ZebOS-XP™ 1.4 MPLS MIBs

For additional information, please contact marketing@ipinfusion.com.

Release Dates

- December 2014 - 1.2
- July 2015 - 1.3
- December 2015 - 1.4

Legend

No - Not Supported. SET/GET handler is not present for the object
LTD - SET/GET handler is present. However cannot SET anything other than default value. Lack of backend feature support
Yes - SET/GET handler is present. 2 or more values can be SET
NA - Not Applicable

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
PW Virtual Connection Table						
1	1	pwIndexNext	read-only	YES	NA	Gives the next PW Index to be used.
pwTable						
2						
	1	pwIndex	not-accessible	NA	NA	Unique index for PW
	2	pwType	read-create	YES	YES	Indicates the emulated service. Supported for ethernet and ethernetTagged (VLAN)
	3	pwOwner	read-create	YES	YES	Protocol which will setup PW. ZebOS supports Manual and pwIdFecSignaling.
	4	pwPsnType	read-create	YES	LTD	PSN over which PW is established. ZebOS supports PSN type MPLS.
	5	pwSetUpPriority	read-create	YES	LTD	Setup Priority for VC . ZebOS doesn't support SetUpPriority. So only the default value of 0 is accepted.
	6	pwHoldingPriority	read-create	YES	LTD	Hold Priority for VC .ZebOS doesn't support SetUpPriority. So only the default value of 0 is accepted.
	8	pwPeerAddrType	read-create	YES	LTD	Peer Address Type. ZebOS supports only IPv4.
	9	pwPeerAddr	read-create	YES	YES	Peer Address. In case pwPeerAddrType is unknown this value should be all zeroes. ZebOS addr type us always ipv4 so it displays the value properly.
	10	pwAttachedPwIndex	read-create	YES	LTD	In case of MS-PW when a PW is attached to another PW instead of a local attachment circuit, this index points to that PW Index. Currently its not supported and only accepts default value of '0'
	11	pwIfIndex	read-create	YES	LTD	If PW is modelled as an interface and part of ifTable this is the interface index of that. ZebOS doesn't support this model so it will only have default value of 0.
	12	pwID	read-create	YES	YES	The PW ID. In case of pwIdFecSignaling this will be signaled using FEC. For Manual case its not signaled but its maintained as an unique id for each PW.
	13	pwLocalGroupID	read-create	YES	YES	The local group ID to which this PW is added. If PW is not part of any group it will be set to 0. Even when maintenance protocol is not in use (vc configured manually) this value will have proper group ID if the PW is part of a group. Though RFC mentions 'SHOULD' be set to 0, we find its a value addition to display even in case of manual. This has no relation to the AGI
	14	pwGroupAttachmentID	read-create	YES	LTD	This is the Attachment Group Identifier (AGI) String. ZebOS doesn't support genFecSignaling (FEC 129) . So this value remains null and cannot be set to any value.
	15	pwLocalAttachmentID	read-create	YES	LTD	This is the Attachment individual Identifier (AAI). ZebOS doesn't support genFecSignaling (FEC 129) . So this value remains null and cannot be set to any value.
	16	pwRemoteAttachmentID	read-create	YES	LTD	This is the Remote Attachment individual Identifier (AAI). ZebOS doesn't support genFecSignaling (FEC 129) . So this value remains null and cannot be set to any value.
	17	pwCwPreference	read-create	YES	YES	This indicates the control word preference TRUE/FALSE. Default value is FALSE. This object can be changed only when PW is not active
	18	pwLocalIfMtu	read-create	YES	YES	This object holds the local MTU size. This needs to be sent over to other end during VC setup by signaling protocol. CAn be changed only when VC is not active. We choose to display the local MTU even if PW is statically configured. If not configured MTU size will have default value of 0. Once the VC is installed it will have default value of 1500 if not configured before.
	19	pwLocalIfString	read-create	YES	LTD	This object holds the Local IF String. ZebOS doesn't support sending IF String in the packet. So this value will remain at the default value of FALSE.
	20	pwLocalCapabAdvert	read-create	YES	YES	This object holds the local capabilities of PW related to OAM. Currently ZebOS supports pwStatusIndication and will allow its configuration. It will enable the OAM for the given PW. If a signaling protocol like LDP is in use this will be advertised to the peer. In case of manual this will set the local capability.
	21	pwRemoteGroupID	read-only	YES	NA	This object holds the remote group ID field for the PW as received by the maintenance protocol (LDP). In ZebOS implementation this displays the interface index of the remote attachment circuit of the pseudowire .
	22	pwCwStatus	read-only	YES	NA	This indicates the status of control word negotiation. ZebOS displays the following status. cwPresent(5) , cwNotPresent(6),
	23	pwRemoteIfMtu	read-only	YES	NA	The remote interface MTU as received from the remote end via maintenance protocol (LDP). Default value will be 0 if this is not avaliable during signaling.
	24	pwRemoteIfString	read-only	YES	NA	Holds the remote IF String as given by maintenance protocol (LDP). This is not supported in ZebOS and always displays NULL.
	25	pwRemoteCapabilities	read-only	YES	NA	Holds the capabilities as received from the remote peer.
	26	pwFragmentCfgSize	read-create	LTD	LTD	If set to a value other than 0 it indicates that fragmentation is desired for this PW. ZebOS doesn't support is currently and will always have the default value of 0.
	27	pwRmtFragCapability	read-only	LTD	NA	The status of the fragmentation based on the local configuration and the peer capabilities as received from the peer when a control protocol is used. ZebOS currently doesn't support this and this value will be by default 0.
	28	pwFcsRetentionCfg	read-create	LTD	YES	The FCS retention capability for the PW. ZebOS currently doesn't support and will be set to fcsRetentionDisable by default.
	29	pwFcsRetentionStatus	read-only	LTD	NA	The FCS retention status for the PW. ZebOS currently doesn't support and will always display fcsRetentionDisabled by default

	30	pwOutboundLabel	read-create	YES	YES	PW label used in the outbound direction (i.e., toward the PSN). It might be set manually if pwOwner is 'manual';otherwise, it is set automatically.If the label is not yet known (signaling in process), the object SHOULD return a value of 0xFFFFFFFF. For manual configuration, this object MAY be changed only if the PW is not active
	31	pwInboundLabel	read-create	YES	YES	PW label used in the inbound direction (i.e., packets received from the PSN). It may be set manually if pwOwner is 'manual'; otherwise, it is set automatically.If the label is not yet known (signaling in process), the object SHOULD return a value of 0xFFFFFFFF. For manual configuration, this object MAY be changed only if the PW is not active
	32	pwName	read-create	YES	YES	The canonical name assigned to the PW. In ZebOS implementation this object cannot be changed at any time.
	33	pwDescr	read-create	YES	YES	Textual string containing information about the PW. If there is no description, this object contains a zero-length string. This object MAY be changed at any time
	34	pwCreateTime	read-only	YES	NA	The value of sysUpTime at the time this PW was created
	35	pwUpTime	read-only	YES	NA	Specifies the time since last change of pwOperStatus to Up(1)
	36	pwLastChange	read-only	YES	NA	Value of sysUpTime at the time the PW entered its current operational state. If the current state was entered prior to the last re-initialization of the local network management subsystem, then this object contains a zero value
	37	pwAdminStatus	read-create	YES	YES	Desired operational status of this PW. ZebOS supports only 'up' and 'down'. This object MAY be set at any time
	38	pwOperStatus	read-only	YES	NA	Indicates the operational status of the PW; it does not reflect the status of the Customer Edge (CE) bound interface. ZebOS displays 'up' and 'down' states.
	39	pwLocalStatus	read-only	YES	NA	Status of the PW in the local node. The various indications in this object SHOULD be available independent of the ability of the local node to advertise them or the remote node to accept these status indications through the control protocol. Remote PW status should be available for static PW if Static PW Status is enabled.
	40	pwRemoteStatusCapable	read-only	YES	NA	Remote node capability to advertise the PW status notification. 'notApplicable' SHOULD be reported for a manually set PW, or if the local node is not capable of accepting the status notification object. 'notYetKnown' SHOULD be reported if the signaling protocol has not yet finished the process of capability determination. remoteCapable and remoteNotcapable SHOULD be reported based on the initial signaling exchange that has determined the remote node capability
	41	pwRemoteStatus	read-only	YES	NA	The status of the PW as was advertised by the remote. If the remote is not capable of advertising the status object, or the local node is not able to acceptthe status object through signaling, then the applicable bit is 'pwNotForwarding', which is set if the remote has sent label release or label withdraw for this PW
	42	pwTimeElapsed	read-only	YES	NA	Number of seconds, including partial seconds, that have elapsed since the beginning of the current interval measurement period
	43	pwValidIntervals	read-only	YES	NA	Number of previous 15-minute intervals for which data was collected
	44	pwRowStatus	read-create	YES	YES	For creating, modifying, and deleting this row.This object MAY be changed at any time
	45	pwStorageType	read-create	YES	LTD	His variable indicates the storage type for this object. ZebOS only supports VOLATILE. (Default is however nonVolatile)
	46	pwOamEnable	read-create	YES	LTD	This object indicates if OAM is enabled for this PW. It always remains enabled .
	47	PwGenIdType	read-create	YES	LTD	Indicates the AGI type if generalized FEC (129) is used for PW signaling or configuration. It SHOULD return the value of zero otherwise. ZebOS currently doesn't claim support for FEC 129 . So this value will be set to 0 by default
	48	pwGenLocalAIIType	read-create	YES	LTD	This object is the type of the local forwarder attachment individual identifier (AII) to be used by this PW if generalized FEC (129) is used for PW signaling or configuration. ZebOS currently doesn't claim support for FEC 129 . So this value will be set to 0 by default
	49	pwGenRemoteAIIType	read-create	YES	LTD	object is the type of the remote forwarder attachment individual identifier (AII) to be used by this PW if generalized FEC (129) is used for PW signaling or configuration. ZebOS currently doesn't claim support for FEC 129 . So this value will be set to 0 by default
pwPerfCurrentTable						
3	1	pwPerfCurrentInHCPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	2	pwPerfCurrentInHCBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	3	pwPerfCurrentOutHCPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	4	pwPerfCurrentOutHCBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	5	pwPerfCurrentInPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	6	pwPerfCurrentInBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	7	pwPerfCurrentOutPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	8	pwPerfCurrentOutBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
pwPerfIntervalTable						
4	1	pwPerfIntervalNumber	not-accessible	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	2	pwPerfIntervalValidData	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	3	pwPerfIntervalTimeElapsed	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	4	pwPerfIntervalInHCPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	5	pwPerfIntervalInHCBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	6	pwPerfIntervalOutHCPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	7	pwPerfIntervalOutHCBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	8	pwPerfIntervalInPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	9	pwPerfIntervalInBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this

	10	pwPerfIntervalOutPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	11	pwPerfIntervalOutBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this

pwPerf1DayIntervalTable						
5	1	pwPerf1DayIntervalNumber	not-accessible	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	2	pwPerf1DayIntervalValidData	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	3	pwPerf1DayIntervalTimeElapsed	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	4	pwPerf1DayIntervalInHCPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	5	pwPerf1DayIntervalInHCBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	6	pwPerf1DayIntervalOutHCPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
	7	pwPerf1DayIntervalOutHCBytes	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
scalar						
6	1	pwPerfTotalErrorPackets	read-only	NO	NA	Traffic parameters. ZebOS currently doesn't have support for this
pwIndexMappingTable						
7	1	pwIndexMappingPwType	not-accessible	NA	NA	PW type (indicates the service) of this PW
	2	pwIndexMappingPwID	not-accessible	NA	NA	PW ID of this PW. Zero if the PW is configured manually
	3	pwIndexMappingPeerAddrType	not-accessible	NA	NA	IP address type of the peer node.
	4	pwIndexMappingPeerAddr	not-accessible	NA	NA	IP address of the peer node
	5	pwIndexMappingPwIndex	read-only	NO	NA	The value that represents the PW in the pwTable
pwPeerMappingTable						
8	1	pwPeerMappingPeerAddrType	not-accessible	NA	NA	IP address type of the peer node
	2	pwPeerMappingPeerAddr	not-accessible	NA	NA	"IP address of the peer node."
	3	pwPeerMappingPwType	not-accessible	NA	NA	PW type (indicates the emulated service) of this PW
	4	pwPeerMappingPwID	not-accessible	NA	NA	PW ID of this PW. Zero if the PW is configured manually
	5	pwPeerMappingPwIndex	read-only	NO	NA	The value that represents the PW in the pwTable
SCALARS						
9	1	pwUpDownNotifEnable	read-write	YES	YES	If this object is set to true(1), then it enables the emission of pwUp and pwDown notifications; otherwise, these notifications are not emitted.
10	1	pwDeletedNotifEnable	read-write	YES	YES	If this object is set to true(1), then it enables the emission of pwDeleted notification; otherwise, this notification is not emitted.
11		pwNotifRate	read-write	YES	YES	This object defines the maximum number of PW notifications that can be emitted from the device per second.
pwGenFecIndexMappingTable						
12	1	pwGenFecIndexMappingAGIType	not-accessible	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
	2	pwGenFecIndexMappingAGI	not-accessible	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
	3	pwGenFecIndexMappingAGI	not-accessible	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
	4	pwGenFecIndexMappingLocalAII	not-accessible	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
	5	pwGenFecIndexMappingRemoteAIIType	not-accessible	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
	6	pwGenFecIndexMappingRemoteAII	not-accessible	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
	7	pwGenFecIndexMappingPwIndex	read-only	NO	NO	ZebOS doesn't currently support Generalized FEC. (FEC 129)
NOTIFICATIONS						
pwDown NOTIFICATION-TYPE OBJECTS { pwOperStatus, --start of range pwOperStatus --end of range			yes			
pwUp NOTIFICATION-TYPE OBJECTS { pwOperStatus, --start of range pwOperStatus --end of range }			yes			
pwDeleted NOTIFICATION-TYPE OBJECTS { pwType, pwID, pwPeerAddrType, pwPeerAddr }			yes			

ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
pwMplsTable					
	Description: This table holds PSN related parameters. It will be created by default when pwTable (RFC 5601) is activated.				
1	pwMplsMplsType	read-write	YES	YES	This indicates the underlying tunnel types. For 'mplsTE' only MPLS-TE tunnels must be used. If 'mplsNonTE is specified then LDP and manual tunnels can be used. When there is no outer tunnel then 'pwonly' needs to be specified. However ZebOS doesn't support 'pwonly'. Default is Non-TE. While changing the PSN from non-TE to TE, the adminstrator needs to specify the tunnel ID for TE tunnel. For Non-TE case if XC index is not specified it will take up any XC with the same FEC. If specified (Static PSN) the XC index will be matched and picked up.
2	pwMplsExpBitsMode	read-write	YES	LTD	This object is set by the operator to determine the PW shim label EXP bits. The value of outerTunnel(1) is used where there is an outer tunnel -- pwMplsMplsType equals to mplsTe(0) or mplsNonTe(1). Note that in this case, there is no need to mark the PW label with the EXP bits, since the PW label is not visible to the intermediate nodes. ZebOS doesn't support other modes namely specifiedValue(2) and serviceDependant(3). The default value is outerTunnel.
3	pwMplsExpBits	read-write	YES	LTD	This object is set when pwMplsExpBitsMode is set to specifiedValue(2). ZebOS doesn't support this and so this value is set to 0.
4	pwMplsTtl	read-write	YES	LTD	The object is set by the operator to indicate the PW TTL value to be used on the PW shim label. ZebOS doesn't support this and so the value is set to default value of 2.
5	pwMplsLocalLdpID	read-write	YES	NO	LDP identifier of the LDP entity that creates this PW in the local node. As the PW labels are always set from the per-platform label space, the last two octets in the LDP ID MUST always both be ZebOs. In ZebOS currently this value is autoconfigured and cannot be changed, ie its readonly.
6	pwMplsLocalLdpEntityIndex	read-write	YES	NO	The local node LDP Entity Index of the LDP entity creating this PW. In ZebOS currently this value is autoconfigured and cannot be changed, ie its readonly.
7	pwMplsPeerLdpID	read-only	YES	NA	The peer LDP identifier of the LDP session. This object SHOULD return the value zero if LDP is not used or if the value is not yet known
8	pwMplsStorageType	read-write	YES	LTD	This variable indicates the storage type for this row. ZebOS only supports Volatile though default in is nonVolatile.
pwMplsOutboundTable					
		Description: PSN related parameters. It will be created by default when pwTable (RFC 5601) is activated.			
1	pwMplsOutboundLsrXcIndex	read-write	YES	YES	Applicable only for mplsNonTE case where this object returns the XC index. The XC index can be set only if the PSN is static. When LDP is used this object will be read only. For TE case this should have value of 0.
2	pwMplsOutboundTunnelIndex	read-write	YES	YES	Applicable only for mplsTE case where this object returns the Tunnel Index. Also it can be set a TE tunnel .For NonTE case this will value 0.
3	pwMplsOutboundTunnelInstance	read-only	YES	NA	Applicable only for mplsTE case. It returns the actual tunnel instance that is forwarding the traffic. ZebOS currently doesn't support this and is therefore set to default value of 0.
4	pwMplsOutboundTunnelLclLSR	read-write	YES	NO	This object is applicable if the pwMplsMplsType mplsTe(0) bit is set, and MUST return a value of all zeros otherwise. It is part of the set of indexes for the outbound tunnel.The operator sets this object to represent the desired tunnel head-end toward the peer for carrying the PW traffic. In ZebOS the operator just needs to give the TunnelIndex and thus this parameter is not used.
5	pwMplsOutboundTunnelPeerLSR	read-write	YES	NO	This object is applicable if the pwMplsMplsType mplsTe(0) bit is set, and MUST return a value of all zeros otherwise. It is part of the set of indexes for the outbound tunnel.The operator sets this object to represent the desired tunnel head-end toward the peer for carrying the PW traffic In ZebOS the operator just needs to give the TunnelIndex and thus this parameter is not used.
6	pwMplsOutboundIfIndex	read-write	YES	LTD	This object is applicable if the pwMplsMplsType pwOnly(0) bit is set, and MUST return a value of zero otherwise.The operator configures the ifIndex of the outbound port in this case. ZebOS doesn't support pwOnly so this will always be set to value 0.
7	pwMplsOutboundTunnelTypeInUse	read-only	YES	NA	This object indicates the current tunnel that is carrying the PW traffic.The value of notYetKnown(1) should be used if the agent is currently unable to determine which tunnel or interface is carrying the PW, for example, because both tunnels are in operational status down.

pwMplsInboundTable					
1	pwMplsInboundXcIndex	read-only	YES	NA	XC index representing this PW in the inbound direction. It MUST return the value zero if the information is not yet known.
pwMplsNonTeMappingTable					
1	pwMplsNonTeMappingDirection	not-accessible	NA	NA	Not Accessible
2	pwMplsNonTeMappingXcIndex	not-accessible	NA	NA	Not Accessible
3	pwMplsNonTeMappingIfIndex	not-accessible	NA	NA	Not Accessible
4	pwMplsNonTeMappingPwIndex	read-only	YES	NA	Value that represents the PW in the pwTable
			pwMplsTeMappingTable		
1	pwMplsTeMappingTunnelIndex	not-accessible	NA	NA	Not-Accessible
2	pwMplsTeMappingTunnelInstance	not-accessible	NA	NA	Not-Accessible
3	pwMplsTeMappingTunnelPeerLsrID	not-accessible	NA	NA	Not-Accessible
4	pwMplsTeMappingTunnelLocalLsrID	not-accessible	NA	NA	Not-Accessible
5	pwMplsTeMappingPwIndex	read-only	YES	NA	object returns the value that represents the PW in the pwTable

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
pwEnetTable						
1	1	pwEnetPwInstance	not-accessible	NA	NA	Index to uniquely identify the individual row.
	2	pwEnetPwVlan	read-create	YES	YES	object defines the (service-delimiting) VLAN field value on the PW. The value 4095 MUST be used if the object is not applicable, for example, when mapping all packets from an Ethernet port to this PW (raw mode). The value 0 MUST be set to indicate untagged frames (from the PW point of view), i.e., when pwEnetVlanMode equals 'noChange' and pwEnetPortVlan equals 0. When pwEnetVlanMode equals 'noChange' this value has the same value as pwEnetPortVlan.
	3	pwEnetVlanMode	read-create	YES	YES	This object indicates the mode of VLAN handling between the port and the PW encapsulation. ZebOS supports "noChange(2)" in which pwEnetPWVlan will have the same value as pwEnetPortVlan and portBased.
	4	pwEnetPortVlan	read-create	YES	YES	This object defines if the mapping between the original port (physical port or VPLS virtual port) to the PW is VLAN based or not. In case of VLAN mapping, this object indicates the VLAN value on the original port. The value of '4095' MUST be used if the whole original port traffic is mapped to the same PW. This object MUST be equal to pwEnetPwVlan if pwEnetVlanMode equals 'noChange' which is what ZebOS supports. The value 0 indicates that packets without a VLAN field (i.e., untagged frames) on the port are associated to this PW. This allows the same behavior as assigning 'Default VLAN' to untagged frames
	5	pwEnetPortIfIndex	read-create	YES	YES	This object is used to specify the ifIndex of the Ethernet port associated with this PW for point-to-point Ethernet service, or the ifIndex of the virtual interface of the VPLS instance associated with the PW if the service is VPLS. Two rows in this table can point to the same ifIndex only if there is no overlap of VLAN values specified in pwEnetPortVlan that are associated with this port. A value of zero indicates that association to an ifIndex is not yet known
	6	pwEnetPwIfIndex	read-create	YES	LTD	If the PW is modeled as an ifIndex in the ifTable, this object indicates the value of the ifIndex representing the Ethernet PW on the PSN side in the Etherlike-MIB. Note that this value may be different from the value of pwIfIndex that represents the ifIndex of the PW for ifType 'pw. ZebOS doesnt support this model hence value will be set to 0.
	7	pwEnetRowStatus	read-create	YES	YES	This object enables creating, deleting, and modifying this row
	8	pwEnetStorageType	read-create	YES	LTD	object indicates the storage type of this row. ZebOS only supports Volatile however default is non-volatile
pwEnetStatsTable						
2	1	pwEnetStatsIllegalVlan	read-only	NO	NA	Traffic parameter. Currently not supported in ZebOS
	2	pwEnetStatsIllegalLength	read-only	NO	NA	Traffic parameter. Currently not supported in ZebOS

ENTRY NO	OBJECT NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
mplsLdpLsrObjects						
	1	mplsldplsrid	read-only	YES	NA	The Label Switching Routers Identifier.
	2	mplsLdpLsrLoopDetectionCapable	read-only	YES	NA	A indication of whether this Label Switching Router supports loop detection
mplsLdpEntityObjects						
	1	mplsLdpEntityLastChange	read-only	YES	NA	The value of sysUpTime at the most recent change in value of any objects in the mplsLdpEntityTable
	2	mplsLdpEntityIndexNext	read-only	YES	NA	Value to be used for mplsLdpEntityIndex when creating entries in the mplsLdpEntityTable.
mplsLDPEntity Table						
	1	mplsLdpEntityLdpId	not-accessible	NA	NA	The LDP identifier.
	2	mplsLdpEntityIndex	not-accessible	NA	NA	This index is used as a secondary index to uniquely identify this row.One way to use this index is to give this the value of ifIndex.
	3	mplsLdpEntityProtocolVersion	read-create	YES	YES	The version number of the LDP protocol which will be used in the session initialization message.
	4	mplsLdpEntityAdminStatus	read-create	YES	YES	The administrative status of this LDP Entity.
	5	mplsLdpEntityOperStatus	read-only	YES	NA	The operational status of this LDP Entity
	6	mplsLdpEntityTcpPort	read-create	YES	LTD	The TCP Port for LDP. The default value is the well-known value of this port.
	7	mplsLdpEntityUdpDscPort	read-create	YES	LTD	The UDP Discovery Port for LDP. The default value is the well-known value for this port.
	8	mplsLdpEntityMaxPduLength	read-create	YES	YES	The maximum PDU Length that is sent in the Common Session Parameters of an Initialization Message.
	9	mplsLdpEntityKeepAliveHoldTimer	read-create	YES	YES	The 16-bit integer value which is the proposed keep alive hold timer for this LDP Entity.
	10	mplsLdpEntityHelloHoldTimer	read-create	YES	YES	The 16-bit integer value which is the proposed Hello hold timer for this LDP Entity.
	11	mplsLdpEntityInitSessionThreshold	read-create	YES	YES	
	12	mplsLdpEntityLabelDistMethod	read-create	YES	YES	For any given LDP session, the method of label distribution must be specified.
	13	mplsLdpEntityLabelRetentionMode	read-create	YES	YES	The LDP Entity can be configured to use either conservative or liberal label retention mode.
	14	mplsLdpEntityPathVectorLimit	read-create	YES	YES	If the value of this object is 0 (zero) then Loop Detection for Path Vectors is disabled.
	15	mplsLdpEntityHopCountLimit	read-create	YES	YES	If the value of this object is 0 (zero), then Loop Detection using Hop Counters is disabled.
	16	mplsLdpEntityTransportAddrKind	read-create	YES	LTD	This specifies whether the loopback or interface address is to be used as the transport address in the transport address TLV of the hello message.
	17	mplsLdpEntityTargetPeer	read-create	YES	YES	If this LDP entity uses targeted peer then set this to true.
	18	mplsLdpEntityTargetPeerAddrType	read-create	YES	LTD	The type of the internetwork layer address used for the Extended Discovery.
	19	mplsLdpEntityTargetPeerAddr	read-create	YES	YES	The value of the internetwork layer address used for the Extended Discovery.
	20	mplsLdpEntityLabelType	read-create	YES	YES	Specifies the optional parameters for the LDP Initialization Message.
	21	mplsLdpEntityDiscontinuityTime	read-only	YES	NA	The value of sysUpTime on the most recent occasion at which any one or more of this entity's counters suffered a discontinuity.
	22	mplsLdpEntityStorageType	read-create	YES	LTD	The storage type for this conceptual row. Conceptual rows having the value 'permanent(4)' need not allow write-access to any columnar objects in the row.
	23	mplsLdpEntityRowStatus	read-create	YES	YES	The status of this conceptual row.
mplsLdpEntityStatsTable						
						statistical information related to failed attempts to establish sessions.
	1	mplsLdpEntityStatsSessionAttempts	read-only	YES	NA	this counter counts the number of session initializations that failed.
	2	mplsLdpEntityStatsSessionRejectedNoHelloErrors	read-only	YES	NA	A count of the Session Rejected/No Hello Error Notification Messages sent or received by this LDP Entity.
	3	mplsLdpEntityStatsSessionRejectedAdErrors	read-only	YES	NA	A count of the Session Rejected/Parameters Advertisement Mode Error Notification Messages sent or received by this LDP Entity.
	4	mplsLdpEntityStatsSessionRejectedMaxPduErrors	read-only	YES	NA	A count of the Session Rejected/Parameters Max Pdu Length Error Notification Messages sent or received by this LDP Entity.
	5	mplsLdpEntityStatsSessionRejectedLRErrors	read-only	YES	NA	A count of the Session Rejected/Parameters Label Range Notification Messages sent or received by this LDP Entity.
	6	mplsLdpEntityStatsBadLdpIdentifierErrors	read-only	YES	NA	This object counts the number of Bad LDP Identifier Fatal Errors detected by the session(s) (past and present) associated with this LDP Entity.
	7	mplsLdpEntityStatsBadPduLengthErrors	read-only	YES	NA	This object counts the number of Bad PDU Length Fatal Errors detected by the session(s) (past and present) associated with this LDP Entity.
	8	mplsLdpEntityStatsBadMessageLengthErrors	read-only	YES	NA	This object counts the number of Bad Message Length Fatal Errors detected by the session(s) (past and present) associated with this LDP Entity.
	9	mplsLdpEntityStatsBadTlvLengthErrors	read-only	YES	NA	This object counts the number of Bad TLV Length Fatal Errors detected by the session(s) (past and present) associated with this LDP Entity.

ENTRY NO	OBJECT NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
	10	mplsLdpEntityStatsMalformedTlvValueErrors	read-only	YES	NA	This object counts the number of Malformed TLV Value Fatal Errors detected by the session(s) (past and present) associated with this LDP Entity.
	11	mplsLdpEntityStatsKeepAliveTimerExpErrors	read-only	YES	NA	This object counts the number of Session Keep Alive Timer Expired Errors detected by the session(s) (past and present) associated with this LDP Entity.
	12	mplsLdpEntityStatsShutdownReceivedNotifications	read-only	YES	NA	This object counts the number of Shutdown Notifications received related to session(s) (past and present) associated with this LDP Entity.
	13	mplsLdpEntityStatsShutdownSentNotifications	read-only	YES	NA	This object counts the number of Shutdown Notfications sent related to session(s) (past and present) associated with this LDP Entity.
mplsLdpSessionObjects						
		mplsLdpPeerLastChange	read-only	YES	NA	The value of sysUpTime at the time of the most recent addition or deletion to/from the mplsLdpPeerTable/mplsLdpSessionTable

ENTRY NO	OBJECT NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
mplsLdpPeerTable						
	1	mplsLdpPeerLdpId	not-accessible	NA	NA	The LDP identifier of this LDP Peer.
	2	mplsLdpPeerLabelDistMethod	read-only	YES	NA	For any given LDP session, the method of label distribution must be specified
	3	mplsLdpPeerPathVectorLimit	read-only	YES	NA	If the value of this object is 0 (zero) then Loop Dection for Path Vectors for this Peer is disabled.
	4	mplsLdpPeerTransportAddrType	read-only	YES	NA	The type of the Internet address for the mplsLdpPeerTransportAddr object.
	5	mplsLdpPeerTransportAddr	read-only	YES	NA	The Internet address advertised by the peer in the Hello Message or the Hello source address.
mplsLdpSessionTable						
	1	mplsLdpSessionStateLastChange	read-only	YES	NA	The value of sysUpTime at the time this Session entered its current state as denoted by the mplsLdpSessionState object.
	2	mplsLdpSessionState	read-only	YES	NA	The current state of the session, all of the states 1 to 5 are based on the state machine for session negotiation behavior
	3	mplsLdpSessionRole	read-only	YES	NA	During session establishment the LSR/LER takes either the active role or the passive role based on address comparisons.
	4	mplsLdpSessionProtocolVersion	read-only	YES	NA	The version of the LDP Protocol which this session is using.
	5	mplsLdpSessionKeepAliveHoldTimeRem	read-only	YES	NA	The keep alive hold time remaining for this session.
	6	mplsLdpSessionKeepAliveTime	read-only	YES	NA	The negotiated KeepAlive Time which represents the amount of seconds between keep alive messages.
	7	mplsLdpSessionMaxPduLength	read-only	YES	NA	The value of maximum allowable length for LDP PDUs for this session.
	8	mplsLdpSessionDiscontinuityTime	read-only	YES	NA	The value of sysUpTime on the most recent occasion at which any one or more of this session's counters suffered a discontinuity.
mplsLdpSessionStatsTable						
	1	mplsLdpSessionStatsUnknownMsTypeErrors	read-only	YES	NA	This object counts the number of Unknown Message Type Errors detected by this LSR/LER during this session.
	2	mplsLdpSessionStatsUnknownTlvErrors	read-only	YES	NA	This object counts the number of Unknown TLV Errors detected by this LSR/LER during this session.
mplsLdpHelloAdjacencyTable						
	1	mplsLdpHelloAdjacencyIndex	not-accessible	NA	NA	An identifier for this specific adjacency
	2	mplsLdpHelloAdjacencyHoldTimeRem	read-only	YES	NA	If the value of this object is 65535, this means that the hold time is infinite (i.e., wait forever).
	3	mplsLdpHelloAdjacencyHoldTime	read-only	YES	NA	The Hello hold time which is negotiated between the Entity and the Peer.
	4	mplsLdpHelloAdjacencyType	read-only	YES	NA	This adjacency is the result of a 'link' hello if the value of this object is link(1). Otherwise, it is a result of a 'targeted' hello, targeted(2).
mplsInSegmentLdpLspTable						
	1	mplsInSegmentLdpLspIndex	not-accessible	NA	NA	This contains the same value as the mplsInSegmentIndex in the MPLS-LSR-STD-MIB's mplsInSegmentTable.
	2	mplsInSegmentLdpLspLabelType	read-only	NO	NA	The Layer 2 Label Type.
	3	mplsInSegmentLdpLspType	read-only	NO	NA	The type of LSP connection.
mplsOutSegmentLdpLspTable						
	1	mplsOutSegmentLdpLspIndex	not-accessible	NA	NA	This contains the same value as the mplsOutSegmentIndex in the MPLS-LSR-STD-MIB's mplsOutSegmentTable.
	2	mplsOutSegmentLdpLspLabelType	read-only	YES	NA	The Layer 2 Label Type.
	3	mplsOutSegmentLdpLspType	read-only	YES	NA	The type of LSP connection.
mplsFecObjects						
	1	mplsFecLastChange	read-only	YES	NA	The value of sysUpTime at the time of the most recent addition/deletion of an entry to/from the mplsLdpFectTable
	2	mplsFecIndexNext	read-only	YES	NA	This object contains an appropriate value to be used for mplsFecIndex when creating entries in the mplsFecTable
mplsFecTable						
	1	mplsFecIndex	not-accessible	NA	NA	The index which uniquely identifies this entry.
	2	mplsFecType	read-write	YES	NO	The type of the FEC.
	3	mplsFecAddrType	read-write	YES	NO	The value of this object is the type of the Interner address.
	4	mplsFecAddr	read-write	YES	NO	The value of this object is interpreted based on the value of the 'mplsFecAddrType' object.
	5	mplsFecAddrPrefixLength	read-write	YES	NO	If the value of the 'mplsFecType' is 'hostAddress(2)' then this object is undefined.
	6	mplsFecStorageType	read-write	YES	NO	The storage type for this conceptual row.
	7	mplsFecRowStatus	read-write	YES	NO	The status of this conceptual row.
mplsLdpLspFecLastChange						
		mplsLdpLspFecLastChange	read-only	YES	NA	The value of sysUpTime at the time of the most recent addition/deletion of an entry to/from the mplsLdpLspFecTable
mplsLdpLspFecTable						
	1	mplsLdpLspFecSegment	not-accessible	NA	NA	It contains either inSegment(1) or outSegment(2) .

ENTRY NO	OBJECT NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
	2	mplsLdpLspFecSegmentIndex	not-accessible	NA	NA	This index is interpretted by using the value of the mplsLdpLspFecSegment.
	3	mplsLdpLspFecIndex	not-accessible	NA	NA	The value of this index is the same as the value of the mplsFecIndex that denotes the FEC associated with this Session.
	4	mplsLdpLspFecStorageType	read-write	YES	NO	The storage type for this conceptual row.
	5	mplsLdpLspFecRowStatus	read-write	YES	NO	The status of this conceptual row
mplsLdpSessionPeerAddrTable						
	1	mplsLdpSessionPeerAddrIndex	not-accessible	NA	NA	An index which uniquely identifies this entry within a given session.
	2	mplsLdpSessionPeerNextHopAddr Type	read-only	YES	NA	The internetwork layer address type of this Next Hop Address as specified in the Label Address Message associated with this Session.
	3	mplsLdpSessionPeerNextHopAddr	read-only	YES	NA	The next hop address

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
mplsTeScalars						
	1	mplsTunnelConfigured	read-only	YES	NA	The number of tunnels configured on this device. A tunnel is considered configured if the mplsTunnelRowStatus is active(1)
	2	mplsTunnelActive	read-only	YES	NA	The number of tunnels active on this device. A tunnel is considered active if the mplsTunnelOperStatus is up(1)
	3	mplsTunnelTeDistProto	read-only	YES	NA	The traffic engineering distribution protocol(s) used by this LSR. Note that an LSR may support more than one distribution protocol simultaneously.
	4	mplsTunnelMaxHops	read-only	YES	NA	The maximum number of hops that can be specified for a tunnel on this device.
	5	mplsTunnelNotificationMaxRate	read-only	YES	NA	This indicates the maximum number of notifications issued per second. If events occur more rapidly, the implementation may simply fail to emit these notifications during that period, or may queue them until an appropriate time.
mplsTunnelTable						
1	1	mplsTunnelIndex	not-accessible	NA	NA	Uniquely identifies a set of tunnel instances between a pair of ingress and egress LSRs.
	2	mplsTunnelInstance	not-accessible	NA	NA	Uniquely identifies a particular instance of a tunnel.
	3	mplsTunnelIngressLSRId	not-accessible	NA	NA	Identity of the ingress LSR
	4	mplsTunnelEgressLSRId	not-accessible	NA	NA	Identity of the egress LSR
	5	mplsTunnelName	read-create	YES	YES	The canonical name assigned to the tunnel. It is showing some extra character after the assigned name.
	6	mplsTunnelDescr	read-create	YES	YES	A textual string containing information about the tunnel. showing some extra character after the assigned name.
	7	mplsTunnelIsIf	read-create	YES	NA	Not supported in ZebOS backend.
	8	mplsTunnelIfIndex	read-only	YES	NA	Not supported in ZebOS backend.
	9	mplsTunnelOwner	read-only	YES	NA	Retrieves the entity that is responsible for managing tunnel.
	10	mplsTunnelRole	read-create	YES	LTD	This value signifies the role that this tunnel instnace represesnts. It is by default takes head(1).
	11	mplsTunnelXCPointer	read-create	YES	NO	This variable points to a row in the mplsXCTable. In XCTable, if I do the GET Operation after creation, NSM awas getting crashed.
	12	mplsTunnelSignallingProto	read-create	YES	LTD	It retrieves "RSVP" by default.
	13	mplsTunnelSetupPrio	read-create	YES	YES	Indicates the setup priority of this tunnel.
	14	mplsTunnelHoldingPrio	read-create	YES	LTD	Indicates the hold priority of this tunnel.
	15	mplsTunnelSessionAttributes	read-create	YES	NO	This bit mask indicates optional session values for tunnel. It is by default takes isPersistent ans isPinned.
	16	mplsTunnelLocalProtectInUse	read-create	YES	LTD	Indicates that the local repair mechanism is in use to maintain tunnel.
	17	mplsTunnelResourcePointer	read-create	YES	YES	Points to an entry in resource Table. The offset value during set operation was not correct and it is returning ASCII value of the number.
	18	mplsTunnelPrimaryInstance	read-only	YES	NA	Specifies the instance index of the primary instance of this tunnel.
	19	mplsTunnelInstancePriority	read-create	YES	NO	Indicates the priority of the instance of a given tunnel.
	20	mplsTunnelHopTableIndex	read-create	YES	YES	It points to an index of an entry in HopTable. Many tunnels can be mapped to same entry in HopTable
	21	mplsTunnelPathInUse	read-create	YES	NO	It retreives the index of any entry in HopTable tunnel is using for transmission.
	22	mplsTunnelARHopTableIndex	read-only	YES	NA	ARHopTable is not implemented. So it retreives 0 be default.
	23	mplsTunnelCHopTableIndex	read-only	YES	NA	CHopTable is not implemented. So it retreives 0 be default.
	24	mplsTunnelIncludeAnyAffinity	read-create	YES	NO	Both Set and Get for this object is working fine.
	25	mplsTunnelIncludeAllAffinity	read-create	YES	NO	Both Set and Get for this object is working fine.
	26	mplsTunnelExcludeAnyAffinity	read-create	YES	NO	Both Set and Get for this object is working fine.
	27	mplsTunnelTotalUpTime	read-only	YES	NA	represents the aggregate up time for all instances of this tunnel.
	28	mplsTunnelInstanceUpTime	read-only	YES	NA	identifies the total time that this tunnel instance's operStatus has been Up.
	29	mplsTunnelPrimaryUpTime	read-only	YES	NA	Specifies the total time the primary instance of this tunnel has been active.
	30	mplsTunnelPathChanges	read-only	YES	NA	Specifies the number of times the actual path for this tunnel instance has changed.
	31	mplsTunnelLastPathChange	read-only	YES	NA	Specifies the time since the last change to the ctual path for this tunnel instance.
	32	mplsTunnelCreationTime	read-only	YES	NA	Specifies the value of SysUpTime when the first instance of this tunnel came into existence.
	33	mplsTunnelStateTransitions	read-only	YES	NA	Specifies the number of times the state of this tunnel instance has changed.
	34	mplsTunnelAdminStatus	read-write	YES	LTD	"Indicates the desired admin status of this tunnel."
	35	mplsTunnelOperStatus	read-only	YES	NA	Indicates the desired operational status of the tunnel.
	36	mplsTunnelRowStatus	read-create	YES	YES	Get Operation on this object was based on whether the session is Up or Not. If the session is Up, it was retreiving Active otherwise NotInService. It should be retreived based on Actual value of object.
	37	mplsTunnelStorageType	read-create	YES	YES	The storage type for this tunnel entry. It is by default "volatile".
mplsTunnelHopListIndexNext						
		mplsTunnelHopListIndexNext	read-only	YES	NA	This object contains an appropriate value to be used for mplsTunnelHopListIndex when creating entries in the mplsTunnelHopTable
mplsTunnelHopTable						
	2	mplsTunnelHopListIndex	not-accessible	NA	NA	Primary index identifying a particular explicit route object.
	3	mplsTunnelHopPathOptionIndex	not-accessible	NA	NA	Secondary index into this table identifying a particular group of hops.
	4	mplsTunnelHopIndex	not-accessible	NA	NA	Tertiary index into this table identifying a particular hop.
	5	mplsTunnelHopAddrType	read-create	YES	LTD	The Hop Address Type of this tunnel hop. Default value is Ipv4.
	6	mplsTunnelHopIpAddr	read-create	YES	YES	Get anf GetNext operation on mplsTunnelHopIpAddr was retreiving from invalied location. Now it is set to proper location
	7	mplsTunnelHopIpPrefixLen	read-create	YES	LTD	If mplsTunnelHopAddrType is set to ipv4(1) or ipv6(2), then this value will contain an appropriate prefix length for the IP address in object mplsTunnelHopIpAddr.

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
	8	mplsTunnelHopAsNumber	read-create	YES	NO	Set for this object is not supported at back end.
	9	mplsTunnelHopAddrUnnum	read-create	YES	NO	Set for this object is not supported at back end.
	10	mplsTunnelHopLspId	read-create	YES	NO	Set for this object is not supported at back end.
	11	mplsTunnelHopType	read-create	YES	YES	Denotes whether this tunnel hop is routed in a strict or loose fashion. The value of this object has no meaning if the mplsTunnelHopInclude object is set to 'false'."
	12	mplsTunnelHopInclude	read-create	YES	LTD	Denotes whether the particular hop is included or not. It is set to default value "include" always.
	13	mplsTunnelHopPathOptionName	read-create	YES	YES	The description of this series of hops as they relate to the specified path option. It is showing some extra character after the assigned name.
	14	mplsTunnelHopEntryPathComp	read-create	YES	YES	It determines whether the path mentioned is explicit or through CSPF.
	15	mplsTunnelHopRowStatus	read-create	YES	YES	When Rowstatus is set to Active from NotInService,Get Operation on mplsHopIpAddr was not returning any values and later On Get Walk operation, it was not returning values of all objects. And also if it is tried to set ot NotInService, It was getting failed.
	16	mplsTunnelHopStorageType	read-create	YES	YES	The storage type for this tunnel hop entry. It is by default "volatile".

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
mplsTunnelResourceTable						
4	1	mplsTunnelResourceIndexNext	read-only	YES	NA	Retrieves the next index of mplsTunnelresource Entry
	2	mplsTunnelResourceIndex	not-accessible	NA	NA	Unique index for mplsTunnelResource table
	3	mplsTunnelResourceMaxRate	read-create	YES	YES	The maximum rate in bits/second
	4	mplsTunnelResourceMeanRate	read-create	YES	YES	This object is copied into an instance of mplsTrafficParamMeanRate in the mplsTrafficParamTable. It is not getting copied to mplsInSegmentTrafficParamPtr.
	5	mplsTunnelResourceMaxBurstSize	read-create	YES	YES	The maximum burst size in bytes.
	6	mplsTunnelResourceMeanBurstSize	read-create	YES	YES	The mean burst size in bytes.
	7	mplsTunnelResourceExBurstSize	read-create	YES	YES	The Excess burst size in bytes.
	8	mplsTunnelResourceFrequency	read-create	YES	YES	The granularity of the availability of committed rate. It takes all 3 values. unspecified(1), frequent(2), veryFrequent(3)
	9	mplsTunnelResourceWeight	read-create	YES	YES	The relative weight for using excess bandwidth above its committed rate.
	10	mplsTunnelResourceRowStatus	read-create	YES	YES	RowStatus is working fine. Both transition from NotInService to Active and vice versa.
	11	mplsTunnelResourceStorageType	read-create	YES	YES	The storage type for this tunnel resource entry. It is by default "volatile".
mplsTunnelARHop Table						
5	1	mplsTunnelARHopListIndex	not-accessible	NA	NA	Primary index into this table identifying a particular recorded hop list.
	2	mplsTunnelARHopIndex	not-accessible	NA	NA	Secondary index into this table identifying the particular hop.
	3	mplsTunnelARHopAddrType	read-only	NO	NA	The Hop Address Type of this tunnel hop.
	4	mplsTunnelARHopIpAddr	read-only	NO	NA	The Tunnel Hop Address for this tunnel hop.
	5	mplsTunnelARHopAddrUnnum	read-only	NO	NA	If mplsTunnelARHopAddrType is set to unnum(4), then this value will contain the interface identifier of the unnumbered interface for this hop.
	6	mplsTunnelARHopLspId	read-only	NO	NA	If mplsTunnelARHopAddrType is set to lspid(5), then this value will contain the LSP ID of this hop otherwise 0.
mplsTunnelCHopTable						
6	1	mplsTunnelCHopListIndex	not-accessible	NA	NA	Primary index into this table identifying a particular computed hop list.
	2	mplsTunnelCHopIndex	not-accessible	NA	NA	Secondary index into this table identifying the particular hop.
	3	mplsTunnelCHopAddrType	read-only	NO	NA	The Hop Address Type of this tunnel hop.
	4	mplsTunnelCHopIpAddr	read-only	NO	NA	The Tunnel Hop Address for this tunnel hop.
		mplsTunnelCHopIpPrefixLen				this value will contain an appropriate prefix length for the IP address in object mplsTunnelCHopIpAddr.
		mplsTunnelCHopAsNumber				This is not supported in backend.
	5	mplsTunnelCHopAddrUnnum	read-only	NO	NA	This is not supported in backend.
	6	mplsTunnelCHopLspId	read-only	NO	NA	If mplsTunnelARHopAddrType is set to lspid(5), then this value will contain the LSP ID of this hop otherwise 0.
	7	mplsTunnelCHopType	read-only	NO	NA	Denotes whether this tunnel hop is routed in a strict or loose fashion.
mplsTunnelPerfTable						
7	1	mplsTunnelPerfPackets	read-only	YES	NA	Number of packets forwarded by the tunnel.
	2	mplsTunnelPerfHCPackets	read-only	YES	NA	High capacity counter for number of packets forwarded by the tunnel.
	3	mplsTunnelPerfErrors	read-only	YES	NA	Number of packets dropped because of errors
	4	mplsTunnelPerfBytes	read-only	YES	NA	Number of bytes forwarded by the tunnel.
	5	mplsTunnelPerfHCBytes	read-only	YES	NA	High capacity counter for number of bytes forwarded by the tunnel.
CR-LDP Tunnel Resource Table						
8	1					Not Supported in ZebOS backend.
mplsTunnelNotification						
	1	mplsTunnelNotificationEnable	read-write	YES	YES	If this object is true, then it enables the generation of mplsTunnelUp and mplsTunnelDown traps, otherwise these traps are not emitted.
	2	mplsTunnelIndexNext	read-only	YES	NA	This indicates the next index value of the tunnel
	3	mplsTunnelResourceIndexNext	raad-only	YES	NA	this indicates the next value of the resource index
NOTIFICATIONS						
mplsTunnelNotificationsEnable						
			read-write			Both SET and GET operation is working accordingly.
		mplsTunnelUp	read-only			Get operation is working fine.
		mplsTunnelDown	read-only			Get operation is working fine.
		mplsTunnelRerouted	read-only			Get operation is working fine.

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET	Comments
MPLS Interface Table						
1	1	mplsInterfaceIndex	not-accessible	NA	NA	Unique index for mplsInterface Table
	2	mplsInterfaceLabelMinIn	read-only	YES	NA	retrieved minimum value of an MPLS label supported receiving on the interface
	3	mplsInterfaceLabelMaxIn	read-only	YES	NA	retrieved maximum value of an MPLS label supported receiving on the interface
	4	mplsInterfaceLabelMinOut	read-only	YES	NA	retrieved minimum value of an MPLS label supported sending on the interface
	5	mplsInterfaceLabelMaxOut	read-only	YES	NA	retrieved maximum value of an MPLS label supported sending on the interface
	6	mplsInterfaceTotalBandwidth	read-only	YES	NA	indicates the total amount of usable bandwidth on this interface
	7	mplsInterfaceAvailableBandwidt	read-only	YES	NA	indicates the total amount of available bandwidth available on this interface
	8	mplsInterfaceLabelParticipation	read-only	YES	NA	indicates whether it is per platform/interface label space
mplsInterfacePerfEntry						
	1	mplsInterfacePerfInLabelInUse	read-only	YES	NA	counts the number of labels that are in use at this point in time on this interface in the incoming direction
	2	mplsInterfacePerfInLabelLookup	read-only	YES	NA	counts the number of labeled packets that have been received on this interface and which were discarded because there was no matching cross-connect entry
	3	mplsInterfaceperfOutLabelInUse	read-only	YES	NA	counts the number of top-most labels in the outgoing label stacks that are in use at this point in time on this interface.
	4	mplsInterfacePerfOutFragmente	read-only	YES	NA	counts the number of outgoing MPLS packets that required fragmentation before transmission on this interface
MPLS InSegment Table						
2						
	1	mplsInSegmentIndexNext	read-only	YES	NA	Retreives the next index value of mplsInSegment Entry
	2	mplsInSegmentIndex	not-accessible	NA	NA	Unique Index of mplsInsegment table
	3	mplsInSegmentInterface	read-create	YES	YES	Depend on RowStatus object bug, Also,In GET operation, it is retreiving gifindex of the interface, But In SET operation, the value should be ifindex of the interface. It should be made common.
	4	mplsInSegmentLabel	read-create	YES	YES	Depend on RowStatus object bug
	5	mplsInSegmentLabelPtr	read-create	YES	YES	Depend on RowStatus object bug
	6	mplsInSegmentNPop	read-create	YES	YES	Depend on RowStatus object bug
	7	mplsInSegmentAddrFamily	read-create	YES	YES	Depend on RowStatus object bug
	8	mplsInSegmentXCIndex	read-only	YES	NA	Retreives cross-connect entry this segment is part of.
	9	mplsInSegmentOwner	read-only	YES	NA	Denotes the entity which created and is responsible for managing this segment. CLI(9) and retreived.
	10	mplsInSegmentTrafficParamPtr	read-create	YES	YES	Depend on RowStatus object bug
	11	mplsInSegmentRowStatus	read-create	YES	YES	GET operation is working fine. In SET operation, there is a problem in converting from NotInService(2) to Active(1). Memory corruption was taking place during copy from ilm_temp to ilm. An extra memory should be added to copy ip address of type pal_in4_addr and it is fixed. And also Destroy(6) was not removing ilm entry and it is fixed now.
	12	mplsInSegmentStorageType	read-create	YES	YES	Depend on RowStatus object bug
		If the entry in InsegmentTable is deleted, corresponding XC entry should also get deleted. Since that XC Entry will become orphan.It has to be deleted.				
					mplsInSegmentPerfTable Table	
3		mplsInSegmentPerfOctets	read-only	YES	NA	total number of octets received by this segment.
		mplsInSegmentPerfPackets	read-only	YES	NA	total number of packets received by this segment.
		mplsInSegmentPerfErrors	read-only	YES	NA	The number of errored packets received on this segment.
		mplsInSegmentPerfDiscards	read-only	YES	NA	The number of labeled packets received on this in-segment, which were chosen to be discarded.
		mplsInSegmentPerfHCOctets	read-only	YES	NA	The total number of octets received. This is the 64 bit
		mplsInSegmentPerfDiscontinuit	read-only	YES	NA	The value of sysUpTime on the most recent occasion
MPLS OutSegmentTable						
4	1	mplsOutSegmentIndexNext	read-only	YES	NA	Retrieves the next index of mplsOutSegment Entry
	2	mplsOutSegmentIndex	not-accessible	NA	NA	Unique index for mplsOutSegment table
	3	mplsOutSegmentInterface	read-create	YES	YES	GET operation is retrieving the invalid interface index(i.e., always 1). In the function nsm_gmpls_get_outseg_if_ix inside nsm_mpls_api.c,switch case of (nhlfe->type) is entering both gmpls_entry_type_ip and gmpls_entry_type_pbb_te which should not be happen. This is fixed. The SET operation was not performing. When RowStatus is NotInService, It should allow SET operation. Also,In GET operation, it is retreiving gifindex of the interface, But In SET operation, the value should be ifindex of the interface. It should be made common. Now both SET and GET operation is fixed and is working.
	4	mplsOutSegmentPushTopLabel	read-create	YES	LTD	mplsOutSegmentPushTopLabel is taking only "true" value.
	5	mplsOutSegmentTopLabel	read-create	YES	YES	In GET operation, It is retreiving the out-going label value when the PushTopLable is "True". In SET Operation, It is performing set operation accordingly.
	6	mplsOutSegmentTopLabelPtr	read-create	YES	LTD	points to the first accessible column of a conceptual row in an external table containing the label

	7	mplsOutSegmentNextHopAddrT	read-create	YES	LTD	Value of mplsOutSegmentNextHopAddrType can be Unknown(0), ipv4(1) or ipv6(2) as per RFC. In ZebOS it supports only ipv4
	8	mplsOutSegmentNextHopAddr	read-create	YES	YES	mplsOutSegmentNextHopAddr is performing both set and get operation.
	9	mplsOutSegmentXCIndex	read-only	YES	NA	Retreives the Xcindex which identifies which cross-connect entry this segment is part of
	10	mplsOutSegmentOwner	read-only	YES	NA	Denotes the entity which created and is responsible for managing this segment. CLI(9)
	11	mplsOutSegmentTrafficParamP	read-create	YES	LTD	This variable represents a pointer to the traffic parameter specification for this out-segment
	12	mplsOutSegmentRowStatus	read-create	YES	YES	Both SET and GET operation is working fine before xc entry is created. After xc entry got created, nhlfe->refcount is showing different values which prevent nhlfe to get removed since nhlfe->refcount is not 0 which needs to be fixed.
	13	mplsOutSegmentStorageType	read-create	YES	LTD	Value can be 1:other 2:volatile 3:nonVolatile 4:permanent 5:readOnly. In ZebOS, it supports only Volatile(2)
Note - To make mplsOutSegmentRowStatus from Active to NotInService., All the XCEntry that is pointing to this must be in NotInService. And also, If we want to delete the mplsOutSegmentEntry,All the XCEntry that is pointing to this must be in NotInService and						

mplsOutSegmentPerf Table						
5		mplsOutSegmentPerfOctets	read-only	YES	NA	This value contains the total number of octets sent on this segment.
		mplsOutSegmentPerfPackets	read-only	YES	NA	This value contains the total number of packets sent on this segment.
		mplsOutSegmentPerfErrors	read-only	YES	NA	Number of packets that could not be sent due to errors on this segment
		mplsOutSegmentPerfDiscards	read-only	YES	NA	The number of labeled packets attempted to be transmitted on this out-segment, which were chosen to be discarded
		mplsOutSegmentPerfHCOctets	read-only	YES	NA	Total number of octets sent which is 64 bit
		mplsOutSegmentPerfDiscontinu	read-only	YES	NA	The value of sysUpTime on the most recent occasion at which any one or more of this segment's Counter suffered a discontinuity
mplsXCTable						
6	1	mplsXCIndexNext	read-only	YES	NA	Retreived Next Index value for XCTable
	2	mplsXCIndex	not-accessible	NA	NA	Unique Index for mplsXCTable
	3	mplsXCInSegmentIndex	Not-accessible	NA	NA	Incoming labe Index
	4	mplsXCOutSegmentIndex	not-accessible	NA	NA	Outgoing Label Index
	5	mplsXCLspId	read-create	YES	LTD	Returns the LSP id and set operation is working . But it is taking only value "0"
	6	mplsXCLabelStackIndex	read-create	YES	LTD	In GET operation, It retreives always 0 as Label stack table is not implemented. By default it is set to 0. In SET operation, Only possible value that can be set is 0.
	7	mplsXCOwner	read-only	YES	NA	Retreives the Owner of the XCEntry
	8	mplsXCRowStatus	read-create	YES	YES	GET operation was working. In SET operation, There was a problem in moving from active to notInService. Now it is fixed.
	9	mplsXCStorageType	read-create	YES	LTD	The only possible value that can be SET and GET is volatile(2). Non-Volatile, Permanent, read-only are not supported in ZebOS
	10	mplsXCAdminStatus	read-create	YES	YES	The possible value that can be SET and GET is up(1) and down(2) . Testing(3) is not supported in ZebOS
	11	mplsXCOperStatus	read-only	YES	LTD	It was showing down even when the RowStatus is Active(1). Now it is fixed.
Comment On mplsXCTable ----> It retreives the value of last index of the XCTable. i.e., If there are 5 entries, In get operation, It retreives only the 5th entry.Not						
mplsLabelStackTable						
7	1	mplsLabelStackIndexNext	read-only	NA	NA	ZebOS doesn't support mplsLabelStackTable
	2	mplsLabelStackIndex	not-accessible	NA	NA	ZebOS doesn't support mplsLabelStackTable
	3	mplsLabelStackLabelIndex	not-accessible	NA	NA	ZebOS doesn't support mplsLabelStackTable
	4	mplsLabelStackLabel	read-create	NA	NA	ZebOS doesn't support mplsLabelStackTable
	5	mplsLabelStackLabelPtr	read-create	NA	NA	ZebOS doesn't support mplsLabelStackTable
	6	mplsLabelStackRowStatus	read-create	NA	NA	ZebOS doesn't support mplsLabelStackTable
	7	mplsLabelStackStorageType	read-create	NA	NA	ZebOS doesn't support mplsLabelStackTable
mplsInSegmentMapTable						
8	1	mplsInSegmentMapInterface	not-accessible	NA	NA	Not Accessible
	2	mplsInSegmentMapLabel	not-accessible	NA	NA	Not Accessible
	3	mplsInSegmentMapLabelPtrInd	not-accessible	NA	NA	Not Accessible
	4	mplsInSegmentMapIndex	read-only	YES	NA	It corresponds to the mplsInSegmentInterface and mplsInSegmentLabel, or the mplsInSegmentInterface and mplsInSegmentLabelPtrr
NOTIFICATIONS						
mplsXCNotificationsEnable						
			read-create			Both SET and GET operation is working accordingly.

OBJECT NO	ENTRY NO	ENTRY NAME	MAX-ACCESS/ TEMPLATE	Support for GET	Support for SET
MplsFTNEntry Table					
1	1	mplsFTNIndex	not-accessible	NA	NA
	2	mplsFTNRowStatus	read-create	YES	YES
	3	mplsFTNDescr	read-create	YES	YES
	4	mplsFTNMask	read-create	YES	LTD
	5	mplsFTNAddrType	read-create	YES	LTD
	6	mplsFTNSourceAddrMin	read-create	YES	LTD
	7	mplsFTNSourceAddrMax	read-create	YES	LTD
	8	mplsFTNDestAddrMin	read-create	YES	YES
	9	mplsFTNDestAddrMax	read-create	YES	YES
	10	mplsFTNSourcePortMin	read-create	YES	LTD
	11	mplsFTNSourcePortMax	read-create	YES	LTD
	12	mplsFTNDestPortMin	read-create	YES	LTD
	13	mplsFTNDestPortMax	read-create	YES	LTD
	14	mplsFTNProtocol	read-create	YES	LTD
	15	mplsFTNDscp	read-create	YES	LTD
	16	mplsFTNActionType	read-create	YES	LTD
	17	mplsFTNActionPointer	read-create	YES	YES
	18	mplsFTNStorageType	read-create	YES	LTD
mplsFTNMAPTable					
2	1	mplsFTNMapIndex	not-accessible	NA	NA
	2	mplsFTNMapPrevIndex	not-accessible	NA	NA
	3	mplsFTNMapCurrIndex	not-accessible	NA	NA
	4	mplsFTNMapRowStatus	read-create	NA	NA
	5	mplsFTNMapStorageType	read-create	NA	NA
mplsFTNPerfTable					
3	1	mplsFTNPerfIndex	not-accessible	NA	NA
	2	mplsFTNPerfCurrIndex	not-accessible	NA	NA
	3	mplsFTNPerfMatchedPackets	read-only	YES	NA
	4	mplsFTNPerfMatchedOctets	read-only	YES	NA
	5	mplsFTNPerfDiscontinuityTime	read-only	YES	NA

Comments
unique index for a conceptual row in mplsFTNTable.
Now it is working. We can do set and get operation on row status.
On setting the new description it was not showing anuthing.Now it is showing correctly.
It works fine only for the default value.
For ipv4 its value is 1. It has not been implemented for ipv6.
It is taking only the default value.(0.0.0.0). LTD (SET/GET handler is present. However cannot SET anything other than default value.
It is taking only the default value.(0.0.0.0). LTD (SET/GET handler is present. However cannot SET anything other than default value.
It is working now as the function to set the min address value has been modified .User have to set the address in such a way that it follows classless address rules for both minimum and maximum address.
Wrote a new function to get the max address from the user through snmp.
Default value is 0. LTD (SET/GET handler is present. However cannot SET anything other than default value.
Default value is 65535. LTD (SET/GET handler is present. However cannot SET anything other than default value.
Default value is 0. LTD (SET/GET handler is present. However cannot SET anything other than default value.
Default value is 65535. LTD (SET/GET handler is present. However cannot SET anything other than default value.
Default value is 255. LTD (SET/GET handler is present. However cannot SET anything other than default value.
Default value is 0. LTD (SET/GET handler is present. However cannot SET anything other than default value.
By default it is redirectLsp(1). LTD (SET/GET handler is present. However cannot SET anything other than default value.
Now we can do the set and get operation on this object.
By default it is volatile(2) .LTD (SET/GET handler is present. However cannot SET anything other than default value.
ZebOS doesn't support mplsFTNMapTable
ZebOS doesn't support mplsFTNMapTable
ZebOS doesn't support mplsFTNMapTable
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ZebOS doesn't support mplsFTNMapTable
The interface index of an interface that an FTN entry has been applied/mapped to.
Index of an FTN entry that has been applied/mapped to the specified interface.
Number of packets that matched the specified FTN entry if it is applied/mapped to the specified interface.
Number of octets that matched the specified FTN entry if it is applied/mapped to the specified interface.
this object contains a zero value if no discontinuities have occurred since the last re-initialization of the local management subsystem,