



packetvideoTM

OSCL API

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Contents

1 oscl Module Index	1
1.1 oscl Modules	1
2 oscl Hierarchical Index	2
2.1 oscl Class Hierarchy	2
3 oscl Data Structure Index	9
3.1 oscl Data Structures	9
4 oscl File Index	15
4.1 oscl File List	15
5 oscl Page Index	20
5.1 oscl Related Pages	20
6 oscl Module Documentation	21
6.1 OSCL config	21
6.2 OSCL Base	25
6.3 OSCL Memory	46
6.4 OSCL Util	62
6.5 OSCL Error	84
6.6 OSCL IO	94
6.7 OSCL Proc	102
6.8 OSCL Init	106
7 oscl Data Structure Documentation	107
7.1 _OsclBasicAllocator Class Reference	107
7.2 _OsclHeapBase Class Reference	109
7.3 AcceptParam Class Reference	111
7.4 allocator Class Reference	112

7.5	AllPassFilter Class Reference	113
7.6	BindParam Class Reference	115
7.7	BufferFragment Class Reference	116
7.8	BufferMgr Class Reference	117
7.9	BufferState Class Reference	118
7.10	BuFragGroup< ChainClass, max_frags > Class Template Reference	119
7.11	BuffFragStatusClass Class Reference	122
7.12	CallbackTimer< Alloc > Class Template Reference	123
7.13	CallbackTimerObserver Class Reference	125
7.14	CFastRep Class Reference	126
7.15	CHheapRep Class Reference	128
7.16	ConnectParam Class Reference	130
7.17	CStackRep Class Reference	131
7.18	DNSRequestParam Class Reference	132
7.19	GetHostByNameParam Class Reference	134
7.20	HeapBase Class Reference	136
7.21	internalLeave Class Reference	138
7.22	LinkedListElement< LLClass > Class Template Reference	139
7.23	ListenParam Class Reference	140
7.24	MediaData< ChainClass, max_frags, local_bufsize > Class Template Reference	141
7.25	MediaStatusClass Class Reference	144
7.26	MemAllocator< T > Class Template Reference	145
7.27	MM_AllocBlockFence Struct Reference	146
7.28	MM_AllocBlockHdr Struct Reference	147
7.29	MM_AllocInfo Struct Reference	148
7.30	MM_AllocNode Struct Reference	150
7.31	MM_AllocQueryInfo Struct Reference	151
7.32	MM_Audit_Imp Class Reference	152
7.33	MM_AuditOverheadStats Struct Reference	160
7.34	MM_FailInsertParam Struct Reference	161
7.35	MM_Stats_CB Struct Reference	162
7.36	MM_Stats_t Struct Reference	163
7.37	NTPTTime Class Reference	165
7.38	Oscl_Alloc Class Reference	169
7.39	Oscl_Dealloc Class Reference	170
7.40	Oscl_DefAlloc Class Reference	171

7.41 Oscl_DefAllocWithRefCounter< DefAlloc > Class Template Reference	172
7.42 OSCL_FastString Class Reference	174
7.43 Oscl_File Class Reference	178
7.44 Oscl_File::OsclCacheObserver Class Reference	186
7.45 Oscl_File::OsclFixedCacheParam Class Reference	187
7.46 Oscl_FileFind Class Reference	188
7.47 Oscl_FileServer Class Reference	192
7.48 oscl_fsstat Struct Reference	194
7.49 OSCL_HeapString< Alloc > Class Template Reference	195
7.50 OSCL_HeapStringA Class Reference	197
7.51 Oscl_Int64_Utils Class Reference	202
7.52 Oscl_Less< T > Struct Template Reference	204
7.53 Oscl_Linked_List< LLClass, Alloc > Class Template Reference	205
7.54 Oscl_Linked_List_Base Class Reference	210
7.55 Oscl_Map< Key, T, Alloc, Compare > Class Template Reference	215
7.56 Oscl_Map< Key, T, Alloc, Compare >::value_compare Class Reference	222
7.57 Oscl_MTLinked_List< LLClass, Alloc, TheLock > Class Template Reference	224
7.58 Oscl_Opaque_Type_Alloc Class Reference	228
7.59 Oscl_Opaque_Type_Alloc_LL Class Reference	230
7.60 Oscl_Opaque_Type_Compare Class Reference	232
7.61 Oscl_Pair< T1, T2 > Struct Template Reference	234
7.62 Oscl_Queue< T, Alloc > Class Template Reference	235
7.63 Oscl_Queue_Base Class Reference	238
7.64 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference	241
7.65 Oscl_Rb_Tree_Base Class Reference	245
7.66 Oscl_Rb_Tree_Const_Iterator< Value > Struct Template Reference	246
7.67 Oscl_Rb_Tree_Iterator< Value > Struct Template Reference	249
7.68 Oscl_Rb_Tree_Node< Value > Struct Template Reference	252
7.69 Oscl_Rb_Tree_Node_Base Struct Reference	253
7.70 Oscl_Select1st< V, U > Struct Template Reference	255
7.71 OSCL_StackString< MaxBufSize > Class Template Reference	256
7.72 oscl_stat_buf Struct Reference	258
7.73 OSCL_String Class Reference	259
7.74 Oscl_Tag< Alloc > Struct Template Reference	264
7.75 Oscl_Tag_Base Struct Reference	266
7.76 Oscl_TagTree< T, Alloc > Class Template Reference	268

7.77 Oscl_TagTree< T, Alloc >::const_iterator Struct Reference	272
7.78 Oscl_TagTree< T, Alloc >::iterator Struct Reference	275
7.79 Oscl_TagTree< T, Alloc >::Node Struct Reference	278
7.80 Oscl_TAlloc< T, Alloc > Class Template Reference	280
7.81 Oscl_TAlloc< T, Alloc >::rebind< U, V > Struct Template Reference	283
7.82 Oscl_Vector< T, Alloc > Class Template Reference	284
7.83 Oscl_Vector_Base Class Reference	289
7.84 OSCL_wFastString Class Reference	293
7.85 OSCL_wHeapString< Alloc > Class Template Reference	296
7.86 OSCL_wHeapStringA Class Reference	298
7.87 OSCL_wStackString< MaxBufSize > Class Template Reference	301
7.88 OSCL_wString Class Reference	303
7.89 OsclAcceptMethod Class Reference	307
7.90 OsclAcceptRequest Class Reference	308
7.91 OsclActiveObject Class Reference	309
7.92 OsclAllocDestructDealloc Class Reference	313
7.93 OsclAOStatus Class Reference	314
7.94 OsclAsyncFile Class Reference	315
7.95 OsclAsyncFileBuffer Class Reference	318
7.96 OsclAuditCB Class Reference	320
7.97 OsclBindMethod Class Reference	321
7.98 OsclBindRequest Class Reference	322
7.99 OsclBinIStream Class Reference	323
7.100 OsclBinIStreamBigEndian Class Reference	325
7.101 OsclBinIStreamLittleEndian Class Reference	328
7.102 OsclBinOStream Class Reference	330
7.103 OsclBinOStreamBigEndian Class Reference	331
7.104 OsclBinOStreamLittleEndian Class Reference	333
7.105 OsclBinStream Class Reference	335
7.106 OsclBuf Class Reference	339
7.107 OsclCompareLess< T > Class Template Reference	341
7.108 OsclComponentRegistry Class Reference	342
7.109 OsclComponentRegistryData Class Reference	344
7.110 OsclComponentRegistryElement Class Reference	345
7.111 OsclConnectMethod Class Reference	347
7.112 OsclConnectRequest Class Reference	348

7.113OsclDestructDealloc Class Reference	349
7.114OsclDNS Class Reference	350
7.115OsclDNSI Class Reference	352
7.116OsclDNSIBase Class Reference	354
7.117OsclDNSMethod Class Reference	357
7.118OsclDNSObserver Class Reference	360
7.119OsclDNSRequest Class Reference	361
7.120OsclDNSRequestAO Class Reference	362
7.121OsclDoubleLink Class Reference	365
7.122OsclDoubleList< T > Class Template Reference	366
7.123OsclDoubleListBase Class Reference	367
7.124OsclDoubleRunner< T > Class Template Reference	369
7.125OsclError Class Reference	371
7.126OsclErrorAllocator Class Reference	373
7.127OsclErrorTrap Class Reference	375
7.128OsclErrorTrapImp Class Reference	376
7.129OsclException< LeaveCode > Class Template Reference	378
7.130OsclExclusiveArrayPtr< T > Class Template Reference	379
7.131OsclExclusivePtr< T > Class Template Reference	382
7.132OsclExclusivePtrA< T, Alloc > Class Template Reference	385
7.133OsclExecScheduler Class Reference	388
7.134OsclExecSchedulerBase Class Reference	390
7.135OsclExecSchedulerCommonBase Class Reference	391
7.136OsclFileCache Class Reference	400
7.137OsclFileCacheBuffer Class Reference	402
7.138OsclFileHandle Class Reference	404
7.139OsclFileManager Class Reference	405
7.140OsclFileStats Class Reference	410
7.141OsclFileStatsItem Class Reference	411
7.142OsclGetHostByNameMethod Class Reference	412
7.143OsclGetHostByNameRequest Class Reference	413
7.144OsclInit Class Reference	414
7.145OsclInteger64Transport Struct Reference	415
7.146OsclIpMReq Class Reference	416
7.147OsclIPSocketI Class Reference	417
7.148OsclJump Class Reference	420

7.149OsclListenMethod Class Reference	421
7.150OsclListenRequest Class Reference	422
7.151OsclLockBase Class Reference	423
7.152OsclMem Class Reference	424
7.153OsclMemAllocator Class Reference	425
7.154OsclMemAllocDestructDealloc< T > Class Template Reference	426
7.155OsclMemAudit Class Reference	428
7.156OSCLMemAutoPtr< T, _Allocator > Class Template Reference	434
7.157OsclMemBasicAllocator Class Reference	438
7.158OsclMemBasicAllocDestructDealloc< T > Class Template Reference	439
7.159OsclMemGlobalAuditObject Class Reference	440
7.160OsclMemoryFragment Struct Reference	441
7.161OsclMemPoolFixedChunkAllocator Class Reference	442
7.162OsclMemPoolFixedChunkAllocatorObserver Class Reference	446
7.163OsclMemPoolResizableAllocator Class Reference	447
7.164OsclMemPoolResizableAllocator::MemPoolBlockInfo Struct Reference	453
7.165OsclMemPoolResizableAllocator::MemPoolBufferInfo Struct Reference	454
7.166OsclMemPoolResizableAllocatorMemoryObserver Class Reference	455
7.167OsclMemPoolResizableAllocatorObserver Class Reference	456
7.168OsclMemStatsNode Class Reference	457
7.169OsclMutex Class Reference	458
7.170OsclNameString< __len > Class Template Reference	460
7.171OsclNativeFile Class Reference	461
7.172OsclNativeFileParams Class Reference	464
7.173OsclNetworkAddress Class Reference	465
7.174OsclNullLock Class Reference	466
7.175OsclPriorityLink Class Reference	467
7.176OsclPriorityList< T > Class Template Reference	468
7.177OsclPriorityQueue< Qelem, Alloc, Container, Compare > Class Template Reference	469
7.178OsclPriorityQueueBase Class Reference	473
7.179OsclProcStatus Class Reference	474
7.180OsclPtr Class Reference	476
7.181OsclPtrC Class Reference	478
7.182OsclRand Class Reference	480
7.183OsclReadyAlloc Class Reference	481
7.184OsclReadyCompare Class Reference	482

7.185OsclReadyQ Class Reference	483
7.186OsclRecvFromMethod Class Reference	485
7.187OsclRecvFromRequest Class Reference	487
7.188OsclRecvMethod Class Reference	489
7.189OsclRecvRequest Class Reference	490
7.190OsclRefCounter Class Reference	491
7.191OsclRefCounterDA Class Reference	493
7.192OsclRefCounterMemFrag Class Reference	495
7.193OsclRefCounterMTDA< LockType > Class Template Reference	497
7.194OsclRefCounterMTSA< DeallocType, LockType > Class Template Reference	499
7.195OsclRefCounterSA< DeallocType > Class Template Reference	501
7.196OsclRegistryAccessClient Class Reference	503
7.197OsclRegistryAccessClientImpl Class Reference	505
7.198OsclRegistryAccessClientTlsImpl Class Reference	506
7.199OsclRegistryAccessElement Class Reference	507
7.200OsclRegistryClient Class Reference	508
7.201OsclRegistryClientImpl Class Reference	510
7.202OsclRegistryClientTlsImpl Class Reference	512
7.203OsclRegistryServTlsImpl Class Reference	513
7.204OsclScheduler Class Reference	515
7.205OsclSchedulerObserver Class Reference	516
7.206OsclScopedLock< LockClass > Class Template Reference	517
7.207OsclSelect Class Reference	518
7.208OsclSemaphore Class Reference	520
7.209OsclSendMethod Class Reference	522
7.210OsclSendRequest Class Reference	523
7.211OsclSendToMethod Class Reference	524
7.212OsclSendToRequest Class Reference	525
7.213OsclSharedPtr< TheClass > Class Template Reference	526
7.214OsclShutdownMethod Class Reference	529
7.215OsclShutdownRequest Class Reference	530
7.216OsclSingleton< T, ID, Registry > Class Template Reference	531
7.217OsclSingletonRegistry Class Reference	533
7.218OsclSocketI Class Reference	534
7.219OsclSocketIBase Class Reference	539
7.220OsclSocketMethod Class Reference	544

7.221 OsclSocketObserver Class Reference	547
7.222 OsclSocketRequest Class Reference	548
7.223 OsclSocketRequestAO Class Reference	549
7.224 OsclSocketServ Class Reference	553
7.225 OsclSocketServI Class Reference	555
7.226 OsclSocketServIBase Class Reference	557
7.227 OsclSocketServRequestList Class Reference	559
7.228 OsclSocketServRequestQElem Class Reference	561
7.229 OsclSocketTOS Class Reference	562
7.230 OsclTCPSocket Class Reference	564
7.231 OsclTCPSocketI Class Reference	571
7.232 OsclThread Class Reference	574
7.233 OsclThreadLock Class Reference	578
7.234 OsclTickCount Class Reference	579
7.235 OsclTimer< Alloc > Class Template Reference	581
7.236 OsclTimerCompare Class Reference	584
7.237 OsclTimerObject Class Reference	585
7.238 OsclTimerObserver Class Reference	589
7.239 OsclTimerQ Class Reference	590
7.240 OsclTLS< T, ID, Registry > Class Template Reference	591
7.241 OsclTLSE< T, ID, Registry > Class Template Reference	593
7.242 OsclTLSRegistry Class Reference	595
7.243 OsclTLSRegistryEx Class Reference	596
7.244 OsclTrapItem Class Reference	597
7.245 OsclTrapStack Class Reference	598
7.246 OsclTrapStackItem Class Reference	599
7.247 OsclUDPSocket Class Reference	600
7.248 OsclUDPSocketI Class Reference	606
7.249 OsclUuid Struct Reference	609
7.250 PVActiveBase Class Reference	611
7.251 PVActiveStats Class Reference	615
7.252 PVLogger Class Reference	616
7.253 PVLoggerAppender Class Reference	622
7.254 PVLoggerFilter Class Reference	623
7.255 PVLoggerLayout Class Reference	625
7.256 PVLoggerRegistry Class Reference	627

7.257PVSchedulerStopper Class Reference	630
7.258PVSockBufRecv Class Reference	631
7.259PVSockBufSend Class Reference	632
7.260PVThreadContext Class Reference	633
7.261RecvFromParam Class Reference	635
7.262RecvParam Class Reference	637
7.263SendParam Class Reference	638
7.264SendToParam Class Reference	639
7.265ShutdownParam Class Reference	640
7.266SocketRequestParam Class Reference	641
7.267StrCSumPtrLen Struct Reference	643
7.268StrPtrLen Struct Reference	646
7.269TimeValue Class Reference	648
7.270TLSStorageOps Class Reference	655
7.271TReadyQueLink Class Reference	656
7.272WStrPtrLen Struct Reference	657
8 oscl File Documentation	659
8.1 oscl_aostatus.h File Reference	659
8.2 oscl_assert.h File Reference	660
8.3 oscl_base.h File Reference	661
8.4 oscl_base_alloc.h File Reference	662
8.5 oscl_base_macros.h File Reference	663
8.6 oscl_bin_stream.h File Reference	664
8.7 oscl_byte_order.h File Reference	665
8.8 oscl_defalloc.h File Reference	666
8.9 oscl_dll.h File Reference	667
8.10 oscl_dns.h File Reference	668
8.11 oscl_dns_gethostname.h File Reference	669
8.12 oscl_dns_imp.h File Reference	670
8.13 oscl_dns_imp_base.h File Reference	671
8.14 oscl_dns_imp_pv.h File Reference	672
8.15 oscl_dns_method.h File Reference	673
8.16 oscl_dns_param.h File Reference	674
8.17 oscl_dns_request.h File Reference	675
8.18 oscl_dns_tuneables.h File Reference	676
8.19 oscl_double_list.h File Reference	677

8.20 oscl_errno.h File Reference	678
8.21 oscl_error.h File Reference	679
8.22 oscl_error_allocator.h File Reference	680
8.23 oscl_error_codes.h File Reference	681
8.24 oscl_error_imp.h File Reference	682
8.25 oscl_error_imp_cppexceptions.h File Reference	683
8.26 oscl_error_imp_fatalerror.h File Reference	684
8.27 oscl_error_imp_jumps.h File Reference	685
8.28 oscl_error_trapcleanup.h File Reference	687
8.29 oscl_exception.h File Reference	688
8.30 oscl_exclusive_ptr.h File Reference	689
8.31 oscl_file_async_read.h File Reference	690
8.32 oscl_file_cache.h File Reference	691
8.33 oscl_file_dir_utils.h File Reference	692
8.34 oscl_file_find.h File Reference	694
8.35 oscl_file_handle.h File Reference	695
8.36 oscl_file_io.h File Reference	696
8.37 oscl_file_manager.h File Reference	697
8.38 oscl_file_native.h File Reference	698
8.39 oscl_file_server.h File Reference	699
8.40 oscl_file_stats.h File Reference	700
8.41 oscl_file_types.h File Reference	701
8.42 oscl_heapbase.h File Reference	702
8.43 oscl_init.h File Reference	703
8.44 oscl_int64_utils.h File Reference	704
8.45 oscl_ip_socket.h File Reference	705
8.46 oscl_linked_list.h File Reference	706
8.47 oscl_lock_base.h File Reference	707
8.48 oscl_map.h File Reference	708
8.49 oscl_math.h File Reference	709
8.50 oscl_media_data.h File Reference	710
8.51 oscl_media_status.h File Reference	711
8.52 oscl_mem.h File Reference	712
8.53 oscl_mem_align.h File Reference	715
8.54 oscl_mem_audit.h File Reference	716
8.55 oscl_mem_audit_internals.h File Reference	718

8.56 oscl_mem_auto_ptr.h File Reference	719
8.57 oscl_mem_basic_functions.h File Reference	720
8.58 oscl_mem_inst.h File Reference	721
8.59 oscl_mem_mempool.h File Reference	722
8.60 oscl_mutex.h File Reference	723
8.61 oscl_namestring.h File Reference	724
8.62 oscl_opaque_type.h File Reference	725
8.63 oscl_pqueue.h File Reference	726
8.64 oscl_proctstatus.h File Reference	727
8.65 oscl_queue.h File Reference	728
8.66 oscl_rand.h File Reference	729
8.67 oscl_refcounter.h File Reference	730
8.68 oscl_refcounter_memfrag.h File Reference	731
8.69 oscl_registry_access_client.h File Reference	732
8.70 oscl_registry_client.h File Reference	733
8.71 oscl_registry_client_impl.h File Reference	734
8.72 oscl_registry_serv_impl.h File Reference	735
8.73 oscl_registry_serv_impl_global.h File Reference	736
8.74 oscl_registry_serv_impl_tls.h File Reference	737
8.75 oscl_registry_types.h File Reference	738
8.76 oscl_scheduler.h File Reference	739
8.77 oscl_scheduler_ao.h File Reference	740
8.78 oscl_scheduler_aobase.h File Reference	741
8.79 oscl_scheduler_readyq.h File Reference	742
8.80 oscl_scheduler_threadcontext.h File Reference	743
8.81 oscl_scheduler_tuneables.h File Reference	744
8.82 oscl_scheduler_types.h File Reference	745
8.83 oscl_semaphore.h File Reference	746
8.84 oscl_shared_ptr.h File Reference	747
8.85 oscl_singleton.h File Reference	748
8.86 oscl_snprintf.h File Reference	750
8.87 oscl_socket.h File Reference	751
8.88 oscl_socket_accept.h File Reference	752
8.89 oscl_socket_bind.h File Reference	753
8.90 oscl_socket_connect.h File Reference	754
8.91 oscl_socket_imp.h File Reference	755

8.92 oscl_socket_imp_base.h File Reference	756
8.93 oscl_socket_imp_pv.h File Reference	757
8.94 oscl_socket_listen.h File Reference	758
8.95 oscl_socket_method.h File Reference	759
8.96 oscl_socket_recv.h File Reference	760
8.97 oscl_socket_recv_from.h File Reference	761
8.98 oscl_socket_request.h File Reference	762
8.99 oscl_socket_send.h File Reference	763
8.100oscl_socket_send_to.h File Reference	764
8.101oscl_socket_serv_imp.h File Reference	765
8.102oscl_socket_serv_imp_base.h File Reference	766
8.103oscl_socket_serv_imp_pv.h File Reference	767
8.104oscl_socket_serv_imp_reqlist.h File Reference	768
8.105oscl_socket_shutdown.h File Reference	769
8.106oscl_socket_stats.h File Reference	770
8.107oscl_socket_tuneables.h File Reference	772
8.108oscl_socket_types.h File Reference	774
8.109oscl_stdstring.h File Reference	776
8.110oscl_str_ptr_len.h File Reference	778
8.111oscl_string.h File Reference	779
8.112oscl_string_containers.h File Reference	780
8.113oscl_string_rep.h File Reference	781
8.114oscl_string_uri.h File Reference	782
8.115oscl_string_utf8.h File Reference	783
8.116oscl_string_utils.h File Reference	784
8.117oscl_string_xml.h File Reference	785
8.118oscl_tagtree.h File Reference	786
8.119oscl_tcp_socket.h File Reference	787
8.120oscl_thread.h File Reference	788
8.121oscl_tickcount.h File Reference	790
8.122oscl_time.h File Reference	791
8.123oscl_timer.h File Reference	793
8.124oscl_tls.h File Reference	794
8.125oscl_tree.h File Reference	795
8.126oscl_types.h File Reference	796
8.127oscl_udp_socket.h File Reference	797

8.128oscl_utf8conv.h File Reference	798
8.129oscl_uuid.h File Reference	799
8.130oscl_vector.h File Reference	801
8.131osclconfig.h File Reference	802
8.132osclconfig_ansi_memory.h File Reference	804
8.133osclconfig_check.h File Reference	805
8.134osclconfig_compiler_warnings.h File Reference	806
8.135osclconfig_error.h File Reference	807
8.136osclconfig_error_check.h File Reference	808
8.137osclconfig_global_new_delete.h File Reference	809
8.138osclconfig_global_placement_new.h File Reference	810
8.139osclconfig_io.h File Reference	811
8.140osclconfig_io_check.h File Reference	822
8.141osclconfig_ix86.h File Reference	823
8.142osclconfig_lib.h File Reference	824
8.143osclconfig_lib_check.h File Reference	825
8.144osclconfig_limits_typedefs.h File Reference	826
8.145osclconfig_memory.h File Reference	827
8.146osclconfig_memory_check.h File Reference	828
8.147osclconfig_no_os.h File Reference	829
8.148osclconfig_proc.h File Reference	830
8.149osclconfig_proc_check.h File Reference	831
8.150osclconfig_proc_unix_android.h File Reference	833
8.151osclconfig_proc_unix_common.h File Reference	835
8.152osclconfig_time.h File Reference	837
8.153osclconfig_time_check.h File Reference	838
8.154osclconfig_unix_android.h File Reference	839
8.155osclconfig_unix_common.h File Reference	843
8.156osclconfig_util.h File Reference	847
8.157osclconfig_util_check.h File Reference	848
8.158pvlogger.h File Reference	849
8.159pvlogger_accessories.h File Reference	857
8.160pvlogger_c.h File Reference	858
8.161pvlogger_registry.h File Reference	860
9 oscl Page Documentation	861
9.1 Todo List	861

Chapter 1

oscl Module Index

1.1 oscl Modules

Here is a list of all modules:

OSCL config	21
OSCL Base	25
OSCL Memory	46
OSCL Util	62
OSCL Error	84
OSCL IO	94
OSCL Proc	102
OSCL Init	106

Chapter 2

oscl Hierarchical Index

2.1 oscl Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

_OscIHeapBase	109
HeapBase	136
Oscl_File	178
OSCL_String	259
OSCL_FastString	174
OSCL_HeapString< Alloc >	195
OSCL_HeapStringA	197
OSCL_StackString< MaxBufSize >	256
OsclActiveObject	309
OsclAsyncFile	315
OsclDNSRequestAO	362
OsclGetHostNameRequest	413
OsclSocketRequestAO	549
OsclAcceptRequest	308
OsclBindRequest	322
OsclConnectRequest	348
OsclListenRequest	422
OsclRecvFromRequest	487
OsclRecvRequest	490
OsclSendRequest	523
OsclSendToRequest	525
OsclShutdownRequest	530
PVSchedulerStopper	630
OsclAsyncFileBuffer	318
OsclBuf	339
OsclDNS	350
OsclFileCache	400
OsclNativeFile	461
OsclPtr	476
OsclPtrC	478
OsclRegistryClient	508
OsclSocketServ	553
OsclTCPSocket	564

OsclTimerObject	585
CallbackTimer< Alloc >	123
OsclDNSMethod	357
OsclGetHostByNameMethod	412
OsclSocketMethod	544
OsclAcceptMethod	307
OsclBindMethod	321
OsclConnectMethod	347
OsclListenMethod	421
OsclRecvFromMethod	485
OsclRecvMethod	489
OsclSendMethod	522
OsclSendToMethod	524
OsclShutdownMethod	529
OsclSocketServI	555
OsclUDPSocket	600
OsclExecSchedulerBase	390
OsclExecScheduler	388
allocator	112
BufferMgr	117
BufferState	118
BufFragGroup< ChainClass, max_frags >	119
MediaData< ChainClass, max_frags, local_bufsize >	141
BufFragStatusClass	122
MediaStatusClass	144
CallbackTimerObserver	125
OsclTimer< Alloc >	581
CFastRep	126
CHheapRep	128
CStackRep	131
DNSRequestParam	132
GetHostByNameParam	134
internalLeave	138
LinkedListElement< LLClass >	139
MemAllocator< T >	145
MM_AllocBlockFence	146
MM_AllocBlockHdr	147
MM_AllocInfo	148
MM_AllocNode	150
MM_AllocQueryInfo	151
MM_Audit_Imp	152
MM_AuditOverheadStats	160
MM_FailInsertParam	161
MM_Stats_CB	162
MM_Stats_t	163
NTPTime	165
Oscl_Alloc	169
Oscl_DefAlloc	171
_OsclBasicAllocator	107
OsclAllocDestructDealloc	313
OsclMemAllocDestructDealloc< T >	426
OsclMemBasicAllocDestructDealloc< T >	439

OsclMemAllocator	425
OsclMemBasicAllocator	438
OsclMemPoolFixedChunkAllocator	442
OsclMemPoolResizableAllocator	447
OsclReadyAlloc	481
Oscl_Dealloc	170
Oscl_DefAlloc	171
Oscl_File::OsclCacheObserver	186
Oscl_File::OsclFixedCacheParam	187
Oscl_FileFind	188
Oscl_FileServer	192
oscl_fsstat	194
Oscl_Int64_Utils	202
Oscl_Less< T >	204
Oscl_Linked_List_Base	210
Oscl_Linked_List< LLClass, Alloc >	205
Oscl_Map< Key, T, Alloc, Compare >	215
Oscl_Map< Key, T, Alloc, Compare >::value_compare	222
Oscl_MTLinked_List< LLClass, Alloc, TheLock >	224
Oscl_Opaque_Type_Alloc	228
Oscl_Queue< T, Alloc >	235
Oscl_Vector< T, Alloc >	284
Oscl_Vector< TOsclReady, OsclReadyAlloc >	284
Oscl_Opaque_Type_Alloc_LL	230
Oscl_Linked_List< LLClass, Alloc >	205
Oscl_Opaque_Type_Compare	232
OsclPriorityQueue< Qelem, Alloc, Container, Compare >	469
OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReady-Alloc >, OsclReadyCompare >	469
OsclReadyQ	483
OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReady-Alloc >, OsclTimerCompare >	469
OsclTimerQ	590
Oscl_Pair< T1, T2 >	234
Oscl_Queue_Base	238
Oscl_Queue< T, Alloc >	235
Oscl_Rb_Tree_Base	245
Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >	241
Oscl_Rb_Tree_Const_Iterator< Value >	246
Oscl_Rb_Tree_Iterator< Value >	249
Oscl_Rb_Tree_Node_Base	253
Oscl_Rb_Tree_Node< Value >	252
Oscl_Select1st< V, U >	255
oscl_stat_buf	258
Oscl_Tag_Base	266
Oscl_Tag< Alloc >	264
Oscl_TagTree< T, Alloc >	268
Oscl_TagTree< T, Alloc >::const_iterator	272
Oscl_TagTree< T, Alloc >::iterator	275
Oscl_TagTree< T, Alloc >::Node	278
Oscl_TAlloc< T, Alloc >::rebind< U, V >	283

Oscl_Vector_Base	289
Oscl_Vector< T, Alloc >	284
Oscl_Vector< TOsclReady, OsclReadyAlloc >	284
OSCL_wString	303
OSCL_wFastString	293
OSCL_wHeapString< Alloc >	296
OSCL_wHeapStringA	298
OSCL_wStackString< MaxBufSize >	301
OsclAOStatus	314
OsclAuditCB	320
OsclBinStream	335
OsclBinIStream	323
OsclBinIStreamBigEndian	325
OsclBinIStreamLittleEndian	328
OsclBinOStream	330
OsclBinOStreamBigEndian	331
OsclBinOStreamLittleEndian	333
OsclCompareLess< T >	341
OsclComponentRegistry	342
OsclComponentRegistryData	344
OsclComponentRegistryElement	345
OsclDestructDealloc	349
Oscl_TAlloc< T, Alloc >	280
OsclAllocDestructDealloc	313
OsclDNSIBase	354
OsclDNSI	352
OsclDNSObserver	360
OsclDNSRequest	361
OsclDoubleLink	365
OsclPriorityLink	467
OsclDoubleListBase	367
OsclDoubleList< T >	366
OsclPriorityList< T >	468
OsclDoubleRunner< T >	369
OsclError	371
OsclErrorAllocator	373
OsclErrorTrap	375
OsclErrorTrapImp	376
OsclException< LeaveCode >	378
OsclExclusiveArrayPtr< T >	379
OsclExclusivePtr< T >	382
OsclExclusivePtrA< T, Alloc >	385
OsclExecSchedulerCommonBase	391
OsclExecScheduler	388
OsclFileCacheBuffer	402
OsclFileHandle	404
OsclFileManager	405
OsclFileStats	410
OsclFileStatsItem	411
OsclInit	414
OsclInteger64Transport	415

OsclIpMReq	416
OsclIPSocketI	417
OsclTCPSocketI	571
OsclUDPSocketI	606
OsclJump	420
OsclLockBase	423
OsclMutex	458
OsclNullLock	466
OsclThreadLock	578
OsclMem	424
OsclMemAudit	428
OSCLMemAutoPtr< T, _Allocator >	434
OsclMemGlobalAuditObject	440
OsclMemoryFragment	441
BufferFragment	116
OsclMemPoolFixedChunkAllocatorObserver	446
OsclMemPoolResizableAllocator::MemPoolBlockInfo	453
OsclMemPoolResizableAllocator::MemPoolBufferInfo	454
OsclMemPoolResizableAllocatorMemoryObserver	455
OsclMemPoolResizableAllocatorObserver	456
OsclMemStatsNode	457
OsclNameString< __len >	460
OsclNativeFileParams	464
OsclNetworkAddress	465
OsclPriorityQueueBase	473
OsclPriorityQueue< Qelem, Alloc, Container, Compare >	469
OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReady-Alloc >, OsclReadyCompare >	469
OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReady-Alloc >, OsclTimerCompare >	469
OsclProcStatus	474
OsclRand	480
OsclReadyCompare	482
OsclRefCounter	491
Oscl_DefAllocWithRefCounter< DefAlloc >	172
OsclRefCounterDA	493
OsclRefCounterMTDA< LockType >	497
OsclRefCounterMTSA< DeallocType, LockType >	499
OsclRefCounterSA< DeallocType >	501
OsclRefCounterMemFrag	495
OsclRegistryAccessClient	503
OsclRegistryAccessElement	507
OsclRegistryClientImpl	510
OsclRegistryAccessClientImpl	505
OsclRegistryServTlsImpl	513
OsclRegistryAccessClientTlsImpl	506
OsclRegistryClientTlsImpl	512
OsclScheduler	515
OsclSchedulerObserver	516
OsclScopedLock< LockClass >	517
OsclSelect	518
OsclSemaphore	520

OsclSharedPtr< TheClass >	526
OsclSingleton< T, ID, Registry >	531
OsclSingletonRegistry	533
OsclSocketIBase	539
OsclSocketI	534
OsclSocketObserver	547
OsclSocketRequest	548
OsclSocketServIBase	557
OsclSocketServI	555
OsclSocketServRequestList	559
OsclSocketServRequestQElem	561
OsclSocketTOS	562
OsclThread	574
OsclTickCount	579
OsclTimerCompare	584
OsclTimerObserver	589
OsclTLS< T, ID, Registry >	591
OsclTLSE< T, ID, Registry >	593
OsclTLSRegistry	595
OsclTLSRegistryEx	596
OsclTrapItem	597
OsclTrapStack	598
OsclTrapStackItem	599
OsclUuid	609
PVActiveBase	611
OsclActiveObject	309
OsclTimerObject	585
PVActiveStats	615
PVLogger	616
PVLoggerAppender	622
PVLoggerFilter	623
AllPassFilter	113
PVLoggerLayout	625
PVLoggerRegistry	627
PVSockBufRecv	631
PVSockBufSend	632
PVThreadContext	633
SocketRequestParam	641
AcceptParam	111
BindParam	115
ConnectParam	130
ListenParam	140
RecvFromParam	635
RecvParam	637
SendParam	638
SendToParam	639
ShutdownParam	640
StrPtrLen	646
StrCSumPtrLen	643
TimeValue	648
TLSStorageOps	655
TReadyQueLink	656

WStrPtrLen [657](#)

Chapter 3

oscl Data Structure Index

3.1 oscl Data Structures

Here are the data structures with brief descriptions:

_OsclBasicAllocator	107
_OsclHeapBase	109
AcceptParam	111
allocator	112
AllPassFilter	113
BindParam	115
BufferFragment	116
BufferMgr	117
BufferState	118
BufFragGroup< ChainClass, max_frags >	119
BufFragStatusClass	122
CallbackTimer< Alloc >	123
CallbackTimerObserver	125
CFastRep	126
CHheapRep	128
ConnectParam	130
CStackRep	131
DNSRequestParam	132
GetHostNameParam	134
HeapBase	136
internalLeave	138
LinkedListElement< LLClass >	139
ListenParam	140
MediaData< ChainClass, max_frags, local_bufsize >	141
MediaStatusClass	144
MemAllocator< T >	145
MM_AllocBlockFence	146
MM_AllocBlockHdr	147
MM_AllocInfo	148
MM_AllocNode	150
MM_AllocQueryInfo	151
MM_Audit_Imp	152
MM_AuditOverheadStats	160

MM_FailInsertParam	161
MM_Stats_CB	162
MM_Stats_t	163
NTPTime (Time value as the number of seconds since 0h (UTC) Jan. 1, 1900)	165
OscI_Alloc	169
OscI_Dealloc	170
OscI_DefAlloc	171
OscI_DefAllocWithRefCounter< DefAlloc >	172
OSCL_FastString	174
OscI_File	178
OscI_File::OsclCacheObserver	186
OscI_File::OsclFixedCacheParam	187
OscI_FileFind	188
OscI_FileServer	192
oscl_fstat	194
OSCL_HeapString< Alloc >	195
OSCL_HeapStringA	197
OscI_Int64_Utils (Wrapper for commonly used int64/uint64 operations)	202
OscI_Less< T >	204
OscI_Linked_List< LLClass, Alloc >	205
OscI_Linked_List_Base	210
OscI_Map< Key, T, Alloc, Compare >	215
OscI_Map< Key, T, Alloc, Compare >::value_compare	222
OscI_MTLinked_List< LLClass, Alloc, TheLock >	224
OscI_Opaque_Type_Alloc	228
OscI_Opaque_Type_Alloc_LL	230
OscI_Opaque_Type_Compare	232
OscI_Pair< T1, T2 >	234
OscI_Queue< T, Alloc >	235
OscI_Queue_Base	238
OscI_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >	241
OscI_Rb_Tree_Base	245
OscI_Rb_Tree_Const_Iterator< Value >	246
OscI_Rb_Tree_Iterator< Value >	249
OscI_Rb_Tree_Node< Value >	252
OscI_Rb_Tree_Node_Base	253
OscI_Select1st< V, U >	255
OSCL_StackString< MaxBufSize >	256
oscl_stat_buf	258
OSCL_String	259
OscI_Tag< Alloc >	264
OscI_Tag_Base	266
OscI_TagTree< T, Alloc >	268
OscI_TagTree< T, Alloc >::const_iterator	272
OscI_TagTree< T, Alloc >::iterator	275
OscI_TagTree< T, Alloc >::Node	278
OscI_TAlloc< T, Alloc >	280
OscI_TAlloc< T, Alloc >::rebind< U, V >	283
OscI_Vector< T, Alloc >	284
OscI_Vector_Base	289
OSCL_wFastString	293
OSCL_wHeapString< Alloc >	296
OSCL_wHeapStringA	298
OSCL_wStackString< MaxBufSize >	301

OSCL_wString	303
OsclAcceptMethod	307
OsclAcceptRequest	308
OsclActiveObject	309
OsclAllocDestructDealloc	313
OsclAOStatus	314
OsclAsyncFile	315
OsclAsyncFileBuffer	318
OsclAuditCB	320
OsclBindMethod	321
OsclBindRequest	322
OsclBinIStream	323
OsclBinIStreamBigEndian	325
OsclBinIStreamLittleEndian	328
OsclBinOStream (Class OsclBinOStream implements the basic stream functions for an output stream)	330
OsclBinOStreamBigEndian (Class OsclBinOStreamBigEndian implements a binary output stream using big endian byte ordering)	331
OsclBinOStreamLittleEndian (Class OsclBinOStreamLittleEndian implements a binary output stream using little endian byte ordering)	333
OsclBinStream	335
OsclBuf	339
OsclCompareLess< T >	341
OsclComponentRegistry	342
OsclComponentRegistryData	344
OsclComponentRegistryElement	345
OsclConnectMethod	347
OsclConnectRequest	348
OsclDestructDealloc	349
OsclDNS	350
OsclDNSI	352
OsclDNSIBase	354
OsclDNSMethod	357
OsclDNSObserver	360
OsclDNSRequest	361
OsclDNSRequestAO	362
OsclDoubleLink	365
OsclDoubleList< T >	366
OsclDoubleListBase	367
OsclDoubleRunner< T >	369
OsclError	371
OsclErrorAllocator (This class provides static methods to invoke the user defined memory allocation routines)	373
OsclErrorTrap	375
OsclErrorTrapImp	376
OsclException< LeaveCode > (Oscl_exception.h contains all the exception handling macros and classes This template class provides the base exception class that all exceptions derive from)	378
OsclExclusiveArrayPtr< T > (Template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the OsclExclusiveArrayPtr expires, its destructor uses delete to free the memory)	379
OsclExclusivePtr< T > (Template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the OsclExclusivePtr expires, its destructor uses delete to free the memory)	382

OsclExclusivePtrA< T, Alloc > (Template class that defines any pointer like object intended to be assigned an address obtained (directly or or indirectly) through Alloc. When the OsclExclusivePtrA expires, Alloc is used to free the memory)	385
OsclExecScheduler	388
OsclExecSchedulerBase	390
OsclExecSchedulerCommonBase	391
OsclFileCache	400
OsclFileCacheBuffer	402
OsclFileHandle	404
OsclFileManager	405
OsclFileStats	410
OsclFileStatsItem	411
OsclGetHostNameMethod	412
OsclGetHostNameRequest	413
OsclInit	414
OsclInteger64Transport	415
OsclIpMReq	416
OsclIPSocketI	417
OsclJump	420
OsclListenMethod	421
OsclListenRequest	422
OsclLockBase	423
OsclMem	424
OsclMemAllocator	425
OsclMemAllocDestructDealloc< T >	426
OsclMemAudit	428
OSCLMemAutoPtr< T, _Allocator > (The oscl_auto_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the oscl_auto_ptr expires, its destructor uses delete to free the memory)	434
OsclMemBasicAllocator	438
OsclMemBasicAllocDestructDealloc< T >	439
OsclMemGlobalAuditObject	440
OsclMemoryFragment	441
OsclMemPoolFixedChunkAllocator	442
OsclMemPoolFixedChunkAllocatorObserver	446
OsclMemPoolResizableAllocator	447
OsclMemPoolResizableAllocator::MemPoolBlockInfo	453
OsclMemPoolResizableAllocator::MemPoolBufferInfo	454
OsclMemPoolResizableAllocatorMemoryObserver	455
OsclMemPoolResizableAllocatorObserver	456
OsclMemStatsNode	457
OsclMutex	458
OsclNameString< __len >	460
OsclNativeFile	461
OsclNativeFileParams	464
OsclNetworkAddress	465
OsclNullLock	466
OsclPriorityLink	467
OsclPriorityList< T >	468
OsclPriorityQueue< Qelem, Alloc, Container, Compare >	469
OsclPriorityQueueBase	473
OsclProcStatus	474
OsclPtr	476

OsclPtrC	478
OsclRand	480
OsclReadyAlloc	481
OsclReadyCompare	482
OsclReadyQ	483
OsclRecvFromMethod	485
OsclRecvFromRequest	487
OsclRecvMethod	489
OsclRecvRequest	490
OsclRefCounter	491
OsclRefCounterDA	493
OsclRefCounterMemFrag	495
OsclRefCounterMTDA< LockType >	497
OsclRefCounterMTSA< DeallocType, LockType >	499
OsclRefCounterSA< DeallocType >	501
OsclRegistryAccessClient	503
OsclRegistryAccessClientImpl	505
OsclRegistryAccessClientTlsImpl	506
OsclRegistryAccessElement	507
OsclRegistryClient	508
OsclRegistryClientImpl	510
OsclRegistryClientTlsImpl	512
OsclRegistryServTlsImpl	513
OsclScheduler	515
OsclSchedulerObserver	516
OsclScopedLock< LockClass > (Template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the OsclScopedLock goes out of scope)	517
OsclSelect	518
OsclSemaphore	520
OsclSendMethod	522
OsclSendRequest	523
OsclSendToMethod	524
OsclSendToRequest	525
OsclSharedPtr< TheClass > (A parameterized smart pointer class)	526
OsclShutdownMethod	529
OsclShutdownRequest	530
OsclSingleton< T, ID, Registry >	531
OsclSingletonRegistry	533
OsclSocketI	534
OsclSocketIBase	539
OsclSocketMethod	544
OsclSocketObserver	547
OsclSocketRequest	548
OsclSocketRequestAO	549
OsclSocketServ	553
OsclSocketServI	555
OsclSocketServIBase	557
OsclSocketServRequestList	559
OsclSocketServRequestQElem	561
OsclSocketTOS	562
OsclTCPSocket	564
OsclTCPSocketI	571
OsclThread	574

OsclThreadLock	578
OsclTickCount	579
OsclTimer< Alloc >	581
OsclTimerCompare	584
OsclTimerObject	585
OsclTimerObserver	589
OsclTimerQ	590
OsclTLS< T, ID, Registry >	591
OsclTLSE< T, ID, Registry >	593
OsclTLSRegistry	595
OsclTLSRegistryEx	596
OsclTrapItem	597
OsclTrapStack	598
OsclTrapStackItem	599
OsclUDPSocket	600
OsclUDPSocketI	606
OsclUuid	609
PVActiveBase	611
PVActiveStats	615
PVLogger	616
PVLoggerAppender	622
PVLoggerFilter	623
PVLoggerLayout	625
PVLoggerRegistry	627
PVSchedulerStopper	630
PVSockBufRecv	631
PVSockBufSend	632
PVThreadContext	633
RecvFromParam	635
RecvParam	637
SendParam	638
SendToParam	639
ShutdownParam	640
SocketRequestParam	641
StrCSumPtrLen (Same as StrPtrLen, but includes checksum field and method to speed up querying)	643
StrPtrLen (This data structure encapsulates a set of functions used to perform)	646
TimeValue (Time value in a format native to the system)	648
TLSStorageOps	655
TReadyQueLink	656
WStrPtrLen (This data structure encapsulates a set of functions used to perform)	657

Chapter 4

oscl File Index

4.1 oscl File List

Here is a list of all files with brief descriptions:

<code>oscl_aostatus.h</code> (Some basic types used with active objects)	659
<code>oscl_assert.h</code> (The file <code>oscl_assert.h</code> provides an OSCL_ASSERT macro to document assumptions and test them during development)	660
<code>oscl_base.h</code> (The file <code>oscl_base.h</code> is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros)	661
<code>oscl_base_alloc.h</code> (A basic allocator that does not rely on other modules)	662
<code>oscl_base_macros.h</code> (This file defines common macros and constants for basic compilation support)	663
<code>oscl_bin_stream.h</code> (Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order)	664
<code>oscl_byte_order.h</code> (This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders))	665
<code>oscl_defalloc.h</code> (The file defines simple default memory allocator classes. These allocators are used by the <code>Oscl_Vector</code> and <code>Oscl_Map</code> class, etc)	666
<code>oscl_dll.h</code> (Defines a DLL entry point)	667
<code>oscl_dns.h</code> (The file <code>oscl_socket.h</code> defines the OSCL DNS APIs)	668
<code>oscl_dns_gethostbyname.h</code>	669
<code>oscl_dns_imp.h</code>	670
<code>oscl_dns_imp_base.h</code>	671
<code>oscl_dns_imp_pv.h</code>	672
<code>oscl_dns_method.h</code>	673
<code>oscl_dns_param.h</code>	674
<code>oscl_dns_request.h</code>	675
<code>oscl_dns_tuneables.h</code>	676
<code>oscl_double_list.h</code> (Internal use types for scheduler)	677
<code>oscl_errno.h</code> (Defines functions to access additional information on errors where supported through an errno or similar service)	678
<code>oscl_error.h</code> (OSCL Error trap and cleanup include file)	679
<code>oscl_error_allocator.h</code> (Defines a memory allocation class used by the oscl error layer)	680
<code>oscl_error_codes.h</code> (Defines basic error and leave codes)	681
<code>oscl_error_imp.h</code> (Internal error implementation support)	682
<code>oscl_error_imp_cppexceptions.h</code> (Implementation File for Leave using C++ exceptions)	683
<code>oscl_error_imp_fatalerror.h</code> (Implementation File for Leave using system fatal error)	684
<code>oscl_error_imp_jumps.h</code> (Implemenation of using Setjmp / Longjmp)	685

<code>oscl_error_trapcleanup.h</code> (OSCL Error trap and cleanup implementation include file)	687
<code>oscl_exception.h</code> (Contains all the exception handling macros and classes)	688
<code>oscl_exclusive_ptr.h</code> (This file defines the <code>OsclExclusivePtr</code> template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error)	689
<code>oscl_file_async_read.h</code>	690
<code>oscl_file_cache.h</code> (The file <code>oscl_file_cache.h</code> defines the class <code>OsclFileCache</code>)	691
<code>oscl_file_dir_utils.h</code> (The file <code>oscl_file_dir_utils.h</code> defines some unix-style directory ops)	692
<code>oscl_file_find.h</code> (The file <code>oscl_file_find.h</code> defines the class <code>Oscl_FileFind</code>)	694
<code>oscl_file_handle.h</code> (The file <code>oscl_file_handle.h</code> defines the class <code>OsclFileHandle</code>)	695
<code>oscl_file_io.h</code> (The file <code>oscl_file_io.h</code> defines the class <code>Oscl_File</code> . This is the public API to the basic file I/O operations)	696
<code>oscl_file_manager.h</code> (File management class)	697
<code>oscl_file_native.h</code> (The file <code>oscl_file_native.h</code> defines the class <code>OsclNativeFile</code> . This is the porting layer for basic file I/O operations)	698
<code>oscl_file_server.h</code> (The file <code>oscl_file_server.h</code> defines the class <code>Oscl_FileServer</code> . This is the porting layer for file server implementations)	699
<code>oscl_file_stats.h</code> (File stats class)	700
<code>oscl_file_types.h</code> (The file <code>oscl_file_types.h</code> defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here)	701
<code>oscl_heapbase.h</code> (OSCL Heap Base include file)	702
<code>oscl_init.h</code> (Global oscl initialization)	703
<code>oscl_int64_utils.h</code>	704
<code>oscl_ip_socket.h</code>	705
<code>oscl_linked_list.h</code> (The file <code>oscl_linked_list.h</code> defines the template class <code>Oscl_Linked_List</code> which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter)	706
<code>oscl_lock_base.h</code> (This file defines an abstract lock class, <code>OsclLockBase</code> , that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, <code>OsclNullLock</code> , is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the <code>OsclScopedLock</code> class which is template class takes care of freeing the lock when the class goes out of scope)	707
<code>oscl_map.h</code> (The file <code>oscl_map.h</code> defines the template class <code>Oscl_Map</code> which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter)	708
<code>oscl_math.h</code> (Provides math functions)	709
<code>oscl_media_data.h</code> (Defines a container class for media data made up of a collection of memory fragments)	710
<code>oscl_media_status.h</code> (Defines a status values for the <code>MediaData</code> containers)	711
<code>oscl_mem.h</code> (This file contains basic memory definitions for common use across platforms)	712
<code>oscl_mem_align.h</code>	715
<code>oscl_mem_audit.h</code> (This file contains the definition and partial implementation of MM_Audit class)	716
<code>oscl_mem_audit_internals.h</code> (This file contains the internal definitions for the mem audit library)	718
<code>oscl_mem_auto_ptr.h</code> (This file defines the <code>oscl_mem_auto_ptr</code> template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error)	719
<code>oscl_mem_basic_functions.h</code> (This file contains prototypes for the basic memory functions)	720
<code>oscl_mem_inst.h</code> (The file defines default memory instrumentation level)	721
<code>oscl_mem_mempool.h</code> (This file contains the definition of memory pool allocators)	722
<code>oscl_mutex.h</code> (This file provides implementation of mutex)	723
<code>oscl_namestring.h</code> (Name string class include file)	724

<code>oscl_opaque_type.h</code> (The file <code>oscl_opaque_type.h</code> defines pure virtual classes for working with opaque types)	725
<code>oscl_pqueue.h</code> (Implements a priority queue data structure similar to STL)	726
<code>oscl_proctstatus.h</code>	727
<code>oscl_queue.h</code> (The file <code>oscl_queue.h</code> defines the template class <code>Oscl_Queue</code> . It is similar to the <code>STL::queue</code> class, with some differences: - less complete - based on array rather than a deque - some interfaces modeled on <code>oscl_vector</code> , for ease of transition Memory allocation is abstracted through the use of an allocator template parameter)	728
<code>oscl_rand.h</code> (Provides pseudo-random number generation)	729
<code>oscl_refcounter.h</code> (A general purpose reference counter to object lifetimes)	730
<code>oscl_refcounter_memfrag.h</code> (This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount)	731
<code>oscl_registry_access_client.h</code> (Client-side implementation Registry Access implementation)	732
<code>oscl_registry_client.h</code> (Client-side implementation of <code>OsclRegistry</code>)	733
<code>oscl_registry_client_impl.h</code> (Client-side implementation of <code>OsclRegistryInterface</code>)	734
<code>oscl_registry_serv_impl.h</code> (Server-side implementation of <code>OsclRegistry</code> interfaces)	735
<code>oscl_registry_serv_impl_global.h</code>	736
<code>oscl_registry_serv_impl_tls.h</code>	737
<code>oscl_registry_types.h</code> (Common types used in <code>Oscl registry</code> interfaces)	738
<code>oscl_scheduler.h</code>	739
<code>oscl_scheduler_ao.h</code> (<code>Oscl Scheduler</code> user execution object classes)	740
<code>oscl_scheduler_aobase.h</code> (<code>Oscl Scheduler</code> internal active object classes)	741
<code>oscl_scheduler_readyq.h</code> (Ready q types for <code>oscl scheduler</code>)	742
<code>oscl_scheduler_threadcontext.h</code> (Thread context functions needed by <code>oscl scheduler</code>)	743
<code>oscl_scheduler_tuneables.h</code> (Tunable settings for <code>Oscl Scheduler</code>)	744
<code>oscl_scheduler_types.h</code> (Scheduler common types include file)	745
<code>oscl_semaphore.h</code> (This file provides implementation of mutex)	746
<code>oscl_shared_ptr.h</code> (This file defines a template class <code>OsclSharedPtr</code> which is a "smart pointer" to the parameterized type)	747
<code>oscl_singleton.h</code> (This file defines the <code>OsclSingleton</code> class. This class provides a container which used to give access to a set of process-level singleton objects. Each object is indexed by an integer ID, listed below. There can only be one instance of each object per process at a given time)	748
<code>oscl_snprintf.h</code> (Provides a portable implementation of <code>snprintf</code>)	750
<code>oscl_socket.h</code> (The file <code>oscl_socket.h</code> defines the OSCL Socket APIs)	751
<code>oscl_socket_accept.h</code>	752
<code>oscl_socket_bind.h</code>	753
<code>oscl_socket_connect.h</code>	754
<code>oscl_socket_imp.h</code>	755
<code>oscl_socket_imp_base.h</code>	756
<code>oscl_socket_imp_pv.h</code>	757
<code>oscl_socket_listen.h</code>	758
<code>oscl_socket_method.h</code>	759
<code>oscl_socket_recv.h</code>	760
<code>oscl_socket_recv_from.h</code>	761
<code>oscl_socket_request.h</code>	762
<code>oscl_socket_send.h</code>	763
<code>oscl_socket_send_to.h</code>	764
<code>oscl_socket_serv_imp.h</code>	765
<code>oscl_socket_serv_imp_base.h</code>	766
<code>oscl_socket_serv_imp_pv.h</code>	767
<code>oscl_socket_serv_imp_reqlist.h</code>	768
<code>oscl_socket_shutdown.h</code>	769

oscl_socket_stats.h	770
oscl_socket_tunables.h	772
oscl_socket_types.h	774
oscl_stdstring.h (This file provides standard string operations such as strlen, strncpy, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as strncpy, strncat, etc. But, we chose to define one. In such cases, we return the destination as null)	776
oscl_str_ptr_len.h (Defines a data structure for string containment/manipulations where the storage for the string is maintained externally)	778
oscl_string.h (Provides a standardized set of string containers that can be used in place of character arrays)	779
oscl_string_containers.h (Provides a standardized set of string containers that can be used in place of character arrays)	780
oscl_string_rep.h (Contains some internal implementation for string containers)	781
oscl_string_uri.h (Utilities to unescape URIs)	782
oscl_string_utf8.h (Utilities to validate and truncate UTF-8 encoded strings)	783
oscl_string_utils.h (Utilities to parse and convert strings)	784
oscl_string_xml.h (Utilities to escape special characters in XML strings)	785
oscl_tagtree.h (The file oscl_tagtree.h ..)	786
oscl_tcp_socket.h	787
oscl_thread.h	788
oscl_tickcount.h (Defines a data structure for string containment/manipulations where the storage for the string is maintained externally)	790
oscl_time.h (The file oscl_time.h defines two classes NTPTime and TimeValue for getting, manipulating, and formatting time values. The TimeValue class is based on the native system time format while NTPTime is used for the standard Network Time Protocol format)	791
oscl_timer.h	793
oscl_tls.h	794
oscl_tree.h (The file oscl_tree.h defines the template class Oscl_Rb_Tree which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the Oscl_Map class. Memory allocation is abstracted through the use of an allocator template parameter)	795
oscl_types.h (This file contains basic type definitions for common use across platforms)	796
oscl_udp_socket.h	797
oscl_utf8conv.h (Utilities to convert unicode to utf8 and vice versa)	798
oscl_uuid.h (This file defines the OSCL UUID structure used for unique identifiers as well as the short (32-bit) identifiers OsclUid32)	799
oscl_vector.h (The file oscl_vector.h defines the template class Oscl_Vector which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter)	801
osclconfig.h (This file contains configuration information for the linux platform)	802
osclconfig_ansi_memory.h (This file contains common typedefs based on the ANSI C limits.h header)	804
osclconfig_check.h	805
osclconfig_compiler_warnings.h (This file contains the ability to turn off/on compiler warnings)	806
osclconfig_error.h (This file contains the common typedefs and header files needed to compile osclerror)	807
osclconfig_error_check.h	808
osclconfig_global_new_delete.h	809
osclconfig_global_placement_new.h	810
osclconfig_io.h (This file contains common typedefs based on the ANSI C limits.h header)	811
osclconfig_io_check.h	822
osclconfig_ix86.h (This file contains configuration information for the ix86 processor family)	823

osclconfig_lib.h (This file contains configuration information for the ANSI build)	824
osclconfig_lib_check.h	825
osclconfig_limits_typedefs.h (This file contains common typedefs based on the ANSI C limits.h header)	826
osclconfig_memory.h	827
osclconfig_memory_check.h	828
osclconfig_no_os.h	829
osclconfig_proc.h (This file contains configuration information for the linux platform)	830
osclconfig_proc_check.h	831
osclconfig_proc_unix_android.h	833
osclconfig_proc_unix_common.h	835
osclconfig_time.h	837
osclconfig_time_check.h	838
osclconfig_unix_android.h	839
osclconfig_unix_common.h	843
osclconfig_util.h	847
osclconfig_util_check.h	848
pvlogger.h (This file contains basic logger interfaces for common use across platforms)	849
pvlogger_accessories.h	857
pvlogger_c.h (This file contains basic logger interfaces for common use across platforms. C-callable version)	858
pvlogger_registry.h	860

Chapter 5

oscl Page Index

5.1 oscl Related Pages

Here is a list of all related documentation pages:

Todo List	861
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Chapter 6

oscl Module Documentation

6.1 OSCL config

Defines

- #define OSCL_ASSERT_ALWAYS 0
- #define OSCL_INTEGERS_WORD_ALIGNED 1
- #define OSCL_BYTE_ORDER_BIG_ENDIAN 0
- #define OSCL_BYTE_ORDER_LITTLE_ENDIAN 1
- #define OSCL_HAS_PRAGMA_PACK 0
- #define OSCL_HAS_UNIX_SUPPORT 0
- #define OSCL_HAS_MSWIN_SUPPORT 0
- #define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_SUPPORT 0
- #define OSCL_HAS_SAVAJE_SUPPORT 0
- #define OSCL_HAS_PV_C_OS_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_ERRORTRAP 0
- #define OSCL_HAS_SYMBIAN_MEMORY_FUNCS 0
- #define OSCL_HAS_PV_C_OS_API_MEMORY_FUNCS 0
- #define OSCL_HAS_PV_C_OS_TIME_FUNCS 0
- #define OSCL_HAS_UNIX_TIME_FUNCS 0
- #define OSCL_HAS_MSWIN_TIME_FUNCS 0
- #define OSCL_HAS_SYMBIAN_TIMERS 0
- #define OSCL_HAS_SYMBIAN_MATH 0
- #define OSCL_HAS_SYMBIAN_SCHEDULER 0
- #define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 0
- #define OSCL_HAS_PTHREAD_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_COMPATIBLE_IO_FUNCTION 0
- #define OSCL_HAS_SAVAJE_IO_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_SOCKET_SERVER 0
- #define OSCL_HAS_SYMBIAN_DNS_SERVER 0
- #define OSCL_HAS_BERKELEY_SOCKETS 0

Typedefs

- `typedef int8 __int8_check__`
- `typedef uint8 __uint8_check__`
- `typedef int16 __int16_check__`
- `typedef uint16 __uint16_check__`
- `typedef int32 __int32_check__`
- `typedef uint32 __uint32_check__`

6.1.1 Define Documentation

6.1.1.1 `#define OSCL_ASSERT_ALWAYS 0`

macro should be set to 0 or 1. When set to 1, OSCL_ASSERT will be compiled in release mode as well as debug mode.

6.1.1.2 `#define OSCL_BYTE_ORDER_BIG_ENDIAN 0`

macro should be set to 1 if the target platform uses big-endian byte order in memory. Otherwise it should be set to 0.

6.1.1.3 `#define OSCL_BYTE_ORDER_LITTLE_ENDIAN 1`

macro should be set to 1 if the target platform uses little-endian byte order in memory. Otherwise it should be set to 0.

6.1.1.4 `#define OSCL_HAS_BERKELEY_SOCKETS 0`

6.1.1.5 `#define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0`

6.1.1.6 `#define OSCL_HAS_MSWIN_SUPPORT 0`

6.1.1.7 `#define OSCL_HAS_MSWIN_TIME_FUNCS 0`

6.1.1.8 `#define OSCL_HAS_PRAGMA_PACK 0`

macro should be set to 1 if the compiler supports pragma pack, 0 if it does not.

- 6.1.1.9 #define OSCL_HAS_PTHREAD_SUPPORT 0
- 6.1.1.10 #define OSCL_HAS_PV_C_OS_API_MEMORY_FUNCS 0
- 6.1.1.11 #define OSCL_HAS_PV_C_OS_SUPPORT 0
- 6.1.1.12 #define OSCL_HAS_PV_C_OS_TIME_FUNCS 0
- 6.1.1.13 #define OSCL_HAS_SAVAJE_IO_SUPPORT 0
- 6.1.1.14 #define OSCL_HAS_SAVAJE_SUPPORT 0
- 6.1.1.15 #define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 0
- 6.1.1.16 #define OSCL_HAS_SYMBIAN_COMPATIBLE_IO_FUNCTION 0
- 6.1.1.17 #define OSCL_HAS_SYMBIAN_DNS_SERVER 0
- 6.1.1.18 #define OSCL_HAS_SYMBIAN_ERRORTRAP 0
- 6.1.1.19 #define OSCL_HAS_SYMBIAN_MATH 0
- 6.1.1.20 #define OSCL_HAS_SYMBIAN_MEMORY_FUNCS 0
- 6.1.1.21 #define OSCL_HAS_SYMBIAN_SCHEDULER 0
- 6.1.1.22 #define OSCL_HAS_SYMBIAN_SOCKET_SERVER 0
- 6.1.1.23 #define OSCL_HAS_SYMBIAN_SUPPORT 0
- 6.1.1.24 #define OSCL_HAS_SYMBIAN_TIMERS 0
- 6.1.1.25 #define OSCL_HAS_UNIX_SUPPORT 0
- 6.1.1.26 #define OSCL_HAS_UNIX_TIME_FUNCS 0
- 6.1.1.27 #define OSCL_INTEGERS_WORD_ALIGNED 1

macro should be set to 1 if the target platform requires integers to be word-aligned in memory. Otherwise it should be set to 0.

6.1.2 Typedef Documentation

- 6.1.2.1 `typedef int16 __int16__check__`**
- 6.1.2.2 `typedef int32 __int32__check__`**
- 6.1.2.3 `typedef int8 __int8__check__`**
- 6.1.2.4 `typedef uint16 __uint16__check__`**
- 6.1.2.5 `typedef uint32 __uint32__check__`**
- 6.1.2.6 `typedef uint8 __uint8__check__`**

6.2 OSCL Base

Files

- file [oscl_assert.h](#)

The file [oscl_assert.h](#) provides an OSCL_ASSERT macro to document assumptions and test them during development.

- file [oscl_base.h](#)

The file [oscl_base.h](#) is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros.

- file [oscl_base_alloc.h](#)

A basic allocator that does not rely on other modules.

- file [oscl_base_macros.h](#)

This file defines common macros and constants for basic compilation support.

- file [oscl_byte_order.h](#)

This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders).

- file [oscl_defalloc.h](#)

The file defines simple default memory allocator classes. These allocators are used by the [Oscl_Vector](#) and [Oscl_Map](#) class, etc.

- file [oscl_dll.h](#)

Defines a DLL entry point.

- file [oscl_exclusive_ptr.h](#)

This file defines the [OsclExclusivePtr](#) template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

- file [oscl_linked_list.h](#)

The file [oscl_linked_list.h](#) defines the template class [Oscl_Linked_List](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

- file [oscl_lock_base.h](#)

This file defines an abstract lock class, [OsclLockBase](#), that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, [OsclNullLock](#), is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the [OsclScopedLock](#) class which is template class takes care of freeing the lock when the class goes out of scope.

- file [oscl_map.h](#)

The file [oscl_map.h](#) defines the template class [Oscl_Map](#) which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

- file [oscl_mem_inst.h](#)

The file defines default memory instrumentation level.

- file [oscl_opaque_type.h](#)

The file [oscl_opaque_type.h](#) defines pure virtual classes for working with opaque types.

- file [oscl_queue.h](#)

The file [oscl_queue.h](#) defines the template class [Oscl_Queue](#). It is similar to the `STL::queue` class, with some differences: - less complete - based on array rather than a deque - some interfaces modeled on `oscl_vector`, for ease of transition Memory allocation is abstracted through the use of an allocator template parameter.

- file [oscl_refcounter.h](#)

A general purpose reference counter to object lifetimes.

- file [oscl_refcounter_memfrag.h](#)

This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount.

- file [oscl_shared_ptr.h](#)

This file defines a template class [OsclSharedPtr](#) which is a "smart pointer" to the parameterized type.

- file [oscl_stdstring.h](#)

This file provides standard string operations such as `strlen`, `strncpy`, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as `strncpy`, `strncat`, etc. But, we chose to define one. In such cases, we return the destination as null.

- file [oscl_tagtree.h](#)

The file [oscl_tagtree.h](#) ...

- file [oscl_time.h](#)

The file [oscl_time.h](#) defines two classes [NTPTime](#) and [TimeValue](#) for getting, manipulating, and formatting time values. The [TimeValue](#) class is based on the native system time format while [NTPTime](#) is used for the standard Network Time Protocol format.

- file [oscl_tree.h](#)

The file [oscl_tree.h](#) defines the template class [Oscl_Rb_Tree](#) which has a very similar API as the `STL Tree` class. It is an implementation of a Red-Black Tree for use by the [Oscl_Map](#) class. Memory allocation is abstracted through the use of an allocator template parameter.

- file [oscl_types.h](#)

This file contains basic type definitions for common use across platforms.

- file [oscl_vector.h](#)

The file [oscl_vector.h](#) defines the template class [Oscl_Vector](#) which has a very similar API as the `STL Vector` class (it basically provides a subset of the `STL` functionality). Memory allocation is abstracted through the use of an allocator template parameter.

Data Structures

- class [_OsclBasicAllocator](#)
- class [LinkedListElement](#)
- class [NTPTime](#)

The [NTPTime](#) class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.

- class Oscl_Alloc
- class Oscl_Dealloc
- class Oscl_DefAlloc
- class Oscl_DefAllocWithRefCounter
- struct Oscl_Less
- class Oscl_Linked_List
- class Oscl_Linked_List_Base
- class Oscl_Map
- class Oscl_MTLinked_List
- class Oscl_Opaque_Type_Alloc
- class Oscl_Opaque_Type_Alloc_LL
- class Oscl_Opaque_Type_Compare
- struct Oscl_Pair
- class Oscl_Queue
- class Oscl_Queue_Base
- class Oscl_Rb_Tree
- class Oscl_Rb_Tree_Base
- struct Oscl_Rb_Tree_Const_Iterator
- struct Oscl_Rb_Tree_Iterator
- struct Oscl_Rb_Tree_Node
- struct Oscl_Rb_Tree_Node_Base
- struct Oscl_Select1st
- struct Oscl_Tag
- struct Oscl_Tag_Base
- class Oscl_TagTree
- class Oscl_TAlloc
- class Oscl_Vector
- class Oscl_Vector_Base
- class OsclAllocDestructDealloc
- class OsclDestructDealloc
- class OsclExclusiveArrayPtr

The `OsclExclusiveArrayPtr` class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the `OsclExclusiveArrayPtr` expires, its destructor uses delete to free the memory.

- class OsclExclusivePtr

The `OsclExclusivePtr` class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the `OsclExclusivePtr` expires, its destructor uses delete to free the memory.

- class OsclExclusivePtrA

The `OsclExclusivePtrA` class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or or indirectly) through Alloc. When the `OsclExclusivePtrA` expires, Alloc is used to free the memory.

- class OsclLockBase
- struct OsclMemoryFragment
- class OsclNullLock
- class OsclRefCounter
- class OsclRefCounterDA

- class [OsclRefCounterMemFrag](#)
- class [OsclRefCounterMTDA](#)
- class [OsclRefCounterMTSA](#)
- class [OsclRefCounterSA](#)
- class [OsclScopedLock](#)

The OsclScopedLock class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the OsclScopedLock goes out of scope.

- class [OsclSharedPtr](#)

A parameterized smart pointer class.

- class [OsclTLS](#)
- class [OsclTLSRegistry](#)
- class [TimeValue](#)

The TimeValue class represents a time value in a format native to the system.

- class [TLSStorageOps](#)

Defines

- #define [OSCL_ASSERT](#)(*_expr*) ((*_expr*)?((void)0):OSCL Assert(# *_expr*, __FILE__, __LINE__))
- #define [OSCL_HAS_SINGLETON_SUPPORT](#) 1
- #define [NULL_TERM_CHAR](#) '\0'

The NULL_TERM_CHAR is used to terminate c-style strings.

- #define [NULL](#) (0)

if the NULL macro isn't already defined, then define it as zero.

- #define [OSCL_INLINE](#) inline
- #define [OSCL_COND_EXPORT_REF](#)
- #define [OSCL_COND_IMPORT_REF](#)
- #define [OSCL_CONST_CAST](#)(*type*, *exp*) ((*type*)(*exp*))

Type casting macros.

- #define [OSCL_STATIC_CAST](#)(*type*, *exp*) ((*type*)(*exp*))
- #define [OSCL_REINTERPRET_CAST](#)(*type*, *exp*) ((*type*)(*exp*))
- #define [OSCL_DYNAMIC_CAST](#)(*type*, *exp*) ((*type*)(*exp*))
- #define [OSCL_VIRTUAL_BASE](#)(*type*) *type*
- #define [OSCL_UNUSED_ARG](#)(*vbl*) (void)(*vbl*)
- #define [OSCL_UNUSED_RETURN](#)(*value*) return *value*
- #define [OSCL_MIN](#)(*a*, *b*) ((*a*) < (*b*) ? (*a*) : (*b*))
- #define [OSCL_MAX](#)(*a*, *b*) ((*a*) > (*b*) ? (*a*) : (*b*))
- #define [OSCL_ABS](#)(*a*) ((*a*) > (0) ? (*a*) : (-*a*))
- #define [OSCL_TEMPLATED_DESTRUCTOR_CALL](#)(*type*, *simple_type*) *type* :: ~*simple_type* ()
- #define [OSCL_UNSIGNED_CONST](#)(*x*) *x*
- #define [OSCL_PACKED_VAR](#) "error"
- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)
- #define [ALLOCATE](#)(*n*) *allocate_fl*(*n*, __FILE__, __LINE__)
- #define [ALLOC_AND_CONSTRUCT](#)(*n*) *alloc_and_construct_fl*(*n*, __FILE__, __LINE__)
- #define [OSCL_DLL_ENTRY_POINT](#)() void *oscl_dll_entry_point*() {}

- #define **OSCL_DLL_ENTRY_POINT_DEFAULT()**
- #define **PVMEM_INST_LEVEL** 1
- #define **OSCL_DISABLE_WARNING_RETURN_TYPE_NOT_UDT**
- #define **OSCL_TLS_BASE_SLOTS** **OSCL_TLS_ID_BASE_LAST** +1
- #define **OSCL_TLS_EXTERNAL_SLOTS** 0
- #define **OSCL_TLS_MAX_SLOTS** (**OSCL_TLS_BASE_SLOTS** + **OSCL_TLS_EXTERNAL_SLOTS**)

Typedefs

- typedef char **CtimeStrBuf** [**CTIME_BUFFER_SIZE**]
- typedef char **PV8601timeStrBuf** [**PV8601TIME_BUFFER_SIZE**]
- typedef char **ISO8601timeStrBuf** [**ISO8601TIME_BUFFER_SIZE**]
- typedef **OsclAny** **TOsclTlsKey**
- typedef int **c_bool**

The c_bool type is mapped to an integer to provide a bool type for C interfaces.

- typedef void **OsclAny**

The OsclAny is meant to be used the context of a generic pointer (i.e., no specific type).

- typedef char **mbchar**

mbchar is multi-byte char (e.g., UTF-8) with null termination.

- typedef unsigned int **uint**

The uint type is a convenient abbreviation for unsigned int.

- typedef uint8 **octet**

The octet type is meant to be used for referring to a byte or collection bytes without suggesting anything about the underlying meaning of the bytes.

- typedef float **OsclFloat**

The Float type defined as OsclFloat.

- typedef **OSCL_NATIVE_INT64_TYPE** **int64**

- typedef **OSCL_NATIVE_UINT64_TYPE** **uint64**

- typedef **OSCL_NATIVE_WCHAR_TYPE** **oscl_wchar**

- typedef **oscl_wchar** **OSCL_TCHAR**

define OSCL_TCHAR

Enumerations

- enum **TimeUnits** { **SECONDS** = 0, **MILLISECONDS** = 1, **MICROSECONDS** = 2 }

The TimeUnits enum can be used when constructing a TimeValue class.

Functions

- OSCL_COND_IMPORT_REF void [_OSCL_Abort\(\)](#)
This function terminates the current process abnormally.
- OSCL_IMPORT_REF void [OSCL_Assert](#) (const char *expr, const char *filename, int line_number)
OSCL_ASSERT macro evaluates an expression and when the result is false, prints a diagnostic message and aborts the program.
- void [PVOsclBase_Init\(\)](#)
- void [PVOsclBase_Cleanup\(\)](#)
- void [little_endian_to_host](#) (char *data, uint32 size)
Convert little endian to host format.
- void [host_to_little_endian](#) (char *data, unsigned int size)
Convert host to little endian format.
- void [big_endian_to_host](#) (char *data, unsigned int size)
Convert big endian to host format.
- void [host_to_big_endian](#) (char *data, unsigned int size)
Convert host to big endian format.
- OSCL_IMPORT_REF uint32 [oscl_strlen](#) (const char *str)
- OSCL_IMPORT_REF uint32 [oscl_strlen](#) (const [oscl_wchar](#) *str)
- OSCL_IMPORT_REF char * [oscl_strncpy](#) (char *dest, const char *src, uint32 count)
- OSCL_IMPORT_REF [oscl_wchar](#) * [oscl_strncpy](#) ([oscl_wchar](#) *dest, const [oscl_wchar](#) *src, uint32 count)
- OSCL_IMPORT_REF int32 [oscl_strcmp](#) (const char *str1, const char *str2)
- OSCL_IMPORT_REF int32 [oscl_strcmp](#) (const [oscl_wchar](#) *str1, const [oscl_wchar](#) *str2)
- OSCL_IMPORT_REF int32 [oscl_strncmp](#) (const char *str1, const char *str2, uint32 count)
- OSCL_IMPORT_REF int32 [oscl_strncmp](#) (const [oscl_wchar](#) *str1, const [oscl_wchar](#) *str2, uint32 count)
- OSCL_IMPORT_REF char * [oscl_strncat](#) (char *dest, const char *src, uint32 count)
- OSCL_IMPORT_REF [oscl_wchar](#) * [oscl_strncat](#) ([oscl_wchar](#) *dest, const [oscl_wchar](#) *src, uint32 count)
- OSCL_IMPORT_REF const char * [oscl_strchr](#) (const char *str, int32 c)
- OSCL_IMPORT_REF char * [oscl_strchr](#) (char *str, int32 c)
- OSCL_IMPORT_REF const [oscl_wchar](#) * [oscl_strchr](#) (const [oscl_wchar](#) *str, int32 c)
- OSCL_IMPORT_REF [oscl_wchar](#) * [oscl_strchr](#) ([oscl_wchar](#) *str, int32 c)
- OSCL_IMPORT_REF const char * [oscl strrchr](#) (const char *str, int32 c)
- OSCL_IMPORT_REF char * [oscl strrchr](#) (char *str, int32 c)
- OSCL_IMPORT_REF const [oscl_wchar](#) * [oscl strrchr](#) (const [oscl_wchar](#) *str, int32 c)
- OSCL_IMPORT_REF [oscl_wchar](#) * [oscl strrchr](#) ([oscl_wchar](#) *str, int32 c)
- OSCL_IMPORT_REF char * [oscl_strset](#) (char *dest, char val, uint32 count)
- OSCL_IMPORT_REF [oscl_wchar](#) * [oscl_strset](#) ([oscl_wchar](#) *dest, [oscl_wchar](#) val, uint32 count)
- OSCL_IMPORT_REF int32 [oscl_CIstrcmp](#) (const char *str1, const char *str2)
- OSCL_IMPORT_REF int32 [oscl_CIstrcmp](#) (const [oscl_wchar](#) *str1, const [oscl_wchar](#) *str2)
- OSCL_IMPORT_REF int32 [oscl_CIstrncmp](#) (const char *str1, const char *str2, uint32 count)

- OSCL_IMPORT_REF int32 `oscl_Clstrncmp` (const `oscl_wchar` *str1, const `oscl_wchar` *str2, uint32 count)
- OSCL_IMPORT_REF char `oscl_tolower` (const char car)
- OSCL_IMPORT_REF `oscl_wchar` `oscl_tolower` (const `oscl_wchar` car)
- OSCL_IMPORT_REF bool `oscl_isLetter` (const char car)
- OSCL_IMPORT_REF const char * `oscl_strstr` (const char *str1, const char *str2)
- OSCL_IMPORT_REF char * `oscl_strstr` (char *str1, const char *str2)
- OSCL_IMPORT_REF const `oscl_wchar` * `oscl_strstr` (const `oscl_wchar` *str1, const `oscl_wchar` *str2)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strstr` (`oscl_wchar` *str1, const `oscl_wchar` *str2)
- OSCL_IMPORT_REF char * `oscl_strcat` (char *dest, const char *src)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strcat` (`oscl_wchar` *dest, const `oscl_wchar` *src)
- OSCL_IMPORT_REF void `PV8601ToRFC822` (`PV8601timeStrBuf` pv8601_buffer, `CtimeStrBuf` ctime_buffer)
- OSCL_IMPORT_REF void `ISO8601ToRFC822` (`ISO8601timeStrBuf` iso8601_buffer, `CtimeStrBuf` ctime_buffer)
- OSCL_IMPORT_REF void `RFC822ToPV8601` (`CtimeStrBuf` ctime_buffer, `PV8601timeStrBuf`)
- OSCL_COND_IMPORT_REF `TimeValue` operator- (const `TimeValue` &a, const `TimeValue` &b)
- OSCL_COND_IMPORT_REF `TimeValue` operator+ (const `TimeValue` &a, const int32 bSeconds)
- OSCL_COND_IMPORT_REF `TimeValue` operator+ (const int32 aSeconds, const `TimeValue` &b)
- OSCL_COND_IMPORT_REF `TimeValue` operator- (const `TimeValue` &a, const int32 bSeconds)
- OSCL_COND_IMPORT_REF `TimeValue` operator- (const int32 aSeconds, const `TimeValue` &b)
- bool `operator==` (const `OsclSharedPtr` &b) const

Test for equality to see if two PVHandles wrap the same object.

- void `Bind` (const `OsclSharedPtr` &inHandle)

Use this function to bind an existing `OsclSharedPtr` to a already-wrapped object.

- void `Bind` (TheClass *ptr, `OsclRefCounter` *in_refcnt)

Use this function to bind an existing `OsclSharedPtr` to a new (unwrapped) object.

Variables

- const int `CTIME_BUFFER_SIZE` = 26
- const int `PV8601TIME_BUFFER_SIZE` = 21
- const int `ISO8601TIME_BUFFER_SIZE` = 21
- const long `USEC_PER_SEC` = 1000000
- const long `MSEC_PER_SEC` = 1000
- const uint32 `unix_ntp_offset` = 2208988800U
- const uint32 `OSCL_TLS_ID_MAGICNUM` = 0
- const uint32 `OSCL_TLS_ID_ERRORHOOK` = 1
- const uint32 `OSCL_TLS_ID_PVLOGGER` = 2
- const uint32 `OSCL_TLS_ID_TEST` = 3
- const uint32 `OSCL_TLS_ID_PVSCHEDULER` = 4
- const uint32 `OSCL_TLS_ID_PVERRORTRAP` = 5
- const uint32 `OSCL_TLS_ID_SDPMEDIAPARSER` = 6
- const uint32 `OSCL_TLS_ID_PAYLOADPARSER` = 7
- const uint32 `OSCL_TLS_ID_PVMFRECOGNIZER` = 8
- const uint32 `OSCL_TLS_ID_WMDRM` = 9
- const uint32 `OSCL_TLS_ID_OSCLREGISTRY` = 10
- const uint32 `OSCL_TLS_ID_SQLITE3` = 11
- const uint32 `OSCL_TLS_ID_BASE_LAST` = 11

6.2.1 Detailed Description

Additional osclbase comment

Additional osclbase comment

Additional osclbase comment

6.2.2 Define Documentation

6.2.2.1 #define ALLOC_AND_CONSTRUCT(n) alloc_and_construct_fl(n,__FILE__,__LINE__)

6.2.2.2 #define ALLOCATE(n) allocate_fl(n,__FILE__,__LINE__)

6.2.2.3 #define NULL (0)

if the NULL macro isn't already defined, then define it as zero.

6.2.2.4 #define NULL_TERM_CHAR '\0'

The NULL_TERM_CHAR is used to terminate c-style strings.

6.2.2.5 #define OSCL_ABS(a) ((a) > (0) ? (a) : -(a))

6.2.2.6 #define OSCL_ASSERT(_expr) ((_expr)?((void)0):OSCLAssert#_expr,__FILE__,__LINE__))

6.2.2.7 #define OSCL_COND_EXPORT_REF

6.2.2.8 #define OSCL_COND_IMPORT_REF

6.2.2.9 #define OSCL_CONST_CAST(type, exp) ((type)(exp))

Type casting macros.

Parameters:

type Destination type of cast

exp Expression to cast

6.2.2.10 #define OSCL_DISABLE_WARNING_RETURN_TYPE_NOT_UDT

6.2.2.11 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

6.2.2.12 #define OSCL_DLL_ENTRY_POINT() void oscl_dll_entry_point() {}

DLL entry/exit point.

Allows you to define custom operations at the entry and exit of the DLL. Place this macro within one source file for each DLL.

Functions with the custom commands for the DLL entry and exit point must also be defined. The entry point custom function is LocalDllEntry(), and the exit point custom function is LocalDllExit().

These functions will be called as a result of executing this macro.

Usage :

```
LocalDliEntry() { custom operations... }  
LocalDliExit() { custom operations... }  
OSCL_DLL_ENTRY_POINT()
```

6.2.2.13 #define OSCL_DLL_ENTRY_POINT_DEFAULT()

Default DLL entry/exit point function.

The body of the DLL entry point is given. The macro only needs to be declared within the source file.

Usage :

```
OSCL_DLL_ENTRY_POINT_DEFAULT()
```

6.2.2.14 #define OSCL_DYNAMIC_CAST(type, exp) ((type)(exp))

6.2.2.15 #define OSCL_HAS_SINGLETON_SUPPORT 1

6.2.2.16 #define OSCL_INLINE inline

6.2.2.17 #define OSCL_MAX(a, b) ((a) > (b) ? (a) : (b))

6.2.2.18 #define OSCL_MIN(a, b) ((a) < (b) ? (a) : (b))

6.2.2.19 #define OSCL_PACKED_VAR "error"

6.2.2.20 #define OSCL_REINTERPRET_CAST(type, exp) ((type)(exp))

6.2.2.21 #define OSCL_STATIC_CAST(type, exp) ((type)(exp))

6.2.2.22 #define OSCL_TEMPLATED_DESTRUCTOR_CALL(type, simple_type) type :: ~simple_type ()

6.2.2.23 #define OSCL_TLS_BASE_SLOTS OSCL_TLS_ID_BASE_LAST +1

6.2.2.24 #define OSCL_TLS_EXTERNAL_SLOTS 0

6.2.2.25 #define OSCL_TLS_MAX_SLOTS (OSCL_TLS_BASE_SLOTS + OSCL_TLS_EXTERNAL_SLOTS)

6.2.2.26 #define OSCL_UNSIGNED_CONST(x) x

6.2.2.27 #define OSCL_UNUSED_ARG(vbl) (void)(vbl)

The following two macros are used to avoid compiler warnings.

OSCL_UNUSED_ARG(vbl) is used to "reference" an otherwise unused parameter or variable, often one which is used only in an OSCL_ASSERT and thus unreferenced in release mode **OSCL_UNUSED_RETURN(val)** provides a "return" of a value, in places which will not actually be executed, such as after an OSCL_LEAVE or Thread::exit or abort. The value needs to be of an appropriate type for the current

function, though zero will usually suffice. Note that OSCL_UNUSED_RETURN will not be necessary for 'void' functions, as there is no requirement for a value-return operation.

6.2.2.28 #define OSCL_UNUSED_RETURN(value) return value

6.2.2.29 #define OSCL_VIRTUAL_BASE(type) type

6.2.2.30 #define PVMEM_INST_LEVEL 1

6.2.3 Typedef Documentation

6.2.3.1 typedef int c_bool

The c_bool type is mapped to an integer to provide a bool type for C interfaces.

6.2.3.2 typedef char CtimeStrBuf[CTIME_BUFFER_SIZE]

6.2.3.3 typedef OSCL_NATIVE_INT64_TYPE int64

6.2.3.4 typedef char ISO8601timeStrBuf[ISO8601TIME_BUFFER_SIZE]

6.2.3.5 typedef char mbchar

mbchar is multi-byte char (e.g., UTF-8) with null termination.

6.2.3.6 typedef uint8 octet

The octet type is meant to be used for referring to a byte or collection bytes without suggesting anything about the underlying meaning of the bytes.

6.2.3.7 typedef oscl_wchar OSCL_TCHAR

define OSCL_TCHAR

6.2.3.8 typedef OSCL_NATIVE_WCHAR_TYPE oscl_wchar

6.2.3.9 typedef void OsclAny

The OsclAny is meant to be used the context of a generic pointer (i.e., no specific type).

6.2.3.10 typedef float OsclFloat

The Float type defined as OsclFloat.

6.2.3.11 `typedef char PV8601timeStrBuf[PV8601TIME_BUFFER_SIZE]`

6.2.3.12 `typedef OsclAny TOsclTlsKey`

6.2.3.13 `typedef unsigned int uint`

The uint type is a convenient abbreviation for unsigned int.

6.2.3.14 `typedef OSCL_NATIVE_UINT64_TYPE uint64`

6.2.4 Enumeration Type Documentation

6.2.4.1 `enum TimeUnits`

The TimeUnits enum can be used when constructing a [TimeValue](#) class.

Enumeration values:

SECONDS

MILLISECONDS

MICROSECONDS

6.2.5 Function Documentation

6.2.5.1 `OSCL_COND_IMPORT_REF void _OSCL_Abort()`

This function terminates the current process abnormally.

6.2.5.2 `void big_endian_to_host (char * data, unsigned int size)`

Convert big endian to host format.

This function takes a buffer of data which is assumed to be in big endian order and rearranges it to the native order of the machine running the code. If the machine is a big endian machine, nothing is done.

Parameters:

data A pointer to the input/output buffer

size The number of bytes in the buffer.

6.2.5.3 `template<class TheClass> void OsclSharedPtr< TheClass >::Bind (TheClass * ptr, OsclRefCounter * in_refcnt) [inline, inherited]`

Use this function to bind an existing OsclSharedPtr to a new (unwrapped) object.

6.2.5.4 `template<class TheClass> void OsclSharedPtr< TheClass >::Bind (const OsclSharedPtr< TheClass > & inHandle) [inline, inherited]`

Use this function to bind an existing OsclSharedPtr to a already-wrapped object.

6.2.5.5 void host_to_big_endian (char * *data*, unsigned int *size*)

Convert host to big endian format.

This function takes a buffer of data which is assumed to be in native host order and rearranges it to big endian format. If the machine is a big endian machine, nothing is done.

Parameters:

- data* A pointer to the input/output buffer
- size* The number of bytes in the buffer.

6.2.5.6 void host_to_little_endian (char * *data*, unsigned int *size*)

Convert host to little endian format.

This function takes a buffer of data which is assumed to be in the host's native order and rearranges it to the little endian format. If the machine is a little endian machine, nothing is done.

Parameters:

- data* A pointer to the input/output buffer
- size* The number of bytes in the buffer.

6.2.5.7 OSCL_IMPORT_REF void ISO8601ToRFC822 ([ISO8601timeStrBuf iso8601_buffer](#), [CtimeStrBuf ctime_buffer](#))

6.2.5.8 void little_endian_to_host (char * *data*, uint32 *size*)

Convert little endian to host format.

This function takes a buffer of data which is assumed to be in little endian order and rearranges it to the native order of the machine running the code. If the machine is a little endian machine, nothing is done.

Parameters:

- data* A pointer to the input/output buffer
- size* The number of bytes in the buffer.

- 6.2.5.9 OSCL_COND_IMPORT_REF TimeValue operator+ (const int32 *aSeconds*, const TimeValue & *b*)**
- 6.2.5.10 OSCL_COND_IMPORT_REF TimeValue operator+ (const TimeValue & *a*, const int32 *bSeconds*)**
- 6.2.5.11 OSCL_COND_IMPORT_REF TimeValue operator- (const int32 *aSeconds*, const TimeValue & *b*)**
- 6.2.5.12 OSCL_COND_IMPORT_REF TimeValue operator- (const TimeValue & *a*, const int32 *bSeconds*)**
- 6.2.5.13 OSCL_COND_IMPORT_REF TimeValue operator- (const TimeValue & *a*, const TimeValue & *b*)**
- 6.2.5.14 template<class TheClass> bool OsclSharedPtr<TheClass>::operator== (const OsclSharedPtr<TheClass> & *b*) const [inline, inherited]**

Test for equality to see if two PVHandles wrap the same object.

- 6.2.5.15 OSCL_IMPORT_REF void OSCL_Assert (const char * *expr*, const char * *filename*, int *line_number*)**

OSCL_ASSERT macro evaluates an expression and when the result is false, prints a diagnostic message and aborts the program.

Parameters:

- expr* is the expression to be evaluated
- filename* is the name of the current source file
- line_number* is the line number in the current source file

- 6.2.5.16 OSCL_IMPORT_REF int32 oscl_CIstrcmp (const oscl_wchar * *str1*, const oscl_wchar * *str2*)**

Case in-sensitive string comparision.

Parameters:

- str1* string to compare
- str2* string to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

- 6.2.5.17 OSCL_IMPORT_REF int32 oscl_CIstrcmp (const char * *str1*, const char * *str2*)**

Case in-sensitive string comparision.

Parameters:

- str1* string to compare

str2 string to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.18 OSCL_IMPORT_REF int32 oscl_Clstrncmp (const oscl_wchar * *str1*, const oscl_wchar * *str2*, uint32 *count*)

Lexicographically compares(case in-sensitive), at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

Parameters:

str1 string to compare

str2 string to compare

count Number of characters to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.19 OSCL_IMPORT_REF int32 oscl_Clstrncmp (const char * *str1*, const char * *str2*, uint32 *count*)

Lexicographically compares(case in-sensitive), at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

Parameters:

str1 string to compare

str2 string to compare

count Number of characters to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.20 OSCL_IMPORT_REF bool oscl_isLetter (const char *car*)

check if supplied parameter is an alphabet (ASCII only).

Parameters:

car

Returns:

1 if car is an alphabet 0 if car is not an alphabet.

6.2.5.21 OSCL_IMPORT_REF oscl_wchar* oscl_streat (oscl_wchar * dest, const oscl_wchar * src)

Appends up to count characters from string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until either the end of src is reached or count characters have been copied. If copying takes place between objects that overlap, the behavior is undefined.

Parameters:

dest null terminated destination string

src source string

count number of characters to append.

Returns:

dest

6.2.5.22 OSCL_IMPORT_REF char* oscl_streat (char * dest, const char * src)

Appends string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until the end of src is reached. If copying takes place between objects that overlap, the behavior is undefined.

Parameters:

dest null terminated destination string

src source string

Returns:

dest

6.2.5.23 OSCL_IMPORT_REF oscl_wchar* oscl_strchr (oscl_wchar * str, int32 c)**6.2.5.24 OSCL_IMPORT_REF const oscl_wchar* oscl_strchr (const oscl_wchar * str, int32 c)**

Finds the first occurrence of c in string, or it returns NULL if c is not found. The null-terminating character is included in the search.

Parameters:

str null terminated source string

c character to search for

Returns:**6.2.5.25 OSCL_IMPORT_REF char* oscl_strchr (char * str, int32 c)****6.2.5.26 OSCL_IMPORT_REF const char* oscl_strchr (const char * str, int32 c)**

Finds the first occurrence of c in string, or it returns NULL if c is not found. The null-terminating character is included in the search.

Parameters:

str null terminated source string

c character to search for

Returns:**6.2.5.27 OSCL_IMPORT_REF int32 oscl_strcmp (const oscl_wchar * str1, const oscl_wchar * str2)**

Lexicographically compares two NULL terminated strings, str1 and str2, and returns a value indicating the relationship between them.

Parameters:

str1 String to compare

str2 String to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.28 OSCL_IMPORT_REF int32 oscl_strcmp (const char * str1, const char * str2)

Lexicographically compares two NULL terminated strings, str1 and str2, and returns a value indicating the relationship between them.

Parameters:

str1 String to compare

str2 String to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.29 OSCL_IMPORT_REF uint32 oscl_strlen (const oscl_wchar * str)

Gets the length of a wide char string

Parameters:

str NULL terminated string.

Returns:

Returns the number of characters in string, excluding the terminal NULL.

6.2.5.30 OSCL_IMPORT_REF uint32 oscl_strlen (const char * str)

Gets the length of a string

Parameters:

str NULL terminated string.

Returns:

Returns the number of characters in string, excluding the terminal NULL.

6.2.5.31 OSCL_IMPORT_REF **oscl_wchar*** oscl_strncat (**oscl_wchar *** dest, **const oscl_wchar *** src, **uint32 count**)

Appends up to count characters from string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until either the end of src is reached or count characters have been copied. If copying takes place between objects that overlap, the behavior is undefined.

Parameters:

dest null terminated destination string

src source string

count number of characters to append.

Returns:

dest

6.2.5.32 OSCL_IMPORT_REF **char*** oscl_strncat (**char *** dest, **const char *** src, **uint32 count**)

Appends up to count characters from string src to string dest, and then appends a terminating null character. The initial character of src overwrites the null character at the end of dest. Subsequent characters in src are appended to dest until either the end of src is reached or count characters have been copied. If copying takes place between objects that overlap, the behavior is undefined.

Parameters:

dest null terminated destination string

src source string

count number of characters to append.

Returns:

dest

6.2.5.33 OSCL_IMPORT_REF **int32** oscl_strncmp (**const oscl_wchar *** str1, **const oscl_wchar *** str2, **uint32 count**)

Lexicographically compares, at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

Parameters:

str1 String to compare

str2 String to compare

count Number of characters to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.34 OSCL_IMPORT_REF int32 oscl_strncmp (const char * str1, const char * str2, uint32 count)

Lexicographically compares, at most, the first count characters in str1 and str2 and returns a value indicating the relationship between the substrings.

Parameters:

- str1* String to compare
- str2* String to compare
- count* Number of characters to compare

Returns:

Negative if str1 < str2 Positive if str1 > str2 Zero if equal

6.2.5.35 OSCL_IMPORT_REF oscl_wchar* oscl_strncpy (oscl_wchar * dest, const oscl_wchar * src, uint32 count)

Copies the chars of one string to another.

Copies the initial count characters of src to dest and returns dest. If count is less than or equal to the length of src, a null character is not appended automatically to the copied string. If count is greater than the length of src, the destination string is padded with null characters up to length count. The behavior of strncpy is undefined if the source and destination strings overlap.

Parameters:

- dest* Destination string
- src* NULL terminated source string
- count* Number of chars to copy

Returns:

Returns dest.

6.2.5.36 OSCL_IMPORT_REF char* oscl_strncpy (char * dest, const char * src, uint32 count)

Copies the chars of one string to another.

Copies the initial count characters of src to dest and returns dest. If count is less than or equal to the length of src, a null character is not appended automatically to the copied string. If count is greater than the length of src, the destination string is padded with null characters up to length count. The behavior of strncpy is undefined if the source and destination strings overlap.

Parameters:

- dest* Destination string
- src* NULL terminated source string
- count* Number of chars to copy

Returns:

Returns dest.

6.2.5.37 OSCL_IMPORT_REF oscl_wchar* oscl_strrchr (oscl_wchar * str, int32 c)

6.2.5.38 OSCL_IMPORT_REF const oscl_wchar* oscl_strrchr (const oscl_wchar * str, int32 c)

6.2.5.39 OSCL_IMPORT_REF char* oscl_strrchr (char * str, int32 c)

6.2.5.40 OSCL_IMPORT_REF const char* oscl_strrchr (const char * str, int32 c)

Finds the last occurrence of c in string, or it returns NULL if c is not found. The null-terminating character is included in the search.

Parameters:

str null terminated source string

c character to search for

Returns:

6.2.5.41 OSCL_IMPORT_REF oscl_wchar* oscl_strset (oscl_wchar * dest, oscl_wchar val, uint32 count)

Sets the characters of a string to a specified character

Parameters:

dest buffer to modify

val character to set

count number of chars to set

Returns:

the value of dest

6.2.5.42 OSCL_IMPORT_REF char* oscl_strset (char * dest, char val, uint32 count)

Sets the characters of a string to a specified character

Parameters:

dest buffer to modify

val character to set

count number of chars to set

Returns:

the value of dest

6.2.5.43 OSCL_IMPORT_REF oscl_wchar* oscl_strstr (oscl_wchar * str1, const oscl_wchar * str2)

6.2.5.44 OSCL_IMPORT_REF const oscl_wchar* oscl_strstr (const oscl_wchar * str1, const oscl_wchar * str2)

find the occurrence of sub-string in a string.

Parameters:

str1 string.

str2 sub-string

Returns:

pointer to the begining of sub-string.

6.2.5.45 OSCL_IMPORT_REF char* oscl strstr (char * str1, const char * str2)**6.2.5.46 OSCL_IMPORT_REF const char* oscl strstr (const char * str1, const char * str2)**

find the occurrence of sub-string in a string.

Parameters:

str1 string.

str2 sub-string

Returns:

pointer to the begining of sub-string.

6.2.5.47 OSCL_IMPORT_REF oscl_wchar oscl_tolower (const oscl_wchar car)

convert upper case ASCII character to lower case. behaviour of this function for non-ASCII characters is not defined.

Parameters:

car upper case character.

Returns:

lower case character.

6.2.5.48 OSCL_IMPORT_REF char oscl_tolower (const char car)

convert upper case ASCII character to lower case. behaviour of this function for non-ASCII characters is not defined.

Parameters:

car upper case character.

Returns:

lower case character.

6.2.5.49 OSCL_IMPORT_REF void PV8601ToRFC822 (PV8601timeStrBuf *pv8601_buffer*, CtimeStrBuf *ctime_buffer*)**6.2.5.50 void PVOsclBase_Cleanup ()**

Cleanup OsclBase functionality OsclBase should be cleaned once OsclBase functions are no longer needed

6.2.5.51 void PVosclBase_Init ()

Initializes OsclBase functionality. OsclBase must be initialized before any OsclBase functionality can be used.

Exceptions:

leaves if out-of-memory

6.2.5.52 OSCL_IMPORT_REF void RFC822ToPV8601 (**CtimeStrBuf** *ctime_buffer*, **PV8601timeStrBuf**)

6.2.6 Variable Documentation

6.2.6.1 const int CTIME_BUFFER_SIZE = 26

6.2.6.2 const int ISO8601TIME_BUFFER_SIZE = 21

6.2.6.3 const long MSEC_PER_SEC = 1000

6.2.6.4 const uint32 OSCL_TLS_ID_BASE_LAST = 11

6.2.6.5 const uint32 OSCL_TLS_ID_ERRORHOOK = 1

6.2.6.6 const uint32 OSCL_TLS_ID_MAGICNUM = 0

6.2.6.7 const uint32 OSCL_TLS_ID_OSCLREGISTRY = 10

6.2.6.8 const uint32 OSCL_TLS_ID_PAYLOADPARSER = 7

6.2.6.9 const uint32 OSCL_TLS_ID_PVERRORTRAP = 5

6.2.6.10 const uint32 OSCL_TLS_ID_PVLOGGER = 2

6.2.6.11 const uint32 OSCL_TLS_ID_PVMFRECOGNIZER = 8

6.2.6.12 const uint32 OSCL_TLS_ID_PVSCHEDULER = 4

6.2.6.13 const uint32 OSCL_TLS_ID_SDPMEDIAPARSER = 6

6.2.6.14 const uint32 OSCL_TLS_ID_SQLITE3 = 11

6.2.6.15 const uint32 OSCL_TLS_ID_TEST = 3

6.2.6.16 const uint32 OSCL_TLS_ID_WMDRM = 9

6.2.6.17 const int PV8601TIME_BUFFER_SIZE = 21

6.2.6.18 const uint32 unix_ntp_offset = 2208988800U

6.2.6.19 const long USEC_PER_SEC = 1000000

6.3 OSCL Memory

Files

- file [oscl_mem.h](#)

This file contains basic memory definitions for common use across platforms.

- file [oscl_mem_audit.h](#)

This file contains the definition and partial implementation of MM_Audit class.

- file [oscl_mem_audit_internals.h](#)

This file contains the internal definitions for the mem audit library.

- file [oscl_mem_auto_ptr.h](#)

This file defines the oscl_mem_auto_ptr template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

- file [oscl_mem_basic_functions.h](#)

This file contains prototypes for the basic memory functions.

- file [oscl_mem_mempool.h](#)

This file contains the definition of memory pool allocators.

Data Structures

- class [allocator](#)
- class [allocator](#)
- class [HeapBase](#)
- struct [MM_AllocBlockFence](#)
- struct [MM_AllocBlockHdr](#)
- struct [MM_AllocInfo](#)
- struct [MM_AllocNode](#)
- struct [MM_AllocQueryInfo](#)
- class [MM_Audit_Imp](#)
- struct [MM_AuditOverheadStats](#)
- struct [MM_FailInsertParam](#)
- struct [MM_Stats_CB](#)
- struct [MM_Stats_t](#)
- class [OsclAuditCB](#)
- class [OsclMem](#)
- class [OsclMemAllocator](#)
- class [OsclMemAllocator](#)
- class [OsclMemAllocDestructDealloc](#)
- class [OsclMemAllocDestructDealloc](#)
- class [OsclMemAudit](#)
- class [OSCLMemAutoPtr](#)

The oscl_auto_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the oscl_auto_ptr expires, its destructor uses delete to free the memory.

- class OsclMemBasicAllocator
- class OsclMemBasicAllocator
- class OsclMemBasicAllocDestructDealloc
- class OsclMemBasicAllocDestructDealloc
- class OsclMemGlobalAuditObject
- class OsclMemPoolFixedChunkAllocator
- class OsclMemPoolFixedChunkAllocatorObserver
- class OsclMemPoolResizableAllocator
- class OsclMemPoolResizableAllocatorMemoryObserver
- class OsclMemPoolResizableAllocatorObserver
- class OsclMemStatsNode

Defines

- #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE
- #define OSCL_HAS_GLOBAL_NEW_DELETE 1
- #define OSCL_CLEANUP_BASE_CLASS(T) _OSCL_CLEANUP_BASE_CLASS(T)
- #define OSCL_ALLOC_NEW(T_allocator, T, params) new(T_allocator.allocate(1)) T params
- #define OSCL_TRAP_ALLOC_NEW(T_ptr, T_allocator, T, params) _OSCL_TRAP_NEW(T_allocator.allocate(1),T_allocator.deallocate,T_ptr,T,params)
- #define OSCL_ALLOC_DELETE(ptr, T_allocator, T)
- #define OSCL_MALLOC(count) _oscl_default_audit_malloc(count)
- #define oscl_malloc(a) OSCL_MALLOC(a)
- #define OSCL_DEFAULT_MALLOC(x) OSCL_MALLOC(x)
- #define OSCL_AUDIT_MALLOC(auditCB, count) _oscl_audit_malloc(count, auditCB)
- #define OSCL_CALLOC(num, size) _oscl_default_audit_calloc(num,size)
- #define oscl_calloc(a, b) OSCL_CALLOC(a,b)
- #define OSCL_AUDIT_CALLOC(auditCB, num, size) _oscl_audit_calloc(num,size, auditCB)
- #define OSCL_REALLOC(ptr, new_size) _oscl_default_audit_realloc(ptr,new_size)
- #define oscl_realloc(a, b) OSCL_REALLOC(a,b)
- #define OSCL_AUDIT_REALLOC(auditCB, ptr, new_size) _oscl_audit_realloc(ptr,new_size, auditCB)
- #define OSCL_FREE(ptr) _oscl_audit_free(ptr)
- #define oscl_free(x) OSCL_FREE(x)
- #define OSCL_DEFAULT_FREE(x) OSCL_FREE(x)
- #define OSCL_NEW(T, params) new T params
- #define OSCL_PLACEMENT_NEW(ptr, constructor) new(ptr) constructor
- #define OSCL_TRAP_NEW(T_ptr, T, params) _OSCL_TRAP_NEW(_oscl_default_audit_new(sizeof(T)),_oscl_audit_free,T_ptr,T,params)
- #define OSCL_AUDIT_NEW(auditCB, T, params) new(_oscl_audit_new(sizeof(T),auditCB)) T params
- #define OSCL_TRAP_AUDIT_NEW(T_ptr, auditCB, T, params) _OSCL_TRAP_NEW(_oscl_audit_new(sizeof(T),auditCB),_oscl_audit_free,T_ptr,T,params)
- #define OSCL_DELETE(ptr)
- #define OSCL_AUDIT_ARRAY_NEW(auditCB, T, count) new(_oscl_audit_new(sizeof(T)*(count),auditCB)) T
- #define OSCL_ARRAY_NEW(T, count) new T[count]
- #define OSCL_ARRAY_DELETE(ptr) delete [] ptr
- #define OSCL_TRAP_NEW(exp, freeFunc, T_ptr, T, params)

- #define **_OSCL_CLEANUP_BASE_CLASS**(T) this → T::~T()
- #define **MM_ALLOC_MAX_QUERY_FILENAME_LEN** 128
- #define **MM_ALLOC_MAX_QUERY_TAG_LEN** 64
- #define **MM_AUDIT_VALIDATE_BLOCK** 1
- #define **MM_AUDIT_PREFILL_FLAG** 0x1
- #define **MM_AUDIT_POSTFILL_FLAG** 0x2
- #define **MM_AUDIT_VALIDATE_ALL_HEAP_FLAG** 0x4
- #define **MM_AUDIT_VALIDATE_ON_FREE_FLAG** 0x8
- #define **MM_AUDIT_ALLOC_NODE_ENABLE_FLAG** 0x10
- #define **MM_AUDIT_SUPPRESS_FILENAME_FLAG** 0x20
- #define **DEFAULT_MM_AUDIT_MODE** 0
- #define **MM_AUDIT_ALLOC_NODE_SUPPORT** 1
- #define **MM_AUDIT_FENCE_SUPPORT** 0
- #define **MM_AUDIT_INCLUDE_ALL_HEAP_VALIDATION** 1
- #define **MM_AUDIT_FILL_SUPPORT** 0
- #define **MM_AUDIT_FAILURE_SIMULATION_SUPPORT** 1
- #define **FENCE_PATTERN** 0xAA
- #define **MIN_FENCE_SIZE** 4
- #define **MEM_ALIGN_SIZE** 8
- #define **COMPUTE_MEM_ALIGN_SIZE**(x, y, z) (y+((x+y)%z) ? (z - (x+y)%z) : 0))
- #define **DEFAULT_PREFILL_PATTERN** 0x96
- #define **DEFAULT_POSTFILL_PATTERN** 0x5A
- #define **OSCL_DISABLE_WARNING_RETURN_TYPE_NOT_UDT**

Typedefs

- typedef **OSCLMemAutoPtr< char, Oscl_TAlloc< char, OsclMemBasicAllocator > >** **MMAudit_CharAutoPtr**
- typedef **OSCLMemAutoPtr< uint8, Oscl_TAlloc< uint8, _OsclBasicAllocator > >** **MMAudit_Uint8AutoPtr**
- typedef **OSCLMemAutoPtr< MM_AllocNode, Oscl_TAlloc< MM_AllocNode, OsclMemBasicAllocator > >** **MM_AllocNodeAutoPtr**
- typedef **OSCLMemAutoPtr< OsclMemStatsNode, Oscl_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > >** **MM_StatsNodeTagTreeType**
- typedef **OSCLMemAutoPtr< OsclMemStatsNode, Oscl_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > >** **OsclMemStatsNodeAutoPtr**
- typedef **Oscl_TAlloc< MM_StatsNodeTagTreeType, OsclMemBasicAllocator >** **TagTreeAllocator**
- typedef **Oscl_TagTree< MM_StatsNodeTagTreeType, TagTreeAllocator >** **OsclTagTreeType**

Functions

- **OSCL_COND_IMPORT_REF void * _oscl_malloc** (int32 count)
- **OSCL_COND_IMPORT_REF void * _oscl_calloc** (int32 nelems, int32 size)
- **OSCL_COND_IMPORT_REF void * _oscl_realloc** (void *src, int32 count)
- **OSCL_COND_IMPORT_REF void _oscl_free** (void *src)
- **OSCL_COND_IMPORT_REF void * oscl_memcpy** (void *dest, const void *src, uint32 count)
- **OSCL_COND_IMPORT_REF void * oscl_memmove** (void *dest, const void *src, uint32 count)
- **OSCL_COND_IMPORT_REF void * oscl_memmove32** (void *dest, const void *src, uint32 count)
- **OSCL_COND_IMPORT_REF void * oscl_memset** (void *dest, uint8 val, uint32 count)

- OSCL_COND_IMPORT_REF int `oscl_memcmp` (const void *buf1, const void *buf2, uint32 count)
- OSCL_COND_IMPORT_REF uint `oscl_mem_aligned_size` (uint size)
- OSCL_IMPORT_REF void `OsclMemInit` (OsclAuditCB &auditCB)
- OSCL_IMPORT_REF void * `_oscl_audit_malloc` (size_t, OsclAuditCB &, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_audit_calloc` (size_t, size_t, OsclAuditCB &, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_audit_realloc` (void *, size_t, OsclAuditCB &, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_audit_new` (size_t, OsclAuditCB &, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_default_audit_malloc` (size_t, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_default_audit_calloc` (size_t, size_t, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_default_audit_realloc` (void *, size_t, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void * `_oscl_default_audit_new` (size_t, const char *f=NULL, const int l=0)
- OSCL_IMPORT_REF void `_oscl_audit_free` (void *)
- void * `operator new` (size_t aSize, const char *aFile, int aLine)
- void * `operator new` (size_t)
- void `operator delete` (void *)
- void * `operator new[]` (size_t aSize, const char *aFile, int aLine)
- void * `operator new[]` (size_t aSize)
- void `operator delete[]` (void *aPtr)

Variables

- const uint32 `ALLOC_NODE_FLAG` = 0x80000000

6.3.1 Define Documentation

6.3.1.1 #define _OSCL_CLEANUP_BASE_CLASS(T) this → T::~T()

This macro is used to cleanup the base class in a derived-class constructor just before a leave occurs.

Parameters:

T: base class name.

6.3.1.2 #define _OSCL_TRAP_NEW(exp, freeFunc, T_ptr, T, params)

Value:

```
{
    int32 __err; \
    OsclAny* __ptr=exp; \
    OSCL_TRY(__err,T_ptr=new(__ptr) T params); \
    if(__err){ \
        freeFunc(__ptr); \
        T_ptr=NULL; \
        OsclError::Leave(__err); \
    } \
}
```

Internal-use macro to catch leaves in constructors. If the constructor leaves, this will free the memory before allowing the leave to propagate to the next level. It is the constructor's responsibility to cleanup any memory in the partially constructed object before leaving. This cleanup may include cleaning up the base class using the OSCL_CLEANUP_BASE_CLASS macro.

Parameters:

exp: expression to allocate memory.

Tptr:variable to hold result.

T: type

params: constructor arg list

freeFunc: delete or free function.

- 6.3.1.3 #define COMPUTE_MEM_ALIGN_SIZE(x, y, z) (y+((x+y)%z) ? (z - (x+y)%z) : 0))
- 6.3.1.4 #define DEFAULT_MM_AUDIT_MODE 0
- 6.3.1.5 #define DEFAULT_POSTFILL_PATTERN 0x5A
- 6.3.1.6 #define DEFAULT_PREFILL_PATTERN 0x96
- 6.3.1.7 #define FENCE_PATTERN 0xAA
- 6.3.1.8 #define MEM_ALIGN_SIZE 8
- 6.3.1.9 #define MIN_FENCE_SIZE 4
- 6.3.1.10 #define MM_ALLOC_MAX_QUERY_FILENAME_LEN 128
- 6.3.1.11 #define MM_ALLOC_MAX_QUERY_TAG_LEN 64
- 6.3.1.12 #define MM_AUDIT_ALLOC_NODE_ENABLE_FLAG 0x10
- 6.3.1.13 #define MM_AUDIT_ALLOC_NODE_SUPPORT 1
- 6.3.1.14 #define MM_AUDIT_FAILURE_SIMULATION_SUPPORT 1
- 6.3.1.15 #define MM_AUDIT_FENCE_SUPPORT 0
- 6.3.1.16 #define MM_AUDIT_FILL_SUPPORT 0
- 6.3.1.17 #define MM_AUDIT_INCLUDE_ALL_HEAP_VALIDATION 1
- 6.3.1.18 #define MM_AUDIT_POSTFILL_FLAG 0x2
- 6.3.1.19 #define MM_AUDIT_PREFILL_FLAG 0x1
- 6.3.1.20 #define MM_AUDIT_SUPPRESS_FILENAME_FLAG 0x20
- 6.3.1.21 #define MM_AUDIT_VALIDATE_ALL_HEAP_FLAG 0x4
- 6.3.1.22 #define MM_AUDIT_VALIDATE_BLOCK 1
- 6.3.1.23 #define MM_AUDIT_VALIDATE_ON_FREE_FLAG 0x8
- 6.3.1.24 #define OSCL_ALLOC_DELETE(ptr, T_allocator, T)

Value:

```
{\
  ptr->~T();\
  T_allocator.deallocate(ptr);\
}
```

Deletes the object of type T using the given allocator

Parameters:

T_allocator allocator for objects of type T

T type of object to delete

ptr pointer to previously created object

Exceptions:

none , unless thrown by the given allocator

**6.3.1.25 #define OSCL_ALLOC_NEW(T_allocator, T, params) new(T_allocator.allocate(1)) T
params**

Creates an object of type T using the given allocator to acquire the memory needed.

Parameters:

T_allocator allocator for objects of type T, must be an [Oscl_TAlloc<T, Allocator>](#), where Allocator is an [Oscl_DefAlloc](#)

T type of object to create

params object initialization parameters

Returns:

pointer to created object

Exceptions:

none , unless thrown by the given allocator

6.3.1.26 #define OSCL_ARRAY_DELETE(ptr) delete [] ptr

Oscl array delete operator..

Parameters:

ptr pointer to memory block previously allocated with OSCL_ARRAY_NEW

Returns:

void

6.3.1.27 #define OSCL_ARRAY_NEW(T, count) new T[count]

Oscl array "new" operator. This uses the global memory audit object.

Parameters:

T data type for 'new' operation

count number of elements to create

Returns:

pointer to the newly created object array of type T

Exceptions:

may leave with code = bad alloc

6.3.1.28 #define OSCL_AUDIT_ARRAY_NEW(auditCB, T, count)
`new(_oscl_audit_new(sizeof(T)*(count),auditCB)) T`

Oscl array "new" operator. This uses the input memory audit object.

Parameters:

auditCB input memory management audit object
T data type for 'new' operation
count number of elements to create

Returns:

pointer to the newly created object array of type T

Exceptions:

may leave with code = bad alloc

6.3.1.29 #define OSCL_AUDIT_CALLOC(auditCB, num, size) _oscl_audit_calloc(num,size, auditCB)

Allocates a memory block using the specified audit object. The block is initialized to zero.

Parameters:

auditCB input memory management audit object
num number of elements
size number of bytes to allocate for each element

Returns:

a void pointer to the allocated space, or NULL if there is insufficient memory available.

Exceptions:

none

6.3.1.30 #define OSCL_AUDIT_MALLOC(auditCB, count) _oscl_audit_malloc(count, auditCB)

Allocates a memory block using the given audit object.

Parameters:

auditCB input memory management audit object
count number of bytes to allocate

Returns:

a void pointer to the allocated space, or NULL if there is insufficient memory available.

Exceptions:

none

6.3.1.31 #define OSCL_AUDIT_NEW(auditCB, T, params) new(_oscl_audit_new(sizeof(T),audit-CB)) T params

Oscl "new" operator. This uses the specified memory audit object.

Parameters:

auditCB input memory management audit object
T data type for 'new' operation
params object initialization parameters

Returns:

pointer to the newly created object of type *T*

Exceptions:

may leave with code = bad alloc

**6.3.1.32 #define OSCL_AUDIT_REALLOC(auditCB, ptr, new_size)
_oscl_audit_realloc(ptr,new_size,auditCB)**

Re-Allocates a memory block using the specified audit object.

Parameters:

auditCB input memory management audit object
ptr original memory block
new_size New size of the block

Returns:

a void pointer to the allocated space, or NULL if there is insufficient memory available.

Exceptions:

none

6.3.1.33 #define oscl_calloc(a, b) OSCL_CALLOC(a,b)**6.3.1.34 #define OSCL_CALLOC(num, size) _oscl_default_audit_calloc(num,size)**

Allocates a memory block using the memory management's global audit object. The block is initialized to zero.

Parameters:

num number of elements
size number of bytes to allocate for each element

Returns:

a void pointer to the allocated space, or NULL if there is insufficient memory available.

Exceptions:

none

6.3.1.35 #define OSCL_CLEANUP_BASE_CLASS(T) _OSCL_CLEANUP_BASE_CLASS(T)

Cleans up the base class of a partially-constructed derived class. This macro will call the destructor if necessary, based on the error-handling implementation.

Parameters:

T: name of the base class.

6.3.1.36 #define OSCL_DEFAULT_FREE(x) OSCL_FREE(x)

Another back-compatibility definition.

6.3.1.37 #define OSCL_DEFAULT_MALLOC(x) OSCL_MALLOC(x)

Another back-compatibility definition.

6.3.1.38 #define OSCL_DELETE(ptr)**Value:**

```
{ \
    if(ptr){delete(ptr);} \
}
```

Oscl "delete" operator.

Parameters:

ptr pointer to memory block previously allocated with OSCL_NEW

Returns:

void

6.3.1.39 #define OSCL_DISABLE_WARNING_RETURN_TYPE_NOT_UDT**6.3.1.40 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE**

Previously this was in oscl_mem_imp.h

6.3.1.41 #define oscl_free(x) OSCL_FREE(x)**6.3.1.42 #define OSCL_FREE(ptr) _oscl_audit_free(ptr)**

Deallocates or frees a memory block.

Parameters:

ptr pointer to previously allocated memory block using the given audit object

6.3.1.43 #define OSCL_HAS_GLOBAL_NEW_DELETE 1

6.3.1.44 #define oscl_malloc(a) OSCL_MALLOC(a)

6.3.1.45 #define OSCL_MALLOC(count) _oscl_default_audit_malloc(count)

Allocates a memory block using the memory management's global audit object.

Parameters:

count number of bytes to allocate

Returns:

a void pointer to the allocated space, or NULL if there is insufficient memory available.

Exceptions:

none

6.3.1.46 #define OSCL_NEW(T, params) new T params

Oscl "new" operator. This uses the global memory audit object.

Parameters:

T data type for 'new' operation

params object initialization parameters

Returns:

pointer to the newly created object of type T

Exceptions:

may leave with code = bad alloc

6.3.1.47 #define OSCL_PLACEMENT_NEW(ptr, constructor) new(ptr) constructor

6.3.1.48 #define oscl_realloc(a, b) OSCL_REALLOC(a,b)

6.3.1.49 #define OSCL_REALLOC(ptr, new_size) _oscl_default_audit_realloc(ptr,new_size)

Re-Allocates a memory block using the memory management's global audit object.

Parameters:

ptr original memory block

new_size New size of the block

Returns:

a void pointer to the allocated space, or NULL if there is insufficient memory available.

Exceptions:

none

6.3.1.50 #define OSCL_TRAP_ALLOC_NEW(T_ptr, T_allocator, T, params)
_OSCL_TRAP_NEW(T_allocator.allocate(1),T_allocator.deallocate,T_ptr,T,params)

Creates an object of type T using the given allocator to acquire the memory needed. This macro is similar to OSCL_ALLOC_NEW except that it handles constructors that leave. If the constructor leaves, the destructor will be called, and allocated memory will be freed before allowing the leave to propagate to the next level.

Parameters:

T_ptr variable to hold return value— pointer to new object of type T.

T_allocator allocator for objects of type T, must be an [Oscl_TAlloc<T, Allocator>](#), where Allocator is an [Oscl_DefAlloc](#)

T type of object to create

params object initialization parameters

Returns:

pointer to created object

Exceptions:

none , unless thrown by the given allocator

**6.3.1.51 #define OSCL_TRAP_AUDIT_NEW(T_ptr, auditCB, T, params) _OSCL_TRAP_-
 NEW(_oscl_audit_new(sizeof(T),auditCB),_oscl_audit_free,T_ptr,T,params)**

Oscl "new" operator. This uses the specified memory audit object. This macro is similar to OSCL_AUDIT_NEW except that it will handle constructors that leave. If the constructor leaves, the destructor will be called, and allocated memory will be freed before allowing the leave to propagate to the next level.

Parameters:

T_ptr variable to hold return value— pointer to new object of type T.

auditCB input memory management audit object

T data type for 'new' operation

params object initialization parameters

Returns:

pointer to the newly created object of type T

Exceptions:

may leave with code = bad alloc

**6.3.1.52 #define OSCL_TRAP_NEW(T_ptr, T, params) _OSCL_TRAP_NEW(_oscl_default_-
 audit_new(sizeof(T)),_oscl_audit_free,T_ptr,T,params)**

Oscl "new" operator. This uses the global memory audit object. This operator is similar to OSCL_NEW except that it will handle constructors that leave. If the constructor leaves, the destructor will be called, and allocated memory will be freed before allowing the leave to propagate to the next level.

Parameters:

T_ptr variable to hold return value— pointer to new object of type T.

T data type for 'new' operation

params object initialization parameters

Returns:

pointer to the newly created object of type T

Exceptions:

may leave with code = bad alloc

6.3.2 Typedef Documentation

6.3.2.1 `typedef OSCLMemAutoPtr<MM_AllocNode, Oscl_TAlloc<MM_AllocNode, OsclMemBasicAllocator> > MM_AllocNodeAutoPtr`

6.3.2.2 `typedef OSCLMemAutoPtr<OsclMemStatsNode, Oscl_TAlloc<OsclMemStatsNode, OsclMemBasicAllocator> > MM_StatsNodeTagTreeType`

6.3.2.3 `typedef OSCLMemAutoPtr<char, Oscl_TAlloc<char, OsclMemBasicAllocator> > MMAuditCharAutoPtr`

6.3.2.4 `typedef OSCLMemAutoPtr<uint8, Oscl_TAlloc<uint8, _OsclBasicAllocator> > MMAuditUInt8AutoPtr`

6.3.2.5 `typedef OSCLMemAutoPtr<OsclMemStatsNode, Oscl_TAlloc<OsclMemStatsNode, OsclMemBasicAllocator> > OsclMemStatsNodeAutoPtr`

6.3.2.6 `typedef Oscl_TagTree<MM_StatsNodeTagTreeType, TagTree_Allocator> OsclTagTreeType`

6.3.2.7 `typedef Oscl_TAlloc<MM_StatsNodeTagTreeType, OsclMemBasicAllocator> TagTree_Allocator`

6.3.3 Function Documentation

6.3.3.1 `OSCL_IMPORT_REF void* _oscl_audit_calloc (size_t, size_t, OsclAuditCB &, const char *f = NULL, const int l = 0)`

6.3.3.2 `OSCL_IMPORT_REF void _oscl_audit_free (void *)`

6.3.3.3 `OSCL_IMPORT_REF void* _oscl_audit_malloc (size_t, OsclAuditCB &, const char *f = NULL, const int l = 0)`

***** Macros for malloc/free with memory management.

- 6.3.3.4 OSCL_IMPORT_REF void* _oscl_audit_new (size_t, OsclAuditCB &, const char **f*=NULL, const int *l*=0)**
- 6.3.3.5 OSCL_IMPORT_REF void* _oscl_audit_realloc (void *, size_t, OsclAuditCB &, const char **f*=NULL, const int *l*=0)**
- 6.3.3.6 OSCL_COND_IMPORT_REF void* _oscl_calloc (int32 *nelems*, int32 *size*)**
- 6.3.3.7 OSCL_IMPORT_REF void* _oscl_default_audit_calloc (size_t, size_t, const char **f*=NULL, const int *l*=0)**
- 6.3.3.8 OSCL_IMPORT_REF void* _oscl_default_audit_malloc (size_t, const char **f*=NULL, const int *l*=0)**
- 6.3.3.9 OSCL_IMPORT_REF void* _oscl_default_audit_new (size_t, const char **f*=NULL, const int *l*=0)**
- 6.3.3.10 OSCL_IMPORT_REF void* _oscl_default_audit_realloc (void *, size_t, const char **f*=NULL, const int *l*=0)**
- 6.3.3.11 OSCL_COND_IMPORT_REF void _oscl_free (void **src*)**
- 6.3.3.12 OSCL_COND_IMPORT_REF void* _oscl_malloc (int32 *count*)**
- 6.3.3.13 OSCL_COND_IMPORT_REF void* _oscl_realloc (void **src*, int32 *count*)**
- 6.3.3.14 void operator delete (void *) [inline]**
- 6.3.3.15]**
- void operator delete[] (void **aPtr*) [inline]
- 6.3.3.16 void* operator new (size_t) [inline]**
- 6.3.3.17 void* operator new (size_t *aSize*, const char **aFile*, int *aLine*) [inline]**
- 6.3.3.18]**
- void* operator new[] (size_t *aSize*) [inline]
- 6.3.3.19]**
- void* operator new[] (size_t *aSize*, const char **aFile*, int *aLine*) [inline]
- 6.3.3.20 OSCL_COND_IMPORT_REF uint oscl_mem_aligned_size (uint *size*)**

Get memory-aligned size of an object.

Parameters:

size size of object

Returns:

memory-aligned size

6.3.3.21 OSCL_COND_IMPORT_REF int oscl_memcmp (const void * buf1, const void * buf2, uint32 count)

Compare characters in two buffers

Parameters:

buf1 first buffer

buf2 second buffer

count number of bytes to compare

Returns:

<0 buf1 less than buf2 0 buf1 equal to buf2 >0 buf1 greater than buf2

6.3.3.22 OSCL_COND_IMPORT_REF void* oscl_memcpy (void * dest, const void * src, uint32 count)

Copies characters between buffers The oscl_memcpy function copies count bytes of src to dest. If the source and destination overlap, this function does not ensure that the original source bytes in the overlapping region are copied before being overwritten. Use oscl_memmove to handle overlapping regions

Parameters:

dest new buffer

src buffer to copy

count number of bytes to copy

Returns:

the value of dest

6.3.3.23 OSCL_COND_IMPORT_REF void* oscl_memmove (void * dest, const void * src, uint32 count)

Moves chars from one buffer to another The memmove function copies count bytes of characters from src to dest. If some regions of the source area and the destination overlap, memmove ensures that the original source bytes in the overlapping region are copied before being overwritten.

Parameters:

dest new buffer

src buffer to copy

count number of bytes to copy

Returns:

the value of dest

6.3.3.24 OSCL_COND_IMPORT_REF void* oscl_memmove32 (void * dest, const void * src, uint32 count)

Same functionality as oscl_memmove, yet optimized for memory aligned on 32-bit boundary

Parameters:

dest new buffer
src buffer to copy
count number of bytes to copy

Returns:

the value of dest

6.3.3.25 OSCL_COND_IMPORT_REF void* oscl_memset (void * dest, uint8 val, uint32 count)

Sets the bytes of a buffer to a specified character

Parameters:

dest buffer to modify
val character to set
count number of bytes to set

Returns:

the value of dest

6.3.3.26 OSCL_IMPORT_REF void OsclMemInit ([OsclAuditCB](#) & auditCB)

Initialize an [OsclAuditCB](#) object. Sets the stats node pointer to null, and sets the audit pointer to the global audit object.

Parameters:

auditCB memory management audit object

6.3.4 Variable Documentation

6.3.4.1 const uint32 MM_AllocBlockHdr::ALLOC_NODE_FLAG = 0x80000000 [static, inherited]

6.4 OSCL Util

Files

- file [oscl_bin_stream.h](#)
Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order.
- file [oscl_math.h](#)
Provides math functions.
- file [oscl_media_data.h](#)
Defines a container class for media data made up of a collection of memory fragments.
- file [oscl_media_status.h](#)
Defines a status values for the [MediaData](#) containers.
- file [oscl_pqueue.h](#)
Implements a priority queue data structure similar to STL.
- file [oscl_rand.h](#)
Provides pseudo-random number generation.
- file [oscl_registry_access_client.h](#)
Client-side implementation Registry Access implementation.
- file [oscl_registry_client.h](#)
Client-side implementation of OsclRegistry.
- file [oscl_registry_client_impl.h](#)
Client-side implementation of OsclRegistryInterface.
- file [oscl_registry_serv_impl.h](#)
Server-side implementation of OsclRegistry interfaces.
- file [oscl_registry_types.h](#)
Common types used in Oscl registry interfaces.
- file [oscl_snprintf.h](#)
Provides a portable implementation of sprintf.
- file [oscl_str_ptr_len.h](#)
Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.
- file [oscl_string.h](#)
Provides a standardized set of string containers that can be used in place of character arrays.
- file [oscl_string_containers.h](#)
Provides a standardized set of string containers that can be used in place of character arrays.

- file [oscl_string_rep.h](#)
Contains some internal implementation for string containers.
- file [oscl_string_uri.h](#)
Utilities to unescape URIs.
- file [oscl_string_utf8.h](#)
Utilities to validate and truncate UTF-8 encoded strings.
- file [oscl_string_utils.h](#)
Utilities to parse and convert strings.
- file [oscl_string_xml.h](#)
Utilities to escape special characters in XML strings.
- file [oscl_tickcount.h](#)
Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.
- file [oscl_utf8conv.h](#)
Utilities to convert unicode to utf8 and vice versa.

Data Structures

- class [BufferFragment](#)
- class [BufferMgr](#)
- class [BufferState](#)
- class [BufFragGroup](#)
- class [BufFragStatusClass](#)
- class [CFastRep](#)
- class [CHheapRep](#)
- class [CStackRep](#)
- class [MediaData](#)
- class [MediaStatusClass](#)
- class [MemAllocator](#)
- class [OSCL_FastString](#)
- class [OSCL_HeapString](#)
- class [OSCL_HeapStringA](#)
- class [OSCL_StackString](#)
- class [OSCL_String](#)
- class [OSCL_wFastString](#)
- class [OSCL_wHeapString](#)
- class [OSCL_wHeapStringA](#)
- class [OSCL_wStackString](#)
- class [OSCL_wString](#)
- class [OsclBinIStream](#)
- class [OsclBinIStreamBigEndian](#)
- class [OsclBinIStreamLittleEndian](#)

- class [OsclBinOStream](#)

Class OsclBinOStream implements the basic stream functions for an output stream.

- class [OsclBinOStreamBigEndian](#)

Class OsclBinOStreamBigEndian implements a binary output stream using big endian byte ordering.

- class [OsclBinOStreamLittleEndian](#)

Class OsclBinOStreamLittleEndian implements a binary output stream using little endian byte ordering.

- class [OsclBinStream](#)

- class [OsclCompareLess](#)

- class [OsclComponentRegistry](#)

- class [OsclComponentRegistryData](#)

- class [OsclComponentRegistryElement](#)

- class [OsclPriorityQueue](#)

- class [OsclPriorityQueueBase](#)

- class [OsclRand](#)

- class [OsclRegistryAccessClient](#)

- class [OsclRegistryAccessClientImpl](#)

- class [OsclRegistryAccessClientTlsImpl](#)

- class [OsclRegistryAccessElement](#)

- class [OsclRegistryClient](#)

- class [OsclRegistryClientImpl](#)

- class [OsclRegistryClientTlsImpl](#)

- class [OsclRegistryServTlsImpl](#)

- class [OsclTickCount](#)

- struct [StrCSumPtrLen](#)

same as [StrPtrLen](#), but includes checksum field and method to speed up querying

- struct [StrPtrLen](#)

This data structure encapsulates a set of functions used to perform.

- struct [WStrPtrLen](#)

This data structure encapsulates a set of functions used to perform.

Defines

- #define [oscl_isdigit](#)(c) ((c) >= '0' && (c) <= '9')
- #define [OSCLTICKCOUNT_MAX_TICKS](#) 0xffffffff
- #define [MAX_NUMBER_OF_BYTE_PER_UTF8](#) 3

Typedefs

- typedef [OsclAny](#) * [OsclComponentFactory](#)
- typedef void(* [BufferFreeFuncPtr](#))(void *)
- typedef uint32 [MediaTimestamp](#)
- typedef [StrPtrLen](#) [StrPtrLen](#)

This data structure encapsulates a set of functions used to perform.

- **typedef WStrPtrLen WStrPtrLen**
This data structure encapsulates a set of functions used to perform.
- **typedef StrCSumPtrLen StrCSumPtrLen**
same as [StrPtrLen](#), but includes checksum field and method to speed up querying
- **typedef WStrPtrLen OSCL_TStrPtrLen**

Enumerations

- enum **TOSCL_StringOp** { [EOSCL_StringOp_CompressASCII](#), [EOSCL_StringOp_UTF16ToUTF8](#) }
- enum **TOSCL_wStringOp** { [EOSCL_wStringOp_ExpandASCII](#), [EOSCL_wStringOp_UTF8ToUTF16](#) }

Functions

- **OSCL_IMPORT_REF const char * skip_whitespace** (const char *ptr)
- **OSCL_IMPORT_REF char * skip_whitespace** (char *ptr)
- **OSCL_IMPORT_REF const char * skip_whitespace** (const char *start, const char *end)
- **OSCL_IMPORT_REF const char * skip_to_whitespace** (const char *start, const char *end)
- **OSCL_IMPORT_REF const char * skip_to_line_term** (const char *start_ptr, const char *end_ptr)
- **OSCL_IMPORT_REF const char * skip_whitespace_and_line_term** (const char *start, const char *end)
- **OSCL_IMPORT_REF int extract_string** (const char *in_ptr, char *outstring, int maxsize)
- **OSCL_IMPORT_REF int extract_string** (const char *start, const char *end, char *outstring, int maxsize)
- **OSCL_IMPORT_REF bool PV_atoi** (const char *buf, const char new_format, uint32 &value)
- **OSCL_IMPORT_REF bool PV_atoi** (const char *buf, const char new_format, int length, uint32 &value)
- **OSCL_IMPORT_REF bool PV_atoi** (const char *buf, const char new_format, int length, [uint64](#) &value)
- **OSCL_IMPORT_REF bool PV_atof** (const char *buf, [OsclFloat](#) &value)
- **OSCL_IMPORT_REF bool PV_atof** (const char *buf, int length, [OsclFloat](#) &value)
- **OSCL_IMPORT_REF int oscl_abs** (int aVal)
- **OSCL_COND_IMPORT_REF double oscl_log** (double value)
- **OSCL_COND_IMPORT_REF double oscl_log10** (double value)
- **OSCL_COND_IMPORT_REF double oscl_sqrt** (double value)
- **OSCL_COND_IMPORT_REF double oscl_pow** (double x, double y)
- **OSCL_COND_IMPORT_REF double oscl_exp** (double value)
- **OSCL_COND_IMPORT_REF double oscl_sin** (double value)
- **OSCL_COND_IMPORT_REF double oscl_cos** (double value)
- **OSCL_COND_IMPORT_REF double oscl_tan** (double value)
- **OSCL_COND_IMPORT_REF double oscl_asin** (double value)
- **OSCL_COND_IMPORT_REF double oscl_atan** (double value)
- **OSCL_COND_IMPORT_REF double oscl_floor** (double value)
- **OSCL_IMPORT_REF int32 oscl_snprintf** (char *str, uint32 count, const char *fmt,...)
- **OSCL_IMPORT_REF int32 oscl_snprintf** ([oscl_wchar](#) *str, uint32 count, const [oscl_wchar](#) *fmt,...)
- **OSCL_IMPORT_REF int32 oscl_vsnprintf** (char *str, uint32 count, const char *fmt, va_list args)

- OSCL_IMPORT_REF int32 `oscl_vsnprintf` (oscl_wchar *str, uint32 count, const oscl_wchar *fmt, va_list args)
- OSCL_IMPORT_REF bool `oscl_str_unescape_uri` (const char *str_buf_in, char *str_buf_out, uint32 max_out_buf_bytes, uint32 max_bytes, uint32 &out_buf_len)

unescape any of the special escape sequence in the uri string
- OSCL_IMPORT_REF bool `oscl_str_unescape_uri` (const OSCL_String &oscl_str_in, OSCL_String &oscl_str_out, uint32 &out_buf_len)

unescape any of the special escape sequence in the uri string
- OSCL_IMPORT_REF bool `oscl_str_is_valid_utf8` (const uint8 *str_buf, uint32 &num_valid_characters, uint32 max_bytes=0, uint32 max_char_2_valid=0, uint32 *num_byte_4_char=NULL)

Check if the input string contains any illegal UTF-8 character. The function scans the string and validate that each character is a valid utf-8. It stops at the first NULL character, invalid character or the max_byte value. The string is valid if and only if every character is a valid utf-8 character and the scanning stopped on a character boundary.
- OSCL_IMPORT_REF int32 `oscl_str_truncate_utf8` (uint8 *str_buf, uint32 max_char, uint32 max_bytes=0)

Truncates the UTF-8 string upto the required size.
- OSCL_IMPORT_REF bool `oscl_str_need_escape_xml` (const char *str_buf, uint32 &num_escape_bytes, uint32 max_bytes=0)

Check if the input string contains any special ASCII character like &, <, >, ', ". The function scans the string and check if each character is a special character. It stops at the first NULL character (if max_bytes = 0), or the max_byte value.
- OSCL_IMPORT_REF int32 `oscl_str_escape_xml` (const char *str_buf_in, char *str_buf_out, uint32 max_out_buf_bytes, uint32 max_bytes=0, uint32 *num_bytes_written=NULL)

Escape any of the following special characters in the string Special ASCII characters: &, <, >, ', ".
- OSCL_IMPORT_REF int32 `oscl_UTF8ToUnicode` (const char *input, int32 inLength, oscl_wchar *output, int32 outLength)

Convert UTF8 byte sequence to Unicode string.
- OSCL_IMPORT_REF int32 `oscl_UnicodeToUTF8` (const oscl_wchar *input, int32 inLength, char *output, int32 outLength)

Convert Unicode string to UTF8 byte sequence.
- `BufferFragment * GetFragment` (const int32 idx)
- `BufferState * GetBufferState` (const int32 idx)
- uint32 `get_size` () const
- uint32 `get_size` () const
- uint32 `get_maxsize` () const
- uint32 `get_maxsize` () const
- const chartype * `get_cstr` () const
- const chartype * `get_cstr` () const
- chartype * `get_str` () const
- chartype * `get_str` () const
- `OSCL_HeapString` ()
- `OSCL_wHeapString` ()

- `OSCL_HeapString` (const chartype *cstr)
- `OSCL_wHeapString` (const chartype *cstr)
- void `set` (const chartype *buf, uint32 length)
- void `set` (const chartype *buf, uint32 length)
- void `set` (const other_chartype *buf, optype op)
- void `set` (const other_chartype *buf, optype op)
- void `set` (const other_chartype *buf, uint32 length, optype op)
- void `set` (const other_chartype *buf, uint32 length, optype op)
- `OSCL_HeapString` (const chartype *buf, uint32 length)
- `OSCL_wHeapString` (const chartype *buf, uint32 length)
- `OSCL_HeapString` (const OSCL_HeapString &src)
- `OSCL_wHeapString` (const OSCL_wHeapString &src)
- `OSCL_HeapString` (const `OSCL_String` &src)
- `OSCL_wHeapString` (const `OSCL_wString` &src)
- `~OSCL_HeapString` ()
- `~OSCL_wHeapString` ()
- `OSCL_HeapString & operator=` (const `OSCL_HeapString` &src)
- `OSCL_wHeapString & operator=` (const `OSCL_wHeapString` &src)
- `OSCL_HeapString & operator=` (const `OSCL_String` &src)
- `OSCL_wHeapString & operator=` (const `OSCL_wString` &src)
- `OSCL_HeapString & operator=` (const chartype *cstr)
- `OSCL_wHeapString & operator=` (const chartype *cstr)
- uint32 `get_size` () const
- uint32 `get_size` () const
- uint32 `get_maxsize` () const
- uint32 `get_maxsize` () const
- const chartype * `get_cstr` () const
- const chartype * `get_cstr` () const
- chartype * `get_str` () const
- chartype * `get_str` () const
- `OSCL_StackString` ()
- `OSCL_wStackString` ()
- `OSCL_StackString` (const chartype *cstr)
- `OSCL_wStackString` (const chartype *cstr)
- void `set` (const chartype *buf, uint32 length)
- void `set` (const chartype *buf, uint32 length)
- void `set` (const other_chartype *buf, optype op)
- void `set` (const other_chartype *buf, optype op)
- void `set` (const other_chartype *buf, uint32 length, optype op)
- void `set` (const other_chartype *buf, uint32 length, optype op)
- `OSCL_StackString` (const chartype *buf, uint32 length)
- `OSCL_wStackString` (const chartype *buf, uint32 length)
- `OSCL_StackString` (const OSCL_StackString &src)
- `OSCL_wStackString` (const OSCL_wStackString &src)
- `OSCL_StackString` (const `OSCL_String` &src)
- `OSCL_wStackString` (const `OSCL_wString` &src)
- `~OSCL_StackString` ()
- `~OSCL_wStackString` ()
- `OSCL_StackString & operator=` (const `OSCL_StackString` &src)
- `OSCL_wStackString & operator=` (const `OSCL_wStackString` &src)

- `OSCL_StackString & operator= (const OSCL_String &src)`
- `OSCL_wStackString & operator= (const OSCL_wString &src)`
- `OSCL_StackString & operator= (const chartype *cstr)`
- `OSCL_wStackString & operator= (const chartype *cstr)`

Variables

- `const int32 APPEND_MEDIA_AT_END = -1`
- `const uint8 OSCL_ASCII_CASE_MAGIC_BIT = 0x20`

6.4.1 Define Documentation

6.4.1.1 #define MAX_NUMBER_OF_BYTE_PER_UTF8 3

Define the maximum UTF8 representation in bytes.

Todo:

Handle 4-byte surrogate pair representation

6.4.1.2 #define oscl_isdigit(c) ((c) >= '0' && (c) <= '9')

6.4.1.3 #define OSCLTICKCOUNT_MAX_TICKS 0xffffffff

6.4.2 Typedef Documentation

6.4.2.1 typedef void(* BufferFreeFuncPtr)(void *)

6.4.2.2 typedef uint32 MediaTimestamp

6.4.2.3 typedef WStrPtrLen OSCL_TStrPtrLen

6.4.2.4 typedef OsclAny* OsclComponentFactory

OsclComponentFactory is an opaque pointer.

6.4.2.5 typedef StrCSumPtrLen StrCSumPtrLen

same as `StrPtrLen`, but includes checksum field and method to speed up querying

6.4.2.6 typedef struct StrPtrLen StrPtrLen

This data structure encapsulates a set of functions used to perform.

standard string operations. It should be used for null-terminated constant (non-modifiable) strings of char type.

6.4.2.7 `typedef struct WStrPtrLen WStrPtrLen`

This data structure encapsulates a set of functions used to perform standard string operations. It should be used for null-terminated constant strings (non-modifiable) of wchar type.

6.4.3 Enumeration Type Documentation

6.4.3.1 `enum TOSCL_StringOp`

Conversion operations for [OSCL_String](#) classes

Enumeration values:

`EOSCL_StringOp_CompressASCII`
`EOSCL_StringOp_UTF16ToUTF8`

6.4.3.2 `enum TOSCL_wStringOp`

Conversion operations for [OSCL_wString](#) classes

Enumeration values:

`EOSCL_wStringOp_ExpandASCII`
`EOSCL_wStringOp_UTF8ToUTF16`

6.4.4 Function Documentation

6.4.4.1 `OSCL_IMPORT_REF int extract_string (const char * start, const char * end, char * outstring, int maxsize)`

6.4.4.2 `OSCL_IMPORT_REF int extract_string (const char * in_ptr, char * outstring, int maxsize)`

6.4.4.3 `template<uint32 MaxBufSize> const OSCL_wStackString< MaxBufSize >::chartype * OSCL_wStackString< MaxBufSize >::get_cstr () [virtual, inherited]`

Implements [OSCL_wString](#).

6.4.4.4 `template<uint32 MaxBufSize> const OSCL_StackString< MaxBufSize >::chartype * OSCL_StackString< MaxBufSize >::get_cstr () [virtual, inherited]`

This function returns the C-style string for read access.

Implements [OSCL_String](#).

6.4.4.5 `template<class Alloc> const OSCL_wHeapString< Alloc >::chartype * OSCL_wHeapString< Alloc >::get_cstr () [virtual, inherited]`

Implements [OSCL_wString](#).

6.4.4.6 template<class Alloc> const OSCL_HeapString< Alloc >::chartype * OSCL_HeapString< Alloc >::get_cstr () [virtual, inherited]

This function returns the C-style string for read access.

Implements [OSCL_String](#).

6.4.4.7 template<uint32 MaxBufSize> uint32 OSCL_wStackString< MaxBufSize >::get_maxsize () [virtual, inherited]

Implements [OSCL_wString](#).

6.4.4.8 template<uint32 MaxBufSize> uint32 OSCL_StackString< MaxBufSize >::get_maxsize () [virtual, inherited]

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL_String](#).

6.4.4.9 template<class Alloc> uint32 OSCL_wHeapString< Alloc >::get_maxsize () [virtual, inherited]

Implements [OSCL_wString](#).

6.4.4.10 template<class Alloc> uint32 OSCL_HeapString< Alloc >::get_maxsize () [virtual, inherited]

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL_String](#).

6.4.4.11 template<uint32 MaxBufSize> uint32 OSCL_wStackString< MaxBufSize >::get_size () [virtual, inherited]

Implements [OSCL_wString](#).

6.4.4.12 template<uint32 MaxBufSize> uint32 OSCL_StackString< MaxBufSize >::get_size () [virtual, inherited]

Pure virtuals from [OSCL_String](#)

Implements [OSCL_String](#).

6.4.4.13 template<class Alloc> uint32 OSCL_wHeapString< Alloc >::get_size () [virtual, inherited]

Implements [OSCL_wString](#).

6.4.4.14 template<class Alloc> uint32 OSCL_HeapString< Alloc >::get_size () [virtual, inherited]

Pure virtuals from [OSCL_String](#)

Implements [OSCL_String](#).

6.4.4.15 template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize >::chartype * OSCL_wStackString< MaxBufSize >::get_str () [virtual, inherited]

Implements [OSCL_wString](#).

6.4.4.16 template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize >::chartype * OSCL_StackString< MaxBufSize >::get_str () [virtual, inherited]

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL_String](#).

6.4.4.17 template<class Alloc> OSCL_wHeapString< Alloc >::chartype * OSCL_wHeapString< Alloc >::get_str () [virtual, inherited]

Implements [OSCL_wString](#).

6.4.4.18 template<class Alloc> OSCL_HeapString< Alloc >::chartype * OSCL_HeapString< Alloc >::get_str () [virtual, inherited]

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL_String](#).

6.4.4.19 template<class ChainClass, uint32 max_frags> BufferState * BuffFragGroup< ChainClass, max_frags >::GetBufferState (const int32 idx) [inline, inherited]

6.4.4.20 template<class ChainClass, uint32 max_frags> BufferFragment * BuffFragGroup< ChainClass, max_frags >::GetFragment (const int32 idx) [inline, inherited]

6.4.4.21 template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize > & OSCL_wStackString< MaxBufSize >::operator= (const chartype * cstr) [inherited]

Reimplemented from [OSCL_wString](#).

6.4.4.22 template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize > & OSCL_StackString< MaxBufSize >::operator= (const chartype * cstr) [inherited]

Assignment operator

am: null-terminated string

Reimplemented from [OSCL_String](#).

6.4.4.23 `template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize > & OSCL_wStackString< MaxBufSize >::operator= (const OSCL_wString & src) [inherited]`

Reimplemented from [OSCL_wString](#).

6.4.4.24 `template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize > & OSCL_StackString< MaxBufSize >::operator= (const OSCL_String & src) [inherited]`

Assignment operator

Reimplemented from [OSCL_String](#).

6.4.4.25 `template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize > & OSCL_wStackString< MaxBufSize >::operator= (const OSCL_wStackString< MaxBufSize > & src) [inherited]`

6.4.4.26 `template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize > & OSCL_StackString< MaxBufSize >::operator= (const OSCL_StackString< MaxBufSize > & src) [inherited]`

Assignment operators

6.4.4.27 `template<class Alloc> OSCL_wHeapString< Alloc > & OSCL_wHeapString< Alloc >::operator= (const chartype * cstr) [inherited]`

Reimplemented from [OSCL_wString](#).

6.4.4.28 `template<class Alloc> OSCL_HeapString< Alloc > & OSCL_HeapString< Alloc >::operator= (const chartype * cstr) [inherited]`

Assignment operator

am: null-terminated string

Reimplemented from [OSCL_String](#).

6.4.4.29 `template<class Alloc> OSCL_wHeapString< Alloc > & OSCL_wHeapString< Alloc >::operator= (const OSCL_wString & src) [inherited]`

Reimplemented from [OSCL_wString](#).

6.4.4.30 `template<class Alloc> OSCL_HeapString< Alloc > & OSCL_HeapString< Alloc >::operator= (const OSCL_String & src) [inherited]`

Assignment operator

Reimplemented from [OSCL_String](#).

6.4.4.31 template<class Alloc> OSCL_wHeapString< Alloc > & OSCL_wHeapString< Alloc >::operator= (const OSCL_wHeapString< Alloc > & src) [inherited]

6.4.4.32 template<class Alloc> OSCL_HeapString< Alloc > & OSCL_HeapString< Alloc >::operator= (const OSCL_HeapString< Alloc > & src) [inherited]

Assignment operators

6.4.4.33 OSCL_IMPORT_REF int oscl_abs (int aVal)

6.4.4.34 OSCL_COND_IMPORT_REF double oscl_asin (double value)

Calculates the arc sine of a number

Parameters:

value source value

6.4.4.35 OSCL_COND_IMPORT_REF double oscl_atan (double value)

Calculates the arc tangent of a number

Parameters:

value source value

6.4.4.36 OSCL_COND_IMPORT_REF double oscl_cos (double value)

Calculates the cosine of a number

Parameters:

value source value

6.4.4.37 OSCL_COND_IMPORT_REF double oscl_exp (double value)

Calculates the exponential of e for a number

Parameters:

value source value

6.4.4.38 OSCL_COND_IMPORT_REF double oscl_floor (double value)

Calculates the floor of a number

Parameters:

value source value

6.4.4.39 template<class Alloc> OSCL_HeapString< Alloc >::OSCL_HeapString (const OSCL_String & src) [inherited]

6.4.4.40 template<class Alloc> OSCL_HeapString< Alloc >::OSCL_HeapString (const OSCL_HeapString< Alloc > & src) [inherited]

Creates a heap string that contains a copy of the input string.

Parameters:

src: input string.

6.4.4.41 template<class Alloc> OSCL_HeapString< Alloc >::OSCL_HeapString (const chartype * buf, uint32 length) [inherited]

Creates a heap string that contains a copy of the input string or character array.

Parameters:

src: character array, not necessarily null-terminated.

length: number of characters to copy.

6.4.4.42 template<class Alloc> OSCL_HeapString< Alloc >::OSCL_HeapString (const chartype * cstr) [inherited]

Creates a heap string that contains a copy of the input string.

Parameters:

cp: null-terminated string.

6.4.4.43 template<class Alloc> OSCL_HeapString< Alloc >::OSCL_HeapString () [inherited]

The default constructor creates an empty string.

6.4.4.44 OSCL_COND_IMPORT_REF double oscl_log (double value)

Calculates the natural log of a number

Parameters:

value source value

6.4.4.45 OSCL_COND_IMPORT_REF double oscl_log10 (double value)

Calculates the logarithm to base 10 of a number

Parameters:

value source value

6.4.4.46 OSCL_COND_IMPORT_REF double oscl_pow (double x, double y)

Calculates the value of x to the power of y

Parameters:

- x* base value
- y* power

6.4.4.47 OSCL_COND_IMPORT_REF double oscl_sin (double *value*)

Calculates the sine of a number

Parameters:

- value* source value

6.4.4.48 OSCL_IMPORT_REF int32 oscl_snprintf (*oscl_wchar* * *str*, uint32 *count*, const *oscl_wchar* * *fmt*, ...)**6.4.4.49 OSCL_IMPORT_REF int32 oscl_snprintf (char * *str*, uint32 *count*, const char * *fmt*, ...)****6.4.4.50 OSCL_COND_IMPORT_REF double oscl_sqrt (double *value*)**

Calculates the square root of a number

Parameters:

- value* source value

6.4.4.51 template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize >::OSCL_StackString (const OSCL_String & *src*) [inherited]**6.4.4.52 template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize >::OSCL_StackString (const OSCL_StackString< MaxBufSize > & *src*) [inherited]**

Creates an OSCL_StackString with a copy of the input string. The string may be truncated to fit the available storage.

Parameters:

- src*: input string.

6.4.4.53 template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize >::OSCL_StackString (const *chartype* * *buf*, uint32 *length*) [inherited]

Creates an OSCL_StackString with a copy of the input string. The string may be truncated to fit the available storage.

Parameters:

- src*: a character array, not necessarily null-terminated.

- length*: the number of characters to copy.

**6.4.4.54 template<uint32 MaxBufSize> OSCL_StackString<MaxBufSize>::OSCL_StackString
(const chartype * *cstr*) [inherited]**

Creates an OSCL_StackString with a copy of the input string. The string may be truncated to fit the available storage.

Parameters:

cp: a null-terminated string.

**6.4.4.55 template<uint32 MaxBufSize> OSCL_StackString<MaxBufSize>::OSCL_StackString
() [inherited]**

Creates an OSCL_StackString initialized with an empty string.

**6.4.4.56 OSCL_IMPORT_REF int32 oscl_str_escape_xml (const char * *str_buf_in*, char *
str_buf_out, uint32 *max_out_buf_bytes*, uint32 *max_bytes* = 0, uint32 * *num_bytes_written*
= NULL)**

Escape any of the following special characters in the string Special ASCII characters: &, <, >, ', ".

The function scans the string and replaces each special character with its corresponding escape sequence. It stops at the first NULL character, the max_byte value.

Parameters:

str_buf_in Ptr to an input string

str_buf_out Ptr to an output buffer which stores the modified string

max_out_buf_bytes The size of str_buf_out.

max_bytes The maximum number of bytes to read (a zero value means read to the first NULL character). It is the length of str_buf_in.

num_bytes_written Number of bytes written in the output buffer, str_buf_out

Returns:

It returns the number of bytes in the str_buf_outring if succeeded. It returns negative number if failed, and its absolute value indicates the total number bytes written to the output buffer, str_buf_out, if str_buf_out != null.

**6.4.4.57 OSCL_IMPORT_REF bool oscl_str_is_valid_utf8 (const uint8 * *str_buf*, uint32 &
num_valid_characters, uint32 *max_bytes* = 0, uint32 *max_char_2_valid* = 0, uint32 *
num_byte_4_char = NULL)**

Check if the input string contains any illegal UTF-8 character. The function scans the string and validate that each character is a valid utf-8. It stops at the first NULL character, invalid character or the max_byte value. The string is valid if and only if every character is a valid utf-8 character and the scanning stopped on a character boundary.

Parameters:

str_buf Ptr to an input string, which may not terminate with null, to be checked

num_valid_chars This is an output parameter which is the number of valid utf-8 characters actually read.

max_bytes The maximum number of bytes to read (a zero value means read to the first NULL character).

max_char_2_valid This is an input parameter. Specify the number of utf-8 characters the caller wants to validate.

num_byte_4_char This is an output parameter. The number of bytes used by the max_char characters

Returns:

True if the string is valid and false otherwise.

6.4.4.58 OSCL_IMPORT_REF bool oscl_str_need_escape_xml (const char * str_buf, uint32 & num_escape_bytes, uint32 max_bytes = 0)

Check if the input string contains any special ASCII character like &, <, >, ', ". The function scans the string and check if each character is a special character. It stops at the first NULL character (if max_bytes = 0), or the max_byte value.

Parameters:

str_buf Ptr to an input string, which may not terminate with null, to be checked

num_escape_bytes This is an output parameter which is the number of bytes needed to hold the result string. Value 0 indicates that there is no special character found. If max_bytes = 0, the return value does not include the null character.

max_bytes The maximum number of bytes to read (a zero value means read to the first NULL character).

Returns:

True if the function succeeds, and num_escape_bytes = 0 means that no special character is found, num_escape_bytes >0 means the number of bytes of the result string. False if there is any error occurred.

6.4.4.59 OSCL_IMPORT_REF int32 oscl_str_truncate_utf8 (uint8 * str_buf, uint32 max_char, uint32 max_bytes = 0)

Truncates the UTF-8 string upto the required size.

The function will modify the str_buf so that it contains AT MOST len valid utf-8 characters. If a NULL character is found before reading len utf-8 characters, then the function does not modify the string and simply returns the number of characters. If an invalid character is found, then it will insert a NULL character after the last valid character and return the length. Otherwise, it will insert a NULL character after len valid utf-8 characters and return the length.

Parameters:

str_buf Ptr to an input string which may not terminate with null

max_char The max number of the UTF-8 CHARACTERS

max_bytes The maximum number of bytes to read (a zero value means read to the first NULL character).

Returns:

It returns the length of the truncated string in utf-8 characters.

6.4.4.60 OSCL_IMPORT_REF bool oscl_str_unescape_uri (const OSCL_String & *oscl_str_in*, OSCL_String & *oscl_str_out*, uint32 & *out_buf_len*)

unescape any of the special escape sequence in the uri string

The function scans the string and replaces each escape sequence with its corresponding character. It stops at the first null character, or the max_byte value. It returns false if the string contains any illegal escape sequence or the output buffer is not big enough. The out_buf_len value indicates the needed buffer length or the index of the byte that causes the error respectively.

Parameters:

oscl_str_in Ptr to an input OSCL_String

oscl_str_out Ptr to an output OSCL_String which stores the modified string

out_buf_len The length of the result string (not including the null character)

Returns:

It returns true if succeeds, otherwise false.

6.4.4.61 OSCL_IMPORT_REF bool oscl_str_unescape_uri (const char * *str_buf_in*, char * *str_buf_out*, uint32 *max_out_buf_bytes*, uint32 *max_bytes*, uint32 & *out_buf_len*)

unescape any of the special escape sequence in the uri string

The function scans the string and replaces each escape sequence with its corresponding character. It stops at the first null character, or the max_byte value. It returns false if the string contains any illegal escape sequence or the output buffer is not big enough. The out_buf_len value indicates the needed buffer length or the index of the byte that causes the error respectively.

Parameters:

str_buf_in Ptr to an input string

str_buf_out Ptr to an output buffer which stores the modified string

max_out_buf_bytes The size of str_buf_out.

max_bytes The maximum number of bytes to read. It is the length of str_buf_in.

out_buf_len The length of the result string (not including the null character)

Returns:

It returns true if succeeds, otherwise false.

6.4.4.62 OSCL_COND_IMPORT_REF double oscl_tan (double *value*)

Calculates the tangential of a number

Parameters:

value source value

6.4.4.63 OSCL_IMPORT_REF int32 oscl_UnicodeToUTF8 (const oscl_wchar * *input*, int32 *inLength*, char * *output*, int32 *outLength*)

Convert Unicode string to UTF8 byte sequence.

The function converts Unicode string to UTF8 byte sequence. The length of input Unicode string is specified. It stops at two conditions: (A) Whole input Unicode string is successfully converted. (B) Destination buferr is not enough for output. In case of (A), it adds a terminated '\0' at the end of the output UTF8 byte sequence, and returns length of the output UTF8 byte sequence (without counting terminated '\0'). In case of (B), it converts as much as possible to the output buffer and adds a terminated '\0' at the end of the output UTF8 byte sequence "(no '\0' added if outLength is less than or equal to 0, return 0)", and returns 0.

Parameters:

input Ptr to an input Unicode string. '\0' termination is not necessary.

inLength The length of the input Unicode string, without counting terminated '\0' (if any).

output Ptr to an output buffer which output UTF8 byte sequence is written in.

outLength The size of output buffer, also the maximum number of char could be written in.

Returns:

length of output (excludes '\0') : completely converts all input string and appends '\0' to output; 0 : insufficient buffer or error in conversion

6.4.4.64 OSCL_IMPORT_REF int32 oscl_UTF8ToUnicode (const char * *input*, int32 *inLength*, oscl_wchar * *output*, int32 *outLength*)

Convert UTF8 byte sequence to Unicode string.

The function converts UTF8 byte sequence (or ASCII sequence) to Unicode string. The length of input UTF8 byte sequence is specified. It stops at two conditions: (A) Whole input UTF8 byte sequence is successfully converted. (B) Output buferr is not enough for output, or parse error. In case of (A), it adds a terminated '\0' at the end of the output Unicode string, and returns length of the output Unicode string (without counting terminated '\0'). In case of (B), it converts as much as possible to the output buffer and adds a terminated '\0' at the end of the output Unicode string "(no '\0' added if outLength is less than or equal to 0, return 0)", and returns 0.

Parameters:

input Ptr to an input UTF8 byte sequence. '\0' termination is not necessary.

inLength The length of the input UTF8 byte sequence, without counting terminated '\0' (if any).

output Ptr to an output buffer which output Unicode string is written in.

outLength The size of output buffer, also the maximum number of oscl_wchar could be written in.

Returns:

Length of output (excludes '\0') : completely converts all input string and appends '\0' to output; 0 : insufficient buffer or error in conversion

- 6.4.4.65 **OSCL_IMPORT_REF int32 oscl_vsnprintf (oscl_wchar * str, uint32 count, const oscl_wchar * fmt, va_list args)**
- 6.4.4.66 **OSCL_IMPORT_REF int32 oscl_vsnprintf (char * str, uint32 count, const char * fmt, va_list args)**
- 6.4.4.67 **template<class Alloc> OSCL_wHeapString< Alloc >::OSCL_wHeapString (const OSCL_wString & src) [inherited]**
- 6.4.4.68 **template<class Alloc> OSCL_wHeapString< Alloc >::OSCL_wHeapString (const OSCL_wHeapString< Alloc > & src) [inherited]**
- 6.4.4.69 **template<class Alloc> OSCL_wHeapString< Alloc >::OSCL_wHeapString (const chartype * buf, uint32 length) [inherited]**
- 6.4.4.70 **template<class Alloc> OSCL_wHeapString< Alloc >::OSCL_wHeapString (const chartype * cstr) [inherited]**
- 6.4.4.71 **template<class Alloc> OSCL_wHeapString< Alloc >::OSCL_wHeapString () [inherited]**
- 6.4.4.72 **template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize >::OSCL_wStackString (const OSCL_wString & src) [inherited]**
- 6.4.4.73 **template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize >::OSCL_wStackString (const OSCL_wStackString< MaxBufSize > & src) [inherited]**
- 6.4.4.74 **template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize >::OSCL_wStackString (const chartype * buf, uint32 length) [inherited]**
- 6.4.4.75 **template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize >::OSCL_wStackString (const chartype * cstr) [inherited]**
- 6.4.4.76 **template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize >::OSCL_wStackString () [inherited]**
- 6.4.4.77 **OSCL_IMPORT_REF bool PV_atof (const char * buf, int length, OsclFloat & value)**
- 6.4.4.78 **OSCL_IMPORT_REF bool PV_atof (const char * buf, OsclFloat & value)**
- 6.4.4.79 **OSCL_IMPORT_REF bool PV_atoi (const char * buf, const char new_format, int length, uint64 & value)**
- 6.4.4.80 **OSCL_IMPORT_REF bool PV_atoi (const char * buf, const char new_format, int length, uint32 & value)**
- 6.4.4.81 **OSCL_IMPORT_REF bool PV_atoi (const char * buf, const char new_format, uint32 & value)**
- 6.4.4.82 **template<uint32 MaxBufSize> void OSCL_wStackString< MaxBufSize >::set (const other_chartype * buf, uint32 length, optype op) [inherited]**
- 6.4.4.83 **template<uint32 MaxBufSize> void OSCL_StackString< MaxBufSize >::set (const other_chartype * buf, uint32 length, optype op) [inherited]**

Parameters:

- buf*: string or character array.
- length*: number of characters to copy.
- op*: conversion operation to apply

6.4.4.84 template<uint32 MaxBufSize> void OSCL_wStackString< MaxBufSize >::set (const other_chartype * *buf*, *otype op*) [inherited]

6.4.4.85 template<uint32 MaxBufSize> void OSCL_StackString< MaxBufSize >::set (const other_chartype * *buf*, *otype op*) [inherited]

Set the contents of this string to a new string, with conversion operation.

Parameters:

- buf*: NULL-terminated wide string.
- op*: conversion operation to apply

6.4.4.86 template<uint32 MaxBufSize> void OSCL_wStackString< MaxBufSize >::set (const chartype * *buf*, uint32 *length*) [inherited]

6.4.4.87 template<uint32 MaxBufSize> void OSCL_StackString< MaxBufSize >::set (const chartype * *buf*, uint32 *length*) [inherited]

Set the contents of this string to a new string or character array.

Parameters:

- buf*: string or character array.
- length*: number of characters to copy.

6.4.4.88 template<class Alloc> void OSCL_wHeapString< Alloc >::set (const other_chartype * *buf*, uint32 *length*, *otype op*) [inherited]

6.4.4.89 template<class Alloc> void OSCL_HeapString< Alloc >::set (const other_chartype * *buf*, uint32 *length*, *otype op*) [inherited]

Set the contents of this string to a new string or character array, with conversion operation.

Parameters:

- buf*: string or character array.
- length*: number of characters to copy.
- op*: conversion operation to apply

6.4.4.90 template<class Alloc> void OSCL_wHeapString< Alloc >::set (const other_chartype * *buf*, *otype op*) [inherited]

6.4.4.91 template<class Alloc> void OSCL_HeapString< Alloc >::set (const other_chartype * *buf*, *otype op*) [inherited]

Set the contents of this string to a new string, with conversion operation.

Parameters:

buf: NULL-terminated wide string.

op: conversion operation to apply

**6.4.4.92 template<class Alloc> void OSCL_wHeapString< Alloc >::set (const chartype * *buf*,
 uint32 *length*) [inherited]**

**6.4.4.93 template<class Alloc> void OSCL_HeapString< Alloc >::set (const chartype * *buf*,
 uint32 *length*) [inherited]**

Set the contents of this string to a new string or character array.

Parameters:

buf: string or character array.

length: number of characters to copy.

**6.4.4.94 OSCL_IMPORT_REF const char* skip_to_line_term (const char * *start_ptr*, const char *
 end_ptr)**

**6.4.4.95 OSCL_IMPORT_REF const char* skip_to_whitespace (const char * *start*, const char *
 end)**

6.4.4.96 OSCL_IMPORT_REF const char* skip_whitespace (const char * *start*, const char * *end*)

6.4.4.97 OSCL_IMPORT_REF char* skip_whitespace (char * *ptr*)

6.4.4.98 OSCL_IMPORT_REF const char* skip_whitespace (const char * *ptr*)

**6.4.4.99 OSCL_IMPORT_REF const char* skip_whitespace_and_line_term (const char * *start*,
 const char * *end*)**

**6.4.4.100 template<class Alloc> OSCL_HeapString< Alloc >::~OSCL_HeapString ()
 [inherited]**

**6.4.4.101 template<uint32 MaxBufSize> OSCL_StackString< MaxBufSize
 >::~OSCL_StackString () [inherited]**

**6.4.4.102 template<class Alloc> OSCL_wHeapString< Alloc >::~OSCL_wHeapString ()
 [inherited]**

**6.4.4.103 template<uint32 MaxBufSize> OSCL_wStackString< MaxBufSize
 >::~OSCL_wStackString () [inherited]**

6.4.5 Variable Documentation

6.4.5.1 const int32 APPEND_MEDIA_AT_END = -1

6.4.5.2 const uint8 OSCL_ASCII_CASE_MAGIC_BIT = 0x20

6.5 OSCL Error

Files

- file [oscl_errno.h](#)
Defines functions to access additional information on errors where supported through an errno or similar service.
- file [oscl_error.h](#)
OSCL Error trap and cleanup include file.
- file [oscl_error_allocator.h](#)
Defines a memory allocation class used by the oscl error layer.
- file [oscl_error_codes.h](#)
Defines basic error and leave codes.
- file [oscl_error_imp.h](#)
Internal error implementation support.
- file [oscl_error_imp_cppexceptions.h](#)
Implementation File for Leave using C++ exceptions.
- file [oscl_error_imp_fatalerror.h](#)
Implementation File for Leave using system fatal error.
- file [oscl_error_imp_jumps.h](#)
Implementation of using Setjmp / Longjmp.
- file [oscl_error_trapcleanup.h](#)
OSCL Error trap and cleanup implementation include file.
- file [oscl_exception.h](#)
contains all the exception handling macros and classes
- file [oscl_heapbase.h](#)
OSCL Heap Base include file.
- file [oscl_namestring.h](#)
Name string class include file.

Data Structures

- class [_OsclHeapBase](#)
- class [internalLeave](#)
- class [OsclError](#)
- class [OsclErrorAllocator](#)

This class provides static methods to invoke the user defined memory allocation routines.

- class OsclErrorTrap
- class OsclErrorTrapImp
- class OsclException

oscl_exception.h contains all the exception handling macros and classes This template class provides the base exception class that all exceptions derive from

- class OsclJump
- class OsclNameString
- class OsclTLSEx
- class OsclTLSRegistryEx
- class OsclTrapItem
- class OsclTrapStack
- class OsclTrapStackItem

Defines

- #define OSCL_TRAPSTACK_PUSH(a) OsclError::PushL(a)
- #define OSCL_TRAPSTACK_POP() OsclError::Pop()
- #define OSCL_TRAPSTACK_POPDEALLOC() OsclError::PopDealloc()
- #define OsclErrNone 0
- #define OsclErrGeneral 100
- #define OsclErrNoMemory 101
- #define OsclErrCancelled 102
- #define OsclErrNotSupported 103
- #define OsclErrArgument 104
- #define OsclErrBadHandle 105
- #define OsclErrAlreadyExists 106
- #define OsclErrBusy 107
- #define OsclErrNotReady 108
- #define OsclErrCorrupt 109
- #define OsclErrTimeout 110
- #define OsclErrOverflow 111
- #define OsclErrUnderflow 112
- #define OsclErrInvalidState 113
- #define OsclErrNoResources 114
- #define OsclErrNotInstalled 115
- #define OsclErrAlreadyInstalled 116
- #define OsclErrSystemCallFailed 117
- #define OsclErrNoHandler 118
- #define OsclErrThreadContextIncorrect 119
- #define OSCL_ERR_NONE OsclErrNone
- #define OSCL_BAD_ALLOC_EXCEPTION_CODE OsclErrNoMemory
- #define OsclSuccess 0
- #define OsclPending 1
- #define OsclFailure -1
- #define PVERROR_IMP_JUMPS
- #define PVERROR_DoLeave() internalLeave __ilv; __ilv.a=0; throw(__ilv)
- #define _PV_TRAP(__r, __s)
- #define _PV_TRAP_NO_TLS(__trapimp, __r, __s)
- #define OSCL_JUMP_MAX_JUMP_MARKS OSCL_MAX_TRAP_LEVELS

- #define **internalLeave** (-1)
 - #define **OSCL_MAX_TRAP_LEVELS** 20
 - #define **PVERRORTRAP_REGISTRY_ID** OSCL_TLS_ID_PVERRORTRAP
 - #define **PVERRORTRAP_REGISTRY** OsclTLSRegistry
 - #define **OSCL_LEAVE**(_leave_status) OsclError::Leave(_leave_status)
- Use this macro to cause a Leave. It terminates the execution of the current active function.*
- #define **OSCL_TRY**(_leave_status, _statements) _PV_TRAP(_leave_status,_statements)
- This macro will be used to set up a try block.*
- #define **OSCL_TRY_NO_TLS**(_trapimp, _leave_status, _statements) _PV_TRAP_NO_TLS(_-trapimp,_leave_status,_statements)
 - #define **OSCL_FIRST_CATCH_ANY**(_leave_status, _statements) if (_leave_status!=OsclErrNone){ _statements; }
- This section defines the macros to be used in the catch block following the try block. Use this macro to call a function that handles all exception types thrown in the preceding try block.*
- #define **OSCL_FIRST_CATCH**(_leave_status, _catch_value, _statements) if (_leave_status!=OsclErrNone && _leave_status == _catch_value){_statements;}
- Use this macro to define a block of code that catches the first exception type thrown in the preceding try block.*
- #define **OSCL_CATCH**(_leave_status, _catch_value, _statements) else if (_leave_status!=OsclErrNone && _leave_status == _catch_value){_statements;}
- Use this macro to define a block of code for catching additional exception types.*
- #define **OSCL_CATCH_ANY**(_leave_status, _statements) else if (_leave_status!=OsclErrNone){ _-statements;}
- Use this macro to call a function that will catch all remaining exception types.*
- #define **OSCL_LAST_CATCH**(_leave_status) else if (_leave_status!=OsclErrNone){OSCL_-LEAVE(_leave_status);}
- Use this macro if OSCL_CATCH_ANY has not been used. It will mark the end of the catch block.*

Typedefs

- typedef int32 **OsclLeaveCode**
- typedef int32 **OsclReturnCode**
- typedef void(*) **OsclTrapOperation**)(OsclAny *)

Functions

- OSCL_IMPORT_REF bool **OSCL_IsErrnoSupported** ()
This function determines if a particular system saves the error number that occurs on a system call.
- OSCL_IMPORT_REF int **OSCL_GetLastError** ()
This function returns the value of the system's global error number variable.
- OSCL_IMPORT_REF bool **OSCL_SetLastError** (int newVal)

This function sets the last error code for the system.

- OSCL_IMPORT_REF char * **OSCL_StrError** (int errnum)

This function maps an error number to an error-message string.

6.5.1 Define Documentation

6.5.1.1 #define _PV_TRAP(__r, __s)

Value:

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __tr=OsclErrorTrapImp::Trap(); \
    if(!__tr){__s;}else{ \
        try{__s;} \
        catch(internalLeave __lv){ \
            __lv.a=__r=__tr->iLeave; } \
            __tr->UnTrap(); } \
    } 
```

6.5.1.2 #define _PV_TRAP_NO_TLS(__trapimp, __r, __s)

Value:

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __tr=OsclErrorTrapImp::TrapNoTls(__trapimp); \
    if(!__tr){__s;}else{ \
        try{__s;} \
        catch(internalLeave __lv){ \
            __lv.a=__r=__tr->iLeave; } \
            __tr->UnTrap(); } \
    } 
```

6.5.1.3 #define internalLeave (-1)

6.5.1.4 #define OSCL_BAD_ALLOC_EXCEPTION_CODE OsclErrNoMemory

6.5.1.5 #define OSCL_CATCH(_leave_status, _catch_value, _statements) else if (_leave_status!=OsclErrNone && _leave_status == _catch_value){_statements;}

Use this macro to define a block of code for catching additional exception types.

OSCL_FIRST_CATCH can be used to catch one exception type. Then the OSCL_CATCH macro can be used to catch each subsequent type. The catch block must end with OSCL_LAST_CATCH or OSCL_CATCH_ANY

Parameters:

oscl_leave_status is the result of any OSCL_THROW

exceptiontype is the exception handled by this catch block

**6.5.1.6 #define OSCL_CATCH_ANY(_leave_status, _statements) else if
(_leave_status!=OsclErrNone){ _statements;}**

Use this macro to call a function that will catch all remaining exception types.

Parameters:

_leave_status

_statements is a statement or block of statements to handle all remaining exception types. This macro ends the try block.

6.5.1.7 #define OSCL_ERR_NONE OsclErrNone

For backward compatibility with old definitions

**6.5.1.8 #define OSCL_FIRST_CATCH(_leave_status, _catch_value, _statements) if
(_leave_status!=OsclErrNone && _leave_status == _catch_value){_statements;}**

Use this macro to define a block of code that catches the first exception type thrown in the preceding try block.

Parameters:

oscl_leave_status is the leave code that was returned by OSCL_THROW

exceptiontype is the exception handled by this catch block. This macro MUST be used in conjunction with either OSCL_LAST_CATCH or OSCL_CATCH_ANY

**6.5.1.9 #define OSCL_FIRST_CATCH_ANY(_leave_status, _statements) if
(_leave_status!=OsclErrNone) { _statements; }**

This section defines the macros to be used in the catch block following the try block. Use this macro to call a function that handles all exception types thrown in the preceding try block.

Parameters:

_leave_status

_statements is a statement or block of statements that will catch all the exception types thrown by the preceding try block. This is a standalone macro and should not be used with any of the macros above

6.5.1.10 #define OSCL_JUMP_MAX_JUMP_MARKS OSCL_MAX_TRAP_LEVELS**6.5.1.11 #define OSCL_LAST_CATCH(_leave_status) else if (_leave_status!=OsclErrNone){OSCL_LEAVE(_leave_status);}**

Use this macro if OSCL_CATCH_ANY has not been used. It will mark the end of the catch block.

Parameters:

_leave_status will be propagated up the call stack. This macro will do an OSCL_LEAVE if the leave has not been handled by the calls above. This macro ends the try block.

6.5.1.12 #define OSCL_LEAVE(_leave_status) OsclError::Leave(_leave_status)

Use this macro to cause a Leave. It terminates the execution of the current active function.

It also tries to cleanup the items on the cleanup stack.

Parameters:

oscl_leave_status tells the cause for the Leave

6.5.1.13 #define OSCL_MAX_TRAP_LEVELS 20**6.5.1.14 #define OSCL_TRAPSTACK_POP() OsclError::Pop()****6.5.1.15 #define OSCL_TRAPSTACK_POPDEALLOC() OsclError::PopDealloc()****6.5.1.16 #define OSCL_TRAPSTACK_PUSH(a) OsclError::PushL(a)**

Cleanup Stack user macros

6.5.1.17 #define OSCL_TRY(_leave_status, _statements) _PV_TRAP(_leave_status, _statements)

This macro will be used to set up a try block.

The try block identifies a block of code that might throw exceptions (or leave)

Parameters:

oscl_leave_status oscl_leave_status will receive the result of any OSCL_LEAVE (which will get called from a OSCL_THROW) on systems that do not support exception handling. This is unused on systems that do support exception handling

statements is a statement or block of statements that could throw exceptions and will be executed in the try block

6.5.1.18 #define OSCL_TRY_NO_TLS(__trapimp, _leave_status, _statements)
 __PV_TRAP_NO_TLS(__trapimp,_leave_status,_statements)

6.5.1.19 #define OsclErrAlreadyExists 106

6.5.1.20 #define OsclErrAlreadyInstalled 116

6.5.1.21 #define OsclErrArgument 104

6.5.1.22 #define OsclErrBadHandle 105

6.5.1.23 #define OsclErrBusy 107

6.5.1.24 #define OsclErrCancelled 102

6.5.1.25 #define OsclErrCorrupt 109

6.5.1.26 #define OsclErrGeneral 100

6.5.1.27 #define OsclErrInvalidState 113

6.5.1.28 #define OsclErrNoHandler 118

6.5.1.29 #define OsclErrNoMemory 101

6.5.1.30 #define OsclErrNone 0

6.5.1.31 #define OsclErrNoResources 114

6.5.1.32 #define OsclErrNotInstalled 115

6.5.1.33 #define OsclErrNotReady 108

6.5.1.34 #define OsclErrNotSupported 103

6.5.1.35 #define OsclErrOverflow 111

6.5.1.36 #define OsclErrSystemCallFailed 117

6.5.1.37 #define OsclErrThreadContextIncorrect 119

6.5.1.38 #define OsclErrTimeout 110

6.5.1.39 #define OsclErrUnderflow 112

6.5.1.40 #define OsclFailure -1

6.5.1.41 #define OsclPending 1

6.5.1.42 #define OsclSuccess 0

6.5.1.43 #define PVError_DoLeave() internalLeave __ilv; __ilv.a=0; throw(__ilv)

6.5.1.44 #define PVERROR_IMP_JUMPS

6.5.1.45 #define PVERRORTRAP_REGISTRY OsclTLSRegistry

6.5.1.46 #define PVERRORTRAP_REGISTRY_ID OSCL_TLS_ID_PVERRORTRAP

6.5.2 Typedef Documentation

6.5.2.1 typedef int32 OsclLeaveCode

Leave Codes

6.5.2.2 typedef int32 OsclReturnCode

Return Codes

6.5.2.3 typedef void(* OsclTrapOperation)(OsclAny*)

OsclTrapItem may be used in the cleanup stack when a custom cleanup operation is needed.

6.5.3 Function Documentation

6.5.3.1 OSCL_IMPORT_REF int OSCL_GetLastError ()

This function returns the value of the system's global error number variable.

Returns:

Returns 0 for system's that do not have this functionality The value of the error number variable does not change until the user calls SetLastError or if another system call occurs that changes the value

Supported Platforms: Win32/wince, Unix Unsupported Platforms : Symbian

6.5.3.2 OSCL_IMPORT_REF bool OSCL_IsErrnoSupported ()

This function determines if a particular system saves the error number that occurs on a system call.

Returns:

This method returns false on systems that do not save the error number that occurs on a system call in a global variable. Returns true for systems that do save the error number

6.5.3.3 OSCL_IMPORT_REF bool OSCL_SetLastError (int *newVal*)

This function sets the last error code for the system.

Parameters:

newVal This value represents the new value for the global error number This method can be used to reset the error number after having retrieved it using GetLastError. Supported Platforms: Win32/wince, Unix Unsupported Platforms : Symbian

6.5.3.4 OSCL_IMPORT_REF char* OSCL_StrError (int *errnum*)

This function maps an error number to an error-message string.

Parameters:

errnum This value represents the error number to map

Returns:

This method returns a pointer to a string containing the system error-message. It returns NULL for systems that do not have this functionality Supported Platforms: Win32/wince, Unix Unsupported Platforms : Symbian

6.6 OSCL IO

Files

- file `oscl_dns.h`
The file `oscl_socket.h` defines the OSCL DNS APIs.
- file `oscl_file_cache.h`
The file `oscl_file_cache.h` defines the class `OsclFileCache`.
- file `oscl_file_dir_utils.h`
The file `oscl_file_dir_utils.h` defines some unix-style directory ops.
- file `oscl_file_find.h`
The file `oscl_file_find.h` defines the class `Oscl_FileFind`.
- file `oscl_file_handle.h`
The file `oscl_file_handle.h` defines the class `Oscl_FileHandle`.
- file `oscl_file_io.h`
The file `oscl_file_io.h` defines the class `Oscl_File`. This is the public API to the basic file I/O operations.
- file `oscl_file_manager.h`
File management class.
- file `oscl_file_native.h`
The file `oscl_file_native.h` defines the class `OsclNativeFile`. This is the porting layer for basic file I/O operations.
- file `oscl_file_server.h`
The file `oscl_file_server.h` defines the class `Oscl_FileServer`. This is the porting layer for file server implementations.
- file `oscl_file_stats.h`
File stats class.
- file `oscl_file_types.h`
The file `oscl_file_types.h` defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here.
- file `oscl_socket.h`
The file `oscl_socket.h` defines the OSCL Socket APIs.

Data Structures

- class `Oscl_File`
- class `Oscl_FileFind`
- class `Oscl_FileServer`
- struct `oscl_fsstat`

- struct `oscl_stat_buf`
- class `OsclIDNS`
- class `OsclDNSObserver`
- class `OsclFileCache`
- class `OsclFileCacheBuffer`
- class `OsclFileHandle`
- class `OsclFileManager`
- class `OsclFileStats`
- class `OsclFileStatsItem`
- class `OsclNativeFile`
- class `OsclNativeFileParams`
- class `OsclSocketServ`
- class `OsclTCPSocket`
- class `OsclUDPSocket`

Defines

- #define `TOsclFileOffsetInt32` int32
- #define `OSCL_FILE_STATS_LOGGER_NODE` "OsclFileStats"
- #define `OSCL_IO_FILENAME_MAXLEN` 512
- #define `OSCL_IO_EXTENSION_MAXLEN` 512
- #define `OSCL_FILE_WCHAR_PATH_DELIMITER` _STRLIT("/")
- #define `OSCL_FILE_CHAR_PATH_DELIMITER` _STRLIT_CHAR("/")

Typedefs

- typedef `oscl_fsstat` `OSCL_FSSTAT`
- typedef `oscl_stat_buf` `OSCL_STAT_BUF`
- typedef FILE * `TOsclFileHandle`

Enumerations

- enum `TPVDNSFxn` { `EPVDNSGetHostByName` }
- enum `TPVDNSEvent` { `EPVDNSSuccess`, `EPVDNSPending`, `EPVDNSTimeout`, `EPVDNSFailure`, `EPVDNSCancel` }
- enum `OSCL_FILEMGMT_PERMS` { `OSCL_FILEMGMT_PERMS_READ` = 0x1, `OSCL_FILEMGMT_PERMS_WRITE` = 0x2, `OSCL_FILEMGMT_PERMS_EXECUTE` = 0x4 }
- enum `OSCL_FILEMGMT_MODES` { `OSCL_FILEMGMT_MODE_DIR` = 0x1 }
- enum `OSCL_FILEMGMT_ERR_TYPE` { `OSCL_FILEMGMT_E_OK` = 0, `OSCL_FILEMGMT_E_PATH_TOO_LONG`, `OSCL_FILEMGMT_E_PATH_NOT_FOUND`, `OSCL_FILEMGMT_E_ALREADY_EXISTS`, `OSCL_FILEMGMT_E_NOT_EMPTY`, `OSCL_FILEMGMT_E_PERMISSION_DENIED`, `OSCL_FILEMGMT_E_NO_MATCH`, `OSCL_FILEMGMT_E_UNKNOWN`, `OSCL_FILEMGMT_E_SYS_SPECIFIC`, `OSCL_FILEMGMT_E_NOT_IMPLEMENTED` }
- enum `TOsclFileOp` { `EOsclFileOp_Open`, `EOsclFileOp_Close`, `EOsclFileOp_Read`, `EOsclFileOp_Write`, `EOsclFileOp_Seek`, `EOsclFileOp_Tell`, `EOsclFileOp_Size`, `EOsclFileOp_Flush`, `EOsclFileOp_EndOfFile`, `EOsclFileOp_SetSize`, `EOsclFileOp_NativeOpen`, `EOsclFileOp_NativeClose`, `EOsclFileOp_NativeRead`, `EOsclFileOp_NativeWrite`, `EOsclFileOp_NativeSeek`, `EOsclFileOp_NativeTell`, `EOsclFileOp_NativeSize`, `EOsclFileOp_NativeFlush`, `EOsclFileOp_NativeEndOfFile`, `EOsclFileOp_NativeSetSize`, `EOsclFileOp_Last` }

Functions

- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (oscl_wchar *path, uint32 size)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (char *path, uint32 size)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const oscl_wchar *path, OSCL_STAT_BUF *statbuf)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const char *path, OSCL_STAT_BUF *statbuf)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const oscl_wchar *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const char *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const oscl_wchar *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const char *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const oscl_wchar *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const char *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const oscl_wchar *oldpath, const oscl_wchar *newpath)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const char *oldpath, const char *newpath)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_statsfs (OSCL_FSSTAT *stats, const char *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_statsfs (OSCL_FSSTAT *stats, const oscl_wchar *path)

6.6.1 Define Documentation

- 6.6.1.1 #define OSCL_FILE_CHAR_PATH_DELIMITER _STRLIT_CHAR("/")
- 6.6.1.2 #define OSCL_FILE_STATS_LOGGER_NODE "OsclFileStats"
- 6.6.1.3 #define OSCL_FILE_WCHAR_PATH_DELIMITER _STRLIT("/")
- 6.6.1.4 #define OSCL_IO_EXTENSION_MAXLEN 512
- 6.6.1.5 #define OSCL_IO_FILENAME_MAXLEN 512
- 6.6.1.6 #define TOsclFileOffsetInt32 int32

6.6.2 Typedef Documentation

- 6.6.2.1 typedef struct oscl_fsstat OSCL_FSSTAT
- 6.6.2.2 typedef struct oscl_stat_buf OSCL_STAT_BUF
- 6.6.2.3 typedef FILE* TOsclFileHandle

TOsclFileHandle is an OS-native file handle type. With a class-based file API such as Symbian, a class ref is used as a file handle. For most ANSI-style file APIs, a file pointer is used as a file handle.

6.6.3 Enumeration Type Documentation

6.6.3.1 enum OSCL_FILEMGMT_ERR_TYPE

Enumeration values:

- `OSCL_FILEMGMT_E_OK`
- `OSCL_FILEMGMT_E_PATH_TOO_LONG`
- `OSCL_FILEMGMT_E_PATH_NOT_FOUND`
- `OSCL_FILEMGMT_E_ALREADY_EXISTS`
- `OSCL_FILEMGMT_E_NOT_EMPTY`
- `OSCL_FILEMGMT_E_PERMISSION_DENIED`
- `OSCL_FILEMGMT_E_NO_MATCH`
- `OSCL_FILEMGMT_E_UNKNOWN`
- `OSCL_FILEMGMT_E_SYS_SPECIFIC`
- `OSCL_FILEMGMT_E_NOT_IMPLEMENTED`

6.6.3.2 enum OSCL_FILEMGMT_MODES

Enumeration values:

- `OSCL_FILEMGMT_MODE_DIR`

6.6.3.3 enum OSCL_FILEMGMT_PERMS

Enumeration values:

- `OSCL_FILEMGMT_PERMS_READ`
- `OSCL_FILEMGMT_PERMS_WRITE`
- `OSCL_FILEMGMT_PERMS_EXECUTE`

6.6.3.4 enum TOsclFileOp

Enumeration values:

- `EOsclFileOp_Open`
- `EOsclFileOp_Close`
- `EOsclFileOp_Read`
- `EOsclFileOp_Write`
- `EOsclFileOp_Seek`
- `EOsclFileOp_Tell`
- `EOsclFileOp_Size`
- `EOsclFileOp_Flush`
- `EOsclFileOp_EndOfFile`
- `EOsclFileOp_SetSize`
- `EOsclFileOp_NativeOpen`
- `EOsclFileOp_NativeClose`

```
EOsclFileOp_NativeRead
EOsclFileOp_NativeWrite
EOsclFileOp_NativeSeek
EOsclFileOp_NativeTell
EOsclFileOp_NativeSize
EOsclFileOp_NativeFlush
EOsclFileOp_NativeEndOfFile
EOsclFileOp_NativeSetSize
EOsclFileOp_Last
```

6.6.3.5 enum TPVDNSEvent

Enumeration values:

```
EPVDNSSuccess
EPVDNSPending
EPVDNSTimeout
EPVDNSFailure
EPVDNSCancel
```

6.6.3.6 enum TPVDNSFxn

Enumeration values:

```
EPVDNSGetHostByName
```

6.6.4 Function Documentation

6.6.4.1 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const char **path*)

oscl_chdir changes the current directory to the path given

Parameters:

character path the full path of the directory to change to.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.6.4.2 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const oscl_wchar **path*)

oscl_chdir changes the current directory to the path given

Parameters:

wide character path the full path of the directory to change to.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.6.4.3 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (char *path, uint32 size)

oscl_getcwd function can be used to determine the full path name of the current directory.

Parameters:

pointer to character buffer to receive the current directory
size size of buffer in characters

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.6.4.4 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (oscl_wchar *path, uint32 size)

oscl_getcwd function can be used to determine the full path name of the current directory.

Parameters:

pointer to wide character buffer to receive the current directory
size size of buffer in wide characters

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.6.4.5 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const char *path)

oscl_mkdir function creates a directory in the path given

Parameters:

character path the full path of the directory to create. if parts of the path do not exist the function will fail

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.6.4.6 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const oscl_wchar *path)

oscl_mkdir function creates a directory in the path given

Parameters:

wide character path the full path of the directory to create. if parts of the path do not exist the function will fail

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.7 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const char *
oldpath, const char **newpath*)**

oscl_rmdir removes an empty directory in the path given

Parameters:

character path the full path of the directory to remove.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.8 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const oscl_wchar
** oldpath*, const oscl_wchar **newpath*)**

oscl_rename function renames a file or directory

Parameters:

wide character path the full path of the file or directory to rename.

wide character path the full path the new name for the directory

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.6.4.9 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const char **path*)

oscl_rmdir removes an empty directory in the path given

Parameters:

character path the full path of the directory to remove.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.10 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const oscl_wchar *
path)**

oscl_rmdir function removes and empty directory in the path given

Parameters:

wide character path the full path of the directory to remove.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.11 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const char *path,
OSCL_STAT_BUF *statbuf)**

oscl_stat function can be used to determine the attributes of a file in addition to whether the file exists or not

Parameters:

character path the full path of the file to stat.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.12 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const oscl_wchar *
path, OSCL_STAT_BUF *statbuf)**

oscl_stat function can be used to determine the attributes of a file in addition to whether the file exists or not

Parameters:

wide character path the full path of the file to stat.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.13 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_statsfs (OSCL_FSSTAT *
stats, const oscl_wchar *path)**

Oscl_StatFS function populates a general structure describing free space available on a filesystem

Parameters:

stats pointer to structure to hold information

path located in desired filesystem (utf8) Note: If the OS does not support a particular field in the structure, it is set to -1.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

**6.6.4.14 OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_statsfs (OSCL_FSSTAT *
stats, const char *path)**

Oscl_StatFS function populates a general structure describing free space available on a filesystem

Parameters:

stats pointer to structure to hold information

path located in desired filesystem (utf8) Note: If the OS does not support a particular field in the structure, it is set to -1.

Returns:

OSCL_FILEMGMT_ERR_TYPE, see enumeration for this type.

6.7 OSCL Proc

Files

- file [oscl_aostatus.h](#)
Some basic types used with active objects.
- file [oscl_double_list.h](#)
Internal use types for scheduler.
- file [oscl_scheduler_ao.h](#)
Oscl Scheduler user execution object classes.
- file [oscl_scheduler_aobase.h](#)
Oscl Scheduler internal active object classes.
- file [oscl_scheduler_readyq.h](#)
ready q types for oscl scheduler
- file [oscl_scheduler_threadcontext.h](#)
Thread context functions needed by oscl scheduler.
- file [oscl_scheduler_tuneables.h](#)
Tuneable settings for Oscl Scheduler.
- file [oscl_scheduler_types.h](#)
Scheduler common types include file.

Data Structures

- class [OsclActiveObject](#)
- class [OsclAOStatus](#)
- class [OsclDoubleLink](#)
- class [OsclDoubleList](#)
- class [OsclDoubleListBase](#)
- class [OsclDoubleRunner](#)
- class [OsclExecScheduler](#)
- class [OsclExecSchedulerBase](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclPriorityLink](#)
- class [OsclPriorityList](#)
- class [OsclReadyAlloc](#)
- class [OsclReadyCompare](#)
- class [OsclReadyQ](#)
- class [OsclScheduler](#)
- class [OsclSchedulerObserver](#)
- class [OsclTimerCompare](#)
- class [OsclTimerObject](#)

- class OsclTimerQ
- class PVActiveBase
- class PVActiveStats
- class PVSchedulerStopper
- class PVThreadContext
- class TReadyQueLink

Defines

- #define QUE_ITER_BEGIN(_type, _qname)
- #define QUE_ITER_END(_qname)
- #define PVSCHEDNAMELEN 30
- #define OSCL_ZEROIZE(ptr, size) oscl_memset(ptr, 0, size)
- #define PVEXECNAMELEN 30
- #define PV_SCHED_ENABLE_AO_STATS 1
- #define PV_SCHED_ENABLE_LOOP_STATS 0
- #define PV_SCHED_ENABLE_PERF_LOGGING 1
- #define PV_SCHED_ENABLE_THREAD_CONTEXT_CHECKS 1
- #define PV_SCHED_LOG_Q 0
- #define PV_SCHED_CHECK_Q 0
- #define PV_SCHED_FAIR_SCHEDULING 1
- #define OSCL_PERF_SUMMARY_LOGGING 0

Typedefs

- typedef PVActiveBase * TOsclReady

Enumerations

- enum TPVThreadContext { EPVThreadContext_InThread, EPVThreadContext_OsclThread, EPVThreadContext_NonOsclThread, EPVThreadContext_Undetermined }

Functions

- template<class T, class S> T * OsclPtrAdd (T *aPtr, S aVal)
- template<class T, class S> T * OsclPtrSub (T *aPtr, S aVal)

Variables

- const int32 OSCL_REQUEST_ERR_NONE = 0
- const int32 OSCL_REQUEST_PENDING = (-0x7fffffff)
- const int32 OSCL_REQUEST_ERR_CANCEL = (-1)
- const int32 OSCL_REQUEST_ERR_GENERAL = (-2)

6.7.1 Define Documentation

6.7.1.1 #define OSCL_PERF_SUMMARY_LOGGING 0

6.7.1.2 #define OSCL_ZEROIZE(ptr, size) oscl_memset(ptr, 0, size)

This file defines the [PVActiveBase](#) class, which is a common base for All PV ExecObjs on all platforms.

6.7.1.3 #define PV_SCHED_CHECK_Q 0

6.7.1.4 #define PV_SCHED_ENABLE_AO_STATS 1

6.7.1.5 #define PV_SCHED_ENABLE_LOOP_STATS 0

6.7.1.6 #define PV_SCHED_ENABLE_PERF_LOGGING 1

6.7.1.7 #define PV_SCHED_ENABLE_THREAD_CONTEXT_CHECKS 1

6.7.1.8 #define PV_SCHED_FAIR_SCHEDULING 1

6.7.1.9 #define PV_SCHED_LOG_Q 0

6.7.1.10 #define PVEEXECNAMELEN 30

6.7.1.11 #define PVSCEDNAMELEN 30

PV Scheduler class

6.7.1.12 #define QUE_ITER_BEGIN(_type, _qname)

Value:

```
if (!_qname.IsEmpty())\
{\
    OsclDoubleRunner <_type> iter(_qname);\
    _type *item;\
    for (iter.SetToHead(); ;iter++)\
    {\
        item=iter;\
```

6.7.1.13 #define QUE_ITER_END(_qname)

Value:

```
if (_qname.IsTail(item))\
    break;\
}\
```

6.7.2 Typedef Documentation

6.7.2.1 `typedef PVActiveBase* TOsclReady`

6.7.3 Enumeration Type Documentation

6.7.3.1 `enum TPVThreadContext`

Thread context type

Enumeration values:

- `EPVThreadContext_InThread`
- `EPVThreadContext_OsclThread`
- `EPVThreadContext_NonOsclThread`
- `EPVThreadContext_Undetermined`

6.7.4 Function Documentation

6.7.4.1 `template<class T, class S> T* OsclPtrAdd (T * aPtr, S aVal) [inline]`

6.7.4.2 `template<class T, class S> T* OsclPtrSub (T * aPtr, S aVal) [inline]`

6.7.5 Variable Documentation

6.7.5.1 `const int32 OSCL_REQUEST_ERR_CANCEL = (-1)`

6.7.5.2 `const int32 OSCL_REQUEST_ERR_GENERAL = (-2)`

6.7.5.3 `const int32 OSCL_REQUEST_ERR_NONE = 0`

6.7.5.4 `const int32 OSCL_REQUEST_PENDING = (-0x7fffffff)`

6.8 OSCL Init

Files

- file [oscl_init.h](#)
Global oscl initialization.

Data Structures

- class [OsclInit](#)
- class [OsclSelect](#)

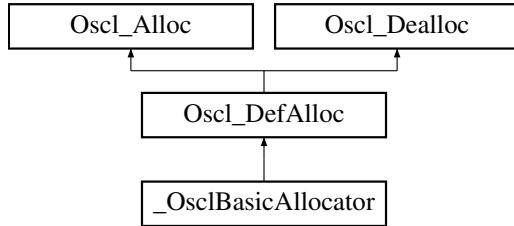
Chapter 7

oscl Data Structure Documentation

7.1 _OsclBasicAllocator Class Reference

```
#include <oscl_base_alloc.h>
```

Inheritance diagram for _OsclBasicAllocator::



Public Methods

- [OsclAny * allocate \(const uint32 size\)](#)
- [void deallocate \(OsclAny *p\)](#)
- [virtual ~_OsclBasicAllocator \(\)](#)

7.1.1 Detailed Description

A basic allocator that does not rely on other modules. There is no memory auditing or exception generation.

Note: this allocator is for internal use by Oscl code only. Higher level code should use [OsclMemAllocator](#) defined in "oscl_mem.h".

7.1.2 Constructor & Destructor Documentation

7.1.2.1 `virtual _OsclBasicAllocator::~_OsclBasicAllocator () [inline, virtual]`

7.1.3 Member Function Documentation

7.1.3.1 `OsclAny* _OsclBasicAllocator::allocate (const uint32 size) [inline, virtual]`

Implements [Oscl_DefAlloc](#).

7.1.3.2 `void _OsclBasicAllocator::deallocate (OsclAny *p) [inline, virtual]`

Implements [Oscl_DefAlloc](#).

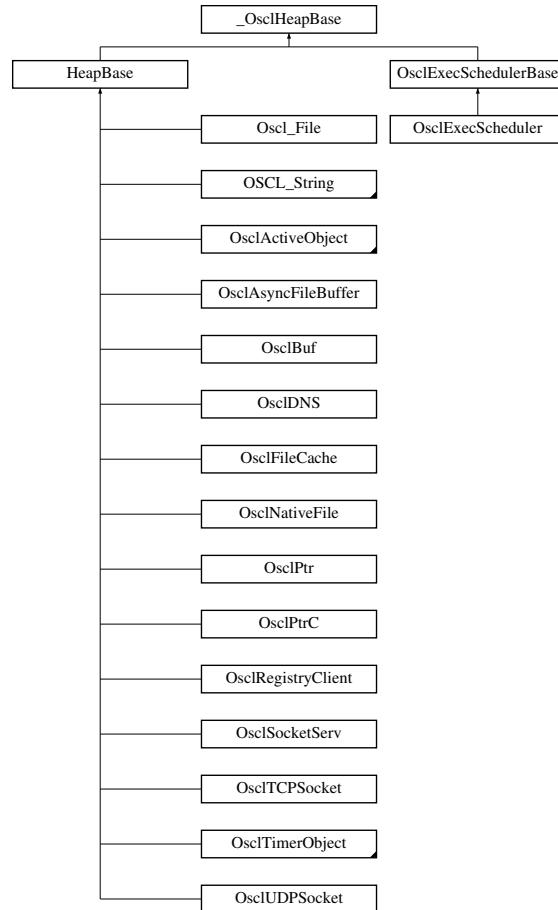
The documentation for this class was generated from the following file:

- [oscl_base_alloc.h](#)

7.2 _OsclHeapBase Class Reference

```
#include <oscl_heapbase.h>
```

Inheritance diagram for _OsclHeapBase::



Public Methods

- virtual ~_OsclHeapBase ()

Protected Methods

- _OsclHeapBase ()
- _OsclHeapBase (const _OsclHeapBase &)

Friends

- class PVCleanupStack

7.2.1 Detailed Description

_OsclHeapBase is used as the base for cleanup stack items with virtual destructor.

7.2.2 Constructor & Destructor Documentation

7.2.2.1 `virtual _OsclHeapBase::~_OsclHeapBase () [inline, virtual]`

7.2.2.2 `_OsclHeapBase::_OsclHeapBase () [inline, protected]`

7.2.2.3 `_OsclHeapBase::_OsclHeapBase (const _OsclHeapBase &) [inline, protected]`

7.2.3 Friends And Related Function Documentation

7.2.3.1 `friend class PVCleanupStack [friend]`

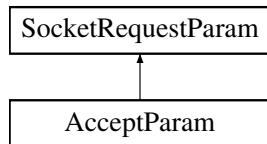
The documentation for this class was generated from the following file:

- [oscl_heapbase.h](#)

7.3 AcceptParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for AcceptParam::



Public Methods

- [AcceptParam \(OsclSocketI &aBlankSocket\)](#)

Data Fields

- [OsclSocketI * iBlankSocket](#)

7.3.1 Constructor & Destructor Documentation

7.3.1.1 [AcceptParam::AcceptParam \(OsclSocketI & aBlankSocket\) \[inline\]](#)

7.3.2 Field Documentation

7.3.2.1 [OsclSocketI* AcceptParam::iBlankSocket](#)

The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.4 allocator Class Reference

```
#include <oscl_mem_mempool.h>
```

7.4.1 Detailed Description

A memory allocator class which allocates and deallocates from a fixed size memory pool; The memory pool is a multiple of fixed chunk size and does not grow. All allocation size must be the same as this chunk size.

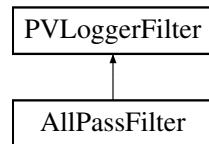
The documentation for this class was generated from the following file:

- [oscl_mem_mempool.h](#)

7.5 AllPassFilter Class Reference

```
#include <pvlogger_accessories.h>
```

Inheritance diagram for AllPassFilter::



Public Types

- [typedef PVLoggerFilter::message_id_type message_id_type](#)
- [typedef PVLoggerFilter::log_level_type log_level_type](#)
- [typedef PVLoggerFilter::filter_status_type filter_status_type](#)

Public Methods

- [AllPassFilter \(\)](#)
- [virtual ~AllPassFilter \(\)](#)
- [filter_status_type FilterString \(char *tag, message_id_type msgID, log_level_type level\)](#)
- [filter_status_type FilterOpaqueMessge \(char *tag, message_id_type msgID, log_level_type level\)](#)

7.5.1 Detailed Description

Example filter that allows all messages to be logged.

7.5.2 Member Typedef Documentation

7.5.2.1 [typedef PVLoggerFilter::filter_status_type AllPassFilter::filter_status_type](#)

Reimplemented from [PVLoggerFilter](#).

7.5.2.2 [typedef PVLoggerFilter::log_level_type AllPassFilter::log_level_type](#)

Reimplemented from [PVLoggerFilter](#).

7.5.2.3 [typedef PVLoggerFilter::message_id_type AllPassFilter::message_id_type](#)

Reimplemented from [PVLoggerFilter](#).

7.5.3 Constructor & Destructor Documentation

7.5.3.1 `AllPassFilter::AllPassFilter () [inline]`

7.5.3.2 `virtual AllPassFilter::~AllPassFilter () [inline, virtual]`

7.5.4 Member Function Documentation

7.5.4.1 `filter_status_type AllPassFilter::FilterOpaqueMessge (char * tag, message_id_type msgID, log_level_type level) [inline, virtual]`

Implements [PVLoggerFilter](#).

7.5.4.2 `filter_status_type AllPassFilter::FilterString (char * tag, message_id_type msgID, log_level_type level) [inline, virtual]`

Implements [PVLoggerFilter](#).

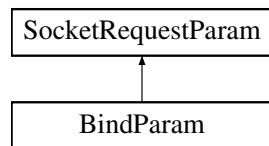
The documentation for this class was generated from the following file:

- [pvlogger_accessories.h](#)

7.6 BindParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for BindParam::



Public Methods

- [BindParam \(OsclNetworkAddress &anAddr\)](#)

Data Fields

- [OsclNetworkAddress iAddr](#)

7.6.1 Constructor & Destructor Documentation

7.6.1.1 [BindParam::BindParam \(OsclNetworkAddress & anAddr\) \[inline\]](#)

7.6.2 Field Documentation

7.6.2.1 [OsclNetworkAddress BindParam::iAddr](#)

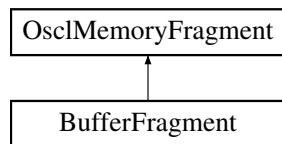
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.7 BufferFragment Class Reference

```
#include <oscl_media_data.h>
```

Inheritance diagram for BufferFragment::



The documentation for this class was generated from the following file:

- [oscl_media_data.h](#)

7.8 BufferMgr Class Reference

```
#include <oscl_media_data.h>
```

Public Methods

- virtual void [BufferReleased](#) (void *ptr, [BufferState](#) *state=NULL)=0
- virtual [~BufferMgr](#) ()

7.8.1 Constructor & Destructor Documentation

7.8.1.1 virtual BufferMgr::~BufferMgr () [inline, virtual]

7.8.2 Member Function Documentation

7.8.2.1 virtual void BufferMgr::BufferReleased (void *ptr, BufferState * state = NULL) [pure virtual]

The documentation for this class was generated from the following file:

- [oscl_media_data.h](#)

7.9 BufferState Class Reference

```
#include <oscl_media_data.h>
```

Public Methods

- `BufferState (BufferFreeFuncPtr the_free_function, void *bufptr=0)`
- `BufferState (BufferMgr *the_buf_mgr=0, void *bufptr=0)`
- `void increment_refcnt ()`
- `void decrement_refcnt ()`
- `void bind (void *in_ptr, BufferFreeFuncPtr in_free_function)`
- `void bind (void *in_ptr, BufferMgr *in_buf_mgr)`
- `void * get_ptr ()`
- `int32 getRefCount ()`
- `BufferFreeFuncPtr get_free_function ()`
- `BufferMgr * get_buf_mgr ()`
- `void reset ()`

7.9.1 Constructor & Destructor Documentation

7.9.1.1 `BufferState::BufferState (BufferFreeFuncPtr the_free_function, void * bufptr = 0)` [inline]

7.9.1.2 `BufferState::BufferState (BufferMgr * the_buf_mgr = 0, void * bufptr = 0)` [inline]

7.9.2 Member Function Documentation

7.9.2.1 `void BufferState::bind (void * in_ptr, BufferMgr * in_buf_mgr)` [inline]

7.9.2.2 `void BufferState::bind (void * in_ptr, BufferFreeFuncPtr in_free_function)` [inline]

7.9.2.3 `void BufferState::decrement_refcnt ()` [inline]

7.9.2.4 `BufferMgr* BufferState::get_buf_mgr ()` [inline]

7.9.2.5 `BufferFreeFuncPtr BufferState::get_free_function ()` [inline]

7.9.2.6 `void* BufferState::get_ptr ()` [inline]

7.9.2.7 `int32 BufferState::getRefCount ()` [inline]

7.9.2.8 `void BufferState::increment_refcnt ()` [inline]

7.9.2.9 `void BufferState::reset ()` [inline]

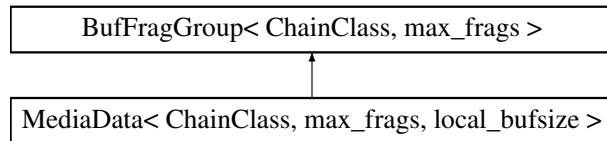
The documentation for this class was generated from the following file:

- `oscl_media_data.h`

7.10 BufFragGroup< ChainClass, max_frags > Class Template Reference

```
#include <oscl_media_data.h>
```

Inheritance diagram for BufFragGroup< ChainClass, max_frags >::



Public Methods

- [BufFragGroup \(\)](#)
- virtual [~BufFragGroup \(\)](#)
- int32 [GetMaxFrags \(\) const](#)
- int32 [GetNumFrags \(\) const](#)
- uint32 [GetLength \(\) const](#)
- [BufferFragment * GetFragment \(const int32 idx\)](#)
- [BufferState * GetBufferState \(const int32 idx\)](#)
- void [AppendNext \(ChainClass *next_ptr\)](#)
- ChainClass * [GetNext \(\) const](#)

Protected Methods

- virtual void [Clear \(\)](#)
- [BufFragStatusClass::status_t AddFragment \(const BufferFragment &frag, BufferState *in_buffer_state, int32 location_offset=max_frags\)](#)

Protected Attributes

- [BufferFragment fragments \[max_frags\]](#)
- [BufferState * buffer_states \[max_frags\]](#)
- [ChainClass * next](#)
- uint32 [num.fragments](#)
- uint32 [length](#)

```
template<class ChainClass, uint32 max_frags> class BufFragGroup< ChainClass, max_frags >
```

7.10.1 Constructor & Destructor Documentation

7.10.1.1 `template<class ChainClass, uint32 max_frags> BufFragGroup< ChainClass, max_frags >::BufFragGroup () [inline]`

7.10.1.2 `template<class ChainClass, uint32 max_frags> virtual BufFragGroup< ChainClass, max_frags >::~BufFragGroup () [inline, virtual]`

7.10.2 Member Function Documentation

7.10.2.1 `template<class ChainClass, uint32 max_frags> BufFragStatusClass::status_t BufFragGroup< ChainClass, max_frags >::AddFragment (const BufferFragment & frag, BufferState * in_buffer_state, int32 location_offset = max_frags) [inline, protected]`

7.10.2.2 `template<class ChainClass, uint32 max_frags> void BufFragGroup< ChainClass, max_frags >::AppendNext (ChainClass * next_ptr) [inline]`

7.10.2.3 `template<class ChainClass, uint32 max_frags> virtual void BufFragGroup< ChainClass, max_frags >::Clear () [inline, protected, virtual]`

Reimplemented in [MediaData< ChainClass, max_frags, local_bufsize >](#).

7.10.2.4 template<class ChainClass, uint32 max_frags> uint32 BufFragGroup< ChainClass, max_frags >::GetLength () const [inline]

7.10.2.5 template<class ChainClass, uint32 max_frags> int32 BufFragGroup< ChainClass, max_frags >::GetMaxFrags () const [inline]

7.10.2.6 template<class ChainClass, uint32 max_frags> ChainClass* BufFragGroup< ChainClass, max_frags >::GetNext () const [inline]

7.10.2.7 template<class ChainClass, uint32 max_frags> int32 BufFragGroup< ChainClass, max_frags >::GetNumFrags () const [inline]

7.10.3 Field Documentation

7.10.3.1 template<class ChainClass, uint32 max_frags> BufferState* BufFragGroup< ChainClass, max_frags >::buffer_states[max_frags] [protected]

7.10.3.2 template<class ChainClass, uint32 max_frags> BufferFragment BufFragGroup< ChainClass, max_frags >::fragments[max_frags] [protected]

7.10.3.3 template<class ChainClass, uint32 max_frags> uint32 BufFragGroup< ChainClass, max_frags >::length [protected]

7.10.3.4 template<class ChainClass, uint32 max_frags> ChainClass* BufFragGroup< ChainClass, max_frags >::next [protected]

7.10.3.5 template<class ChainClass, uint32 max_frags> uint32 BufFragGroup< ChainClass, max_frags >::num_fragments [protected]

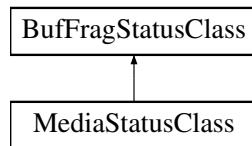
The documentation for this class was generated from the following file:

- [oscl_media_data.h](#)

7.11 BufFragStatusClass Class Reference

```
#include <oscl_media_status.h>
```

Inheritance diagram for BufFragStatusClass::



Public Types

- enum `status_t` { `BFG_SUCCESS` = 0, `TOO_MANY_FRAGS` = 1, `NOT_ENOUGH_SPACE` = 2, `EMPTY_FRAGMENT` = 3, `NULL_INPUT` = 4, `FIXED_FRAG_LOC_FULL` = 5, `INTERNAL_ERROR`, `INVALID_ID` }

7.11.1 Member Enumeration Documentation

7.11.1.1 enum BufFragStatusClass::status_t

Enumeration values:

`BFG_SUCCESS`
`TOO_MANY_FRAGS`
`NOT_ENOUGH_SPACE`
`EMPTY_FRAGMENT`
`NULL_INPUT`
`FIXED_FRAG_LOC_FULL`
`INTERNAL_ERROR`
`INVALID_ID`

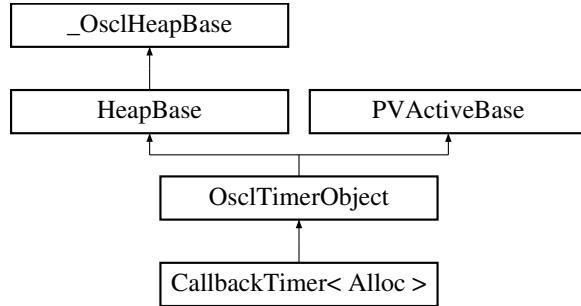
The documentation for this class was generated from the following file:

- [oscl_media_status.h](#)

7.12 CallbackTimer< Alloc > Class Template Reference

```
#include <oscl_timer.h>
```

Inheritance diagram for CallbackTimer< Alloc >::



Public Methods

- [CallbackTimer \(CallbackTimerObserver &aContainer, const char *name, int32 aPriority=OsclActiveObject::EPriorityNominal\)](#)
- [~CallbackTimer \(\)](#)
- [void Run \(\)](#)

```
template<class Alloc> class CallbackTimer< Alloc >
```

7.12.1 Constructor & Destructor Documentation

7.12.1.1 template<class Alloc> CallbackTimer< Alloc >::CallbackTimer (CallbackTimerObserver & aContainer, const char * name, int32 aPriority = OsclActiveObject::EPriorityNominal) [inline]

7.12.1.2 template<class Alloc> CallbackTimer< Alloc >::~CallbackTimer () [inline]

7.12.2 Member Function Documentation

7.12.2.1 template<class Alloc> void CallbackTimer< Alloc >::Run () [inline, virtual]

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's [Run\(\)](#) function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls ExecError() to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

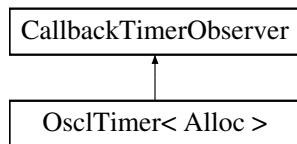
The documentation for this class was generated from the following file:

- [oscl_timer.h](#)

7.13 CallbackTimerObserver Class Reference

```
#include <oscl_timer.h>
```

Inheritance diagram for CallbackTimerObserver::



Public Methods

- virtual void [TimerBaseElapsed \(\)=0](#)
- virtual [~CallbackTimerObserver \(\)](#)

7.13.1 Constructor & Destructor Documentation

7.13.1.1 virtual CallbackTimerObserver::~CallbackTimerObserver () [inline, virtual]

7.13.2 Member Function Documentation

7.13.2.1 virtual void CallbackTimerObserver::TimerBaseElapsed () [pure virtual]

Implemented in [OsclTimer< Alloc >](#).

The documentation for this class was generated from the following file:

- [oscl_timer.h](#)

7.14 CFastRep Class Reference

```
#include <oscl_string_rep.h>
```

Public Methods

- [CFastRep \(\)](#)
- OSCL_IMPORT_REF void [set_w](#) (char *cp, uint32 len, uint32 maxlen)
- OSCL_IMPORT_REF void [set_w \(oscl_wchar](#) *cp, uint32 len, uint32 maxlen)
- OSCL_IMPORT_REF void [set_r](#) (const char *cp, uint32 len)
- OSCL_IMPORT_REF void [set_r \(const oscl_wchar](#) *cp, uint32 len)
- OSCL_IMPORT_REF void [append](#) (const char *cp, uint32 len)
- OSCL_IMPORT_REF void [append \(const oscl_wchar](#) *cp, uint32 len)

Data Fields

- uint32 [maxsize](#)
- uint32 [size](#)
- [OsclAny](#) * [buffer](#)
- bool [writable](#)
- bool [overwrite](#)

7.14.1 Detailed Description

For internal use only– fast string representation

7.14.2 Constructor & Destructor Documentation

7.14.2.1 `CFastRep::CFastRep () [inline]`

7.14.3 Member Function Documentation

7.14.3.1 `OSCL_IMPORT_REF void CFastRep::append (const oscl_wchar * cp, uint32 len)`

7.14.3.2 `OSCL_IMPORT_REF void CFastRep::append (const char * cp, uint32 len)`

7.14.3.3 `OSCL_IMPORT_REF void CFastRep::set_r (const oscl_wchar * cp, uint32 len)`

7.14.3.4 `OSCL_IMPORT_REF void CFastRep::set_r (const char * cp, uint32 len)`

7.14.3.5 `OSCL_IMPORT_REF void CFastRep::set_w (oscl_wchar * cp, uint32 len, uint32 maxlen)`

7.14.3.6 `OSCL_IMPORT_REF void CFastRep::set_w (char * cp, uint32 len, uint32 maxlen)`

7.14.4 Field Documentation

7.14.4.1 `OsclAny* CFastRep::buffer`

7.14.4.2 `uint32 CFastRep::maxsize`

7.14.4.3 `bool CFastRep::overwrite`

7.14.4.4 `uint32 CFastRep::size`

7.14.4.5 `bool CFastRep::writable`

The documentation for this class was generated from the following file:

- `oscl_string_rep.h`

7.15 CHeapRep Class Reference

```
#include <oscl_string_rep.h>
```

Public Methods

- [CHeapRep \(\)](#)
- OSCL_IMPORT_REF bool [set](#) (uint32, const char *, [Oscl_DefAlloc](#) &)
- OSCL_IMPORT_REF bool [set](#) (uint32, const [oscl_wchar](#) *, [Oscl_DefAlloc](#) &)
- OSCL_IMPORT_REF bool [append](#) (uint32, const char *, uint32, const char *, [Oscl_DefAlloc](#) &)
- OSCL_IMPORT_REF bool [append](#) (uint32, const [oscl_wchar](#) *, uint32, const [oscl_wchar](#) *, [Oscl_DefAlloc](#) &)
- OSCL_IMPORT_REF void [add_ref](#) ()
- OSCL_IMPORT_REF void [remove_ref](#) ([Oscl_DefAlloc](#) &)

Static Public Methods

- OSCL_IMPORT_REF void [set_rep](#) (CHheapRep *&, [Oscl_DefAlloc](#) &, const char *, uint32)
- OSCL_IMPORT_REF void [set_rep](#) (CHheapRep *&, [Oscl_DefAlloc](#) &, const [oscl_wchar](#) *, uint32)
- OSCL_IMPORT_REF void [append_rep](#) (CHheapRep *&, [Oscl_DefAlloc](#) &, const char *, uint32)
- OSCL_IMPORT_REF void [append_rep](#) (CHheapRep *&, [Oscl_DefAlloc](#) &, const [oscl_wchar](#) *, uint32)
- OSCL_IMPORT_REF void [assign](#) (CHheapRep *&, CHheapRep *, [Oscl_DefAlloc](#) &)

Data Fields

- uint32 [refcount](#)
- [OsclAny](#) * [buffer](#)
- uint32 [maxsize](#)
- uint32 [size](#)

7.15.1 Detailed Description

For internal use only– heap string representation

7.15.2 Constructor & Destructor Documentation

7.15.2.1 `OSCL_IMPORT_REF CHeapRep::CHeapRep () [inline]`

7.15.3 Member Function Documentation

7.15.3.1 `OSCL_IMPORT_REF void CHeapRep::add_ref ()`

7.15.3.2 `OSCL_IMPORT_REF bool CHeapRep::append (uint32, const oscl_wchar *, uint32, const oscl_wchar *, Oscl_DefAlloc &)`

7.15.3.3 `OSCL_IMPORT_REF bool CHeapRep::append (uint32, const char *, uint32, const char *, Oscl_DefAlloc &)`

7.15.3.4 `OSCL_IMPORT_REF void CHeapRep::append_rep (CHeapRep *&, Oscl_DefAlloc &, const oscl_wchar *, uint32) [static]`

7.15.3.5 `OSCL_IMPORT_REF void CHeapRep::append_rep (CHeapRep *&, Oscl_DefAlloc &, const char *, uint32) [static]`

7.15.3.6 `OSCL_IMPORT_REF void CHeapRep::assign (CHeapRep *&, CHeapRep *, Oscl_DefAlloc &) [static]`

7.15.3.7 `OSCL_IMPORT_REF void CHeapRep::remove_ref (Oscl_DefAlloc &)`

7.15.3.8 `OSCL_IMPORT_REF bool CHeapRep::set (uint32, const oscl_wchar *, Oscl_DefAlloc &)`

7.15.3.9 `OSCL_IMPORT_REF bool CHeapRep::set (uint32, const char *, Oscl_DefAlloc &)`

7.15.3.10 `OSCL_IMPORT_REF void CHeapRep::set_rep (CHeapRep *&, Oscl_DefAlloc &, const oscl_wchar *, uint32) [static]`

7.15.3.11 `OSCL_IMPORT_REF void CHeapRep::set_rep (CHeapRep *&, Oscl_DefAlloc &, const char *, uint32) [static]`

7.15.4 Field Documentation

7.15.4.1 `OsclAny* CHeapRep::buffer`

7.15.4.2 `uint32 CHeapRep::maxsize`

7.15.4.3 `uint32 CHeapRep::refcount`

7.15.4.4 `uint32 CHeapRep::size`

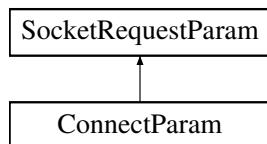
The documentation for this class was generated from the following file:

- `oscl_string_rep.h`

7.16 ConnectParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for ConnectParam::



Public Methods

- [ConnectParam \(OsclNetworkAddress &anAddr\)](#)

Data Fields

- [OsclNetworkAddress iAddr](#)

7.16.1 Constructor & Destructor Documentation

7.16.1.1 ConnectParam::ConnectParam (OsclNetworkAddress & *anAddr*) [inline]

7.16.2 Field Documentation

7.16.2.1 OsclNetworkAddress ConnectParam::iAddr

The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.17 CStackRep Class Reference

```
#include <oscl_string_rep.h>
```

Public Methods

- [CStackRep \(\)](#)
- [OSCL_IMPORT_REF void set \(const char *cp, uint32 len\)](#)
- [OSCL_IMPORT_REF void set \(const oscl_wchar *cp, uint32 len\)](#)
- [OSCL_IMPORT_REF void append \(const char *cp, uint32 len\)](#)
- [OSCL_IMPORT_REF void append \(const oscl_wchar *cp, uint32 len\)](#)

Data Fields

- [uint32 maxsize](#)
- [uint32 size](#)
- [OsclAny * buffer](#)

7.17.1 Detailed Description

For internal use only– stack string representation

7.17.2 Constructor & Destructor Documentation

7.17.2.1 CStackRep::CStackRep () [inline]

7.17.3 Member Function Documentation

7.17.3.1 OSCL_IMPORT_REF void CStackRep::append (const oscl_wchar * cp, uint32 len)

7.17.3.2 OSCL_IMPORT_REF void CStackRep::append (const char * cp, uint32 len)

7.17.3.3 OSCL_IMPORT_REF void CStackRep::set (const oscl_wchar * cp, uint32 len)

7.17.3.4 OSCL_IMPORT_REF void CStackRep::set (const char * cp, uint32 len)

7.17.4 Field Documentation

7.17.4.1 OsclAny* CStackRep::buffer

7.17.4.2 uint32 CStackRep::maxsize

7.17.4.3 uint32 CStackRep::size

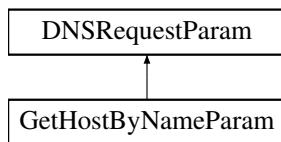
The documentation for this class was generated from the following file:

- [oscl_string_rep.h](#)

7.18 DNSRequestParam Class Reference

```
#include <oscl_dns_param.h>
```

Inheritance diagram for DNSRequestParam::



Public Methods

- virtual ~DNSRequestParam ()
- void RemoveRef ()
- void InThread ()
- virtual void Destroy ()=0

Data Fields

- TPVDNSFx_n iFx_n
- OsclDNSRequest * iDNSRequest

Protected Methods

- DNSRequestParam (TPVDNSFx_n aFx_n)

Protected Attributes

- uint32 iRefCount

7.18.1 Constructor & Destructor Documentation

7.18.1.1 virtual DNSRequestParam::~DNSRequestParam () [inline, virtual]

7.18.1.2 DNSRequestParam::DNSRequestParam (TPVDNSFx_n aFx_n) [protected]

7.18.2 Member Function Documentation

7.18.2.1 virtual void DNSRequestParam::Destroy () [pure virtual]

Implemented in [GetHostByNameParam](#).

7.18.2.2 void DNSRequestParam::InThread ()

7.18.2.3 void DNSRequestParam::RemoveRef ()

7.18.3 Field Documentation

7.18.3.1 OsclDNSRequest* DNSRequestParam::iDNSRequest

7.18.3.2 TPVDNSFxn DNSRequestParam::iFxn

7.18.3.3 uint32 DNSRequestParam::iRefCount [protected]

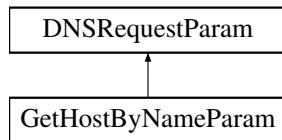
The documentation for this class was generated from the following file:

- [oscl_dns_param.h](#)

7.19 GetHostByNameParam Class Reference

```
#include <oscl_dns_param.h>
```

Inheritance diagram for GetHostByNameParam::



Public Types

- enum { `addressListCapacity` = 10 }

Public Methods

- void `Destroy` ()
- `~GetHostByNameParam` ()
- void `PersistHostAddress` (const `OsclNetworkAddress` &`addr`)
- bool `canPersistMoreHostAddresses` ()

Static Public Methods

- `GetHostByNameParam * Create` (const char *`name`, `OsclNetworkAddress` *&`addr`, `Oscl_Vector<OsclNetworkAddress, OsclMemAllocator>` *`aAddressList`)

Data Fields

- `char * iName`
- `OsclNetworkAddress * iAddr`
- `Oscl_Vector<OsclNetworkAddress, OsclMemAllocator> * iAddressList`

7.19.1 Member Enumeration Documentation

7.19.1.1 anonymous enum

Enumeration values:

`addressListCapacity`

7.19.2 Constructor & Destructor Documentation

7.19.2.1 `GetHostByNameParam::~GetHostByNameParam ()`

7.19.3 Member Function Documentation

7.19.3.1 `bool GetHostByNameParam::canPersistMoreHostAddresses () [inline]`

7.19.3.2 `GetHostByNameParam* GetHostByNameParam::Create (const char * name, OsclNetworkAddress *& addr, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aAddressList) [static]`

7.19.3.3 `void GetHostByNameParam::Destroy () [virtual]`

Implements [DNSRequestParam](#).

7.19.3.4 `void GetHostByNameParam::PersistHostAddress (const OsclNetworkAddress & addr) [inline]`

7.19.4 Field Documentation

7.19.4.1 `OsclNetworkAddress* GetHostByNameParam::iAddr`

7.19.4.2 `Oscl_Vector<OsclNetworkAddress, OsclMemAllocator>* GetHostByNameParam::i-AddressList`

7.19.4.3 `char* GetHostByNameParam::iName`

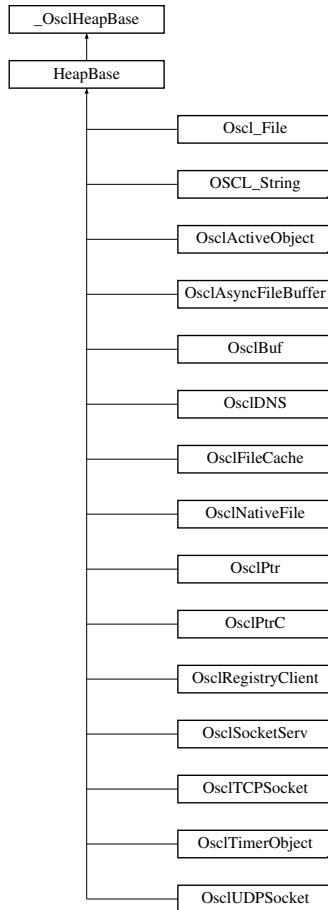
The documentation for this class was generated from the following file:

- [oscl_dns_param.h](#)

7.20 HeapBase Class Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for HeapBase::



Public Methods

- [HeapBase \(\)](#)
- virtual [~HeapBase \(\)](#)

7.20.1 Detailed Description

HeapBase is the base class for all classes that allocates memory.

HeapBase has overloaded new and delete operators.

Derived from [_OsclHeapBase](#) providing CBase* alike pointer and virtual destructor for cleanupstack to Push and Pop for cleanup when leave occurs.

HeapBase has a virtual destructor which calls the destructor of all the derived classes.

7.20.2 Constructor & Destructor Documentation

7.20.2.1 `HeapBase::HeapBase () [inline]`

7.20.2.2 `virtual HeapBase::~HeapBase () [inline, virtual]`

The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.21 internalLeave Class Reference

```
#include <oscl_error_imp_cppexceptions.h>
```

Data Fields

- int a

7.21.1 Field Documentation

7.21.1.1 int internalLeave::a

The documentation for this class was generated from the following file:

- [oscl_error_imp_cppexceptions.h](#)

7.22 LinkedListElement< LLClass > Class Template Reference

```
#include <oscl_linked_list.h>
```

Public Methods

- [LinkedListElement \(LLClass in_data\)](#)

Data Fields

- [LinkedListElement< LLClass > * next](#)
- [LLClass data](#)

7.22.1 Detailed Description

```
template<class LLClass> class LinkedListElement< LLClass >
```

Linked List Element Class

7.22.2 Constructor & Destructor Documentation

```
7.22.2.1 template<class LLClass> LinkedListElement< LLClass >::LinkedListElement  
(LLClass in_data) [inline]
```

7.22.3 Field Documentation

```
7.22.3.1 template<class LLClass> LLClass LinkedListElement< LLClass >::data
```

```
7.22.3.2 template<class LLClass> LinkedListElement<LLClass>*>* LinkedListElement<  
LLClass >::next
```

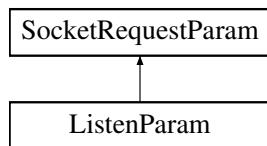
The documentation for this class was generated from the following file:

- [oscl_linked_list.h](#)

7.23 ListenParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for ListenParam::



Public Methods

- [ListenParam \(uint32 aSize\)](#)

Data Fields

- uint32 [iQSize](#)

7.23.1 Constructor & Destructor Documentation

7.23.1.1 [ListenParam::ListenParam \(uint32 aSize\) \[inline\]](#)

7.23.2 Field Documentation

7.23.2.1 [uint32 ListenParam::iQSize](#)

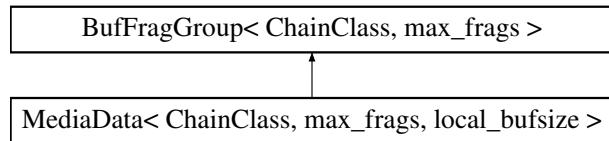
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.24 MediaData< ChainClass, max_frags, local_bufsize > Class Template Reference

```
#include <oscl_media_data.h>
```

Inheritance diagram for MediaData< ChainClass, max_frags, local_bufsize >::



Public Methods

- [MediaData \(\)](#)
- virtual [~MediaData \(\)](#)
- uint32 [GetLocalBufsize \(\) const](#)
- [MediaTimestamp GetTimestamp \(\) const](#)
- void [SetTimestamp \(MediaTimestamp in_timestamp\)](#)
- uint32 [GetAvailableBufferSize \(\) const](#)
- [MediaStatusClass::status_t GetLocalFragment \(BufferFragment &fragment\)](#)
- virtual void [Clear \(\)](#)
- bool [IsLocalData \(const OsclMemoryFragment &frag\) const](#)
- int [GetMediaSize \(\) const](#)
- [BufferFragment * GetMediaFragment \(const uint32 idx\)](#)
- uint32 [GetNumMediaFrags \(const uint32 idx\) const](#)

Protected Methods

- [MediaStatusClass::status_t AddLocalFragment \(const BufferFragment &frag, int32 location_offset\)](#)

Protected Attributes

- [MediaTimestamp timestamp](#)
- uint8 [localbuf \[local_bufsize\]](#)
- uint32 [available_localbuf](#)
- int [num_reserved_fragments](#)

template<class ChainClass, uint32 max_frags, uint32 local_bufsize> class MediaData< ChainClass, max_frags, local_bufsize >

7.24.1 Constructor & Destructor Documentation

- 7.24.1.1 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> MediaData< ChainClass, max_frags, local_bufsize >::MediaData () [inline]
- 7.24.1.2 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> virtual MediaData< ChainClass, max_frags, local_bufsize >::~MediaData () [inline, virtual]

7.24.2 Member Function Documentation

- 7.24.2.1 template<class ChainClass, uint32 max_frags, uint32 local_bufsize>
MediaStatusClass::status_t MediaData< ChainClass, max_frags, local_bufsize
>::AddLocalFragment (const BufferFragment &frag, int32 location_offset) [inline, protected]
- 7.24.2.2 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> virtual void
MediaData< ChainClass, max_frags, local_bufsize >::Clear () [inline, virtual]

Reimplemented from [BufFragGroup< ChainClass, max_frags >](#).

- 7.24.2.3 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> uint32 MediaData<ChainClass, max_frags, local_bufsize >::GetAvailableBufferSize () const [inline]
- 7.24.2.4 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> uint32 MediaData<ChainClass, max_frags, local_bufsize >::GetLocalBufsize () const [inline]
- 7.24.2.5 template<class ChainClass, uint32 max_frags, uint32 local_bufsize>
MediaStatusClass::status_t MediaData<ChainClass, max_frags, local_bufsize >::GetLocalFragment (**BufferFragment** & *fragment*) [inline]
- 7.24.2.6 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> **BufferFragment*** MediaData<ChainClass, max_frags, local_bufsize >::GetMediaFragment (const uint32 *idx*) [inline]
- 7.24.2.7 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> int MediaData<ChainClass, max_frags, local_bufsize >::GetMediaSize () const [inline]
- 7.24.2.8 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> uint32 MediaData<ChainClass, max_frags, local_bufsize >::GetNumMediaFrags (const uint32 *idx*) const [inline]
- 7.24.2.9 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> **MediaTimestamp** MediaData<ChainClass, max_frags, local_bufsize >::GetTimestamp () const [inline]
- 7.24.2.10 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> bool MediaData<ChainClass, max_frags, local_bufsize >::IsLocalData (const **OsclMemoryFragment** & *frag*) const [inline]
- 7.24.2.11 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> void MediaData<ChainClass, max_frags, local_bufsize >::SetTimestamp (**MediaTimestamp** *in_timestamp*) [inline]

7.24.3 Field Documentation

- 7.24.3.1 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> uint32 MediaData<ChainClass, max_frags, local_bufsize >::available_localbuf [protected]
- 7.24.3.2 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> uint8 MediaData<ChainClass, max_frags, local_bufsize >::localbuf[local_bufsize] [protected]
- 7.24.3.3 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> int MediaData<ChainClass, max_frags, local_bufsize >::num_reserved.fragments [protected]
- 7.24.3.4 template<class ChainClass, uint32 max_frags, uint32 local_bufsize> **MediaTimestamp** MediaData<ChainClass, max_frags, local_bufsize >::timestamp [protected]

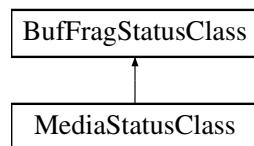
The documentation for this class was generated from the following file:

- [oscl_media_data.h](#)

7.25 MediaStatusClass Class Reference

```
#include <oscl_media_status.h>
```

Inheritance diagram for MediaStatusClass::



The documentation for this class was generated from the following file:

- [oscl_media_status.h](#)

7.26 MemAllocator< T > Class Template Reference

```
#include <oscl_media_data.h>
```

Public Types

- `typedef T * pointer`

Public Methods

- `virtual pointer allocate (void *hint=0, const int num_reserved_frags=1)=0`
- `virtual void deallocate (pointer p)=0`
- `virtual ~MemAllocator ()`

```
template<class T> class MemAllocator< T >
```

7.26.1 Member Typedef Documentation

7.26.1.1 template<class T> `typedef T* MemAllocator< T >::pointer`

7.26.2 Constructor & Destructor Documentation

7.26.2.1 template<class T> `virtual MemAllocator< T >::~MemAllocator () [inline, virtual]`

7.26.3 Member Function Documentation

7.26.3.1 template<class T> `virtual pointer MemAllocator< T >::allocate (void * hint = 0, const int num_reserved_frags = 1) [pure virtual]`

7.26.3.2 template<class T> `virtual void MemAllocator< T >::deallocate (pointer p) [pure virtual]`

The documentation for this class was generated from the following file:

- [oscl_media_data.h](#)

7.27 MM_AllocBlockFence Struct Reference

```
#include <oscl_mem_audit_internals.h>
```

Public Methods

- [MM_AllocBlockFence \(\)](#)
- [void fill_fence \(\)](#)
- [bool check_fence \(\)](#)

Data Fields

- [uint8 pad \[COMPUTE_MEM_ALIGN_SIZE\(sizeof\(MM_AllocBlockHdr\), MIN_FENCE_SIZE, MEM_ALIGN_SIZE\)\]](#)

7.27.1 Constructor & Destructor Documentation

[7.27.1.1 MM_AllocBlockFence::MM_AllocBlockFence \(\) \[inline\]](#)

7.27.2 Member Function Documentation

[7.27.2.1 bool MM_AllocBlockFence::check_fence \(\) \[inline\]](#)

[7.27.2.2 void MM_AllocBlockFence::fill_fence \(\) \[inline\]](#)

7.27.3 Field Documentation

[7.27.3.1 uint8 MM_AllocBlockFence::pad\[COMPUTE_MEM_ALIGN_SIZE\(sizeof\(MM_AllocBlockHdr\), MIN_FENCE_SIZE, MEM_ALIGN_SIZE\)\]](#)

The documentation for this struct was generated from the following file:

- [oscl_mem_audit_internals.h](#)

7.28 MM_AllocBlockHdr Struct Reference

```
#include <oscl_mem_audit_internals.h>
```

Public Methods

- `bool isAllocNodePtr ()`
- `void setAllocNodeFlag ()`
- `MM_AllocBlockHdr ()`
- `MM_AllocBlockHdr (void *ptr, uint32 inSize)`

Data Fields

- `void * pNode`
- `uint32 size`
- `void * pRootNode`
- `uint32 pad`

Static Public Attributes

- `const uint32 ALLOC_NODE_FLAG = 0x80000000`

7.28.1 Constructor & Destructor Documentation

7.28.1.1 `MM_AllocBlockHdr::MM_AllocBlockHdr () [inline]`

7.28.1.2 `MM_AllocBlockHdr::MM_AllocBlockHdr (void *ptr, uint32 inSize) [inline]`

7.28.2 Member Function Documentation

7.28.2.1 `bool MM_AllocBlockHdr::isAllocNodePtr () [inline]`

7.28.2.2 `void MM_AllocBlockHdr::setAllocNodeFlag () [inline]`

7.28.3 Field Documentation

7.28.3.1 `uint32 MM_AllocBlockHdr::pad`

7.28.3.2 `void* MM_AllocBlockHdr::pNode`

7.28.3.3 `void* MM_AllocBlockHdr::pRootNode`

7.28.3.4 `uint32 MM_AllocBlockHdr::size`

The documentation for this struct was generated from the following file:

- `oscl_mem_audit_internals.h`

7.29 MM_AllocInfo Struct Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [MM_AllocInfo \(\)](#)
- [~MM_AllocInfo \(\)](#)
- [void * operator new \(oscl_memsize_t size\)](#)
- [void * operator new \(oscl_memsize_t size, MM_AllocInfo *ptr\)](#)
- [void operator delete \(void *ptr\) throw \(\)](#)

Data Fields

- [uint32 allocNum](#)
- [char * pFileName](#)
- [uint32 lineNo](#)
- [uint32 size](#)
- [void * pMemBlock](#)
- [OsclMemStatsNode * pStatsNode](#)
- [bool bSetFailure](#)

7.29.1 Constructor & Destructor Documentation

7.29.1.1 `MM_AllocInfo::MM_AllocInfo () [inline]`

7.29.1.2 `MM_AllocInfo::~MM_AllocInfo () [inline]`

7.29.2 Member Function Documentation

7.29.2.1 `void MM_AllocInfo::operator delete (void *ptr) throw () [inline]`

7.29.2.2 `void* MM_AllocInfo::operator new (oscl_memsize_t size, MM_AllocInfo *ptr) [inline]`

7.29.2.3 `void* MM_AllocInfo::operator new (oscl_memsize_t size) [inline]`

7.29.3 Field Documentation

7.29.3.1 `uint32 MM_AllocInfo::allocNum`

7.29.3.2 `bool MM_AllocInfo::bSetFailure`

7.29.3.3 `uint32 MM_AllocInfo::lineNo`

7.29.3.4 `char* MM_AllocInfo::pFileName`

7.29.3.5 `void* MM_AllocInfo::pMemBlock`

7.29.3.6 `OsclMemStatsNode* MM_AllocInfo::pStatsNode`

7.29.3.7 `uint32 MM_AllocInfo::size`

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.30 MM_AllocNode Struct Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [MM_AllocNode \(\)](#)
- [~MM_AllocNode \(\)](#)
- [void * operator new \(oscl_memsize_t size\)](#)
- [void * operator new \(oscl_memsize_t size, MM_AllocNode *ptr\)](#)
- [void operator delete \(void *ptr\) throw \(\)](#)

Data Fields

- [MM_AllocInfo * pAllocInfo](#)
- [MM_AllocNode * pPrev](#)
- [MM_AllocNode * pNext](#)

7.30.1 Constructor & Destructor Documentation

[7.30.1.1 MM_AllocNode::MM_AllocNode \(\) \[inline\]](#)

[7.30.1.2 MM_AllocNode::~MM_AllocNode \(\) \[inline\]](#)

7.30.2 Member Function Documentation

[7.30.2.1 void MM_AllocNode::operator delete \(void *ptr\) throw \(\) \[inline\]](#)

[7.30.2.2 void* MM_AllocNode::operator new \(oscl_memsize_t size, MM_AllocNode *ptr\) \[inline\]](#)

[7.30.2.3 void* MM_AllocNode::operator new \(oscl_memsize_t size\) \[inline\]](#)

7.30.3 Field Documentation

[7.30.3.1 MM_AllocInfo* MM_AllocNode::pAllocInfo](#)

[7.30.3.2 MM_AllocNode* MM_AllocNode::pNext](#)

[7.30.3.3 MM_AllocNode* MM_AllocNode::pPrev](#)

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.31 MM_AllocQueryInfo Struct Reference

```
#include <oscl_mem_audit.h>
```

Data Fields

- uint32 [allocNum](#)
- char [fileName](#) [MM_ALLOC_MAX_QUERY_FILENAME_LEN]
- uint32 [lineNo](#)
- uint32 [size](#)
- const void * [pMemBlock](#)
- char [tag](#) [MM_ALLOC_MAX_QUERY_TAG_LEN]

7.31.1 Field Documentation

7.31.1.1 uint32 MM_AllocQueryInfo::allocNum

7.31.1.2 char MM_AllocQueryInfo::fileName[MM_ALLOC_MAX_QUERY_FILENAME_LEN]

7.31.1.3 uint32 MM_AllocQueryInfo::lineNo

7.31.1.4 const void* MM_AllocQueryInfo::pMemBlock

7.31.1.5 uint32 MM_AllocQueryInfo::size

7.31.1.6 char MM_AllocQueryInfo::tag[MM_ALLOC_MAX_QUERY_TAG_LEN]

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.32 MM_Audit_Imp Class Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [MM_Audit_Imp \(\)](#)
- [~MM_Audit_Imp \(\)](#)
- [OSCL_IMPORT_REF void * MM_allocate \(const OsclMemStatsNode *statsNode, uint32 sizeIn, const char *pFileName, uint32 lineNumber, bool allocNodeTracking=false\)](#)
- [OSCL_IMPORT_REF bool MM_deallocate \(void *pMemBlockIn\)](#)
- [OSCL_IMPORT_REF MM_Stats_t * MM_GetStats \(const char *const tagIn\)](#)
- [OSCL_IMPORT_REF uint32 MM_GetStatsInDepth \(const char *tagIn, MM_Stats_CB *array_ptr, uint32 max_nodes\)](#)
- [OSCL_IMPORT_REF uint32 MM_GetTreeNodes \(const char *tagIn\)](#)
- [OSCL_IMPORT_REF bool MM_AddTag \(const char *tagIn\)](#)
- [OSCL_IMPORT_REF const OsclMemStatsNode * MM_GetTagName \(const char *tagIn\)](#)
- [OSCL_IMPORT_REF const OsclMemStatsNode * MM_GetExistingTag \(const char *tagIn\)](#)
- [OSCL_IMPORT_REF const OsclMemStatsNode * MM_GetRootNode \(\)](#)
- [OSCL_IMPORT_REF MM_AllocQueryInfo * MM_CreateAllocNodeInfo \(uint32 max_array_size\)](#)
- [OSCL_IMPORT_REF void MM_ReleaseAllocNodeInfo \(MM_AllocQueryInfo *info\)](#)
- [OSCL_IMPORT_REF uint32 MM_GetAllocNodeInfo \(MM_AllocQueryInfo *output_array, uint32 max_array_size, uint32 offset\)](#)
- [OSCL_IMPORT_REF bool MM_Validate \(const void *ptrIn\)](#)
- [uint32 MM_GetAllocNo \(void\)](#)
- [void MM_GetOverheadStats \(MM_AuditOverheadStats &stats\)](#)
- [uint32 MM_GetNumAllocNodes \(\)](#)
- [uint32 MM_GetMode \(void\)](#)
- [uint8 MM_GetPrefillPattern \(void\)](#)
- [uint32 MM_GetPostfillPattern \(void\)](#)
- [OSCL_IMPORT_REF void MM_SetMode \(uint32 inMode\)](#)
- [OSCL_IMPORT_REF void MM_SetPrefillPattern \(uint8 pattern\)](#)
- [OSCL_IMPORT_REF void MM_SetPostfillPattern \(uint8 pattern\)](#)
- [OSCL_IMPORT_REF void MM_SetTagLevel \(uint32 level\)](#)
- [OSCL_IMPORT_REF bool MM_SetFailurePoint \(const char *tagIn, uint32 alloc_number\)](#)
- [OSCL_IMPORT_REF void MM_UnsetFailurePoint \(const char *tagIn\)](#)
- [MM_AllocNode * addAllocNode \(void *pMem, uint32 sizeIn, OsclMemStatsNode *pStatsNode, const char *pFileName, uint32 lineNumber\)](#)
- [OsclMemStatsNode * removeAllocNode \(void *pMemBlockIn, uint32 &size\)](#)
- [void removeALLAllocNodes \(\)](#)
- [OsclMemStatsNode * createStatsNode \(const char *tagIn\)](#)
- [bool updateStatsNode \(OsclMemStatsNode *pCurrStatsNode, const MM_Stats_t &pDelta, bool bAdd\)](#)
- [bool updateStatsNodeInFailure \(const char *tagIn\)](#)
- [bool updateStatsNodeInFailure \(OsclMemStatsNode *pStatsNode\)](#)
- [bool pruneSubtree \(OsclMemStatsNode *pNode\)](#)
- [bool pruneSubtree \(const char *tagIn\)](#)
- [void retrieveParentTag \(char *tag\)](#)
- [int32 retrieveParentTagLength \(const char *tag, int32 bound\)](#)
- [void makeValidTag \(const char *tagIn, MMAuditCharAutoPtr &autoPtr\)](#)

- uint32 [getTagActualSize](#) (const char *tagIn)
- bool [isSetFailure](#) (const char *tagIn)
- bool [isSetFailure](#) (OsclMemStatsNode *statsNode)
- bool [validate_all_heap](#) ()

Static Public Methods

- bool [validate](#) (void *ptrIn)
- OsclMemAudit * [getAuditRoot](#) (void *ptrIn)
- uint32 [getSize](#) (void *ptrIn)

7.32.1 Constructor & Destructor Documentation

7.32.1.1 MM_Audit_Imp::MM_Audit_Imp ()

Constructor, create the root node in statistics table

7.32.1.2 MM_Audit_Imp::~MM_Audit_Imp ()

A destructor, remove all the nodes in allocation and statistics table

7.32.2 Member Function Documentation

7.32.2.1 MM_AllocNode* MM_Audit_Imp::addAllocNode (void * pMem, uint32 sizeIn, OsclMemStatsNode * pStatsNode, const char * pFileName, uint32 lineNumber)

Returns:

true if operation succeeds;

7.32.2.2 OsclMemStatsNode* MM_Audit_Imp::createStatsNode (const char * tagIn)

Returns:

true if operation succeeds;

7.32.2.3 OsclMemAudit* MM_Audit_Imp::getAuditRoot (void * ptrIn) [static]

Returns:

audit root pointer.

7.32.2.4 uint32 MM_Audit_Imp::getSize (void * ptrIn) [static]

Returns:

original block size. leaves if bad pointer.

7.32.2.5 uint32 MM_Audit_Imp::getTagActualSize (const char * tagIn)**Returns:**

the size of the truncated tag; 0 means NO truncation

7.32.2.6 bool MM_Audit_Imp::isSetFailure (OsclMemStatsNode * statsNode)**7.32.2.7 bool MM_Audit_Imp::isSetFailure (const char * tagIn)****Returns:**

true if operation succeeds;

7.32.2.8 void MM_Audit_Imp::makeValidTag (const char * tagIn, MMAuditCharAutoPtr & autoptr)**Returns:**

a valid tag; NULL will be converted into root tag

7.32.2.9 OSCL_IMPORT_REF bool MM_Audit_Imp::MM_AddTag (const char * tagIn) [inline]

API to add a node and zero out its counters; Note that this tag should be re-used

Parameters:

tagIn input tag

Returns:

true if operation succeeds;

7.32.2.10 OSCL_IMPORT_REF void* MM_Audit_Imp::MM_allocate (const OsclMemStatsNode * statsNode, uint32 sizeIn, const char * pFileName, uint32 lineNumber, bool allocNodeTracking = false)

The following are APIs t __nothrow_ / const __nothrow_

Returns:

the memory pointer if operation succeeds.

7.32.2.11 OSCL_IMPORT_REF MM_AllocQueryInfo* MM_Audit_Imp::MM_CreateAllocNode-Info (uint32 max_array_size)

These APIs will allocate and release space for alloc node info, to be used with the MM_GetAllocNodeInfo API.

7.32.2.12 OSCL_IMPORT_REF bool MM_Audit_Imp::MM_deallocate (void * pMemBlockIn)**Returns:**

true if operation succeeds;

7.32.2.13 uint32 MM_Audit_Imp::MM_GetAllocNo (void) [inline]

API to get the current allocation number

Returns:

the current allocation number

**7.32.2.14 OSCL_IMPORT_REF uint32 MM_Audit_Imp::MM_GetAllocNodeInfo
(MM_AllocQueryInfo * output_array, uint32 max_array_size, uint32 offset)**

API to query the list of alloc nodes. It copies the information into the provided output array.

Parameters:

output_array the array where the data will be written

max_array_size the max number of output array elements

offset the offset into the alloc node list from which the data should begin.

Returns:

the number of valid nodes in the output array

**7.32.2.15 OSCL_IMPORT_REF const OsclMemStatsNode* MM_Audit_Imp::MM_GetExisting-
Tag (const char * tagIn)**

API to add a node and zero out its counters; Note that this tag should be re-used

Parameters:

tagIn input tag

Returns:

true if operation succeeds;

7.32.2.16 uint32 MM_Audit_Imp::MM_GetMode (void) [inline]

API to get the operating mode of the mm_audit class.

7.32.2.17 uint32 MM_Audit_Imp::MM_GetNumAllocNodes () [inline]

API to get the number of allocation nodes (records) for allocations that are being tracked individually.

**7.32.2.18 void MM_Audit_Imp::MM_GetOverheadStats (MM_AuditOverheadStats & stats)
[inline]**

API to get the overhead statistics for the memory used by the mm_audit class.

7.32.2.19 uint32 MM_Audit_Imp::MM_GetPostfillPattern (void) [inline]

API to get the postfill pattern. The pattern is used to fill the memory before freeing it.

7.32.2.20 uint8 MM_Audit_Imp::MM_GetPrefillPattern (void) [inline]

API to get the prefill pattern. The pattern is used to fill the memory before returning it to the caller.

7.32.2.21 OSCL_IMPORT_REF const OsclMemStatsNode* MM_Audit_Imp::MM_GetRootNode () [inline]**7.32.2.22 OSCL_IMPORT_REF MM_Stats_t* MM_Audit_Imp::MM_GetStats (const char *const tagIn)**

API to get memory statistics through context string(tag)

Returns:

statistics pointer if operation succeeds

7.32.2.23 OSCL_IMPORT_REF uint32 MM_Audit_Imp::MM_GetStatsInDepth (const char * tagIn, MM_Stats_CB * array_ptr, uint32 max_nodes)

API to get memory statistics in detail through context string(tag) including its subtree

Returns:

statistics pointer array and actual number of nodes if operation succeeds

7.32.2.24 OSCL_IMPORT_REF const OsclMemStatsNode* MM_Audit_Imp::MM_GetTagName (const char * tagIn)

API to add a node and zero out its counters; Note that this tag should be re-used

Parameters:

tagIn input tag

Returns:

pointer to [OsclMemStatsNode](#) which should be passed to MM_allocate

7.32.2.25 OSCL_IMPORT_REF uint32 MM_Audit_Imp::MM_GetTreeNodes (const char * tagIn)

API to get the number of tree nodes including the tag node and its subtree

Parameters:

tagIn input tag

Returns:

the number of tree nodes ; 0 means no tag node

**7.32.2.26 OSCL_IMPORT_REF void MM_Audit_Imp::MM_ReleaseAllocNodeInfo
([MM_AllocQueryInfo](#) * *info*)**

**7.32.2.27 OSCL_IMPORT_REF bool MM_Audit_Imp::MM_SetFailurePoint (const char * *tagIn*,
uint32 *alloc_number*)**

API to insert allocation failure deterministically according to allocation number associated with tag

Parameters:

tagIn input tag

alloc_number allocation number associated with tag

Returns:

true if operation succeeds;

7.32.2.28 OSCL_IMPORT_REF void MM_Audit_Imp::MM_SetMode (uint32 *inMode*)

API to set the operating mode of the mm_audit class.

7.32.2.29 OSCL_IMPORT_REF void MM_Audit_Imp::MM_SetPostfillPattern (uint8 *pattern*)

API to set the postfill pattern.

7.32.2.30 OSCL_IMPORT_REF void MM_Audit_Imp::MM_SetPrefillPattern (uint8 *pattern*)

API to set the prefill pattern.

7.32.2.31 OSCL_IMPORT_REF void MM_Audit_Imp::MM_SetTagLevel (uint32 *level*)

API to set the maximum tag level,i.e. tag level for a.b.c.d = 4

Parameters:

level input tag level to be set

**7.32.2.32 OSCL_IMPORT_REF void MM_Audit_Imp::MM_UnsetFailurePoint (const char *
tagIn)**

API to cancel the allocation failure point associated with tag

Parameters:

tagIn input tag

7.32.2.33 OSCL_IMPORT_REF bool MM_Audit_Imp::MM_Validate (const void * *ptrIn*)

API to check the input pointer is a valid pointer to a chunk of memory

Parameters:

ptrIn input pointer to be validated

Returns:

true if operation succeeds;

7.32.2.34 `bool MM_Audit_Imp::pruneSubtree (const char * tagIn)`

7.32.2.35 `bool MM_Audit_Imp::pruneSubtree (OsclMemStatsNode * pNode)`

Returns:

true if operation succeeds;

7.32.2.36 `void MM_Audit_Imp::removeALLAllocNodes ()`

7.32.2.37 `OsclMemStatsNode* MM_Audit_Imp::removeAllocNode (void * pMemBlockIn, uint32 & size)`

Returns:

true if operation succeeds;

7.32.2.38 `void MM_Audit_Imp::retrieveParentTag (char * tag)`

7.32.2.39 `int32 MM_Audit_Imp::retrieveParentTagLength (const char * tag, int32 bound)`

Returns:

the length of a immediate parent tag for the input tag

7.32.2.40 `bool MM_Audit_Imp::updateStatsNode (OsclMemStatsNode * pCurrStatsNode, const MM_Stats_t & pDelta, bool bAdd)`

Returns:

true if operation succeeds;

7.32.2.41 `bool MM_Audit_Imp::updateStatsNodeInFailure (OsclMemStatsNode * pStatsNode)`

7.32.2.42 `bool MM_Audit_Imp::updateStatsNodeInFailure (const char * tagIn)`

Returns:

true if operation succeeds;

7.32.2.43 `bool MM_Audit_Imp::validate (void * ptrIn) [static]`

Returns:

true if operation succeeds;

7.32.2.44 bool MM_Audit_Imp::validate_all_heap ()**Returns:**

true if operation succeeds;

The documentation for this class was generated from the following file:

- [oscl_mem_audit.h](#)

7.33 MM_AuditOverheadStats Struct Reference

```
#include <oscl_mem_audit.h>
```

Data Fields

- uint32 [per_allocation_overhead](#)
- uint32 [stats_overhead](#)

7.33.1 Field Documentation

7.33.1.1 uint32 MM_AuditOverheadStats::per_allocation_overhead

7.33.1.2 uint32 MM_AuditOverheadStats::stats_overhead

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.34 MM_FailInsertParam Struct Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [MM_FailInsertParam \(\)](#)
- [void reset \(\)](#)
- [void * operator new \(oscl_memsize_t size\)](#)
- [void * operator new \(oscl_memsize_t size, MM_FailInsertParam *ptr\)](#)
- [void operator delete \(void *ptr\) throw \(\)](#)

Data Fields

- [uint32 nAllocNum](#)
- [uint16 xsubi \[3\]](#)

7.34.1 Constructor & Destructor Documentation

[7.34.1.1 MM_FailInsertParam::MM_FailInsertParam \(\) \[inline\]](#)

7.34.2 Member Function Documentation

[7.34.2.1 void MM_FailInsertParam::operator delete \(void *ptr\) throw \(\) \[inline\]](#)

[7.34.2.2 void* MM_FailInsertParam::operator new \(oscl_memsize_t size, MM_FailInsertParam *ptr\) \[inline\]](#)

[7.34.2.3 void* MM_FailInsertParam::operator new \(oscl_memsize_t size\) \[inline\]](#)

[7.34.2.4 void MM_FailInsertParam::reset \(\) \[inline\]](#)

7.34.3 Field Documentation

[7.34.3.1 uint32 MM_FailInsertParam::nAllocNum](#)

[7.34.3.2 uint16 MM_FailInsertParam::xsubi\[3\]](#)

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.35 MM_Stats_CB Struct Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [MM_Stats_CB \(\)](#)
- [void * operator new \(oscl_memsize_t size\)](#)
- [void * operator new \(oscl_memsize_t size, MM_Stats_CB *ptr\)](#)
- [void operator delete \(void *ptr\) throw \(\)](#)

Data Fields

- [const char * tag](#)
- [const MM_Stats_t * pStats](#)
- [uint32 num_child_nodes](#)

7.35.1 Constructor & Destructor Documentation

[7.35.1.1 MM_Stats_CB::MM_Stats_CB \(\) \[inline\]](#)

7.35.2 Member Function Documentation

[7.35.2.1 void MM_Stats_CB::operator delete \(void *ptr\) throw \(\) \[inline\]](#)

[7.35.2.2 void* MM_Stats_CB::operator new \(oscl_memsize_t size, MM_Stats_CB *ptr\) \[inline\]](#)

[7.35.2.3 void* MM_Stats_CB::operator new \(oscl_memsize_t size\) \[inline\]](#)

7.35.3 Field Documentation

[7.35.3.1 uint32 MM_Stats_CB::num_child_nodes](#)

[7.35.3.2 const MM_Stats_t* MM_Stats_CB::pStats](#)

[7.35.3.3 const char* MM_Stats_CB::tag](#)

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.36 MM_Stats_t Struct Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [MM_Stats_t \(\)](#)
- [MM_Stats_t \(uint32 sizeIn\)](#)
- [void reset \(\)](#)
- [void update \(const MM_Stats_t &delta, bool add\)](#)
- [void * operator new \(oscl_memsize_t size\)](#)
- [void * operator new \(oscl_memsize_t size, MM_Stats_t *ptr\)](#)
- [void operator delete \(void *ptr\) throw \(\)](#)

Data Fields

- [uint32 numBytes](#)
- [uint32 peakNumBytes](#)
- [uint32 numAllocs](#)
- [uint32 peakNumAllocs](#)
- [uint32 numAllocFails](#)
- [uint32 totalNumAllocs](#)
- [uint32 totalNumBytes](#)

7.36.1 Constructor & Destructor Documentation

7.36.1.1 `MM_Stats_t::MM_Stats_t () [inline]`

7.36.1.2 `MM_Stats_t::MM_Stats_t (uint32 sizeIn) [inline]`

7.36.2 Member Function Documentation

7.36.2.1 `void MM_Stats_t::operator delete (void *ptr) throw () [inline]`

7.36.2.2 `void* MM_Stats_t::operator new (oscl_memsize_t size, MM_Stats_t *ptr) [inline]`

7.36.2.3 `void* MM_Stats_t::operator new (oscl_memsize_t size) [inline]`

7.36.2.4 `void MM_Stats_t::reset () [inline]`

7.36.2.5 `void MM_Stats_t::update (const MM_Stats_t & delta, bool add) [inline]`

7.36.3 Field Documentation

7.36.3.1 `uint32 MM_Stats_t::numAllocFails`

7.36.3.2 `uint32 MM_Stats_t::numAllocs`

7.36.3.3 `uint32 MM_Stats_t::numBytes`

7.36.3.4 `uint32 MM_Stats_t::peakNumAllocs`

7.36.3.5 `uint32 MM_Stats_t::peakNumBytes`

7.36.3.6 `uint32 MM_Stats_t::totalNumAllocs`

7.36.3.7 `uint32 MM_Stats_t::totalNumBytes`

The documentation for this struct was generated from the following file:

- [oscl_mem_audit.h](#)

7.37 NTPTime Class Reference

The NTPTime class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.

```
#include <oscl_time.h>
```

Public Methods

- **OSCL_COND_IMPORT_REF NTPTime ()**
The default constructor creates an NTPTime instance representing the current system time.
- **OSCL_COND_IMPORT_REF NTPTime (const NTPTime &src)**
Copy constructor to create a new NTPTime from an existing one.
- **OSCL_COND_IMPORT_REF NTPTime (const uint32 seconds)**
Construct an NTPTime from a uint32.
- **OSCL_COND_IMPORT_REF NTPTime (const int32 seconds)**
Construct an NTPTime from a int.
- **OSCL_COND_IMPORT_REF NTPTime (const TimeValue &t)**
Construct a NTPTime instance from a TimeValue instance.
- **OSCL_COND_IMPORT_REF NTPTime (const uint64 value)**
Construct a NTPTime instance from a uint64 value.
- **OSCL_COND_IMPORT_REF NTPTime & operator= (uint32 newval)**
The assignment operator for a 32 bit integer.
- **OSCL_COND_IMPORT_REF NTPTime & operator= (uint64 newval)**
The assignment operator for a 64 bit integer.
- **OSCL_COND_IMPORT_REF NTPTime & operator+= (uint64 val)**
The += operator is used to add a 64 bit 32.32 value to an existing NTPTime value.
- **OSCL_COND_IMPORT_REF NTPTime operator- (const NTPTime &npt) const**
The - operator allows subtraction of one NTPTime value from another. This is useful to measure an interval.
- **void set_from_system_time (const uint32 systemtime)**
This method converts a 32-bit system time to NTP time.
- **OSCL_COND_IMPORT_REF uint32 get_middle32 () const**
Grab the middle 32 bits of the 64 bit 32.32 representation.
- **OSCL_COND_IMPORT_REF uint32 get_upper32 () const**
This method returns the upper 32 bits of the 32.32 representation.
- **OSCL_COND_IMPORT_REF uint32 get_lower32 () const**
This method returns the lower 32 bits of the 32.32 representation.

- int32 [to_system_time \(\) const](#)

This method converts the ntp time value to system time.

- OSCL_COND_IMPORT_REF [uint64 get_value \(\) const](#)

This method returns the 32.32 ntp representation.

- OSCL_IMPORT_REF int [set_to_current_time \(\)](#)

This method sets the 32.32 representation to the current system time value.

7.37.1 Detailed Description

The NTPTime class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.

The NTPTime class: Conversion to/from Unix (epoch at 0h Jan. 1, 1970) amount to addition/subtraction of 2208988800. A single 64 bit value is used to represent the time. This value represents the number of seconds since 0h (UTC) Jan. 1, 1900. There is an implied binary point between the upper 32 bits and lower 32 bits (this is referred to as a 32.32 fractional representation). For example a binary value of 00000000 00000000 00000011 10000000 00000000 00000000 00000000 represents 3.5 seconds since Jan 1, 1900.

7.37.2 Constructor & Destructor Documentation

7.37.2.1 OSCL_COND_IMPORT_REF NTPTime::NTPTime ()

The default constructor creates an NTPTime instance representing the current system time.

7.37.2.2 OSCL_COND_IMPORT_REF NTPTime::NTPTime (const NTPTime & src)

Copy constructor to create a new NTPTime from an existing one.

7.37.2.3 OSCL_COND_IMPORT_REF NTPTime::NTPTime (const uint32 seconds)

Construct an NTPTime from a uint32.

Parameters:

seconds The uint32 input represents the number of seconds since Jan. 1, 1900.

7.37.2.4 OSCL_COND_IMPORT_REF NTPTime::NTPTime (const int32 seconds)

Construct an NTPTime from a int.

Parameters:

seconds The int input represents the number of seconds since Jan. 1, 1900.

7.37.2.5 OSCL_COND_IMPORT_REF NTPTime::NTPTime (const TimeValue & t)

Construct a NTPTime instance from a TimeValue instance.

This constructor creates an NTPTime value representing the same absolute time as the TimeValue parameter.

Parameters:

t A reference to a TimeValue object.

7.37.2.6 OSCL_COND_IMPORT_REF NTPTime::NTPTime (const uint64 value)

Construct a NTPTime instance from a uint64 value.

Parameters:

value A 64 bit integer argument which is used as the ntp 32.32 fractional representation.

7.37.3 Member Function Documentation

7.37.3.1 OSCL_COND_IMPORT_REF uint32 NTPTime::get_lower32 ()

This method returns the lower 32 bits of the 32.32 representation.

7.37.3.2 OSCL_COND_IMPORT_REF uint32 NTPTime::get_middle32 ()

Grab the middle 32 bits of the 64 bit 32.32 representation.

7.37.3.3 OSCL_COND_IMPORT_REF uint32 NTPTime::get_upper32 ()

This method returns the upper 32 bits of the 32.32 representation.

7.37.3.4 OSCL_COND_IMPORT_REF uint64 NTPTime::get_value ()

This method returns the 32.32 ntp representation.

7.37.3.5 OSCL_COND_IMPORT_REF NTPTime& NTPTime::operator+= (uint64 val)

The += operator is used to add a 64 bit 32.32 value to an existing NTPTime value.

Parameters:

val The 64 bit 32.32 value to add to this object's value.

7.37.3.6 OSCL_COND_IMPORT_REF NTPTime NTPTime::operator- (const NTPTime & npt) const

The - operator allows subtraction of one NTPTime value from another. This is useful to measure an interval.

Parameters:

npt A reference to the NTPTime object to be subtracted from this one.

7.37.3.7 OSCL_COND_IMPORT_REF NTPTime& NTPTime::operator= (*uint64 newval*)

The assignment operator for a 64 bit integer.

Parameters:

newval A 64 bit value which represents the 32.32 fractional representation of the ntp time.

7.37.3.8 OSCL_COND_IMPORT_REF NTPTime& NTPTime::operator= (*uint32 newval*)

The assignment operator for a 32 bit integer.

Parameters:

newval A 32 bit integer representing the upper 32 bits of the 32.32 NTP time (e.g. the number of whole seconds since Jan 1, 1900 UTC).

7.37.3.9 void NTPTime::set_from_system_time (*const uint32 systemtime*)

This method converts a 32-bit system time to NTP time.

This method sets the value of the NTPTime instance to the absolute time represented by the 32 bit input argument.

Parameters:

systemtime This 32-bit value is interpreted as the number of seconds since the unix epoch Jan. 1 1970.

7.37.3.10 OSCL_IMPORT_REF int NTPTime::set_to_current_time ()

This method sets the 32.32 representation to the current system time value.

7.37.3.11 int32 NTPTime::to_system_time ()

This method converts the ntp time value to system time.

This method returns a 32 bit value representing the same absolute time as the NTP time value, but expressed as whole seconds since the unix epoch. The fractional part of the ntp value is discarded.

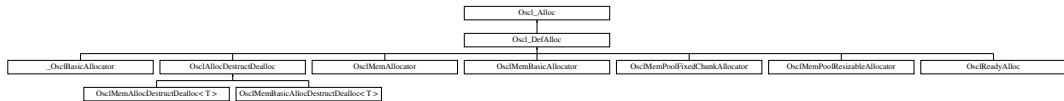
The documentation for this class was generated from the following file:

- [oscl_time.h](#)

7.38 Oscl_Alloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl_Alloc::



Public Methods

- virtual `~Oscl_Alloc ()`
- virtual `OsclAny * allocate (const uint32 size)=0`
- virtual `OsclAny * allocate_fl (const uint32 size, const char *file_name, const int line_num)`

7.38.1 Constructor & Destructor Documentation

7.38.1.1 virtual Oscl_Alloc::~Oscl_Alloc () [inline, virtual]

7.38.2 Member Function Documentation

7.38.2.1 virtual OsclAny* Oscl_Alloc::allocate (const uint32 size) [pure virtual]

Implemented in `_OsclBasicAllocator`, `Oscl_DefAlloc`, `OsclMemAllocator`, `OsclMemBasicAllocator`, `OsclMemAllocDestructDealloc< T >`, `OsclMemBasicAllocDestructDealloc< T >`, `OsclMemPoolFixedChunkAllocator`, `OsclMemPoolResizableAllocator`, and `OsclReadyAlloc`.

7.38.2.2 virtual OsclAny* Oscl_Alloc::allocate_fl (const uint32 size, const char *file_name, const int line_num) [inline, virtual]

Reimplemented in `Oscl_DefAlloc`, `OsclMemAllocator`, `OsclMemAllocDestructDealloc< T >`, and `OsclReadyAlloc`.

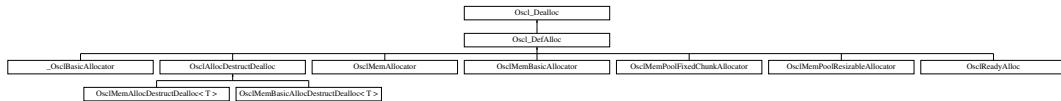
The documentation for this class was generated from the following file:

- `oscl_defalloc.h`

7.39 Oscl_Dealloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl_Dealloc::



Public Methods

- virtual void [deallocate \(OsclAny *p\)=0](#)
- virtual [~Oscl_Dealloc \(\)](#)

7.39.1 Constructor & Destructor Documentation

7.39.1.1 virtual Oscl_Dealloc::~Oscl_Dealloc () [inline, virtual]

7.39.2 Member Function Documentation

7.39.2.1 virtual void Oscl_Dealloc::deallocate (OsclAny *p) [pure virtual]

Implemented in [_OsclBasicAllocator](#), [Oscl_DefAlloc](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

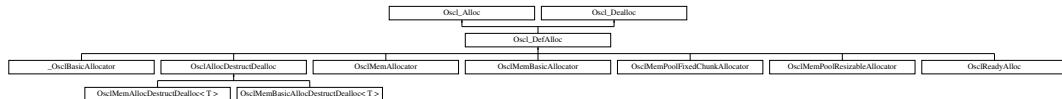
The documentation for this class was generated from the following file:

- [oscl_defalloc.h](#)

7.40 Oscl_DefAlloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl_DefAlloc::



Public Methods

- virtual [OsclAny * allocate \(const uint32 size\)=0](#)
- virtual [OsclAny * allocate_fl \(const uint32 size, const char *file_name, const int line_num\)](#)
- virtual void [deallocate \(OsclAny *p\)=0](#)

7.40.1 Member Function Documentation

7.40.1.1 virtual [OsclAny* Oscl_DefAlloc::allocate \(const uint32 size\)](#) [pure virtual]

Implements [Oscl_Alloc](#).

Implemented in [_OsclBasicAllocator](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

7.40.1.2 virtual [OsclAny* Oscl_DefAlloc::allocate_fl \(const uint32 size, const char *file_name, const int line_num\)](#) [inline, virtual]

Reimplemented from [Oscl_Alloc](#).

Reimplemented in [OsclMemAllocator](#), [OsclMemAllocDestructDealloc< T >](#), and [OsclReadyAlloc](#).

7.40.1.3 virtual void [Oscl_DefAlloc::deallocate \(OsclAny *p\)](#) [pure virtual]

Implements [Oscl_Dealloc](#).

Implemented in [_OsclBasicAllocator](#), [OsclMemAllocator](#), [OsclMemBasicAllocator](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [OsclMemPoolFixedChunkAllocator](#), [OsclMemPoolResizableAllocator](#), and [OsclReadyAlloc](#).

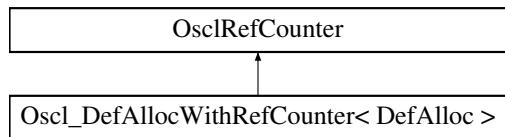
The documentation for this class was generated from the following file:

- [oscl_defalloc.h](#)

7.41 Oscl_DefAllocWithRefCounter< DefAlloc > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for Oscl_DefAllocWithRefCounter< DefAlloc >::



Public Methods

- void [Delete](#) ()
- void [addRef](#) ()
- void [removeRef](#) ()
- uint32 [getCount](#) ()

Static Public Methods

- Oscl_DefAllocWithRefCounter * [New](#) ()

7.41.1 Detailed Description

template<class DefAlloc> class Oscl_DefAllocWithRefCounter< DefAlloc >

Implementation of an [Oscl_DefAlloc](#) class with a built-in ref counter.

7.41.2 Member Function Documentation

7.41.2.1 template<class DefAlloc> void Oscl_DefAllocWithRefCounter< DefAlloc >::addRef () [inline, virtual]

Add to the reference count

Implements [OsclRefCounter](#).

7.41.2.2 template<class DefAlloc> void Oscl_DefAllocWithRefCounter< DefAlloc >::Delete () [inline]

Delete object

7.41.2.3 template<class DefAlloc> uint32 Oscl_DefAllocWithRefCounter< DefAlloc >::getCount () [inline, virtual]

Gets the current number of references

Implements [OsclRefCounter](#).

**7.41.2.4 template<class DefAlloc> Oscl_DefAllocWithRefCounter*
Oscl_DefAllocWithRefCounter< DefAlloc >::New () [inline, static]**

Create object

**7.41.2.5 template<class DefAlloc> void Oscl_DefAllocWithRefCounter< DefAlloc >::removeRef
() [inline, virtual]**

Delete from reference count

Implements [OsclRefCounter](#).

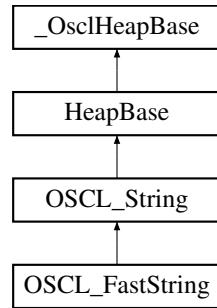
The documentation for this class was generated from the following file:

- [oscl_refcounter.h](#)

7.42 OSCL_FastString Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_FastString::



Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

Public Methods

- `OSCL_IMPORT_REF OSCL_FastString()`
- `OSCL_IMPORT_REF OSCL_FastString(const OSCL_FastString &src)`
- `OSCL_IMPORT_REF OSCL_FastString(const chartype *cstr)`
- `OSCL_IMPORT_REF OSCL_FastString(chartype *buf, uint32 maxlen)`
- `OSCL_IMPORT_REF ~OSCL_FastString()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_FastString & operator=(const OSCL_FastString &src)`
- `OSCL_IMPORT_REF OSCL_FastString & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(chartype *cstr, uint32 maxlen)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 numofbyte, optype op)`
- `OSCL_IMPORT_REF void set_length()`

Friends

- class `OSCL_String`

7.42.1 Detailed Description

`OSCL_FastString` is a simple string class, compatible with regular character array strings.

This class does not allocate internal memory for the string but acts as a container for a user-defined buffer. This means no copying of the string is done and provides a faster way of manipulating strings. Depending on initialization, this container provides either read-only or read-write access to the string.

Implementation assumes the input string is null-terminated.

Parameters:

C: type of character.

7.42.2 Member Typedef Documentation

7.42.2.1 `typedef OSCL_String::chartype OSCL_FastString::chartype`

Reimplemented from [OSCL_String](#).

7.42.2.2 `typedef TOSCL_StringOp OSCL_FastString::optype`

7.42.2.3 `typedef OSCL_wString::chartype OSCL_FastString::other_chartype`

7.42.3 Constructor & Destructor Documentation

7.42.3.1 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString()`

Default constructor.

7.42.3.2 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString(const OSCL_FastString &src)`

Creates a fast string that contains a copy of the input string. The string inherits the writable-ness of the source string.

Parameters:

src: input string.

7.42.3.3 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString(const chartype *cstr)`

Create the string and initialize it to contain the input string. The string is not writable.

am: **null-terminated string.**

7.42.3.4 `OSCL_IMPORT_REF OSCL_FastString::OSCL_FastString(chartype *buf, uint32 maxlen)`

Create the string and initialize it to contain the input string. The string is writable.

Parameters:

cp: null-terminated string.

maxlen: maximum size of storage at *cp*, not incl null terminator. If input string is not null-terminated, the function leaves.

7.42.3.5 OSCL_IMPORT_REF OSCL_FastString::~OSCL_FastString ()**7.42.4 Member Function Documentation****7.42.4.1 OSCL_IMPORT_REF const chartype* OSCL_FastString::get_cstr () [virtual]**

This function returns the C-style string for read access.

Implements [OSCL_String](#).

7.42.4.2 OSCL_IMPORT_REF uint32 OSCL_FastString::get_maxsize () [virtual]

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL_String](#).

7.42.4.3 OSCL_IMPORT_REF uint32 OSCL_FastString::get_size () [virtual]

Pure virtuals from [OSCL_String](#)

Implements [OSCL_String](#).

7.42.4.4 OSCL_IMPORT_REF chartype* OSCL_FastString::get_str () [virtual]

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL_String](#).

7.42.4.5 OSCL_IMPORT_REF OSCL_FastString& OSCL_FastString::operator= (const chartype * cstr)

Assignment operator

am: null-terminated string

Reimplemented from [OSCL_String](#).

7.42.4.6 OSCL_IMPORT_REF OSCL_FastString& OSCL_FastString::operator= (const OSCL_FastString & src)

Assignment operators

7.42.4.7 OSCL_IMPORT_REF void OSCL_FastString::set (const other_chartype * buf, uint32 numofbyte, optype op)

Set the contents of this string to a new string or character array, with conversion operation.

Parameters:

buf: string or character array.

numofbyte: number of bytes available in the buffer. There must be enough space available for the converted string including its NULL terminator. The converted string may be smaller or larger than the original string.

op: conversion operation to apply If numofbyte is not large enough for conversion, the function leaves. If input string is not null-terminated, the function leaves.

7.42.4.8 OSCL_IMPORT_REF void OSCL_FastString::set ([chartype](#) * *cstr*, uint32 *maxlen*)

This function can be used to reassign the string to a new writable string. If input string is not null-terminated, the function leaves.

7.42.4.9 OSCL_IMPORT_REF void OSCL_FastString::set_length ()

This function can be used to refresh the string size in case the contents of the string buffer have been modified since the container was created.

7.42.5 Friends And Related Function Documentation

7.42.5.1 friend class OSCL_String [friend]

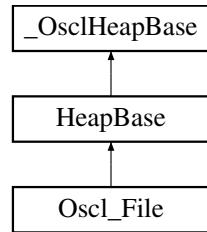
The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.43 Oscl_File Class Reference

```
#include <oscl_file_io.h>
```

Inheritance diagram for Oscl_File::



Public Types

- enum `seek_type` { `SEEKSET`, `SEEKCUR`, `SEEKEND` }
- enum `mode_type` { `MODE_READ` = 0x0001, `MODE_READWRITE` = 0x0002, `MODE_APPEND` = 0x0004, `MODE_BINARY` = 0x0008, `MODE_TEXT` = 0x0010, `MODE_READ_PLUS` = 0x0020 }
- enum `TSymbianAccessMode` { `ESymbianAccessMode_Rfile` = 0, `ESymbianAccessMode_RfileBuf` = 1 }

Public Methods

- `OSCL_IMPORT_REF Oscl_File()`
- `OSCL_IMPORT_REF Oscl_File(uint32 aCacheSize)`
- `OSCL_IMPORT_REF Oscl_File(uint32 aCacheSize, OsclFileHandle *aFileHandle)`
- `OSCL_IMPORT_REF ~Oscl_File()`
- `OSCL_IMPORT_REF void SetPVCacheSize(uint32 aSize)`
- `void AddFixedCache(const OsclFixedCacheParam &aParam)`
- `void RemoveFixedCache(const TOsclFileOffset &aPos)`
- `void SetCacheObserver(OsclCacheObserver *aObs)`
- `OSCL_IMPORT_REF void SetNativeAccessMode(uint32 aMode)`
- `OSCL_IMPORT_REF void SetNativeBufferSize(int32 aSize)`
- `OSCL_IMPORT_REF void SetAsyncReadBufferSize(uint32 aSize)`
- `OSCL_IMPORT_REF int32 SetFileHandle(OsclFileHandle *aHandle)`
- `OSCL_IMPORT_REF int32 Open(const char *filename, uint32 mode, Oscl_FileServer &fileserv)`
- `OSCL_IMPORT_REF int32 Open(const oscl_wchar *filename, uint32 mode, Oscl_FileServer &fileserv)`
- `OSCL_IMPORT_REF uint32 Read(OsclAny *buffer, uint32 size, uint32 numelements)`
- `OSCL_IMPORT_REF uint32 Write(const OsclAny *buffer, uint32 size, uint32 numelements)`
- `OSCL_IMPORT_REF int32 Seek(TOscOfFileOffset offset, seek_type origin)`
- `OSCL_IMPORT_REF TOscOfFileOffset Tell()`
- `OSCL_IMPORT_REF int32 Close()`
- `OSCL_IMPORT_REF int32 Flush()`
- `OSCL_IMPORT_REF int32 SetSize(uint32 size)`
- `OSCL_IMPORT_REF int32 EndOfFile()`
- `OSCL_IMPORT_REF int32 GetError()`

- [OsclFileHandle * Handle \(\)](#)
- [OSCL_IMPORT_REF TOsclFileOffset Size \(\)](#)
- [OSCL_IMPORT_REF void SetLoggingEnable \(bool aEnable\)](#)
- [OSCL_IMPORT_REF void SetSummaryStatsLoggingEnable \(bool aEnable\)](#)

Friends

- class [OsclFileCache](#)
- class [OsclFileCacheBuffer](#)
- class [asyncfilereadwrite_test](#)
- class [largeasyncfilereadwrite_test](#)
- class [asyncfilereadcancel_test](#)

7.43.1 Member Enumeration Documentation

7.43.1.1 enum Oscl_File::mode_type

Enumeration values:

MODE_READ Opens a file for reading. The file must exist.

MODE_READWRITE Opens the file for reading and writing. If the file exists, its contents will be overwritten unless APPEND mode is specified. If the file does not exist, it will be created.

MODE_APPEND Specifies all write operations to occur at the end of the file. The file pointer can be moved with the Seek command, but will always be moved to the end of the file for write commands.

MODE_BINARY Opens the file in 'binary' mode. This is the default.

MODE_TEXT Opens the file in 'text' mode. The default mode is 'binary'.

MODE_READ_PLUS Open a file for reading and writing. The file must exist. The default mode is 'binary'.

7.43.1.2 enum Oscl_File::seek_type

Enumeration values:

SEEKSET Beginning of file

SEEKCUR Current position of file pointer

SEEKEND End of file

7.43.1.3 enum Oscl_File::TSymbianAccessMode

Defines mode options for SetNativeAccessMode on Symbian.

Enumeration values:

ESymbianAccessMode_Rfile

ESymbianAccessMode_RfileBuf

7.43.2 Constructor & Destructor Documentation

7.43.2.1 OSCL_IMPORT_REF Oscl_File::Oscl_File ()

Constructor

7.43.2.2 OSCL_IMPORT_REF Oscl_File::Oscl_File (uint32 *aCacheSize*)

Deprecated Constructor, present for back-compatibility.

Parameters:

aCacheSize: sets native buffer size, and when pv cache is enabled, also sets pv cache size.

7.43.2.3 OSCL_IMPORT_REF Oscl_File::Oscl_File (uint32 *aCacheSize*, **OsclFileHandle** * *aFileHandle*)

Deprecated Constructor, present for back-compatibility.

Parameters:

aCacheSize: sets native buffer size, and when pv cache is enabled, also sets pv cache size.

aFileHandle: open file handle.

7.43.2.4 OSCL_IMPORT_REF Oscl_File::~Oscl_File ()

Destructor

7.43.3 Member Function Documentation

7.43.3.1 void Oscl_File::AddFixedCache (const **OsclFixedCacheParam** & *aParam*) [inline]

AddFixedCache adds a fixed cache. The fixed cache will be used on the next opportunity. The fixed cache must not overlap with any other fixed cache.

Parameters:

aParam: Cache location and size.

7.43.3.2 OSCL_IMPORT_REF int32 Oscl_File::Close ()

The File Close operation Closes the file after flushing any remaining data in the buffers.

Note: If the file object was opened with an external file handle, then Close will simply flush the file. The file will remain open.

Returns:

returns 0 if successful, and a non-zero value otherwise

7.43.3.3 OSCL_IMPORT_REF int32 Oscl_File::EndOfFile ()

The File EOF(end of file) operation returns a nonzero value after the first read operation that attempts to read past the end of the file

Returns:

7.43.3.4 OSCL_IMPORT_REF int32 Oscl_File::Flush ()

The File Flush operation On an output stream OSCL_FileFlush causes any buffered but unwritten data to be written to the file.

Returns:

returns 0 if successful, and a non-zero value otherwise

7.43.3.5 OSCL_IMPORT_REF int32 Oscl_File::GetError ()

The File Error operation If no error has occurred on stream, returns 0. Otherwise, it returns a nonzero value

Returns:

7.43.3.6 OsclFileHandle* Oscl_File::Handle () [inline]

Retrieve the file handle.

Returns:

file handle

7.43.3.7 OSCL_IMPORT_REF int32 Oscl_File::Open (const oscl_wchar *filename, uint32 mode, Oscl_FileServer &fileserv)

Opens a file.

Note: when an external file handle is used, Open will attach to the file handle and initialize cacheing features, but will not do a native file open.

Parameters:

filename name of file to open (Unicode)

mode combination of open mode flags

fileserv fileserv to use

Returns:

returns 0 if successful and a non-zero value otherwise

7.43.3.8 OSCL_IMPORT_REF int32 Oscl_File::Open (const char *filename, uint32 mode, Oscl_FileServer &fileserv)

Opens a file.

Note: when an external file handle is used, Open will attach to the file handle and initialize cacheing features, but will not do a native file open.

Parameters:

filename name of file to open (Utf8)
mode combination of open mode flags
fileserv fileserv to use

Returns:

returns 0 if successful and a non-zero value otherwise

7.43.3.9 OSCL_IMPORT_REF uint32 Oscl_File::Read (OsclAny *buffer, uint32 size, uint32 numelements)

The File Read operation Reads from the file into the buffer a maximum of 'numelements' of size 'size'.

Parameters:

buffer pointer to buffer of type void
size element size in bytes
numelements max number of elements to read

Returns:

returns the number of full elements actually read, which may be less than count if an error occurs or if the end of the file is encountered before reaching count. Use the CheckEndOfFile or GetError function to distinguish a read error from an end-of-file condition.

7.43.3.10 void Oscl_File::RemoveFixedCache (const TOsclFileOffset &aPos) [inline]

RemoveFixedCache removes a fixed cache.

Parameters:

aPos: Cache location and size.

7.43.3.11 OSCL_IMPORT_REF int32 Oscl_File::Seek (TOsclFileOffset offset, seek_type origin)

The File Seek operation Sets the position for file pointer

Parameters:

offset offset from the specified origin.
origin starting point

Returns:

returns 0 on success, and a non-zero value otherwise

7.43.3.12 OSCL_IMPORT_REF void Oscl_File::SetAsyncReadBufferSize (uint32 *aSize*)

SetAsyncReadBufferSize configures the asynchronous background read function. May not be available on all platforms.

This should be called before opening the file. If used when the file is open, the option will not take effect until the next Open.

Note: if asynchronous read is not available on the platform, this call will have no effect.

Parameters:

aSize: buffer size in bytes. Zero disables the feature.

7.43.3.13 void Oscl_File::SetCacheObserver ([OsclCacheObserver](#) * *aObs*) [inline]**7.43.3.14 OSCL_IMPORT_REF int32 Oscl_File::SetFileHandle ([OsclFileHandle](#) * *aHandle*)**

SetFileHandle adds an open file handle to the Oscl_File object. The Oscl_File object will use that handle to access the file.

This call is not available when the Oscl_File object is already open.

Note: This feature is used in Symbian with the MMF framework. The MMF framework provides an open RFile handle to access content. When using RFileBuf access mode with an RFile handle, the RFileBuf will be attached to the open RFile handle.

To use the external file handle, the caller starts with a native file handle to an open file. The caller must wrap the native file handle in an [OsclFileHandle](#) object, pass the [OsclFileHandle](#) pointer to SetFileHandle, call [Oscl_File::Open](#), then proceed to use the Oscl_File object, finally calling [Oscl_File::Close](#). In this usage mode, [Oscl_File::Open](#) and [Oscl_File::Close](#) do not actually call native file open and close. It is assumed that the caller will close the original native file handle after usage is complete.

Parameters:

aHandle: container for an open file handle.

Returns:

returns 0 if successful, non-zero if error.

7.43.3.15 OSCL_IMPORT_REF void Oscl_File::SetLoggingEnable (bool *aEnable*)

SetLoggingEnable configures the [PVLogger](#) output for this file. This will enable full logging of each API entry and exit using the logger object "Oscl_File", plus full logging of native operation entry & exit using logger object "OsclNativeFile".

Parameters:

aEnable: true to enable, false to disable logging.

7.43.3.16 OSCL_IMPORT_REF void Oscl_File::SetNativeAccessMode (uint32 *aMode*)

SetNativeAccessMode allows switching between different native file access modes, when available.

Note: for Symbian, use the TSymbianAccessMode values to choose the mode. If multiple access modes are not available on the platform, this call will have no effect.

Parameters:

aMode: access mode.

7.43.3.17 OSCL_IMPORT_REF void Oscl_File::SetNativeBufferSize (int32 *aSize*)

SetNativeBufferSize configures the native file buffering feature, when available.

This should be called before opening the file. If used when the file is open, the option will not take effect until the next Open.

Note: For Symbian, this sets the RFileBuf cache size. If native buffering is not available on the platform, this call will have no effect.

Parameters:

aSize: native buffer size in bytes. Zero disables the feature.

7.43.3.18 OSCL_IMPORT_REF void Oscl_File::SetPVCacheSize (uint32 *aSize*)

SetPVCacheSize configures the read/write cache.

This should be called before opening the file. If used when the file is open, the option will not take effect until the next Open.

Parameters:

aSize: cache size in bytes. Zero disables the cache.

7.43.3.19 OSCL_IMPORT_REF int32 Oscl_File::SetSize (uint32 *size*)

The File SetSize operation If the file has been opened for writing This sets the size of the file. The file pointer position is unchanged unless the pointers position is greater than the new filesize.

Returns:

returns 0 if successful, and a non-zero value otherwise

7.43.3.20 OSCL_IMPORT_REF void Oscl_File::SetSummaryStatsLoggingEnable (bool *aEnable*)

SetSummaryStatsLoggingEnable configures the [PVLogger](#) output for this file. This will enable summary statistics logging only, using the logger object "[OsclFileStats](#)".

Parameters:

aEnable: true to enable, false to disable stats logging.

7.43.3.21 OSCL_IMPORT_REF [TOscOfFileOffset](#) Oscl_File::Size ()

Get the file size in bytes.

Returns:

- The size of the file, or -1 on error.

7.43.3.22 OSCL_IMPORT_REF [TOsclFileOffset](#) Oscl_File::Tell ()

The File Tell operation Returns the current file position for file specified by fp

7.43.3.23 OSCL_IMPORT_REF uint32 Oscl_File::Write (const [OsclAny](#) * *buffer*, uint32 *size*, uint32 *numelements*)

The File Write operation Writes from the buffer '*numelements*' objects of size '*size*'

Parameters:

buffer pointer to buffer of type void

size element size in bytes

numelements number of elements to write

Returns:

The number of elements written

7.43.4 Friends And Related Function Documentation

7.43.4.1 friend class [asyncfilereadcancel_test](#) [friend]

7.43.4.2 friend class [asyncfilereadwrite_test](#) [friend]

7.43.4.3 friend class [largeasynccfilereadwrite_test](#) [friend]

7.43.4.4 friend class [OsclFileCache](#) [friend]

7.43.4.5 friend class [OsclFileCacheBuffer](#) [friend]

The documentation for this class was generated from the following file:

- [oscl_file_io.h](#)

7.44 Oscl_File::OsclCacheObserver Class Reference

```
#include <oscl_file_io.h>
```

Public Methods

- virtual ~OsclCacheObserver ()
- virtual OsclFileCacheBuffer * ChooseCurCache (OsclFileCache &aContext, TOsclFileOffset aPos)=0

7.44.1 Detailed Description

For defining a cache observer. Cache observer can implement customized cache schemes by replacing the SetCachePosition routine.

7.44.2 Constructor & Destructor Documentation

7.44.2.1 virtual Oscl_File::OsclCacheObserver::~OsclCacheObserver () [inline, virtual]

7.44.3 Member Function Documentation

7.44.3.1 virtual OsclFileCacheBuffer* Oscl_File::OsclCacheObserver::ChooseCurCache (OsclFileCache & aContext, TOsclFileOffset aPos) [pure virtual]

The documentation for this class was generated from the following file:

- [oscl_file_io.h](#)

7.45 Oscl_File::OsclFixedCacheParam Class Reference

```
#include <oscl_file_io.h>
```

Public Methods

- bool [Contains \(TOsclFileOffset pos\) const](#)

Data Fields

- [TOsclFileOffset iFilePosition](#)
- [uint32 iSize](#)

7.45.1 Detailed Description

Parameters for defining a fixed cache

7.45.2 Member Function Documentation

**7.45.2.1 bool Oscl_File::OsclFixedCacheParam::Contains (TOsclFileOffset *pos*) const
[inline]**

7.45.3 Field Documentation

7.45.3.1 TOsclFileOffset Oscl_File::OsclFixedCacheParam::iFilePosition

7.45.3.2 uint32 Oscl_File::OsclFixedCacheParam::iSize

The documentation for this class was generated from the following file:

- [oscl_file_io.h](#)

7.46 Oscl_FileFind Class Reference

```
#include <oscl_file_find.h>
```

Public Types

- enum `error_type` { `E_OK` = 0, `E_INVALID_STATE`, `E_INVALID_ARG`, `E_PATH_TOO_LONG`, `E_PATH_NOT_FOUND`, `E_NO_MATCH`, `E_BUFFER_TOO_SMALL`, `E_NOT_IMPLEMENTED`, `E_MEMORY_ERROR`, `E_OTHER` }
- enum `element_type` { `FILE_TYPE` = 0, `DIR_TYPE`, `INVALID_TYPE` }

Public Methods

- OSCL_IMPORT_REF const char * `FindFirst` (const char *directory, const char *pattern, char *buf, uint32 buflen)
- OSCL_IMPORT_REF const `oscl_wchar` * `FindFirst` (const `oscl_wchar` *directory, const `oscl_wchar` *pattern, `oscl_wchar` *buf, uint32 buflen)
- OSCL_IMPORT_REF char * `FindNext` (char *buf, uint32 buflen)
- OSCL_IMPORT_REF `oscl_wchar` * `FindNext` (`oscl_wchar` *buf, uint32 buflen)
- OSCL_IMPORT_REF void `Close` ()
- OSCL_IMPORT_REF `element_type` `GetElementType` ()
- OSCL_IMPORT_REF `error_type` `GetLastError` ()
- OSCL_IMPORT_REF `Oscl_FileFind` ()
- OSCL_IMPORT_REF `~Oscl_FileFind` ()

7.46.1 Detailed Description

`Oscl_FileFind` class defines the generic way of finding filesystem elements that match a pattern within a directory

7.46.2 Member Enumeration Documentation

7.46.2.1 enum Oscl_FileFind::element_type

Enumeration values:

`FILE_TYPE`

`DIR_TYPE`

`INVALID_TYPE`

7.46.2.2 enum Oscl_FileFind::error_type

Enumeration values:

`E_OK`

`E_INVALID_STATE`

`E_INVALID_ARG`

`E_PATH_TOO_LONG`

E_PATH_NOT_FOUND
E_NO_MATCH
E_BUFFER_TOO_SMALL
E_NOT_IMPLEMENTED
E_MEMORY_ERROR
E_OTHER

7.46.3 Constructor & Destructor Documentation

7.46.3.1 OSCL_IMPORT_REF Oscl_FileFind::Oscl_FileFind ()

constructor.

Returns:

none

7.46.3.2 OSCL_IMPORT_REF Oscl_FileFind::~Oscl_FileFind ()

destructor. will deallocate open handles if necessary

Returns:

none

7.46.4 Member Function Documentation

7.46.4.1 OSCL_IMPORT_REF void Oscl_FileFind::Close ()

closes the handle to directory.

Returns:

none

7.46.4.2 OSCL_IMPORT_REF const oscl_wchar* Oscl_FileFind::FindFirst (const oscl_wchar * directory, const oscl_wchar * pattern, oscl_wchar * buf, uint32 buflen)

Opens a directory for reading.

Parameters:

directory directory to search (utf16).

pattern wildcard pattern filter (utf16). passing NULL, results in a universal match.

buf buffer for returned pathname (utf16).

buflen size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E_BUFFER_TOO_SMALL.

Returns:

returns a pointer to buffer supplied, which contains the pathname of the first found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

7.46.4.3 OSCL_IMPORT_REF const char* Oscl_FileFind::FindFirst (const char * *directory*, const char * *pattern*, char * *buf*, uint32 *buflen*)

Finds first element matching the pattern.

Parameters:

directory directory to search (utf8).

pattern wildcard pattern filter (utf8). passing NULL, results in a universal match.

buf buffer for returned pathname (utf8).

buflen size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E_BUFFER_TOO_SMALL.

Returns:

returns a pointer to buffer supplied, which contains the pathname of the first found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

7.46.4.4 OSCL_IMPORT_REF oscl_wchar* Oscl_FileFind::FindNext (oscl_wchar * *buf*, uint32 *buflen*)

Reads the next element in a directory. Note: the pointer returned by this function is not persistent and should be stored. Its scope is limited to the lifetime of the class.

Parameters:

buf buffer to hold directory name(utf16)

buflen size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E_BUFFER_TOO_SMALL.

Returns:

returns a pointer to buffer supplied, which contains the pathname of the next found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

7.46.4.5 OSCL_IMPORT_REF char* Oscl_FileFind::FindNext (char * *buf*, uint32 *buflen*)

Reads the next element in the directory. Note: the pointer returned by this function is not persistent and should be stored. Its scope is limited to the lifetime of the class.

Parameters:

buf buffer to hold directory name(utf8)

buflen size in wide characters of buf. If buf is not large enough to hold the returned string, NULL is returned, and GetLastError is set to E_BUFFER_TOO_SMALL.

Returns:

returns a pointer to buffer supplied, which contains the pathname of the next found element, or NULL otherwise. On a NULL return value, [GetLastError\(\)](#) returns a more detailed error.

7.46.4.6 OSCL_IMPORT_REF *element_type* Oscl_FileFind::GetElementType ()

Returns the element type for the last element returned

Returns:

see enumeration above for more info.

7.46.4.7 OSCL_IMPORT_REF [error_type](#) Oscl_FileFind::GetLastError ()

Returns the error code for the last operation.

Returns:

see enumeration above for more info.

The documentation for this class was generated from the following file:

- [oscl_file_find.h](#)

7.47 Oscl_FileServer Class Reference

```
#include <oscl_file_server.h>
```

Public Methods

- OSCL_IMPORT_REF [Oscl_FileServer \(\)](#)
- OSCL_IMPORT_REF [~Oscl_FileServer \(\)](#)
- OSCL_IMPORT_REF int32 [Connect \(bool aShareSession=false\)](#)
- OSCL_IMPORT_REF int32 [Close \(\)](#)
- OSCL_IMPORT_REF int32 [Oscl_DeleteFile \(const char *filename\)](#)
- OSCL_IMPORT_REF int32 [Oscl_DeleteFile \(const oscl_wchar *filename\)](#)

Friends

- class [Oscl_File](#)
- class [OsclNativeFile](#)

7.47.1 Constructor & Destructor Documentation

7.47.1.1 OSCL_IMPORT_REF Oscl_FileServer::Oscl_FileServer ()

Constructor

7.47.1.2 OSCL_IMPORT_REF Oscl_FileServer::~Oscl_FileServer ()

Destructor

7.47.2 Member Function Documentation

7.47.2.1 OSCL_IMPORT_REF int32 Oscl_FileServer::Close ()

Closes a file server.

Returns:

returns 0 on success and a non-zero value otherwise

7.47.2.2 OSCL_IMPORT_REF int32 Oscl_FileServer::Connect (bool aShareSession = false)

Connects the server. This must be called before a file server can be used.

Returns:

returns 0 on success and a non-zero value otherwise

**7.47.2.3 OSCL_IMPORT_REF int32 Oscl_FileServer::Oscl_DeleteFile (const oscl_wchar *
filename)**

Deletes a file from the filesystem

Parameters:

filename name of the file to delete (Unicode)

Returns:

returns 0 if successful, and a non-zero value otherwise.

7.47.2.4 OSCL_IMPORT_REF int32 Oscl_FileServer::Oscl_DeleteFile (const char **filename*)

Deletes a file from the filesystem *

Parameters:

filename name of the file to delete (Utf8)

Returns:

returns 0 if successful, and a non-zero value otherwise.

7.47.3 Friends And Related Function Documentation**7.47.3.1 friend class Oscl_File [friend]****7.47.3.2 friend class OsclNativeFile [friend]**

The documentation for this class was generated from the following file:

- [oscl_file_server.h](#)

7.48 oscl_fsstat Struct Reference

```
#include <oscl_file_dir_utils.h>
```

Data Fields

- [uint64 freebytes](#)
- [uint64 totalbytes](#)

7.48.1 Field Documentation

7.48.1.1 [uint64 oscl_fsstat::freebytes](#)

7.48.1.2 [uint64 oscl_fsstat::totalbytes](#)

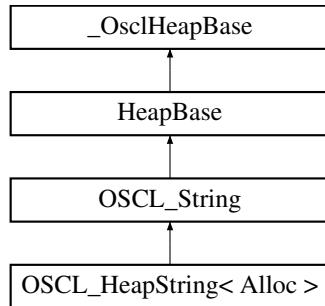
The documentation for this struct was generated from the following file:

- [oscl_file_dir_utils.h](#)

7.49 OSCL_HeapString< Alloc > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_HeapString< Alloc >::



Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

Public Methods

- `OSCL_HeapString()`
- `OSCL_HeapString(const OSCL_HeapString &src)`
- `OSCL_HeapString(const OSCL_String &src)`
- `OSCL_HeapString(const chartype *cstr)`
- `OSCL_HeapString(const chartype *buf, uint32 length)`
- `~OSCL_HeapString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_HeapString & operator=(const OSCL_HeapString &src)`
- `OSCL_HeapString & operator=(const OSCL_String &src)`
- `OSCL_HeapString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, optype op)`
- `void set(const other_chartype *buf, uint32 length, optype op)`

Friends

- `class OSCL_String`

7.49.1 Detailed Description

```
template<class Alloc> class OSCL_HeapString< Alloc >
```

OSCL_HeapString is a simple string class, compatible with regular character array strings.

The string array is variable length, is allocated from the heap, and is modifiable. A copy-on-write mechanism is used to minimize unnecessary copying when multiple instances of a string are created for reading. Allocated memory is automatically freed by the class destructor when the last string referencing the memory is destroyed.

The class HAS NO thread synchronization built-in, so it is NOT MT-SAFE. External locks should be used if the class is to be shared across threads.

Parameters:

Alloc: memory allocator, derived from [Oscl_DefAlloc](#).

7.49.2 Member Typedef Documentation

7.49.2.1 template<class Alloc> typedef OSCL_String::chartype OSCL_HeapString< Alloc >::chartype

Reimplemented from [OSCL_String](#).

7.49.2.2 template<class Alloc> typedef TOSCL_StringOp OSCL_HeapString< Alloc >::optype

7.49.2.3 template<class Alloc> typedef OSCL_wString::chartype OSCL_HeapString< Alloc >::other_chartype

7.49.3 Friends And Related Function Documentation

7.49.3.1 template<class Alloc> friend class OSCL_String [friend]

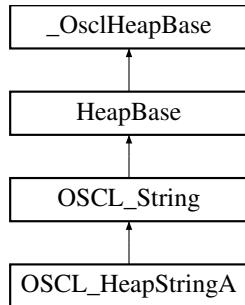
The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.50 OSCL_HeapStringA Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_HeapStringA::



Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

Public Methods

- `OSCL_IMPORT_REF OSCL_HeapStringA()`
- `OSCL_IMPORT_REF OSCL_HeapStringA(Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA(const OSCL_HeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_HeapStringA(const OSCL_HeapStringA &src, Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA(const OSCL_String &src, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA(const chartype *cstr, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_HeapStringA(const chartype *buf, uint32 length, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF ~OSCL_HeapStringA()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_HeapStringA & operator=(const OSCL_HeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_HeapStringA & operator=(const OSCL_String &src)`
- `OSCL_IMPORT_REF OSCL_HeapStringA & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(const chartype *buf, uint32 length)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, optype op)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 length, optype op)`

Friends

- class `OSCL_String`

7.50.1 Detailed Description

OSCL_HeapStringA is a simple string class, compatible with regular character array strings. It is similar to [OSCL_HeapString](#), except that the allocator is passed at run-time instead of compile-time. The allocator pointer is passed in the constructor, and may be a reference-counted object. If the allocator is not a reference-counted object then it must persist over the lifetime of all OSCL_HeapStringA objects that use it. If no allocator is provided, then an [OsclMemAllocator](#) will be used.

The string array is variable length, is allocated from the heap, and is modifiable. A copy-on-write mechanism is used to minimize unnecessary copying when multiple instances of a string are created for reading. Allocated memory is automatically freed by the class destructor when the last string referencing the memory is destroyed.

The class HAS NO thread synchronization built-in, so it is NOT MT-SAFE. External locks should be used if the class is to be shared across threads.

7.50.2 Member Typedef Documentation

7.50.2.1 `typedef OSCL_String::chartype OSCL_HeapStringA::chartype`

Reimplemented from [OSCL_String](#).

7.50.2.2 `typedef TOSCL_StringOp OSCL_HeapStringA::optype`

7.50.2.3 `typedef OSCL_wString::chartype OSCL_HeapStringA::other_chartype`

7.50.3 Constructor & Destructor Documentation

7.50.3.1 `OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA()`

The default constructor creates an empty string.

am: (optional) allocator or reference-counted allocator.

am: (optional) reference counter associated with allocator object.

If no allocator is provided, this object will use an [OsclMemAllocator](#).

7.50.3.2 `OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA (Oscl_DefAlloc *alloc, OsclRefCounter *ref = NULL)`

7.50.3.3 `OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA (const OSCL_HeapStringA & src)`

Creates a heap string that contains a copy of the input string.

Parameters:

src: input string.

am: (optional) allocator or reference-counted allocator.

am: (optional) reference counter associated with allocator object.

If no allocator is provided, this this object will use an [OsclMemAllocator](#).

7.50.3.4 OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA (const OSCL_HeapStringA & src, Oscl_DefAlloc * alloc, OsclRefCounter * ref = NULL)

7.50.3.5 OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA (const OSCL_String & src, Oscl_DefAlloc * alloc = NULL, OsclRefCounter * ref = NULL)

7.50.3.6 OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA (const chartype * cstr, Oscl_DefAlloc * alloc = NULL, OsclRefCounter * ref = NULL)

Creates a heap string that contains a copy of the input string.

Parameters:

cp: null-terminated string.

am: (optional) allocator or reference-counted allocator.

am: (optional) reference counter associated with allocator object.

If no allocator is provided, this this object will use an [OsclMemAllocator](#).

7.50.3.7 OSCL_IMPORT_REF OSCL_HeapStringA::OSCL_HeapStringA (const chartype * buf, uint32 length, Oscl_DefAlloc * alloc = NULL, OsclRefCounter * ref = NULL)

Creates a heap string that contains a copy of the input string or character array.

Parameters:

src: character array, not necessarily null-terminated.

length: number of characters to copy.

am: (optional) allocator or reference-counted allocator.

am: (optional) reference counter associated with allocator object.

If no allocator is provided, this this object will use an [OsclMemAllocator](#).

7.50.3.8 OSCL_IMPORT_REF OSCL_HeapStringA::~OSCL_HeapStringA ()

7.50.4 Member Function Documentation

7.50.4.1 OSCL_IMPORT_REF const chartype* OSCL_HeapStringA::get_cstr () [virtual]

This function returns the C-style string for read access.

Implements [OSCL_String](#).

7.50.4.2 OSCL_IMPORT_REF uint32 OSCL_HeapStringA::get_maxsize () [virtual]

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implements [OSCL_String](#).

7.50.4.3 OSCL_IMPORT_REF uint32 OSCL_HeapStringA::get_size () [virtual]

Pure virtuals from [OSCL_String](#)

Implements [OSCL_String](#).

7.50.4.4 OSCL_IMPORT_REF chartype* OSCL_HeapStringA::get_str () [virtual]

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implements [OSCL_String](#).

7.50.4.5 OSCL_IMPORT_REF OSCL_HeapStringA& OSCL_HeapStringA::operator= (const chartype * cstr)

Assignment operator

am: null-terminated string

Reimplemented from [OSCL_String](#).

7.50.4.6 OSCL_IMPORT_REF OSCL_HeapStringA& OSCL_HeapStringA::operator= (const OSCL_String & src)

Assignment operator

Reimplemented from [OSCL_String](#).

7.50.4.7 OSCL_IMPORT_REF OSCL_HeapStringA& OSCL_HeapStringA::operator= (const OSCL_HeapStringA & src)

Assignment operators

7.50.4.8 OSCL_IMPORT_REF void OSCL_HeapStringA::set (const other_chartype * buf, uint32 length, optype op)

Set the contents of this string to a new string or character array, with conversion operation.

Parameters:

buf: string or character array.

length: number of characters to copy.

op: conversion operation to apply

7.50.4.9 OSCL_IMPORT_REF void OSCL_HeapStringA::set (const **other_chartype** * *buf*, **optype** *op*)

Set the contents of this string to a new string, with conversion operation.

Parameters:

buf: NULL-terminated wide string.

op: conversion operation to apply

7.50.4.10 OSCL_IMPORT_REF void OSCL_HeapStringA::set (const **chartype** * *buf*, uint32 *length*)

Set the contents of this string to a new string or character array.

Parameters:

buf: string or character array.

length: number of characters to copy.

7.50.5 Friends And Related Function Documentation

7.50.5.1 friend class OSCL_String [friend]

The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.51 Oscl_Int64_Utils Class Reference

The Oscl_Int64_Utils class provides a wrapper for commonly used int64/uint64 operations.

```
#include <oscl_int64_utils.h>
```

Static Public Methods

- OSCL_IMPORT_REF void `set_int64` (`int64` &`input_value`, const `int32` `upper`, const `uint32` `lower`)
- OSCL_IMPORT_REF `int32` `get_int64_upper32` (const `int64` &`input_value`)
- OSCL_IMPORT_REF `uint32` `get_int64_lower32` (const `int64` &`input_value`)
- OSCL_IMPORT_REF `uint32` `get_int64_middle32` (const `int64` &`input_value`)
- OSCL_IMPORT_REF void `set_uint64` (`uint64` &`input_value`, const `uint32` `upper`, const `uint32` `lower`)
- OSCL_IMPORT_REF `uint32` `get_uint64_upper32` (const `uint64` &`input_value`)
- OSCL_IMPORT_REF `uint32` `get_uint64_lower32` (const `uint64` &`input_value`)
- OSCL_IMPORT_REF `uint32` `get_uint64_middle32` (const `uint64` &`input_value`)

7.51.1 Detailed Description

The Oscl_Int64_Utils class provides a wrapper for commonly used int64/uint64 operations.

The Oscl_Int64_Utils class:

Provides a wrapper for commonly used operations to mask the differences between OSes that have an int64/uint64 class instead of a 64-bit integer.

7.51.2 Member Function Documentation

- 7.51.2.1 **OSCL_IMPORT_REF** **uint32** **Oscl_Int64_Utils::get_int64_lower32** (**const int64 & input_value**) [static]
- 7.51.2.2 **OSCL_IMPORT_REF** **uint32** **Oscl_Int64_Utils::get_int64_middle32** (**const int64 & input_value**) [static]
- 7.51.2.3 **OSCL_IMPORT_REF** **int32** **Oscl_Int64_Utils::get_int64_upper32** (**const int64 & input_value**) [static]
- 7.51.2.4 **OSCL_IMPORT_REF** **uint32** **Oscl_Int64_Utils::get_uint64_lower32** (**const uint64 & input_value**) [static]
- 7.51.2.5 **OSCL_IMPORT_REF** **uint32** **Oscl_Int64_Utils::get_uint64_middle32** (**const uint64 & input_value**) [static]
- 7.51.2.6 **OSCL_IMPORT_REF** **uint32** **Oscl_Int64_Utils::get_uint64_upper32** (**const uint64 & input_value**) [static]
- 7.51.2.7 **OSCL_IMPORT_REF** **void** **Oscl_Int64_Utils::set_int64** (**int64 & input_value, const int32 upper, const uint32 lower**) [static]
- 7.51.2.8 **OSCL_IMPORT_REF** **void** **Oscl_Int64_Utils::set_uint64** (**uint64 & input_value, const uint32 upper, const uint32 lower**) [static]

The documentation for this class was generated from the following file:

- [oscl_int64_utils.h](#)

7.52 Oscl_Less< T > Struct Template Reference

```
#include <oscl_map.h>
```

Public Methods

- bool [operator\(\)](#) (const T &x, const T &y) const

```
template<class T> struct Oscl_Less< T >
```

7.52.1 Member Function Documentation

7.52.1.1 template<class T> bool Oscl_Less< T >::operator() (const T & x, const T & y) const [inline]

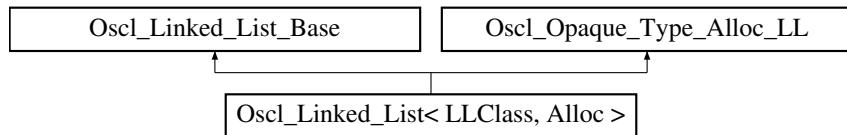
The documentation for this struct was generated from the following file:

- [oscl_map.h](#)

7.53 Oscl_Linked_List< LLClass, Alloc > Class Template Reference

```
#include <oscl_linked_list.h>
```

Inheritance diagram for Oscl_Linked_List< LLClass, Alloc >::



Public Methods

- [Oscl_Linked_List \(\)](#)
- [~Oscl_Linked_List \(\)](#)
- void [clear \(\)](#)
- int32 [dequeue_element \(LLClass &element\)](#)
- int32 [get_first \(LLClass &ele\)](#)
- int32 [get_next \(LLClass &ele\)](#)
- int32 [check_list \(\)](#)
- int32 [get_num_elements \(\)](#)
- int32 [add_element \(LLClass &new_element\)](#)
- int32 [add_to_front \(const LLClass &new_element\)](#)
- int32 [insert_element \(const LLClass &new_element, int index\)](#)
- int32 [get_element \(int32 index, LLClass &element\)](#)
- int32 [remove_element \(const LLClass &data_to_remove\)](#)
- int32 [get_index \(const LLClass &data\)](#)
- int32 [remove_element \(const int32 index_to_remove\)](#)
- int32 [move_to_end \(const LLClass &data_to_move\)](#)
- int32 [move_to_front \(const LLClass &data_to_move\)](#)

7.53.1 Detailed Description

`template<class LLClass, class Alloc> class Oscl_Linked_List< LLClass, Alloc >`

Oscl Linked List Class

7.53.2 Constructor & Destructor Documentation

7.53.2.1 `template<class LLClass, class Alloc> Oscl_Linked_List< LLClass, Alloc >::Oscl_Linked_List () [inline]`

Initialized the protected variables of list.

7.53.2.2 template<class LLClass, class Alloc> Oscl_Linked_List< LLClass, Alloc >::~Oscl_Linked_List () [inline]

The destructor.

7.53.3 Member Function Documentation

7.53.3.1 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::add_element (LLClass & new_element) [inline]

Adds new element to the list.if list is already there then it adds element at end of list otherwise it create the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.53.3.2 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::add_to_front (const LLClass & new_element) [inline]

Adds new element at the start of the list.if list is already exist then it adds element at start of list otherwise it create the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.53.3.3 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::check_list () [inline]

Debug routine: Checks the list for elements.

Returns:

32-bit integer, if node count is equal to number of node added to the list then returns 1 otherwise returns 0.

Reimplemented from [Oscl_Linked_List_Base](#).

7.53.3.4 template<class LLClass, class Alloc> void Oscl_Linked_List< LLClass, Alloc >::clear () [inline]

7.53.3.5 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::dequeue_element (LLClass & element) [inline]

7.53.3.6 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::get_element (int32 index, LLClass & element) [inline]

Search and returns the element in the list for passed index.

Parameters:

index, element The index is the count for the node.

Returns:

32-bit integer on success returns 1 otherwise returns 0.

7.53.3.7 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::get_first (LLClass & ele) [inline]

Return the first element of list in passed parameter,

Parameters:

ele return the value of first element of list in this parameter

Returns:

32-bit interger,If first element found, it returns 1 otherwise it returns 0

7.53.3.8 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::get_index (const LLClass & data) [inline]

Returns the index for requested element.

Parameters:

data the element for which index to be return.

Returns:

32-bit integer if data is found in the list it returns index otherwise it returns -1.

7.53.3.9 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::get_next (LLClass & ele) [inline]

Return the next element of list in passed parameter,

Parameters:

ele return the value of next element of list in this parameter

Returns:

32-bit interger ,if next element is found in list,it returns 1 otherwise it returns 0

7.53.3.10 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::get_num_elements () [inline]

Get number of elements in the list.

Returns:

32-bit integer, number of elements in list.

7.53.3.11 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::insert_element (const LLClass & *new_element*, int *index*) [inline]

Inserts new element in the list. If the index is past the end of the list it creates the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.53.3.12 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::move_to_end (const LLClass & *data_to_move*) [inline]

Moves the element to end of the list

Parameters:

data_to_move

Returns:

On success returns 1 otherwise returns 0.

7.53.3.13 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::move_to_front (const LLClass & *data_to_move*) [inline]

Moves the element to front of the list

Parameters:

data_to_move

Returns:

On success returns 1 otherwise returns 0.

7.53.3.14 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::remove_element (const int32 *index_to_remove*) [inline]

Removes the element for requested index.

Parameters:

index_to_remove

Returns:

on success return 1 otherwise return 0.

Reimplemented from [Oscl_Linked_List_Base](#).

7.53.3.15 template<class LLClass, class Alloc> int32 Oscl_Linked_List< LLClass, Alloc >::remove_element (const LLClass & *data_to_remove*) [inline]

Removes the element from the list.

Parameters:

data_to_remove

Returns:

32-bit integer on if element fount in the list returns 1 otherwise returns 0.

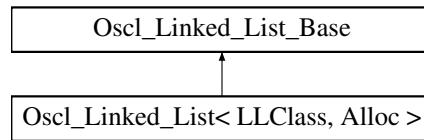
The documentation for this class was generated from the following file:

- [oscl_linked_list.h](#)

7.54 Oscl_Linked_List_Base Class Reference

```
#include <oscl_linked_list.h>
```

Inheritance diagram for Oscl_Linked_List_Base::



Protected Methods

- virtual ~Oscl_Linked_List_Base ()
- OSCL_IMPORT_REF void construct (Oscl_Opaque_Type_Alloc_LL *op)
- OSCL_IMPORT_REF void destroy ()
- OSCL_IMPORT_REF int32 get_first (OsclAny *ele)
- OSCL_IMPORT_REF int32 get_next (OsclAny *ele)
- OSCL_IMPORT_REF int32 check_list ()
- OSCL_IMPORT_REF int32 add_element (const OsclAny *new_element)
- OSCL_IMPORT_REF int32 add_to_front (const OsclAny *new_element)
- OSCL_IMPORT_REF int32 insert_element (const OsclAny *new_element, int index)
- OSCL_IMPORT_REF int32 get_element (int32 index, OsclAny *element)
- OSCL_IMPORT_REF int32 remove_element (const OsclAny *data_to_remove)
- OSCL_IMPORT_REF int32 get_index (const OsclAny *data)
- OSCL_IMPORT_REF int32 remove_element (const int32 index_to_remove)
- OSCL_IMPORT_REF int32 move_to_end (const OsclAny *data_to_move)
- OSCL_IMPORT_REF int32 move_to_front (const OsclAny *data_to_move)

Protected Attributes

- OsclAny * head
- OsclAny * tail
- OsclAny * iterator
- int32 num_elements
- uint32 sizeof_T

7.54.1 Detailed Description

Oscl Linked List Base Class. A non-templated base class is used to avoid large inline functions in the [Oscl_Linked_List](#) implementation.

7.54.2 Constructor & Destructor Documentation

7.54.2.1 `virtual Oscl_Linked_List_Base::~Oscl_Linked_List_Base ()` [inline, protected, virtual]

7.54.3 Member Function Documentation

7.54.3.1 `OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::add_element (const OsclAny * new_element)` [protected]

Adds new element to the list.if list is already there then it adds element at end of list otherwise it create the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.54.3.2 `OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::add_to_front (const OsclAny * new_element)` [protected]

Adds new element at the start of the list.if list is already exist then it adds element at start of list otherwise it create the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.54.3.3 `OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::check_list ()` [protected]

Debug routine: Checks the list for elements.

Returns:

32-bit integer, if node count is equal to number of node added to the list then returns 1 otherwise returns 0.

Reimplemented in [Oscl_Linked_List< LLClass, Alloc >](#).

7.54.3.4 `OSCL_IMPORT_REF void Oscl_Linked_List_Base::construct (Oscl_Opaque_Type_Alloc_LL * op)` [protected]

7.54.3.5 `OSCL_IMPORT_REF void Oscl_Linked_List_Base::destroy ()` [protected]

7.54.3.6 `OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::get_element (int32 index, OsclAny * element)` [protected]

Search and returns the element in the list for passed index.

Parameters:

index, element The index is the count for the node.

Returns:

32-bit integer on success returns 1 otherwise returns 0.

**7.54.3.7 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::get_first (OsclAny * *ele*)
[protected]**

Return the first element of list in passed parameter,

Parameters:

ele return the value of first element of list in this parameter

Returns:

32-bit interger,If first element found, it returns 1 otherwise it returns 0

**7.54.3.8 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::get_index (const OsclAny * *data*)
[protected]**

Returns the index for requested element.

Parameters:

data the element for which index to be return.

Returns:

32-bit integer if data is found in the list it returns index otherwise it returns -1.

**7.54.3.9 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::get_next (OsclAny * *ele*)
[protected]**

Return the next element of list in passed parameter,

Parameters:

ele return the value of next element of list in this parameter

Returns:

32-bit interger ,if next element is found in list,it returns 1 otherwise it returns 0

**7.54.3.10 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::insert_element (const OsclAny *
new_element, int index) [protected]**

Inserts new element in the list. If the index is past the end of the list it creates the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

**7.54.3.11 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::move_to_end (const OsclAny *
data_to_move) [protected]**

Moves the element to end of the list

Parameters:

data_to_move

Returns:

On success returns 1 otherwise returns 0.

**7.54.3.12 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::move_to_front (const OsclAny *
data_to_move) [protected]**

Moves the element to front of the list

Parameters:

data_to_move

Returns:

On success returns 1 otherwise returns 0.

**7.54.3.13 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::remove_element (const int32
index_to_remove) [protected]**

Removes the element for requested index.

Parameters:

index_to_remove

Returns:

on success return 1 otherwise return 0.

Reimplemented in [Oscl_Linked_List< LLClass, Alloc >](#).

**7.54.3.14 OSCL_IMPORT_REF int32 Oscl_Linked_List_Base::remove_element (const OsclAny *
data_to_remove) [protected]**

Removes the element from the list.

Parameters:

data_to_remove

Returns:

32-bit integer on if element fount in the list returns 1 otherwise returns 0.

7.54.4 Field Documentation

7.54.4.1 **OsclAny* Oscl_Linked_List_Base::head** [protected]

7.54.4.2 **OsclAny* Oscl_Linked_List_Base::iterator** [protected]

7.54.4.3 **int32 Oscl_Linked_List_Base::num_elements** [protected]

7.54.4.4 **uint32 Oscl_Linked_List_Base::sizeof_T** [protected]

7.54.4.5 **OsclAny* Oscl_Linked_List_Base::tail** [protected]

The documentation for this class was generated from the following file:

- [oscl_linked_list.h](#)

7.55 Oscl_Map< Key, T, Alloc, Compare > Class Template Reference

```
#include <oscl_map.h>
```

Public Types

- `typedef Key key_type`
- `typedef Compare key_compare`
- `typedef Oscl_Pair< const Key, T > value_type`
- `typedef Oscl_Map< Key, T, Alloc, Compare > self`
- `typedef rep_type::pointer pointer`
- `typedef rep_type::reference reference`
- `typedef rep_type::const_reference const_reference`
- `typedef rep_type::iterator iterator`
- `typedef rep_type::const_iterator const_iterator`
- `typedef rep_type::size_type size_type`
- `typedef Oscl_Pair< iterator, bool > pair_iterator_bool`
- `typedef Oscl_Pair< iterator, iterator > pair_iterator_iterator`
- `typedef Oscl_Pair< const_iterator, const_iterator > pair_citerator_citerator`

Public Methods

- `Oscl_Map (const Compare &comp=Compare())`
- `Oscl_Map (const self &x)`
- `self & operator= (const self &x)`
- `key_compare key_comp () const`
- `value_compare value_comp () const`
- `iterator begin ()`
- `const_iterator begin () const`
- `iterator end ()`
- `const_iterator end () const`
- `bool empty () const`
- `size_type size () const`
- `size_type max_size () const`
- `T & operator[] (const key_type &k)`
- `pair_iterator_bool insert (const value_type &x)`
- `iterator insert (iterator position, const value_type &x)`
- `void insert (const value_type *first, const value_type *last)`
- `void erase (iterator position)`
- `size_type erase (const key_type &x)`
- `void erase (iterator first, iterator last)`
- `void clear ()`
- `iterator find (const key_type &x)`
- `const_iterator find (const key_type &x) const`
- `size_type count (const key_type &x) const`
- `iterator lower_bound (const key_type &x)`
- `const_iterator lower_bound (const key_type &x) const`
- `iterator upper_bound (const key_type &x)`

- `const_iterator upper_bound (const key_type &x) const`
- `pair_iterator iterator equal_range (const key_type &x)`
- `pair_citerator citerator equal_range (const key_type &x) const`

7.55.1 Detailed Description

```
template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> class Oscl_Map< Key,  
T, Alloc, Compare >
```

Oscl_Map Class. A subset of STL::Map methods. Oscl_Map is a sorted associative container that associates objects of type Key with objects of type T. It is also a unique associative container, meaning that no two elements have the same key. Oscl_Map uses the key to speed lookup, insertion, and deletion of elements. It is often superior to all other containers when you need to lookup an element by key value. Due to the underlying tree structure, inserts and erases can be performed in logarithmic time, where a vector would take linear time in some cases.

7.55.2 Member Typedef Documentation

- 7.55.2.1 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::const_iterator Oscl_Map< Key, T, Alloc, Compare >::const_iterator`
- 7.55.2.2 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::const_reference Oscl_Map< Key, T, Alloc, Compare >::const_reference`
- 7.55.2.3 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::iterator Oscl_Map< Key, T, Alloc, Compare >::iterator`
- 7.55.2.4 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Compare Oscl_Map< Key, T, Alloc, Compare >::key_compare`
- 7.55.2.5 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Key Oscl_Map< Key, T, Alloc, Compare >::key_type`
- 7.55.2.6 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<const_iterator, const_iterator> Oscl_Map< Key, T, Alloc, Compare >::pair_citerator_citerator`
- 7.55.2.7 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<iterator, bool> Oscl_Map< Key, T, Alloc, Compare >::pair_iterator_bool`
- 7.55.2.8 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<iterator, iterator> Oscl_Map< Key, T, Alloc, Compare >::pair_iterator_iterator`
- 7.55.2.9 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::pointer Oscl_Map< Key, T, Alloc, Compare >::pointer`
- 7.55.2.10 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::reference Oscl_Map< Key, T, Alloc, Compare >::reference`
- 7.55.2.11 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Map<Key, T, Alloc, Compare> Oscl_Map< Key, T, Alloc, Compare >::self`
- 7.55.2.12 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef rep_type::size_type Oscl_Map< Key, T, Alloc, Compare >::size_type`
- 7.55.2.13 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> typedef Oscl_Pair<const Key, T> Oscl_Map< Key, T, Alloc, Compare >::value_type`

7.55.3 Constructor & Destructor Documentation

- 7.55.3.1 `template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> Oscl_Map< Key, T, Alloc, Compare >::Oscl_Map (const Compare & comp = Compare() [inline])`

Creates an empty map using comp as the key compare object

7.55.3.2 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> Oscl_Map< Key, T, Alloc, Compare >::Oscl_Map (const **self & *x*) [inline]**

Oscl_Map copy constructor

7.55.4 Member Function Documentation

7.55.4.1 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> const_iterator Oscl_Map< Key, T, Alloc, Compare >::begin () const [inline]

Returns a const iterator pointing to the beginning of the map

7.55.4.2 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> iterator Oscl_Map< Key, T, Alloc, Compare >::begin () [inline]

Returns an iterator pointing to the beginning of the map

7.55.4.3 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> void Oscl_Map< Key, T, Alloc, Compare >::clear () [inline]

Erases all elements

7.55.4.4 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> size_type Oscl_Map< Key, T, Alloc, Compare >::count (const **key_type & *x*) const [inline]**

Returns the number of elements with key *x*. For map this will either be 0 or 1.

7.55.4.5 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> bool Oscl_Map< Key, T, Alloc, Compare >::empty () const [inline]

Returns true if map size is 0

7.55.4.6 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> const_iterator Oscl_Map< Key, T, Alloc, Compare >::end () const [inline]

Returns a const iterator pointing to the end of the map.

7.55.4.7 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> iterator Oscl_Map< Key, T, Alloc, Compare >::end () [inline]

Returns an iterator pointing to the end of the map.

7.55.4.8 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> pair_citerator_citerator Oscl_Map< Key, T, Alloc, Compare >::equal_range (const **key_type & *x*) const [inline]**

Finds a range containing all elements whose key is *x*

**7.55.4.9 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
 pair_iterator_iterator Oscl_Map< Key, T, Alloc, Compare >::equal_range (const
 key_type & x) [inline]**

Finds a range containing all elements whose key is x

**7.55.4.10 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> void
 Oscl_Map< Key, T, Alloc, Compare >::erase (iterator first, iterator last) [inline]**

Erases all elements in the range [first,last)

**7.55.4.11 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> size_type
 Oscl_Map< Key, T, Alloc, Compare >::erase (const key_type & x) [inline]**

Erases the element with key x

**7.55.4.12 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> void
 Oscl_Map< Key, T, Alloc, Compare >::erase (iterator position) [inline]**

Erases the element pointed to by position

**7.55.4.13 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
 const_iterator Oscl_Map< Key, T, Alloc, Compare >::find (const key_type & x) const
 [inline]**

Finds an element whose key is x

**7.55.4.14 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> iterator
 Oscl_Map< Key, T, Alloc, Compare >::find (const key_type & x) [inline]**

Finds an element whose key is x

**7.55.4.15 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> void
 Oscl_Map< Key, T, Alloc, Compare >::insert (const value_type *first, const value_type
 *last) [inline]**

Inserts the range [first,last) into the map

**7.55.4.16 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> iterator
 Oscl_Map< Key, T, Alloc, Compare >::insert (iterator position, const value_type & x)
 [inline]**

Inserts x into the map using position as a hint as to where it should be inserted

**7.55.4.17 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
`pair_iterator_bool` Oscl_Map< Key, T, Alloc, Compare >::insert (const `value_type` & x) [inline]**

Inserts x into the map

**7.55.4.18 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
`key_compare` Oscl_Map< Key, T, Alloc, Compare >::key_comp () const [inline]**

Returns the key compare object used by the map

**7.55.4.19 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
`const_iterator` Oscl_Map< Key, T, Alloc, Compare >::lower_bound (const `key_type` & x) const [inline]**

Finds the first element whose key is not less than x

**7.55.4.20 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> iterator
`Oscl_Map`< Key, T, Alloc, Compare >::lower_bound (const `key_type` & x) [inline]**

Finds the first element whose key is not less than x

**7.55.4.21 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> size_type
`Oscl_Map`< Key, T, Alloc, Compare >::max_size () const [inline]**

Returns the maximum possible size of the map

**7.55.4.22 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> self&
`Oscl_Map`< Key, T, Alloc, Compare >::operator= (const `self` & x) [inline]**

Oscl_Map assignment operator

7.55.4.23]

template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> T& Oscl_Map< Key, T, Alloc, Compare >::operator[] (const `key_type` & k) [inline]

Returns a reference to the object that is associated with a particular key. If the map does not already contain such an object, operator[] inserts the default object `value_type()`.

**7.55.4.24 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> size_type
`Oscl_Map`< Key, T, Alloc, Compare >::size () const [inline]**

Returns the size of the map

**7.55.4.25 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
const_iterator Oscl_Map< Key, T, Alloc, Compare >::upper_bound (const key_type &
x) const [inline]**

Finds the first element whose key is not greater than x

**7.55.4.26 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> iterator
Oscl_Map< Key, T, Alloc, Compare >::upper_bound (const key_type & x) [inline]**

Finds the first element whose key is not greater than x

**7.55.4.27 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>>
value_compare Oscl_Map< Key, T, Alloc, Compare >::value_comp () const
[inline]**

Returns the value compare object used by the map

The documentation for this class was generated from the following file:

- [oscl_map.h](#)

7.56 Oscl_Map< Key, T, Alloc, Compare >::value_compare Class Reference

```
#include <oscl_map.h>
```

Public Methods

- bool [operator\(\)](#) (const [value_type](#) &x, const [value_type](#) &y) const

Protected Methods

- [value_compare](#) (Compare c)

Protected Attributes

- Compare [comp](#)

Friends

- class [Oscl_Map< Key, T, Alloc, Compare >](#)

```
template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> class Oscl_Map< Key,  
T, Alloc, Compare >::value_compare
```

7.56.1 Constructor & Destructor Documentation

```
7.56.1.1 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> Oscl\_Map< Key, T, Alloc, Compare >::value\_compare::value\_compare (Compare c) [inline, protected]
```

7.56.2 Member Function Documentation

```
7.56.2.1 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> bool  
Oscl\_Map< Key, T, Alloc, Compare >::value\_compare::operator\(\) (const value\_type &  
x, const value\_type &y) const [inline]
```

7.56.3 Friends And Related Function Documentation

```
7.56.3.1 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> friend class  
Oscl\_Map< Key, T, Alloc, Compare > [friend]
```

7.56.4 Field Documentation

```
7.56.4.1 template<class Key, class T, class Alloc, class Compare = Oscl_Less<Key>> Compare  
Oscl\_Map< Key, T, Alloc, Compare >::value\_compare::comp [protected]
```

The documentation for this class was generated from the following file:

- [oscl_map.h](#)

7.57 Oscl_MTLinked_List< LLClass, Alloc, TheLock > Class Template Reference

```
#include <oscl_linked_list.h>
```

Public Methods

- [Oscl_MTLinked_List \(\)](#)
- [~Oscl_MTLinked_List \(\)](#)
- int32 [dequeue_element \(LLClass &element\)](#)
- int32 [add_element \(LLClass &new_element\)](#)
- int32 [add_to_front \(LLClass &new_element\)](#)
- uint32 [get_element \(int32 index, LLClass &element\)](#)
- int32 [remove_element \(const LLClass &data_to_remove\)](#)
- int32 [get_index \(const LLClass &data\)](#)
- int32 [remove_element \(const int32 index_to_remove\)](#)
- int32 [move_to_end \(const LLClass &data_to_move\)](#)
- int32 [move_to_front \(const LLClass &data_to_move\)](#)

Protected Attributes

- [Oscl_Linked_List< LLClass, Alloc > the_list](#)

7.57.1 Detailed Description

template<class LLClass, class Alloc, class TheLock> class Oscl_MTLinked_List< LLClass, Alloc, TheLock >

Oscl_MTLinked_List is a multi-threaded version of the LinkedList. It has mutex protection to allow access by different threads.

7.57.2 Constructor & Destructor Documentation

7.57.2.1 template<class LLClass, class Alloc, class TheLock> Oscl_MTLinked_List< LLClass, Alloc, TheLock >::Oscl_MTLinked_List () [inline]

Constructor for Oscl_MTLinked_List

7.57.2.2 template<class LLClass, class Alloc, class TheLock> Oscl_MTLinked_List< LLClass, Alloc, TheLock >::~Oscl_MTLinked_List () [inline]

Destructor for Oscl_MTLinked_List

7.57.3 Member Function Documentation

7.57.3.1 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::add_element (LLClass & *new_element*) [inline]

Adds new element to the Multi Threaded Linked list.if list is already there then it adds element at end of list otherwise it create the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.57.3.2 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::add_to_front (LLClass & *new_element*) [inline]

Adds new element at the start of the Multi Threaded Linked list. if list is already exist then it adds element at start of list otherwise it create the list and add the element as first element of list.

Parameters:

new_element the element to be add in the list.

Returns:

32-bit integer on the success returns 1.

7.57.3.3 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::dequeue_element (LLClass & *element*) [inline]

7.57.3.4 template<class LLClass, class Alloc, class TheLock> uint32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::get_element (int32 *index*, LLClass & *element*) [inline]

Search and returns the element in the Multi Threaded Linked List for passed index.

Parameters:

index, element The index is the count for the node.

Returns:

32-bit integer on success returns 1 otherwise returns 0.

7.57.3.5 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::get_index (const LLClass & *data*) [inline]

Returns the index for requested element.

Parameters:

data the element for which index to be return.

Returns:

32-bit integer if data is found in the list it returns index otherwise it returns -1.

7.57.3.6 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::move_to_end (const LLClass & *data_to_move*) [inline]

Moves the element to end of the list

Parameters:

data_to_move

Returns:

On success returns 1 otherwise returns 0.

7.57.3.7 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::move_to_front (const LLClass & *data_to_move*) [inline]

Moves the element to front of the list

Parameters:

data_to_move

Returns:

On success returns 1 otherwise returns 0.

7.57.3.8 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::remove_element (const int32 *index_to_remove*) [inline]

Removes the element for requested index.

Parameters:

index_to_remove

Returns:

on success return 1 otherwise return 0.

7.57.3.9 template<class LLClass, class Alloc, class TheLock> int32 Oscl_MTLinked_List< LLClass, Alloc, TheLock >::remove_element (const LLClass & *data_to_remove*) [inline]

Removes the element from the list.

Parameters:

data_to_remove

Returns:

32-bit integer on if element fount in the list returns 1 otherwise returns 0.

7.57.4 Field Documentation

7.57.4.1 template<class LLClass, class Alloc, class TheLock> Oscl_Linked_List<LLClass, Alloc> Oscl_MTLinked_List< LLClass, Alloc, TheLock >::the_list [protected]

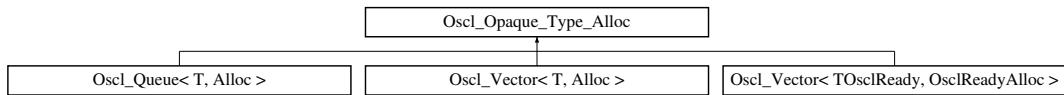
The documentation for this class was generated from the following file:

- [oscl_linked_list.h](#)

7.58 Oscl_Opaque_Type_Alloc Class Reference

```
#include <oscl_opaque_type.h>
```

Inheritance diagram for Oscl_Opaque_Type_Alloc::



Public Methods

- virtual ~Oscl_Opaque_Type_Alloc ()
- virtual void construct (OsclAny *p, const OsclAny *init_val)=0
- virtual void destroy (OsclAny *p)=0
- virtual OsclAny * allocate (const uint32 size)=0
- virtual void deallocate (OsclAny *p)=0

7.58.1 Detailed Description

This class combines opaque type operations with memory allocation operations.

7.58.2 Constructor & Destructor Documentation

7.58.2.1 virtual Oscl_Opaque_Type_Alloc::~Oscl_Opaque_Type_Alloc () [inline, virtual]

7.58.3 Member Function Documentation

7.58.3.1 virtual OsclAny* Oscl_Opaque_Type_Alloc::allocate (const uint32 size) [pure virtual]

Allocate "size" bytes

7.58.3.2 virtual void Oscl_Opaque_Type_Alloc::construct (OsclAny * p, const OsclAny * init_val) [pure virtual]

Construct element at p using element at init_val as the initial value. Both pointers must be non-NULL.

7.58.3.3 virtual void Oscl_Opaque_Type_Alloc::deallocate (OsclAny * p) [pure virtual]

Deallocate memory previously allocated with "allocate"

7.58.3.4 virtual void Oscl_Opaque_Type_Alloc::destroy (OsclAny * p) [pure virtual]

Destroy element at p.

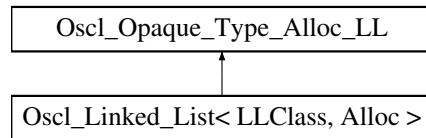
The documentation for this class was generated from the following file:

- [oscl_opaque_type.h](#)

7.59 Oscl_Opaque_Type_Alloc_LL Class Reference

```
#include <oscl_opaque_type.h>
```

Inheritance diagram for Oscl_Opaque_Type_Alloc_LL::



Public Methods

- virtual ~Oscl_Opaque_Type_Alloc_LL ()
- virtual void construct (OsclAny *p, const OsclAny *init_val)=0
- virtual void destroy (OsclAny *p)=0
- virtual OsclAny * allocate (const uint32 size)=0
- virtual void deallocate (OsclAny *p)=0
- virtual OsclAny * get_next (const OsclAny *elem) const=0
- virtual void set_next (OsclAny *elem, const OsclAny *nextelem)=0
- virtual void get_data (OsclAny *elem, OsclAny *data_val)=0
- virtual bool compare_data (const OsclAny *elem, const OsclAny *data_val) const=0

7.59.1 Detailed Description

This class combines opaque type operations with memory allocation operations and linked list support

7.59.2 Constructor & Destructor Documentation

7.59.2.1 virtual Oscl_Opaque_Type_Alloc_LL::~Oscl_Opaque_Type_Alloc_LL () [inline, virtual]

7.59.3 Member Function Documentation

7.59.3.1 virtual OsclAny* Oscl_Opaque_Type_Alloc_LL::allocate (const uint32 size) [pure virtual]

Allocate "size" bytes

7.59.3.2 virtual bool Oscl_Opaque_Type_Alloc_LL::compare_data (const OsclAny * elem, const OsclAny * data_val) const [pure virtual]

Compare data.

7.59.3.3 virtual void Oscl_Opaque_Type_Alloc_LL::construct (OsclAny * p, const OsclAny * init_val) [pure virtual]

Construct element at p using element at init_val as the initial value. Both pointers must be non-NULL.

7.59.3.4 virtual void Oscl_Opaque_Type_Alloc_LL::deallocate (OsclAny * *p*) [pure virtual]

Deallocate memory previously allocated with "allocate"

7.59.3.5 virtual void Oscl_Opaque_Type_Alloc_LL::destroy (OsclAny * *p*) [pure virtual]

Destroy element at p.

7.59.3.6 virtual void Oscl_Opaque_Type_Alloc_LL::get_data (OsclAny * *elem*, OsclAny * *data_val*) [pure virtual]

Get data

7.59.3.7 virtual OsclAny* Oscl_Opaque_Type_Alloc_LL::get_next (const OsclAny * *elem*) const [pure virtual]

Get next element in linked list.

7.59.3.8 virtual void Oscl_Opaque_Type_Alloc_LL::set_next (OsclAny * *elem*, const OsclAny * *nextelem*) [pure virtual]

Set next element in linked list.

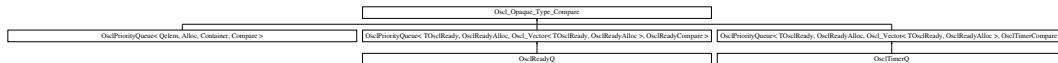
The documentation for this class was generated from the following file:

- [oscl_opaque_type.h](#)

7.60 Oscl_Opaque_Type_Compare Class Reference

```
#include <oscl_opaque_type.h>
```

Inheritance diagram for Oscl_Opaque_Type_Compare::



Public Methods

- virtual ~Oscl_Opaque_Type_Compare ()
- virtual void swap (OsclAny *a, const OsclAny *b)=0
- virtual int compare_LT (OsclAny *a, OsclAny *b) const=0
- virtual int compare_EQ (const OsclAny *a, const OsclAny *b) const=0

7.60.1 Detailed Description

Opaque type operations with swap & comparisons.

7.60.2 Constructor & Destructor Documentation

7.60.2.1 virtual Oscl_Opaque_Type_Compare::~Oscl_Opaque_Type_Compare () [inline, virtual]

7.60.3 Member Function Documentation

7.60.3.1 virtual int Oscl_Opaque_Type_Compare::compare_EQ (const OsclAny * a, const OsclAny * b) const [pure virtual]

Return a==b.

Implemented in [OsclPriorityQueue< Qelem, Alloc, Container, Compare >](#), [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >](#), and [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >](#).

7.60.3.2 virtual int Oscl_Opaque_Type_Compare::compare_LT (OsclAny * a, OsclAny * b) const [pure virtual]

Return a<b.

Implemented in [OsclPriorityQueue< Qelem, Alloc, Container, Compare >](#), [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >](#), and [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >](#).

**7.60.3.3 virtual void Oscl_Opaque_Type_Compare::swap (OsclAny * a, const OsclAny * b)
[pure virtual]**

Swap element at "a" with element at "b". Both pointers must be non-NULL.

Implemented in [OsclPriorityQueue< Qelem, Alloc, Container, Compare >](#), [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclReadyCompare >](#), and [OsclPriorityQueue< TOsclReady, OsclReadyAlloc, Oscl_Vector< TOsclReady, OsclReadyAlloc >, OsclTimerCompare >](#).

The documentation for this class was generated from the following file:

- [oscl_opaque_type.h](#)

7.61 Oscl_Pair< T1, T2 > Struct Template Reference

```
#include <oscl_tree.h>
```

Public Methods

- [Oscl_Pair \(\)](#)
- [Oscl_Pair \(const T1 &a, const T2 &b\)](#)

Data Fields

- [T1 first](#)
- [T2 second](#)

```
template<class T1, class T2> struct Oscl_Pair< T1, T2 >
```

7.61.1 Constructor & Destructor Documentation

7.61.1.1 template<class T1, class T2> Oscl_Pair< T1, T2 >::Oscl_Pair () [inline]

7.61.1.2 template<class T1, class T2> Oscl_Pair< T1, T2 >::Oscl_Pair (const T1 & a, const T2 & b) [inline]

7.61.2 Field Documentation

7.61.2.1 template<class T1, class T2> T1 Oscl_Pair< T1, T2 >::first

7.61.2.2 template<class T1, class T2> T2 Oscl_Pair< T1, T2 >::second

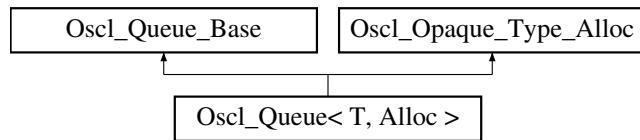
The documentation for this struct was generated from the following file:

- [oscl_tree.h](#)

7.62 Oscl_Queue< T, Alloc > Class Template Reference

```
#include <oscl_queue.h>
```

Inheritance diagram for Oscl_Queue< T, Alloc >::



Public Types

- typedef T [value_type](#)
- typedef T * [pointer](#)
- typedef T & [reference](#)
- typedef const T & [const_reference](#)
- typedef uint32 [size_type](#)

Public Methods

- [Oscl_Queue \(\)](#)
- [Oscl_Queue \(uint32 n\)](#)
- virtual [~Oscl_Queue \(\)](#)
- void [push \(const T &x\)](#)
- [reference front \(\)](#)
- [const_reference front \(\) const](#)
- void [pop \(\)](#)
- [reference back \(\)](#)
- [const_reference back \(\) const](#)
- void [clear \(\)](#)

7.62.1 Detailed Description

template<class T, class Alloc> class Oscl_Queue< T, Alloc >

Oscl_Queue Class. A subset of STL::Queue methods. Oscl_Queue supports constant time insertion (at the end) and removal of elements at the front of the queue. It does not support insertion or removal of elements at the other ends or middle of the queue, nor random access to elements. * No iteration capability is [currently] supplied. * No assignment or copy capability is [currently] supplied. The number of elements in a queue can vary dynamically, and memory management is performed automatically.

7.62.2 Member Typedef Documentation

- 7.62.2.1 **template<class T, class Alloc> typedef const T& Oscl_Queue< T, Alloc >::const_reference**
- 7.62.2.2 **template<class T, class Alloc> typedef T* Oscl_Queue< T, Alloc >::pointer**
- 7.62.2.3 **template<class T, class Alloc> typedef T& Oscl_Queue< T, Alloc >::reference**
- 7.62.2.4 **template<class T, class Alloc> typedef uint32 Oscl_Queue< T, Alloc >::size_type**
- 7.62.2.5 **template<class T, class Alloc> typedef T Oscl_Queue< T, Alloc >::value_type**

7.62.3 Constructor & Destructor Documentation

- 7.62.3.1 **template<class T, class Alloc> Oscl_Queue< T, Alloc >::Oscl_Queue () [inline]**

Creates an empty queue.

- 7.62.3.2 **template<class T, class Alloc> Oscl_Queue< T, Alloc >::Oscl_Queue (uint32 n) [inline]**

Creates an empty queue with capacity n.

Parameters:

n creates a queue with n elements. The main reason for specifying n is efficiency. If you know the capacity to which your queue must grow, then it is more efficient to allocate the queue all at once rather than rely on the automatic reallocation scheme.

- 7.62.3.3 **template<class T, class Alloc> virtual Oscl_Queue< T, Alloc >::~Oscl_Queue () [inline, virtual]**

The destructor.

7.62.4 Member Function Documentation

- 7.62.4.1 **template<class T, class Alloc> const_reference Oscl_Queue< T, Alloc >::back () const [inline]**

Returns the last element (const)

- 7.62.4.2 **template<class T, class Alloc> reference Oscl_Queue< T, Alloc >::back () [inline]**

Returns the last element: "back" (generally not too useful, but some debugging aids might want to find out what was just added)

- 7.62.4.3 **template<class T, class Alloc> void Oscl_Queue< T, Alloc >::clear () [inline]**

Removes all elements.

Reimplemented from [Oscl_Queue_Base](#).

7.62.4.4 template<class T, class Alloc> const_reference Oscl_Queue< T, Alloc >::front () const [inline]

Returns the first element (const)

7.62.4.5 template<class T, class Alloc> reference Oscl_Queue< T, Alloc >::front () [inline]

Returns the first element.

Reimplemented from [Oscl_Queue_Base](#).

7.62.4.6 template<class T, class Alloc> void Oscl_Queue< T, Alloc >::pop () [inline]

Removes the first element

Reimplemented from [Oscl_Queue_Base](#).

7.62.4.7 template<class T, class Alloc> void Oscl_Queue< T, Alloc >::push (const T & x) [inline]

Inserts a new element at the end. Queue will be grown if necessary. If allocation fails, an OSCL_LEAVE will occur

Parameters:

x new element

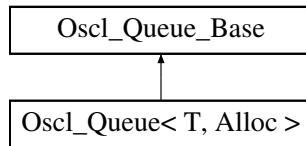
The documentation for this class was generated from the following file:

- [oscl_queue.h](#)

7.63 Oscl_Queue_Base Class Reference

```
#include <oscl_queue.h>
```

Inheritance diagram for Oscl_Queue_Base::



Public Methods

- uint32 `size () const`
- uint32 `capacity () const`
- bool `empty () const`
- OSCL_IMPORT_REF void `reserve (uint32 n)`

Protected Methods

- OSCL_IMPORT_REF void `construct (Oscl_Opaque_Type_Alloc *aType)`
- OSCL_IMPORT_REF void `construct (Oscl_Opaque_Type_Alloc *aType, uint32 n)`
- virtual `~Oscl_Queue_Base ()`
- OSCL_IMPORT_REF void `destroy ()`
- OSCL_IMPORT_REF void `push (const OsclAny *x)`
- OSCL_IMPORT_REF void `pop ()`
- OSCL_IMPORT_REF void `clear ()`

Protected Attributes

- uint32 `numelems`
- uint32 `bufsize`
- `OsclAny * elems`
- uint32 `sizeof_T`
- uint32 `ifront`
- uint32 `irear`

7.63.1 Detailed Description

`Oscl_Queue_Base` is a non-templatized base class for [Oscl_Queue](#). The purpose of this base class is to avoid large inline routines in the [Oscl_Queue](#) implementation. This class is not intended for direct instantiation except by [Oscl_Queue](#).

7.63.2 Constructor & Destructor Documentation

7.63.2.1 virtual Oscl_Queue_Base::~Oscl_Queue_Base () [inline, protected, virtual]

The destructor.

7.63.3 Member Function Documentation

7.63.3.1 **uint32 Oscl_Queue_Base::capacity () const [inline]**

Returns the allocated memory of the queue.

7.63.3.2 **OSCL_IMPORT_REF void Oscl_Queue_Base::clear () [protected]**

Removes all elements.

Reimplemented in [Oscl_Queue< T, Alloc >](#).

7.63.3.3 **OSCL_IMPORT_REF void Oscl_Queue_Base::construct (Oscl_Opaque_Type_Alloc * aType, uint32 n) [protected]**

7.63.3.4 **OSCL_IMPORT_REF void Oscl_Queue_Base::construct (Oscl_Opaque_Type_Alloc * aType) [protected]**

7.63.3.5 **OSCL_IMPORT_REF void Oscl_Queue_Base::destroy () [protected]**

Like an explicit destructor call.

7.63.3.6 **bool Oscl_Queue_Base::empty () const [inline]**

True if there are no elements in the queue

7.63.3.7 **OSCL_IMPORT_REF void Oscl_Queue_Base::pop () [protected]**

Removes the first element

Reimplemented in [Oscl_Queue< T, Alloc >](#).

7.63.3.8 **OSCL_IMPORT_REF void Oscl_Queue_Base::push (const OsclAny * x) [protected]**

Inserts a new element at the end. Queue will be grown if necessary. If allocation fails, an OSCL_LEAVE will occur

Parameters:

x new element

7.63.3.9 **OSCL_IMPORT_REF void Oscl_Queue_Base::reserve (uint32 n)**

Reallocates memory if necessary to a capacity of *n* elements. The main reason for reserve is efficiency. If you know the capacity to which your vector must grow, then it is more efficient to allocate the vector all at once rather than rely on the automatic reallocation scheme. This also helps control the invalidation of iterators.

Parameters:

n size of vector

7.63.3.10 uint32 Oscl_Queue_Base::size () const [inline]

Returns the size of the queue.

7.63.4 Field Documentation

7.63.4.1 uint32 Oscl_Queue_Base::bufsize [protected]**7.63.4.2 OsclAny* Oscl_Queue_Base::elems [protected]****7.63.4.3 uint32 Oscl_Queue_Base::ifront [protected]****7.63.4.4 uint32 Oscl_Queue_Base::irear [protected]****7.63.4.5 uint32 Oscl_Queue_Base::numelems [protected]****7.63.4.6 uint32 Oscl_Queue_Base::sizeof_T [protected]**

The documentation for this class was generated from the following file:

- [oscl_queue.h](#)

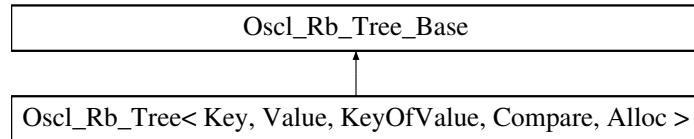


7.64 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference

7.64 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::



Public Types

- typedef Key `key_type`
- typedef Value `value_type`
- typedef `value_type * pointer`
- typedef `const value_type * const_pointer`
- typedef `value_type & reference`
- typedef `const value_type & const_reference`
- typedef `Oscl_Rb_Tree_Node< Value >::link_type link_type`
- typedef `Oscl_Rb_Tree_Iterator< value_type > iterator`
- typedef `Oscl_Rb_Tree_Const_Iterator< value_type > const_iterator`
- typedef uint32 `size_type`
- typedef int32 `difference_type`

Public Methods

- `Oscl_Rb_Tree (const Compare &comp=Compare())`
- `Oscl_Rb_Tree (const Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > &x)`
- `~Oscl_Rb_Tree ()`
- `Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > & operator= (const Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > &x)`
- `iterator begin ()`
- `const_iterator begin () const`
- `iterator end ()`
- `const_iterator end () const`
- `bool empty () const`
- `size_type size () const`
- `size_type max_size () const`
- `Oscl_Pair< iterator, bool > insert_unique (const value_type &v)`
- `iterator insert_unique (iterator position, const value_type &v)`
- `void insert_unique (const iterator first, const iterator last)`
- `void insert_unique (const value_type *first, const value_type *last)`
- `void erase (iterator position)`
- `size_type erase (const key_type &x)`
- `void erase (iterator first, iterator last)`
- `void erase (const key_type *first, const key_type *last)`



7.64 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference

- void [clear \(\)](#)
- [iterator find \(const Key &k\)](#)
- [const_iterator find \(const Key &k\) const](#)
- [size_type count \(const Key &k\) const](#)
- [iterator lower_bound \(const Key &k\)](#)
- [const_iterator lower_bound \(const Key &k\) const](#)
- [iterator upper_bound \(const Key &k\)](#)
- [const_iterator upper_bound \(const Key &k\) const](#)
- [Oscl_Pair< iterator, iterator > equal_range \(const Key &k\)](#)
- [Oscl_Pair< const_iterator, const_iterator > equal_range \(const Key &k\) const](#)



7.64 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference

template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> class Oscl_Rb_-Tree< Key, Value, KeyOfValue, Compare, Alloc >

7.64.1 Member Typedef Documentation

7.64.1.1 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Oscl_Rb_Tree_Const_Iterator<value_type> Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::const_iterator

7.64.1.2 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef const value_type* Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::const_pointer

7.64.1.3 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef const value_type& Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::const_reference

7.64.1.4 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef int32 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::difference_type

7.64.1.5 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Oscl_Rb_Tree_Iterator<value_type> Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::iterator

7.64.1.6 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Key Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::key_type

7.64.1.7 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Oscl_Rb_Tree_Node<Value>::link_type Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::link_type

7.64.1.8 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef value_type* Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::pointer

7.64.1.9 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef value_type& Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::reference

7.64.1.10 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef uint32 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::size_type

7.64.1.11 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> typedef Value Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::value_type

7.64.2 Constructor & Destructor Documentation

7.64.2.1 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::Oscl_Rb_Tree (const Compare & comp = Compare()) [inline]

7.64.2.2 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::Oscl_Rb_Tree (const Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > & x) [inline]

7.64.2.3 template<class Key, class Value, class KeyOfValue, class Compare, class Alloc> Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc >::~Oscl_Rb_Tree ()



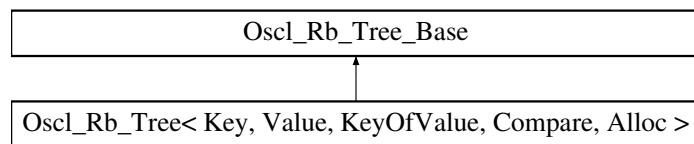
7.64 Oscl_Rb_Tree< Key, Value, KeyOfValue, Compare, Alloc > Class Template Reference

- [oscl_tree.h](#)

7.65 Oscl_Rb_Tree_Base Class Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl_Rb_Tree_Base::



Public Types

- `typedef Oscl_Rb_Tree_Node_Base::base_link_type base_link_type`

Public Methods

- `OSCL_IMPORT_REF void rotate_left (base_link_type x, base_link_type &root)`
- `OSCL_IMPORT_REF void rotate_right (base_link_type x, base_link_type &root)`
- `OSCL_IMPORT_REF void rebalance (base_link_type x, base_link_type &root)`
- `OSCL_IMPORT_REF base_link_type rebalance_for_erase (base_link_type z, base_link_type &root, base_link_type &leftmost, base_link_type &rightmost)`

7.65.1 Member Typedef Documentation

7.65.1.1 `typedef Oscl_Rb_Tree_Node_Base::base_link_type Oscl_Rb_Tree_Base::base_link_type`

7.65.2 Member Function Documentation

7.65.2.1 `OSCL_IMPORT_REF void Oscl_Rb_Tree_Base::rebalance (base_link_type x, base_link_type &root)`

7.65.2.2 `OSCL_IMPORT_REF base_link_type Oscl_Rb_Tree_Base::rebalance_for_erase (base_link_type z, base_link_type &root, base_link_type &leftmost, base_link_type &rightmost)`

7.65.2.3 `OSCL_IMPORT_REF void Oscl_Rb_Tree_Base::rotate_left (base_link_type x, base_link_type &root)`

7.65.2.4 `OSCL_IMPORT_REF void Oscl_Rb_Tree_Base::rotate_right (base_link_type x, base_link_type &root)`

The documentation for this class was generated from the following file:

- `oscl_tree.h`

7.66 Oscl_Rb_Tree_Const_Iterator< Value > Struct Template Reference

```
#include <oscl_tree.h>
```

Public Types

- `typedef Value value_type`
- `typedef const value_type & reference`
- `typedef const value_type * pointer`
- `typedef Oscl_Rb_Tree_Const_Iterator< Value > const_iterator`
- `typedef Oscl_Rb_Tree_Const_Iterator< Value > self`
- `typedef Oscl_Rb_Tree_Node_Base * base_link_type`
- `typedef Oscl_Rb_Tree_Node< Value > * link_type`

Public Methods

- `Oscl_Rb_Tree_Const_Iterator()`
- `Oscl_Rb_Tree_Const_Iterator(link_type x)`
- `Oscl_Rb_Tree_Const_Iterator(const const_iterator &it)`
- `reference operator * () const`
- `pointer operator → () const`
- `bool operator==(const self &x)`
- `bool operator!=(const self &x)`
- `self & operator++()`
- `self operator++(int)`
- `self & operator--()`
- `self operator--(int)`

Data Fields

- `base_link_type node`

template<class Value> struct Oscl_Rb_Tree_Const_Iterator< Value >

7.66.1 Member Typedef Documentation

- 7.66.1.1 template<class Value> typedef Oscl_Rb_Tree_Node_Base* Oscl_Rb_Tree_Const_Iterator< Value >::base_link_type
- 7.66.1.2 template<class Value> typedef Oscl_Rb_Tree_Const_Iterator<Value> Oscl_Rb_Tree_Const_Iterator< Value >::const_iterator
- 7.66.1.3 template<class Value> typedef Oscl_Rb_Tree_Node<Value>* Oscl_Rb_Tree_Const_Iterator< Value >::link_type
- 7.66.1.4 template<class Value> typedef const value_type* Oscl_Rb_Tree_Const_Iterator< Value >::pointer
- 7.66.1.5 template<class Value> typedef const value_type& Oscl_Rb_Tree_Const_Iterator< Value >::reference
- 7.66.1.6 template<class Value> typedef Oscl_Rb_Tree_Const_Iterator<Value> Oscl_Rb_Tree_Const_Iterator< Value >::self
- 7.66.1.7 template<class Value> typedef Value Oscl_Rb_Tree_Const_Iterator< Value >::value_type

7.66.2 Constructor & Destructor Documentation

- 7.66.2.1 template<class Value> Oscl_Rb_Tree_Const_Iterator< Value >::Oscl_Rb_Tree_Const_Iterator () [inline]
- 7.66.2.2 template<class Value> Oscl_Rb_Tree_Const_Iterator< Value >::Oscl_Rb_Tree_Const_Iterator ([link_type](#) x) [inline]
- 7.66.2.3 template<class Value> Oscl_Rb_Tree_Const_Iterator< Value >::Oscl_Rb_Tree_Const_Iterator (const [const_iterator](#) & it) [inline]

7.66.3 Member Function Documentation

- 7.66.3.1 template<class Value> [reference](#) Oscl_Rb_Tree_Const_Iterator< Value >::operator * () const [inline]
- 7.66.3.2 template<class Value> bool Oscl_Rb_Tree_Const_Iterator< Value >::operator!= (const [self](#) & x) [inline]
- 7.66.3.3 template<class Value> [self](#) Oscl_Rb_Tree_Const_Iterator< Value >::operator++ (int) [inline]
- 7.66.3.4 template<class Value> [self&](#) Oscl_Rb_Tree_Const_Iterator< Value >::operator++ () [inline]
- 7.66.3.5 template<class Value> [self](#) Oscl_Rb_Tree_Const_Iterator< Value >::operator- (int) [inline]
- 7.66.3.6 template<class Value> [self&](#) Oscl_Rb_Tree_Const_Iterator< Value >::operator- () [inline]

-
- [oscl_tree.h](#)

7.67 Oscl_Rb_Tree_Iterator< Value > Struct Template Reference

```
#include <oscl_tree.h>
```

Public Types

- `typedef Value value_type`
- `typedef value_type & reference`
- `typedef value_type * pointer`
- `typedef Oscl_Rb_Tree_Iterator< Value > iterator`
- `typedef Oscl_Rb_Tree_Iterator< Value > self`
- `typedef Oscl_Rb_Tree_Node_Base * base_link_type`
- `typedef Oscl_Rb_Tree_Node< Value > * link_type`

Public Methods

- `Oscl_Rb_Tree_Iterator ()`
- `Oscl_Rb_Tree_Iterator (link_type x)`
- `Oscl_Rb_Tree_Iterator (const iterator &it)`
- `reference operator * () const`
- `pointer operator → () const`
- `bool operator== (const self &x)`
- `bool operator!= (const self &x)`
- `self & operator++ ()`
- `self operator++ (int)`
- `self & operator– ()`
- `self operator– (int)`

Data Fields

- `base_link_type node`

```
template<class Value> struct Oscl_Rb_Tree_Iterator< Value >
```

7.67.1 Member Typedef Documentation

- 7.67.1.1 template<class Value> typedef Oscl_Rb_Tree_Node_Base* Oscl_Rb_Tree_Iterator< Value >::base_link_type
- 7.67.1.2 template<class Value> typedef Oscl_Rb_Tree_Iterator<Value> Oscl_Rb_Tree_Iterator< Value >::iterator
- 7.67.1.3 template<class Value> typedef Oscl_Rb_Tree_Node<Value>* Oscl_Rb_Tree_Iterator< Value >::link_type
- 7.67.1.4 template<class Value> typedef value_type* Oscl_Rb_Tree_Iterator< Value >::pointer
- 7.67.1.5 template<class Value> typedef value_type& Oscl_Rb_Tree_Iterator< Value >::reference
- 7.67.1.6 template<class Value> typedef Oscl_Rb_Tree_Iterator<Value> Oscl_Rb_Tree_Iterator< Value >::self
- 7.67.1.7 template<class Value> typedef Value Oscl_Rb_Tree_Iterator< Value >::value_type

7.67.2 Constructor & Destructor Documentation

- 7.67.2.1 template<class Value> Oscl_Rb_Tree_Iterator< Value >::Oscl_Rb_Tree_Iterator () [inline]
- 7.67.2.2 template<class Value> Oscl_Rb_Tree_Iterator< Value >::Oscl_Rb_Tree_Iterator (link_type x) [inline]
- 7.67.2.3 template<class Value> Oscl_Rb_Tree_Iterator< Value >::Oscl_Rb_Tree_Iterator (const iterator & it) [inline]

7.67.3 Member Function Documentation

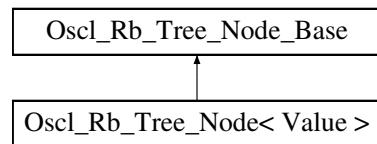
- 7.67.3.1 template<class Value> reference Oscl_Rb_Tree_Iterator< Value >::operator * () const [inline]
- 7.67.3.2 template<class Value> bool Oscl_Rb_Tree_Iterator< Value >::operator!= (const self & x) [inline]
- 7.67.3.3 template<class Value> self Oscl_Rb_Tree_Iterator< Value >::operator++ (int) [inline]
- 7.67.3.4 template<class Value> self& Oscl_Rb_Tree_Iterator< Value >::operator++ () [inline]
- 7.67.3.5 template<class Value> self Oscl_Rb_Tree_Iterator< Value >::operator- (int) [inline]
- 7.67.3.6 template<class Value> self& Oscl_Rb_Tree_Iterator< Value >::operator- () [inline]
- 7.67.3.7 template<class Value> pointer Oscl_Rb_Tree_Iterator< Value >::operator -> () const [inline]

- [oscl_tree.h](#)

7.68 Oscl_Rb_Tree_Node< Value > Struct Template Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl_Rb_Tree_Node< Value >::



Public Types

- [typedef Value value_type](#)
- [typedef Oscl_Rb_Tree_Node< Value > * link_type](#)

Data Fields

- [value_type value](#)

```
template<class Value> struct Oscl_Rb_Tree_Node< Value >
```

7.68.1 Member Typedef Documentation

7.68.1.1 template<class Value> typedef Oscl_Rb_Tree_Node<Value>* Oscl_Rb_Tree_Node< Value >::link_type

7.68.1.2 template<class Value> typedef Value Oscl_Rb_Tree_Node< Value >::value_type

7.68.2 Field Documentation

7.68.2.1 template<class Value> [value_type](#) Oscl_Rb_Tree_Node< Value >::value

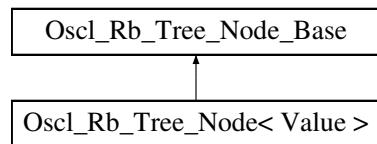
The documentation for this struct was generated from the following file:

- [oscl_tree.h](#)

7.69 Oscl_Rb_Tree_Node_Base Struct Reference

```
#include <oscl_tree.h>
```

Inheritance diagram for Oscl_Rb_Tree_Node_Base::



Public Types

- `typedef Oscl_Rb_Tree_Node_Base * base_link_type`
- `typedef enum Oscl_Rb_Tree_Node_Base::RedBl color_type`
- `enum RedBl { red, black }`

Static Public Methods

- `base_link_type minimum (base_link_type x)`
- `base_link_type maximum (base_link_type x)`

Data Fields

- `color_type color`
- `base_link_type parent`
- `base_link_type left`
- `base_link_type right`

7.69.1 Member Typedef Documentation

7.69.1.1 `typedef Oscl_Rb_Tree_Node_Base* Oscl_Rb_Tree_Node_Base::base_link_type`

7.69.1.2 `typedef enum Oscl_Rb_Tree_Node_Base::RedBl Oscl_Rb_Tree_Node_Base::color_type`

7.69.2 Member Enumeration Documentation

7.69.2.1 `enum Oscl_Rb_Tree_Node_Base::RedBl`

Enumeration values:

`red`

`black`

7.69.3 Member Function Documentation

7.69.3.1 **base_link_type** Oscl_Rb_Tree_Node_Base::maximum (**base_link_type** *x*) [inline, static]

7.69.3.2 **base_link_type** Oscl_Rb_Tree_Node_Base::minimum (**base_link_type** *x*) [inline, static]

7.69.4 Field Documentation

7.69.4.1 **color_type** Oscl_Rb_Tree_Node_Base::color

7.69.4.2 **base_link_type** Oscl_Rb_Tree_Node_Base::left

7.69.4.3 **base_link_type** Oscl_Rb_Tree_Node_Base::parent

7.69.4.4 **base_link_type** Oscl_Rb_Tree_Node_Base::right

The documentation for this struct was generated from the following file:

- [oscl_tree.h](#)

7.70 Oscl_Select1st< V, U > Struct Template Reference

```
#include <oscl_map.h>
```

Public Methods

- const U & [operator\(\)](#) (const V &x) const

```
template<class V, class U> struct Oscl_Select1st< V, U >
```

7.70.1 Member Function Documentation

**7.70.1.1 template<class V, class U> const U& Oscl_Select1st< V, U >::operator() (const V & x)
const [inline]**

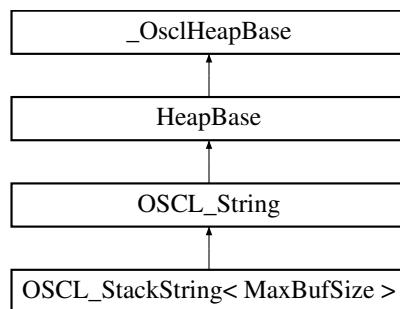
The documentation for this struct was generated from the following file:

- [oscl_map.h](#)

7.71 OSCL_StackString< MaxBufSize > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_StackString< MaxBufSize >::



Public Types

- `typedef OSCL_String::chartype chartype`
- `typedef TOSCL_StringOp optype`
- `typedef OSCL_wString::chartype other_chartype`

Public Methods

- `OSCL_StackString()`
- `OSCL_StackString(const OSCL_StackString &src)`
- `OSCL_StackString(const OSCL_String &src)`
- `OSCL_StackString(const chartype *cstr)`
- `OSCL_StackString(const chartype *buf, uint32 length)`
- `~OSCL_StackString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_StackString & operator=(const OSCL_StackString &src)`
- `OSCL_StackString & operator=(const OSCL_String &src)`
- `OSCL_StackString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, optype op)`
- `void set(const other_chartype *buf, uint32 length, optype op)`

Friends

- `class OSCL_String`

7.71.1 Detailed Description

template<uint32 MaxBufSize> class OSCL_StackString< MaxBufSize >

OSCL_StackString is a simple string class, compatible with regular character array strings.

The string array is fixed length, is allocated from the stack, and is modifiable. Operations that update the string will automatically truncate it to fit the fixed size storage. This is recommended for use for short strings (<255). Use [OSCL_HeapString](#) for very large strings to avoid stack overflow.

Parameters:

C: type of character.

MaxBufSize: maximum string length not including null terminator.

7.71.2 Member Typedef Documentation

7.71.2.1 template<uint32 MaxBufSize> typedef OSCL_String::chartype OSCL_StackString< MaxBufSize >::chartype

Reimplemented from [OSCL_String](#).

7.71.2.2 template<uint32 MaxBufSize> typedef TOSCL_StringOp OSCL_StackString< MaxBufSize >::optype

7.71.2.3 template<uint32 MaxBufSize> typedef OSCL_wString::chartype OSCL_StackString< MaxBufSize >::other_chartype

7.71.3 Friends And Related Function Documentation

7.71.3.1 template<uint32 MaxBufSize> friend class OSCL_String [friend]

The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.72 oscl_stat_buf Struct Reference

```
#include <oscl_file_dir_utils.h>
```

Data Fields

- uint32 [mode](#)
- uint32 [perms](#)

7.72.1 Field Documentation

7.72.1.1 uint32 oscl_stat_buf::mode

7.72.1.2 uint32 oscl_stat_buf::perms

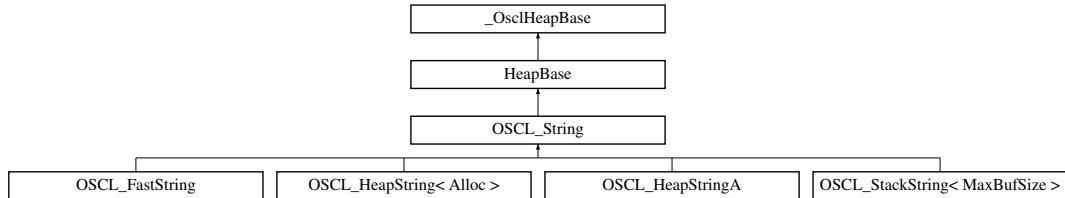
The documentation for this struct was generated from the following file:

- [oscl_file_dir_utils.h](#)

7.73 OSCL_String Class Reference

```
#include <oscl_string.h>
```

Inheritance diagram for OSCL_String::



Public Types

- `typedef char chartype`

Public Methods

- `virtual uint32 get_size () const=0`
- `virtual uint32 get_maxsize () const=0`
- `virtual const chartype * get_cstr () const=0`
- `virtual bool is_writable () const`
- `virtual chartype * get_str () const=0`
- `OSCL_String & operator=(const OSCL_String &src)`
- `OSCL_String & operator=(const chartype *cstr)`
- `OSCL_String & operator+=(const OSCL_String &src)`
- `OSCL_String & operator+=(const chartype *cstr)`
- `OSCL_String & operator+=(const chartype c)`
- `bool operator==(const OSCL_String &src) const`
- `bool operator!=(const OSCL_String &src) const`
- `bool operator< (const OSCL_String &src) const`
- `bool operator<= (const OSCL_String &src) const`
- `bool operator> (const OSCL_String &src) const`
- `bool operator>= (const OSCL_String &src) const`
- `bool operator==(const chartype *cstr) const`
- `chartype operator[] (uint32 index) const`
- `virtual chartype read (uint32 index) const`
- `virtual uint32 setrep_to_char (const oscl_wchar *src, uint32 len, TOSCL_StringOp op, Oscl_DefAlloc *aAlloc)`
- `virtual int8 hash () const`
- `virtual void write (uint32 index, chartype c)`
- `virtual void write (uint32 offset, uint32 length, const chartype *buf)`

Protected Methods

- [OSCL_String \(\)](#)
- [virtual ~OSCL_String \(\)](#)
- [virtual void set_rep \(const chartype *cstr\)=0](#)
- [virtual void append_rep \(const chartype *cstr\)=0](#)
- [virtual void set_rep \(const OSCL_String &src\)=0](#)
- [virtual void append_rep \(const OSCL_String &src\)=0](#)
- [virtual void set_len \(uint32 len\)=0](#)

7.73.1 Detailed Description

A common base class for string classes with "char" character format

7.73.2 Member Typedef Documentation

7.73.2.1 `typedef char OSCL_String::chartype`

Reimplemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), [OSCL_FastString](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.3 Constructor & Destructor Documentation

7.73.3.1 `OSCL_String::OSCL_String () [protected]`

7.73.3.2 `virtual OSCL_String::~OSCL_String () [protected, virtual]`

7.73.4 Member Function Documentation

7.73.4.1 `virtual void OSCL_String::append_rep (const OSCL_String & src) [protected, pure virtual]`

Append the input string to the current string. The string may be truncated to fit the available storage.

7.73.4.2 `virtual void OSCL_String::append_rep (const chartype * cstr) [protected, pure virtual]`

Append the input null-terminated string to the current string. The string may be truncated to fit the available storage.

7.73.4.3 `virtual const chartype* OSCL_String::get_cstr () [pure virtual]`

This function returns the C-style string for read access.

Implemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), [OSCL_FastString](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.4.4 virtual uint32 OSCL_String::get_maxsize () [pure virtual]

This function returns the maximum available storage size, not including null terminator. The maximum size may be larger than the current string size.

Implemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), [OSCL_FastString](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.4.5 virtual uint32 OSCL_String::get_size () [pure virtual]

This function returns the string size not including the null-terminator.

Implemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), [OSCL_FastString](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.4.6 virtual chartype* OSCL_String::get_str () [pure virtual]

This function returns the C-style string for write access. If the string is not writable it returns NULL.

Implemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), [OSCL_FastString](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.4.7 virtual int8 OSCL_String::hash () [virtual]

This function performs a hash operation on the string. If the string is not writable, the function leaves.

7.73.4.8 virtual bool OSCL_String::is_writable () [virtual]

This function returns true if the string is writable.

7.73.4.9 bool OSCL_String::operator!= (const OSCL_String & src) const**7.73.4.10 OSCL_String& OSCL_String::operator+= (const chartype c)**

Append operator. This operator appends the input character to this object. The string may be truncated to fit available storage.

7.73.4.11 OSCL_String& OSCL_String::operator+= (const chartype * cstr)

Append operator. This operator appends the input string to this object. The string may be truncated to fit available storage.

am: null-terminated string

7.73.4.12 OSCL_String& OSCL_String::operator+= (const OSCL_String & src)

Append operator. This operator appends the input string to this object. The string may be truncated to fit available storage.

7.73.4.13 bool OSCL_String::operator< (const OSCL_String & src) const

7.73.4.14 bool OSCL_String::operator<= (const OSCL_String & src) const

7.73.4.15 OSCL_String& OSCL_String::operator= (const chartype * cstr)

Assignment operator

am: null-terminated string

Reimplemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), [OSCL_FastString](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.4.16 OSCL_String& OSCL_String::operator= (const OSCL_String & src)

Assignment operator

Reimplemented in [OSCL_HeapString< Alloc >](#), [OSCL_HeapStringA](#), [OSCL_StackString< MaxBufSize >](#), and [OSCL_HeapString< OsclMemAllocator >](#).

7.73.4.17 bool OSCL_String::operator== (const chartype * cstr) const

Comparison operator

am: null-terminated string

7.73.4.18 bool OSCL_String::operator== (const OSCL_String & src) const

Comparison operators

7.73.4.19 bool OSCL_String::operator> (const OSCL_String & src) const

7.73.4.20 bool OSCL_String::operator>= (const OSCL_String & src) const

7.73.4.21]

chartype OSCL_String::operator[] (uint32 index) const

This is subscript notation to access a character at the given position. If the index is outside the current size range then the function leaves.

7.73.4.22 virtual chartype OSCL_String::read (uint32 index) const [virtual]

This function returns the character at the given position. If the index is outside the current size range then the function leaves.

7.73.4.23 virtual void OSCL_String::set_len (uint32 len) [protected, pure virtual]

Update the length of the string. This function will only be called when the string is writable.

7.73.4.24 virtual void OSCL_String::set_rep (const OSCL_String & src) [protected, pure virtual]

Set string representation to input string.

7.73.4.25 virtual void OSCL_String::set_rep (const chartype * cstr) [protected, pure virtual]

Set string representation to input null-terminated string.

7.73.4.26 virtual uint32 OSCL_String::setrep_to_char (const oscl_wchar * src, uint32 len, TOSCL_StringOp op, Oscl_DefAlloc * aAlloc) [virtual]

This function allocates a temp storage for performing one of the following operations based on TOSCL_-StringOp

- compress src string from oscl_wchar to utf8.
- convert src string from oscl_wchar to utf8. call parent [set_rep\(\)](#) to copy resulting string.

Parameters:

src: reference input string

len: length of string to operate on

op: type operation mentioned above

aAlloc: optional, memory allocator if available

Returns:

length of compressed or converted string exclude terminated '\0'.

7.73.4.27 virtual void OSCL_String::write (uint32 offset, uint32 length, const chartype * buf) [virtual]

This function replaces characters at the specified offset within the current string. If the string is not writable, the function leaves. The characters may be truncated to fit the current storage.

Parameters:

offset: the offset into the existing string buffer

length: number of characters to copy.

ptr: character buffer, not necessarily null-terminated.

7.73.4.28 virtual void OSCL_String::write (uint32 index, chartype c) [virtual]

This function stores a character at the specified position. If the string is not writable, the function leaves. If the index is outside the current size range then the function leaves.

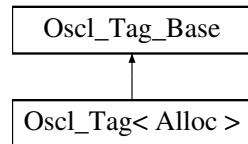
The documentation for this class was generated from the following file:

- [oscl_string.h](#)

7.74 Oscl_Tag< Alloc > Struct Template Reference

```
#include <oscl_tagtree.h>
```

Inheritance diagram for Oscl_Tag< Alloc >::



Public Methods

- [Oscl_Tag](#) (const Oscl_Tag< Alloc > &t)
- [Oscl_Tag](#) (const [tag_base_type](#) &t)
- [~Oscl_Tag](#) ()
- bool [operator<](#) (const Oscl_Tag< Alloc > &x) const

Data Fields

- [Oscl_TAlloc< tag_base_unit, Alloc > tagAllocator](#)
- [tag_base_type tag](#)

```
template<class Alloc> struct Oscl_Tag< Alloc >
```

7.74.1 Constructor & Destructor Documentation

7.74.1.1 template<class Alloc> Oscl_Tag< Alloc >::Oscl_Tag (const Oscl_Tag< Alloc > & t)
`[inline]`

7.74.1.2 template<class Alloc> Oscl_Tag< Alloc >::Oscl_Tag (const tag_base_type & t)
`[inline]`

7.74.1.3 template<class Alloc> Oscl_Tag< Alloc >::~Oscl_Tag () `[inline]`

7.74.2 Member Function Documentation

7.74.2.1 template<class Alloc> bool Oscl_Tag< Alloc >::operator< (const Oscl_Tag< Alloc > & x) const `[inline]`

7.74.3 Field Documentation

7.74.3.1 template<class Alloc> tag_base_type Oscl_Tag< Alloc >::tag

7.74.3.2 template<class Alloc> Oscl_TAlloc<tag_base_unit, Alloc> Oscl_Tag< Alloc >::tagAllocator

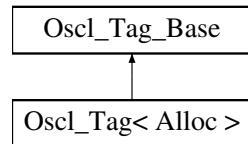
The documentation for this struct was generated from the following file:

- [oscl_tagtree.h](#)

7.75 Oscl_Tag_Base Struct Reference

```
#include <oscl_tagtree.h>
```

Inheritance diagram for Oscl_Tag_Base::



Public Types

- `typedef char tag_base_unit`
- `typedef tag_base_unit * tag_base_type`
- `typedef uint32 size_type`

Public Methods

- `bool operator() (const tag_base_type &x, const tag_base_type &y) const`
- `size_type tag_len (const tag_base_type &t) const`
- `tag_base_type tag_copy (tag_base_type &dest, const tag_base_type &src) const`
- `int32 tag_cmp (const tag_base_type &x, const tag_base_type &y) const`
- `OSCL_IMPORT_REF tag_base_type tag_ancestor (tag_base_type &dest, const tag_base_type &src) const`
- `OSCL_IMPORT_REF size_type tag_depth (const tag_base_type &t) const`

7.75.1 Member Typedef Documentation

- 7.75.1.1 `typedef uint32 Oscl_Tag_Base::size_type`
- 7.75.1.2 `typedef tag_base_unit* Oscl_Tag_Base::tag_base_type`
- 7.75.1.3 `typedef char Oscl_Tag_Base::tag_base_unit`

7.75.2 Member Function Documentation

- 7.75.2.1 `bool Oscl_Tag_Base::operator() (const tag_base_type & x, const tag_base_type & y) const [inline]`
- 7.75.2.2 `OSCL_IMPORT_REF tag_base_type Oscl_Tag_Base::tag_ancestor (tag_base_type & dest, const tag_base_type & src) const`
- 7.75.2.3 `int32 Oscl_Tag_Base::tag_cmp (const tag_base_type & x, const tag_base_type & y) const [inline]`
- 7.75.2.4 `tag_base_type Oscl_Tag_Base::tag_copy (tag_base_type & dest, const tag_base_type & src) const [inline]`
- 7.75.2.5 `OSCL_IMPORT_REF size_type Oscl_Tag_Base::tag_depth (const tag_base_type & t) const`
- 7.75.2.6 `size_type Oscl_Tag_Base::tag_len (const tag_base_type & t) const [inline]`

The documentation for this struct was generated from the following file:

- [oscl_tagtree.h](#)

7.76 Oscl_TagTree< T, Alloc > Class Template Reference

```
#include <oscl_tagtree.h>
```

Public Types

- typedef [Oscl_Tag< Alloc > tag_type](#)
- typedef tag_type::tag_base_type [tag_base_type](#)
- typedef [Oscl_Vector< Node *, Alloc > children_type](#)
- typedef [Node node_type](#)
- typedef [node_type * node_ptr](#)
- typedef [Oscl_Map< const tag_base_type, node_ptr, Alloc, Oscl_Tag_Base > map_type](#)
- typedef map_type::size_type [size_type](#)
- typedef map_type::value_type [value_type](#)
- typedef [Oscl_Pair< iterator, bool > pair_iterator_bool](#)

Public Methods

- [Oscl_TagTree \(size_type max_depth=0\)](#)
- [Oscl_TagTree \(const Oscl_TagTree< T, Alloc > &x\)](#)
- [Oscl_TagTree< T, Alloc > & operator=\(const Oscl_TagTree< T, Alloc > &x\)](#)
- [~Oscl_TagTree \(\)](#)
- [iterator begin \(\)](#)
- [const_iterator begin \(\) const](#)
- [iterator end \(\)](#)
- [const_iterator end \(\) const](#)
- [bool empty \(\) const](#)
- [size_type size \(\) const](#)
- [T & operator\[\] \(const tag_base_type &t\)](#)
- [pair_iterator_bool insert \(const tag_base_type &t, const T &x\)](#)
- [void erase \(iterator position\)](#)
- [size_type erase \(const tag_base_type &x\)](#)
- [void clear \(\)](#)
- [iterator find \(const tag_base_type &x\)](#)
- [size_type count \(const tag_base_type &x\) const](#)

7.76.1 Detailed Description

template<class T, class Alloc> class Oscl_TagTree< T, Alloc >

Oscl_TagTree Class.

7.76.2 Member Typedef Documentation

- 7.76.2.1 template<class T, class Alloc> typedef **Oscl_Vector<Node*, Alloc>** Oscl_TagTree< T, Alloc >::children_type
- 7.76.2.2 template<class T, class Alloc> typedef **Oscl_Map<const tag_base_type, node_ptr, Alloc, Oscl_Tag_Base>** Oscl_TagTree< T, Alloc >::map_type
- 7.76.2.3 template<class T, class Alloc> typedef **node_type*** Oscl_TagTree< T, Alloc >::node_ptr
- 7.76.2.4 template<class T, class Alloc> typedef **Node** Oscl_TagTree< T, Alloc >::node_type
- 7.76.2.5 template<class T, class Alloc> typedef **Oscl_Pair<iterator, bool>** Oscl_TagTree< T, Alloc >::pair_iterator_bool
- 7.76.2.6 template<class T, class Alloc> typedef map_type::size_type Oscl_TagTree< T, Alloc >::size_type
- 7.76.2.7 template<class T, class Alloc> typedef tag_type::tag_base_type Oscl_TagTree< T, Alloc >::tag_base_type
- 7.76.2.8 template<class T, class Alloc> typedef **Oscl_Tag<Alloc>** Oscl_TagTree< T, Alloc >::tag_type
- 7.76.2.9 template<class T, class Alloc> typedef map_type::value_type Oscl_TagTree< T, Alloc >::value_type

7.76.3 Constructor & Destructor Documentation

- 7.76.3.1 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::Oscl_TagTree (**size_type max_depth = 0**) [inline]

Creates a tag tree with only a root node with tag ""

- 7.76.3.2 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::Oscl_TagTree (const Oscl_TagTree< T, Alloc > & x) [inline]

Copy constructor

- 7.76.3.3 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::~Oscl_TagTree () [inline]

Destructor

7.76.4 Member Function Documentation

- 7.76.4.1 template<class T, class Alloc> const_iterator Oscl_TagTree< T, Alloc >::begin () const [inline]

Returns an iterator pointing to the first node in the tree.

7.76.4.2 template<class T, class Alloc> iterator Oscl_TagTree< T, Alloc >::begin () [inline]

Returns an iterator pointing to the first node in the tree.

7.76.4.3 template<class T, class Alloc> void Oscl_TagTree< T, Alloc >::clear () [inline]

Erases the entire tag tree.

7.76.4.4 template<class T, class Alloc> size_type Oscl_TagTree< T, Alloc >::count (const tag_base_type & x) const [inline]

Returns the number of elements with key x. This can only be 0 or 1..

7.76.4.5 template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::empty () const [inline]

Returns true if tree size is 0

7.76.4.6 template<class T, class Alloc> const_iterator Oscl_TagTree< T, Alloc >::end () const [inline]

Returns a const iterator pointing to the end of the tree.

7.76.4.7 template<class T, class Alloc> iterator Oscl_TagTree< T, Alloc >::end () [inline]

Returns an iterator pointing to the end of the tree.

7.76.4.8 template<class T, class Alloc> size_type Oscl_TagTree< T, Alloc >::erase (const tag_base_type & x) [inline]

Erases the node with tag x. If the node has children, then the node will not be erased from the tree. It will be replaced with the default node value

Parameters:

x Tag of node to erase

Returns:

Returns the number of nodes erased. Since one-to-one mapping between nodes and tags, this will be either 0 or 1

7.76.4.9 template<class T, class Alloc> void Oscl_TagTree< T, Alloc >::erase (iterator position) [inline]

Erases the element pointed to by the iterator. If the node has children, then the node will not be erased from the tree. It will be replaced with the default node value.

Parameters:

position Iterator pointing to the node to be erased

7.76.4.10 template<class T, class Alloc> iterator Oscl_TagTree< T, Alloc >::find (const tag_base_type & x) [inline]

Finds an element whose key is x

Returns:

returns an iterator to the element with key x. If no element is found, returns [end\(\)](#)

7.76.4.11 template<class T, class Alloc> pair_iterator_bool Oscl_TagTree< T, Alloc >::insert (const tag_base_type & t, const T & x) [inline]

Inserts x into the tree and associates it with tag t. If the tag already exists x will not be inserted, and an iterator pointing to the existing node with tag t is returned.

Parameters:

t tag to use

x element to insert

Returns:

Returns a pair of parameters, iterator and bool. The iterator points to the inserted node containing x. If the tag t already existed, then the iterator points to the node associated with tag t. The bool is true if x was inserted and false if it was not inserted due to an existing node with tag t.

7.76.4.12 template<class T, class Alloc> Oscl_TagTree<T, Alloc>& Oscl_TagTree< T, Alloc >::operator= (const Oscl_TagTree< T, Alloc > & x) [inline]

Assignment operator

7.76.4.13]

template<class T, class Alloc> T& Oscl_TagTree< T, Alloc >::operator[] (const tag_base_type & t) [inline]

Returns a reference to the object that is associated with a particular tag. If the map does not already contain such an object, operator[] inserts the default object T().

7.76.4.14 template<class T, class Alloc> size_type Oscl_TagTree< T, Alloc >::size () const [inline]

Returns the number of nodes stored in the tree

The documentation for this class was generated from the following file:

- [oscl_tagtree.h](#)

7.77 Oscl_TagTree< T, Alloc >::const_iterator Struct Reference

```
#include <oscl_tagtree.h>
```

Public Types

- `typedef const node_type & reference`
- `typedef const node_type * pointer`
- `typedef map_type::const_iterator mapiter`
- `typedef const_iterator self`

Public Methods

- `const_iterator()`
- `const_iterator(mapiter x)`
- `const_iterator(const const_iterator &it)`
- `reference operator*() const`
- `pointer operator->() const`
- `bool operator==(const self &x)`
- `bool operator!=(const self &x)`
- `self & operator++()`
- `self operator++(int)`
- `self & operator--()`
- `self operator--(int)`

Data Fields

- `mapiter mapit`

template<class T, class Alloc> struct Oscl_TagTree< T, Alloc >::const_iterator

7.77.1 Member Typedef Documentation

- 7.77.1.1 template<class T, class Alloc> typedef map_type::const_iterator Oscl_TagTree< T, Alloc >::const_iterator::mapiter
- 7.77.1.2 template<class T, class Alloc> typedef const node_type* Oscl_TagTree< T, Alloc >::const_iterator::pointer
- 7.77.1.3 template<class T, class Alloc> typedef const node_type& Oscl_TagTree< T, Alloc >::const_iterator::reference
- 7.77.1.4 template<class T, class Alloc> typedef const_iterator Oscl_TagTree< T, Alloc >::const_iterator::self

7.77.2 Constructor & Destructor Documentation

- 7.77.2.1 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::const_iterator::const_iterator() [inline]
- 7.77.2.2 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::const_iterator::const_iterator(mapiter x) [inline]
- 7.77.2.3 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::const_iterator::const_iterator(const const_iterator & it) [inline]

7.77.3 Member Function Documentation

- 7.77.3.1 template<class T, class Alloc> reference Oscl_TagTree< T, Alloc >::const_iterator::operator *() const [inline]
- 7.77.3.2 template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::const_iterator::operator!= (const self & x) [inline]
- 7.77.3.3 template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::const_iterator::operator++(int) [inline]
- 7.77.3.4 template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::const_iterator::operator++() [inline]
- 7.77.3.5 template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::const_iterator::operator-(int) [inline]
- 7.77.3.6 template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::const_iterator::operator-() [inline]
- 7.77.3.7 template<class T, class Alloc> pointer Oscl_TagTree< T, Alloc >::const_iterator::operator -() const [inline]
- 7.77.3.8 template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::const_iterator::operator==(const self & x) [inline]

7.77.4 Field Documentation

- [oscl_tagtree.h](#)

7.78 Oscl_TagTree< T, Alloc >::iterator Struct Reference

```
#include <oscl_tagtree.h>
```

Public Types

- `typedef node_type & reference`
- `typedef node_type * pointer`
- `typedef map_type::iterator mapiter`
- `typedef iterator self`

Public Methods

- `iterator ()`
- `iterator (mapiter x)`
- `iterator (const iterator &it)`
- `reference operator * () const`
- `pointer operator → () const`
- `bool operator== (const self &x)`
- `bool operator!= (const self &x)`
- `self & operator++ ()`
- `self operator++ (int)`
- `self & operator– ()`
- `self operator– (int)`

Data Fields

- `mapiter mapit`

template<class T, class Alloc> struct Oscl_TagTree< T, Alloc >::iterator

7.78.1 Member Typedef Documentation

- 7.78.1.1 template<class T, class Alloc> typedef map_type::iterator Oscl_TagTree< T, Alloc >::iterator::mapiter
- 7.78.1.2 template<class T, class Alloc> typedef node_type* Oscl_TagTree< T, Alloc >::iterator::pointer
- 7.78.1.3 template<class T, class Alloc> typedef node_type& Oscl_TagTree< T, Alloc >::iterator::reference
- 7.78.1.4 template<class T, class Alloc> typedef iterator Oscl_TagTree< T, Alloc >::iterator::self

7.78.2 Constructor & Destructor Documentation

- 7.78.2.1 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::iterator::iterator () [inline]
- 7.78.2.2 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::iterator::iterator (mapiter x) [inline]
- 7.78.2.3 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::iterator::iterator (const iterator & it) [inline]

7.78.3 Member Function Documentation

- 7.78.3.1 template<class T, class Alloc> reference Oscl_TagTree< T, Alloc >::iterator::operator * () const [inline]
- 7.78.3.2 template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::iterator::operator!= (const self & x) [inline]
- 7.78.3.3 template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::iterator::operator++ (int) [inline]
- 7.78.3.4 template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::iterator::operator++ () [inline]
- 7.78.3.5 template<class T, class Alloc> self Oscl_TagTree< T, Alloc >::iterator::operator- (int) [inline]
- 7.78.3.6 template<class T, class Alloc> self& Oscl_TagTree< T, Alloc >::iterator::operator- () [inline]
- 7.78.3.7 template<class T, class Alloc> pointer Oscl_TagTree< T, Alloc >::iterator::operator → () const [inline]
- 7.78.3.8 template<class T, class Alloc> bool Oscl_TagTree< T, Alloc >::iterator::operator== (const self & x) [inline]

7.78.4 Field Documentation

-
- 7.78.4.1 template<class T, class Alloc> mapiter Oscl_TagTree< T, Alloc >::iterator::mapit

- [oscl_tagtree.h](#)

7.79 Oscl_TagTree< T, Alloc >::Node Struct Reference

```
#include <oscl_tagtree.h>
```

Public Types

- `typedef Oscl_Vector< Node *, Alloc > children_type`

Public Methods

- `Node()`
- `void sort_children()`
- `tag_type::size_type depth()`

Data Fields

- `tag_type tag`
- `T value`
- `Node * parent`
- `children_type children`

template<class T, class Alloc> struct Oscl_TagTree< T, Alloc >::Node

7.79.1 Member Typedef Documentation

7.79.1.1 template<class T, class Alloc> typedef Oscl_Vector<Node*, Alloc> Oscl_TagTree< T, Alloc >::Node::children_type

7.79.2 Constructor & Destructor Documentation

7.79.2.1 template<class T, class Alloc> Oscl_TagTree< T, Alloc >::Node::Node () [inline]

7.79.3 Member Function Documentation

7.79.3.1 template<class T, class Alloc> tag_type::size_type Oscl_TagTree< T, Alloc >::Node::depth () [inline]

7.79.3.2 template<class T, class Alloc> void Oscl_TagTree< T, Alloc >::Node::sort_children () [inline]

7.79.4 Field Documentation

7.79.4.1 template<class T, class Alloc> children_type Oscl_TagTree< T, Alloc >::Node::children

7.79.4.2 template<class T, class Alloc> Node* Oscl_TagTree< T, Alloc >::Node::parent

7.79.4.3 template<class T, class Alloc> tag_type Oscl_TagTree< T, Alloc >::Node::tag

7.79.4.4 template<class T, class Alloc> T Oscl_TagTree< T, Alloc >::Node::value

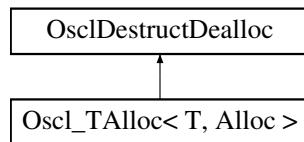
The documentation for this struct was generated from the following file:

- [oscl_tagtree.h](#)

7.80 Oscl_TAlloc< T, Alloc > Class Template Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for Oscl_TAlloc< T, Alloc >::



Public Types

- typedef T [value_type](#)
- typedef T * [pointer](#)
- typedef const T * [const_pointer](#)
- typedef uint32 [size_type](#)
- typedef T & [reference](#)
- typedef const T & [const_reference](#)

Public Methods

- virtual [~Oscl_TAlloc \(\)](#)
- [pointer allocate_fl \(uint32 size, const char *file_name, const int line_num\)](#)
- [pointer allocate \(uint32 size\)](#)
- [pointer alloc_and_construct_fl \(const_reference val, const char *file_name, const int line_num\)](#)
- [pointer alloc_and_construct \(const_reference val\)](#)
- void [deallocate \(OsclAny *p\)](#)
- void [deallocate \(OsclAny *p, size_type n\)](#)
- void [destruct_and_dealloc \(OsclAny *p\)](#)
- [pointer address \(reference r\)](#)
- [const_pointer address \(const_reference r\) const](#)
- void [construct \(pointer p, const_reference val\)](#)
- void [destroy \(pointer p\)](#)

template<class T, class Alloc> class Oscl_TAlloc< T, Alloc >

7.80.1 Member Typedef Documentation

7.80.1.1 template<class T, class Alloc> **typedef const T* Oscl_TAlloc< T, Alloc >::const_pointer**

7.80.1.2 template<class T, class Alloc> **typedef const T& Oscl_TAlloc< T, Alloc >::const_reference**

7.80.1.3 template<class T, class Alloc> **typedef T* Oscl_TAlloc< T, Alloc >::pointer**

7.80.1.4 template<class T, class Alloc> **typedef T& Oscl_TAlloc< T, Alloc >::reference**

7.80.1.5 template<class T, class Alloc> **typedef uint32 Oscl_TAlloc< T, Alloc >::size_type**

7.80.1.6 template<class T, class Alloc> **typedef T Oscl_TAlloc< T, Alloc >::value_type**

7.80.2 Constructor & Destructor Documentation

7.80.2.1 template<class T, class Alloc> **virtual Oscl_TAlloc< T, Alloc >::~Oscl_TAlloc ()**
 [inline, virtual]

7.80.3 Member Function Documentation

7.80.3.1 template<class T, class Alloc> **const_pointer Oscl_TAlloc< T, Alloc >::address (const_reference r) const** [inline]

7.80.3.2 template<class T, class Alloc> **pointer Oscl_TAlloc< T, Alloc >::address (reference r)**
 [inline]

7.80.3.3 template<class T, class Alloc> **pointer Oscl_TAlloc< T, Alloc >::alloc_and_construct (const_reference val)** [inline]

7.80.3.4 template<class T, class Alloc> **pointer Oscl_TAlloc< T, Alloc >::alloc_and_construct_fl (const_reference val, const char *file_name, const int line_num)** [inline]

7.80.3.5 template<class T, class Alloc> **pointer Oscl_TAlloc< T, Alloc >::allocate (uint32 size)**
 [inline]

7.80.3.6 template<class T, class Alloc> **pointer Oscl_TAlloc< T, Alloc >::allocate_fl (uint32 size, const char *file_name, const int line_num)** [inline]

7.80.3.7 template<class T, class Alloc> **void Oscl_TAlloc< T, Alloc >::construct (pointer p, const_reference val)** [inline]

7.80.3.8 template<class T, class Alloc> **void Oscl_TAlloc< T, Alloc >::deallocate (OsclAny *p, size_type n)** [inline]

7.80.3.9 template<class T, class Alloc> **void Oscl_TAlloc< T, Alloc >::deallocate (OsclAny *p)**
 [inline]

7.80.3.10 template<class T, class Alloc> **void Oscl_TAlloc< T, Alloc >::destroy (pointer p)**
 [inline]

7.80.3.11 template<class T, class Alloc> **void Oscl_TAlloc< T, Alloc >::destruct_and_dealloc (OsclAny *p)** [inline, virtual]

The documentation for this class was generated from the following file:

- [oscl_defalloc.h](#)

7.81 Oscl_TAlloc< T, Alloc >::rebind< U, V > Struct Template Reference

```
#include <oscl_defalloc.h>
```

Public Types

- `typedef Oscl_TAlloc< U, V > other`

```
template<class T, class Alloc>template<class U, class V> struct Oscl_TAlloc< T, Alloc >::rebind< U, V >
```

7.81.1 Member Typedef Documentation

```
7.81.1.1 template<class T, class Alloc> template<class U, class V> typedef Oscl_TAlloc<U, V>  
Oscl_TAlloc< T, Alloc >::rebind< U, V >::other
```

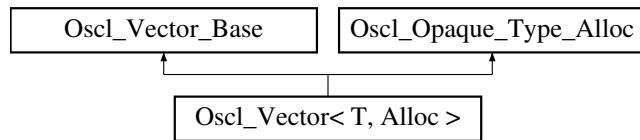
The documentation for this struct was generated from the following file:

- `oscl_defalloc.h`

7.82 Oscl_Vector< T, Alloc > Class Template Reference

```
#include <oscl_vector.h>
```

Inheritance diagram for Oscl_Vector< T, Alloc >::



Public Types

- `typedef T value_type`
- `typedef T * pointer`
- `typedef T & reference`
- `typedef const T & const_reference`
- `typedef T * iterator`
- `typedef const T * const_iterator`

Public Methods

- `Oscl_Vector()`
- `Oscl_Vector(uint32 n)`
- `Oscl_Vector(const Oscl_Vector< T, Alloc > &x)`
- `virtual ~Oscl_Vector()`
- `Oscl_Vector< T, Alloc > & operator=(const Oscl_Vector< T, Alloc > &x)`
- `void push_back(const T &x)`
- `void push_front(const T &x)`
- `iterator insert(iterator pos, const T &x)`
- `T & operator[](uint32 n)`
- `const T & operator[](uint32 n) const`
- `T & front()`
- `const T & front() const`
- `T & back()`
- `const T & back() const`
- `void pop_back()`
- `void clear()`
- `void destroy()`
- `iterator begin() const`
- `iterator end() const`
- `iterator erase(iterator pos)`
- `iterator erase(iterator first, iterator last)`

7.82.1 Detailed Description

template<class T, class Alloc> class Oscl_Vector< T, Alloc >

Oscl_Vector Class. A subset of STL::Vector methods. Oscl_Vector supports random access to elements, constant time insertion and removal of elements at the end of the vector, and linear time insertion and removal of elements at the beginning or middle of the vector. The number of elements in a vector can vary dynamically, and memory management is performed automatically.

7.82.2 Member Typedef Documentation

7.82.2.1 template<class T, class Alloc> typedef const T* Oscl_Vector< T, Alloc >::const_iterator

7.82.2.2 template<class T, class Alloc> typedef const T& Oscl_Vector< T, Alloc >::const_reference

7.82.2.3 template<class T, class Alloc> typedef T* Oscl_Vector< T, Alloc >::iterator

7.82.2.4 template<class T, class Alloc> typedef T* Oscl_Vector< T, Alloc >::pointer

7.82.2.5 template<class T, class Alloc> typedef T& Oscl_Vector< T, Alloc >::reference

7.82.2.6 template<class T, class Alloc> typedef T Oscl_Vector< T, Alloc >::value_type

7.82.3 Constructor & Destructor Documentation

7.82.3.1 template<class T, class Alloc> Oscl_Vector< T, Alloc >::Oscl_Vector () [inline]

Creates an empty vector.

7.82.3.2 template<class T, class Alloc> Oscl_Vector< T, Alloc >::Oscl_Vector (uint32 n) [inline]

Creates an empty vector with capacity n.

Parameters:

n creates a vector with n elements. The main reason for specifying n is efficiency. If you know the capacity to which your vector must grow, then it is more efficient to allocate the vector all at once rather than rely on the automatic reallocation scheme. This also helps control the invalidation of iterators.

7.82.3.3 template<class T, class Alloc> Oscl_Vector< T, Alloc >::Oscl_Vector (const Oscl_Vector< T, Alloc > & x) [inline]

Copy Constructor.

Parameters:

x vector class to copy.

**7.82.3.4 template<class T, class Alloc> virtual Oscl_Vector< T, Alloc >::~Oscl_Vector ()
[inline, virtual]**

The destructor.

7.82.4 Member Function Documentation

**7.82.4.1 template<class T, class Alloc> const T& Oscl_Vector< T, Alloc >::back () const
[inline]**

Returns the last element.

7.82.4.2 template<class T, class Alloc> T& Oscl_Vector< T, Alloc >::back () [inline]

Returns the last element.

**7.82.4.3 template<class T, class Alloc> iterator Oscl_Vector< T, Alloc >::begin () const
[inline]**

Returns an iterator pointing to the beginning of the vector.

Reimplemented from [Oscl_Vector_Base](#).

7.82.4.4 template<class T, class Alloc> void Oscl_Vector< T, Alloc >::clear () [inline]

Removes all elements.

7.82.4.5 template<class T, class Alloc> void Oscl_Vector< T, Alloc >::destroy () [inline]

Destroy – this is like an explicit destructor call.

Reimplemented from [Oscl_Vector_Base](#).

**7.82.4.6 template<class T, class Alloc> iterator Oscl_Vector< T, Alloc >::end () const
[inline]**

Returns an iterator pointing to the end of the vector..

Reimplemented from [Oscl_Vector_Base](#).

**7.82.4.7 template<class T, class Alloc> iterator Oscl_Vector< T, Alloc >::erase (iterator *first*,
iterator *last*) [inline]**

Erases elements in range [*first*, *last*). Erasing an element invalidates all iterators pointing to elements following the deletion point.

Parameters:

first starting position

last ending position, this position is not erased

7.82.4.8 template<class T, class Alloc> iterator Oscl_Vector< T, Alloc >::erase (iterator pos) [inline]

Erases the element pointed to by iterator pos. Erasing an element invalidates all iterators pointing to elements following the deletion point.

Parameters:

pos iterator at erase position

7.82.4.9 template<class T, class Alloc> const T& Oscl_Vector< T, Alloc >::front () const [inline]

Returns the first element.

7.82.4.10 template<class T, class Alloc> T& Oscl_Vector< T, Alloc >::front () [inline]

Returns the first element.

7.82.4.11 template<class T, class Alloc> iterator Oscl_Vector< T, Alloc >::insert (iterator pos, const T & x) [inline]

Inserts a new element before the one at pos.

Parameters:

pos position at which to insert the new element.

x new element

7.82.4.12 template<class T, class Alloc> Oscl_Vector<T, Alloc>& Oscl_Vector< T, Alloc >::operator= (const Oscl_Vector< T, Alloc > & x) [inline]

The assignment operator

7.82.4.13]

template<class T, class Alloc> const T& Oscl_Vector< T, Alloc >::operator[] (uint32 n) const [inline]

Returns the n'th element.

Parameters:

n element position to return

7.82.4.14]

template<class T, class Alloc> T& Oscl_Vector< T, Alloc >::operator[] (uint32 n) [inline]

Returns the n'th element.

Parameters:

n element position to return

7.82.4.15 template<class T, class Alloc> void Oscl_Vector< T, Alloc >::pop_back () [inline]

Removes the last element.

Reimplemented from [Oscl_Vector_Base](#).

7.82.4.16 template<class T, class Alloc> void Oscl_Vector< T, Alloc >::push_back (const T & x) [inline]

Inserts a new element at the end. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

Parameters:

x new element

7.82.4.17 template<class T, class Alloc> void Oscl_Vector< T, Alloc >::push_front (const T & x) [inline]

Inserts a new element at the front. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

Parameters:

x new element

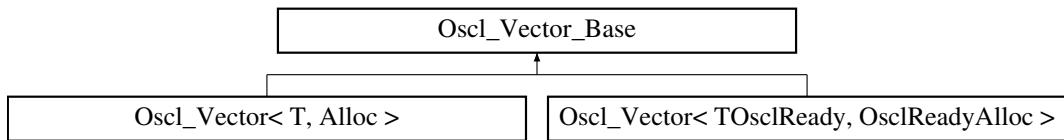
The documentation for this class was generated from the following file:

- [oscl_vector.h](#)

7.83 Oscl_Vector_Base Class Reference

```
#include <oscl_vector.h>
```

Inheritance diagram for Oscl_Vector_Base::



Public Methods

- uint32 [size \(\) const](#)
- uint32 [capacity \(\) const](#)
- bool [empty \(\) const](#)
- OSCL_IMPORT_REF void [reserve \(uint32 n\)](#)

Protected Methods

- OSCL_IMPORT_REF void [construct \(Oscl_Opaque_Type_Alloc *aType\)](#)
- OSCL_IMPORT_REF void [construct \(Oscl_Opaque_Type_Alloc *aType, uint32 n\)](#)
- OSCL_IMPORT_REF void [construct \(Oscl_Opaque_Type_Alloc *aType, const Oscl_Vector_Base &x\)](#)
- virtual [~Oscl_Vector_Base \(\)](#)
- OSCL_IMPORT_REF void [push_back \(const OsclAny *x\)](#)
- OSCL_IMPORT_REF void [pop_back \(\)](#)
- OSCL_IMPORT_REF void [push_front \(const OsclAny *x\)](#)
- OSCL_IMPORT_REF OsclAny * [insert \(OsclAny *pos, const OsclAny *x\)](#)
- OSCL_IMPORT_REF OsclAny * [erase \(OsclAny *pos\)](#)
- OSCL_IMPORT_REF OsclAny * [erase \(OsclAny *first, OsclAny *last\)](#)
- OSCL_IMPORT_REF void [assign_vector \(const Oscl_Vector_Base &x\)](#)
- OSCL_IMPORT_REF void [destroy \(\)](#)

Protected Attributes

- uint32 [numelems](#)
- uint32 [bufsize](#)
- [OsclAny * elems](#)
- uint32 [sizeof_T](#)

Friends

- class [OsclPriorityQueueBase](#)

7.83.1 Detailed Description

Oscl_Vector_Base is a non-templatized base class for [Oscl_Vector](#). The purpose of this base class is to avoid large inline routines in the [Oscl_Vector](#) implementation. This class is not intended for direct instantiation except by [Oscl_Vector](#).

7.83.2 Constructor & Destructor Documentation

7.83.2.1 virtual Oscl_Vector_Base::~Oscl_Vector_Base () [inline, protected, virtual]

The destructor.

7.83.3 Member Function Documentation

7.83.3.1 OSCL_IMPORT_REF void Oscl_Vector_Base::assign_vector (const Oscl_Vector_Base & x) [protected]

7.83.3.2 uint32 Oscl_Vector_Base::capacity () const [inline]

Returns the allocated memory of the vector in units of number of elements.

7.83.3.3 OSCL_IMPORT_REF void Oscl_Vector_Base::construct (Oscl_Opaque_Type_Alloc * aType, const Oscl_Vector_Base & x) [protected]

7.83.3.4 OSCL_IMPORT_REF void Oscl_Vector_Base::construct (Oscl_Opaque_Type_Alloc * aType, uint32 n) [protected]

7.83.3.5 OSCL_IMPORT_REF void Oscl_Vector_Base::construct (Oscl_Opaque_Type_Alloc * aType) [protected]

7.83.3.6 OSCL_IMPORT_REF void Oscl_Vector_Base::destroy () [protected]

Reimplemented in [Oscl_Vector< T, Alloc >](#), [Oscl_Vector< OsclComponentRegistryElement, OsclMemAllocator >](#), [Oscl_Vector< uint32, OsclMemAllocator >](#), [Oscl_Vector< OsclSocketServRequestQElem, OsclMemAllocator >](#), [Oscl_Vector< Node *, Alloc >](#), [Oscl_Vector< OsclFixedCacheParam, OsclMemAllocator >](#), [Oscl_Vector< OsclSocketRequest *, OsclMemAllocator >](#), [Oscl_Vector< entry_type *, Alloc >](#), [Oscl_Vector< OSCL_HeapString< OsclMemAllocator >, OsclMemAllocator >](#), [Oscl_Vector< OsclAsyncFileBuffer *, OsclMemAllocator >](#), [Oscl_Vector< TOsclFileOffset, OsclMemAllocator >](#), [Oscl_Vector< MemPoolBufferInfo *, OsclMemAllocator >](#), [Oscl_Vector< OsclSharedPtr< PVLoggerFilter >, alloc_type >](#), [Oscl_Vector< TOsclReady, OsclReadyAlloc >](#), [Oscl_Vector< OsclFileCacheBuffer, OsclMemAllocator >](#), [Oscl_Vector< OsclSharedPtr< PVLoggerAppender >, alloc_type >](#), [Oscl_Vector< OsclAny *, OsclMemAllocator >](#), and [Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >](#).

7.83.3.7 bool Oscl_Vector_Base::empty () const [inline]

True if the vector's size is 0.

7.83.3.8 OSCL_IMPORT_REF `OsclAny*` Oscl_Vector_Base::erase (`OsclAny *first, OsclAny *last`) [protected]

Erases elements in range [first, last). Erasing an element invalidates all iterators pointing to elements following the deletion point.

Parameters:

first starting position

last ending position, this position is not erased

7.83.3.9 OSCL_IMPORT_REF `OsclAny*` Oscl_Vector_Base::erase (`OsclAny *pos`) [protected]

Erases the element pointed to by iterator pos. Erasing an element invalidates all iterators pointing to elements following the deletion point.

Parameters:

pos iterator at erase position

7.83.3.10 OSCL_IMPORT_REF `OsclAny*` Oscl_Vector_Base::insert (`OsclAny *pos, const OsclAny *x`) [protected]

Inserts a new element at a specific position.

Parameters:

pos iterator at insert position.

x pointer to new element

7.83.3.11 OSCL_IMPORT_REF void Oscl_Vector_Base::pop_back () [protected]

Removes the last element.

Reimplemented in `Oscl_Vector< T, Alloc >`, `Oscl_Vector< OsclComponentRegistryElement, OsclMemAllocator >`, `Oscl_Vector< uint32, OsclMemAllocator >`, `Oscl_Vector< OsclSocketServRequestQElem, OsclMemAllocator >`, `Oscl_Vector< Node *, Alloc >`, `Oscl_Vector< OsclFixedCacheParam, OsclMemAllocator >`, `Oscl_Vector< OsclSocketRequest *, OsclMemAllocator >`, `Oscl_Vector< entry_type *, Alloc >`, `Oscl_Vector< OSCL_HeapString< OsclMemAllocator >, OsclMemAllocator >`, `Oscl_Vector< OsclAsyncFileBuffer *, OsclMemAllocator >`, `Oscl_Vector< TOscFileOffset, OsclMemAllocator >`, `Oscl_Vector< MemPoolBufferInfo *, OsclMemAllocator >`, `Oscl_Vector< OsclSharedPtr< PVLoggerFilter >, alloc_type >`, `Oscl_Vector< TOscReady, OsclReadyAlloc >`, `Oscl_Vector< OsclFileCacheBuffer, OsclMemAllocator >`, `Oscl_Vector< OsclSharedPtr< PVLoggerAppender >, alloc_type >`, `Oscl_Vector< OsclAny *, OsclMemAllocator >`, and `Oscl_Vector< OsclNetworkAddress, OsclMemAllocator >`.

7.83.3.12 OSCL_IMPORT_REF void Oscl_Vector_Base::push_back (const `OsclAny *x`) [protected]

Inserts a new element at the end. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

Parameters:

x pointer to the new element

7.83.3.13 OSCL_IMPORT_REF void Oscl_Vector_Base::push_front (const OsclAny * *x*) [protected]

Inserts a new element at the front. Inserting an element invalidates all iterators if memory reallocation occurs as a result of the insertion.

Parameters:

x pointer to new element

7.83.3.14 OSCL_IMPORT_REF void Oscl_Vector_Base::reserve (uint32 *n*)

Reallocates memory if necessary to a capacity of *n* elements. The main reason for reserve is efficiency. If you know the capacity to which your vector must grow, then it is more efficient to allocate the vector all at once rather than rely on the automatic reallocation scheme. This also helps control the invalidation of iterators.

Parameters:

n size of vector

7.83.3.15 uint32 Oscl_Vector_Base::size () const [inline]

Returns the size of the vector in units of number of elements.

7.83.4 Friends And Related Function Documentation

7.83.4.1 friend class OsclPriorityQueueBase [friend]

7.83.5 Field Documentation

7.83.5.1 uint32 Oscl_Vector_Base::bufsize [protected]**7.83.5.2 OsclAny* Oscl_Vector_Base::elems [protected]****7.83.5.3 uint32 Oscl_Vector_Base::numelems [protected]****7.83.5.4 uint32 Oscl_Vector_Base::sizeof_T [protected]**

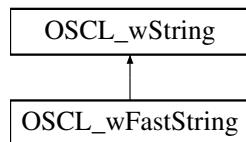
The documentation for this class was generated from the following file:

- [oscl_vector.h](#)

7.84 OSCL_wFastString Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_wFastString::



Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

Public Methods

- `OSCL_IMPORT_REF OSCL_wFastString()`
- `OSCL_IMPORT_REF OSCL_wFastString(const OSCL_wFastString &src)`
- `OSCL_IMPORT_REF OSCL_wFastString(const chartype *cstr)`
- `OSCL_IMPORT_REF OSCL_wFastString(chartype *buf, uint32 maxlen)`
- `OSCL_IMPORT_REF ~OSCL_wFastString()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_wFastString & operator=(const OSCL_wFastString &src)`
- `OSCL_IMPORT_REF OSCL_wFastString & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(chartype *cstr, uint32 maxlen)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 numofbyte, optype op)`
- `OSCL_IMPORT_REF void set_length()`

Friends

- class `OSCL_wString`

7.84.1 Detailed Description

`OSCL_wFastString` is identical to `OSCL_FastString` except that it uses wide-character format. For descriptions, see `OSCL_FastString`.

7.84.2 Member Typedef Documentation

7.84.2.1 `typedef OSCL_wString::chartype OSCL_wFastString::chartype`

Reimplemented from `OSCL_wString`.

7.84.2.2 **typedef TOSCL_wStringOp OSCL_wFastString::optype**

7.84.2.3 **typedef OSCL_String::chartype OSCL_wFastString::other_chartype**

7.84.3 Constructor & Destructor Documentation

7.84.3.1 **OSCL_IMPORT_REF OSCL_wFastString::OSCL_wFastString()**

7.84.3.2 **OSCL_IMPORT_REF OSCL_wFastString::OSCL_wFastString(const OSCL_wFastString & src)**

7.84.3.3 **OSCL_IMPORT_REF OSCL_wFastString::OSCL_wFastString(const chartype * cstr)**

7.84.3.4 **OSCL_IMPORT_REF OSCL_wFastString::OSCL_wFastString(chartype * buf, uint32 maxlen)**

7.84.3.5 **OSCL_IMPORT_REF OSCL_wFastString::~OSCL_wFastString()**

7.84.4 Member Function Documentation

7.84.4.1 **OSCL_IMPORT_REF const chartype* OSCL_wFastString::get_cstr() [virtual]**

Implements [OSCL_wString](#).

7.84.4.2 **OSCL_IMPORT_REF uint32 OSCL_wFastString::get_maxsize() [virtual]**

Implements [OSCL_wString](#).

7.84.4.3 **OSCL_IMPORT_REF uint32 OSCL_wFastString::get_size() [virtual]**

Implements [OSCL_wString](#).

7.84.4.4 **OSCL_IMPORT_REF chartype* OSCL_wFastString::get_str() [virtual]**

Implements [OSCL_wString](#).

7.84.4.5 **OSCL_IMPORT_REF OSCL_wFastString& OSCL_wFastString::operator=(const chartype * cstr)**

Reimplemented from [OSCL_wString](#).

- 7.84.4.6 **OSCL_IMPORT_REF OSCL_wFastString& OSCL_wFastString::operator= (const OSCL_wFastString & src)**
- 7.84.4.7 **OSCL_IMPORT_REF void OSCL_wFastString::set (const other_chartype * buf, uint32 numofbyte, optype op)**
- 7.84.4.8 **OSCL_IMPORT_REF void OSCL_wFastString::set (chartype * cstr, uint32 maxlen)**
- 7.84.4.9 **OSCL_IMPORT_REF void OSCL_wFastString::set_length ()**

7.84.5 Friends And Related Function Documentation

- 7.84.5.1 **friend class OSCL_wString [friend]**

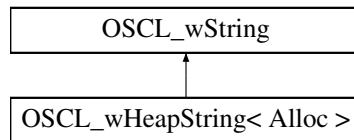
The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.85 OSCL_wHeapString< Alloc > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_wHeapString< Alloc >::



Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp otype`
- `typedef OSCL_String::chartype other_chartype`

Public Methods

- `OSCL_wHeapString()`
- `OSCL_wHeapString(const OSCL_wHeapString &src)`
- `OSCL_wHeapString(const OSCL_wString &src)`
- `OSCL_wHeapString(const chartype *cstr)`
- `OSCL_wHeapString(const chartype *buf, uint32 length)`
- `~OSCL_wHeapString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_wHeapString & operator=(const OSCL_wHeapString &src)`
- `OSCL_wHeapString & operator=(const OSCL_wString &src)`
- `OSCL_wHeapString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, otype op)`
- `void set(const other_chartype *buf, uint32 length, otype op)`

Friends

- class `OSCL_wString`

7.85.1 Detailed Description

```
template<class Alloc> class OSCL_wHeapString< Alloc >
```

`OSCL_wHeapString` is identical to `OSCL_HeapString` except that it uses wide-character format. For descriptions, see `OSCL_HeapString`.

7.85.2 Member Typedef Documentation

7.85.2.1 template<class Alloc> typedef OSCL_wString::chartype OSCL_wHeapString< Alloc >::chartype

Reimplemented from [OSCL_wString](#).

7.85.2.2 template<class Alloc> typedef TOSCL_wStringOp OSCL_wHeapString< Alloc >::optype

7.85.2.3 template<class Alloc> typedef OSCL_String::chartype OSCL_wHeapString< Alloc >::other_chartype

7.85.3 Friends And Related Function Documentation

7.85.3.1 template<class Alloc> friend class OSCL_wString [friend]

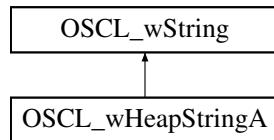
The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.86 OSCL_wHeapStringA Class Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_wHeapStringA::



Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

Public Methods

- `OSCL_IMPORT_REF OSCL_wHeapStringA()`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const OSCL_wHeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const OSCL_wHeapStringA &src, Oscl_DefAlloc *alloc, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const OSCL_wString &src, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const chartype *cstr, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA(const chartype *buf, uint32 length, Oscl_DefAlloc *alloc=NULL, OsclRefCounter *ref=NULL)`
- `OSCL_IMPORT_REF ~OSCL_wHeapStringA()`
- `OSCL_IMPORT_REF uint32 get_size() const`
- `OSCL_IMPORT_REF uint32 get_maxsize() const`
- `OSCL_IMPORT_REF const chartype * get_cstr() const`
- `OSCL_IMPORT_REF chartype * get_str() const`
- `OSCL_IMPORT_REF OSCL_wHeapStringA & operator=(const OSCL_wHeapStringA &src)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA & operator=(const OSCL_wString &src)`
- `OSCL_IMPORT_REF OSCL_wHeapStringA & operator=(const chartype *cstr)`
- `OSCL_IMPORT_REF void set(const chartype *buf, uint32 length)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, optype op)`
- `OSCL_IMPORT_REF void set(const other_chartype *buf, uint32 length, optype op)`

Friends

- class `OSCL_wString`

7.86.1 Detailed Description

OSCL_wHeapStringA is identical to [OSCL_HeapStringA](#) except that it uses wide-character format. For descriptions, see [OSCL_HeapStringA](#).

7.86.2 Member Typedef Documentation

7.86.2.1 `typedef OSCL_wString::chartype OSCL_wHeapStringA::chartype`

Reimplemented from [OSCL_wString](#).

7.86.2.2 `typedef TOSCL_wStringOp OSCL_wHeapStringA::optype`

7.86.2.3 `typedef OSCL_String::chartype OSCL_wHeapStringA::other_chartype`

7.86.3 Constructor & Destructor Documentation

7.86.3.1 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA()`

7.86.3.2 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA(Oscl_DefAlloc *alloc, OsclRefCounter *ref = NULL)`

7.86.3.3 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA(const OSCL_wHeapStringA &src)`

7.86.3.4 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA(const OSCL_wHeapStringA &src, Oscl_DefAlloc *alloc, OsclRefCounter *ref = NULL)`

7.86.3.5 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA(const OSCL_wString &src, Oscl_DefAlloc *alloc = NULL, OsclRefCounter *ref = NULL)`

7.86.3.6 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA(const chartype *cstr, Oscl_DefAlloc *alloc = NULL, OsclRefCounter *ref = NULL)`

7.86.3.7 `OSCL_IMPORT_REF OSCL_wHeapStringA::OSCL_wHeapStringA(const chartype *buf, uint32 length, Oscl_DefAlloc *alloc = NULL, OsclRefCounter *ref = NULL)`

7.86.3.8 `OSCL_IMPORT_REF OSCL_wHeapStringA::~OSCL_wHeapStringA()`

7.86.4 Member Function Documentation

7.86.4.1 `OSCL_IMPORT_REF const chartype* OSCL_wHeapStringA::get_cstr() [virtual]`

Implements [OSCL_wString](#).

7.86.4.2 `OSCL_IMPORT_REF uint32 OSCL_wHeapStringA::get_maxsize() [virtual]`

Implements [OSCL_wString](#).

7.86.4.3 OSCL_IMPORT_REF uint32 OSCL_wHeapStringA::get_size () [virtual]

Implements [OSCL_wString](#).

7.86.4.4 OSCL_IMPORT_REF chartype* OSCL_wHeapStringA::get_str () [virtual]

Implements [OSCL_wString](#).

7.86.4.5 OSCL_IMPORT_REF OSCL_wHeapStringA& OSCL_wHeapStringA::operator= (const chartype * cstr)

Reimplemented from [OSCL_wString](#).

7.86.4.6 OSCL_IMPORT_REF OSCL_wHeapStringA& OSCL_wHeapStringA::operator= (const OSCL_wString & src)

Reimplemented from [OSCL_wString](#).

7.86.4.7 OSCL_IMPORT_REF OSCL_wHeapStringA& OSCL_wHeapStringA::operator= (const OSCL_wHeapStringA & src)**7.86.4.8 OSCL_IMPORT_REF void OSCL_wHeapStringA::set (const other_chartype * buf, uint32 length, optype op)****7.86.4.9 OSCL_IMPORT_REF void OSCL_wHeapStringA::set (const other_chartype * buf, optype op)****7.86.4.10 OSCL_IMPORT_REF void OSCL_wHeapStringA::set (const chartype * buf, uint32 length)**

7.86.5 Friends And Related Function Documentation

7.86.5.1 friend class OSCL_wString [friend]

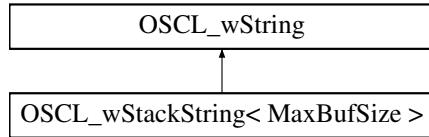
The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.87 OSCL_wStackString< MaxBufSize > Class Template Reference

```
#include <oscl_string_containers.h>
```

Inheritance diagram for OSCL_wStackString< MaxBufSize >::



Public Types

- `typedef OSCL_wString::chartype chartype`
- `typedef TOSCL_wStringOp optype`
- `typedef OSCL_String::chartype other_chartype`

Public Methods

- `OSCL_wStackString()`
- `OSCL_wStackString(const OSCL_wStackString &src)`
- `OSCL_wStackString(const OSCL_wString &src)`
- `OSCL_wStackString(const chartype *cstr)`
- `OSCL_wStackString(const chartype *buf, uint32 length)`
- `~OSCL_wStackString()`
- `uint32 get_size() const`
- `uint32 get_maxsize() const`
- `const chartype * get_cstr() const`
- `chartype * get_str() const`
- `OSCL_wStackString & operator=(const OSCL_wStackString &src)`
- `OSCL_wStackString & operator=(const OSCL_wString &src)`
- `OSCL_wStackString & operator=(const chartype *cstr)`
- `void set(const chartype *buf, uint32 length)`
- `void set(const other_chartype *buf, optype op)`
- `void set(const other_chartype *buf, uint32 length, optype op)`

Friends

- class `OSCL_wString`

7.87.1 Detailed Description

```
template<uint32 MaxBufSize> class OSCL_wStackString< MaxBufSize >
```

OSCL_wStackString is identical to `OSCL_StackString` except that it uses wide-character format. For descriptions, see `OSCL_StackString`.

7.87.2 Member Typedef Documentation

7.87.2.1 template<uint32 MaxBufSize> typedef OSCL_wString::chartype OSCL_wStackString< MaxBufSize >::chartype

Reimplemented from [OSCL_wString](#).

7.87.2.2 template<uint32 MaxBufSize> typedef TOSCL_wStringOp OSCL_wStackString< MaxBufSize >::optype

7.87.2.3 template<uint32 MaxBufSize> typedef OSCL_String::chartype OSCL_wStackString< MaxBufSize >::other_chartype

7.87.3 Friends And Related Function Documentation

7.87.3.1 template<uint32 MaxBufSize> friend class OSCL_wString [friend]

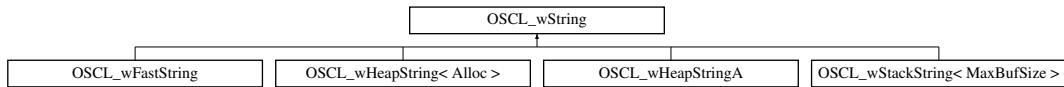
The documentation for this class was generated from the following file:

- [oscl_string_containers.h](#)

7.88 OSCL_wString Class Reference

```
#include <oscl_string.h>
```

Inheritance diagram for OSCL_wString::



Public Types

- `typedef oscl_wchar chartype`

Public Methods

- `virtual uint32 get_size () const=0`
- `virtual uint32 get_maxsize () const=0`
- `virtual const chartype * get_cstr () const=0`
- `virtual bool is_writable () const`
- `virtual chartype * get_str () const=0`
- `OSCL_wString & operator=(const OSCL_wString &src)`
- `OSCL_wString & operator=(const chartype *cstr)`
- `OSCL_wString & operator+=(const OSCL_wString &src)`
- `OSCL_wString & operator+=(const chartype *cstr)`
- `OSCL_wString & operator+=(const chartype c)`
- `bool operator==(const OSCL_wString &src) const`
- `bool operator!=(const OSCL_wString &src) const`
- `bool operator<(const OSCL_wString &src) const`
- `bool operator<=(const OSCL_wString &src) const`
- `bool operator>(const OSCL_wString &src) const`
- `bool operator>=(const OSCL_wString &src) const`
- `bool operator==(const chartype *cstr) const`
- `chartype operator[](uint32 index) const`
- `virtual chartype read(uint32 index) const`
- `virtual uint32 setrep_to_wide_char(const char *src, uint32 len, TOSCL_wStringOp op, Oscl_DefAlloc *aAlloc)`
- `virtual int8 hash() const`
- `virtual void write(uint32 index, chartype c)`
- `virtual void write(uint32 offset, uint32 length, const chartype *buf)`

Protected Methods

- `OSCL_wString()`
- `virtual ~OSCL_wString()`
- `virtual void set_rep(const chartype *cstr)=0`
- `virtual void append_rep(const chartype *cstr)=0`
- `virtual void set_rep(const OSCL_wString &src)=0`
- `virtual void append_rep(const OSCL_wString &src)=0`
- `virtual void set_len(uint32 len)=0`

7.88.1 Detailed Description

A common base class for string classes with wide character (oscl_wchar) format. OSCL_wString and [OSCL_String](#) are identical except for the character format. For descriptions, see [OSCL_String](#).

7.88.2 Member Typedef Documentation

7.88.2.1 `typedef oscl_wchar OSCL_wString::chartype`

Reimplemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), [OSCL_wStackString< MaxBufSize >](#), and [OSCL_wFastString](#).

7.88.3 Constructor & Destructor Documentation

7.88.3.1 `OSCL_wString::OSCL_wString () [protected]`

7.88.3.2 `virtual OSCL_wString::~OSCL_wString () [protected, virtual]`

7.88.4 Member Function Documentation

7.88.4.1 `virtual void OSCL_wString::append_rep (const OSCL_wString & src) [protected, pure virtual]`

7.88.4.2 `virtual void OSCL_wString::append_rep (const chartype * cstr) [protected, pure virtual]`

7.88.4.3 `virtual const chartype* OSCL_wString::get_cstr () [pure virtual]`

Implemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), [OSCL_wStackString< MaxBufSize >](#), and [OSCL_wFastString](#).

7.88.4.4 `virtual uint32 OSCL_wString::get_maxsize () [pure virtual]`

Implemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), [OSCL_wStackString< MaxBufSize >](#), and [OSCL_wFastString](#).

7.88.4.5 `virtual uint32 OSCL_wString::get_size () [pure virtual]`

Implemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), [OSCL_wStackString< MaxBufSize >](#), and [OSCL_wFastString](#).

7.88.4.6 `virtual chartype* OSCL_wString::get_str () [pure virtual]`

Implemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), [OSCL_wStackString< MaxBufSize >](#), and [OSCL_wFastString](#).

7.88.4.7 virtual int8 OSCL_wString::hash () [virtual]

7.88.4.8 virtual bool OSCL_wString::is_writable () [virtual]

7.88.4.9 bool OSCL_wString::operator!= (const OSCL_wString & src) const

7.88.4.10 OSCL_wString& OSCL_wString::operator+= (const chartype c)

7.88.4.11 OSCL_wString& OSCL_wString::operator+= (const chartype * cstr)

7.88.4.12 OSCL_wString& OSCL_wString::operator+= (const OSCL_wString & src)

7.88.4.13 bool OSCL_wString::operator< (const OSCL_wString & src) const

7.88.4.14 bool OSCL_wString::operator<= (const OSCL_wString & src) const

7.88.4.15 OSCL_wString& OSCL_wString::operator= (const chartype * cstr)

Reimplemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), [OSCL_wStackString< MaxBufSize >](#), and [OSCL_wFastString](#).

7.88.4.16 OSCL_wString& OSCL_wString::operator= (const OSCL_wString & src)

Reimplemented in [OSCL_wHeapString< Alloc >](#), [OSCL_wHeapStringA](#), and [OSCL_wStackString< MaxBufSize >](#).

7.88.4.17 bool OSCL_wString::operator== (const chartype * cstr) const

7.88.4.18 bool OSCL_wString::operator== (const OSCL_wString & src) const

7.88.4.19 bool OSCL_wString::operator> (const OSCL_wString & src) const

7.88.4.20 bool OSCL_wString::operator>= (const OSCL_wString & src) const

7.88.4.21]

chartype OSCL_wString::operator[] (uint32 index) const

- 7.88.4.22 **virtual chartype** OSCL_wString::read (*uint32 index*) const [virtual]
- 7.88.4.23 **virtual void** OSCL_wString::set_len (*uint32 len*) [protected, pure virtual]
- 7.88.4.24 **virtual void** OSCL_wString::set_rep (*const OSCL_wString & src*) [protected, pure virtual]
- 7.88.4.25 **virtual void** OSCL_wString::set_rep (*const chartype * cstr*) [protected, pure virtual]
- 7.88.4.26 **virtual uint32** OSCL_wString::setrep_to_wide_char (*const char * src, uint32 len, TOSCL_wStringOp op, Oscl_DefAlloc * aAlloc*) [virtual]
- 7.88.4.27 **virtual void** OSCL_wString::write (*uint32 offset, uint32 length, const chartype * buf*) [virtual]
- 7.88.4.28 **virtual void** OSCL_wString::write (*uint32 index, chartype c*) [virtual]

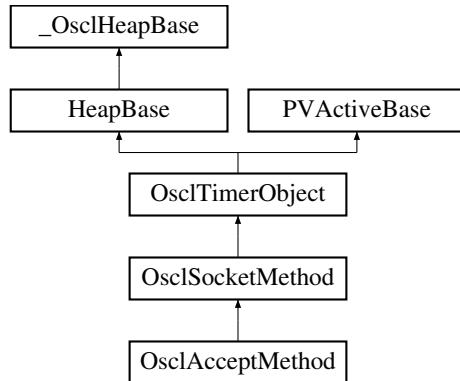
The documentation for this class was generated from the following file:

- [oscl_string.h](#)

7.89 OsclAcceptMethod Class Reference

```
#include <oscl_socket_accept.h>
```

Inheritance diagram for OsclAcceptMethod::



Public Methods

- [~OsclAcceptMethod \(\)](#)
- [TPVSocketEvent Accept \(int32 aTimeout\)](#)
- [void DiscardAcceptedSocket \(\)](#)
- [OsclSocketI * GetAcceptedSocket \(\)](#)
- [OsclAcceptRequest * AcceptRequest \(\)](#)

Static Public Methods

- [OsclAcceptMethod * NewL \(OsclIPSocketI &c\)](#)

7.89.1 Constructor & Destructor Documentation

7.89.1.1 OsclAcceptMethod::~OsclAcceptMethod ()

7.89.2 Member Function Documentation

7.89.2.1 TPVSocketEvent OsclAcceptMethod::Accept (int32 aTimeout)

7.89.2.2 OsclAcceptRequest* OsclAcceptMethod::AcceptRequest () [inline]

7.89.2.3 void OsclAcceptMethod::DiscardAcceptedSocket ()

7.89.2.4 OsclSocketI* OsclAcceptMethod::GetAcceptedSocket ()

7.89.2.5 OsclAcceptMethod* OsclAcceptMethod::NewL (OsclIPSocketI &c) [static]

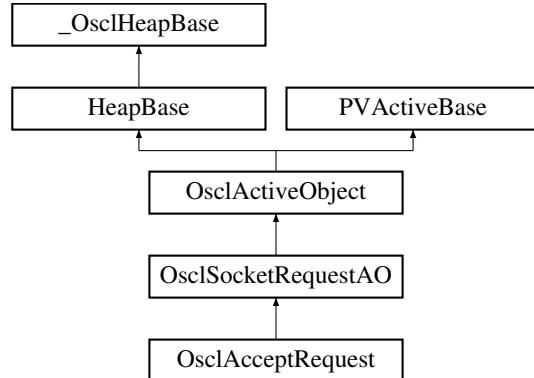
The documentation for this class was generated from the following file:

- [oscl_socket_accept.h](#)

7.90 OsclAcceptRequest Class Reference

```
#include <oscl_socket_accept.h>
```

Inheritance diagram for OsclAcceptRequest::



Public Methods

- [OsclAcceptRequest \(OsclSocketMethod &c\)](#)
- [void Accept \(OsclSocketI &aSocket\)](#)

7.90.1 Constructor & Destructor Documentation

7.90.1.1 OsclAcceptRequest::OsclAcceptRequest ([OsclSocketMethod & c](#)) [inline]

7.90.2 Member Function Documentation

7.90.2.1 void OsclAcceptRequest::Accept ([OsclSocketI & aSocket](#))

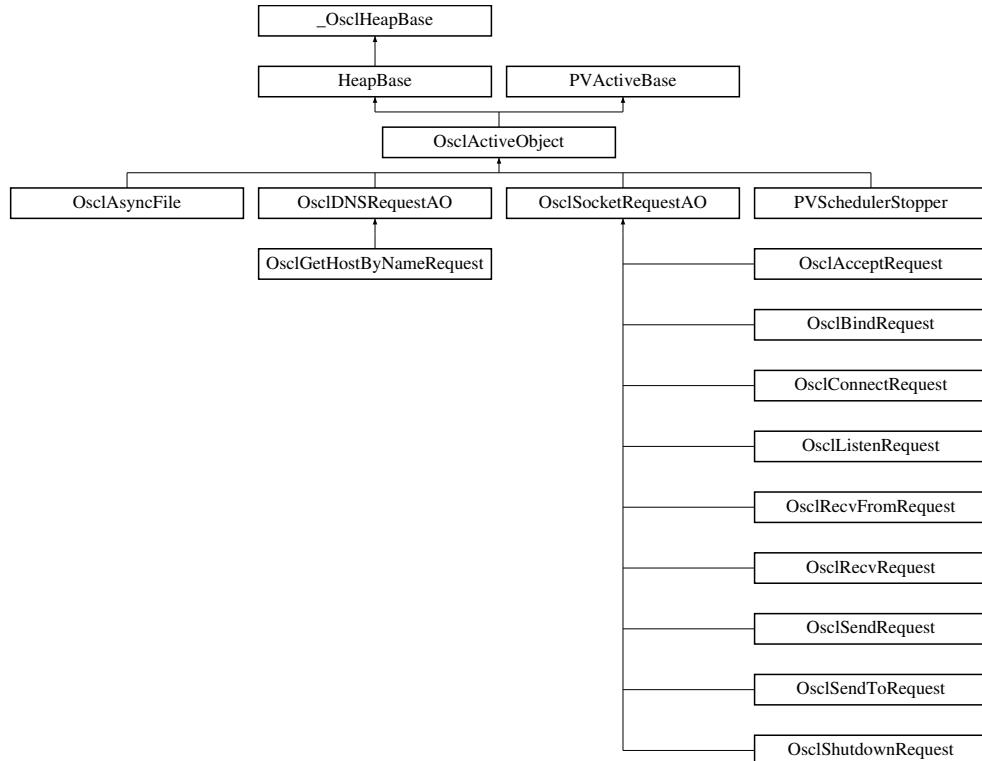
The documentation for this class was generated from the following file:

- [oscl_socket_accept.h](#)

7.91 OsclActiveObject Class Reference

```
#include <oscl_scheduler_ao.h>
```

Inheritance diagram for OsclActiveObject::



Public Types

- enum **OsclActivePriority** { **EPriorityIdle** = -100, **EPriorityLow** = -20, **EPriorityNominal** = 0, **EPriorityHigh** = 10, **EPriorityHighest** = 20 }

Public Methods

- OSCL_IMPORT_REF **OsclActiveObject** (int32 aPriority, const char name[])
- virtual OSCL_IMPORT_REF ~**OsclActiveObject** ()
- OSCL_IMPORT_REF void **SetBusy** ()
- OSCL_IMPORT_REF bool **IsBusy** () const
- OSCL_IMPORT_REF void **PendForExec** ()
- OSCL_IMPORT_REF void **PendComplete** (int32 aStatus)
- OSCL_IMPORT_REF void **AddToScheduler** ()
- OSCL_IMPORT_REF void **RemoveFromScheduler** ()
- OSCL_IMPORT_REF void **RunIfNotReady** ()
- OSCL_IMPORT_REF void **Cancel** ()
- OSCL_IMPORT_REF int32 **Priority** () const
- OSCL_IMPORT_REF int32 **Status** () const
- OSCL_IMPORT_REF void **SetStatus** (int32)
- OSCL_IMPORT_REF **OsclAOStatus & StatusRef** ()

Protected Methods

- virtual OSCL_IMPORT_REF void [DoCancel \(\)](#)
- virtual OSCL_IMPORT_REF int32 [RunError \(int32 aError\)](#)

7.91.1 Detailed Description

User base class for execution objects. OsclActiveObject defines an execution object without any timer. This AO can be used across threads, i.e. the request can be activated in one thread and completed in another.

7.91.2 Member Enumeration Documentation

7.91.2.1 enum OsclActiveObject::OsclActivePriority

Scheduling priorities.

Enumeration values:

- EPriorityIdle** A low priority, useful for execution objects representing background processing.
EPriorityLow A priority higher than EPriorityIdle but lower than EPriorityNominal.
EPriorityNominal Most exec objects will have this priority.
EPriorityHigh A priority higher than EPriorityNominal; useful for execution objects handling user input.
EPriorityHighest A priority higher than EPriorityHighest.

7.91.3 Constructor & Destructor Documentation

7.91.3.1 OSCL_IMPORT_REF OsclActiveObject::OsclActiveObject (int32 *aPriority*, const char *name*[])

Constructor.

Parameters:

- aPriority* (input param): scheduling priority
name (input param): optional name for this AO.

7.91.3.2 virtual OSCL_IMPORT_REF OsclActiveObject::~OsclActiveObject () [virtual]

Destructor.

7.91.4 Member Function Documentation

7.91.4.1 OSCL_IMPORT_REF void OsclActiveObject::AddToScheduler ()

Add this exec object to the current thread's scheduler.

Reimplemented from [PVActiveBase](#).

7.91.4.2 OSCL_IMPORT_REF void OsclActiveObject::Cancel ()

Cancel any pending request. If the request is readied, this will call the DoCancel routine, wait for the request to cancel, then set the request idle. The AO will not run. If the request is not readied, it does nothing. Request must be canceled from the same thread in which it is scheduled.

Reimplemented from [PVActiveBase](#).

7.91.4.3 virtual OSCL_IMPORT_REF void OsclActiveObject::DoCancel () [protected, virtual]

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will complete the request. If any additional action is needed, the derived class may override this. If the derived class does override DoCancel, it must complete the request.

Implements [PVActiveBase](#).

Reimplemented in [OsclDNSRequestAO](#), and [OsclSocketRequestAO](#).

7.91.4.4 OSCL_IMPORT_REF bool OsclActiveObject::IsBusy ()

Return true if this AO is pending, false otherwise.

7.91.4.5 OSCL_IMPORT_REF void OsclActiveObject::PendComplete (int32 *aStatus*)

Complete the active request for the AO. This API is thread-safe. If the request is not pending, this call will leave.

Parameters:

aStatus: request completion status.

7.91.4.6 OSCL_IMPORT_REF void OsclActiveObject::PendForExec ()

Set request active for this AO and set the status to pending. PendForExec is identical to SetActive, but it additionally sets the request status to OSCL_REQUEST_PENDING.

7.91.4.7 OSCL_IMPORT_REF int32 OsclActiveObject::Priority ()

Return scheduling priority of this exec object.

7.91.4.8 OSCL_IMPORT_REF void OsclActiveObject::RemoveFromScheduler ()

Remove this AO from its scheduler. Will leave if the calling thread context does not match the scheduling thread. Cancels any readied request before removing.

Reimplemented from [PVActiveBase](#).

**7.91.4.9 virtual OSCL_IMPORT_REF int32 OsclActiveObject::RunError (int32 *aError*)
[protected, virtual]**

Run Error handler. This gets called by scheduler when the Run routine leaves. The default implementation simply returns the leave code. If the derived class wants to handle errors from Run, it may override this. The RunError should return OsclErrNone if it handles the error, otherwise it should return the input error code.

Parameters:

aError: the leave code generated by the Run.

Implements [PVActiveBase](#).

7.91.4.10 OSCL_IMPORT_REF void OsclActiveObject::RunIfNotReady ()

Complete this AO's request immediately. If the AO is already active, this will do nothing. Will leave if the AO is not added to any scheduler, or if the calling thread context does not match the scheduling thread.

7.91.4.11 OSCL_IMPORT_REF void OsclActiveObject::SetBusy ()

Set object ready for this AO, additionally sets the request status to OSCL_REQUEST_PENDING. Will leave if the request is already readied, or the execution object is not added to any scheduler, or the calling thread context does not match the scheduler thread.

7.91.4.12 OSCL_IMPORT_REF void OsclActiveObject::SetStatus (int32)**7.91.4.13 OSCL_IMPORT_REF int32 OsclActiveObject::Status ()**

Request status access

7.91.4.14 OSCL_IMPORT_REF OsclAOStatus& OsclActiveObject::StatusRef ()

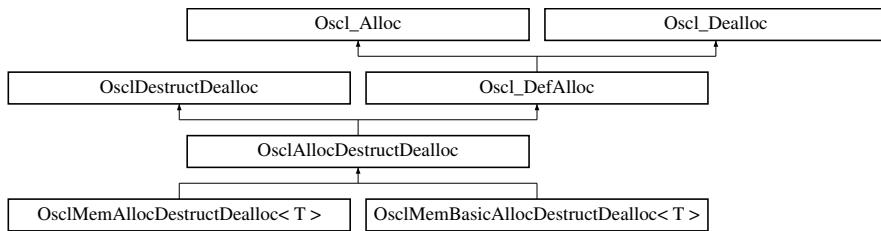
The documentation for this class was generated from the following file:

- [oscl_scheduler_ao.h](#)

7.92 OsclAllocDestructDealloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for OsclAllocDestructDealloc::



Public Methods

- virtual ~OsclAllocDestructDealloc ()

7.92.1 Constructor & Destructor Documentation

7.92.1.1 virtual OsclAllocDestructDealloc::~OsclAllocDestructDealloc () [inline, virtual]

The documentation for this class was generated from the following file:

- [oscl_defalloc.h](#)

7.93 OsclAOStatus Class Reference

```
#include <oscl_aostatus.h>
```

Public Methods

- OSCL_INLINE OsclAOStatus ()
- OSCL_INLINE OsclAOStatus (int32 aStatus)
- OSCL_INLINE int32 operator= (int32 aStatus)
- OSCL_INLINE int32 operator== (int32 aStatus) const
- OSCL_INLINE int32 operator!= (int32 aStatus) const
- OSCL_INLINE int32 operator>= (int32 aStatus) const
- OSCL_INLINE int32 operator<= (int32 aStatus) const
- OSCL_INLINE int32 operator> (int32 aStatus) const
- OSCL_INLINE int32 operator< (int32 aStatus) const
- OSCL_INLINE int32 Value () const

7.93.1 Constructor & Destructor Documentation

7.93.1.1 OSCL_INLINE OsclAOStatus::OsclAOStatus ()

7.93.1.2 OSCL_INLINE OsclAOStatus::OsclAOStatus (int32 *aStatus*)

7.93.2 Member Function Documentation

7.93.2.1 OSCL_INLINE int32 OsclAOStatus::operator!= (int32 *aStatus*) const

7.93.2.2 OSCL_INLINE int32 OsclAOStatus::operator< (int32 *aStatus*) const

7.93.2.3 OSCL_INLINE int32 OsclAOStatus::operator<= (int32 *aStatus*) const

7.93.2.4 OSCL_INLINE int32 OsclAOStatus::operator= (int32 *aStatus*)

7.93.2.5 OSCL_INLINE int32 OsclAOStatus::operator== (int32 *aStatus*) const

7.93.2.6 OSCL_INLINE int32 OsclAOStatus::operator> (int32 *aStatus*) const

7.93.2.7 OSCL_INLINE int32 OsclAOStatus::operator>= (int32 *aStatus*) const

7.93.2.8 OSCL_INLINE int32 OsclAOStatus::Value ()

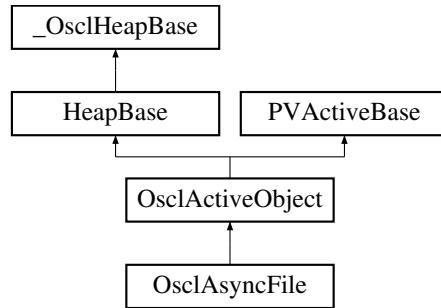
The documentation for this class was generated from the following file:

- [oscl_aostatus.h](#)

7.94 OsclAsyncFile Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclAsyncFile::



Public Methods

- [`~OsclAsyncFile \(\)`](#)
- [`int32 Open \(const oscl_wchar *filename, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv\)`](#)
- [`int32 Open \(const char *filename, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv\)`](#)
- [`int32 Seek \(TOsclFileOffset offset, Oscl_File::seek_type origin\)`](#)
- [`TOsclFileOffset Tell \(\)`](#)
- [`uint32 Read \(OsclAny *aBuffer1, uint32 aDataSize, uint32 aNumElements\)`](#)
- [`int32 EndOfFile \(\)`](#)
- [`TOsclFileOffset Size \(\)`](#)
- [`int32 Close \(\)`](#)
- [`uint32 Write \(const OsclAny *aBuffer1, uint32 aDataSize, uint32 aNumElements\)`](#)
- [`uint32 Flush \(\)`](#)

Static Public Methods

- [`OsclAsyncFile * NewL \(OsclNativeFile &aAsyncFile, int32 aCacheSize, PVLogger *\)`](#)
- [`void Delete \(OsclAsyncFile *\)`](#)

Data Fields

- [`uint32 iNumOfRun`](#)
- [`uint32 iNumOfRunErr`](#)

7.94.1 Detailed Description

OsclAsyncFile

7.94.2 Constructor & Destructor Documentation

7.94.2.1 OsclAsyncFile::~OsclAsyncFile ()

Destructor.

7.94.3 Member Function Documentation

7.94.3.1 int32 OsclAsyncFile::Close ()

7.94.3.2 void OsclAsyncFile::Delete (OsclAsyncFile *) [static]

7.94.3.3 int32 OsclAsyncFile::EndOfFile ()

7.94.3.4 uint32 OsclAsyncFile::Flush () [inline]

7.94.3.5 OsclAsyncFile* OsclAsyncFile::NewL (OsclNativeFile & aSyncFile, int32 aCacheSize, PVLogger *) [static]

Two-phased constructor.

Parameters:

aSyncFile: open handle for async file read. Note: it is the caller's job to open/close this file handle.

aSyncFile: duplicate open handle for sync file read. Note: it is the caller's job to open this file handle, but this class will close the handle.

aCacheSize: size of one of the individual cache buffers. The total cached data size will be larger, since multiple buffers are used.

aStartAsyncRead: When true, async file read will start immediately. When false, read will not begin until StartAsyncRead is called.

- 7.94.3.6 int32 OsclAsyncFile::Open (const char **filename*, uint32 *mode*, const OsclNativeFileParams & *params*, Oscl_FileServer & *fileserv*)
- 7.94.3.7 int32 OsclAsyncFile::Open (const oscl_wchar **filename*, uint32 *mode*, const OsclNativeFileParams & *params*, Oscl_FileServer & *fileserv*)
- 7.94.3.8 uint32 OsclAsyncFile::Read (OsclAny **aBuffer1*, uint32 *aDataSize*, uint32 *aNumElements*)
- 7.94.3.9 int32 OsclAsyncFile::Seek (TOsclFileOffset *offset*, Oscl_File::seek_type *origin*)
- 7.94.3.10 TOsclFileOffset OsclAsyncFile::Size ()
- 7.94.3.11 TOsclFileOffset OsclAsyncFile::Tell ()
- 7.94.3.12 uint32 OsclAsyncFile::Write (const OsclAny **aBuffer1*, uint32 *aDataSize*, uint32 *aNumElements*) [inline]

7.94.4 Field Documentation

- 7.94.4.1 uint32 OsclAsyncFile::iNumOfRun

- 7.94.4.2 uint32 OsclAsyncFile::iNumOfRunErr

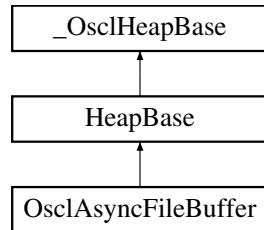
The documentation for this class was generated from the following file:

- [oscl_file_async_read.h](#)

7.95 OsclAsyncFileBuffer Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclAsyncFileBuffer::



Public Methods

- `~OsclAsyncFileBuffer ()`
- `void CleanInUse ()`
- `void SetInUse ()`
- `bool IsInUse ()`
- `bool IsValid ()`
- `TOsclFileOffset Offset ()`
- `void SetOffset (TOsclFileOffset aOffset)`
- `int32 Length ()`
- `bool HasThisOffset (TOsclFileOffset aOffset)`
- `int32 Id ()`
- `OsclBuf * Buffer ()`
- `void UpdateData ()`
- `void StartAsyncRead (bool aStartAsyncRead)`

Static Public Methods

- `OsclAsyncFileBuffer * NewL (int32 aBufferSize, int32 aId)`

7.95.1 Detailed Description

Buffer class used with async read. We keep an array of these, covering consecutive areas of the file. This allows for some seeking without requiring a full flush & refill each time.

7.95.2 Constructor & Destructor Documentation

7.95.2.1 `OsclAsyncFileBuffer::~OsclAsyncFileBuffer ()`

7.95.3 Member Function Documentation

7.95.3.1 `OsclBuf* OsclAsyncFileBuffer::Buffer ()`

7.95.3.2 `void OsclAsyncFileBuffer::CleanInUse () [inline]`

7.95.3.3 `bool OsclAsyncFileBuffer::HasThisOffset (TOsclFileOffset aOffset)`

7.95.3.4 `int32 OsclAsyncFileBuffer::Id () [inline]`

7.95.3.5 `bool OsclAsyncFileBuffer::IsInUse () [inline]`

7.95.3.6 `bool OsclAsyncFileBuffer::IsValid () [inline]`

7.95.3.7 `int32 OsclAsyncFileBuffer::Length () [inline]`

7.95.3.8 `OsclAsyncFileBuffer* OsclAsyncFileBuffer::NewL (int32 aBufferSize, int32 aId) [static]`

7.95.3.9 `TOsclFileOffset OsclAsyncFileBuffer::Offset () [inline]`

7.95.3.10 `void OsclAsyncFileBuffer::SetInUse () [inline]`

7.95.3.11 `void OsclAsyncFileBuffer::SetOffset (TOsclFileOffset aOffset) [inline]`

7.95.3.12 `void OsclAsyncFileBuffer::StartAsyncRead (bool aStartAsyncRead)`

7.95.3.13 `void OsclAsyncFileBuffer::UpdateData ()`

The documentation for this class was generated from the following file:

- `oscl_file_async_read.h`

7.96 OsclAuditCB Class Reference

```
#include <oscl_mem.h>
```

Public Methods

- [OsclAuditCB \(\)](#)
- [OsclAuditCB \(const OsclMemStatsNode *myStatsNode, OsclMemAudit *ptr\)](#)

Data Fields

- [const OsclMemStatsNode * pStatsNode](#)
- [OsclMemAudit * pAudit](#)

7.96.1 Constructor & Destructor Documentation

7.96.1.1 OsclAuditCB::OsclAuditCB () [inline]

7.96.1.2 OsclAuditCB::OsclAuditCB (const OsclMemStatsNode * *myStatsNode*, OsclMemAudit * *ptr*) [inline]

7.96.2 Field Documentation

7.96.2.1 OsclMemAudit* OsclAuditCB::pAudit

7.96.2.2 const OsclMemStatsNode* OsclAuditCB::pStatsNode

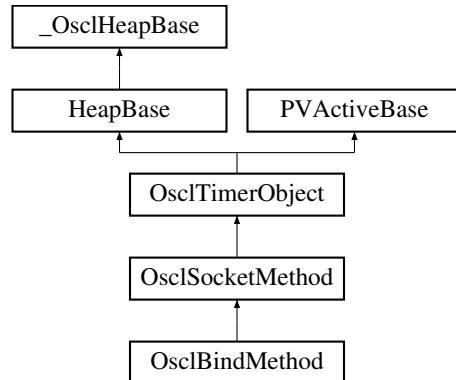
The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.97 OsclBindMethod Class Reference

```
#include <oscl_socket_bind.h>
```

Inheritance diagram for OsclBindMethod::



Public Methods

- [~OsclBindMethod \(\)](#)
- [TPVSocketEvent Bind \(OsclNetworkAddress &aAddress, int32 aTimeout\)](#)
- [OsclBindRequest * BindRequest \(\)](#)

Static Public Methods

- [OsclBindMethod * NewL \(OsclIPSocketI &c\)](#)

7.97.1 Constructor & Destructor Documentation

7.97.1.1 OsclBindMethod::~OsclBindMethod ()

7.97.2 Member Function Documentation

7.97.2.1 TPVSocketEvent OsclBindMethod::Bind (OsclNetworkAddress & aAddress, int32 aTimeout)

7.97.2.2 OsclBindRequest* OsclBindMethod::BindRequest () [inline]

7.97.2.3 OsclBindMethod* OsclBindMethod::NewL (OsclIPSocketI &c) [static]

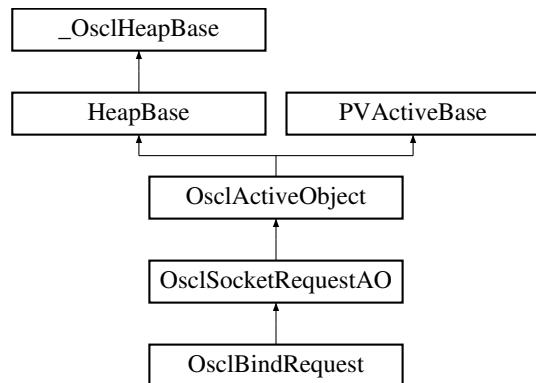
The documentation for this class was generated from the following file:

- [oscl_socket_bind.h](#)

7.98 OsclBindRequest Class Reference

```
#include <oscl_socket_bind.h>
```

Inheritance diagram for OsclBindRequest::



Public Methods

- [OsclBindRequest \(OsclSocketMethod &c\)](#)
- [void Bind \(OsclNetworkAddress &aAddress\)](#)

7.98.1 Detailed Description

This is the AO that interacts with the socket server

7.98.2 Constructor & Destructor Documentation

7.98.2.1 OsclBindRequest::OsclBindRequest ([OsclSocketMethod & c](#)) [inline]

7.98.3 Member Function Documentation

7.98.3.1 void OsclBindRequest::Bind ([OsclNetworkAddress & aAddress](#))

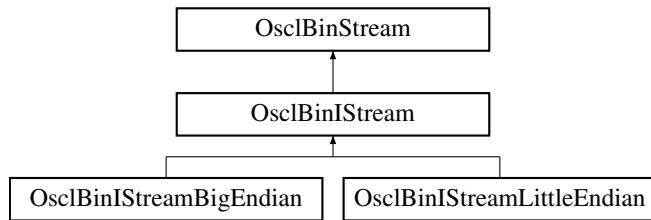
The documentation for this class was generated from the following file:

- [oscl_socket_bind.h](#)

7.99 OsclBinIStream Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinIStream::



Public Methods

- [OsclBinIStream \(\)](#)
- [~OsclBinIStream \(\)](#)
- uint8 [Read_uint8 \(\)](#)

This method reads an unsigned short from the stream.

- OsclBinIStream & [get \(int8 *data, int32 size\)](#)

This method reads 'length' number of bytes from the stream and places them in 'data'.

7.99.1 Constructor & Destructor Documentation

7.99.1.1 OsclBinIStream::OsclBinIStream () [inline]

7.99.1.2 OsclBinIStream::~OsclBinIStream () [inline]

7.99.2 Member Function Documentation

7.99.2.1 OsclBinIStream& OsclBinIStream::get (int8 * data, int32 size)

This method reads 'length' number of bytes from the stream and places them in 'data'.

Parameters:

data is a pointer to the place to store the bytes read

size is the number of bytes to read

7.99.2.2 uint8 OsclBinIStream::Read_uint8 ()

This method reads an unsigned short from the stream.

Returns:

Unsigned short read from the stream.

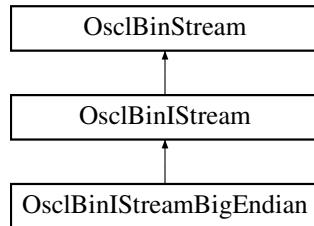
The documentation for this class was generated from the following file:

- [oscl_bin_stream.h](#)

7.100 OsclBinIStreamBigEndian Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinIStreamBigEndian::



Public Methods

- [OsclBinIStreamBigEndian \(\)](#)
- [void Read \(int8 &data\)](#)
- [void Read \(uint8 &data\)](#)
- [void Read \(int16 &data\)](#)
- [void Read \(uint16 &data\)](#)
- [void Read \(int32 &data\)](#)
- [void Read \(uint32 &data\)](#)
- [OsclBinIStreamBigEndian & operator>> \(int8 &data\)](#)

This method reads a int8 from the stream and stores it in 'data'.

- [OsclBinIStream & operator>> \(uint8 &data\)](#)

This method reads a uint8 from the stream and stores it in 'data'.

- [OsclBinIStreamBigEndian & operator>> \(int16 &data\)](#)

This method reads a int16 from the stream and stores it in 'data'.

- [OsclBinIStreamBigEndian & operator>> \(uint16 &data\)](#)

This method reads a uint16 from the stream and stores it in 'data'.

- [OsclBinIStreamBigEndian & operator>> \(int32 &data\)](#)

This method reads a int32 from the stream and stores it in 'data'.

- [OsclBinIStreamBigEndian & operator>> \(uint32 &data\)](#)

This method reads a uint32 from the stream and stores it in 'data'.

- [uint16 Read_uint16 \(\)](#)

This method reads an unsigned short from the stream.

- [uint32 Read_uint32 \(\)](#)

This method reads an unsigned long from the stream.

7.100.1 Constructor & Destructor Documentation

7.100.1.1 OsclBinIStreamBigEndian::OsclBinIStreamBigEndian () [inline]

7.100.2 Member Function Documentation

7.100.2.1 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (uint32 & data)

This method reads a uint32 from the stream and stores it in 'data'.

7.100.2.2 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (int32 & data)

This method reads a int32 from the stream and stores it in 'data'.

7.100.2.3 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (uint16 & data)

This method reads a uint16 from the stream and stores it in 'data'.

7.100.2.4 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (int16 & data)

This method reads a int16 from the stream and stores it in 'data'.

7.100.2.5 OsclBinIStream& OsclBinIStreamBigEndian::operator>> (uint8 & data)

This method reads a uint8 from the stream and stores it in 'data'.

7.100.2.6 OsclBinIStreamBigEndian& OsclBinIStreamBigEndian::operator>> (int8 & data)

This method reads a int8 from the stream and stores it in 'data'.

7.100.2.7 void OsclBinIStreamBigEndian::Read (uint32 & data)

7.100.2.8 void OsclBinIStreamBigEndian::Read (int32 & data)

7.100.2.9 void OsclBinIStreamBigEndian::Read (uint16 & data)

7.100.2.10 void OsclBinIStreamBigEndian::Read (int16 & data)

7.100.2.11 void OsclBinIStreamBigEndian::Read (uint8 & data)

7.100.2.12 void OsclBinIStreamBigEndian::Read (int8 & data)

7.100.2.13 uint16 OsclBinIStreamBigEndian::Read_uint16 ()

This method reads an unsigned short from the stream.

Returns:

Unsigned short read from the stream.

7.100.2.14 uint32 OsclBinIStreamBigEndian::Read_uint32 ()

This method reads an unsigned long from the stream.

Returns:

unsigned long read from the stream.

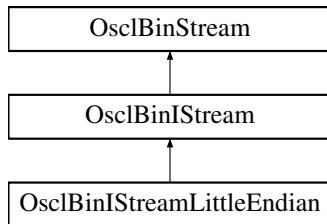
The documentation for this class was generated from the following file:

- [oscl_bin_stream.h](#)

7.101 OsclBinIStreamLittleEndian Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinIStreamLittleEndian::



Public Methods

- [OsclBinIStreamLittleEndian \(\)](#)
[OsclBinIStreamLittleEndian & operator>> \(int8 &data\)](#)
This method reads a int8 from the stream and stores it in 'data'.
- [OsclBinIStreamLittleEndian & operator>> \(uint8 &data\)](#)
This method reads a uint8 from the stream and stores it in 'data'.
- [OsclBinIStreamLittleEndian & operator>> \(int16 &data\)](#)
This method reads a int16 from the stream and stores it in 'data'.
- [OsclBinIStreamLittleEndian & operator>> \(uint16 &data\)](#)
This method reads a uint16 from the stream and stores it in 'data'.
- [OsclBinIStreamLittleEndian & operator>> \(int32 &data\)](#)
This method reads a int32 from the stream and stores it in 'data'.
- [OsclBinIStreamLittleEndian & operator>> \(uint32 &data\)](#)
This method reads a uint32 from the stream and stores it in 'data'.

Protected Methods

- uint16 [Read_uint16 \(\)](#)
- uint32 [Read_uint32 \(\)](#)

7.101.1 Constructor & Destructor Documentation

7.101.1.1 OsclBinIStreamLittleEndian::OsclBinIStreamLittleEndian () [inline]

7.101.2 Member Function Documentation

7.101.2.1 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (uint32 & data)

This method reads a uint32 from the stream and stores it in 'data'.

7.101.2.2 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (int32 & data)

This method reads a int32 from the stream and stores it in 'data'.

7.101.2.3 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (uint16 & data)

This method reads a uint16 from the stream and stores it in 'data'.

7.101.2.4 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (int16 & data)

This method reads a int16 from the stream and stores it in 'data'.

7.101.2.5 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (uint8 & data)

This method reads a uint8 from the stream and stores it in 'data'.

7.101.2.6 OsclBinIStreamLittleEndian& OsclBinIStreamLittleEndian::operator>> (int8 & data)

This method reads a int8 from the stream and stores it in 'data'.

7.101.2.7 uint16 OsclBinIStreamLittleEndian::Read_uint16 () [protected]

7.101.2.8 uint32 OsclBinIStreamLittleEndian::Read_uint32 () [protected]

The documentation for this class was generated from the following file:

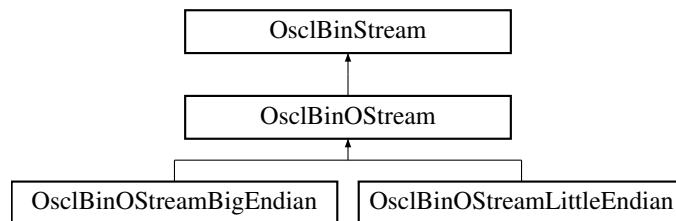
- [oscl_bin_stream.h](#)

7.102 OsclBinOStream Class Reference

Class OsclBinOStream implements the basic stream functions for an output stream.

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinOStream:::



Public Methods

- [OsclBinOStream \(\)](#)
- virtual [~OsclBinOStream \(\)](#)
- [OsclBinOStream & write \(const int8 *data, int32 size\)](#)

This method writes 'length' number of bytes stored in 'data' to the stream.

7.102.1 Detailed Description

Class OsclBinOStream implements the basic stream functions for an output stream.

7.102.2 Constructor & Destructor Documentation

7.102.2.1 [OsclBinOStream::OsclBinOStream \(\) \[inline\]](#)

7.102.2.2 [virtual OsclBinOStream::~OsclBinOStream \(\) \[inline, virtual\]](#)

7.102.3 Member Function Documentation

7.102.3.1 [OsclBinOStream& OsclBinOStream::write \(const int8 * data, int32 size\)](#)

This method writes 'length' number of bytes stored in 'data' to the stream.

The documentation for this class was generated from the following file:

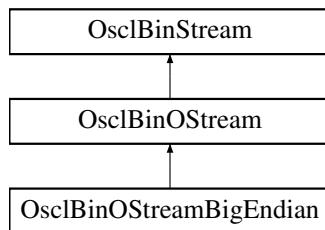
- [oscl_bin_stream.h](#)

7.103 OsclBinOStreamBigEndian Class Reference

Class OsclBinOStreamBigEndian implements a binary output stream using big endian byte ordering.

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinOStreamBigEndian::



Public Methods

- [OsclBinOStreamBigEndian \(\)](#)
- OsclBinOStreamBigEndian & [operator<< \(const int8 &data\)](#)
This method writes a int8 from 'data' to the stream.
- OsclBinOStreamBigEndian & [operator<< \(const uint8 &data\)](#)
This method writes a uint8 from 'data' to the stream.
- OsclBinOStreamBigEndian & [operator<< \(const int16 &data\)](#)
This method writes a int16 from 'data' to the stream.
- OsclBinOStreamBigEndian & [operator<< \(const uint16 &data\)](#)
This method writes a uint16 from 'data' to the stream.
- OsclBinOStreamBigEndian & [operator<< \(const int32 &data\)](#)
This method writes a int32 from 'data' to the stream.
- OsclBinOStreamBigEndian & [operator<< \(const uint32 &data\)](#)
This method writes a uint32 from 'data' to the stream.

Protected Methods

- void [WriteUnsignedShort \(const uint16 data\)](#)
- void [WriteUnsignedLong \(const uint32 data\)](#)

7.103.1 Detailed Description

Class OsclBinOStreamBigEndian implements a binary output stream using big endian byte ordering.

7.103.2 Constructor & Destructor Documentation

7.103.2.1 OsclBinOStreamBigEndian::OsclBinOStreamBigEndian () [inline]

7.103.3 Member Function Documentation

7.103.3.1 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const uint32 & data)

This method writes a uint32 from 'data' to the stream.

7.103.3.2 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const int32 & data)

This method writes a int32 from 'data' to the stream.

7.103.3.3 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const uint16 & data)

This method writes a uint16 from 'data' to the stream.

7.103.3.4 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const int16 & data)

This method writes a int16 from 'data' to the stream.

7.103.3.5 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const uint8 & data)

This method writes a uint8 from 'data' to the stream.

7.103.3.6 OsclBinOStreamBigEndian& OsclBinOStreamBigEndian::operator<< (const int8 & data)

This method writes a int8 from 'data' to the stream.

7.103.3.7 void OsclBinOStreamBigEndian::WriteUnsignedLong (const uint32 data) [protected]

7.103.3.8 void OsclBinOStreamBigEndian::WriteUnsignedShort (const uint16 data) [protected]

The documentation for this class was generated from the following file:

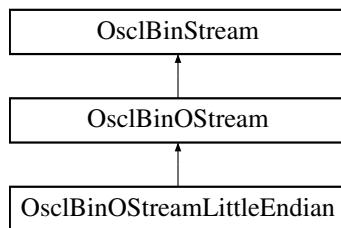
- [oscl_bin_stream.h](#)

7.104 OsclBinOStreamLittleEndian Class Reference

Class OsclBinOStreamLittleEndian implements a binary output stream using little endian byte ordering.

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinOStreamLittleEndian::



Public Methods

- [OsclBinOStreamLittleEndian \(\)](#)
- [OsclBinOStreamLittleEndian & operator<< \(const int8 &data\)](#)
This method writes a int8 from 'data' to the stream.
- [OsclBinOStreamLittleEndian & operator<< \(const uint8 &data\)](#)
This method writes a uint8 from 'data' to the stream.
- [OsclBinOStreamLittleEndian & operator<< \(const int16 &data\)](#)
This method writes a int16 from 'data' to the stream.
- [OsclBinOStreamLittleEndian & operator<< \(const uint16 &data\)](#)
This method writes a uint16 from 'data' to the stream.
- [OsclBinOStreamLittleEndian & operator<< \(const int32 &data\)](#)
This method writes a int32 from 'data' to the stream.
- [OsclBinOStreamLittleEndian & operator<< \(const uint32 &data\)](#)
This method writes a uint32 from 'data' to the stream.

Protected Methods

- [void WriteUnsignedShort \(const uint16 data\)](#)
This method writes 'data' (unsigned short) to the stream.
- [void WriteUnsignedLong \(const uint32 data\)](#)
This method writes 'data' (unsigned long) to the stream.

7.104.1 Detailed Description

Class OsclBinOStreamLittleEndian implements a binary output stream using little endian byte ordering.

7.104.2 Constructor & Destructor Documentation

7.104.2.1 OsclBinOStreamLittleEndian::OsclBinOStreamLittleEndian () [inline]

7.104.3 Member Function Documentation

7.104.3.1 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const uint32 & data)

This method writes a uint32 from 'data' to the stream.

7.104.3.2 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const int32 & data)

This method writes a int32 from 'data' to the stream.

7.104.3.3 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const uint16 & data)

This method writes a uint16 from 'data' to the stream.

7.104.3.4 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const int16 & data)

This method writes a int16 from 'data' to the stream.

7.104.3.5 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const uint8 & data)

This method writes a uint8 from 'data' to the stream.

7.104.3.6 OsclBinOStreamLittleEndian& OsclBinOStreamLittleEndian::operator<< (const int8 & data)

This method writes a int8 from 'data' to the stream.

7.104.3.7 void OsclBinOStreamLittleEndian::WriteUnsignedLong (const uint32 data) [protected]

This method writes 'data' (unsigned long) to the stream.

7.104.3.8 void OsclBinOStreamLittleEndian::WriteUnsignedShort (const uint16 data) [protected]

This method writes 'data' (unsigned short) to the stream.

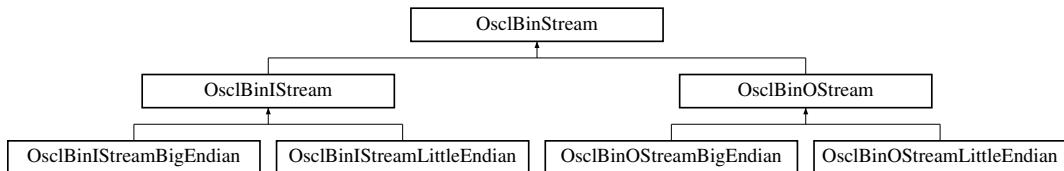
The documentation for this class was generated from the following file:

- [oscl_bin_stream.h](#)

7.105 OsclBinStream Class Reference

```
#include <oscl_bin_stream.h>
```

Inheritance diagram for OsclBinStream::



Public Methods

- [OsclBinStream \(\)](#)
- [bool good \(\)](#)

This method determines if the stream is ok.

- [bool eof \(\)](#)

This method determines if end of stream has been reached.

- [bool fail \(\)](#)

This method determines if an error has occurred in the stream.

- [void Attach \(void *buffer, uint32 l_length\)](#)

This method specifies the data buffer to attach to the stream.

- [void Attach \(const uint32 numFragments, const OsclMemoryFragment *fragPtr\)](#)

This method specifies the memory fragment array to use for input.

- [uint32 tellg \(\)](#)

This method returns the current stream position.

- [void Seek \(uint32 absPosition\)](#)

This method seeks to the specified stream position.

- [uint32 PositionInBlock \(\)](#)

This method returns the current stream position.

- [void seekFromCurrentPosition \(int32 offset\)](#)

This method seeks to the specified offset from the current location.

Protected Types

- enum [state_t](#) { [GOOD_STATE](#), [EOF_STATE](#), [FAIL_STATE](#) }

Protected Methods

- bool [ReserveSpace](#) (uint32 size)
- bool [HaveRoomInCurrentBlock](#) (uint32 size)

Protected Attributes

- [state_t state](#)
- uint8 * [pBasePosition](#)
- uint8 * [pPosition](#)
- uint32 [length](#)
- const [OsclMemoryFragment](#) * [nextFragPtr](#)
- int [fragsLeft](#)
- const [OsclMemoryFragment](#) * [firstFragPtr](#)
- int [numFrags](#)
- [OsclMemoryFragment](#) [specialFragBuffer](#)

7.105.1 Member Enumeration Documentation

7.105.1.1 enum OsclBinStream::state_t [protected]

Enumeration values:

- GOOD_STATE**
- EOF_STATE**
- FAIL_STATE**

7.105.2 Constructor & Destructor Documentation

7.105.2.1 OsclBinStream::OsclBinStream () [inline]

7.105.3 Member Function Documentation

7.105.3.1 void OsclBinStream::Attach (const uint32 *numFragments*, const [OsclMemoryFragment](#) **fragPtr*)

This method specifies the memory fragment array to use for input.

This array should remain static while the stream refers to it.

Parameters:

numFragments is the number of elements in the array

fragPtr is the pointer to the MemoryFragment array

7.105.3.2 void OsclBinStream::Attach (void **buffer*, uint32 *l_length*)

This methods specifies the data buffer to attach to the stream.

Parameters:

buffer will provide the input

length of the buffer

7.105.3.3 bool OsclBinStream::eof ()

This method determines if end of stream has been reached.

Returns:

true if end of stream has been reached.

7.105.3.4 bool OsclBinStream::fail ()

This method determines if an error has occurred in the stream.

Returns:

true if an error occurred in the stream.

7.105.3.5 bool OsclBinStream::good ()

This method determines if the stream is ok.

Returns:

true if stream is ok.

7.105.3.6 bool OsclBinStream::HaveRoomInCurrentBlock (uint32 *size*) [protected]**7.105.3.7 uint32 OsclBinStream::PositionInBlock ()**

This method returns the current stream position.

Returns:

stream position.

7.105.3.8 bool OsclBinStream::ReserveSpace (uint32 *size*) [protected]**7.105.3.9 void OsclBinStream::Seek (uint32 *absPosition*)**

This method seeks to the specified stream position.

Returns:

Stream position.

7.105.3.10 void OsclBinStream::seekFromCurrentPosition (int32 *offset*)

This method seeks to the specified offset from the current location.

Parameters:

offset from current stream location

7.105.3.11 uint32 OsclBinStream::tellg ()

This method returns the current stream position.

This method is to be used if the input stream is a pointer to the MemoryFragment array

Returns:

Stream position.

7.105.4 Field Documentation

7.105.4.1 const OsclMemoryFragment* OsclBinStream::firstFragPtr [protected]

7.105.4.2 int OsclBinStream::fragsLeft [protected]

7.105.4.3 uint32 OsclBinStream::length [protected]

7.105.4.4 const OsclMemoryFragment* OsclBinStream::nextFragPtr [protected]

7.105.4.5 int OsclBinStream::numFrags [protected]

7.105.4.6 uint8* OsclBinStream::pBasePosition [protected]

7.105.4.7 uint8* OsclBinStream::pPosition [protected]

7.105.4.8 OsclMemoryFragment OsclBinStream::specialFragBuffer [protected]

7.105.4.9 state_t OsclBinStream::state [protected]

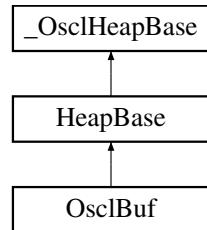
The documentation for this class was generated from the following file:

- [oscl_bin_stream.h](#)

7.106 OsclBuf Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclBuf::



Public Methods

- [OsclBuf](#) (int32 size)
- int32 [Length](#) ()
- [OsclPtr Des](#) ()
- [OsclPtrC DesC](#) ()

Static Public Methods

- OsclBuf * [NewL](#) (int32 size)
- void [Delete](#) (OsclBuf *a)

Data Fields

- uint8 * [iBuffer](#)
- int32 [iMaxLength](#)
- int32 [iLength](#)

7.106.1 Constructor & Destructor Documentation

7.106.1.1 `OsclBuf::OsclBuf (int32 size)` [inline]

7.106.2 Member Function Documentation

7.106.2.1 `void OsclBuf::Delete (OsclBuf * a)` [inline, static]

7.106.2.2 `OsclPtr OsclBuf::Des ()` [inline]

7.106.2.3 `OsclPtrC OsclBuf::DesC ()` [inline]

7.106.2.4 `int32 OsclBuf::Length ()` [inline]

7.106.2.5 `OsclBuf* OsclBuf::NewL (int32 size)` [inline, static]

7.106.3 Field Documentation

7.106.3.1 `uint8* OsclBuf::iBuffer`

7.106.3.2 `int32 OsclBuf::iLength`

7.106.3.3 `int32 OsclBuf::iMaxLength`

The documentation for this class was generated from the following file:

- [oscl_file_async_read.h](#)

7.107 OsclCompareLess< T > Class Template Reference

```
#include <oscl_priqueue.h>
```

Public Methods

- int [compare](#) (T &a, T &b) const

```
template<class T> class OsclCompareLess< T >
```

7.107.1 Member Function Documentation

**7.107.1.1 template<class T> int OsclCompareLess< T >::compare (T & a, T & b) const
[inline]**

The documentation for this class was generated from the following file:

- [oscl_priqueue.h](#)

7.108 OsclComponentRegistry Class Reference

```
#include <oscl_registry_serv_impl.h>
```

Public Methods

- [OsclComponentRegistry \(\)](#)
- [~OsclComponentRegistry \(\)](#)
- [int32 Register \(uint32 &aId, OSCL_String &, OsclComponentFactory\)](#)
- [int32 Unregister \(OSCL_String &\)](#)
- [int32 Unregister \(uint32\)](#)
- [OsclComponentFactory FindExact \(OSCL_String &\)](#)
- [void FindHierarchical \(OSCL_String &, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &\)](#)
- [void OpenSession \(\)](#)
- [void CloseSession \(\)](#)

Data Fields

- [OsclComponentRegistryData iData](#)
- [OsclMutex iMutex](#)
- [uint32 iComponentIdCounter](#)
- [uint32 iNumSessions](#)

7.108.1 Detailed Description

Thread-safe singleton registry object.

7.108.2 Constructor & Destructor Documentation

7.108.2.1 `OsclComponentRegistry::OsclComponentRegistry ()`

7.108.2.2 `OsclComponentRegistry::~OsclComponentRegistry ()`

7.108.3 Member Function Documentation

7.108.3.1 `void OsclComponentRegistry::CloseSession ()`

7.108.3.2 `OsclComponentFactory OsclComponentRegistry::FindExact (OSCL_String &)`

7.108.3.3 `void OsclComponentRegistry::FindHierarchical (OSCL_String &, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &)`

7.108.3.4 `void OsclComponentRegistry::OpenSession ()`

7.108.3.5 `int32 OsclComponentRegistry::Register (uint32 & aId, OSCL_String &, OsclComponentFactory)`

7.108.3.6 `int32 OsclComponentRegistry::Unregister (uint32)`

7.108.3.7 `int32 OsclComponentRegistry::Unregister (OSCL_String &)`

7.108.4 Field Documentation

7.108.4.1 `uint32 OsclComponentRegistry::iComponentIdCounter`

7.108.4.2 `OsclComponentRegistryData OsclComponentRegistry::iData`

7.108.4.3 `OsclMutex OsclComponentRegistry::iMutex`

7.108.4.4 `uint32 OsclComponentRegistry::iNumSessions`

The documentation for this class was generated from the following file:

- `oscl_registry_serv_impl.h`

7.109 OsclComponentRegistryData Class Reference

```
#include <oscl_registry_serv_impl.h>
```

Public Methods

- [OsclComponentRegistryElement * Find \(OSCL_String &, bool aExact\)](#)

Data Fields

- [Oscl_Vector< OsclComponentRegistryElement, OsclMemAllocator > iVec](#)

7.109.1 Detailed Description

Registry

7.109.2 Member Function Documentation

7.109.2.1 [OsclComponentRegistryElement* OsclComponentRegistryData::Find \(OSCL_String &, bool aExact\)](#)

7.109.3 Field Documentation

7.109.3.1 [Oscl_Vector<OsclComponentRegistryElement, OsclMemAllocator> OsclComponentRegistryData::iVec](#)

The documentation for this class was generated from the following file:

- [oscl_registry_serv_impl.h](#)

7.110 OsclComponentRegistryElement Class Reference

```
#include <oscl_registry_serv_impl.h>
```

Public Methods

- [OsclComponentRegistryElement \(OSCL_String &, OsclComponentFactory\)](#)
- [OsclComponentRegistryElement \(const OsclComponentRegistryElement &\)](#)
- [OsclComponentRegistryElement & operator= \(const OsclComponentRegistryElement &src\)](#)
- [~OsclComponentRegistryElement \(\)](#)
- [bool Match \(OSCL_String &aStr, bool aExact\)](#)

Data Fields

- [OSCL_String * iId](#)
- [OsclComponentFactory iFactory](#)
- [uint32 iComponentId](#)

7.110.1 Detailed Description

Data for each registered component.

7.110.2 Constructor & Destructor Documentation

7.110.2.1 OsclComponentRegistryElement::OsclComponentRegistryElement (OSCL_String &, OsclComponentFactory)

7.110.2.2 OsclComponentRegistryElement::OsclComponentRegistryElement (const OsclComponentRegistryElement &)

7.110.2.3 OsclComponentRegistryElement::~OsclComponentRegistryElement ()

7.110.3 Member Function Documentation

7.110.3.1 bool OsclComponentRegistryElement::Match (OSCL_String & aStr, bool aExact)

7.110.3.2 OsclComponentRegistryElement& OsclComponentRegistryElement::operator= (const OsclComponentRegistryElement & src)

7.110.4 Field Documentation

7.110.4.1 uint32 OsclComponentRegistryElement::iComponentId

7.110.4.2 OsclComponentFactory OsclComponentRegistryElement::iFactory

7.110.4.3 OSCL_String* OsclComponentRegistryElement::iId

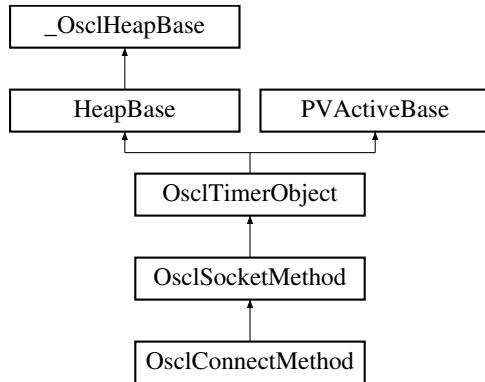
The documentation for this class was generated from the following file:

- [oscl_registry_serv_impl.h](#)

7.111 OsclConnectMethod Class Reference

```
#include <oscl_socket_connect.h>
```

Inheritance diagram for OsclConnectMethod::



Public Methods

- [~OsclConnectMethod \(\)](#)
- [TPVSocketEvent Connect \(OsclNetworkAddress &aAddress, int32 aTimeout\)](#)
- [OsclConnectRequest * ConnectRequest \(\)](#)

Static Public Methods

- [OsclConnectMethod * NewL \(OsclIPSocketI &c\)](#)

7.111.1 Constructor & Destructor Documentation

7.111.1.1 OsclConnectMethod::~OsclConnectMethod ()

7.111.2 Member Function Documentation

7.111.2.1 TPVSocketEvent OsclConnectMethod::Connect (OsclNetworkAddress & aAddress, int32 aTimeout)

7.111.2.2 OsclConnectRequest* OsclConnectMethod::ConnectRequest () [inline]

7.111.2.3 OsclConnectMethod* OsclConnectMethod::NewL (OsclIPSocketI & c) [static]

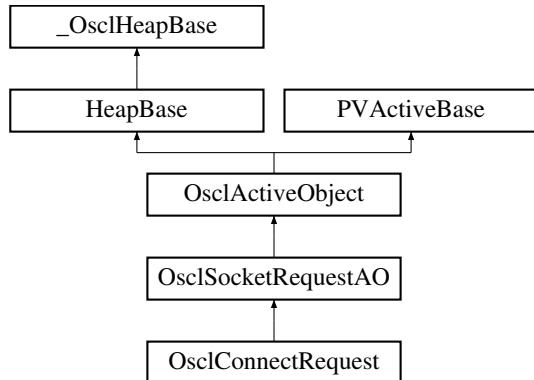
The documentation for this class was generated from the following file:

- [oscl_socket_connect.h](#)

7.112 OsclConnectRequest Class Reference

```
#include <oscl_socket_connect.h>
```

Inheritance diagram for OsclConnectRequest::



Public Methods

- [OsclConnectRequest \(OsclSocketMethod &c\)](#)
- [void Connect \(OsclNetworkAddress &aAddress\)](#)

7.112.1 Detailed Description

This is the AO that interacts with the socket server

7.112.2 Constructor & Destructor Documentation

7.112.2.1 OsclConnectRequest::OsclConnectRequest ([OsclSocketMethod & c](#)) [inline]

7.112.3 Member Function Documentation

7.112.3.1 void OsclConnectRequest::Connect ([OsclNetworkAddress & aAddress](#))

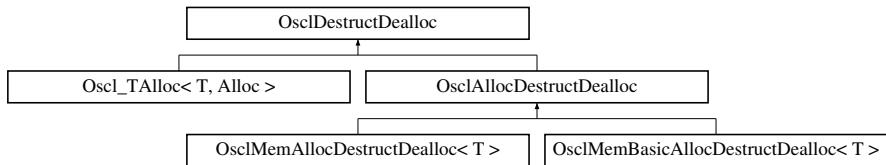
The documentation for this class was generated from the following file:

- [oscl_socket_connect.h](#)

7.113 OsclDestructDealloc Class Reference

```
#include <oscl_defalloc.h>
```

Inheritance diagram for OsclDestructDealloc::



Public Methods

- virtual ~OsclDestructDealloc ()
- virtual void [destruct_and_dealloc \(OsclAny *ptr\)=0](#)

7.113.1 Constructor & Destructor Documentation

7.113.1.1 virtual OsclDestructDealloc::~OsclDestructDealloc () [inline, virtual]

7.113.2 Member Function Documentation

7.113.2.1 virtual void OsclDestructDealloc::destruct_and_dealloc (OsclAny * ptr) [pure virtual]

Implemented in [Oscl_TAlloc< T, Alloc >](#), [OsclMemAllocDestructDealloc< T >](#), [OsclMemBasicAllocDestructDealloc< T >](#), [Oscl_TAlloc< entry_type, Alloc >](#), [Oscl_TAlloc< node_type, TagTree_Allocator >](#), [Oscl_TAlloc< node_type, alloc_type >](#), [Oscl_TAlloc< MM_StatsNodeTagTreeType, OsclMemBasicAllocator >](#), [Oscl_TAlloc< char, alloc_type >](#), [Oscl_TAlloc< tag_base_unit, Alloc >](#), [Oscl_TAlloc< PVLogger, alloc_type >](#), and [Oscl_TAlloc< node_type, Alloc >](#).

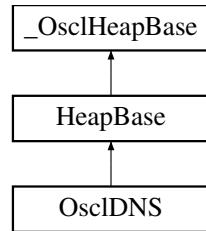
The documentation for this class was generated from the following file:

- [oscl_defalloc.h](#)

7.114 OsclDNS Class Reference

```
#include <oscl_dns.h>
```

Inheritance diagram for OsclDNS::



Public Methods

- OSCL_IMPORT_REF ~OsclDNS ()
- OSCL_IMPORT_REF TPVDNSEvent GetHostByName (char *name, OsclNetworkAddress &addr, int32 aTimeoutMsec=-1, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aAddressList=NULL)
- OSCL_IMPORT_REF void CancelGetHostByName ()

Static Public Methods

- OSCL_IMPORT_REF OsclDNS * NewL (Oscl_DefAlloc &alloc, OsclSocketServ &aServ, OsclDNSObserver &aObserver, uint32 aId)

Friends

- class OsclDNSRequestAO

7.114.1 Detailed Description

The DNS class

7.114.2 Constructor & Destructor Documentation

7.114.2.1 OSCL_IMPORT_REF OsclDNS::~OsclDNS ()

Destructor.

Note: the application must de-allocate the DNS object using the same allocator that was passed in the NewL object creation call.

7.114.3 Member Function Documentation

7.114.3.1 OSCL_IMPORT_REF void OsclDNS::CancelGetHostByName ()

Cancel GetHostByName

This method will cancel any pending GetHostByName operation on the current object, causing the GetHostByName to complete with error EPVDNSCancel. If there is no pending GetHostByName operation, this method will have no effect.

7.114.3.2 OSCL_IMPORT_REF TPVDNSEvent OsclDNS::GetHostByName (char * *name*, OsclNetworkAddress & *addr*, int32 *aTimeoutMsec* = -1, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * *aAddressList* = NULL)

GetHostByName. This is an asynchronous method.

Parameters:

name: Null-terminated string containing the host name.

addr: The output address corresponding to the host. The ipAddr field will contain the network address of the host in dotted decimal notation.

aTimeoutMsec: A timeout for the request in milliseconds, or (-1) to indicate infinite wait.

aAddressList : A list of addresses for the host. @returns: EPVDNSPending for success, EPVDNSFailure for failure.

7.114.3.3 OSCL_IMPORT_REF OsclDNS* OsclDNS::NewL (Oscl_DefAlloc & *alloc*, OsclSocketServ & *aServ*, OsclDNSObserver & *aObserver*, uint32 *aId*) [static]

DNS object creation.

Parameters:

alloc: Memory allocator

aServ: Socket server.

aObserver: DNS Event observer

aId: Unique ID for this DNS object. This ID will be included in all callbacks associated with this DNS object.

7.114.4 Friends And Related Function Documentation

7.114.4.1 friend class OsclDNSRequestAO [friend]

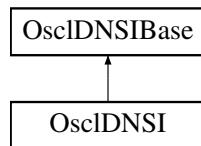
The documentation for this class was generated from the following file:

- [oscl_dns.h](#)

7.115 OsclDNSI Class Reference

```
#include <oscl_dns_imp_pv.h>
```

Inheritance diagram for OsclDNSI::



Public Methods

- [~OsclDNSI \(\)](#)
- int32 [Open \(OsclSocketServI &aServer\)](#)
- int32 [Close \(\)](#)
- void [GetHostByName \(GetHostNameParam &, OsclDNSRequestAO &\)](#)
- void [GetHostByNameSuccess \(GetHostNameParam &\)](#)
- void [GetNextHost \(OsclDNSRequestAO &\)](#)
- void [GetNextHostSuccess \(GetHostNameParam &\)](#)
- bool [GetHostByNameResponseContainsAliasInfo \(\)](#)

Static Public Methods

- OsclDNSI * [NewL \(Oscl_DefAlloc &a\)](#)

Friends

- class [OsclDNSRequest](#)
- class [OsclGetHostByNameRequest](#)
- class [DNSRequestParam](#)

7.115.1 Detailed Description

OsclDNSI, non-Symbian implementation

7.115.2 Constructor & Destructor Documentation

7.115.2.1 OsclDNSI::~OsclDNSI ()

7.115.3 Member Function Documentation

7.115.3.1 int32 OsclDNSI::Close () [virtual]

Implements [OsclDNSIBase](#).

7.115.3.2 void OsclDNSI::GetHostByName ([GetHostNameParam](#) &, [OsclDNSRequestAO](#) &) [virtual]

Implements [OsclDNSIBase](#).

7.115.3.3 bool OsclDNSI::GetHostNameResponseContainsAliasInfo () [virtual]

Implements [OsclDNSIBase](#).

7.115.3.4 void OsclDNSI::GetHostNameSuccess ([GetHostNameParam](#) &) [virtual]

Implements [OsclDNSIBase](#).

7.115.3.5 void OsclDNSI::GetNextHost ([OsclDNSRequestAO](#) &) [virtual]

Implements [OsclDNSIBase](#).

7.115.3.6 void OsclDNSI::GetNextHostSuccess ([GetHostNameParam](#) &) [virtual]

Implements [OsclDNSIBase](#).

7.115.3.7 OsclDNSI* OsclDNSI::NewL ([Oscl_DefAlloc](#) & *a*) [static]

7.115.3.8 int32 OsclDNSI::Open ([OsclSocketServI](#) & *aServer*) [virtual]

Implements [OsclDNSIBase](#).

7.115.4 Friends And Related Function Documentation

7.115.4.1 friend class DNSRequestParam [friend]

7.115.4.2 friend class OsclDNSRequest [friend]

Reimplemented from [OsclDNSIBase](#).

7.115.4.3 friend class OsclGetHostNameRequest [friend]

Reimplemented from [OsclDNSIBase](#).

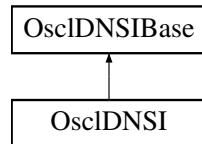
The documentation for this class was generated from the following file:

- [oscl_dns_imp_pv.h](#)

7.116 OsclDNSIBase Class Reference

```
#include <oscl_dns_imp_base.h>
```

Inheritance diagram for OsclDNSIBase::



Public Methods

- virtual ~OsclDNSIBase ()
- virtual int32 Open (OsclSocketServI &aServer)=0
- virtual int32 Close ()=0
- virtual void GetHostByName (GetHostNameParam &, OsclDNSRequestAO &)=0
- virtual void GetHostByNameSuccess (GetHostNameParam &)=0
- virtual bool GetHostByNameResponseContainsAliasInfo ()=0
- virtual void GetNextHost (OsclDNSRequestAO &)=0
- virtual void GetNextHostSuccess (GetHostNameParam &)=0
- void CancelFxn (TPVDNSFx)

Protected Methods

- OsclDNSIBase (Oscl_DefAlloc &a)
- virtual bool IsReady (OsclDNSRequestAO &aObject)=0
- virtual void CancelGetHostByName ()=0

Protected Attributes

- Oscl_DefAlloc & iAlloc
- OsclSocketServI * iSocketServ

Friends

- class OsclDNSRequest
- class OsclGetHostNameRequest

7.116.1 Detailed Description

OsclDNSIBase is a common base class for all implementations.

7.116.2 Constructor & Destructor Documentation

7.116.2.1 `virtual OsclDNSIBase::~OsclDNSIBase () [virtual]`

7.116.2.2 `OsclDNSIBase::OsclDNSIBase (Oscl_DefAlloc & a) [protected]`

7.116.3 Member Function Documentation

7.116.3.1 `void OsclDNSIBase::CancelFxn (TPVDNSFxn)`

7.116.3.2 `virtual void OsclDNSIBase::CancelGetHostByName () [protected, pure virtual]`

7.116.3.3 `virtual int32 OsclDNSIBase::Close () [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.3.4 `virtual void OsclDNSIBase::GetHostByName (GetHostNameParam &, OsclDNSRequestAO &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.3.5 `virtual bool OsclDNSIBase::GetHostByNameResponseContainsAliasInfo () [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.3.6 `virtual void OsclDNSIBase::GetHostByNameSuccess (GetHostNameParam &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.3.7 `virtual void OsclDNSIBase::GetNextHost (OsclDNSRequestAO &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.3.8 `virtual void OsclDNSIBase::GetNextHostSuccess (GetHostNameParam &) [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.3.9 `virtual bool OsclDNSIBase::IsReady (OsclDNSRequestAO & aObject) [protected, pure virtual]`

7.116.3.10 `virtual int32 OsclDNSIBase::Open (OsclSocketServI & aServer) [pure virtual]`

Implemented in [OsclDNSI](#).

7.116.4 Friends And Related Function Documentation

7.116.4.1 friend class OsclDNSRequest [friend]

Reimplemented in [OsclDNSI](#).

7.116.4.2 friend class OsclGetHostByNameRequest [friend]

Reimplemented in [OsclDNSI](#).

7.116.5 Field Documentation

7.116.5.1 [Oscl_DefAlloc& OsclDNSIBase::iAlloc](#) [protected]

7.116.5.2 [OsclSocketServI* OsclDNSIBase::iSocketServ](#) [protected]

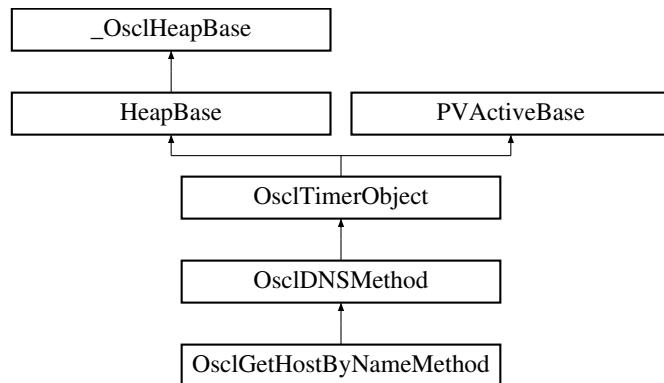
The documentation for this class was generated from the following file:

- [oscl_dns_imp_base.h](#)

7.117 OsclDNSMethod Class Reference

```
#include <oscl_dns_method.h>
```

Inheritance diagram for OsclDNSMethod::



Public Methods

- [OsclDNSMethod \(Oscl_DefAlloc &a, const char *name, TPVDNSFxn fxn\)](#)
- void [Abort \(\)](#)
- void [AbortAll \(\)](#)
- void [CancelMethod \(\)](#)
- void [Run \(\)](#)

Data Fields

- [OsclDNSObserver * iDNSObserver](#)
- uint32 [iId](#)
- [Oscl_DefAlloc & iAlloc](#)
- [TPVDNSFxn iDNSFxn](#)
- [PVLogger * iLogger](#)

Protected Methods

- void [ConstructL \(OsclDNSObserver *aObserver, OsclDNSRequestAO *aAO, uint32 aId\)](#)
- bool [StartMethod \(int32 aTimeoutMsec\)](#)
- void [MethodDone \(\)](#)

Protected Attributes

- [OsclDNSRequestAO * iDNSRequestAO](#)

7.117.1 Detailed Description

This is the base class for all socket methods. It provides the timeout on socket requests.

7.117.2 Constructor & Destructor Documentation

7.117.2.1 OsclDNSMethod::OsclDNSMethod ([Oscl_DefAlloc](#) & *a*, const char * *name*, [TPVDNSFxn](#) *fxn*) [inline]

7.117.3 Member Function Documentation

7.117.3.1 void OsclDNSMethod::Abort ()

7.117.3.2 void OsclDNSMethod::AbortAll ()

7.117.3.3 void OsclDNSMethod::CancelMethod ()

7.117.3.4 void OsclDNSMethod::ConstructL ([OsclDNSObserver](#) * *aObserver*, [OsclDNSRequestAO](#) * *aAO*, uint32 *aId*) [protected]

7.117.3.5 void OsclDNSMethod::MethodDone () [protected]

7.117.3.6 void OsclDNSMethod::Run () [virtual]

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's `WaitForAnyRequest()` function completes.

Before calling this active object's `Run()` function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request

2. marked this active object's request as complete (i.e. the request is no longer outstanding)

`Run()` runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls `ExecError()` to handle the leave.

Note that once the active scheduler's `Start()` function has been called, all user code is run under one of the program's active object's `Run()` or `RunError()` functions.

Implements [PVActiveBase](#).

7.117.3.7 **bool OsclDNSMethod::StartMethod (int32 *aTimeoutMsec*)** [protected]

7.117.4 Field Documentation

7.117.4.1 **Oscl_DefAlloc& OsclDNSMethod::iAlloc**

7.117.4.2 **TPVDNSFxn OsclDNSMethod::iDNSFxn**

7.117.4.3 **OsclDNSObserver* OsclDNSMethod::iDNSObserver**

7.117.4.4 **OsclDNSRequestAO* OsclDNSMethod::iDNSRequestAO** [protected]

7.117.4.5 **uint32 OsclDNSMethod::iId**

7.117.4.6 **PVLogger* OsclDNSMethod::iLogger**

The documentation for this class was generated from the following file:

- [oscl_dns_method.h](#)

7.118 OsclDNSObserver Class Reference

```
#include <oscl_dns.h>
```

Public Methods

- virtual OSCL_IMPORT_REF void [HandleDNSEvent](#) (int32 aId, [TPVDNSFxn](#) aFxn, [TPVDNSEvent](#) aEvent, int32 aError)=0
- virtual [~OsclDNSObserver](#) ()

7.118.1 Detailed Description

DNS event observer. The client implements this to get asynchronous command completion.

7.118.2 Constructor & Destructor Documentation

7.118.2.1 virtual OsclDNSObserver::~OsclDNSObserver () [inline, virtual]

7.118.3 Member Function Documentation

**7.118.3.1 virtual OSCL_IMPORT_REF void OsclDNSObserver::HandleDNSEvent (int32 *aId*,
[TPVDNSFxn](#) *aFxn*, [TPVDNSEvent](#) *aEvent*, int32 *aError*) [pure virtual]**

DNS Event callback.

Parameters:

***aId*:** The ID that was supplied when the DNS object was created.

***aEvent*:** Function completion event. Will be EPVDNSSuccess, EPVDNSTimeout, or EPVDNSFailure.

***aError*:** When the event is EPVDNSFailure, this may contain a platform-specific error code, or zero if none is available.

The documentation for this class was generated from the following file:

- [oscl_dns.h](#)

7.119 OsclDNSRequest Class Reference

```
#include <oscl_dns_request.h>
```

Public Methods

- [OsclDNSRequest \(\)](#)
- [~OsclDNSRequest \(\)](#)
- void [CancelRequest \(\)](#)
- void [Complete \(bool, int32 aStatus, int32 aSockErr\)](#)
- void [Activate \(DNSRequestParam *iParam, OsclDNSRequestAO &a\)](#)

Data Fields

- [OsclDNSRequestAO * iDNSRequestAO](#)
- [DNSRequestParam * iDNSRequestParam](#)
- bool [iActive](#)

7.119.1 Detailed Description

This class defines the interface to the dns implementation threads.

7.119.2 Constructor & Destructor Documentation

7.119.2.1 [OsclDNSRequest::OsclDNSRequest \(\) \[inline\]](#)

7.119.2.2 [OsclDNSRequest::~OsclDNSRequest \(\) \[inline\]](#)

7.119.3 Member Function Documentation

7.119.3.1 void [OsclDNSRequest::Activate \(DNSRequestParam * iParam, OsclDNSRequestAO & a\)](#)

7.119.3.2 void [OsclDNSRequest::CancelRequest \(\)](#)

7.119.3.3 void [OsclDNSRequest::Complete \(bool, int32 aStatus, int32 aSockErr\)](#)

7.119.4 Field Documentation

7.119.4.1 bool [OsclDNSRequest::iActive](#)

7.119.4.2 [OsclDNSRequestAO* OsclDNSRequest::iDNSRequestAO](#)

7.119.4.3 [DNSRequestParam* OsclDNSRequest::iDNSRequestParam](#)

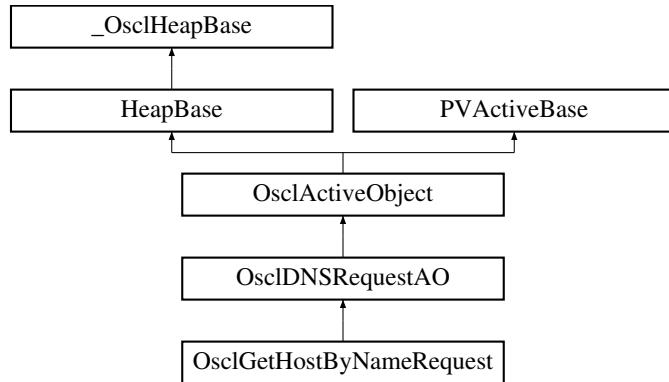
The documentation for this class was generated from the following file:

- [oscl_dns_request.h](#)

7.120 OsclDNSRequestAO Class Reference

```
#include <oscl_dns_method.h>
```

Inheritance diagram for OsclDNSRequestAO::



Protected Methods

- [OsclDNSRequestAO](#) (const char *name)
- void [ConstructL](#) ([OsclDNSI](#) *aDNS, [OsclDNSMethod](#) *aMethod)
- void [Abort](#) ()
- void [NewRequest](#) ()
- void [RequestDone](#) ()
- int [GetSocketError](#) ()
- [OsclSocketServI](#) * [Serv](#) ()
- void [DoCancel](#) ()
- void [Run](#) ()
- virtual void [Success](#) ()
- virtual void [Failure](#) ()
- virtual void [Cancelled](#) ()

Protected Attributes

- [OsclDNSI](#) * [iDNSI](#)
- [OsclDNSMethod](#) * [iDNSMethod](#)
- int32 [iSocketError](#)
- [PVLogger](#) * [iLogger](#)

Friends

- class [OsclDNSI](#)
- class [OsclDNSMethod](#)
- class [OsclDNSRequest](#)
- class [GetHostNameParam](#)

7.120.1 Detailed Description

This is the base class for all requests to the socket server.

7.120.2 Constructor & Destructor Documentation

7.120.2.1 OsclDNSRequestAO::OsclDNSRequestAO (const char * *name*) [inline, protected]

7.120.3 Member Function Documentation

7.120.3.1 void OsclDNSRequestAO::Abort () [inline, protected]

7.120.3.2 virtual void OsclDNSRequestAO::Cancelled () [inline, protected, virtual]

7.120.3.3 void OsclDNSRequestAO::ConstructL (OsclDNSI * *aDNS*, OsclDNSMethod * *aMethod*) [inline, protected]

7.120.3.4 void OsclDNSRequestAO::DoCancel () [protected, virtual]

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will complete the request. If any additional action is needed, the derived class may override this. If the derived class does override DoCancel, it must complete the request.

Reimplemented from [OsclActiveObject](#).

7.120.3.5 virtual void OsclDNSRequestAO::Failure () [inline, protected, virtual]

7.120.3.6 int OsclDNSRequestAO::GetSocketError () [protected]

7.120.3.7 void OsclDNSRequestAO::NewRequest () [protected]

7.120.3.8 void OsclDNSRequestAO::RequestDone () [protected]

7.120.3.9 void OsclDNSRequestAO::Run () [protected, virtual]

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's `WaitForAnyRequest()` function completes.

Before calling this active object's `Run()` function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

`Run()` runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls `ExecError()` to handle the leave.

Note that once the active scheduler's `Start()` function has been called, all user code is run under one of the program's active object's `Run()` or `RunError()` functions.

Implements [PVActiveBase](#).

7.120.3.10 [**OsclSocketServI*** OsclDNSRequestAO::Serv \(\)](#) [protected]

7.120.3.11 [**virtual void OsclDNSRequestAO::Success \(\)**](#) [inline, protected, virtual]

7.120.4 Friends And Related Function Documentation

7.120.4.1 [**friend class GetHostByNameParam**](#) [friend]

7.120.4.2 [**friend class OsclDNSI**](#) [friend]

7.120.4.3 [**friend class OsclDNSMethod**](#) [friend]

7.120.4.4 [**friend class OsclDNSRequest**](#) [friend]

7.120.5 Field Documentation

7.120.5.1 [**OsclDNSI* OsclDNSRequestAO::iDNSI**](#) [protected]

7.120.5.2 [**OsclDNSMethod* OsclDNSRequestAO::iDNSMethod**](#) [protected]

7.120.5.3 [**PVLogger* OsclDNSRequestAO::iLogger**](#) [protected]

7.120.5.4 [**int32 OsclDNSRequestAO::iSocketError**](#) [protected]

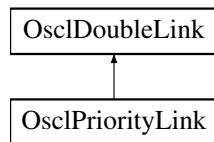
The documentation for this class was generated from the following file:

- [oscl_dns_method.h](#)

7.121 OsclDoubleLink Class Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclDoubleLink::



Public Methods

- [OsclDoubleLink \(\)](#)
- void [Remove \(\)](#)
- void [InsertAfter \(OsclDoubleLink *aLink\)](#)
- void [InsertBefore \(OsclDoubleLink *aLink\)](#)

Data Fields

- OsclDoubleLink * [iNext](#)
- OsclDoubleLink * [iPrev](#)

7.121.1 Constructor & Destructor Documentation

7.121.1.1 [OsclDoubleLink::OsclDoubleLink \(\) \[inline\]](#)

7.121.2 Member Function Documentation

7.121.2.1 [void OsclDoubleLink::InsertAfter \(OsclDoubleLink * *aLink*\)](#)

7.121.2.2 [void OsclDoubleLink::InsertBefore \(OsclDoubleLink * *aLink*\)](#)

7.121.2.3 [void OsclDoubleLink::Remove \(\)](#)

7.121.3 Field Documentation

7.121.3.1 [OsclDoubleLink* OsclDoubleLink::iNext](#)

7.121.3.2 [OsclDoubleLink* OsclDoubleLink::iPrev](#)

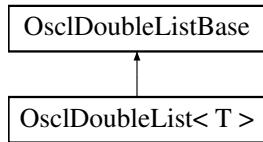
The documentation for this class was generated from the following file:

- [oscl_double_list.h](#)

7.122 OsclDoubleList< T > Class Template Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclDoubleList< T >::



Public Methods

- OSCL_INLINE OsclDoubleList()
- OSCL_INLINE OsclDoubleList(int32 anOffset)
- OSCL_INLINE void InsertHead(T &aRef)
- OSCL_INLINE void InsertTail(T &aRef)
- OSCL_INLINE bool IsHead(const T *aPtr) const
- OSCL_INLINE bool IsTail(const T *aPtr) const
- OSCL_INLINE T * Head() const
- OSCL_INLINE T * Tail() const

```
template<class T> class OsclDoubleList< T >
```

7.122.1 Constructor & Destructor Documentation

7.122.1.1 template<class T> OSCL_INLINE OsclDoubleList< T >::OsclDoubleList()

**7.122.1.2 template<class T> OSCL_INLINE OsclDoubleList< T >::OsclDoubleList(int32
anOffset)**

7.122.2 Member Function Documentation

7.122.2.1 template<class T> OSCL_INLINE T* OsclDoubleList< T >::Head()

7.122.2.2 template<class T> OSCL_INLINE void OsclDoubleList< T >::InsertHead(T & aRef)

7.122.2.3 template<class T> OSCL_INLINE void OsclDoubleList< T >::InsertTail(T & aRef)

**7.122.2.4 template<class T> OSCL_INLINE bool OsclDoubleList< T >::IsHead(const T * aPtr)
const**

**7.122.2.5 template<class T> OSCL_INLINE bool OsclDoubleList< T >::IsTail(const T * aPtr)
const**

7.122.2.6 template<class T> OSCL_INLINE T* OsclDoubleList< T >::Tail()

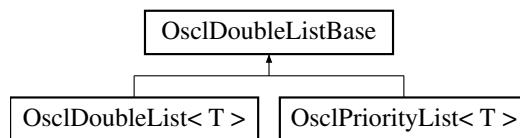
The documentation for this class was generated from the following file:

- [oscl_double_list.h](#)

7.123 OsclDoubleListBase Class Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclDoubleListBase::



Public Methods

- bool [IsEmpty \(\) const](#)
- void [SetOffset \(int32 anOffset\)](#)
- void [Reset \(\)](#)
- [OsclDoubleLink * getHead \(\)](#)
- int32 [getOffset \(\)](#)

Protected Methods

- [OsclDoubleListBase \(\)](#)
- [OsclDoubleListBase \(int32 anOffset\)](#)
- void [InsertHead \(OsclAny *aPtr\)](#)
- void [InsertTail \(OsclAny *aPtr\)](#)
- void [Insert \(OsclAny *aPtr\)](#)

Protected Attributes

- [OsclDoubleLink iHead](#)
- int32 [iOffset](#)

7.123.1 Constructor & Destructor Documentation

7.123.1.1 **OsclDoubleListBase::OsclDoubleListBase ()** [protected]

7.123.1.2 **OsclDoubleListBase::OsclDoubleListBase (int32 *anOffset*)** [protected]

7.123.2 Member Function Documentation

7.123.2.1 **OsclDoubleLink* OsclDoubleListBase::getHead ()** [inline]

7.123.2.2 **int32 OsclDoubleListBase::getOffset ()** [inline]

7.123.2.3 **void OsclDoubleListBase::Insert (OsclAny * *aPtr*)** [protected]

7.123.2.4 **void OsclDoubleListBase::InsertHead (OsclAny * *aPtr*)** [protected]

7.123.2.5 **void OsclDoubleListBase::InsertTail (OsclAny * *aPtr*)** [protected]

7.123.2.6 **bool OsclDoubleListBase::IsEmpty ()**

7.123.2.7 **void OsclDoubleListBase::Reset ()**

7.123.2.8 **void OsclDoubleListBase::SetOffset (int32 *anOffset*)**

7.123.3 Field Documentation

7.123.3.1 **OsclDoubleLink OsclDoubleListBase::iHead** [protected]

7.123.3.2 **int32 OsclDoubleListBase::iOffset** [protected]

The documentation for this class was generated from the following file:

- [oscl_double_list.h](#)

7.124 OsclDoubleRunner< T > Class Template Reference

```
#include <oscl_double_list.h>
```

Public Methods

- [OsclDoubleRunner \(OsclDoubleListBase &aQue\)](#)
- [void Set \(T &aLink\)](#)
- [operator T * \(\)](#)
- [T * operator++ \(int\)](#)
- [T * operator- \(int\)](#)
- [void SetToHead \(\)](#)
- [void SetToTail \(\)](#)

Protected Attributes

- [int32 iOffset](#)
- [OsclDoubleLink * iHead](#)
- [OsclDoubleLink * iNext](#)

template<class T> class OsclDoubleRunner< T >

7.124.1 Constructor & Destructor Documentation

7.124.1.1 template<class T> OsclDoubleRunner< T >::OsclDoubleRunner ([OsclDoubleListBase & aQue](#)) [inline]

7.124.2 Member Function Documentation

7.124.2.1 template<class T> OsclDoubleRunner< T >::operator T * () [inline]

7.124.2.2 template<class T> T* OsclDoubleRunner< T >::operator++ (int) [inline]

7.124.2.3 template<class T> T* OsclDoubleRunner< T >::operator- (int)

7.124.2.4 template<class T> void OsclDoubleRunner< T >::Set (T & aLink) [inline]

7.124.2.5 template<class T> void OsclDoubleRunner< T >::SetToHead () [inline]

7.124.2.6 template<class T> void OsclDoubleRunner< T >::SetToTail () [inline]

7.124.3 Field Documentation

7.124.3.1 template<class T> [OsclDoubleLink* OsclDoubleRunner< T >::iHead](#) [protected]

7.124.3.2 template<class T> [OsclDoubleLink* OsclDoubleRunner< T >::iNext](#) [protected]

7.124.3.3 template<class T> int32 [OsclDoubleRunner< T >::iOffset](#) [protected]

The documentation for this class was generated from the following file:

-
- [oscl_double_list.h](#)

7.125 OsclError Class Reference

```
#include <oscl_error.h>
```

Static Public Methods

- OSCL_IMPORT_REF void [PushL \(_OsclHeapBase *aPtr\)](#)
- OSCL_IMPORT_REF void [PushL \(OsclAny *aPtr\)](#)
- OSCL_IMPORT_REF void [PushL \(OsclTrapItem anItem\)](#)
- OSCL_IMPORT_REF void [Pop \(\)](#)
- OSCL_IMPORT_REF void [Pop \(int32 aCount\)](#)
- OSCL_IMPORT_REF void [PopDealloc \(\)](#)
- OSCL_IMPORT_REF void [PopDealloc \(int32 aCount\)](#)
- OSCL_IMPORT_REF void [Leave \(int32 aReason\)](#)
- OSCL_IMPORT_REF void [LeaveIfNull \(OsclAny *a\)](#)
- OSCL_IMPORT_REF void [LeaveIfError \(int32 aReason\)](#)

7.125.1 Detailed Description

User Error class

7.125.2 Member Function Documentation

7.125.2.1 OSCL_IMPORT_REF void OsclError::Leave (int32 *aReason*) [static]

Do a Leave error, with the given reason code. When a leave occurs, all items on the cleanup stack for the current trap level will be destroyed, and execution will jump to the trap handler.

7.125.2.2 OSCL_IMPORT_REF void OsclError::LeaveIfError (int32 *aReason*) [static]

Evaluate the input parameter, and if it is an error code (non-zero), then do a Leave with the provided reason code.

7.125.2.3 OSCL_IMPORT_REF void OsclError::LeaveIfNull (OsclAny * *a*) [static]

Evaluate the input parameter, and if it is null, do a Leave with OsclErrNoMemory reason code.

7.125.2.4 OSCL_IMPORT_REF void OsclError::Pop (int32 *aCount*) [static]

Pop the cleanup stack N times

7.125.2.5 OSCL_IMPORT_REF void OsclError::Pop () [static]

Pop the cleanup stack

7.125.2.6 OSCL_IMPORT_REF void OsclError::PopDealloc (int32 *aCount*) [static]

PopDealloc N times

7.125.2.7 OSCL_IMPORT_REF void OsclError::PopDealloc () [static]

Destroy the item on the top of the cleanup stack and pop it

7.125.2.8 OSCL_IMPORT_REF void OsclError::PushL ([OsclTrapItem](#) *anItem*) [static]

Push an [OsclTrapItem](#) onto the cleanup stack

7.125.2.9 OSCL_IMPORT_REF void OsclError::PushL ([OsclAny](#) * *aPtr*) [static]

Push an OsclAny item onto the cleanup stack.

7.125.2.10 OSCL_IMPORT_REF void OsclError::PushL ([_OsclHeapBase](#) * *aPtr*) [static]

Push an [_OsclHeapBase](#) item onto the cleanup stack.

The documentation for this class was generated from the following file:

- [oscl_error.h](#)

7.126 OsclErrorAllocator Class Reference

This class provides static methods to invoke the user defined memory allocation routines.

```
#include <oscl_error_allocator.h>
```

Public Methods

- **OsclErrorAllocator (Oscl_DefAlloc *allocator)**
constructor method
- **void * operator new (uint32 size, OsclAny *aPtr)**
placement new operator that allocates memory using the user defined methods
- **void operator delete (OsclAny *aPtr, OsclAny *aPtr2)**
delete operator that doesn't do anything, user has to deallocate manually

Static Public Methods

- **OsclAny * allocate (uint32 aSize)**
static method to allocate a block of memory on heap
- **OsclAny deallocate (OsclAny *aPointer)**
static method to deallocate a block of memory on heap

7.126.1 Detailed Description

This class provides static methods to invoke the user defined memory allocation routines.

This class must be instantiated before the static methods are called, else asserts will happen

7.126.2 Constructor & Destructor Documentation

7.126.2.1 OsclErrorAllocator::OsclErrorAllocator (**Oscl_DefAlloc * allocator**) [inline]

constructor method

Parameters:

allocator - a pointer to the concrete object that provides the allocator/deallocator

7.126.3 Member Function Documentation

7.126.3.1 OsclAny* OsclErrorAllocator::allocate (uint32 *aSize*) [inline, static]

static method to allocate a block of memory on heap

Parameters:

aSize - number of bytes to allocate

7.126.3.2 OsclAny OsclErrorAllocator::deallocate (OsclAny * aPointer) [inline, static]

static method to deallocate a block of memory on heap

Parameters:

aPointer - pointer to block of memory to be deallocated

7.126.3.3 void OsclErrorAllocator::operator delete (OsclAny * aPtr, OsclAny * aPtr2) [inline]

delete operator that doesn't do anything, user has to deallocate manually

7.126.3.4 void* OsclErrorAllocator::operator new (uint32 size, OsclAny * aPtr) [inline]

placement new operator that allocates memory using the user defined methods

The documentation for this class was generated from the following file:

- [oscl_error_allocator.h](#)

7.127 OsclErrorTrap Class Reference

```
#include <oscl_error.h>
```

Static Public Methods

- OSCL_IMPORT_REF int32 [Init \(Oscl_DefAlloc *aAlloc=NULL\)](#)
- OSCL_IMPORT_REF int32 [Cleanup \(\)](#)
- OSCL_IMPORT_REF [OsclErrorTrapImp * GetErrorTrapImp \(\)](#)

7.127.1 Member Function Documentation

7.127.1.1 OSCL_IMPORT_REF int32 OsclErrorTrap::Cleanup () [static]

Cleanup and destroy error trap for the calling thread.

Returns:

0 for success, or an error

7.127.1.2 OSCL_IMPORT_REF [OsclErrorTrapImp*](#) OsclErrorTrap::GetErrorTrapImp () [static]

Get the ErrorTrapImp for the current thread. Leaves on error.

7.127.1.3 OSCL_IMPORT_REF int32 OsclErrorTrap::Init ([Oscl_DefAlloc * aAlloc = NULL](#)) [static]

Allocate and initialize error trap for the calling thread.

Parameters:

aAlloc: optional, allocator to use for the internal implementation.

Returns:

0 for success, or an error

The documentation for this class was generated from the following file:

- [oscl_error.h](#)

7.128 OsclErrorTrapImp Class Reference

```
#include <oscl_error_trapcleanup.h>
```

Public Methods

- OSCL_IMPORT_REF void [UnTrap \(\)](#)

Static Public Methods

- OSCL_IMPORT_REF OsclErrorTrapImp * [Trap \(\)](#)
- OSCL_IMPORT_REF OsclErrorTrapImp * [TrapNoTls \(OsclErrorTrapImp *\)](#)

Data Fields

- [OsclJump * iJumpData](#)
- int32 [iLeave](#)
- [OsclTrapStack * iTrapStack](#)

Friends

- class [OsclErrorTrap](#)
- class [OsclError](#)
- class [OsclExecScheduler](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclJump](#)
- class [OsclJumpMark](#)
- class [OsclTrapStack](#)
- class [CPVInterfaceProxy](#)
- class [OsclScheduler](#)

7.128.1 Detailed Description

A per-thread cleanup stack with nested trap support.

7.128.2 Member Function Documentation

7.128.2.1 OSCL_IMPORT_REF OsclErrorTrapImp* OsclErrorTrapImp::Trap () [static]

PV trap cleanup. Public for use in macros only.

7.128.2.2 OSCL_IMPORT_REF OsclErrorTrapImp* OsclErrorTrapImp::TrapNoTls (OsclErrorTrapImp *) [static]

7.128.2.3 OSCL_IMPORT_REF void OsclErrorTrapImp::UnTrap ()

these are used in public macros, but aren't intended as public methods or members.

7.128.3 Friends And Related Function Documentation

7.128.3.1 **friend class CPVInterfaceProxy [friend]**

7.128.3.2 **friend class OsclError [friend]**

7.128.3.3 **friend class OsclErrorTrap [friend]**

7.128.3.4 **friend class OsclExecScheduler [friend]**

7.128.3.5 **friend class OsclExecSchedulerCommonBase [friend]**

7.128.3.6 **friend class OsclJump [friend]**

7.128.3.7 **friend class OsclJumpMark [friend]**

7.128.3.8 **friend class OsclScheduler [friend]**

7.128.3.9 **friend class OsclTrapStack [friend]**

7.128.4 Field Documentation

7.128.4.1 **OsclJump* OsclErrorTrapImp::iJumpData**

7.128.4.2 **int32 OsclErrorTrapImp::iLeave**

7.128.4.3 **OsclTrapStack* OsclErrorTrapImp::iTrapStack**

The documentation for this class was generated from the following file:

- [oscl_error_trapcleanup.h](#)

7.129 OsclException< LeaveCode > Class Template Reference

`oscl_exception.h` contains all the exception handling macros and classes This template class provides the base exception class that all exceptions derive from

```
#include <oscl_exception.h>
```

Public Methods

- `OsclException ()`

Static Public Methods

- `int getLeaveCode ()`

7.129.1 Detailed Description

`template<int LeaveCode> class OsclException< LeaveCode >`

`oscl_exception.h` contains all the exception handling macros and classes This template class provides the base exception class that all exceptions derive from

All PacketVideo exception classes will be derived from the OsclException class. Each derived class will have a static function where the leave code can be obtained. This avoids the issue of having static members in a DLL. The function needs to be static so it can be called without an instance of the class

7.129.2 Constructor & Destructor Documentation

7.129.2.1 `template<int LeaveCode> OsclException< LeaveCode >::OsclException ()`
[inline]

7.129.3 Member Function Documentation

7.129.3.1 `template<int LeaveCode> int OsclException< LeaveCode >::getLeaveCode ()`
[inline, static]

The documentation for this class was generated from the following file:

- `oscl_exception.h`

7.130 OsclExclusiveArrayPtr< T > Class Template Reference

The OsclExclusiveArrayPtr class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the OsclExclusiveArrayPtr expires, its destructor uses delete to free the memory.

```
#include <oscl_exclusive_ptr.h>
```

Public Methods

- **OsclExclusiveArrayPtr (T *inPtr=0)**
Default constructor Initializes the pointer and takes ownership.
- **OsclExclusiveArrayPtr (OsclExclusiveArrayPtr< T > &_Y)**
Copy constructor.
- **OsclExclusiveArrayPtr< T > & operator= (OsclExclusiveArrayPtr< T > &_Y)**
Assignment operator from an another OsclExclusiveArrayPtr.
- **virtual ~OsclExclusiveArrayPtr ()**
Destructor.
- **T & operator* () const**
The indirection operator () accesses a value indirectly, through a pointer.*
- **T * operator-> () const**
The indirection operator (->) accesses a value indirectly, through a pointer.
- **T * get () const**
get() method returns the pointer, currently owned by the class.
- **T * release ()**
release() method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.
- **bool set (T *ptr)**
set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

Protected Attributes

- **T * _Ptr**

7.130.1 Detailed Description

template<class T> class OsclExclusiveArrayPtr< T >

The OsclExclusiveArrayPtr class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the OsclExclusiveArrayPtr expires, its destructor uses delete to free the memory.

The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an [OsclExclusivePtr](#) object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The [OsclExclusivePtr](#) is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

7.130.2 Constructor & Destructor Documentation

7.130.2.1 template<class T> OsclExclusiveArrayPtr< T >::OsclExclusiveArrayPtr (T * *inPtr* = 0) [inline, explicit]

Default constructor Initializes the pointer and takes ownership.

7.130.2.2 template<class T> OsclExclusiveArrayPtr< T >::OsclExclusiveArrayPtr (OsclExclusiveArrayPtr< T > & *_Y*) [inline]

Copy constructor.

Initializes the pointer and takes ownership from another OsclExclusiveArrayPtr. Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

7.130.2.3 template<class T> virtual OsclExclusiveArrayPtr< T >::~OsclExclusiveArrayPtr () [inline, virtual]

Destructor.

The pointer is deleted in case this class still has ownership

7.130.3 Member Function Documentation

7.130.3.1 template<class T> T* OsclExclusiveArrayPtr< T >::get () const [inline]

[get\(\)](#) method returns the pointer, currently owned by the class.

7.130.3.2 template<class T> T& OsclExclusiveArrayPtr< T >::operator * () const [inline]

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the OsclExclusiveArrayPtr can be used like the regular pointer that it was initialized with.

7.130.3.3 template<class T> T* OsclExclusiveArrayPtr< T >::operator -> () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the OsclExclusiveArrayPtr can be used like the regular pointer that it was initialized with.

7.130.3.4 template<class T> OsclExclusiveArrayPtr<T>& OsclExclusiveArrayPtr< T >::operator= (OsclExclusiveArrayPtr< T > & _Y) [inline]

Assignment operator from an another OsclExclusiveArrayPtr.

Parameters:

_Y The value parameter should be another OsclExclusiveArrayPtr

Returns:

Returns a reference to this OsclExclusiveArrayPtr instance with pointer initialized.

Precondition:

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the OsclExclusiveArrayPtr given as the input parameter. The ownership of the pointer is transferred.

7.130.3.5 template<class T> T* OsclExclusiveArrayPtr< T >::release () [inline]

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

7.130.3.6 template<class T> bool OsclExclusiveArrayPtr< T >::set (T *ptr) [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

7.130.4 Field Documentation

7.130.4.1 template<class T> T* OsclExclusiveArrayPtr< T >::_Ptr [protected]

The documentation for this class was generated from the following file:

- [oscl_exclusive_ptr.h](#)

7.131 OsclExclusivePtr< T > Class Template Reference

The OsclExclusivePtr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the OsclExclusivePtr expires, its destructor uses delete to free the memory.

```
#include <oscl_exclusive_ptr.h>
```

Public Methods

- **OsclExclusivePtr** (T *inPtr=0)
Default constructor Initializes the pointer and takes ownership.
- **OsclExclusivePtr** (OsclExclusivePtr< T > &_Y)
Copy constructor.
- OsclExclusivePtr< T > & **operator=** (OsclExclusivePtr< T > &_Y)
Assignment operator from an another OsclExclusivePtr.
- virtual ~**OsclExclusivePtr** ()
Destructor.
- T & **operator *** () const
The indirection operator () accesses a value indirectly, through a pointer.*
- T * **operator ->** () const
The indirection operator (->) accesses a value indirectly, through a pointer.
- T * **get** () const
***get()** method returns the pointer, currently owned by the class.*
- T * **release** ()
***release()** method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.*
- bool **set** (T *ptr)
***set()** method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

Protected Attributes

- T * **_Ptr**

7.131.1 Detailed Description

template<class T> class OsclExclusivePtr< T >

The OsclExclusivePtr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the OsclExclusivePtr expires, its destructor uses delete to free the memory.

The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an OsclExclusivePtr object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The OsclExclusivePtr is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

7.131.2 Constructor & Destructor Documentation

7.131.2.1 template<class T> OsclExclusivePtr< T >::OsclExclusivePtr (T * *inPtr* = 0) [inline, explicit]

Default constructor Initializes the pointer and takes ownership.

7.131.2.2 template<class T> OsclExclusivePtr< T >::OsclExclusivePtr (OsclExclusivePtr< T > & *_Y*) [inline]

Copy constructor.

Initializes the pointer and takes ownership from another OsclExclusivePtr. Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

7.131.2.3 template<class T> virtual OsclExclusivePtr< T >::~OsclExclusivePtr () [inline, virtual]

Destructor.

The pointer is deleted in case this class still has ownership

7.131.3 Member Function Documentation

7.131.3.1 template<class T> T* OsclExclusivePtr< T >::get () const [inline]

[get\(\)](#) method returns the pointer, currently owned by the class.

7.131.3.2 template<class T> T& OsclExclusivePtr< T >::operator * () const [inline]

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the OsclExclusivePtr can be used like the regular pointer that it was initialized with.

7.131.3.3 template<class T> T* OsclExclusivePtr< T >::operator -> () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the OsclExclusivePtr can be used like the regular pointer that it was initialized with.

7.131.3.4 template<class T> OsclExclusivePtr<T>& OsclExclusivePtr< T >::operator= (OsclExclusivePtr< T > & _Y) [inline]

Assignment operator from an another OsclExclusivePtr.

Parameters:

_Y The value parameter should be another OsclExclusivePtr

Returns:

Returns a reference to this OsclExclusivePtr instance with pointer initialized.

Precondition:

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the OsclExclusivePtr given as the input parameter. The ownership of the pointer is transferred.

7.131.3.5 template<class T> T* OsclExclusivePtr< T >::release () [inline]

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

7.131.3.6 template<class T> bool OsclExclusivePtr< T >::set (T *ptr) [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

7.131.4 Field Documentation

7.131.4.1 template<class T> T* OsclExclusivePtr< T >::_Ptr [protected]

The documentation for this class was generated from the following file:

- [oscl_exclusive_ptr.h](#)

7.132 OsclExclusivePtrA< T, Alloc > Class Template Reference

The OsclExclusivePtrA class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or indirectly) through Alloc. When the OsclExclusivePtrA expires, Alloc is used to free the memory.

```
#include <oscl_exclusive_ptr.h>
```

Public Methods

- **OsclExclusivePtrA** (T *inPtr=0)
Default constructor Initializes the pointer and takes ownership.
- **OsclExclusivePtrA** (OsclExclusivePtrA< T, Alloc > &_Y)
Copy constructor.
- OsclExclusivePtrA< T, Alloc > & **operator=** (OsclExclusivePtrA< T, Alloc > &_Y)
Assignment operator from an another OsclExclusiveArrayPtr.
- virtual ~**OsclExclusivePtrA** ()
Destructor.
- T & **operator *** () const
The indirection operator () accesses a value indirectly, through a pointer.*
- T * **operator ->** () const
The indirection operator (->) accesses a value indirectly, through a pointer.
- T * **get** () const
***get()** method returns the pointer, currently owned by the class.*
- T * **release** ()
***release()** method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.*
- bool **set** (T *ptr)
***set()** method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.*

Protected Attributes

- T * **_Ptr**

7.132.1 Detailed Description

template<class T, class Alloc> class OsclExclusivePtrA< T, Alloc >

The OsclExclusivePtrA class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or indirectly) through Alloc. When the OsclExclusivePtrA expires, Alloc is used to free the memory.

The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an [OsclExclusivePtr](#) object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The [OsclExclusivePtr](#) is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

7.132.2 Constructor & Destructor Documentation

7.132.2.1 template<class T, class Alloc> OsclExclusivePtrA< T, Alloc >::OsclExclusivePtrA (T * *inPtr* = 0) [inline, explicit]

Default constructor Initializes the pointer and takes ownership.

7.132.2.2 template<class T, class Alloc> OsclExclusivePtrA< T, Alloc >::OsclExclusivePtrA (OsclExclusivePtrA< T, Alloc > & *_Y*) [inline]

Copy constructor.

Initializes the pointer and takes ownership from another [OsclExclusiveArrayPtr](#). Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

7.132.2.3 template<class T, class Alloc> virtual OsclExclusivePtrA< T, Alloc >::~OsclExclusivePtrA () [inline, virtual]

Destructor.

The pointer is deleted in case this class still has ownership

7.132.3 Member Function Documentation

7.132.3.1 template<class T, class Alloc> T* OsclExclusivePtrA< T, Alloc >::get () const [inline]

[get\(\)](#) method returns the pointer, currently owned by the class.

7.132.3.2 template<class T, class Alloc> T& OsclExclusivePtrA< T, Alloc >::operator * () const [inline]

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclExclusiveArrayPtr](#) can be used like the regular pointer that it was initialized with.

7.132.3.3 template<class T, class Alloc> T* OsclExclusivePtrA< T, Alloc >::operator -> () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the [OsclExclusiveArrayPtr](#) can be used like the regular pointer that it was initialized with.

7.132.3.4 template<class T, class Alloc> OsclExclusivePtrA<T, Alloc>& OsclExclusivePtrA< T, Alloc >::operator= (OsclExclusivePtrA< T, Alloc > & _Y) [inline]

Assignment operator from an another [OsclExclusiveArrayPtr](#).

Parameters:

_Y The value parameter should be another [OsclExclusiveArrayPtr](#)

Returns:

Returns a reference to this [OsclExclusiveArrayPtr](#) instance with pointer initialized.

Precondition:

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the [OsclExclusiveArrayPtr](#) given as the input parameter. The ownership of the pointer is transferred.

7.132.3.5 template<class T, class Alloc> T* OsclExclusivePtrA< T, Alloc >::release () [inline]

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

7.132.3.6 template<class T, class Alloc> bool OsclExclusivePtrA< T, Alloc >::set (T *ptr) [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

7.132.4 Field Documentation

7.132.4.1 template<class T, class Alloc> T* OsclExclusivePtrA< T, Alloc >::_Ptr [protected]

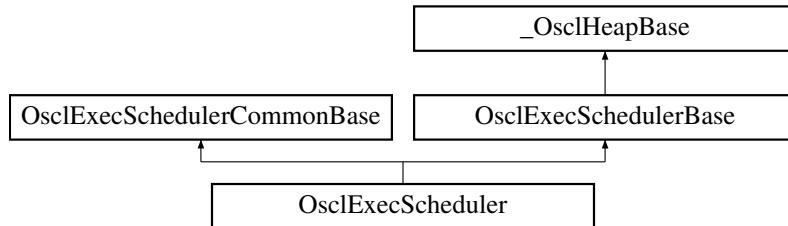
The documentation for this class was generated from the following file:

- [oscl_exclusive_ptr.h](#)

7.133 OsclExecScheduler Class Reference

```
#include <oscl_scheduler.h>
```

Inheritance diagram for OsclExecScheduler::



Public Methods

- OSCL_IMPORT_REF void [RunSchedulerNonBlocking](#) (int32 aTargetCount, int32 &aReady, uint32 &aDelayMsec)
- OSCL_IMPORT_REF void [RegisterForCallback](#) ([OsclSchedulerObserver](#) *aCallback, [OsclAny](#) *aCallbackContext)

Static Public Methods

- OSCL_IMPORT_REF [OsclExecScheduler](#) * [Current](#) ()

Friends

- class [OsclScheduler](#)

7.133.1 Member Function Documentation

7.133.1.1 OSCL_IMPORT_REF OsclExecScheduler* OsclExecScheduler::Current () [static]

Get currently installed scheduler for calling thread, or NULL if no scheduler is installed.

7.133.1.2 OSCL_IMPORT_REF void OsclExecScheduler::RegisterForCallback ([OsclSchedulerObserver](#) * aCallback, [OsclAny](#) * aCallbackContext)

Register for a notification when non-blocking scheduler needs to run again.

Note: On Symbian, non-blocking mode is not supported and this call will leave.

7.133.1.3 OSCL_IMPORT_REF void OsclExecScheduler::RunSchedulerNonBlocking (int32 aTargetCount, int32 &aReady, uint32 &aDelayMsec)

Run PV scheduler in non-blocking mode. This call returns when the desired number of Run calls have been made, or when there are no more active objects that are ready to run.

Parameters:

aTargetCount: (input param) the maximum number of Run calls to make.

aReady: (output param) tells the number of active objects that are currently ready to run.

aDelayMsec: (output param) If no active objects are ready to run, but one or more active objects are waiting on timers, this parameter will tell the time interval from the current time until the first of the pending timer objects will be ready to run, in milliseconds.

Note: On Symbian, non-blocking mode is not supported and this call will leave.

7.133.2 Friends And Related Function Documentation

7.133.2.1 friend class OsclScheduler [friend]

Reimplemented from [OsclExecSchedulerCommonBase](#).

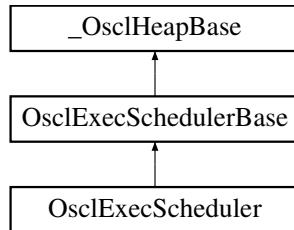
The documentation for this class was generated from the following file:

- [oscl_scheduler.h](#)

7.134 OsclExecSchedulerBase Class Reference

```
#include <oscl_scheduler_types.h>
```

Inheritance diagram for OsclExecSchedulerBase::



Friends

- class [OsclExecScheduler](#)
- class [OsclCoeActiveScheduler](#)
- class [PVActiveBase](#)

7.134.1 Detailed Description

OsclActiveSchedulerBase is the base for [OsclExecScheduler](#). The non-Symbian OsclActiveSchedulerBase class is functionally similar to a subset of Symbian CActiveScheduler class.

7.134.2 Friends And Related Function Documentation

7.134.2.1 friend class OsclCoeActiveScheduler [friend]

7.134.2.2 friend class OsclExecScheduler [friend]

7.134.2.3 friend class PVActiveBase [friend]

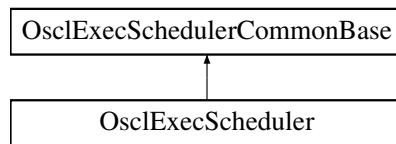
The documentation for this class was generated from the following file:

- [oscl_scheduler_types.h](#)

7.135 OsclExecSchedulerCommonBase Class Reference

```
#include <oscl_scheduler.h>
```

Inheritance diagram for OsclExecSchedulerCommonBase::



Public Methods

- OSCL_IMPORT_REF void [StartScheduler](#) (OsclSemaphore *sem=NULL)
- OSCL_IMPORT_REF void [StopScheduler](#) ()
- OSCL_IMPORT_REF void [SuspendScheduler](#) ()
- OSCL_IMPORT_REF void [ResumeScheduler](#) ()
- OSCL_IMPORT_REF void [StartNativeScheduler](#) ()

Static Public Methods

- OSCL_IMPORT_REF [OsclNameString< PVSCHEDNAMELEN > *](#) [GetName](#) ()
- OSCL_IMPORT_REF uint32 [GetId](#) ()

Protected Types

- enum [TOtherExecStats](#) { [EOtherExecStats_WaitTime](#), [EOtherExecStats_QueueTime](#), [EOtherExecStats_NativeOS](#), [EOtherExecStats_ReleaseTime](#), [EOtherExecStats_Last](#) }

Protected Methods

- virtual ~[OsclExecSchedulerCommonBase](#) ()
- void [InstallScheduler](#) ()
- void [UninstallScheduler](#) ()
- void [Error](#) (int32 anError) const
- [OsclExecSchedulerCommonBase](#) ([Oscl_DefAlloc](#) *)
- virtual void [ConstructL](#) (const char *name, int)
- void [BeginScheduling](#) (bool blocking, bool native)
- void [EndScheduling](#) ()
- void [BlockingLoopL](#) ()
- bool [IsStarted](#) ()
- bool [IsInstalled](#) ()
- void [AddToExecTimerQ](#) ([PVActiveBase](#) *active, uint32)
- void [PendComplete](#) ([PVActiveBase](#) *, int32 aReason, [TPVThreadContext](#) aContext)
- void [RequestCanceled](#) ([PVActiveBase](#) *)
- [PVActiveBase](#) * [UpdateTimers](#) (uint32 &aDelay)
- [PVActiveBase](#) * [UpdateTimersMsec](#) (uint32 &aDelay)
- [PVActiveBase](#) * [WaitForReadyAO](#) ()

- void [CallRunExec \(PVActiveBase *\)](#)
- void [ConstructStatQ \(\)](#)
- void [BeginStats \(\)](#)
- void [EndStats \(\)](#)
- void [CleanupStatQ \(\)](#)
- PVActiveBase * [FindPVBase \(PVActiveBase *active, OsclDoubleList< PVActiveBase > &\)](#)
- void [CleanupExecQ \(\)](#)
- void [InitExecQ \(int\)](#)
- void [ResetLogPerf \(\)](#)
- void [IncLogPerf \(uint32\)](#)

Static Protected Methods

- OsclExecSchedulerCommonBase * [GetScheduler \(\)](#)
- OsclExecSchedulerCommonBase * [SetScheduler \(OsclExecSchedulerCommonBase *\)](#)
- void [ShowStats \(PVActiveStats *active\)](#)
- void [ShowSummaryStats \(PVActiveStats *active, PVLogger *, int64, int64 &, float &\)](#)

Protected Attributes

- bool [iBlockingMode](#)
- bool [iNativeMode](#)
- PVSchedulerStopper * [iStopper](#)
- OsclNoYieldMutex [iStopperCrit](#)
- PVThreadContext [iThreadContext](#)
- OsclNameString< PVSCHEDNAMELEN > [iName](#)
- bool [iDoStop](#)
- bool [iDoSuspend](#)
- bool [iSuspended](#)
- OsclSemaphore [iResumeSem](#)
- OsclErrorTrapImp * [iErrorTrapImp](#)
- OsclReadyQ [iReadyQ](#)
- OsclTimerQ [iExecTimerQ](#)
- uint32 [iNumAOAdded](#)
- OsclDoubleList< PVActiveStats > [iPVStatQ](#)
- PVActiveStats * [iOtherExecStats \[EOtherExecStats_Last\]](#)
- uint8 * [iTTotalTicksTemp](#)
- int64 [iGrandTotalTicks](#)
- float [iTTotalPercent](#)
- uint32 [iTime](#)
- int32 [iDelta](#)
- PVActiveStats * [iPVStats](#)
- PVLogger * [iLogger](#)
- PVLogger * [iDebugLogger](#)
- char * [iLogPerfIndentStr](#)
- int32 [iLogPerfIndentStrLen](#)
- uint32 [iLogPerfTotal](#)
- Oscl_DefAlloc * [iAlloc](#)
- OsclMemAllocator [iDefAlloc](#)

Static Protected Attributes

- const uint32 [iTTimeCompareThreshold](#)

Friends

- class [OsclScheduler](#)
- class [PVThreadContext](#)
- class [OsclCoeActiveScheduler](#)
- class [OsclTimerCompare](#)
- class [OsclReadyQ](#)
- class [OsclError](#)
- class [PVActiveStats](#)
- class [OsclActiveObject](#)
- class [OsclTimerObject](#)
- class [PVActiveBase](#)
- class [PVSchedulerStopper](#)
- class [OsclExecScheduler](#)

7.135.1 Member Enumeration Documentation

7.135.1.1 enum OsclExecSchedulerCommonBase::TOtherExecStats [protected]

Enumeration values:

- EOtherExecStats_WaitTime**
- EOtherExecStats_QueueTime**
- EOtherExecStats_NativeOS**
- EOtherExecStats_ReleaseTime**
- EOtherExecStats_Last**

7.135.2 Constructor & Destructor Documentation

- 7.135.2.1 **virtual OsclExecSchedulerCommonBase::~OsclExecSchedulerCommonBase ()**
[protected, virtual]
- 7.135.2.2 **OsclExecSchedulerCommonBase::OsclExecSchedulerCommonBase (Oscl_DefAlloc *)**
[protected]

7.135.3 Member Function Documentation

- 7.135.3.1 **void OsclExecSchedulerCommonBase::AddToExecTimerQ (PVActiveBase * *active*, uint32)** [protected]
- 7.135.3.2 **void OsclExecSchedulerCommonBase::BeginScheduling (bool *blocking*, bool *native*)**
[protected]
- 7.135.3.3 **void OsclExecSchedulerCommonBase::BeginStats ()** [protected]
- 7.135.3.4 **void OsclExecSchedulerCommonBase::BlockingLoopL ()** [protected]
- 7.135.3.5 **void OsclExecSchedulerCommonBase::CallRunExec (PVActiveBase *)** [protected]
- 7.135.3.6 **void OsclExecSchedulerCommonBase::CleanupExecQ ()** [protected]
- 7.135.3.7 **void OsclExecSchedulerCommonBase::CleanupStatQ ()** [protected]
- 7.135.3.8 **virtual void OsclExecSchedulerCommonBase::ConstructL (const char * *name*, int)**
[protected, virtual]
- 7.135.3.9 **void OsclExecSchedulerCommonBase::ConstructStatQ ()** [protected]
- 7.135.3.10 **void OsclExecSchedulerCommonBase::EndScheduling ()** [protected]
- 7.135.3.11 **void OsclExecSchedulerCommonBase::EndStats ()** [protected]
- 7.135.3.12 **void OsclExecSchedulerCommonBase::Error (int32 *anError*) const** [protected]
- 7.135.3.13 **PVActiveBase* OsclExecSchedulerCommonBase::FindPVBase (PVActiveBase * *active*, OsclDoubleList< PVActiveBase > &)** [protected]
- 7.135.3.14 **OSCL_IMPORT_REF uint32 OsclExecSchedulerCommonBase::GetId ()** [static]

Get numeric ID of current thread.

- 7.135.3.15 **OSCL_IMPORT_REF OsclNameString< PVSCHEDNAMELEN >* OsclExecSchedulerCommonBase::GetName ()** [static]

Get name of scheduler for current thread.

- 7.135.3.16** `OsclExecSchedulerCommonBase* OsclExecSchedulerCommonBase::GetScheduler ()` [static, protected]
- 7.135.3.17** `void OsclExecSchedulerCommonBase::IncLogPerf (uint32) [protected]`
- 7.135.3.18** `void OsclExecSchedulerCommonBase::InitExecQ (int) [protected]`
- 7.135.3.19** `void OsclExecSchedulerCommonBase::InstallScheduler () [protected]`
- 7.135.3.20** `bool OsclExecSchedulerCommonBase::IsInstalled () [inline, protected]`
- 7.135.3.21** `bool OsclExecSchedulerCommonBase::IsStarted () [protected]`
- 7.135.3.22** `void OsclExecSchedulerCommonBase::PendComplete (PVActiveBase *, int32 aReason, TPVThreadContext aContext) [protected]`
- 7.135.3.23** `void OsclExecSchedulerCommonBase::RequestCanceled (PVActiveBase *) [protected]`
- 7.135.3.24** `void OsclExecSchedulerCommonBase::ResetLogPerf () [protected]`
- 7.135.3.25** `OSCL_IMPORT_REF void OsclExecSchedulerCommonBase::ResumeScheduler ()`

Resume scheduling immediately. This API only applies to a blocking loop scheduler.

- 7.135.3.26** `OsclExecSchedulerCommonBase* OsclExecSchedulerCommonBase::SetScheduler (OsclExecSchedulerCommonBase *) [static, protected]`
- 7.135.3.27** `void OsclExecSchedulerCommonBase::ShowStats (PVActiveStats * active) [static, protected]`
- 7.135.3.28** `void OsclExecSchedulerCommonBase::ShowSummaryStats (PVActiveStats * active, PVLogger *, int64, int64 &, float &) [static, protected]`
- 7.135.3.29** `OSCL_IMPORT_REF void OsclExecSchedulerCommonBase::StartNativeScheduler ()`

Start the OS native scheduling loop. This is an alternative to the PV scheduling loop. To stop the native scheduler, use the StopScheduler API.

- 7.135.3.30** `OSCL_IMPORT_REF void OsclExecSchedulerCommonBase::StartScheduler (OsclSemaphore * sem = NULL)`

Start scheduling. This call blocks until scheduler is stopped or an error occurs.

Parameters:

sem: optional startup semaphore. If provided, the scheduler will signal this semaphore when the startup has progressed to the point that it's safe to call StopScheduler or SuspendScheduler from another thread.

7.135.3.31 OSCL_IMPORT_REF void OsclExecSchedulerCommonBase::StopScheduler ()

Stop scheduling. This API may be called from the scheduling thread or some other thread.

7.135.3.32 OSCL_IMPORT_REF void OsclExecSchedulerCommonBase::SuspendScheduler ()

Suspend scheduling when the current Run is complete. This API only applies to a blocking loop scheduler.

7.135.3.33 void OsclExecSchedulerCommonBase::UninstallScheduler () [protected]**7.135.3.34 PVActiveBase* OsclExecSchedulerCommonBase::UpdateTimers (uint32 & aDelay) [protected]****7.135.3.35 PVActiveBase* OsclExecSchedulerCommonBase::UpdateTimersMsec (uint32 & aDelay) [protected]****7.135.3.36 PVActiveBase* OsclExecSchedulerCommonBase::WaitForReadyAO () [protected]****7.135.4 Friends And Related Function Documentation****7.135.4.1 friend class OsclActiveObject [friend]****7.135.4.2 friend class OsclCoeActiveScheduler [friend]****7.135.4.3 friend class OsclError [friend]****7.135.4.4 friend class OsclExecScheduler [friend]****7.135.4.5 friend class OsclReadyQ [friend]****7.135.4.6 friend class OsclScheduler [friend]**

Reimplemented in [OsclExecScheduler](#).

7.135.4.7 friend class OsclTimerCompare [friend]

7.135.4.8 friend class OsclTimerObject [friend]

7.135.4.9 friend class PVActiveBase [friend]

7.135.4.10 friend class PVActiveStats [friend]

7.135.4.11 friend class PVSchedulerStopper [friend]

7.135.4.12 friend class PVThreadContext [friend]

7.135.5 Field Documentation

7.135.5.1 **Oscl_DefAlloc*** OsclExecSchedulerCommonBase::iAlloc [protected]

7.135.5.2 bool OsclExecSchedulerCommonBase::iBlockingMode [protected]

7.135.5.3 **PVLogger*** OsclExecSchedulerCommonBase::iDebugLogger [protected]

7.135.5.4 **OsclMemAllocator** OsclExecSchedulerCommonBase::iDefAlloc [protected]

7.135.5.5 int32 OsclExecSchedulerCommonBase::iDelta [protected]

7.135.5.6 bool OsclExecSchedulerCommonBase::iDoStop [protected]

7.135.5.7 bool OsclExecSchedulerCommonBase::iDoSuspend [protected]

7.135.5.8 **OsclErrorTrapImp*** OsclExecSchedulerCommonBase::iErrorTrapImp
[protected]

7.135.5.9 **OsclTimerQ** OsclExecSchedulerCommonBase::iExecTimerQ [protected]

7.135.5.10 **int64** OsclExecSchedulerCommonBase::iGrandTotalTicks [protected]

7.135.5.11 **PVLogger*** OsclExecSchedulerCommonBase::iLogger [protected]

7.135.5.12 char* OsclExecSchedulerCommonBase::iLogPerfIndentStr [protected]

7.135.5.13 int32 OsclExecSchedulerCommonBase::iLogPerfIndentStrLen [protected]

7.135.5.14 uint32 OsclExecSchedulerCommonBase::iLogPerfTotal [protected]

7.135.5.15 **OsclNameString<PVSCHEDEXNAMELEN>** OsclExecSchedulerCommonBase::iName
[protected]

7.135.5.16 bool OsclExecSchedulerCommonBase::iNativeMode [protected]

7.135.5.17 uint32 OsclExecSchedulerCommonBase::iNumAOAdded [protected]

7.135.5.18 **PVActiveStats*** OsclExecSchedulerCommonBase::iOtherExecStats[EOtherExecStats_-
Last] [protected]

7.135.5.19 **OsclDoubleList<PVActiveStats>** OsclExecSchedulerCommonBase::iPVStatQ

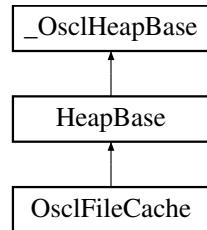
[protected]

- [oscl_scheduler.h](#)

7.136 OsclFileCache Class Reference

```
#include <oscl_file_cache.h>
```

Inheritance diagram for OsclFileCache::



Public Methods

- [OsclFileCache \(Oscl_File &aContainer\)](#)
- [~OsclFileCache \(\)](#)
- int32 [Open \(uint32 mode, uint32 cache_size\)](#)
- void [Close \(\)](#)
- uint32 [Read \(void *outputBuffer, uint32 size, uint32 numelements\)](#)
- uint32 [Write \(const void *inputBuffer, uint32 size, uint32 numelements\)](#)
- [TOsclFileOffset FileSize \(\)](#)
- int32 [Seek \(TOsclFileOffset offset, Oscl_File::seek_type origin\)](#)
- [TOsclFileOffset Tell \(\)](#)
- int32 [Flush \(\)](#)
- int32 [EndOfFile \(\)](#)
- OSCL_IMPORT_REF [OsclFileCacheBuffer * AddFixedCache \(const Oscl_File::OsclFixedCacheParam &\)](#)

Data Fields

- [OsclFileCacheBuffer _movableCache](#)
- [Oscl_Vector< OsclFileCacheBuffer, OsclMemAllocator > _fixedCaches](#)

Friends

- class [OsclFileCacheBuffer](#)

7.136.1 Constructor & Destructor Documentation

7.136.1.1 **OsclFileCache::OsclFileCache ([Oscl_File](#) & *aContainer*)**

7.136.1.2 **OsclFileCache::~OsclFileCache ()**

7.136.2 Member Function Documentation

7.136.2.1 **OSCL_IMPORT_REF [OsclFileCacheBuffer](#)* OsclFileCache::AddFixedCache (const [Oscl_File::OsclFixedCacheParam](#) &)**

7.136.2.2 **void OsclFileCache::Close ()**

7.136.2.3 **int32 OsclFileCache::EndOfFile () [inline]**

7.136.2.4 **[TOsclFileOffset](#) OsclFileCache::FileSize () [inline]**

7.136.2.5 **int32 OsclFileCache::Flush ()**

7.136.2.6 **int32 OsclFileCache::Open (uint32 *mode*, uint32 *cache_size*)**

7.136.2.7 **uint32 OsclFileCache::Read (void * *outputBuffer*, uint32 *size*, uint32 *numelements*)**

7.136.2.8 **int32 OsclFileCache::Seek ([TOsclFileOffset](#) *offset*, [Oscl_File::seek_type](#) *origin*)**

7.136.2.9 **[TOsclFileOffset](#) OsclFileCache::Tell () [inline]**

7.136.2.10 **uint32 OsclFileCache::Write (const void * *inputBuffer*, uint32 *size*, uint32 *numelements*)**

7.136.3 Friends And Related Function Documentation

7.136.3.1 **friend class OsclFileCacheBuffer [friend]**

7.136.4 Field Documentation

7.136.4.1 **[Oscl_Vector](#)<[OsclFileCacheBuffer](#), [OsclMemAllocator](#)> OsclFileCache::_fixedCaches**

7.136.4.2 **[OsclFileCacheBuffer](#) OsclFileCache::_movableCache**

The documentation for this class was generated from the following file:

- [oscl_file_cache.h](#)

7.137 OsclFileCacheBuffer Class Reference

```
#include <oscl_file_cache.h>
```

Public Methods

- [OsclFileCacheBuffer \(\)](#)
- int32 [SetPosition \(TOsclFileOffset pos\)](#)
- int32 [PrepRead \(\)](#)
- int32 [PrepWrite \(\)](#)
- int32 [WriteUpdatesToFile \(\)](#)
- int32 [FillFromFile \(uint32, uint32\)](#)
- bool [IsUpdated \(\)](#)
- bool [Contains \(TOsclFileOffset pos\)](#)
- bool [Preceeds \(TOsclFileOffset pos\)](#)

Data Fields

- [OsclFileCache * iContainer](#)
- bool [isFixed](#)
- uint32 [capacity](#)
- uint32 [usableSize](#)
- uint8 * [pBuffer](#)
- [TOsclFileOffset filePosition](#)
- uint32 [currentPos](#)
- uint32 [endPos](#)
- uint32 [updateStart](#)
- uint32 [updateEnd](#)

7.137.1 Constructor & Destructor Documentation

7.137.1.1 `OsclFileCacheBuffer::OsclFileCacheBuffer () [inline]`

7.137.2 Member Function Documentation

7.137.2.1 `bool OsclFileCacheBuffer::Contains (TOsclFileOffset pos) [inline]`

7.137.2.2 `int32 OsclFileCacheBuffer::FillFromFile (uint32, uint32)`

7.137.2.3 `bool OsclFileCacheBuffer::IsUpdated () [inline]`

7.137.2.4 `bool OsclFileCacheBuffer::Preceeds (TOsclFileOffset pos) [inline]`

7.137.2.5 `int32 OsclFileCacheBuffer::PreRead ()`

7.137.2.6 `int32 OsclFileCacheBuffer::PrepWrite ()`

7.137.2.7 `int32 OsclFileCacheBuffer::SetPosition (TOsclFileOffset pos)`

7.137.2.8 `int32 OsclFileCacheBuffer::WriteUpdatesToFile ()`

7.137.3 Field Documentation

7.137.3.1 `uint32 OsclFileCacheBuffer::capacity`

7.137.3.2 `uint32 OsclFileCacheBuffer::currentPos`

7.137.3.3 `uint32 OsclFileCacheBuffer::endPos`

7.137.3.4 `TOsclFileOffset OsclFileCacheBuffer::filePosition`

7.137.3.5 `OsclFileCache* OsclFileCacheBuffer::iContainer`

7.137.3.6 `bool OsclFileCacheBuffer::isFixed`

7.137.3.7 `uint8* OsclFileCacheBuffer::pBuffer`

7.137.3.8 `uint32 OsclFileCacheBuffer::updateEnd`

7.137.3.9 `uint32 OsclFileCacheBuffer::updateStart`

7.137.3.10 `uint32 OsclFileCacheBuffer::usableSize`

The documentation for this class was generated from the following file:

- [oscl_file_cache.h](#)

7.138 OsclFileHandle Class Reference

```
#include <oscl_file_handle.h>
```

Public Methods

- [OsclFileHandle \(TOsclFileHandle aHandle\)](#)
- [OsclFileHandle \(const OsclFileHandle &aHandle\)](#)
- [TOsclFileHandle Handle \(\) const](#)

Friends

- class [Oscl_File](#)

7.138.1 Detailed Description

OsclFileHandle is a container for a handle to a previously-opened file.

7.138.2 Constructor & Destructor Documentation

7.138.2.1 OsclFileHandle::OsclFileHandle (TOsclFileHandle *aHandle*) [inline]

7.138.2.2 OsclFileHandle::OsclFileHandle (const OsclFileHandle & *aHandle*) [inline]

7.138.3 Member Function Documentation

7.138.3.1 TOsclFileHandle OsclFileHandle::Handle () const [inline]

7.138.4 Friends And Related Function Documentation

7.138.4.1 friend class Oscl_File [friend]

The documentation for this class was generated from the following file:

- [oscl_file_handle.h](#)

7.139 OsclFileManager Class Reference

```
#include <oscl_file_manager.h>
```

Public Types

- enum **OSCL_FILE_ATTRIBUTE_TYPE** { **OSCL_FILE_ATTRIBUTE_READONLY** = 0x00000001, **OSCL_FILE_ATTRIBUTE_HIDDEN** = 0x00000002, **OSCL_FILE_ATTRIBUTE_SYSTEM** = 0x00000004, **OSCL_FILE_ATTRIBUTE_DIRECTORY** = 0x00000010, **OSCL_FILE_ATTRIBUTE_ARCHIVE** = 0x00000020, **OSCL_FILE_ATTRIBUTE_NORMAL** = 0x00000080 }

Static Public Methods

- OSCL_IMPORT_REF bool **OsclGetFileSize** (const **oscl_wchar** *aFileName, **uint64** &aFileSize)
- OSCL_IMPORT_REF bool **OsclGetFileSize** (const char *aFileName, **uint64** &aFileSize)
- OSCL_IMPORT_REF bool **OsclGetFileCreationTime** (const **oscl_wchar** *aFileName, **uint64** &aFileCreationTime)
- OSCL_IMPORT_REF bool **OsclGetFileCreationTime** (const char *aFileName, **uint64** &aFileCreationTime)
- OSCL_IMPORT_REF bool **OsclGetFileLastAccessTime** (const **oscl_wchar** *aFileName, **uint64** &aFileLastAccessTime)
- OSCL_IMPORT_REF bool **OsclGetFileLastAccessTime** (const char *aFileName, **uint64** &aFileLastAccessTime)
- OSCL_IMPORT_REF bool **OsclGetFileLastWriteTime** (const **oscl_wchar** *aFileName, **uint64** &aFileLastWriteTime)
- OSCL_IMPORT_REF bool **OsclGetFileLastWriteTime** (const char *aFileName, **uint64** &aFileLastWriteTime)
- OSCL_IMPORT_REF bool **OsclGetFileAttributes** (const **oscl_wchar** *aFileName, **uint32** &aFileAttributes)
- OSCL_IMPORT_REF bool **OsclGetFileAttributes** (const char *aFileName, **uint32** &aFileAttributes)
- OSCL_IMPORT_REF void **OsclExtractFilenameFromFullPath** (const char *aPath, char *&aFileName)
- OSCL_IMPORT_REF void **OsclExtractFilenameFromFullPath** (const **oscl_wchar** *aPath, **oscl_wchar** *&aFileName)

7.139.1 Member Enumeration Documentation

7.139.1.1 enum OsclFileManager::OSCL_FILE_ATTRIBUTE_TYPE

Enumeration values:

- OSCL_FILE_ATTRIBUTE_READONLY**
- OSCL_FILE_ATTRIBUTE_HIDDEN**
- OSCL_FILE_ATTRIBUTE_SYSTEM**
- OSCL_FILE_ATTRIBUTE_DIRECTORY**
- OSCL_FILE_ATTRIBUTE_ARCHIVE**
- OSCL_FILE_ATTRIBUTE_NORMAL**

7.139.2 Member Function Documentation

**7.139.2.1 OSCL_IMPORT_REF void OsclFileManager::OsclExtractFilenameFromFullPath
(const oscl_wchar * aPath, oscl_wchar *& aFileName) [static]**

**7.139.2.2 OSCL_IMPORT_REF void OsclFileManager::OsclExtractFilenameFromFullPath
(const char * aPath, char *& aFileName) [static]**

OsclExtractFilenameFromFullPath utility function provide the FileName From Path of a file.

Parameters:

in] character path; the full path of the file or directory

out] character FileName :file Name .It is assigned a pointer to file name in path itself.

Returns:

void for all condition

**7.139.2.3 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileAttributes (const char *
aFileName, uint32 & aFileAttributes) [static]**

OsclGetFileAttributes utility function provides the various attributes of file (or directory) like if it is hidden, read only etc. The uint32 value is to be interpreted as per the enum OSCL_FILE_ATTRIBUTE_TYPE defined in [oscl_file_manager.h](#)

Parameters:

in] character path; the full path of the file or directory

out] file attributes.

Returns:

true if successful, otherwise false.

**7.139.2.4 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileAttributes (const oscl_wchar
* aFileName, uint32 & aFileAttributes) [static]**

OsclGetFileAttributes utility function provides the various attributes of file (or directory) like if it is hidden, read only etc. The uint32 value is to be interpreted as per the enum OSCL_FILE_ATTRIBUTE_TYPE defined in [oscl_file_manager.h](#)

Parameters:

in] wide character path; the full path of the file or directory

out] file attributes.

Returns:

true if successful, otherwise false.

**7.139.2.5 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileCreationTime (const char *
aFileName, uint64 & aFileCreationTime) [static]**

OsclGetFileCreationTime utility function provides the file (or directory) creation time

Note:

On symbian platform, this api returns last modified time.

Parameters:

in] character path; the full path of the file or directory

out] creation time in microseconds.

Returns:

true if successful, otherwise false.

**7.139.2.6 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileCreationTime (const
oscl_wchar * aFileName, uint64 & aFileCreationTime) [static]**

OsclGetFileCreationTime utility function provides the file (or directory) creation time

Note:

On symbian platform, this api returns last modified time.

Parameters:

in] wide character path; the full path of the file or directory

out] creation time in microseconds

Returns:

true if successful, otherwise false.

**7.139.2.7 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileLastAccessTime (const char
* aFileName, uint64 & aFileLastAccessTime) [static]**

OsclGetFileLastAccessTime utility function provides the file (or directory) last access time, which might be different from last modified time.

Note:

On symbian platform, this api returns last modified time.

Parameters:

in] character path; the full path of the file or directory

out] Last access time in microseconds.

Returns:

true if successful, otherwise false.

7.139.2.8 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileLastAccessTime (const oscl_wchar * aFileName, uint64 & aFileLastAccessTime) [static]

OsclGetFileLastAccessTime utility function provides the file (or directory) last access time, which might be different from last modified time.

Note:

On symbian platform, this api returns last modified time.

Parameters:

in] wide character path; the full path of the file or directory
out] Last access time in microseconds

Returns:

true if successful, otherwise false.

7.139.2.9 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileLastWriteTime (const char * aFileName, uint64 & aFileLastWriteTime) [static]

OsclGetFileLastWriteTime utility function provides the file (or directory) last modified time.

Parameters:

in] character path; the full path of the file or directory
out] last modified time in microseconds

Returns:

true if successful, otherwise false.

7.139.2.10 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileLastWriteTime (const oscl_wchar * aFileName, uint64 & aFileLastWriteTime) [static]

OsclGetFileLastWriteTime utility function provides the file (or directory) last modified time.

Parameters:

in] wide character path; the full path of the file or directory
out] last modified time in microseconds

Returns:

true if successful, otherwise false.

7.139.2.11 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileSize (const char * aFileName, uint64 & aFileSize) [static]

OsclGetFileSize utility function provides the file size. For directory, this value is undefined.

Parameters:

in] character path; the full path of the file or directory
out] file size in bytes.

Returns:

true if successful, otherwise false.

**7.139.2.12 OSCL_IMPORT_REF bool OsclFileManager::OsclGetFileSize (const oscl_wchar *
aFileName, uint64 & *aFileSize*) [static]**

OsclGetFileSize utility function provides the file size. For directory, this value is undefined. creation time

Parameters:

- in*] wide character path; the full path of the file or directory
- out*] file size in bytes

Returns:

true if successful, otherwise false.

The documentation for this class was generated from the following file:

- [oscl_file_manager.h](#)

7.140 OsclFileStats Class Reference

```
#include <oscl_file_stats.h>
```

Public Methods

- [OsclFileStats \(Oscl_File *c\)](#)
- [void Start \(uint32 &aTicks\)](#)
- [void End \(TOsclFileOp aOp, uint32 aStart, uint32 aParam=0, TOsclFileOffset aParam2=0\)](#)
- [void Log \(TOsclFileOp, PVLogger *, uint32\)](#)
- [void LogAll \(PVLogger *, uint32\)](#)

7.140.1 Constructor & Destructor Documentation

7.140.1.1 OsclFileStats::OsclFileStats ([Oscl_File](#) * *c*)

7.140.2 Member Function Documentation

7.140.2.1 void OsclFileStats::End ([TOsclFileOp](#) *aOp*, [uint32](#) *aStart*, [uint32](#) *aParam* = 0, [TOsclFileOffset](#) *aParam2* = 0)

7.140.2.2 void OsclFileStats::Log ([TOsclFileOp](#), [PVLogger](#) *, [uint32](#))

7.140.2.3 void OsclFileStats::LogAll ([PVLogger](#) *, [uint32](#))

7.140.2.4 void OsclFileStats::Start ([uint32](#) & *aTicks*)

The documentation for this class was generated from the following file:

- [oscl_file_stats.h](#)

7.141 OsclFileStatsItem Class Reference

```
#include <oscl_file_stats.h>
```

Data Fields

- uint32 [iOpCount](#)
- uint32 [iParam](#)
- [TOsclFileOffset](#) [iParam2](#)
- uint32 [iStartTick](#)
- uint32 [iTTotalTicks](#)

7.141.1 Field Documentation

7.141.1.1 uint32 OsclFileStatsItem::iOpCount

7.141.1.2 uint32 OsclFileStatsItem::iParam

7.141.1.3 TOsclFileOffset OsclFileStatsItem::iParam2

7.141.1.4 uint32 OsclFileStatsItem::iStartTick

7.141.1.5 uint32 OsclFileStatsItem::iTTotalTicks

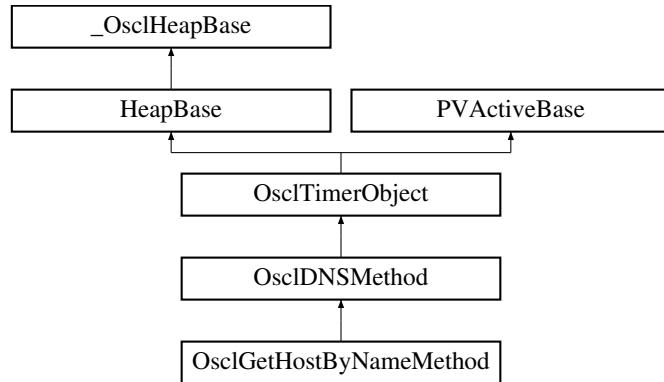
The documentation for this class was generated from the following file:

- [oscl_file_stats.h](#)

7.142 OsclGetHostByNameMethod Class Reference

```
#include <oscl_dns_gethostbyname.h>
```

Inheritance diagram for OsclGetHostByNameMethod::



Public Methods

- `~OsclGetHostByNameMethod ()`
- `TPVDNSEvent GetHostByName (char *name, OsclNetworkAddress *addr, int32 aTimeout, Oscl_-Vector< OsclNetworkAddress, OsclMemAllocator > *aAddressList)`

Static Public Methods

- `OsclGetHostByNameMethod * NewL (Oscl_DefAlloc &a, OsclDNSI *aDNS, OsclDNSObserver *aObserver, uint32 aId)`

7.142.1 Constructor & Destructor Documentation

7.142.1.1 OsclGetHostByNameMethod::~OsclGetHostByNameMethod ()

7.142.2 Member Function Documentation

7.142.2.1 TPVDNSEvent OsclGetHostByNameMethod::GetHostByName (char * name, OsclNetworkAddress * addr, int32 aTimeout, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aAddressList)

7.142.2.2 OsclGetHostByNameMethod* OsclGetHostByNameMethod::NewL (Oscl_DefAlloc &a, OsclDNSI *aDNS, OsclDNSObserver *aObserver, uint32 aId) [static]

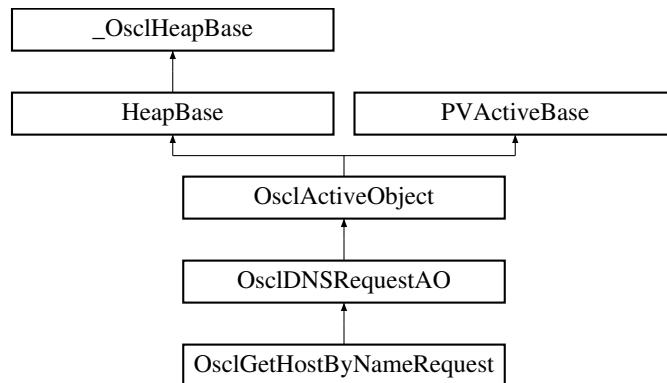
The documentation for this class was generated from the following file:

- `oscl_dns_gethostbyname.h`

7.143 OsclGetHostByNameRequest Class Reference

```
#include <oscl_dns_gethostbyname.h>
```

Inheritance diagram for OsclGetHostByNameRequest::



Friends

- class [OsclGetHostByNameMethod](#)

7.143.1 Friends And Related Function Documentation

7.143.1.1 friend class OsclGetHostByNameMethod [friend]

The documentation for this class was generated from the following file:

- [oscl_dns_gethostbyname.h](#)

7.144 OsclInit Class Reference

```
#include <oscl_init.h>
```

Static Public Methods

- OSCL_IMPORT_REF void [Init](#) (int32 &aError, const [OsclSelect](#) *aSelect=NULL)
- OSCL_IMPORT_REF void [Cleanup](#) (int32 &aError, const [OsclSelect](#) *aSelect=NULL)

7.144.1 Detailed Description

Per-thread oscl initialization and cleanup.

7.144.2 Member Function Documentation

7.144.2.1 OSCL_IMPORT_REF void OsclInit::Cleanup (int32 & aError, const [OsclSelect](#) * aSelect = NULL) [static]

This routine cleans up the Oscl modules in the calling thread.

Parameters:

err: (output) error code of any leave that occurs in initialization.

config: (input param) optional set of initialization parameters. If null, then full initialization with default parameters will be performed. For proper cleanup, the parameters should match the ones used during the Init call.

7.144.2.2 OSCL_IMPORT_REF void OsclInit::Init (int32 & aError, const [OsclSelect](#) * aSelect = NULL) [static]

This routine initializes the Oscl modules in the calling thread.

Parameters:

err: (output) error code of any leave that occurs in initialization.

config: (input param) optional set of initialization parameters. If null, then full initialization with default parameters will be performed.

The documentation for this class was generated from the following file:

- [oscl_init.h](#)

7.145 OsclInteger64Transport Struct Reference

```
#include <oscl_int64_utils.h>
```

Data Fields

- uint32 [iHigh](#)
- uint32 [iLow](#)

7.145.1 Detailed Description

OsclInteger64Transport Structure

Structure to only transport 64-bit integer values uint64 and int64 could be classes so needed for cases where having a class will not work.

7.145.2 Field Documentation

7.145.2.1 uint32 OsclInteger64Transport::iHigh

7.145.2.2 uint32 OsclInteger64Transport::iLow

The documentation for this struct was generated from the following file:

- [oscl_int64_utils.h](#)

7.146 OsclIpMReq Class Reference

```
#include <oscl_socket_types.h>
```

Public Methods

- [OsclIpMReq \(const char *intrfcAddr, const char *multcstAddr\)](#)

Data Fields

- [OsclNameString< PVNETWORKADDRESS_LEN > interfaceAddr](#)
- [OsclNameString< PVNETWORKADDRESS_LEN > multicastAddr](#)

7.146.1 Constructor & Destructor Documentation

7.146.1.1 OsclIpMReq::OsclIpMReq (const char * *intrfcAddr*, const char * *multcstAddr*)
[inline]

7.146.2 Field Documentation

7.146.2.1 OsclNameString<PVNETWORKADDRESS_LEN> OsclIpMReq::interfaceAddr

7.146.2.2 OsclNameString<PVNETWORKADDRESS_LEN> OsclIpMReq::multicastAddr

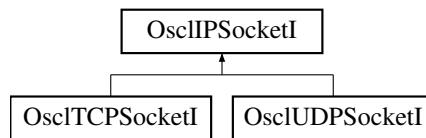
The documentation for this class was generated from the following file:

- [oscl_socket_types.h](#)

7.147 OsclIPSocketI Class Reference

```
#include <oscl_ip_socket.h>
```

Inheritance diagram for OsclIPSocketI::



Public Methods

- int32 [Bind \(OsclNetworkAddress &aAddress\)](#)
- int32 [Join \(OsclNetworkAddress &aAddress\)](#)
- int32 [SetRecvBufferSize \(uint32 size\)](#)
- int32 [SetOptionToReuseAddress \(\)](#)
- int32 [SetTOS \(const OsclSocketTOS &aTOS\)](#)
- int32 [GetPeerName \(OsclNetworkAddress &peerName\)](#)
- virtual int32 [Close \(\)=0](#)
- virtual uint8 * [GetRecvData \(int32 *aLength\)=0](#)
- virtual uint8 * [GetSendData \(int32 *aLength\)=0](#)
- virtual ~[OsclIPSocketI \(\)](#)
- void [ThreadLogoff \(\)](#)
- void [ThreadLogon \(OsclSocketObserver *aObs, OsclSocketServI *aServ\)](#)
- [OsclSocketServI * SocketServ \(\)](#)
- [Oscl_DefAlloc & Alloc \(\)](#)

Protected Methods

- [OsclIPSocketI \(Oscl_DefAlloc &a\)](#)
- void [ConstructL \(OsclSocketObserver *aObs, OsclSocketI *aSock, OsclSocketServI *aServ, uint32 aId\)](#)

Protected Attributes

- [Oscl_DefAlloc & iAlloc](#)
- [OsclNetworkAddress iAddress](#)
- uint32 [iId](#)
- [OsclSocketObserver * iObserver](#)
- [OsclSocketI * iSocket](#)
- [OsclSocketServI * iSocketServ](#)
- [PVLogger * iLogger](#)

Friends

- class [OsclSocketRequestAO](#)
- class [OsclSocketMethod](#)

7.147.1 Constructor & Destructor Documentation

7.147.1.1 `virtual OsclIPSocketI::~OsclIPSocketI () [inline, virtual]`

7.147.1.2 `OsclIPSocketI::OsclIPSocketI (Oscl_DefAlloc & a) [inline, protected]`

7.147.2 Member Function Documentation

7.147.2.1 `Oscl_DefAlloc& OsclIPSocketI::Alloc () [inline]`

7.147.2.2 `int32 OsclIPSocketI::Bind (OsclNetworkAddress & aAddress)`

7.147.2.3 `virtual int32 OsclIPSocketI::Close () [pure virtual]`

Implemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.147.2.4 `void OsclIPSocketI::ConstructL (OsclSocketObserver * aObs, OsclSocketI * aSock, OsclSocketServI * aServ, uint32 aId) [protected]`

7.147.2.5 `int32 OsclIPSocketI::GetPeerName (OsclNetworkAddress & peerName)`

7.147.2.6 `virtual uint8* OsclIPSocketI::GetRecvData (int32 * aLength) [pure virtual]`

Implemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.147.2.7 `virtual uint8* OsclIPSocketI::GetSendData (int32 * aLength) [pure virtual]`

Implemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.147.2.8 `int32 OsclIPSocketI::Join (OsclNetworkAddress & aAddress)`

7.147.2.9 `int32 OsclIPSocketI::SetOptionToReuseAddress ()`

7.147.2.10 `int32 OsclIPSocketI::SetRecvBufferSize (uint32 size)`

7.147.2.11 `int32 OsclIPSocketI::SetTOS (const OsclSocketTOS & aTOS)`

7.147.2.12 `OsclSocketServI* OsclIPSocketI::SocketServ () [inline]`

7.147.2.13 `void OsclIPSocketI::ThreadLogoff ()`

Reimplemented in [OsclTCPSocketI](#), and [OsclUDPSocketI](#).

7.147.2.14 void OsclIPSocketI::ThreadLogon ([OsclSocketObserver](#) * *aObs*, [OsclSocketServI](#) * *aServ*)

7.147.3 Friends And Related Function Documentation

7.147.3.1 friend class [OsclSocketMethod](#) [friend]

7.147.3.2 friend class [OsclSocketRequestAO](#) [friend]

7.147.4 Field Documentation

7.147.4.1 [OsclNetworkAddress](#) [OsclIPSocketI::iAddress](#) [protected]

7.147.4.2 [Oscl_DefAlloc&](#) [OsclIPSocketI::iAlloc](#) [protected]

7.147.4.3 uint32 [OsclIPSocketI::iId](#) [protected]

7.147.4.4 [PVLogger*](#) [OsclIPSocketI::iLogger](#) [protected]

7.147.4.5 [OsclSocketObserver*](#) [OsclIPSocketI::iObserver](#) [protected]

7.147.4.6 [OsclSocketI*](#) [OsclIPSocketI::iSocket](#) [protected]

7.147.4.7 [OsclSocketServI*](#) [OsclIPSocketI::iSocketServ](#) [protected]

The documentation for this class was generated from the following file:

- [oscl_ip_socket.h](#)

7.148 OsclJump Class Reference

```
#include <oscl_error_imp_jumps.h>
```

Public Methods

- void [Jump](#) (int a)
- jmp_buf * [Top](#) ()
- [~OsclJump](#) ()

Static Public Methods

- OSCL_IMPORT_REF void [StaticJump](#) (int a)

Friends

- class [OsclErrorTrapImp](#)

7.148.1 Constructor & Destructor Documentation

7.148.1.1 OsclJump::~OsclJump () [inline]

7.148.2 Member Function Documentation

7.148.2.1 void OsclJump::Jump (int a) [inline]

7.148.2.2 OSCL_IMPORT_REF void OsclJump::StaticJump (int a) [static]

7.148.2.3 jmp_buf* OsclJump::Top () [inline]

7.148.3 Friends And Related Function Documentation

7.148.3.1 friend class OsclErrorTrapImp [friend]

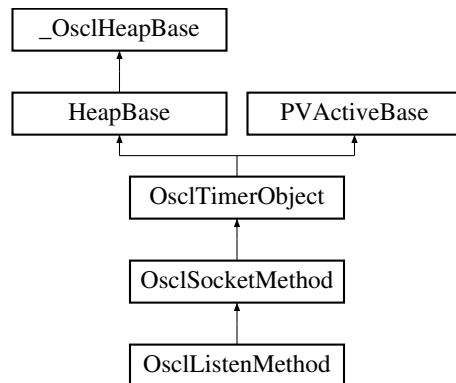
The documentation for this class was generated from the following file:

- [oscl_error_imp_jumps.h](#)

7.149 OsclListenMethod Class Reference

```
#include <oscl_socket_listen.h>
```

Inheritance diagram for OsclListenMethod::



Public Methods

- [~OsclListenMethod \(\)](#)
- [TPVSocketEvent Listen \(uint32 qsize, int32 aTimeout\)](#)
- [OsclListenRequest * ListenRequest \(\)](#)

Static Public Methods

- [OsclListenMethod * NewL \(OsclIPSocketI &c\)](#)

7.149.1 Constructor & Destructor Documentation

7.149.1.1 OsclListenMethod::~OsclListenMethod ()

7.149.2 Member Function Documentation

7.149.2.1 TPVSocketEvent OsclListenMethod::Listen (uint32 qsize, int32 aTimeout)

7.149.2.2 OsclListenRequest* OsclListenMethod::ListenRequest () [inline]

7.149.2.3 OsclListenMethod* OsclListenMethod::NewL (OsclIPSocketI &c) [static]

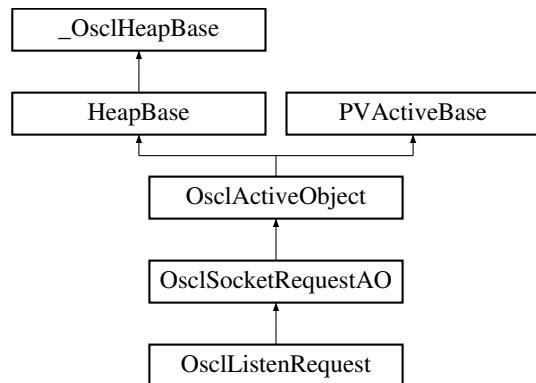
The documentation for this class was generated from the following file:

- [oscl_socket_listen.h](#)

7.150 OsclListenRequest Class Reference

```
#include <oscl_socket_listen.h>
```

Inheritance diagram for OsclListenRequest::



Public Methods

- [OsclListenRequest \(OsclSocketMethod &c\)](#)
- void [Listen \(uint32 qsize\)](#)

7.150.1 Detailed Description

This is the AO that interacts with the socket server

7.150.2 Constructor & Destructor Documentation

7.150.2.1 OsclListenRequest::OsclListenRequest ([OsclSocketMethod & c](#)) [inline]

7.150.3 Member Function Documentation

7.150.3.1 void OsclListenRequest::Listen (uint32 *qsize*)

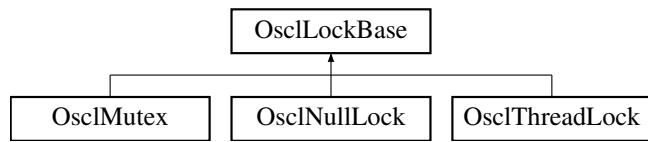
The documentation for this class was generated from the following file:

- [oscl_socket_listen.h](#)

7.151 OsclLockBase Class Reference

```
#include <oscl_lock_base.h>
```

Inheritance diagram for OsclLockBase::



Public Methods

- virtual void [Lock \(\)=0](#)
- virtual void [Unlock \(\)=0](#)
- virtual [~OsclLockBase \(\)](#)

7.151.1 Constructor & Destructor Documentation

7.151.1.1 virtual OsclLockBase::~OsclLockBase () [inline, virtual]

7.151.2 Member Function Documentation

7.151.2.1 virtual void OsclLockBase::Lock () [pure virtual]

Implemented in [OsclNullLock](#), [OsclMutex](#), and [OsclThreadLock](#).

7.151.2.2 virtual void OsclLockBase::Unlock () [pure virtual]

Implemented in [OsclNullLock](#), [OsclMutex](#), and [OsclThreadLock](#).

The documentation for this class was generated from the following file:

- [oscl_lock_base.h](#)

7.152 OsclMem Class Reference

```
#include <oscl_mem.h>
```

Static Public Methods

- OSCL_IMPORT_REF void [Init \(\)](#)
- OSCL_IMPORT_REF void [Cleanup \(\)](#)

7.152.1 Member Function Documentation

7.152.1.1 OSCL_IMPORT_REF void OsclMem::Cleanup () [static]

Per-thread cleanup of Oscl Memory @exception: Leaves on error;

7.152.1.2 OSCL_IMPORT_REF void OsclMem::Init () [static]

Per-thread initialization of Oscl Memory

Parameters:

lock: A lock class for use with multi-threaded applications. The lock is needed in use cases where memory may be allocated in one thread and freed in another. In this case, there must be a single lock object, and its pointer must be passed to the [OsclMem::Init](#) call in each thread. If no lock is provided, the memory manager will not be thread-safe. @exception: Leaves on error

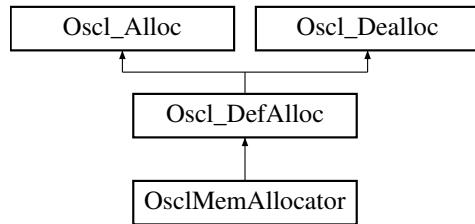
The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.153 OsclMemAllocator Class Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemAllocator::



Public Methods

- [OsclAny * allocate \(const uint32 n\)](#)
- [OsclAny * allocate_fl \(const uint32 n, const char *file_name, const int line_num\)](#)
- void [deallocate \(OsclAny *p\)](#)

7.153.1 Detailed Description

A simple allocator class. Configurable as to whether this goes through the memory manager or not.

7.153.2 Member Function Documentation

7.153.2.1 [OsclAny* OsclMemAllocator::allocate \(const uint32 n\)](#) [inline, virtual]

This API throws an exception when malloc returns NULL. n must be greater than 0.

Returns:

pointer (or Leave with OsclErrNoMemory)

Implements [Oscl_DefAlloc](#).

7.153.2.2 [OsclAny* OsclMemAllocator::allocate_fl \(const uint32 n, const char *file_name, const int line_num\)](#) [inline, virtual]

Reimplemented from [Oscl_DefAlloc](#).

7.153.2.3 [void OsclMemAllocator::deallocate \(OsclAny *p\)](#) [inline, virtual]

Implements [Oscl_DefAlloc](#).

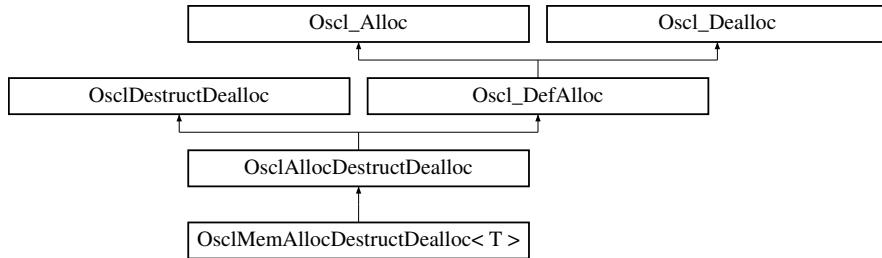
The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.154 OsclMemAllocDestructDealloc< T > Class Template Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemAllocDestructDealloc< T >::



Public Methods

- [OsclAny * allocate_fl](#) (const uint32 size, const char *file_name, const int line_num)
- [OsclAny * allocate](#) (const uint32 size)
- void [deallocate](#) (OsclAny *p)
- void [destruct_and_dealloc](#) (OsclAny *p)

7.154.1 Detailed Description

`template<class T> class OsclMemAllocDestructDealloc< T >`

An [OsclAllocDestructDealloc](#) class that uses [OsclMemAllocator](#).

7.154.2 Member Function Documentation

7.154.2.1 template<class T> [OsclAny*](#) OsclMemAllocDestructDealloc< T >::allocate (const uint32 size) [inline, virtual]

Implements [Oscl_DefAlloc](#).

7.154.2.2 template<class T> [OsclAny*](#) OsclMemAllocDestructDealloc< T >::allocate_fl (const uint32 size, const char *file_name, const int line_num) [inline, virtual]

Reimplemented from [Oscl_DefAlloc](#).

7.154.2.3 template<class T> void OsclMemAllocDestructDealloc< T >::deallocate ([OsclAny](#) * p) [inline, virtual]

Implements [Oscl_DefAlloc](#).

**7.154.2.4 template<class T> void OsclMemAllocDestructDealloc< T >::destruct_and_dealloc
(OsclAny * p) [inline, virtual]**

Implements [OsclDestructDealloc](#).

The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.155 OsclMemAudit Class Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [OsclMemAudit \(\)](#)
- [~OsclMemAudit \(\)](#)
- [void * MM_allocate \(const OsclMemStatsNode *statsNode, uint32 sizeIn, const char *pFileName, uint32 lineNumber, bool allocNodeTracking=false\)](#)
- [bool MM_deallocate \(void *pMemBlockIn\)](#)
- [MM_Stats_t * MM_GetStats \(const char *const tagIn\)](#)
- [uint32 MM_GetStatsInDepth \(const char *tagIn, MM_Stats_CB *array_ptr, uint32 max_nodes\)](#)
- [uint32 MM_GetTreeNodes \(const char *tagIn\)](#)
- [bool MM_AddTag \(const char *tagIn\)](#)
- [const OsclMemStatsNode * MM_GetTagName \(const char *tagIn\)](#)
- [const OsclMemStatsNode * MM_GetExistingTag \(const char *tagIn\)](#)
- [const OsclMemStatsNode * MM_GetRootNode \(\)](#)
- [uint32 MM_GetAllocNodeInfo \(MM_AllocQueryInfo *output_array, uint32 max_array_size, uint32 offset\)](#)
- [MM_AllocQueryInfo * MM_CreateAllocNodeInfo \(uint32 max_array_size\)](#)
- [void MM_ReleaseAllocNodeInfo \(MM_AllocQueryInfo *info\)](#)
- [bool MM_Validate \(const void *ptrIn\)](#)
- [uint32 MM_GetAllocNo \(void\)](#)
- [void MM_GetOverheadStats \(MM_AuditOverheadStats &stats\)](#)
- [uint32 MM_GetNumAllocNodes \(\)](#)
- [uint32 MM_GetMode \(void\)](#)
- [uint8 MM_GetPrefillPattern \(void\)](#)
- [uint32 MM_GetPostfillPattern \(void\)](#)
- [void MM_SetMode \(uint32 inMode\)](#)
- [void MM_SetPrefillPattern \(uint8 pattern\)](#)
- [void MM_SetPostfillPattern \(uint8 pattern\)](#)
- [void MM_SetTagLevel \(uint32 level\)](#)
- [bool MM_SetFailurePoint \(const char *tagIn, uint32 alloc_number\)](#)
- [void MM_UnsetFailurePoint \(const char *tagIn\)](#)
- [int32 MM_GetRefCount \(\)](#)
- [OsclLockBase * GetLock \(\)](#)

Friends

- class [OsclMemGlobalAuditObject](#)

7.155.1 Constructor & Destructor Documentation

7.155.1.1 OsclMemAudit::OsclMemAudit () [inline]

Constructor, create the root node in statistics table

7.155.1.2 OsclMemAudit::~OsclMemAudit () [inline]

A destructor, remove all the nodes in allocation andstatistics table

7.155.2 Member Function Documentation**7.155.2.1 OsclLockBase* OsclMemAudit::GetLock () [inline]**

API to obtain mem lock ptr

7.155.2.2 bool OsclMemAudit::MM_AddTag (const char * tagIn) [inline]

API to add a node and zero out its counters; Note that this tag should be re-used

Parameters:

tagIn input tag

Returns:

true if operation succeeds;

7.155.2.3 void* OsclMemAudit::MM_allocate (const OsclMemStatsNode * statsNode, uint32 sizeIn, const char * pFileName, uint32 lineNumber, bool allocNodeTracking = false) [inline]

The following are APIs to __nothrow_ / const __nothrow_

Returns:

the memory pointer if operation succeeds.

7.155.2.4 MM_AllocQueryInfo* OsclMemAudit::MM_CreateAllocNodeInfo (uint32 max_array_size) [inline]**7.155.2.5 bool OsclMemAudit::MM_deallocate (void * pMemBlockIn) [inline]****Returns:**

true if operation succeeds;

7.155.2.6 uint32 OsclMemAudit::MM_GetAllocNo (void) [inline]

API to get the current allocation number

Returns:

the current allocation number

7.155.2.7 `uint32 OsclMemAudit::MM_GetAllocNodeInfo (MM_AllocQueryInfo * output_array, uint32 max_array_size, uint32 offset) [inline]`

API to query the list of alloc nodes. It copies the information into the provided output array.

Parameters:

output_array the array where the data will be written

max_array_size the max number of output array elements

offset the offset into the alloc node list from which the data should begin.

Returns:

the number of valid nodes in the output array

7.155.2.8 `const OsclMemStatsNode* OsclMemAudit::MM_GetExistingTag (const char * tagIn) [inline]`

API to add a node and zero out its counters; Note that this tag should be re-used

Parameters:

tagIn input tag

Returns:

true if operation succeeds;

7.155.2.9 `uint32 OsclMemAudit::MM_GetMode (void) [inline]`

API to get the operating mode of the mm_audit class.

7.155.2.10 `uint32 OsclMemAudit::MM_GetNumAllocNodes () [inline]`

API to get the number of allocation nodes (records) for allocations that are being tracked individually.

7.155.2.11 `void OsclMemAudit::MM_GetOverheadStats (MM_AuditOverheadStats & stats) [inline]`

API to get the overhead statistics for the memory used by the mm_audit class.

7.155.2.12 `uint32 OsclMemAudit::MM_GetPostfillPattern (void) [inline]`

API to get the postfill pattern. The pattern is used to fill the memory before freeing it.

7.155.2.13 `uint8 OsclMemAudit::MM_GetPrefillPattern (void) [inline]`

API to get the prefill pattern. The pattern is used to fill the memory before returning it to the caller.

7.155.2.14 int32 OsclMemAudit::MM_GetRefCount () [inline]

7.155.2.15 const OsclMemStatsNode* OsclMemAudit::MM_GetRootNode () [inline]

7.155.2.16 MM_Stats_t* OsclMemAudit::MM_GetStats (const char *const tagIn) [inline]

API to get memory statistics through context string(tag)

Returns:

statistics pointer if operation succeeds

7.155.2.17 uint32 OsclMemAudit::MM_GetStatsInDepth (const char * tagIn, MM_Stats_CB * array_ptr, uint32 max_nodes) [inline]

API to get memory statistics in detail through context string(tag) including its subtree

Returns:

statistics pointer array and actual number of nodes if operation succeeds

7.155.2.18 const OsclMemStatsNode* OsclMemAudit::MM_GetTagName (const char * tagIn) [inline]

API to add a node and zero out its counters; Note that this tag should be re-used

Parameters:

tagIn input tag

Returns:

pointer to [OsclMemStatsNode](#) which should be passed to MM_allocate

7.155.2.19 uint32 OsclMemAudit::MM_GetTreeNodes (const char * tagIn) [inline]

API to get the number of tree nodes including the tag node and its subtree

Parameters:

tagIn input tag

Returns:

the number of tree nodes ; 0 means no tag node

7.155.2.20 void OsclMemAudit::MM_ReleaseAllocNodeInfo (MM_AllocQueryInfo * info) [inline]

7.155.2.21 bool OsclMemAudit::MM_SetFailurePoint (const char * tagIn, uint32 alloc_number) [inline]

API to insert allocation failure deterministically according to allocation number associated with tag

Parameters:

tagIn input tag
alloc_number allocation number associated with tag

Returns:

true if operation succeeds;

7.155.2.22 void OsclMemAudit::MM_SetMode (uint32 *inMode*) [inline]

API to set the operating mode of the mm_audit class.

7.155.2.23 void OsclMemAudit::MM_SetPostfillPattern (uint8 *pattern*) [inline]

API to set the postfill pattern.

7.155.2.24 void OsclMemAudit::MM_SetPrefillPattern (uint8 *pattern*) [inline]

API to set the prefill pattern.

7.155.2.25 void OsclMemAudit::MM_SetTagLevel (uint32 *level*) [inline]

API to set the maximum tag level,i.e. tag level for a.b.c.d = 4

Parameters:

level input tag level to be set

7.155.2.26 void OsclMemAudit::MM_UnsetFailurePoint (const char * *tagIn*) [inline]

API to cancel the allocation failure point associated with tag

Parameters:

tagIn input tag

7.155.2.27 bool OsclMemAudit::MM_Validate (const void * *ptrIn*) [inline]

API to check the input pointer is a valid pointer to a chunk of memory

Parameters:

ptrIn input pointer to be validated

Returns:

true if operation succeeds;

7.155.3 Friends And Related Function Documentation

7.155.3.1 friend class OsclMemGlobalAuditObject [friend]

The documentation for this class was generated from the following file:

- [oscl_mem_audit.h](#)

7.156 OSCLMemAutoPtr< T, _Allocator > Class Template Reference

The oscl_auto_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the oscl_auto_ptr expires, its destructor uses delete to free the memory.

```
#include <oscl_mem_auto_ptr.h>
```

Public Methods

- **OSCLMemAutoPtr** (T *inPtr=0)

Default constructor Initializes the pointer and takes ownership.
- **OSCLMemAutoPtr** (const OSCLMemAutoPtr< T > &_Y)

Copy constructor.
- **OSCLMemAutoPtr< T, _Allocator > & operator=** (const OSCLMemAutoPtr< T, _Allocator > &_Y)

Assignment operator from an another oscl_auto_ptr.
- **~OSCLMemAutoPtr** ()

Destructor.
- **T & operator *** () const

The indirection operator () accesses a value indirectly, through a pointer.*
- **T * operator ->** () const

The indirection operator (->) accesses a value indirectly, through a pointer.
- **void takeOwnership** (T *ptr)

The takeOwnership function assigns the value with ownership.
- **void allocate** (**oscl_memsize_t** size)
- **void setWithoutOwnership** (T *ptr)

The takeOwnership function assigns the value with ownership.
- **T * get** () const

get() method returns the pointer, currently owned by the class.
- **T * release** () const

release() method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

Static Public Methods

- **void deallocate** (T *ptr)

Data Fields

- bool [_Ownership](#)

7.156.1 Detailed Description

```
template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> class OSCLMemAuto-  
Ptr< T, _Allocator >
```

The oscl_auto_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or indirectly) by new. When the oscl_auto_ptr expires, its destructor uses delete to free the memory.

The purpose of this class is to provide a way to prevent accidental memory leaks in a class or a method, due to "not remembering to delete" variables allocated on the heap. Thus if you assign an address returned by new to an oscl_auto_ptr object, you don't have to remember to free the memory later, it will be freed automatically when the object goes out of scope. The oscl_auto_ptr is an example of a smart pointer, an object that acts like a pointer, but with additional features. The class is defined so that it acts like a regular pointer in most respects

7.156.2 Constructor & Destructor Documentation

```
7.156.2.1 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>>  
OSCLMemAutoPtr< T, _Allocator >::OSCLMemAutoPtr (T * inPtr = 0) [inline,  
explicit]
```

Default constructor Initializes the pointer and takes ownership.

```
7.156.2.2 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>>  
OSCLMemAutoPtr< T, _Allocator >::OSCLMemAutoPtr (const OSCLMemAutoPtr<  
T > & _Y) [inline]
```

Copy constructor.

Initializes the pointer and takes ownership from another oscl_auto_ptr. Note that the other class does NOT own the pointer any longer, and hence it is NOT its responsibility to free it.

```
7.156.2.3 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>>  
OSCLMemAutoPtr< T, _Allocator >::~OSCLMemAutoPtr () [inline]
```

Destructor.

The pointer is deleted in case this class still has ownership

7.156.3 Member Function Documentation

7.156.3.1 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> void OSCLMemAutoPtr< T, _Allocator >::allocate (oscl_memsize_t size) [inline]

7.156.3.2 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> void OSCLMemAutoPtr< T, _Allocator >::deallocate (T *ptr) [inline, static]

7.156.3.3 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> T* OSCLMemAutoPtr< T, _Allocator >::get () const [inline]

[get\(\)](#) method returns the pointer, currently owned by the class.

7.156.3.4 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> T& OSCLMemAutoPtr< T, _Allocator >::operator * () const [inline]

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the OSCLMemAutoPtr can be used like the regular pointer that it was initialized with.

7.156.3.5 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> T* OSCLMemAutoPtr< T, _Allocator >::operator -> () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the OSCLMemAutoPtr can be used like the regular pointer that it was initialized with.

7.156.3.6 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> OSCLMemAutoPtr< T, _Allocator >& OSCLMemAutoPtr< T, _Allocator >::operator=(const OSCLMemAutoPtr< T, _Allocator > & _Y) [inline]

Assignment operator from an another oscl_auto_ptr.

Parameters:

_Y The value parameter should be another oscl_auto_ptr

Returns:

Returns a reference to this oscl_auto_ptr instance with pointer initialized.

Precondition:

The input class should be non-null and should point to a valid pointer.

This assignment operator initializes the class to the contents of the oscl_auto_ptr given as the input parameter. The ownership of the pointer is transferred.

7.156.3.7 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> T* OSCLMemAutoPtr< T, _Allocator >::release () const [inline]

[release\(\)](#) method releases ownership of the pointer, currently owned by the class. It returns the pointer as well.

7.156.3.8 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> void OSCLMemAutoPtr< T, _Allocator >::setWithoutOwnership (T *ptr) [inline]

The takeOwnership function assigns the value with ownership.

7.156.3.9 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> void OSCLMemAutoPtr< T, _Allocator >::takeOwnership (T *ptr) [inline]

The takeOwnership function assigns the value with ownership.

7.156.4 Field Documentation

7.156.4.1 template<class T, class _Allocator = Oscl_TAlloc<T, OsclMemAllocator>> bool OSCLMemAutoPtr< T, _Allocator >::_Ownership

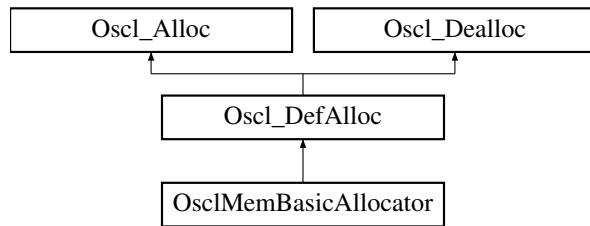
The documentation for this class was generated from the following file:

- [oscl_mem_auto_ptr.h](#)

7.157 OsclMemBasicAllocator Class Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemBasicAllocator::



Public Methods

- [OsclAny * allocate \(const uint32 n\)](#)
- [void deallocate \(OsclAny *p\)](#)

7.157.1 Detailed Description

A simple allocator class that does not use the memory management.

Note: this allocator is for internal use by Oscl only. Higher level code should use [OsclMemAllocator](#).

7.157.2 Member Function Documentation

7.157.2.1 [OsclAny* OsclMemBasicAllocator::allocate \(const uint32 n\) \[inline, virtual\]](#)

This API throws an exception when malloc returns NULL. n must be greater than 0.

Returns:

pointer (or Leave with OsclErrNoMemory)

Implements [Oscl_DefAlloc](#).

7.157.2.2 [void OsclMemBasicAllocator::deallocate \(OsclAny *p\) \[inline, virtual\]](#)

Implements [Oscl_DefAlloc](#).

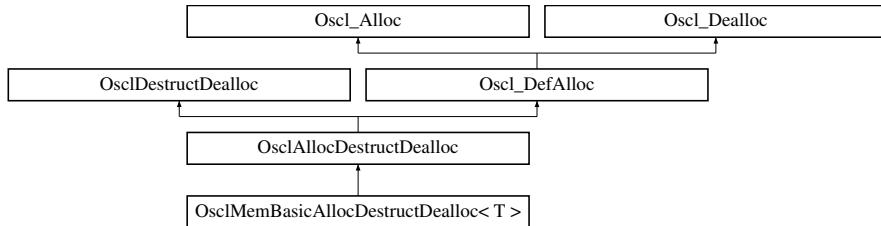
The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.158 OsclMemBasicAllocDestructDealloc< T > Class Template Reference

```
#include <oscl_mem.h>
```

Inheritance diagram for OsclMemBasicAllocDestructDealloc< T >::



Public Methods

- [OsclAny * allocate \(const uint32 size\)](#)
- [void deallocate \(OsclAny *p\)](#)
- [void destruct_and_dealloc \(OsclAny *p\)](#)

7.158.1 Detailed Description

template<class T> class OsclMemBasicAllocDestructDealloc< T >

An [OsclAllocDestructDealloc](#) class that uses [OsclMemBasicAllocator](#).

7.158.2 Member Function Documentation

7.158.2.1 template<class T> [OsclAny*](#) OsclMemBasicAllocDestructDealloc< T >::allocate (const uint32 size) [inline, virtual]

Implements [Oscl_DefAlloc](#).

7.158.2.2 template<class T> void OsclMemBasicAllocDestructDealloc< T >::deallocate ([OsclAny](#) * p) [inline, virtual]

Implements [Oscl_DefAlloc](#).

7.158.2.3 template<class T> void OsclMemBasicAllocDestructDealloc< T >::destruct_and_dealloc ([OsclAny](#) * p) [inline, virtual]

Implements [OsclDestructDealloc](#).

The documentation for this class was generated from the following file:

- [oscl_mem.h](#)

7.159 OsclMemGlobalAuditObject Class Reference

```
#include <oscl_mem.h>
```

Public Types

- `typedef OsclMemAudit audit_type`

Static Public Methods

- `OSCL_IMPORT_REF audit_type * getGlobalMemAuditObject ()`

Friends

- class `OsclMem`

7.159.1 Member Typedef Documentation

7.159.1.1 `typedef OsclMemAudit OsclMemGlobalAuditObject::audit_type`

7.159.2 Member Function Documentation

7.159.2.1 `OSCL_IMPORT_REF audit_type* OsclMemGlobalAuditObject::getGlobalMemAuditObject () [static]`

returns the global audit object. For use in macros only– not a public API.

7.159.3 Friends And Related Function Documentation

7.159.3.1 `friend class OsclMem [friend]`

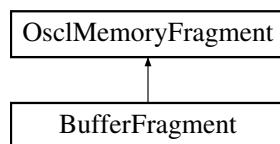
The documentation for this class was generated from the following file:

- `oscl_mem.h`

7.160 OsclMemoryFragment Struct Reference

```
#include <oscl_types.h>
```

Inheritance diagram for OsclMemoryFragment::



Data Fields

- `uint32 len`
- `void * ptr`

7.160.1 Field Documentation

7.160.1.1 `uint32 OsclMemoryFragment::len`

7.160.1.2 `void* OsclMemoryFragment::ptr`

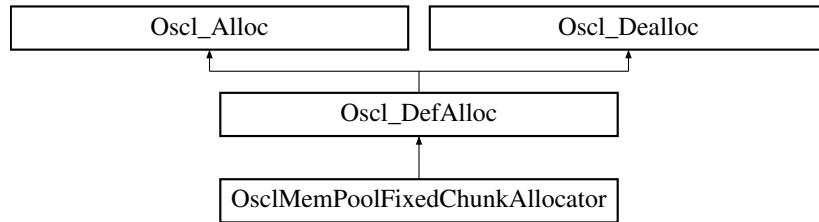
The documentation for this struct was generated from the following file:

- [oscl_types.h](#)

7.161 OsclMemPoolFixedChunkAllocator Class Reference

```
#include <oscl_mem_mempool.h>
```

Inheritance diagram for OsclMemPoolFixedChunkAllocator::



Public Methods

- OSCL_IMPORT_REF OsclMemPoolFixedChunkAllocator (const uint32 numchunk=1, const uint32 chunksze=0, Oscl_DefAlloc *gen_alloc=NULL, const uint32 chunkalignment=0)
- virtual OSCL_IMPORT_REF void enablenullpointerreturn ()
- virtual ~OsclMemPoolFixedChunkAllocator ()
- virtual OSCL_IMPORT_REF OsclAny * allocate (const uint32 n)
- virtual OSCL_IMPORT_REF void deallocate (OsclAny *p)
- virtual OSCL_IMPORT_REF void notifyfreechunkavailable (OsclMemPoolFixedChunkAllocatorObserver &obs, OsclAny *aContextData=NULL)
- virtual OSCL_IMPORT_REF void CancelFreeChunkAvailableCallback ()
- OSCL_IMPORT_REF void addRef ()
- OSCL_IMPORT_REF void removeRef ()

Protected Methods

- virtual OSCL_IMPORT_REF void createmempool ()
- virtual OSCL_IMPORT_REF void destroymempool ()

Protected Attributes

- uint32 iNumChunk
- uint32 iChunkSize
- uint32 iChunkSizeMemAligned
- uint32 iChunkAlignment
- Oscl_DefAlloc * iMemPoolAllocator
- OsclAny * iMemPool
- OsclAny * iMemPoolAligned
- Oscl_Vector< OsclAny *, OsclMemAllocator > iFreeMemChunkList
- bool iCheckNextAvailableFreeChunk
- OsclMemPoolFixedChunkAllocatorObserver * iObserver
- OsclAny * iNextAvailableContextData
- int32 iRefCount
- bool iEnableNullPtrReturn

7.161.1 Constructor & Destructor Documentation

7.161.1.1 OSCL_IMPORT_REF OsclMemPoolFixedChunkAllocator::OsclMemPoolFixedChunkAllocator (const uint32 numchunk = 1, const uint32 chunkszie = 0, Oscl_DefAlloc * gen_alloc = NULL, const uint32 chunkalignment = 0)

This API throws an exception when the memory allocation for pool fails If numchunk and chunkszie parameters are not set, memory pool of 1 chunk will be created in the first call to allocate. The chunk size will be set to the n passed in for [allocate\(\)](#). If numchunk parameter is set to 0, the memory pool will use 1 for numchunk. If chunkalignment is set to 0, memory pool will use default allocator alignment (8-byte) If chunkalignment is > 0, memory pool will align all buffers in the mempool to the specified alignment. Alignment should be a power of 2

Returns:

void

7.161.1.2 virtual OsclMemPoolFixedChunkAllocator::~OsclMemPoolFixedChunkAllocator () [inline, virtual]

The destructor for the memory pool

7.161.2 Member Function Documentation

7.161.2.1 OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::addRef ()

Increments the reference count for this memory pool allocator

Returns:

void

7.161.2.2 virtual OSCL_IMPORT_REF OsclAny* OsclMemPoolFixedChunkAllocator::allocate (const uint32 n) [virtual]

This API throws an exception when n is greater than the fixed chunk size or there are no free chunk available in the pool, if "enablenullpointerreturn" has not been called. If the memory pool hasn't been created yet, the pool will be created with chunk size equal to n so n must be greater than 0. Exception will be thrown if memory allocation for the memory pool fails.

Returns:

pointer to available chunk from memory pool

Implements [Oscl_DefAlloc](#).

7.161.2.3 virtual OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::CancelFreeChunkAvailableCallback () [virtual]

This API will cancel any past callback requests..

Returns:

void

7.161.2.4 virtual OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::createmempool() [protected, virtual]

**7.161.2.5 virtual OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::deallocate(
OsclAny *p)** [virtual]

This API throws an exception when the pointer p passed in is not part of the memory pool. Exception will be thrown if the memory pool is not set up yet.

Returns:

void

Implements [Oscl_DefAlloc](#).

7.161.2.6 virtual OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::destroymempool() [protected, virtual]

7.161.2.7 virtual OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::enablenullpointerreturn() [virtual]

This API will disable exceptions in case the memory pool runs out of memory Instead of doing "[OSCL_LEAVE\(OsclErrNoResources\)](#)" allocate API will return NULL.

Returns:

void

**7.161.2.8 virtual OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::notifyfreechunkavailable(
OsclMemPoolFixedChunkAllocatorObserver &obs, OsclAny *aContextData = NULL)** [virtual]

This API will set the flag to send a callback via specified observer object when the next memory chunk is deallocated by [deallocate\(\)](#) call..

Returns:

void

7.161.2.9 OSCL_IMPORT_REF void OsclMemPoolFixedChunkAllocator::removeRef()

Decrements the reference count for this memory pool allocator When the reference count goes to 0, this instance of the memory pool object is deleted

Returns:

void

7.161.3 Field Documentation

- 7.161.3.1 **bool OsclMemPoolFixedChunkAllocator::iCheckNextAvailableFreeChunk** [protected]
- 7.161.3.2 **uint32 OsclMemPoolFixedChunkAllocator::iChunkAlignment** [protected]
- 7.161.3.3 **uint32 OsclMemPoolFixedChunkAllocator::iChunkSize** [protected]
- 7.161.3.4 **uint32 OsclMemPoolFixedChunkAllocator::iChunkSizeMemAligned** [protected]
- 7.161.3.5 **bool OsclMemPoolFixedChunkAllocator::iEnableNullPtrReturn** [protected]
- 7.161.3.6 **Oscl_Vector<OsclAny*, OsclMemAllocator> OsclMemPoolFixedChunkAllocator::iFreeMemChunkList** [protected]
- 7.161.3.7 **OsclAny* OsclMemPoolFixedChunkAllocator::iMemPool** [protected]
- 7.161.3.8 **OsclAny* OsclMemPoolFixedChunkAllocator::iMemPoolAligned** [protected]
- 7.161.3.9 **Oscl_DefAlloc* OsclMemPoolFixedChunkAllocator::iMemPoolAllocator** [protected]
- 7.161.3.10 **OsclAny* OsclMemPoolFixedChunkAllocator::iNextAvailableContextData** [protected]
- 7.161.3.11 **uint32 OsclMemPoolFixedChunkAllocator::iNumChunk** [protected]
- 7.161.3.12 **OsclMemPoolFixedChunkAllocatorObserver* OsclMemPoolFixedChunkAllocator::iObserver** [protected]
- 7.161.3.13 **int32 OsclMemPoolFixedChunkAllocator::iRefCount** [protected]

The documentation for this class was generated from the following file:

- [oscl_mem_mempool.h](#)

7.162 OsclMemPoolFixedChunkAllocatorObserver Class Reference

```
#include <oscl_mem_mempool.h>
```

Public Methods

- virtual void [freechunkavailable \(OsclAny *aContextData\)=0](#)
- virtual [~OsclMemPoolFixedChunkAllocatorObserver \(\)](#)

7.162.1 Constructor & Destructor Documentation

7.162.1.1 virtual [OsclMemPoolFixedChunkAllocatorObserver::~OsclMemPoolFixedChunkAllocatorObserver \(\) \[inline, virtual\]](#)

7.162.2 Member Function Documentation

7.162.2.1 virtual void [OsclMemPoolFixedChunkAllocatorObserver::freechunkavailable \(OsclAny * aContextData\) \[pure virtual\]](#)

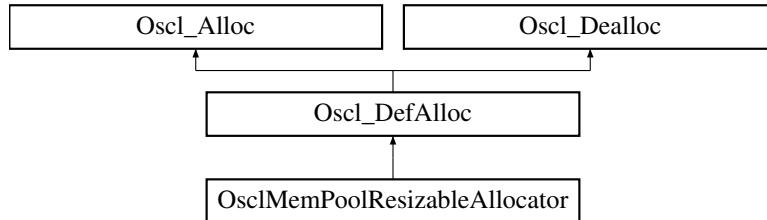
The documentation for this class was generated from the following file:

- [oscl_mem_mempool.h](#)

7.163 OsclMemPoolResizableAllocator Class Reference

```
#include <oscl_mem_mempool.h>
```

Inheritance diagram for OsclMemPoolResizableAllocator::



Public Methods

- OSCL_IMPORT_REF [OsclMemPoolResizableAllocator](#) (uint32 aMemPoolBufferSize, uint32 aMemPoolBufferNumLimit=0, uint32 aExpectedNumBlocksPerBuffer=0, [Oscl_DefAlloc](#) *gen_alloc=NULL)
- virtual OSCL_IMPORT_REF void [enablenullpointerreturn](#) ()
- virtual OSCL_IMPORT_REF [OsclAny](#) * [allocate](#) (const uint32 aNumBytes)
- virtual OSCL_IMPORT_REF void [deallocate](#) ([OsclAny](#) *aPtr)
- virtual OSCL_IMPORT_REF bool [trim](#) ([OsclAny](#) *aPtr, uint32 aBytesToFree)
- OSCL_IMPORT_REF uint32 [getBufferSize](#) () const
- virtual OSCL_IMPORT_REF uint32 [getAllocatedSize](#) () const
- virtual OSCL_IMPORT_REF uint32 [getAvailableSize](#) () const
- virtual OSCL_IMPORT_REF uint32 [getLargestContiguousFreeBlockSize](#) () const
- virtual OSCL_IMPORT_REF bool [setMaxSzForNewMemPoolBuffer](#) (uint32 aMaxNewMemPoolBufferSz)
- virtual OSCL_IMPORT_REF void [notifyfreeblockavailable](#) ([OsclMemPoolResizableAllocatorObserver](#) &aObserver, uint32 aRequestedSize=0, [OsclAny](#) *aContextData=NULL)
- virtual OSCL_IMPORT_REF void [CancelFreeChunkAvailableCallback](#) ()
- virtual OSCL_IMPORT_REF void [notifyfreememoryavailable](#) ([OsclMemPoolResizableAllocatorMemoryObserver](#) &aObserver, uint32 aRequestedSize=0, [OsclAny](#) *aContextData=NULL)
- OSCL_IMPORT_REF void [CancelFreeMemoryAvailableCallback](#) ()
- OSCL_IMPORT_REF void [addRef](#) ()
- OSCL_IMPORT_REF void [removeRef](#) ()

Protected Methods

- virtual ~[OsclMemPoolResizableAllocator](#) ()
- [MemPoolBufferInfo](#) * [addnewmempoolbuffer](#) (uint32 aBufferSize)
- void [destroyallmempoolbuffers](#) ()
- [MemPoolBlockInfo](#) * [findfreeblock](#) (uint32 aBlockSize)
- [OsclAny](#) * [allocateblock](#) ([MemPoolBlockInfo](#) &aBlockPtr, uint32 aNumBytes)
- void [deallocateblock](#) ([MemPoolBlockInfo](#) &aBlockPtr)
- bool [validateblock](#) ([OsclAny](#) *aBlockBufPtr)
- uint32 [getMemPoolBufferSize](#) ([MemPoolBufferInfo](#) *aBufferInfo) const
- uint32 [getMemPoolBufferAllocatedSize](#) ([MemPoolBufferInfo](#) *aBufferInfo) const
- uint32 [memoryPoolBufferMgmtOverhead](#) () const

Protected Attributes

- uint32 `iMemPoolBufferSize`
- uint32 `iMemPoolBufferNumLimit`
- uint32 `iExpectedNumBlocksPerBuffer`
- uint32 `iMaxNewMemPoolBufferSz`
- `Oscl_DefAlloc` * `iMemPoolBufferAllocator`
- `Oscl_Vector< MemPoolBufferInfo *, OsclMemAllocator >` `iMemPoolBufferList`
- uint32 `iBufferInfoAlignedSize`
- uint32 `iBlockInfoAlignedSize`
- bool `iCheckNextAvailable`
- uint32 `iRequestedNextAvailableSize`
- `OsclAny` * `iNextAvailableContextData`
- `OsclMemPoolResizableAllocatorObserver` * `iObserver`
- bool `iCheckFreeMemoryAvailable`
- uint32 `iRequestedAvailableFreeMemSize`
- `OsclAny` * `iFreeMemContextData`
- `OsclMemPoolResizableAllocatorMemoryObserver` * `iFreeMemPoolObserver`
- int32 `iRefCount`
- bool `iEnableNullPtrReturn`

7.163.1 Constructor & Destructor Documentation

7.163.1.1 OSCL_IMPORT_REF OsclMemPoolResizableAllocator::OsclMemPoolResizableAllocator (uint32 *aMemPoolBufferSize*, uint32 *aMemPoolBufferNumLimit* = 0, uint32 *aExpectedNumBlocksPerBuffer* = 0, `Oscl_DefAlloc` * *gen_alloc* = NULL)

Create the memory pool allocator with resizing functionality. The size of the memory pool buffer needs to be passed-in. The maximum number of memory pool buffers, expected number of blocks in a memory pool buffer, and outside allocator are optional. This API throws an exception when the memory allocation for the pool buffer fails. If memory pool buffer number limit parameter is not set, the assumption is that there is no limit and memory pool will grow as needed. If the expected number of blocks is not set or not known, the memory pool will use a default value to 10 to allocate extra memory for the block info header.

Returns:

`void`

7.163.1.2 virtual OsclMemPoolResizableAllocator::~OsclMemPoolResizableAllocator () [inline, protected, virtual]

The destructor for the memory pool. Should not be called directly. Use `removeRef()` instead.

7.163.2 Member Function Documentation

7.163.2.1 `MemPoolBufferInfo*` OsclMemPoolResizableAllocator::addnewmempoolbuffer (uint32 *aBufferSize*) [protected]

7.163.2.2 OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::addRef ()

Increments the reference count for this memory pool allocator

Returns:

void

**7.163.2.3 virtual OSCL_IMPORT_REF [OsclAny](#)* OsclMemPoolResizableAllocator::allocate
(const uint32 aNumBytes) [virtual]**

Allocates a block from the memory pool that is at least in size requested This API throws an exception if there isn't enough memory (if "enablenullpointerreturn" has not been called) for the requested amount in the pool or if the extra pool buffer cannot be allocated.

Returns:

Pointer to memory buffer from memory pool

Implements [Oscl_DefAlloc](#).

**7.163.2.4 [OsclAny](#)* OsclMemPoolResizableAllocator::allocateblock ([MemPoolBlockInfo](#) &
aBlockPtr, uint32 aNumBytes) [protected]****7.163.2.5 virtual OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::CancelFree-
ChunkAvailableCallback () [virtual]**

This API will cancel any past callback requests..

Returns:

void

**7.163.2.6 OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::CancelFreeMemory-
AvailableCallback ()****7.163.2.7 virtual OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::deallocate
([OsclAny](#) * aPtr) [virtual]**

Deallocates and returns a block back to the memory pool This API throws an exception if the pointer passed in is not part of the memory pool, aligned, or has corrupted block header.

Returns:

void

Implements [Oscl_DefAlloc](#).

**7.163.2.8 void OsclMemPoolResizableAllocator::deallocateblock ([MemPoolBlockInfo](#) &
aBlockPtr) [protected]****7.163.2.9 void OsclMemPoolResizableAllocator::destroyallmempoolbuffers () [protected]****7.163.2.10 virtual OSCL_IMPORT_REF void OsclMemPoolResizable-
Allocator::enablenullpointerreturn () [virtual]**

This API will disable exceptions in case the memory pool runs out of memory Instead of doing "[OSCL_LEAVE\(OsclErrNoResources\)](#)" allocate API will return NULL.

Returns:

void

7.163.2.11 **MemPoolBlockInfo*** OsclMemPoolResizableAllocator::findfreeblock (**uint32 aBlockSize**) [protected]

7.163.2.12 **virtual OSCL_IMPORT_REF uint32 OsclMemPoolResizableAllocator::getAllocatedSize ()** [virtual]

Returns the number of bytes allocated from the buffer<including the overhead bytes that may be allocated by the allocator to keep track of the chunks allocated>

7.163.2.13 **virtual OSCL_IMPORT_REF uint32 OsclMemPoolResizableAllocator::getAvailableSize ()** [virtual]

Returns the number of bytes available with the buffer

7.163.2.14 **OSCL_IMPORT_REF uint32 OsclMemPoolResizableAllocator::getBufferSize ()**

Returns the size of the buffer <including the overhead bytes that may be allocated by the allocator>

7.163.2.15 **virtual OSCL_IMPORT_REF uint32 OsclMemPoolResizableAllocator::getLargestContiguousFreeBlockSize ()** [virtual]

Returns the size of the largest available chunk in the memory.

7.163.2.16 **uint32 OsclMemPoolResizableAllocator::getMemPoolBufferAllocatedSize (MemPoolBufferInfo * aBufferInfo) const** [protected]

7.163.2.17 **uint32 OsclMemPoolResizableAllocator::getMemPoolBufferSize (MemPoolBufferInfo * aBufferInfo) const** [protected]

7.163.2.18 **uint32 OsclMemPoolResizableAllocator::memoryPoolBufferMgmtOverhead ()** [protected]

7.163.2.19 **virtual OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::notifyfreeblockavailable (OsclMemPoolResizableAllocatorObserver & aObserver, uint32 aRequestedSize = 0, OsclAny * aContextData = NULL)** [virtual]

This API will set the flag to send a callback via specified observer object when the next memory block is deallocated by [deallocate\(\)](#) call. If the optional requested size parameter is set, the callback is sent when a free memory space of requested size becomes available. The optional context data is returned with the callback and can be used by the user to differentiate between different instances of memory pool objects. This memory pool only allows one notify to be queued. Another call to this function will just overwrite the previous call.

Returns:

void

7.163.2.20 `virtual OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::notifyfreememoryavailable (OsclMemPoolResizableAllocatorMemoryObserver & aObserver, uint32 aRequestedSize = 0, OsclAny * aContextData = NULL)`
[virtual]

7.163.2.21 `OSCL_IMPORT_REF void OsclMemPoolResizableAllocator::removeRef ()`

Decrements the reference count for this memory pool allocator When the reference count goes to 0, this instance of the memory pool object is deleted

Returns:

`void`

7.163.2.22 `virtual OSCL_IMPORT_REF bool OsclMemPoolResizableAllocator::setMaxSzForNewMemPoolBuffer (uint32 aMaxNewMemPoolBufferSz)`
[virtual]

7.163.2.23 `virtual OSCL_IMPORT_REF bool OsclMemPoolResizableAllocator::trim (OsclAny * aPtr, uint32 aBytesToFree)` [virtual]

Returns a tail segment of a previously allocated memory block back to the memory pool. The passed-in pointer to the memory buffer is still valid after the call completes but the buffer size is smaller by by specified amount that was freed. This function allows the user to allocate a larger size block initially when the amount needed is unknown and then return the unused portion of the block when the amount becomes known. This API throws an exception if the pointer passed in is not part of the memory pool or the size to return is bigger than the size of the passed-in block. Exception will be thrown if the memory pool is not set up yet.

Returns:

`bool` True if trim operation successful. False if the block wasn't trimmed

7.163.2.24 **bool OsclMemPoolResizableAllocator::validateblock ([OsclAny](#) * *aBlockBufPtr*)** [protected]

7.163.3 Field Documentation

7.163.3.1 **uint32 OsclMemPoolResizableAllocator::iBlockInfoAlignedSize** [protected]

7.163.3.2 **uint32 OsclMemPoolResizableAllocator::iBufferInfoAlignedSize** [protected]

7.163.3.3 **bool OsclMemPoolResizableAllocator::iCheckFreeMemoryAvailable** [protected]

7.163.3.4 **bool OsclMemPoolResizableAllocator::iCheckNextAvailable** [protected]

7.163.3.5 **bool OsclMemPoolResizableAllocator::iEnableNullPtrReturn** [protected]

7.163.3.6 **uint32 OsclMemPoolResizableAllocator::iExpectedNumBlocksPerBuffer** [protected]

7.163.3.7 **[OsclAny](#)* OsclMemPoolResizableAllocator::iFreeMemContextData** [protected]

7.163.3.8 **[OsclMemPoolResizableAllocatorMemoryObserver](#)* OsclMemPoolResizableAllocator::iFreeMemPoolObserver** [protected]

7.163.3.9 **uint32 OsclMemPoolResizableAllocator::iMaxNewMemPoolBufferSz** [protected]

7.163.3.10 **[Oscl_DefAlloc](#)* OsclMemPoolResizableAllocator::iMemPoolBufferAllocator** [protected]

7.163.3.11 **[Oscl_Vector](#)<[MemPoolBufferInfo](#)*, [OsclMemAllocator](#)> OsclMemPoolResizableAllocator::iMemPoolBufferList** [protected]

7.163.3.12 **uint32 OsclMemPoolResizableAllocator::iMemPoolBufferNumLimit** [protected]

7.163.3.13 **uint32 OsclMemPoolResizableAllocator::iMemPoolBufferSize** [protected]

7.163.3.14 **[OsclAny](#)* OsclMemPoolResizableAllocator::iNextAvailableContextData** [protected]

7.163.3.15 **[OsclMemPoolResizableAllocatorObserver](#)* OsclMemPoolResizableAllocator::iObserver** [protected]

7.163.3.16 **int32 OsclMemPoolResizableAllocator::iRefCount** [protected]

7.163.3.17 **uint32 OsclMemPoolResizableAllocator::iRequestedAvailableFreeMemSize** [protected]

7.163.3.18 **uint32 OsclMemPoolResizableAllocator::iRequestedNextAvailableSize** [protected]

The documentation for this class was generated from the following file:

- [oscl_mem_mempool.h](#)

7.164 OsclMemPoolResizableAllocator::MemPoolBlockInfo Struct Reference

```
#include <oscl_mem_mempool.h>
```

Data Fields

- uint32 iBlockPreFence
- MemPoolBlockInfo * iNextFreeBlock
- MemPoolBlockInfo * iPrevFreeBlock
- uint32 iBlockSize
- uint8 * iBlockBuffer
- MemPoolBufferInfo * iParentBuffer
- uint32 iBlockPostFence

7.164.1 Field Documentation

7.164.1.1 uint8* OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockBuffer

7.164.1.2 uint32 OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockPostFence

7.164.1.3 uint32 OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockPreFence

7.164.1.4 uint32 OsclMemPoolResizableAllocator::MemPoolBlockInfo::iBlockSize

7.164.1.5 MemPoolBlockInfo* OsclMemPoolResizableAllocator::MemPoolBlockInfo::iNextFree-Block

7.164.1.6 MemPoolBufferInfo* OsclMemPoolResizableAllocator::MemPoolBlockInfo::iParent-Buffer

7.164.1.7 MemPoolBlockInfo* OsclMemPoolResizableAllocator::MemPoolBlockInfo::iPrevFree-Block

The documentation for this struct was generated from the following file:

- oscl_mem_mempool.h

7.165 OsclMemPoolResizableAllocator::MemPoolBufferInfo Struct Reference

```
#include <oscl_mem_mempool.h>
```

Data Fields

- uint32 iBufferPreFence
- [OsclAny](#) * iStartAddr
- [OsclAny](#) * iEndAddr
- uint32 iBufferSize
- uint32 iNumOutstanding
- [MemPoolBlockInfo](#) * iNextFreeBlock
- uint32 iAllocatedSz
- uint32 iBufferPostFence

7.165.1 Field Documentation

7.165.1.1 uint32 OsclMemPoolResizableAllocator::MemPoolBufferInfo::iAllocatedSz

7.165.1.2 uint32 OsclMemPoolResizableAllocator::MemPoolBufferInfo::iBufferPostFence

7.165.1.3 uint32 OsclMemPoolResizableAllocator::MemPoolBufferInfo::iBufferPreFence

7.165.1.4 uint32 OsclMemPoolResizableAllocator::MemPoolBufferInfo::iBufferSize

7.165.1.5 [OsclAny](#)* OsclMemPoolResizableAllocator::MemPoolBufferInfo::iEndAddr

7.165.1.6 [MemPoolBlockInfo](#)* OsclMemPoolResizableAllocator::MemPoolBufferInfo::iNextFree-Block

7.165.1.7 uint32 OsclMemPoolResizableAllocator::MemPoolBufferInfo::iNumOutstanding

7.165.1.8 [OsclAny](#)* OsclMemPoolResizableAllocator::MemPoolBufferInfo::iStartAddr

The documentation for this struct was generated from the following file:

- [oscl_mem_mempool.h](#)

7.166 OsclMemPoolResizableAllocatorMemoryObserver Class Reference

```
#include <oscl_mem_mempool.h>
```

Public Methods

- virtual void [freememoryavailable \(OsclAny *aContextData\)=0](#)
- virtual [~OsclMemPoolResizableAllocatorMemoryObserver \(\)](#)

7.166.1 Constructor & Destructor Documentation

7.166.1.1 virtual OsclMemPoolResizableAllocatorMemoryObserver::~OsclMemPoolResizableAllocatorMemoryObserver () [inline, virtual]

7.166.2 Member Function Documentation

7.166.2.1 virtual void OsclMemPoolResizableAllocatorMemoryObserver::freememoryavailable (OsclAny * aContextData) [pure virtual]

The documentation for this class was generated from the following file:

- [oscl_mem_mempool.h](#)

7.167 OsclMemPoolResizableAllocatorObserver Class Reference

```
#include <oscl_mem_mempool.h>
```

Public Methods

- virtual void [freeblockavailable \(OsclAny *aContextData\)=0](#)
- virtual [~OsclMemPoolResizableAllocatorObserver \(\)](#)

7.167.1 Constructor & Destructor Documentation

7.167.1.1 [virtual OsclMemPoolResizableAllocatorObserver::~OsclMemPoolResizableAllocatorObserver \(\) \[inline, virtual\]](#)

7.167.2 Member Function Documentation

7.167.2.1 [virtual void OsclMemPoolResizableAllocatorObserver::freeblockavailable \(OsclAny **aContextData*\) \[pure virtual\]](#)

The documentation for this class was generated from the following file:

- [oscl_mem_mempool.h](#)

7.168 OsclMemStatsNode Class Reference

```
#include <oscl_mem_audit.h>
```

Public Methods

- [OsclMemStatsNode \(\)](#)
- [void reset \(\)](#)
- [~OsclMemStatsNode \(\)](#)
- [void * operator new \(oscl_memsize_t size\)](#)
- [void * operator new \(oscl_memsize_t size, OsclMemStatsNode *ptr\)](#)
- [void operator delete \(void *ptr\) throw \(\)](#)

Data Fields

- [MM_Stats_t * pMMStats](#)
- [MM_FailInsertParam * pMMFIParam](#)
- [char * tag](#)

7.168.1 Constructor & Destructor Documentation

7.168.1.1 OsclMemStatsNode::OsclMemStatsNode () [inline]

7.168.1.2 OsclMemStatsNode::~OsclMemStatsNode () [inline]

7.168.2 Member Function Documentation

7.168.2.1 void OsclMemStatsNode::operator delete (void *ptr) throw () [inline]

7.168.2.2 void* OsclMemStatsNode::operator new (oscl_memsize_t size, OsclMemStatsNode *ptr) [inline]

7.168.2.3 void* OsclMemStatsNode::operator new (oscl_memsize_t size) [inline]

7.168.2.4 void OsclMemStatsNode::reset () [inline]

7.168.3 Field Documentation

7.168.3.1 MM_FailInsertParam* OsclMemStatsNode::pMMFIParam

7.168.3.2 MM_Stats_t* OsclMemStatsNode::pMMStats

7.168.3.3 char* OsclMemStatsNode::tag

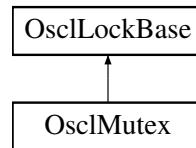
The documentation for this class was generated from the following file:

- [oscl_mem_audit.h](#)

7.169 OsclMutex Class Reference

```
#include <oscl_mutex.h>
```

Inheritance diagram for OsclMutex::



Public Methods

- OSCL_IMPORT_REF OsclMutex ()
- virtual OSCL_IMPORT_REF ~OsclMutex ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Create (void)
- OSCL_IMPORT_REF void Lock ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError TryLock ()
- OSCL_IMPORT_REF void Unlock ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Close (void)

7.169.1 Detailed Description

Class OsclMutex

7.169.2 Constructor & Destructor Documentation

7.169.2.1 OSCL_IMPORT_REF OsclMutex::OsclMutex ()

Class constructor

7.169.2.2 virtual OSCL_IMPORT_REF OsclMutex::~OsclMutex () [virtual]

Class destructor

7.169.3 Member Function Documentation

7.169.3.1 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclMutex::Close (void)

Closes the Mutex

Parameters:

It wont take any parameters

Returns:

Returns the Error whether it is success or failure. Incase of failure it will return what is the specific error

7.169.3.2 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclMutex::Create (void)

Creates the Mutex

Parameters:

No input arguments

Returns:

Returns the Error whether it is success or failure. Incase of failure it will return what is the specific error

7.169.3.3 OSCL_IMPORT_REF void OsclMutex::Lock () [virtual]

Locks the Mutex

Parameters:

It wont take any parameters

Returns:

Returns nothing

Implements [OsclLockBase](#).

7.169.3.4 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclMutex::TryLock ()

Try to lock the mutex,if the Mutex is already locked calling thread immediately returns with out blocking

Parameters:

It wont take any parameters

Returns:

Returns SUCCESS_ERROR if the mutex was acquired, MUTEX_LOCKED_ERROR if the mutex cannot be acquired without waiting, or an error code if the operation failed. Note: this function may not be supported on all platforms, and may return NOT_IMPLEMENTED.

7.169.3.5 OSCL_IMPORT_REF void OsclMutex::Unlock () [virtual]

Releases the Mutex

Parameters:

It wont take any parameters

Returns:

Returns nothing

Implements [OsclLockBase](#).

The documentation for this class was generated from the following file:

- [oscl_mutex.h](#)

7.170 OsclNameString< __len > Class Template Reference

```
#include <oscl_namestring.h>
```

Public Methods

- [OsclNameString \(\)](#)
- [OsclNameString \(const char a\[\]\)](#)
- [OsclNameString \(uint8 *a\)](#)
- void [Set \(uint8 *a\)](#)
- void [Set \(const char a\[\]\)](#)
- uint8 * [Str \(\) const](#)
- int32 [MaxLen \(\) const](#)

7.170.1 Detailed Description

```
template<int __len> class OsclNameString< __len >
```

Name string class appropriate for passing short constant ASCII strings around. All strings are automatically truncated and null-terminated.

7.170.2 Constructor & Destructor Documentation

7.170.2.1 template<int __len> OsclNameString< __len >::OsclNameString () [inline]

7.170.2.2 template<int __len> OsclNameString< __len >::OsclNameString (const char a[]) [inline]

7.170.2.3 template<int __len> OsclNameString< __len >::OsclNameString (uint8 * a) [inline]

7.170.3 Member Function Documentation

7.170.3.1 template<int __len> int32 OsclNameString< __len >::MaxLen () const [inline]

7.170.3.2 template<int __len> void OsclNameString< __len >::Set (const char a[]) [inline]

7.170.3.3 template<int __len> void OsclNameString< __len >::Set (uint8 * a) [inline]

Set the string to the input value. The string will be truncated to fit the storage class and automatically null-terminated.

Parameters:

a (input param): null-terminated character string.

7.170.3.4 template<int __len> uint8* OsclNameString< __len >::Str () const [inline]

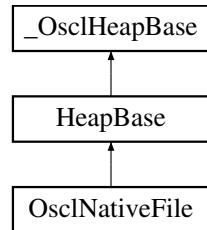
The documentation for this class was generated from the following file:

- [oscl_namestring.h](#)

7.171 OsclNativeFile Class Reference

```
#include <oscl_file_native.h>
```

Inheritance diagram for OsclNativeFile::



Public Methods

- [OsclNativeFile \(\)](#)
- [~OsclNativeFile \(\)](#)
- [int32 Open \(const OsclFileHandle &, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv\)](#)
- [int32 Open \(const oscl_wchar *filename, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv\)](#)
- [int32 Open \(const char *filename, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv\)](#)
- [uint32 Read \(OsclAny *buffer, uint32 size, uint32 numelements\)](#)
- [uint32 Write \(const OsclAny *buffer, uint32 size, uint32 numelements\)](#)
- [int32 Seek \(TOsclFileOffset offset, Oscl_File::seek_type origin\)](#)
- [TOsclFileOffset Tell \(\)](#)
- [int32 Flush \(\)](#)
- [int32 EndOfFile \(\)](#)
- [TOsclFileOffset Size \(\)](#)
- [int32 Close \(\)](#)
- [int32 SetSize \(uint32 size\)](#)
- [uint32 Mode \(\)](#)
- [int32 GetError \(\)](#)
- [int32 ReadAsync \(OsclAny *buffer, uint32 size, uint32 numelements, OsclAOStatus &status\)](#)
- [uint32 GetReadAsyncNumElements \(\)](#)
- [bool HasAsyncRead \(\)](#)
- [void ReadAsyncCancel \(\)](#)

7.171.1 Constructor & Destructor Documentation

7.171.1.1 OsclNativeFile::OsclNativeFile ()

7.171.1.2 OsclNativeFile::~OsclNativeFile ()

7.171.2 Member Function Documentation

7.171.2.1 int32 OsclNativeFile::Close ()

7.171.2.2 int32 OsclNativeFile::EndOfFile ()

7.171.2.3 int32 OsclNativeFile::Flush ()

7.171.2.4 int32 OsclNativeFile::GetError ()

7.171.2.5 uint32 OsclNativeFile::GetReadAsyncNumElements ()

Get the number of elements read in the last call to ReadAsync. @returns: number of elements read.

7.171.2.6 bool OsclNativeFile::HasAsyncRead ()

@returns: true if async read is supported natively.

7.171.2.7 uint32 OsclNativeFile::Mode () [inline]

7.171.2.8 int32 OsclNativeFile::Open (const char *filename, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv)

7.171.2.9 int32 OsclNativeFile::Open (const oscl_wchar *filename, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv)

7.171.2.10 int32 OsclNativeFile::Open (const OsclFileHandle &, uint32 mode, const OsclNativeFileParams ¶ms, Oscl_FileServer &fileserv)

7.171.2.11 uint32 OsclNativeFile::Read (OsclAny *buffer, uint32 size, uint32 numelements)

7.171.2.12 int32 OsclNativeFile::ReadAsync (OsclAny *buffer, uint32 size, uint32 numelements, OsclAOStatus &status)

Asynchronous read.

Parameters:

buffer: data buffer, must be at least size*numelements bytes

size: size of elements

numelements: number of elements to read

status: Request status for asynchronous completion @returns: 0 for success.

7.171.2.13 void OsclNativeFile::ReadAsyncCancel ()

Cancel any pending async read.

7.171.2.14 int32 OsclNativeFile::Seek ([TOsclFileOffset offset](#), [Oscl_File::seek_type origin](#))**7.171.2.15 int32 OsclNativeFile::SetSize (uint32 *size*)****7.171.2.16 [TOsclFileOffset](#) OsclNativeFile::Size ()****7.171.2.17 [TOsclFileOffset](#) OsclNativeFile::Tell ()****7.171.2.18 uint32 OsclNativeFile::Write (const [OsclAny](#) * *buffer*, uint32 *size*, uint32 *numelements*)**

The documentation for this class was generated from the following file:

- [oscl_file_native.h](#)

7.172 OsclNativeFileParams Class Reference

```
#include <oscl_file_types.h>
```

Public Methods

- [OsclNativeFileParams \(uint32 mode=0, uint32 bufsize=0, uint32 asyncsize=0\)](#)

Data Fields

- uint32 [iNativeAccessMode](#)
- uint32 [iNativeBufferSize](#)
- uint32 [iAsyncReadBufferSize](#)

7.172.1 Constructor & Destructor Documentation

7.172.1.1 **OsclNativeFileParams::OsclNativeFileParams (uint32 mode = 0, uint32 bufsize = 0, uint32 asyncsize = 0) [inline]**

7.172.2 Field Documentation

7.172.2.1 **uint32 OsclNativeFileParams::iAsyncReadBufferSize**

7.172.2.2 **uint32 OsclNativeFileParams::iNativeAccessMode**

7.172.2.3 **uint32 OsclNativeFileParams::iNativeBufferSize**

The documentation for this class was generated from the following file:

- [oscl_file_types.h](#)

7.173 OsclNetworkAddress Class Reference

```
#include <oscl_socket_types.h>
```

Public Methods

- [OsclNetworkAddress \(\)](#)
- [OsclNetworkAddress \(const char *addr, int p\)](#)
- [bool operator== \(const OsclNetworkAddress &rhs\) const](#)

Data Fields

- [OsclNameString< PVNETWORKADDRESS_LEN > ipAddr](#)
- [int port](#)

7.173.1 Constructor & Destructor Documentation

7.173.1.1 [OsclNetworkAddress::OsclNetworkAddress \(\) \[inline\]](#)

7.173.1.2 [OsclNetworkAddress::OsclNetworkAddress \(const char *addr, int p\) \[inline\]](#)

7.173.2 Member Function Documentation

7.173.2.1 [bool OsclNetworkAddress::operator== \(const OsclNetworkAddress & rhs\) const \[inline\]](#)

7.173.3 Field Documentation

7.173.3.1 [OsclNameString<PVNETWORKADDRESS_LEN> OsclNetworkAddress::ipAddr](#)

7.173.3.2 [int OsclNetworkAddress::port](#)

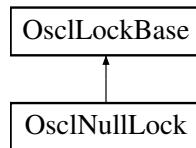
The documentation for this class was generated from the following file:

- [oscl_socket_types.h](#)

7.174 OsclNullLock Class Reference

```
#include <oscl_lock_base.h>
```

Inheritance diagram for OsclNullLock::



Public Methods

- virtual void [Lock \(\)](#)
- virtual void [Unlock \(\)](#)
- virtual [~OsclNullLock \(\)](#)

7.174.1 Constructor & Destructor Documentation

7.174.1.1 virtual OsclNullLock::~OsclNullLock () [inline, virtual]

7.174.2 Member Function Documentation

7.174.2.1 virtual void OsclNullLock::Lock () [inline, virtual]

Implements [OsclLockBase](#).

7.174.2.2 virtual void OsclNullLock::Unlock () [inline, virtual]

Implements [OsclLockBase](#).

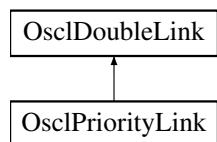
The documentation for this class was generated from the following file:

- [oscl_lock_base.h](#)

7.175 OsclPriorityLink Class Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclPriorityLink::



Data Fields

- int32 [iPriority](#)

7.175.1 Field Documentation

7.175.1.1 int32 OsclPriorityLink::iPriority

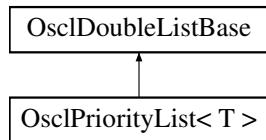
The documentation for this class was generated from the following file:

- [oscl_double_list.h](#)

7.176 OsclPriorityList< T > Class Template Reference

```
#include <oscl_double_list.h>
```

Inheritance diagram for OsclPriorityList< T >::



Public Methods

- OSCL_INLINE OsclPriorityList ()
- OSCL_INLINE OsclPriorityList (int32 anOffset)
- OSCL_INLINE void Insert (T &aRef)
- OSCL_INLINE bool IsHead (const T *aPtr) const
- OSCL_INLINE bool IsTail (const T *aPtr) const
- OSCL_INLINE T * Head () const
- OSCL_INLINE T * Tail () const

```
template<class T> class OsclPriorityList< T >
```

7.176.1 Constructor & Destructor Documentation

7.176.1.1 template<class T> OSCL_INLINE OsclPriorityList< T >::OsclPriorityList ()

7.176.1.2 template<class T> OSCL_INLINE OsclPriorityList< T >::OsclPriorityList (int32 *anOffset*)

7.176.2 Member Function Documentation

7.176.2.1 template<class T> OSCL_INLINE T* OsclPriorityList< T >::Head ()

7.176.2.2 template<class T> OSCL_INLINE void OsclPriorityList< T >::Insert (T &*aRef*)

7.176.2.3 template<class T> OSCL_INLINE bool OsclPriorityList< T >::IsHead (const T **aPtr*) const

7.176.2.4 template<class T> OSCL_INLINE bool OsclPriorityList< T >::IsTail (const T **aPtr*) const

7.176.2.5 template<class T> OSCL_INLINE T* OsclPriorityList< T >::Tail ()

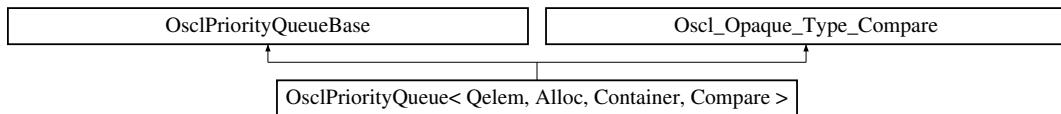
The documentation for this class was generated from the following file:

- [oscl_double_list.h](#)

7.177 OsclPriorityQueue< Qelem, Alloc, Container, Compare > Class Template Reference

```
#include <oscl_priqueue.h>
```

Inheritance diagram for OsclPriorityQueue< Qelem, Alloc, Container, Compare >::



Public Types

- `typedef Container::value_type value_type`
- `typedef Container container_type`
- `typedef Container::iterator iterator`
- `typedef Container::const_reference const_reference`

Public Methods

- `bool empty () const`
- `uint32 size () const`
- `void reserve (uint32 n)`
- `const_reference top () const`
- `const Container & vec ()`
- `void push (const value_type &input)`
- `void pop ()`
- `int remove (const value_type &input)`
- `OsclPriorityQueue ()`
- `virtual ~OsclPriorityQueue ()`

Protected Methods

- `void push_heap (iterator first, iterator last)`
- `void pop_heap (iterator first, iterator last)`
- `iterator find_heap (const value_type &input, iterator first, iterator last)`
- `int validate ()`
- `void swap (OsclAny *dest, const OsclAny *src)`
- `int compare_LT (OsclAny *a, OsclAny *b) const`
- `int compare_EQ (const OsclAny *a, const OsclAny *b) const`

Protected Attributes

- `Container c`
- `Compare comp`

Friends

- class [oscl_priqueue_test](#)

```
template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> class OsclPriorityQueue< Qelem, Alloc, Container, Compare >
```

7.177.1 Member Typedef Documentation

- 7.177.1.1 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **typedef Container::const_reference OsclPriorityQueue< Qelem, Alloc, Container, Compare >::const_reference**
- 7.177.1.2 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **typedef Container OsclPriorityQueue< Qelem, Alloc, Container, Compare >::container_type**
- 7.177.1.3 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **typedef Container::iterator OsclPriorityQueue< Qelem, Alloc, Container, Compare >::iterator**
- 7.177.1.4 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **typedef Container::value_type OsclPriorityQueue< Qelem, Alloc, Container, Compare >::value_type**

7.177.2 Constructor & Destructor Documentation

- 7.177.2.1 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **OsclPriorityQueue< Qelem, Alloc, Container, Compare >::OsclPriorityQueue () [inline]**
- 7.177.2.2 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **virtual OsclPriorityQueue< Qelem, Alloc, Container, Compare >::~OsclPriorityQueue () [inline, virtual]**

7.177.3 Member Function Documentation

- 7.177.3.1 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::compare_EQ (const OsclAny * a, const OsclAny * b) const [inline, protected, virtual]**

Return a==b.

Implements [Oscl_Opaque_Type_Compare](#).

- 7.177.3.2 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::compare_LT (OsclAny * a, OsclAny * b) const [inline, protected, virtual]**

Return a<b.

Implements [Oscl_Opaque_Type_Compare](#).

- 7.177.3.3 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> bool OsclPriorityQueue< Qelem, Alloc, Container, Compare >::empty () const [inline]`
- 7.177.3.4 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> iterator OsclPriorityQueue< Qelem, Alloc, Container, Compare >::find_heap (const value_type & input, iterator first, iterator last) [inline, protected]`
- 7.177.3.5 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::pop () [inline]`
- 7.177.3.6 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::pop_heap (iterator first, iterator last) [inline, protected]`
- 7.177.3.7 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::push (const value_type & input) [inline]`
- 7.177.3.8 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::push_heap (iterator first, iterator last) [inline, protected]`
- 7.177.3.9 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::remove (const value_type & input) [inline]`
- 7.177.3.10 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::reserve (uint32 n) [inline]`
- 7.177.3.11 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> uint32 OsclPriorityQueue< Qelem, Alloc, Container, Compare >::size () const [inline]`
- 7.177.3.12 `template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> void OsclPriorityQueue< Qelem, Alloc, Container, Compare >::swap (OsclAny * dest, const OsclAny * src) [inline, protected, virtual]`

Swap element at "a" with element at "b". Both pointers must be non-NULL.

Implements [Oscl_Opaque_Type_Compare](#).

- 7.177.3.13 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **const_reference** OsclPriorityQueue< Qelem, Alloc, Container, Compare >::top () const [inline]
- 7.177.3.14 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> int OsclPriorityQueue< Qelem, Alloc, Container, Compare >::validate () [inline, protected]
- 7.177.3.15 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> **const Container&** OsclPriorityQueue< Qelem, Alloc, Container, Compare >::vec () [inline]

7.177.4 Friends And Related Function Documentation

- 7.177.4.1 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> friend class oscl_priqueue_test [friend]

7.177.5 Field Documentation

- 7.177.5.1 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> Container OsclPriorityQueue< Qelem, Alloc, Container, Compare >::c [protected]
- 7.177.5.2 template<class Qelem, class Alloc, class Container = Oscl_Vector<Qelem, Alloc>, class Compare = OsclCompareLess<Qelem>> Compare OsclPriorityQueue< Qelem, Alloc, Container, Compare >::comp [protected]

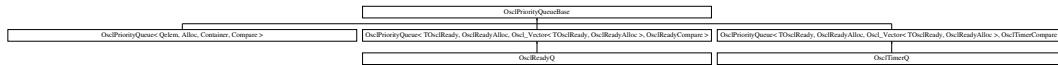
The documentation for this class was generated from the following file:

- [oscl_priqueue.h](#)

7.178 OsclPriorityQueueBase Class Reference

```
#include <oscl_priqueue.h>
```

Inheritance diagram for OsclPriorityQueueBase::



Protected Methods

- virtual ~OsclPriorityQueueBase ()
- OSCL_IMPORT_REF void [push_heap](#) (OsclAny *first, OsclAny *last)
- OSCL_IMPORT_REF void [pop_heap](#) (OsclAny *first, OsclAny *last)
- OSCL_IMPORT_REF OsclAny * [find_heap](#) (const OsclAny *input, OsclAny *first, OsclAny *last)
- OSCL_IMPORT_REF int [remove](#) (const OsclAny *input)
- void [construct](#) (Oscl_Opaque_Type_Compare *ot, Oscl_Vector_Base *vec)

7.178.1 Detailed Description

OsclPriorityQueueBase is a non-templatized base class for [OsclPriorityQueue](#). The purpose of this base class is to avoid large inline routines in the [OsclPriorityQueue](#) implementation. This class is not intended for direct instantiation except by [OsclPriorityQueue](#).

7.178.2 Constructor & Destructor Documentation

7.178.2.1 virtual OsclPriorityQueueBase::~OsclPriorityQueueBase () [inline, protected, virtual]

7.178.3 Member Function Documentation

7.178.3.1 void OsclPriorityQueueBase::[construct](#) (Oscl_Opaque_Type_Compare * *ot*, Oscl_Vector_Base * *vec*) [inline, protected]

7.178.3.2 OSCL_IMPORT_REF OsclAny* OsclPriorityQueueBase::[find_heap](#) (const OsclAny * *input*, OsclAny * *first*, OsclAny * *last*) [protected]

7.178.3.3 OSCL_IMPORT_REF void OsclPriorityQueueBase::[pop_heap](#) (OsclAny * *first*, OsclAny * *last*) [protected]

7.178.3.4 OSCL_IMPORT_REF void OsclPriorityQueueBase::[push_heap](#) (OsclAny * *first*, OsclAny * *last*) [protected]

7.178.3.5 OSCL_IMPORT_REF int OsclPriorityQueueBase::[remove](#) (const OsclAny * *input*) [protected]

The documentation for this class was generated from the following file:

- [oscl_priqueue.h](#)

7.179 OsclProcStatus Class Reference

```
#include <oscl_procstatus.h>
```

Public Types

- enum `eOsclProcError` { `SUCCESS_ERROR` = 0, `OTHER_ERROR`, `TOO_MANY_THREADS_ERROR`, `BAD_THREADID_ADDR_ERROR`, `MAX_THRDS_REACHED_ERROR`, `INVALID_THREAD_ID_ERROR`, `NOT_ENOUGH_MEMORY_ERROR`, `OUTOFMEMORY_ERROR`, `NOT_ENOUGH_RESOURCES_ERROR`, `THREAD_1_INACTIVE_ERROR`, `ALREADY_SUSPENDED_ERROR`, `NOT_SUSPENDED_ERROR`, `INVALID_THREAD_ERROR`, `INVALID_PARAM_ERROR`, `NO_PERMISSION_ERROR`, `INVALID_PRIORITY_ERROR`, `PSHARED_NOT_ZERO_ERROR`, `EXCEED_MAX_COUNT_VARIABLE_ERROR`, `THREAD_BLOCK_ERROR`, `EXCEED_MAX_SEM_COUNT_ERROR`, `INVALID_HANDLE_ERROR`, `INVALID_OPERATION_ERROR`, `INVALID_FUNCTION_ERROR`, `INVALID_ACCESS_ERROR`, `INVALID_ARGUMENT_ERROR`, `SYSTEM_RESOURCES_UNAVAILABLE_ERROR`, `INVALID_POINTER_ERROR`, `RELOCK_MUTEX_ERROR`, `THREAD_NOT_OWN_MUTEX_ERROR`, `MUTEX_LOCKED_ERROR`, `WAIT_ABANDONED_ERROR`, `WAIT_TIMEOUT_ERROR`, `SEM_NOT_SIGNALED_ERROR`, `PSHARED_ATTRIBUTE_SETTING_ERROR`, `NOT_IMPLEMENTED` }

7.179.1 Detailed Description

Class OsclProcStatus

7.179.2 Member Enumeration Documentation

7.179.2.1 enum OsclProcStatus::eOsclProcError

List of enums which contain error codes

Enumeration values:

`SUCCESS_ERROR`
`OTHER_ERROR`
`TOO_MANY_THREADS_ERROR`
`BAD_THREADID_ADDR_ERROR`
`MAX_THRDS_REACHED_ERROR`
`INVALID_THREAD_ID_ERROR`
`NOT_ENOUGH_MEMORY_ERROR`
`OUTOFMEMORY_ERROR`
`NOT_ENOUGH_RESOURCES_ERROR`
`THREAD_1_INACTIVE_ERROR`
`ALREADY_SUSPENDED_ERROR`
`NOT_SUSPENDED_ERROR`
`INVALID_THREAD_ERROR`
`INVALID_PARAM_ERROR`
`NO_PERMISSION_ERROR`

INVALID_PRIORITY_ERROR
PSHARED_NOT_ZERO_ERROR
EXCEED_MAX_COUNT_VARIABLE_ERROR
THREAD_BLOCK_ERROR
EXCEED_MAX_SEM_COUNT_ERROR
INVALID_HANDLE_ERROR
INVALID_OPERATION_ERROR
INVALID_FUNCTION_ERROR
INVALID_ACCESS_ERROR
INVALID_ARGUMENT_ERROR
SYSTEM_RESOURCES_UNAVAILABLE_ERROR
INVALID_POINTER_ERROR
RELOCK_MUTEX_ERROR
THREAD_NOT_OWN_MUTEX_ERROR
MUTEX_LOCKED_ERROR
WAIT_ABANDONED_ERROR
WAIT_TIMEOUT_ERROR
SEM_NOT_SIGNALED_ERROR
PSHARED_ATTRIBUTE_SETTING_ERROR
NOT_IMPLEMENTED

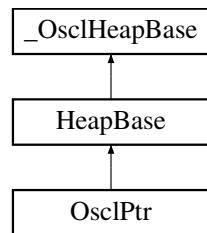
The documentation for this class was generated from the following file:

- [oscl_procstatus.h](#)

7.180 OsclPtr Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclPtr::



Public Methods

- [OsclPtr \(uint8 *ptr, int32 &len, int32 max\)](#)
- [OsclPtr \(const OsclPtr &d\)](#)
- [uint8 * Ptr \(\)](#)
- [void SetLength \(int32 l\)](#)
- [int32 Length \(\)](#)
- [void Zero \(\)](#)
- [void Set \(OsclPtr &v\)](#)
- [void Set \(uint8 *ptr, int32 len, int32 max\)](#)
- [void Append \(OsclPtrC &v\)](#)

7.180.1 Constructor & Destructor Documentation

7.180.1.1 OsclPtr::OsclPtr (uint8 *ptr, int32 &len, int32 max) [inline]

7.180.1.2 OsclPtr::OsclPtr (const OsclPtr &d) [inline]

7.180.2 Member Function Documentation

7.180.2.1 void OsclPtr::Append (OsclPtrC &v) [inline]

7.180.2.2 int32 OsclPtr::Length () [inline]

7.180.2.3 uint8* OsclPtr::Ptr () [inline]

7.180.2.4 void OsclPtr::Set (uint8 *ptr, int32 len, int32 max) [inline]

7.180.2.5 void OsclPtr::Set (OsclPtr &v) [inline]

7.180.2.6 void OsclPtr::SetLength (int32 l) [inline]

7.180.2.7 void OsclPtr::Zero () [inline]

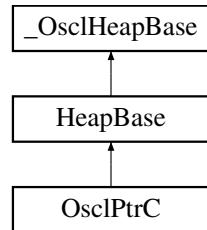
The documentation for this class was generated from the following file:

- [oscl_file_async_read.h](#)

7.181 OsclPtrC Class Reference

```
#include <oscl_file_async_read.h>
```

Inheritance diagram for OsclPtrC::



Public Methods

- [OsclPtrC](#) (const uint8 *ptr, int32 len, int32 max)
- [OsclPtrC](#) (const OsclPtrC &d)
- const uint8 * [Ptr](#) ()
- void [SetLength](#) (int32 l)
- int32 [Length](#) ()
- void [Zero](#) ()
- void [Set](#) (OsclPtrC *v)
- void [Set](#) (uint8 *ptr, int32 len, int32 max)
- OsclPtrC [Right](#) (int32 size)
- OsclPtrC [Left](#) (int32 size)

7.181.1 Constructor & Destructor Documentation

7.181.1.1 `OsclPtrC::OsclPtrC (const uint8 *ptr, int32 len, int32 max)` [inline]

7.181.1.2 `OsclPtrC::OsclPtrC (const OsclPtrC & d)` [inline]

7.181.2 Member Function Documentation

7.181.2.1 `OsclPtrC OsclPtrC::Left (int32 size)` [inline]

7.181.2.2 `int32 OsclPtrC::Length ()` [inline]

7.181.2.3 `const uint8* OsclPtrC::Ptr ()` [inline]

7.181.2.4 `OsclPtrC OsclPtrC::Right (int32 size)` [inline]

7.181.2.5 `void OsclPtrC::Set (uint8 *ptr, int32 len, int32 max)` [inline]

7.181.2.6 `void OsclPtrC::Set (OsclPtrC *v)` [inline]

7.181.2.7 `void OsclPtrC::SetLength (int32 l)` [inline]

7.181.2.8 `void OsclPtrC::Zero ()` [inline]

The documentation for this class was generated from the following file:

- [oscl_file_async_read.h](#)

7.182 OsclRand Class Reference

```
#include <oscl_rand.h>
```

Public Methods

- OSCL_COND_IMPORT_REF void [Seed](#) (int32 seed)
- OSCL_COND_IMPORT_REF int32 [Rand](#) ()

7.182.1 Member Function Documentation

7.182.1.1 OSCL_COND_IMPORT_REF int32 OsclRand::Rand ()

7.182.1.2 OSCL_COND_IMPORT_REF void OsclRand::Seed (int32 *seed*)

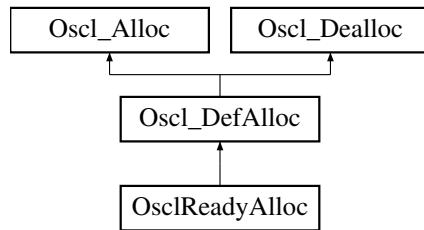
The documentation for this class was generated from the following file:

- [oscl_rand.h](#)

7.183 OsclReadyAlloc Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Inheritance diagram for OsclReadyAlloc::



Public Methods

- [OsclAny * allocate \(const uint32 size\)](#)
- [OsclAny * allocate_fl \(const uint32 size, const char *file_name, const int line_num\)](#)
- void [deallocate \(OsclAny *p\)](#)

7.183.1 Member Function Documentation

7.183.1.1 [OsclAny* OsclReadyAlloc::allocate \(const uint32 size\) \[virtual\]](#)

Implements [Oscl_DefAlloc](#).

7.183.1.2 [OsclAny* OsclReadyAlloc::allocate_fl \(const uint32 size, const char *file_name, const int line_num\) \[virtual\]](#)

Reimplemented from [Oscl_DefAlloc](#).

7.183.1.3 [void OsclReadyAlloc::deallocate \(OsclAny *p\) \[virtual\]](#)

Implements [Oscl_DefAlloc](#).

The documentation for this class was generated from the following file:

- [oscl_scheduler_readyq.h](#)

7.184 OsclReadyCompare Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Static Public Methods

- int [compare \(TOsclReady &a, TOsclReady &b\)](#)

7.184.1 Member Function Documentation

7.184.1.1 int OsclReadyCompare::compare (TOsclReady &*a*, TOsclReady &*b*) [static]

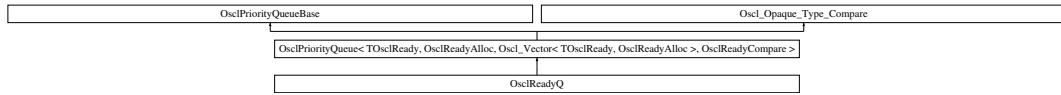
The documentation for this class was generated from the following file:

- [oscl_scheduler_readyq.h](#)

7.185 OsclReadyQ Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Inheritance diagram for OsclReadyQ::



Public Methods

- void [Construct](#) (int)
- void [ThreadLogon](#) ()
- void [ThreadLogoff](#) ()
- void [Remove](#) (TOscIReady)
- bool [IsIn](#) (TOscIReady)
- uint32 [Depth](#) ()
- [TOscIReady PopTop](#) ()
- [TOscIReady Top](#) ()
- [TOscIReady WaitAndPopTop](#) ()
- [TOscIReady WaitAndPopTop](#) (uint32)
- int32 [PendComplete](#) (PVActiveBase *pvbase, int32 aReason)
- int32 [WaitForRequestComplete](#) (PVActiveBase *)
- void [RegisterForCallback](#) (OsclSchedulerObserver *aCallback, OsclAny *aCallbackContext)
- void [TimerCallback](#) (uint32 aDelayMicrosec)
- [OsclSchedulerObserver * Callback](#) ()

7.185.1 Member Function Documentation

7.185.1.1 **OsclSchedulerObserver*** OsclReadyQ::Callback () [inline]

7.185.1.2 void OsclReadyQ::Construct (int)

7.185.1.3 uint32 OsclReadyQ::Depth () [inline]

7.185.1.4 bool OsclReadyQ::IsIn (**TOsclReady**)

7.185.1.5 int32 OsclReadyQ::PendComplete (**PVActiveBase** **pvbase*, int32 *aReason*)

7.185.1.6 **TOsclReady** OsclReadyQ::PopTop ()

7.185.1.7 void OsclReadyQ::RegisterForCallback (**OsclSchedulerObserver** **aCallback*, **OsclAny** **aCallbackContext*)

7.185.1.8 void OsclReadyQ::Remove (**TOsclReady**)

7.185.1.9 void OsclReadyQ::ThreadLogoff ()

7.185.1.10 void OsclReadyQ::ThreadLogon ()

7.185.1.11 void OsclReadyQ::TimerCallback (uint32 *aDelayMicrosec*)

7.185.1.12 **TOsclReady** OsclReadyQ::Top ()

7.185.1.13 **TOsclReady** OsclReadyQ::WaitAndPopTop (uint32)

7.185.1.14 **TOsclReady** OsclReadyQ::WaitAndPopTop ()

7.185.1.15 int32 OsclReadyQ::WaitForRequestComplete (**PVActiveBase** *)

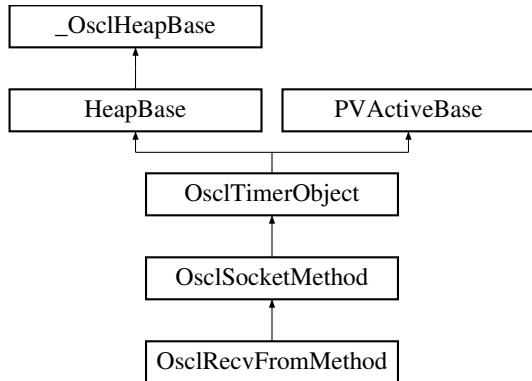
The documentation for this class was generated from the following file:

- `oscl_scheduler_readyq.h`

7.186 OsclRecvFromMethod Class Reference

```
#include <oscl_socket_recv_from.h>
```

Inheritance diagram for OsclRecvFromMethod:::



Public Methods

- [~OsclRecvFromMethod \(\)](#)
- [TPVSocketEvent RecvFrom \(uint8 *&aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeout, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource\)](#)
- [uint8 * GetRecvData \(int32 *aLength\)](#)
- [OsclRecvFromRequest * RecvFromRequest \(\)](#)

Static Public Methods

- [OsclRecvFromMethod * NewL \(OsclIPSocketI &c\)](#)

7.186.1 Constructor & Destructor Documentation

7.186.1.1 OsclRecvFromMethod::~OsclRecvFromMethod ()

7.186.2 Member Function Documentation

7.186.2.1 uint8* OsclRecvFromMethod::GetRecvData (int32 * aLength)

7.186.2.2 OsclRecvFromMethod* OsclRecvFromMethod::NewL (OsclIPSocketI & c) [static]

7.186.2.3 TPVSocketEvent OsclRecvFromMethod::RecvFrom (uint8 *& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, int32 aTimeout, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > * aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aPacketSource)

7.186.2.4 OsclRecvFromRequest* OsclRecvFromMethod::RecvFromRequest () [inline]

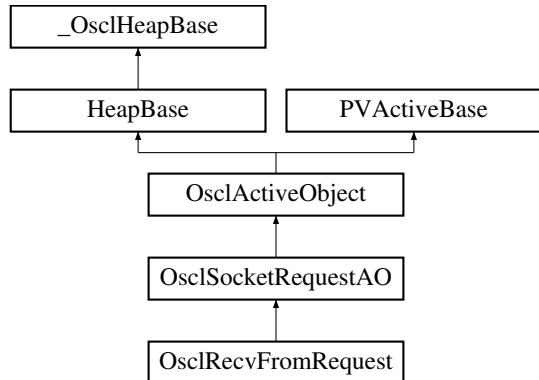
The documentation for this class was generated from the following file:

- [oscl_socket_recv_from.h](#)

7.187 OsclRecvFromRequest Class Reference

```
#include <oscl_socket_recv_from.h>
```

Inheritance diagram for OsclRecvFromRequest::



Public Methods

- `uint8 * GetRecvData (int32 *aLength)`
- `OsclRecvFromRequest (OsclSocketMethod &c)`
- `void RecvFrom (uint8 *&aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource)`
- `void Success ()`

7.187.1 Detailed Description

This is the AO that interacts with the socket server

7.187.2 Constructor & Destructor Documentation

7.187.2.1 OsclRecvFromRequest::OsclRecvFromRequest (`OsclSocketMethod &c`) [inline]

7.187.3 Member Function Documentation

7.187.3.1 `uint8* OsclRecvFromRequest::GetRecvData (int32 * aLength)`

7.187.3.2 `void OsclRecvFromRequest::RecvFrom (uint8 *& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > * aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aPacketSource)`

7.187.3.3 `void OsclRecvFromRequest::Success () [virtual]`

Reimplemented from `OsclSocketRequestAO`.

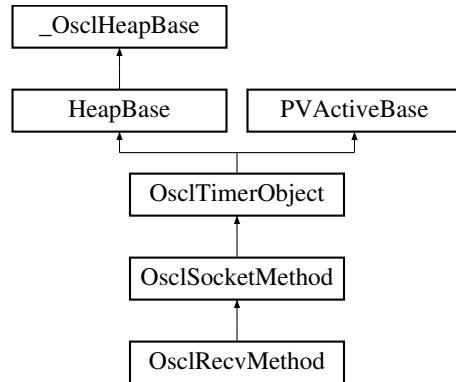
The documentation for this class was generated from the following file:

- [oscl_socket_recv_from.h](#)

7.188 OsclRecvMethod Class Reference

```
#include <oscl_socket_recv.h>
```

Inheritance diagram for OsclRecvMethod::



Public Methods

- [~OsclRecvMethod \(\)](#)
- [TPVSocketEvent Recv \(uint8 *&aPtr, uint32 aMaxLen, int32 aTimeout\)](#)
- [uint8 * GetRecvData \(int32 *aLength\)](#)
- [OsclRecvRequest * RecvRequest \(\)](#)

Static Public Methods

- [OsclRecvMethod * NewL \(OsclIPSocketI &c\)](#)

7.188.1 Constructor & Destructor Documentation

7.188.1.1 OsclRecvMethod::~OsclRecvMethod ()

7.188.2 Member Function Documentation

7.188.2.1 uint8* OsclRecvMethod::GetRecvData (int32 * aLength)

7.188.2.2 OsclRecvMethod* OsclRecvMethod::NewL (OsclIPSocketI & c) [static]

7.188.2.3 TPVSocketEvent OsclRecvMethod::Recv (uint8 *& aPtr, uint32 aMaxLen, int32 aTimeout)

7.188.2.4 OsclRecvRequest* OsclRecvMethod::RecvRequest () [inline]

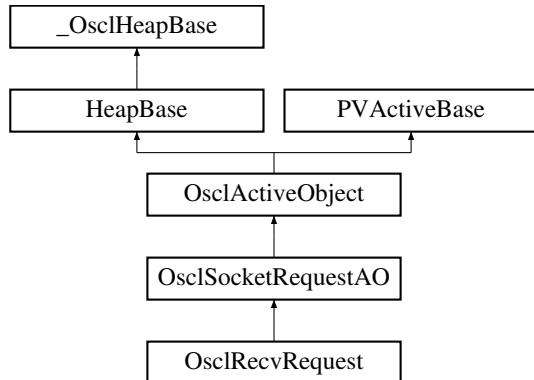
The documentation for this class was generated from the following file:

- [oscl_socket_recv.h](#)

7.189 OsclRecvRequest Class Reference

```
#include <oscl_socket_recv.h>
```

Inheritance diagram for OsclRecvRequest::



Public Methods

- `uint8 * GetRecvData (int32 *aLength)`
- `OsclRecvRequest (OsclSocketMethod &c)`
- `void Recv (uint8 *&aPtr, uint32 aMaxLen)`
- `void Success ()`

7.189.1 Detailed Description

This is the AO that interacts with the socket server

7.189.2 Constructor & Destructor Documentation

7.189.2.1 OsclRecvRequest::OsclRecvRequest (`OsclSocketMethod &c`) [inline]

7.189.3 Member Function Documentation

7.189.3.1 `uint8* OsclRecvRequest::GetRecvData (int32 * aLength)`

7.189.3.2 `void OsclRecvRequest::Recv (uint8 *& aPtr, uint32 aMaxLen)`

7.189.3.3 `void OsclRecvRequest::Success () [virtual]`

Reimplemented from `OsclSocketRequestAO`.

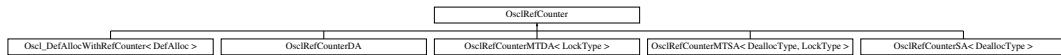
The documentation for this class was generated from the following file:

- `oscl_socket_recv.h`

7.190 OsclRefCounter Class Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounter:::



Public Methods

- virtual void `addRef ()=0`
- virtual void `removeRef ()=0`
- virtual uint32 `getCount ()=0`
- virtual `~OsclRefCounter ()`

7.190.1 Detailed Description

Interface class for OsclRefCounter implementations

7.190.2 Constructor & Destructor Documentation

7.190.2.1 virtual OsclRefCounter:::~OsclRefCounter () [inline, virtual]

7.190.3 Member Function Documentation

7.190.3.1 virtual void OsclRefCounter:::addRef () [pure virtual]

Add to the reference count

Implemented in `OsclRefCounterDA`, `OsclRefCounterSA< DeallocType >`, `OsclRefCounterMTDA< LockType >`, `OsclRefCounterMTSA< DeallocType, LockType >`, and `Oscl_RefAllocWithRefCounter< DefAlloc >`.

7.190.3.2 virtual uint32 OsclRefCounter:::getCount () [pure virtual]

Gets the current number of references

Implemented in `OsclRefCounterDA`, `OsclRefCounterSA< DeallocType >`, `OsclRefCounterMTDA< LockType >`, `OsclRefCounterMTSA< DeallocType, LockType >`, and `Oscl_RefAllocWithRefCounter< DefAlloc >`.

7.190.3.3 virtual void OsclRefCounter:::removeRef () [pure virtual]

Delete from reference count

Implemented in `OsclRefCounterDA`, `OsclRefCounterSA< DeallocType >`, `OsclRefCounterMTDA< LockType >`, `OsclRefCounterMTSA< DeallocType, LockType >`, and `Oscl_RefAllocWithRefCounter< DefAlloc >`.

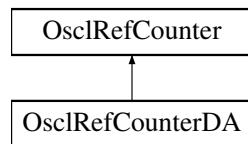
The documentation for this class was generated from the following file:

-
- [oscl_refcounter.h](#)

7.191 OsclRefCounterDA Class Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterDA::



Public Methods

- [OsclRefCounterDA \(OsclAny *p, OsclDestructDealloc *dealloc\)](#)
- virtual [~OsclRefCounterDA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

7.191.1 Detailed Description

Implementation of an [OsclRefCounter](#) that uses a dynamically created deallocator.

7.191.2 Constructor & Destructor Documentation

7.191.2.1 OsclRefCounterDA::OsclRefCounterDA ([OsclAny *p](#), [OsclDestructDealloc *dealloc](#)) [inline]

Constructor Takes a pointer to the buffer to track, and a pointer to the deallocator object which will be used to delete the buffer.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to `delete()`.

Parameters:

p pointer to the buffer to track

dealloc pointer to the deallocator to use when deleting the buffer

7.191.2.2 virtual OsclRefCounterDA::~OsclRefCounterDA () [inline, virtual]

Destructor empty

7.191.3 Member Function Documentation

7.191.3.1 void OsclRefCounterDA::addRef () [inline, virtual]

Add to the reference count

Implements [OsclRefCounter](#).

7.191.3.2 uint32 OsclRefCounterDA::getCount () [inline, virtual]

Gets the current number of references

Implements [OsclRefCounter](#).

7.191.3.3 void OsclRefCounterDA::removeRef () [inline, virtual]

Remove from the reference count

Implements [OsclRefCounter](#).

The documentation for this class was generated from the following file:

- [oscl_refcounter.h](#)

7.192 OsclRefCounterMemFrag Class Reference

```
#include <oscl_refcounter_memfrag.h>
```

Public Methods

- [OsclRefCounterMemFrag \(OsclMemoryFragment &m, OsclRefCounter *r, uint32 in_capacity\)](#)
- [OsclRefCounterMemFrag \(const OsclRefCounterMemFrag &x\)](#)
- [OsclRefCounterMemFrag \(\)](#)
- [OsclRefCounterMemFrag & operator= \(const OsclRefCounterMemFrag &x\)](#)
- [~OsclRefCounterMemFrag \(\)](#)
- [OsclRefCounter * getRefCounter \(\)](#)
- [OsclMemoryFragment & getMemFrag \(\)](#)
- [OsclAny * getMemFragPtr \(\)](#)
- [uint32 getMemFragSize \(\)](#)
- [uint32 getCapacity \(\)](#)
- [uint32 getCount \(\)](#)

7.192.1 Detailed Description

Class to contain a memory fragment with it's associated reference counter.

7.192.2 Constructor & Destructor Documentation

7.192.2.1 OsclRefCounterMemFrag::OsclRefCounterMemFrag ([OsclMemoryFragment & m](#), [OsclRefCounter * r](#), [uint32 in_capacity](#)) [inline]

Constructor. A valid memory fragment and reference counter are required as input. The memory fragment structure will be copied locally.

Parameters:

- m* reference to memory fragment
- r* pointer to the reference counter associated with the memory fragment.

7.192.2.2 OsclRefCounterMemFrag::OsclRefCounterMemFrag ([const OsclRefCounterMemFrag & x](#)) [inline]

Copy constructor.

7.192.2.3 OsclRefCounterMemFrag::OsclRefCounterMemFrag () [inline]

Default constructor.

7.192.2.4 OsclRefCounterMemFrag::~OsclRefCounterMemFrag () [inline]

Destructor. Removes this object's reference from the reference counter. The reference counter will not be deleted. The reference counter is designed to self-delete when it's reference count reaches 0.

7.192.3 Member Function Documentation

7.192.3.1 **uint32 OsclRefCounterMemFrag::getCapacity () [inline]**

Returns the capacity of the memory fragment

Returns:

7.192.3.2 **uint32 OsclRefCounterMemFrag::getCount () [inline]**

Returns the reference counter's current count.

7.192.3.3 **OsclMemoryFragment& OsclRefCounterMemFrag::getMemFrag () [inline]**

Returns a reference to the contained memory fragment structure.

7.192.3.4 **OsclAny* OsclRefCounterMemFrag::getMemFragPtr () [inline]**

Returns a pointer to the memory fragment data.

7.192.3.5 **uint32 OsclRefCounterMemFrag::getMemFragSize () [inline]**

Returns the size of the memory fragment data which equals its filled size.

Returns:

7.192.3.6 **OsclRefCounter* OsclRefCounterMemFrag::getRefCounter () [inline]**

Returns a pointer to the contained reference counter object

7.192.3.7 **OsclRefCounterMemFrag& OsclRefCounterMemFrag::operator= (const OsclRefCounterMemFrag & x) [inline]**

Assignment Operator

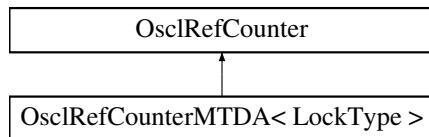
The documentation for this class was generated from the following file:

- [oscl_refcounter_memfrag.h](#)

7.193 OsclRefCounterMTDA< LockType > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterMTDA< LockType >::



Public Methods

- [OsclRefCounterMTDA \(OsclAny *p, OsclDestructDealloc *dealloc\)](#)
- virtual [~OsclRefCounterMTDA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

7.193.1 Detailed Description

template<class LockType> class OsclRefCounterMTDA< LockType >

Implementation of [OsclRefCounterDA](#) for multi-threaded use. A templated lock class must be specified.

7.193.2 Constructor & Destructor Documentation

7.193.2.1 template<class LockType> OsclRefCounterMTDA< LockType >::OsclRefCounterMTDA (OsclAny *p, OsclDestructDealloc *dealloc) [inline]

Constructor Takes a pointer to the buffer to track, and a pointer to the deallocator object which will be used to delete the buffer.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to [delete\(\)](#).

Parameters:

p pointer to the buffer to track

dealloc pointer to the deallocator to use when deleting the buffer

7.193.2.2 template<class LockType> virtual OsclRefCounterMTDA< LockType >::~OsclRefCounterMTDA () [inline, virtual]

Destructor empty

7.193.3 Member Function Documentation

**7.193.3.1 template<class LockType> void OsclRefCounterMTDA< LockType >::addRef ()
[inline, virtual]**

Add to the reference count

Implements [OsclRefCounter](#).

**7.193.3.2 template<class LockType> uint32 OsclRefCounterMTDA< LockType >::getCount ()
[inline, virtual]**

Gets the current number of references

Implements [OsclRefCounter](#).

**7.193.3.3 template<class LockType> void OsclRefCounterMTDA< LockType >::removeRef ()
[inline, virtual]**

Remove from the reference count

Implements [OsclRefCounter](#).

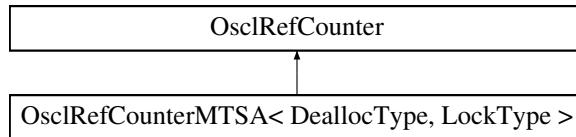
The documentation for this class was generated from the following file:

- [oscl_refcounter.h](#)

7.194 OsclRefCounterMTSA< DeallocType, LockType > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterMTSA< DeallocType, LockType >::



Public Methods

- [OsclRefCounterMTSA \(OsclAny *p\)](#)
- virtual [~OsclRefCounterMTSA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

7.194.1 Detailed Description

```
template<class DeallocType, class LockType> class OsclRefCounterMTSA< DeallocType, LockType >
```

Implementation of [OsclRefCounterSA](#) for multi-threaded use. A templated lock class must be specified.

7.194.2 Constructor & Destructor Documentation

7.194.2.1 template<class DeallocType, class LockType> OsclRefCounterMTSA< DeallocType, LockType >::OsclRefCounterMTSA (OsclAny * p) [inline]

Constructor Takes a pointer to the buffer to track.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to `delete()`.

Parameters:

p pointer to the buffer to track

7.194.2.2 template<class DeallocType, class LockType> virtual OsclRefCounterMTSA< DeallocType, LockType >::~OsclRefCounterMTSA () [inline, virtual]

Destructor empty

7.194.3 Member Function Documentation

7.194.3.1 template<class DeallocType, class LockType> void OsclRefCounterMTSA< DeallocType, LockType >::addRef () [inline, virtual]

Add to the reference count

Implements [OsclRefCounter](#).

7.194.3.2 template<class DeallocType, class LockType> uint32 OsclRefCounterMTSA< DeallocType, LockType >::getCount () [inline, virtual]

Gets the current number of references

Implements [OsclRefCounter](#).

7.194.3.3 template<class DeallocType, class LockType> void OsclRefCounterMTSA< DeallocType, LockType >::removeRef () [inline, virtual]

Remove from the reference count

Implements [OsclRefCounter](#).

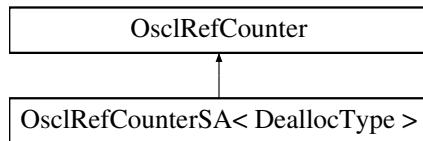
The documentation for this class was generated from the following file:

- [oscl_refcounter.h](#)

7.195 OsclRefCounterSA< DeallocType > Class Template Reference

```
#include <oscl_refcounter.h>
```

Inheritance diagram for OsclRefCounterSA< DeallocType >::



Public Methods

- [OsclRefCounterSA \(OsclAny *p\)](#)
- virtual [~OsclRefCounterSA \(\)](#)
- void [addRef \(\)](#)
- void [removeRef \(\)](#)
- uint32 [getCount \(\)](#)

7.195.1 Detailed Description

template<class DeallocType> class OsclRefCounterSA< DeallocType >

Implementation of an [OsclRefCounter](#) that uses a statically created deallocator.

7.195.2 Constructor & Destructor Documentation

7.195.2.1 template<class DeallocType> OsclRefCounterSA< DeallocType >::OsclRefCounterSA (OsclAny *p) [inline]

Constructor Takes a pointer to the buffer to track.

When the reference count reaches zero, the buffer will be deleted by the deallocator. Also, the [OsclRefCounter](#) object (this) will self-destruct when the reference count is zero. In some cases the [OsclRefCounter](#) object will be part of the buffer being deleted. For such cases, the object pointer must be equal to the buffer pointer given at construction. If the object is not part of the buffer being deleted, it will self-destruct with a call to [delete\(\)](#).

Parameters:

p pointer to the buffer to track

7.195.2.2 template<class DeallocType> virtual OsclRefCounterSA< DeallocType >::~OsclRefCounterSA () [inline, virtual]

Destructor empty

7.195.3 Member Function Documentation

7.195.3.1 template<class DeallocType> void OsclRefCounterSA< DeallocType >::addRef () [inline, virtual]

Add to the reference count

Implements [OsclRefCounter](#).

7.195.3.2 template<class DeallocType> uint32 OsclRefCounterSA< DeallocType >::getCount () [inline, virtual]

Gets the current number of references

Implements [OsclRefCounter](#).

7.195.3.3 template<class DeallocType> void OsclRefCounterSA< DeallocType >::removeRef () [inline, virtual]

Remove from the reference count

Implements [OsclRefCounter](#).

The documentation for this class was generated from the following file:

- [oscl_refcounter.h](#)

7.196 OsclRegistryAccessClient Class Reference

```
#include <oscl_registry_access_client.h>
```

Public Methods

- OSCL_IMPORT_REF OsclRegistryAccessClient ()
- OSCL_IMPORT_REF ~OsclRegistryAccessClient ()
- OSCL_IMPORT_REF int32 Connect ()
- OSCL_IMPORT_REF OsclComponentFactory GetFactory (OSCL_String &aComponent)
- OSCL_IMPORT_REF void GetFactories (OSCL_String &aRegistry, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &aVec)
- OSCL_IMPORT_REF void Close ()

7.196.1 Constructor & Destructor Documentation

7.196.1.1 OSCL_IMPORT_REF OsclRegistryAccessClient::OsclRegistryAccessClient ()

7.196.1.2 OSCL_IMPORT_REF OsclRegistryAccessClient::~OsclRegistryAccessClient ()

7.196.2 Member Function Documentation

7.196.2.1 OSCL_IMPORT_REF void OsclRegistryAccessClient::Close ()

Close and cleanup session.

7.196.2.2 OSCL_IMPORT_REF int32 OsclRegistryAccessClient::Connect ()

Create a session.

Returns:

OsclErrNone on success.

7.196.2.3 OSCL_IMPORT_REF void OsclRegistryAccessClient::GetFactories (OSCL_String & aRegistry, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > & aVec)

Get all factories for a given registry type.

Parameters:

aRegistry: registry MIME type

aVec: output component factory + mimestring vector.

7.196.2.4 OSCL_IMPORT_REF OsclComponentFactory OsclRegistryAccessClient::GetFactory (OSCL_String & aComponent)

Lookup a factory by registry and component mime type.

Parameters:

aComponent: registry+component MIME type

Returns:

Factory. Factory will be NULL if not found.

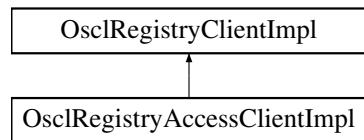
The documentation for this class was generated from the following file:

- [oscl_registry_access_client.h](#)

7.197 OsclRegistryAccessClientImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryAccessClientImpl::



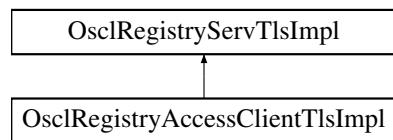
The documentation for this class was generated from the following file:

- [oscl_registry_client_impl.h](#)

7.198 OsclRegistryAccessClientTlsImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryAccessClientTlsImpl::



The documentation for this class was generated from the following file:

- [oscl_registry_client_impl.h](#)

7.199 OsclRegistryAccessElement Class Reference

```
#include <oscl_registry_types.h>
```

Data Fields

- [OsclComponentFactory](#) iFactory
- [OSCL_HeapString< OsclMemAllocator >](#) iMimeType

7.199.1 Detailed Description

A class used to access the registry data

7.199.2 Field Documentation

7.199.2.1 [OsclComponentFactory](#) OsclRegistryAccessElement::iFactory

7.199.2.2 [OSCL_HeapString<OsclMemAllocator>](#) OsclRegistryAccessElement::iMimeType

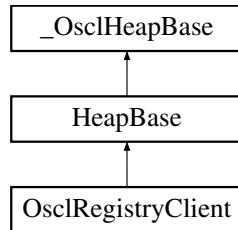
The documentation for this class was generated from the following file:

- [oscl_registry_types.h](#)

7.200 OsclRegistryClient Class Reference

```
#include <oscl_registry_client.h>
```

Inheritance diagram for OsclRegistryClient::



Public Methods

- OSCL_IMPORT_REF [OsclRegistryClient \(\)](#)
- OSCL_IMPORT_REF [~OsclRegistryClient \(\)](#)
- OSCL_IMPORT_REF int32 [Connect \(bool aPerThread=false\)](#)
- OSCL_IMPORT_REF int32 [Register \(OSCL_String &aComponentID, OsclComponentFactory aFactory\)](#)
- OSCL_IMPORT_REF int32 [UnRegister \(OSCL_String &aComponentID\)](#)
- OSCL_IMPORT_REF void [Close \(\)](#)

7.200.1 Constructor & Destructor Documentation

7.200.1.1 OSCL_IMPORT_REF OsclRegistryClient::OsclRegistryClient ()

7.200.1.2 OSCL_IMPORT_REF OsclRegistryClient::~OsclRegistryClient ()

7.200.2 Member Function Documentation

7.200.2.1 OSCL_IMPORT_REF void OsclRegistryClient::Close ()

Close and cleanup. All components registered in this session are automatically unregistered.

7.200.2.2 OSCL_IMPORT_REF int32 OsclRegistryClient::Connect (bool *aPerThread* = false)

Create a session.

Parameters:

aPerThread: Select per-thread registry instead of global registry.

Returns:

OsclErrNone on success.

**7.200.2.3 OSCL_IMPORT_REF int32 OsclRegistryClient::Register ([OSCL_String &](#)
aComponentID, [OsclComponentFactory](#) *aFactory*)**

Register a component factory by registry ID and component ID.

Parameters:

aComponentID: registry + component mime-string.

aFactory: factory function pointer.

aParam: component Create param.

Returns:

OsclErrNone on success.

**7.200.2.4 OSCL_IMPORT_REF int32 OsclRegistryClient::UnRegister ([OSCL_String &](#)
aComponentID)**

Unregister a previously registered component.

Returns:

OsclErrNone on success.

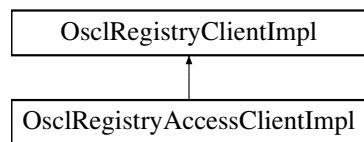
The documentation for this class was generated from the following file:

- [oscl_registry_client.h](#)

7.201 OsclRegistryClientImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryClientImpl:



Protected Methods

- int32 [Connect \(\)](#)
- void [Close \(\)](#)
- int32 [Register \(OSCL_String &, OsclComponentFactory\)](#)
- int32 [UnRegister \(OSCL_String &\)](#)
- [OsclComponentFactory GetFactory \(OSCL_String &\)](#)
- void [GetFactories \(OSCL_String &, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &\)](#)

Friends

- class [OsclRegistryClient](#)
- class [OsclRegistryAccessClient](#)

7.201.1 Member Function Documentation

7.201.1.1 **void OsclRegistryClientImpl::Close (void)** [inline, protected]

7.201.1.2 **int32 OsclRegistryClientImpl::Connect ()** [inline, protected]

7.201.1.3 **void OsclRegistryClientImpl::GetFactories (OSCL_String &, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &)** [inline, protected]

7.201.1.4 **OsclComponentFactory OsclRegistryClientImpl::GetFactory (OSCL_String &)**
[inline, protected]

7.201.1.5 **int32 OsclRegistryClientImpl::Register (OSCL_String &, OsclComponentFactory)**
[inline, protected]

7.201.1.6 **int32 OsclRegistryClientImpl::UnRegister (OSCL_String &)** [inline,
protected]

7.201.2 Friends And Related Function Documentation

7.201.2.1 **friend class OsclRegistryAccessClient** [friend]

7.201.2.2 **friend class OsclRegistryClient** [friend]

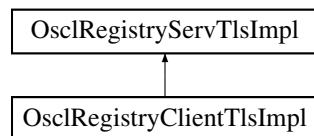
The documentation for this class was generated from the following file:

- [oscl_registry_client_impl.h](#)

7.202 OsclRegistryClientTlsImpl Class Reference

```
#include <oscl_registry_client_impl.h>
```

Inheritance diagram for OsclRegistryClientTlsImpl::



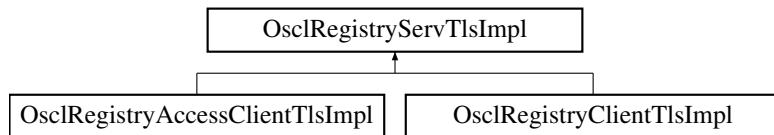
The documentation for this class was generated from the following file:

- [oscl_registry_client_impl.h](#)

7.203 OsclRegistryServTlsImpl Class Reference

```
#include <oscl_registry_serv_impl_tls.h>
```

Inheritance diagram for OsclRegistryServTlsImpl::



Protected Methods

- [OsclRegistryServTlsImpl \(\)](#)
- virtual [~OsclRegistryServTlsImpl \(\)](#)
- int32 [Connect \(\)](#)
- void [Close \(\)](#)
- int32 [Register \(OSCL_String &aComponentID, OsclComponentFactory aFactory\)](#)
- int32 [UnRegister \(OSCL_String &aComponentID\)](#)
- [OsclComponentFactory GetFactory \(OSCL_String &aComponent\)](#)
- void [GetFactories \(OSCL_String &aRegistry, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > &aVec\)](#)

Friends

- class [OsclRegistryClient](#)
- class [OsclRegistryAccessClient](#)

7.203.1 Constructor & Destructor Documentation

7.203.1.1 `OsclRegistryServTlsImpl::OsclRegistryServTlsImpl ()` [protected]

7.203.1.2 `virtual OsclRegistryServTlsImpl::~OsclRegistryServTlsImpl ()` [protected, virtual]

7.203.2 Member Function Documentation

7.203.2.1 `void OsclRegistryServTlsImpl::Close ()` [protected]

7.203.2.2 `int32 OsclRegistryServTlsImpl::Connect ()` [protected]

7.203.2.3 `void OsclRegistryServTlsImpl::GetFactories (OSCL_String & aRegistry, Oscl_Vector< OsclRegistryAccessElement, OsclMemAllocator > & aVec)` [protected]

7.203.2.4 `OsclComponentFactory OsclRegistryServTlsImpl::GetFactory (OSCL_String & aComponent)` [protected]

7.203.2.5 `int32 OsclRegistryServTlsImpl::Register (OSCL_String & aComponentID, OsclComponentFactory aFactory)` [protected]

7.203.2.6 `int32 OsclRegistryServTlsImpl::UnRegister (OSCL_String & aComponentID)` [protected]

7.203.3 Friends And Related Function Documentation

7.203.3.1 `friend class OsclRegistryAccessClient` [friend]

7.203.3.2 `friend class OsclRegistryClient` [friend]

The documentation for this class was generated from the following file:

- [oscl_registry_serv_impl_tls.h](#)

7.204 OsclScheduler Class Reference

```
#include <oscl_scheduler.h>
```

Static Public Methods

- OSCL_IMPORT_REF void [Init](#) (const char *name, [Oscl_DefAlloc](#) *alloc=NULL, int nreserve=20)
- OSCL_IMPORT_REF void [Cleanup](#) ()

7.204.1 Detailed Description

Per-thread scheduler initialization and cleanup.

7.204.2 Member Function Documentation

7.204.2.1 OSCL_IMPORT_REF void OsclScheduler::Cleanup () [static]

This routine uninstalls and destroys Oscl scheduler for the calling thread.

7.204.2.2 OSCL_IMPORT_REF void OsclScheduler::Init (const char * *name*, [Oscl_DefAlloc](#) * *alloc* = NULL, int *nreserve* = 20) [static]

This routine creates and installs a scheduler in the calling thread.

Parameters:

- name*:** (input param) scheduler name.
- alloc*:** (input param) optional allocator to use for the internal implementation.
- nreserve*:** (input param) optional value for ready queue reserve size.

The documentation for this class was generated from the following file:

- [oscl_scheduler.h](#)

7.205 OsclSchedulerObserver Class Reference

```
#include <oscl_scheduler.h>
```

Public Methods

- virtual void [OsclSchedulerTimerCallback](#) ([OsclAny](#) *aContext, uint32 aDelayMsec)=0
- virtual void [OsclSchedulerReadyCallback](#) ([OsclAny](#) *aContext)=0
- virtual [~OsclSchedulerObserver](#) ()

7.205.1 Detailed Description

OsclSchedulerObserver is an observer class for use when running scheduler in non-blocking mode. The scheduler observer can register for callbacks so it will be notified when it is necessary to run scheduler again. Note: non-blocking mode and scheduler callbacks are not supported on Symbian.

7.205.2 Constructor & Destructor Documentation

7.205.2.1 virtual [OsclSchedulerObserver::~OsclSchedulerObserver](#) () [inline, virtual]

7.205.3 Member Function Documentation

7.205.3.1 virtual void [OsclSchedulerObserver::OsclSchedulerReadyCallback](#) ([OsclAny](#) **aContext*) [pure virtual]

[OsclSchedulerReadyCallback](#) is called when the ready queue is updated, meaning an AO is ready to run. Scheduler needs to be run ASAP. Calling context may be any thread, so be careful!

The current observer is cleared before making the callback, so the observer must call RegisterForCallback again if it wants further notifications.

7.205.3.2 virtual void [OsclSchedulerObserver::OsclSchedulerTimerCallback](#) ([OsclAny](#) **aContext*, uint32 *aDelayMsec*) [pure virtual]

[OsclSchedulerTimerCallback](#) is called when the front of the timer queue is updated. This means the minimum delay has changed and scheduler needs to be run again after aDelayMsec. Calling context is in-thread.

The current observer is cleared before making the callback, so the observer must call RegisterForCallback again if it wants further notifications.

The documentation for this class was generated from the following file:

- [oscl_scheduler.h](#)

7.206 OsclScopedLock< LockClass > Class Template Reference

The OsclScopedLock class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the OsclScopedLock goes out of scope.

```
#include <oscl_lock_base.h>
```

Public Methods

- [OsclScopedLock \(LockClass &inLock\)](#)
Default constructor Initializes the pointer and takes ownership.
- [~OsclScopedLock \(\)](#)
Destructor.

7.206.1 Detailed Description

template<class LockClass> class OsclScopedLock< LockClass >

The OsclScopedLock class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the OsclScopedLock goes out of scope.

The purpose of this class is to provide a way to prevent accidental resource leaks in a class or a method, due to "not remembering to unlock" variables which might lead to deadlock conditions.

7.206.2 Constructor & Destructor Documentation

7.206.2.1 **template<class LockClass> OsclScopedLock< LockClass >::OsclScopedLock (LockClass & inLock) [inline, explicit]**

Default constructor Initializes the pointer and takes ownership.

7.206.2.2 **template<class LockClass> OsclScopedLock< LockClass >::~OsclScopedLock () [inline]**

Destructor.

The pointer is deleted in case this class still has ownership

The documentation for this class was generated from the following file:

- [oscl_lock_base.h](#)

7.207 OsclSelect Class Reference

```
#include <oscl_init.h>
```

Public Methods

- [OsclSelect \(\)](#)
- [OsclSelect \(Oscl_DefAlloc *erralloc, Oscl_DefAlloc *schedalloc, const char *name, int32 reserve=10, bool heapcheck=false, FILE *output=NULL\)](#)

Data Fields

- bool [iOsclBase](#)
- bool [iOsclMemory](#)
- bool [iOsclErrorTrap](#)
- bool [iOsclLogger](#)
- bool [iOsclScheduler](#)
- [Oscl_DefAlloc * iErrAlloc](#)
- [Oscl_DefAlloc * iSchedulerAlloc](#)
- const char * [iSchedulerName](#)
- int32 [iSchedulerReserve](#)
- bool [iHeapCheck](#)
- FILE * [iOutputFile](#)

7.207.1 Detailed Description

Oscl Module selection and Init/Cleanup options.

7.207.2 Constructor & Destructor Documentation

7.207.2.1 OsclSelect::OsclSelect () [inline]

7.207.2.2 OsclSelect::OsclSelect ([Oscl_DefAlloc](#) * *erralloc*, [Oscl_DefAlloc](#) * *schedalloc*, const char * *name*, int32 *reserve* = 10, bool *heapcheck* = false, FILE * *output* = NULL) [inline]

7.207.3 Field Documentation

7.207.3.1 [Oscl_DefAlloc](#)* OsclSelect::iErrAlloc

7.207.3.2 bool OsclSelect::iHeapCheck

7.207.3.3 bool OsclSelect::iOsclBase

7.207.3.4 bool OsclSelect::iOsclErrorTrap

7.207.3.5 bool OsclSelect::iOsclLogger

7.207.3.6 bool OsclSelect::iOsclMemory

7.207.3.7 bool OsclSelect::iOsclScheduler

7.207.3.8 FILE* OsclSelect::iOutputFile

7.207.3.9 [Oscl_DefAlloc](#)* OsclSelect::iSchedulerAlloc

7.207.3.10 const char* OsclSelect::iSchedulerName

7.207.3.11 int32 OsclSelect::iSchedulerReserve

The documentation for this class was generated from the following file:

- [oscl_init.h](#)

7.208 OsclSemaphore Class Reference

```
#include <oscl_semaphore.h>
```

Public Methods

- OSCL_IMPORT_REF OsclSemaphore ()
- OSCL_IMPORT_REF ~OsclSemaphore ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Create (uint32 initVal=0)
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Close ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Wait ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Wait (uint32 timeout_msec)
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError TryWait ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Signal ()

7.208.1 Detailed Description

Class Semaphore

7.208.2 Constructor & Destructor Documentation

7.208.2.1 OSCL_IMPORT_REF OsclSemaphore::OsclSemaphore ()

Class constructor

7.208.2.2 OSCL_IMPORT_REF OsclSemaphore::~OsclSemaphore ()

Class destructor

7.208.3 Member Function Documentation

7.208.3.1 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclSemaphore::Close ()

Closes the Semaphore

Parameters:

It wont take any parameters

Returns:

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

7.208.3.2 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclSemaphore::Create (uint32 initVal = 0)

Creates the Semaphore

Parameters:

Intialcount

Returns:

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

7.208.3.3 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclSemaphore::Signal ()

Signals that the thread is finished with the Semaphore

Parameters:

It wont take any parameters

Returns:

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

7.208.3.4 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclSemaphore::TryWait ()

Try to acquire semaphore ,if the semaphore is already acquired by another thread, calling thread immediately returns with out blocking

Parameters:

It wont take any parameters

Returns:

Returns SUCCESS_ERROR if the semaphore was acquired, SEM_LOCKED_ERROR if the semaphore cannot be acquired without waiting, or an error code if the operation failed. Note: this function may not be supported on all platforms, and may return NOT_IMPLEMENTED.

7.208.3.5 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclSemaphore::Wait (uint32 timeout_msec)

Makes the thread to wait on the Semaphore, with a timeout.

Parameters:

timeout in milliseconds.

Returns:

Returns SUCCESS_ERROR if the semaphore was aquired, WAIT_TIMEOUT_ERROR if the timeout expired without acquiring the semaphore, or an error code if the operation failed. Note: this function may not be supported on all platforms, and may return NOT_IMPLEMENTED.

7.208.3.6 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclSemaphore::Wait ()

Makes the thread to wait on the Semaphore

Parameters:

It wont take any parameters

Returns:

Returns the Error whether it is success or failure incase of failure it will return what is the specific error

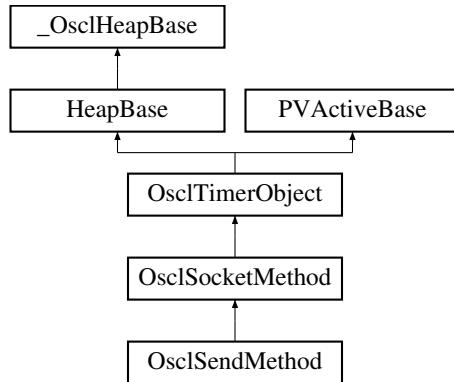
The documentation for this class was generated from the following file:

- [oscl_semaphore.h](#)

7.209 OsclSendMethod Class Reference

```
#include <oscl_socket_send.h>
```

Inheritance diagram for OsclSendMethod::



Public Methods

- [~OsclSendMethod \(\)](#)
- [TPVSocketEvent Send \(const uint8 *aPtr, uint32 aLen, int32 aTimeout\)](#)
- [uint8 * GetSendData \(int32 *aLength\)](#)
- [OsclSendRequest * SendRequest \(\)](#)

Static Public Methods

- [OsclSendMethod * NewL \(OsclIPSocketI &c\)](#)

7.209.1 Constructor & Destructor Documentation

7.209.1.1 OsclSendMethod::~OsclSendMethod ()

7.209.2 Member Function Documentation

7.209.2.1 uint8* OsclSendMethod::GetSendData (int32 * aLength)

7.209.2.2 OsclSendMethod* OsclSendMethod::NewL (OsclIPSocketI & c) [static]

7.209.2.3 TPVSocketEvent OsclSendMethod::Send (const uint8 *& aPtr, uint32 aLen, int32 aTimeout)

7.209.2.4 OsclSendRequest* OsclSendMethod::SendRequest () [inline]

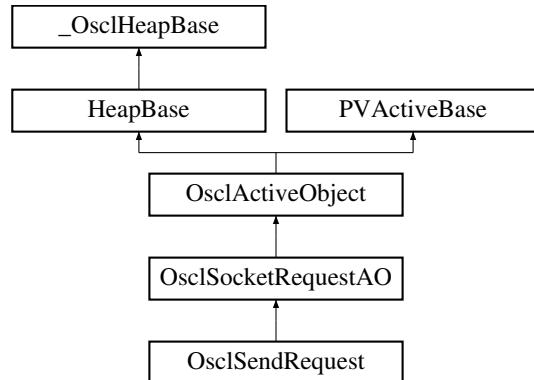
The documentation for this class was generated from the following file:

- [oscl_socket_send.h](#)

7.210 OsclSendRequest Class Reference

```
#include <oscl_socket_send.h>
```

Inheritance diagram for OsclSendRequest::



Public Methods

- [OsclSendRequest \(OsclSocketMethod &c\)](#)
- [void Send \(const uint8 *&aPtr, uint32 aLen\)](#)
- [void Success \(\)](#)
- [uint8 * GetSendData \(int32 *aLength\)](#)

7.210.1 Constructor & Destructor Documentation

7.210.1.1 OsclSendRequest::OsclSendRequest (OsclSocketMethod & c) [inline]

7.210.2 Member Function Documentation

7.210.2.1 uint8* OsclSendRequest::GetSendData (int32 * aLength)

7.210.2.2 void OsclSendRequest::Send (const uint8 *& aPtr, uint32 aLen)

7.210.2.3 void OsclSendRequest::Success () [virtual]

Reimplemented from [OsclSocketRequestAO](#).

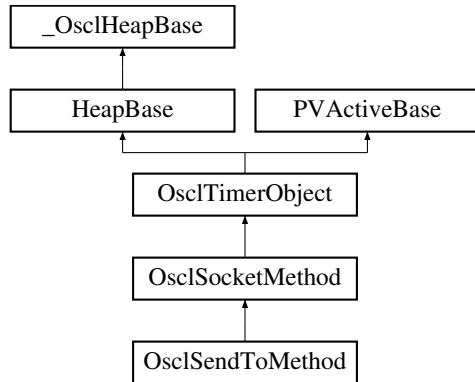
The documentation for this class was generated from the following file:

- [oscl_socket_send.h](#)

7.211 OsclSendToMethod Class Reference

```
#include <oscl_socket_send_to.h>
```

Inheritance diagram for OsclSendToMethod:::



Public Methods

- [~OsclSendToMethod \(\)](#)
- [TPVSocketEvent SendTo \(const uint8 *&aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeout\)](#)
- [uint8 * GetSendData \(int32 *aLength\)](#)
- [OsclSendToRequest * SendToRequest \(\)](#)

Static Public Methods

- [OsclSendToMethod * NewL \(OsclIPSocketI &c\)](#)

7.211.1 Constructor & Destructor Documentation

7.211.1.1 OsclSendToMethod::~OsclSendToMethod ()

7.211.2 Member Function Documentation

7.211.2.1 uint8* OsclSendToMethod::GetSendData (int32 * aLength)

7.211.2.2 OsclSendToMethod* OsclSendToMethod::NewL (OsclIPSocketI & c) [static]

7.211.2.3 TPVSocketEvent OsclSendToMethod::SendTo (const uint8 *& aPtr, uint32 aLen, OsclNetworkAddress & aAddress, int32 aTimeout)

7.211.2.4 OsclSendToRequest* OsclSendToMethod::SendToRequest () [inline]

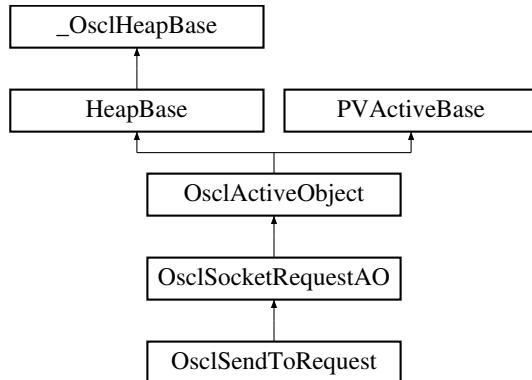
The documentation for this class was generated from the following file:

- [oscl_socket_send_to.h](#)

7.212 OsclSendToRequest Class Reference

```
#include <oscl_socket_send_to.h>
```

Inheritance diagram for OsclSendToRequest::



Public Methods

- [OsclSendToRequest \(OsclSocketMethod &c\)](#)
- void [SendTo \(const uint8 *&aPtr, uint32 aLen, OsclNetworkAddress &aAddress\)](#)
- void [Success \(\)](#)
- uint8 * [GetSendData \(int32 *aLength\)](#)

7.212.1 Detailed Description

This is the AO that interacts with the socket server

7.212.2 Constructor & Destructor Documentation

7.212.2.1 OsclSendToRequest::OsclSendToRequest ([OsclSocketMethod & c](#)) [inline]

7.212.3 Member Function Documentation

7.212.3.1 uint8* OsclSendToRequest::GetSendData (int32 * aLength)

7.212.3.2 void OsclSendToRequest::SendTo (const uint8 *& aPtr, uint32 aLen, [OsclNetworkAddress & aAddress](#))

7.212.3.3 void OsclSendToRequest::Success () [virtual]

Reimplemented from [OsclSocketRequestAO](#).

The documentation for this class was generated from the following file:

- [oscl_socket_send_to.h](#)

7.213 OsclSharedPtr< TheClass > Class Template Reference

A parameterized smart pointer class.

```
#include <oscl_shared_ptr.h>
```

Public Methods

- **OsclSharedPtr ()**
Constructor.
- **OsclSharedPtr (TheClass *inClassPtr, OsclRefCounter *in_refcnt)**
Constructor.
- **OsclSharedPtr (const OsclSharedPtr &inSharedPtr)**
Copy constructor.
- **virtual ~OsclSharedPtr ()**
Destructor.
- **TheClass * operator → ()**
• **TheClass & operator * ()**
The indirection operator returns a reference to an object of the parameterized type.
- **operator TheClass * ()**
Casting operator.
- **TheClass * GetRep ()**
Use this function to get a pointer to the wrapped object.
- **OsclRefCounter * GetRefCounter ()**
Get the refcount pointer. This should primarily be used for conversion operations.
- **int get_count ()**
Get a count of how many references to the object exist.
- **void Bind (const OsclSharedPtr &inHandle)**
Use this function to bind an existing OsclSharedPtr to a already-wrapped object.
- **void Bind (TheClass *ptr, OsclRefCounter *in_refcnt)**
Use this function to bind an existing OsclSharedPtr to a new (unwrapped) object.
- **void Unbind ()**
Use this function of unbind an existing OsclSharedPtr.
- **OsclSharedPtr & operator= (const OsclSharedPtr &inSharedPtr)**
Assignment operator.
- **bool operator== (const OsclSharedPtr &b) const**
Test for equality to see if two PVHandles wrap the same object.

7.213.1 Detailed Description

template<class TheClass> class OsclSharedPtr< TheClass >

A parameterized smart pointer class.

7.213.2 Constructor & Destructor Documentation

7.213.2.1 template<class TheClass> OsclSharedPtr< TheClass >::OsclSharedPtr () [inline]

Constructor.

7.213.2.2 template<class TheClass> OsclSharedPtr< TheClass >::OsclSharedPtr (TheClass * *inClassPtr*, OsclRefCounter * *in_refcnt*) [inline]

Constructor.

Parameters:

inClassPtr A pointer to an instance of the parameterized type that the new OsclSharedPtr will wrap.

7.213.2.3 template<class TheClass> OsclSharedPtr< TheClass >::OsclSharedPtr (const OsclSharedPtr< TheClass > & *inSharedPtr*) [inline]

Copy constructor.

7.213.2.4 template<class TheClass> virtual OsclSharedPtr< TheClass >::~OsclSharedPtr () [inline, virtual]

Destructor.

7.213.3 Member Function Documentation

7.213.3.1 template<class TheClass> int OsclSharedPtr< TheClass >::get_count () [inline]

Get a count of how many references to the object exist.

7.213.3.2 template<class TheClass> OsclRefCounter* OsclSharedPtr< TheClass >::GetRefCounter () [inline]

Get the refcount pointer. This should primarily be used for conversion operations.

7.213.3.3 template<class TheClass> TheClass* OsclSharedPtr< TheClass >::GetRep () [inline]

Use this function to get a pointer to the wrapped object.

7.213.3.4 template<class TheClass> TheClass& OsclSharedPtr< TheClass >::operator * () [inline]

The indirection operator returns a reference to an object of the parameterized type.

7.213.3.5 template<class TheClass> OsclSharedPtr< TheClass >::operator TheClass * () [inline]

Casting operator.

7.213.3.6 template<class TheClass> TheClass* OsclSharedPtr< TheClass >::operator → () [inline]

The dereferencing operator returns a pointer to the parameterized type and can be used to access member elements of TheClass.

7.213.3.7 template<class TheClass> OsclSharedPtr& OsclSharedPtr< TheClass >::operator=(const OsclSharedPtr< TheClass > & *inSharedPtr*) [inline]

Assignment operator.

7.213.3.8 template<class TheClass> void OsclSharedPtr< TheClass >::Unbind () [inline]

Use this function of unbind an existing OsclSharedPtr.

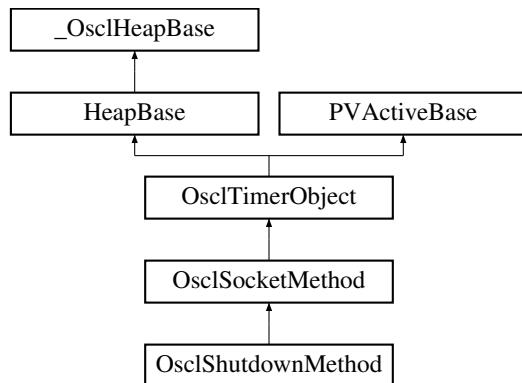
The documentation for this class was generated from the following file:

- [oscl_shared_ptr.h](#)

7.214 OsclShutdownMethod Class Reference

```
#include <oscl_socket_shutdown.h>
```

Inheritance diagram for OsclShutdownMethod::



Public Methods

- [~OsclShutdownMethod \(\)](#)
- [TPVSocketEvent Shutdown \(TPVSocketShutdown aHow, int32 aTimeout\)](#)
- [OsclShutdownRequest * ShutdownRequest \(\)](#)

Static Public Methods

- [OsclShutdownMethod * NewL \(OsclIPSocketI &c\)](#)

7.214.1 Constructor & Destructor Documentation

7.214.1.1 OsclShutdownMethod::~OsclShutdownMethod ()

7.214.2 Member Function Documentation

7.214.2.1 OsclShutdownMethod* OsclShutdownMethod::NewL (OsclIPSocketI &c) [static]

7.214.2.2 TPVSocketEvent OsclShutdownMethod::Shutdown (TPVSocketShutdown aHow, int32 aTimeout)

7.214.2.3 OsclShutdownRequest* OsclShutdownMethod::ShutdownRequest () [inline]

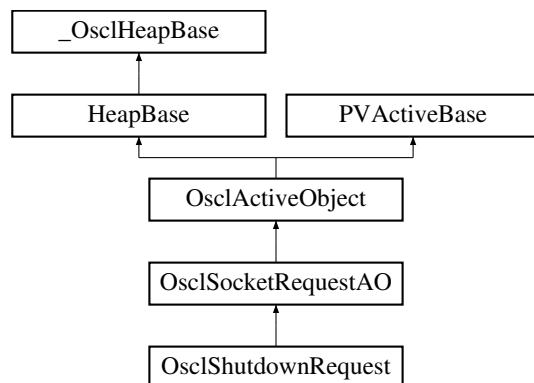
The documentation for this class was generated from the following file:

- [oscl_socket_shutdown.h](#)

7.215 OsclShutdownRequest Class Reference

```
#include <oscl_socket_shutdown.h>
```

Inheritance diagram for OsclShutdownRequest::



Public Methods

- [OsclShutdownRequest \(OsclSocketMethod &c\)](#)
- [void Shutdown \(TPVSocketShutdown aHow\)](#)

7.215.1 Detailed Description

This is the AO that interacts with the socket server

7.215.2 Constructor & Destructor Documentation

7.215.2.1 OsclShutdownRequest::OsclShutdownRequest ([OsclSocketMethod & c](#)) [inline]

7.215.3 Member Function Documentation

7.215.3.1 void OsclShutdownRequest::Shutdown ([TPVSocketShutdown aHow](#))

The documentation for this class was generated from the following file:

- [oscl_socket_shutdown.h](#)

7.216 OsclSingleton< T, ID, Registry > Class Template Reference

```
#include <oscl_singleton.h>
```

Public Methods

- [OsclSingleton \(\)](#)
- [~OsclSingleton \(\)](#)
- [T & operator * \(\) const](#)

The indirection operator () accesses a value indirectly, through a pointer.*

- [T * operator → \(\) const](#)

The indirection operator (->) accesses a value indirectly, through a pointer.

- [bool set \(\)](#)

set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

Protected Attributes

- [T * _Ptr](#)

```
template<class T, uint32 ID, class Registry = OsclSingletonRegistry> class OsclSingleton< T, ID, Registry >
```

7.216.1 Constructor & Destructor Documentation

7.216.1.1 template<class T, uint32 ID, class Registry = OsclSingletonRegistry> OsclSingleton< T, ID, Registry >::OsclSingleton () [inline]

7.216.1.2 template<class T, uint32 ID, class Registry = OsclSingletonRegistry> OsclSingleton< T, ID, Registry >::~OsclSingleton () [inline]

7.216.2 Member Function Documentation

7.216.2.1 template<class T, uint32 ID, class Registry = OsclSingletonRegistry> T& OsclSingleton< T, ID, Registry >::operator * () const [inline]

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the OsclSingleton can be used like the regular pointer that it was initialized with.

7.216.2.2 template<class T, uint32 ID, class Registry = OsclSingletonRegistry> T* OsclSingleton< T, ID, Registry >::operator → () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the OsclSingleton can be used like the regular pointer that it was initialized with.

7.216.2.3 template<class T, uint32 ID, class Registry = OsclSingletonRegistry> bool OsclSingleton< T, ID, Registry >::set () [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

7.216.3 Field Documentation

7.216.3.1 template<class T, uint32 ID, class Registry = OsclSingletonRegistry> T* OsclSingleton< T, ID, Registry >::_Ptr [protected]

The documentation for this class was generated from the following file:

- [oscl_singleton.h](#)

7.217 OsclSingletonRegistry Class Reference

```
#include <oscl_singleton.h>
```

Static Public Methods

- OSCL_IMPORT_REF [OsclAny](#) * getInstance (uint32 ID, int32 &error)
- OSCL_IMPORT_REF void registerInstance ([OsclAny](#) *ptr, uint32 ID, int32 &error)
- OSCL_IMPORT_REF [OsclAny](#) * lockAndGetInstance (uint32 ID, int32 &error)
- OSCL_IMPORT_REF void registerInstanceAndUnlock ([OsclAny](#) *ptr, uint32 ID, int32 &error)

Friends

- class [OsclBase](#)

7.217.1 Member Function Documentation

7.217.1.1 OSCL_IMPORT_REF [OsclAny](#)* OsclSingletonRegistry::getInstance (uint32 *ID*, int32 & *error*) [static]

7.217.1.2 OSCL_IMPORT_REF [OsclAny](#)* OsclSingletonRegistry::lockAndGetInstance (uint32 *ID*, int32 & *error*) [static]

7.217.1.3 OSCL_IMPORT_REF void OsclSingletonRegistry::registerInstance ([OsclAny](#) * *ptr*, uint32 *ID*, int32 & *error*) [static]

7.217.1.4 OSCL_IMPORT_REF void OsclSingletonRegistry::registerInstanceAndUnlock ([OsclAny](#) * *ptr*, uint32 *ID*, int32 & *error*) [static]

7.217.2 Friends And Related Function Documentation

7.217.2.1 friend class OsclBase [friend]

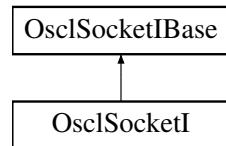
The documentation for this class was generated from the following file:

- [oscl_singleton.h](#)

7.218 OsclSocketI Class Reference

```
#include <oscl_socket_imp_pv.h>
```

Inheritance diagram for OsclSocketI::



Public Methods

- `~OsclSocketI ()`
- `int32 Open (OsclSocketServI &aServer, uint32 addrFamily, uint32 sockType, uint32 protocol)`
- `int32 Open (OsclSocketServI &aServer)`
- `int32 Bind (OsclNetworkAddress &anAddr)`
- `int32 SetSockOpt (TPVSocketOptionLevel aOptionLevel, TPVSocketOptionName aOptionName, OsclAny *aOptionValue, int32 aOptionLen)`
- `int32 GetPeerName (OsclNetworkAddress &peerName)`
- `int32 Join (OsclNetworkAddress &anAddr)`
- `int32 Close ()`
- `int32 Listen (uint32 qSize)`
- `int32 SetRecvBufferSize (uint32 size)`
- `TPVSocketEvent ThreadLogoff ()`
- `TPVSocketEvent ThreadLogon (OsclSocketServI *aServ)`
- `void Connect (ConnectParam &, OsclSocketRequestAO &)`
- `void Accept (AcceptParam &, OsclSocketRequestAO &)`
- `void Shutdown (ShutdownParam &, OsclSocketRequestAO &)`
- `void Send (SendParam &, OsclSocketRequestAO &)`
- `void SendSuccess (SendParam &)`
- `void SendTo (SendToParam &, OsclSocketRequestAO &)`
- `void SendToSuccess (SendToParam &)`
- `void Recv (RecvParam &, OsclSocketRequestAO &)`
- `void RecvSuccess (RecvParam &)`
- `void RecvFrom (RecvFromParam &, OsclSocketRequestAO &)`
- `void RecvFromSuccess (RecvFromParam &)`
- `TOsclSocket Socket ()`
- `void ProcessConnect (OsclSocketServRequestQElem *)`
- `void ProcessShutdown (OsclSocketServRequestQElem *)`
- `void ProcessAccept (OsclSocketServRequestQElem *)`
- `void ProcessSendTo (OsclSocketServRequestQElem *)`
- `void ProcessRecvFrom (OsclSocketServRequestQElem *)`
- `void ProcessSend (OsclSocketServRequestQElem *)`
- `void ProcessRecv (OsclSocketServRequestQElem *)`
- `PVLogger * Logger ()`

Static Public Methods

- `OsclSocketI * NewL (Oscl_DefAlloc &a)`
- `bool MakeAddr (OsclNetworkAddress &in, TOsclSockAddr &addr)`
- `void MakeAddr (TOsclSockAddr &in, OsclNetworkAddress &addr)`
- `bool MakeMulticastGroupInformation (OsclIpMReq &in, TIpMReq &addr)`
- `void MakeMulticastGroupInformation (TIpMReq &in, OsclIpMReq &addr)`

Friends

- class `OsclAcceptRequest`
- class `OsclConnectRequest`
- class `OsclRecvRequest`
- class `OsclRecvFromRequest`
- class `OsclSendRequest`
- class `OsclSendToRequest`
- class `OsclShutdownRequest`
- class `OsclUDPSocket`
- class `OsclTCPSocket`

7.218.1 Detailed Description

Socket implementation class

7.218.2 Constructor & Destructor Documentation

7.218.2.1 `OsclSocketI::~OsclSocketI ()`

7.218.3 Member Function Documentation

7.218.3.1 `void OsclSocketI::Accept (AcceptParam &, OsclSocketRequestAO &) [virtual]`

Implements `OsclSocketIBase`.

7.218.3.2 `int32 OsclSocketI::Bind (OsclNetworkAddress & anAddr) [virtual]`

Implements `OsclSocketIBase`.

7.218.3.3 `int32 OsclSocketI::Close () [virtual]`

Implements `OsclSocketIBase`.

7.218.3.4 `void OsclSocketI::Connect (ConnectParam &, OsclSocketRequestAO &) [virtual]`

Implements `OsclSocketIBase`.

7.218.3.5 int32 OsclSocketI::GetPeerName ([OsclNetworkAddress](#) & *peerName*)

7.218.3.6 int32 OsclSocketI::Join ([OsclNetworkAddress](#) & *anAddr*) [virtual]

Implements [OsclSocketIBase](#).

7.218.3.7 int32 OsclSocketI::Listen (uint32 *qSize*) [virtual]

Implements [OsclSocketIBase](#).

7.218.3.8 [PVLogger](#)* OsclSocketI::Logger () [inline]

7.218.3.9 void OsclSocketI::MakeAddr ([TOscI_SockAddr](#) & *in*, [OsclNetworkAddress](#) & *addr*) [static]

7.218.3.10 bool OsclSocketI::MakeAddr ([OsclNetworkAddress](#) & *in*, [TOscI_SockAddr](#) & *addr*) [static]

7.218.3.11 void OsclSocketI::MakeMulticastGroupInformation ([TIpMReq](#) & *in*, [OsclIpMReq](#) & *addr*) [static]

7.218.3.12 bool OsclSocketI::MakeMulticastGroupInformation ([OsclIpMReq](#) & *in*, [TIpMReq](#) & *addr*) [static]

7.218.3.13 OsclSocketI* OsclSocketI::NewL ([Oscl_DefAlloc](#) & *a*) [static]

7.218.3.14 int32 OsclSocketI::Open ([OsclSocketServI](#) & *aServer*) [virtual]

Implements [OsclSocketIBase](#).

7.218.3.15 int32 OsclSocketI::Open ([OsclSocketServI](#) & *aServer*, uint32 *addrFamily*, uint32 *sockType*, uint32 *protocol*) [virtual]

Implements [OsclSocketIBase](#).

- 7.218.3.16 void OsclSocketI::ProcessAccept ([OsclSocketServRequestQElem](#) *)
- 7.218.3.17 void OsclSocketI::ProcessConnect ([OsclSocketServRequestQElem](#) *)
- 7.218.3.18 void OsclSocketI::ProcessRecv ([OsclSocketServRequestQElem](#) *)
- 7.218.3.19 void OsclSocketI::ProcessRecvFrom ([OsclSocketServRequestQElem](#) *)
- 7.218.3.20 void OsclSocketI::ProcessSend ([OsclSocketServRequestQElem](#) *)
- 7.218.3.21 void OsclSocketI::ProcessSendTo ([OsclSocketServRequestQElem](#) *)
- 7.218.3.22 void OsclSocketI::ProcessShutdown ([OsclSocketServRequestQElem](#) *)
- 7.218.3.23 void OsclSocketI::Recv ([RecvParam](#) &, [OsclSocketRequestAO](#) &) [virtual]
- Implements [OsclSocketIBase](#).
- 7.218.3.24 void OsclSocketI::RecvFrom ([RecvFromParam](#) &, [OsclSocketRequestAO](#) &) [virtual]
- Implements [OsclSocketIBase](#).
- 7.218.3.25 void OsclSocketI::RecvFromSuccess ([RecvFromParam](#) &) [virtual]
- Implements [OsclSocketIBase](#).
- 7.218.3.26 void OsclSocketI::RecvSuccess ([RecvParam](#) &) [virtual]
- Implements [OsclSocketIBase](#).
- 7.218.3.27 void OsclSocketI::Send ([SendParam](#) &, [OsclSocketRequestAO](#) &) [virtual]
- Implements [OsclSocketIBase](#).
- 7.218.3.28 void OsclSocketI::SendSuccess ([SendParam](#) &) [virtual]
- Implements [OsclSocketIBase](#).
- 7.218.3.29 void OsclSocketI::SendTo ([SendToParam](#) &, [OsclSocketRequestAO](#) &) [virtual]
- Implements [OsclSocketIBase](#).

- 7.218.3.30 void OsclSocketI::SendToSuccess ([SendToParam](#) &) [virtual]

Implements [OsclSocketIBase](#).

7.218.3.31 `int32 OsclSocketI::SetRecvBufferSize (uint32 size)`

7.218.3.32 `int32 OsclSocketI::SetSockOpt (TPVSocketOptionLevel aOptionLevel,
TPVSocketOptionName aOptionName, OsclAny * aOptionValue, int32 aOptionLen)`

7.218.3.33 `void OsclSocketI::Shutdown (ShutdownParam &, OsclSocketRequestAO &)`
[virtual]

Implements [OsclSocketIBase](#).

7.218.3.34 `TOsclSocket OsclSocketI::Socket () [inline]`

7.218.3.35 `TPVSocketEvent OsclSocketI::ThreadLogoff ()`

7.218.3.36 `TPVSocketEvent OsclSocketI::ThreadLogon (OsclSocketServI * aServ)`

7.218.4 Friends And Related Function Documentation

7.218.4.1 `friend class OsclAcceptRequest [friend]`

7.218.4.2 `friend class OsclConnectRequest [friend]`

7.218.4.3 `friend class OsclRecvFromRequest [friend]`

7.218.4.4 `friend class OsclRecvRequest [friend]`

7.218.4.5 `friend class OsclSendRequest [friend]`

7.218.4.6 `friend class OsclSendToRequest [friend]`

7.218.4.7 `friend class OsclShutdownRequest [friend]`

7.218.4.8 `friend class OsclTCPSocket [friend]`

Reimplemented from [OsclSocketIBase](#).

7.218.4.9 `friend class OsclUDPSocket [friend]`

Reimplemented from [OsclSocketIBase](#).

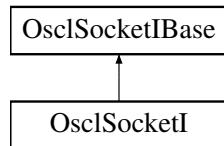
The documentation for this class was generated from the following file:

- [oscl_socket_imp_pv.h](#)

7.219 OsclSocketIBase Class Reference

```
#include <oscl_socket_imp_base.h>
```

Inheritance diagram for OsclSocketIBase::



Public Methods

- virtual ~OsclSocketIBase ()
- virtual int32 Open (OsclSocketServI &aServer, uint32 addrFamily, uint32 sockType, uint32 proto-col)=0
- virtual int32 Open (OsclSocketServI &aServer)=0
- virtual int32 Bind (OsclNetworkAddress &anAddr)=0
- virtual int32 Join (OsclNetworkAddress &anAddr)=0
- virtual int32 Close ()=0
- virtual int32 Listen (uint32 qSize)=0
- virtual void Connect (ConnectParam &, OsclSocketRequestAO &)=0
- virtual void Accept (AcceptParam &, OsclSocketRequestAO &)=0
- virtual void Shutdown (ShutdownParam &, OsclSocketRequestAO &)=0
- virtual void Send (SendParam &, OsclSocketRequestAO &)=0
- virtual void SendSuccess (SendParam &)=0
- virtual void SendTo (SendToParam &, OsclSocketRequestAO &)=0
- virtual void SendToSuccess (SendToParam &)=0
- virtual void Recv (RecvParam &, OsclSocketRequestAO &)=0
- virtual void RecvSuccess (RecvParam &)=0
- virtual void RecvFrom (RecvFromParam &, OsclSocketRequestAO &)=0
- virtual void RecvFromSuccess (RecvFromParam &)=0
- virtual void BindAsync (BindParam &, OsclSocketRequestAO &)
- virtual void ListenAsync (ListenParam &, OsclSocketRequestAO &)
- void CancelFxn (TPVSocketFxn)

Static Public Methods

- bool HasAsyncBind ()
- bool HasAsyncListen ()

Protected Methods

- OsclSocketIBase (Oscl_DefAlloc &a)
- virtual void CancelConnect ()=0
- virtual void CancelAccept ()=0
- virtual void CancelShutdown ()=0
- virtual void CancelSend ()=0

- virtual void [CancelSendTo \(\)=0](#)
- virtual void [CancelRecv \(\)=0](#)
- virtual void [CancelRecvFrom \(\)=0](#)
- virtual void [CancelBind \(\)](#)
- virtual void [CancelListen \(\)](#)
- virtual bool [IsOpen \(\)=0](#)

Static Protected Methods

- int [GetShutdown \(TPVSocketShutdown aOsclVal\)](#)

Protected Attributes

- [Oscl_DefAlloc & iAlloc](#)
- [OsclSocketServI * iSocketServ](#)

Friends

- class [OsclSocketRequest](#)
- class [OsclSocketMethod](#)
- class [OsclSocketRequestAO](#)
- class [OsclUDPSocket](#)
- class [OsclTCPSocket](#)

7.219.1 Detailed Description

Socket implementation base class

7.219.2 Constructor & Destructor Documentation

7.219.2.1 virtual OsclSocketIBase::~OsclSocketIBase () [virtual]

7.219.2.2 OsclSocketIBase::OsclSocketIBase ([Oscl_DefAlloc & a](#)) [protected]

7.219.3 Member Function Documentation

7.219.3.1 virtual void OsclSocketIBase::Accept ([AcceptParam &, OsclSocketRequestAO &](#)) [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.2 virtual int32 OsclSocketIBase::Bind ([OsclNetworkAddress & anAddr](#)) [pure virtual]

Implemented in [OsclSocketI](#).

- 7.219.3.3 **virtual void OsclSocketIBase::BindAsync ([BindParam](#) &, [OsclSocketRequestAO](#) &)**
[inline, virtual]
- 7.219.3.4 **virtual void OsclSocketIBase::CancelAccept ()** [protected, pure virtual]
- 7.219.3.5 **virtual void OsclSocketIBase::CancelBind ()** [inline, protected, virtual]
- 7.219.3.6 **virtual void OsclSocketIBase::CancelConnect ()** [protected, pure virtual]
- 7.219.3.7 **void OsclSocketIBase::CancelFxn ([TPVSocketFxn](#))**
- 7.219.3.8 **virtual void OsclSocketIBase::CancelListen ()** [inline, protected, virtual]
- 7.219.3.9 **virtual void OsclSocketIBase::CancelRecv ()** [protected, pure virtual]
- 7.219.3.10 **virtual void OsclSocketIBase::CancelRecvFrom ()** [protected, pure virtual]
- 7.219.3.11 **virtual void OsclSocketIBase::CancelSend ()** [protected, pure virtual]
- 7.219.3.12 **virtual void OsclSocketIBase::CancelSendTo ()** [protected, pure virtual]
- 7.219.3.13 **virtual void OsclSocketIBase::CancelShutdown ()** [protected, pure virtual]
- 7.219.3.14 **virtual int32 OsclSocketIBase::Close ()** [pure virtual]

Implemented in [OsclSocketI](#).

- 7.219.3.15 **virtual void OsclSocketIBase::Connect ([ConnectParam](#) &, [OsclSocketRequestAO](#) &)**
[pure virtual]

Implemented in [OsclSocketI](#).

- 7.219.3.16 **int OsclSocketIBase::GetShutdown ([TPVSocketShutdown](#) aOsclVal)** [static,
protected]
- 7.219.3.17 **bool OsclSocketIBase::HasAsyncBind ()** [static]
- 7.219.3.18 **bool OsclSocketIBase::HasAsyncListen ()** [static]
- 7.219.3.19 **virtual bool OsclSocketIBase::IsOpen ()** [protected, pure virtual]
- 7.219.3.20 **virtual int32 OsclSocketIBase::Join ([OsclNetworkAddress](#) & anAddr)** [pure
virtual]

Implemented in [OsclSocketI](#).

- 7.219.3.21 **virtual int32 OsclSocketIBase::Listen (uint32 qSize)** [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.22 `virtual void OsclSocketIBase::ListenAsync (ListenParam &, OsclSocketRequestAO &)`
[inline, virtual]

7.219.3.23 `virtual int32 OsclSocketIBase::Open (OsclSocketServI & aServer)` [pure
virtual]

Implemented in [OsclSocketI](#).

7.219.3.24 `virtual int32 OsclSocketIBase::Open (OsclSocketServI & aServer, uint32 addrFamily,
uint32 sockType, uint32 protocol)` [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.25 `virtual void OsclSocketIBase::Recv (RecvParam &, OsclSocketRequestAO &)` [pure
virtual]

Implemented in [OsclSocketI](#).

7.219.3.26 `virtual void OsclSocketIBase::RecvFrom (RecvFromParam &, OsclSocketRequestAO
&)` [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.27 `virtual void OsclSocketIBase::RecvFromSuccess (RecvFromParam &)` [pure
virtual]

Implemented in [OsclSocketI](#).

7.219.3.28 `virtual void OsclSocketIBase::RecvSuccess (RecvParam &)` [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.29 `virtual void OsclSocketIBase::Send (SendParam &, OsclSocketRequestAO &)` [pure
virtual]

Implemented in [OsclSocketI](#).

7.219.3.30 `virtual void OsclSocketIBase::SendSuccess (SendParam &)` [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.31 `virtual void OsclSocketIBase::SendTo (SendToParam &, OsclSocketRequestAO &)`
[pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.32 virtual void OsclSocketIBase::SendToSuccess ([SendToParam](#) &) [pure virtual]

Implemented in [OsclSocketI](#).

7.219.3.33 virtual void OsclSocketIBase::Shutdown ([ShutdownParam](#) &, [OsclSocketRequestAO](#) &) [pure virtual]

Implemented in [OsclSocketI](#).

7.219.4 Friends And Related Function Documentation

7.219.4.1 friend class OsclSocketMethod [friend]

7.219.4.2 friend class OsclSocketRequest [friend]

7.219.4.3 friend class OsclSocketRequestAO [friend]

7.219.4.4 friend class OsclTCPSocket [friend]

Reimplemented in [OsclSocketI](#).

7.219.4.5 friend class OsclUDPSocket [friend]

Reimplemented in [OsclSocketI](#).

7.219.5 Field Documentation

7.219.5.1 [Oscl_DefAlloc](#)& OsclSocketIBase::iAlloc [protected]

7.219.5.2 [OsclSocketServI](#)* OsclSocketIBase::iSocketServ [protected]

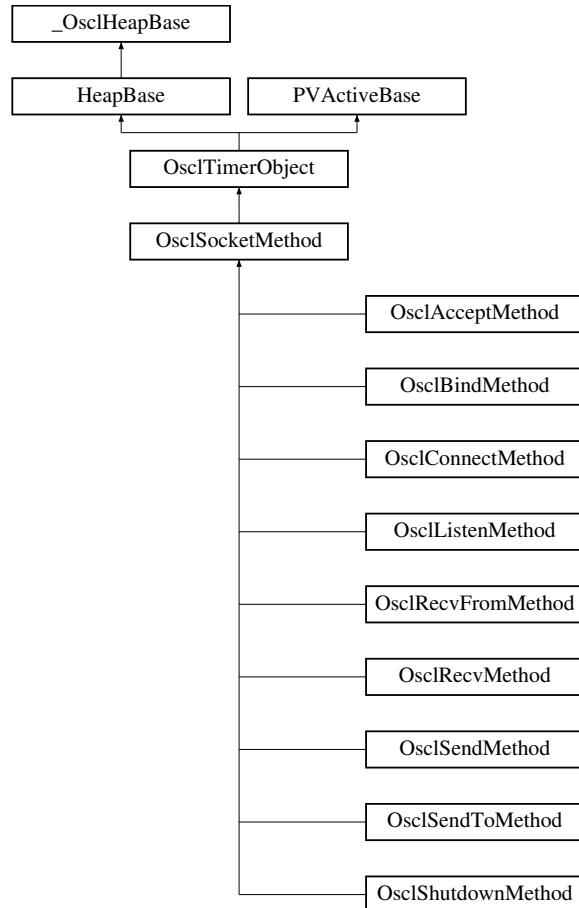
The documentation for this class was generated from the following file:

- [oscl_socket_imp_base.h](#)

7.220 OsclSocketMethod Class Reference

```
#include <oscl_socket_method.h>
```

Inheritance diagram for OsclSocketMethod::



Public Methods

- [OsclSocketMethod \(OsclIPSocketI &aContainer, const char *name, TPVSocketFxn fxn\)](#)
- virtual [~OsclSocketMethod \(\)](#)
- void [Abort \(\)](#)
- void [AbortAll \(\)](#)
- void [CancelMethod \(\)](#)
- [Oscl_DefAlloc & Alloc \(\)](#)
- [TPVSocketEvent ThreadLogon \(\)](#)
- [TPVSocketEvent ThreadLogoff \(\)](#)

Data Fields

- [OsclIPSocketI & iContainer](#)
- [TPVSocketFxn iSocketFxn](#)

Protected Methods

- void [ConstructL \(OsclSocketRequestAO *aAO\)](#)
- bool [StartMethod \(int32 aTimeoutMsec\)](#)
- void [MethodDone \(\)](#)
- void [Run \(\)](#)

Protected Attributes

- [OsclSocketRequestAO * iSocketRequestAO](#)

7.220.1 Detailed Description

OsclSocketMethod is the base class for all socket methods. Two AOs are required for each socket operation— one to provide a timeout, and one to detect request completion. The OsclSocketMethod class implements the timeout and contains the request completion AO.

7.220.2 Constructor & Destructor Documentation

7.220.2.1 OsclSocketMethod::OsclSocketMethod ([OsclIPSocketI & aContainer](#), [const char * name](#), [TPVSocketFxn ffn](#)) [inline]

7.220.2.2 virtual OsclSocketMethod::~OsclSocketMethod () [inline, virtual]

7.220.3 Member Function Documentation

7.220.3.1 void OsclSocketMethod::Abort () [inline]

7.220.3.2 void OsclSocketMethod::AbortAll () [inline]

7.220.3.3 Oscl_DefAlloc& OsclSocketMethod::Alloc () [inline]

7.220.3.4 void OsclSocketMethod::CancelMethod () [inline]

7.220.3.5 void OsclSocketMethod::ConstructL (OsclSocketRequestAO * aAO) [inline, protected]

7.220.3.6 void OsclSocketMethod::MethodDone () [inline, protected]

7.220.3.7 void OsclSocketMethod::Run () [protected, virtual]

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's `WaitForAnyRequest()` function completes.

Before calling this active object's `Run()` function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request

2. marked this active object's request as complete (i.e. the request is no longer outstanding)

[Run\(\)](#) runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls [ExecError\(\)](#) to handle the leave.

Note that once the active scheduler's [Start\(\)](#) function has been called, all user code is run under one of the program's active object's [Run\(\)](#) or [RunError\(\)](#) functions.

Implements [PVActiveBase](#).

7.220.3.8 bool OsclSocketMethod::StartMethod (int32 *aTimeoutMsec*) [protected]

7.220.3.9 TPVSocketEvent OsclSocketMethod::ThreadLogoff ()

7.220.3.10 TPVSocketEvent OsclSocketMethod::ThreadLogon ()

7.220.4 Field Documentation

7.220.4.1 OsclIPSocketI& OsclSocketMethod::iContainer

7.220.4.2 TPVSocketFxn OsclSocketMethod::iSocketFxn

7.220.4.3 OsclSocketRequestAO* OsclSocketMethod::iSocketRequestAO [protected]

The documentation for this class was generated from the following file:

- [oscl_socket_method.h](#)

7.221 OsclSocketObserver Class Reference

```
#include <oscl_socket_types.h>
```

Public Methods

- virtual OSCL_IMPORT_REF void [HandleSocketEvent](#) (int32 *aId*, [TPVSocketFxn](#) *aFxn*, [TPVSocketEvent](#) *aEvent*, int32 *aError*)=0
- virtual ~[OsclSocketObserver](#) ()

7.221.1 Detailed Description

Socket event observer. The client implements this to get asynchronous command completion.

7.221.2 Constructor & Destructor Documentation

7.221.2.1 virtual [OsclSocketObserver::~OsclSocketObserver](#) () [inline, virtual]

7.221.3 Member Function Documentation

7.221.3.1 virtual OSCL_IMPORT_REF void [OsclSocketObserver::HandleSocketEvent](#) (int32 *aId*, [TPVSocketFxn](#) *aFxn*, [TPVSocketEvent](#) *aEvent*, int32 *aError*) [pure virtual]

Socket Event callback.

Parameters:

aId: The ID that was supplied when the socket was created.

aFxn: Type of socket function call.

aEvent: Function completion event. Will be EPVSocketSuccess, EPVSocketTimeout, or EPVSocketFailure.

aError: When the event is EPVSocketFailure, this may contain a platform-specific error code, or zero if none is available.

The documentation for this class was generated from the following file:

- [oscl_socket_types.h](#)

7.222 OsclSocketRequest Class Reference

```
#include <oscl_socket_request.h>
```

Public Methods

- [OsclSocketRequest \(\)](#)
- [TPVSocketFxn Fxn \(\)](#)
- void [CancelRequest \(\)](#)
- void [Activate \(SocketRequestParam *iParam, OsclSocketRequestAO &a\)](#)
- void [Complete \(OsclSocketServRequestQElem *, int32 aStatus, int32 aSockErr=0\)](#)

Data Fields

- [OsclSocketRequestAO * iSocketRequestAO](#)
- [SocketRequestParam * iParam](#)
- [OsclSocketI * iSocketI](#)

7.222.1 Detailed Description

This class defines the request interface to the PV socket server.

7.222.2 Constructor & Destructor Documentation

7.222.2.1 [OsclSocketRequest::OsclSocketRequest \(\) \[inline\]](#)

7.222.3 Member Function Documentation

7.222.3.1 [void OsclSocketRequest::Activate \(SocketRequestParam * iParam, OsclSocketRequestAO & a\)](#)

7.222.3.2 [void OsclSocketRequest::CancelRequest \(\)](#)

7.222.3.3 [void OsclSocketRequest::Complete \(OsclSocketServRequestQElem *, int32 aStatus, int32 aSockErr = 0\)](#)

7.222.3.4 [TPVSocketFxn OsclSocketRequest::Fxn \(\) \[inline\]](#)

7.222.4 Field Documentation

7.222.4.1 [SocketRequestParam* OsclSocketRequest::iParam](#)

7.222.4.2 [OsclSocketI* OsclSocketRequest::iSocketI](#)

7.222.4.3 [OsclSocketRequestAO* OsclSocketRequest::iSocketRequestAO](#)

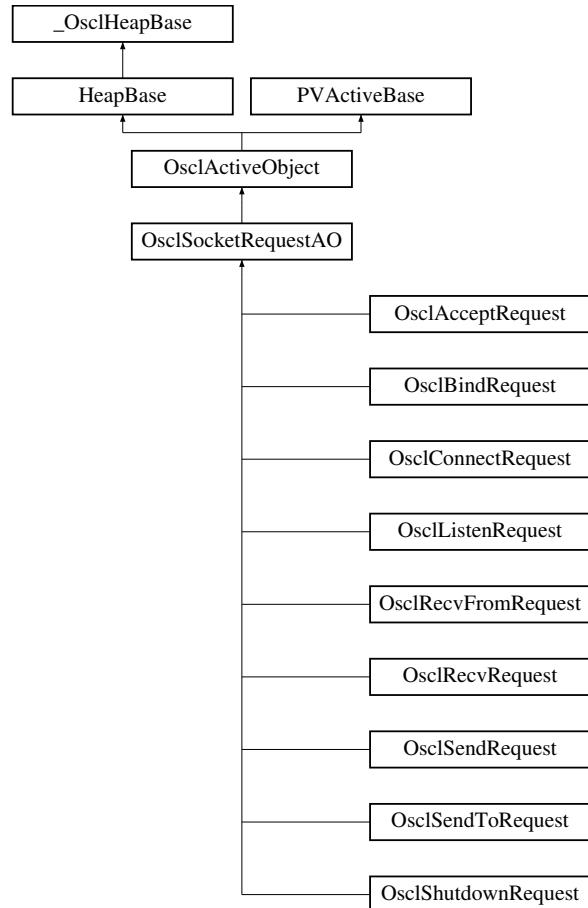
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.223 OsclSocketRequestAO Class Reference

```
#include <oscl_socket_method.h>
```

Inheritance diagram for OsclSocketRequestAO::



Public Methods

- void [ConstructL \(\)](#)

Protected Methods

- [OsclSocketRequestAO \(OsclSocketMethod &aContainer, const char *name\)](#)
- virtual [~OsclSocketRequestAO \(\)](#)
- [OsclAny * NewRequest \(const uint32 size\)](#)
- void [CleanupParam \(bool deallocate=false\)](#)
- void [Abort \(\)](#)
- void [RequestDone \(\)](#)
- int [GetSocketError \(\)](#)
- void [DoCancel \(\)](#)
- void [Run \(\)](#)

- virtual void [Success \(\)](#)
- [OsclSocketI * SocketI \(\)](#)
- [OsclSocketObserver * SocketObserver \(\)](#)
- uint32 [Id \(\)](#)
- [Oscl_DefAlloc & Alloc \(\)](#)

Protected Attributes

- [OsclSocketMethod & iContainer](#)
- int32 [iSocketError](#)
- [SocketRequestParam * iParam](#)
- uint32 [iParamSize](#)

Friends

- class [OsclSocketI](#)
- class [OsclSocketMethod](#)
- class [OsclSocketRequest](#)

7.223.1 Detailed Description

This is the base class for all the AOs that interact with the socket server. This object is contained within an [OsclSocketMethod](#) object

7.223.2 Constructor & Destructor Documentation

7.223.2.1 OsclSocketRequestAO::OsclSocketRequestAO ([OsclSocketMethod & aContainer](#), const char * *name*) [inline, protected]

7.223.2.2 virtual OsclSocketRequestAO::~OsclSocketRequestAO () [inline, protected, virtual]

7.223.3 Member Function Documentation

7.223.3.1 void OsclSocketRequestAO::Abort () [inline, protected]

7.223.3.2 [Oscl_DefAlloc& OsclSocketRequestAO::Alloc \(\) \[inline, protected\]](#)

7.223.3.3 void OsclSocketRequestAO::CleanupParam (bool *deallocate* = false) [protected]

7.223.3.4 void OsclSocketRequestAO::ConstructL () [inline]

7.223.3.5 void OsclSocketRequestAO::DoCancel () [inline, protected, virtual]

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will complete the request. If any additional action is needed, the derived class may override this. If the derived class does override DoCancel, it must complete the request.

Reimplemented from [OsclActiveObject](#).

7.223.3.6 **int OsclSocketRequestAO::GetSocketError ()** [inline, protected]

7.223.3.7 **uint32 OsclSocketRequestAO::Id ()** [inline, protected]

7.223.3.8 **OsclAny* OsclSocketRequestAO::NewRequest (const uint32 size)** [protected]

7.223.3.9 **void OsclSocketRequestAO::RequestDone ()** [inline, protected]

7.223.3.10 **void OsclSocketRequestAO::Run ()** [protected, virtual]

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's WaitForAnyRequest() function completes.

Before calling this active object's Run() function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

Run() runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls ExecError() to handle the leave.

Note that once the active scheduler's Start() function has been called, all user code is run under one of the program's active object's Run() or RunError() functions.

Implements [PVActiveBase](#).

7.223.3.11 **OsclSocketI* OsclSocketRequestAO::SocketI ()** [inline, protected]

7.223.3.12 **OsclSocketObserver* OsclSocketRequestAO::SocketObserver ()** [inline, protected]

7.223.3.13 **virtual void OsclSocketRequestAO::Success ()** [inline, protected, virtual]

Reimplemented in [OsclRecvRequest](#), [OsclRecvFromRequest](#), [OsclSendRequest](#), and [OsclSendToRequest](#).

7.223.4 Friends And Related Function Documentation

7.223.4.1 **friend class OsclSocketI** [friend]

7.223.4.2 **friend class OsclSocketMethod** [friend]

7.223.4.3 **friend class OsclSocketRequest** [friend]

7.223.5 Field Documentation

7.223.5.1 **OsclSocketMethod& OsclSocketRequestAO::iContainer** [protected]

7.223.5.2 **SocketRequestParam* OsclSocketRequestAO::iParam** [protected]

7.223.5.3 **uint32 OsclSocketRequestAO::iParamSize** [protected]

7.223.5.4 **int32 OsclSocketRequestAO::iSocketError** [protected]

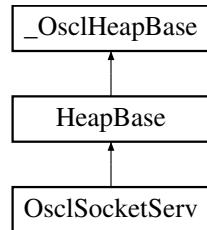
The documentation for this class was generated from the following file:

- [oscl_socket_method.h](#)

7.224 OsclSocketServ Class Reference

```
#include <oscl_socket.h>
```

Inheritance diagram for OsclSocketServ::



Public Methods

- OSCL_IMPORT_REF ~OsclSocketServ ()
- OSCL_IMPORT_REF int32 Connect (uint32 aMessageSlots=8, bool aShareSession=false)
- OSCL_IMPORT_REF void Close (bool aCleanup=true)

Static Public Methods

- OSCL_IMPORT_REF OsclSocketServ * NewL (Oscl_DefAlloc &alloc)

Friends

- class OsclTCPSocket
- class OsclUDPSocket
- class OsclDNS

7.224.1 Constructor & Destructor Documentation

7.224.1.1 OSCL_IMPORT_REF OsclSocketServ::~OsclSocketServ ()

Destructor. The server object must be deleted using the same allocator used in the NewL call.

7.224.2 Member Function Documentation

7.224.2.1 OSCL_IMPORT_REF void OsclSocketServ::Close (bool aCleanup = true)

Close socket server. This is a synchronous method.

Parameters:

aCleanup: cleanup the socket system? the socket cleanup should only be done when all parts of the application are done using sockets.

7.224.2.2 OSCL_IMPORT_REF int32 OsclSocketServ::Connect (uint32 *aMessageSlots* = 8, bool *aShareSession* = false)

Connect to socket server. This is a synchronous method.

Parameters:

Number of message slots.

Returns:

Returns OsclErrNone for success, or a platform-specific code.

**7.224.2.3 OSCL_IMPORT_REF OsclSocketServ* OsclSocketServ::NewL (Oscl_DefAlloc & *alloc*)
[static]**

Create a socket server. May leave if failure.

Parameters:

alloc: Memory allocator.

Returns:

Returns pointer to socket server

7.224.3 Friends And Related Function Documentation**7.224.3.1 friend class OsclDNS [friend]****7.224.3.2 friend class OsclTCPSocket [friend]****7.224.3.3 friend class OsclUDPSocket [friend]**

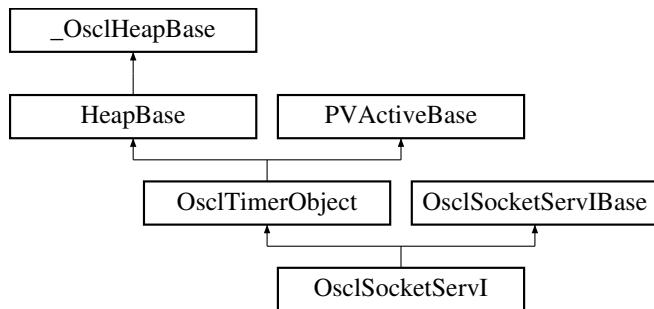
The documentation for this class was generated from the following file:

- [oscl_socket.h](#)

7.225 OsclSocketServI Class Reference

```
#include <oscl_socket_serv_imp_pv.h>
```

Inheritance diagram for OsclSocketServI::



Public Methods

- int32 [Connect](#) (uint32 aMessageSlots, bool aShareSession)
- void [Close](#) (bool)
- bool [IsServerThread](#) ()

Static Public Methods

- OsclSocketServI * [NewL](#) (Oscl_DefAlloc &a)

Friends

- class [OsclSocketServRequestList](#)
- class [LoopbackSocket](#)
- class [OsclTCPSocketI](#)
- class [OsclUDPSocketI](#)
- class [OsclSocketI](#)
- class [OsclDNSI](#)
- class [OsclSocketRequest](#)
- class [OsclSocketServ](#)

7.225.1 Detailed Description

PV socket server implementation

7.225.2 Member Function Documentation

7.225.2.1 void OsclSocketServI::Close (bool) [virtual]

Implements [OsclSocketServIBase](#).

7.225.2.2 int32 OsclSocketServI::Connect (uint32 *aMessageSlots*, bool *aShareSession*)
[virtual]

Implements [OsclSocketServIBase](#).

7.225.2.3 bool OsclSocketServI::IsServerThread ()

7.225.2.4 OsclSocketServI* OsclSocketServI::NewL ([Oscl_DefAlloc](#) & *a*) [static]

7.225.3 Friends And Related Function Documentation

7.225.3.1 friend class LoopbackSocket [friend]

7.225.3.2 friend class OsclDNSI [friend]

7.225.3.3 friend class OsclSocketI [friend]

7.225.3.4 friend class OsclSocketRequest [friend]

7.225.3.5 friend class OsclSocketServ [friend]

7.225.3.6 friend class OsclSocketServRequestList [friend]

7.225.3.7 friend class OsclTCPSocketI [friend]

7.225.3.8 friend class OsclUDPSocketI [friend]

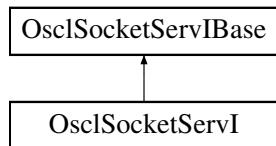
The documentation for this class was generated from the following file:

- [oscl_socket_serv_imp_pv.h](#)

7.226 OsclSocketServIBase Class Reference

```
#include <oscl_socket_serv_imp_base.h>
```

Inheritance diagram for OsclSocketServIBase::



Public Methods

- virtual ~[OsclSocketServIBase](#) ()
- virtual int32 [Connect](#) (uint32 aMessageSlots, bool aShareSession)=0
- virtual void [Close](#) (bool)=0

Data Fields

- [PVLogger * iLogger](#)

Protected Types

- enum [TSocketServState](#) { [ESocketServ_Idle](#), [ESocketServ_Connected](#), [ESocketServ_Error](#) }

Protected Methods

- [OsclSocketServIBase \(Oscl_DefAlloc &a\)](#)
- [TSocketServState State \(\) const](#)
- [bool IsServConnected \(\) const](#)

Protected Attributes

- [Oscl_DefAlloc & iAlloc](#)
- [TSocketServState iServState](#)
- [int iServError](#)

7.226.1 Detailed Description

Base class common to all implementations

7.226.2 Member Enumeration Documentation

7.226.2.1 enum OsclSocketServIBase::TSocketServState [protected]

Enumeration values:

[ESocketServ_Idle](#)

ESocketServ_Connected

ESocketServ_Error

7.226.3 Constructor & Destructor Documentation

7.226.3.1 virtual OsclSocketServIBase::~OsclSocketServIBase () [inline, virtual]

7.226.3.2 OsclSocketServIBase::OsclSocketServIBase ([Oscl_DefAlloc](#) & *a*) [inline, protected]

7.226.4 Member Function Documentation

7.226.4.1 virtual void OsclSocketServIBase::Close (bool) [pure virtual]

Implemented in [OsclSocketServI](#).

7.226.4.2 virtual int32 OsclSocketServIBase::Connect (uint32 *aMessageSlots*, bool *aShareSession*) [pure virtual]

Implemented in [OsclSocketServI](#).

7.226.4.3 bool OsclSocketServIBase::IsServConnected () const [inline, protected]

7.226.4.4 [TSocketServState](#) OsclSocketServIBase::State () const [inline, protected]

7.226.5 Field Documentation

7.226.5.1 [Oscl_DefAlloc](#)& OsclSocketServIBase::iAlloc [protected]

7.226.5.2 [PVLogger](#)* OsclSocketServIBase::iLogger

7.226.5.3 int OsclSocketServIBase::iServerError [protected]

7.226.5.4 [TSocketServState](#) OsclSocketServIBase::iServState [protected]

The documentation for this class was generated from the following file:

- [oscl_socket_serv_imp_base.h](#)

7.227 OsclSocketServRequestList Class Reference

```
#include <oscl_socket_serv_imp_reqlist.h>
```

Public Methods

- [OsclSocketServRequestList \(\)](#)
- [void Add \(OsclSocketRequest *\)](#)
- [void StartCancel \(OsclSocketRequest *\)](#)
- [void Open \(OsclSocketServI *s\)](#)
- [void Close \(\)](#)
- [void Wakeup \(\)](#)
- [void WaitOnRequests \(\)](#)
- [void Remove \(OsclSocketServRequestQElem *aElem\)](#)

Friends

- class [OsclSocketServI](#)

7.227.1 Detailed Description

PV socket server request queue

7.227.2 Constructor & Destructor Documentation

7.227.2.1 OsclSocketServRequestList::OsclSocketServRequestList ()

7.227.3 Member Function Documentation

7.227.3.1 void OsclSocketServRequestList::Add ([OsclSocketRequest *](#))

7.227.3.2 void OsclSocketServRequestList::Close ()

7.227.3.3 void OsclSocketServRequestList::Open ([OsclSocketServI * s](#))

7.227.3.4 void OsclSocketServRequestList::Remove ([OsclSocketServRequestQElem * aElem](#)) [inline]

7.227.3.5 void OsclSocketServRequestList::StartCancel ([OsclSocketRequest *](#))

7.227.3.6 void OsclSocketServRequestList::WaitOnRequests ()

7.227.3.7 void OsclSocketServRequestList::Wakeup ()

7.227.4 Friends And Related Function Documentation

7.227.4.1 friend class OsclSocketServI [friend]

The documentation for this class was generated from the following file:

-
- [oscl_socket_serv_imp_reqlist.h](#)

7.228 OsclSocketServRequestQElem Class Reference

```
#include <oscl_socket_serv_imp_reqlist.h>
```

Public Methods

- [OsclSocketServRequestQElem \(OsclSocketRequest *r\)](#)

Data Fields

- [OsclSocketRequest * iSocketRequest](#)
- [uint8 iSelect](#)
- [bool iCancel](#)

7.228.1 Constructor & Destructor Documentation

7.228.1.1 [OsclSocketServRequestQElem::OsclSocketServRequestQElem \(OsclSocketRequest * r\)](#)
[inline]

7.228.2 Field Documentation

7.228.2.1 [bool OsclSocketServRequestQElem::iCancel](#)

7.228.2.2 [uint8 OsclSocketServRequestQElem::iSelect](#)

7.228.2.3 [OsclSocketRequest* OsclSocketServRequestQElem::iSocketRequest](#)

The documentation for this class was generated from the following file:

- [oscl_socket_serv_imp_reqlist.h](#)

7.229 OsclSocketTOS Class Reference

```
#include <oscl_socket_types.h>
```

Public Types

- enum **TPVServicePrecedence** { **EPVRoutine** = 0, **EPVPriority** = 1, **EPVImmediate** = 2, **EPVFlash** = 3, **EPVOverrideFlash** = 4, **EPVCritic_Ecp** = 5, **EPVInetControl** = 6, **EPVNetControl** = 7 }
- enum **TPVServicePriority** { **EPVNoTOS** = 0x0, **EPVLDelay** = (1 << 4), **EPVHiThrpt** = (1 << 3), **EPVHiRel** = (1 << 2) }

Public Methods

- **OsclSocketTOS ()**
- void **SetPrecedence** (**TPVServicePrecedence** aPrecedence)
- void **SetPriority** (bool aMinimizeDelay, bool aMaximizeThroughput, bool MaximizeReliability)
- void **ClearTOS ()**
- uint8 **GetTOS ()** const

7.229.1 Member Enumeration Documentation

7.229.1.1 enum OsclSocketTOS::TPVServicePrecedence

Enumeration values:

EPVRoutine
EPVPriority
EPVImmediate
EPVFlash
EPVOverrideFlash
EPVCritic_Ecp
EPVInetControl
EPVNetControl

7.229.1.2 enum OsclSocketTOS::TPVServicePriority

Enumeration values:

EPVNoTOS
EPVLDelay
EPVHiThrpt
EPVHiRel

7.229.2 Constructor & Destructor Documentation

7.229.2.1 `OsclSocketTOS::OsclSocketTOS () [inline]`

7.229.3 Member Function Documentation

7.229.3.1 `void OsclSocketTOS::ClearTOS () [inline]`

7.229.3.2 `uint8 OsclSocketTOS::GetTOS () const [inline]`

7.229.3.3 `void OsclSocketTOS::SetPrecedence (TPVServicePrecedence aPrecedence) [inline]`

7.229.3.4 `void OsclSocketTOS::SetPriority (bool aMinimizeDelay, bool aMaximizeThroughput, bool MaximizeReliability) [inline]`

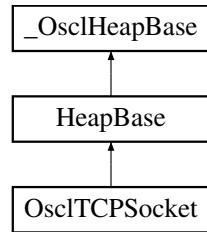
The documentation for this class was generated from the following file:

- [oscl_socket_types.h](#)

7.230 OsclTCPSocket Class Reference

```
#include <oscl_socket.h>
```

Inheritance diagram for OsclTCPSocket::



Public Methods

- OSCL_IMPORT_REF ~OsclTCPSocket ()
- OSCL_IMPORT_REF TPVSocketEvent ThreadLogoff ()
- OSCL_IMPORT_REF TPVSocketEvent ThreadLogon (OsclSocketServ &aServ, OsclSocketObserver *aObserver)
- OSCL_IMPORT_REF int32 Close ()
- OSCL_IMPORT_REF int32 Bind (OsclNetworkAddress &aAddress)
- OSCL_IMPORT_REF TPVSocketEvent BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=(-1))
- OSCL_IMPORT_REF void CancelBind ()
- OSCL_IMPORT_REF int32 SetOptionToReuseAddress ()
- OSCL_IMPORT_REF int32 SetTOS (const OsclSocketTOS &aTOS)
- OSCL_IMPORT_REF int32 GetPeerName (OsclNetworkAddress &aPeerName)
- OSCL_IMPORT_REF int32 Listen (int32 aQueueSize)
- OSCL_IMPORT_REF TPVSocketEvent ListenAsync (int32 aQueueSize, int32 aTimeoutMsec=(-1))
- OSCL_IMPORT_REF void CancelListen ()
- OSCL_IMPORT_REF OsclTCPSocket * GetAcceptedSocketL (uint32 aId)
- OSCL_IMPORT_REF uint8 * GetRecvData (int32 *aLength)
- OSCL_IMPORT_REF uint8 * GetSendData (int32 *aLength)
- OSCL_IMPORT_REF TPVSocketEvent Connect (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- OSCL_IMPORT_REF void CancelConnect ()
- OSCL_IMPORT_REF TPVSocketEvent Shutdown (TPVSocketShutdown aHow, int32 aTimeoutMsec=-1)
- OSCL_IMPORT_REF void CancelShutdown ()
- OSCL_IMPORT_REF TPVSocketEvent Accept (int32 aTimeout=-1)
- OSCL_IMPORT_REF void CancelAccept ()
- OSCL_IMPORT_REF TPVSocketEvent Send (const uint8 *aPtr, uint32 aLen, int32 aTimeoutMsec=-1)
- OSCL_IMPORT_REF void CancelSend ()
- OSCL_IMPORT_REF TPVSocketEvent Recv (uint8 *aPtr, uint32 aMaxLen, int32 aTimeoutMsec=-1)
- OSCL_IMPORT_REF void CancelRecv ()

Static Public Methods

- OSCL_IMPORT_REF OsclTCPSocket * **NewL** (Oscl_DefAlloc &alloc, OsclSocketServ &aServ, OsclSocketObserver *aObserver, uint32 aId)

7.230.1 Detailed Description

The TCP Socket class

7.230.2 Constructor & Destructor Documentation

7.230.2.1 OSCL_IMPORT_REF OsclTCPSocket::~OsclTCPSocket ()

Destructor. The object must be deleted using the same allocator used in the NewL call.

7.230.3 Member Function Documentation

7.230.3.1 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::Accept (int32 aTimeout = -1)

Accept incoming connections. This is an asynchronous method.

Parameters:

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.230.3.2 OSCL_IMPORT_REF int32 OsclTCPSocket::Bind (OsclNetworkAddress & aAddress)

Bind a TCP socket to an address. This is a synchronous method.

Parameters:

aAddress: Bind address.

Returns:

Returns OsclErrNone for success, or a platform-specific error code.

7.230.3.3 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::BindAsync (OsclNetworkAddress & aAddress, int32 aTimeoutMsec = (-1))

Bind a TCP socket to an address. This is an asynchronous method.

Parameters:

aAddress: Bind address.

aTimeoutMsec: Optional timeout. Use a negative value for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.230.3.4 OSCL_IMPORT_REF void OsclTCPSocket::CancelAccept ()

Cancel Accept

This method will cancel any pending Accept operation on the current socket, causing the Accept to complete with error EPVSocketCancel. If there is no pending Accept operation, this method will have no effect.

7.230.3.5 OSCL_IMPORT_REF void OsclTCPSocket::CancelBind ()

Cancel Bind

This method will cancel any pending BindAsync operation on the current socket, causing the BindAsync to complete with error EPVSocketCancel. If there is no pending BindAsync operation, this method will have no effect.

7.230.3.6 OSCL_IMPORT_REF void OsclTCPSocket::CancelConnect ()

Cancel Connect

This method will cancel any pending Connect operation on the current socket, causing the Connect to complete with error EPVSocketCancel. If there is no pending Connect operation, this method will have no effect.

7.230.3.7 OSCL_IMPORT_REF void OsclTCPSocket::CancelListen ()

Cancel Async Listen

This method will cancel any pending ListenAsync operation on the current socket, causing the Listen to complete with error EPVSocketCancel. If there is no pending Listen operation, this method will have no effect.

7.230.3.8 OSCL_IMPORT_REF void OsclTCPSocket::CancelRecv ()

Cancel Recv

This method will cancel any pending Recv operation on the current socket, causing the Recv to complete with error EPVSocketCancel. If there is no pending Recv operation, this method will have no effect.

7.230.3.9 OSCL_IMPORT_REF void OsclTCPSocket::CancelSend ()

Cancel Send

This method will cancel any pending Send operation on the current socket, causing the Send to complete with error EPVSocketCancel. If there is no pending Send operation, this method will have no effect.

7.230.3.10 OSCL_IMPORT_REF void OsclTCPSocket::CancelShutdown ()

Cancel Shutdown

This method will cancel any pending Shutdown operation on the current socket, causing the Shutdown to complete with error EPVSocketCancel. If there is no pending Shutdown operation, this method will have no effect.

7.230.3.11 OSCL_IMPORT_REF int32 OsclTCPSocket::Close ()

Close a TCP socket. This is a synchronous method.

Once it is closed a socket cannot be re-opened. Sockets are automatically closed when they are deleted. This method may be used to see any error code returned from the platform's socket close call.

Returns:

Returns OsclErrNone for success, or a platform-specific error code.

7.230.3.12 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::Connect (OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1)

Connect to an address. This is an asynchronous method.

Parameters:

aAddress: a network address.

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.230.3.13 OSCL_IMPORT_REF OsclTCPSocket* OsclTCPSocket::GetAcceptedSocketL (uint32 aId)

Retrieve the accept socket after a successful Accept operation. This is a synchronous method.

Parameters:

aId: Socket ID. The caller must assign an ID to each socket. The ID is used to identify the socket in observer callbacks.

Returns:

Returns pointer to socket, or NULL if error. Note: The caller is responsible for deleting any accepted socket that it retrieves.

7.230.3.14 OSCL_IMPORT_REF int32 OsclTCPSocket::GetPeerName (OsclNetworkAddress & aPeerName)

Retrieves the peer address of the socket

Parameters:

aPeerName: This will store the peer address when API returns successfully.

Returns:

Returns OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.230.3.15 OSCL_IMPORT_REF uint8* OsclTCPSocket::GetRecvData (int32 * aLength)

Retrieve the received data after a successful Recv operation. This is a synchronous method.

Parameters:

aLength: (output) number of bytes of data received.

Returns:

Returns pointer to received data, or NULL if none.

7.230.3.16 OSCL_IMPORT_REF uint8* OsclTCPSocket::GetSendData (int32 * aLength)

Retrieve the sent data after a successful Send operation. This is a synchronous method.

Parameters:

aLength: (output) number of bytes of data sent.

Returns:

Returns pointer to sent data, or NULL if none.

7.230.3.17 OSCL_IMPORT_REF int32 OsclTCPSocket::Listen (int32 aQueueSize)

Listen. This is a synchronous method.

Parameters:

aQueueSize: Queue size.

Returns:

Returns OsclErrNone for success, or a platform-specific error code.

7.230.3.18 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::ListenAsync (int32 aQueueSize, int32 aTimeoutMsec = (-1))

ListenAsync This is an asynchronous method.

Parameters:

aQueueSize: Queue size.

aTimeoutMsec: Optional timeout. Use a negative value for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**7.230.3.19 OSCL_IMPORT_REF OsclTCPSocket* OsclTCPSocket::NewL (Oscl_DefAlloc
& alloc, OsclSocketServ & aServ, OsclSocketObserver * aObserver, uint32 aId)
[static]**

Create a TCP Socket. May leave if failure.

Parameters:

alloc: Memory allocator.

aServ: Socket server. Must be connected.

aObserver: Socket observer.

aId: Socket ID. The caller must assign an ID to each socket. The ID is used to identify the socket in observer callbacks.

Returns:

Returns pointer to socket.

**7.230.3.20 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::Recv (uint8 * aPtr, uint32
aMaxLen, int32 aTimeoutMsec = -1)**

Receive Data. This is an asynchronous method.

Parameters:

aPtr: Buffer for received data.

aMaxLen: Length of buffer.

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

**7.230.3.21 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::Send (const uint8 * aPtr,
uint32 aLen, int32 aTimeoutMsec = -1)**

Send Data. This is an asynchronous method.

Parameters:

aPtr: Data to send.

aLen: Length of data to send.

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.230.3.22 OSCL_IMPORT_REF int32 OsclTCPSocket::SetOptionToReuseAddress ()

Allows the server to bind to an address which is in a TIME_WAIT state.

Returns:

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK_ERR_BAD_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.230.3.23 OSCL_IMPORT_REF int32 OsclTCPSocket::SetTOS (const OsclSocketTOS & aTOS)

Sets the Type of Service field of each outgoing IP datagram.

Parameters:

aTOS: Specifies the type of service requested.

Returns:

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK_ERR_BAD_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

**7.230.3.24 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::Shutdown
(TPVSocketShutdown aHow, int32 aTimeoutMsec = -1)**

Shutdown a socket. This is an asynchronous method.

Parameters:

aHow: type of shutdown

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.230.3.25 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::ThreadLogoff ()

Thread logoff routine. This will prepare for transfer and use of the socket in another thread. All socket requests must be complete prior to calling this routine. If any requests are still active, it will return EPVSocketFailure;

**7.230.3.26 OSCL_IMPORT_REF TPVSocketEvent OsclTCPSocket::ThreadLogon
(OsclSocketServ & aServ, OsclSocketObserver * aObserver)**

Thread logon routine. This will complete the transfer of a socket from another thread for use in the current thread. The ThreadLogoff API must be called in the original thread prior to calling ThreadLogon.

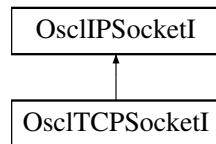
The documentation for this class was generated from the following file:

- [oscl_socket.h](#)

7.231 OsclTCPSocketI Class Reference

```
#include <oscl_tcp_socket.h>
```

Inheritance diagram for OsclTCPSocketI::



Public Methods

- virtual ~OsclTCPSocketI ()
- [TPVSocketEvent ThreadLogoff \(\)](#)
- [TPVSocketEvent ThreadLogon \(OsclSocketServI *aServ, OsclSocketObserver *aObserver\)](#)
- int32 [Close \(\)](#)
- int32 [Listen \(int aQueueSize\)](#)
- OsclTCPSocketI * [GetAcceptedSocketL \(uint32 aId\)](#)
- uint8 * [GetRecvData \(int32 *aLength\)](#)
- uint8 * [GetSendData \(int32 *aLength\)](#)
- [TPVSocketEvent BindAsync \(OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1\)](#)
- void [CancelBind \(\)](#)
- [TPVSocketEvent ListenAsync \(uint32 qsize, int32 aTimeoutMsec=-1\)](#)
- void [CancelListen \(\)](#)
- [TPVSocketEvent Connect \(OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1\)](#)
- void [CancelConnect \(\)](#)
- [TPVSocketEvent Shutdown \(TPVSocketShutdown aHow, int32 aTimeoutMsec=-1\)](#)
- void [CancelShutdown \(\)](#)
- [TPVSocketEvent Accept \(int32 aTimeout=-1\)](#)
- void [CancelAccept \(\)](#)
- [TPVSocketEvent Send \(const uint8 *&aPtr, uint32 aLen, int32 aTimeoutMsec=-1\)](#)
- void [CancelSend \(\)](#)
- [TPVSocketEvent Recv \(uint8 *&aPtr, uint32 aMaxLen, int32 aTimeoutMsec=-1\)](#)
- void [CancelRecv \(\)](#)

Static Public Methods

- OsclTCPSocketI * [NewL \(Oscl_DefAlloc &a, OsclSocketServI *aServ, OsclSocketObserver *aObserver, uint32 aId\)](#)

7.231.1 Detailed Description

Internal implementation class for [OsclTCPSocket](#)

7.231.2 Constructor & Destructor Documentation

7.231.2.1 **virtual OsclTCPSocketI::~OsclTCPSocketI () [virtual]**

7.231.3 Member Function Documentation

7.231.3.1 **TPVSocketEvent OsclTCPSocketI::Accept (int32 *aTimeout* = -1) [inline]**

7.231.3.2 **TPVSocketEvent OsclTCPSocketI::BindAsync (OsclNetworkAddress & *aAddress*, int32 *aTimeoutMsec* = -1) [inline]**

7.231.3.3 **void OsclTCPSocketI::CancelAccept () [inline]**

7.231.3.4 **void OsclTCPSocketI::CancelBind () [inline]**

7.231.3.5 **void OsclTCPSocketI::CancelConnect () [inline]**

7.231.3.6 **void OsclTCPSocketI::CancelListen () [inline]**

7.231.3.7 **void OsclTCPSocketI::CancelRecv () [inline]**

7.231.3.8 **void OsclTCPSocketI::CancelSend () [inline]**

7.231.3.9 **void OsclTCPSocketI::CancelShutdown () [inline]**

7.231.3.10 **int32 OsclTCPSocketI::Close () [virtual]**

Implements [OsclIPSocketI](#).

7.231.3.11 **TPVSocketEvent OsclTCPSocketI::Connect (OsclNetworkAddress & *aAddress*, int32 *aTimeoutMsec* = -1) [inline]**

7.231.3.12 **OsclTCPSocketI* OsclTCPSocketI::GetAcceptedSocketL (uint32 *aId*)**

7.231.3.13 **uint8 * OsclTCPSocketI::GetRecvData (int32 * *aLength*) [inline, virtual]**

Implements [OsclIPSocketI](#).

7.231.3.14 **uint8 * OsclTCPSocketI::GetSendData (int32 * *aLength*) [inline, virtual]**

Implements [OsclIPSocketI](#).

- 7.231.3.15 **int32** OsclTCPSocketI::Listen (*int aQueueSize*) [inline]
- 7.231.3.16 **TPVSocketEvent** OsclTCPSocketI::ListenAsync (*uint32 qsize, int32 aTimeoutMsec = -1*) [inline]
- 7.231.3.17 OsclTCPSocketI* OsclTCPSocketI::NewL (**Oscl_DefAlloc** & *a*, **OsclSocketServI** * *aServ*, **OsclSocketObserver** * *aObserver*, *uint32 aId*) [static]
- 7.231.3.18 **TPVSocketEvent** OsclTCPSocketI::Recv (*uint8 *& aPtr, uint32 aMaxLen, int32 aTimeoutMsec = -1*) [inline]
- 7.231.3.19 **TPVSocketEvent** OsclTCPSocketI::Send (*const uint8 *& aPtr, uint32 aLen, int32 aTimeoutMsec = -1*) [inline]
- 7.231.3.20 **TPVSocketEvent** OsclTCPSocketI::Shutdown (**TPVSocketShutdown** *aHow, int32 aTimeoutMsec = -1*) [inline]
- 7.231.3.21 **TPVSocketEvent** OsclTCPSocketI::ThreadLogoff ()

Reimplemented from **OsclIPSocketI**.

- 7.231.3.22 **TPVSocketEvent** OsclTCPSocketI::ThreadLogon (**OsclSocketServI** * *aServ*, **OsclSocketObserver** * *aObserver*)

The documentation for this class was generated from the following file:

- [oscl_tcp_socket.h](#)

7.232 OsclThread Class Reference

```
#include <oscl_thread.h>
```

Public Methods

- OSCL_IMPORT_REF OsclThread ()
- OSCL_IMPORT_REF ~OsclThread ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Create (TOsclThreadFuncPtr func, int32 stack_size, TOsclThreadFuncArg argument, OsclThread_State state=Start_on_creation, bool oIsJoinable=false)
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError GetPriority (OsclThreadPriority &refThreadPriority)
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError SetPriority (OsclThreadPriority ePriority)
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Suspend ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Resume ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError Terminate (OsclAny *exitcode)

Static Public Methods

- OSCL_IMPORT_REF void Exit (OsclAny *exitcode)
- OSCL_IMPORT_REF void EnableKill ()
- OSCL_IMPORT_REF OsclProcStatus::eOsclProcError GetId (TOsclThreadId &refThreadId)
- OSCL_IMPORT_REF bool CompareId (TOsclThreadId &t1, TOsclThreadId &t2)
- OSCL_IMPORT_REF void SleepMillisec (const int32 msec)

7.232.1 Detailed Description

Thread Class. A subset of Thread APIs. It implements platform independent APIs for thread creation, exiting, suspend, resume, priority and termination. With the use of proper defines it implements the basic thread features. It provides an opaque layer through which user doesn't need to worry about OS specific data.

7.232.2 Constructor & Destructor Documentation

7.232.2.1 OSCL_IMPORT_REF OsclThread::OsclThread ()

Class constructor

7.232.2.2 OSCL_IMPORT_REF OsclThread::~OsclThread ()

Class destructor

7.232.3 Member Function Documentation

7.232.3.1 OSCL_IMPORT_REF bool OsclThread::CompareId (TOsclThreadId & t1, TOsclThreadId & t2) [static]

Static routine to compare whether two thread ID's are equal.

Parameters:

t1, t2: thread ID passed by the application

Returns:

true if equal.

7.232.3.2 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::Create (TOsclThreadFuncPtr *func*, int32 *stack_size*, TOsclThreadFuncArg *argument*, *OsclThread_State state* = Start_on_creation, bool *oIsJoinable* = false)

This routine will create a thread. The thread may be launched immediately or may be created in a suspended state and launched with a Resume call.

Parameters:

func = Name of the thread Function *stack_size* = Size of the thread stack. If zero, then the platform-specific default stack size will be used. *argument* = Argument to be passed to thread function *state* = Enumeration which specifies the state of the thread on creation with values Running and Suspend. Note: the Suspend option may not be available on all platforms. If it is not supported, the Create call will return INVALID_PARAM_ERROR. *oIsJoinable* = A boolean, which when set to true, creates a Joinable thread. The default value for this is false, which creates a Detached thread. Note 1: When a joinable thread is created, it is imperative to call thread Terminate. Otherwise, it would cause a memory leak. Note 2: This is currently available only for platforms that have support for pthreads.

Returns:

eOsclProcError

7.232.3.3 OSCL_IMPORT_REF void OsclThread::EnableKill () [static]

EnableKill is a static function which can be called by the thread routine in order to enable thread termination without waiting for cancellation points. EnableKill only applies to pthread implementations. For other implementations this function will do nothing.

Returns:

None

7.232.3.4 OSCL_IMPORT_REF void OsclThread::Exit (OsclAny * *exitcode*) [static]

Exit is a static function which is used to end the current thread. When called it just ends the execution of the current thread.

Parameters:

exitcode = Exitcode of the thread. This can be used by other threads to know the exit status of this thread.

Returns:

None

**7.232.3.5 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::GetId
(TOsclThreadId & refThreadId) [static]**

Static routine to retrieve ID of calling thread.

Parameters:

Thread ID passed by the application

Returns:

Error code

**7.232.3.6 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::GetPriority
(OsclThreadPriority & refThreadPriority)**

GetThreadPriority gets the priority of the thread. It takes reference of the input argument and assigns priority to it from one of the already defined priorities.

Parameters:

int16& refThreadPriority : Output Priority value

Returns:

Error code

7.232.3.7 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::Resume ()

ResumeThread resumes the suspended thread and brings it into execution.

Parameters:

None

Returns:

Error code Note: this function may not be supported on all platforms, and may return NOT_ - IMPLEMENTED.

**7.232.3.8 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::SetPriority
(OsclThreadPriority ePriority)**

SetThreadPriority sets the priority of the thread. It takes priority as the input argument and assigns it to the thread referred.

Parameters:

ePriorityLevel : Input Priority value

Returns:

Error code Note: this function may not be supported on all platforms, and may return NOT_ - IMPLEMENTED.

7.232.3.9 OSCL_IMPORT_REF void OsclThread::SleepMillisec (const int32 msec) [static]

Suspend current thread execution for specified time.

Parameters:

msec, *t2*: sleep time in milliseconds.

7.232.3.10 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::Suspend ()

This API suspends the thread being referred. The thread can later be brought into execution by calling OSCL_ResumeThread() on it.

Parameters:

None

Returns:

Error code Note: this function may not be supported on all platforms, and may return NOT_IMPLEMENTED.

**7.232.3.11 OSCL_IMPORT_REF OsclProcStatus::eOsclProcError OsclThread::Terminate
(OsclAny * exitcode)**

Terminate a thread other than the calling thread.

Note: for pthread implementations, the Terminate call will block until the thread has terminated. By default, threads will not terminate until a cancellation point is reached. The EnableKill method may be used to override this default behavior and allow immediate termination.

Parameters:

exitcode = Exitcode of the thread.

Returns:

Error code

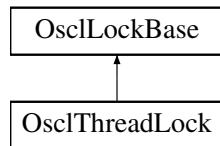
The documentation for this class was generated from the following file:

- [oscl_thread.h](#)

7.233 OsclThreadLock Class Reference

```
#include <oscl_mutex.h>
```

Inheritance diagram for OsclThreadLock::



Public Methods

- OSCL_IMPORT_REF OsclThreadLock ()
- virtual OSCL_IMPORT_REF ~OsclThreadLock ()
- OSCL_IMPORT_REF void Lock ()
- OSCL_IMPORT_REF void Unlock ()

7.233.1 Detailed Description

An implementation of [OsclLockBase](#) using a mutex

7.233.2 Constructor & Destructor Documentation

7.233.2.1 OSCL_IMPORT_REF OsclThreadLock::OsclThreadLock ()

7.233.2.2 virtual OSCL_IMPORT_REF OsclThreadLock::~OsclThreadLock () [virtual]

7.233.3 Member Function Documentation

7.233.3.1 OSCL_IMPORT_REF void OsclThreadLock::Lock () [virtual]

Implements [OsclLockBase](#).

7.233.3.2 OSCL_IMPORT_REF void OsclThreadLock::Unlock () [virtual]

Implements [OsclLockBase](#).

The documentation for this class was generated from the following file:

- [oscl_mutex.h](#)

7.234 OsclTickCount Class Reference

```
#include <oscl_tickcount.h>
```

Static Public Methods

- uint32 [TickCount \(\)](#)
- uint32 [TickCountFrequency \(\)](#)
- uint32 [TickCountPeriod \(\)](#)
- uint32 [TicksToMsec \(uint32 ticks\)](#)
- uint32 [MsecToTicks \(uint32 msec\)](#)

7.234.1 Detailed Description

OsclTickCount class is used to retrieve the system tick count and the tick counter's frequency. The maximum tick count value is equivalent to the maximum uint32 value.

7.234.2 Member Function Documentation

7.234.2.1 uint32 OsclTickCount::MsecToTicks (uint32 *msec*) [static]

This function converts milliseconds to ticks

Returns:

ticks

7.234.2.2 uint32 OsclTickCount::TickCount () [static]

This function returns the current system tick count

Returns:

returns the tick count

7.234.2.3 uint32 OsclTickCount::TickCountFrequency () [static]

This function returns the tick frequency in ticks per second

Returns:

ticks per second

7.234.2.4 uint32 OsclTickCount::TickCountPeriod () [static]

This function returns the tick period in microseconds per tick

Returns:

microseconds per tick

7.234.2.5 uint32 OsclTickCount::TicksToMsec (uint32 *ticks*) [static]

This function converts ticks to milliseconds

Returns:

milliseconds

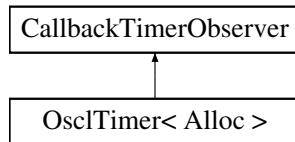
The documentation for this class was generated from the following file:

- [oscl_tickcount.h](#)

7.235 OsclTimer< Alloc > Class Template Reference

```
#include <oscl_timer.h>
```

Inheritance diagram for OsclTimer< Alloc >::



Public Types

- `typedef CallbackTimer< Alloc > callback_timer_type`

Public Methods

- `OsclTimer (const char *name, uint32 frequency=1, int32 priority=OsclActiveObject::EPriorityNominal)`
- `virtual ~OsclTimer ()`
- `void SetObserver (OsclTimerObserver *obs)`
- `void SetFrequency (uint32 frequency)`
- `void SetExactFrequency (uint32 frequency)`
- `void Request (int32 timerID, int32 timeoutInfo, int32 cycles, OsclTimerObserver *obs=0, bool recurring=0)`
- `void Cancel (int32 timerID, int32 timeoutInfo=-1)`
- `void Clear ()`

Protected Methods

- `void TimerBaseElapsed ()`

Friends

- `class CallbackTimer< Alloc >`

template<class Alloc> class OsclTimer< Alloc >

7.235.1 Member Typedef Documentation

7.235.1.1 template<class Alloc> typedef CallbackTimer<Alloc> OsclTimer< Alloc >::callback_timer_type

7.235.2 Constructor & Destructor Documentation

7.235.2.1 template<class Alloc> OsclTimer< Alloc >::OsclTimer (const char * *name*, uint32 *frequency* = 1, int32 *priority* = OsclActiveObject::EPriorityNominal)

Constructor

Parameters:

frequency The frequency of the timer in cycles/second. A value of 1 means the timer will cycle in 1 second intervals.

7.235.2.2 template<class Alloc> OsclTimer< Alloc >::~OsclTimer () [virtual]

7.235.3 Member Function Documentation

7.235.3.1 template<class Alloc> void OsclTimer< Alloc >::Cancel (int32 *timerID*, int32 *timeoutInfo* = -1)

Cancel a timer

Parameters:

timerID used to identify the timer to cancel.

timeoutInfo if not set to -1, this value will be used as additional matching criteria to cancel a timer.

7.235.3.2 template<class Alloc> void OsclTimer< Alloc >::Clear ()

Cancel all pending timers.

7.235.3.3 template<class Alloc> void OsclTimer< Alloc >::Request (int32 *timerID*, int32 *timeoutInfo*, int32 *cycles*, OsclTimerObserver * *obs* = 0, bool *recurring* = 0)

Request a timer

Parameters:

timerID used to identify the timer for cancellation. This value will be returned as part of the timeout event.

timeoutInfo for user info. Returned to the observer on a timeout event

cycles the number of cycles to wait before a timeout event. If the timer frequency is 1 and the cycles are set to 2, then the timeout event will occur in 2 seconds.

obs a local observer object to be called on a timeout event. This observer overrides the global observer if set.

7.235.3.4 template<class Alloc> void OsclTimer< Alloc >::SetExactFrequency (uint32 *frequency*)

Set the exact frequency of the timer in microsecond.

Parameters:

frequency A value of 1 means the timer will cycle in one microsecond intervals, 1000 means millisecond intervals, etc.

7.235.3.5 template<class Alloc> void OsclTimer< Alloc >::SetFrequency (uint32 *frequency*)

Set the frequency of the timer in cycles/second.

Parameters:

frequency A value of 1 means the timer will cycle in one second intervals, 1000 means millisecond intervals, etc.

7.235.3.6 template<class Alloc> void OsclTimer< Alloc >::SetObserver ([OsclTimerObserver](#) * *obs*) [inline]

Set the global observer. Each timer can request a local observer, which if set overrides the global observer.

Parameters:

obs observer object.

7.235.3.7 template<class Alloc> void OsclTimer< Alloc >::TimerBaseElapsed () [protected, virtual]

Implements [CallbackTimerObserver](#).

7.235.4 Friends And Related Function Documentation

7.235.4.1 template<class Alloc> friend class [CallbackTimer](#)< Alloc > [friend]

The documentation for this class was generated from the following file:

- [oscl_timer.h](#)

7.236 OsclTimerCompare Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Static Public Methods

- int [compare \(TOsclReady &a, TOsclReady &b\)](#)

7.236.1 Member Function Documentation

7.236.1.1 int OsclTimerCompare::compare (TOsclReady &*a*, TOsclReady &*b*) [static]

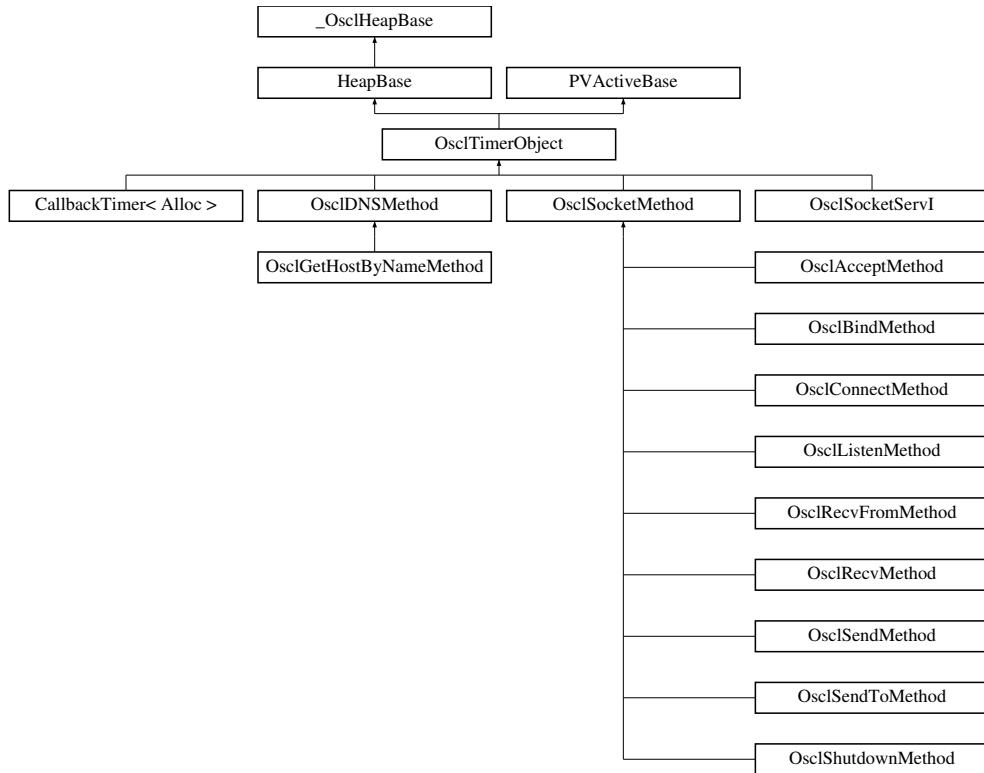
The documentation for this class was generated from the following file:

- [oscl_scheduler_readyq.h](#)

7.237 OsclTimerObject Class Reference

```
#include <oscl_scheduler_ao.h>
```

Inheritance diagram for OsclTimerObject::



Public Methods

- OSCL_IMPORT_REF [OsclTimerObject](#) (int32 aPriority, const char name[])
- virtual OSCL_IMPORT_REF [~OsclTimerObject](#) ()
- OSCL_IMPORT_REF void [AddToScheduler](#) ()
- OSCL_IMPORT_REF void [RemoveFromScheduler](#) ()
- OSCL_IMPORT_REF void [After](#) (int32 aDelayMicrosec)
- OSCL_IMPORT_REF void [RunIfNotReady](#) (uint32 aDelayMicrosec=0)
- OSCL_IMPORT_REF void [SetBusy](#) ()
- OSCL_IMPORT_REF bool [IsBusy](#) () const
- OSCL_IMPORT_REF void [Cancel](#) ()
- OSCL_IMPORT_REF int32 [Priority](#) () const
- OSCL_IMPORT_REF int32 [Status](#) () const
- OSCL_IMPORT_REF void [SetStatus](#) (int32)
- OSCL_IMPORT_REF [OsclAOStatus](#) & [StatusRef](#) ()

Protected Methods

- virtual OSCL_IMPORT_REF void [DoCancel](#) ()
- virtual OSCL_IMPORT_REF int32 [RunError](#) (int32 aError)

7.237.1 Detailed Description

User base class for execution objects. OsclTimerObject defines an exec object with a timer.

7.237.2 Constructor & Destructor Documentation

7.237.2.1 OSCL_IMPORT_REF OsclTimerObject::OsclTimerObject (int32 *aPriority*, const char *name*[])

Constructor.

Parameters:

aPriority (input param): scheduling priority

name (input param): optional name for this AO.

7.237.2.2 virtual OSCL_IMPORT_REF OsclTimerObject::~OsclTimerObject () [virtual]

Destructor.

7.237.3 Member Function Documentation

7.237.3.1 OSCL_IMPORT_REF void OsclTimerObject::AddToScheduler ()

Add this AO to the current thread's scheduler.

Reimplemented from [PVActiveBase](#).

7.237.3.2 OSCL_IMPORT_REF void OsclTimerObject::After (int32 *aDelayMicrosec*)

'After' sets the request ready, with request status OSCL_REQUEST_STATUS_PENDING, and starts a timer. When the timer expires, the request will complete with status OSCL_REQUEST_ERR_NONE. Must be called from the same thread in which the active object is scheduled. Will leave if the request is already readied, the object is not added to any scheduler, or the calling thread does not match the scheduling thread.

Parameters:

anInterval: timeout interval in microseconds.

7.237.3.3 OSCL_IMPORT_REF void OsclTimerObject::Cancel ()

Cancel any active request. If the request is pending, this will call the DoCancel routine, wait for the request to cancel, then set the request idle. The AO will not run. If the request is not active, it does nothing. Request must be canceled from the same thread in which it is scheduled.

Reimplemented from [PVActiveBase](#).

7.237.3.4 virtual OSCL_IMPORT_REF void OsclTimerObject::DoCancel () [protected, virtual]

Cancel request handler. This gets called by scheduler when the request is cancelled. The default routine will cancel the timer. If any additional action is needed, the derived class may override this. If the derived class does override this, it should explicitly call [OsclTimerObject::DoCancel](#) in its own DoCancel routine.

Implements [PVActiveBase](#).

7.237.3.5 OSCL_IMPORT_REF bool OsclTimerObject::IsBusy ()

Return true if this AO is active, false otherwise.

7.237.3.6 OSCL_IMPORT_REF int32 OsclTimerObject::Priority ()

Return scheduling priority of this exec object.

7.237.3.7 OSCL_IMPORT_REF void OsclTimerObject::RemoveFromScheduler ()

Remove this AO from its scheduler. Will leave if the calling thread context does not match the scheduling thread. Cancels any pending request before removing.

Reimplemented from [PVActiveBase](#).

7.237.3.8 virtual OSCL_IMPORT_REF int32 OsclTimerObject::RunError (int32 *aError*) [protected, virtual]

Run Leave handler. This gets called by scheduler when the Run routine leaves. The default implementation simply returns the leave code. If the derived class wants to handle errors from Run, it may override this. The ExecError should return OsclErrNone if it handles the error, otherwise it should return the input error code.

Parameters:

aError: the leave code generated by the Run.

Implements [PVActiveBase](#).

7.237.3.9 OSCL_IMPORT_REF void OsclTimerObject::RunIfNotReady (uint32 *aDelayMicrosec* = 0)

Complete the request after a time interval. RunIfNotReady is identical to [After\(\)](#) except that it first checks the request status, and if it is already readied, it does nothing.

Parameters:

aDelayMicrosec (input param): delay in microseconds.

7.237.3.10 OSCL_IMPORT_REF void OsclTimerObject::SetBusy ()

Set request ready for this AO. Will leave if the request is already readied, or the exec object is not added to any scheduler, or the calling thread context does not match the scheduler thread.

7.237.3.11 OSCL_IMPORT_REF void OsclTimerObject::SetStatus (int32)

7.237.3.12 OSCL_IMPORT_REF int32 OsclTimerObject::Status ()

Request status access

7.237.3.13 OSCL_IMPORT_REF OsclAOStatus& OsclTimerObject::StatusRef ()

The documentation for this class was generated from the following file:

- [oscl_scheduler_ao.h](#)

7.238 OsclTimerObserver Class Reference

```
#include <oscl_timer.h>
```

Public Methods

- virtual void [TimeoutOccurred](#) (int32 timerID, int32 timeoutInfo)=0
- virtual [~OsclTimerObserver](#) ()

7.238.1 Detailed Description

The observer class to receive timeout callbacks

7.238.2 Constructor & Destructor Documentation

7.238.2.1 [virtual OsclTimerObserver::~OsclTimerObserver \(\)](#) [inline, virtual]

7.238.3 Member Function Documentation

7.238.3.1 [virtual void OsclTimerObserver::TimeoutOccurred \(int32 timerID, int32 timeoutInfo\)](#) [pure virtual]

This function will be called when the timer associated with this observer is executed

Parameters:

timerID The ID given at timer request.

timeoutInfo Any extra info given at timer request.

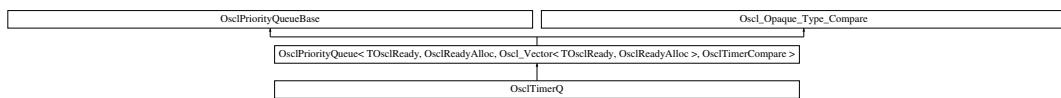
The documentation for this class was generated from the following file:

- [oscl_timer.h](#)

7.239 OsclTimerQ Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Inheritance diagram for OsclTimerQ::



Public Methods

- void [Construct](#) (int)
- void [Add](#) ([TOsclReady](#))
- void [Remove](#) ([TOsclReady](#))
- [TOsclReady](#) [PopTop](#) ()
- [TOsclReady](#) [Top](#) ()
- void [Pop](#) ([TOsclReady](#))
- bool [IsIn](#) ([TOsclReady](#))

7.239.1 Member Function Documentation

7.239.1.1 void OsclTimerQ::Add ([TOsclReady](#))

7.239.1.2 void OsclTimerQ::Construct (int)

7.239.1.3 bool OsclTimerQ::IsIn ([TOsclReady](#))

7.239.1.4 void OsclTimerQ::Pop ([TOsclReady](#))

7.239.1.5 [TOsclReady](#) OsclTimerQ::PopTop ()

7.239.1.6 void OsclTimerQ::Remove ([TOsclReady](#))

7.239.1.7 [TOsclReady](#) OsclTimerQ::Top ()

The documentation for this class was generated from the following file:

- [oscl_scheduler_readyq.h](#)

7.240 OsclTLS< T, ID, Registry > Class Template Reference

```
#include <oscl_tls.h>
```

Public Methods

- `OsclTLS ()`
- `~OsclTLS ()`
- `T & operator * () const`
The indirection operator () accesses a value indirectly, through a pointer.*
- `T * operator -> () const`
The indirection operator (->) accesses a value indirectly, through a pointer.
- `bool set ()`
set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

Protected Attributes

- `T * _Ptr`

`template<class T, uint32 ID, class Registry = OsclTLSRegistry> class OsclTLS< T, ID, Registry >`

7.240.1 Constructor & Destructor Documentation

7.240.1.1 `template<class T, uint32 ID, class Registry = OsclTLSRegistry> OsclTLS< T, ID, Registry >::OsclTLS () [inline]`

7.240.1.2 `template<class T, uint32 ID, class Registry = OsclTLSRegistry> OsclTLS< T, ID, Registry >::~OsclTLS () [inline]`

7.240.2 Member Function Documentation

7.240.2.1 `template<class T, uint32 ID, class Registry = OsclTLSRegistry> T& OsclTLS< T, ID, Registry >::operator * () const [inline]`

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the OsclTLS can be used like the regular pointer that it was initialized with.

7.240.2.2 `template<class T, uint32 ID, class Registry = OsclTLSRegistry> T* OsclTLS< T, ID, Registry >::operator -> () const [inline]`

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the OsclTLS can be used like the regular pointer that it was initialized with.

7.240.2.3 template<class T, uint32 ID, class Registry = OsclTLSRegistry> bool OsclTLS< T, ID, Registry >::set () [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

7.240.3 Field Documentation**7.240.3.1 template<class T, uint32 ID, class Registry = OsclTLSRegistry> T* OsclTLS< T, ID, Registry >::_Ptr [protected]**

The documentation for this class was generated from the following file:

- [oscl_tls.h](#)

7.241 OsclTLSEEx< T, ID, Registry > Class Template Reference

```
#include <oscl_error.h>
```

Public Methods

- `OsclTLSEEx ()`
- `~OsclTLSEEx ()`
- `T & operator * () const`

The indirection operator () accesses a value indirectly, through a pointer.*

- `T * operator -> () const`

The indirection operator (->) accesses a value indirectly, through a pointer.

- `bool set ()`

set() method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

Protected Attributes

- `T * _Ptr`

```
template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> class OsclTLSEEx< T, ID, Registry >
```

7.241.1 Constructor & Destructor Documentation

7.241.1.1 template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> OsclTLSEEx< T, ID, Registry >::OsclTLSEEx () [inline]

7.241.1.2 template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> OsclTLSEEx< T, ID, Registry >::~OsclTLSEEx () [inline]

7.241.2 Member Function Documentation

7.241.2.1 template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> T& OsclTLSEEx< T, ID, Registry >::operator * () const [inline]

The indirection operator (*) accesses a value indirectly, through a pointer.

This operator ensures that the `OsclTLS` can be used like the regular pointer that it was initialized with.

7.241.2.2 template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> T* OsclTLSEEx< T, ID, Registry >::operator -> () const [inline]

The indirection operator (->) accesses a value indirectly, through a pointer.

This operator ensures that the `OsclTLS` can be used like the regular pointer that it was initialized with.

7.241.2.3 template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> bool OsclTLSE< T, ID, Registry >::set () [inline]

[set\(\)](#) method sets ownership to the pointer, passed. This method is needed when the class is created with a default constructor. Returns false in case the class is non-empty.

7.241.3 Field Documentation

7.241.3.1 template<class T, uint32 ID, class Registry = OsclTLSRegistryEx> T* OsclTLSE< T, ID, Registry >::_Ptr [protected]

The documentation for this class was generated from the following file:

- [oscl_error.h](#)

7.242 OsclTLSRegistry Class Reference

```
#include <oscl_tls.h>
```

Static Public Methods

- OSCL_IMPORT_REF [OsclAny](#) * getInstance (uint32 ID, int32 &error)
- OSCL_IMPORT_REF void [registerInstance](#) ([OsclAny](#) *ptr, uint32 ID, int32 &error)

Friends

- class [OsclBase](#)

7.242.1 Member Function Documentation

7.242.1.1 OSCL_IMPORT_REF [OsclAny](#)* OsclTLSRegistry::getInstance (uint32 *ID*, int32 & *error*) [static]

7.242.1.2 OSCL_IMPORT_REF void OsclTLSRegistry::registerInstance ([OsclAny](#) * *ptr*, uint32 *ID*, int32 & *error*) [static]

7.242.2 Friends And Related Function Documentation

7.242.2.1 friend class [OsclBase](#) [friend]

The documentation for this class was generated from the following file:

- [oscl_tls.h](#)

7.243 OsclTLSRegistryEx Class Reference

```
#include <oscl_error.h>
```

Static Public Methods

- [OsclAny * getInstance \(uint32 ID\)](#)
- [void registerInstance \(OsclAny *ptr, uint32 ID\)](#)

7.243.1 Member Function Documentation

7.243.1.1 [OsclAny* OsclTLSRegistryEx::getInstance \(uint32 ID\)](#) [inline, static]

7.243.1.2 [void OsclTLSRegistryEx::registerInstance \(OsclAny *ptr, uint32 ID\)](#) [inline, static]

The documentation for this class was generated from the following file:

- [oscl_error.h](#)

7.244 OsclTrapItem Class Reference

```
#include <oscl_heapbase.h>
```

Public Methods

- OSCL_INLINE [OsclTrapItem \(OsclTrapOperation anOperation\)](#)
- OSCL_INLINE [OsclTrapItem \(OsclTrapOperation anOperation, OsclAny *aPtr\)](#)

Friends

- class [OsclTrapStackItem](#)
- class [OsclTrapStack](#)

7.244.1 Constructor & Destructor Documentation

7.244.1.1 OSCL_INLINE OsclTrapItem::OsclTrapItem ([OsclTrapOperation anOperation](#))

7.244.1.2 OSCL_INLINE OsclTrapItem::OsclTrapItem ([OsclTrapOperation anOperation, OsclAny * aPtr](#))

7.244.2 Friends And Related Function Documentation

7.244.2.1 friend class OsclTrapStack [friend]

7.244.2.2 friend class OsclTrapStackItem [friend]

The documentation for this class was generated from the following file:

- [oscl_heapbase.h](#)

7.245 OsclTrapStack Class Reference

```
#include <oscl_error_trapcleanup.h>
```

Friends

- class [OsclError](#)
- class [OsclErrorTrap](#)
- class [OsclErrorTrapImp](#)

7.245.1 Detailed Description

A common type for cleanup stack and trap mark stack. for internal use only.

7.245.2 Friends And Related Function Documentation

7.245.2.1 friend class OsclError [friend]

7.245.2.2 friend class OsclErrorTrap [friend]

7.245.2.3 friend class OsclErrorTrapImp [friend]

The documentation for this class was generated from the following file:

- [oscl_error_trapcleanup.h](#)

7.246 OsclTrapStackItem Class Reference

```
#include <oscl_error_trapcleanup.h>
```

Public Methods

- [OsclTrapStackItem \(\)](#)
- [OsclTrapStackItem \(_OsclHeapBase *aCBase\)](#)
- [OsclTrapStackItem \(OsclAny *aTAny\)](#)
- [OsclTrapStackItem \(OsclTrapItem aItem\)](#)

Data Fields

- [_OsclHeapBase * iCBase](#)
- [OsclAny * iTAny](#)
- [OsclTrapOperation iTrapOperation](#)
- [OsclTrapStackItem * iNext](#)

7.246.1 Detailed Description

Internal cleanup stack item type.

7.246.2 Constructor & Destructor Documentation

7.246.2.1 OsclTrapStackItem::OsclTrapStackItem () [inline]

7.246.2.2 OsclTrapStackItem::OsclTrapStackItem (_OsclHeapBase * aCBase) [inline]

7.246.2.3 OsclTrapStackItem::OsclTrapStackItem (OsclAny * aTAny) [inline]

7.246.2.4 OsclTrapStackItem::OsclTrapStackItem (OsclTrapItem aItem) [inline]

7.246.3 Field Documentation

7.246.3.1 _OsclHeapBase* OsclTrapStackItem::iCBase

7.246.3.2 OsclTrapStackItem* OsclTrapStackItem::iNext

7.246.3.3 OsclAny* OsclTrapStackItem::iTAny

7.246.3.4 OsclTrapOperation OsclTrapStackItem::iTrapOperation

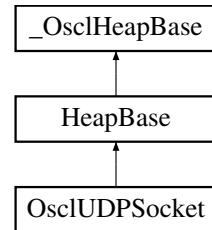
The documentation for this class was generated from the following file:

- [oscl_error_trapcleanup.h](#)

7.247 OsclUDPSocket Class Reference

```
#include <oscl_socket.h>
```

Inheritance diagram for OsclUDPSocket::



Public Methods

- OSCL_IMPORT_REF ~OsclUDPSocket ()
- OSCL_IMPORT_REF TPVSocketEvent ThreadLogoff ()
- OSCL_IMPORT_REF TPVSocketEvent ThreadLogon (OsclSocketServ &aServ, OsclSocketObserver *aObserver)
- OSCL_IMPORT_REF int32 Close ()
- OSCL_IMPORT_REF int32 Bind (OsclNetworkAddress &aAddress)
- OSCL_IMPORT_REF int32 Join (OsclNetworkAddress &aAddress)
- OSCL_IMPORT_REF int32 JoinMulticastGroup (OsclIpMReq &aMReq)
- OSCL_IMPORT_REF int32 SetMulticastTTL (int32 aTTL)
- OSCL_IMPORT_REF int32 SetOptionToReuseAddress ()
- OSCL_IMPORT_REF int32 SetTOS (const OsclSocketTOS &aTOS)
- OSCL_IMPORT_REF int32 GetPeerName (OsclNetworkAddress &aPeerName)
- OSCL_IMPORT_REF TPVSocketEvent BindAsync (OsclNetworkAddress &aAddress, int32 aTimeoutMsec=(-1))
- OSCL_IMPORT_REF void CancelBind ()
- OSCL_IMPORT_REF uint8 * GetRecvData (int32 *aLength)
- OSCL_IMPORT_REF uint8 * GetSendData (int32 *aLength)
- OSCL_IMPORT_REF TPVSocketEvent SendTo (const uint8 *aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1)
- OSCL_IMPORT_REF void CancelSendTo ()
- OSCL_IMPORT_REF TPVSocketEvent RecvFrom (uint8 *aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1, uint32 aMultiRecvLimit=0, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen=NULL, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource=NULL)
- OSCL_IMPORT_REF void CancelRecvFrom ()
- OSCL_IMPORT_REF int32 SetRecvBufferSize (uint32 size)

Static Public Methods

- OSCL_IMPORT_REF OsclUDPSocket * NewL (Oscl_DefAlloc &alloc, OsclSocketServ &aServ, OsclSocketObserver *aObserver, uint32 aId)

7.247.1 Detailed Description

The UDP Socket class

7.247.2 Constructor & Destructor Documentation

7.247.2.1 OSCL_IMPORT_REF OsclUDPSocket::~OsclUDPSocket ()

Destructor. The object must be deleted using the same allocator used in the NewL call.

7.247.3 Member Function Documentation

7.247.3.1 OSCL_IMPORT_REF int32 OsclUDPSocket::Bind ([OsclNetworkAddress](#) & *aAddress*)

Bind a UDP socket to an address. This is a synchronous method.

Parameters:

aAddress: Bind address.

Returns:

Returns OsclErrNone for success, or a platform-specific error code.

7.247.3.2 OSCL_IMPORT_REF [TPVSocketEvent](#) OsclUDPSocket::BindAsync ([OsclNetworkAddress](#) & *aAddress*, int32 *aTimeoutMsec* = (-1))

Bind a UDP socket to an address. This is an asynchronous method.

Parameters:

aAddress: Bind address.

aTimeoutMsec: Optional timeout. Use a negative value for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.247.3.3 OSCL_IMPORT_REF void OsclUDPSocket::CancelBind ()

Cancel Bind

This method will cancel any pending BindAsync operation on the current socket, causing the BindAsync to complete with error EPVSocketCancel. If there is no pending BindAsync operation, this method will have no effect.

7.247.3.4 OSCL_IMPORT_REF void OsclUDPSocket::CancelRecvFrom ()

Cancel RecvFrom

This method will cancel any pending RecvFrom operation on the current socket, causing the RecvFrom to complete with error EPVSocketCancel. If there is no pending RecvFrom operation, this method will have no effect.

7.247.3.5 OSCL_IMPORT_REF void OsclUDPSocket::CancelSendTo ()

Cancel SendTo

This method will cancel any pending SendTo operation on the current socket, causing the SendTo to complete with error EPVSocketCancel. If there is no pending SendTo operation, this method will have no effect.

7.247.3.6 OSCL_IMPORT_REF int32 OsclUDPSocket::Close ()

Close a UDP socket. This is a synchronous method.

Once it is closed a socket cannot be re-opened. Sockets are automatically closed when they are deleted. This method may be used to see any error code returned from the platform's socket close call.

Returns:

Returns OsclErrNone for success, or a platform-specific error code.

7.247.3.7 OSCL_IMPORT_REF int32 OsclUDPSocket::GetPeerName ([OsclNetworkAddress](#) & *aPeerName*)

Retrieves the peer address of the socket

Parameters:

aPeerName: This will store the peer address when API returns successfully.

Returns:

Returns OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.247.3.8 OSCL_IMPORT_REF uint8* OsclUDPSocket::GetRecvData (int32 * *aLength*)

Retrieve the received data after a successful RecvFrom operation. This is a synchronous method.

Parameters:

aLength: (output) number of bytes of data received.

Returns:

Returns pointer to received data, or NULL if none.

7.247.3.9 OSCL_IMPORT_REF uint8* OsclUDPSocket::GetSendData (int32 * *aLength*)

Retrieve the sent data after a successful SendTo operation. This is a synchronous method.

Parameters:

aLength: (output) number of bytes of data sent.

Returns:

Returns pointer to sent data, or NULL if none.

7.247.3.10 OSCL_IMPORT_REF int32 OsclUDPSocket::Join ([OsclNetworkAddress](#) & *aAddress*)

Bind a UDP socket to an address and Join the multicast group. This is a synchronous method.

Parameters:

aAddress: Bind address.

Returns:

Returns OsclErrNone for success, or a platform-specific error code. May throw an OsclErrNotSupported Exception

7.247.3.11 OSCL_IMPORT_REF int32 OsclUDPSocket::JoinMulticastGroup ([OsclIpMReq](#) & *aMReq*)

Join the multicast group.

Parameters:

aMReq: Multicast group information.

Returns:

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK_ERR_BAD_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.247.3.12 OSCL_IMPORT_REF OsclUDPSocket* OsclUDPSocket::NewL ([Oscl_DefAlloc](#) & *alloc*, [OsclSocketServ](#) & *aServ*, [OsclSocketObserver](#) * *aObserver*, uint32 *aId*) [static]

Create a UDP Socket. May leave if failure.

Parameters:

alloc: Memory allocator.

aServ: Socket server. Must be connected.

aObserver: Socket observer.

aId: Socket ID. The caller must assign an ID to each socket. The ID is used to identify the socket in observer callbacks.

Returns:

Returns pointer to socket.

7.247.3.13 OSCL_IMPORT_REF TPVSocketEvent OsclUDPSocket::RecvFrom (uint8 * *aPtr*, uint32 *aMaxLen*, [OsclNetworkAddress](#) & *aAddress*, int32 *aTimeoutMsec* = -1, uint32 *aMultiRecvLimit* = 0, [Oscl_Vector](#)< uint32, [OsclMemAllocator](#) > * *aPacketLen* = NULL, [Oscl_Vector](#)< [OsclNetworkAddress](#), [OsclMemAllocator](#) > * *aPacketSource* = NULL)

Receive Data. This is an asynchronous method.

Parameters:

aPtr: Buffer to receive incoming data

aMaxLen: Length of buffer.

aAddress: (output) Source address.

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

aMultiRecvLimit (optional input): Configures multiple packet receive mode. As long as there are packets queued at the socket and at least aMultiRecvLimit bytes are available in the buffer, recvfrom operations will continue. A value of zero disabled multiple packet mode. The individual packet lengths can be retrieved in the aPacketLen parameter; and the individual packet source addresses can be retrieved in the aPacketSource parameter.

aPacketLen: (optional output) a vector of packet lengths, in case multiple packets were received.

aPacketSource: (optional output) a vector of source addresses, in case multiple packets were received.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.247.3.14 OSCL_IMPORT_REF TPVSocketEvent OsclUDPSocket::SendTo (const uint8 * aPtr, uint32 aLen, OscINetworkAddress & aAddress, int32 aTimeoutMsec = -1)

Send Data. This is an asynchronous method.

Parameters:

aPtr: Data to send.

aLen: Length of data to send.

aAddress: Destination address.

aTimeoutMsec: Timeout in milliseconds, or (-1) for infinite wait.

Returns:

Will return EPVSocketPending if successful. When the operation is complete, a callback to the observer will occur with the completion status. If the operation cannot be initiated, the call will return EPVSocketFailure and there will be no callback.

7.247.3.15 OSCL_IMPORT_REF int32 OsclUDPSocket::SetMulticastTTL (int32 aTTL)

Controls the number of intermediate systems through which a multicast datagram can be forwarded.

Parameters:

aTTL:Specifies the time-to-live value for multicast datagrams sent through this socket.

Returns:

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK_ERR_BAD_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.247.3.16 OSCL_IMPORT_REF int32 OsclUDPSocket::SetOptionToReuseAddress ()

Allows the server to bind to an address which is in a TIME_WAIT state.

Returns:

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK_ERR_BAD_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.247.3.17 OSCL_IMPORT_REF int32 OsclUDPSocket::SetRecvBufferSize (uint32 *size*)

Set the buffer size of the socket This is a synchronous method.

Parameters:

size: buffer size

Returns:

Returns OsclErrNone for success, or a platform-specific error code. May throw an OsclErrNotSupported Exception.

7.247.3.18 OSCL_IMPORT_REF int32 OsclUDPSocket::SetTOS (const OsclSocketTOS & *aTOS*)

Sets the Type of Service field of each outgoing IP datagram.

Parameters:

aTOS: Specifies the type of service requested.

Returns:

Returns: OsclErrNone for success, or a platform-specific error code. or PVSOCK_ERR_NOT_SUPPORTED, if underlying OS doesn't support joining multicast group PVSOCK_ERR_BAD_PARAM, if config io file is not configured in accordance with underlying OS PVSOCK_ERR_NOT_IMPLEMENTED, if this API is not implemented in OSCL for the underlying OS

7.247.3.19 OSCL_IMPORT_REF TPVSocketEvent OsclUDPSocket::ThreadLogoff ()

Thread logoff routine. This will prepare for transfer and use of the socket in another thread. All socket requests must be complete prior to calling this routine. If any requests are still active, it will return EPVSocketFailure;

**7.247.3.20 OSCL_IMPORT_REF TPVSocketEvent OsclUDPSocket::ThreadLogon
(OsclSocketServ & *aServ*, OsclSocketObserver * *aObserver*)**

Thread logon routine. This will complete the transfer of a socket from another thread for use in the current thread. The ThreadLogoff API must be called in the original thread prior to calling ThreadLogon.

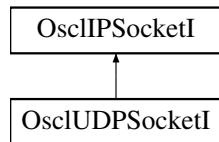
The documentation for this class was generated from the following file:

- [oscl_socket.h](#)

7.248 OsclUDPSocketI Class Reference

```
#include <oscl_udp_socket.h>
```

Inheritance diagram for OsclUDPSocketI::



Public Methods

- virtual ~OsclUDPSocketI ()
- int32 [Close \(\)](#)
- int32 [JoinMulticastGroup \(OsclIpMReq &aMReq\)](#)
- int32 [SetMulticastTTL \(int32 aTTL\)](#)
- uint8 * [GetRecvData \(int32 *aLength\)](#)
- uint8 * [GetSendData \(int32 *aLength\)](#)
- [TPVSocketEvent ThreadLogoff \(\)](#)
- [TPVSocketEvent ThreadLogon \(OsclSocketServI *aServ, OsclSocketObserver *aObserver\)](#)
- [TPVSocketEvent BindAsync \(OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1\)](#)
- void [CancelBind \(\)](#)
- [TPVSocketEvent SendTo \(const uint8 *&aPtr, uint32 aLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1\)](#)
- void [CancelSendTo \(\)](#)
- [TPVSocketEvent RecvFrom \(uint8 *&aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, int32 aTimeoutMsec=-1, uint32 aMultiMaxLen=0, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen=NULL, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource=NULL\)](#)
- void [CancelRecvFrom \(\)](#)

Static Public Methods

- OsclUDPSocketI * [NewL \(Oscl_DefAlloc &a, OsclSocketServI *aServ, OsclSocketObserver *aObserver, uint32 aId\)](#)

7.248.1 Detailed Description

Internal implementation class for [OsclUDPSocket](#)

7.248.2 Constructor & Destructor Documentation

7.248.2.1 `virtual OsclUDPSocketI::~OsclUDPSocketI () [virtual]`

7.248.3 Member Function Documentation

7.248.3.1 `TPVSocketEvent OsclUDPSocketI::BindAsync (OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1) [inline]`

7.248.3.2 `void OsclUDPSocketI::CancelBind () [inline]`

7.248.3.3 `void OsclUDPSocketI::CancelRecvFrom () [inline]`

7.248.3.4 `void OsclUDPSocketI::CancelSendTo () [inline]`

7.248.3.5 `int32 OsclUDPSocketI::Close () [virtual]`

Implements [OsclIPSocketI](#).

7.248.3.6 `uint8 * OsclUDPSocketI::GetRecvData (int32 * aLength) [inline, virtual]`

Implements [OsclIPSocketI](#).

7.248.3.7 `uint8 * OsclUDPSocketI::GetSendData (int32 * aLength) [inline, virtual]`

Implements [OsclIPSocketI](#).

7.248.3.8 `int32 OsclUDPSocketI::JoinMulticastGroup (OsclIpMReq & aMReq)`

7.248.3.9 `OsclUDPSocketI* OsclUDPSocketI::NewL (Oscl_DefAlloc & a, OsclSocketServI * aServ, OsclSocketObserver * aObserver, uint32 aId) [static]`

7.248.3.10 `TPVSocketEvent OsclUDPSocketI::RecvFrom (uint8 *& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1, uint32 aMultiMaxLen = 0, Oscl_Vector< uint32, OsclMemAllocator > * aPacketLen = NULL, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aPacketSource = NULL) [inline]`

7.248.3.11 `TPVSocketEvent OsclUDPSocketI::SendTo (const uint8 *& aPtr, uint32 aLen, OsclNetworkAddress & aAddress, int32 aTimeoutMsec = -1) [inline]`

7.248.3.12 `int32 OsclUDPSocketI::SetMulticastTTL (int32 aTTL)`

7.248.3.13 `TPVSocketEvent OsclUDPSocketI::ThreadLogoff ()`

Reimplemented from [OsclIPSocketI](#).

7.248.3.14 `TPVSocketEvent OsclUDPSocketI::ThreadLogon (OsclSocketServI * aServ, OsclSocketObserver * aObserver)`

The documentation for this class was generated from the following file:

- [oscl_udp_socket.h](#)

7.249 OsclUuid Struct Reference

```
#include <oscl_uuid.h>
```

Public Methods

- [OsclUuid \(\)](#)
- [OsclUuid \(uint32 l, uint16 w1, uint16 w2, uint8 b1, uint8 b2, uint8 b3, uint8 b4, uint8 b5, uint8 b6, uint8 b7, uint8 b8\)](#)
- [OsclUuid \(const char *aUuidString\)](#)
- [OsclUuid \(const OsclUuid &uuid\)](#)
- [OsclUuid & operator= \(const OsclUuid &src\)](#)
- [bool operator== \(const OsclUuid &src\) const](#)
- [bool operator!= \(const OsclUuid &src\) const](#)

Data Fields

- uint32 [data1](#)
- uint16 [data2](#)
- uint16 [data3](#)
- uint8 [data4](#) [BYTES_IN_UUID_ARRAY]

7.249.1 Detailed Description

OSCL UUID structure used for unique identification of modules and interfaces.

7.249.2 Constructor & Destructor Documentation

7.249.2.1 OsclUuid::OsclUuid () [inline]

7.249.2.2 OsclUuid::OsclUuid (uint32 *l*, uint16 *w1*, uint16 *w2*, uint8 *b1*, uint8 *b2*, uint8 *b3*, uint8 *b4*, uint8 *b5*, uint8 *b6*, uint8 *b7*, uint8 *b8*) [inline]

7.249.2.3 OsclUuid::OsclUuid (const char * *aUuidString*) [inline]

7.249.2.4 OsclUuid::OsclUuid (const OsclUuid & *uuid*) [inline]

7.249.3 Member Function Documentation

7.249.3.1 bool OsclUuid::operator!= (const OsclUuid & *src*) const [inline]

7.249.3.2 OsclUuid& OsclUuid::operator= (const OsclUuid & *src*) [inline]

7.249.3.3 bool OsclUuid::operator== (const OsclUuid & *src*) const [inline]

7.249.4 Field Documentation

7.249.4.1 uint32 OsclUuid::data1

7.249.4.2 uint16 OsclUuid::data2

7.249.4.3 uint16 OsclUuid::data3

7.249.4.4 uint8 OsclUuid::data4[BYTES_IN_UUID_ARRAY]

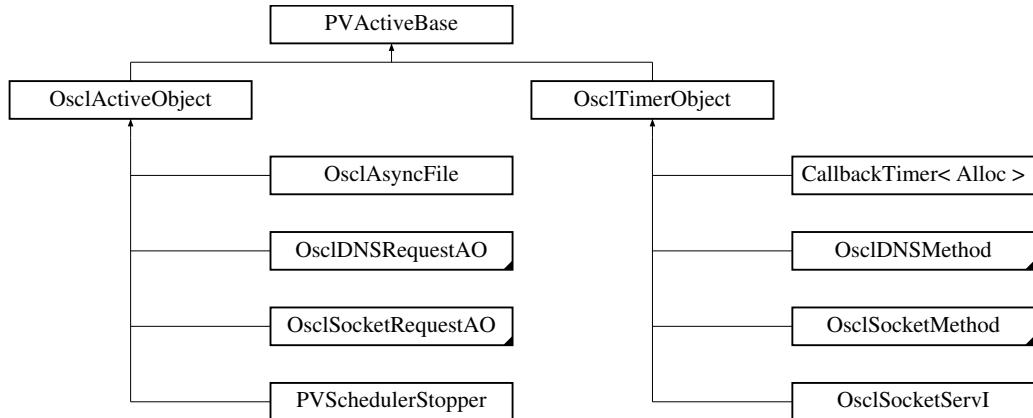
The documentation for this struct was generated from the following file:

- [oscl_uuid.h](#)

7.250 PVActiveBase Class Reference

```
#include <oscl_scheduler_aobase.h>
```

Inheritance diagram for PVActiveBase::



Public Methods

- [PVActiveBase](#) (const char name[], int32 pri)
- virtual [~PVActiveBase](#) ()
- bool [IsInAnyQ](#) ()
- virtual int32 [RunError](#) (int32 aError)=0
- virtual void [Run](#) ()=0
- virtual void [DoCancel](#) ()=0
- void [AddToScheduler](#) ()
- void [RemoveFromScheduler](#) ()
- void [Destroy](#) ()
- void [Activate](#) ()
- OSCL_IMPORT_REF bool [IsAdded](#) () const
- void [Cancel](#) ()

Data Fields

- uint32 [iAddedNum](#)
- [OsclNameString< PVEXECNAMELEN > iName](#)
- [PVThreadContext iThreadContext](#)
- [PVActiveStats * iPVAstats](#)
- [TReadyQueLink iPVReadyQLink](#)
- bool [iBusy](#)
- [OsclAOStatus iStatus](#)

Friends

- class [PVActiveStats](#)
- class [OsclSchedulerCommonBase](#)

- class [OsclActiveObject](#)
- class [OsclTimerObject](#)
- class [OsclReadyQ](#)
- class [OsclReadyCompare](#)
- class [OsclReadySetPosition](#)
- class [OsclExecScheduler](#)

7.250.1 Detailed Description

PV Scheduler internal AO base class. Both [OsclActiveObject](#) and [OsclTimerObject](#) derive from this class. For Symbian, this just container has the desired additions to the basic CTimer or OsclActiveObj functionality. For non-Symbian, this class contains the entire AO implementation.

7.250.2 Constructor & Destructor Documentation

7.250.2.1 PVActiveBase::PVActiveBase (const char *name*[], int32 *pri*)

7.250.2.2 virtual PVActiveBase::~PVActiveBase () [virtual]

7.250.3 Member Function Documentation

7.250.3.1 void PVActiveBase::Activate ()

7.250.3.2 void PVActiveBase::AddToScheduler ()

Reimplemented in [OsclActiveObject](#), and [OsclTimerObject](#).

7.250.3.3 void PVActiveBase::Cancel ()

Reimplemented in [OsclActiveObject](#), and [OsclTimerObject](#).

7.250.3.4 void PVActiveBase::Destroy ()

7.250.3.5 virtual void PVActiveBase::DoCancel () [pure virtual]

Implements cancellation of an outstanding request.

This function is called as part of the active object's [Cancel\(\)](#).

It must call the appropriate cancel function offered by the active object's asynchronous service provider. The asynchronous service provider's cancel is expected to act immediately.

[DoCancel\(\)](#) must not wait for event completion; this is handled by [Cancel\(\)](#).

Implemented in [OsclDNSRequestAO](#), [OsclSocketRequestAO](#), [OsclActiveObject](#), and [OsclTimerObject](#).

7.250.3.6 OSCL_IMPORT_REF bool PVActiveBase::IsAdded ()

7.250.3.7 bool PVActiveBase::IsInAnyQ () [inline]

7.250.3.8 void PVActiveBase::RemoveFromScheduler ()

Reimplemented in [OsclActiveObject](#), and [OsclTimerObject](#).

7.250.3.9 virtual void PVActiveBase::Run () [pure virtual]

Handles an active object's request completion event.

A derived class must provide an implementation to handle the completed request. If appropriate, it may issue another request.

The function is called by the active scheduler when a request completion event occurs, i.e. after the active scheduler's `WaitForAnyRequest()` function completes.

Before calling this active object's `Run()` function, the active scheduler has:

1. decided that this is the highest priority active object with a completed request
2. marked this active object's request as complete (i.e. the request is no longer outstanding)

`Run()` runs under a trap harness in the active scheduler. If it leaves, then the active scheduler calls `ExecError()` to handle the leave.

Note that once the active scheduler's `Start()` function has been called, all user code is run under one of the program's active object's `Run()` or `RunError()` functions.

Implemented in [OsclDNSMethod](#), [OsclDNSRequestAO](#), [OsclSocketMethod](#), [OsclSocketRequestAO](#), and [CallbackTimer< Alloc >](#).

7.250.3.10 virtual int32 PVActiveBase::RunError (int32 *aError*) [pure virtual]

Virtual routine that gets called if the active object's Run routine leaves.

Parameters:

***aError*:** the leave code generated by the Run.

Returns:

:returns `OsclErrNone` if the error was handled, or returns the input *aError* value if not handled.

Implemented in [OsclActiveObject](#), and [OsclTimerObject](#).

7.250.4 Friends And Related Function Documentation

7.250.4.1 friend class OsclActiveObject [friend]

7.250.4.2 friend class OsclExecScheduler [friend]

7.250.4.3 friend class OsclReadyCompare [friend]

7.250.4.4 friend class OsclReadyQ [friend]

7.250.4.5 friend class OsclReadySetPosition [friend]

7.250.4.6 friend class OsclSchedulerCommonBase [friend]

7.250.4.7 friend class OsclTimerObject [friend]

7.250.4.8 friend class PVActiveStats [friend]

7.250.5 Field Documentation

7.250.5.1 uint32 PVActiveBase::iAddedNum

7.250.5.2 bool PVActiveBase::iBusy

7.250.5.3 OsclNameString<PVEXECNAMELEN> PVActiveBase::iName

7.250.5.4 PVActiveStats* PVActiveBase::iPVActiveStats

7.250.5.5 TReadyQueLink PVActiveBase::iPVReadyQLink

7.250.5.6 OsclAOStatus PVActiveBase::iStatus

The request status associated with an asynchronous request.

This is passed as a parameter to all asynchronous service providers.

The active scheduler uses this to check whether the active object's request has completed.

The function can use the completion code to judge the success or otherwise of the request.

Request status contains one of the values OSCL_REQUEST_ERR_NONE: request completed with no error, or request is not active. OSCL_REQUEST_PENDING: request is active & pending OSCL_REQUEST_ERR_CANCEL: request was canceled before completion. or any user-defined value.

7.250.5.7 PVThreadContext PVActiveBase::iThreadContext

The documentation for this class was generated from the following file:

- [oscl_scheduler_aobase.h](#)

7.251 PVActiveStats Class Reference

```
#include <oscl_scheduler_aobase.h>
```

Friends

- class [PVActiveBase](#)
- class [OsclExecScheduler](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclActiveObject](#)
- class [OsclTimerObject](#)
- class [OsclReadyQ](#)

7.251.1 Detailed Description

PV AO statistics

7.251.2 Friends And Related Function Documentation

7.251.2.1 friend class OsclActiveObject [friend]

7.251.2.2 friend class OsclExecScheduler [friend]

7.251.2.3 friend class OsclExecSchedulerCommonBase [friend]

7.251.2.4 friend class OsclReadyQ [friend]

7.251.2.5 friend class OsclTimerObject [friend]

7.251.2.6 friend class PVActiveBase [friend]

The documentation for this class was generated from the following file:

- [oscl_scheduler_aobase.h](#)

7.252 PVLogger Class Reference

```
#include <pvlogger.h>
```

Public Types

- `typedef int32 log_level_type`
- `typedef int32 message_id_type`
- `typedef int32 filter_status_type`
- `typedef _OsclBasicAllocator alloc_type`

Public Methods

- `void SetLogLevel (log_level_type level)`
- `OSCL_IMPORT_REF void SetLogLevelAndPropagate (log_level_type level)`
- `log_level_type GetLogLevel ()`
- `void DisableAppenderInheritance ()`
- `void AddAppender (OsclSharedPtr< PVLoggerAppender > &appender)`
- `void RemoveAppender (OsclSharedPtr< PVLoggerAppender > &appender)`
- `void AddFilter (OsclSharedPtr< PVLoggerFilter > &filter)`
- `uint32 GetNumAppenders ()`
- `OSCL_IMPORT_REF bool IsActive (log_level_type level)`
- `OSCL_IMPORT_REF void LogMsgStringV (message_id_type msgID, const char *fmt, va_list arguments)`
- `OSCL_IMPORT_REF void LogMsgBuffersV (message_id_type msgID, int32 numPairs, va_list arguments)`
- `OSCL_IMPORT_REF void LogMsgString (message_id_type msgID, const char *fmt,...)`
- `OSCL_IMPORT_REF void LogMsgBuffers (message_id_type msgID, int32 numPairs,...)`
- `OSCL_IMPORT_REF PVLogger (const char *inputTag, log_level_type level, bool oAppenderInheritance)`
- `virtual ~PVLogger ()`

Static Public Methods

- `OSCL_IMPORT_REF void Init ()`
- `OSCL_IMPORT_REF void Cleanup ()`
- `OSCL_IMPORT_REF PVLogger * GetLoggerObject (const char *inputTag)`

Protected Methods

- `void SetParent (PVLogger *parentLogger)`
- `PVLogger * GetParent ()`

Friends

- class `PVLoggerRegistry`

7.252.1 Member Typedef Documentation

7.252.1.1 `typedef _OsclBasicAllocator PVLogger::alloc_type`

7.252.1.2 `typedef int32 PVLogger::filter_status_type`

7.252.1.3 `typedef int32 PVLogger::log_level_type`

7.252.1.4 `typedef int32 PVLogger::message_id_type`

7.252.2 Constructor & Destructor Documentation

7.252.2.1 `OSCL_IMPORT_REF PVLogger::PVLogger (const char * inputTag, log_level_type level, bool oAppenderInheritance)`

Logger Constructor

Parameters:

tag Logger tag, unique to a logging control point

level Active Log level of the logger

oAppenderInheritance

Returns:

NONE

7.252.2.2 `virtual PVLogger::~PVLogger () [inline, virtual]`

7.252.3 Member Function Documentation

7.252.3.1 `void PVLogger::AddAppender (OsclSharedPtr< PVLoggerAppender > & appender) [inline]`

This method adds an appender to the logging control point. Each logger maintains a list of appenders. Any msg to a logger if deemed active is logged to all the appenders.

Parameters:

appender pointer to the appender to add

Returns:

NONE

Exceptions:

leaves if out of memory

7.252.3.2 `void PVLogger::AddFilter (OsclSharedPtr< PVLoggerFilter > & filter) [inline]`

This method adds a message filter to the logging control point. Each logger maintains a list of filters. Any msg to a logger if deemed active is passed through the msg filters prior to logging.

Parameters:

msgFilter pointer to the filter to add

Returns:

NONE

Exceptions:

leaves if out of memory

7.252.3.3 OSCL_IMPORT_REF void PVLogger::Cleanup () [static]

Frees the PVLogger singleton used by the current thread. This must be called before thread exit. No messages can be logged after cleanup.

Returns:**7.252.3.4 void PVLogger::DisableAppenderInheritance () [inline]**

This method disables appender inheritance for the logging control point

7.252.3.5 OSCL_IMPORT_REF PVLogger* PVLogger::GetLoggerObject (const char * *inputTag*) [static]

This is a factory method to create a log control point, with a certain input tag. There is a central registry of all the loggers, with their corresponding tags, called PV Logger Registry. In case the logger with the specified tag exists in the global registry, it is returned, else a new one is created and a pointer to the same is returned.

Parameters:

inputTag logger tag, viz. "x.y.z"

level log level associated with the logging control point (All messages with log levels less than equal to the log level of the control point would be logged)

oAppenderInheritance

Returns:

PVLogger* Pointer to the logging control point

Exceptions:

leaves if out of memory

7.252.3.6 log_level_type PVLogger::GetLogLevel () [inline]

This method returns the log level of a control point. This could either have been set explicitly by the user (at the time of creation or later) or could have been inherited from one of its ancestors.

Returns:

log level associated with the logging control point

7.252.3.7 uint32 PVLogger::GetNumAppenders () [inline]

This method returns the number of appenders attached to the logging control point.

7.252.3.8 PVLogger* PVLogger::GetParent () [inline, protected]**7.252.3.9 OSCL_IMPORT_REF void PVLogger::Init () [static]**

PVLogger needs to be initialized once per thread. This creates the PVLogger singleton that is used throughout the duration of the thread. Initialization must occur before the first message is logged.

Exceptions:

leaves if out of memory

7.252.3.10 OSCL_IMPORT_REF bool PVLogger::IsActive ([log_level_type level](#))

This method determines if a msg passed to the logging control point is active or not. Only messages that are deemed active are logged. Messages are considered not active if any of the following criteria are met:

- All logging is disabled at this logging control point
- If all the log levels, leading upto the root log point are uninitialized
- If the log level of the incoming message is LESS THAN that of the active log level of the logging control point.

Returns:

BOOL

7.252.3.11 OSCL_IMPORT_REF void PVLogger::LogMsgBuffers ([message_id_type msgID](#), int32 *numPairs*, ...)

This method logs opaque data buffers to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

Parameters:

msgID Message ID, that is unique to a message

numPairs Number of (ptr_len, ptr) pairs

arguments Variable list of arguments

Returns:

NONE

7.252.3.12 OSCL_IMPORT_REF void PVLogger::LogMsgBuffersV ([message_id_type msgID](#), int32 *numPairs*, va_list *arguments*)

This method logs opaque data buffers to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

Parameters:

msgID Message ID, that is unique to a message

numPairs Number of (ptr_len, ptr) pairs

arguments Variable list of arguments

Returns:

NONE

7.252.3.13 OSCL_IMPORT_REF void PVLogger::LogMsgString (*message_id_type msgID, const char *fmt, ...)*

This method logs formatted text msg to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

Parameters:

msgID Message ID, that is unique to a message

fmt format string, similar to one taken by printf

arguments Variable list of arguments

Returns:

NONE

7.252.3.14 OSCL_IMPORT_REF void PVLogger::LogMsgStringV (*message_id_type msgID, const char *fmt, va_list arguments)*

This method logs formatted text msg to all the appenders, after running through the message filters. After logging the message to the appenders attached to the current control point, the message is passed up to the parent node, only if appender inheritance is enabled.

Parameters:

msgID Message ID, that is unique to a message

fmt format string, similar to one taken by printf

arguments Variable list of arguments

Returns:

NONE

7.252.3.15 void PVLogger::RemoveAppender (*OsclSharedPtr< PVLoggerAppender > & appender*) [inline]

This method removes an appender from the logging control point. Each logger maintains a list of appenders. Any msg to a logger if deemed active is logged to all the appenders.

Parameters:

appender pointer to the appender to delete

Returns:

NONE

7.252.3.16 void PVLogger::SetLogLevel (*log_level_type* *level*) [inline]

This method is used to set the log level of a control point.

Parameters:

level log level associated with the logging control point

Returns:

NONE

7.252.3.17 OSCL_IMPORT_REF void PVLogger::SetLogLevelAndPropagate (*log_level_type* *level*)

This method is used to set the log level of a control point, as well as to propagate the level to all the descendants of this control point.

Parameters:

level log level associated with the logging control point

Returns:

NONE

7.252.3.18 void PVLogger::SetParent (PVLogger **parentLogger*) [inline, protected]**7.252.4 Friends And Related Function Documentation****7.252.4.1 friend class PVLoggerRegistry [friend]**

The documentation for this class was generated from the following file:

- [pvlogger.h](#)

7.253 PVLoggerAppender Class Reference

```
#include <pvlogger_accessories.h>
```

Public Types

- `typedef PVLogger::message_id_type message_id_type`

Public Methods

- `virtual ~PVLoggerAppender ()`
- `virtual void AppendString (message_id_type msgID, const char *fmt, va_list va)=0`
- `virtual void AppendBuffers (message_id_type msgID, int32 numPairs, va_list va)=0`

7.253.1 Detailed Description

Base class for all message appenders. This class defines the interface to the message appenders. There are two kinds of msg appender APIs, one to append text messages, and other to append opaque message buffers.

7.253.2 Member Typedef Documentation

7.253.2.1 `typedef PVLogger::message_id_type PVLoggerAppender::message_id_type`

7.253.3 Constructor & Destructor Documentation

7.253.3.1 `virtual PVLoggerAppender::~PVLoggerAppender () [inline, virtual]`

7.253.4 Member Function Documentation

7.253.4.1 `virtual void PVLoggerAppender::AppendBuffers (message_id_type msgID, int32 numPairs, va_list va) [pure virtual]`

7.253.4.2 `virtual void PVLoggerAppender::AppendString (message_id_type msgID, const char *fmt, va_list va) [pure virtual]`

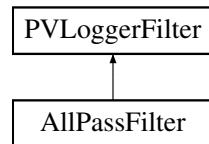
The documentation for this class was generated from the following file:

- `pvlogger_accessories.h`

7.254 PVLoggerFilter Class Reference

```
#include <pvlogger_accessories.h>
```

Inheritance diagram for PVLoggerFilter::



Public Types

- `typedef PVLogger::message_id_type message_id_type`
- `typedef PVLogger::log_level_type log_level_type`
- `typedef PVLogger::filter_status_type filter_status_type`

Public Methods

- `virtual ~PVLoggerFilter ()`
- `virtual filter_status_type FilterString (char *tag, message_id_type msgID, log_level_type level)=0`
- `virtual filter_status_type FilterOpaqueMessge (char *tag, message_id_type msgID, log_level_type level)=0`

7.254.1 Detailed Description

Base class for all message filters. This class defines the interface to the message filters. There are two kinds of msg filtering APIs, one to filter text messages, and other to filter opaque message buffers.

7.254.2 Member Typedef Documentation

7.254.2.1 `typedef PVLogger::filter_status_type PVLoggerFilter::filter_status_type`

Reimplemented in [AllPassFilter](#).

7.254.2.2 `typedef PVLogger::log_level_type PVLoggerFilter::log_level_type`

Reimplemented in [AllPassFilter](#).

7.254.2.3 `typedef PVLogger::message_id_type PVLoggerFilter::message_id_type`

Reimplemented in [AllPassFilter](#).

7.254.3 Constructor & Destructor Documentation

7.254.3.1 `virtual PVLoggerFilter::~PVLoggerFilter () [inline, virtual]`

7.254.4 Member Function Documentation

7.254.4.1 `virtual filter_status_type PVLoggerFilter::FilterOpaqueMessge (char * tag, message_id_type msgID, log_level_type level) [pure virtual]`

Implemented in [AllPassFilter](#).

7.254.4.2 `virtual filter_status_type PVLoggerFilter::FilterString (char * tag, message_id_type msgID, log_level_type level) [pure virtual]`

Implemented in [AllPassFilter](#).

The documentation for this class was generated from the following file:

- [pvlogger_accessories.h](#)

7.255 PVLoggerLayout Class Reference

```
#include <pvlogger_accessories.h>
```

Public Types

- `typedef PVLogger::message_id_type message_id_type`

Public Methods

- `virtual ~PVLoggerLayout ()`
- `virtual int32 FormatString (char *formatBuf, int32 formatBufSize, message_id_type msgID, const char *fmt, va_list va)=0`
- `virtual int32 FormatOpaqueMessage (char *formatBuf, int32 formatBufSize, message_id_type msgID, int32 numPairs, va_list va)=0`

7.255.1 Detailed Description

Base class for all message formatters. This class defines the interface to the message formatter. There are two kinds of msg formatting APIs, one to format text messages, and other to format opaque message buffers.

7.255.2 Member Typedef Documentation

7.255.2.1 `typedef PVLogger::message_id_type PVLoggerLayout::message_id_type`

7.255.3 Constructor & Destructor Documentation

7.255.3.1 `virtual PVLoggerLayout::~PVLoggerLayout () [inline, virtual]`

7.255.4 Member Function Documentation

7.255.4.1 `virtual int32 PVLoggerLayout::FormatOpaqueMessage (char *formatBuf, int32 formatBufSize, message_id_type msgID, int32 numPairs, va_list va) [pure virtual]`

Formats the data and copies it to the given buffer.

Returns:

The length of the buffer used.

7.255.4.2 `virtual int32 PVLoggerLayout::FormatString (char *formatBuf, int32 formatBufSize, message_id_type msgID, const char *fmt, va_list va) [pure virtual]`

Formats the string and copies it to the given buffer.

Returns:

The length of the string not including the trailing '\0'

The documentation for this class was generated from the following file:

- [pvlogger_accessories.h](#)

7.256 PVLoggerRegistry Class Reference

```
#include <pvlogger_registry.h>
```

Public Types

- `typedef PVLogger::log_level_type log_level_type`
- `typedef PVLogger::alloc_type alloc_type`

Public Methods

- `OSCL_IMPORT_REF PVLoggerRegistry()`
- `virtual OSCL_IMPORT_REF ~PVLoggerRegistry()`
- `OSCL_IMPORT_REF PVLogger * GetPVLoggerObject (const char *tagIn)`
- `OSCL_IMPORT_REF PVLogger * CreatePVLogger (const char *tagIn, log_level_type level, bool oAppenderInheritance)`
- `OSCL_IMPORT_REF bool SetNodeLogLevelExplicit (char *tagIn, log_level_type level)`
- `OSCL_IMPORT_REF void SetNodeLogLevelExplicit (Oscl_TagTree< PVLogger *, alloc_type >::node_type *node, log_level_type level)`

Static Public Methods

- `OSCL_IMPORT_REF PVLoggerRegistry * GetPVLoggerRegistry()`

7.256.1 Detailed Description

Class: PVLoggerRegistry

PVLoggerRegistry class, maintains a repository of all the loggers, along with their associated tags, in a tag tree. Any request for a log control point is serviced by this class.

Memory Ownership: Creates log control points for each tag, and holds these pointers in the tag tree. `PVLogger` registry is responsible for calling the destructor on each of these loggers.

7.256.2 Member Typedef Documentation

7.256.2.1 `typedef PVLogger::alloc_type PVLoggerRegistry::alloc_type`

7.256.2.2 `typedef PVLogger::log_level_type PVLoggerRegistry::log_level_type`

7.256.3 Constructor & Destructor Documentation

7.256.3.1 `OSCL_IMPORT_REF PVLoggerRegistry::PVLoggerRegistry()`

PVLoggerRegistry Constructor

7.256.3.2 `virtual OSCL_IMPORT_REF PVLoggerRegistry::~PVLoggerRegistry () [virtual]`

PVLoggerRegistry Destructor

7.256.4 Member Function Documentation

7.256.4.1 OSCL_IMPORT_REF PVLogger* PVLoggerRegistry::CreatePVLogger (const char * *tagIn*, log_level_type *level*, bool *oAppenderInheritance*)

This method creates a log control point, with specified tag, and level

Parameters:

inputTag logger tag, viz. "x.y.z"
level log level associated with the logging control point
oAppenderInheritance

Returns:

PVLogger<alloc_type, TheLock>* Pointer to the logging control point

7.256.4.2 OSCL_IMPORT_REF PVLogger* PVLoggerRegistry::GetPVLoggerObject (const char * *tagIn*)

PVLoggerRegistry method to get access to a logging control point, associated with a tag. In case the logger for this tag does not exist, it is created afresh, else pointer to the existing one is returned.

Parameters:

inputTag logger tag, viz. "x.y.z"
level log level associated with the logging control point
oAppenderInheritance

Returns:

PVLogger<Alloc, TheLock>* Pointer to the logging control point

7.256.4.3 OSCL_IMPORT_REF PVLoggerRegistry* PVLoggerRegistry::GetPVLoggerRegistry () [static]

Get the logger registry. There is only one logger registry instance per thread.

7.256.4.4 OSCL_IMPORT_REF void PVLoggerRegistry::SetNodeLogLevelExplicit (Oscl_TagTree< PVLogger *, alloc_type >::node_type * *node*, log_level_type *level*)

This method recursively propagates the log level to all the descendants, of a node.

Parameters:

node Node ptr, associated with a logger, from the tag tree.
level log level associated with the logging control point

Returns:

NONE

**7.256.4.5 OSCL_IMPORT_REF bool PVLoggerRegistry::SetNodeLogLevelExplicit (char * *tagIn*,
log_level_type level)**

This method propagates the log level to all the descendants of the node, with a specified tag.

Parameters:

tagIn logger tag, viz. "x.y.z"

level log level associated with the logging control point

Returns:

true on success, else false.

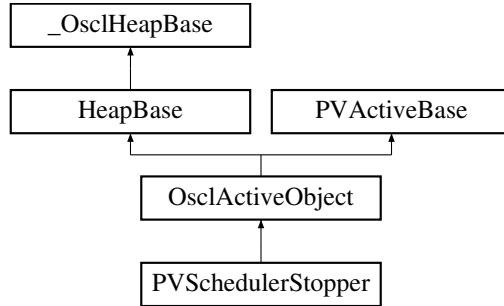
The documentation for this class was generated from the following file:

- [pvlogger_registry.h](#)

7.257 PVSchedulerStopper Class Reference

```
#include <oscl_scheduler.h>
```

Inheritance diagram for PVSchedulerStopper::



Public Methods

- [PVSchedulerStopper \(\)](#)
- [~PVSchedulerStopper \(\)](#)

7.257.1 Detailed Description

Scheduler stopper AO class, for internal use by scheduler.

7.257.2 Constructor & Destructor Documentation

7.257.2.1 PVSchedulerStopper::PVSchedulerStopper ()

7.257.2.2 PVSchedulerStopper::~PVSchedulerStopper ()

The documentation for this class was generated from the following file:

- [oscl_scheduler.h](#)

7.258 PVSockBufRecv Class Reference

```
#include <oscl_socket_request.h>
```

Public Methods

- [PVSockBufRecv \(\)](#)
- [PVSockBufRecv \(uint8 *aPtr, uint32 aLen, uint32 aMax\)](#)
- [PVSockBufRecv \(const PVSockBufRecv &a\)](#)

Data Fields

- [uint8 * iPtr](#)
- [uint32 iLen](#)
- [uint32 iMaxLen](#)

7.258.1 Constructor & Destructor Documentation

7.258.1.1 PVSockBufRecv::PVSockBufRecv () [inline]

7.258.1.2 PVSockBufRecv::PVSockBufRecv (uint8 * *aPtr*, uint32 *aLen*, uint32 *aMax*) [inline]

7.258.1.3 PVSockBufRecv::PVSockBufRecv (const PVSockBufRecv & *a*) [inline]

7.258.2 Field Documentation

7.258.2.1 uint32 PVSockBufRecv::iLen

7.258.2.2 uint32 PVSockBufRecv::iMaxLen

7.258.2.3 uint8* PVSockBufRecv::iPtr

The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.259 PVSockBufSend Class Reference

```
#include <oscl_socket_request.h>
```

Public Methods

- [PVSockBufSend \(\)](#)
- [PVSockBufSend \(const uint8 *aPtr, uint32 aLen\)](#)
- [PVSockBufSend \(const PVSockBufSend &a\)](#)

Data Fields

- const uint8 * [iPtr](#)
- uint32 [iLen](#)

7.259.1 Constructor & Destructor Documentation

7.259.1.1 PVSockBufSend::PVSockBufSend () [inline]

7.259.1.2 PVSockBufSend::PVSockBufSend (const uint8 * *aPtr*, uint32 *aLen*) [inline]

7.259.1.3 PVSockBufSend::PVSockBufSend (const PVSockBufSend & *a*) [inline]

7.259.2 Field Documentation

7.259.2.1 uint32 PVSockBufSend::iLen

7.259.2.2 const uint8* PVSockBufSend::iPtr

The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.260 PVThreadContext Class Reference

```
#include <oscl_scheduler_threadcontext.h>
```

Public Methods

- OSCL_IMPORT_REF PVThreadContext ()
- OSCL_IMPORT_REF ~PVThreadContext ()
- OSCL_IMPORT_REF bool IsSameThreadContext ()
- OSCL_IMPORT_REF void EnterThreadContext ()
- OSCL_IMPORT_REF void ExitThreadContext ()

Static Public Methods

- OSCL_IMPORT_REF uint32 Id ()
- OSCL_IMPORT_REF bool ThreadHasScheduler ()

Friends

- class PVActiveBase
- class OsclActiveObject
- class OsclTimerObject
- class OsclExecScheduler
- class OsclCoeActiveScheduler
- class OsclExecSchedulerCommonBase
- class OsclExecSchedulerBase
- class OsclCoeActiveSchedulerBase

7.260.1 Constructor & Destructor Documentation

7.260.1.1 OSCL_IMPORT_REF PVThreadContext::PVThreadContext ()

7.260.1.2 OSCL_IMPORT_REF PVThreadContext::~PVThreadContext ()

7.260.2 Member Function Documentation

7.260.2.1 OSCL_IMPORT_REF void PVThreadContext::EnterThreadContext ()

enter and exit thread context.

7.260.2.2 OSCL_IMPORT_REF void PVThreadContext::ExitThreadContext ()

7.260.2.3 OSCL_IMPORT_REF uint32 PVThreadContext::Id () [static]

static routine to get a unique thread ID for caller's thread context.

7.260.2.4 OSCL_IMPORT_REF bool PVThreadContext::IsSameThreadContext ()

compare caller's thread context to this one.

7.260.2.5 OSCL_IMPORT_REF bool PVThreadContext::ThreadHasScheduler () [static]

a static utility to tell whether the calling thread has any scheduler— either Oscl scheduler or native scheduler.

7.260.3 Friends And Related Function Documentation**7.260.3.1 friend class OsclActiveObject [friend]****7.260.3.2 friend class OsclCoeActiveScheduler [friend]****7.260.3.3 friend class OsclCoeActiveSchedulerBase [friend]****7.260.3.4 friend class OsclExecScheduler [friend]****7.260.3.5 friend class OsclExecSchedulerBase [friend]****7.260.3.6 friend class OsclExecSchedulerCommonBase [friend]****7.260.3.7 friend class OsclTimerObject [friend]****7.260.3.8 friend class PVActiveBase [friend]**

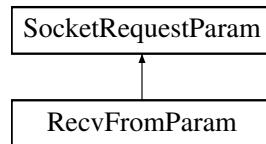
The documentation for this class was generated from the following file:

- [oscl_scheduler_threadcontext.h](#)

7.261 RecvFromParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for RecvFromParam::



Public Methods

- [RecvFromParam \(uint8 *aPtr, uint32 aMaxLen, OsclNetworkAddress &aAddress, uint32 flags, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > *aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > *aPacketSource\)](#)

Data Fields

- [PVSockBufRecv iBufRecv](#)
- [uint32 iFlags](#)
- [OsclNetworkAddress & iAddr](#)
- [uint32 iMultiMaxLen](#)
- [Oscl_Vector< uint32, OsclMemAllocator > * iPacketLen](#)
- [Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * iPacketSource](#)

7.261.1 Constructor & Destructor Documentation

[7.261.1.1 RecvFromParam::RecvFromParam \(uint8 *& aPtr, uint32 aMaxLen, OsclNetworkAddress & aAddress, uint32 flags, uint32 aMultiMax, Oscl_Vector< uint32, OsclMemAllocator > * aPacketLen, Oscl_Vector< OsclNetworkAddress, OsclMemAllocator > * aPacketSource\) \[inline\]](#)

7.261.2 Field Documentation

[7.261.2.1 OsclNetworkAddress& RecvFromParam::iAddr](#)

[7.261.2.2 PVSockBufRecv RecvFromParam::iBufRecv](#)

[7.261.2.3 uint32 RecvFromParam::iFlags](#)

[7.261.2.4 uint32 RecvFromParam::iMultiMaxLen](#)

[7.261.2.5 Oscl_Vector<uint32, OsclMemAllocator>* RecvFromParam::iPacketLen](#)

[7.261.2.6 Oscl_Vector<OsclNetworkAddress, OsclMemAllocator>* RecvFromParam::iPacketSource](#)

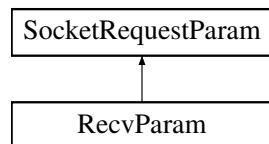
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.262 RecvParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for RecvParam::



Public Methods

- [RecvParam \(uint8 *&aPtr, uint32 aMaxLen, uint32 flags\)](#)

Data Fields

- [PVSockBufRecv iBufRecv](#)
- [uint32 iFlags](#)

7.262.1 Constructor & Destructor Documentation

7.262.1.1 RecvParam::RecvParam (uint8 *& aPtr, uint32 aMaxLen, uint32 flags) [inline]

7.262.2 Field Documentation

7.262.2.1 PVSockBufRecv RecvParam::iBufRecv

7.262.2.2 uint32 RecvParam::iFlags

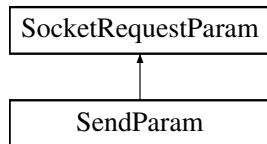
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.263 SendParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for SendParam::



Public Methods

- [SendParam \(const uint8 *&aPtr, uint32 aLen, uint32 aFlags\)](#)

Data Fields

- [PVSockBufSend iBufSend](#)
- [uint32 iFlags](#)
- [uint32 iXferLen](#)

7.263.1 Detailed Description

Socket method parameter sets

7.263.2 Constructor & Destructor Documentation

7.263.2.1 SendParam::SendParam (const uint8 *& aPtr, uint32 aLen, uint32 aFlags) [inline]

7.263.3 Field Documentation

7.263.3.1 PVSockBufSend SendParam::iBufSend

7.263.3.2 uint32 SendParam::iFlags

7.263.3.3 uint32 SendParam::iXferLen

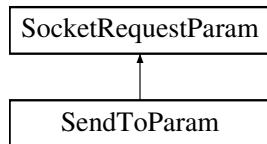
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.264 SendToParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for SendToParam::



Public Methods

- [SendToParam \(const uint8 *&aPtr, uint32 aLen, OsclNetworkAddress &anAddr, uint32 flags\)](#)
- [~SendToParam \(\)](#)

Data Fields

- [PVSockBufSend iBufSend](#)
- [uint32 iFlags](#)
- [OsclNetworkAddress iAddr](#)
- [uint32 iXferLen](#)

7.264.1 Constructor & Destructor Documentation

7.264.1.1 SendToParam::SendToParam (const uint8 *& *aPtr*, uint32 *aLen*, OsclNetworkAddress & *anAddr*, uint32 *flags*) [inline]

7.264.1.2 SendToParam::~SendToParam () [inline]

7.264.2 Field Documentation

7.264.2.1 OsclNetworkAddress SendToParam::iAddr

7.264.2.2 PVSockBufSend SendToParam::iBufSend

7.264.2.3 uint32 SendToParam::iFlags

7.264.2.4 uint32 SendToParam::iXferLen

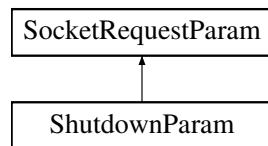
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.265 ShutdownParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for ShutdownParam::



Public Methods

- [ShutdownParam \(TPVSocketShutdown aHow\)](#)

Data Fields

- [TPVSocketShutdown iHow](#)

7.265.1 Constructor & Destructor Documentation

7.265.1.1 ShutdownParam::ShutdownParam ([TPVSocketShutdown aHow](#)) [inline]

7.265.2 Field Documentation

7.265.2.1 [TPVSocketShutdown ShutdownParam::iHow](#)

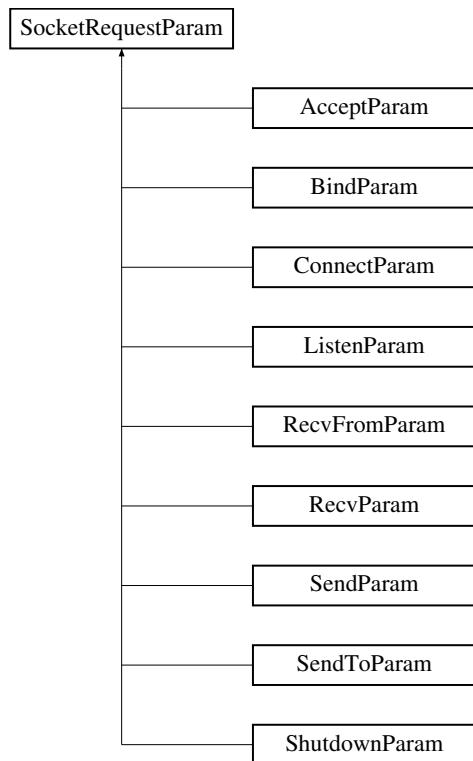
The documentation for this class was generated from the following file:

- [oscl_socket_request.h](#)

7.266 SocketRequestParam Class Reference

```
#include <oscl_socket_request.h>
```

Inheritance diagram for SocketRequestParam::



Public Methods

- [SocketRequestParam \(TPVSocketFxn aFxn\)](#)

Data Fields

- [TPVSocketFxn iFxn](#)

7.266.1 Detailed Description

Base class for all socket method parameter sets

7.266.2 Constructor & Destructor Documentation

7.266.2.1 `SocketRequestParam::SocketRequestParam (TPVSocketFxn aFxn) [inline]`

7.266.3 Field Documentation

7.266.3.1 `TPVSocketFxn SocketRequestParam::iFxn`

The documentation for this class was generated from the following file:

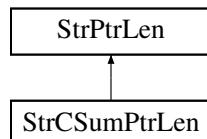
- `oscl_socket_request.h`

7.267 StrCSumPtrLen Struct Reference

same as [StrPtrLen](#), but includes checksum field and method to speed up querying

```
#include <oscl_str_ptr_len.h>
```

Inheritance diagram for StrCSumPtrLen::



Public Types

- [typedef int16 CheckSumType](#)

Public Methods

- [void setPtrLen \(const char *newPtr, uint32 newLen\)](#)
- [CheckSumType getCheckSum \(\) const](#)
- [OSCL_IMPORT_REF void setCheckSum \(\)](#)
- [StrCSumPtrLen \(\)](#)
- [StrCSumPtrLen \(const char *newPtr\)](#)
- [StrCSumPtrLen \(const char *newPtr, uint32 newLen\)](#)
- [StrCSumPtrLen \(const StrCSumPtrLen &rhs\)](#)
- [StrCSumPtrLen \(const StrPtrLen &rhs\)](#)
- [c_bool isCIEquivalentTo \(const StrCSumPtrLen &rhs\) const](#)
- [c_bool operator== \(const StrCSumPtrLen &rhs\) const](#)
- [c_bool operator!= \(const StrCSumPtrLen &rhs\) const](#)
- [StrCSumPtrLen & operator= \(const StrCSumPtrLen &rhs\)](#)
- [StrCSumPtrLen & operator= \(const StrPtrLen &rhs\)](#)
- [StrCSumPtrLen & operator= \(const char *rhs\)](#)

Protected Attributes

- [CheckSumType checkSum](#)

7.267.1 Detailed Description

same as [StrPtrLen](#), but includes checksum field and method to speed up querying

7.267.2 Member Typedef Documentation

7.267.2.1 `typedef int16 StrCSumPtrLen::CheckSumType`

7.267.3 Constructor & Destructor Documentation

7.267.3.1 `StrCSumPtrLen::StrCSumPtrLen () [inline]`

7.267.3.2 `StrCSumPtrLen::StrCSumPtrLen (const char * newPtr) [inline]`

7.267.3.3 `StrCSumPtrLen::StrCSumPtrLen (const char * newPtr, uint32 newLen) [inline]`

7.267.3.4 `StrCSumPtrLen::StrCSumPtrLen (const StrCSumPtrLen & rhs) [inline]`

7.267.3.5 `StrCSumPtrLen::StrCSumPtrLen (const StrPtrLen & rhs) [inline]`

7.267.4 Member Function Documentation

7.267.4.1 `CheckSumType StrCSumPtrLen::getCheckSum () const [inline]`

7.267.4.2 `c_bool StrCSumPtrLen::isCIEquivalentTo (const StrCSumPtrLen & rhs) const [inline]`

7.267.4.3 `c_bool StrCSumPtrLen::operator!= (const StrCSumPtrLen & rhs) const [inline]`

7.267.4.4 `StrCSumPtrLen& StrCSumPtrLen::operator= (const char * rhs) [inline]`

Reimplemented from [StrPtrLen](#).

7.267.4.5 `StrCSumPtrLen& StrCSumPtrLen::operator= (const StrPtrLen & rhs) [inline]`

Reimplemented from [StrPtrLen](#).

7.267.4.6 `StrCSumPtrLen& StrCSumPtrLen::operator= (const StrCSumPtrLen & rhs) [inline]`

7.267.4.7 `c_bool StrCSumPtrLen::operator== (const StrCSumPtrLen & rhs) const [inline]`

7.267.4.8 `OSCL_IMPORT_REF void StrCSumPtrLen::setCheckSum ()`

7.267.4.9 `void StrCSumPtrLen::setPtrLen (const char * newPtr, uint32 newLen) [inline]`

Reimplemented from [StrPtrLen](#).

7.267.5 Field Documentation

7.267.5.1 `CheckSumType StrCSumPtrLen::checkSum [protected]`

The documentation for this struct was generated from the following file:

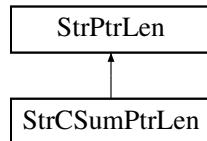
- [oscl_str_ptr_len.h](#)

7.268 StrPtrLen Struct Reference

This data structure encapsulates a set of functions used to perform.

```
#include <oscl_str_ptr_len.h>
```

Inheritance diagram for StrPtrLen::



Public Methods

- [StrPtrLen](#) (const char *newPtr)
- [StrPtrLen](#) (const char *newPtr, uint32 newLen)
- [StrPtrLen](#) ()
- [StrPtrLen](#) (const StrPtrLen &rhs)
- const char * [c_str](#) () const
- int32 [length](#) () const
- int32 [size](#) () const
- void [setPtrLen](#) (const char *newPtr, uint32 newLen)
- [c_bool](#) [isCIEquivalentTo](#) (const StrPtrLen &rhs) const
- [c_bool](#) [isCIPrefixOf](#) (const StrPtrLen &rhs) const
- int32 [operator==](#) (const StrPtrLen &rhs) const
- int32 [operator!=](#) (const StrPtrLen &rhs) const
- StrPtrLen & [operator=](#) (const StrPtrLen &rhs)
- StrPtrLen & [operator=](#) (const char *rhs)

Protected Methods

- bool [isLetter](#) (const char c) const

Protected Attributes

- const char * [ptr](#)
- int32 [len](#)

7.268.1 Detailed Description

This data structure encapsulates a set of functions used to perform.

standard string operations. It should be used for null-terminated constant (non-modifiable) strings of char type.

7.268.2 Constructor & Destructor Documentation

7.268.2.1 `StrPtrLen::StrPtrLen (const char * newPtr) [inline]`

7.268.2.2 `StrPtrLen::StrPtrLen (const char * newPtr, uint32 newLen) [inline]`

7.268.2.3 `StrPtrLen::StrPtrLen () [inline]`

7.268.2.4 `StrPtrLen::StrPtrLen (const StrPtrLen & rhs) [inline]`

7.268.3 Member Function Documentation

7.268.3.1 `const char* StrPtrLen::c_str () const [inline]`

7.268.3.2 `c_bool StrPtrLen::isCIEquivalentTo (const StrPtrLen & rhs) const [inline]`

7.268.3.3 `c_bool StrPtrLen::isCIPrefixOf (const StrPtrLen & rhs) const [inline]`

7.268.3.4 `bool StrPtrLen::isLetter (const char c) const [inline, protected]`

7.268.3.5 `int32 StrPtrLen::length () const [inline]`

7.268.3.6 `int32 StrPtrLen::operator!= (const StrPtrLen & rhs) const [inline]`

7.268.3.7 `StrPtrLen& StrPtrLen::operator= (const char * rhs) [inline]`

Reimplemented in [StrCSumPtrLen](#).

7.268.3.8 `StrPtrLen& StrPtrLen::operator= (const StrPtrLen & rhs) [inline]`

Reimplemented in [StrCSumPtrLen](#).

7.268.3.9 `int32 StrPtrLen::operator== (const StrPtrLen & rhs) const [inline]`

7.268.3.10 `void StrPtrLen::setPtrLen (const char * newPtr, uint32 newLen) [inline]`

Reimplemented in [StrCSumPtrLen](#).

7.268.3.11 `int32 StrPtrLen::size () const [inline]`

7.268.4 Field Documentation

7.268.4.1 `int32 StrPtrLen::len [protected]`

7.268.4.2 `const char* StrPtrLen::ptr [protected]`

The documentation for this struct was generated from the following file:

- [oscl_str_ptr_len.h](#)

7.269 TimeValue Class Reference

The TimeValue class represents a time value in a format native to the system.

```
#include <oscl_time.h>
```

Public Methods

- OSCL_COND_IMPORT_REF [TimeValue](#) ()

Create a TimeValue representing the current time.
- OSCL_COND_IMPORT_REF [TimeValue](#) (const [TimeValue](#) &Tv)

Copy constructor.
- OSCL_COND_IMPORT_REF [TimeValue](#) (long tv, [TimeUnits](#) units)

Create a TimeValue representing an interval of tv units.
- OSCL_COND_IMPORT_REF [TimeValue](#) (const [OsclBasicTimeStruct](#) &in_tv)

Create a TimeValue representing the absolute time specified by the BasicTimeStruct.
- OSCL_COND_IMPORT_REF [TimeValue](#) (const [ISO8601timeStrBuf](#) time_strbuf)
- OSCL_COND_IMPORT_REF [TimeValue](#) (uint16 aYear, uint16 aMonth, uint16 aDay, uint16 aHour, uint16 aMinute, uint16 aSecond, uint16 aMilliseconds)
- OSCL_COND_IMPORT_REF [TimeValue](#) ([OsclBasicDateTimeStruct](#) in_ts)

Create a TimeValue representing the absolute time specified by the BasicDateTimeStruct.
- OSCL_COND_IMPORT_REF int32 [get_local_time](#) ()

Get the local time after having adjusted for daylight saving.
- OSCL_COND_IMPORT_REF void [set_to_zero](#) ()

Set the time value to zero (represents a zero interval).
- OSCL_COND_IMPORT_REF void [set_to_current_time](#) ()

Set the time value to the current system time.
- OSCL_COND_IMPORT_REF void [set_from_ntp_time](#) (const uint32 ntp_offset)

This method converts a 32-bit NTP offset to system time.
- OSCL_COND_IMPORT_REF uint32 [get_sec](#) () const

Get a 32 bit value representing the seconds since the (system dependent) epoch.
- OSCL_COND_IMPORT_REF int32 [to_msec](#) () const
- OSCL_COND_IMPORT_REF uint32 [get_usec](#) () const

Get a 32 bit value representing the number of microseconds in the time value.
- OSCL_COND_IMPORT_REF uint64 [get_timevalue_in_usec](#) () const

Get a 64 bit value representing the time value converted to microseconds.
- OSCL_IMPORT_REF char * [get_str_ctime](#) ([CtimeStrBuf](#) ctime_strbuf)

Get a string containing a text representation of this TimeValue object.

- OSCL_IMPORT_REF int [get_pv8601_str_time](#) (PV8601timeStrBuf time_stdbuf)

Get a PV extended text representation of the Time based on the PV 8601 format.
- OSCL_IMPORT_REF int [get_ISO8601_str_time](#) (ISO8601timeStrBuf time_stdbuf)

Get a PV extended text representation of the Time based on the ISO 8601 format.
- OSCL_IMPORT_REF char * [get_rfc822_gmtime_str](#) (int max_time_strlen, char *time_str)

Get a text representation of the time in the GMT timezone based on the RFC 822 / RFC 1123 (also described in the HTTP spec RFC 2068 and RFC 2616).
- OSCL_COND_IMPORT_REF bool [is_zero](#) ()

Determine if the time value is zero.
- OSCL_COND_IMPORT_REF bool [is_zulu](#) () const

Manipulate internal flags to mark the time value as being in "zulu" (GMT) time.
- OSCL_COND_IMPORT_REF void [set_zulu](#) (bool is_zulu)
- OSCL_COND_IMPORT_REF TimeValue & [operator=](#) (const TimeValue &a)

Assignment operator.
- OSCL_COND_IMPORT_REF TimeValue & [operator+=](#) (const TimeValue &a)

+ = operator
- OSCL_COND_IMPORT_REF TimeValue & [operator-=](#) (const TimeValue &a)

- = operator
- OSCL_COND_IMPORT_REF TimeValue & [operator *=](#) (const int scale)

This operator scales the time value by a constant.
- OSCL_COND_IMPORT_REF OsclBasicTimeStruct * [get_timeval_ptr](#) ()
 - OSCL_COND_IMPORT_REF TimeValue & [operator+=](#) (const int32 aSeconds)
 - OSCL_COND_IMPORT_REF TimeValue & [operator-=](#) (const int32 aSeconds)

Friends

- class [NTPTime](#)
- OSCL_COND_IMPORT_REF friend bool [operator==](#) (const TimeValue &a, const TimeValue &b)
- OSCL_COND_IMPORT_REF friend bool [operator!=](#) (const TimeValue &a, const TimeValue &b)
- OSCL_COND_IMPORT_REF friend bool [operator<=](#) (const TimeValue &a, const TimeValue &b)
- OSCL_COND_IMPORT_REF friend bool [operator>=](#) (const TimeValue &a, const TimeValue &b)
- OSCL_COND_IMPORT_REF friend bool [operator<](#) (const TimeValue &a, const TimeValue &b)
- OSCL_COND_IMPORT_REF friend bool [operator>](#) (const TimeValue &a, const TimeValue &b)

7.269.1 Detailed Description

The TimeValue class represents a time value in a format native to the system.

This class provides common time functions independent of any OS. The actual representation used is native to the system that the class is compiled on to increase efficiency. Macros used in this class:

- OSCL_HAS_ANSI_STRING_SUPPORT:

Definitions to determine the type of basic time structure used to store the time

- OSCL_HAS_UNIX_TIME_FUNCS
- OSCL_HAS_SYMBIAN_SUPPORT
- OSCL_HAS_MSWIN_SUPPORT

7.269.2 Constructor & Destructor Documentation

7.269.2.1 OSCL_COND_IMPORT_REF TimeValue::TimeValue ()

Create a TimeValue representing the current time.

7.269.2.2 OSCL_COND_IMPORT_REF TimeValue::TimeValue (const TimeValue & *Tv*)

Copy constructor.

7.269.2.3 OSCL_COND_IMPORT_REF TimeValue::TimeValue (long *tv*, TimeUnits *units*)

Create a TimeValue representing an interval of tv units.

Parameters:

- tv* The number of units in the interval to be represented by this TimeValue.
- units* The units of the tv argument. Must be in the enumeration TimeUnits.

7.269.2.4 OSCL_COND_IMPORT_REF TimeValue::TimeValue (const OsclBasicTimeStruct & *in_tv*)

Create a TimeValue representing the absolute time specified by the BasicTimeStruct.

Parameters:

- in_tv* OsclBasicTimeStruct as defined for each platform.

7.269.2.5 OSCL_COND_IMPORT_REF TimeValue::TimeValue (const ISO8601timeStrBuf *time_strbuf*)

7.269.2.6 OSCL_COND_IMPORT_REF TimeValue::TimeValue (uint16 *aYear*, uint16 *aMonth*, uint16 *aDay*, uint16 *aHour*, uint16 *aMinute*, uint16 *aSecond*, uint16 *aMilliseconds*)

TimeValue constructor that sets time according to following input parameter for a specific date time. Please note that no argument is check for its validity (range etc) It might assert incase wrong argument are passed by user of this api.

Parameters:

in] uint16 wYear;
in] uint16 wMonth; Jan = 1 to Dec = 12
in] uint16 wDay; 1-28/29/30/31
in] uint16 wHour; 0 to 23
in] uint16 wMinute; 0 to 59
in] uint16 wSecond; 0 to 59
in] uint16 wMilliseconds; 0 to 999

7.269.2.7 OSCL_COND_IMPORT_REF TimeValue::TimeValue ([OsclBasicDateTimeStruct in_ts](#))

Create a TimeValue representing the absolute time specified by the BasicDateTimeStruct.

Parameters:

in_ts OsclBasicDateTimeStruct as defined for each platform provides the date in a readable format (i.e. day, date, week etc.) Notes: Implementation incomplete (= not done) on Win32, Wince, Symbian

7.269.3 Member Function Documentation**7.269.3.1 OSCL_IMPORT_REF int TimeValue::get_ISO8601_str_time ([ISO8601timeStrBuf time_strbuf](#))**

Get a PV extended text representation of the Time based on the ISO 8601 format.

Parameters:

time_strbuf A ISO8601timeStrBuf object to which the text representation will be written,

Returns:

The number of characters copied to the buffer, not including the terminating null. The returned string is of the form "1985-04-12 10:15:30Z".

7.269.3.2 OSCL_COND_IMPORT_REF int32 TimeValue::get_local_time ()

Get the local time after having adjusted for daylight saving.

Notes: Implementation incomplete (= not done) on Win32, Wince, Symbian

7.269.3.3 OSCL_IMPORT_REF int TimeValue::get_pv8601_str_time ([PV8601timeStrBuf time_strbuf](#))

Get a PV extended text representation of the Time based on the PV 8601 format.

Parameters:

time_strbuf A PV8601timeStrBuf object to which the text representation will be written,

Returns:

The number of characters copied to the buffer, not including the terminating null. The returned string is of the form "19850412T101530.047Z".

7.269.3.4 OSCL_IMPORT_REF char* TimeValue::get_rfc822_gmtime_str (int max_time_strlen, char * time_str)

Get a text representation of the time in the GMT timezone based on the RFC 822 / RFC 1123 (also described in the HTTP spec RFC 2068 and RFC 2616).

Parameters:

max_time_strlen The maximum number of characters that can be written to the buffer.

time_str A pointer to the buffer to which the characters will be written.

Returns:

Returns a pointer to the buffer (same as *time_str*) containing a null terminated (c-style) string of the form "Wed, 30 Jun 1993 21:49:08 GMT".

7.269.3.5 OSCL_COND_IMPORT_REF uint32 TimeValue::get_sec ()

Get a 32 bit value representing the seconds since the (system dependent) epoch.

Returns:

This call returns a 32 bit value representing the number of seconds since the epoch. On unix systems this represents the number of seconds since the unix epoch Jan 1 1970. On Win32 this represents the number of seconds since Jan 1, 1601. This is intended to be used for intervals rather than for absolute time. (On Win32 for example, a 32 bit value would be too small to represent the number of seconds from the epoch until the current time.)

7.269.3.6 OSCL_IMPORT_REF char* TimeValue::get_str_ctime (CtimeStrBuf ctime_strbuf)

Get a string containing a text representation of this TimeValue object.

Parameters:

ctime_strbuf A CtimeStrBuf object to which the text representation will be written,

Returns:

A pointer to the input CtimeStrBuf is returned. This string is null terminated of the form "Wed Jun 30 21:49:08 1993".

7.269.3.7 OSCL_COND_IMPORT_REF OsclBasicTimeStruct* TimeValue::get_timeval_ptr ()**7.269.3.8 OSCL_COND_IMPORT_REF uint64 TimeValue::get_timevalue_in_usec ()**

Get a 64 bit value representing the time value converted to microseconds.

Returns:

Returns a uint64 value representing the time value in terms of microseconds. The time origin is dependent on platform for which OSCL is compiled. For example for symbian it is midnight, January 1st, 0 AD for windows it is January 1, 1601 (UTC)

7.269.3.9 OSCL_COND_IMPORT_REF uint32 TimeValue::get_usec ()

Get a 32 bit value representing the number of microseconds in the time value.

Returns:

Returns a uint32 value representing the number of microseconds in the time value after subtracting off the whole seconds.

7.269.3.10 OSCL_COND_IMPORT_REF bool TimeValue::is_zero ()

Determine if the time value is zero.

7.269.3.11 OSCL_COND_IMPORT_REF bool TimeValue::is_zulu ()

Manipulate internal flags to mark the time value as being in "zulu" (GMT) time.

7.269.3.12 OSCL_COND_IMPORT_REF TimeValue& TimeValue::operator *= (const int scale)

This operator scales the time value by a constant.

7.269.3.13 OSCL_COND_IMPORT_REF TimeValue& TimeValue::operator+= (const int32 aSeconds)**7.269.3.14 OSCL_COND_IMPORT_REF TimeValue& TimeValue::operator+= (const TimeValue & a)**

+= operator

7.269.3.15 OSCL_COND_IMPORT_REF TimeValue& TimeValue::operator-= (const int32 aSeconds)**7.269.3.16 OSCL_COND_IMPORT_REF TimeValue& TimeValue::operator-= (const TimeValue & a)**

-= operator

7.269.3.17 OSCL_COND_IMPORT_REF TimeValue& TimeValue::operator= (const TimeValue & a)

Assignment operator.

7.269.3.18 OSCL_COND_IMPORT_REF void TimeValue::set_from_ntp_time (const uint32 ntp_offset)

This method converts a 32-bit NTP offset to system time.

This method takes a 32-bit ntp offset which is the number of seconds from 0 h Jan 1, 1900 and converts it to the system time

7.269.3.19 OSCL_COND_IMPORT_REF void TimeValue::set_to_current_time ()

Set the time value to the current system time.

7.269.3.20 OSCL_COND_IMPORT_REF void TimeValue::set_to_zero ()

Set the time value to zero (represents a zero interval).

7.269.3.21 OSCL_COND_IMPORT_REF void TimeValue::set_zulu (bool *is_zulu*)**7.269.3.22 OSCL_COND_IMPORT_REF int32 TimeValue::to_msec ()****7.269.4 Friends And Related Function Documentation****7.269.4.1 friend class NTPTime [friend]****7.269.4.2 OSCL_COND_IMPORT_REF friend bool operator!= (const TimeValue & *a*, const TimeValue & *b*) [friend]****7.269.4.3 OSCL_COND_IMPORT_REF friend bool operator< (const TimeValue & *a*, const TimeValue & *b*) [friend]****7.269.4.4 OSCL_COND_IMPORT_REF friend bool operator<= (const TimeValue & *a*, const TimeValue & *b*) [friend]****7.269.4.5 OSCL_COND_IMPORT_REF friend bool operator== (const TimeValue & *a*, const TimeValue & *b*) [friend]****7.269.4.6 OSCL_COND_IMPORT_REF friend bool operator> (const TimeValue & *a*, const TimeValue & *b*) [friend]****7.269.4.7 OSCL_COND_IMPORT_REF friend bool operator>= (const TimeValue & *a*, const TimeValue & *b*) [friend]**

The documentation for this class was generated from the following file:

- [oscl_time.h](#)

7.270 TLSStorageOps Class Reference

```
#include <oscl_tls.h>
```

Static Public Methods

- OSCL_IMPORT_REF void [save_registry \(TOsclTlsKey *key, OsclAny *ptr, int32 &\)](#)
- OSCL_IMPORT_REF [OsclAny * get_registry \(TOsclTlsKey *key\)](#)

7.270.1 Member Function Documentation

**7.270.1.1 OSCL_IMPORT_REF OsclAny* TLSStorageOps::get_registry (TOsclTlsKey * *key*)
[static]**

**7.270.1.2 OSCL_IMPORT_REF void TLSStorageOps::save_registry (TOsclTlsKey * *key*,
OsclAny * *ptr*, int32 &) [static]**

The documentation for this class was generated from the following file:

- [oscl_tls.h](#)

7.271 TReadyQueLink Class Reference

```
#include <oscl_scheduler_readyq.h>
```

Public Methods

- [TReadyQueLink \(\)](#)

Data Fields

- int32 [iAOPriority](#)
- uint32 [iTimeToRunTicks](#)
- uint32 [iTimeQueuedTicks](#)
- uint32 [iSeqNum](#)
- OsclAny * [iIsIn](#)

7.271.1 Detailed Description

This class defines the queue link, which is common to both ready Q and timer Q. Each AO contains its own queue link object.

7.271.2 Constructor & Destructor Documentation

7.271.2.1 [TReadyQueLink::TReadyQueLink \(\) \[inline\]](#)

7.271.3 Field Documentation

7.271.3.1 [int32 TReadyQueLink::iAOPriority](#)

7.271.3.2 [OsclAny* TReadyQueLink::iIsIn](#)

7.271.3.3 [uint32 TReadyQueLink::iSeqNum](#)

7.271.3.4 [uint32 TReadyQueLink::iTimeQueuedTicks](#)

7.271.3.5 [uint32 TReadyQueLink::iTimeToRunTicks](#)

The documentation for this class was generated from the following file:

- [oscl_scheduler_readyq.h](#)

7.272 WStrPtrLen Struct Reference

This data structure encapsulates a set of functions used to perform.

```
#include <oscl_str_ptr_len.h>
```

Public Methods

- [WStrPtrLen \(const oscl_wchar *newPtr\)](#)
- [WStrPtrLen \(const oscl_wchar *newPtr, uint32 newLen\)](#)
- [WStrPtrLen \(\)](#)
- [WStrPtrLen \(const WStrPtrLen &rhs\)](#)
- [const oscl_wchar * c_str \(\) const](#)
- [int32 length \(\) const](#)
- [int32 size \(\) const](#)
- [void setPtrLen \(const oscl_wchar *newPtr, uint32 newLen\)](#)
- [c_bool isCIEquivalentTo \(const WStrPtrLen &rhs\) const](#)
- [int32 operator== \(const WStrPtrLen &rhs\) const](#)
- [int32 operator!= \(const WStrPtrLen &rhs\) const](#)
- [WStrPtrLen & operator= \(const WStrPtrLen &rhs\)](#)
- [WStrPtrLen & operator= \(const oscl_wchar *rhs\)](#)

Protected Attributes

- [const oscl_wchar * ptr](#)
- [int32 len](#)

7.272.1 Detailed Description

This data structure encapsulates a set of functions used to perform.

standard string operations. It should be used for null-terminated constant strings (non-modifiable) of wchar type.

7.272.2 Constructor & Destructor Documentation

- 7.272.2.1 `WStrPtrLen::WStrPtrLen (const oscl_wchar * newPtr) [inline]`
- 7.272.2.2 `WStrPtrLen::WStrPtrLen (const oscl_wchar * newPtr, uint32 newLen) [inline]`
- 7.272.2.3 `WStrPtrLen::WStrPtrLen () [inline]`
- 7.272.2.4 `WStrPtrLen::WStrPtrLen (const WStrPtrLen & rhs) [inline]`

7.272.3 Member Function Documentation

- 7.272.3.1 `const oscl_wchar* WStrPtrLen::c_str () const [inline]`
- 7.272.3.2 `c_bool WStrPtrLen::isCIEquivalentTo (const WStrPtrLen & rhs) const [inline]`
- 7.272.3.3 `int32 WStrPtrLen::length () const [inline]`
- 7.272.3.4 `int32 WStrPtrLen::operator!= (const WStrPtrLen & rhs) const [inline]`
- 7.272.3.5 `WStrPtrLen& WStrPtrLen::operator= (const oscl_wchar * rhs) [inline]`
- 7.272.3.6 `WStrPtrLen& WStrPtrLen::operator= (const WStrPtrLen & rhs) [inline]`
- 7.272.3.7 `int32 WStrPtrLen::operator== (const WStrPtrLen & rhs) const [inline]`
- 7.272.3.8 `void WStrPtrLen::setPtrLen (const oscl_wchar * newPtr, uint32 newLen) [inline]`
- 7.272.3.9 `int32 WStrPtrLen::size () const [inline]`

7.272.4 Field Documentation

- 7.272.4.1 `int32 WStrPtrLen::len [protected]`
- 7.272.4.2 `const oscl_wchar* WStrPtrLen::ptr [protected]`

The documentation for this struct was generated from the following file:

- `oscl_str_ptr_len.h`

Chapter 8

oscl File Documentation

8.1 oscl_aostatus.h File Reference

Some basic types used with active objects.

```
#include "osclconfig_proc.h"
#include "oscl_base.h"
#include "oscl_aostatus.inl"
```

Data Structures

- class [OsclAOStatus](#)

Variables

- const int32 [OSCL_REQUEST_ERR_NONE](#) = 0
- const int32 [OSCL_REQUEST_PENDING](#) = (-0x7fffffff)
- const int32 [OSCL_REQUEST_ERR_CANCEL](#) = (-1)
- const int32 [OSCL_REQUEST_ERR_GENERAL](#) = (-2)

8.1.1 Detailed Description

Some basic types used with active objects.

8.2 oscl_assert.h File Reference

The file [oscl_assert.h](#) provides an OSCL_ASSERT macro to document assumptions and test them during development.

```
#include "oscl_base.h"  
#include "oscl_assert.inl"
```

Defines

- #define **OSCL_ASSERT**(_expr) ((_expr)?((void)0):OSCL_Assert(# _expr,__FILE__,__LINE__))

Functions

- OSCL_COND_IMPORT_REF void **_OSCL_Abort** ()
This function terminates the current process abnormally.
- OSCL_IMPORT_REF void **OSCL_Assert** (const char *expr, const char *filename, int line_number)
OSCL_ASSERT macro evaluates an expression and when the result is false, prints a diagnostic message and aborts the program.

8.2.1 Detailed Description

The file [oscl_assert.h](#) provides an OSCL_ASSERT macro to document assumptions and test them during development.

8.3 oscl_base.h File Reference

The file [oscl_base.h](#) is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros.

```
#include "osclconfig.h"
#include "oscl_base_macros.h"
#include "oscl_types.h"
#include "osclconfig_check.h"
#include "pv_config.h"
```

Defines

- `#define OSCL_HAS_SINGLETON_SUPPORT 1`

Functions

- `void PVOsclBase_Init ()`
- `void PVOsclBase_Cleanup ()`

8.3.1 Detailed Description

The file [oscl_base.h](#) is the public header that should be included to pick up the platform configuration, basic type definitions, and common macros.

8.4 oscl_base_alloc.h File Reference

A basic allocator that does not rely on other modules.

```
#include "osclconfig.h"  
#include "oscl_defalloc.h"  
#include "osclconfig_memory.h"
```

Data Structures

- class [_OsclBasicAllocator](#)

8.4.1 Detailed Description

A basic allocator that does not rely on other modules.

8.5 oscl_base_macros.h File Reference

This file defines common macros and constants for basic compilation support.

```
#include "osclconfig.h"
```

Defines

- #define **NULL_TERM_CHAR** '\0'
The NULL_TERM_CHAR is used to terminate c-style strings.
- #define **NULL** (0)
if the NULL macro isn't already defined, then define it as zero.
- #define **OSCL_INLINE** inline
- #define **OSCL_COND_EXPORT_REF**
- #define **OSCL_COND_IMPORT_REF**
- #define **OSCL_CONST_CAST**(type, exp) ((type)(exp))
Type casting macros.
- #define **OSCL_STATIC_CAST**(type, exp) ((type)(exp))
- #define **OSCL_REINTERPRET_CAST**(type, exp) ((type)(exp))
- #define **OSCL_DYNAMIC_CAST**(type, exp) ((type)(exp))
- #define **OSCL_VIRTUAL_BASE**(type) type
- #define **OSCL_UNUSED_ARG**(vbl) (void)(vbl)
- #define **OSCL_UNUSED_RETURN**(value) return value
- #define **OSCL_MIN**(a, b) ((a) < (b) ? (a) : (b))
- #define **OSCL_MAX**(a, b) ((a) > (b) ? (a) : (b))
- #define **OSCL_ABS**(a) ((a) > (0) ? (a) : -(a))
- #define **OSCL_TEMPLATED_DESTRUCTOR_CALL**(type, simple_type) type :: ~simple_type ()
- #define **OSCL_UNSIGNED_CONST**(x) x
- #define **OSCL_PACKED_VAR** "error"

8.5.1 Detailed Description

This file defines common macros and constants for basic compilation support.

8.6 oscl_bin_stream.h File Reference

Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order.

```
#include "oscl_base.h"
#include "oscl_bin_stream.inl"
```

Data Structures

- class [OsclBinIStream](#)
- class [OsclBinIStreamBigEndian](#)
- class [OsclBinIStreamLittleEndian](#)
- class [OsclBinOStream](#)

Class OsclBinOStream implements the basic stream functions for an output stream.

- class [OsclBinOStreamBigEndian](#)

Class OsclBinOStreamBigEndian implements a binary output stream using big endian byte ordering.

- class [OsclBinOStreamLittleEndian](#)

Class OsclBinOStreamLittleEndian implements a binary output stream using little endian byte ordering.

- class [OsclBinStream](#)

8.6.1 Detailed Description

Defines a set of binary stream classes which handle portable input / output of binary data regardless of the native byte order.

8.7 oscl_byte_order.h File Reference

This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders).

```
#include "oscl_base.h"  
#include "oscl_byte_order.inl"
```

Functions

- void [little_endian_to_host](#) (char *data, uint32 size)
Convert little endian to host format.
- void [host_to_little_endian](#) (char *data, unsigned int size)
Convert host to little endian format.
- void [big_endian_to_host](#) (char *data, unsigned int size)
Convert big endian to host format.
- void [host_to_big_endian](#) (char *data, unsigned int size)
Convert host to big endian format.

8.7.1 Detailed Description

This file defines functions providing byte ordering utility (e.g., switching between big and little endian orders).

8.8 oscl_defalloc.h File Reference

The file defines simple default memory allocator classes. These allocators are used by the [Oscl_Vector](#) and [Oscl_Map](#) class, etc.

```
#include "oscl_base.h"  
#include "osclconfig_compiler_warnings.h"  
#include "oscl_mem_inst.h"
```

Data Structures

- class [Oscl_Alloc](#)
- class [Oscl_Dealloc](#)
- class [Oscl_DefAlloc](#)
- class [Oscl_TAlloc](#)
- class [OsclAllocDestructDealloc](#)
- class [OsclDestructDealloc](#)
- struct [rebind](#)

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)
- #define [ALLOCATE\(n\)](#) [allocate_fl\(n,__FILE__,__LINE__\)](#)
- #define [ALLOC_AND_CONSTRUCT\(n\)](#) [alloc_and_construct_fl\(n,__FILE__,__LINE__\)](#)

8.8.1 Detailed Description

The file defines simple default memory allocator classes. These allocators are used by the [Oscl_Vector](#) and [Oscl_Map](#) class, etc.

8.9 oscl_dll.h File Reference

Defines a DLL entry point.

```
#include "osclconfig.h"
```

Defines

- #define **OSCL_DLL_ENTRY_POINT()** void oscl_dll_entry_point() {}
- #define **OSCL_DLL_ENTRY_POINT_DEFAULT()**

8.9.1 Detailed Description

Defines a DLL entry point.

8.10 oscl_dns.h File Reference

The file [oscl_socket.h](#) defines the OSCL DNS APIs.

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_defalloc.h"
#include "oscl_socket.h"
```

Data Structures

- class [OsclIDNS](#)
- class [OsclDNSObserver](#)

Enumerations

- enum [TPVDNSFxn](#) { [EPVDNSGetHostByName](#) }
- enum [TPVDNSEvent](#) { [EPVDNSSuccess](#), [EPVDNSPending](#), [EPVDNSTimeout](#), [EPVDNSFailure](#), [EPVDNSCancel](#) }

8.10.1 Detailed Description

The file [oscl_socket.h](#) defines the OSCL DNS APIs.

8.11 oscl_dns_gethostbyname.h File Reference

```
#include "oscl_dns_method.h"
#include "oscl_dns.h"
#include "osclconfig_io.h"
```

Data Structures

- class [OsclGetHostByNameMethod](#)
- class [OsclGetHostByNameRequest](#)

8.12 oscl_dns_imp.h File Reference

```
#include "oscl_dns_tuneables.h"  
#include "oscl_dns_imp_pv.h"
```

8.13 oscl_dns_imp_base.h File Reference

```
#include "oscl_socket_imp.h"
#include "oscl_dns_request.h"
#include "oscl_dns.h"
```

Data Structures

- class [OsclDNSIBase](#)

8.14 oscl_dns_imp_pv.h File Reference

```
#include "oscl_socket_imp_base.h"
#include "oscl_dns_request.h"
#include "oscl_dns_imp_base.h"
```

Data Structures

- class [OsclDNSI](#)

8.15 oscl_dns_method.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_dns.h"
#include "pvlogger.h"
```

Data Structures

- class [OsclIDNSMethod](#)
- class [OsclDNSRequestAO](#)

8.16 oscl_dns_param.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_dns_tuneables.h"
#include "oscl_namestring.h"
#include "oscl_dns.h"
#include "oscl_mutex.h"
#include "oscl_semaphore.h"
```

Data Structures

- class [DNSRequestParam](#)
- class [GetHostByNameParam](#)

Typedefs

- typedef [OsclMemAllocator TDNSRequestParamAllocator](#)

8.16.1 Typedef Documentation

8.16.1.1 typedef [OsclMemAllocator TDNSRequestParamAllocator](#)

8.17 oscl_dns_request.h File Reference

```
#include "oscl_dns_tuneables.h"
#include "oscl_namestring.h"
#include "oscl_dns.h"
#include "oscl_socket_types.h"
```

Data Structures

- class [OsclDNSRequest](#)

8.18 oscl_dns_tuneables.h File Reference

```
#include "osclconfig_io.h"
#include "osclconfig_proc.h"
```

Defines

- #define **PV_DNS_SERVER** 1
- #define **PV_DNS_IS_THREAD** OSCL_HAS_THREAD_SUPPORT

8.18.1 Define Documentation

8.18.1.1 #define PV_DNS_IS_THREAD OSCL_HAS_THREAD_SUPPORT

PV_DNS_IS_THREAD chooses either the threaded or AO-based implementation of the PV DNS request.
Note: AO-based option is not good here, since some DNS requests will block the caller until completion.

8.18.1.2 #define PV_DNS_SERVER 1

Enable/disable the PV DNS server here.

8.19 oscl_double_list.h File Reference

Internal use types for scheduler.

```
#include "osclconfig_proc.h"
#include "oscl_base.h"
#include "oscl_assert.h"
#include "oscl_double_list.inl"
```

Data Structures

- class [OsclDoubleLink](#)
- class [OsclDoubleList](#)
- class [OsclDoubleListBase](#)
- class [OsclDoubleRunner](#)
- class [OsclPriorityLink](#)
- class [OsclPriorityList](#)

Defines

- #define [QUE_ITER_BEGIN](#)(_type, _qname)
- #define [QUE_ITER_END](#)(_qname)

Functions

- template<class T, class S> T * [OsclPtrAdd](#) (T *aPtr, S aVal)
- template<class T, class S> T * [OsclPtrSub](#) (T *aPtr, S aVal)

8.19.1 Detailed Description

Internal use types for scheduler.

8.20 oscl_errno.h File Reference

Defines functions to access additional information on errors where supported through an errno or similar service.

```
#include "oscl_base.h"
#include "osclconfig_error.h"
#include "oscl_errno.inl"
```

Functions

- OSCL_IMPORT_REF bool [OSCL_IsErrnoSupported \(\)](#)
This function determines if a particular system saves the error number that occurs on a system call.
- OSCL_IMPORT_REF int [OSCL_GetLastError \(\)](#)
This function returns the value of the system's global error number variable.
- OSCL_IMPORT_REF bool [OSCL_SetLastError \(int newVal\)](#)
This function sets the last error code for the system.
- OSCL_IMPORT_REF char * [OSCL_StrError \(int errnum\)](#)
This function maps an error number to an error-message string.

8.20.1 Detailed Description

Defines functions to access additional information on errors where supported through an errno or similar service.

8.21 oscl_error.h File Reference

OSCL Error trap and cleanup include file.

```
#include "oscl_heapbase.h"
#include "oscl_defalloc.h"
#include "oscl_error_codes.h"
#include "oscl_singleton.h"
#include "oscl_assert.h"
#include "oscl_tls.h"
```

Data Structures

- class [OsclError](#)
- class [OsclErrorTrap](#)
- class [OsclTLSEx](#)
- class [OsclTLSRegistryEx](#)

Defines

- #define [OSCL_TRAPSTACK_PUSH\(a\)](#) OsclError::PushL(a)
- #define [OSCL_TRAPSTACK_POP\(\)](#) OsclError::Pop()
- #define [OSCL_TRAPSTACK_POPDEALLOC\(\)](#) OsclError::PopDealloc()

8.21.1 Detailed Description

OSCL Error trap and cleanup include file.

8.22 oscl_error_allocator.h File Reference

Defines a memory allocation class used by the oscl error layer.

```
#include "oscl_base.h"  
#include "oscl_base_macros.h"  
#include "osclconfig_error.h"  
#include "oscl_assert.h"  
#include "oscl_defalloc.h"
```

Data Structures

- class [OsclErrorAllocator](#)

This class provides static methods to invoke the user defined memory allocation routines.

8.22.1 Detailed Description

Defines a memory allocation class used by the oscl error layer.

8.23 oscl_error_codes.h File Reference

Defines basic error and leave codes.

Defines

- #define `OsclErrNone` 0
- #define `OsclErrGeneral` 100
- #define `OsclErrNoMemory` 101
- #define `OsclErrCancelled` 102
- #define `OsclErrNotSupported` 103
- #define `OsclErrArgument` 104
- #define `OsclErrBadHandle` 105
- #define `OsclErrAlreadyExists` 106
- #define `OsclErrBusy` 107
- #define `OsclErrNotReady` 108
- #define `OsclErrCorrupt` 109
- #define `OsclErrTimeout` 110
- #define `OsclErrOverflow` 111
- #define `OsclErrUnderflow` 112
- #define `OsclErrInvalidState` 113
- #define `OsclErrNoResources` 114
- #define `OsclErrNotInstalled` 115
- #define `OsclErrAlreadyInstalled` 116
- #define `OsclErrSystemCallFailed` 117
- #define `OsclErrNoHandler` 118
- #define `OsclErrThreadContextIncorrect` 119
- #define `OSCL_ERR_NONE` `OsclErrNone`
- #define `OSCL_BAD_ALLOC_EXCEPTION_CODE` `OsclErrNoMemory`
- #define `OsclSuccess` 0
- #define `OsclPending` 1
- #define `OsclFailure` -1

Typedefs

- typedef int32 `OsclLeaveCode`
- typedef int32 `OsclReturnCode`

8.23.1 Detailed Description

Defines basic error and leave codes.

8.24 oscl_error_imp.h File Reference

Internal error implementation support.

```
#include "osclconfig_error.h"  
#include "oscl_error_imp_jumps.h"
```

Defines

- #define PVERROR_IMP_JUMPS

8.24.1 Detailed Description

Internal error implementation support.

8.25 oscl_error_imp_cppexceptions.h File Reference

Implementation File for Leave using C++ exceptions.

```
#include "oscl_error_trapcleanup.h"
```

Data Structures

- class [internalLeave](#)

Defines

- #define [PVError_DoLeave\(\)](#) [internalLeave](#) __ilv;__ilv.a=0;throw(__ilv)
- #define [_PV_TRAP](#)(__r, __s)
- #define [_PV_TRAP_NO_TLS](#)(__trapimp, __r, __s)

8.25.1 Detailed Description

Implementation File for Leave using C++ exceptions.

8.26 oscl_error_imp_fatalerror.h File Reference

Implementation File for Leave using system fatal error.

```
#include "oscl_assert.h"
```

Defines

- #define PVError_DoLeave() _OSCL_Abort()
- #define _PV_TRAP(__r, __s)
- #define _PV_TRAP_NO_TLS(__tr, __r, __s)

8.26.1 Detailed Description

Implementation File for Leave using system fatal error.

8.26.2 Define Documentation

8.26.2.1 #define _PV_TRAP(__r, __s)

Value:

```
__r=OsclErrNone; \
{__s;}
```

8.26.2.2 #define _PV_TRAP_NO_TLS(__tr, __r, __s)

Value:

```
__r=OsclErrNone; \
{__s;}
```

8.26.2.3 #define PVError_DoLeave() _OSCL_Abort()

8.27 oscl_error_imp_jumps.h File Reference

Implementation of using Setjmp / Longjmp.

```
#include "oscl_error_trapcleanup.h"
#include "oscl_assert.h"
#include "osclconfig_error.h"
#include "oscl_defalloc.h"
#include "oscl_error.h"
```

Data Structures

- class [OsclJump](#)

Defines

- #define OSCL_JUMP_MAX_JUMP_MARKS OSCL_MAX_TRAP_LEVELS
- #define internalLeave (-1)
- #define PVError_DoLeave() OsclJump::StaticJump(internalLeave)
- #define _PV_TRAP(__r, __s)
- #define _PV_TRAP_NO_TLS(__trapimp, __r, __s)

8.27.1 Detailed Description

Implementation of using Setjmp / Longjmp.

8.27.2 Define Documentation

8.27.2.1 #define _PV_TRAP(__r, __s)

Value:

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __trap=OsclErrorTrapImp::Trap(); \
    if(!__trap){__s;}else{ \
        int __tr=setjmp(*(__trap->iJumpData->Top())); \
        if (__tr==0)\ 
            {__s;} \
        else if (__tr==internalLeave)\ 
            {__r=__trap->iLeave;} \
            __trap->UnTrap();} \
}
```

8.27.2.2 #define _PV_TRAP_NO_TLS(__trapimp, __r, __s)

Value:

```
__r=OsclErrNone; \
{ \
    OsclErrorTrapImp* __trap=OsclErrorTrapImp::TrapNoTls(__trapimp); \
    if(!__trap){__s;}else{ \
        int __tr=setjmp(*((__trap->iJumpData->Top()))); \
        if (__tr==0)\ 
            {__s;} \
        else if (__tr==internalLeave)\ 
            {__r=__trap->iLeave;} \
        __trap->UnTrap();} \
}
```

8.27.2.3 #define PVError_DoLeave() OsclJump::StaticJump(internalLeave)

8.28 oscl_error_trapcleanup.h File Reference

OSCL Error trap and cleanup implementation include file.

```
#include "osclconfig_error.h"  
#include "oscl_heapbase.h"  
#include "oscl_defalloc.h"  
#include "oscl_assert.h"  
#include "oscl_error.h"  
#include "oscl_base_alloc.h"  
#include "oscl_tls.h"  
#include "oscl_singleton.h"  
#include "oscl_error_imp.h"
```

Data Structures

- class [OsclErrorTrapImp](#)
- class [OsclTrapStack](#)
- class [OsclTrapStackItem](#)

Defines

- #define [OSCL_MAX_TRAP_LEVELS](#) 20
- #define [PVERRORTRAP_REGISTRY_ID](#) [OSCL_TLS_ID_PVERRORTRAP](#)
- #define [PVERRORTRAP_REGISTRY](#) OsclTLSRegistry

8.28.1 Detailed Description

OSCL Error trap and cleanup implementation include file.

8.29 oscl_exception.h File Reference

contains all the exception handling macros and classes

```
#include "oscl_error.h"
#include "oscl_error_imp.h"
```

Data Structures

- class **OsclException**

oscl_exception.h contains all the exception handling macros and classes This template class provides the base exception class that all exceptions derive from

Defines

- #define **OSCL_LEAVE(_leave_status)** OsclError::Leave(_leave_status)
Use this macro to cause a Leave. It terminates the execution of the current active function.
- #define **OSCL_TRY(_leave_status, _statements)** _PV_TRAP(_leave_status,_statements)
This macro will be used to set up a try block.
- #define **OSCL_TRY_NO_TLS(_trapimp, _leave_status, _statements)** _PV_TRAP_NO_TLS(_-
 $_trapimp, _leave_status, _statements)$
• #define **OSCL_FIRST_CATCH_ANY(_leave_status, _statements)** if (_leave_status!=OsclErrNone){ _statements; }
This section defines the macros to be used in the catch block following the try block Use this macro to call a function that handles all exception types thrown in the preceding try block.
- #define **OSCL_FIRST_CATCH(_leave_status, _catch_value, _statements)** if (_leave_status!=OsclErrNone && _leave_status == _catch_value){_statements;}
Use this macro to define a block of code that catches the first exception type thrown in the preceding try block.
- #define **OSCL_CATCH(_leave_status, _catch_value, _statements)** else if (_leave_status!=OsclErrNone && _leave_status == _catch_value){_statements;}
Use this macro to define a block of code for catching additional exception types.
- #define **OSCL_CATCH_ANY(_leave_status, _statements)** else if (_leave_status!=OsclErrNone){ _-
 $_statements;$
Use this macro to call a function that will catch all remaining exception types.
- #define **OSCL_LAST_CATCH(_leave_status)** else if (_leave_status!=OsclErrNone){OSCL_-
 $LEAVE(_leave_status);$
Use this macro if OSCL_CATCH_ANY has not been used. It will mark the end of the catch block.

8.29.1 Detailed Description

contains all the exception handling macros and classes

8.30 oscl_exclusive_ptr.h File Reference

This file defines the [OsclExclusivePtr](#) template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

```
#include "oscl_defalloc.h"
```

Data Structures

- class [OsclExclusiveArrayPtr](#)

The OsclExclusiveArrayPtr class is a template class that defines an array pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the OsclExclusiveArrayPtr expires, its destructor uses delete to free the memory.

- class [OsclExclusivePtr](#)

The OsclExclusivePtr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the OsclExclusivePtr expires, its destructor uses delete to free the memory.

- class [OsclExclusivePtrA](#)

The OsclExclusivePtrA class is a template class that defines any pointer like object intended to be assigned an address obtained (directly or or indirectly) through Alloc. When the OsclExclusivePtrA expires, Alloc is used to free the memory.

8.30.1 Detailed Description

This file defines the [OsclExclusivePtr](#) template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

8.31 oscl_file_async_read.h File Reference

```
#include "oscl_base.h"
#include "osclconfig_io.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_scheduler_ao.h"
#include "oscl_file_io.h"
#include "oscl_semaphore.h"
```

Data Structures

- class [OsclAsyncFile](#)
- class [OsclAsyncFileBuffer](#)
- class [OsclBuf](#)
- class [OsclPtr](#)
- class [OsclPtrC](#)

8.32 oscl_file_cache.h File Reference

The file [oscl_file_cache.h](#) defines the class [OsclFileCache](#).

```
#include "osclconfig_io.h"  
#include "oscl_base.h"  
#include "oscl_file_io.h"
```

Data Structures

- class [OsclFileCache](#)
- class [OsclFileCacheBuffer](#)

8.32.1 Detailed Description

The file [oscl_file_cache.h](#) defines the class [OsclFileCache](#).

8.33 oscl_file_dir_utils.h File Reference

The file `oscl_file_dir_utils.h` defines some unix-style directory ops.

```
#include "osclconfig_io.h"
#include "oscl_base.h"
```

Data Structures

- struct `oscl_fsstat`
- struct `oscl_stat_buf`

Typedefs

- typedef `oscl_fsstat` `OSCL_FSSTAT`
- typedef `oscl_stat_buf` `OSCL_STAT_BUF`

Enumerations

- enum `OSCL_FILEMGMT_PERMS` { `OSCL_FILEMGMT_PERMS_READ` = 0x1, `OSCL_FILEMGMT_PERMS_WRITE` = 0x2, `OSCL_FILEMGMT_PERMS_EXECUTE` = 0x4 }
- enum `OSCL_FILEMGMT_MODES` { `OSCL_FILEMGMT_MODE_DIR` = 0x1 }
- enum `OSCL_FILEMGMT_ERR_TYPE` { `OSCL_FILEMGMT_E_OK` = 0, `OSCL_FILEMGMT_E_PATH_TOO_LONG`, `OSCL_FILEMGMT_E_PATH_NOT_FOUND`, `OSCL_FILEMGMT_E_ALREADY_EXISTS`, `OSCL_FILEMGMT_E_NOT_EMPTY`, `OSCL_FILEMGMT_E_PERMISSION_DENIED`, `OSCL_FILEMGMT_E_NO_MATCH`, `OSCL_FILEMGMT_E_UNKNOWN`, `OSCL_FILEMGMT_E_SYS_SPECIFIC`, `OSCL_FILEMGMT_E_NOT_IMPLEMENTED` }

Functions

- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (oscl_wchar *path, uint32 size)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_getcwd (char *path, uint32 size)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const oscl_wchar *path, OSCL_STAT_BUF *statbuf)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_stat (const char *path, OSCL_STAT_BUF *statbuf)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_mkdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rmdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const oscl_wchar *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_chdir (const char *path)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const oscl_wchar *oldpath, const oscl_wchar *newpath)`
- `OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_rename (const char *oldpath, const char *newpath)`

- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_statfs (OSCL_FSSTAT *stats, const char *path)
- OSCL_IMPORT_REF OSCL_FILEMGMT_ERR_TYPE oscl_statfs (OSCL_FSSTAT *stats, const oscl_wchar *path)

8.33.1 Detailed Description

The file [oscl_file_dir_utils.h](#) defines some unix-style directory ops.

8.34 oscl_file_find.h File Reference

The file [oscl_file_find.h](#) defines the class [Oscl_FileFind](#).

```
#include "osclconfig_io.h"  
#include "oscl_base.h"  
#include "oscl_mem.h"  
#include "oscl_vector.h"  
#include "oscl_string_containers.h"  
#include "oscl_file_types.h"
```

Data Structures

- class [Oscl_FileFind](#)

8.34.1 Detailed Description

The file [oscl_file_find.h](#) defines the class [Oscl_FileFind](#).

8.35 oscl_file_handle.h File Reference

The file [oscl_file_handle.h](#) defines the class [OsclFileHandle](#).

```
#include "osclconfig_io.h"  
#include "oscl_base.h"
```

Data Structures

- class [OsclFileHandle](#)

TypeDefs

- [typedef FILE * TOsclFileHandle](#)

8.35.1 Detailed Description

The file [oscl_file_handle.h](#) defines the class [OsclFileHandle](#).

8.36 oscl_file_io.h File Reference

The file [oscl_file_io.h](#) defines the class [Oscl_File](#). This is the public API to the basic file I/O operations.

```
#include "osclconfig_io.h"  
#include "oscl_base.h"  
#include "oscl_mem.h"  
#include "oscl_vector.h"  
#include "oscl_file_server.h"  
#include "oscl_file_find.h"  
#include "oscl_file_dir_utils.h"  
#include "oscl_file_handle.h"
```

Data Structures

- class [Oscl_File](#)
- class [OsclFixedCacheParam](#)
- class [OsclCacheObserver](#)

Defines

- #define [TOsclFileOffsetInt32](#) int32

8.36.1 Detailed Description

The file [oscl_file_io.h](#) defines the class [Oscl_File](#). This is the public API to the basic file I/O operations.

8.37 oscl_file_manager.h File Reference

File management class.

```
#include "oscl_base.h"
```

Data Structures

- class [OsclFileManager](#)

8.37.1 Detailed Description

File management class.

8.38 oscl_file_native.h File Reference

The file [oscl_file_native.h](#) defines the class [OsclNativeFile](#). This is the porting layer for basic file I/O operations.

```
#include "osclconfig_io.h"
#include "oscl_base.h"
#include "oscl_aostatus.h"
#include "oscl_file_io.h"
```

Data Structures

- class [OsclNativeFile](#)

8.38.1 Detailed Description

The file [oscl_file_native.h](#) defines the class [OsclNativeFile](#). This is the porting layer for basic file I/O operations.

8.39 oscl_file_server.h File Reference

The file [oscl_file_server.h](#) defines the class [Oscl_FileServer](#). This is the porting layer for file server implementations.

```
#include "osclconfig_io.h"  
#include "oscl_base.h"
```

Data Structures

- class [Oscl_FileServer](#)

8.39.1 Detailed Description

The file [oscl_file_server.h](#) defines the class [Oscl_FileServer](#). This is the porting layer for file server implementations.

8.40 oscl_file_stats.h File Reference

File stats class.

```
#include "oscl_base.h"
#include "osclconfig_io.h"
```

Data Structures

- class [OsclFileStats](#)
- class [OsclFileStatsItem](#)

Defines

- #define [OSCL_FILE_STATS_LOGGER_NODE](#) "OsclFileStats"

Enumerations

- enum [TOsclFileOp](#) { [EOsclFileOp_Open](#), [EOsclFileOp_Close](#), [EOsclFileOp_Read](#), [EOsclFileOp_Write](#), [EOsclFileOp_Seek](#), [EOsclFileOp_Tell](#), [EOsclFileOp_Size](#), [EOsclFileOp_Flush](#), [EOsclFileOp_EndOfFile](#), [EOsclFileOp_SetSize](#), [EOsclFileOp_NativeOpen](#), [EOsclFileOp_NativeClose](#), [EOsclFileOp_NativeRead](#), [EOsclFileOp_NativeWrite](#), [EOsclFileOp_NativeSeek](#), [EOsclFileOp_NativeTell](#), [EOsclFileOp_NativeSize](#), [EOsclFileOp_NativeFlush](#), [EOsclFileOp_NativeEndOfFile](#), [EOsclFileOp_NativeSetSize](#), [EOsclFileOp_Last](#) }

8.40.1 Detailed Description

File stats class.

8.41 oscl_file_types.h File Reference

The file [oscl_file_types.h](#) defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here.

Data Structures

- class [OsclNativeFileParams](#)

Defines

- #define [OSCL_IO_FILENAME_MAXLEN](#) 512
- #define [OSCL_IO_EXTENSION_MAXLEN](#) 512
- #define [OSCL_FILE_WCHAR_PATH_DELIMITER](#) _STRLIT("/")
- #define [OSCL_FILE_CHAR_PATH_DELIMITER](#) _STRLIT_CHAR("/")

8.41.1 Detailed Description

The file [oscl_file_types.h](#) defines some constants and types for file I/O implementations. Anything that needs to be shared across implementation modules can go here.

8.42 oscl_heapbase.h File Reference

OSCL Heap Base include file.

```
#include "osclconfig_error.h"
#include "oscl_base.h"
#include "oscl_heapbase.inl"
```

Data Structures

- class [_OsclHeapBase](#)
- class [OsclTrapItem](#)

Typedefs

- [typedef void\(* OsclTrapOperation \)\(OsclAny *\)](#)

8.42.1 Detailed Description

OSCL Heap Base include file.

8.43 oscl_init.h File Reference

Global oscl initialization.

```
#include "oscl_base.h"  
#include <stdio.h>
```

Data Structures

- class [OsclInit](#)
- class [OsclSelect](#)

8.43.1 Detailed Description

Global oscl initialization.

8.44 oscl_int64_utils.h File Reference

```
#include "oscl_base.h"
```

Data Structures

- class [Oscl_Int64_Utils](#)
The Oscl_Int64_Utils class provides a wrapper for commonly used int64/uint64 operations.
- struct [OsclInteger64Transport](#)

Typedefs

- typedef [OsclInteger64Transport _OsclInteger64Transport](#)

8.44.1 Typedef Documentation

8.44.1.1 typedef struct [OsclInteger64Transport _OsclInteger64Transport](#)

[OsclInteger64Transport](#) Structure

Structure to only transport 64-bit integer values uint64 and int64 could be classes so needed for cases where having a class will not work.

8.45 oscl_ip_socket.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

Data Structures

- class [OsclIPSocketI](#)

8.46 oscl_linked_list.h File Reference

The file [oscl_linked_list.h](#) defines the template class [Oscl_Linked_List](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"
#include "oscl_defalloc.h"
#include "oscl_opaque_type.h"
#include "oscl_assert.h"
```

Data Structures

- class [LinkedListElement](#)
- class [Oscl_Linked_List](#)
- class [Oscl_Linked_List_Base](#)
- class [Oscl_MTLinked_List](#)

8.46.1 Detailed Description

The file [oscl_linked_list.h](#) defines the template class [Oscl_Linked_List](#) which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

8.47 oscl_lock_base.h File Reference

This file defines an abstract lock class, [OsclLockBase](#), that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, [OsclNullLock](#), is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the [OsclScopedLock](#) class which is template class takes care of freeing the lock when the class goes out of scope.

Data Structures

- class [OsclLockBase](#)
- class [OsclNullLock](#)
- class [OsclScopedLock](#)

The OsclScopedLock class is a template class that handles unlocking an abstract class on destruction. This is very useful for ensuring that the lock is released when the OsclScopedLock goes out of scope.

8.47.1 Detailed Description

This file defines an abstract lock class, [OsclLockBase](#), that is used for APIs potentially requiring multi-thread safety. A null-lock implementation, [OsclNullLock](#), is also provided for single-thread configurations (basically a noop for lock/unlock). Also provides the [OsclScopedLock](#) class which is template class takes care of freeing the lock when the class goes out of scope.

8.48 oscl_map.h File Reference

The file `oscl_map.h` defines the template class `Oscl_Map` which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"
#include "oscl_tree.h"
#include "osclconfig_compiler_warnings.h"
```

Data Structures

- struct `Oscl_Less`
- class `Oscl_Map`
- struct `Oscl_Select1st`
- class `value_compare`

Defines

- `#define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE`

8.48.1 Detailed Description

The file `oscl_map.h` defines the template class `Oscl_Map` which has a very similar API as the STL Map class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

8.48.2 Define Documentation

8.48.2.1 `#define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE`

8.49 oscl_math.h File Reference

Provides math functions.

```
#include "osclconfig_util.h"
#include "oscl_base.h"
#include "oscl_math.inl"
```

Functions

- OSCL_COND_IMPORT_REF double `oscl_log` (double value)
- OSCL_COND_IMPORT_REF double `oscl_log10` (double value)
- OSCL_COND_IMPORT_REF double `oscl_sqrt` (double value)
- OSCL_COND_IMPORT_REF double `oscl_pow` (double x, double y)
- OSCL_COND_IMPORT_REF double `oscl_exp` (double value)
- OSCL_COND_IMPORT_REF double `oscl_sin` (double value)
- OSCL_COND_IMPORT_REF double `oscl_cos` (double value)
- OSCL_COND_IMPORT_REF double `oscl_tan` (double value)
- OSCL_COND_IMPORT_REF double `oscl_asin` (double value)
- OSCL_COND_IMPORT_REF double `oscl_atan` (double value)
- OSCL_COND_IMPORT_REF double `oscl_floor` (double value)

8.49.1 Detailed Description

Provides math functions.

8.50 oscl_media_data.h File Reference

Defines a container class for media data made up of a collection of memory fragments.

```
#include "oscl_base.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_media_status.h"
```

Data Structures

- class [BufferFragment](#)
- class [BufferMgr](#)
- class [BufferState](#)
- class [BuffFragGroup](#)
- class [MediaData](#)
- class [MemAllocator](#)

Typedefs

- typedef void(* [BufferFreeFuncPtr](#))(void *)
- typedef uint32 [MediaTimestamp](#)

8.50.1 Detailed Description

Defines a container class for media data made up of a collection of memory fragments.

8.51 oscl_media_status.h File Reference

Defines a status values for the [MediaData](#) containers.

Data Structures

- class [BufFragStatusClass](#)
- class [MediaStatusClass](#)

Variables

- const int32 [APPEND_MEDIA_AT_END](#) = -1

8.51.1 Detailed Description

Defines a status values for the [MediaData](#) containers.

8.52 oscl_mem.h File Reference

This file contains basic memory definitions for common use across platforms.

```
#include "osclconfig_memory.h"  
#include "oscl_base.h"  
#include "oscl_types.h"  
#include "oscl_assert.h"  
#include "oscl_mem_basic_functions.h"  
#include "oscl_lock_base.h"  
#include "osclconfig_compiler_warnings.h"  
#include "oscl_mem_inst.h"  
#include "oscl_heapbase.h"  
#include "oscl_defalloc.h"  
#include "oscl_refcounter.h"  
#include "oscl_error.h"  
#include "oscl_exception.h"  
#include "oscl_mem.inl"
```

Data Structures

- class [HeapBase](#)
- class [OsclAuditCB](#)
- class [OsclMem](#)
- class [OsclMemAllocator](#)
- class [OsclMemAllocDestructDealloc](#)
- class [OsclMemBasicAllocator](#)
- class [OsclMemBasicAllocDestructDealloc](#)
- class [OsclMemGlobalAuditObject](#)

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)
- #define [OSCL_HAS_GLOBAL_NEW_DELETE](#) 1
- #define [OSCL_CLEANUP_BASE_CLASS\(T\)](#) _OSCL_CLEANUP_BASE_CLASS(T)
- #define [OSCL_ALLOC_NEW\(T_allocator, T, params\)](#) new(T_allocator.allocate(1)) T params
- #define [OSCL_TRAP_ALLOC_NEW\(T_ptr, T_allocator, T, params\)](#) _OSCL_TRAP_NEW(T_allocator.allocate(1),T_allocator.deallocate,T_ptr,T,params)
- #define [OSCL_ALLOC_DELETE\(ptr, T_allocator, T\)](#)
- #define [OSCL_MALLOC\(count\)](#) _oscl_default_audit_malloc(count)
- #define [oscl_malloc\(a\)](#) OSCL_MALLOC(a)
- #define [OSCL_DEFAULT_MALLOC\(x\)](#) OSCL_MALLOC(x)
- #define [OSCL_AUDIT_MALLOC\(auditCB, count\)](#) _oscl_audit_malloc(count, auditCB)
- #define [OSCL_CALLOC\(num, size\)](#) _oscl_default_audit_calloc(num,size)
- #define [oscl_calloc\(a, b\)](#) OSCL_CALLOC(a,b)

- #define **OSCL_AUDIT_CALLOC**(auditCB, num, size) _oscl_audit_calloc(num,size, auditCB)
- #define **OSCL_REALLOC**(ptr, new_size) _oscl_default_audit_realloc(ptr,new_size)
- #define **oscl_realloc**(a, b) OSCL_REALLOC(a,b)
- #define **OSCL_AUDIT_REALLOC**(auditCB, ptr, new_size) _oscl_audit_realloc(ptr,new_size, auditCB)
- #define **OSCL_FREE**(ptr) _oscl_audit_free(ptr)
- #define **oscl_free**(x) OSCL_FREE(x)
- #define **OSCL_DEFAULT_FREE**(x) OSCL_FREE(x)
- #define **OSCL_NEW**(T, params) new T params
- #define **OSCL_PLACEMENT_NEW**(ptr, constructor) new(ptr) constructor
- #define **OSCL_TRAP_NEW**(T_ptr, T, params) _OSCL_TRAP_NEW(_oscl_default_audit_new(sizeof(T)),_oscl_audit_free,T_ptr,T,params)
- #define **OSCL_AUDIT_NEW**(auditCB, T, params) new(_oscl_audit_new(sizeof(T),auditCB)) T params
- #define **OSCL_TRAP_AUDIT_NEW**(T_ptr, auditCB, T, params) _OSCL_TRAP_NEW(_oscl_audit_new(sizeof(T),auditCB),_oscl_audit_free,T_ptr,T,params)
- #define **OSCL_DELETE**(ptr)
- #define **OSCL_AUDIT_ARRAY_NEW**(auditCB, T, count) new(_oscl_audit_new(sizeof(T)*(count),auditCB)) T
- #define **OSCL_ARRAY_NEW**(T, count) new T[count]
- #define **OSCL_ARRAY_DELETE**(ptr) delete [] ptr
- #define **OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE**
- #define **_OSCL_TRAP_NEW**(exp, freeFunc, T_ptr, T, params)
- #define **_OSCL_CLEANUP_BASE_CLASS**(T) this → T::~T()

Functions

- **OSCL_COND_IMPORT_REF** **uint** **oscl_mem_aligned_size** (**uint** **size**)
- **OSCL_IMPORT_REF** **void** **OsclMemInit** (**OsclAuditCB** &auditCB)
- **OSCL_IMPORT_REF** **void *** **_oscl_audit_malloc** (**size_t**, **OsclAuditCB** &, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_audit_calloc** (**size_t**, **size_t**, **OsclAuditCB** &, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_audit_realloc** (**void** *, **size_t**, **OsclAuditCB** &, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_audit_new** (**size_t**, **OsclAuditCB** &, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_default_audit_malloc** (**size_t**, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_default_audit_calloc** (**size_t**, **size_t**, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_default_audit_realloc** (**void** *, **size_t**, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void *** **_oscl_default_audit_new** (**size_t**, **const char** *f=NULL, **const int** l=0)
- **OSCL_IMPORT_REF** **void** **_oscl_audit_free** (**void** *)
- **void *** **operator new** (**size_t** aSize, **const char** *aFile, **int** aLine)
- **void *** **operator new** (**size_t** aSize)
- **void operator delete** (**void** *aPtr)
- **void *** **operator new[]** (**size_t** aSize, **const char** *aFile, **int** aLine)
- **void *** **operator new[]** (**size_t** aSize)
- **void operator delete[]** (**void** *aPtr)

8.52.1 Detailed Description

This file contains basic memory definitions for common use across platforms.

This is the main entry point header file for the OSCL memory library. It should be the only one users directly include. Basic memory copy, compare, and move functions are defined here as well as the allocation functions.

8.52.2 Define Documentation

8.52.2.1 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

Previously this was in oscl_mem_imp.h

8.52.3 Function Documentation

8.52.3.1 void operator delete (void * *aPtr*) [inline]

8.52.3.2 void* operator new (size_t *aSize*) [inline]

8.53 oscl_mem_align.h File Reference

8.54 oscl_mem_audit.h File Reference

This file contains the definition and partial implementation of MM_Audit class.

```
#include "oscl_lock_base.h"
#include "oscl_base_alloc.h"
#include "oscl_tagtree.h"
#include "oscl_mem.h"
#include "oscl_mem_auto_ptr.h"
#include "osclconfig_compiler_warnings.h"
```

Data Structures

- struct [MM_AllocInfo](#)
- struct [MM_AllocNode](#)
- struct [MM_AllocQueryInfo](#)
- class [MM_Audit_Imp](#)
- struct [MM_AuditOverheadStats](#)
- struct [MM_FailInsertParam](#)
- struct [MM_Stats_CB](#)
- struct [MM_Stats_t](#)
- class [OsclMemAudit](#)
- class [OsclMemStatsNode](#)

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)
- #define [MM_ALLOC_MAX_QUERY_FILENAME_LEN](#) 128
- #define [MM_ALLOC_MAX_QUERY_TAG_LEN](#) 64
- #define [MM_AUDIT_VALIDATE_BLOCK](#) 1
- #define [MM_AUDIT_PREFILL_FLAG](#) 0x1
- #define [MM_AUDIT_POSTFILL_FLAG](#) 0x2
- #define [MM_AUDIT_VALIDATE_ALL_HEAP_FLAG](#) 0x4
- #define [MM_AUDIT_VALIDATE_ON_FREE_FLAG](#) 0x8
- #define [MM_AUDIT_ALLOC_NODE_ENABLE_FLAG](#) 0x10
- #define [MM_AUDIT_SUPPRESS_FILENAME_FLAG](#) 0x20
- #define [DEFAULT_MM_AUDIT_MODE](#) 0

Typedefs

- typedef [OSCLMemAutoPtr< char, Oscl_TAlloc< char, OsclMemBasicAllocator > >](#) [MMAudit_CharAutoPtr](#)
- typedef [OSCLMemAutoPtr< uint8, Oscl_TAlloc< uint8, _OsclBasicAllocator > >](#) [MMAudit_Uint8AutoPtr](#)
- typedef [OSCLMemAutoPtr< MM_AllocNode, Oscl_TAlloc< MM_AllocNode, OsclMemBasicAllocator > >](#) [MM_AllocNodeAutoPtr](#)
- typedef [OSCLMemAutoPtr< OsclMemStatsNode, Oscl_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > >](#) [MM_StatsNodeTagTreeType](#)

- `typedef OSCLMemAutoPtr< OsclMemStatsNode, Oscl_TAlloc< OsclMemStatsNode, OsclMemBasicAllocator > > OsclMemStatsNodeAutoPtr`
- `typedef Oscl_TAlloc< MM_StatsNodeTagTreeType, OsclMemBasicAllocator > TagTree_Allocator`
- `typedef Oscl_TagTree< MM_StatsNodeTagTreeType, TagTree_Allocator > OsclTagTreeType`

8.54.1 Detailed Description

This file contains the definition and partial implementation of MM_Audit class.

8.54.2 Define Documentation

8.54.2.1 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

8.55 oscl_mem_audit_internals.h File Reference

This file contains the internal definitions for the mem audit library.

```
#include "oscl_base.h"  
#include "oscl_mem_audit.h"  
#include "oscl_mem_inst.h"  
#include "osclconfig_compiler_warnings.h"
```

Data Structures

- struct [MM_AllocBlockFence](#)
- struct [MM_AllocBlockHdr](#)

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)
- #define [MM_AUDIT_ALLOC_NODE_SUPPORT](#) 1
- #define [MM_AUDIT_FENCE_SUPPORT](#) 0
- #define [MM_AUDIT_INCLUDE_ALL_HEAP_VALIDATION](#) 1
- #define [MM_AUDIT_FILL_SUPPORT](#) 0
- #define [MM_AUDIT_FAILURE_SIMULATION_SUPPORT](#) 1
- #define [FENCE_PATTERN](#) 0xAA
- #define [MIN_FENCE_SIZE](#) 4
- #define [MEM_ALIGN_SIZE](#) 8
- #define [COMPUTE_MEM_ALIGN_SIZE](#)(x, y, z) (y+(((x+y)%z) ? (z - (x+y)%z) : 0))
- #define [DEFAULT_PREFILL_PATTERN](#) 0x96
- #define [DEFAULT_POSTFILL_PATTERN](#) 0x5A

8.55.1 Detailed Description

This file contains the internal definitions for the mem audit library.

8.55.2 Define Documentation

8.55.2.1 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

8.56 oscl_mem_auto_ptr.h File Reference

This file defines the oscl_mem_auto_ptr template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

```
#include "osclconfig_memory.h"  
#include "osclconfig_compiler_warnings.h"  
#include "oscl_mem.h"
```

Data Structures

- class [OSCLMemAutoPtr](#)

The oscl_auto_ptr class is a template class that defines a pointer like object intended to be assigned an address obtained (directly or or indirectly) by new. When the oscl_auto_ptr expires, its destructor uses delete to free the memory.

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)
- #define [OSCL_DISABLE_WARNING_RETURN_TYPE_NOT_UDT](#)

8.56.1 Detailed Description

This file defines the oscl_mem_auto_ptr template class. This class is used to avoid any potential memory leaks that may arise while returning from methods in case of error.

8.56.2 Define Documentation

8.56.2.1 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

8.57 oscl_mem_basic_functions.h File Reference

This file contains prototypes for the basic memory functions.

```
#include "oscl_base.h"  
#include "oscl_mem_basic_functions.inl"
```

Functions

- OSCL_COND_IMPORT_REF void * [_oscl_malloc](#) (int32 count)
- OSCL_COND_IMPORT_REF void * [_oscl_calloc](#) (int32 nelems, int32 size)
- OSCL_COND_IMPORT_REF void * [_oscl_realloc](#) (void *src, int32 count)
- OSCL_COND_IMPORT_REF void [_oscl_free](#) (void *src)
- OSCL_COND_IMPORT_REF void * [oscl_memcpy](#) (void *dest, const void *src, uint32 count)
- OSCL_COND_IMPORT_REF void * [oscl_memmove](#) (void *dest, const void *src, uint32 count)
- OSCL_COND_IMPORT_REF void * [oscl_memmove32](#) (void *dest, const void *src, uint32 count)
- OSCL_COND_IMPORT_REF void * [oscl_memset](#) (void *dest, uint8 val, uint32 count)
- OSCL_COND_IMPORT_REF int [oscl_memcmp](#) (const void *buf1, const void *buf2, uint32 count)

8.57.1 Detailed Description

This file contains prototypes for the basic memory functions.

8.58 oscl_mem_inst.h File Reference

The file defines default memory instrumentation level.

```
#include "osclconfig_memory.h"
```

Defines

- #define **PVMEM_INST_LEVEL** 1

8.58.1 Detailed Description

The file defines default memory instrumentation level.

8.59 oscl_mem_mempool.h File Reference

This file contains the definition of memory pool allocators.

```
#include "oscl_mem.h"  
#include "oscl_defalloc.h"  
#include "oscl_vector.h"
```

Data Structures

- struct [MemPoolBlockInfo](#)
- struct [MemPoolBufferInfo](#)
- class [OsclMemPoolFixedChunkAllocator](#)
- class [OsclMemPoolFixedChunkAllocatorObserver](#)
- class [OsclMemPoolResizableAllocator](#)
- class [OsclMemPoolResizableAllocatorMemoryObserver](#)
- class [OsclMemPoolResizableAllocatorObserver](#)

8.59.1 Detailed Description

This file contains the definition of memory pool allocators.

8.60 oscl_mutex.h File Reference

This file provides implementation of mutex.

```
#include "osclconfig_proc.h"  
#include "oscl_types.h"  
#include "oscl_base.h"  
#include "oscl_thread.h"  
#include "oscl_lock_base.h"
```

Data Structures

- class [OsclMutex](#)
- class [OsclThreadLock](#)

Typedefs

- typedef [OsclMutex OsclNoYieldMutex](#)

8.60.1 Detailed Description

This file provides implementation of mutex.

8.60.2 Typedef Documentation

8.60.2.1 typedef [OsclMutex OsclNoYieldMutex](#)

Class [OsclNoYieldMutex](#) can be used in use cases where there will be no CPU-yielding operation done while the Mutex is locked.

CPU-yielding operations include [OsclMutex::Lock](#), [OsclSemaphore::Wait](#), [OsclThread::Sleep](#), and [OsclBrewThreadUtil::BThreadYield](#).

The behavior of [OsclNoYieldMutex](#) depends on whether the threading model is pre-emptive or not. When threading is pre-emptive, it is identical to [OsclMutex](#). When threading is non-pre-emptive, it is a NO-OP.

An example of this type of use case is for simple data protection.

8.61 oscl_namestring.h File Reference

Name string class include file.

```
#include "oscl_base.h"
```

Data Structures

- class [OsclNameString](#)

8.61.1 Detailed Description

Name string class include file.

8.62 oscl_opaque_type.h File Reference

The file [oscl_opaque_type.h](#) defines pure virtual classes for working with opaque types.

```
#include "oscl_base.h"
```

Data Structures

- class [Oscl_Opaque_Type_Alloc](#)
- class [Oscl_Opaque_Type_Alloc_LL](#)
- class [Oscl_Opaque_Type_Compare](#)

8.62.1 Detailed Description

The file [oscl_opaque_type.h](#) defines pure virtual classes for working with opaque types.

8.63 oscl_priqueue.h File Reference

Implements a priority queue data structure similar to STL.

```
#include "oscl_base.h"  
#include "oscl_vector.h"
```

Data Structures

- class [OsclCompareLess](#)
- class [OsclPriorityQueue](#)
- class [OsclPriorityQueueBase](#)

8.63.1 Detailed Description

Implements a priority queue data structure similar to STL.

Implements a priority queue data structure similar to the STL class. The properties of the class include O(Log_2(N)) insertion and deletion complexity and O(1) complexity to access the top priority item.

8.64 oscl_procstatus.h File Reference

Data Structures

- class [OsclProcStatus](#)

8.65 oscl_queue.h File Reference

The file [oscl_queue.h](#) defines the template class [Oscl_Queue](#). It is similar to the STL::queue class, with some differences: - less complete - based on array rather than a deque - some interfaces modeled on oscl_vector, for ease of transition Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_base.h"  
#include "oscl_mem_basic_functions.h"  
#include "oscl_assert.h"  
#include "oscl_opaque_type.h"
```

Data Structures

- class [Oscl_Queue](#)
- class [Oscl_Queue_Base](#)

8.65.1 Detailed Description

The file [oscl_queue.h](#) defines the template class [Oscl_Queue](#). It is similar to the STL::queue class, with some differences: - less complete - based on array rather than a deque - some interfaces modeled on oscl_vector, for ease of transition Memory allocation is abstracted through the use of an allocator template parameter.

8.66 oscl_rand.h File Reference

Provides pseudo-random number generation.

```
#include "osclconfig_util.h"  
#include "oscl_base.h"  
#include "oscl_mem_basic_functions.h"  
#include "oscl_rand.inl"
```

Data Structures

- class [OsclRand](#)

8.66.1 Detailed Description

Provides pseudo-random number generation.

8.67 oscl_refcounter.h File Reference

A general purpose reference counter to object lifetimes.

```
#include "oscl_assert.h"  
#include "oscl_defalloc.h"
```

Data Structures

- class [Oscl_DefAllocWithRefCounter](#)
- class [OsclRefCounter](#)
- class [OsclRefCounterDA](#)
- class [OsclRefCounterMTDA](#)
- class [OsclRefCounterMTSA](#)
- class [OsclRefCounterSA](#)

8.67.1 Detailed Description

A general purpose reference counter to object lifetimes.

8.68 oscl_refcounter_memfrag.h File Reference

This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount.

```
#include "oscl_base.h"  
#include "oscl_refcounter.h"
```

Data Structures

- class [OsclRefCounterMemFrag](#)

8.68.1 Detailed Description

This file provides the definition of reference counted memory fragment, which provides access to a buffer and helps manage its lifetime through the refcount.

8.69 oscl_registry_access_client.h File Reference

Client-side implementation Registry Access implementation.

```
#include "oscl_registry_types.h"  
#include "oscl_string_containers.h"  
#include "oscl_vector.h"  
#include "oscl_mem.h"
```

Data Structures

- class [OsclRegistryAccessClient](#)

8.69.1 Detailed Description

Client-side implementation Registry Access implementation.

8.70 oscl_registry_client.h File Reference

Client-side implementation of OsclRegistry.

```
#include "oscl_registry_types.h"
#include "oscl_mem.h"
#include "oscl_string.h"
```

Data Structures

- class [OsclRegistryClient](#)

8.70.1 Detailed Description

Client-side implementation of OsclRegistry.

8.71 oscl_registry_client_impl.h File Reference

Client-side implementation of OsclRegistryInterface.

```
#include "oscl_base.h"
#include "osclconfig_proc.h"
#include "oscl_vector.h"
#include "oscl_string.h"
#include "oscl_registry_types.h"
#include "oscl_registry_serv_impl_tls.h"
```

Data Structures

- class [OsclRegistryAccessClientImpl](#)
- class [OsclRegistryAccessClientTlsImpl](#)
- class [OsclRegistryClientImpl](#)
- class [OsclRegistryClientTlsImpl](#)

8.71.1 Detailed Description

Client-side implementation of OsclRegistryInterface.

8.72 oscl_registry_serv_impl.h File Reference

Server-side implementation of OsclRegistry interfaces.

```
#include "oscl_base.h"
#include "osclconfig_proc.h"
#include "oscl_registry_types.h"
#include "oscl_string.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
```

Data Structures

- class [OsclComponentRegistry](#)
- class [OsclComponentRegistryData](#)
- class [OsclComponentRegistryElement](#)

8.72.1 Detailed Description

Server-side implementation of OsclRegistry interfaces.

8.73 oscl_registry_serv_impl_global.h File Reference

```
#include "osclconfig_proc.h"
#include "oscl_base.h"
```

8.74 oscl_registry_serv_impl_tls.h File Reference

```
#include "osclconfig_proc.h"
#include "oscl_registry_serv_impl.h"
#include "oscl_registry_types.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

Data Structures

- class [OsclRegistryServTlsImpl](#)

8.75 oscl_registry_types.h File Reference

Common types used in Oscl registry interfaces.

```
#include "oscl_types.h"  
#include "oscl_string_containers.h"
```

Data Structures

- class [OsclRegistryAccessElement](#)

TypeDefs

- typedef [OsclAny](#) * [OsclComponentFactory](#)

8.75.1 Detailed Description

Common types used in Oscl registry interfaces.

8.76 oscl_scheduler.h File Reference

```
#include "oscl_scheduler_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_scheduler_threadcontext.h"
#include "oscl_defalloc.h"
#include "oscl_mem.h"
```

Data Structures

- class [OsclExecScheduler](#)
- class [OsclExecSchedulerCommonBase](#)
- class [OsclScheduler](#)
- class [OsclSchedulerObserver](#)
- class [PVSchedulerStopper](#)

Defines

- #define [PVSCHEDNAMELEN](#) 30

8.77 oscl_scheduler_ao.h File Reference

Oscl Scheduler user execution object classes.

```
#include "oscl_scheduler_aobase.h"
#include "oscl_mem.h"
#include "oscl_scheduler_types.h"
```

Data Structures

- class [OsclActiveObject](#)
- class [OsclTimerObject](#)

8.77.1 Detailed Description

Oscl Scheduler user execution object classes.

8.78 oscl_scheduler_aobase.h File Reference

Oscl Scheduler internal active object classes.

```
#include "oscl_namestring.h"
#include "oscl_scheduler_threadcontext.h"
#include "oscl_scheduler_readyq.h"
#include "oscl_string_containers.h"
#include "oscl_scheduler_types.h"
```

Data Structures

- class [PVActiveBase](#)
- class [PVActiveStats](#)

Defines

- #define [OSCL_ZEROIZE](#)(ptr, size) oscl_memset(ptr, 0, size)
- #define [PVEEXECNAMELEN](#) 30

8.78.1 Detailed Description

Oscl Scheduler internal active object classes.

8.79 oscl_scheduler_readyq.h File Reference

ready q types for oscl scheduler

```
#include "oscl_scheduler_tuneables.h"
#include "oscl_priqueue.h"
#include "oscl_base_alloc.h"
#include "oscl_semaphore.h"
#include "oscl_mem.h"
#include "oscl_string_containers.h"
#include "oscl_scheduler_types.h"
#include "oscl_mutex.h"
```

Data Structures

- class [OsclReadyAlloc](#)
- class [OsclReadyCompare](#)
- class [OsclReadyQ](#)
- class [OsclTimerCompare](#)
- class [OsclTimerQ](#)
- class [TReadyQueLink](#)

Typedefs

- typedef [PVActiveBase](#) * TOsclReady

8.79.1 Detailed Description

ready q types for oscl scheduler

8.80 oscl_scheduler_threadcontext.h File Reference

Thread context functions needed by oscl scheduler.

```
#include "oscl_double_list.h"
#include "oscl_mutex.h"
#include "oscl_aostatus.h"
```

Data Structures

- class [PVThreadContext](#)

Enumerations

- enum [TPVThreadContext](#) { [EPVThreadContext_InThread](#), [EPVThreadContext_OsclThread](#), [EPVThreadContext_NonOsclThread](#), [EPVThreadContext_Undetermined](#) }

8.80.1 Detailed Description

Thread context functions needed by oscl scheduler.

8.81 oscl_scheduler_tuneables.h File Reference

Tunable settings for Oscl Scheduler.

```
#include "osclconfig_proc.h"
```

Defines

- #define PV_SCHED_ENABLE_AO_STATS 1
- #define PV_SCHED_ENABLE_LOOP_STATS 0
- #define PV_SCHED_ENABLE_PERF_LOGGING 1
- #define PV_SCHED_ENABLE_THREAD_CONTEXT_CHECKS 1
- #define PV_SCHED_LOG_Q 0
- #define PV_SCHED_CHECK_Q 0
- #define PV_SCHED_FAIR_SCHEDULING 1
- #define OSCL_PERF_SUMMARY_LOGGING 0

8.81.1 Detailed Description

Tunable settings for Oscl Scheduler.

8.82 oscl_scheduler_types.h File Reference

Scheduler common types include file.

```
#include "osclconfig_proc.h"  
#include "oscl_aostatus.h"  
#include "oscl_heapbase.h"
```

Data Structures

- class [OsclExecSchedulerBase](#)

8.82.1 Detailed Description

Scheduler common types include file.

8.83 oscl_semaphore.h File Reference

This file provides implementation of mutex.

```
#include "osclconfig_proc.h"  
#include "oscl_thread.h"
```

Data Structures

- class [OsclSemaphore](#)

8.83.1 Detailed Description

This file provides implementation of mutex.

8.84 oscl_shared_ptr.h File Reference

This file defines a template class [OsclSharedPtr](#) which is a "smart pointer" to the parameterized type.

```
#include "oscl_base.h"
#include "oscl_refcounter.h"
#include "osclconfig_compiler_warnings.h"
```

Data Structures

- class [OsclSharedPtr](#)
A parameterized smart pointer class.

Defines

- #define [OSCL_DISABLE_WARNING_RETURN_TYPE_NOT_UDT](#)

8.84.1 Detailed Description

This file defines a template class [OsclSharedPtr](#) which is a "smart pointer" to the parameterized type.

8.85 oscl_singleton.h File Reference

This file defines the [OsclSingleton](#) class. This class provides a container which used to give access to a set of process-level singleton objects. Each object is indexed by an integer ID, listed below. There can only be one instance of each object per process at a given time.

```
#include "oscl_base.h"
#include "oscl_defalloc.h"
```

Data Structures

- class [OsclSingleton](#)
- class [OsclSingletonRegistry](#)
- class [SingletonTable](#)

Variables

- const uint32 [OSCL_SINGLETON_ID_TEST](#) = 0
- const uint32 [OSCL_SINGLETON_ID_OSCLMEM](#) = 1
- const uint32 [OSCL_SINGLETON_ID_PVLOGGER](#) = 2
- const uint32 [OSCL_SINGLETON_ID_PVSCHEDULER](#) = 3
- const uint32 [OSCL_SINGLETON_ID_PVERRORTRAP](#) = 4
- const uint32 [OSCL_SINGLETON_ID_SDPMEDIAPARSER](#) = 5
- const uint32 [OSCL_SINGLETON_ID_PAYLOADPARSER](#) = 6
- const uint32 [OSCL_SINGLETON_ID_CPM_PLUGIN](#) = 7
- const uint32 [OSCL_SINGLETON_ID_PVMFRECOGNIZER](#) = 8
- const uint32 [OSCL_SINGLETON_ID_OSCLREGISTRY](#) = 9
- const uint32 [OSCL_SINGLETON_ID_OMX](#) = 10
- const uint32 [OSCL_SINGLETON_ID_OMXMASTERCORE](#) = 11
- const uint32 [OSCL_SINGLETON_ID_TICKCOUNT](#) = 12
- const uint32 [OSCL_SINGLETON_ID_WMDRMLOCK](#) = 13
- const uint32 [OSCL_SINGLETON_ID_LAST](#) = 14

8.85.1 Detailed Description

This file defines the [OsclSingleton](#) class. This class provides a container which used to give access to a set of process-level singleton objects. Each object is indexed by an integer ID, listed below. There can only be one instance of each object per process at a given time.

[OsclSingleton](#) is initialized in [OsclBase::Init](#).

8.85.2 Variable Documentation

- 8.85.2.1 `const uint32 OSCL_SINGLETON_ID_CPM_PLUGIN = 7`
- 8.85.2.2 `const uint32 OSCL_SINGLETON_ID_LAST = 14`
- 8.85.2.3 `const uint32 OSCL_SINGLETON_ID_OMX = 10`
- 8.85.2.4 `const uint32 OSCL_SINGLETON_ID_OMXMASTERCORE = 11`
- 8.85.2.5 `const uint32 OSCL_SINGLETON_ID_OSCLMEM = 1`
- 8.85.2.6 `const uint32 OSCL_SINGLETON_ID_OSCLREGISTRY = 9`
- 8.85.2.7 `const uint32 OSCL_SINGLETON_ID_PAYLOADPARSER = 6`
- 8.85.2.8 `const uint32 OSCL_SINGLETON_ID_PVERRORTRAP = 4`
- 8.85.2.9 `const uint32 OSCL_SINGLETON_ID_PVLOGGER = 2`
- 8.85.2.10 `const uint32 OSCL_SINGLETON_ID_PVMFRECOGNIZER = 8`
- 8.85.2.11 `const uint32 OSCL_SINGLETON_ID_PVSCHEDULER = 3`
- 8.85.2.12 `const uint32 OSCL_SINGLETON_ID_SDPMEDIAPARSER = 5`
- 8.85.2.13 `const uint32 OSCL_SINGLETON_ID_TEST = 0`
- 8.85.2.14 `const uint32 OSCL_SINGLETON_ID_TICKCOUNT = 12`
- 8.85.2.15 `const uint32 OSCL_SINGLETON_ID_WMDRMLOCK = 13`

8.86 oscl_snprintf.h File Reference

Provides a portable implementation of snprintf.

```
#include "oscl_base.h"  
#include "osclconfig_util.h"
```

Functions

- OSCL_IMPORT_REF int32 [oscl_snprintf](#) (char *str, uint32 count, const char *fmt,...)
- OSCL_IMPORT_REF int32 [oscl_snprintf](#) ([oscl_wchar](#) *str, uint32 count, const [oscl_wchar](#) *fmt,...)
- OSCL_IMPORT_REF int32 [oscl_vsnprintf](#) (char *str, uint32 count, const char *fmt, va_list args)
- OSCL_IMPORT_REF int32 [oscl_vsnprintf](#) ([oscl_wchar](#) *str, uint32 count, const [oscl_wchar](#) *fmt, va_list args)

8.86.1 Detailed Description

Provides a portable implementation of snprintf.

8.87 oscl_socket.h File Reference

The file [oscl_socket.h](#) defines the OSCL Socket APIs.

```
#include "osclconfig_io.h"  
#include "oscl_heapbase.h"  
#include "oscl_defalloc.h"  
#include "oscl_vector.h"  
#include "oscl_mem.h"  
#include "oscl_socket_types.h"
```

Data Structures

- class [OsclSocketServ](#)
- class [OsclTCPSocket](#)
- class [OsclUDPSocket](#)

8.87.1 Detailed Description

The file [oscl_socket.h](#) defines the OSCL Socket APIs.

8.88 oscl_socket_accept.h File Reference

```
#include "oscl_socket_imp.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclAcceptMethod](#)
- class [OsclAcceptRequest](#)

8.89 oscl_socket_bind.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclBindMethod](#)
- class [OsclBindRequest](#)

8.90 oscl_socket_connect.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclConnectMethod](#)
- class [OsclConnectRequest](#)

8.91 oscl_socket_imp.h File Reference

```
#include "oscl_socket_tuneables.h"
#include "oscl_socket_imp_pv.h"
```

8.92 oscl_socket_imp_base.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_request.h"
#include "oscl_defalloc.h"
#include "oscl_mutex.h"
#include "oscl_socket_stats.h"
#include "oscl_base.h"
```

Data Structures

- class [OsclSocketIBase](#)

8.93 oscl_socket_imp_pv.h File Reference

```
#include "oscl_socket_imp_base.h"
```

Data Structures

- class [OsclSocketI](#)

Defines

- #define [PVSOCK_ERR_BAD_PARAM](#) (-1)
- #define [PVSOCK_ERR SOCK_NOT_OPEN](#) (-2)
- #define [PVSOCK_ERR SOCK_NO_SERV](#) (-3)
- #define [PVSOCK_ERR SERV_NOT_CONNECTED](#) (-4)
- #define [PVSOCK_ERR SOCK_NOT_CONNECTED](#) (-5)
- #define [PVSOCK_ERR NOT_IMPLEMENTED](#) (-6)
- #define [PVSOCK_ERR NOT_SUPPORTED](#) (-7)

8.93.1 Define Documentation

8.93.1.1 #define PVSOCK_ERR_BAD_PARAM (-1)

some error codes for request completion these are negative so they won't conflict with errors from the OS socket layer.

8.93.1.2 #define PVSOCK_ERR_NOT_IMPLEMENTED (-6)

8.93.1.3 #define PVSOCK_ERR_NOT_SUPPORTED (-7)

8.93.1.4 #define PVSOCK_ERR_SERV_NOT_CONNECTED (-4)

8.93.1.5 #define PVSOCK_ERR SOCK_NO_SERV (-3)

8.93.1.6 #define PVSOCK_ERR SOCK_NOT_CONNECTED (-5)

8.93.1.7 #define PVSOCK_ERR SOCK_NOT_OPEN (-2)

8.94 oscl_socket_listen.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclListenMethod](#)
- class [OsclListenRequest](#)

Defines

- #define [OSCL_SOCKET_LISTEN_H_INCLUDEDd](#)

8.94.1 Define Documentation

8.94.1.1 #define OSCL_SOCKET_LISTEN_H_INCLUDEDd

8.95 oscl_socket_method.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_socket_types.h"
#include "oscl_scheduler_ao.h"
#include "oscl_socket_request.h"
#include "pvlogger.h"
#include "oscl_socket_tuneables.h"
#include "oscl_ip_socket.h"
#include "oscl_socket_imp.h"
```

Data Structures

- class [OsclSocketMethod](#)
- class [OsclSocketRequestAO](#)

Defines

- #define [MSEC_TO_MICROSEC](#) 1000

8.95.1 Define Documentation

8.95.1.1 #define MSEC_TO_MICROSEC 1000

8.96 oscl_socket_recv.h File Reference

```
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclRecvMethod](#)
- class [OsclRecvRequest](#)

8.97 oscl_socket_recv_from.h File Reference

```
#include "oscl_socket_serv_imp.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclRecvFromMethod](#)
- class [OsclRecvFromRequest](#)

8.98 oscl_socket_request.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_socket_tuneables.h"
```

Data Structures

- class [AcceptParam](#)
- class [BindParam](#)
- class [ConnectParam](#)
- class [ListenParam](#)
- class [OsclSocketRequest](#)
- class [PVSockBufRecv](#)
- class [PVSockBufSend](#)
- class [RecvFromParam](#)
- class [RecvParam](#)
- class [SendParam](#)
- class [SendToParam](#)
- class [ShutdownParam](#)
- class [SocketRequestParam](#)

8.99 oscl_socket_send.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclSendMethod](#)
- class [OsclSendRequest](#)

8.100 oscl_socket_send_to.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_imp.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclSendToMethod](#)
- class [OsclSendToRequest](#)

8.101 oscl_socket_serv_imp.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_socket_tuneables.h"
#include "oscl_socket_serv_imp_pv.h"
```

8.102 oscl_socket_serv_imp_base.h File Reference

```
#include "oscl_base.h"
#include "oscl_socket_stats.h"
```

Data Structures

- class [OsclSocketServIBase](#)

8.103 oscl_socket_serv_imp_pv.h File Reference

```
#include "oscl_socket_serv_imp_base.h"
#include "oscl_socket_serv_imp_reqlist.h"
#include "oscl_socket_tuneables.h"
#include "oscl_scheduler_ao.h"
```

Data Structures

- class [OsclSocketServI](#)

Defines

- #define [OSCL_READSET_FLAG](#) 0x04
- #define [OSCL_WRITESET_FLAG](#) 0x02
- #define [OSCL_EXCEPTSET_FLAG](#) 0x01

8.103.1 Define Documentation

8.103.1.1 #define OSCL_EXCEPTSET_FLAG 0x01

8.103.1.2 #define OSCL_READSET_FLAG 0x04

A bitmask for socket select operations

8.103.1.3 #define OSCL_WRITESET_FLAG 0x02

8.104 oscl_socket_serv_imp_reqlist.h File Reference

```
#include "oscl_socket_tuneables.h"
#include "oscl_defalloc.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

Data Structures

- class [OsclSocketServRequestList](#)
- class [OsclSocketServRequestQElem](#)

8.105 oscl_socket_shutdown.h File Reference

```
#include "oscl_socket_types.h"
#include "oscl_socket_method.h"
```

Data Structures

- class [OsclShutdownMethod](#)
- class [OsclShutdownRequest](#)

8.106 oscl_socket_stats.h File Reference

```
#include "oscl_base.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_mutex.h"
#include "oscl_socket_tuneables.h"
```

Enumerations

- enum TOsclSocketStatEvent { EOscSocket_RequestAO_Success, EOscSocket_RequestAO_Canceled, EOscSocket_RequestAO_Error, EOscSocket_RequestAO_Timeout, EOscSocket_ServRequestIssued, EOscSocket_ServPoll, EOscSocket_OS, EOscSocket_Readable, EOscSocket_Writable, EOscSocket_Except, EOscSocket_DataRecv, EOscSocket_DataSent, EOscSocket_ServRequestComplete, EOscSocket_ServRequestCancelIssued, EOscSocketServ_LoopsockOk, EOscSocketServ_LoopsockError }
- enum TOsclSocketServStatEvent { EOscSocketServ_SelectNoActivity = 0, EOscSocketServ_SelectActivity, EOscSocketServ_SelectRescheduleAsap, EOscSocketServ_SelectReschedulePoll, EOscSocketServ_LastEvent }

8.106.1 Enumeration Type Documentation

8.106.1.1 enum TOsclSocketServStatEvent

Enumeration values:

EOscSocketServ_SelectNoActivity
EOscSocketServ_SelectActivity
EOscSocketServ_SelectRescheduleAsap
EOscSocketServ_SelectReschedulePoll
EOscSocketServ_LastEvent

8.106.1.2 enum TOsclSocketStatEvent

Socket diagnostics.

Enumeration values:

EOscSocket_RequestAO_Success
EOscSocket_RequestAO_Canceled
EOscSocket_RequestAO_Error
EOscSocket_RequestAO_Timeout
EOscSocket_ServRequestIssued
EOscSocket_ServPoll
EOscSocket_OS
EOscSocket_Readable
EOscSocket_Writable

EOselSocket_Except
EOselSocket_DataRecv
EOselSocket_DataSent
EOselSocket_ServRequestComplete
EOselSocket_ServRequestCancelIssued
EOselSocketServ_LoopsockOk
EOselSocketServ_LoopsockError

8.107 oscl_socket_tuneables.h File Reference

```
#include "osclconfig_io.h"
#include "osclconfig_proc.h"
```

Defines

- #define PV_SOCKET_REQUEST_AO_PRIORITY OsclActiveObject::EPriorityNominal
- #define PV_OSCL_SOCKET_STATS_LOGGING 0
- #define PV_SOCKET_SERVER 1
- #define PV_SOCKET_SERVER_IS_THREAD OSCL_HAS_THREAD_SUPPORT
- #define PV_SOCKET_SERVER_SELECT 0
- #define PV_SOCKET_SERVER_THREAD_PRIORITY ThreadPriorityAboveNormal
- #define PV_SOCKET_SERVER_SELECT_TIMEOUT_MSEC (-1)
- #define PV_SOCKET_SERVER_SELECT_LOOPBACK_SOCKET 0
- #define PV_SOCKET_SERVER_AO_PRIORITY (OsclActiveObject::EPriorityNominal)
- #define PV_SOCKET_SERVER_AO_INTERVAL_MSEC 5
- #define PV_OSCL_SOCKET_SERVER_LOGGER_OUTPUT 0
- #define PV_OSCL_SOCKET_1MB_RECV_BUF 0
- #define PV_SOCKET_SERVI_STATS 0

8.107.1 Define Documentation

8.107.1.1 #define PV_OSCL_SOCKET_1MB_RECV_BUF 0

Set this to 0 or 1 to enable/disable setting the socket receive buffer size to 1 MB in the Bind call. This setting only affects PV socket server implementations.

When set to 1, the code will use the OsclSetRecvBufferSize macro to set the buffer size in the Bind call.

This setting was found to improve streaming performance on WinMobile devices, but should not generally be used.

8.107.1.2 #define PV_OSCL_SOCKET_SERVER_LOGGER_OUTPUT 0

Set this to 0 or 1 to enable/disable [PVLogger](#) output from PV socket server. Note that socket server logging will appear in a different file when running threaded mode of socket server. This is quite a bit of logging, so it should generally be disabled.

8.107.1.3 #define PV_OSCL_SOCKET_STATS_LOGGING 0

Set this to 0 or 1 to enable/disable socket stats logging with "OsclSocketStats" node. This feature is fairly costly so should be off in production code.

8.107.1.4 #define PV_SOCKET_REQUEST_AO_PRIORITY OsclActiveObject::EPriority-Nominal

PV_SOCKET_REQUEST_AO_PRIORITY sets the priority of the socket request completion AOs.

8.107.1.5 #define PV_SOCKET_SERVER 1

Enable/disable the PV socket server here.

8.107.1.6 #define PV_SOCKET_SERVER_AO_INTERVAL_MSEC 5

PV_SOCKET_SERVER_AO_INTERVAL_MSEC sets the AO scheduling interval of the PV socket server AO for non-threaded implementations.

8.107.1.7 #define PV_SOCKET_SERVER_AO_PRIORITY (OsclActiveObject::EPriority-Nominal)

PV_SOCKET_SERVER_AO_PRIORITY sets priority of the PV socket server AO for non-threaded implementations.

8.107.1.8 #define PV_SOCKET_SERVER_IS_THREAD OSCL_HAS_THREAD_SUPPORT

PV_SOCKET_SERVER_IS_THREAD chooses either the threaded or AO-based implementation of the PV socket server

8.107.1.9 #define PV_SOCKET_SERVER_SELECT 0

PV_SOCKET_SERVER_SELECT chooses whether to use "select" call or not. In threaded mode, select call is required and is forced to "1". In AO mode, "select" call is an option that defaults to "0". Avoiding any "select" call was found to greatly reduce CPU usage on WinMobile devices.

8.107.1.10 #define PV_SOCKET_SERVER_SELECT_LOOPBACK_SOCKET 0

PV_SOCKET_SERVER_SELECT_LOOPBACK_SOCKET enables the feature to wakeup the select call by writing to a loopback socket each time a new request comes in. This option is required to support the blocking select option of threaded server mode. This option is forced to "0" in AO mode.

8.107.1.11 #define PV_SOCKET_SERVER_SELECT_TIMEOUT_MSEC (-1)

PV_SOCKET_SERVER_SELECT_TIMEOUT_MSEC sets duration of the select call in the PV socket server thread for the polling select loop implementation. When the timeout is -1, the select call will block forever waiting on a new request and will use a loopback socket to signal a new request. Note: if infinite wait is selected, but loopback socket is not available, the implementation will poll at 10 msec intervals.

8.107.1.12 #define PV_SOCKET_SERVER_THREAD_PRIORITY ThreadPriorityAboveNormal

PV_SOCKET_SERVER_THREAD_PRIORITY sets the priority of the PV socket server thread.

8.107.1.13 #define PV_SOCKET_SERVI_STATS 0

For detailed performance breakdown of time spend in [OsclSocketServI](#) AO. Output is logged under "OsclSchedulerPerfStats" node. Should be off in production code. This option is forced to "0" in threaded mode.

8.108 oscl_socket_types.h File Reference

```
#include "osclconfig_io.h"
#include "oscl_types.h"
#include "oscl_scheduler_types.h"
#include "oscl_namestring.h"
#include "oscl_stdstring.h"
```

Data Structures

- class [OsclIpMReq](#)
- class [OsclNetworkAddress](#)
- class [OsclSocketObserver](#)
- class [OsclSocketTOS](#)

Defines

- #define [PVNETWORKADDRESS_LEN](#) 50

Enumerations

- enum [TPVSocketFxn](#) { EPVSocketSend = 0, EPVSocketSendTo, EPVSocketRecv, EPVSocketRecvFrom, EPVSocketConnect, EPVSocketAccept, EPVSocketShutdown, EPVSocketBind, EPVSocketListen, EPVSocket_Last }
- enum [TPVSocketEvent](#) { EPVSocketSuccess, EPVSocketPending, EPVSocketTimeout, EPVSocketFailure, EPVSocketCancel, EPVSocketNotImplemented }
- enum [TPVSocketShutdown](#) { EPVSocketSendShutdown, EPVSocketRecvShutdown, EPVSocketBothShutdown }
- enum [TPVSocketOptionName](#) { EPVIMulticastTTL, EPVIPAddMembership, EPVIPTOS, EPVSockReuseAddr }
- enum [TPVSocketOptionLevel](#) { EPVIPProtoIP, EPVIPProtoTCP, EPVSocket }

8.108.1 Define Documentation

8.108.1.1 #define PVNETWORKADDRESS_LEN 50

8.108.2 Enumeration Type Documentation

8.108.2.1 enum TPVSocketEvent

Return codes for asynchronous APIs

Enumeration values:

EPVSocketSuccess
EPVSocketPending
EPVSocketTimeout
EPVSocketFailure

EPVSocketCancel
EPVSocketNotImplemented

8.108.2.2 enum TPVSocketFxn

Enumeration values:

EPVSocketSend
EPVSocketSendTo
EPVSocketRecv
EPVSocketRecvFrom
EPVSocketConnect
EPVSocketAccept
EPVSocketShutdown
EPVSocketBind
EPVSocketListen
EPVSocket_Last

8.108.2.3 enum TPVSocketOptionLevel

Enumeration values:

EPVIPProtoIP
EPVIPProtoTCP
EPVSocket

8.108.2.4 enum TPVSocketOptionName

Enumeration values:

EPVIMulticastTTL
EPVIAAddMembership
EPVIPTOS
EPVSockReuseAddr

8.108.2.5 enum TPVSocketShutdown

Enumeration values:

EPVSocketSendShutdown
EPVSocketRecvShutdown
EPVSocketBothShutdown

8.109 oscl_stdstring.h File Reference

This file provides standard string operations such as `strlen`, `strncpy`, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as `strncpy`, `strncat`, etc. But, we chose to define one. In such cases, we return the destination as null.

```
#include "oscl_base.h"
```

Functions

- OSCL_IMPORT_REF uint32 `oscl_strlen` (const char *str)
- OSCL_IMPORT_REF uint32 `oscl_strlen` (const `oscl_wchar` *str)
- OSCL_IMPORT_REF char * `oscl_strncpy` (char *dest, const char *src, uint32 count)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strncpy` (`oscl_wchar` *dest, const `oscl_wchar` *src, uint32 count)
- OSCL_IMPORT_REF int32 `oscl_strcmp` (const char *str1, const char *str2)
- OSCL_IMPORT_REF int32 `oscl_stremp` (const `oscl_wchar` *str1, const `oscl_wchar` *str2)
- OSCL_IMPORT_REF int32 `oscl_strncmp` (const char *str1, const char *str2, uint32 count)
- OSCL_IMPORT_REF int32 `oscl_strnncmp` (const `oscl_wchar` *str1, const `oscl_wchar` *str2, uint32 count)
- OSCL_IMPORT_REF char * `oscl_strncat` (char *dest, const char *src, uint32 count)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strncat` (`oscl_wchar` *dest, const `oscl_wchar` *src, uint32 count)
- OSCL_IMPORT_REF const char * `oscl_strchr` (const char *str, int32 c)
- OSCL_IMPORT_REF char * `oscl_strchr` (char *str, int32 c)
- OSCL_IMPORT_REF const `oscl_wchar` * `oscl_strchr` (const `oscl_wchar` *str, int32 c)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strchr` (`oscl_wchar` *str, int32 c)
- OSCL_IMPORT_REF const char * `oscl strrchr` (const char *str, int32 c)
- OSCL_IMPORT_REF char * `oscl strrchr` (char *str, int32 c)
- OSCL_IMPORT_REF const `oscl_wchar` * `oscl strrchr` (const `oscl_wchar` *str, int32 c)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl strrchr` (`oscl_wchar` *str, int32 c)
- OSCL_IMPORT_REF char * `oscl_strset` (char *dest, char val, uint32 count)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strset` (`oscl_wchar` *dest, `oscl_wchar` val, uint32 count)
- OSCL_IMPORT_REF int32 `oscl_CIstrcmp` (const char *str1, const char *str2)
- OSCL_IMPORT_REF int32 `oscl_CIstrcmp` (const `oscl_wchar` *str1, const `oscl_wchar` *str2)
- OSCL_IMPORT_REF int32 `oscl_CIstrncmp` (const char *str1, const char *str2, uint32 count)
- OSCL_IMPORT_REF int32 `oscl_CIstrncmp` (const `oscl_wchar` *str1, const `oscl_wchar` *str2, uint32 count)
- OSCL_IMPORT_REF char `oscl_tolower` (const char car)
- OSCL_IMPORT_REF `oscl_wchar` `oscl_tolower` (const `oscl_wchar` car)
- OSCL_IMPORT_REF bool `oscl_isLetter` (const char car)
- OSCL_IMPORT_REF const char * `oscl_strstr` (const char *str1, const char *str2)
- OSCL_IMPORT_REF char * `oscl_strstr` (char *str1, const char *str2)
- OSCL_IMPORT_REF const `oscl_wchar` * `oscl_strstr` (const `oscl_wchar` *str1, const `oscl_wchar` *str2)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_strstr` (`oscl_wchar` *str1, const `oscl_wchar` *str2)
- OSCL_IMPORT_REF char * `oscl_streat` (char *dest, const char *src)
- OSCL_IMPORT_REF `oscl_wchar` * `oscl_streat` (`oscl_wchar` *dest, const `oscl_wchar` *src)

8.109.1 Detailed Description

This file provides standard string operations such as strlen, strncpy, etc. ANSI defines undefined behavior when the destination pointer is null for operations such as strncpy, strncat, etc. But, we chose to define one. In such cases, we return the destination as null.

8.110 oscl_str_ptr_len.h File Reference

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

```
#include "oscl_base.h"
#include "oscl_stdstring.h"
```

Data Structures

- struct [StrCSumPtrLen](#)
same as [StrPtrLen](#), but includes checksum field and method to speed up querying
- struct [StrPtrLen](#)
This data structure encapsulates a set of functions used to perform.
- struct [WStrPtrLen](#)
This data structure encapsulates a set of functions used to perform.

Typedefs

- typedef StrPtrLen [StrPtrLen](#)
This data structure encapsulates a set of functions used to perform.
- typedef WStrPtrLen [WStrPtrLen](#)
This data structure encapsulates a set of functions used to perform.
- typedef StrCSumPtrLen [StrCSumPtrLen](#)
same as [StrPtrLen](#), but includes checksum field and method to speed up querying
- typedef [WStrPtrLen](#) [OSCL_TStrPtrLen](#)

Variables

- const uint8 [OSCL_ASCII_CASE_MAGIC_BIT](#) = 0x20

8.110.1 Detailed Description

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

8.111 oscl_string.h File Reference

Provides a standardized set of string containers that can be used in place of character arrays.

```
#include "oscl_base.h"  
#include "oscl_mem.h"
```

Data Structures

- class [OSCL_String](#)
- class [OSCL_wString](#)

Enumerations

- enum [TOSCL_StringOp](#) { [EOSCL_StringOp_CompressASCII](#), [EOSCL_StringOp_UTF16ToUTF8](#) }
- enum [TOSCL_wStringOp](#) { [EOSCL_wStringOp_ExpandASCII](#), [EOSCL_wStringOp_UTF8ToUTF16](#) }

8.111.1 Detailed Description

Provides a standardized set of string containers that can be used in place of character arrays.

8.112 oscl_string_containers.h File Reference

Provides a standardized set of string containers that can be used in place of character arrays.

```
#include "oscl_string.h"  
#include "oscl_defalloc.h"  
#include "oscl_refcounter.h"  
#include "oscl_error.h"  
#include "oscl_string_rep.h"  
#include "oscl_stdstring.h"  
#include "oscl_mem.h"
```

Data Structures

- class [OSCL_FastString](#)
- class [OSCL_HeapString](#)
- class [OSCL_HeapStringA](#)
- class [OSCL_StackString](#)
- class [OSCL_wFastString](#)
- class [OSCL_wHeapString](#)
- class [OSCL_wHeapStringA](#)
- class [OSCL_wStackString](#)

8.112.1 Detailed Description

Provides a standardized set of string containers that can be used in place of character arrays.

8.113 oscl_string_rep.h File Reference

Contains some internal implementation for string containers.

```
#include "oscl_defalloc.h"
```

Data Structures

- class [CFastRep](#)
- class [CHheapRep](#)
- class [CStackRep](#)

8.113.1 Detailed Description

Contains some internal implementation for string containers.

8.114 oscl_string_uri.h File Reference

Utilities to unescape URIs.

```
#include "oscl_base.h"  
#include "oscl_string.h"
```

Functions

- OSCL_IMPORT_REF bool [oscl_str_unescape_uri](#) (const char *str_buf_in, char *str_buf_out, uint32 max_out_buf_bytes, uint32 max_bytes, uint32 &out_buf_len)
unescape any of the special escape sequence in the uri string
- OSCL_IMPORT_REF bool [oscl_str_unescape_uri](#) (const [OSCL_String](#) &oscl_str_in, [OSCL_String](#) &oscl_str_out, uint32 &out_buf_len)
unescape any of the special escape sequence in the uri string

8.114.1 Detailed Description

Utilities to unescape URIs.

8.115 oscl_string_utf8.h File Reference

Utilities to validate and truncate UTF-8 encoded strings.

```
#include "oscl_base.h"
```

Functions

- OSCL_IMPORT_REF bool `oscl_str_is_valid_utf8` (const uint8 *str_buf, uint32 &num_valid_characters, uint32 max_bytes=0, uint32 max_char_2_valid=0, uint32 *num_byte_4_char=NULL)

Check if the input string contains any illegal UTF-8 character. The function scans the string and validate that each character is a valid utf-8. It stops at the first NULL character, invalid character or the max_byte value. The string is valid if and only if every character is a valid utf-8 character and the scanning stopped on a character boundary.

- OSCL_IMPORT_REF int32 `oscl_str_truncate_utf8` (uint8 *str_buf, uint32 max_char, uint32 max_bytes=0)

Truncates the UTF-8 string upto the required size.

8.115.1 Detailed Description

Utilities to validate and truncate UTF-8 encoded strings.

8.116 oscl_string_utils.h File Reference

Utilities to parse and convert strings.

```
#include "oscl_base.h"
```

Defines

- #define `oscl_isdigit(c) ((c) >= '0' && (c) <= '9')`

Functions

- OSCL_IMPORT_REF const char * `skip_whitespace` (const char *ptr)
- OSCL_IMPORT_REF char * `skip_whitespace` (char *ptr)
- OSCL_IMPORT_REF const char * `skip_whitespace` (const char *start, const char *end)
- OSCL_IMPORT_REF const char * `skip_to_whitespace` (const char *start, const char *end)
- OSCL_IMPORT_REF const char * `skip_to_line_term` (const char *start_ptr, const char *end_ptr)
- OSCL_IMPORT_REF const char * `skip_whitespace_and_line_term` (const char *start, const char *end)
- OSCL_IMPORT_REF int `extract_string` (const char *in_ptr, char *outstring, int maxsize)
- OSCL_IMPORT_REF int `extract_string` (const char *start, const char *end, char *outstring, int maxsize)
- OSCL_IMPORT_REF bool `PV_atoi` (const char *buf, const char new_format, uint32 &value)
- OSCL_IMPORT_REF bool `PV_atoi` (const char *buf, const char new_format, int length, uint32 &value)
- OSCL_IMPORT_REF bool `PV_atoi` (const char *buf, const char new_format, int length, `uint64` &value)
- OSCL_IMPORT_REF bool `PV_atof` (const char *buf, `OsclFloat` &value)
- OSCL_IMPORT_REF bool `PV_atof` (const char *buf, int length, `OsclFloat` &value)
- OSCL_IMPORT_REF int `oscl_abs` (int aVal)

8.116.1 Detailed Description

Utilities to parse and convert strings.

8.117 oscl_string_xml.h File Reference

Utilities to escape special characters in XML strings.

```
#include "oscl_base.h"
```

Functions

- OSCL_IMPORT_REF bool [oscl_str_need_escape_xml](#) (const char *str_buf, uint32 &num_escape_bytes, uint32 max_bytes=0)

Check if the input string contains any special ASCII character like &, <, >, ', ". The function scans the string and check if each character is a special character. It stops at the first NULL character (if max_bytes = 0), or the max_byte value.

- OSCL_IMPORT_REF int32 [oscl_str_escape_xml](#) (const char *str_buf_in, char *str_buf_out, uint32 max_out_buf_bytes, uint32 max_bytes=0, uint32 *num_bytes_written=NULL)

Escape any of the following special characters in the string Special ASCII characters: &, <, >, ', ".

8.117.1 Detailed Description

Utilities to escape special characters in XML strings.

8.118 oscl_tagtree.h File Reference

The file [oscl_tagtree.h](#) ...

```
#include "oscl_base.h"
#include "oscl_map.h"
#include "oscl_vector.h"
#include "oscl_stdstring.h"
#include "osclconfig_compiler_warnings.h"
```

Data Structures

- struct [const_iterator](#)
- struct [iterator](#)
- struct [Node](#)
- struct [Oscl_Tag](#)
- struct [Oscl_Tag_Base](#)
- class [Oscl_TagTree](#)

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)

8.118.1 Detailed Description

The file [oscl_tagtree.h](#) ...

8.118.2 Define Documentation

8.118.2.1 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

8.119 oscl_tcp_socket.h File Reference

```
#include "oscl_ip_socket.h"
#include "oscl_defalloc.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
#include "oscl_socket_listen.h"
#include "oscl_socket_recv.h"
#include "oscl_socket_send.h"
#include "oscl_socket_accept.h"
#include "oscl_socket_shutdown.h"
#include "oscl_socket_connect.h"
#include "oscl_socket_bind.h"
```

Data Structures

- class [OsclTCPSocketI](#)

8.120 oscl_thread.h File Reference

```
#include "osclconfig_proc.h"
#include "oscl_procstatus.h"
#include "oscl_base.h"
```

Data Structures

- class [OsclThread](#)

TypeDefs

- typedef [TOsclThreadFuncRet\(OSCL_THREAD_DECL * TOsclThreadFuncPtr \)\(TOsclThreadFuncArg\)](#)

Enumerations

- enum [OsclThread_State](#) { [Start_on_creation](#), [Suspend_on_creation](#) }
- enum [OsclThreadPriority](#) { [ThreadPriorityLowest](#), [ThreadPriorityLow](#), [ThreadPriorityBelowNormal](#), [ThreadPriorityNormal](#), [ThreadPriorityAboveNormal](#), [ThreadPriorityHighest](#), [ThreadPriorityTimeCritical](#) }

8.120.1 Detailed Description

. This file provides THREAD implementation that can be ported
to three OS LINUX, SYMBIAN, WIN32

8.120.2 TypeDef Documentation

8.120.2.1 [typedef TOsclThreadFuncRet\(OSCL_THREAD_DECL * TOsclThreadFuncPtr\)\(TOsclThreadFuncArg\)](#)

8.120.3 Enumeration Type Documentation

8.120.3.1 enum [OsclThread_State](#)

Enumeration values:

[Start_on_creation](#)

[Suspend_on_creation](#)

8.120.3.2 enum [OsclThreadPriority](#)

Enumeration values:

[ThreadPriorityLowest](#)

[ThreadPriorityLow](#)

[ThreadPriorityBelowNormal](#)

ThreadPriorityNormal

ThreadPriorityAboveNormal

ThreadPriorityHighest

ThreadPriorityTimeCritical

8.121 oscl_tickcount.h File Reference

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

```
#include "oscl_base.h"
#include "oscl_tickcount.inl"
```

Data Structures

- class [OsclTickCount](#)

Defines

- #define [OSCLTICKCOUNT_MAX_TICKS](#) 0xffffffff

8.121.1 Detailed Description

Defines a data structure for string containment/manipulations where the storage for the string is maintained externally.

8.122 oscl_time.h File Reference

The file `oscl_time.h` defines two classes `NTPTime` and `TimeValue` for getting, manipulating, and formatting time values. The `TimeValue` class is based on the native system time format while `NTPTime` is used for the standard Network Time Protocol format.

```
#include "oscl_base.h"
#include "osclconfig_time.h"
#include "oscl_int64_utils.h"
#include "oscl_time.inl"
```

Data Structures

- class `NTPTime`

The NTPTime class represents a time value as the number of seconds since 0h (UTC) Jan. 1, 1900.

- class `TimeValue`

The TimeValue class represents a time value in a format native to the system.

Typedefs

- typedef char `CtimeStrBuf` [`CTIME_BUFFER_SIZE`]
- typedef char `PV8601timeStrBuf` [`PV8601TIME_BUFFER_SIZE`]
- typedef char `ISO8601timeStrBuf` [`ISO8601TIME_BUFFER_SIZE`]

Enumerations

- enum `TimeUnits` { `SECONDS` = 0, `MILLISECONDS` = 1, `MICROSECONDS` = 2 }

The TimeUnits enum can be used when constructing a `TimeValue` class.

Functions

- OSCL_IMPORT_REF void `PV8601ToRFC822` (`PV8601timeStrBuf` `pv8601_buffer`, `CtimeStrBuf` `ctime_buffer`)
- OSCL_IMPORT_REF void `ISO8601ToRFC822` (`ISO8601timeStrBuf` `iso8601_buffer`, `CtimeStrBuf` `ctime_buffer`)
- OSCL_IMPORT_REF void `RFC822ToPV8601` (`CtimeStrBuf` `ctime_buffer`, `PV8601timeStrBuf`)
- OSCL_COND_IMPORT_REF `TimeValue operator-` (const `TimeValue` &`a`, const `TimeValue` &`b`)
- OSCL_COND_IMPORT_REF `TimeValue operator+` (const `TimeValue` &`a`, const int32 `bSeconds`)
- OSCL_COND_IMPORT_REF `TimeValue operator+` (const int32 `aSeconds`, const `TimeValue` &`b`)
- OSCL_COND_IMPORT_REF `TimeValue operator-` (const `TimeValue` &`a`, const int32 `bSeconds`)
- OSCL_COND_IMPORT_REF `TimeValue operator-` (const int32 `aSeconds`, const `TimeValue` &`b`)

Variables

- const int **CTIME_BUFFER_SIZE** = 26
- const int **PV8601TIME_BUFFER_SIZE** = 21
- const int **ISO8601TIME_BUFFER_SIZE** = 21
- const long **USEC_PER_SEC** = 1000000
- const long **MSEC_PER_SEC** = 1000
- const uint32 **unix_ntp_offset** = 2208988800U

8.122.1 Detailed Description

The file **oscl_time.h** defines two classes **NTPTime** and **TimeValue** for getting, manipulating, and formatting time values. The **TimeValue** class is based on the native system time format while **NTPTime** is used for the standard Network Time Protocol format.

8.123 oscl_timer.h File Reference

```
#include "oscl_base.h"
#include "osclconfig_util.h"
#include "oscl_vector.h"
#include "oscl_tickcount.h"
#include "oscl_rand.h"
#include "oscl_scheduler_ao.h"
```

Data Structures

- struct [_TimerEntry](#)
- class [CallbackTimer](#)
- class [CallbackTimerObserver](#)
- class [OsclTimer](#)
- class [OsclTimerObserver](#)

8.124 oscl_tls.h File Reference

```
#include "oscl_base.h"
#include "oscl_defalloc.h"
```

Data Structures

- class [OsclTLS](#)
- class [OsclTLSRegistry](#)
- class [TLSStorageOps](#)

Defines

- #define [OSCL_TLS_BASE_SLOTS](#) OSCL_TLS_ID_BASE_LAST +1
- #define [OSCL_TLS_EXTERNAL_SLOTS](#) 0
- #define [OSCL_TLS_MAX_SLOTS](#) (OSCL_TLS_BASE_SLOTS + OSCL_TLS_EXTERNAL_SLOTS)

Typedefs

- typedef [OsclAny](#) TOsclTlsKey

Variables

- const uint32 [OSCL_TLS_ID_MAGICNUM](#) = 0
- const uint32 [OSCL_TLS_ID_ERRORHOOK](#) = 1
- const uint32 [OSCL_TLS_ID_PVLOGGER](#) = 2
- const uint32 [OSCL_TLS_ID_TEST](#) = 3
- const uint32 [OSCL_TLS_ID_PVSCHEDULER](#) = 4
- const uint32 [OSCL_TLS_ID_PVERRORTRAP](#) = 5
- const uint32 [OSCL_TLS_ID_SDPMEDIAPARSER](#) = 6
- const uint32 [OSCL_TLS_ID_PAYLOADPARSER](#) = 7
- const uint32 [OSCL_TLS_ID_PVMFRECOGNIZER](#) = 8
- const uint32 [OSCL_TLS_ID_WMDRM](#) = 9
- const uint32 [OSCL_TLS_ID_OSCLREGISTRY](#) = 10
- const uint32 [OSCL_TLS_ID_SQLITE3](#) = 11
- const uint32 [OSCL_TLS_ID_BASE_LAST](#) = 11

8.125 oscl_tree.h File Reference

The file [oscl_tree.h](#) defines the template class [Oscl_Rb_Tree](#) which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the [Oscl_Map](#) class. Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_defalloc.h"  
#include "osclconfig_compiler_warnings.h"
```

Data Structures

- struct [Oscl_Pair](#)
- class [Oscl_Rb_Tree](#)
- class [Oscl_Rb_Tree_Base](#)
- struct [Oscl_Rb_Tree_Const_Iterator](#)
- struct [Oscl_Rb_Tree_Iterator](#)
- struct [Oscl_Rb_Tree_Node](#)
- struct [Oscl_Rb_Tree_Node_Base](#)

Defines

- #define [OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE](#)

8.125.1 Detailed Description

The file [oscl_tree.h](#) defines the template class [Oscl_Rb_Tree](#) which has a very similar API as the STL Tree class. It is an implementation of a Red-Black Tree for use by the [Oscl_Map](#) class. Memory allocation is abstracted through the use of an allocator template parameter.

8.125.2 Define Documentation

8.125.2.1 #define OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE

8.126 oscl_types.h File Reference

This file contains basic type definitions for common use across platforms.

```
#include "osclconfig.h"
```

Data Structures

- struct [OsclMemoryFragment](#)

Typedefs

- [typedef int c_bool](#)
The c_bool type is mapped to an integer to provide a bool type for C interfaces.
- [typedef void OsclAny](#)
The OsclAny is meant to be used the context of a generic pointer (i.e., no specific type).
- [typedef char mbchar](#)
mbchar is multi-byte char (e.g., UTF-8) with null termination.
- [typedef unsigned int uint](#)
The uint type is a convenient abbreviation for unsigned int.
- [typedef uint8 octet](#)
The octet type is meant to be used for referring to a byte or collection bytes without suggesting anything about the underlying meaning of the bytes.
- [typedef float OsclFloat](#)
The Float type defined as OsclFloat.
- [typedef OSCL_NATIVE_INT64_TYPE int64](#)
- [typedef OSCL_NATIVE_UINT64_TYPE uint64](#)
- [typedef OSCL_NATIVE_WCHAR_TYPE oscl_wchar](#)
- [typedef oscl_wchar OSCL_TCHAR](#)
define OSCL_TCHAR

8.126.1 Detailed Description

This file contains basic type definitions for common use across platforms.

8.127 oscl_udp_socket.h File Reference

```
#include "oscl_ip_socket.h"
#include "oscl_defalloc.h"
#include "oscl_socket_recv_from.h"
#include "oscl_socket_send_to.h"
#include "oscl_socket_bind.h"
```

Data Structures

- class [OsclUDPSocketI](#)

8.128 oscl_utf8conv.h File Reference

Utilities to convert unicode to utf8 and vice versa.

```
#include "oscl_base.h"
```

Defines

- #define MAX_NUMBER_OF_BYTE_PER_UTF8 3

Functions

- OSCL_IMPORT_REF int32 **oscl_UTF8ToUnicode** (const char *input, int32 inLength, oscl_wchar *output, int32 outLength)
Convert UTF8 byte sequence to Unicode string.
- OSCL_IMPORT_REF int32 **oscl_UnicodeToUTF8** (const oscl_wchar *input, int32 inLength, char *output, int32 outLength)
Convert Unicode string to UTF8 byte sequence.

8.128.1 Detailed Description

Utilities to convert unicode to utf8 and vice versa.

8.129 oscl_uuid.h File Reference

This file defines the OSCL UUID structure used for unique identifiers as well as the short (32-bit) identifiers OsclUid32.

```
#include "oscl_base.h"
#include "oscl_mem_basic_functions.h"
#include "oscl_string_utils.h"
#include "oscl_stdstring.h"
```

Data Structures

- struct [OsclUuid](#)

Defines

- #define [EMPTY_UUID](#) PVUuid(0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0)
- #define [BYTES_IN_UUID_ARRAY](#) 8

TypeDefs

- typedef uint32 [OsclUid32](#)

Variables

- const char [PV_CHAR_CLOSE_BRACKET](#) = ')
- const char [PV_CHAR_COMMA](#) = ','

8.129.1 Detailed Description

This file defines the OSCL UUID structure used for unique identifiers as well as the short (32-bit) identifiers OsclUid32.

8.129.2 Define Documentation

8.129.2.1 #define BYTES_IN_UUID_ARRAY 8

8.129.2.2 #define EMPTY_UUID PVUuid(0,0,0,0,0,0,0,0)

8.129.3 Typedef Documentation

8.129.3.1 typedef uint32 OsclUid32

8.129.4 Variable Documentation

8.129.4.1 const char PV_CHAR_CLOSE_BRACKET = ')

8.129.4.2 const char PV_CHAR_COMMA = ','

8.130 oscl_vector.h File Reference

The file `oscl_vector.h` defines the template class `Oscl_Vector` which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

```
#include "oscl_mem_basic_functions.h"
#include "oscl_assert.h"
#include "oscl_opaque_type.h"
#include "oscl_defalloc.h"
#include "oscl_base.h"
```

Data Structures

- class `Oscl_Vector`
- class `Oscl_Vector_Base`

8.130.1 Detailed Description

The file `oscl_vector.h` defines the template class `Oscl_Vector` which has a very similar API as the STL Vector class (it basically provides a subset of the STL functionality). Memory allocation is abstracted through the use of an allocator template parameter.

8.131 osclconfig.h File Reference

This file contains configuration information for the linux platform.

```
#include <dirent.h>
#include <dlsfcn.h>
#include "osclconfig_limits_typedefs.h"
#include "osclconfig_unix_android.h"
#include "osclconfig_ix86.h"
#include "osclconfig_check.h"
```

Defines

- #define OSCL_HAS_ANDROID_SUPPORT 1
- #define OSCL_HAS_ANDROID_FILE_IO_SUPPORT 1
- #define OSCL_EXPORT_REF __attribute__ ((visibility("default")))
- #define OSCL_IMPORT_REF __attribute__ ((visibility("default")))
- #define OSCL_RELEASE_BUILD 0
- #define PVLOGGER_INST_LEVEL 5
- #define OSCL_UNSIGNED_CONST(x) x##u
- #define OSCL_NATIVE_UINT64_TYPE u_int64_t
- #define OSCL_TEMPLATED_DESTRUCTOR_CALL(type, simple_type) ~type ()
- #define __TFS__ <>
- #define OSCL_HAS_PRAGMA_PACK 0
- #define OSCL_HAS_PACKED_STRUCT 1
- #define OSCL_PACKED_VAR(x) x __attribute__((packed))
- #define OSCL_PACKED_STRUCT_BEGIN
- #define OSCL_PACKED_STRUCT_END __attribute__((packed))
- #define OSCL_ASSERT_ALWAYS 0

8.131.1 Detailed Description

This file contains configuration information for the linux platform.

8.131.2 Define Documentation

8.131.2.1 `#define __TFS__ <>`

8.131.2.2 `#define OSCL_EXPORT_REF __attribute__ ((visibility("default")))`

8.131.2.3 `#define OSCL_HAS_ANDROID_FILE_IO_SUPPORT 1`

8.131.2.4 `#define OSCL_HAS_ANDROID_SUPPORT 1`

8.131.2.5 `#define OSCL_HAS_PACKED_STRUCT 1`

8.131.2.6 `#define OSCL_IMPORT_REF __attribute__ ((visibility("default")))`

8.131.2.7 `#define OSCL_NATIVE_UINT64_TYPE u_int64_t`

8.131.2.8 `#define OSCL_PACKED_STRUCT_BEGIN`

8.131.2.9 `#define OSCL_PACKED_STRUCT_END __attribute__((packed))`

8.131.2.10 `#define OSCL_PACKED_VAR(x) x __attribute__((packed))`

8.131.2.11 `#define OSCL_RELEASE_BUILD 0`

8.131.2.12 `#define OSCL_TEMPLATED_DESTRUCTOR_CALL(type, simple_type) ~type()`

8.131.2.13 `#define OSCL_UNSIGNED_CONST(x) x##u`

8.131.2.14 `#define PVLOGGER_INST_LEVEL 5`

8.132 osclconfig_ansi_memory.h File Reference

This file contains common typedefs based on the ANSI C limits.h header.

```
#include <memory.h>
```

Defines

- #define OSCL_HAS_ANSI_MEMORY_FUNCS 1

Typedefs

- typedef size_t oscl_memsize_t

8.132.1 Detailed Description

This file contains common typedefs based on the ANSI C limits.h header.

This header file should work for any ANSI C compiler to determine the proper native C types to use for OSCL integer types.

8.132.2 Define Documentation

8.132.2.1 #define OSCL_HAS_ANSI_MEMORY_FUNCS 1

8.132.3 Typedef Documentation

8.132.3.1 typedef size_t oscl_memsize_t

8.133 osclconfig_check.h File Reference

Typedefs

- `typedef int8 __int8__check__`
- `typedef uint8 __uint8__check__`
- `typedef int16 __int16__check__`
- `typedef uint16 __uint16__check__`
- `typedef int32 __int32__check__`
- `typedef uint32 __uint32__check__`

8.134 osclconfig_compiler_warnings.h File Reference

This file contains the ability to turn off/on compiler warnings.

Defines

- #define OSCL_FUNCTION_PTR(x) (&x)

8.134.1 Detailed Description

This file contains the ability to turn off/on compiler warnings.

8.134.2 Define Documentation

8.134.2.1 #define OSCL_FUNCTION_PTR(x) (&x)

8.135 osclconfig_error.h File Reference

This file contains the common typedefs and header files needed to compile osclerror.

```
#include "osclconfig.h"  
#include <setjmp.h>  
#include <errno.h>  
#include "osclconfig_error_check.h"
```

Defines

- #define OSCL_HAS_EXCEPTIONS 1
- #define OSCL_HAS_ERRNO_H 1
- #define OSCL_HAS_SYMBIAN_ERRORTRAP 0
- #define OSCL_HAS_SETJMP_H 1

8.135.1 Detailed Description

This file contains the common typedefs and header files needed to compile osclerror.

8.135.2 Define Documentation

- 8.135.2.1 #define OSCL_HAS_ERRNO_H 1
- 8.135.2.2 #define OSCL_HAS_EXCEPTIONS 1
- 8.135.2.3 #define OSCL_HAS_SETJMP_H 1
- 8.135.2.4 #define OSCL_HAS_SYMBIAN_ERRORTRAP 0

8.136 osclconfig_error_check.h File Reference

8.137 osclconfig_global_new_delete.h File Reference

Functions

- void * **operator new** (size_t)
- void **operator delete** (void *)

8.138 osclconfig_global_placement_new.h File Reference

Functions

- void * [operator new](#) (size_t, void *ptr)

8.138.1 Function Documentation

8.138.1.1 void* operator new (size_t, void *ptr) [inline]

8.139 osclconfig_io.h File Reference

This file contains common typedefs based on the ANSI C limits.h header.

```
#include "osclconfig.h"  
  
#include <stdio.h>  
#include <stdlib.h>  
#include <stdarg.h>  
#include <sys/socket.h>  
#include <netinet/in.h>  
#include <arpa/inet.h>  
#include <fcntl.h>  
#include <signal.h>  
#include <netdb.h>  
#include <sys/mman.h>  
#include <sys/types.h>  
#include <errno.h>  
#include <sys/vfs.h>  
#include <dirent.h>  
#include <sys/stat.h>  
#include "osclconfig_io_check.h"
```

Defines

- #define OSCL_HAS_GLOB 0
- #define OSCL_HAS_ANSI_FILE_IO_SUPPORT 1
- #define OSCL_HAS_ANSI_64BIT_FILE_IO_SUPPORT 0
- #define OSCL_HAS_MSWIN_FILE_IO_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_COMPATIBLE_IO_FUNCTION 0
- #define OSCL_HAS_NATIVE_FILE_CACHE_ENABLE 1
- #define OSCL_FILE_BUFFER_MAX_SIZE 32768
- #define OSCL_HAS_PV_FILE_CACHE 0
- #define OSCL_HAS_LARGE_FILE_SUPPORT 1
- #define OSCL_HAS_SYMBIAN_SOCKET_SERVER 0
- #define OSCL_HAS_SYMBIAN_DNS_SERVER 0
- #define OSCL_HAS_BERKELEY_SOCKETS 1
- #define OSCL_HAS_SOCKET_SUPPORT 1
- #define OsclValidInetAddr(addr) (inet_addr(addr)!=INADDR_NONE)
- #define OsclMakeSockAddr(sockaddr, port, addrstr, ok)
- #define OsclUnMakeSockAddr(sockaddr, addrstr) addrstr=inet_ntoa(sockaddr.sin_addr);
- #define OsclMakeInAddr(in_addr, addrstr, ok)
- #define OsclUnMakeInAddr(in_addr, addrstr) addrstr=inet_ntoa(in_addr);
- #define OsclSetRecvBufferSize(s, val, ok, err)
- #define OsclBind(s, addr, ok, err)

- #define `OsclSetSockOpt`(s, optLevel, optName, optVal, optLen, ok, err)
- #define `OsclJoin`(s, addr, ok, err)
- #define `OsclListen`(s, size, ok, err)
- #define `OsclAccept`(s, accept_s, ok, err, wouldblock)
- #define `OsclSetNonBlocking`(s, ok, err)
- #define `OsclShutdown`(s, how, ok, err)
- #define `OsclSocket`(s, fam, type, prot, ok, err)
- #define `OsclSendTo`(s, buf, len, addr, ok, err, nbytes, wouldblock)
- #define `OsclSend`(s, buf, len, ok, err, nbytes, wouldblock)
- #define `OsclCloseSocket`(s, ok, err)
- #define `OsclConnect`(s, addr, ok, err, wouldblock)
- #define `OsclGetPeerName`(s, name, namelen, ok, err)
- #define `OsclGetAsyncSockErr`(s, ok, err)
- #define `OsclPipe`(x) pipe(x)
- #define `OsclReadFD`(fd, buf, cnt) read(fd,buf,cnt)
- #define `OsclWriteFD`(fd, buf, cnt) write(fd,buf,cnt)
- #define `OsclConnectComplete`(s, wset, eset, success, fail, ok, err)
- #define `OsclRecv`(s, buf, len, ok, err, nbytes, wouldblock)
- #define `OsclRecvFrom`(s, buf, len, paddr, paddrlen, ok, err, nbytes, wouldblock)
- #define `OsclSocketSelect`(nfds, rd, wr, ex, timeout, ok, err, nhandles)
- #define `OsclSocketStartup`(ok)
- #define `OsclSocketCleanup`(ok)
- #define `OsclGethostbyname`(name, hostent, ok, err)
- #define `OsclGetDottedAddr`(hostent, dottedaddr, ok)
- #define `OsclGetDottedAddrVector`(hostent, dottedaddr, dottedaddrvect, ok)
- #define `OSCL_SD_RECEIVE` SHUT_RD
- #define `OSCL_SD_SEND` SHUT_WR
- #define `OSCL_SD_BOTH` SHUT_RDWR
- #define `OSCL_AF_INET` AF_INET
- #define `OSCL SOCK_STREAM` SOCK_STREAM
- #define `OSCL SOCK_DGRAM` SOCK_DGRAM
- #define `OSCL IPPROTO_IP` IPPROTO_IP
- #define `OSCL IPPROTO_TCP` IPPROTO_TCP
- #define `OSCL IPPROTO_UDP` IPPROTO_UDP
- #define `OSCL_SOL_SOCKET` SOL_SOCKET
- #define `OSCL_SOL_IP` IPPROTO_IP
- #define `OSCL_SOL_TCP` IPPROTO_TCP
- #define `OSCL_SOL_UDP` IPPROTO_UDP
- #define `OSCL_SOCKOPT_IP_MULTICAST_TTL` IP_MULTICAST_TTL
- #define `OSCL_SOCKOPT_IP_ADDMEMBERSHIP` IP_ADD_MEMBERSHIP
- #define `OSCL_SOCKOPT_IP_TOS` IP_TOS
- #define `OSCL_SOCKOPT_SOL_REUSEADDR` SO_REUSEADDR
- #define `_FILE_OFFSET_BITS` 64

Typedefs

- typedef int `TOsclSocket`
- typedef sockaddr_in `TOsclSockAddr`
- typedef socklen_t `TOsclSockAddrLen`
- typedef ip_mreq `TIpMReq`
- typedef hostent `TOsclHostent`
- typedef off_t `TOsclFileOffset`

8.139.1 Detailed Description

This file contains common typedefs based on the ANSI C limits.h header.

This header file should work for any ANSI C compiler to determine the proper native C types to use for OSCL integer types.

8.139.2 Define Documentation

- 8.139.2.1 `#define _FILE_OFFSET_BITS 64`
- 8.139.2.2 `#define OSCL_AF_INET AF_INET`
- 8.139.2.3 `#define OSCL_FILE_BUFFER_MAX_SIZE 32768`
- 8.139.2.4 `#define OSCL_HAS_ANSI_64BIT_FILE_IO_SUPPORT 0`
- 8.139.2.5 `#define OSCL_HAS_ANSI_FILE_IO_SUPPORT 1`
- 8.139.2.6 `#define OSCL_HAS_BERKELEY_SOCKETS 1`
- 8.139.2.7 `#define OSCL_HAS_GLOB 0`
- 8.139.2.8 `#define OSCL_HAS_LARGE_FILE_SUPPORT 1`
- 8.139.2.9 `#define OSCL_HAS_MSWIN_FILE_IO_SUPPORT 0`
- 8.139.2.10 `#define OSCL_HAS_NATIVE_FILE_CACHE_ENABLE 1`
- 8.139.2.11 `#define OSCL_HAS_PV_FILE_CACHE 0`
- 8.139.2.12 `#define OSCL_HAS_SOCKET_SUPPORT 1`
- 8.139.2.13 `#define OSCL_HAS_SYMBIAN_COMPATIBLE_IO_FUNCTION 0`
- 8.139.2.14 `#define OSCL_HAS_SYMBIAN_DNS_SERVER 0`
- 8.139.2.15 `#define OSCL_HAS_SYMBIAN_SOCKET_SERVER 0`
- 8.139.2.16 `#define OSCL IPPROTO_IP IPPROTO_IP`
- 8.139.2.17 `#define OSCL IPPROTO_TCP IPPROTO_TCP`
- 8.139.2.18 `#define OSCL IPPROTO_UDP IPPROTO_UDP`
- 8.139.2.19 `#define OSCL_SD_BOTH SHUT_RDWR`
- 8.139.2.20 `#define OSCL_SD_RECEIVE SHUT_RD`
- 8.139.2.21 `#define OSCL_SD_SEND SHUT_WR`
- 8.139.2.22 `#define OSCL_SOCK_DGRAM SOCK_DGRAM`
- 8.139.2.23 `#define OSCL_SOCK_STREAM SOCK_STREAM`
- 8.139.2.24 `#define OSCL_SOCKOPT_IP_ADDMEMBERSHIP IP_ADD_MEMBERSHIP`
- 8.139.2.25 `#define OSCL_SOCKOPT_IP_MULTICAST_TTL IP_MULTICAST_TTL`
- 8.139.2.26 `#define OSCL_SOCKOPT_IP_TOS IP_TOS`
- 8.139.2.27 `#define OSCL_SOCKOPT_SOL_REUSEADDR SO_REUSEADDR`

```
accept_s=accept(s,NULL,NULL);\
ok=(accept_s!=(-1));\
if (!ok){err=errno;wouldblock=(err==EAGAIN)|err==EWOULDBLOCK);}
```

8.139.2.33 #define OsclBind(s, addr, ok, err)

Value:

```
TOsclSockAddr* tmpadr = &addr;\
sockaddr* sadr = OSCL_STATIC_CAST(sockaddr*, tmpadr);\
ok=(bind(s,sadr,sizeof(addr))!=(-1));\
if (!ok)err=errno
```

8.139.2.34 #define OsclCloseSocket(s, ok, err)

Value:

```
ok=(close(s)!=(-1));\
if (!ok)err=errno
```

8.139.2.35 #define OsclConnect(s, addr, ok, err, wouldblock)

Value:

```
TOsclSockAddr* tmpadr = &addr;\
sockaddr* sadr = OSCL_STATIC_CAST(sockaddr*, tmpadr);\
ok=(connect(s,sadr,sizeof(addr))!=(-1));\
if (!ok){err=errno;wouldblock=(err==EINPROGRESS);}
```

8.139.2.36 #define OsclConnectComplete(s, wset, eset, success, fail, ok, err)

Value:

```
success=fail=false;\
if (FD_ISSET(s,&eset))\
{fail=true;OsclGetAsyncSockErr(s,ok,err);}\\
else if (FD_ISSET(s,&wset))\
{OsclGetAsyncSockErr(s,ok,err);if (ok && err==0)success=true;else fail=true;}
```

8.139.2.37 #define OsclGetAsyncSockErr(s, ok, err)

Value:

```
int opterr;socklen_t optlen(sizeof(opterr));\
ok=(getsockopt(s,SOL_SOCKET,SO_ERROR,(void *)&opterr,&optlen)!=(-1));\
if(ok)err=opterr;else err=errno;
```

8.139.2.38 #define OsclGetDottedAddr(hostent, dottedaddr, ok)

Value:

```
long *_hostaddr=(long*)hostent->h_addr_list[0];\
  struct in_addr _inaddr;\
  _inaddr.s_addr=*_hostaddr;\
  dottedaddr/inet_ntoa(_inaddr);\
  ok=(dottedaddr!=NULL);
```

8.139.2.39 #define OsclGetDottedAddrVector(hostent, dottedaddr, dottedaddrvect, ok)

Value:

```
if(dottedaddrvect)\
{\\
  long **_addrlist=(long**)hostent->h_addr_list;\
  for(int i = 0; _addrlist[i] != NULL; i++){\\
    struct in_addr _inaddr;\
    _inaddr.s_addr=_addrlist[i];\
    OsclNetworkAddress addr(inet_ntoa(_inaddr), 0);\
    dottedaddrvect->push_back(addr);\
  }\\
  if (!dottedaddrvect->empty())\
    {dottedaddr->port = dottedaddrvect->front().port; dottedaddr->ipAddr.Set(dottedaddrvect->front().ipAd\
ok=(!dottedaddrvect->empty() && (((*dottedaddrvect)[0]).ipAddr.Str() != NULL));\
}\\
else\
{\
  char *add;\
  OsclGetDottedAddr(hostent,add,ok);\
  if(ok) dottedaddr->ipAddr.Set(add);\
}
```

8.139.2.40 #define OsclGethostbyname(name, hostent, ok, err)

Value:

```
hostent=gethostbyname((const char*)name);\
ok=(hostent!=NULL);\
if (!ok)err=errno;
```

8.139.2.41 #define OsclGetPeerName(s, name, namelen, ok, err)

Value:

```
ok=(getpeername(s,(sockaddr*)&name,(socklen_t*)&namelen) != (-1) );\
if (!ok)err=errno
```

8.139.2.42 #define OsclJoin(s, addr, ok, err)

Value:

```
{
    struct ip_mreq mreq; \
    void* p = &addr; \
    ok=(bind(s,(sockaddr*)p,sizeof(addr))!=(-1));\
    mreq.imr_multiaddr.s_addr = addr.sin_addr.s_addr ; \
    mreq.imr_interface.s_addr = htonl(INADDR_ANY); \
    ok=(setsockopt(s, IPPROTO_IP, IP_ADD_MEMBERSHIP, &mreq, sizeof(struct ip_mreq))!=(-1)); \
    if (!ok)err=errno; \
}
```

8.139.2.43 #define OsclListen(s, size, ok, err)

Value:

```
ok=(listen(iSocket,qSize)!=(-1));\
if (!ok)err=errno
```

8.139.2.44 #define OsclMakeInAddr(in_addr, addrstr, ok)

Value:

```
int32 result = inet_aton((const char*)addrstr, &in_addr);\
ok=(result!=0);
```

8.139.2.45 #define OsclMakeSockAddr(sockaddr, port, addrstr, ok)

Value:

```
sockaddr.sin_family=OSCL_AF_INET; \
sockaddr.sin_port=htons(port); \
int32 result=inet_aton((const char*)addrstr,&sockaddr.sin_addr); \
ok=(result!=0);
```

8.139.2.46 #define OsclPipe(x) pipe(x)

8.139.2.47 #define OsclReadFD(fd, buf, cnt) read(fd,buf,cnt)

8.139.2.48 #define OsclRecv(s, buf, len, ok, err, nbytes, wouldblock)

Value:

```
nbytes=recv(s,(void *)buf),(size_t)(len),0); \
ok=(nbytes!=(-1)); \
if (!ok){err=errno;wouldblock=(err==EAGAIN);}
```

8.139.2.49 #define OsclRecvFrom(s, buf, len, paddr, paddrlen, ok, err, nbytes, wouldblock)
Value:

```
\nvoid* p=paddr;\n\nbytes=recvfrom(s,(void*)(buf),(size_t)(len),0,(struct sockaddr*)p,paddrlen);\n  ok=(nbytes!=(-1));\n  if (!ok){err=errno;wouldblock=(err==EAGAIN);}\n}
```

8.139.2.50 #define OsclSend(s, buf, len, ok, err, nbytes, wouldblock)
Value:

```
nbytes=send(s,(const void*)(buf),(size_t)(len),0);\n  ok=(nbytes!=(-1));\n  if (!ok){err=errno;wouldblock=(err==EAGAIN||err==EWOULDBLOCK);}
```

8.139.2.51 #define OsclSendTo(s, buf, len, addr, ok, err, nbytes, wouldblock)
Value:

```
TOsclSockAddr* tmpadr = &addr;\nsockaddr* sadr = OSCL_STATIC_CAST(sockaddr*, tmpadr);\nnbytes=sendto(s,(const void*)(buf),(size_t)(len),0,sadr,(socklen_t)sizeof(addr));\n  ok=(nbytes!=(-1));\n  if (!ok){err=errno;wouldblock=(err==EAGAIN||err==EWOULDBLOCK);}
```

8.139.2.52 #define OsclSetNonBlocking(s, ok, err)
Value:

```
ok=(fcntl(s,F_SETFL,O_NONBLOCK)!=(-1));\n  if (!ok)err=errno
```

8.139.2.53 #define OsclSetRecvBufferSize(s, val, ok, err)
Value:

```
ok=(setsockopt(s,SOL_SOCKET,SO_RCVBUF,(char*)&val, sizeof(int)) != -1);\n  if (!ok)err=errno
```

8.139.2.54 #define OsclSetSockOpt(s, optLevel, optName, optVal, optLen, ok, err)
Value:

```
ok=(setsockopt(s,optLevel,optName,OSCL_STATIC_CAST(const char*,optVal),optLen) != (-1));\n  if (!ok)err=errno
```

8.139.2.55 #define OsclShutdown(s, how, ok, err)**Value:**

```
ok=(shutdown(iSocket,how)!=(-1));\
if (!ok)err=errno
```

8.139.2.56 #define OsclSocket(s, fam, type, prot, ok, err)**Value:**

```
s=socket(fam,type,prot);\
ok=(s!=(-1));\
if (!ok)err=errno
```

8.139.2.57 #define OsclSocketCleanup(ok)**Value:**

```
signal(SIGPIPE,SIG_DFL);\
ok=true
```

8.139.2.58 #define OsclSocketSelect(nfds, rd, wr, ex, timeout, ok, err, nhandles)**Value:**

```
nhandles=select(nfds,&rd,&wr,&ex,&timeout);\
ok=(nhandles!=-1);\
if (!ok)err=errno
```

8.139.2.59 #define OsclSocketStartup(ok)**Value:**

```
signal(SIGPIPE,SIG_IGN);\
ok=true
```

8.139.2.60 #define OsclUnMakeInAddr(in_addr, addrstr) addrstr=inet_ntoa(in_addr);

8.139.2.61 #define OsclUnMakeSockAddr(sockaddr, addrstr) addrstr=inet_ntoa(sockaddr.sin_addr);

8.139.2.62 #define OsclValidInetAddr(addr) (inet_addr(addr)!=INADDR_NONE)

8.139.2.63 #define OsclWriteFD(fd, buf, cnt) write(fd,buf,cnt)

8.139.3 Typedef Documentation

8.139.3.1 typedef struct ip_mreq TIpMReq

8.139.3.2 typedef off_t TOsclFileOffset

8.139.3.3 typedef struct hostent TOsclHostent

8.139.3.4 typedef struct sockaddr_in TOsclSockAddr

8.139.3.5 typedef socklen_t TOsclSockAddrLen

8.139.3.6 typedef int TOsclSocket

8.140 osclconfig_io_check.h File Reference

Typedefs

- `typedef TOsclFileOffset __verify__TOsclFileOffset__defined__`

8.140.1 Typedef Documentation

8.140.1.1 `typedef TOsclFileOffset __verify__TOsclFileOffset__defined__`

type `TOsclFileOffset` should be defined as the type used for file size and offsets on the target platform.
Example: `typedef size_t TOsclFileOffset;`

8.141 osclconfig_ix86.h File Reference

This file contains configuration information for the ix86 processor family.

Defines

- #define OSCL_INTEGERS_WORD_ALIGNED 1
- #define OSCL_BYTE_ORDER_BIG_ENDIAN 0
- #define OSCL_BYTE_ORDER_LITTLE_ENDIAN 1

8.141.1 Detailed Description

This file contains configuration information for the ix86 processor family.

8.142 osclconfig_lib.h File Reference

This file contains configuration information for the ANSI build.

```
#include "osclconfig_lib_check.h"
```

Defines

- #define OSCL_HAS_RUNTIME_LIB_LOADING_SUPPORT 1
- #define PV_RUNTIME_LIB_FILENAME_EXTENSION "so"
- #define OSCL_LIB_READ_DEBUG_LIBS 1
- #define PV_DYNAMIC_LOADING_CONFIG_FILE_PATH "./"

8.142.1 Detailed Description

This file contains configuration information for the ANSI build.

8.142.2 Define Documentation

8.142.2.1 #define OSCL_HAS_RUNTIME_LIB_LOADING_SUPPORT 1

8.142.2.2 #define OSCL_LIB_READ_DEBUG_LIBS 1

8.142.2.3 #define PV_DYNAMIC_LOADING_CONFIG_FILE_PATH "./"

8.142.2.4 #define PV_RUNTIME_LIB_FILENAME_EXTENSION "so"

8.143 osclconfig_lib_check.h File Reference

8.144 osclconfig_limits_typedefs.h File Reference

This file contains common typedefs based on the ANSI C limits.h header.

```
#include <limits.h>
```

Defines

- #define OSCL_CHAR_IS_UNSIGNED 1
- #define OSCL_CHAR_IS_SIGNED 0

8.144.1 Detailed Description

This file contains common typedefs based on the ANSI C limits.h header.

This header file should work for any ANSI C compiler to determine the proper native C types to use for OSCL integer types.

8.144.2 Define Documentation

8.144.2.1 #define OSCL_CHAR_IS_SIGNED 0

8.144.2.2 #define OSCL_CHAR_IS_UNSIGNED 1

8.145 osclconfig_memory.h File Reference

```
#include "osclconfig.h"
#include "osclconfig_ansi_memory.h"
#include "osclconfig_memory_check.h"
```

Defines

- #define OSCL_BYPASS_MEMMGT 1
- #define OSCL_HAS_GLOBAL_NEW_DELETE 1
- #define PVMEM_INST_LEVEL 1
- #define OSCL_HAS_HEAP_BASE_SUPPORT 1
- #define OSCL_HAS_SYMBIAN_MEMORY_FUNCS 0

8.145.1 Define Documentation

8.145.1.1 #define OSCL_BYPASS_MEMMGT 1

8.145.1.2 #define OSCL_HAS_GLOBAL_NEW_DELETE 1

8.145.1.3 #define OSCL_HAS_HEAP_BASE_SUPPORT 1

8.145.1.4 #define OSCL_HAS_SYMBIAN_MEMORY_FUNCS 0

8.145.1.5 #define PVMEM_INST_LEVEL 1

8.146 osclconfig_memory_check.h File Reference

8.147 osclconfig_no_os.h File Reference

Defines

- #define OSCL_HAS_UNIX_SUPPORT 0
- #define OSCL_HAS_MSWIN_SUPPORT 0
- #define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_SUPPORT 0
- #define OSCL_HAS_SAVAJE_SUPPORT 0
- #define OSCL_HAS_PV_C_OS_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_ERRORTRAP 0
- #define OSCL_HAS_SYMBIAN_MEMORY_FUNCS 0
- #define OSCL_HAS_PV_C_OS_API_MEMORY_FUNCS 0
- #define OSCL_HAS_PV_C_OS_TIME_FUNCS 0
- #define OSCL_HAS_UNIX_TIME_FUNCS 0
- #define OSCL_HAS_MSWIN_TIME_FUNCS 0
- #define OSCL_HAS_SYMBIAN_TIMERS 0
- #define OSCL_HAS_SYMBIAN_MATH 0
- #define OSCL_HAS_SYMBIAN_SCHEDULER 0
- #define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 0
- #define OSCL_HAS_PTHREAD_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_COMPATIBLE_IO_FUNCTION 0
- #define OSCL_HAS_SAVAJE_IO_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_SOCKET_SERVER 0
- #define OSCL_HAS_SYMBIAN_DNS_SERVER 0
- #define OSCL_HAS_BERKELEY_SOCKETS 0

8.148 osclconfig_proc.h File Reference

This file contains configuration information for the linux platform.

```
#include "osclconfig.h"  
#include "osclconfig_proc_unix_android.h"  
#include "osclconfig_proc_check.h"
```

8.148.1 Detailed Description

This file contains configuration information for the linux platform.

8.149 osclconfig_proc_check.h File Reference

Typedefs

- `typedef TOsclThreadId __verify__TOsclThreadId_defined__`
- `typedef TOsclThreadFuncRet __verify__TOsclThreadFuncRet_defined__`
- `typedef TOsclThreadFuncArg __verify__TOsclThreadFuncArg_defined__`
- `typedef TOsclThreadObject __verify__TOsclThreadObject_defined__`
- `typedef TOsclMutexObject __verify__TOsclMutexObject_defined__`
- `typedef TOsclSemaphoreObject __verify__TOsclSemaphoreObject_defined__`
- `typedef TOsclConditionObject __verify__TOsclConditionObject_defined__`

8.149.1 Typedef Documentation

8.149.1.1 `typedef TOsclConditionObject __verify__TOsclConditionObject_defined__`

type `TOsclConditionObject` should be defined as the type used as a condition variable on the target platform.
Example: `typedef pthread_cond_t TOsclConditionObject;`

Note: Condition variables are only used with certain semaphore implementations. If the semaphore implementation does not require a condition variable, then this type can be defined as 'int' as follows: `typedef int TOsclConditionObject; //not used`

8.149.1.2 `typedef TOsclMutexObject __verify__TOsclMutexObject_defined__`

type `TOsclMutexObject` should be defined as the type used as a mutex object or handle on the target platform. Example: `typedef pthread_mutex_t TOsclMutexObject;`

8.149.1.3 `typedef TOsclSemaphoreObject __verify__TOsclSemaphoreObject_defined__`

type `TOsclSemaphoreObject` should be defined as the type used as a mutex object or handle on the target platform. Example: `typedef sem_t TOsclSemaphoreObject;`

8.149.1.4 `typedef TOsclThreadFuncArg __verify__TOsclThreadFuncArg_defined__`

type `TOsclThreadFuncArg` should be defined as the type used as a thread function argument on the target platform. Example: `typedef LPVOID TOsclThreadFuncArg;`

8.149.1.5 `typedef TOsclThreadFuncRet __verify__TOsclThreadFuncRet_defined__`

type `TOsclThreadFuncRet` should be defined as the type used as a thread function return value on the target platform. Example: `typedef DWORD TOsclThreadFuncRet;`

8.149.1.6 `typedef TOsclThreadId __verify__TOsclThreadId_defined__`

type `TOsclThreadId` should be defined as the type used as a thread ID on the target platform. Example: `typedef DWORD TOsclThreadId;`

8.149.1.7 `typedef TOsclThreadObject __verify__TOsclThreadObject_defined__`

type `TOsclThreadObject` should be defined as the type used as a thread object or handle on the target platform. Example: `typedef pthread_t TOsclThreadObject;`

8.150 osclconfig_proc_unix_android.h File Reference

```
#include <pthread.h>
#include <errno.h>
#include <signal.h>
```

Defines

- #define OSCL_HAS_SYMBIAN_SCHEDULER 0
- #define OSCL_HAS_THREAD_SUPPORT 1
- #define OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT 0
- #define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 0
- #define OSCL_HAS_PTHREAD_SUPPORT 1
- #define OSCL_THREAD_DECL

TypeDefs

- typedef pthread_t TOsclThreadId
- typedef void * TOsclThreadFuncArg
- typedef void * TOsclThreadFuncRet
- typedef pthread_t TOsclThreadObject
- typedef pthread_mutex_t TOsclMutexObject
- typedef int TOsclSemaphoreObject
- typedef pthread_cond_t TOsclConditionObject

8.150.1 Define Documentation

- 8.150.1.1 `#define OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT 0`
- 8.150.1.2 `#define OSCL_HAS_PTHREAD_SUPPORT 1`
- 8.150.1.3 `#define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 0`
- 8.150.1.4 `#define OSCL_HAS_SYMBIAN_SCHEDULER 0`
- 8.150.1.5 `#define OSCL_HAS_THREAD_SUPPORT 1`
- 8.150.1.6 `#define OSCL_THREAD_DECL`

8.150.2 Typedef Documentation

- 8.150.2.1 `typedef pthread_cond_t TOsclConditionObject`
- 8.150.2.2 `typedef pthread_mutex_t TOsclMutexObject`
- 8.150.2.3 `typedef int TOsclSemaphoreObject`
- 8.150.2.4 `typedef void* TOsclThreadFuncArg`
- 8.150.2.5 `typedef void* TOsclThreadFuncRet`
- 8.150.2.6 `typedef pthread_t TOsclThreadId`
- 8.150.2.7 `typedef pthread_t TOsclThreadObject`

8.151 osclconfig_proc_unix_common.h File Reference

```
#include <time.h>
#include <semaphore.h>
#include <pthread.h>
#include <errno.h>
```

Defines

- #define OSCL_HAS_SYMBIAN_SCHEDULER 0
- #define OSCL_HAS_THREAD_SUPPORT 1
- #define OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT 0
- #define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 1
- #define OSCL_HAS_PTHREAD_SUPPORT 1
- #define OSCL_THREAD_DECL

Typedefs

- typedef pthread_t TOsclThreadId
- typedef void * TOsclThreadFuncArg
- typedef void * TOsclThreadFuncRet
- typedef pthread_t TOsclThreadObject
- typedef pthread_mutex_t TOsclMutexObject
- typedef sem_t TOsclSemaphoreObject
- typedef pthread_cond_t TOsclConditionObject

8.151.1 Define Documentation

- 8.151.1.1 #define OSCL_HAS_NON_PREEMPTIVE_THREAD_SUPPORT 0
- 8.151.1.2 #define OSCL_HAS_PTHREAD_SUPPORT 1
- 8.151.1.3 #define OSCL_HAS_SEM_TIMEDWAIT_SUPPORT 1
- 8.151.1.4 #define OSCL_HAS_SYMBIAN_SCHEDULER 0
- 8.151.1.5 #define OSCL_HAS_THREAD_SUPPORT 1
- 8.151.1.6 #define OSCL_THREAD_DECL

8.151.2 Typedef Documentation

- 8.151.2.1 typedef pthread_cond_t TOsclConditionObject
- 8.151.2.2 typedef pthread_mutex_t TOsclMutexObject
- 8.151.2.3 typedef sem_t TOsclSemaphoreObject
- 8.151.2.4 typedef void* TOsclThreadFuncArg
- 8.151.2.5 typedef void* TOsclThreadFuncRet
- 8.151.2.6 typedef pthread_t TOsclThreadId
- 8.151.2.7 typedef pthread_t TOsclThreadObject

8.152 osclconfig_time.h File Reference

```
#include "osclconfig.h"
#include <time.h>
#include <sys/time.h>
#include <unistd.h>
#include "osclconfig_time_check.h"
```

Defines

- #define OSCL_HAS_UNIX_TIME_FUNCS 1
- #define OSCL_HAS_MSWIN_TIME_FUNCS 0

TypeDefs

- typedef timeval OsclBasicTimeStruct
- typedef tm OsclBasicDateTimeStruct

8.152.1 Define Documentation

8.152.1.1 #define OSCL_HAS_MSWIN_TIME_FUNCS 0

8.152.1.2 #define OSCL_HAS_UNIX_TIME_FUNCS 1

8.152.2 Typedef Documentation

8.152.2.1 typedef tm OsclBasicDateTimeStruct

8.152.2.2 typedef struct timeval OsclBasicTimeStruct

8.153 osclconfig_time_check.h File Reference

Typedefs

- `typedef OsclBasicTimeStruct __Validate__BasicTimeStruct__`
- `typedef OsclBasicDateTimeStruct __Validate__BasicTimeDateStruct__`

8.153.1 Typedef Documentation

8.153.1.1 `typedef OsclBasicDateTimeStruct __Validate__BasicTimeDateStruct__`

`OsclBasicDateTimeStruct` type should be defined to the platform-specific date + time type.

8.153.1.2 `typedef OsclBasicTimeStruct __Validate__BasicTimeStruct__`

`OsclBasicTimeStruct` type should be defined to the platform-specific time of day type.

8.154 osclconfig_unix_android.h File Reference

```
#include <stdlib.h>
#include <stdarg.h>
#include <sys/types.h>
#include <stdio.h>
#include <string.h>
#include <unistd.h>
#include <pthread.h>
#include <ctype.h>
#include <math.h>
```

Defines

- #define OSCL_DISABLE_INLINES 0
- #define OSCL_HAS_ANSI_STDLIB_SUPPORT 1
- #define OSCL_HAS_ANSI_MATH_SUPPORT 1
- #define OSCL_HAS_GLOBAL_VARIABLE_SUPPORT 1
- #define OSCL_HAS_ANSI_STRING_SUPPORT 1
- #define OSCL_HAS_ANSI_WIDE_STRING_SUPPORT 0
- #define OSCL_HAS_ANSI_STDIO_SUPPORT 1
- #define OSCL_MEMFRAG_PTR_BEFORE_LEN 1
- #define OSCL_HAS_UNIX_SUPPORT 1
- #define OSCL_HAS_MSWIN_SUPPORT 0
- #define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_SUPPORT 0
- #define OSCL_HAS_NATIVE_INT64_TYPE 1
- #define OSCL_HAS_NATIVE_UINT64_TYPE 1
- #define OSCL_NATIVE_INT64_TYPE int64_t
- #define OSCL_NATIVE_UINT64_TYPE uint64_t
- #define INT64(x) x##LL
- #define UINT64(x) x##ULL
- #define INT64_HILO(high, low) (((high##LL))<<32)|low)
- #define UINT64_HILO(high, low) (((high##ULL))<<32)|low)
- #define OSCL_HAS_UNICODE_SUPPORT 1
- #define OSCL_NATIVE_WCHAR_TYPE wchar_t
- #define _STRLIT(x) L ## x
- #define _STRLIT_CHAR(x) x
- #define _STRLIT_WCHAR(x) L ## x
- #define OSCL_HAS_TLS_SUPPORT 1
- #define OSCL_TLS_IS_KEYED 1
- #define OSCL_TLS_KEY_CREATE_FUNC(key) (pthread_key_create(&key,NULL)==0)
- #define OSCL_TLS_KEY_DELETE_FUNC(key) pthread_key_delete(key)
- #define OSCL_TLS_STORE_FUNC(key, ptr) (pthread_setspecific(key,(const void*)ptr)==0)
- #define OSCL_TLS_GET_FUNC(key) pthread_getspecific(key)
- #define OSCL_HAS_BASIC_LOCK 1

Typedefs

- `typedef pthread_key_t TOsclTlsKey`
- `typedef pthread_mutex_t TOsclBasicLockObject`

8.154.1 Define Documentation

- 8.154.1.1 `#define _STRLIT(x) L ## x`
- 8.154.1.2 `#define _STRLIT_CHAR(x) x`
- 8.154.1.3 `#define _STRLIT_WCHAR(x) L ## x`
- 8.154.1.4 `#define INT64(x) x##LL`
- 8.154.1.5 `#define INT64_HILO(high, low) (((high##LL))<<32)|low)`
- 8.154.1.6 `#define OSCL_DISABLE_INLINES 0`
- 8.154.1.7 `#define OSCL_HAS_ANSI_MATH_SUPPORT 1`
- 8.154.1.8 `#define OSCL_HAS_ANSI_STDIO_SUPPORT 1`
- 8.154.1.9 `#define OSCL_HAS_ANSI_STDLIB_SUPPORT 1`
- 8.154.1.10 `#define OSCL_HAS_ANSI_STRING_SUPPORT 1`
- 8.154.1.11 `#define OSCL_HAS_ANSI_WIDE_STRING_SUPPORT 0`
- 8.154.1.12 `#define OSCL_HAS_BASIC_LOCK 1`
- 8.154.1.13 `#define OSCL_HAS_GLOBAL_VARIABLE_SUPPORT 1`
- 8.154.1.14 `#define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0`
- 8.154.1.15 `#define OSCL_HAS_MSWIN_SUPPORT 0`
- 8.154.1.16 `#define OSCL_HAS_NATIVE_INT64_TYPE 1`
- 8.154.1.17 `#define OSCL_HAS_NATIVE_UINT64_TYPE 1`
- 8.154.1.18 `#define OSCL_HAS_SYMBIAN_SUPPORT 0`
- 8.154.1.19 `#define OSCL_HAS_TLS_SUPPORT 1`
- 8.154.1.20 `#define OSCL_HAS_UNICODE_SUPPORT 1`
- 8.154.1.21 `#define OSCL_HAS_UNIX_SUPPORT 1`
- 8.154.1.22 `#define OSCL_MEMFRAG_PTR_BEFORE_LEN 1`
- 8.154.1.23 `#define OSCL_NATIVE_INT64_TYPE int64_t`
- 8.154.1.24 `#define OSCL_NATIVE_UINT64_TYPE uint64_t`
- 8.154.1.25 `#define OSCL_NATIVE_WCHAR_TYPE wchar_t`
- 8.154.1.26 `#define OSCL_TLS_GET_FUNC(key) pthread_getspecific(key)`
- 8.154.1.27 `#define OSCL_TLS_IS_KEYED 1`

8.155 osclconfig_unix_common.h File Reference

```
#include <stdlib.h>
#include <stdarg.h>
#include <sys/types.h>
#include <stdio.h>
#include <wchar.h>
#include <string.h>
#include <unistd.h>
#include <pthread.h>
#include <ctype.h>
#include <math.h>
```

Defines

- #define OSCL_DISABLE_INLINES 0
- #define OSCL_HAS_ANSI_STDLIB_SUPPORT 1
- #define OSCL_HAS_ANSI_MATH_SUPPORT 1
- #define OSCL_HAS_GLOBAL_VARIABLE_SUPPORT 1
- #define OSCL_HAS_ANSI_STRING_SUPPORT 1
- #define OSCL_HAS_ANSI_WIDE_STRING_SUPPORT 1
- #define OSCL_HAS_ANSI_STDIO_SUPPORT 1
- #define OSCL_MEMFRAG_PTR_BEFORE_LEN 1
- #define OSCL_HAS_UNIX_SUPPORT 1
- #define OSCL_HAS_MSWIN_SUPPORT 0
- #define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0
- #define OSCL_HAS_SYMBIAN_SUPPORT 0
- #define OSCL_HAS_NATIVE_INT64_TYPE 1
- #define OSCL_HAS_NATIVE_UINT64_TYPE 1
- #define OSCL_NATIVE_INT64_TYPE int64_t
- #define OSCL_NATIVE_UINT64_TYPE uint64_t
- #define INT64(x) x##LL
- #define UINT64(x) x##ULL
- #define INT64_HILO(high, low) (((high##LL))<<32)|low)
- #define UINT64_HILO(high, low) (((high##ULL))<<32)|low)
- #define OSCL_HAS_UNICODE_SUPPORT 1
- #define OSCL_NATIVE_WCHAR_TYPE wchar_t
- #define _STRLIT(x) L ## x
- #define _STRLIT_CHAR(x) x
- #define _STRLIT_WCHAR(x) L ## x
- #define OSCL_HAS_TLS_SUPPORT 1
- #define OSCL_TLS_IS_KEYED 1
- #define OSCL_TLS_KEY_CREATE_FUNC(key) (pthread_key_create(&key,NULL)==0)
- #define OSCL_TLS_KEY_DELETE_FUNC(key) pthread_key_delete(key)
- #define OSCL_TLS_STORE_FUNC(key, ptr) (pthread_setspecific(key,(const void*)ptr)==0)
- #define OSCL_TLS_GET_FUNC(key) pthread_getspecific(key)
- #define OSCL_HAS_BASIC_LOCK 1

Typedefs

- `typedef pthread_key_t TOsclTlsKey`
- `typedef pthread_mutex_t TOsclBasicLockObject`

8.155.1 Define Documentation

- 8.155.1.1 `#define _STRLIT(x) L ## x`
- 8.155.1.2 `#define _STRLIT_CHAR(x) x`
- 8.155.1.3 `#define _STRLIT_WCHAR(x) L ## x`
- 8.155.1.4 `#define INT64(x) x##LL`
- 8.155.1.5 `#define INT64_HILO(high, low) (((high##LL))<<32)|low)`
- 8.155.1.6 `#define OSCL_DISABLE_INLINES 0`
- 8.155.1.7 `#define OSCL_HAS_ANSI_MATH_SUPPORT 1`
- 8.155.1.8 `#define OSCL_HAS_ANSI_STDIO_SUPPORT 1`
- 8.155.1.9 `#define OSCL_HAS_ANSI_STDLIB_SUPPORT 1`
- 8.155.1.10 `#define OSCL_HAS_ANSI_STRING_SUPPORT 1`
- 8.155.1.11 `#define OSCL_HAS_ANSI_WIDE_STRING_SUPPORT 1`
- 8.155.1.12 `#define OSCL_HAS_BASIC_LOCK 1`
- 8.155.1.13 `#define OSCL_HAS_GLOBAL_VARIABLE_SUPPORT 1`
- 8.155.1.14 `#define OSCL_HAS_MSWIN_PARTIAL_SUPPORT 0`
- 8.155.1.15 `#define OSCL_HAS_MSWIN_SUPPORT 0`
- 8.155.1.16 `#define OSCL_HAS_NATIVE_INT64_TYPE 1`
- 8.155.1.17 `#define OSCL_HAS_NATIVE_UINT64_TYPE 1`
- 8.155.1.18 `#define OSCL_HAS_SYMBIAN_SUPPORT 0`
- 8.155.1.19 `#define OSCL_HAS_TLS_SUPPORT 1`
- 8.155.1.20 `#define OSCL_HAS_UNICODE_SUPPORT 1`
- 8.155.1.21 `#define OSCL_HAS_UNIX_SUPPORT 1`
- 8.155.1.22 `#define OSCL_MEMFRAG_PTR_BEFORE_LEN 1`
- 8.155.1.23 `#define OSCL_NATIVE_INT64_TYPE int64_t`
- 8.155.1.24 `#define OSCL_NATIVE_UINT64_TYPE uint64_t`
- 8.155.1.25 `#define OSCL_NATIVE_WCHAR_TYPE wchar_t`
- 8.155.1.26 `#define OSCL_TLS_GET_FUNC(key) pthread_getspecific(key)`
- 8.155.1.27 `#define OSCL_TLS_IS_KEYED 1`

8.156 osclconfig_util.h File Reference

```
#include "osclconfig.h"
#include <stdio.h>
#include <time.h>
#include <sys/time.h>
#include <unistd.h>
#include "osclconfig_util_check.h"
```

Defines

- #define OSCL_CLOCK_HAS_DRIFT_CORRECTION 0
- #define OSCL_HAS_SYMBIAN_TIMERS 0
- #define OSCL_HAS_SYMBIAN_MATH 0
- #define OSCL RAND_MAX RAND_MAX
- #define SLEEP_ONE_SEC sleep(1)

8.156.1 Define Documentation

- 8.156.1.1 #define OSCL_CLOCK_HAS_DRIFT_CORRECTION 0
- 8.156.1.2 #define OSCL_HAS_SYMBIAN_MATH 0
- 8.156.1.3 #define OSCL_HAS_SYMBIAN_TIMERS 0
- 8.156.1.4 #define OSCL RAND_MAX RAND_MAX
- 8.156.1.5 #define SLEEP_ONE_SEC sleep(1)

8.157 osclconfig_util_check.h File Reference

8.158 pvlogger.h File Reference

This file contains basic logger interfaces for common use across platforms.

```
#include "oscl_base.h"
#include "oscl_vector.h"
#include "oscl_shared_ptr.h"
#include "oscl_base_alloc.h"
```

Data Structures

- class [PVLogger](#)

Defines

- #define [PVLOGMSG_INST_REL](#) 0
- #define [PVLOGMSG_INST_PROF](#) 1
- #define [PVLOGMSG_INST_HLDBG](#) 2
- #define [PVLOGMSG_INST_MLDBG](#) 3
- #define [PVLOGMSG_INST_LLDBG](#) 4
- #define [PVLOGGER_INST_LEVEL](#) 5
- #define [_PVLOGGER_LOGMSG\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [_PVLOGGER_LOGMSG_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [_PVLOGGER_LOGBIN\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [_PVLOGGER_LOGBIN_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_INST_LEVEL_SUPPORT](#) 1
- #define [PVLOGGER_LOGMSG_PVLOGMSG_INST_REL\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGMSG\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGMSG_V_PVLOGMSG_INST_REL\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGMSG_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGBIN_PVLOGMSG_INST_REL\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGBIN\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGBIN_V_PVLOGMSG_INST_REL\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGBIN_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGMSG_PVLOGMSG_INST_PROF\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGMSG\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGMSG_V_PVLOGMSG_INST_PROF\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGMSG_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGBIN_PVLOGMSG_INST_PROF\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGBIN\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGBIN_V_PVLOGMSG_INST_PROF\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGBIN_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGMSG_PVLOGMSG_INST_HLDBG\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGMSG\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGMSG_V_PVLOGMSG_INST_HLDBG\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGMSG_V\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGBIN_PVLOGMSG_INST_HLDBG\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGBIN\(LOGGER, LEVEL, MESSAGE\)](#)
- #define [PVLOGGER_LOGBIN_V_PVLOGMSG_INST_HLDBG\(LOGGER, LEVEL, MESSAGE\) _- PVLOGGER_LOGBIN_V\(LOGGER, LEVEL, MESSAGE\)](#)

- #define **PVLOGGER_LOGMSG_PVLOGMSG_INST_MLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGMSG_V_PVLOGMSG_INST_MLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGBIN_PVLOGMSG_INST_MLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGBIN_V_PVLOGMSG_V_INST_MLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGMSG_PVLOGMSG_INST_LLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGMSG_V_PVLOGMSG_INST_LLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGBIN_PVLOGMSG_INST_LLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGBIN_V_PVLOGMSG_INST_LLDBG**(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGMSG**(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER_LOGMSG_## IL (LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGMSG_V**(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER_LOGMSG_V_## IL (LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGBIN**(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER_LOGBIN_## IL (LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOGBIN_V**(IL, LOGGER, LEVEL, MESSAGE) PVLOGGER_LOGBIN_V_## IL (LOGGER, LEVEL, MESSAGE)
- #define **PVLOGGER_LOG_USE_ONLY**(x) x
- #define **PVLOGGER_ENABLE** 1

Variables

- const int32 **PVLOGGER_LEVEL_UNINITIALIZED** = -1
- const **PVLogger::log_level_type** **PVLOGMSG_EMERG** = 0
- const **PVLogger::log_level_type** **PVLOGMSG_ALERT** = 1
- const **PVLogger::log_level_type** **PVLOGMSG_CRIT** = 2
- const **PVLogger::log_level_type** **PVLOGMSG_ERR** = 3
- const **PVLogger::log_level_type** **PVLOGMSG_WARNING** = 4
- const **PVLogger::log_level_type** **PVLOGMSG_NOTICE** = 5
- const **PVLogger::log_level_type** **PVLOGMSG_INFO** = 6
- const **PVLogger::log_level_type** **PVLOGMSG_STACK_TRACE** = 7
- const **PVLogger::log_level_type** **PVLOGMSG_DEBUG** = 8
- const **PVLogger::log_level_type** **PVLOGMSG_FATAL_ERROR** = **PVLOGMSG_EMERG**
- const **PVLogger::log_level_type** **PVLOGMSG_NONFATAL_ERROR** = **PVLOGMSG_ERR**
- const **PVLogger::log_level_type** **PVLOGMSG_STATISTIC** = **PVLOGMSG_INFO**
- const **PVLogger::log_level_type** **PVLOGMSG_VERBOSE** = **PVLOGMSG_DEBUG**

8.158.1 Detailed Description

This file contains basic logger interfaces for common use across platforms.

This is the main entry point header file for the logger library. It should be the only one users directly include.

8.158.2 Define Documentation

8.158.2.1 #define _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)

Value:

```
{\
  if (LOGGER) \
  {\
    if (LOGGER->IsActive(LEVEL)) \
    {\
      LOGGER->LogMsgBuffers MESSAGE; \
    }\
  }\
}
```

8.158.2.2 #define _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)

Value:

```
{\
  if (LOGGER) \
  {\
    if (LOGGER->IsActive(LEVEL)) \
    {\
      LOGGER->LogMsgBuffersV MESSAGE; \
    }\
  }\
}
```

8.158.2.3 #define _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)

Value:

```
{\
  if (LOGGER) \
  {\
    if (LOGGER->IsActive(LEVEL)) \
    {\
      LOGGER->LogMsgString MESSAGE; \
    }\
  }\
}
```

8.158.2.4 #define _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)

Value:

```
{\
  if (LOGGER) \
  {\
    if (LOGGER->IsActive(LEVEL)) \
    {\
      LOGGER->LogMsgStringV MESSAGE; \
    }\
  }\
}
```

8.158.2.5 #define PVLOGGER_ENABLE 1

In case logging is compiled out, there is no need to compile the logger runtime code either.

8.158.2.6 #define PVLOGGER_INST_LEVEL 5**8.158.2.7 #define PVLOGGER_INST_LEVEL_SUPPORT 1****8.158.2.8 #define PVLOGGER_LOG_USE_ONLY(x) x**

Used to compile in/out lines of code that are used only for **PVLogger** macros.

This code will be removed at compile time when **PVLogger** is disabled, i.e. Release mode. So do not put in any code that is necessary for correct functionality of the module

**8.158.2.9 #define PVLOGGER_LOGBIN(IL, LOGGER, LEVEL, MESSAGE)
PVLOGGER_LOGBIN_ ## IL (LOGGER, LEVEL, MESSAGE)**

This is a binary API to log messages

Parameters:

IL Instrumentation level.

LOGGER Pointer to the logger object, that acts as the logging control/interface point

LEVEL Log level of the message

MESSAGE Log Message which includes the message id, and message buffers that need to be logged.

Example Usage: PVLOGGER_LOGBIN (PVLOGMSG_INST_LLDBG, logger_1, PVLOGMSG_WARNING, (10, 3, msgBuf1Size, msgBuf1, msgBuf2Size, msgBuf2, msgBuf3Size, msgBuf3));

-This message contains THREE (ptr_len, ptr) pairs. Log level of this msg is PVLOGMSG_WARNING, message id is 10.

- 8.158.2.10 #define PVLOGGER_LOGBIN_PVLOGMSG_INST_HLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.11 #define PVLOGGER_LOGBIN_PVLOGMSG_INST_LLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.12 #define PVLOGGER_LOGBIN_PVLOGMSG_INST_MLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.13 #define PVLOGGER_LOGBIN_PVLOGMSG_INST_PROF(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.14 #define PVLOGGER_LOGBIN_PVLOGMSG_INST_REL(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN(LOGGER, LEVEL, MESSAGE)
- 8.158.2.15 #define PVLOGGER_LOGBIN_V(IL, LOGGER, LEVEL, MESSAGE)
PVLOGGER_LOGBIN_V_## IL (LOGGER, LEVEL, MESSAGE)
- 8.158.2.16 #define PVLOGGER_LOGBIN_V_PVLOGMSG_INST_HLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.17 #define PVLOGGER_LOGBIN_V_PVLOGMSG_INST_LLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.18 #define PVLOGGER_LOGBIN_V_PVLOGMSG_INST_PROF(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.19 #define PVLOGGER_LOGBIN_V_PVLOGMSG_INST_REL(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.20 #define PVLOGGER_LOGBIN_V_PVLOGMSG_V_INST_MLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGBIN_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.21 #define PVLOGGER_LOGMSG(IL, LOGGER, LEVEL, MESSAGE)
PVLOGGER_LOGMSG_## IL (LOGGER, LEVEL, MESSAGE)

This is the text based API to log messages

Parameters:

IL Instrumentation level.

LOGGER Pointer to the logger object, that acts as the logging control/interface point

LEVEL Log level of the message

MESSAGE Log Message which includes the message id, and any kind of formatting information

Example Usage: PVLOGGER_LOGMSG(PVLOGMSG_INST_LLDBG, logger_1, PVLOGMSG_WARNING, (13, "Test Messsage to Node 1

")); -This message of log level PVLOGMSG_WARNING, and has a message id of 13

- 8.158.2.22 #define PVLOGGER_LOGMSG_PVLOGMSG_INST_HLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- 8.158.2.23 #define PVLOGGER_LOGMSG_PVLOGMSG_INST_LLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- 8.158.2.24 #define PVLOGGER_LOGMSG_PVLOGMSG_INST_MLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- 8.158.2.25 #define PVLOGGER_LOGMSG_PVLOGMSG_INST_PROF(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- 8.158.2.26 #define PVLOGGER_LOGMSG_PVLOGMSG_INST_REL(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG(LOGGER, LEVEL, MESSAGE)
- 8.158.2.27 #define PVLOGGER_LOGMSG_V(IL, LOGGER, LEVEL, MESSAGE)
PVLOGGER_LOGMSG_V_## IL (LOGGER, LEVEL, MESSAGE)
- 8.158.2.28 #define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_HLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.29 #define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_LLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.30 #define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_MLDBG(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.31 #define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_PROF(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.32 #define PVLOGGER_LOGMSG_V_PVLOGMSG_INST_REL(LOGGER, LEVEL, MESSAGE) _PVLOGGER_LOGMSG_V(LOGGER, LEVEL, MESSAGE)
- 8.158.2.33 #define PVLOGMSG_INST_HLDBG 2

High Level Debug Layer

This layer should contain messages that have very minimal impact on performance, but are at lower level (i.e., provide more information) than would be appropriate in a shipping product. The messages are probably used to gather information and validate proper functionality at a high level as might be appropriate for IOT, stress testing, or QA testing.

8.158.2.34 #define PVLOGMSG_INST_LLDBG 4

Low Level Debug Layer

This layer should contain messages for early functional testing. The messages are typically at a very low-level and allow testing the functionality of individual modules and components. Messages at this layer will typically have a performance impact (sometimes significant) due to the fact that they are at such a low level.

8.158.2.35 #define PVLOGMSG_INST_MLDBG 3

Mid Level Debug Layer

This layer should contain messages that are useful in the middle stages of the development cycle where major components are being integrated. The components themselves should already be well-tested so the emphasis is on interfaces between these components and integration testing. Messages at this layer may have some performance impact.

8.158.2.36 #define PVLOGMSG_INST_PROF 1

Profile Layer

The profile layer is used for messages and information related to measuring and reporting performance-related information.

8.158.2.37 #define PVLOGMSG_INST_REL 0

Release Layer

The release layer should only be used for messages that should remain in the final release. In certain cases all messaging may be disabled depending on customer requirements. However, when allowed the release layer should contain information that will be useful diagnosing problems in a released product (perhaps after entering a diagnostic mode), but with absolutely minimal performance impact when disabled at runtime.

8.158.3 Variable Documentation

8.158.3.1 const int32 PVLOGGER_LEVEL_UNINITIALIZED = -1

8.158.3.2 const PVLogger::log_level_type PVLOGMSG_ALERT = 1

action must be taken immediately

8.158.3.3 const PVLogger::log_level_type PVLOGMSG_CRIT = 2

critical conditions

8.158.3.4 const PVLogger::log_level_type PVLOGMSG_DEBUG = 8

debug-level messages

8.158.3.5 const PVLogger::log_level_type PVLOGMSG_EMERG = 0

system is unusable

8.158.3.6 const PVLogger::log_level_type PVLOGMSG_ERR = 3

error conditions

8.158.3.7 const PVLogger::log_level_type PVLOGMSG_FATAL_ERROR = PVLOGMSG_EMERG

8.158.3.8 const PVLogger::log_level_type PVLOGMSG_INFO = 6

informational

8.158.3.9 const PVLogger::log_level_type PVLOGMSG_NONFATAL_ERROR = PVLOGMSG_ERR

8.158.3.10 const PVLogger::log_level_type PVLOGMSG_NOTICE = 5

normal but significant condition

8.158.3.11 const PVLogger::log_level_type PVLOGMSG_STACK_TRACE = 7

function enter and exit

8.158.3.12 const PVLogger::log_level_type PVLOGMSG_STATISTIC = PVLOGMSG_INFO

8.158.3.13 const PVLogger::log_level_type PVLOGMSG_VERBOSE = PVLOGMSG_DEBUG

8.158.3.14 const PVLogger::log_level_type PVLOGMSG_WARNING = 4

warning conditions

8.159 pvlogger_accessories.h File Reference

```
#include "oscl_base.h"
#include "pvlogger.h"
```

Data Structures

- class [AllPassFilter](#)
- class [PVLoggerAppender](#)
- class [PVLoggerFilter](#)
- class [PVLoggerLayout](#)

Variables

- const [PVLoggerFilter::filter_status_type PVLOGGER_FILTER_ACCEPT = 1](#)
- const [PVLoggerFilter::filter_status_type PVLOGGER_FILTER_REJECT = 2](#)
- const [PVLoggerFilter::filter_status_type PVLOGGER_FILTER_NEUTRAL = 3](#)

8.159.1 Variable Documentation

8.159.1.1 const [PVLoggerFilter::filter_status_type PVLOGGER_FILTER_ACCEPT = 1](#)

8.159.1.2 const [PVLoggerFilter::filter_status_type PVLOGGER_FILTER_NEUTRAL = 3](#)

8.159.1.3 const [PVLoggerFilter::filter_status_type PVLOGGER_FILTER_REJECT = 2](#)

8.160 pvlogger_c.h File Reference

This file contains basic logger interfaces for common use across platforms. C-callable version.

```
#include "osclconfig.h"
```

Defines

- #define PVLOGGER_C_INST_LEVEL 5
- #define PVLOGMSG_C_INST_REL 0
- #define PVLOGMSG_C_INST_PROF 1
- #define PVLOGMSG_C_INST_HLDBG 2
- #define PVLOGMSG_C_INST_MLDBG 3
- #define PVLOGMSG_C_INST_LLDBG 4
- #define PVLOGMSG_C_EMERG 0
- #define PVLOGMSG_C_ALERT 1
- #define PVLOGMSG_C_CRIT 2
- #define PVLOGMSG_C_ERR 3
- #define PVLOGMSG_C_WARNING 4
- #define PVLOGMSG_C_NOTICE 5
- #define PVLOGMSG_C_INFO 6
- #define PVLOGMSG_C_STACK_TRACE 7
- #define PVLOGMSG_C_STACK_DEBUG 8

Functions

- OSCL_IMPORT_REF void * [pvLogger_GetLoggerObject](#) (const char *tag)
- OSCL_IMPORT_REF int [pvLogger_IsActive](#) (void *logger, int log_level)
- OSCL_IMPORT_REF void [pvLogger_LogMsgString](#) (void *logger, int msgID, const char *fmt,...)

8.160.1 Detailed Description

This file contains basic logger interfaces for common use across platforms. C-callable version.

This is the main entry point header file for the logger library. It should be the only one users directly include.

8.160.2 Define Documentation

- 8.160.2.1 `#define PVLOGGER_C_INST_LEVEL 5`
- 8.160.2.2 `#define PVLOGMSG_C_ALERT 1`
- 8.160.2.3 `#define PVLOGMSG_C_CRIT 2`
- 8.160.2.4 `#define PVLOGMSG_C_EMERG 0`
- 8.160.2.5 `#define PVLOGMSG_C_ERR 3`
- 8.160.2.6 `#define PVLOGMSG_C_INFO 6`
- 8.160.2.7 `#define PVLOGMSG_C_INST_HLDBG 2`
- 8.160.2.8 `#define PVLOGMSG_C_INST_LLDBG 4`
- 8.160.2.9 `#define PVLOGMSG_C_INST_MLDBG 3`
- 8.160.2.10 `#define PVLOGMSG_C_INST_PROF 1`
- 8.160.2.11 `#define PVLOGMSG_C_INST_REL 0`
- 8.160.2.12 `#define PVLOGMSG_C_NOTICE 5`
- 8.160.2.13 `#define PVLOGMSG_C_STACK_DEBUG 8`
- 8.160.2.14 `#define PVLOGMSG_C_STACK_TRACE 7`
- 8.160.2.15 `#define PVLOGMSG_C_WARNING 4`

8.160.3 Function Documentation

- 8.160.3.1 `OSCL_IMPORT_REF void* pvLogger_GetLoggerObject (const char * tag)`
- 8.160.3.2 `OSCL_IMPORT_REF int pvLogger_IsActive (void * logger, int log_level)`
- 8.160.3.3 `OSCL_IMPORT_REF void pvLogger_LogMsgString (void * logger, int msgID, const char * fmt, ...)`

8.161 pvlogger_registry.h File Reference

```
#include "pvlogger.h"
#include "oscl_tagtree.h"
```

Data Structures

- class [PVLoggerRegistry](#)

Chapter 9

oscl Page Documentation

9.1 Todo List

Global **MAX_NUMBER_OF_BYTE_PER_UTF8** Handle 4-byte surrogate pair representation

Index

~AllPassFilter
 AllPassFilter, 114
~BufFragGroup
 BufFragGroup, 120
~BufferMgr
 BufferMgr, 117
~CallbackTimer
 CallbackTimer, 123
~CallbackTimerObserver
 CallbackTimerObserver, 125
~DNSRequestParam
 DNSRequestParam, 132
~GetHostByNameParam
 GetHostByNameParam, 135
~HeapBase
 HeapBase, 137
~MM_AllocInfo
 MM_AllocInfo, 149
~MM_AllocNode
 MM_AllocNode, 150
~MM_Audit_Imp
 MM_Audit_Imp, 153
~MediaData
 MediaData, 142
~MemAllocator
 MemAllocator, 145
~OSCLMemAutoPtr
 OSCLMemAutoPtr, 435
~OSCL_FastString
 OSCL_FastString, 175
~OSCL_HeapString
 osclutil, 83
~OSCL_HeapStringA
 OSCL_HeapStringA, 199
~OSCL_StackString
 osclutil, 83
~OSCL_String
 OSCL_String, 260
~OSCL_wFastString
 OSCL_wFastString, 294
~OSCL_wHeapString
 osclutil, 83
~OSCL_wHeapStringA
 OSCL_wHeapStringA, 299
~OSCL_wStackString
 osclutil, 83
~OSCL_wString
 OSCL_wString, 304
~OsclAcceptMethod
 OsclAcceptMethod, 307
~OsclActiveObject
 OsclActiveObject, 310
~OsclAllocDestructDealloc
 OsclAllocDestructDealloc, 313
~OsclAsyncFile
 OsclAsyncFile, 316
~OsclAsyncFileBuffer
 OsclAsyncFileBuffer, 319
~OsclBinIStream
 OsclBinIStream, 323
~OsclBinOStream
 OsclBinOStream, 330
~OsclBindMethod
 OsclBindMethod, 321
~OsclCacheObserver
 Oscl_File::OsclCacheObserver, 186
~OsclComponentRegistry
 OsclComponentRegistry, 343
~OsclComponentRegistryElement
 OsclComponentRegistryElement, 345
~OsclConnectMethod
 OsclConnectMethod, 347
~OsclDNS
 OsclDNS, 350
~OsclDNSI
 OsclDNSI, 352
~OsclDNSIBase
 OsclDNSIBase, 355
~OsclDNSObserver
 OsclDNSObserver, 360
~OsclDNSRequest
 OsclDNSRequest, 361
~OsclDestructDealloc
 OsclDestructDealloc, 349
~OsclExclusiveArrayPtr
 OsclExclusiveArrayPtr, 380
~OsclExclusivePtr
 OsclExclusivePtr, 383
~OsclExclusivePtrA
 OsclExclusivePtrA, 386

- ~OsclExecSchedulerCommonBase
 - OsclExecSchedulerCommonBase, 394
- ~OsclFileCache
 - OsclFileCache, 401
- ~OsclGetHostByNameMethod
 - OsclGetHostByNameMethod, 412
- ~OsclIPSocketI
 - OsclIPSocketI, 418
- ~OsclJump
 - OsclJump, 420
- ~OsclListenMethod
 - OsclListenMethod, 421
- ~OsclLockBase
 - OsclLockBase, 423
- ~OsclMemAudit
 - OsclMemAudit, 428
- ~OsclMemPoolFixedChunkAllocator
 - OsclMemPoolFixedChunkAllocator, 443
- ~OsclMemPoolFixedChunkAllocatorObserver
 - OsclMemPoolFixedChunkAllocator-
Observer, 446
- ~OsclMemPoolResizableAllocator
 - OsclMemPoolResizableAllocator, 448
- ~OsclMemPoolResizableAllocatorMemoryObserver
 - OsclMemPoolResizableAllocatorMemory-
Observer, 455
- ~OsclMemPoolResizableAllocatorObserver
 - OsclMemPoolResizableAllocatorObserver,
456
- ~OsclMemStatsNode
 - OsclMemStatsNode, 457
- ~OsclMutex
 - OsclMutex, 458
- ~OsclNativeFile
 - OsclNativeFile, 462
- ~OsclNullLock
 - OsclNullLock, 466
- ~OsclPriorityQueue
 - OsclPriorityQueue, 470
- ~OsclPriorityQueueBase
 - OsclPriorityQueueBase, 473
- ~OsclRecvFromMethod
 - OsclRecvFromMethod, 485
- ~OsclRecvMethod
 - OsclRecvMethod, 489
- ~OsclRefCounter
 - OsclRefCounter, 491
- ~OsclRefCounterDA
 - OsclRefCounterDA, 493
- ~OsclRefCounterMTDA
 - OsclRefCounterMTDA, 497
- ~OsclRefCounterMTSA
 - OsclRefCounterMTSA, 499
- ~OsclRefCounterMemFrag
 - OsclRefCounterMemFrag, 495
- ~OsclRefCounterSA
 - OsclRefCounterSA, 501
- ~OsclRegistryAccessClient
 - OsclRegistryAccessClient, 503
- ~OsclRegistryClient
 - OsclRegistryClient, 508
- ~OsclRegistryServTlsImpl
 - OsclRegistryServTlsImpl, 514
- ~OsclSchedulerObserver
 - OsclSchedulerObserver, 516
- ~OsclScopedLock
 - OsclScopedLock, 517
- ~OsclSemaphore
 - OsclSemaphore, 520
- ~OsclSendMethod
 - OsclSendMethod, 522
- ~OsclSendToMethod
 - OsclSendToMethod, 524
- ~OsclSharedPtr
 - OsclSharedPtr, 527
- ~OsclShutdownMethod
 - OsclShutdownMethod, 529
- ~OsclSingleton
 - OsclSingleton, 531
- ~OsclSocketI
 - OsclSocketI, 535
- ~OsclSocketIBase
 - OsclSocketIBase, 540
- ~OsclSocketMethod
 - OsclSocketMethod, 545
- ~OsclSocketObserver
 - OsclSocketObserver, 547
- ~OsclSocketRequestAO
 - OsclSocketRequestAO, 550
- ~OsclSocketServ
 - OsclSocketServ, 553
- ~OsclSocketServIBase
 - OsclSocketServIBase, 558
- ~OsclTCPSocket
 - OsclTCPSocket, 565
- ~OsclTCPSocketI
 - OsclTCPSocketI, 572
- ~OsclTLS
 - OsclTLS, 591
- ~OsclTLSEx
 - OsclTLSEx, 593
- ~OsclThread
 - OsclThread, 574
- ~OsclThreadLock
 - OsclThreadLock, 578
- ~OsclTimer
 - OsclTimer, 582
- ~OsclTimerObject

OsclTimerObject, 586
 ~OsclTimerObserver
 OsclTimerObserver, 589
 ~OsclUDPSocket
 OsclUDPSocket, 601
 ~OsclUDPSocketI
 OsclUDPSocketI, 607
 ~Oscl_Alloc
 Oscl_Alloc, 169
 ~Oscl_Dealloc
 Oscl_Dealloc, 170
 ~Oscl_File
 Oscl_File, 180
 ~Oscl_FileFind
 Oscl_FileFind, 189
 ~Oscl_FileServer
 Oscl_FileServer, 192
 ~Oscl_Linked_List
 Oscl_Linked_List, 205
 ~Oscl_Linked_List_Base
 Oscl_Linked_List_Base, 211
 ~Oscl_MTLinked_List
 Oscl_MTLinked_List, 224
 ~Oscl_Opaque_Type_Alloc
 Oscl_Opaque_Type_Alloc, 228
 ~Oscl_Opaque_Type_Alloc_LL
 Oscl_Opaque_Type_Alloc_LL, 230
 ~Oscl_Opaque_Type_Compare
 Oscl_Opaque_Type_Compare, 232
 ~Oscl_Queue
 Oscl_Queue, 236
 ~Oscl_Queue_Base
 Oscl_Queue_Base, 238
 ~Oscl_Rb_Tree
 Oscl_Rb_Tree, 243
 ~Oscl_TAlloc
 Oscl_TAlloc, 281
 ~Oscl_Tag
 Oscl_Tag, 264
 ~Oscl_TagTree
 Oscl_TagTree, 269
 ~Oscl_Vector
 Oscl_Vector, 285
 ~Oscl_Vector_Base
 Oscl_Vector_Base, 290
 ~PVActiveBase
 PVActiveBase, 612
 ~PVLogger
 PVLogger, 617
 ~PVLoggerAppender
 PVLoggerAppender, 622
 ~PVLoggerFilter
 PVLoggerFilter, 624
 ~PVLoggerLayout
 PVLoggerLayout, 625
 ~PVLoggerRegistry
 PVLoggerRegistry, 627
 ~PVSchedulerStopper
 PVSchedulerStopper, 630
 ~PVThreadContext
 PVThreadContext, 633
 ~SendToParam
 SendToParam, 639
 ~OsclBasicAllocator
 _OsclBasicAllocator, 108
 ~OsclHeapBase
 _OsclHeapBase, 110
 _FILE_OFFSET_BITS
 osclconfig_io.h, 815
 _OSCL_Abort
 osclbase, 35
 _OSCL_CLEANUP_BASE_CLASS
 osclmemory, 49
 _OSCL_TRAP_NEW
 osclmemory, 49
 _OsclBasicAllocator, 107
 _OsclBasicAllocator
 ~_OsclBasicAllocator, 108
 allocate, 108
 deallocate, 108
 _OsclHeapBase, 109
 _OsclHeapBase, 110
 _OsclHeapBase
 ~_OsclHeapBase, 110
 _OsclHeapBase, 110
 PVCleanupStack, 110
 _OsclInteger64Transport
 oscl_int64_utils.h, 704
 _Ownership
 OSCLMemAutoPtr, 437
 _PVLOGGER_LOGBIN
 pvlogger.h, 851
 _PVLOGGER_LOGBIN_V
 pvlogger.h, 851
 _PVLOGGER_LOGMSG
 pvlogger.h, 851
 _PVLOGGER_LOGMSG_V
 pvlogger.h, 851
 _PV_TRAP
 oscl_error_imp_fatalerror.h, 684
 oscl_error_imp_jumps.h, 685
 osclerror, 87
 _PV_TRAP_NO_TLS
 oscl_error_imp_fatalerror.h, 684
 oscl_error_imp_jumps.h, 685
 osclerror, 87
 _Ptr
 OsclExclusiveArrayPtr, 381

OsclExclusivePtr, 384
 OsclExclusivePtrA, 387
 OsclSingleton, 532
 OsclTLS, 592
 OsclTLSE, 594
_STRLIT
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
_STRLIT_CHAR
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
_STRLIT_WCHAR
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
TFS
 osclconfig.h, 803
_Validate_BasicTimeDateStruct
 osclconfig_time_check.h, 838
_Validate_BasicTimeStruct
 osclconfig_time_check.h, 838
_int16_check
 osclconfig, 24
_int32_check
 osclconfig, 24
_int8_check
 osclconfig, 24
_uint16_check
 osclconfig, 24
_uint32_check
 osclconfig, 24
_uint8_check
 osclconfig, 24
_verify_TOsclConditionObject_defined
 osclconfig_proc_check.h, 831
_verify_TOsclFileOffset_defined
 osclconfig_io_check.h, 822
_verify_TOsclMutexObject_defined
 osclconfig_proc_check.h, 831
_verify_TOsclSemaphoreObject_defined
 osclconfig_proc_check.h, 831
_verify_TOsclThreadFuncArg_defined
 osclconfig_proc_check.h, 831
_verify_TOsclThreadFuncRet_defined
 osclconfig_proc_check.h, 831
_verify_TOsclThreadId_defined
 osclconfig_proc_check.h, 831
_verify_TOsclThreadObject_defined
 osclconfig_proc_check.h, 831
_fixedCaches
 OsclFileCache, 401
_movableCache
 OsclFileCache, 401
_oscl_audit_malloc
 osclmemory, 58
_oscl_audit_free
 osclmemory, 58
_oscl_audit_malloc
 osclmemory, 58
_oscl_audit_new
 osclmemory, 58
_oscl_audit_realloc
 osclmemory, 59
_oscl_calloc
 osclmemory, 59
_oscl_default_audit_calloc
 osclmemory, 59
_oscl_default_audit_malloc
 osclmemory, 59
_oscl_default_audit_new
 osclmemory, 59
_oscl_default_audit_realloc
 osclmemory, 59
_oscl_free
 osclmemory, 59
_oscl_malloc
 osclmemory, 59
_oscl_realloc
 osclmemory, 59

a
 internalLeave, 138

Abort
 OsclDNSMethod, 358
 OsclDNSRequestAO, 363
 OsclSocketMethod, 545
 OsclSocketRequestAO, 550

AbortAll
 OsclDNSMethod, 358
 OsclSocketMethod, 545

Accept
 OsclAcceptMethod, 307
 OsclAcceptRequest, 308
 OsclSocketI, 535
 OsclSocketIBase, 540
 OsclTCPSocket, 565
 OsclTCPSocketI, 572

AcceptParam, 111
 AcceptParam, 111

AcceptParam
 AcceptParam, 111
 iBlankSocket, 111

AcceptRequest
 OsclAcceptMethod, 307

Activate
 OsclDNSRequest, 361
 OsclSocketRequest, 548
 PVActiveBase, 612

Add

OsclSocketServRequestList, [559](#)
 OsclTimerQ, [590](#)
add_element
 Oscl_Linked_List, [206](#)
 Oscl_Linked_List_Base, [211](#)
 Oscl_MTLINKED_List, [225](#)
add_ref
 CHHeapRep, [129](#)
add_to_front
 Oscl_Linked_List, [206](#)
 Oscl_Linked_List_Base, [211](#)
 Oscl_MTLINKED_List, [225](#)
addAllocNode
 MM_Audit_Imp, [153](#)
AddAppender
 PVLogger, [617](#)
AddFilter
 PVLogger, [617](#)
AddFixedCache
 Oscl_File, [180](#)
 OsclFileCache, [401](#)
AddFragment
 BufFragGroup, [120](#)
AddLocalFragment
 MediaData, [142](#)
addnewmempoolbuffer
 OsclMemPoolResizableAllocator, [448](#)
addRef
 Oscl_DefAllocWithRefCounter, [172](#)
 OsclMemPoolFixedChunkAllocator, [443](#)
 OsclMemPoolResizableAllocator, [448](#)
 OsclRefCount, [491](#)
 OsclRefCountDA, [494](#)
 OsclRefCountMTDA, [498](#)
 OsclRefCountMTSA, [500](#)
 OsclRefCountSA, [502](#)
address
 Oscl_TAlloc, [281](#)
addressListCapacity
 GetHostNameParam, [134](#)
AddToExecTimerQ
 OsclExecSchedulerCommonBase, [394](#)
AddToScheduler
 OsclActiveObject, [310](#)
 OsclTimerObject, [586](#)
 PVActiveBase, [612](#)
After
 OsclTimerObject, [586](#)
Alloc
 OsclIPSocketI, [418](#)
 OsclSocketMethod, [545](#)
 OsclSocketRequestAO, [550](#)
ALLOC_AND_CONSTRUCT
 osclbase, [32](#)
alloc_and_construct
 Oscl_TAlloc, [281](#)
alloc_and_construct_fl
 Oscl_TAlloc, [281](#)
ALLOC_NODE_FLAG
 osclmemory, [61](#)
alloc_type
 PVLogger, [617](#)
 PVLoggerRegistry, [627](#)
ALLOCATE
 osclbase, [32](#)
allocate
 _OsclBasicAllocator, [108](#)
 MemAllocator, [145](#)
 Oscl_Alloc, [169](#)
 Oscl_DefAlloc, [171](#)
 Oscl_Opaque_Type_Alloc, [228](#)
 Oscl_Opaque_Type_Alloc_LL, [230](#)
 Oscl_TAlloc, [281](#)
 OsclErrorAllocator, [373](#)
 OsclMemAllocator, [425](#)
 OsclMemAllocDestructDealloc, [426](#)
 OSCLMemAutoPtr, [436](#)
 OsclMemBasicAllocator, [438](#)
 OsclMemBasicAllocDestructDealloc, [439](#)
 OsclMemPoolFixedChunkAllocator, [443](#)
 OsclMemPoolResizableAllocator, [449](#)
 OsclReadyAlloc, [481](#)
allocate_fl
 Oscl_Alloc, [169](#)
 Oscl_DefAlloc, [171](#)
 Oscl_TAlloc, [281](#)
 OsclMemAllocator, [425](#)
 OsclMemAllocDestructDealloc, [426](#)
 OsclReadyAlloc, [481](#)
allocateblock
 OsclMemPoolResizableAllocator, [449](#)
allocator, [112](#)
allocNum
 MM_AllocInfo, [149](#)
 MM_AllocQueryInfo, [151](#)
AllPassFilter, [113](#)
 AllPassFilter, [114](#)
AllPassFilter
 ~AllPassFilter, [114](#)
 AllPassFilter, [114](#)
 filter_status_type, [113](#)
 FilterOpaqueMessge, [114](#)
 FilterString, [114](#)
 log_level_type, [113](#)
 message_id_type, [113](#)
ALREADY_SUSPENDED_ERROR
 OsclProcStatus, [474](#)
Append

OsclPtr, 476
 append
 CFastRep, 127
 CHeapRep, 129
 CStackRep, 131
 APPEND_MEDIA_AT_END
 osclutil, 83
 append_rep
 CHeapRep, 129
 OSCL_String, 260
 OSCL_wString, 304
 AppendBuffers
 PVLoggerAppender, 622
 AppendNext
 BufFragGroup, 120
 AppendString
 PVLoggerAppender, 622
 assign
 CHeapRep, 129
 assign_vector
 Oscl_Vector_Base, 290
 asyncfilereadcancel_test
 Oscl_File, 185
 asyncfilereadwrite_test
 Oscl_File, 185
 Attach
 OsclBinStream, 336
 audit_type
 OsclMemGlobalAuditObject, 440
 available_localbuf
 MediaData, 143

 back
 Oscl_Queue, 236
 Oscl_Vector, 286
 BAD_THREADID_ADDR_ERROR
 OsclProcStatus, 474
 base_link_type
 Oscl_Rb_Tree_Base, 245
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_Rb_Tree_Node_Base, 253
 begin
 Oscl_Map, 218
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 269
 Oscl_Vector, 286
 BeginScheduling
 OsclExecSchedulerCommonBase, 394
 BeginStats
 OsclExecSchedulerCommonBase, 394
 BFG_SUCCESS
 BufFragStatusClass, 122
 big_endian_to_host

 osclbase, 35
 Bind
 osclbase, 35
 OsclBindMethod, 321
 OsclBindRequest, 322
 OsclIPSocketI, 418
 OsclSocketI, 535
 OsclSocketIBase, 540
 OsclTCPSocket, 565
 OsclUDPSocket, 601
 bind
 BufferState, 118
 BindAsync
 OsclSocketIBase, 540
 OsclTCPSocket, 565
 OsclTCPSocketI, 572
 OsclUDPSocket, 601
 OsclUDPSocketI, 607
 BindParam, 115
 BindParam, 115
 BindParam
 BindParam, 115
 iAddr, 115
 BindRequest
 OsclBindMethod, 321
 black
 Oscl_Rb_Tree_Node_Base, 253
 BlockingLoopL
 OsclExecSchedulerCommonBase, 394
 bSetFailure
 MM_AllocInfo, 149
 Buffer
 OsclAsyncFileBuffer, 319
 buffer
 CFastRep, 127
 CHeapRep, 129
 CStackRep, 131
 buffer_states
 BufFragGroup, 121
 BufferFragment, 116
 BufferFreeFuncPtr
 osclutil, 68
 BufferMgr, 117
 ~BufferMgr, 117
 BufferReleased, 117
 BufferReleased
 BufferMgr, 117
 BufferState, 118
 BufferState, 118
 BufferState
 bind, 118
 BufferState, 118
 decrement_refcnt, 118

get_buf_mgr, 118
 get_free_function, 118
 get_ptr, 118
 get_refcount, 118
 increment_refcnt, 118
 reset, 118
BuFragGroup, 119
 BufFragGroup, 120
BuFragGroup
 ~BuFragGroup, 120
 AddFragment, 120
 AppendNext, 120
 buffer_states, 121
 BufFragGroup, 120
 Clear, 120
 fragments, 121
 GetLength, 120
 GetMaxFrags, 121
 GetNext, 121
 GetNumFrags, 121
 length, 121
 next, 121
 num_fragments, 121
BuFragStatusClass, 122
 BFG_SUCCESS, 122
 EMPTY_FRAGMENT, 122
 FIXED_FRAG_LOC_FULL, 122
 INTERNAL_ERROR, 122
 INVALID_ID, 122
 NOT_ENOUGH_SPACE, 122
 NULL_INPUT, 122
 TOO_MANY_FRAGS, 122
BuFragStatusClass
 status_t, 122
bufsize
 Oscl_Queue_Base, 240
 Oscl_Vector_Base, 292
BYTES_IN_UUID_ARRAY
 oscl_uuid.h, 800

c
 OsclPriorityQueue, 472

c_bool
 osclbase, 34

c_str
 StrPtrLen, 647
 WStrPtrLen, 658

Callback
 OsclReadyQ, 484

callback_timer_type
 OsclTimer, 582

CallbackTimer, 123
 CallbackTimer, 123

CallbackTimer
 ~CallbackTimer, 123
 CallbackTimer, 123
 Run, 123
 CallbackTimer< Alloc >
 OsclTimer, 583
 CallbackTimerObserver, 125
 CallbackTimerObserver
 ~CallbackTimerObserver, 125
 TimerBaseElapsed, 125

CallRunExec
 OsclExecSchedulerCommonBase, 394

Cancel
 OsclActiveObject, 310
 OsclTimer, 582
 OsclTimerObject, 586
 PVActiveBase, 612

CancelAccept
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572

CancelBind
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572
 OsclUDPSocket, 601
 OsclUDPSocketI, 607

CancelConnect
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572

CancelFreeChunkAvailableCallback
 OsclMemPoolFixedChunkAllocator, 443
 OsclMemPoolResizableAllocator, 449

CancelFreeMemoryAvailableCallback
 OsclMemPoolResizableAllocator, 449

CancelFxn
 OsclDNSIBase, 355
 OsclSocketIBase, 541

CancelGetHostName
 OsclDNS, 350
 OsclDNSIBase, 355

Cancelled
 OsclDNSRequestAO, 363

CancelListen
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572

CancelMethod
 OsclDNSMethod, 358
 OsclSocketMethod, 545

CancelRecv
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572

CancelRecvFrom
 OsclSocketIBase, 541
 OsclUDPSocket, 601
 OsclUDPSocketI, 607
 CancelRequest
 OsclDNSRequest, 361
 OsclSocketRequest, 548
 CancelSend
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572
 CancelSendTo
 OsclSocketIBase, 541
 OsclUDPSocket, 601
 OsclUDPSocketI, 607
 CancelShutdown
 OsclSocketIBase, 541
 OsclTCPSocket, 566
 OsclTCPSocketI, 572
 canPersistMoreHostAddresses
 GetHostNameParam, 135
 capacity
 Oscl_Queue_Base, 239
 Oscl_Vector_Base, 290
 OsclFileCacheBuffer, 403
 CFastRep, 126
 CFastRep, 127
 CFastRep
 append, 127
 buffer, 127
 CFastRep, 127
 maxsize, 127
 overwrite, 127
 set_r, 127
 set_w, 127
 size, 127
 writable, 127
 chartype
 OSCL_FastString, 175
 OSCL_HeapString, 196
 OSCL_HeapStringA, 198
 OSCL_StackString, 257
 OSCL_String, 260
 OSCL_wFastString, 293
 OSCL_wHeapString, 297
 OSCL_wHeapStringA, 299
 OSCL_wStackString, 302
 OSCL_wString, 304
 CHeapRep, 128
 CHeapRep, 129
 CHeapRep
 add_ref, 129
 append, 129
 append_rep, 129
 assign, 129
 buffer, 129
 CHheapRep, 129
 maxsize, 129
 refcount, 129
 remove_ref, 129
 set, 129
 set_rep, 129
 size, 129
 check_fence
 MM_AllocBlockFence, 146
 check_list
 Oscl_Linked_List, 206
 Oscl_Linked_List_Base, 211
 checkSum
 StrCSumPtrLen, 644
 CheckSumType
 StrCSumPtrLen, 644
 children
 Oscl_TagTree::Node, 279
 children_type
 Oscl_TagTree, 269
 Oscl_TagTree::Node, 279
 ChooseCurCache
 Oscl_File::OsclCacheObserver, 186
 CleanInUse
 OsclAsyncFileBuffer, 319
 Cleanup
 OsclErrorTrap, 375
 OsclInit, 414
 OsclMem, 424
 OsclScheduler, 515
 PVLogger, 618
 CleanupExecQ
 OsclExecSchedulerCommonBase, 394
 CleanupParam
 OsclSocketRequestAO, 550
 CleanupStatQ
 OsclExecSchedulerCommonBase, 394
 Clear
 BufFragGroup, 120
 MediaData, 142
 OsclTimer, 582
 clear
 Oscl_Linked_List, 206
 Oscl_Map, 218
 Oscl_Queue, 236
 Oscl_Queue_Base, 239
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 270
 Oscl_Vector, 286
 ClearTOS
 OsclSocketTOS, 563
 Close

Oscl_File, 180
 Oscl_FileFind, 189
 Oscl_FileServer, 192
 OsclAsyncFile, 316
 OsclDNSI, 352
 OsclDNSIBase, 355
 OsclFileCache, 401
 OsclIPSocketI, 418
 OsclMutex, 458
 OsclNativeFile, 462
 OsclRegistryAccessClient, 503
 OsclRegistryClient, 508
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
 OsclSemaphore, 520
 OsclSocketI, 535
 OsclSocketIBase, 541
 OsclSocketServ, 553
 OsclSocketServI, 555
 OsclSocketServIBase, 558
 OsclSocketServRequestList, 559
 OsclTCPSocket, 567
 OsclTCPSocketI, 572
 OsclUDPSocket, 602
 OsclUDPSocketI, 607
CloseSession
 OsclComponentRegistry, 343
color
 Oscl_Rb_Tree_Node_Base, 254
color_type
 Oscl_Rb_Tree_Node_Base, 253
comp
 Oscl_Map::value_compare, 222
 OsclPriorityQueue, 472
compare
 OsclCompareLess, 341
 OsclReadyCompare, 482
 OsclTimerCompare, 584
compare_data
 Oscl_Opaque_Type_Alloc_LL, 230
compare_EQ
 Oscl_Opaque_Type_Compare, 232
 OsclPriorityQueue, 470
compare_LT
 Oscl_Opaque_Type_Compare, 232
 OsclPriorityQueue, 470
CompareId
 OsclThread, 574
Complete
 OsclDNSRequest, 361
 OsclSocketRequest, 548
COMPUTE_MEM_ALIGN_SIZE
 osclmemory, 50
Connect
 Oscl_FileServer, 192
 OsclConnectMethod, 347
 OsclConnectRequest, 348
 OsclRegistryAccessClient, 503
 OsclRegistryClient, 508
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
 OsclSocketI, 535
 OsclSocketIBase, 541
 OsclSocketServ, 553
 OsclSocketServI, 555
 OsclSocketServIBase, 558
 OsclTCPSocket, 567
 OsclTCPSocketI, 572
 ConnectParam, 130
 ConnectParam, 130
ConnectParam
 ConnectParam, 130
 iAddr, 130
ConnectRequest
 OsclConnectMethod, 347
const_iterator
 Oscl_Map, 217
 Oscl_Rb_Tree, 243
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_TagTree::const_iterator, 273
 Oscl_Vector, 285
const_pointer
 Oscl_Rb_Tree, 243
 Oscl_TAlloc, 281
const_reference
 Oscl_Map, 217
 Oscl_Queue, 236
 Oscl_Rb_Tree, 243
 Oscl_TAlloc, 281
 Oscl_Vector, 285
 OsclPriorityQueue, 470
Construct
 OsclReadyQ, 484
 OsclTimerQ, 590
construct
 Oscl_Linked_List_Base, 211
 Oscl_Opaque_Type_Alloc, 228
 Oscl_Opaque_Type_Alloc_LL, 230
 Oscl_Queue_Base, 239
 Oscl_TAlloc, 281
 Oscl_Vector_Base, 290
 OsclPriorityQueueBase, 473
ConstructL
 OsclDNSMethod, 358
 OsclDNSRequestAO, 363
 OsclExecSchedulerCommonBase, 394
 OsclIPSocketI, 418
 OsclSocketMethod, 545

OsclSocketRequestAO, 550
 ConstructStatQ
 OsclExecSchedulerCommonBase, 394
 container_type
 OsclPriorityQueue, 470
 Contains
 Oscl_File::OsclFixedCacheParam, 187
 OsclFileCacheBuffer, 403
 count
 Oscl_Map, 218
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 270
 CPVInterfaceProxy
 OsclErrorTrapImp, 377
 Create
 GetHostNameParam, 135
 OsclMutex, 458
 OsclSemaphore, 520
 OsclThread, 575
 createmempool
 OsclMemPoolFixedChunkAllocator, 443
 CreatePVLogger
 PVLoggerRegistry, 628
 createStatsNode
 MM_Audit_Imp, 153
 CStackRep, 131
 CStackRep, 131
 CStackRep
 append, 131
 buffer, 131
 CStackRep, 131
 maxsize, 131
 set, 131
 size, 131
 CTIME_BUFFER_SIZE
 osclbase, 45
 CtimeStrBuf
 osclbase, 34
 Current
 OsclExecScheduler, 388
 currentPos
 OsclFileCacheBuffer, 403

 data
 LinkedListElement, 139
 data1
 OsclUuid, 610
 data2
 OsclUuid, 610
 data3
 OsclUuid, 610
 data4
 OsclUuid, 610
 deallocate

 _OsclBasicAllocator, 108
 MemAllocator, 145
 Oscl_Dealloc, 170
 Oscl_DefAlloc, 171
 Oscl_Opaque_Type_Alloc, 228
 Oscl_Opaque_Type_Alloc_LL, 230
 Oscl_TAlloc, 281
 OsclErrorAllocator, 373
 OsclMemAllocator, 425
 OsclMemAllocDestructDealloc, 426
 OSCLMemAutoPtr, 436
 OsclMemBasicAllocator, 438
 OsclMemBasicAllocDestructDealloc, 439
 OsclMemPoolFixedChunkAllocator, 444
 OsclMemPoolResizableAllocator, 449
 OsclReadyAlloc, 481
 deallocateblock
 OsclMemPoolResizableAllocator, 449
 decrement_refcnt
 BufferState, 118
 DEFAULT_MM_AUDIT_MODE
 osclmemory, 51
 DEFAULT_POSTFILL_PATTERN
 osclmemory, 51
 DEFAULT_PREFILL_PATTERN
 osclmemory, 51
 Delete
 Oscl_DefAllocWithRefCounter, 172
 OsclAsyncFile, 316
 OsclBuf, 340
 Depth
 OsclReadyQ, 484
 depth
 Oscl_TagTree::Node, 279
 dequeue_element
 Oscl_Linked_List, 206
 Oscl_MTLLinked_List, 225
 Des
 OsclBuf, 340
 DesC
 OsclBuf, 340
 Destroy
 DNSRequestParam, 132
 GetHostNameParam, 135
 PVActiveBase, 612
 destroy
 Oscl_Linked_List_Base, 211
 Oscl_Opaque_Type_Alloc, 228
 Oscl_Opaque_Type_Alloc_LL, 231
 Oscl_Queue_Base, 239
 Oscl_TAlloc, 281
 Oscl_Vector, 286
 Oscl_Vector_Base, 290
 destroyallmempoolbuffers

OsclMemPoolResizableAllocator, 449
destroymempool
 OsclMemPoolFixedChunkAllocator, 444
destruct_and_dealloc
 Oscl_TAlloc, 281
 OsclDestructDealloc, 349
 OsclMemAllocDestructDealloc, 426
 OsclMemBasicAllocDestructDealloc, 439
difference_type
 Oscl_Rb_Tree, 243
DIR_TYPE
 Oscl_FileFind, 188
DisableAppenderInheritance
 PVLogger, 618
DiscardAcceptedSocket
 OsclAcceptMethod, 307
DNSRequestParam, 132
 DNSRequestParam, 132
 OsclIDNSI, 353
DNSRequestParam
 ~DNSRequestParam, 132
 Destroy, 132
 DNSRequestParam, 132
 iDNSRequest, 133
 iFxn, 133
 InThread, 132
 iRefCount, 133
 RemoveRef, 133
DoCancel
 OsclActiveObject, 311
 OsclIDNSRequestAO, 363
 OsclSocketRequestAO, 550
 OsclTimerObject, 586
 PVActiveBase, 612
E_BUFFER_TOO_SMALL
 Oscl_FileFind, 189
E_INVALID_ARG
 Oscl_FileFind, 188
E_INVALID_STATE
 Oscl_FileFind, 188
E_MEMORY_ERROR
 Oscl_FileFind, 189
E_NO_MATCH
 Oscl_FileFind, 189
E_NOT_IMPLEMENTED
 Oscl_FileFind, 189
E_OK
 Oscl_FileFind, 188
E_OTHER
 Oscl_FileFind, 189
E_PATH_NOT_FOUND
 Oscl_FileFind, 188
E_PATH_TOO_LONG
 Oscl_FileFind, 188
element_type
 Oscl_FileFind, 188
elems
 Oscl_Queue_Base, 240
 Oscl_Vector_Base, 292
empty
 Oscl_Map, 218
 Oscl_Queue_Base, 239
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 270
 Oscl_Vector_Base, 290
 OsclPriorityQueue, 471
EMPTY_FRAGMENT
 BuffFragStatusClass, 122
EMPTY_UUID
 oscl_uuid.h, 800
EnableKill
 OsclThread, 575
enablenullpointerreturn
 OsclMemPoolFixedChunkAllocator, 444
 OsclMemPoolResizableAllocator, 449
End
 OsclFileStats, 410
end
 Oscl_Map, 218
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 270
 Oscl_Vector, 286
EndOfFile
 Oscl_File, 180
 OsclAsyncFile, 316
 OsclFileCache, 401
 OsclNativeFile, 462
endPos
 OsclFileCacheBuffer, 403
EndScheduling
 OsclExecSchedulerCommonBase, 394
EndStats
 OsclExecSchedulerCommonBase, 394
EnterThreadContext
 PVThreadContext, 633
eof
 OsclBinStream, 336
EOF_STATE
 OsclBinStream, 336
EOSCL_StringOp_CompressASCII
 osclutil, 69
EOSCL_StringOp_UTF16ToUTF8
 osclutil, 69
EOSCL_wStringOp_ExpandASCII
 osclutil, 69
EOSCL_wStringOp_UTF8ToUTF16
 osclutil, 69

EOscIFileOp_Close
 osclio, [97](#)
 EOscIFileOp_EndOfFile
 osclio, [97](#)
 EOscIFileOp_Flush
 osclio, [97](#)
 EOscIFileOp_Last
 osclio, [98](#)
 EOscIFileOp_NativeClose
 osclio, [97](#)
 EOscIFileOp_NativeEndOfFile
 osclio, [98](#)
 EOscIFileOp_NativeFlush
 osclio, [98](#)
 EOscIFileOp_NativeOpen
 osclio, [97](#)
 EOscIFileOp_NativeRead
 osclio, [97](#)
 EOscIFileOp_NativeSeek
 osclio, [98](#)
 EOscIFileOp_NativeSetSize
 osclio, [98](#)
 EOscIFileOp_NativeSize
 osclio, [98](#)
 EOscIFileOp_NativeTell
 osclio, [98](#)
 EOscIFileOp_NativeWrite
 osclio, [98](#)
 EOscIFileOp_Open
 osclio, [97](#)
 EOscIFileOp_Read
 osclio, [97](#)
 EOscIFileOp_Seek
 osclio, [97](#)
 EOscIFileOp_SetSize
 osclio, [97](#)
 EOscIFileOp_Size
 osclio, [97](#)
 EOscIFileOp_Tell
 osclio, [97](#)
 EOscIFileOp_Write
 osclio, [97](#)
 eOsclProcError
 OsclProcStatus, [474](#)
 EOscISocket_DataRecv
 oscl_socket_stats.h, [771](#)
 EOscISocket_DataSent
 oscl_socket_stats.h, [771](#)
 EOscISocket_Except
 oscl_socket_stats.h, [770](#)
 EOscISocket_OS
 oscl_socket_stats.h, [770](#)
 EOscISocket_Readable
 oscl_socket_stats.h, [770](#)
 EOscISocket_RequestAO_Canceled
 oscl_socket_stats.h, [770](#)
 EOscISocket_RequestAO_Error
 oscl_socket_stats.h, [770](#)
 EOscISocket_RequestAO_Success
 oscl_socket_stats.h, [770](#)
 EOscISocket_RequestAO_Timeout
 oscl_socket_stats.h, [770](#)
 EOscISocket_ServPoll
 oscl_socket_stats.h, [770](#)
 EOscISocket_ServRequestCancelIssued
 oscl_socket_stats.h, [771](#)
 EOscISocket_ServRequestComplete
 oscl_socket_stats.h, [771](#)
 EOscISocket_ServRequestIssued
 oscl_socket_stats.h, [770](#)
 EOscISocket_Writable
 oscl_socket_stats.h, [770](#)
 EOscISocketServ_LastEvent
 oscl_socket_stats.h, [770](#)
 EOscISocketServ_LoopsockError
 oscl_socket_stats.h, [771](#)
 EOscISocketServ_LoopsockOk
 oscl_socket_stats.h, [771](#)
 EOscISocketServ_SelectActivity
 oscl_socket_stats.h, [770](#)
 EOscISocketServ_SelectNoActivity
 oscl_socket_stats.h, [770](#)
 EOscISocketServ_SelectRescheduleAsap
 oscl_socket_stats.h, [770](#)
 EOscISocketServ_SelectReschedulePoll
 oscl_socket_stats.h, [770](#)
 EOtherExecStats_Last
 OsclExecSchedulerCommonBase, [393](#)
 EOtherExecStats_NativeOS
 OsclExecSchedulerCommonBase, [393](#)
 EOtherExecStats_QueueTime
 OsclExecSchedulerCommonBase, [393](#)
 EOtherExecStats_ReleaseTime
 OsclExecSchedulerCommonBase, [393](#)
 EOtherExecStats_WaitTime
 OsclExecSchedulerCommonBase, [393](#)
 EPriorityHigh
 OsclActiveObject, [310](#)
 EPriorityHighest
 OsclActiveObject, [310](#)
 EPriorityIdle
 OsclActiveObject, [310](#)
 EPriorityLow
 OsclActiveObject, [310](#)
 EPriorityNominal
 OsclActiveObject, [310](#)
 EPVCritic_Ecp
 EPVSocketTOS, [562](#)

EPVDNSCancel
 osclio, 98
 EPVDNSFailure
 osclio, 98
 EPVDNSGetHostByName
 osclio, 98
 EPVDNSPending
 osclio, 98
 EPVDNSSuccess
 osclio, 98
 EPVDNSTimeout
 osclio, 98
 EPVFlash
 OsclSocketTOS, 562
 EPVHiRel
 OsclSocketTOS, 562
 EPVHiThrpt
 OsclSocketTOS, 562
 EPVImmediate
 OsclSocketTOS, 562
 EPVInetControl
 OsclSocketTOS, 562
 EPVIPAddMembership
 oscl_socket_types.h, 775
 EPVIMulticastTTL
 oscl_socket_types.h, 775
 EPVIPProtoIP
 oscl_socket_types.h, 775
 EPVIPProtoTCP
 oscl_socket_types.h, 775
 EPVIPTOS
 oscl_socket_types.h, 775
 EPVLDelay
 OsclSocketTOS, 562
 EPVNetControl
 OsclSocketTOS, 562
 EPVNoTOS
 OsclSocketTOS, 562
 EPVOverrideFlash
 OsclSocketTOS, 562
 EPVPriority
 OsclSocketTOS, 562
 EPVRoutine
 OsclSocketTOS, 562
 EPVSocket
 oscl_socket_types.h, 775
 EPVSocket_Last
 oscl_socket_types.h, 775
 EPVSocketAccept
 oscl_socket_types.h, 775
 EPVSocketBind
 oscl_socket_types.h, 775
 EPVSocketBothShutdown
 oscl_socket_types.h, 775
 EPVSocketCancel
 oscl_socket_types.h, 774
 EPVSocketConnect
 oscl_socket_types.h, 775
 EPVSocketFailure
 oscl_socket_types.h, 774
 EPVSocketListen
 oscl_socket_types.h, 775
 EPVSocketNotImplemented
 oscl_socket_types.h, 775
 EPVSocketPending
 oscl_socket_types.h, 774
 EPVSocketRecv
 oscl_socket_types.h, 775
 EPVSocketRecvFrom
 oscl_socket_types.h, 775
 EPVSocketRecvShutdown
 oscl_socket_types.h, 775
 EPVSocketSend
 oscl_socket_types.h, 775
 EPVSocketSendShutdown
 oscl_socket_types.h, 775
 EPVSocketSendTo
 oscl_socket_types.h, 775
 EPVSocketShutdown
 oscl_socket_types.h, 775
 EPVSocketSuccess
 oscl_socket_types.h, 774
 EPVSocketTimeout
 oscl_socket_types.h, 774
 EPVSockReuseAddr
 oscl_socket_types.h, 775
 EPVThreadContext_InThread
 osclproc, 105
 EPVThreadContext_NonOsclThread
 osclproc, 105
 EPVThreadContext_OsclThread
 osclproc, 105
 EPVThreadContext_Undetermined
 osclproc, 105
 equal_range
 Oscl_Map, 218
 Oscl_Rb_Tree, 243
 erase
 Oscl_Map, 219
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 270
 Oscl_Vector, 286
 Oscl_Vector_Base, 290, 291
 Error
 OsclExecSchedulerCommonBase, 394
 error_type
 Oscl_FileFind, 188
 ESocketServ_Connected

OsclSocketServIBase, 557
 ESocketServ_Error
 OsclSocketServIBase, 558
 ESocketServ_Idle
 OsclSocketServIBase, 557
 ESymbianAccessMode_Rfile
 Oscl_File, 179
 ESymbianAccessMode_RfileBuf
 Oscl_File, 179
 EXCEED_MAX_COUNT_VARIABLE_-
 ERROR
 OsclProcStatus, 475
 EXCEED_MAX_SEM_COUNT_ERROR
 OsclProcStatus, 475
 Exit
 OsclThread, 575
 ExitThreadContext
 PVThreadContext, 633
 extract_string
 osclutil, 69

 fail
 OsclBinStream, 337
 FAIL_STATE
 OsclBinStream, 336
 Failure
 OsclIDNSRequestAO, 363
 FENCE_PATTERN
 osclmemory, 51
 FILE_TYPE
 Oscl_FileFind, 188
 fileName
 MM_AllocQueryInfo, 151
 filePosition
 OsclFileCacheBuffer, 403
 FileSize
 OsclFileCache, 401
 fill_fence
 MM_AllocBlockFence, 146
 FillFromFile
 OsclFileCacheBuffer, 403
 filter_status_type
 AllPassFilter, 113
 PVLogger, 617
 PVLoggerFilter, 623
 FilterOpaqueMessge
 AllPassFilter, 114
 PVLoggerFilter, 624
 FilterString
 AllPassFilter, 114
 PVLoggerFilter, 624
 Find
 OsclComponentRegistryData, 344
 find
 Oscl_Map, 219
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 270
 find_heap
 OsclPriorityQueue, 471
 OsclPriorityQueueBase, 473
 FindExact
 OsclComponentRegistry, 343
 FindFirst
 Oscl_FileFind, 189
 findfreeblock
 OsclMemPoolResizableAllocator, 450
 FindHierarchical
 OsclComponentRegistry, 343
 FindNext
 Oscl_FileFind, 190
 FindPVB
 OsclExecSchedulerCommonBase, 394
 first
 Oscl_Pair, 234
 firstFragPtr
 OsclBinStream, 338
 FIXED_FRAG_LOC_FULL
 BuffFragStatusClass, 122
 Flush
 Oscl_File, 181
 OsclAsyncFile, 316
 OsclFileCache, 401
 OsclNativeFile, 462
 FormatOpaqueMessage
 PVLoggerLayout, 625
 FormatString
 PVLoggerLayout, 625
 fragments
 BuffFragGroup, 121
 fragsLeft
 OsclBinStream, 338
 freeblockavailable
 OsclMemPoolResizableAllocatorObserver,
 456
 freebytes
 oscl_fsstat, 194
 freechunkavailable
 OsclMemPoolFixedChunkAllocator-
 Observer, 446
 freememoryavailable
 OsclMemPoolResizableAllocatorMemory-
 Observer, 455
 front
 Oscl_Queue, 237
 Oscl_Vector, 287
 Fxn
 OsclSocketRequest, 548

```

get          NTPTime, 167
OsclBinIStream, 323
OsclExclusiveArrayPtr, 380
OsclExclusivePtr, 383
OsclExclusivePtrA, 386
OSCLMemAutoPtr, 436
get_buf_mgr   BufferState, 118
get_count     OsclSharedPtr, 527
get_cstr      OSCL_FastString, 176
              OSCL_HeapStringA, 199
              OSCL_String, 260
              OSCL_wFastString, 294
              OSCL_wHeapStringA, 299
              OSCL_wString, 304
              osclutil, 69
get_data      Oscl_Opaque_Type_Alloc_LL, 231
get_element   Oscl_Linked_List, 206
              Oscl_Linked_List_Base, 211
              Oscl_MTLINKED_List, 225
get_first     Oscl_Linked_List, 207
              Oscl_Linked_List_Base, 212
get_free_function BufferState, 118
get_index     Oscl_Linked_List, 207
              Oscl_Linked_List_Base, 212
              Oscl_MTLINKED_List, 225
get_int64_lower32 Oscl_Int64_Utils, 203
get_int64_middle32 Oscl_Int64_Utils, 203
get_int64_upper32 Oscl_Int64_Utils, 203
get_ISO8601_str_time TimeValue, 651
get_local_time  TimeValue, 651
get_lower32    NTPTime, 167
get_maxsize    OSCL_FastString, 176
              OSCL_HeapStringA, 199
              OSCL_String, 260
              OSCL_wFastString, 294
              OSCL_wHeapStringA, 299
              OSCL_wString, 304
              osclutil, 70
get_middle32   get

```

OsclAcceptMethod, 307
 GetAcceptedSocketL
 OsclTCPSocket, 567
 OsclTCPSocketI, 572
 getAllocatedSize
 OsclMemPoolResizableAllocator, 450
 getAuditRoot
 MM_Audit_Imp, 153
 GetAvailableBufferSize
 MediaData, 142
 getAvailableSize
 OsclMemPoolResizableAllocator, 450
 getBufferSize
 OsclMemPoolResizableAllocator, 450
 GetBufferState
 osclutil, 71
 getCapacity
 OsclRefCounterMemFrag, 496
 getCheckSum
 StrCSumPtrLen, 644
 getCount
 Oscl_DefAllocWithRefCounter, 172
 OsclRefCounter, 491
 OsclRefCounterDA, 494
 OsclRefCounterMemFrag, 496
 OsclRefCounterMTDA, 498
 OsclRefCounterMTSA, 500
 OsclRefCounterSA, 502
 GetElementType
 Oscl_FileFind, 190
 GetError
 Oscl_File, 181
 OsclNativeFile, 462
 GetErrorTrapImp
 OsclErrorTrap, 375
 GetFactories
 OsclRegistryAccessClient, 503
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
 GetFactory
 OsclRegistryAccessClient, 503
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
 GetFragment
 osclutil, 71
 getGlobalMemAuditObject
 OsclMemGlobalAuditObject, 440
 getHead
 OsclDoubleListBase, 368
 GetHostName
 OsclDNS, 351
 OsclDNSI, 352
 OsclDNSIBase, 355
 OsclGetHostNameMethod, 412
 GetHostByNameParam, 134
 addressListCapacity, 134
 OsclDNSRequestAO, 364
 GetHostByNameParam
 ~GetHostByNameParam, 135
 canPersistMoreHostAddresses, 135
 Create, 135
 Destroy, 135
 iAddr, 135
 iAddressList, 135
 iName, 135
 PersistHostAddress, 135
 GetHostByNameResponseContainsAliasInfo
 OsclDNSI, 353
 OsclDNSIBase, 355
 GetHostByNameSuccess
 OsclDNSI, 353
 OsclDNSIBase, 355
 GetId
 OsclExecSchedulerCommonBase, 394
 OsclThread, 575
 getInstance
 OsclSingletonRegistry, 533
 OsclTLSRegistry, 595
 OsclTLSRegistryEx, 596
 getLargestContiguousFreeBlockSize
 OsclMemPoolResizableAllocator, 450
 GetLastError
 Oscl_FileFind, 190
 getLeaveCode
 OsclException, 378
 GetLength
 BufFragGroup, 120
 GetLocalBufsize
 MediaData, 143
 GetLocalFragment
 MediaData, 143
 GetLock
 OsclMemAudit, 429
 GetLoggerObject
 PVLogger, 618
 GetLogLevel
 PVLogger, 618
 GetMaxFrags
 BufFragGroup, 121
 GetMediaFragment
 MediaData, 143
 GetMediaSize
 MediaData, 143
 getMemFrag
 OsclRefCounterMemFrag, 496
 getMemFragPtr
 OsclRefCounterMemFrag, 496
 getMemFragSize

OsclRefCounterMemFrag, 496
 getMemPoolBufferAllocatedSize
 OsclMemPoolResizableAllocator, 450
 getMemPoolBufferSize
 OsclMemPoolResizableAllocator, 450
 GetName
 OsclExecSchedulerCommonBase, 394
 GetNext
 BufFragGroup, 121
 GetNextHost
 OsclDNSI, 353
 OsclDNSIBase, 355
 GetNextHostSuccess
 OsclDNSI, 353
 OsclDNSIBase, 355
 GetNumAppenders
 PVLogger, 618
 GetNumFrags
 BufFragGroup, 121
 GetNumMediaFrags
 MediaData, 143
 getOffset
 OsclDoubleListBase, 368
 GetParent
 PVLogger, 619
 GetPeerName
 OsclIPSocketI, 418
 OsclSocketI, 535
 OsclTCPSocket, 567
 OsclUDPSocket, 602
 GetPriority
 OsclThread, 576
 GetPVLoggerObject
 PVLoggerRegistry, 628
 GetPVLoggerRegistry
 PVLoggerRegistry, 628
 GetReadAsyncNumElements
 OsclNativeFile, 462
 GetRecvData
 OsclIPSocketI, 418
 OsclRecvFromMethod, 485
 OsclRecvFromRequest, 487
 OsclRecvMethod, 489
 OsclRecvRequest, 490
 OsclTCPSocket, 568
 OsclTCPSocketI, 572
 OsclUDPSocket, 602
 OsclUDPSocketI, 607
 GetRefCounter
 OsclSharedPtr, 527
 getRefCounter
 OsclRefCounterMemFrag, 496
 GetRep
 OsclSharedPtr, 527
 GetScheduler
 OsclExecSchedulerCommonBase, 394
 GetSendData
 OsclIPSocketI, 418
 OsclSendMethod, 522
 OsclSendRequest, 523
 OsclSendToMethod, 524
 OsclSendToRequest, 525
 OsclTCPSocket, 568
 OsclTCPSocketI, 572
 OsclUDPSocket, 602
 OsclUDPSocketI, 607
 GetShutdown
 OsclSocketIBase, 541
 getSize
 MM_Audit_Imp, 153
 GetSocketError
 OsclDNSRequestAO, 363
 OsclSocketRequestAO, 550
 getTagActualSize
 MM_Audit_Imp, 153
 GetTimestamp
 MediaData, 143
 GetTOS
 OsclSocketTOS, 563
 good
 OsclBinStream, 337
 GOOD_STATE
 OsclBinStream, 336
 Handle
 Oscl_File, 181
 OsclFileHandle, 404
 HandleDNSEvent
 OsclDNSObserver, 360
 HandleSocketEvent
 OsclSocketObserver, 547
 HasAsyncBind
 OsclSocketIBase, 541
 HasAsyncListen
 OsclSocketIBase, 541
 HasAsyncRead
 OsclNativeFile, 462
 hash
 OSCL_String, 261
 OSCL_wString, 304
 HasThisOffset
 OsclAsyncFileBuffer, 319
 HaveRoomInCurrentBlock
 OsclBinStream, 337
 Head
 OsclDoubleList, 366
 OsclPriorityList, 468
 head

Oscl_Linked_List_Base, 214
HeapBase, 136
 HeapBase, 137
HeapBase
 ~HeapBase, 137
 HeapBase, 137
host_to_big_endian
 osclbase, 35
host_to_little_endian
 osclbase, 36

iActive
 OsclDNSRequest, 361

iAddedNum
 PVActiveBase, 614

iAddr
 BindParam, 115
 ConnectParam, 130
 GetHostNameParam, 135
 RecvFromParam, 635
 SendToParam, 639

iAddress
 OsclIPSocketI, 419

iAddressList
 GetHostNameParam, 135

iAlloc
 OsclDNSIBase, 356
 OsclDNSMethod, 359
 OsclExecSchedulerCommonBase, 398
 OsclIPSocketI, 419
 OsclSocketIBase, 543
 OsclSocketServIBase, 558

iAllocatedSz
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454

iAOPriority
 TReadyQueLink, 656

iAsyncReadBufferSize
 OsclNativeFileParams, 464

iBlankSocket
 AcceptParam, 111

iBlockBuffer
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, 453

iBlockInfoAlignedSize
 OsclMemPoolResizableAllocator, 452

iBlockingMode
 OsclExecSchedulerCommonBase, 398

iBlockPostFence
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, 453

iBlockPreFence
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, 453

iBlockSize
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, 453

iBuffer
 OsclBuf, 340

iBufferInfoAlignedSize
 OsclMemPoolResizableAllocator, 452

iBufferPostFence
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454

iBufferPreFence
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454

iBufferSize
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454

iBufRecv
 RecvFromParam, 635
 RecvParam, 637

iBufSend
 SendParam, 638
 SendToParam, 639

iBusy
 PVActiveBase, 614

iCancel
 OsclSocketServRequestQElem, 561

iCBase
 OsclTrapStackItem, 599

iCheckFreeMemoryAvailable
 OsclMemPoolResizableAllocator, 452

iCheckNextAvailable
 OsclMemPoolResizableAllocator, 452

iCheckNextAvailableFreeChunk
 OsclMemPoolFixedChunkAllocator, 445

iChunkAlignment
 OsclMemPoolFixedChunkAllocator, 445

iChunkSize
 OsclMemPoolFixedChunkAllocator, 445

iComponentId
 OsclComponentRegistryElement, 345

iComponentIdCounter
 OsclComponentRegistry, 343

iContainer
 OsclFileCacheBuffer, 403
 OsclSocketMethod, 546
 OsclSocketRequestAO, 552

Id
 OsclAsyncFileBuffer, 319
 OsclSocketRequestAO, 551
 PVThreadContext, 633

iData
 OsclComponentRegistry, 343

iDebugLogger
 OsclExecSchedulerCommonBase, 398

iDefAlloc
 OsclExecSchedulerCommonBase, 398

iDelta
 OsclExecSchedulerCommonBase, 398

iDNSFxN
 OsclDNSMethod, 359

iDNSI
 OsclDNSRequestAO, 364

iDNSMethod
 OsclDNSRequestAO, 364

iDNSObserver
 OsclDNSMethod, 359

iDNSRequest
 DNSRequestParam, 133

iDNSRequestAO
 OsclDNSMethod, 359

iDNSRequest
 OsclDNSRequest, 361

iDNSRequestParam
 OsclDNSRequest, 361

iDoStop
 OsclExecSchedulerCommonBase, 398

iDoSuspend
 OsclExecSchedulerCommonBase, 398

iEnableNullPtrReturn
 OsclMemPoolFixedChunkAllocator, 445

iEndAddr
 OsclMemPoolResizableAllocator, 452

iErrAlloc
 OsclSelect, 519

iErrorTrapImp
 OsclExecSchedulerCommonBase, 398

iExecTimerQ
 OsclExecSchedulerCommonBase, 398

iExpectedNumBlocksPerBuffer
 OsclMemPoolResizableAllocator, 452

iFactory
 OsclComponentRegistryElement, 345

iFilePosition
 Oscl_File::OsclFixedCacheParam, 187

iFlags
 RecvFromParam, 635

 RecvParam, 637

 SendParam, 638

 SendToParam, 639

iFreeMemChunkList
 OsclMemPoolFixedChunkAllocator, 445

iFreeMemContextData
 OsclMemPoolResizableAllocator, 452

iFreeMemPoolObserver
 OsclMemPoolFixedChunkAllocator, 445

iFront
 Oscl_Queue_Base, 240

iFxn
 DNSRequestParam, 133

iGrandTotalTicks
 OsclExecSchedulerCommonBase, 398

iHead
 OsclDoubleListBase, 368

 OsclDoubleRunner, 369

iHeapCheck
 OsclSelect, 519

iHigh
 OsclInteger64Transport, 415

iHow
 ShutdownParam, 640

iId
 OsclComponentRegistryElement, 345

 OsclDNSMethod, 359

 OsclIPSocketI, 419

iIsIn
 TReadyQueLink, 656

iJumpData
 OsclErrorTrapImp, 377

iLeave
 OsclErrorTrapImp, 377

iLen
 PVSockBufRecv, 631

 PVSockBufSend, 632

iLength
 OsclBuf, 340

iLogger
 OsclDNSMethod, 359

 OsclDNSRequestAO, 364

 OsclExecSchedulerCommonBase, 398

 OsclIPSocketI, 419

 OsclSocketServIBase, 558

iLogPerfIndentStr
 OsclExecSchedulerCommonBase, 398

iLogPerfIndentStrLen
 OsclExecSchedulerCommonBase, 398

iLogPerfTotal
 OsclExecSchedulerCommonBase, 398

iLow
 OsclInteger64Transport, 415

iMaxLen
 PVSockBufRecv, 631

iMaxLength
 OsclBuf, 340

iMaxNewMemPoolBufferSz
 OsclMemPoolResizableAllocator, 452

iMemPool
 OsclMemPoolFixedChunkAllocator, 445

iMemPoolAligned
 OsclMemPoolFixedChunkAllocator, 445

iMemPoolAllocator
 OsclMemPoolFixedChunkAllocator, 445

iMemPoolBufferAllocator
 OsclMemPoolResizableAllocator, 452

iMemPoolBufferList
 OsclMemPoolResizableAllocator, 452

iMemPoolBufferNumLimit
 OsclMemPoolResizableAllocator, 452

iMemPoolBufferSize
 OsclMemPoolResizableAllocator, 452

iMimeType
 OsclRegistryAccessElement, 507

iMultiMaxLen
 RecvFromParam, 635

iMutex
 OsclComponentRegistry, 343

iName
 GetHostByNameParam, 135
 OsclExecSchedulerCommonBase, 398
 PVActiveBase, 614

iNativeAccessMode
 OsclNativeFileParams, 464

iNativeBufferSize
 OsclNativeFileParams, 464

iNativeMode
 OsclExecSchedulerCommonBase, 398

IncLogPerf
 OsclExecSchedulerCommonBase, 395

increment_refcnt
 BufferState, 118

iNext
 OsclDoubleLink, 365
 OsclDoubleRunner, 369
 OsclTrapStackItem, 599

iNextAvailableContextData
 OsclMemPoolFixedChunkAllocator, 445
 OsclMemPoolResizableAllocator, 452

iNextFreeBlock
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, 453
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454

Init
 OsclErrorTrap, 375
 OsclInit, 414
 OsclMem, 424
 OsclScheduler, 515
 PVLogger, 619

InitExecQ
 OsclExecSchedulerCommonBase, 395

Insert
 OsclDoubleListBase, 368

 OsclPriorityList, 468

insert
 Oscl_Map, 219
 Oscl_TagTree, 271
 Oscl_Vector, 287
 Oscl_Vector_Base, 291

insert_element
 Oscl_Linked_List, 207
 Oscl_Linked_List_Base, 212

insert_unique
 Oscl_Rb_Tree, 243

InsertAfter
 OsclDoubleLink, 365

InsertBefore
 OsclDoubleLink, 365

InsertHead
 OsclDoubleList, 366
 OsclDoubleListBase, 368

InsertTail
 OsclDoubleList, 366
 OsclDoubleListBase, 368

InstallScheduler
 OsclExecSchedulerCommonBase, 395

INT64
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846

int64
 osclbase, 34

INT64_HILO
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846

interfaceAddr
 OsclIpMReq, 416

INTERNAL_ERROR
 BuffFragStatusClass, 122

internalLeave, 138
 osclerror, 87

internalLeave
 a, 138

InThread
 DNSRequestParam, 132

iNumAOAdded
 OsclExecSchedulerCommonBase, 398

iNumChunk
 OsclMemPoolFixedChunkAllocator, 445

iNumOfRun
 OsclAsyncFile, 317

iNumOfRunErr
 OsclAsyncFile, 317

iNumOutstanding
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454

iNumSessions
 OsclComponentRegistry, 343

INVALID_ACCESS_ERROR
 OsclProcStatus, [475](#)
 INVALID_ARGUMENT_ERROR
 OsclProcStatus, [475](#)
 INVALID_FUNCTION_ERROR
 OsclProcStatus, [475](#)
 INVALID_HANDLE_ERROR
 OsclProcStatus, [475](#)
 INVALID_ID
 BufFragStatusClass, [122](#)
 INVALID_OPERATION_ERROR
 OsclProcStatus, [475](#)
 INVALID_PARAM_ERROR
 OsclProcStatus, [474](#)
 INVALID_POINTER_ERROR
 OsclProcStatus, [475](#)
 INVALID_PRIORITY_ERROR
 OsclProcStatus, [474](#)
 INVALID_THREAD_ERROR
 OsclProcStatus, [474](#)
 INVALID_THREAD_ID_ERROR
 OsclProcStatus, [474](#)
 INVALID_TYPE
 Oscl_FileFind, [188](#)
 iObserver
 OsclIPSocketI, [419](#)
 OsclMemPoolFixedChunkAllocator, [445](#)
 OsclMemPoolResizableAllocator, [452](#)
 iOffset
 OsclDoubleListBase, [368](#)
 OsclDoubleRunner, [369](#)
 iOpCount
 OsclFileStatsItem, [411](#)
 iOsclBase
 OsclSelect, [519](#)
 iOsclErrorTrap
 OsclSelect, [519](#)
 iOsclLogger
 OsclSelect, [519](#)
 iOsclMemory
 OsclSelect, [519](#)
 iOsclScheduler
 OsclSelect, [519](#)
 iOtherExecStats
 OsclExecSchedulerCommonBase, [398](#)
 iOutputFile
 OsclSelect, [519](#)
 iPacketLen
 RecvFromParam, [635](#)
 iPacketSource
 RecvFromParam, [635](#)
 ipAddr
 OsclNetworkAddress, [465](#)
 iParam
 OsclFileStatsItem, [411](#)
 OsclSocketRequest, [548](#)
 OsclSocketRequestAO, [552](#)
 iParam2
 OsclFileStatsItem, [411](#)
 iParamSize
 OsclSocketRequestAO, [552](#)
 iParentBuffer
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, [453](#)
 iPrev
 OsclDoubleLink, [365](#)
 iPrevFreeBlock
 OsclMemPoolResizableAllocator::Mem-
 PoolBlockInfo, [453](#)
 iPriority
 OsclPriorityLink, [467](#)
 iPtr
 PVSockBufRecv, [631](#)
 PVSockBufSend, [632](#)
 iPVActiveStats
 PVActiveBase, [614](#)
 iPVReadyQLink
 PVActiveBase, [614](#)
 iPVStatQ
 OsclExecSchedulerCommonBase, [398](#)
 iPVStats
 OsclExecSchedulerCommonBase, [398](#)
 iQSize
 ListenParam, [140](#)
 iReadyQ
 OsclExecSchedulerCommonBase, [398](#)
 irear
 Oscl_Queue_Base, [240](#)
 iRefCount
 DNSRequestParam, [133](#)
 OsclMemPoolFixedChunkAllocator, [445](#)
 OsclMemPoolResizableAllocator, [452](#)
 iRequestedAvailableFreeMemSize
 OsclMemPoolResizableAllocator, [452](#)
 iRequestedNextAvailableSize
 OsclMemPoolResizableAllocator, [452](#)
 iResumeSem
 OsclExecSchedulerCommonBase, [398](#)
 is_writable
 OSCL_String, [261](#)
 OSCL_wString, [305](#)
 is_zero
 TimeValue, [653](#)
 is_zulu
 TimeValue, [653](#)
 IsActive
 PVLogger, [619](#)
 IsAdded

PVActiveBase, 612
 isAllocNodePtr
 MM_AllocBlockHdr, 147
 IsBusy
 OsclActiveObject, 311
 OsclTimerObject, 587
 iSchedulerAlloc
 OsclSelect, 519
 iSchedulerName
 OsclSelect, 519
 iSchedulerReserve
 OsclSelect, 519
 isCIEquivalentTo
 StrCSumPtrLen, 644
 StrPtrLen, 647
 WStrPtrLen, 658
 isCIPrefixOf
 StrPtrLen, 647
 iSelect
 OsclSocketServRequestQElem, 561
 IsEmpty
 OsclDoubleListBase, 368
 iSeqNum
 TReadyQueLink, 656
 iServerError
 OsclSocketServIBase, 558
 iServerState
 OsclSocketServIBase, 558
 isFixed
 OsclFileCacheBuffer, 403
 IsHead
 OsclDoubleList, 366
 OsclPriorityList, 468
 IsIn
 OsclReadyQ, 484
 OsclTimerQ, 590
 IsInAnyQ
 PVActiveBase, 613
 IsInstalled
 OsclExecSchedulerCommonBase, 395
 IsInUse
 OsclAsyncFileBuffer, 319
 iSize
 Oscl_File::OsclFixedCacheParam, 187
 isLetter
 StrPtrLen, 647
 IsLocalData
 MediaData, 143
 ISO8601TIME_BUFFER_SIZE
 osclbase, 45
 ISO8601timeStrBuf
 osclbase, 34
 ISO8601ToRFC822
 osclbase, 36
 iSocket
 OsclIPSocketI, 419
 iSocketError
 OsclDNSRequestAO, 364
 OsclSocketRequestAO, 552
 iSocketFxn
 OsclSocketMethod, 546
 iSocketI
 OsclSocketRequest, 548
 iSocketRequest
 OsclSocketServRequestQElem, 561
 iSocketRequestAO
 OsclSocketMethod, 546
 OsclSocketRequest, 548
 iSocketServ
 OsclDNSIBase, 356
 OsclIPSocketI, 419
 OsclSocketIBase, 543
 IsOpen
 OsclSocketIBase, 541
 IsReady
 OsclDNSIBase, 355
 IsSameThreadContext
 PVThreadContext, 633
 IsServConnected
 OsclSocketServIBase, 558
 IsServerThread
 OsclSocketServI, 556
 isSetFailure
 MM_Audit_Imp, 154
 IsStarted
 OsclExecSchedulerCommonBase, 395
 IsTail
 OsclDoubleList, 366
 OsclPriorityList, 468
 iStartAddr
 OsclMemPoolResizableAllocator::Mem-
 PoolBufferInfo, 454
 iStartTick
 OsclFileStatsItem, 411
 iStatus
 PVActiveBase, 614
 iStopper
 OsclExecSchedulerCommonBase, 398
 iStopperCrit
 OsclExecSchedulerCommonBase, 398
 IsUpdated
 OsclFileCacheBuffer, 403
 iSuspended
 OsclExecSchedulerCommonBase, 398
 IsValid
 OsclAsyncFileBuffer, 319
 iTAny
 OsclTrapStackItem, 599

iterator
 Oscl_Linked_List_Base, 214
 Oscl_Map, 217
 Oscl_Rb_Tree, 243
 Oscl_Rb_Tree_Iterator, 250
 Oscl_TagTree::iterator, 276
 Oscl_Vector, 285
 OsclPriorityQueue, 470

iThreadContext
 OsclExecSchedulerCommonBase, 398
 PVActiveBase, 614

iTime
 OsclExecSchedulerCommonBase, 398

iTimeCompareThreshold
 OsclExecSchedulerCommonBase, 398

iTimeQueuedTicks
 TReadyQueLink, 656

iTimeToRunTicks
 TReadyQueLink, 656

iTotalPercent
 OsclExecSchedulerCommonBase, 398

iTotalTicks
 OsclFileStatsItem, 411

iTotalTicksTemp
 OsclExecSchedulerCommonBase, 398

iTrapOperation
 OsclTrapStackItem, 599

iTrapStack
 OsclErrorTrapImp, 377

iVec
 OsclComponentRegistryData, 344

iXferLen
 SendParam, 638
 SendToParam, 639

Join
 OsclIPSocketI, 418
 OsclSocketI, 536
 OsclSocketIBase, 541
 OsclUDPSocket, 602

JoinMulticastGroup
 OsclUDPSocket, 603
 OsclUDPSocketI, 607

Jump
 OsclJump, 420

key_comp
 Oscl_Map, 220

key_compare
 Oscl_Map, 217

key_type
 Oscl_Map, 217
 Oscl_Rb_Tree, 243

largeasyncfilereadwrite_test
 Oscl_File, 185

Leave
 OsclError, 371

LeaveIfError
 OsclError, 371

LeaveIfNull
 OsclError, 371

Left
 OsclPtrC, 479

left
 Oscl_Rb_Tree_Node_Base, 254

len
 OsclMemoryFragment, 441
 StrPtrLen, 647
 WStrPtrLen, 658

Length
 OsclAsyncFileBuffer, 319
 OsclBuf, 340
 OsclPtr, 476
 OsclPtrC, 479

length
 BuffFragGroup, 121
 OsclBinStream, 338
 StrPtrLen, 647
 WStrPtrLen, 658

lineNo
 MM_AllocInfo, 149
 MM_AllocQueryInfo, 151

link_type
 Oscl_Rb_Tree, 243
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_Rb_Tree_Node, 252

LinkedListElement, 139
 LinkedListElement, 139

LinkedListElement
 data, 139
 LinkedListElement, 139
 next, 139

Listen
 OsclListenMethod, 421
 OsclListenRequest, 422
 OsclSocketI, 536
 OsclSocketIBase, 541
 OsclTCPSocket, 568
 OsclTCPSocketI, 572

ListenAsync
 OsclSocketIBase, 541
 OsclTCPSocket, 568
 OsclTCPSocketI, 573

ListenParam, 140
 ListenParam, 140

ListenParam

iQSize, 140
 ListenParam, 140
ListenRequest
 OsclListenMethod, 421
little_endian_to_host
 osclbase, 36
localbuf
 MediaData, 143
Lock
 OsclLockBase, 423
 OsclMutex, 459
 OsclNullLock, 466
 OsclThreadLock, 578
lockAndGetInstance
 OsclSingletonRegistry, 533
Log
 OsclFileStats, 410
log_level_type
 AllPassFilter, 113
 PVLogger, 617
 PVLoggerFilter, 623
 PVLoggerRegistry, 627
LogAll
 OsclFileStats, 410
Logger
 OsclSocketI, 536
LogMsgBuffers
 PVLogger, 619
LogMsgBuffersV
 PVLogger, 619
LogMsgString
 PVLogger, 620
LogMsgStringV
 PVLogger, 620
LoopbackSocket
 OsclSocketServI, 556
lower_bound
 Oscl_Map, 220
 Oscl_Rb_Tree, 243
MakeAddr
 OsclSocketI, 536
MakeMulticastGroupInformation
 OsclSocketI, 536
makeValidTag
 MM_Audit_Imp, 154
map_type
 Oscl_TagTree, 269
mapit
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
mapiter
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
Match
 OsclComponentRegistryElement, 345
MAX_NUMBER_OF_BYTE_PER_UTF8
 osclutil, 68
max_size
 Oscl_Map, 220
 Oscl_Rb_Tree, 243
MAX_THRDS_REACHED_ERROR
 OsclProcStatus, 474
maximum
 Oscl_Rb_Tree_Node_Base, 254
MaxLen
 OsclNameString, 460
maxsize
 CFastRep, 127
 CHeapRep, 129
 CStackRep, 131
mbchar
 osclbase, 34
MediaData, 141
 MediaData, 142
MediaData
 ~MediaData, 142
 AddLocalFragment, 142
 available_localbuf, 143
 Clear, 142
 GetAvailableBufferSize, 142
 GetLocalBufsize, 143
 GetLocalFragment, 143
 GetMediaFragment, 143
 GetMediaSize, 143
 GetNumMediaFrags, 143
 GetTimestamp, 143
 IsLocalData, 143
 localbuf, 143
 MediaData, 142
 num_reserved_fragments, 143
 SetTimestamp, 143
 timestamp, 143
MediaStatusClass, 144
MediaTimestamp
 osclutil, 68
MEM_ALIGN_SIZE
 osclmemory, 51
MemAllocator, 145
MemAllocator
 ~MemAllocator, 145
 allocate, 145
 deallocate, 145
 pointer, 145
memoryPoolBufferMgmtOverhead
 OsclMemPoolResizableAllocator, 450
message_id_type
 AllPassFilter, 113

PVLogger, 617
 PVLoggerAppender, 622
 PVLoggerFilter, 623
 PVLoggerLayout, 625
MethodDone
 OsclDNSMethod, 358
 OsclSocketMethod, 545
MICROSECONDS
 osclbase, 35
MILLISECONDS
 osclbase, 35
MIN_FENCE_SIZE
 osclmemory, 51
minimum
 Oscl_Rb_Tree_Node_Base, 254
MM_AddTag
 MM_Audit_Imp, 154
 OsclMemAudit, 429
MM_ALLOC_MAX_QUERY_FILENAME_LEN
 osclmemory, 51
MM_ALLOC_MAX_QUERY_TAG_LEN
 osclmemory, 51
MM_allocate
 MM_Audit_Imp, 154
 OsclMemAudit, 429
MM_AllocBlockFence, 146
 MM_AllocBlockFence, 146
MM_AllocBlockFence
 check_fence, 146
 fill_fence, 146
 MM_AllocBlockFence, 146
 pad, 146
MM_AllocBlockHdr, 147
 MM_AllocBlockHdr, 147
MM_AllocBlockHdr
 isAllocNodePtr, 147
 MM_AllocBlockHdr, 147
 pad, 147
 pNode, 147
 pRootNode, 147
 setAllocNodeFlag, 147
 size, 147
MM_AllocInfo, 148
 MM_AllocInfo, 149
MM_AllocInfo
 ~MM_AllocInfo, 149
 allocNum, 149
 bSetFailure, 149
 lineNo, 149
 MM_AllocInfo, 149
 operator delete, 149
 operator new, 149
 pFileName, 149
 pMemBlock, 149
 pStatsNode, 149
 size, 149
MM_AllocNode, 150
 MM_AllocNode, 150
MM_AllocNode
 ~MM_AllocNode, 150
 MM_AllocNode, 150
 operator delete, 150
 operator new, 150
 pAllocInfo, 150
 pNext, 150
 pPrev, 150
MM_AllocNodeAutoPtr
 osclmemory, 58
MM_AllocQueryInfo, 151
MM_AllocQueryInfo
 allocNum, 151
 fileName, 151
 lineNo, 151
 pMemBlock, 151
 size, 151
 tag, 151
MM_AUDIT_ALLOC_NODE_ENABLE_FLAG
 osclmemory, 51
MM_AUDIT_ALLOC_NODE_SUPPORT
 osclmemory, 51
MM_AUDIT_FAILURE_SIMULATION_SUPPORT
 osclmemory, 51
MM_AUDIT_FENCE_SUPPORT
 osclmemory, 51
MM_AUDIT_FILL_SUPPORT
 osclmemory, 51
MM_Audit_Imp, 152
 ~MM_Audit_Imp, 153
 addAllocNode, 153
 createStatsNode, 153
 getAuditRoot, 153
 getSize, 153
 getTagActualSize, 153
 isSetFailure, 154
 makeValidTag, 154
 MM_AddTag, 154
 MM_allocate, 154
 MM_Audit_Imp, 153
 MM_CreateAllocNodeInfo, 154
 MM_deallocate, 154
 MM_GetAllocNo, 154
 MM_GetAllocNodeInfo, 155
 MM_GetExistingTag, 155
 MM_GetMode, 155
 MM_GetNumAllocNodes, 155

MM_GetOverheadStats, 155
 MM_GetPostfillPattern, 155
 MM_GetPrefillPattern, 155
 MM_GetRootNode, 156
 MM_GetStats, 156
 MM_GetStatsInDepth, 156
 MM_GetTagName, 156
 MM_GetTreeNodes, 156
 MM_ReleaseAllocNodeInfo, 156
 MM_SetFailurePoint, 157
 MM_SetMode, 157
 MM_SetPostfillPattern, 157
 MM_SetPrefillPattern, 157
 MM_SetTagLevel, 157
 MM_UnsetFailurePoint, 157
 MM_Validate, 157
 pruneSubtree, 158
 removeALLAllocNodes, 158
 removeAllocNode, 158
 retrieveParentTag, 158
 retrieveParentTagLength, 158
 updateStatsNode, 158
 updateStatsNodeInFailure, 158
 validate, 158
 validate_all_heap, 158
MM_AUDIT_INCLUDE_ALL_HEAP_-VALIDATION
 osclmemory, 51
MM_AUDIT_POSTFILL_FLAG
 osclmemory, 51
MM_AUDIT_PREFILL_FLAG
 osclmemory, 51
MM_AUDIT_SUPPRESS_FILENAME_FLAG
 osclmemory, 51
MM_AUDIT_VALIDATE_ALL_HEAP_FLAG
 osclmemory, 51
MM_AUDIT_VALIDATE_BLOCK
 osclmemory, 51
MM_AUDIT_VALIDATE_ON_FREE_FLAG
 osclmemory, 51
MM_AuditOverheadStats, 160
MM_AuditOverheadStats
 per_allocation_overhead, 160
 stats_overhead, 160
MM_CreateAllocNodeInfo
 MM_Audit_Imp, 154
 OsclMemAudit, 429
MM_deallocate
 MM_Audit_Imp, 154
 OsclMemAudit, 429
MM_FailInsertParam, 161
 MM_FailInsertParam, 161
MM_FailInsertParam
 MM_FailInsertParam, 161
MM_GetOverheadStats, 155
MM_GetPostfillPattern, 155
MM_GetPrefillPattern, 155
MM_GetRootNode, 156
MM_GetStats, 156
MM_GetStatsInDepth, 156
MM_GetTagName, 156
MM_GetTreeNodes, 156
MM_ReleaseAllocNodeInfo, 156
MM_SetFailurePoint, 157
MM_SetMode, 157
MM_SetPostfillPattern, 157
MM_SetPrefillPattern, 157
MM_SetTagLevel, 157
MM_UnsetFailurePoint, 157
nAllocNum, 161
operator delete, 161
operator new, 161
reset, 161
xsubi, 161
MM_GetAllocNo
 MM_Audit_Imp, 154
 OsclMemAudit, 429
MM_GetAllocNodeInfo
 MM_Audit_Imp, 155
 OsclMemAudit, 429
MM_GetExistingTag
 MM_Audit_Imp, 155
 OsclMemAudit, 430
MM_GetMode
 MM_Audit_Imp, 155
 OsclMemAudit, 430
MM_GetNumAllocNodes
 MM_Audit_Imp, 155
 OsclMemAudit, 430
MM_GetOverheadStats
 MM_Audit_Imp, 155
 OsclMemAudit, 430
MM_GetPostfillPattern
 MM_Audit_Imp, 155
 OsclMemAudit, 430
MM_GetPrefillPattern
 MM_Audit_Imp, 155
 OsclMemAudit, 430
MM_GetRefCount
 OsclMemAudit, 430
MM_GetRootNode
 MM_Audit_Imp, 156
 OsclMemAudit, 431
MM_GetStats
 MM_Audit_Imp, 156
 OsclMemAudit, 431
MM_GetStatsInDepth
 MM_Audit_Imp, 156
 OsclMemAudit, 431
MM_GetTagName
 MM_Audit_Imp, 156
 OsclMemAudit, 431
MM_GetTreeNodes
 MM_Audit_Imp, 156
 OsclMemAudit, 431
MM_ReleaseAllocNodeInfo
 MM_Audit_Imp, 156
 OsclMemAudit, 431
MM_SetFailurePoint
 MM_Audit_Imp, 157
 OsclMemAudit, 431
MM_SetMode
 MM_Audit_Imp, 157

OsclMemAudit, 432
MM_SetPostfillPattern
 MM_Audit_Imp, 157
 OsclMemAudit, 432
MM_SetPrefillPattern
 MM_Audit_Imp, 157
 OsclMemAudit, 432
MM_SetTagLevel
 MM_Audit_Imp, 157
 OsclMemAudit, 432
MM_Stats_CB, 162
 MM_Stats_CB, 162
 num_child_nodes, 162
 operator delete, 162
 operator new, 162
 pStats, 162
 tag, 162
MM_Stats_t, 163
 MM_Stats_t, 164
 numAllocFails, 164
 numAllocs, 164
 numBytes, 164
 operator delete, 164
 operator new, 164
 peakNumAllocs, 164
 peakNumBytes, 164
 reset, 164
 totalNumAllocs, 164
 totalNumBytes, 164
 update, 164
MM_StatsNodeTagTreeType
 osclmemory, 58
MM_UnsetFailurePoint
 MM_Audit_Imp, 157
 OsclMemAudit, 432
MM_Validate
 MM_Audit_Imp, 157
 OsclMemAudit, 432
MMAuditCharAutoPtr
 osclmemory, 58
MMAuditUint8AutoPtr
 osclmemory, 58
Mode
 OsclNativeFile, 462
mode
 oscl_stat_buf, 258
MODE_APPEND
 Oscl_File, 179
MODE_BINARY
 Oscl_File, 179
MODE_READ
 Oscl_File, 179
MODE_READ_PLUS
 Oscl_File, 179
MODE_READWRITE
 Oscl_File, 179
MODE_TEXT
 Oscl_File, 179
mode_type
 Oscl_File, 179
move_to_end
 Oscl_Linked_List, 208
 Oscl_Linked_List_Base, 212
 Oscl_MTLLinked_List, 225
move_to_front
 Oscl_Linked_List, 208
 Oscl_Linked_List_Base, 213
 Oscl_MTLLinked_List, 226
MSEC_PER_SEC
 osclbase, 45
MSEC_TO_MICROSEC
 oscl_socket_method.h, 759
MsecToTicks
 OsclTickCount, 579
multicastAddr
 OsclIpMReq, 416
MUTEX_LOCKED_ERROR
 OsclProcStatus, 475
nAllocNum
 MM_FailInsertParam, 161
New
 Oscl_DefAllocWithRefCounter, 173
NewL
 OsclAcceptMethod, 307
 OsclAsyncFile, 316
 OsclAsyncFileBuffer, 319
 OsclBindMethod, 321
 OsclBuf, 340
 OsclConnectMethod, 347
 OsclDNS, 351
 OsclDNSI, 353
 OsclGetHostByNameMethod, 412
 OsclListenMethod, 421
 OsclRecvFromMethod, 485
 OsclRecvMethod, 489
 OsclSendMethod, 522
 OsclSendToMethod, 524
 OsclShutdownMethod, 529
 OsclSocketI, 536
 OsclSocketServ, 554
 OsclSocketServI, 556
 OsclTCPSocket, 568
 OsclTCPSocketI, 573
 OsclUDPSocket, 603
 OsclUDPSocketI, 607
NewRequest
 OsclDNSRequestAO, 363

OsclSocketRequestAO, 551
 next
 BufFragGroup, 121
 LinkedListElement, 139
 nextFragPtr
 OsclBinStream, 338
 NO_PERMISSION_ERROR
 OsclProcStatus, 474
 Node
 Oscl_TagTree::Node, 279
 node
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 node_ptr
 Oscl_TagTree, 269
 node_type
 Oscl_TagTree, 269
 NOT_ENOUGH_MEMORY_ERROR
 OsclProcStatus, 474
 NOT_ENOUGH_RESOURCES_ERROR
 OsclProcStatus, 474
 NOT_ENOUGH_SPACE
 BufFragStatusClass, 122
 NOT_IMPLEMENTED
 OsclProcStatus, 475
 NOT_SUSPENDED_ERROR
 OsclProcStatus, 474
 notifyfreeblockavailable
 OsclMemPoolResizableAllocator, 450
 notifyfreechunkavailable
 OsclMemPoolFixedChunkAllocator, 444
 notifyfreememoryavailable
 OsclMemPoolResizableAllocator, 450
 NTPTime, 165
 get_lower32, 167
 get_middle32, 167
 get_upper32, 167
 get_value, 167
 NTPTime, 166, 167
 operator+=, 167
 operator-, 167
 operator=, 167, 168
 set_from_system_time, 168
 set_to_current_time, 168
 TimeValue, 654
 to_system_time, 168
 NULL
 osclbase, 32
 NULL_INPUT
 BufFragStatusClass, 122
 NULL_TERM_CHAR
 osclbase, 32
 num_child_nodes
 MM_Stats_CB, 162
 num_elements
 Oscl_Linked_List_Base, 214
 num_fragments
 BufFragGroup, 121
 num_reserved.fragments
 MediaData, 143
 numAllocFails
 MM_Stats_t, 164
 numAllocs
 MM_Stats_t, 164
 numBytes
 MM_Stats_t, 164
 numelems
 Oscl_Queue_Base, 240
 Oscl_Vector_Base, 292
 numFrags
 OsclBinStream, 338
 octet
 osclbase, 34
 Offset
 OsclAsyncFileBuffer, 319
 Open
 Oscl_File, 181
 OsclAsyncFile, 316, 317
 OsclDNSI, 353
 OsclDNSIBase, 355
 OsclFileCache, 401
 OsclNativeFile, 462
 OsclSocketI, 536
 OsclSocketIBase, 542
 OsclSocketServRequestList, 559
 OpenSession
 OsclComponentRegistry, 343
 operator *
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
 OsclExclusiveArrayPtr, 380
 OsclExclusivePtr, 383
 OsclExclusivePtrA, 386
 OSCLMemAutoPtr, 436
 OsclSharedPtr, 527
 OsclSingleton, 531
 OsclTLS, 591
 OsclTLSEx, 593
 operator *=
 TimeValue, 653
 operator delete
 MM_AllocInfo, 149
 MM_AllocNode, 150
 MM_FailInsertParam, 161
 MM_Stats_CB, 162

MM_Stats_t, 164
 oscl_mem.h, 714
 OsclErrorAllocator, 374
 osclmemory, 59
 OsclMemStatsNode, 457
 operator delete[]
 osclmemory, 59
 operator new
 MM_AllocInfo, 149
 MM_AllocNode, 150
 MM_FailInsertParam, 161
 MM_Stats_CB, 162
 MM_Stats_t, 164
 oscl_mem.h, 714
 osclconfig_global_placement_new.h, 810
 OsclErrorAllocator, 374
 osclmemory, 59
 OsclMemStatsNode, 457
 operator new[]
 osclmemory, 59
 operator T *
 OsclDoubleRunner, 369
 operator TheClass *
 OsclSharedPtr, 528
 operator!=
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 OSCL_String, 261
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
 OSCL_wString, 305
 OsclAOStatus, 314
 OsclUuid, 610
 StrCSumPtrLen, 644
 StrPtrLen, 647
 TimeValue, 654
 WStrPtrLen, 658
 operator()
 Oscl_Less, 204
 Oscl_Map::value_compare, 222
 Oscl_Select1st, 255
 Oscl_Tag_Base, 267
 operator+
 osclbase, 36, 37
 operator++
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
 OsclDoubleRunner, 369
 operator+=
 NTPTime, 167
 OSCL_String, 261
 OSCL_wString, 305
 TimeValue, 654
 OsclExclusiveArrayPtr, 380
 OsclExclusivePtr, 383
 OsclExclusivePtrA, 386
 OSCLMemAutoPtr, 436
 OsclSharedPtr, 528
 OsclSingleton, 531
 OsclTLS, 591
 OsclTLSEx, 593
 operator<
 OSCL_String, 261
 Oscl_Tag, 264
 OSCL_wString, 305
 OsclAOStatus, 314
 TimeValue, 654
 operator<<
 OsclBinOStreamBigEndian, 332
 OsclBinOStreamLittleEndian, 334
 operator<=

 OSCL_String, 262
 OSCL_wString, 305
 OsclAOStatus, 314
 TimeValue, 654
 operator=

 NTPTime, 167, 168
 OSCL_FastString, 176
 OSCL_HeapStringA, 200
 Oscl_Map, 220
 Oscl_Rb_Tree, 243
 OSCL_String, 262
 Oscl_TagTree, 271
 Oscl_Vector, 287
 OSCL_wFastString, 294
 OSCL_wHeapStringA, 300
 OSCL_wString, 305
 OsclAOStatus, 314
 OsclComponentRegistryElement, 345
 OsclExclusiveArrayPtr, 380

OsclExclusivePtr, 383
 OsclExclusivePtrA, 386
 OSCLMemAutoPtr, 436
 OsclRefCounterMemFrag, 496
 OsclSharedPtr, 528
 osclutil, 71–73
 OsclUuid, 610
 StrCSumPtrLen, 644
 StrPtrLen, 647
 TimeValue, 653
 WStrPtrLen, 658

operator==
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 OSCL_String, 262
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
 OSCL_wString, 305
 OsclAOStatus, 314
 osclbase, 37
 OsclNetworkAddress, 465
 OsclUuid, 610
 StrCSumPtrLen, 644
 StrPtrLen, 647
 TimeValue, 654
 WStrPtrLen, 658

operator>
 OSCL_String, 262
 OSCL_wString, 305
 OsclAOStatus, 314
 TimeValue, 654

operator>=
 OSCL_String, 262
 OSCL_wString, 305
 OsclAOStatus, 314
 TimeValue, 654

operator>>
 OsclBinIStreamBigEndian, 326
 OsclBinIStreamLittleEndian, 329

operator[]
 Oscl_Map, 220
 OSCL_String, 262
 Oscl_TagTree, 271
 Oscl_Vector, 287
 OSCL_wString, 305

optype
 OSCL_FastString, 175
 OSCL_HeapString, 196
 OSCL_HeapStringA, 198
 OSCL_StackString, 257
 OSCL_wFastString, 293
 OSCL_wHeapString, 297
 OSCL_wHeapStringA, 299
 OSCL_wStackString, 302

OSCL Base, 25
 OSCL config, 21
 OSCL Error, 84
 OSCL Init, 106
 OSCL IO, 94
 OSCL Memory, 46
 OSCL Proc, 102
 OSCL Util, 62
 OSCL_ABS
 osclbase, 32
 oscl_abs
 osclutil, 73
 OSCL_AF_INET
 osclconfig_io.h, 815
 Oscl_Alloc, 169
 ~Oscl_Alloc, 169
 allocate, 169
 allocate_fl, 169
 OSCL_ALLOC_DELETE
 osclmemory, 51
 OSCL_ALLOC_NEW
 osclmemory, 52
 oscl_aostatus.h, 659
 OSCL_ARRAY_DELETE
 osclmemory, 52
 OSCL_ARRAY_NEW
 osclmemory, 52
 OSCL_ASCII_CASE_MAGIC_BIT
 osclutil, 83
 oscl_asin
 osclutil, 73
 OSCL_ASSERT
 osclbase, 32
 OSCL_Assert
 osclbase, 37
 oscl_assert.h, 660
 OSCL_ASSERT_ALWAYS
 osclconfig, 22
 oscl_atan
 osclutil, 73
 OSCL_AUDIT_ARRAY_NEW
 osclmemory, 52
 OSCL_AUDIT_CALLOC
 osclmemory, 53
 OSCL_AUDIT_MALLOC
 osclmemory, 53
 OSCL_AUDIT_NEW
 osclmemory, 53
 OSCL_AUDIT_REALLOC
 osclmemory, 54
 OSCL_BAD_ALLOC_EXCEPTION_CODE
 osclerror, 87
 oscl_base.h, 661
 oscl_base_alloc.h, 662

oscl_base_macros.h, 663
 oscl_bin_stream.h, 664
OSCL_BYPASS_MEMMGT
 osclconfig_memory.h, 827
 oscl_byte_order.h, 665
OSCL_BYTEn_ORDER_BIG_ENDIAN
 osclconfig, 22
OSCL_BYTEn_ORDER_LITTLE_ENDIAN
 osclconfig, 22
OSCL_CALLOC
 osclmemory, 54
 oscl_calloc
 osclmemory, 54
OSCL_CATCH
 osclerror, 87
OSCL_CATCH_ANY
 osclerror, 87
OSCL_CHAR_IS_SIGNED
 osclconfig_limits_typedefs.h, 826
OSCL_CHAR_IS_UNSIGNED
 osclconfig_limits_typedefs.h, 826
 oscl_chdir
 osclio, 98
 oscl_CIstrcmp
 osclbase, 37
 oscl_CIstrncmp
 osclbase, 38
OSCL_CLEANUP_BASE_CLASS
 osclmemory, 54
OSCL_CLOCK_HAS_DRIFT_CORRECTION
 osclconfig_util.h, 847
OSCL_COND_EXPORT_REF
 osclbase, 32
OSCL_COND_IMPORT_REF
 osclbase, 32
OSCL_CONST_CAST
 osclbase, 32
 oscl_cos
 osclutil, 73
Oscl_Dalloc, 170
 ~Oscl_Dalloc, 170
 deallocate, 170
Oscl_DefAlloc, 171
Oscl_DefAlloc
 allocate, 171
 allocate_fl, 171
 deallocate, 171
 oscl_defalloc.h, 666
Oscl_DefAllocWithRefCounter, 172
Oscl_DefAllocWithRefCounter
 addRef, 172
 Delete, 172
 getCount, 172
 New, 173
 removeRef, 173
OSCL_DEFAULT_FREE
 osclmemory, 55
OSCL_DEFAULT_MALLOC
 osclmemory, 55
OSCL_DELETE
 osclmemory, 55
Oscl_DeleteFile
 Oscl_FileServer, 192, 193
OSCL_DISABLE_INLINES
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
OSCL_DISABLE_WARNING_RETURN_-TYPE_NOT_UDT
 osclbase, 32
 osclmemory, 55
OSCL_DISABLE_WARNING_TRUNCATE_DEBUG_MESSAGE
 oscl_map.h, 708
 oscl_mem.h, 714
 oscl_mem_audit.h, 717
 oscl_mem_audit_internals.h, 718
 oscl_mem_auto_ptr.h, 719
 oscl_tagtree.h, 786
 oscl_tree.h, 795
 osclbase, 32
 osclmemory, 55
oscl_dll.h, 667
OSCL_DLL_ENTRY_POINT
 osclbase, 32
OSCL_DLL_ENTRY_POINT_DEFAULT
 osclbase, 33
oscl_dns.h, 668
 oscl_dns_gethostbyname.h, 669
 oscl_dns_imp.h, 670
 oscl_dns_imp_base.h, 671
 oscl_dns_imp_pv.h, 672
 oscl_dns_method.h, 673
 oscl_dns_param.h, 674
 TDNSRequestParamAllocator, 674
 oscl_dns_request.h, 675
 oscl_dns_tuneables.h, 676
 PV_DNS_IS_THREAD, 676
 PV_DNS_SERVER, 676
 oscl_double_list.h, 677
OSCL_DYNAMIC_CAST
 osclbase, 33
OSCL_ERR_NONE
 osclerror, 88
oscl_errno.h, 678
oscl_error.h, 679
 oscl_error_allocator.h, 680
 oscl_error_codes.h, 681
 oscl_error_imp.h, 682

oscl_error_imp_cppexceptions.h, 683
 oscl_error_imp_fatalerror.h, 684
 _PV_TRAP, 684
 _PV_TRAP_NO_TLS, 684
 PVError_DoLeave, 684
 oscl_error_imp_jumps.h, 685
 _PV_TRAP, 685
 _PV_TRAP_NO_TLS, 685
 PVError_DoLeave, 686
 oscl_error_trapcleanup.h, 687
 oscl_exception.h, 688
 OSCL_EXCEPTSET_FLAG
 oscl_socket_serv_imp_pv.h, 767
 oscl_exclusive_ptr.h, 689
 oscl_exp
 osclutil, 73
 OSCL_EXPORT_REF
 osclconfig.h, 803
 OSCL_FastString, 174
 OSCL_FastString, 175
 OSCL_FastString
 ~OSCL_FastString, 175
 chartype, 175
 get_cstr, 176
 get_maxsize, 176
 get_size, 176
 get_str, 176
 operator=, 176
 optype, 175
 OSCL_FastString, 175
 OSCL_String, 177
 other_chartype, 175
 set, 176, 177
 set_length, 177
 Oscl_File
 ESymbianAccessMode_Rfile, 179
 ESymbianAccessMode_RfileBuf, 179
 MODE_APPEND, 179
 MODE_BINARY, 179
 MODE_READ, 179
 MODE_READ_PLUS, 179
 MODE_READWRITE, 179
 MODE_TEXT, 179
 SEEKCUR, 179
 SEEKEND, 179
 SEEKSET, 179
 Oscl_File, 178
 ~Oscl_File, 180
 AddFixedCache, 180
 asyncfilereadcancel_test, 185
 asyncfilereadwrite_test, 185
 Close, 180
 EndOfFile, 180
 Flush, 181
 GetError, 181
 Handle, 181
 largeasyncfilereadwrite_test, 185
 mode_type, 179
 Open, 181
 Oscl_File, 180
 Oscl_FileServer, 193
 OsclFileCache, 185
 OsclFileCacheBuffer, 185
 OsclFileHandle, 404
 Read, 182
 RemoveFixedCache, 182
 Seek, 182
 seek_type, 179
 SetAsyncReadBufferSize, 182
 SetCacheObserver, 183
 SetFileHandle, 183
 SetLoggingEnable, 183
 SetNativeAccessMode, 183
 SetNativeBufferSize, 184
 SetPVCacheSize, 184
 SetSize, 184
 SetSummaryStatsLoggingEnable, 184
 Size, 184
 Tell, 184
 TSymbianAccessMode, 179
 Write, 185
 Oscl_File::OsclCacheObserver, 186
 Oscl_File::OsclCacheObserver
 ~OsclCacheObserver, 186
 ChooseCurCache, 186
 Oscl_File::OsclFixedCacheParam, 187
 Oscl_File::OsclFixedCacheParam
 Contains, 187
 iFilePath, 187
 iSize, 187
 oscl_file_async_read.h, 690
 OSCL_FILE_ATTRIBUTE_ARCHIVE
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_DIRECTORY
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_HIDDEN
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_NORMAL
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_READONLY
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_SYSTEM
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_TYPE
 OsclFileManager, 405
 OSCL_FILE_BUFFER_MAX_SIZE
 osclconfig_io.h, 815
 oscl_file_cache.h, 691

OSCL_FILE_CHAR_PATH_DELIMITER
 osclio, 96
 oscl_file_dir_utils.h, 692
 oscl_file_find.h, 694
 oscl_file_handle.h, 695
 oscl_file_io.h, 696
 oscl_file_manager.h, 697
 oscl_file_native.h, 698
 oscl_file_server.h, 699
 oscl_file_stats.h, 700
 OSCL_FILE_STATS_LOGGER_NODE
 osclio, 96
 oscl_file_types.h, 701
 OSCL_FILE_WCHAR_PATH_DELIMITER
 osclio, 96
 Oscl_FileFind
 DIR_TYPE, 188
 E_BUFFER_TOO_SMALL, 189
 E_INVALID_ARG, 188
 E_INVALID_STATE, 188
 E_MEMORY_ERROR, 189
 E_NO_MATCH, 189
 E_NOT_IMPLEMENTED, 189
 E_OK, 188
 E_OTHER, 189
 E_PATH_NOT_FOUND, 188
 E_PATH_TOO_LONG, 188
 FILE_TYPE, 188
 INVALID_TYPE, 188
 Oscl_FileFind, 188
 Oscl_FileFind, 189
 Oscl_FileFind
 ~Oscl_FileFind, 189
 Close, 189
 element_type, 188
 error_type, 188
 FindFirst, 189
 FindNext, 190
 GetElementType, 190
 GetLastError, 190
 Oscl_FileFind, 189
 OSCL_FILEMGMT_E_ALREADY_EXISTS
 osclio, 97
 OSCL_FILEMGMT_E_NO_MATCH
 osclio, 97
 OSCL_FILEMGMT_E_NOT_EMPTY
 osclio, 97
 OSCL_FILEMGMT_E_NOT_-
 IMPLEMENTED
 osclio, 97
 OSCL_FILEMGMT_E_OK
 osclio, 97
 OSCL_FILEMGMT_E_PATH_NOT_FOUND
 osclio, 97
 OSCL_FILEMGMT_E_PATH_TOO_LONG
 osclio, 97
 OSCL_FILEMGMT_E_PERMISSION_-
 DENIED
 osclio, 97
 OSCL_FILEMGMT_E_SYS_SPECIFIC
 osclio, 97
 OSCL_FILEMGMT_E_UNKNOWN
 osclio, 97
 OSCL_FILEMGMT_ERR_TYPE
 osclio, 97
 OSCL_FILEMGMT_MODE_DIR
 osclio, 97
 OSCL_FILEMGMT_MODES
 osclio, 97
 OSCL_FILEMGMT_PERMS
 osclio, 97
 OSCL_FILEMGMT_PERMS_EXECUTE
 osclio, 97
 OSCL_FILEMGMT_PERMS_READ
 osclio, 97
 OSCL_FILEMGMT_PERMS_WRITE
 osclio, 97
 Oscl_FileServer, 192
 Oscl_FileServer, 192
 Oscl_FileServer
 ~Oscl_FileServer, 192
 Close, 192
 Connect, 192
 Oscl_DeleteFile, 192, 193
 Oscl_File, 193
 Oscl_FileServer, 192
 OsclNativeFile, 193
 OSCL_FIRST_CATCH
 osclerror, 88
 OSCL_FIRST_CATCH_ANY
 osclerror, 88
 oscl_floor
 osclutil, 73
 OSCL_FREE
 osclmemory, 55
 oscl_free
 osclmemory, 55
 OSCL_FSSTAT
 osclio, 96
 oscl_fsstat, 194
 freebytes, 194
 totalbytes, 194
 OSCL_FUNCTION_PTR
 osclconfig_compiler_warnings.h, 806
 oscl_getcwd
 osclio, 98, 99
 OSCL_GetLastError
 osclerror, 92

OSCL_HAS_ANDROID_FILE_IO_SUPPORT
osclconfig.h, 803

OSCL_HAS_ANDROID_SUPPORT
osclconfig.h, 803

OSCL_HAS_ANSI_64BIT_FILE_IO_-
SUPPORT
osclconfig_io.h, 815

OSCL_HAS_ANSI_FILE_IO_SUPPORT
osclconfig_io.h, 815

OSCL_HAS_ANSI_MATH_SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_ANSI_MEMORY_FUNCS
osclconfig_ansi_memory.h, 804

OSCL_HAS_ANSI_STDIO_SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_ANSI_STDLIB_SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_ANSI_STRING_SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_ANSI_WIDE_STRING_-
SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_BASIC_LOCK
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_BERKELEY_SOCKETS
osclconfig, 22
osclconfig_io.h, 815

OSCL_HAS_ERRNO_H
osclconfig_error.h, 807

OSCL_HAS_EXCEPTIONS
osclconfig_error.h, 807

OSCL_HAS_GLOB
osclconfig_io.h, 815

OSCL_HAS_GLOBAL_NEW_DELETE
osclconfig_memory.h, 827
osclmemory, 55

OSCL_HAS_GLOBAL_VARIABLE_-
SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_HEAP_BASE_SUPPORT
osclconfig_memory.h, 827

OSCL_HAS_LARGE_FILE_SUPPORT
osclconfig_io.h, 815

OSCL_HAS_MSWIN_FILE_IO_SUPPORT
osclconfig_io.h, 815

OSCL_HAS_MSWIN_PARTIAL_SUPPORT
osclconfig, 22

osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_MSWIN_SUPPORT
osclconfig, 22
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_MSWIN_TIME_FUNCS
osclconfig, 22
osclconfig_time.h, 837

OSCL_HAS_NATIVE_FILE_CACHE_-
ENABLE
osclconfig_io.h, 815

OSCL_HAS_NATIVE_INT64_TYPE
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_NATIVE_UINT64_TYPE
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_NON_PREEMPTIVE_-
THREAD_SUPPORT
osclconfig_proc_unix_android.h, 834
osclconfig_proc_unix_common.h, 836

OSCL_HAS_PACKED_STRUCT
osclconfig.h, 803

OSCL_HAS_PRAGMA_PACK
osclconfig, 22

OSCL_HAS_PTHREAD_SUPPORT
osclconfig, 22
osclconfig_proc_unix_android.h, 834
osclconfig_proc_unix_common.h, 836

OSCL_HAS_PV_C_OS_API_MEMORY_-
FUNCS
osclconfig, 23

OSCL_HAS_PV_C_OS_SUPPORT
osclconfig, 23

OSCL_HAS_PV_C_OS_TIME_FUNCS
osclconfig, 23

OSCL_HAS_PV_FILE_CACHE
osclconfig_io.h, 815

OSCL_HAS_RUNTIME_LIB_LOADING_-
SUPPORT
osclconfig_lib.h, 824

OSCL_HAS_SAVAJE_IO_SUPPORT
osclconfig, 23

OSCL_HAS_SAVAJE_SUPPORT
osclconfig, 23

OSCL_HAS_SEM_TIMEDWAIT_SUPPORT
osclconfig, 23
osclconfig_proc_unix_android.h, 834
osclconfig_proc_unix_common.h, 836

OSCL_HAS_SETJMP_H
osclconfig_error.h, 807

OSCL_HAS_SINGLETON_SUPPORT
osclbase, 33

OSCL_HAS_SOCKET_SUPPORT
osclconfig_io.h, 815

OSCL_HAS_SYMBIAN_COMPATIBLE_IO_-
FUNCTION
osclconfig, 23
osclconfig_io.h, 815

OSCL_HAS_SYMBIAN_DNS_SERVER
osclconfig, 23
osclconfig_io.h, 815

OSCL_HAS_SYMBIAN_ERRORTRAP
osclconfig, 23
osclconfig_error.h, 807

OSCL_HAS_SYMBIAN_MATH
osclconfig, 23
osclconfig_util.h, 847

OSCL_HAS_SYMBIAN_MEMORY_FUNCS
osclconfig, 23
osclconfig_memory.h, 827

OSCL_HAS_SYMBIAN_SCHEDULER
osclconfig, 23
osclconfig_proc_unix_android.h, 834
osclconfig_proc_unix_common.h, 836

OSCL_HAS_SYMBIAN_SOCKET_SERVER
osclconfig, 23
osclconfig_io.h, 815

OSCL_HAS_SYMBIAN_SUPPORT
osclconfig, 23
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_SYMBIAN_TIMERS
osclconfig, 23
osclconfig_util.h, 847

OSCL_HAS_THREAD_SUPPORT
osclconfig_proc_unix_android.h, 834
osclconfig_proc_unix_common.h, 836

OSCL_HAS_TLS_SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_UNICODE_SUPPORT
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_UNIX_SUPPORT
osclconfig, 23
osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

OSCL_HAS_UNIX_TIME_FUNCS
osclconfig, 23
osclconfig_time.h, 837

oscl_heapbase.h, 702

OSCL_HeapString, 195
osclutil, 73, 74

OSCL_HeapString
chartype, 196
optype, 196

OSCL_String, 196
other_chartype, 196

OSCL_HeapStringA, 197
OSCL_HeapStringA, 198, 199

OSCL_HeapStringA
~OSCL_HeapStringA, 199
chartype, 198
get_cstr, 199
get_maxsize, 199
get_size, 200
get_str, 200
operator=, 200
optype, 198
OSCL_HeapStringA, 198, 199

OSCL_String, 201
other_chartype, 198
set, 200, 201

OSCL_IMPORT_REF
osclconfig.h, 803

oscl_init.h, 703

OSCL_INLINE
osclbase, 33

Oscl_Int64_Utils, 202
get_int64_lower32, 203
get_int64_middle32, 203
get_int64_upper32, 203
get_uint64_lower32, 203
get_uint64_middle32, 203
get_uint64_upper32, 203
set_int64, 203
set_uint64, 203

oscl_int64_utils.h, 704
_OsclInteger64Transport, 704

OSCL_INTEGERS_WORD_ALIGNED
osclconfig, 23

OSCL_IO_EXTENSION_MAXLEN
osclio, 96

OSCL_IO_FILENAME_MAXLEN
osclio, 96

oscl_ip_socket.h, 705

OSCL_IPPROTO_IP
osclconfig_io.h, 815

OSCL_IPPROTO_TCP
osclconfig_io.h, 815

OSCL_IPPROTO_UDP
osclconfig_io.h, 815

oscl_isdigit
osclutil, 68

OSCL_IsErrnoSupported
osclerror, 92

oscl_isLetter
osclbase, 38

OSCL_JUMP_MAX_JUMP_MARKS
osclerror, 88

OSCL_LAST_CATCH
 osclerror, 88
 OSCL_LEAVE
 osclerror, 88
 Oscl_Less, 204
 operator(), 204
 OSCL_LIB_READ_DEBUG_LIBS
 osclconfig_lib.h, 824
 Oscl_Linked_List, 205
 ~Oscl_Linked_List, 205
 add_element, 206
 add_to_front, 206
 check_list, 206
 clear, 206
 dequeue_element, 206
 get_element, 206
 get_first, 207
 get_index, 207
 get_next, 207
 get_num_elements, 207
 insert_element, 207
 move_to_end, 208
 move_to_front, 208
 Oscl_Linked_List, 205
 remove_element, 208
 oscl_linked_list.h, 706
 Oscl_Linked_List_Base, 210
 ~Oscl_Linked_List_Base, 211
 add_element, 211
 add_to_front, 211
 check_list, 211
 construct, 211
 destroy, 211
 get_element, 211
 get_first, 212
 get_index, 212
 get_next, 212
 head, 214
 insert_element, 212
 iterator, 214
 move_to_end, 212
 move_to_front, 213
 num_elements, 214
 remove_element, 213
 sizeof_T, 214
 tail, 214
 oscl_lock_base.h, 707
 oscl_log
 osclutil, 74
 oscl_log10
 osclutil, 74
 OSCL_MALLOC
 osclmemory, 56
 oscl_malloc
 osclmemory, 56
 Oscl_Map, 215
 begin, 218
 clear, 218
 const_iterator, 217
 const_reference, 217
 count, 218
 empty, 218
 end, 218
 equal_range, 218
 erase, 219
 find, 219
 insert, 219
 iterator, 217
 key_comp, 220
 key_compare, 217
 key_type, 217
 lower_bound, 220
 max_size, 220
 operator=, 220
 operator[], 220
 Oscl_Map, 217
 pair_citerator_citerator, 217
 pair_iterator_bool, 217
 pair_iterator_iterator, 217
 pointer, 217
 reference, 217
 self, 217
 size, 220
 size_type, 217
 upper_bound, 220, 221
 value_comp, 221
 value_type, 217
 oscl_map.h, 708
 OSCL_DISABLE_WARNING_-
 TRUNCATE_DEBUG_MESSAGE,
 708
 Oscl_Map::value_compare, 222
 comp, 222
 operator(), 222
 Oscl_Map< Key, T, Alloc, Compare >, 222
 value_compare, 222
 Oscl_Map< Key, T, Alloc, Compare >
 Oscl_Map::value_compare, 222
 oscl_math.h, 709
 OSCL_MAX
 osclbase, 33
 OSCL_MAX_TRAP_LEVELS
 osclerror, 89
 oscl_media_data.h, 710
 oscl_media_status.h, 711
 oscl_mem.h, 712
 operator delete, 714
 operator new, 714

```

OSCL_DISABLE_WARNING_-
    TRUNCATE_DEBUG_MESSAGE,
    714
oscl_mem_align.h, 715
oscl_mem_aligned_size
    osclmemory, 59
oscl_mem_audit.h, 716
    OSCL_DISABLE_WARNING_-
        TRUNCATE_DEBUG_MESSAGE,
        717
oscl_mem_audit_internals.h, 718
    OSCL_DISABLE_WARNING_-
        TRUNCATE_DEBUG_MESSAGE,
        718
oscl_mem_auto_ptr.h, 719
    OSCL_DISABLE_WARNING_-
        TRUNCATE_DEBUG_MESSAGE,
        719
oscl_mem_basic_functions.h, 720
oscl_mem_inst.h, 721
oscl_mem_mempool.h, 722
oscl_memcmp
    osclmemory, 60
oscl_memcpy
    osclmemory, 60
OSCL_MEMFRAG_PTR_BEFORE_LEN
    osclconfig_unix_android.h, 842
    osclconfig_unix_common.h, 846
oscl_memmove
    osclmemory, 60
oscl_memmove32
    osclmemory, 60
oscl_memset
    osclmemory, 61
oscl_memsize_t
    osclconfig_ansi_memory.h, 804
OSCL_MIN
    osclbase, 33
oscl_mkdir
    osclio, 99
Oscl_MTLinked_List, 224
    ~Oscl_MTLinked_List, 224
    add_element, 225
    add_to_front, 225
    dequeue_element, 225
    get_element, 225
    get_index, 225
    move_to_end, 225
    move_to_front, 226
    Oscl_MTLinked_List, 224
    remove_element, 226
    the_list, 226
oscl_mutex.h, 723
    OsclNoYieldMutex, 723

oscl_namestring.h, 724
OSCL_NATIVE_INT64_TYPE
    osclconfig_unix_android.h, 842
    osclconfig_unix_common.h, 846
OSCL_NATIVE_UINT64_TYPE
    osclconfig.h, 803
    osclconfig_unix_android.h, 842
    osclconfig_unix_common.h, 846
OSCL_NATIVE_WCHAR_TYPE
    osclconfig_unix_android.h, 842
    osclconfig_unix_common.h, 846
OSCL_NEW
    osclmemory, 56
oscl_opaque_type.h, 725
Oscl_Opaque_Type_Alloc, 228
    ~Oscl_Opaque_Type_Alloc, 228
    allocate, 228
    construct, 228
    deallocate, 228
    destroy, 228
Oscl_Opaque_Type_Alloc_LL, 230
    ~Oscl_Opaque_Type_Alloc_LL, 230
    allocate, 230
    compare_data, 230
    construct, 230
    deallocate, 230
    destroy, 231
    get_data, 231
    get_next, 231
    set_next, 231
Oscl_Opaque_Type_Compare, 232
    ~Oscl_Opaque_Type_Compare, 232
    compare_EQ, 232
    compare_LT, 232
    swap, 232
OSCL_PACKED_STRUCT_BEGIN
    osclconfig.h, 803
OSCL_PACKED_STRUCT_END
    osclconfig.h, 803
OSCL_PACKED_VAR
    osclbase, 33
    osclconfig.h, 803
Oscl_Pair, 234
    first, 234
    Oscl_Pair, 234
    second, 234
OSCL_PERF_SUMMARY_LOGGING
    osclproc, 104
OSCL_PLACEMENT_NEW
    osclmemory, 56
oscl_pow
    osclutil, 74
oscl_pqueue.h, 726
oscl_pqueue_test

```

OsclPriorityQueue, 472
 oscl_proctstatus.h, 727
Oscl_Queue, 235
 ~Oscl_Queue, 236
 back, 236
 clear, 236
 const_reference, 236
 front, 237
Oscl_Queue, 236
 pointer, 236
 pop, 237
 push, 237
 reference, 236
 size_type, 236
 value_type, 236
 oscl_queue.h, 728
Oscl_Queue_Base, 238
 ~Oscl_Queue_Base, 238
 bufsize, 240
 capacity, 239
 clear, 239
 construct, 239
 destroy, 239
 elems, 240
 empty, 239
 ifront, 240
 irear, 240
 numelems, 240
 pop, 239
 push, 239
 reserve, 239
 size, 239
 sizeof_T, 240
 oscl_rand.h, 729
OSCL_RAND_MAX
 osclconfig_util.h, 847
Oscl_Rb_Tree, 241
 ~Oscl_Rb_Tree, 243
 begin, 243
 clear, 243
 const_iterator, 243
 const_pointer, 243
 const_reference, 243
 count, 243
 difference_type, 243
 empty, 243
 end, 243
 equal_range, 243
 erase, 243
 find, 243
 insert_unique, 243
 iterator, 243
 key_type, 243
 link_type, 243
 lower_bound, 243
 max_size, 243
 operator=, 243
Oscl_Rb_Tree, 243
 pointer, 243
 reference, 243
 size, 243
 size_type, 243
 upper_bound, 243
 value_type, 243
Oscl_Rb_Tree_Base, 245
 base_link_type, 245
 rebalance, 245
 rebalance_for_erase, 245
 rotate_left, 245
 rotate_right, 245
Oscl_Rb_Tree_Const_Iterator, 246
 base_link_type, 247
 const_iterator, 247
 link_type, 247
 node, 247
 operator *, 247
 operator!=, 247
 operator++, 247
 operator-, 247
 operator->, 247
 operator==, 247
Oscl_Rb_Tree_Const_Iterator, 247
 pointer, 247
 reference, 247
 self, 247
 value_type, 247
Oscl_Rb_Tree_Iterator, 249
 base_link_type, 250
 iterator, 250
 link_type, 250
 node, 250
 operator *, 250
 operator!=, 250
 operator++, 250
 operator-, 250
 operator->, 250
 operator==, 250
Oscl_Rb_Tree_Iterator, 250
 pointer, 250
 reference, 250
 self, 250
 value_type, 250
Oscl_Rb_Tree_Node, 252
 link_type, 252
 value, 252
 value_type, 252
Oscl_Rb_Tree_Node_Base
 black, 253

red, 253
Oscl_Rb_Tree_Node_Base, 253
 base_link_type, 253
 color, 254
 color_type, 253
 left, 254
 maximum, 254
 minimum, 254
 parent, 254
 RedB1, 253
 right, 254
OSCL_READSET_FLAG
 oscl_socket_serv_imp_pv.h, 767
OSCL_REALLOC
 osclmemory, 56
oscl_realloc
 osclmemory, 56
oscl_refcounter.h, 730
oscl_refcounter_memfrag.h, 731
oscl_registry_access_client.h, 732
oscl_registry_client.h, 733
oscl_registry_client_impl.h, 734
oscl_registry_serv_impl.h, 735
oscl_registry_serv_impl_global.h, 736
oscl_registry_serv_impl_tls.h, 737
oscl_registry_types.h, 738
OSCL_REINTERPRET_CAST
 osclbase, 33
OSCL_RELEASE_BUILD
 osclconfig.h, 803
oscl_rename
 osclio, 99, 100
OSCL_REQUEST_ERR_CANCEL
 osclproc, 105
OSCL_REQUEST_ERR_GENERAL
 osclproc, 105
OSCL_REQUEST_ERR_NONE
 osclproc, 105
OSCL_REQUEST_PENDING
 osclproc, 105
oscl_rmdir
 osclio, 100
oscl_scheduler.h, 739
oscl_scheduler_ao.h, 740
oscl_scheduler_aobase.h, 741
oscl_scheduler_readyq.h, 742
oscl_scheduler_threadcontext.h, 743
oscl_scheduler_tuneables.h, 744
oscl_scheduler_types.h, 745
OSCL_SD_BOTH
 osclconfig_io.h, 815
OSCL_SD_RECEIVE
 osclconfig_io.h, 815
OSCL_SD_SEND

 osclconfig_io.h, 815
Oscl_Select1st, 255
 operator(), 255
oscl_semaphore.h, 746
OSCL_SetLastError
 osclerror, 92
oscl_shared_ptr.h, 747
oscl_sin
 osclutil, 75
oscl_singleton.h, 748
 OSCL_SINGLETON_ID_CPM_PLUGIN, 749
 OSCL_SINGLETON_ID_LAST, 749
 OSCL_SINGLETON_ID_OMX, 749
 OSCL_SINGLETON_ID_-
 OMXMASTERCORE, 749
 OSCL_SINGLETON_ID_OSCLMEM, 749
 OSCL_SINGLETON_ID_-
 OSCLREGISTRY, 749
 OSCL_SINGLETON_ID_-
 PAYLOADPARSER, 749
 OSCL_SINGLETON_ID_-
 PVERRORTRAP, 749
 OSCL_SINGLETON_ID_PVLOGGER, 749
 OSCL_SINGLETON_ID_-
 PVMFRECOGNIZER, 749
 OSCL_SINGLETON_ID_-
 PVSCEDULER, 749
 OSCL_SINGLETON_ID_-
 SDPMEDIAPARSER, 749
 OSCL_SINGLETON_ID_TEST, 749
 OSCL_SINGLETON_ID_TICKCOUNT, 749
 OSCL_SINGLETON_ID_-
 WMDRMLOCK, 749
 OSCL_SINGLETON_ID_CPM_PLUGIN
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_LAST
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_OMX
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_-
 OMXMASTERCORE
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_OSCLMEM
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_OSCLREGISTRY
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_PAYLOADPARSER
 oscl_singleton.h, 749
 OSCL_SINGLETON_ID_PVERRORTRAP
 oscl_singleton.h, 749

OSCL_SINGLETON_ID_PVLOGGER
 oscl_singleton.h, 749
OSCL_SINGLETON_ID_-
 PVMFRECOGNIZER
 oscl_singleton.h, 749
OSCL_SINGLETON_ID_PVSCHEDULER
 oscl_singleton.h, 749
OSCL_SINGLETON_ID_-
 SDPMEDIAPARSER
 oscl_singleton.h, 749
OSCL_SINGLETON_ID_TEST
 oscl_singleton.h, 749
OSCL_SINGLETON_ID_TICKCOUNT
 oscl_singleton.h, 749
OSCL_SINGLETON_ID_WMDRMLOCK
 oscl_singleton.h, 749
oscl_snprintf
 osclutil, 75
 oscl_snprintf.h, 750
OSCL SOCK_DGRAM
 osclconfig_io.h, 815
OSCL SOCK_STREAM
 osclconfig_io.h, 815
oscl_socket.h, 751
oscl_socket_accept.h, 752
oscl_socket_bind.h, 753
oscl_socket_connect.h, 754
oscl_socket_imp.h, 755
oscl_socket_imp_base.h, 756
oscl_socket_imp_pv.h, 757
 PVSOCK_ERR_BAD_PARAM, 757
 PVSOCK_ERR_NOT_IMPLEMENTED,
 757
 PVSOCK_ERR_NOT_SUPPORTED, 757
 PVSOCK_ERR_SERV_NOT_-
 CONNECTED, 757
 PVSOCK_ERR SOCK_NO_SERV, 757
 PVSOCK_ERR SOCK_NOT_-
 CONNECTED, 757
 PVSOCK_ERR SOCK_NOT_OPEN, 757
oscl_socket_listen.h, 758
 OSCL_SOCKET_LISTEN_H_-
 INCLUDEDd, 758
OSCL_SOCKET_LISTEN_H_INCLUDEDd
 oscl_socket_listen.h, 758
oscl_socket_method.h, 759
 MSEC_TO_MICROSEC, 759
oscl_socket_recv.h, 760
oscl_socket_recv_from.h, 761
oscl_socket_request.h, 762
oscl_socket_send.h, 763
oscl_socket_send_to.h, 764
oscl_socket_serv_imp.h, 765
oscl_socket_serv_imp_base.h, 766

oscl_socket_serv_imp_pv.h, 767
 OSCL_EXCEPTSET_FLAG, 767
 OSCL_READSET_FLAG, 767
 OSCL_WRITESET_FLAG, 767
oscl_socket_serv_imp_reqlist.h, 768
oscl_socket_shutdown.h, 769
oscl_socket_stats.h
 EOsclSocket_DataRecv, 771
 EOsclSocket_DataSent, 771
 EOsclSocket_Except, 770
 EOsclSocket_OS, 770
 EOsclSocket_Readable, 770
 EOsclSocket_RequestAO_Canceled, 770
 EOsclSocket_RequestAO_Error, 770
 EOsclSocket_RequestAO_Success, 770
 EOsclSocket_RequestAO_Timeout, 770
 EOsclSocket_ServPoll, 770
 EOsclSocket_ServRequestCancelIssued,
 771
 EOsclSocket_ServRequestComplete, 771
 EOsclSocket_ServRequestIssued, 770
 EOsclSocket_Writable, 770
 EOsclSocketServ_LastEvent, 770
 EOsclSocketServ_LoopsckError, 771
 EOsclSocketServ_LoopsckOk, 771
 EOsclSocketServ_SelectActivity, 770
 EOsclSocketServ_SelectNoActivity, 770
 EOsclSocketServ_SelectRescheduleAsap,
 770
 EOsclSocketServ_SelectReschedulePoll,
 770
oscl_socket_stats.h, 770
 TOsclSocketServStatEvent, 770
 TOsclSocketStatEvent, 770
oscl_socket_tuneables.h, 772
 PV_OSCL_SOCKET_1MB_RECV_BUF,
 772
 PV_OSCL_SOCKET_SERVER_-
 LOGGER_OUTPUT, 772
 PV_OSCL_SOCKET_STATS_LOGGING,
 772
 PV_SOCKET_REQUEST_AO_-
 PRIORITY, 772
 PV_SOCKET_SERVER, 772
 PV_SOCKET_SERVER_AO_-
 INTERVAL_MSEC, 773
 PV_SOCKET_SERVER_AO_PRIORITY,
 773
 PV_SOCKET_SERVER_IS_THREAD,
 773
 PV_SOCKET_SERVER_SELECT, 773
 PV_SOCKET_SERVER_SELECT_-
 LOOPBACK_SOCKET, 773

PV_SOCKET_SERVER_SELECT_-
TIMEOUT_MSEC, 773
PV_SOCKET_SERVER_THREAD_-
PRIORITY, 773
PV_SOCKET_SERVI_STATS, 773
oscl_socket_types.h
EPVIPAddMembership, 775
EPVIMulticastTTL, 775
EPVIPProtoIP, 775
EPVIPProtoTCP, 775
EPVIPTOS, 775
EPVSocket, 775
EPVSocket_Last, 775
EPVSocketAccept, 775
EPVSocketBind, 775
EPVSocketBothShutdown, 775
EPVSocketCancel, 774
EPVSocketConnect, 775
EPVSocketFailure, 774
EPVSocketListen, 775
EPVSocketNotImplemented, 775
EPVSocketPending, 774
EPVSocketRecv, 775
EPVSocketRecvFrom, 775
EPVSocketRecvShutdown, 775
EPVSocketSend, 775
EPVSocketSendShutdown, 775
EPVSocketSendTo, 775
EPVSocketShutdown, 775
EPVSocketSuccess, 774
EPVSocketTimeout, 774
EPVSockReuseAddr, 775
oscl_socket_types.h, 774
PVNETWORKADDRESS_LEN, 774
TPVSocketEvent, 774
TPVSocketFxn, 775
TPVSocketOptionLevel, 775
TPVSocketOptionName, 775
TPVSocketShutdown, 775
OSCL_SOCKOPT_IP_ADDMEMBERSHIP
osclconfig_io.h, 815
OSCL_SOCKOPT_IP_MULTICAST_TTL
osclconfig_io.h, 815
OSCL_SOCKOPT_IP_TOS
osclconfig_io.h, 815
OSCL_SOCKOPT_SOL_REUSEADDR
osclconfig_io.h, 815
OSCL_SOL_IP
osclconfig_io.h, 815
OSCL_SOL_SOCKET
osclconfig_io.h, 815
OSCL_SOL_TCP
osclconfig_io.h, 815
OSCL_SOL_UDP

osclconfig_io.h, 815
oscl_sqrt
osclutil, 75
OSCL_StackString, 256
osclutil, 75, 76
OSCL_StackString
chartype, 257
optype, 257
OSCL_String, 257
other_chartype, 257
oscl_stat
osclo, 100, 101
OSCL_STAT_BUF
osclo, 96
oscl_stat_buf, 258
mode, 258
perms, 258
oscl_statsfs
osclo, 101
OSCL_STATIC_CAST
osclbase, 33
oscl_stdstring.h, 776
oscl_str_escape_xml
osclutil, 76
oscl_str_is_valid_utf8
osclutil, 76
oscl_str_need_escape_xml
osclutil, 77
oscl_str_ptr_len.h, 778
oscl_str_truncate_utf8
osclutil, 77
oscl_str_unescape_uri
osclutil, 77, 78
oscl_strcat
osclbase, 38, 39
oscl_strchr
osclbase, 39
oscl_strcmp
osclbase, 40
OSCL_StrError
osclerror, 92
OSCL_String, 259
~OSCL_String, 260
append_rep, 260
chartype, 260
get_cstr, 260
get_maxsize, 260
get_size, 261
get_str, 261
hash, 261
is_writable, 261
operator!=, 261
operator+=, 261
operator<, 261

operator<=, 262
 operator=, 262
 operator==, 262
 operator>, 262
 operator>=, 262
 operator[], 262
 OSCL_FastString, 177
 OSCL_HeapString, 196
 OSCL_HeapStringA, 201
 OSCL_StackString, 257
 OSCL_String, 260
 read, 262
 set_len, 262
 set_rep, 262, 263
 setrep_to_char, 263
 write, 263
 oscl_string.h, 779
 oscl_string_containers.h, 780
 oscl_string_rep.h, 781
 oscl_string_uri.h, 782
 oscl_string_utf8.h, 783
 oscl_string_utils.h, 784
 oscl_string_xml.h, 785
 oscl_strlen
 osclbase, 40
 oscl_strncat
 osclbase, 40, 41
 oscl_strcmp
 osclbase, 41
 oscl_strncpy
 osclbase, 42
 oscl_strchr
 osclbase, 42, 43
 oscl_strset
 osclbase, 43
 oscl strstr
 osclbase, 43, 44
 Oscl_Tag, 264
 ~Oscl_Tag, 264
 operator<, 264
 Oscl_Tag, 264
 tag, 264
 tagAllocator, 264
 Oscl_Tag_Base, 266
 operator(), 267
 size_type, 267
 tag_ancestor, 267
 tag_base_type, 267
 tag_base_unit, 267
 tag_cmp, 267
 tag_copy, 267
 tag_depth, 267
 tag_len, 267
 Oscl_TagTree, 268
 Oscl_TagTree, 269
 ~Oscl_TagTree, 269
 begin, 269
 children_type, 269
 clear, 270
 count, 270
 empty, 270
 end, 270
 erase, 270
 find, 270
 insert, 271
 map_type, 269
 node_ptr, 269
 node_type, 269
 operator=, 271
 operator[], 271
 Oscl_TagTree, 269
 pair_iterator_bool, 269
 size, 271
 size_type, 269
 tag_base_type, 269
 tag_type, 269
 value_type, 269
 oscl_tagtree.h, 786
 OSCL_DISABLE_WARNING_-
 TRUNCATE_DEBUG_MESSAGE,
 786
 Oscl_TagTree::const_iterator, 272
 Oscl_TagTree::const_iterator
 const_iterator, 273
 mapit, 273
 mapiter, 273
 operator *, 273
 operator!=, 273
 operator++, 273
 operator-, 273
 operator->, 273
 operator==, 273
 pointer, 273
 reference, 273
 self, 273
 Oscl_TagTree::iterator, 275
 Oscl_TagTree::iterator
 iterator, 276
 mapit, 276
 mapiter, 276
 operator *, 276
 operator!=, 276
 operator++, 276
 operator-, 276
 operator->, 276
 operator==, 276
 pointer, 276

reference, 276
 self, 276
Oscl_TagTree::Node, 278
Oscl_TagTree::Node
 children, 279
 children_type, 279
 depth, 279
 Node, 279
 parent, 279
 sort_children, 279
 tag, 279
 value, 279
Oscl_TAlloc, 280
 ~Oscl_TAlloc, 281
 address, 281
 alloc_and_construct, 281
 alloc_and_construct_fl, 281
 allocate, 281
 allocate_fl, 281
 const_pointer, 281
 const_reference, 281
 construct, 281
 deallocate, 281
 destroy, 281
 destruct_and_dealloc, 281
 pointer, 281
 reference, 281
 size_type, 281
 value_type, 281
Oscl_TAlloc::rebind, 283
 other, 283
oscl_tan
 osclutil, 78
OSCL_TCHAR
 osclbase, 34
oscl_tcp_socket.h, 787
OSCL_TEMPLATED_DESTRUCTOR_CALL
 osclbase, 33
 osclconfig.h, 803
oscl_thread.h
 Start_on_creation, 788
 Suspend_on_creation, 788
 ThreadPriorityAboveNormal, 789
 ThreadPriorityBelowNormal, 788
 ThreadPriorityHighest, 789
 ThreadPriorityLow, 788
 ThreadPriorityLowest, 788
 ThreadPriorityNormal, 788
 ThreadPriorityTimeCritical, 789
oscl_thread.h, 788
 OsclThread_State, 788
 OsclThreadPriority, 788
 TOsclThreadFuncPtr, 788
OSCL_THREAD_DECL
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836
oscl_tickcount.h, 790
oscl_time.h, 791
oscl_timer.h, 793
oscl_tls.h, 794
OSCL_TLS_BASE_SLOTS
 osclbase, 33
OSCL_TLS_EXTERNAL_SLOTS
 osclbase, 33
OSCL_TLS_GET_FUNC
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
OSCL_TLS_ID_BASE_LAST
 osclbase, 45
OSCL_TLS_ID_ERRORHOOK
 osclbase, 45
OSCL_TLS_ID_MAGICNUM
 osclbase, 45
OSCL_TLS_ID_OSCLREGISTRY
 osclbase, 45
OSCL_TLS_ID_PAYLOADPARSER
 osclbase, 45
OSCL_TLS_ID_PVERRORTRAP
 osclbase, 45
OSCL_TLS_ID_PVLOGGER
 osclbase, 45
OSCL_TLS_ID_PVMFRECOGNIZER
 osclbase, 45
OSCL_TLS_ID_PVSCHEDULER
 osclbase, 45
OSCL_TLS_ID_SDPMEDIAPARSER
 osclbase, 45
OSCL_TLS_ID_SQLITE3
 osclbase, 45
OSCL_TLS_ID_TEST
 osclbase, 45
OSCL_TLS_ID_WMDRM
 osclbase, 45
OSCL_TLS_IS_KEYED
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
OSCL_TLS_KEY_CREATE_FUNC
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
OSCL_TLS_KEY_DELETE_FUNC
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
OSCL_TLS_MAX_SLOTS
 osclbase, 33
OSCL_TLS_STORE_FUNC
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
oscl_tolower

osclbase, 44
OSCL_TRAP_ALLOC_NEW
 osclmemory, 56
OSCL_TRAP_AUDIT_NEW
 osclmemory, 57
OSCL_TRAP_NEW
 osclmemory, 57
OSCL_TRAPSTACK_POP
 osclerror, 89
OSCL_TRAPSTACK_POPDEALLOC
 osclerror, 89
OSCL_TRAPSTACK_PUSH
 osclerror, 89
oscl_tree.h, 795
 OSCL_DISABLE_WARNING_-
 TRUNCATE_DEBUG_MESSAGE,
 795
OSCL_TRY
 osclerror, 89
OSCL_TRY_NO_TLS
 osclerror, 89
OSCL_TStrPtrLen
 osclutil, 68
oscl_types.h, 796
oscl_udp_socket.h, 797
oscl_UnicodeToUTF8
 osclutil, 78
OSCL_UNSIGNED_CONST
 osclbase, 33
 osclconfig.h, 803
OSCL_UNUSED_ARG
 osclbase, 33
OSCL_UNUSED_RETURN
 osclbase, 34
oscl_utf8conv.h, 798
oscl_UTF8ToUnicode
 osclutil, 79
oscl_uuid.h, 799
 BYTES_IN_UUID_ARRAY, 800
 EMPTY_UUID, 800
 OsclUid32, 800
 PV_CHAR_CLOSE_BRACKET, 800
 PV_CHAR_COMMA, 800
Oscl_Vector, 284
 ~Oscl_Vector, 285
 back, 286
 begin, 286
 clear, 286
 const_iterator, 285
 const_reference, 285
 destroy, 286
 end, 286
 erase, 286
 front, 287
 insert, 287
 iterator, 285
 operator=, 287
 operator[], 287
 Oscl_Vector, 285
 pointer, 285
 pop_back, 287
 push_back, 288
 push_front, 288
 reference, 285
 value_type, 285
oscl_vector.h, 801
Oscl_Vector_Base, 289
 ~Oscl_Vector_Base, 290
 assign_vector, 290
 bufsize, 292
 capacity, 290
 construct, 290
 destroy, 290
 elems, 292
 empty, 290
 erase, 290, 291
 insert, 291
 numelems, 292
 OsclPriorityQueueBase, 292
 pop_back, 291
 push_back, 291
 push_front, 292
 reserve, 292
 size, 292
 sizeof_T, 292
OSCL_VIRTUAL_BASE
 osclbase, 34
oscl_vsnprintf
 osclutil, 79, 81
oscl_wchar
 osclbase, 34
OSCL_wFastString, 293
 OSCL_wFastString, 294
OSCL_wFastString
 ~OSCL_wFastString, 294
 chartype, 293
 get_cstr, 294
 get_maxsize, 294
 get_size, 294
 get_str, 294
 operator=, 294
 optype, 293
 OSCL_wFastString, 294
OSCL_wString, 295
 other_chartype, 294
 set, 295
 set_length, 295
OSCL_wHeapString, 296

osclutil, 81
OSCL_wHeapString
 chartype, 297
 optype, 297
 OSCL_wString, 297
 other_chartype, 297
OSCL_wHeapStringA, 298
 OSCL_wHeapStringA, 299
OSCL_wHeapStringA
 ~OSCL_wHeapStringA, 299
 chartype, 299
 get_cstr, 299
 get_maxsize, 299
 get_size, 299
 get_str, 300
 operator=, 300
 optype, 299
 OSCL_wHeapStringA, 299
 OSCL_wString, 300
 other_chartype, 299
 set, 300
OSCL_WRITESET_FLAG
 oscl_socket_serv_imp_pv.h, 767
OSCL_wStackString, 301
 osclutil, 81
OSCL_wStackString
 chartype, 302
 optype, 302
 OSCL_wString, 302
 other_chartype, 302
OSCL_wString, 303
 OSCL_wFastString, 295
 OSCL_wHeapString, 297
 OSCL_wHeapStringA, 300
 OSCL_wStackString, 302
 OSCL_wString, 304
OSCL_wString
 ~OSCL_wString, 304
 append_rep, 304
 chartype, 304
 get_cstr, 304
 get_maxsize, 304
 get_size, 304
 get_str, 304
 hash, 304
 is_writable, 305
 operator!=, 305
 operator+=, 305
 operator<, 305
 operator<=, 305
 operator=, 305
 operator==, 305
 operator>, 305
 operator>=, 305
 operator[], 305
OSCL_wString, 304
 read, 305
 set_len, 306
 set_rep, 306
 setrep_to_wide_char, 306
 write, 306
OSCL_ZEROIZE
 osclproc, 104
OsclAccept
 osclconfig_io.h, 815
OsclAcceptMethod, 307
OsclAcceptMethod
 ~OsclAcceptMethod, 307
 Accept, 307
 AcceptRequest, 307
 DiscardAcceptedSocket, 307
 GetAcceptedSocket, 307
 NewL, 307
OsclAcceptRequest, 308
 OsclAcceptRequest, 308
 OsclSocketI, 538
OsclAcceptRequest
 Accept, 308
 OsclAcceptRequest, 308
OsclActiveObject, 309
 EPriorityHigh, 310
 EPriorityHighest, 310
 EPriorityIdle, 310
 EPriorityLow, 310
 EPriorityNominal, 310
 OsclActiveObject, 310
 OsclExecSchedulerCommonBase, 396
 PVActiveBase, 614
 PVActiveStats, 615
 PVThreadContext, 634
OsclActiveObject
 ~OsclActiveObject, 310
 AddToScheduler, 310
 Cancel, 310
 DoCancel, 311
 IsBusy, 311
 OsclActiveObject, 310
 OsclActivePriority, 310
 PendComplete, 311
 PendForExec, 311
 Priority, 311
 RemoveFromScheduler, 311
 RunError, 311
 RunIfNotReady, 312
 SetBusy, 312
 SetStatus, 312
 Status, 312
 StatusRef, 312

OsclActivePriority
 OsclActiveObject, 310
 OsclAllocDestructDealloc, 313
 OsclAllocDestructDealloc
 ~OsclAllocDestructDealloc, 313
 OsclAny
 osclbase, 34
 OsclAOStatus, 314
 OsclAOStatus, 314
 OsclAOStatus
 operator!=, 314
 operator<, 314
 operator<=, 314
 operator=, 314
 operator==, 314
 operator>, 314
 operator>=, 314
 OsclAOStatus, 314
 Value, 314
 OsclAsyncFile, 315
 OsclAsyncFile
 ~OsclAsyncFile, 316
 Close, 316
 Delete, 316
 EndOfFile, 316
 Flush, 316
 iNumOfRun, 317
 iNumOfRunErr, 317
 NewL, 316
 Open, 316, 317
 Read, 317
 Seek, 317
 Size, 317
 Tell, 317
 Write, 317
 OsclAsyncFileBuffer, 318
 OsclAsyncFileBuffer
 ~OsclAsyncFileBuffer, 319
 Buffer, 319
 CleanInUse, 319
 HasThisOffset, 319
 Id, 319
 IsInUse, 319
 IsValid, 319
 Length, 319
 NewL, 319
 Offset, 319
 SetInUse, 319
 SetOffset, 319
 StartAsyncRead, 319
 UpdateData, 319
 OsclAuditCB, 320
 OsclAuditCB, 320
 OsclAuditCB

OsclAuditCB, 320
 pAudit, 320
 pStatsNode, 320
 OsclBase
 OsclSingletonRegistry, 533
 OsclTLSRegistry, 595
 osclbase
 _OSCL_Abort, 35
 ALLOC_AND_CONSTRUCT, 32
 ALLOCATE, 32
 big_endian_to_host, 35
 Bind, 35
 c_bool, 34
 CTIME_BUFFER_SIZE, 45
 CtimeStrBuf, 34
 host_to_big_endian, 35
 host_to_little_endian, 36
 int64, 34
 ISO8601TIME_BUFFER_SIZE, 45
 ISO8601timeStrBuf, 34
 ISO8601ToRFC822, 36
 little_endian_to_host, 36
 mbchar, 34
 MICROSECONDS, 35
 MILLISECONDS, 35
 MSEC_PER_SEC, 45
 NULL, 32
 NULL_TERM_CHAR, 32
 octet, 34
 operator+, 36, 37
 operator-, 37
 operator==, 37
 OSCL_ABS, 32
 OSCL_ASSERT, 32
 OSCL_Assert, 37
 oscl_CIstrcmp, 37
 oscl_CIstrncmp, 38
 OSCL_COND_EXPORT_REF, 32
 OSCL_COND_IMPORT_REF, 32
 OSCL_CONST_CAST, 32
 OSCL_DISABLE_WARNING_-
 RETURN_TYPE_NOT_UDT, 32
 OSCL_DISABLE_WARNING_-
 TRUNCATE_DEBUG_MESSAGE,
 32
 OSCL_DLL_ENTRY_POINT, 32
 OSCL_DLL_ENTRY_POINT_DEFAULT,
 33
 OSCL_DYNAMIC_CAST, 33
 OSCL_HAS_SINGLETON_SUPPORT, 33
 OSCL_INLINE, 33
 oscl_isLetter, 38
 OSCL_MAX, 33
 OSCL_MIN, 33

OSCL_PACKED_VAR, 33
 OSCL_REINTERPRET_CAST, 33
 OSCL_STATIC_CAST, 33
 oscl_strcat, 38, 39
 oscl strchr, 39
 oscl_strcmp, 40
 oscl_strlen, 40
 oscl_strncat, 40, 41
 oscl_strncmp, 41
 oscl_strncpy, 42
 oscl strrchr, 42, 43
 oscl_strset, 43
 oscl strstr, 43, 44
 OSCL_TCHAR, 34
 OSCL_TEMPLATED_DESTRUCTOR_-
 CALL, 33
 OSCL_TLS_BASE_SLOTS, 33
 OSCL_TLS_EXTERNAL_SLOTS, 33
 OSCL_TLS_ID_BASE_LAST, 45
 OSCL_TLS_ID_ERRORHOOK, 45
 OSCL_TLS_ID_MAGICNUM, 45
 OSCL_TLS_ID_OSCLREGISTRY, 45
 OSCL_TLS_ID_PAYLOADPARSER, 45
 OSCL_TLS_ID_PVERRORTRAP, 45
 OSCL_TLS_ID_PVLOGGER, 45
 OSCL_TLS_ID_PVMFRECOGNIZER, 45
 OSCL_TLS_ID_PVSCHEDULER, 45
 OSCL_TLS_ID_SDPMEDIAPARSER, 45
 OSCL_TLS_ID_SQLITE3, 45
 OSCL_TLS_ID_TEST, 45
 OSCL_TLS_ID_WMDRM, 45
 OSCL_TLS_MAX_SLOTS, 33
 oscl_tolower, 44
 OSCL_UNSIGNED_CONST, 33
 OSCL_UNUSED_ARG, 33
 OSCL_UNUSED_RETURN, 34
 OSCL_VIRTUAL_BASE, 34
 oscl_wchar, 34
 OsclAny, 34
 OsclFloat, 34
 PV8601TIME_BUFFER_SIZE, 45
 PV8601timeStrBuf, 34
 PV8601ToRFC822, 44
 PVMEM_INST_LEVEL, 34
 PVOsclBase_Cleanup, 44
 PVOsclBase_Init, 44
 RFC822ToPV8601, 45
 SECONDS, 35
 TimeUnits, 35
 TOscIITlsKey, 35
 uint, 35
 uint64, 35
 unix_ntp_offset, 45
 USEC_PER_SEC, 45

 OsclBasicDateTimeStruct
 osclconfig_time.h, 837
 OsclBasicTimeStruct
 osclconfig_time.h, 837
 OsclBind
 osclconfig_io.h, 816
 OsclBindMethod, 321
 OsclBindMethod
 ~OsclBindMethod, 321
 Bind, 321
 BindRequest, 321
 NewL, 321
 OsclBindRequest, 322
 OsclBindRequest, 322
 OsclBindRequest
 Bind, 322
 OsclBindRequest, 322
 OsclBinIStream, 323
 OsclBinIStream, 323
 OsclBinIStream
 ~OsclBinIStream, 323
 get, 323
 OsclBinIStream, 323
 Read_uint8, 323
 OsclBinIStreamBigEndian, 325
 OsclBinIStreamBigEndian, 326
 OsclBinIStreamBigEndian
 operator>>, 326
 OsclBinIStreamBigEndian, 326
 Read, 326
 Read_uint16, 326
 Read_uint32, 326
 OsclBinIStreamLittleEndian, 328
 OsclBinIStreamLittleEndian, 329
 OsclBinIStreamLittleEndian
 operator>>, 329
 OsclBinIStreamLittleEndian, 329
 Read_uint16, 329
 Read_uint32, 329
 OsclBinOStream, 330
 OsclBinOStream, 330
 OsclBinOStream
 ~OsclBinOStream, 330
 OsclBinOStream, 330
 write, 330
 OsclBinOStreamBigEndian, 331
 OsclBinOStreamBigEndian, 332
 OsclBinOStreamBigEndian
 operator<<, 332
 OsclBinOStreamBigEndian, 332
 WriteUnsignedLong, 332
 WriteUnsignedShort, 332
 OsclBinOStreamLittleEndian, 333
 OsclBinOStreamLittleEndian, 334

OsclBinOStreamLittleEndian
 operator<<, 334
OsclBinOStreamLittleEndian, 334
 WriteUnsignedLong, 334
 WriteUnsignedShort, 334
OsclBinStream, 335
 EOF_STATE, 336
 FAIL_STATE, 336
 GOOD_STATE, 336
 OsclBinStream, 336
OsclBinStream
 Attach, 336
 eof, 336
 fail, 337
 firstFragPtr, 338
 fragsLeft, 338
 good, 337
 HaveRoomInCurrentBlock, 337
 length, 338
 nextFragPtr, 338
 numFrags, 338
 OsclBinStream, 336
 pBasePosition, 338
 PositionInBlock, 337
 pPosition, 338
 ReserveSpace, 337
 Seek, 337
 seekFromCurrentPosition, 337
 specialFragBuffer, 338
 state, 338
 state_t, 336
 tellg, 337
OsclBuf, 339
 OsclBuf, 340
OsclBuf
 Delete, 340
 Des, 340
 DesC, 340
 iBuffer, 340
 iLength, 340
 iMaxLength, 340
 Length, 340
 NewL, 340
 OsclBuf, 340
OsclCloseSocket
 osclconfig_io.h, 816
OsclCoeActiveScheduler
 OsclExecSchedulerBase, 390
 OsclExecSchedulerCommonBase, 396
 PVThreadContext, 634
OsclCoeActiveSchedulerBase
 PVThreadContext, 634
OsclCompareLess, 341
OsclCompareLess
 compare, 341
OsclComponentFactory
 osclutil, 68
OsclComponentRegistry, 342
 OsclComponentRegistry, 343
OsclComponentRegistry
 ~OsclComponentRegistry, 343
 CloseSession, 343
 FindExact, 343
 FindHierarchical, 343
 iComponentIdCounter, 343
 iData, 343
 iMutex, 343
 iNumSessions, 343
 OpenSession, 343
 OsclComponentRegistry, 343
 Register, 343
 Unregister, 343
OsclComponentRegistryData, 344
OsclComponentRegistryData
 Find, 344
 iVec, 344
OsclComponentRegistryElement, 345
 OsclComponentRegistryElement, 345
OsclComponentRegistryElement
 ~OsclComponentRegistryElement, 345
 iComponentId, 345
 iFactory, 345
 iId, 345
 Match, 345
 operator=, 345
 OsclComponentRegistryElement, 345
osclconfig
 __int16_check__, 24
 __int32_check__, 24
 __int8_check__, 24
 __uint16_check__, 24
 __uint32_check__, 24
 __uint8_check__, 24
 OSCL_ASSERT_ALWAYS, 22
 OSCL_BYTE_ORDER_BIG_ENDIAN,
 22
 OSCL_BYTE_ORDER_LITTLE_-
 ENDIAN, 22
 OSCL_HAS_BERKELEY_SOCKETS, 22
 OSCL_HAS_MSWIN_PARTIAL_-
 SUPPORT, 22
 OSCL_HAS_MSWIN_SUPPORT, 22
 OSCL_HAS_MSWIN_TIME_FUNCS, 22
 OSCL_HAS_PRAGMA_PACK, 22
 OSCL_HAS_PTHREAD_SUPPORT, 22
 OSCL_HAS_PV_C_OS_API_-
 MEMORY_FUNCS, 23
 OSCL_HAS_PV_C_OS_SUPPORT, 23

OSCL_HAS_PV_C_OS_TIME_FUNCS,
 23
 OSCL_HAS_SAVAJE_IO_SUPPORT, 23
 OSCL_HAS_SAVAJE_SUPPORT, 23
 OSCL_HAS_SEM_TIMEDWAIT_-
 SUPPORT, 23
 OSCL_HAS_SYMBIAN_-
 COMPATIBLE_IO_FUNCTION,
 23
 OSCL_HAS_SYMBIAN_DNS_SERVER,
 23
 OSCL_HAS_SYMBIAN_ERRORTRAP,
 23
 OSCL_HAS_SYMBIAN_MATH, 23
 OSCL_HAS_SYMBIAN_MEMORY_-
 FUNCTIONS, 23
 OSCL_HAS_SYMBIAN_SCHEDULER,
 23
 OSCL_HAS_SYMBIAN_SOCKET_-
 SERVER, 23
 OSCL_HAS_SYMBIAN_SUPPORT, 23
 OSCL_HAS_SYMBIAN_TIMERS, 23
 OSCL_HAS_UNIX_SUPPORT, 23
 OSCL_HAS_UNIX_TIME_FUNCS, 23
 OSCL_INTEGERS_WORD_ALIGNED,
 23
 osclconfig.h, 802
 __TFS__, 803
 OSCL_EXPORT_REF, 803
 OSCL_HAS_ANDROID_FILE_IO_-
 SUPPORT, 803
 OSCL_HAS_ANDROID_SUPPORT, 803
 OSCL_HAS_PACKED_STRUCT, 803
 OSCL_IMPORT_REF, 803
 OSCL_NATIVE_UINT64_TYPE, 803
 OSCL_PACKED_STRUCT_BEGIN, 803
 OSCL_PACKED_STRUCT_END, 803
 OSCL_PACKED_VAR, 803
 OSCL_RELEASE_BUILD, 803
 OSCL_TEMPLATED_DESTRUCTOR_-
 CALL, 803
 OSCL_UNSIGNED_CONST, 803
 PVLOGGER_INST_LEVEL, 803
 osclconfig_ansi_memory.h, 804
 OSCL_HAS_ANSI_MEMORY_FUNCS,
 804
 oscl_memsize_t, 804
 osclconfig_check.h, 805
 osclconfig_compiler_warnings.h, 806
 OSCL_FUNCTION_PTR, 806
 osclconfig_error.h, 807
 OSCL_HAS_ERRNO_H, 807
 OSCL_HAS_EXCEPTIONS, 807
 OSCL_HAS_SETJMP_H, 807
 OSCL_HAS_SYMBIAN_ERRORTRAP,
 807
 osclconfig_error_check.h, 808
 osclconfig_global_new_delete.h, 809
 osclconfig_global_placement_new.h, 810
 operator new, 810
 osclconfig_io.h, 811
 __FILE_OFFSET_BITS, 815
 OSCL_AF_INET, 815
 OSCL_FILE_BUFFER_MAX_SIZE, 815
 OSCL_HAS_ANSI_64BIT_FILE_IO_-
 SUPPORT, 815
 OSCL_HAS_ANSI_FILE_IO_SUPPORT,
 815
 OSCL_HAS_BERKELEY_SOCKETS,
 815
 OSCL_HAS_GLOB, 815
 OSCL_HAS_LARGE_FILE_SUPPORT,
 815
 OSCL_HAS_MSWIN_FILE_IO_-
 SUPPORT, 815
 OSCL_HAS_NATIVE_FILE_CACHE_-
 ENABLE, 815
 OSCL_HAS_PV_FILE_CACHE, 815
 OSCL_HAS_SOCKET_SUPPORT, 815
 OSCL_HAS_SYMBIAN_-
 COMPATIBLE_IO_FUNCTION,
 815
 OSCL_HAS_SYMBIAN_DNS_SERVER,
 815
 OSCL_HAS_SYMBIAN_SOCKET_-
 SERVER, 815
 OSCL IPPROTO_IP, 815
 OSCL IPPROTO_TCP, 815
 OSCL IPPROTO_UDP, 815
 OSCL_SD_BOTH, 815
 OSCL_SD_RECEIVE, 815
 OSCL_SD_SEND, 815
 OSCL SOCK_DGRAM, 815
 OSCL SOCK_STREAM, 815
 OSCL SOCKOPT_IP_-
 ADDMEMBERSHIP, 815
 OSCL SOCKOPT_IP_MULTICAST_-
 TTL, 815
 OSCL SOCKOPT_IP_TOS, 815
 OSCL SOCKOPT_SOL_REUSEADDR,
 815
 OSCL SOL_IP, 815
 OSCL SOL_SOCKET, 815
 OSCL SOL_TCP, 815
 OSCL SOL_UDP, 815
 OsclAccept, 815
 OsclBind, 816
 OsclCloseSocket, 816

OsclConnect, 816
 OsclConnectComplete, 816
 OsclGetAsyncSockErr, 816
 OsclGetDottedAddr, 816
 OsclGetDottedAddrVector, 817
 OsclGethostbyname, 817
 OsclGetPeerName, 817
 OsclJoin, 817
 OsclListen, 818
 OsclMakeInAddr, 818
 OsclMakeSockAddr, 818
 OsclPipe, 818
 OsclReadFD, 818
 OsclRecv, 818
 OsclRecvFrom, 818
 OsclSend, 819
 OsclSendTo, 819
 OsclSetNonBlocking, 819
 OsclSetRecvBufferSize, 819
 OsclSetSockOpt, 819
 OsclShutdown, 819
 OsclSocket, 820
 OsclSocketCleanup, 820
 OsclSocketSelect, 820
 OsclSocketStartup, 820
 OsclUnMakeInAddr, 820
 OsclUnMakeSockAddr, 821
 OsclValidInetAddr, 821
 OsclWriteFD, 821
 TIpmReq, 821
 TOsclFileOffset, 821
 TOsclHostent, 821
 TOsclSockAddr, 821
 TOsclSockAddrLen, 821
 TOsclSocket, 821
 osclconfig_io_check.h, 822
 __verify__TOsclFileOffset__defined__,
 822
 osclconfig_ix86.h, 823
 osclconfig_lib.h, 824
 OSCL_HAS_RUNTIME_LIB_-
 LOADING_SUPPORT, 824
 OSCL_LIB_READ_DEBUG_LIBS, 824
 PV_DYNAMIC_LOADING_CONFIG_-
 FILE_PATH, 824
 PV_RUNTIME_LIB_FILENAME_-
 EXTENSION, 824
 osclconfig_lib_check.h, 825
 osclconfig_limits_typedefs.h, 826
 OSCL_CHAR_IS_SIGNED, 826
 OSCL_CHAR_IS_UNSIGNED, 826
 osclconfig_memory.h, 827
 OSCL_BYPASS_MEMMGT, 827
 OSCL_HAS_GLOBAL_NEW_DELETE,
 827
 OSCL_HAS_HEAP_BASE_SUPPORT,
 827
 OSCL_HAS_SYMBIAN_MEMORY_-
 FUNCTIONS, 827
 PVMEM_INST_LEVEL, 827
 osclconfig_memory_check.h, 828
 osclconfig_no_os.h, 829
 osclconfig_proc.h, 830
 osclconfig_proc_check.h, 831
 __verify__TOsclConditionObject__-
 defined__, 831
 __verify__TOsclMutexObject__defined__,
 831
 __verify__TOsclSemaphoreObject__-
 defined__, 831
 __verify__TOsclThreadFuncArg__-
 defined__, 831
 __verify__TOsclThreadFuncRet__-
 defined__, 831
 __verify__TOsclThreadId__defined__, 831
 __verify__TOsclThreadObject__defined__
 , 831
 osclconfig_proc_unix_android.h, 833
 OSCL_HAS_NON_PREEMPTIVE_-
 THREAD_SUPPORT, 834
 OSCL_HAS_PTHREAD_SUPPORT, 834
 OSCL_HAS_SEM_TIMEDWAIT_-
 SUPPORT, 834
 OSCL_HAS_SYMBIAN_SCHEDULER,
 834
 OSCL_HAS_THREAD_SUPPORT, 834
 OSCL_THREAD_DECL, 834
 TOsclConditionObject, 834
 TOsclMutexObject, 834
 TOsclSemaphoreObject, 834
 TOsclThreadFuncArg, 834
 TOsclThreadFuncRet, 834
 TOsclThreadId, 834
 TOsclThreadObject, 834
 osclconfig_proc_unix_common.h, 835
 OSCL_HAS_NON_PREEMPTIVE_-
 THREAD_SUPPORT, 836
 OSCL_HAS_PTHREAD_SUPPORT, 836
 OSCL_HAS_SEM_TIMEDWAIT_-
 SUPPORT, 836
 OSCL_HAS_SYMBIAN_SCHEDULER,
 836
 OSCL_HAS_THREAD_SUPPORT, 836
 OSCL_THREAD_DECL, 836
 TOsclConditionObject, 836
 TOsclMutexObject, 836
 TOsclSemaphoreObject, 836

TOsclThreadFuncArg, 836
 TOsclThreadFuncRet, 836
 TOsclThreadId, 836
 TOsclThreadObject, 836
 osclconfig_time.h, 837
 OSCL_HAS_MSWIN_TIME_FUNCS, 837
 OSCL_HAS_UNIX_TIME_FUNCS, 837
 OsclBasicDateStruct, 837
 OsclBasicTimeStruct, 837
 osclconfig_time_check.h, 838
 __Validate__BasicTimeDateStruct__, 838
 __Validate__BasicTimeStruct__, 838
 osclconfig_unix_android.h, 839
 _STRLIT, 842
 _STRLIT_CHAR, 842
 _STRLIT_WCHAR, 842
 INT64, 842
 INT64_HILO, 842
 OSCL_DISABLE_INLINES, 842
 OSCL_HAS_ANSI_MATH_SUPPORT, 842
 OSCL_HAS_ANSI_STDIO_SUPPORT, 842
 OSCL_HAS_ANSI_STDLIB_SUPPORT, 842
 OSCL_HAS_ANSI_STRING_SUPPORT, 842
 OSCL_HAS_ANSI_WIDE_STRING_SUPPORT, 842
 OSCL_HAS_BASIC_LOCK, 842
 OSCL_HAS_GLOBAL_VARIABLE_SUPPORT, 842
 OSCL_HAS_MSWIN_PARTIAL_SUPPORT, 842
 OSCL_HAS_MSWIN_SUPPORT, 842
 OSCL_HAS_NATIVE_INT64_TYPE, 842
 OSCL_HAS_NATIVE_UINT64_TYPE, 842
 OSCL_HAS_NATIVE_INT64_TYPE, 842
 OSCL_HAS_SYMBIAN_SUPPORT, 842
 OSCL_HAS_TLS_SUPPORT, 842
 OSCL_HAS_UNICODE_SUPPORT, 842
 OSCL_HAS_UNIX_SUPPORT, 842
 OSCL_MEMFRAG_PTR_BEFORE_LEN, 842
 OSCL_NATIVE_INT64_TYPE, 842
 OSCL_NATIVE_UINT64_TYPE, 842
 OSCL_NATIVE_WCHAR_TYPE, 842
 OSCL_TLS_GET_FUNC, 842
 OSCL_TLS_IS_KEYED, 842
 OSCL_TLS_KEY_CREATE_FUNC, 842
 OSCL_TLS_KEY_DELETE_FUNC, 842
 OSCL_TLS_STORE_FUNC, 842
 TOsclBasicLockObject, 842

 TOsclTlsKey, 842
 UINT64, 842
 UINT64_HILO, 842
 osclconfig_unix_common.h, 843
 _STRLIT, 846
 _STRLIT_CHAR, 846
 _STRLIT_WCHAR, 846
 INT64, 846
 INT64_HILO, 846
 OSCL_DISABLE_INLINES, 846
 OSCL_HAS_ANSI_MATH_SUPPORT, 846
 OSCL_HAS_ANSI_STDIO_SUPPORT, 846
 OSCL_HAS_ANSI_STDLIB_SUPPORT, 846
 OSCL_HAS_ANSI_STRING_SUPPORT, 846
 OSCL_HAS_ANSI_WIDE_STRING_SUPPORT, 846
 OSCL_HAS_BASIC_LOCK, 846
 OSCL_HAS_GLOBAL_VARIABLE_SUPPORT, 846
 OSCL_HAS_MSWIN_PARTIAL_SUPPORT, 846
 OSCL_HAS_MSWIN_SUPPORT, 846
 OSCL_HAS_NATIVE_INT64_TYPE, 846
 OSCL_HAS_NATIVE_UINT64_TYPE, 846
 OSCL_HAS_SYMBIAN_SUPPORT, 846
 OSCL_HAS_TLS_SUPPORT, 846
 OSCL_HAS_UNICODE_SUPPORT, 846
 OSCL_HAS_UNIX_SUPPORT, 846
 OSCL_MEMFRAG_PTR_BEFORE_LEN, 846
 OSCL_NATIVE_INT64_TYPE, 846
 OSCL_NATIVE_UINT64_TYPE, 846
 OSCL_NATIVE_WCHAR_TYPE, 846
 OSCL_TLS_GET_FUNC, 846
 OSCL_TLS_IS_KEYED, 846
 OSCL_TLS_KEY_CREATE_FUNC, 846
 OSCL_TLS_KEY_DELETE_FUNC, 846
 OSCL_TLS_STORE_FUNC, 846
 TOsclBasicLockObject, 846
 TOsclTlsKey, 846
 UINT64, 846
 UINT64_HILO, 846
 osclconfig_util.h, 847
 OSCL_CLOCK_HAS_DRIFT_CORRECTION, 847
 OSCL_HAS_SYMBIAN_MATH, 847
 OSCL_HAS_SYMBIAN_TIMERS, 847
 OSCL RAND_MAX, 847
 SLEEP_ONE_SEC, 847

osclconfig_util_check.h, 848
OsclConnect
 osclconfig_io.h, 816
OsclConnectComplete
 osclconfig_io.h, 816
OsclConnectMethod, 347
OsclConnectMethod
 ~OsclConnectMethod, 347
 Connect, 347
 ConnectRequest, 347
 NewL, 347
OsclConnectRequest, 348
 OsclConnectRequest, 348
 OsclSocketI, 538
OsclConnectRequest
 Connect, 348
 OsclConnectRequest, 348
OsclDestructDealloc, 349
OsclDestructDealloc
 ~OsclDestructDealloc, 349
 destruct_and_dealloc, 349
OsclDNS, 350
 OsclSocketServ, 554
OsclDNS
 ~OsclDNS, 350
 CancelGetHostByName, 350
 GetHostByName, 351
 NewL, 351
 OsclDNSRequestAO, 351
OsclDNSI, 352
 OsclDNSRequestAO, 364
 OsclSocketServI, 556
OsclDNSI
 ~OsclDNSI, 352
 Close, 352
 DNSRequestParam, 353
 GetHostByName, 352
 GetHostByNameResponseContainsAlias-
 Info, 353
 GetHostByNameSuccess, 353
 GetNextHost, 353
 GetNextHostSuccess, 353
 NewL, 353
 Open, 353
 OsclDNSRequest, 353
 OsclGetHostByNameRequest, 353
OsclDNSIBase, 354
 OsclDNSIBase, 355
OsclDNSIBase
 ~OsclDNSIBase, 355
 CancelFxn, 355
 CancelGetHostByName, 355
 Close, 355
 GetHostByName, 355
 GetHostByNameResponseContainsAlias-
 Info, 355
 GetHostByNameSuccess, 355
 GetNextHost, 355
 GetNextHostSuccess, 355
 iAlloc, 356
 iSocketServ, 356
 IsReady, 355
 Open, 355
 OsclDNSIBase, 355
 OsclDNSRequest, 356
 OsclGetHostByNameRequest, 356
OsclDNSMethod, 357
 OsclDNSMethod, 358
 OsclDNSRequestAO, 364
OsclDNSMethod
 Abort, 358
 AbortAll, 358
 CancelMethod, 358
 ConstructL, 358
 iAlloc, 359
 iDNSFxn, 359
 iDNSObserver, 359
 iDNSRequestAO, 359
 iId, 359
 iLogger, 359
 MethodDone, 358
 OsclDNSMethod, 358
 Run, 358
 StartMethod, 358
OsclDNSObserver, 360
OsclDNSObserver
 ~OsclDNSObserver, 360
 HandleDNSEvent, 360
OsclDNSRequest, 361
 OsclDNSI, 353
 OsclDNSIBase, 356
 OsclDNSRequest, 361
 OsclDNSRequestAO, 364
OsclDNSRequest
 ~OsclDNSRequest, 361
 Activate, 361
 CancelRequest, 361
 Complete, 361
 iActive, 361
 iDNSRequestAO, 361
 iDNSRequestParam, 361
 OsclDNSRequest, 361
OsclDNSRequestAO, 362
 OsclDNS, 351
 OsclDNSRequestAO, 363
OsclDNSRequestAO
 Abort, 363
 Cancelled, 363

ConstructL, 363
 DoCancel, 363
 Failure, 363
 GetHostByNameParam, 364
 GetSocketError, 363
 iDNSI, 364
 iDNSMethod, 364
 iLogger, 364
 iSocketError, 364
 NewRequest, 363
 OsclDNSI, 364
 OsclDNSMethod, 364
 OsclDNSRequest, 364
 OsclDNSRequestAO, 363
 RequestDone, 363
 Run, 363
 Serv, 364
 Success, 364
 OsclDoubleLink, 365
 OsclDoubleLink, 365
 OsclDoubleLink
 iNext, 365
 InsertAfter, 365
 InsertBefore, 365
 iPrev, 365
 OsclDoubleLink, 365
 Remove, 365
 OsclDoubleList, 366
 OsclDoubleList, 366
 OsclDoubleList
 Head, 366
 InsertHead, 366
 InsertTail, 366
 IsHead, 366
 IsTail, 366
 OsclDoubleList, 366
 Tail, 366
 OsclDoubleListBase, 367
 OsclDoubleListBase, 368
 OsclDoubleListBase
 getHead, 368
 getOffset, 368
 iHead, 368
 Insert, 368
 InsertHead, 368
 InsertTail, 368
 iOffset, 368
 IsEmpty, 368
 OsclDoubleListBase, 368
 Reset, 368
 SetOffset, 368
 OsclDoubleRunner, 369
 OsclDoubleRunner, 369
 OsclDoubleRunner
 iHead, 369
 iNext, 369
 iOffset, 369
 operator T *, 369
 operator++, 369
 operator-, 369
 OsclDoubleRunner, 369
 Set, 369
 SetToHead, 369
 SetToTail, 369
 OsclErrAlreadyExists
 osclerror, 91
 OsclErrAlreadyInstalled
 osclerror, 91
 OsclErrArgument
 osclerror, 91
 OsclErrBadHandle
 osclerror, 91
 OsclErrBusy
 osclerror, 91
 OsclErrCancelled
 osclerror, 91
 OsclErrCorrupt
 osclerror, 91
 OsclErrGeneral
 osclerror, 91
 OsclErrInvalidState
 osclerror, 91
 OsclErrNoHandler
 osclerror, 91
 OsclErrNoMemory
 osclerror, 91
 OsclErrNone
 osclerror, 91
 OsclErrNoResources
 osclerror, 91
 OsclErrNotInstalled
 osclerror, 91
 OsclErrNotReady
 osclerror, 91
 OsclErrNotSupported
 osclerror, 91
 OsclError, 371
 OsclErrorTrapImp, 377
 OsclExecSchedulerCommonBase, 396
 OsclTrapStack, 598
 OsclError
 Leave, 371
 LeaveIfError, 371
 LeaveIfNull, 371
 Pop, 371
 PopDealloc, 371, 372
 PushL, 372
 osclerror

_PV_TRAP, 87
 _PV_TRAP_NO_TLS, 87
 internalLeave, 87
 OSCL_BAD_ALLOC_EXCEPTION_CODE, 87
 OSCL_CATCH, 87
 OSCL_CATCH_ANY, 87
 OSCL_ERR_NONE, 88
 OSCL_FIRST_CATCH, 88
 OSCL_FIRST_CATCH_ANY, 88
 OSCL_GetLastError, 92
 OSCL_IsErrnoSupported, 92
 OSCL_JUMP_MAX_JUMP_MARKS, 88
 OSCL_LAST_CATCH, 88
 OSCL_LEAVE, 88
 OSCL_MAX_TRAP_LEVELS, 89
 OSCL_SetLastError, 92
 OSCL_StrError, 92
 OSCL_TRAPSTACK_POP, 89
 OSCL_TRAPSTACK_POPDEALLOC, 89
 OSCL_TRAPSTACK_PUSH, 89
 OSCL_TRY, 89
 OSCL_TRY_NO_TLS, 89
 OsclErrAlreadyExists, 91
 OsclErrAlreadyInstalled, 91
 OsclErrArgument, 91
 OsclErrBadHandle, 91
 OsclErrBusy, 91
 OsclErrCancelled, 91
 OsclErrCorrupt, 91
 OsclErrGeneral, 91
 OsclErrInvalidState, 91
 OsclErrNoHandler, 91
 OsclErrNoMemory, 91
 OsclErrNone, 91
 OsclErrNoResources, 91
 OsclErrNotInstalled, 91
 OsclErrNotReady, 91
 OsclErrNotSupported, 91
 OsclErrOverflow, 91
 OsclErrSystemCallFailed, 91
 OsclErrThreadContextIncorrect, 91
 OsclErrTimeout, 91
 OsclErrUnderflow, 91
 OsclFailure, 91
 OsclLeaveCode, 92
 OsclPending, 91
 OsclReturnCode, 92
 OsclSuccess, 91
 OsclTrapOperation, 92
 PVERROR_IMP_JUMPS, 91
 PVERRORTRAP_REGISTRY, 91
 PVERRORTRAP_REGISTRY_ID, 92
 OsclErrorAllocator, 373
 OsclErrorAllocator, 373
 OsclErrorAllocator
 allocate, 373
 deallocate, 373
 operator delete, 374
 operator new, 374
 OsclErrorAllocator, 373
 OsclErrorTrap, 375
 OsclErrorTrapImp, 377
 OsclTrapStack, 598
 OsclErrorTrap
 Cleanup, 375
 GetErrorTrapImp, 375
 Init, 375
 OsclErrorTrapImp, 376
 OsclJump, 420
 OsclTrapStack, 598
 OsclErrorTrapImp
 CPVInterfaceProxy, 377
 iJumpData, 377
 iLeave, 377
 iTrapStack, 377
 OsclError, 377
 OsclErrorTrap, 377
 OsclExecScheduler, 377
 OsclExecSchedulerCommonBase, 377
 OsclJump, 377
 OsclJumpMark, 377
 OsclScheduler, 377
 OsclTrapStack, 377
 Trap, 376
 TrapNoTls, 376
 UnTrap, 376
 OsclErrOverflow
 osclerror, 91
 OsclErrSystemCallFailed
 osclerror, 91
 OsclErrThreadContextIncorrect
 osclerror, 91
 OsclErrTimeout
 osclerror, 91
 OsclErrUnderflow
 osclerror, 91
 OsclException, 378
 OsclException, 378
 OsclException
 getLeaveCode, 378
 OsclException, 378
 OsclExclusiveArrayPtr, 379
 OsclExclusiveArrayPtr, 380
 OsclExclusiveArrayPtr
 ~OsclExclusiveArrayPtr, 380
 _Ptr, 381

get, 380
 operator *, 380
 operator->, 380
 operator=, 380
 OsclExclusiveArrayPtr, 380
 release, 381
 set, 381
OsclExclusivePtr, 382
 OsclExclusivePtr, 383
OsclExclusivePtr
 ~OsclExclusivePtr, 383
 _Ptr, 384
 get, 383
 operator *, 383
 operator->, 383
 operator=, 383
 OsclExclusivePtr, 383
 release, 384
 set, 384
OsclExclusivePtrA, 385
 OsclExclusivePtrA, 386
OsclExclusivePtrA
 ~OsclExclusivePtrA, 386
 _Ptr, 387
 get, 386
 operator *, 386
 operator->, 386
 operator=, 386
 OsclExclusivePtrA, 386
 release, 387
 set, 387
OsclExecScheduler, 388
 OsclErrorTrapImp, 377
 OsclExecSchedulerBase, 390
 OsclExecSchedulerCommonBase, 396
 PVActiveBase, 614
 PVActiveStats, 615
 PVThreadContext, 634
OsclExecScheduler
 Current, 388
 OsclScheduler, 389
 RegisterForCallback, 388
 RunSchedulerNonBlocking, 388
OsclExecSchedulerBase, 390
 PVThreadContext, 634
OsclExecSchedulerBase
 OsclCoeActiveScheduler, 390
 OsclExecScheduler, 390
 PVActiveBase, 390
OsclExecSchedulerCommonBase, 391
 EOtherExecStats_Last, 393
 EOtherExecStats_NativeOS, 393
 EOtherExecStats_QueueTime, 393
 EOtherExecStats_ReleaseTime, 393
 EOtherExecStats_WaitTime, 393
 OsclErrorTrapImp, 377
 OsclExecSchedulerCommonBase, 394
 PVActiveStats, 615
 PVThreadContext, 634
 OsclExecSchedulerCommonBase
 ~OsclExecSchedulerCommonBase, 394
 AddToExecTimerQ, 394
 BeginScheduling, 394
 BeginStats, 394
 BlockingLoopL, 394
 CallRunExec, 394
 CleanupExecQ, 394
 CleanupStatQ, 394
 ConstructL, 394
 ConstructStatQ, 394
 EndScheduling, 394
 EndStats, 394
 Error, 394
 FindPVBase, 394
 GetId, 394
 GetName, 394
 GetScheduler, 394
 iAlloc, 398
 iBlockingMode, 398
 iDebugLogger, 398
 iDefAlloc, 398
 iDelta, 398
 iDoStop, 398
 iDoSuspend, 398
 iErrorTrapImp, 398
 iExecTimerQ, 398
 iGrandTotalTicks, 398
 iLogger, 398
 iLogPerfIndentStr, 398
 iLogPerfIndentStrLen, 398
 iLogPerfTotal, 398
 iName, 398
 iNativeMode, 398
 IncLogPerf, 395
 InitExecQ, 395
 InstallScheduler, 395
 iNumAOAdded, 398
 iOtherExecStats, 398
 iPVStatQ, 398
 iPVStats, 398
 iReadyQ, 398
 iResumeSem, 398
 IsInstalled, 395
 IsStarted, 395
 iStopper, 398
 iStopperCrit, 398
 iSuspended, 398
 iThreadContext, 398

iTime, 398
 iTimeCompareThreshold, 398
 iTotalsPercent, 398
 iTotalsTicksTemp, 398
 OsclActiveObject, 396
 OsclCoeActiveScheduler, 396
 OsclError, 396
 OsclExecScheduler, 396
 OsclExecSchedulerCommonBase, 394
 OsclReadyQ, 396
 OsclScheduler, 396
 OsclTimerCompare, 396
 OsclTimerObject, 398
 PendComplete, 395
 PVActiveBase, 398
 PVActiveStats, 398
 PVSchedulerStopper, 398
 PVThreadContext, 398
 RequestCanceled, 395
 ResetLogPerf, 395
 ResumeScheduler, 395
 SetScheduler, 395
 ShowStats, 395
 ShowSummaryStats, 395
 StartNativeScheduler, 395
 StartScheduler, 395
 StopScheduler, 395
 SuspendScheduler, 396
 TOtherExecStats, 393
 UninstallScheduler, 396
 UpdateTimers, 396
 UpdateTimersMsec, 396
 WaitForReadyAO, 396
 OsclExtractFilenameFromFullPath
 OsclFileManager, 406
 OsclFailure
 osclerror, 91
 OsclFileCache, 400
 Oscl_File, 185
 OsclFileCache, 401
 OsclFileCache
 ~OsclFileCache, 401
 _fixedCaches, 401
 _movableCache, 401
 AddFixedCache, 401
 Close, 401
 EndOfFile, 401
 FileSize, 401
 Flush, 401
 Open, 401
 OsclFileCache, 401
 OsclFileCacheBuffer, 401
 Read, 401
 Seek, 401
 Tell, 401
 Write, 401
 OsclFileCacheBuffer, 402
 Oscl_File, 185
 OsclFileCache, 401
 OsclFileCacheBuffer, 403
 OsclFileCacheBuffer
 capacity, 403
 Contains, 403
 currentPos, 403
 endPos, 403
 filePosition, 403
 FillFromFile, 403
 iContainer, 403
 isFixed, 403
 IsUpdated, 403
 OsclFileCacheBuffer, 403
 pBuffer, 403
 Preceeds, 403
 PrepRead, 403
 PrepWrite, 403
 SetPosition, 403
 updateEnd, 403
 updateStart, 403
 usableSize, 403
 WriteUpdatesToFile, 403
 OsclFileHandle, 404
 OsclFileHandle, 404
 OsclFileHandle
 Handle, 404
 Oscl_File, 404
 OsclFileHandle, 404
 OsclFileManager, 405
 OSCL_FILE_ATTRIBUTE_ARCHIVE,
 405
 OSCL_FILE_ATTRIBUTE_-
 DIRECTORY, 405
 OSCL_FILE_ATTRIBUTE_HIDDEN, 405
 OSCL_FILE_ATTRIBUTE_NORMAL,
 405
 OSCL_FILE_ATTRIBUTE_READONLY,
 405
 OSCL_FILE_ATTRIBUTE_SYSTEM,
 405
 OsclFileManager
 OSCL_FILE_ATTRIBUTE_TYPE, 405
 OsclExtractFilenameFromFullPath, 406
 OsclGetFileAttributes, 406
 OsclGetFileCreationTime, 406, 407
 OsclGetFileLastAccessTime, 407
 OsclGetFileLastWriteTime, 408
 OsclGetFileSize, 408
 OsclFileStats, 410
 OsclFileStats, 410

OsclFileStats
 End, 410
 Log, 410
 LogAll, 410
 OsclFileStats, 410
 Start, 410
 OsclFileStatsItem, 411
 OsclFileStatsItem
 iOpCount, 411
 iParam, 411
 iParam2, 411
 iStartTick, 411
 iTTotalTicks, 411
 OsclFloat
 osclbase, 34
 OsclGetAsyncSockErr
 osclconfig_io.h, 816
 OsclGetDottedAddr
 osclconfig_io.h, 816
 OsclGetDottedAddrVector
 osclconfig_io.h, 817
 OsclGetFileAttributes
 OsclFileManager, 406
 OsclGetFileCreationTime
 OsclFileManager, 406, 407
 OsclGetFileLastAccessTime
 OsclFileManager, 407
 OsclGetFileLastWriteTime
 OsclFileManager, 408
 OsclGetFileSize
 OsclFileManager, 408
 OsclGethostbyname
 osclconfig_io.h, 817
 OsclGetHostByNameMethod, 412
 OsclGetHostByNameRequest, 413
 OsclGetHostByNameMethod
 ~OsclGetHostByNameMethod, 412
 GetHostName, 412
 NewL, 412
 OsclGetHostByNameRequest, 413
 OsclIDNSI, 353
 OsclIDNSIBase, 356
 OsclGetHostByNameRequest
 OsclGetHostByNameMethod, 413
 OsclGetPeerName
 osclconfig_io.h, 817
 OsclInit, 414
 OsclInit
 Cleanup, 414
 Init, 414
 OsclInteger64Transport, 415
 OsclInteger64Transport
 iHigh, 415
 iLow, 415
 osclio
 EOsclFileOp_Close, 97
 EOsclFileOp_EndOfFile, 97
 EOsclFileOp_Flush, 97
 EOsclFileOp_Last, 98
 EOsclFileOp_NativeClose, 97
 EOsclFileOp_NativeEndOfFile, 98
 EOsclFileOp_NativeFlush, 98
 EOsclFileOp_NativeOpen, 97
 EOsclFileOp_NativeRead, 97
 EOsclFileOp_NativeSeek, 98
 EOsclFileOp_NativeSetSize, 98
 EOsclFileOp_NativeSize, 98
 EOsclFileOp_NativeTell, 98
 EOsclFileOp_NativeWrite, 98
 EOsclFileOp_Open, 97
 EOsclFileOp_Read, 97
 EOsclFileOp_Seek, 97
 EOsclFileOp_SetSize, 97
 EOsclFileOp_Size, 97
 EOsclFileOp_Tell, 97
 EOsclFileOp_Write, 97
 EPVDNSCancel, 98
 EPVDNSFailure, 98
 EPVDNSGetHostByName, 98
 EPVDNSPending, 98
 EPVDNSSuccess, 98
 EPVDNSTimeout, 98
 oscl_chdir, 98
 OSCL_FILE_CHAR_PATH_-
 DELIMITER, 96
 OSCL_FILE_STATS_LOGGER_NODE,
 96
 OSCL_FILE_WCHAR_PATH_-
 DELIMITER, 96
 OSCL_FILEMGMT_E_ALREADY_-
 EXISTS, 97
 OSCL_FILEMGMT_E_NO_MATCH, 97
 OSCL_FILEMGMT_E_NOT_EMPTY, 97
 OSCL_FILEMGMT_E_NOT_-
 IMPLEMENTED, 97
 OSCL_FILEMGMT_E_OK, 97
 OSCL_FILEMGMT_E_PATH_NOT_-
 FOUND, 97
 OSCL_FILEMGMT_E_PATH_TOO_-
 LONG, 97
 OSCL_FILEMGMT_E_PERMISSION_-
 DENIED, 97
 OSCL_FILEMGMT_E_SYS_SPECIFIC,
 97
 OSCL_FILEMGMT_E_UNKNOWN, 97
 OSCL_FILEMGMT_ERR_TYPE, 97
 OSCL_FILEMGMT_MODE_DIR, 97
 OSCL_FILEMGMT_MODES, 97

OSCL_FILEMGMT_PERMS, 97
 OSCL_FILEMGMT_PERMS_EXECUTE, 97
 OSCL_FILEMGMT_PERMS_READ, 97
 OSCL_FILEMGMT_PERMS_WRITE, 97
 OSCL_FSSTAT, 96
 oscl_getcwd, 98, 99
 OSCL_IO_EXTENSION_MAXLEN, 96
 OSCL_IO_FILENAME_MAXLEN, 96
 oscl_mkdir, 99
 oscl_rename, 99, 100
 oscl_rmdir, 100
 oscl_stat, 100, 101
 OSCL_STAT_BUF, 96
 oscl_statfs, 101
 TOsclFileHandle, 96
 TOsclFileOffsetInt32, 96
 TOsclFileOp, 97
 TPVDNSEvent, 98
 TPVDNSFxn, 98
 OsclIpMReq, 416
 OsclIpMReq, 416
 OsclIpMReq
 interfaceAddr, 416
 multicastAddr, 416
 OsclIpMReq, 416
 OsclIPSocketI, 417
 OsclIPSocketI, 418
 OsclIPSocketI
 ~OsclIPSocketI, 418
 Alloc, 418
 Bind, 418
 Close, 418
 ConstructL, 418
 GetPeerName, 418
 GetRecvData, 418
 GetSendData, 418
 iAddress, 419
 iAlloc, 419
 iId, 419
 iLogger, 419
 iObserver, 419
 iSocket, 419
 iSocketServ, 419
 Join, 418
 OsclIPSocketI, 418
 OsclSocketMethod, 419
 OsclSocketRequestAO, 419
 SetOptionToReuseAddress, 418
 SetRecvBufferSize, 418
 SetTOS, 418
 SocketServ, 418
 ThreadLogoff, 418
 ThreadLogon, 418
 OsclJoin
 osclconfig_io.h, 817
 OsclJump, 420
 OsclErrorTrapImp, 377
 OsclJump
 ~OsclJump, 420
 Jump, 420
 OsclErrorTrapImp, 420
 StaticJump, 420
 Top, 420
 OsclJumpMark
 OsclErrorTrapImp, 377
 OsclLeaveCode
 osclerror, 92
 OsclListen
 osclconfig_io.h, 818
 OsclListenMethod, 421
 OsclListenMethod
 ~OsclListenMethod, 421
 Listen, 421
 ListenRequest, 421
 NewL, 421
 OsclListenRequest, 422
 OsclListenRequest, 422
 OsclListenRequest
 Listen, 422
 OsclListenRequest, 422
 OsclLockBase, 423
 OsclLockBase
 ~OsclLockBase, 423
 Lock, 423
 Unlock, 423
 OsclMakeInAddr
 osclconfig_io.h, 818
 OsclMakeSockAddr
 osclconfig_io.h, 818
 OsclMem, 424
 OsclMemGlobalAuditObject, 440
 OsclMem
 Cleanup, 424
 Init, 424
 OsclMemAllocator, 425
 OsclMemAllocator
 allocate, 425
 allocate_fl, 425
 deallocate, 425
 OsclMemAllocDestructDealloc, 426
 OsclMemAllocDestructDealloc
 allocate, 426
 allocate_fl, 426
 deallocate, 426
 destruct_and_dealloc, 426
 OsclMemAudit, 428
 OsclMemAudit, 428

OsclMemAudit
 ~OsclMemAudit, 428
 GetLock, 429
 MM_AddTag, 429
 MM_allocate, 429
 MM_CreateAllocNodeInfo, 429
 MM_deallocate, 429
 MM_GetAllocNo, 429
 MM_GetAllocNodeInfo, 429
 MM_GetExistingTag, 430
 MM_GetMode, 430
 MM_GetNumAllocNodes, 430
 MM_GetOverheadStats, 430
 MM_GetPostfillPattern, 430
 MM_GetPrefillPattern, 430
 MM_GetRefCount, 430
 MM_GetRootNode, 431
 MM_GetStats, 431
 MM_GetStatsInDepth, 431
 MM_GetTagName, 431
 MM_GetTreeNodes, 431
 MM_ReleaseAllocNodeInfo, 431
 MM_SetFailurePoint, 431
 MM_SetMode, 432
 MM_SetPostfillPattern, 432
 MM_SetPrefillPattern, 432
 MM_SetTagLevel, 432
 MM_UnsetFailurePoint, 432
 MM_Validate, 432
 OsclMemAudit, 428
 OsclMemGlobalAuditObject, 433
OSCLMemAutoPtr, 434
 OSCLMemAutoPtr, 435
OSCLMemAutoPtr
 ~OSCLMemAutoPtr, 435
 _Ownership, 437
 allocate, 436
 deallocate, 436
 get, 436
 operator *, 436
 operator->, 436
 operator=, 436
 OSCLMemAutoPtr, 435
 release, 436
 setWithoutOwnership, 436
 takeOwnership, 437
OsclMemBasicAllocator, 438
OsclMemBasicAllocator
 allocate, 438
 deallocate, 438
OsclMemBasicAllocDestructDealloc, 439
OsclMemBasicAllocDestructDealloc
 allocate, 439
 deallocate, 439
 destruct_and_dealloc, 439
OsclMemGlobalAuditObject, 440
 OsclMemAudit, 433
OsclMemGlobalAuditObject
 audit_type, 440
 getGlobalMemAuditObject, 440
 OsclMem, 440
OsclMemInit
 osclmemory, 61
osclmemory
 _OSCL_CLEANUP_BASE_CLASS, 49
 _OSCL_TRAP_NEW, 49
 _oscl_audit_calloc, 58
 _oscl_audit_free, 58
 _oscl_audit_malloc, 58
 _oscl_audit_new, 58
 _oscl_audit_realloc, 59
 _oscl_calloc, 59
 _oscl_default_audit_calloc, 59
 _oscl_default_audit_malloc, 59
 _oscl_default_audit_new, 59
 _oscl_default_audit_realloc, 59
 _oscl_free, 59
 _oscl_malloc, 59
 _oscl_realloc, 59
 ALLOC_NODE_FLAG, 61
 COMPUTE_MEM_ALIGN_SIZE, 50
 DEFAULT_MM_AUDIT_MODE, 51
 DEFAULT_POSTFILL_PATTERN, 51
 DEFAULT_PREFILL_PATTERN, 51
 FENCE_PATTERN, 51
 MEM_ALIGN_SIZE, 51
 MIN_FENCE_SIZE, 51
 MM_ALLOC_MAX_QUERY_-
 FILENAME_LEN, 51
 MM_ALLOC_MAX_QUERY_TAG_LEN,
 51
 MM_AllocNodeAutoPtr, 58
 MM_AUDIT_ALLOC_NODE_-
 ENABLE_FLAG, 51
 MM_AUDIT_ALLOC_NODE_-
 SUPPORT, 51
 MM_AUDIT_FAILURE_SIMULATION_-
 SUPPORT, 51
 MM_AUDIT_FENCE_SUPPORT, 51
 MM_AUDIT_FILL_SUPPORT, 51
 MM_AUDIT_INCLUDE_ALL_HEAP_-
 VALIDATION, 51
 MM_AUDIT_POSTFILL_FLAG, 51
 MM_AUDIT_PREFILL_FLAG, 51
 MM_AUDIT_SUPPRESS_FILENAME_-
 FLAG, 51
 MM_AUDIT_VALIDATE_ALL_HEAP_-
 FLAG, 51

MM_AUDIT_VALIDATE_BLOCK, 51
 MM_AUDIT_VALIDATE_ON_FREE_-
 FLAG, 51
 MM_StatsNodeTagTreeType, 58
 MMAuditCharAutoPtr, 58
 MMAuditUint8AutoPtr, 58
 operator delete, 59
 operator delete[], 59
 operator new, 59
 operator new[], 59
 OSCL_ALLOC_DELETE, 51
 OSCL_ALLOC_NEW, 52
 OSCL_ARRAY_DELETE, 52
 OSCL_ARRAY_NEW, 52
 OSCL_AUDIT_ARRAY_NEW, 52
 OSCL_AUDIT_CALLOC, 53
 OSCL_AUDIT_MALLOC, 53
 OSCL_AUDIT_NEW, 53
 OSCL_AUDIT_REALLOC, 54
 OSCL_CALLOC, 54
 oscl_calloc, 54
 OSCL_CLEANUP_BASE_CLASS, 54
 OSCL_DEFAULT_FREE, 55
 OSCL_DEFAULT_MALLOC, 55
 OSCL_DELETE, 55
 OSCL_DISABLE_WARNING_-
 RETURN_TYPE_NOT_UDT, 55
 OSCL_DISABLE_WARNING_-
 TRUNCATE_DEBUG_MESSAGE,
 55
 OSCL_FREE, 55
 oscl_free, 55
 OSCL_HAS_GLOBAL_NEW_DELETE,
 55
 OSCL_MALLOC, 56
 oscl_malloc, 56
 oscl_mem_aligned_size, 59
 oscl_memcmp, 60
 oscl_memcpy, 60
 oscl_memmove, 60
 oscl_memmove32, 60
 oscl_memset, 61
 OSCL_NEW, 56
 OSCL_PLACEMENT_NEW, 56
 OSCL_REALLOC, 56
 oscl_realloc, 56
 OSCL_TRAP_ALLOC_NEW, 56
 OSCL_TRAP_AUDIT_NEW, 57
 OSCL_TRAP_NEW, 57
 OsclMemInit, 61
 OsclMemStatsNodeAutoPtr, 58
 OsclTagTreeType, 58
 TagTree_Allocator, 58
 OsclMemoryFragment, 441
 OsclMemoryFragment
 len, 441
 ptr, 441
 OsclMemPoolFixedChunkAllocator, 442
 OsclMemPoolFixedChunkAllocator, 443
 OsclMemPoolFixedChunkAllocator
 ~OsclMemPoolFixedChunkAllocator, 443
 addRef, 443
 allocate, 443
 CancelFreeChunkAvailableCallback, 443
 createmempool, 443
 deallocate, 444
 destroymempool, 444
 enablenullpointerreturn, 444
 iCheckNextAvailableFreeChunk, 445
 iChunkAlignment, 445
 iChunkSize, 445
 iChunkSizeMemAligned, 445
 iEnableNullPtrReturn, 445
 iFreeMemChunkList, 445
 iMemPool, 445
 iMemPoolAligned, 445
 iMemPoolAllocator, 445
 iNextAvailableContextData, 445
 iNumChunk, 445
 iObserver, 445
 iRefCount, 445
 notifyfreechunkavailable, 444
 OsclMemPoolFixedChunkAllocator, 443
 removeRef, 444
 OsclMemPoolFixedChunkAllocatorObserver,
 446
 OsclMemPoolFixedChunkAllocatorObserver
 ~OsclMemPoolFixedChunkAllocatorObserver,
 446
 freechunkavailable, 446
 OsclMemPoolResizableAllocator, 447
 OsclMemPoolResizableAllocator, 448
 OsclMemPoolResizableAllocator
 ~OsclMemPoolResizableAllocator, 448
 addnewmempoolbuffer, 448
 addRef, 448
 allocate, 449
 allocateblock, 449
 CancelFreeChunkAvailableCallback, 449
 CancelFreeMemoryAvailableCallback, 449
 deallocate, 449
 deallocateblock, 449
 destroyallmempoolbuffers, 449
 enablenullpointerreturn, 449
 findfreeblock, 450
 getAllocatedSize, 450
 getAvailableSize, 450
 getBufferSize, 450

getLargestContiguousFreeBlockSize, 450
 getMemPoolBufferAllocatedSize, 450
 getMemPoolBufferSize, 450
 iBlockInfoAlignedSize, 452
 iBufferInfoAlignedSize, 452
 iCheckFreeMemoryAvailable, 452
 iCheckNextAvailable, 452
 iEnableNullPtrReturn, 452
 iExpectedNumBlocksPerBuffer, 452
 iFreeMemContextData, 452
 iFreeMemPoolObserver, 452
 iMaxNewMemPoolBufferSz, 452
 iMemPoolBufferAllocator, 452
 iMemPoolBufferList, 452
 iMemPoolBufferNumLimit, 452
 iMemPoolBufferSize, 452
 iNextAvailableContextData, 452
 iObserver, 452
 iRefCount, 452
 iRequestedAvailableFreeMemSize, 452
 iRequestedNextAvailableSize, 452
 memoryPoolBufferMgmtOverhead, 450
 notifyfreeblockavailable, 450
 notifyfreememoryavailable, 450
 OsclMemPoolResizableAllocator, 448
 removeRef, 451
 setMaxSzForNewMemPoolBuffer, 451
 trim, 451
 validateblock, 451
 OsclMemPoolResizableAllocator::MemPoolBlockInfo, 453
 OsclMemPoolResizableAllocator::MemPoolBlockInfo
 iBlockBuffer, 453
 iBlockPostFence, 453
 iBlockPreFence, 453
 iBlockSize, 453
 iNextFreeBlock, 453
 iParentBuffer, 453
 iPrevFreeBlock, 453
 OsclMemPoolResizableAllocator::MemPoolBufferInfo, 454
 OsclMemPoolResizableAllocator::MemPoolBufferInfo
 iAllocatedSz, 454
 iBufferPostFence, 454
 iBufferPreFence, 454
 iBufferSize, 454
 iEndAddr, 454
 iNextFreeBlock, 454
 iNumOutstanding, 454
 iStartAddr, 454
 OsclMemPoolResizableAllocatorMemoryObserver, 455
 OsclMemPoolResizableAllocatorMemoryObserver
 ~OsclMemPoolResizableAllocatorMemoryObserver
 Close, 455
 EndOfFile, 455
 Flush, 455
 GetError, 455
 GetReadAsyncNumElements, 455
 HasAsyncRead, 455
 Mode, 455
 Open, 455
 OsclNativeFile, 455

Read, 462
 ReadAsync, 462
 ReadAsyncCancel, 462
 Seek, 463
 SetSize, 463
 Size, 463
 Tell, 463
 Write, 463
OsclNativeFileParams, 464
 OsclNativeFileParams, 464
OsclNativeFileParams
 iAsyncReadBufferSize, 464
 iNativeAccessMode, 464
 iNativeBufferSize, 464
 OsclNativeFileParams, 464
OsclNetworkAddress, 465
 OsclNetworkAddress, 465
OsclNetworkAddress
 ipAddr, 465
 operator==, 465
 OsclNetworkAddress, 465
 port, 465
OsclNoYieldMutex
 oscl_mutex.h, 723
OsclNullLock, 466
OsclNullLock
 ~OsclNullLock, 466
 Lock, 466
 Unlock, 466
OsclPending
 osclerror, 91
OsclPipe
 osclconfig_io.h, 818
OsclPriorityLink, 467
OsclPriorityLink
 iPriority, 467
OsclPriorityList, 468
 OsclPriorityList, 468
OsclPriorityList
 Head, 468
 Insert, 468
 IsHead, 468
 IsTail, 468
 OsclPriorityList, 468
 Tail, 468
OsclPriorityQueue, 469
 OsclPriorityQueue, 470
OsclPriorityQueue
 ~OsclPriorityQueue, 470
 c, 472
 comp, 472
 compare_EQ, 470
 compare_LT, 470
 const_reference, 470
 container_type, 470
 empty, 471
 find_heap, 471
 iterator, 470
 oscl_pqueue_test, 472
 OsclPriorityQueue, 470
 pop, 471
 pop_heap, 471
 push, 471
 push_heap, 471
 remove, 471
 reserve, 471
 size, 471
 swap, 471
 top, 471
 validate, 472
 value_type, 470
 vec, 472
OsclPriorityQueueBase, 473
 Oscl_Vector_Base, 292
OsclPriorityQueueBase
 ~OsclPriorityQueueBase, 473
 construct, 473
 find_heap, 473
 pop_heap, 473
 push_heap, 473
 remove, 473
osclproc
 EPVThreadContext_InThread, 105
 EPVThreadContext_NonOsclThread, 105
 EPVThreadContext_OsclThread, 105
 EPVThreadContext_Undetermined, 105
 OSCL_PERF_SUMMARY_LOGGING, 104
 OSCL_REQUEST_ERR_CANCEL, 105
 OSCL_REQUEST_ERR_GENERAL, 105
 OSCL_REQUEST_ERR_NONE, 105
 OSCL_REQUEST_PENDING, 105
 OSCL_ZEROIZE, 104
 OsclPtrAdd, 105
 OsclPtrSub, 105
 PV_SCHED_CHECK_Q, 104
 PV_SCHED_ENABLE_AO_STATS, 104
 PV_SCHED_ENABLE_LOOP_STATS, 104
 PV_SCHED_ENABLE_PERF_LOGGING, 104
 PV_SCHED_ENABLE_THREAD_CONTEXT_CHECKS, 104
 PV_SCHED_FAIR_SCHEDULING, 104
 PV_SCHED_LOG_Q, 104
 PVEEXECNAMELEN, 104
 PVSCHEDNAMELEN, 104
 QUE_ITER_BEGIN, 104

QUE_ITER_END, 104
 TOscIReady, 105
 TPVThreadContext, 105
OsclProcStatus, 474
 ALREADY_SUSPENDED_ERROR, 474
 BAD_THREADID_ADDR_ERROR, 474
 EXCEED_MAX_COUNT_VARIABLE_-
 ERROR, 475
 EXCEED_MAX_SEM_COUNT_ERROR,
 475
 INVALID_ACCESS_ERROR, 475
 INVALID_ARGUMENT_ERROR, 475
 INVALID_FUNCTION_ERROR, 475
 INVALID_HANDLE_ERROR, 475
 INVALID_OPERATION_ERROR, 475
 INVALID_PARAM_ERROR, 474
 INVALID_POINTER_ERROR, 475
 INVALID_PRIORITY_ERROR, 474
 INVALID_THREAD_ERROR, 474
 INVALID_THREAD_ID_ERROR, 474
 MAX_THRDS_REACHED_ERROR, 474
 MUTEX_LOCKED_ERROR, 475
 NO_PERMISSION_ERROR, 474
 NOT_ENOUGH_MEMORY_ERROR, 474
 NOT_ENOUGH_RESOURCES_ERROR,
 474
 NOT_IMPLEMENTED, 475
 NOT_SUSPENDED_ERROR, 474
 OTHER_ERROR, 474
 OUTOFGMEMORY_ERROR, 474
 PSHARED_ATTRIBUTE_SETTING_-
 ERROR, 475
 PSHARED_NOT_ZERO_ERROR, 475
 RELOCK_MUTEX_ERROR, 475
 SEM_NOT_SIGNALED_ERROR, 475
 SUCCESS_ERROR, 474
 SYSTEM_RESOURCES_-
 UNAVAILABLE_ERROR, 475
 THREAD_1_INACTIVE_ERROR, 474
 THREAD_BLOCK_ERROR, 475
 THREAD_NOT_OWN_MUTEX_-
 ERROR, 475
 TOO_MANY_THREADS_ERROR, 474
 WAIT_ABANDONED_ERROR, 475
 WAIT_TIMEOUT_ERROR, 475
OsclProcStatus
 eOsclProcError, 474
OsclPtr, 476
 OsclPtr, 476
OsclPtr
 Append, 476
 Length, 476
 OsclPtr, 476
 Ptr, 476
 Set, 476
 SetLength, 476
 Zero, 476
OsclPtrAdd
 osclproc, 105
OsclPtrC, 478
 OsclPtrC, 479
OsclPtrC
 Left, 479
 Length, 479
 OsclPtrC, 479
 Ptr, 479
 Right, 479
 Set, 479
 SetLength, 479
 Zero, 479
OsclPtrSub
 osclproc, 105
OsclRand, 480
OsclRand
 Rand, 480
 Seed, 480
OsclReadFD
 osclconfig_io.h, 818
OsclReadyAlloc, 481
OsclReadyAlloc
 allocate, 481
 allocate_fl, 481
 deallocate, 481
OsclReadyCompare, 482
 PVActiveBase, 614
OsclReadyCompare
 compare, 482
OsclReadyQ, 483
 OsclExecSchedulerCommonBase, 396
 PVActiveBase, 614
 PVActiveStats, 615
OsclReadyQ
 Callback, 484
 Construct, 484
 Depth, 484
 IsIn, 484
 PendComplete, 484
 PopTop, 484
 RegisterForCallback, 484
 Remove, 484
 ThreadLogoff, 484
 ThreadLogon, 484
 TimerCallback, 484
 Top, 484
 WaitAndPopTop, 484
 WaitForRequestComplete, 484
OsclReadySetPosition
 PVActiveBase, 614

OsclRecv
 osclconfig_io.h, 818
OsclRecvFrom
 osclconfig_io.h, 818
OsclRecvFromMethod, 485
OsclRecvFromMethod
 ~OsclRecvFromMethod, 485
 GetRecvData, 485
 NewL, 485
 RecvFrom, 485
 RecvFromRequest, 485
OsclRecvFromRequest, 487
 OsclRecvFromRequest, 487
 OsclSocketI, 538
OsclRecvFromRequest
 GetRecvData, 487
 OsclRecvFromRequest, 487
 RecvFrom, 487
 Success, 487
OsclRecvMethod, 489
OsclRecvMethod
 ~OsclRecvMethod, 489
 GetRecvData, 489
 NewL, 489
 Recv, 489
 RecvRequest, 489
OsclRecvRequest, 490
 OsclRecvRequest, 490
 OsclSocketI, 538
OsclRecvRequest
 GetRecvData, 490
 OsclRecvRequest, 490
 Recv, 490
 Success, 490
OsclRefCounter, 491
OsclRefCounter
 ~OsclRefCounter, 491
 addRef, 491
 getCount, 491
 removeRef, 491
OsclRefCounterDA, 493
 OsclRefCounterDA, 493
OsclRefCounterDA
 ~OsclRefCounterDA, 493
 addRef, 494
 getCount, 494
 OsclRefCounterDA, 493
 removeRef, 494
OsclRefCounterMemFrag, 495
 OsclRefCounterMemFrag, 495
OsclRefCounterMemFrag
 ~OsclRefCounterMemFrag, 495
 getCapacity, 496
 getCount, 496
 getMemFrag, 496
 getMemFragPtr, 496
 getMemFragSize, 496
 getRefCounter, 496
 operator=, 496
 OsclRefCounterMemFrag, 495
OsclRefCounterMTDA, 497
 OsclRefCounterMTDA, 497
OsclRefCounterMTDA
 ~OsclRefCounterMTDA, 497
 addRef, 498
 getCount, 498
 OsclRefCounterMTDA, 497
 removeRef, 498
OsclRefCounterMTSA, 499
 OsclRefCounterMTSA, 499
OsclRefCounterMTSA
 ~OsclRefCounterMTSA, 499
 addRef, 500
 getCount, 500
 OsclRefCounterMTSA, 499
 removeRef, 500
OsclRefCounterSA, 501
 OsclRefCounterSA, 501
OsclRefCounterSA
 ~OsclRefCounterSA, 501
 addRef, 502
 getCount, 502
 OsclRefCounterSA, 501
 removeRef, 502
OsclRegistryAccessClient, 503
 OsclRegistryAccessClient, 503
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
OsclRegistryAccessClient
 ~OsclRegistryAccessClient, 503
 Close, 503
 Connect, 503
 GetFactories, 503
 GetFactory, 503
 OsclRegistryAccessClient, 503
OsclRegistryAccessClientImpl, 505
OsclRegistryAccessClientTlsImpl, 506
OsclRegistryAccessElement
 iFactory, 507
 iMimeType, 507
OsclRegistryClient, 508
 OsclRegistryClient, 508
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
OsclRegistryClient
 ~OsclRegistryClient, 508
 Close, 508

Connect, [508](#)
 OsclRegistryClient, [508](#)
 Register, [508](#)
 UnRegister, [509](#)
 OsclRegistryClientImpl, [510](#)
 OsclRegistryClientImpl
 Close, [511](#)
 Connect, [511](#)
 GetFactories, [511](#)
 GetFactory, [511](#)
 OsclRegistryAccessClient, [511](#)
 OsclRegistryClient, [511](#)
 Register, [511](#)
 UnRegister, [511](#)
 OsclRegistryClientTlsImpl, [512](#)
 OsclRegistryServTlsImpl, [513](#)
 OsclRegistryServTlsImpl, [514](#)
 OsclRegistryServTlsImpl
 ~OsclRegistryServTlsImpl, [514](#)
 Close, [514](#)
 Connect, [514](#)
 GetFactories, [514](#)
 GetFactory, [514](#)
 OsclRegistryAccessClient, [514](#)
 OsclRegistryClient, [514](#)
 OsclRegistryServTlsImpl, [514](#)
 Register, [514](#)
 UnRegister, [514](#)
 OsclReturnCode
 osclerror, [92](#)
 OsclScheduler, [515](#)
 OsclErrorTrapImp, [377](#)
 OsclExecScheduler, [389](#)
 OsclExecSchedulerCommonBase, [396](#)
 OsclScheduler
 Cleanup, [515](#)
 Init, [515](#)
 OsclSchedulerCommonBase
 PVActiveBase, [614](#)
 OsclSchedulerObserver, [516](#)
 OsclSchedulerObserver
 ~OsclSchedulerObserver, [516](#)
 OsclSchedulerReadyCallback, [516](#)
 OsclSchedulerTimerCallback, [516](#)
 OsclSchedulerReadyCallback
 OsclSchedulerObserver, [516](#)
 OsclSchedulerTimerCallback
 OsclSchedulerObserver, [516](#)
 OsclScopedLock, [517](#)
 OsclScopedLock, [517](#)
 OsclScopedLock
 ~OsclScopedLock, [517](#)
 OsclScopedLock, [517](#)
 OsclSelect, [518](#)
 OsclSelect, [519](#)
 OsclSelect
 iErrAlloc, [519](#)
 iHeapCheck, [519](#)
 iOsclBase, [519](#)
 iOsclErrorTrap, [519](#)
 iOsclLogger, [519](#)
 iOsclMemory, [519](#)
 iOsclScheduler, [519](#)
 iOutputFile, [519](#)
 iSchedulerAlloc, [519](#)
 iSchedulerName, [519](#)
 iSchedulerReserve, [519](#)
 OsclSelect, [519](#)
 OsclSemaphore, [520](#)
 OsclSemaphore, [520](#)
 OsclSemaphore
 ~OsclSemaphore, [520](#)
 Close, [520](#)
 Create, [520](#)
 OsclSemaphore, [520](#)
 Signal, [521](#)
 TryWait, [521](#)
 Wait, [521](#)
 OsclSend
 osclconfig_io.h, [819](#)
 OsclSendMethod, [522](#)
 OsclSendMethod
 ~OsclSendMethod, [522](#)
 GetSendData, [522](#)
 NewL, [522](#)
 Send, [522](#)
 SendRequest, [522](#)
 OsclSendRequest, [523](#)
 OsclSendRequest, [523](#)
 OsclSocketI, [538](#)
 OsclSendRequest
 GetSendData, [523](#)
 OsclSendRequest, [523](#)
 Send, [523](#)
 Success, [523](#)
 OsclSendTo
 osclconfig_io.h, [819](#)
 OsclSendToMethod, [524](#)
 OsclSendToMethod
 ~OsclSendToMethod, [524](#)
 GetSendData, [524](#)
 NewL, [524](#)
 SendTo, [524](#)
 SendToRequest, [524](#)
 OsclSendToRequest, [525](#)
 OsclSendToRequest, [525](#)
 OsclSocketI, [538](#)
 OsclSendToRequest

GetSendData, 525
 OsclSendToRequest, 525
 SendTo, 525
 Success, 525
 OsclSetNonBlocking
 osclconfig_io.h, 819
 OsclSetRecvBufferSize
 osclconfig_io.h, 819
 OsclSetSockOpt
 osclconfig_io.h, 819
 OsclSharedPtr, 526
 OsclSharedPtr, 527
 OsclSharedPtr
 ~OsclSharedPtr, 527
 get_count, 527
 GetRefCounter, 527
 GetRep, 527
 operator *, 527
 operator TheClass *, 528
 operator->, 528
 operator=, 528
 OsclSharedPtr, 527
 Unbind, 528
 OsclShutdown
 osclconfig_io.h, 819
 OsclShutdownMethod, 529
 OsclShutdownMethod
 ~OsclShutdownMethod, 529
 NewL, 529
 Shutdown, 529
 ShutdownRequest, 529
 OsclShutdownRequest, 530
 OsclShutdownRequest, 530
 OsclSocketI, 538
 OsclShutdownRequest
 OsclShutdownRequest, 530
 Shutdown, 530
 OsclSingleton, 531
 OsclSingleton, 531
 OsclSingleton
 ~OsclSingleton, 531
 _Ptr, 532
 operator *, 531
 operator->, 531
 OsclSingleton, 531
 set, 531
 OsclSingletonRegistry, 533
 OsclSingletonRegistry
 getInstance, 533
 lockAndGetInstance, 533
 OsclBase, 533
 registerInstance, 533
 registerInstanceAndUnlock, 533
 OsclSocket
 osclconfig_io.h, 820
 OsclSocketCleanup
 osclconfig_io.h, 820
 OsclSocketI, 534
 OsclSocketRequestAO, 552
 OsclSocketServI, 556
 OsclSocketI
 ~OsclSocketI, 535
 Accept, 535
 Bind, 535
 Close, 535
 Connect, 535
 GetPeerName, 535
 Join, 536
 Listen, 536
 Logger, 536
 MakeAddr, 536
 MakeMulticastGroupInformation, 536
 NewL, 536
 Open, 536
 OsclAcceptRequest, 538
 OsclConnectRequest, 538
 OsclRecvFromRequest, 538
 OsclRecvRequest, 538
 OsclSendRequest, 538
 OsclSendToRequest, 538
 OsclShutdownRequest, 538
 OsclTCPSocket, 538
 OsclUDPSocket, 538
 ProcessAccept, 536
 ProcessConnect, 537
 ProcessRecv, 537
 ProcessRecvFrom, 537
 ProcessSend, 537
 ProcessSendTo, 537
 ProcessShutdown, 537
 Recv, 537
 RecvFrom, 537
 RecvFromSuccess, 537
 RecvSuccess, 537
 Send, 537
 SendSuccess, 537
 SendTo, 537
 SendToSuccess, 537
 SetRecvBufferSize, 537
 SetSockOpt, 538
 Shutdown, 538
 Socket, 538
 ThreadLogoff, 538
 ThreadLogon, 538
 OsclSocketIBase, 539
 OsclSocketIBase, 540
 OsclSocketIBase
 ~OsclSocketIBase, 540

Accept, 540
 Bind, 540
 BindAsync, 540
 CancelAccept, 541
 CancelBind, 541
 CancelConnect, 541
 CancelFxn, 541
 CancelListen, 541
 CancelRecv, 541
 CancelRecvFrom, 541
 CancelSend, 541
 CancelSendTo, 541
 CancelShutdown, 541
 Close, 541
 Connect, 541
 GetShutdown, 541
 HasAsyncBind, 541
 HasAsyncListen, 541
 iAlloc, 543
 iSocketServ, 543
 IsOpen, 541
 Join, 541
 Listen, 541
 ListenAsync, 541
 Open, 542
 OsclSocketIBase, 540
 OsclSocketMethod, 543
 OsclSocketRequest, 543
 OsclSocketRequestAO, 543
 OsclTCPSocket, 543
 OsclUDPSocket, 543
 Recv, 542
 RecvFrom, 542
 RecvFromSuccess, 542
 RecvSuccess, 542
 Send, 542
 SendSuccess, 542
 SendTo, 542
 SendToSuccess, 542
 Shutdown, 543
 OsclSocketMethod, 544
 OsclIPSocketI, 419
 OsclSocketIBase, 543
 OsclSocketMethod, 545
 OsclSocketRequestAO, 552
 OsclSocketMethod
 ~OsclSocketMethod, 545
 Abort, 545
 AbortAll, 545
 Alloc, 545
 CancelMethod, 545
 ConstructL, 545
 iContainer, 546
 iSocketFxn, 546
 iSocketRequestAO, 546
 MethodDone, 545
 OsclSocketMethod, 545
 Run, 545
 StartMethod, 546
 ThreadLogoff, 546
 ThreadLogon, 546
 OsclSocketObserver, 547
 OsclSocketObserver
 ~OsclSocketObserver, 547
 HandleSocketEvent, 547
 OsclSocketRequest, 548
 OsclSocketIBase, 543
 OsclSocketRequest, 548
 OsclSocketRequestAO, 552
 OsclSocketServI, 556
 OsclSocketRequest
 Activate, 548
 CancelRequest, 548
 Complete, 548
 Fxn, 548
 iParam, 548
 iSocketI, 548
 iSocketRequestAO, 548
 OsclSocketRequest, 548
 OsclSocketRequestAO, 549
 OsclIPSocketI, 419
 OsclSocketIBase, 543
 OsclSocketRequestAO, 550
 OsclSocketRequestAO
 ~OsclSocketRequestAO, 550
 Abort, 550
 Alloc, 550
 CleanupParam, 550
 ConstructL, 550
 DoCancel, 550
 GetSocketError, 550
 iContainer, 552
 Id, 551
 iParam, 552
 iParamSize, 552
 iSocketError, 552
 NewRequest, 551
 OsclSocketI, 552
 OsclSocketMethod, 552
 OsclSocketRequest, 552
 OsclSocketRequestAO, 550
 RequestDone, 551
 Run, 551
 SocketI, 551
 SocketObserver, 551
 Success, 551
 OsclSocketSelect
 osclconfig_io.h, 820

OsclSocketServ, 553
 OsclSocketServI, 556
OsclSocketServ
 ~**OsclSocketServ**, 553
 Close, 553
 Connect, 553
 NewL, 554
 OsclDNS, 554
 OsclTCPSocket, 554
 OsclUDPSocket, 554
OsclSocketServI, 555
 OsclSocketServRequestList, 559
OsclSocketServI
 Close, 555
 Connect, 555
 IsServerThread, 556
 LoopbackSocket, 556
 NewL, 556
 OsclDNSI, 556
 OsclSocketI, 556
 OsclSocketRequest, 556
 OsclSocketServ, 556
 OsclSocketServRequestList, 556
 OsclTCPSocketI, 556
 OsclUDPSocketI, 556
OsclSocketServIBase, 557
 ESocketServ_Connected, 557
 ESocketServ_Error, 558
 ESocketServ_Idle, 557
 OsclSocketServIBase, 558
OsclSocketServIBase
 ~**OsclSocketServIBase**, 558
 Close, 558
 Connect, 558
 iAlloc, 558
 iLogger, 558
 iServError, 558
 iServState, 558
 IsServConnected, 558
 OsclSocketServIBase, 558
 State, 558
 TSocketServState, 557
OsclSocketServRequestList, 559
 OsclSocketServI, 556
 OsclSocketServRequestList, 559
OsclSocketServRequestList
 Add, 559
 Close, 559
 Open, 559
 OsclSocketServI, 559
 OsclSocketServRequestList, 559
 Remove, 559
 StartCancel, 559
 WaitOnRequests, 559
 Wakeup, 559
OsclSocketServRequestQElem, 561
 OsclSocketServRequestQElem, 561
OsclSocketServRequestQElem
 iCancel, 561
 iSelect, 561
 iSocketRequest, 561
 OsclSocketServRequestQElem, 561
OsclSocketStartup
 osclconfig_io.h, 820
OsclSocketTOS, 562
 EPVCritic_Ecp, 562
 EPVFlash, 562
 EPVHiRel, 562
 EPVHiThrpt, 562
 EPVImmediate, 562
 EPVInetControl, 562
 EPVLDelay, 562
 EPVNetControl, 562
 EPVNoTOS, 562
 EPVOverrideFlash, 562
 EPVPriority, 562
 EPVRoutine, 562
 OsclSocketTOS, 563
OsclSocketTOS
 ClearTOS, 563
 GetTOS, 563
 OsclSocketTOS, 563
 SetPrecedence, 563
 SetPriority, 563
 TPVServicePrecedence, 562
 TPVServicePriority, 562
OsclSuccess
 osclerror, 91
OsclTagTreeType
 osclmemory, 58
OsclTCPSocket, 564
 OsclSocketI, 538
 OsclSocketIBase, 543
 OsclSocketServ, 554
OsclTCPSocket
 ~**OsclTCPSocket**, 565
 Accept, 565
 Bind, 565
 BindAsync, 565
 CancelAccept, 566
 CancelBind, 566
 CancelConnect, 566
 CancelListen, 566
 CancelRecv, 566
 CancelSend, 566
 CancelShutdown, 566
 Close, 567
 Connect, 567

GetAcceptedSocketL, 567
 GetPeerName, 567
 GetRecvData, 568
 GetSendData, 568
 Listen, 568
 ListenAsync, 568
 NewL, 568
 Recv, 569
 Send, 569
 SetOptionToReuseAddress, 569
 SetTOS, 570
 Shutdown, 570
 ThreadLogoff, 570
 ThreadLogon, 570
OscITCPSocketI, 571
 OscISocketServI, 556
OscITCPSocketI
 ~OscITCPSocketI, 572
 Accept, 572
 BindAsync, 572
 CancelAccept, 572
 CancelBind, 572
 CancelConnect, 572
 CancelListen, 572
 CancelRecv, 572
 CancelSend, 572
 CancelShutdown, 572
 Close, 572
 Connect, 572
 GetAcceptedSocketL, 572
 GetRecvData, 572
 GetSendData, 572
 Listen, 572
 ListenAsync, 573
 NewL, 573
 Recv, 573
 Send, 573
 Shutdown, 573
 ThreadLogoff, 573
 ThreadLogon, 573
OscIThread, 574
 OscIThread, 574
OscIThread
 ~OscIThread, 574
 CompareId, 574
 Create, 575
 EnableKill, 575
 Exit, 575
 GetId, 575
 GetPriority, 576
 OscIThread, 574
 Resume, 576
 SetPriority, 576
 SleepMillisec, 576
 Suspend, 577
 Terminate, 577
 OscIThread_State
 oscl_thread.h, 788
 OscIThreadLock, 578
 OscIThreadLock, 578
 OscIThreadLock
 ~OscIThreadLock, 578
 Lock, 578
 OscIThreadLock, 578
 Unlock, 578
 OscIThreadPriority
 oscl_thread.h, 788
 OscITickCount, 579
 OscITickCount
 MsecToTicks, 579
 TickCount, 579
 TickCountFrequency, 579
 TickCountPeriod, 579
 TicksToMsec, 579
 OSCLTICKCOUNT_MAX_TICKS
 osclutil, 68
 OscITimer, 581
 OscITimer, 582
 OscITimer
 ~OscITimer, 582
 callback_timer_type, 582
 CallbackTimer< Alloc >, 583
 Cancel, 582
 Clear, 582
 OscITimer, 582
 Request, 582
 SetExactFrequency, 582
 SetFrequency, 583
 SetObserver, 583
 TimerBaseElapsed, 583
 OscITimerCompare, 584
 OscExecSchedulerCommonBase, 396
 OscITimerCompare
 compare, 584
 OscITimerObject, 585
 OscExecSchedulerCommonBase, 398
 OscITimerObject, 586
 PVActiveBase, 614
 PVActiveStats, 615
 PVThreadContext, 634
 OscITimerObject
 ~OscITimerObject, 586
 AddToScheduler, 586
 After, 586
 Cancel, 586
 DoCancel, 586
 IsBusy, 587
 OscITimerObject, 586

Priority, [587](#)
 RemoveFromScheduler, [587](#)
 RunError, [587](#)
 RunIfNotReady, [587](#)
 SetBusy, [587](#)
 SetStatus, [587](#)
 Status, [588](#)
 StatusRef, [588](#)
 OsclTimerObserver, [589](#)
 OsclTimerObserver
 ~OsclTimerObserver, [589](#)
 TimeoutOccurred, [589](#)
 OsclTimerQ, [590](#)
 OsclTimerQ
 Add, [590](#)
 Construct, [590](#)
 IsIn, [590](#)
 Pop, [590](#)
 PopTop, [590](#)
 Remove, [590](#)
 Top, [590](#)
 OsclTLS, [591](#)
 OsclTLS, [591](#)
 OsclTLS
 ~OsclTLS, [591](#)
 _Ptr, [592](#)
 operator *, [591](#)
 operator->, [591](#)
 OsclTLS, [591](#)
 set, [591](#)
 OsclTLSEx, [593](#)
 OsclTLSEx, [593](#)
 OsclTLSEx
 ~OsclTLSEx, [593](#)
 _Ptr, [594](#)
 operator *, [593](#)
 operator->, [593](#)
 OsclTLSEx, [593](#)
 set, [593](#)
 OsclTLSRegistry, [595](#)
 OsclTLSRegistry
 getInstance, [595](#)
 OsclBase, [595](#)
 registerInstance, [595](#)
 OsclTLSRegistryEx, [596](#)
 OsclTLSRegistryEx
 getInstance, [596](#)
 registerInstance, [596](#)
 OsclTrapItem, [597](#)
 OsclTrapItem, [597](#)
 OsclTrapItem
 OsclTrapItem, [597](#)
 OsclTrapStack, [597](#)
 OsclTrapStackItem, [597](#)
 OsclTrapOperation
 osclerror, [92](#)
 OsclTrapStack, [598](#)
 OsclErrorTrapImp, [377](#)
 OsclTrapItem, [597](#)
 OsclTrapStack
 OsclError, [598](#)
 OsclErrorTrap, [598](#)
 OsclErrorTrapImp, [598](#)
 OsclTrapStackItem, [599](#)
 OsclTrapItem, [597](#)
 OsclTrapStackItem, [599](#)
 OsclTrapStackItem
 iCBase, [599](#)
 iNext, [599](#)
 iTAny, [599](#)
 iTrapOperation, [599](#)
 OsclTrapStackItem, [599](#)
 OsclUDPSocket, [600](#)
 OsclSocketI, [538](#)
 OsclSocketIBase, [543](#)
 OsclSocketServ, [554](#)
 OsclUDPSocket
 ~OsclUDPSocket, [601](#)
 Bind, [601](#)
 BindAsync, [601](#)
 CancelBind, [601](#)
 CancelRecvFrom, [601](#)
 CancelSendTo, [601](#)
 Close, [602](#)
 GetPeerName, [602](#)
 GetRecvData, [602](#)
 GetSendData, [602](#)
 Join, [602](#)
 JoinMulticastGroup, [603](#)
 NewL, [603](#)
 RecvFrom, [603](#)
 SendTo, [604](#)
 SetMulticastTTL, [604](#)
 SetOptionToReuseAddress, [604](#)
 SetRecvBufferSize, [605](#)
 SetTOS, [605](#)
 ThreadLogoff, [605](#)
 ThreadLogon, [605](#)
 OsclUDPSocketI, [606](#)
 OsclSocketServI, [556](#)
 OsclUDPSocketI
 ~OsclUDPSocketI, [607](#)
 BindAsync, [607](#)
 CancelBind, [607](#)
 CancelRecvFrom, [607](#)
 CancelSendTo, [607](#)
 Close, [607](#)
 GetRecvData, [607](#)

GetSendData, 607
 JoinMulticastGroup, 607
 NewL, 607
 RecvFrom, 607
 SendTo, 607
 SetMulticastTTL, 607
 ThreadLogoff, 607
 ThreadLogon, 607
OsclUid32
 oscl_uuid.h, 800
OsclUnMakeInAddr
 osclconfig_io.h, 820
OsclUnMakeSockAddr
 osclconfig_io.h, 821
osclutil
 ~OSCL_HeapString, 83
 ~OSCL_StackString, 83
 ~OSCL_wHeapString, 83
 ~OSCL_wStackString, 83
 APPEND_MEDIA_AT_END, 83
 BufferFreeFuncPtr, 68
 EOSCL_StringOp_CompressASCII, 69
 EOSCL_StringOp_UTF16ToUTF8, 69
 EOSCL_wStringOp_ExpandASCII, 69
 EOSCL_wStringOp_UTF8ToUTF16, 69
 extract_string, 69
 get_cstr, 69
 get_maxsize, 70
 get_size, 70
 get_str, 71
 GetBufferState, 71
 GetFragment, 71
 MAX_NUMBER_OF_BYTE_PER_UTF8,
 68
 MediaTimestamp, 68
 operator=, 71–73
 oscl_abs, 73
 OSCL_ASCII_CASE_MAGIC_BIT, 83
 oscl_asin, 73
 oscl_atan, 73
 oscl_cos, 73
 oscl_exp, 73
 oscl_floor, 73
 OSCL_HeapString, 73, 74
 oscl_isdigit, 68
 oscl_log, 74
 oscl_log10, 74
 oscl_pow, 74
 oscl_sin, 75
 oscl_snprintf, 75
 oscl_sqrt, 75
 OSCL_StackString, 75, 76
 oscl_str_escape_xml, 76
 oscl_str_is_valid_utf8, 76
 oscl_str_need_escape_xml, 77
 oscl_str_truncate_utf8, 77
 oscl_str_unescape_uri, 77, 78
 oscl_tan, 78
 OSCL_TStrPtrLen, 68
 oscl_UncodeToUTF8, 78
 oscl_UTF8ToUnicode, 79
 oscl_vsnprintf, 79, 81
 OSCL_wHeapString, 81
 OSCL_wStackString, 81
 OsclComponentFactory, 68
 OSCLTICKCOUNT_MAX_TICKS, 68
 PV_atof, 81
 PV_atoi, 81
 set, 81–83
 skip_to_line_term, 83
 skip_to_whitespace, 83
 skip_whitespace, 83
 skip_whitespace_and_line_term, 83
 StrCSumPtrLen, 68
 StrPtrLen, 68
 TOSCL_StringOp, 69
 TOSCL_wStringOp, 69
 WStrPtrLen, 68
OsclUuid, 609
 OsclUuid, 610
OsclUuid
 data1, 610
 data2, 610
 data3, 610
 data4, 610
 operator!=, 610
 operator=, 610
 operator==, 610
 OsclUuid, 610
OsclValidInetAddr
 osclconfig_io.h, 821
OsclWriteFD
 osclconfig_io.h, 821
other
 Oscl_TAlloc::rebind, 283
other_chartype
 OSCL_FastString, 175
 OSCL_HeapString, 196
 OSCL_HeapStringA, 198
 OSCL_StackString, 257
 OSCL_wFastString, 294
 OSCL_wHeapString, 297
 OSCL_wHeapStringA, 299
 OSCL_wStackString, 302
OTHER_ERROR
 OsclProcStatus, 474
OUTOFMEMORY_ERROR
 OsclProcStatus, 474

overwrite
 CFastRep, 127

pad
 MM_AllocBlockFence, 146
 MM_AllocBlockHdr, 147

pair_citerator_citerator
 Oscl_Map, 217

pair_iterator_bool
 Oscl_Map, 217
 Oscl_TagTree, 269

pair_iterator_iterator
 Oscl_Map, 217

pAllocInfo
 MM_AllocNode, 150

parent
 Oscl_Rb_Tree_Node_Base, 254
 Oscl_TagTree::Node, 279

pAudit
 OsclAuditCB, 320

pBasePosition
 OsclBinStream, 338

pBuffer
 OsclFileCacheBuffer, 403

peakNumAllocs
 MM_Stats_t, 164

peakNumBytes
 MM_Stats_t, 164

PendComplete
 OsclActiveObject, 311
 OsclExecSchedulerCommonBase, 395
 OsclReadyQ, 484

PendForExec
 OsclActiveObject, 311

per_allocation_overhead
 MM_AuditOverheadStats, 160

perms
 osci_stat_buf, 258

PersistHostAddress
 GetHostNameParam, 135

pFileName
 MM_AllocInfo, 149

pMemBlock
 MM_AllocInfo, 149
 MM_AllocQueryInfo, 151

pMMFIParam
 OsclMemStatsNode, 457

pMMStats
 OsclMemStatsNode, 457

pNext
 MM_AllocNode, 150

pNode
 MM_AllocBlockHdr, 147

pointer
 MemAllocator, 145
 Oscl_Map, 217
 Oscl_Queue, 236
 Oscl_Rb_Tree, 243
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
 Oscl_TAlloc, 281
 Oscl_Vector, 285

Pop
 OsclError, 371
 OsclTimerQ, 590

pop
 Oscl_Queue, 237
 Oscl_Queue_Base, 239
 OsclPriorityQueue, 471

pop_back
 Oscl_Vector, 287
 Oscl_Vector_Base, 291

pop_heap
 OsclPriorityQueue, 471
 OsclPriorityQueueBase, 473

PopDealloc
 OsclError, 371, 372

PopTop
 OsclReadyQ, 484
 OsclTimerQ, 590

port
 OsclNetworkAddress, 465

PositionInBlock
 OsclBinStream, 337

pPosition
 OsclBinStream, 338

pPrev
 MM_AllocNode, 150

Preceeds
 OsclFileCacheBuffer, 403

PreRead
 OsclFileCacheBuffer, 403

PreWrite
 OsclFileCacheBuffer, 403

Priority
 OsclActiveObject, 311
 OsclTimerObject, 587

ProcessAccept
 OsclSocketI, 536

ProcessConnect
 OsclSocketI, 537

ProcessRecv
 OsclSocketI, 537

ProcessRecvFrom
 OsclSocketI, 537

ProcessSend

OsclSocketI, 537
ProcessSendTo
 OsclSocketI, 537
ProcessShutdown
 OsclSocketI, 537
pRootNode
 MM_AllocBlockHdr, 147
pruneSubtree
 MM_Audit_Imp, 158
PSHARED_ATTRIBUTE_SETTING_ERROR
 OsclProcStatus, 475
PSHARED_NOT_ZERO_ERROR
 OsclProcStatus, 475
pStats
 MM_Stats_CB, 162
pStatsNode
 MM_AllocInfo, 149
 OsclAuditCB, 320
Ptr
 OsclPtr, 476
 OsclPtrC, 479
ptr
 OsclMemoryFragment, 441
 StrPtrLen, 647
 WStrPtrLen, 658
push
 Oscl_Queue, 237
 Oscl_Queue_Base, 239
 OsclPriorityQueue, 471
push_back
 Oscl_Vector, 288
 Oscl_Vector_Base, 291
push_front
 Oscl_Vector, 288
 Oscl_Vector_Base, 292
push_heap
 OsclPriorityQueue, 471
 OsclPriorityQueueBase, 473
PushL
 OsclError, 372
PV8601TIME_BUFFER_SIZE
 osclbase, 45
PV8601timeStrBuf
 osclbase, 34
PV8601ToRFC822
 osclbase, 44
PV_atof
 osclutil, 81
PV_atoi
 osclutil, 81
PV_CHAR_CLOSE_BRACKET
 oscl_uuid.h, 800
PV_CHAR_COMMA
 oscl_uuid.h, 800
PV_DNS_IS_THREAD
 oscl_dns_tuneables.h, 676
PV_DNS_SERVER
 oscl_dns_tuneables.h, 676
PV_DYNAMIC_LOADING_CONFIG_FILE_PATH
 osclconfig_lib.h, 824
PV_OSCL_SOCKET_1MB_RECV_BUF
 oscl_socket_tuneables.h, 772
PV_OSCL_SOCKET_SERVER_LOGGER_OUTPUT
 oscl_socket_tuneables.h, 772
PV_OSCL_SOCKET_STATS_LOGGING
 oscl_socket_tuneables.h, 772
PV_RUNTIME_LIB_FILENAME_EXTENSION
 osclconfig_lib.h, 824
PV_SCHED_CHECK_Q
 osclproc, 104
PV_SCHED_ENABLE_AO_STATS
 osclproc, 104
PV_SCHED_ENABLE_LOOP_STATS
 osclproc, 104
PV_SCHED_ENABLE_PERF_LOGGING
 osclproc, 104
PV_SCHED_ENABLE_THREAD_CONTEXT_CHECKS
 osclproc, 104
PV_SCHED_FAIR_SCHEDULING
 osclproc, 104
PV_SCHED_LOG_Q
 osclproc, 104
PV_SOCKET_REQUEST_AO_PRIORITY
 oscl_socket_tuneables.h, 772
PV_SOCKET_SERVER
 oscl_socket_tuneables.h, 772
PV_SOCKET_SERVER_AO_INTERVAL_MSEC
 oscl_socket_tuneables.h, 773
PV_SOCKET_SERVER_AO_PRIORITY
 oscl_socket_tuneables.h, 773
PV_SOCKET_SERVER_IS_THREAD
 oscl_socket_tuneables.h, 773
PV_SOCKET_SERVER_SELECT
 oscl_socket_tuneables.h, 773
PV_SOCKET_SERVER_SELECT_LOOPBACK_SOCKET
 oscl_socket_tuneables.h, 773
PV_SOCKET_SERVER_SELECT_TIMEOUT_MSEC
 oscl_socket_tuneables.h, 773
PV_SOCKET_SERVER_THREAD_PRIORITY
 oscl_socket_tuneables.h, 773

PV_SOCKET_SERVI_STATS
`oscl_socket_tuneables.h`, 773

PVActiveBase, 611
 OsclExecSchedulerBase, 390
 OsclExecSchedulerCommonBase, 398
 PVActiveBase, 612
 PVActiveStats, 615
 PVThreadContext, 634

PVActiveBase
 ~PVActiveBase, 612
 Activate, 612
 AddToScheduler, 612
 Cancel, 612
 Destroy, 612
 DoCancel, 612
 iAddedNum, 614
 iBusy, 614
 iName, 614
 iPVAstats, 614
 iPVRreadyQLink, 614
 IsAdded, 612
 IsInAnyQ, 613
 iStatus, 614
 iThreadContext, 614
 OsclActiveObject, 614
 OsclExecScheduler, 614
 OsclReadyCompare, 614
 OsclReadyQ, 614
 OsclReadySetPosition, 614
 OsclSchedulerCommonBase, 614
 OsclTimerObject, 614
 PVActiveBase, 612
 PVActiveStats, 614
 RemoveFromScheduler, 613
 Run, 613
 RunError, 613

PVActiveStats, 615
 OsclExecSchedulerCommonBase, 398
 PVActiveBase, 614

PVActiveStats
 OsclActiveObject, 615
 OsclExecScheduler, 615
 OsclExecSchedulerCommonBase, 615
 OsclReadyQ, 615
 OsclTimerObject, 615
 PVActiveBase, 615

PVCleanupStack
 _OsclHeapBase, 110

PVError_DoLeave
`oscl_error_imp_fatalerror.h`, 684
`oscl_error_imp_jumps.h`, 686
 osclerror, 91

PVERRORTIMP_JUMPS
 osclerror, 91

PVERRORTRAP_REGISTRY
 osclerror, 91

PVERRORTRAP_REGISTRY_ID
 osclerror, 92

PVEXECNAMELEN
 osclproc, 104

PVLogger, 616
 ~PVLogger, 617
 AddAppender, 617
 AddFilter, 617
 alloc_type, 617
 Cleanup, 618
 DisableAppenderInheritance, 618
 filter_status_type, 617
 GetLoggerObject, 618
 GetLogLevel, 618
 GetNumAppenders, 618
 GetParent, 619
 Init, 619
 IsActive, 619
 log_level_type, 617
 LogMsgBuffers, 619
 LogMsgBuffersV, 619
 LogMsgString, 620
 LogMsgStringV, 620
 message_id_type, 617
 PVLogger, 617
 PVLoggerRegistry, 621
 RemoveAppender, 620
 SetLogLevel, 620
 SetLogLevelAndPropagate, 621
 SetParent, 621

`pvlogger.h`, 849
 _PVLOGGER_LOGBIN, 851
 _PVLOGGER_LOGBIN_V, 851
 _PVLOGGER_LOGMSG, 851
 _PVLOGGER_LOGMSG_V, 851
 PVLOGGER_ENABLE, 851
 PVLOGGER_INST_LEVEL, 852
 PVLOGGER_INST_LEVEL_SUPPORT, 852
 PVLOGGER_LEVEL_UNINITIALIZED, 855
 PVLOGGER_LOG_USE_ONLY, 852
 PVLOGGER_LOGBIN, 852
 PVLOGGER_LOGBIN_PVLOGMSG_-INST_HLDBG, 852
 PVLOGGER_LOGBIN_PVLOGMSG_-INST_LLDBG, 853
 PVLOGGER_LOGBIN_PVLOGMSG_-INST_MLDBG, 853
 PVLOGGER_LOGBIN_PVLOGMSG_-INST_PROF, 853

PVLOGGER_LOGBIN_PVLOGMSG_-
INST_REL, 853
PVLOGGER_LOGBIN_V, 853
PVLOGGER_LOGBIN_V_-
PVLOGMSG_INST_HLDBG, 853
PVLOGGER_LOGBIN_V_-
PVLOGMSG_INST_LLDBG, 853
PVLOGGER_LOGBIN_V_-
PVLOGMSG_INST_PROF, 853
PVLOGGER_LOGBIN_V_-
PVLOGMSG_INST_REL, 853
PVLOGGER_LOGBIN_V_-
PVLOGMSG_V_INST_MLDBG,
853
PVLOGGER_LOGMSG, 853
PVLOGGER_LOGMSG_PVLOGMSG_-
INST_HLDBG, 853
PVLOGGER_LOGMSG_PVLOGMSG_-
INST_LLDBG, 854
PVLOGGER_LOGMSG_PVLOGMSG_-
INST_MLDBG, 854
PVLOGGER_LOGMSG_PVLOGMSG_-
INST_PROF, 854
PVLOGGER_LOGMSG_PVLOGMSG_-
INST_REL, 854
PVLOGGER_LOGMSG_V, 854
PVLOGGER_LOGMSG_V_-
PVLOGMSG_INST_HLDBG, 854
PVLOGGER_LOGMSG_V_-
PVLOGMSG_INST_LLDBG, 854
PVLOGGER_LOGMSG_V_-
PVLOGMSG_INST_MLDBG,
854
PVLOGGER_LOGMSG_V_-
PVLOGMSG_INST_PROF, 854
PVLOGGER_LOGMSG_V_-
PVLOGMSG_INST_REL, 854
PVLOGMSG_ALERT, 855
PVLOGMSG_CRIT, 855
PVLOGMSG_DEBUG, 855
PVLOGMSG_EMERG, 855
PVLOGMSG_ERR, 855
PVLOGMSG_FATAL_ERROR, 855
PVLOGMSG_INFO, 856
PVLOGMSG_INST_HLDBG, 854
PVLOGMSG_INST_LLDBG, 854
PVLOGMSG_INST_MLDBG, 854
PVLOGMSG_INST_PROF, 855
PVLOGMSG_INST_REL, 855
PVLOGMSG_NONFATAL_ERROR, 856
PVLOGMSG_NOTICE, 856
PVLOGMSG_STACK_TRACE, 856
PVLOGMSG_STATISTIC, 856
PVLOGMSG_VERBOSE, 856
PVLOGMSG_WARNING, 856
pvlogger_accessories.h, 857
PVLOGGER_FILTER_ACCEPT, 857
PVLOGGER_FILTER_NEUTRAL, 857
PVLOGGER_FILTER_REJECT, 857
pvlogger_c.h, 858
PVLOGGER_C_INST_LEVEL, 859
pvLogger_GetLoggerObject, 859
pvLogger_IsActive, 859
pvLogger_LogMsgString, 859
PVLOGMSG_C_ALERT, 859
PVLOGMSG_C_CRIT, 859
PVLOGMSG_C_EMERG, 859
PVLOGMSG_C_ERR, 859
PVLOGMSG_C_INFO, 859
PVLOGMSG_C_INST_HLDBG, 859
PVLOGMSG_C_INST_LLDBG, 859
PVLOGMSG_C_INST_MLDBG, 859
PVLOGMSG_C_INST_PROF, 859
PVLOGMSG_C_INST_REL, 859
PVLOGMSG_C_NOTICE, 859
PVLOGMSG_C_STACK_DEBUG, 859
PVLOGMSG_C_STACK_TRACE, 859
PVLOGMSG_C_WARNING, 859
PVLOGGER_C_INST_LEVEL
pvlogger_c.h, 859
PVLOGGER_ENABLE
pvlogger.h, 851
PVLOGGER_FILTER_ACCEPT
pvlogger_accessories.h, 857
PVLOGGER_FILTER_NEUTRAL
pvlogger_accessories.h, 857
PVLOGGER_FILTER_REJECT
pvlogger_accessories.h, 857
pvLogger_GetLoggerObject
pvlogger_c.h, 859
PVLOGGER_INST_LEVEL
osclconfig.h, 803
pvlogger.h, 852
PVLOGGER_INST_LEVEL_SUPPORT
pvlogger.h, 852
pvLogger_IsActive
pvlogger_c.h, 859
PVLOGGER_LEVEL_UNINITIALIZED
pvlogger.h, 855
PVLOGGER_LOG_USE_ONLY
pvlogger.h, 852
PVLOGGER_LOGBIN
pvlogger.h, 852
PVLOGGER_LOGBIN_PVLOGMSG_INST_-
HLDBG
pvlogger.h, 852
PVLOGGER_LOGBIN_PVLOGMSG_INST_-
LLDBG

pvlogger.h, 853
PVLOGGER_LOGBIN_PVLOGMSG_INST_-MLDBG
 pvlogger.h, 853
PVLOGGER_LOGBIN_PVLOGMSG_INST_-PROF
 pvlogger.h, 853
PVLOGGER_LOGBIN_PVLOGMSG_INST_-REL
 pvlogger.h, 853
PVLOGGER_LOGBIN_V
 pvlogger.h, 853
PVLOGGER_LOGBIN_V_PVLOGMSG_-INST_HLDBG
 pvlogger.h, 853
PVLOGGER_LOGBIN_V_PVLOGMSG_-INST_LLDBG
 pvlogger.h, 853
PVLOGGER_LOGBIN_V_PVLOGMSG_-INST_PROF
 pvlogger.h, 853
PVLOGGER_LOGBIN_V_PVLOGMSG_-INST_REL
 pvlogger.h, 853
PVLOGGER_LOGBIN_V_PVLOGMSG_V_-INST_MLDBG
 pvlogger.h, 853
PVLOGGER_LOGMSG
 pvlogger.h, 853
PVLOGGER_LOGMSG_PVLOGMSG_-INST_HLDBG
 pvlogger.h, 853
PVLOGGER_LOGMSG_PVLOGMSG_-INST_LLDBG
 pvlogger.h, 854
PVLOGGER_LOGMSG_PVLOGMSG_-INST_MLDBG
 pvlogger.h, 854
PVLOGGER_LOGMSG_PVLOGMSG_-INST_PROF
 pvlogger.h, 854
PVLOGGER_LOGMSG_PVLOGMSG_-INST_REL
 pvlogger.h, 854
PVLOGGER_LOGMSG_V
 pvlogger.h, 854
PVLOGGER_LOGMSG_V_PVLOGMSG_-INST_HLDBG
 pvlogger.h, 854
PVLOGGER_LOGMSG_V_PVLOGMSG_-INST_LLDBG
 pvlogger.h, 854
PVLOGGER_LOGMSG_V_PVLOGMSG_-INST_MLDBG

pvlogger.h, 854
PVLOGGER_LOGMSG_V_PVLOGMSG_-INST_PROF
 pvlogger.h, 854
PVLOGGER_LOGMSG_V_PVLOGMSG_-INST_REL
 pvlogger.h, 854
PvLogger_LogMsgString
 pvlogger_c.h, 859
pvlogger_registry.h, 860
PVLoggerAppender, 622
PVLoggerAppender
 ~PVLoggerAppender, 622
 AppendBuffers, 622
 AppendString, 622
 message_id_type, 622
PVLoggerFilter, 623
PVLoggerFilter
 ~PVLoggerFilter, 624
 filter_status_type, 623
 FilterOpaqueMessge, 624
 FilterString, 624
 log_level_type, 623
 message_id_type, 623
PVLoggerLayout, 625
PVLoggerLayout
 ~PVLoggerLayout, 625
 FormatOpaqueMessage, 625
 FormatString, 625
 message_id_type, 625
PVLoggerRegistry, 627
 PVLogger, 621
 PVLoggerRegistry, 627
PVLoggerRegistry
 ~PVLoggerRegistry, 627
 alloc_type, 627
 CreatePVLogger, 628
 GetPVLoggerObject, 628
 GetPVLoggerRegistry, 628
 log_level_type, 627
 PVLoggerRegistry, 627
 SetNodeLogLevelExplicit, 628
PVLOGMSG_ALERT
 pvlogger.h, 855
PVLOGMSG_C_ALERT
 pvlogger_c.h, 859
PVLOGMSG_C_CRIT
 pvlogger_c.h, 859
PVLOGMSG_C_EMERG
 pvlogger_c.h, 859
PVLOGMSG_C_ERR
 pvlogger_c.h, 859
PVLOGMSG_C_INFO
 pvlogger_c.h, 859

PVLOGMSG_C_INST_HLDBG
pvlogger_c.h, 859
PVLOGMSG_C_INST_LLDBG
pvlogger_c.h, 859
PVLOGMSG_C_INST_MLDBG
pvlogger_c.h, 859
PVLOGMSG_C_INST_PROF
pvlogger_c.h, 859
PVLOGMSG_C_INST_REL
pvlogger_c.h, 859
PVLOGMSG_C_NOTICE
pvlogger_c.h, 859
PVLOGMSG_C_STACK_DEBUG
pvlogger_c.h, 859
PVLOGMSG_C_STACK_TRACE
pvlogger_c.h, 859
PVLOGMSG_C_WARNING
pvlogger_c.h, 859
PVLOGMSG_CRIT
pvlogger.h, 855
PVLOGMSG_DEBUG
pvlogger.h, 855
PVLOGMSG_EMERG
pvlogger.h, 855
PVLOGMSG_ERR
pvlogger.h, 855
PVLOGMSG_FATAL_ERROR
pvlogger.h, 855
PVLOGMSG_INFO
pvlogger.h, 856
PVLOGMSG_INST_HLDBG
pvlogger.h, 854
PVLOGMSG_INST_LLDBG
pvlogger.h, 854
PVLOGMSG_INST_MLDBG
pvlogger.h, 854
PVLOGMSG_INST_PROF
pvlogger.h, 855
PVLOGMSG_INST_REL
pvlogger.h, 855
PVLOGMSG_NONFATAL_ERROR
pvlogger.h, 856
PVLOGMSG_NOTICE
pvlogger.h, 856
PVLOGMSG_STACK_TRACE
pvlogger.h, 856
PVLOGMSG_STATISTIC
pvlogger.h, 856
PVLOGMSG_VERBOSE
pvlogger.h, 856
PVLOGMSG_WARNING
pvlogger.h, 856
PVMEM_INST_LEVEL
osclbase, 34

osclconfig_memory.h, 827
PVNETHOSTADDRESS_LEN
oscl_socket_types.h, 774
PVOscBase_Cleanup
osclbase, 44
PVOscBase_Init
osclbase, 44
PVSCHEDNAMELEN
osclproc, 104
PVSchedulerStopper, 630
OsclExecSchedulerCommonBase, 398
PVSchedulerStopper, 630
PVSchedulerStopper
~PVSchedulerStopper, 630
PVSchedulerStopper, 630
PVSOCK_ERR_BAD_PARAM
oscl_socket_imp_pv.h, 757
PVSOCK_ERR_NOT_IMPLEMENTED
oscl_socket_imp_pv.h, 757
PVSOCK_ERR_NOT_SUPPORTED
oscl_socket_imp_pv.h, 757
PVSOCK_ERR_SERV_NOT_CONNECTED
oscl_socket_imp_pv.h, 757
PVSOCK_ERR_SOCK_NO_SERV
oscl_socket_imp_pv.h, 757
PVSOCK_ERR_SOCK_NOT_CONNECTED
oscl_socket_imp_pv.h, 757
PVSOCK_ERR_SOCK_NOT_OPEN
oscl_socket_imp_pv.h, 757
PVSockBufRecv, 631
PVSockBufRecv, 631
PVSockBufRecv
iLen, 631
iMaxLen, 631
iPtr, 631
PVSockBufRecv, 631
PVSockBufSend, 632
PVSockBufSend, 632
PVSockBufSend
iLen, 632
iPtr, 632
PVSockBufSend, 632
PVThreadContext, 633
OsclExecSchedulerCommonBase, 398
PVThreadContext, 633
PVThreadContext
~PVThreadContext, 633
EnterThreadContext, 633
ExitThreadContext, 633
Id, 633
IsSameThreadContext, 633
OsclActiveObject, 634
OsclCoeActiveScheduler, 634
OsclCoeActiveSchedulerBase, 634

OsclExecScheduler, 634
 OsclExecSchedulerBase, 634
 OsclExecSchedulerCommonBase, 634
 OsclTimerObject, 634
 PVActiveBase, 634
 PVThreadContext, 633
 ThreadHasScheduler, 634

QUE_ITER_BEGIN
 osclproc, 104

QUE_ITER_END
 osclproc, 104

Rand
 OsclRand, 480

Read
 Oscl_File, 182
 OsclAsyncFile, 317
 OsclBinIStreamBigEndian, 326
 OsclFileCache, 401
 OsclNativeFile, 462

read
 OSCL_String, 262
 OSCL_wString, 305

Read_uint16
 OsclBinIStreamBigEndian, 326
 OsclBinIStreamLittleEndian, 329

Read_uint32
 OsclBinIStreamBigEndian, 326
 OsclBinIStreamLittleEndian, 329

Read_uint8
 OsclBinIStream, 323

ReadAsync
 OsclNativeFile, 462

ReadAsyncCancel
 OsclNativeFile, 462

rebalance
 Oscl_Rb_Tree_Base, 245

rebalance_for_erase
 Oscl_Rb_Tree_Base, 245

Recv
 OsclRecvMethod, 489
 OsclRecvRequest, 490
 OsclSocketI, 537
 OsclSocketIBase, 542
 OsclTCPSocket, 569
 OsclTCPSocketI, 573

RecvFrom
 OsclRecvFromMethod, 485
 OsclRecvFromRequest, 487
 OsclSocketI, 537
 OsclSocketIBase, 542
 OsclUDPSocket, 603
 OsclUDPSocketI, 607

RecvFromParam, 635
 RecvFromParam, 635

RecvFromParam
 iAddr, 635
 iBufRecv, 635
 iFlags, 635
 iMultiMaxLen, 635
 iPacketLen, 635
 iPacketSource, 635
 RecvFromParam, 635

RecvFromRequest
 OsclRecvFromMethod, 485

RecvFromSuccess
 OsclSocketI, 537
 OsclSocketIBase, 542

RecvParam, 637
 RecvParam, 637

RecvParam
 iBufRecv, 637
 iFlags, 637
 RecvParam, 637

RecvRequest
 OsclRecvMethod, 489

RecvSuccess
 OsclSocketI, 537
 OsclSocketIBase, 542

red
 Oscl_Rb_Tree_Node_Base, 253

RedBl
 Oscl_Rb_Tree_Node_Base, 253

refcount
 CHHeapRep, 129

reference
 Oscl_Map, 217
 Oscl_Queue, 236
 Oscl_Rb_Tree, 243
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
 Oscl_TAlloc, 281
 Oscl_Vector, 285

Register
 OsclComponentRegistry, 343
 OsclRegistryClient, 508
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514

RegisterForCallback
 OsclExecScheduler, 388
 OsclReadyQ, 484

registerInstance
 OsclSingletonRegistry, 533
 OsclTLSRegistry, 595
 OsclTLSRegistryEx, 596

registerInstanceAndUnlock
 OsclSingletonRegistry, 533
 release
 OsclExclusiveArrayPtr, 381
 OsclExclusivePtr, 384
 OsclExclusivePtrA, 387
 OSCLMemAutoPtr, 436
 RELOCK_MUTEX_ERROR
 OsclProcStatus, 475
 Remove
 OsclDoubleLink, 365
 OsclReadyQ, 484
 OsclSocketServRequestList, 559
 OsclTimerQ, 590
 remove
 OsclPriorityQueue, 471
 OsclPriorityQueueBase, 473
 remove_element
 Oscl_Linked_List, 208
 Oscl_Linked_List_Base, 213
 Oscl_MTLinkedList, 226
 remove_ref
 CHheapRep, 129
 removeAllAllocNodes
 MM_Audit_Imp, 158
 removeAllocNode
 MM_Audit_Imp, 158
 RemoveAppender
 PVLogger, 620
 RemoveFixedCache
 Oscl_File, 182
 RemoveFromScheduler
 OsclActiveObject, 311
 OsclTimerObject, 587
 PVActiveBase, 613
 RemoveRef
 DNSRequestParam, 133
 removeRef
 Oscl_DefAllocWithRefCounter, 173
 OsclMemPoolFixedChunkAllocator, 444
 OsclMemPoolResizableAllocator, 451
 OsclRefCount, 491
 OsclRefCountDA, 494
 OsclRefCountMTDA, 498
 OsclRefCountMTSA, 500
 OsclRefCountSA, 502
 Request
 OsclTimer, 582
 RequestCanceled
 OsclExecSchedulerCommonBase, 395
 RequestDone
 OsclIDNSRequestAO, 363
 OsclSocketRequestAO, 551
 reserve
 Oscl_Queue_Base, 239
 Oscl_Vector_Base, 292
 OsclPriorityQueue, 471
 ReserveSpace
 OsclBinStream, 337
 Reset
 OsclDoubleListBase, 368
 reset
 BufferState, 118
 MM_FailInsertParam, 161
 MM_Stats_t, 164
 OsclMemStatsNode, 457
 ResetLogPerf
 OsclExecSchedulerCommonBase, 395
 Resume
 OsclThread, 576
 ResumeScheduler
 OsclExecSchedulerCommonBase, 395
 retrieveParentTag
 MM_Audit_Imp, 158
 retrieveParentTagLength
 MM_Audit_Imp, 158
 RFC822ToPV8601
 osclbase, 45
 Right
 OsclPtrC, 479
 right
 Oscl_Rb_Tree_Node_Base, 254
 rotate_left
 Oscl_Rb_Tree_Base, 245
 rotate_right
 Oscl_Rb_Tree_Base, 245
 Run
 CallbackTimer, 123
 OsclDNSMethod, 358
 OsclDNSRequestAO, 363
 OsclSocketMethod, 545
 OsclSocketRequestAO, 551
 PVActiveBase, 613
 RunError
 OsclActiveObject, 311
 OsclTimerObject, 587
 PVActiveBase, 613
 RunIfNotReady
 OsclActiveObject, 312
 OsclTimerObject, 587
 RunSchedulerNonBlocking
 OsclExecScheduler, 388
 save_registry
 TLSStorageOps, 655
 second
 Oscl_Pair, 234
 SECONDS

oscibase, 35
Seed
 OsclRand, 480
Seek
 Oscl_File, 182
 OsclAsyncFile, 317
 OsclBinStream, 337
 OsclFileCache, 401
 OsclNativeFile, 463
seek_type
 Oscl_File, 179
SEEKCUR
 Oscl_File, 179
SEEKEND
 Oscl_File, 179
seekFromCurrentPosition
 OsclBinStream, 337
SEEKSET
 Oscl_File, 179
self
 Oscl_Map, 217
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_TagTree::const_iterator, 273
 Oscl_TagTree::iterator, 276
SEM_NOT_SIGNALLED_ERROR
 OsclProcStatus, 475
Send
 OsclSendMethod, 522
 OsclSendRequest, 523
 OsclSocketI, 537
 OsclSocketIBase, 542
 OsclTCPSocket, 569
 OsclTCPSocketI, 573
SendParam, 638
 SendParam, 638
SendParam
 iBufSend, 638
 iFlags, 638
 iXferLen, 638
 SendParam, 638
SendRequest
 OsclSendMethod, 522
SendSuccess
 OsclSocketI, 537
 OsclSocketIBase, 542
SendTo
 OsclSendToMethod, 524
 OsclSendToRequest, 525
 OsclSocketI, 537
 OsclSocketIBase, 542
 OsclUDPSocket, 604
 OsclUDPSocketI, 607
SendToParam, 639
SendToParam, 639
 ~SendToParam, 639
 iAddr, 639
 iBufSend, 639
 iFlags, 639
 iXferLen, 639
 SendToParam, 639
SendToRequest
 OsclSendToMethod, 524
SendToSuccess
 OsclSocketI, 537
 OsclSocketIBase, 542
Serv
 OsclDNSRequestAO, 364
Set
 OsclDoubleRunner, 369
 OsclNameString, 460
 OsclPtr, 476
 OsclPtrC, 479
set
 CHeapRep, 129
 CStackRep, 131
 OSCL_FastString, 176, 177
 OSCL_HeapStringA, 200, 201
 OSCL_wFastString, 295
 OSCL_wHeapStringA, 300
 OsclExclusiveArrayPtr, 381
 OsclExclusivePtr, 384
 OsclExclusivePtrA, 387
 OsclSingleton, 531
 OsclTLS, 591
 OsclTLSEx, 593
 osclutil, 81–83
set_from_ntp_time
 TimeValue, 653
set_from_system_time
 NTPTime, 168
set_int64
 Oscl_Int64_Utils, 203
set_len
 OSCL_String, 262
 OSCL_wString, 306
set_length
 OSCL_FastString, 177
 OSCL_wFastString, 295
set_next
 Oscl_Opaque_Type_Alloc_LL, 231
set_r
 CFastRep, 127
set_rep
 CHeapRep, 129
 OSCL_String, 262, 263
 OSCL_wString, 306

set_to_current_time
 NTPTime, 168
 TimeValue, 653
 set_to_zero
 TimeValue, 654
 set_uint64
 Oscl_Int64_Utils, 203
 set_w
 CFastRep, 127
 set_zulu
 TimeValue, 654
 setAllocNodeFlag
 MM_AllocBlockHdr, 147
 SetAsyncReadBufferSize
 Oscl_File, 182
 SetBusy
 OsclActiveObject, 312
 OsclTimerObject, 587
 SetCacheObserver
 Oscl_File, 183
 setCheckSum
 StrCSumPtrLen, 644
 SetExactFrequency
 OsclTimer, 582
 SetFileHandle
 Oscl_File, 183
 SetFrequency
 OsclTimer, 583
 SetInUse
 OsclAsyncFileBuffer, 319
 SetLength
 OsclPtr, 476
 OsclPtrC, 479
 SetLoggingEnable
 Oscl_File, 183
 SetLogLevel
 PVLogger, 620
 SetLogLevelAndPropagate
 PVLogger, 621
 setMaxSzForNewMemPoolBuffer
 OsclMemPoolResizableAllocator, 451
 SetMulticastTTL
 OsclUDPSocket, 604
 OsclUDPSocketI, 607
 SetNativeAccessMode
 Oscl_File, 183
 SetNativeBufferSize
 Oscl_File, 184
 SetNodeLogLevelExplicit
 PVLoggerRegistry, 628
 SetObserver
 OsclTimer, 583
 SetOffset
 OsclAsyncFileBuffer, 319
 OsclDoubleListBase, 368
 SetOptionToReuseAddress
 OsclIPSocketI, 418
 OsclTCPSocket, 569
 OsclUDPSocket, 604
 SetParent
 PVLogger, 621
 SetPosition
 OsclFileCacheBuffer, 403
 SetPrecedence
 OsclSocketTOS, 563
 SetPriority
 OsclSocketTOS, 563
 OsclThread, 576
 setPtrLen
 StrCSumPtrLen, 644
 StrPtrLen, 647
 WStrPtrLen, 658
 SetPVCacheSize
 Oscl_File, 184
 SetRecvBufferSize
 OsclIPSocketI, 418
 OsclSocketI, 537
 OsclUDPSocket, 605
 setrep_to_char
 OSCL_String, 263
 setrep_to_wide_char
 OSCL_wString, 306
 SetScheduler
 OsclExecSchedulerCommonBase, 395
 SetSize
 Oscl_File, 184
 OsclNativeFile, 463
 SetSockOpt
 OsclSocketI, 538
 SetStatus
 OsclActiveObject, 312
 OsclTimerObject, 587
 SetSummaryStatsLoggingEnable
 Oscl_File, 184
 SetTimestamp
 MediaData, 143
 SetToHead
 OsclDoubleRunner, 369
 SetTOS
 OsclIPSocketI, 418
 OsclTCPSocket, 570
 OsclUDPSocket, 605
 SetToTail
 OsclDoubleRunner, 369
 setWithoutOwnership
 OSCLMemAutoPtr, 436
 ShowStats
 OsclExecSchedulerCommonBase, 395

ShowSummaryStats
 OsclExecSchedulerCommonBase, 395

Shutdown
 OsclShutdownMethod, 529
 OsclShutdownRequest, 530
 OsclSocketI, 538
 OsclSocketIBase, 543
 OsclTCPSocket, 570
 OsclTCPSocketI, 573

ShutdownParam, 640
 ShutdownParam, 640

ShutdownParam
 iHow, 640
 ShutdownParam, 640

ShutdownRequest
 OsclShutdownMethod, 529

Signal
 OsclSemaphore, 521

Size
 Oscl_File, 184
 OsclAsyncFile, 317
 OsclNativeFile, 463

size
 CFastRep, 127
 CHHeapRep, 129
 CStackRep, 131
 MM_AllocBlockHdr, 147
 MM_AllocInfo, 149
 MM_AllocQueryInfo, 151
 Oscl_Map, 220
 Oscl_Queue_Base, 239
 Oscl_Rb_Tree, 243
 Oscl_TagTree, 271
 Oscl_Vector_Base, 292
 OsclPriorityQueue, 471
 StrPtrLen, 647
 WStrPtrLen, 658

size_type
 Oscl_Map, 217
 Oscl_Queue, 236
 Oscl_Rb_Tree, 243
 Oscl_Tag_Base, 267
 Oscl_TagTree, 269
 Oscl_TAlloc, 281

sizeof_T
 Oscl_Linked_List_Base, 214
 Oscl_Queue_Base, 240
 Oscl_Vector_Base, 292

skip_to_line_term
 osclutil, 83

skip_to_whitespace
 osclutil, 83

skip_whitespace
 osclutil, 83

skip_whitespace_and_line_term
 osclutil, 83

SLEEP_ONE_SEC
 osclconfig_util.h, 847

SleepMillisec
 OsclThread, 576

Socket
 OsclSocketI, 538

SocketI
 OsclSocketRequestAO, 551

SocketObserver
 OsclSocketRequestAO, 551

SocketRequestParam, 641
 SocketRequestParam, 642

SocketRequestParam
 iFxn, 642
 SocketRequestParam, 642

SocketServ
 OsclIPSocketI, 418

sort_children
 Oscl_TagTree::Node, 279

specialFragBuffer
 OsclBinStream, 338

Start
 OsclFileStats, 410

Start_on_creation
 oscl_thread.h, 788

StartAsyncRead
 OsclAsyncFileBuffer, 319

StartCancel
 OsclSocketServRequestList, 559

StartMethod
 OsclDNSMethod, 358
 OsclSocketMethod, 546

StartNativeScheduler
 OsclExecSchedulerCommonBase, 395

StartScheduler
 OsclExecSchedulerCommonBase, 395

State
 OsclSocketServIBase, 558

state
 OsclBinStream, 338

state_t
 OsclBinStream, 336

StaticJump
 OsclJump, 420

stats_overhead
 MM_AuditOverheadStats, 160

Status
 OsclActiveObject, 312
 OsclTimerObject, 588

status_t
 BuffFragStatusClass, 122

StatusRef

OsclActiveObject, 312
 OsclTimerObject, 588
StopScheduler
 OsclExecSchedulerCommonBase, 395
Str
 OsclNameString, 460
StrCSumPtrLen, 643
 osclutil, 68
 StrCSumPtrLen, 644
StrCSumPtrLen
 checkSum, 644
 CheckSumType, 644
 getCheckSum, 644
 isCIEquivalentTo, 644
 operator!=, 644
 operator=, 644
 operator==, 644
 setCheckSum, 644
 setPtrLen, 644
 StrCSumPtrLen, 644
StrPtrLen, 646
 osclutil, 68
 StrPtrLen, 647
StrPtrLen
 c_str, 647
 isCIEquivalentTo, 647
 isCIprefixOf, 647
 isLetter, 647
 len, 647
 length, 647
 operator!=, 647
 operator=, 647
 operator==, 647
 ptr, 647
 setPtrLen, 647
 size, 647
 StrPtrLen, 647
Success
 OsclIDNSRequestAO, 364
 OsclRecvFromRequest, 487
 OsclRecvRequest, 490
 OsclSendRequest, 523
 OsclSendToRequest, 525
 OsclSocketRequestAO, 551
SUCCESS_ERROR
 OsclProcStatus, 474
Suspend
 OsclThread, 577
Suspend_on_creation
 oscl_thread.h, 788
SuspendScheduler
 OsclExecSchedulerCommonBase, 396
swap
 Oscl_Opaque_Type_Compare, 232
 OsclPriorityQueue, 471
 SYSTEM_RESOURCES_UNAVAILABLE_-
 ERROR
 OsclProcStatus, 475
tag
 MM_AllocQueryInfo, 151
 MM_Stats_CB, 162
 Oscl_Tag, 264
 Oscl_TagTree::Node, 279
 OsclMemStatsNode, 457
tag_ancestor
 Oscl_Tag_Base, 267
tag_base_type
 Oscl_Tag_Base, 267
 Oscl_TagTree, 269
tag_base_unit
 Oscl_Tag_Base, 267
tag_cmp
 Oscl_Tag_Base, 267
tag_copy
 Oscl_Tag_Base, 267
tag_depth
 Oscl_Tag_Base, 267
tag_len
 Oscl_Tag_Base, 267
tag_type
 Oscl_TagTree, 269
tagAllocator
 Oscl_Tag, 264
TagTree_Allocator
 osclmemory, 58
Tail
 OsclDoubleList, 366
 OsclPriorityList, 468
tail
 Oscl_Linked_List_Base, 214
takeOwnership
 OSCLMemAutoPtr, 437
TDNSRequestParamAllocator
 oscl_dns_param.h, 674
Tell
 Oscl_File, 184
 OsclAsyncFile, 317
 OsclFileCache, 401
 OsclNativeFile, 463
tellg
 OsclBinStream, 337
Terminate
 OsclThread, 577
the_list
 Oscl_MTLLinked_List, 226
THREAD_1_INACTIVE_ERROR
 OsclProcStatus, 474

THREAD_BLOCK_ERROR
 OsclProcStatus, [475](#)
 THREAD_NOT_OWN_MUTEX_ERROR
 OsclProcStatus, [475](#)
 ThreadHasScheduler
 PVThreadContext, [634](#)
 ThreadLogoff
 OsclIPSocketI, [418](#)
 OsclReadyQ, [484](#)
 OsclSocketI, [538](#)
 OsclSocketMethod, [546](#)
 OsclTCPSocket, [570](#)
 OsclTCPSocketI, [573](#)
 OsclUDPSocket, [605](#)
 OsclUDPSocketI, [607](#)
 ThreadLogon
 OsclIPSocketI, [418](#)
 OsclReadyQ, [484](#)
 OsclSocketI, [538](#)
 OsclSocketMethod, [546](#)
 OsclTCPSocket, [570](#)
 OsclTCPSocketI, [573](#)
 OsclUDPSocket, [605](#)
 OsclUDPSocketI, [607](#)
 ThreadPriorityAboveNormal
 oscl_thread.h, [789](#)
 ThreadPriorityBelowNormal
 oscl_thread.h, [788](#)
 ThreadPriorityHighest
 oscl_thread.h, [789](#)
 ThreadPriorityLow
 oscl_thread.h, [788](#)
 ThreadPriorityLowest
 oscl_thread.h, [788](#)
 ThreadPriorityNormal
 oscl_thread.h, [788](#)
 ThreadPriorityTimeCritical
 oscl_thread.h, [789](#)
 TickCount
 OsclTickCount, [579](#)
 TickCountFrequency
 OsclTickCount, [579](#)
 TickCountPeriod
 OsclTickCount, [579](#)
 TicksToMsec
 OsclTickCount, [579](#)
 TimeoutOccurred
 OsclTimerObserver, [589](#)
 TimerBaseElapsed
 CallbackTimerObserver, [125](#)
 OsclTimer, [583](#)
 TimerCallback
 OsclReadyQ, [484](#)
 timestamp
 MediaData, [143](#)
 TimeUnits
 osclbase, [35](#)
 TimeValue, [648](#)
 TimeValue, [650, 651](#)
 TimeValue
 get_ISO8601_str_time, [651](#)
 get_local_time, [651](#)
 get_pv8601_str_time, [651](#)
 get_rfc822_gmtime_str, [651](#)
 get_sec, [652](#)
 get_str_ctime, [652](#)
 get_timeval_ptr, [652](#)
 get_timevalue_in_usec, [652](#)
 get_usec, [652](#)
 is_zero, [653](#)
 is_zulu, [653](#)
 NTPTime, [654](#)
 operator *=, [653](#)
 operator!=, [654](#)
 operator+=, [653](#)
 operator-=, [653](#)
 operator<, [654](#)
 operator<=, [654](#)
 operator=, [653](#)
 operator==, [654](#)
 operator>, [654](#)
 operator>=, [654](#)
 set_from_ntp_time, [653](#)
 set_to_current_time, [653](#)
 set_to_zero, [654](#)
 set_zulu, [654](#)
 TimeValue, [650, 651](#)
 to_msec, [654](#)
 TIpMReq
 osclconfig_io.h, [821](#)
 TLSStorageOps, [655](#)
 TLSStorageOps
 get_registry, [655](#)
 save_registry, [655](#)
 to_msec
 TimeValue, [654](#)
 to_system_time
 NTPTime, [168](#)
 TOO_MANY_FRAGS
 BuffFragStatusClass, [122](#)
 TOO_MANY_THREADS_ERROR
 OsclProcStatus, [474](#)
 Top
 OsclJump, [420](#)
 OsclReadyQ, [484](#)
 OsclTimerQ, [590](#)
 top
 OsclPriorityQueue, [471](#)

TOSCL_StringOp
 osclutil, 69

TOSCL_wStringOp
 osclutil, 69

TOsclBasicLockObject
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846

TOsclConditionObject
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclFileHandle
 oscilio, 96

TOsclFileOffset
 osclconfig_io.h, 821

TOsclFileOffsetInt32
 oscilio, 96

TOsclFileOp
 oscilio, 97

TOsclHostent
 osclconfig_io.h, 821

TOsclMutexObject
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclReady
 osclproc, 105

TOsclSemaphoreObject
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclSockAddr
 osclconfig_io.h, 821

TOsclSockAddrLen
 osclconfig_io.h, 821

TOsclSocket
 osclconfig_io.h, 821

TOsclSocketServStatEvent
 oscl_socket_stats.h, 770

TOsclSocketStatEvent
 oscl_socket_stats.h, 770

TOsclThreadFuncArg
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclThreadFuncPtr
 oscl_thread.h, 788

TOsclThreadFuncRet
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclThreadId
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclThreadObject
 osclconfig_proc_unix_android.h, 834
 osclconfig_proc_unix_common.h, 836

TOsclTlsKey
 oscbase, 35

osclconfig_unix_android.h, 842
osclconfig_unix_common.h, 846

totalbytes
 oscl_fsstat, 194

totalNumAllocs
 MM_Stats_t, 164

totalNumBytes
 MM_Stats_t, 164

TOtherExecStats
 OsclExecSchedulerCommonBase, 393

TPVDNSEvent
 oscilio, 98

TPVDNSFxn
 oscilio, 98

TPVServicePrecedence
 OsclSocketTOS, 562

TPVServicePriority
 OsclSocketTOS, 562

TPVSocketEvent
 oscl_socket_types.h, 774

TPVSocketFxn
 oscl_socket_types.h, 775

TPVSocketOptionLevel
 oscl_socket_types.h, 775

TPVSocketOptionName
 oscl_socket_types.h, 775

TPVSocketShutdown
 oscl_socket_types.h, 775

TPVThreadContext
 osclproc, 105

Trap
 OsclErrorTrapImp, 376

TrapNoTls
 OsclErrorTrapImp, 376

TReadyQueLink, 656
 TReadyQueLink, 656

TReadyQueLink
 iAOPriority, 656
 iIsIn, 656
 iSeqNum, 656
 iTIMEQueuedTicks, 656
 iTIMEToRunTicks, 656
 TReadyQueLink, 656

trim
 OsclMemPoolResizableAllocator, 451

TryLock
 OsclMutex, 459

TryWait
 OsclSemaphore, 521

TSocketServState
 OsclSocketServIBase, 557

TSymbianAccessMode
 Oscl_File, 179

uint
 osclbase, 35
 UINT64
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
 uint64
 osclbase, 35
 UINT64_HILO
 osclconfig_unix_android.h, 842
 osclconfig_unix_common.h, 846
 Unbind
 OsclSharedPtr, 528
 UninstallScheduler
 OsclExecSchedulerCommonBase, 396
 unix_ntp_offset
 osclbase, 45
 Unlock
 OsclLockBase, 423
 OsclMutex, 459
 OsclNullLock, 466
 OsclThreadLock, 578
 UnRegister
 OsclRegistryClient, 509
 OsclRegistryClientImpl, 511
 OsclRegistryServTlsImpl, 514
 Unregister
 OsclComponentRegistry, 343
 UnTrap
 OsclErrorTrapImp, 376
 update
 MM_Stats_t, 164
 UpdateData
 OsclAsyncFileBuffer, 319
 updateEnd
 OsclFileCacheBuffer, 403
 updateStart
 OsclFileCacheBuffer, 403
 updateStatsNode
 MM_Audit_Imp, 158
 updateStatsNodeInFailure
 MM_Audit_Imp, 158
 UpdateTimers
 OsclExecSchedulerCommonBase, 396
 UpdateTimersMsec
 OsclExecSchedulerCommonBase, 396
 upper_bound
 Oscl_Map, 220, 221
 Oscl_Rb_Tree, 243
 usableSize
 OsclFileCacheBuffer, 403
 USEC_PER_SEC
 osclbase, 45
 validate
 MM_Audit_Imp, 158
 OsclPriorityQueue, 472
 validate_all_heap
 MM_Audit_Imp, 158
 validateblock
 OsclMemPoolResizableAllocator, 451
 Value
 OsclAOStatus, 314
 value
 Oscl_Rb_Tree_Node, 252
 Oscl_TagTree::Node, 279
 value_comp
 Oscl_Map, 221
 value_compare
 Oscl_Map::value_compare, 222
 value_type
 Oscl_Map, 217
 Oscl_Queue, 236
 Oscl_Rb_Tree, 243
 Oscl_Rb_Tree_Const_Iterator, 247
 Oscl_Rb_Tree_Iterator, 250
 Oscl_Rb_Tree_Node, 252
 Oscl_TagTree, 269
 Oscl_TAlloc, 281
 Oscl_Vector, 285
 OsclPriorityQueue, 470
 vec
 OsclPriorityQueue, 472
 Wait
 OsclSemaphore, 521
 WAIT_ABANDONED_ERROR
 OsclProcStatus, 475
 WAIT_TIMEOUT_ERROR
 OsclProcStatus, 475
 WaitAndPopTop
 OsclReadyQ, 484
 WaitForReadyAO
 OsclExecSchedulerCommonBase, 396
 WaitForRequestComplete
 OsclReadyQ, 484
 WaitOnRequests
 OsclSocketServRequestList, 559
 Wakeup
 OsclSocketServRequestList, 559
 writable
 CFastRep, 127
 Write
 Oscl_File, 185
 OsclAsyncFile, 317
 OsclFileCache, 401
 OsclNativeFile, 463
 write
 OSCL_String, 263

OSCL_wString, [306](#)
OsclBinOStream, [330](#)

WriteUnsignedLong
 OsclBinOStreamBigEndian, [332](#)
 OsclBinOStreamLittleEndian, [334](#)

WriteUnsignedShort
 OsclBinOStreamBigEndian, [332](#)
 OsclBinOStreamLittleEndian, [334](#)

WriteUpdatesToFile
 OsclFileCacheBuffer, [403](#)

WStrPtrLen, [657](#)
 osclutil, [68](#)
 WStrPtrLen, [658](#)

WStrPtrLen
 c_str, [658](#)
 isCIEquivalentTo, [658](#)
 len, [658](#)
 length, [658](#)
 operator!=, [658](#)
 operator=, [658](#)
 operator==, [658](#)
 ptr, [658](#)
 setPtrLen, [658](#)
 size, [658](#)
 WStrPtrLen, [658](#)

xsubi
 MM_FailInsertParam, [161](#)

Zero
 OsclPtr, [476](#)
 OsclPtrC, [479](#)