# Porting Guide Tips and Tricks from EDK to EDK II

This document contains information useful to porting Old code to R9

August 14, 2006

Porting Guide Table

1. Rename Item Table

|  |  |  |
| --- | --- | --- |
| **R8.X Name** | **EDKII (R9) Name** | **How to Fix** |
| BBS\_TYPE\_DEV | BBS\_TYPE\_BEV | Replace Old Name with R9 Name |
| BOOT\_OBJECT\_AUTHORIZATION\_PARMSET\_GUIDVALUE | BOOT\_OBJECT\_AUTHORIZATION\_PARMSET\_GUID | Support Old name and R9 name |
| CONTROLLER\_DEVICE\_PATH.Controller | CONTROLLER\_DEVICE\_PATH. ControllerNumber | Replace Old Name with R9 Name |
| EFI\_FX\_SAVE\_STATE | EFI\_FX\_SAVE\_STATE\_IA32 | Replace Old Name with R9 Name |
| EFI\_VOLUME\_OPEN | EFI\_SIMPLE\_FILE\_SYSTEM\_PROTOCOL\_OPEN\_VOLUME | Replace Old Name with R9 Name |
| PXE\_CPB\_INITIALIZE.Duplex | PXE\_CPB\_INITIALIZE.DuplexMode | Replace Old Name with R9 Name |
| PXE\_CPB\_INITIALIZE.LoopBack | PXE\_CPB\_INITIALIZE.LoopBackMode | Replace Old Name with R9 Name |
| PXE\_CPB\_START | PXE\_CPB\_START\_30 | Replace Old Name with R9 Name |
| PXE\_DB\_GET\_INIT\_INFO. Duplex | PXE\_DB\_GET\_INIT\_INFO.SupportedDuplexModes | Replace Old Name with R9 Name |
| PXE\_DB\_GET\_INIT\_INFO. LoopBack | PXE\_DB\_GET\_INIT\_INFO.SupportedLoopBackModes | Replace Old Name with R9 Name |
| PeiHob.h | Hob.h | Replace Old Name with R9 Name |
| PEI\_CPU\_IO\_PPI\_GUID | EFI\_PEI\_CPU\_IO\_PPI\_INSTALLED\_GUID | Replace Old Name with R9 Name |
| PEI\_PCI\_CFG\_PPI\_GUID | EFI\_PEI\_PCI\_CFG\_PPI\_INSTALLED\_GUID | Replace Old Name with R9 Name |
| EFI\_INTERNAL\_FUNCTION | 0x0 | Remove this marco and Replace it with 0x0 |
| EFI\_INTERNAL\_POINTER | 0x0 | Remove this marco and Replace it with 0x0 |
| EFI\_IPF\_GP\_POINTER | 0x0 | Remove this marco and Replace it with 0x0 |
| EFI\_TPL\_DRIVER | EFI\_TPL\_APPLICATION | Remove this macro and Replace it with R9 definition |
| EFI\_ACPI\_TABLE\_GUID | EFI\_ACPI\_10\_TABLE\_GUID | Replace Old Name with R9 Name |
| EFI\_ACPI\_20\_TABLE\_GUID | EFI\_ACPI\_TABLE\_GUID | Support Old Name and R9 name. |
| EFI\_GLOBAL\_VARIABLE\_GUID | EFI\_GLOBAL\_VARIABLE | Support Old Name and R9 name (R9 name is defined in spec). |
| EFI\_MPS\_TABLE\_GUID | MPS\_TABLE\_GUID | Support Old Name and R9 name (R9 name is defined in spec). |
| EFI\_SAL\_SYSTEM\_TABLE\_GUID | SAL\_SYSTEM\_TABLE\_GUID | Support Old Name and R9 name (R9 name is defined in spec). |
| EFI\_SMBIOS\_TABLE\_GUID | SMBIOS\_TABLE\_GUID | Support Old Name and R9 name (R9 name is defined in spec). |
| EFI\_EBC\_INTERPRETER\_PROTOCOL\_GUID | EFI\_EBC\_PROTOCOL\_GUID | Support Old name and R9 name. |
| EFI\_FILE\_SYSTEM\_VOLUME\_LABEL\_INFO\_ID\_GUID | EFI\_FILE\_SYSTEM\_VOLUME\_LABEL\_ID | Support Old Name and R9 name (R9 name is defined in spec). |
| EFI\_LOADED\_IMAGE\_INFORMATION\_REVISION | EFI\_LOADED\_IMAGE\_PROTOCOL\_REVISION | Support Old Name and R9 name. |
| LOAD\_FILE\_PROTOCOL\_GUID | EFI\_LOAD\_FILE\_PROTOCOL\_GUID | Support Old Name and R9 name. |
| EFI\_PXE\_BASE\_CODE\_INTERFACE\_REVISION | EFI\_PXE\_BASE\_CODE\_PROTOCOL\_REVISION | Support Old Name and R9 name. |
| EFI\_PXE\_BASE\_CODE\_CALLBACK\_INTERFACE\_REVISION | EFI\_PXE\_BASE\_CODE\_CALLBACK\_PROTOCOL\_REVISION | Support Old Name and R9 name. |
| SERIAL\_IO\_INTERFACE\_REVISION | EFI\_SERIAL\_IO\_PROTOCOL\_REVISION | Support Old Name and R9 name. |
| EFI\_FILE\_HANDLE\_REVISION | EFI\_FILE\_PROTOCOL\_REVISION | Support Old Name and R9 name. |
| EFI\_SIMPLE\_TEXT\_IN\_PROTOCOL\_GUID | EFI\_SIMPLE\_TEXT\_INPUT\_PROTOCOL\_GUID | Support Old Name and R9 name. |
| EFI\_SIMPLE\_TEXT\_IN\_PROTOCOL | EFI\_SIMPLE\_TEXT\_INPUT\_PROTOCOL | Support Old Name and R9 name. |
| EFI\_SIMPLE\_TEXT\_OUT\_PROTOCOL | EFI\_SIMPLE\_TEXT\_OUTPUT\_PROTOCOL | Support Old Name and R9 name. |
| EFI\_OPTIONAL\_POINTER | EFI\_OPTIONAL\_PTR | Support Old name and R9 name |
| PXE\_FRAME\_TYPE\_MULTICAST | PXE\_FRAME\_TYPE\_FILTERED\_MULTICAST | Support Old name and R9 name |
| EFI\_IMAGE\_MACHINE\_IA32 | IMAGE\_FILE\_MACHINE\_I386 | Support Old Name and R9 name. |
| EFI\_IMAGE\_MACHINE\_IA64 | IMAGE\_FILE\_MACHINE\_IA64 | Support Old Name and R9 name. |
| EFI\_IMAGE\_MACHINE\_EBC | IMAGE\_FILE\_MACHINE\_EBC | Support Old Name and R9 name. |
| EFI\_IMAGE\_MACHINE\_X64 | IMAGE\_FILE\_MACHINE\_X64 | Support Old Name and R9 name. |
| EFI\_TEXT\_OUTPUT\_STRING | EFI\_TEXT\_STRING | Replace Old Name with R9 name. |
| EFI\_EVENT\_TIMER | EVENT\_TIMER | Support Old Name and R9 name. |
| EFI\_EVENT\_RUNTIME | EVENT\_RUNTIME | Support Old Name and R9 name. |
| EFI\_EVENT\_RUNTIME\_CONTEXT | EVENT\_RUNTIME\_CONTEXT | Support Old Name and R9 name. |
| EFI\_EVENT\_NOTIFY\_WAIT | EVENT\_NOTIFY\_WAIT | Support Old Name and R9 name. |
| EFI\_EVENT\_NOTIFY\_SIGNAL | EVENT\_NOTIFY\_SIGNAL | Support Old Name and R9 name. |
| EFI\_EVENT\_SIGNAL\_EXIT\_BOOT\_SERVICES | EVENT\_SIGNAL\_EXIT\_BOOT\_SERVICES | Support Old Name and R9 name. |
| EFI\_EVENT\_SIGNAL\_VIRTUAL\_ADDRESS\_CHANGE | EVENT\_SIGNAL\_VIRTUAL\_ADDRESS\_CHANGE | Support Old Name and R9 name. |
| EFI\_TPL\_APPLICATION | TPL\_APPLICATION | Support Old Name and R9 name. |
| EFI\_TPL\_CALLBACK | TPL\_CALLBACK | Support Old Name and R9 name. |
| EFI\_TPL\_NOTIFY | TPL\_NOTIFY | Support Old Name and R9 name. |
| EFI\_TPL\_HIGH\_LEVEL | TPL\_HIGH\_LEVEL | Support Old Name and R9 name. |
| UEFI\_2\_00\_SYSTEM\_TABLE\_REVISION | EFI\_2\_00\_SYSTEM\_TABLE\_REVISION | Replace Old Name with R9 name. |
| PEI\_STATUS\_CODE\_PPI\_GUID | EFI\_PEI\_REPORT\_PROGRESS\_CODE\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_STATUS\_CODE\_PPI | EFI\_PEI\_PROGRESS\_CODE\_PPI | Replace Old Name with R9 Name |
| PEI\_REPORT\_STATUS\_CODE | EFI\_PEI\_REPORT\_STATUS\_CODE | Replace Old Name with R9 Name |
| gPeiStatusCodePpiGuid | gEfiPeiStatusCodePpiGuid | Replace Old Name with R9 Name |
| PEI\_BOOT\_IN\_RECOVERY\_MODE\_PEIM\_PPI | EFI\_PEI\_BOOT\_IN\_RECOVERY\_MODE\_PEIM\_PPI | Replace Old Name with R9 Name |
| gPeiBootInRecoveryModePpiGuid | gEfiPeiBootInRecoveryModePpiGuid | Replace Old Name with R9 Name |
| PEI\_CPU\_IO\_PPI | EFI\_PEI\_CPU\_IO\_PPI | Replace Old Name with R9 Name |
| PEI\_CPU\_IO\_PPI\_WIDTH | EFI\_ PEI\_CPU\_IO\_PPI\_WIDTH | Replace Old Name with R9 Name |
| PEI\_CPU\_IO\_PPI\_ACCESS | EFI\_PEI\_CPU\_IO\_PPI\_ACCESS | Replace Old Name with R9 Name |
| PEI\_CPU\_IO\_PPI\_IO\_MEM | EFI\_PEI\_CPU\_IO\_PPI\_IO\_MEM | Replace Old Name with R9 Name |
| PEI\_CPU\_IO\_PPI\_\* | EFI\_PEI\_CPU\_IO\_PPI\_\* | Replace Old Name with R9 Name |
| gPeiCpuIoPpiInServiceTableGuid | gEfiPeiCpuIoPpiInServiceTableGuid | Replace Old Name with R9 Name |
| PEI\_END\_OF\_PEI\_PHASE\_PPI\_GUID | EFI\_PEI\_END\_OF\_PEI\_PHASE\_PPI\_GUID | Replace Old Name with R9 Name |
| gEndOfPeiSignalPpiGuid | gEfiEndOfPeiSignalPpiGuid | Replace Old Name with R9 Name |
| PEI\_MASTER\_BOOT\_MODE\_PEIM\_PPI | EFI\_PEI\_MASTER\_BOOT\_MODE\_PEIM\_PPI | Replace Old Name with R9 Name |
| gPeiMasterBootModePpiGuid | gEfiPeiMasterBootModePpiGuid | Replace Old Name with R9 Name |
| PEI\_PERMANENT\_MEMORY\_INSTALLED\_PPI\_GUID | EFI\_PEI\_PERMANENT\_MEMORY\_INSTALLED\_PPI\_GUID | Replace Old Name with R9 Name |
| gPeiMemoryDiscoveredPpiGuid | gEfiPeiMemoryDiscoveredPpiGuid | Replace Old Name with R9 Name |
| PEI\_PCI\_CFG\_PPI | EFI\_PEI\_PCI\_CFG\_PPI | Replace Old Name with R9 Name |
| PEI\_PCI\_CFG\_PPI\_WIDTH | EFI\_PEI\_PCI\_CFG\_PPI\_WIDTH | Replace Old Name with R9 Name |
| PEI\_PCI\_CFG\_PPI\_PCI\_ADDRESS | EFI\_PEI\_PCI\_CFG\_PPI\_PCI\_ADDRESS | Replace Old Name with R9 Name |
| PEI\_PCI\_CFG\_PPI\_IO | EFI\_PEI\_PCI\_CFG\_PPI\_IO | Replace Old Name with R9 Name |
| PEI\_PCI\_CFG\_PPI\_RW | EFI\_PEI\_PCI\_CFG\_PPI\_RW | Replace Old Name with R9 Name |
| gPeiPciCfgPpiInServiceTableGuid | gEfiPeiPciCfgPpiInServiceTableGuid | Replace Old Name with R9 Name |
| PEI\_READ\_ONLY\_VARIABLE\_ACCESS\_PPI\_GUID | EFI\_PEI\_READ\_ONLY\_VARIABLE\_ACCESS\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_READ\_ONLY\_VARIABLE\_PPI | EFI\_PEI\_READ\_ONLY\_VARIABLE\_PPI | Replace Old Name with R9 Name |
| PEI\_GET\_VARIABLE | EFI\_PEI\_GET\_VARIABLE | Replace Old Name with R9 Name |
| PEI\_GET\_NEXT\_VARIABLE\_NAME | EFI\_PEI\_GET\_NEXT\_VARIABLE\_NAME | Replace Old Name with R9 Name |
| gPeiReadOnlyVariablePpiGuid | gEfiPeiReadOnlyVariablePpiGuid | Replace Old Name with R9 Name |
| PEI\_RECOVERY\_MODULE\_INTERFACE\_PPI | EFI\_PEI\_RECOVERY\_MODULE\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_RECOVERY\_MODULE\_INTERFACE | EFI\_PEI\_RECOVERY\_MODULE\_PPI | Replace Old Name with R9 Name |
| PEI\_LOAD\_RECOVERY\_CAPSULE | EFI\_PEI\_LOAD\_RECOVERY\_CAPSULE | Replace Old Name with R9 Name |
| gPeiRecoveryModulePpiGuid | gEfiPeiRecoveryModulePpiGuid | Replace Old Name with R9 Name |
| PEI\_RESET\_PPI\_GUID | EFI\_PEI\_RESET\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_RESET\_PPI | EFI\_PEI\_RESET\_PPI | Replace Old Name with R9 Name |
| gPeiResetPpiGuid | gEfiPeiResetPpiGuid | Replace Old Name with R9 Name |
| PEI\_S3\_RESUME\_PPI\_GUID | EFI\_PEI\_S3\_RESUME\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_S3\_RESUME\_PPI | EFI\_PEI\_S3\_RESUME\_PPI | Replace Old Name with R9 Name |
| PEI\_S3\_RESUME\_PPI\_RESTORE\_CONFIG | EFI\_PEI\_S3\_RESUME\_PPI\_RESTORE\_CONFIG | Replace Old Name with R9 Name |
| gPeiS3ResumePpiGuid | gEfiPeiS3ResumePpiGuid | Replace Old Name with R9 Name |
| SEC\_PLATFORM\_INFORMATION\_RECORD | EFI\_SEC\_PLATFORM\_INFORMATION\_RECORD | Replace Old Name with R9 Name |
| SEC\_PLATFORM\_INFORMATION | EFI\_SEC\_PLATFORM\_INFORMATION | Replace Old Name with R9 Name |
| PEI\_SECURITY\_PPI\_GUID | EFI\_PEI\_SECURITY\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_SECURITY\_PPI | EFI\_PEI\_SECURITY\_PPI | Replace Old Name with R9 Name |
| PEI\_SECURITY\_AUTHENTICATION\_STATE | EFI\_PEI\_SECURITY\_AUTHENTICATION\_STATE | Replace Old Name with R9 Name |
| gPeiSecurityPpiGuid | gEfiPeiSecurityPpiGuid | Replace Old Name with R9 Name |
| PEI\_STALL\_PPI\_GUID | EFI\_PEI\_STALL\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_STALL\_PPI | EFI\_PEI\_STALL\_PPI | Replace Old Name with R9 Name |
| PEI\_STALL | EFI\_PEI\_STALL | Replace Old Name with R9 Name |
| gPeiStallPpiGuid | gEfiPeiStallPpiGuid | Replace Old Name with R9 Name |
| gPeiFvFileLoaderPpiGuid | gEfiPeiFvFileLoaderPpiGuid | Replace Old Name with R9 Name |
| gPeiSectionExtractionPpiGuid | gEfiPeiSectionExtractionPpiGuid | Replace Old Name with R9 Name |
| GLYPH\_NON\_SPACING | EFI\_GLYPH\_NON\_SPACING | Replace Old Name with R9 Name |
| GLYPH\_NON\_BREAKING | EFI\_GLYPH\_WIDE | Replace Old Name with R9 Name |
| SCREEN\_DESCRIPTOR | EFI\_SCREEN\_DESCRIPTOR | Replace Old Name with R9 Name |
| EFI\_IFR\_CHECK\_BOX | EFI\_IFR\_CHECKBOX | Replace Old Name with R9 Name |
| EFI\_IFR\_GRAYOUT | EFI\_IFR\_GRAY\_OUT | Replace Old Name with R9 Name |
| EFI\_IFR\_END\_IF | EFI\_IFR\_END\_EXPR | Replace Old Name with R9 Name |
| gProcessorProducerGuid | gEfiProcessorProducerGuid | Replace Old Name with R9 Name |
| gProcessorSubClassName | gEfiProcessorSubClassGuid | Replace Old Name with R9 Name |
| gCacheSubClassName | gEfiCacheSubClassGuid | Replace Old Name with R9 Name |
| gMemoryProducerGuid | gEfiMemoryProducerGuid | Replace Old Name with R9 Name |
| gMemorySubClassGuid | gEfiMemorySubClassGuid | Replace Old Name with R9 Name |
| gMiscProducerGuid | gEfiMiscProducerGuid | Replace Old Name with R9 Name |
| gMiscSubClassGuid | gEfiMiscSubClassGuid | Replace Old Name with R9 Name |
| EFI\_STRING\_TOKEN | STRING\_REF | Replace Old Name with R9 Name |
| EFI\_MEMORY\_ARRAY\_START\_ADDRESS | EFI\_MEMORY\_ARRAY\_START\_ADDRESS\_DATA | Replace Old Name with R9 Name |
| EFI\_MEMORY\_DEVICE\_START\_ADDRESS | EFI\_MEMORY\_DEVICE\_START\_ADDRESS\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_LAST\_PCI\_BUS | EFI\_MISC\_LAST\_PCI\_BUS\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_BIOS\_VENDOR | EFI\_MISC\_BIOS\_VENDOR\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_SYSTEM\_MANUFACTURER | EFI\_MISC\_SYSTEM\_MANUFACTURER\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_BASE\_BOARD\_MANUFACTURER | EFI\_MISC\_BASE\_BOARD\_MANUFACTURER\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_CHASSIS\_MANUFACTURER | EFI\_MISC\_CHASSIS\_MANUFACTURER\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_PORT\_INTERNAL\_CONNECTOR\_DESIGNATOR | EFI\_MISC\_PORT\_INTERNAL\_CONNECTOR\_DESIGNATOR\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_SYSTEM\_SLOT\_DESIGNATION | EFI\_MISC\_SYSTEM\_SLOT\_DESIGNATION\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_ONBOARD\_DEVICE | EFI\_MISC\_ONBOARD\_DEVICE\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_ONBOARD\_DEVICE\_TYPE\_DATA | EFI\_MISC\_PORTING\_DEVICE\_TYPE\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_OEM\_STRING | EFI\_MISC\_OEM\_STRING\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_SYSTEM\_OPTION\_STRING | EFI\_MISC\_SYSTEM\_OPTION\_STRING\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_NUMBER\_OF\_INSTALLABLE\_LANGUAGES | EFI\_MISC\_NUMBER\_OF\_INSTALLABLE\_LANGUAGES\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_SYSTEM\_LANGUAGE\_STRING | EFI\_MISC\_SYSTEM\_LANGUAGE\_STRING\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_BIS\_ENTRY\_POINT | EFI\_MISC\_BIS\_ENTRY\_POINT\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_BOOT\_INFORMATION\_STATUS | EFI\_MISC\_BOOT\_INFORMATION\_STATUS\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_SYSTEM\_POWER\_SUPPLY | EFI\_MISC\_SYSTEM\_POWER\_SUPPLY\_DATA | Replace Old Name with R9 Name |
| EFI\_MISC\_SMBIOS\_STRUCT\_ENCAPSULATION | EFI\_MISC\_SMBIOS\_STRUCT\_ENCAPSULATION\_DATA | Replace Old Name with R9 Name |
| EFI\_EXP\_DATA | EFI\_EXP\_BASE10\_DATA | Replace Old Name with R9 Name |
| EFI\_LIST\_ENTRY | LIST-ENTRY | Replace old Name with R9 Name |
| PEI\_SMBUS\_PPI\_GUID | EFI\_PEI\_SMBUS\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_SMBUS\_PPI | EFI\_PEI\_SMBUS\_PPI | Replace Old Name with R9 Name |
| PEI\_SMBUS\_PPI\_EXECUTE\_OPERATION | EFI\_PEI\_SMBUS\_PPI\_EXECUTE\_OPERATION | Replace Old Name with R9 Name |
| PEI\_SMBUS\_NOTIFY\_FUNCTION | EFI\_PEI\_SMBUS\_NOTIFY\_FUNCTION | Replace Old Name with R9 Name |
| PEI\_SMBUS\_PPI\_ARP\_DEVICE | EFI\_PEI\_SMBUS\_PPI\_ARP\_DEVICE | Replace Old Name with R9 Name |
| PEI\_SMBUS\_PPI\_GET\_ARP\_MAP | EFI\_PEI\_SMBUS\_PPI\_GET\_ARP\_MAP | Replace Old Name with R9 Name |
| PEI\_SMBUS\_PPI\_NOTIFY | EFI\_PEI\_SMBUS\_PPI\_NOTIFY | Replace Old Name with R9 Name |
| gPeiSmbusPpiGuid | gEfiPeiSmbusPpiGuid | Replace Old Name with R9 Name |
| PEI\_BOOT\_SCRIPT\_EXECUTER\_PPI\_GUID | EFI\_PEI\_BOOT\_SCRIPT\_EXECUTER\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_BOOT\_SCRIPT\_EXECUTE | EFI\_PEI\_BOOT\_SCRIPT\_EXECUTE | Replace Old Name with R9 Name |
| PEI\_BOOT\_SCRIPT\_EXECUTER\_PPI | EFI\_PEI\_BOOT\_SCRIPT\_EXECUTER\_PPI | Replace Old Name with R9 Name |
| gPeiBootScriptExecuterPpiGuid | gEfiPeiBootScriptExecuterPpiGuid | Replace Old Name with R9 Name |
| EFI\_TO\_LEGACY16\_INIT\_TABLE | EFI\_TO\_COMPATIBILITY16\_INIT\_TABLE | Replace Old Name with R9 Name |
| DISPATCH\_OPROM\_TABLE | EFI\_DISPATCH\_OPROM\_TABLE | Replace Old Name with R9 Name |
| EFI\_SMM\_SYSTEM\_TABLE\_REVISION (0 << 16) | (0x02) | EFI\_SMM\_SYSTEM\_TABLE\_REVISION (0 << 16) | (0x09) | Replace old Name with R9 Name |
| gEfiStatusCodeArchProtocolGuid | gEfiStatusCodeRuntimeProtocolGuid | Replace old Name with R9 Name |
| EFI\_STATUS\_CODE\_ARCH\_PROTOCOL | EFI\_STATUS\_CODE\_PROTOCOL | Replace Old Name with R9 Name, according to Dxecis spec 0.91b |
| DXE\_REPORT\_STATUS\_CODE | EFI\_REPORT\_STATUS\_CODE | Replace old Name with R9 Name |
| EFI\_FIND\_FV\_PPI\_GUID | EFI\_PEI\_FIND\_FV\_PPI\_GUID | Replace Old Name with R9 Name |
| EFI\_FIND\_FV\_FINDFV | EFI\_PEI\_FIND\_FV\_FINDFV | Replace Old Name with R9 Name |
| EFI\_FIND\_FV\_PPI | EFI\_PEI\_FIND\_FV\_PPI | Replace Old Name with R9 Name |
| PEI\_BLOCK\_IO\_PPI\_GUID | EFI\_PEI\_VIRTUAL\_BLOCK\_IO\_PPI | Replace Old Name with R9 Name |
| PEI\_RECOVERY\_BLOCK\_IO\_INTERFACE | EFI\_PEI\_RECOVERY\_BLOCK\_IO\_PPI | Replace Old Name with R9 Name |
| PEI\_LBA | EFI\_PEI\_LBA | Replace Old Name with R9 Name |
| PEI\_BLOCK\_IO\_MEDIA | EFI\_PEI\_BLOCK\_IO\_MEDIA | Replace Old Name with R9 Name |
| PEI\_BLOCK\_DEVICE\_TYPE | EFI\_PEI\_BLOCK\_DEVICE\_TYPE | Replace Old Name with R9 Name |
| PEI\_GET\_NUMBER\_BLOCK\_DEVICES | EFI\_PEI\_GET\_NUMBER\_BLOCK\_DEVICES | Replace Old Name with R9 Name |
| PEI\_GET\_DEVICE\_MEDIA\_INFORMATION | EFI\_PEI\_GET\_DEVICE\_MEDIA\_INFORMATION | Replace Old Name with R9 Name |
| PEI\_READ\_BLOCKS | EFI\_PEI\_READ\_BLOCKS | Replace old Name with R9 Name |
| gPeiBlockIoPpiGuid | gEfiPeiBlockIoPpiGuid | Replace old Name with R9 Name |
| PEI\_DEVICE\_RECOVERY\_MODULE\_INTERFACE\_PPI | EFI\_PEI\_DEVICE\_RECOVERY\_MODULE\_PPI\_GUID | Replace Old Name with R9 Name |
| PEI\_DEVICE\_RECOVERY\_MODULE\_INTERFACE | EFI\_PEI\_DEVICE\_RECOVERY\_MODULE\_PPI | Replace old Name with R9 Name |
| PEI\_DEVICE\_GET\_NUMBER\_RECOVERY\_CAPSULE | EFI\_PEI\_DEVICE\_GET\_NUMBER\_RECOVERY\_CAPSULE | Replace Old Name with R9 Name |
| PEI\_DEVICE\_GET\_RECOVERY\_CAPSULE\_INFO | EFI\_PEI\_DEVICE\_GET\_RECOVERY\_CAPSULE\_INFO | Replace Old Name with R9 Name |
| PEI\_DEVICE\_LOAD\_RECOVERY\_CAPSULE | EFI\_PEI\_DEVICE\_LOAD\_RECOVERY\_CAPSULE | Replace old Name with R9 Name |
| gPeiDeviceRecoveryModulePpiGuid | gEfiPeiDeviceRecoveryModulePpiGuid | Replace old Name with R9 Name |
| EfiDevicePathSize | GetDevicePathSize | Replace Old Name with R9 Name |
| EfiDuplicateDevicePath | DuplicateDevicePath | Replace Old Name with R9 Name |
| EfiAppendDevicePath | AppendDevicePath | Replace Old Name with R9 Name |
| EfiAppendDevicePathNode | AppendDevicePathNode | Replace Old Name with R9 Name |
| EfiAppendDevicePathInstance | AppendDevicePathInstance | Replace Old Name with R9 Name |
| EfiDevicePathInstance | GetNextDevicePathInstance | Replace Old Name with R9 Name |
| EfiIsDevicePathMultiInstance | IsDevicePathMultiInstance | Replace Old Name with R9 Name |
| EfiDevicePathFromHandle | DevicePathFromHandle | Replace Old Name with R9 Name |
| EfiFileDevicePath | FileDevicePath | Replace Old Name with R9 Name |
| EfiLibGetSystemConfigurationTable | EfiGetSystemConfigurationTable | Replace Old Name with R9 Name |
| EfiLibCreateProtocolNotifyEvent | EfiCreateProtocolNotifyEvent | Replace Old Name with R9 Name |
| EfiLibNamedEventListen | EfiNamedEventListen | Replace Old Name with R9 Name |
| EfiLibNamedEventSignal | EfiNamedEventSignal | Replace Old Name with R9 Name |
| EfiLibLookupUnicodeString | LookupUnicodeString | Replace Old Name with R9 Name |
| EfiLibAddUnicodeString | AddUnicodeString | Replace Old Name with R9 Name |
| EfiLibFreeUnicodeStringTable | FreeUnicodeStringTable | Replace Old Name with R9 Name |

2. Redefine Item Table

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| --- | --- | --- |
| **Old Name** | **R9 Name** | **How to Fix** |
| Typedef struct {  UINTN HealthFlags;  } SEC\_PLATFORM\_INFORMATION\_RECORD; | typedef struct {  EFI\_HEALTH\_FLAGS HealthFlags;  } SEC\_PLATFORM\_INFORMATION\_RECORD; | Replace old struct with R9 struct in PPI/ SecPlatformInformation.h |
| typedef struct {  EFI\_IFR\_OP\_HEADER Header;  UINT16 QuestionId;  UINT8 StorageWidth;  CHAR8 Data[1];  } EFI\_IFR\_NV\_DATA; | typedef struct {  EFI\_IFR\_OP\_HEADER Header;  UINT16 QuestionId;  UINT8 StorageWidth;  // CHAR8 Data[1];  } EFI\_IFR\_NV\_DATA; | Replace old struct with R9 struct in Protocol/FormCallback.h |
| typedef struct {  VOID \*NvRamMap;  UINT32 EntryCount;  EFI\_IFR\_DATA\_ENTRY Data[1];  } EFI\_IFR\_DATA\_ARRAY; | typedef struct {  VOID \*NvRamMap;  UINT32 EntryCount;  // EFI\_IFR\_DATA\_ENTRY //Data[1];  } EFI\_IFR\_DATA\_ARRAY; | Replace old struct with R9 struct in Protocol/FormCallback.h |
| typedef struct {  BOOLEAN FormSetUpdate;  EFI\_PHYSICAL\_ADDRESS FormCallbackHandle;  BOOLEAN FormUpdate;  STRING\_REF FormTitle;  UINT16 DataCount;  UINT8 \*Data;  } EFI\_HII\_UPDATE\_DATA; | typedef struct {  BOOLEAN FormSetUpdate;  EFI\_PHYSICAL\_ADDRESS FormCallbackHandle;  BOOLEAN FormUpdate;  UINT16 FormValue;  STRING\_REF FormTitle;  UINT16 DataCount;  UINT8 \*Data;  } EFI\_HII\_UPDATE\_DATA; | Replace old struct with R9 struct in Protocol/Hii.h |
| typedef enum {  IsaIa32 = EFI\_IMAGE\_MACHINE\_IA32,  IsaIpf = EFI\_IMAGE\_MACHINE\_IA64,  IsaEbc = EFI\_IMAGE\_MACHINE\_EBC  } EFI\_INSTRUCTION\_SET\_ARCHITECTURE; | typedef enum {  IsaIa32 = IMAGE\_FILE\_MACHINE\_I386, IsaX64 = IMAGE\_FILE\_MACHINE\_X64,  IsaIpf = IMAGE\_FILE\_MACHINE\_IA64,  IsaEbc = IMAGE\_FILE\_MACHINE\_EBC  } EFI\_INSTRUCTION\_SET\_ARCHITECTURE; | Replace old struct with R9 struct in DebugSupport.h |
| typedef union u\_pxe\_db\_get\_config\_info {  PXE\_PCI\_CONFIG\_INFO pci;  PXE\_PCC\_CONFIG\_INFO pcc;  PXE\_USB\_CONFIG\_INFO usb;  PXE\_1394\_CONFIG\_INFO \_1394;  } PXE\_DB\_GET\_CONFIG\_INFO; | typedef union u\_pxe\_db\_get\_config\_info {  PXE\_PCI\_CONFIG\_INFO pci;  PXE\_PCC\_CONFIG\_INFO pcc;  } PXE\_DB\_GET\_CONFIG\_INFO; | Replace old struct with R9 struct in EfiPxe.h |
| typedef enum {  TimerCancel,  TimerPeriodic,  TimerRelative,  TimerTypeMax  } EFI\_TIMER\_DELAY; | typedef enum {  TimerCancel,  TimerPeriodic,  TimerRelative  } EFI\_TIMER\_DELAY; | Replace old struct with R9 struct in UefiSpec.h |
| typedef struct { ……  UINT32 MaximumMemoryCapacity; }  EFI\_MEMORY\_ARRAY\_LOCATION\_DATA; | typedef struct { ……  EFI\_EXP\_BASE2\_DATA MaximumMemoryCapacity; }  EFI\_MEMORY\_ARRAY\_LOCATION\_DATA; | Replace old struct with R9 struct in DataHubRecords.h |
| typedef struct {  ......  UINTN MemoryDeviceSize;  UINT16 MemorySpeed;  } EFI\_MEMORY\_ARRAY\_LINK\_DATA; | typedef struct {  ......  EFI\_EXP\_BASE2\_DATA MemoryDeviceSize;  EFI\_EXE\_BASE10\_DATA MemoryTypeSpeed;  } EFI\_MEMORY\_ARRAY\_LINK\_DATA; | Replace old struct with R9 struct in DataHubRecords.h |
| typedef struct {  EFI\_STRING\_TYPE StringType;  } EFI\_STATUS\_CODE\_STRING\_DATA | typedef struct {  EFI\_STATUS\_CODE\_DATA DataHeader;  EFI\_STRING\_TYPE StringType;  EFI\_STATUS\_CODE\_STRING String;  } EFI\_STATUS\_CODE\_STRING\_DATA | Replace old struct with R9 struct in StatusCodeDataTypeId.h |
| typedef struct \_PEI\_BOOT\_SCRIPT\_EXECUTER\_PPI {  UINT64 Revision;  EFI\_PEI\_BOOT\_SCRIPT\_EXECUTE Execute;  }; | typedef struct \_EFI\_PEI\_BOOT\_SCRIPT\_EXECUTER\_PPI {  //UINT64 Revision;  EFI\_PEI\_BOOT\_SCRIPT\_EXECUTE Execute;  }; | Replace old struct with R9 struct in PPI/BootScriptExecuter.h |
| typedef struct {  UINT32 BiosLessThan1MB;  .....  } EFI\_TO\_COMPATIBILITY16\_INIT\_TABLE; | typedef struct {  UINT32 BiosLessThan1MB;  .....  UINT32 LowPmmMemory;  UINT32 LowPmmMemorySizeInBytes;} EFI\_TO\_COMPATIBILITY16\_INIT\_TABLE; | Replace old struct with R9 struct in common/Leagcy16.h |
| typedef struct {  UINT32 EfiSystemTable;  ……  } EFI\_COMPATIBILITY16\_TABLE; | typedef struct {  EFI\_SYSTEM\_TABLE \*EfiSystemTable;  ……  } EFI\_COMPATIBILITY16\_TABLE; | Replace old struct with R9 struct in common/Leagcy16.h |
| typedef struct {  VOID \*AcpiTable;  VOID \*SmbiosTable;  BBS\_TABLE \*BbsTable;  SMM\_TABLE \*SmmTable;  UD\_TABLE \*UnconventionalDeviceTable;  ……//other elements  } EFI\_TO\_COMPATIBILITY16\_BOOT\_TABLE; | typedef struct {  UINT32 AcpiTable;  UINT32 SmbiosTable;  UINT32 BbsTable;  UINT32 SmmTable;  UINT32 UnconventionalDeviceTable;  ……//other elements  } EFI\_TO\_COMPATIBILITY16\_BOOT\_TABLE; | Replace old struct with R9 struct in common/Leagcy16.h |
| EFI\_SMM\_CPU\_SAVE\_STATE | typedef union {    EFI\_SMI\_CPU\_SAVE\_STATE     Ia32SaveState;    EFI\_PMI\_SYSTEM\_CONTEXT     ItaniumSaveState;  }  EFI\_SMM\_CPU\_SAVE\_STATE; | Replace old struct with R9 struct in Dxe/SmmCis.h |
| EFI\_SMM\_OPTIONAL\_FP\_SAVE\_STATE | typedef union {    EFI\_SMI\_OPTIONAL\_FPSAVE\_STATE             Ia32FpSave;    EFI\_PMI\_OPTIONAL\_FLOATING\_POINT\_CONTEXT   ItaniumFpSave;  }EFI\_SMM\_FLOATING\_POINT\_SAVE\_STATE; | Replace old struct with R9 struct in Dxe/SmmCis.h |
| Struct \_EFI\_SMM\_SW\_DISPATCH\_PROTOCOL {  EFI\_SMM\_SW\_REGISTER Register;  EFI\_SMM\_SW\_UNREGISTER UnRegister;  }; | struct \_EFI\_SMM\_SW\_DISPATCH\_PROTOCOL {  EFI\_SMM\_SW\_REGISTER Register;  EFI\_SMM\_SW\_UNREGISTER UnRegister;  UINTN   MaximumSwiValue;  }; | Replace old struct with R9 struct in Protocol/SmmSwDispatch.h |
| typedef enum {  //…  EfiGetPlatformPciExpressBase = 6,  } EFI\_GET\_PLATFORM\_INFO\_MODE; | typedef enum {  //…  EfiGetPlatformPciExpressBase = 6,  EfiGetPlatformPmmSize = 7,  EfiGetPlatformEndOpromShadowAddr = 8,  } EFI\_GET\_PLATFORM\_INFO\_MODE; | Replace old struct with R9 struct in Protocol/LegacyBiosPlatform.h |
| typedef enum {  EFI\_PXE\_BASE\_CODE\_FUNCTION\_FIRST,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_DHCP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_DISCOVER,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_MTFTP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_UDP\_WRITE,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_UDP\_READ,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_ARP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_IGMP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_TCP\_WRITE,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_TCP\_READ,  EFI\_PXE\_BASE\_CODE\_PXE\_FUNCTION\_LAST  } EFI\_PXE\_BASE\_CODE\_FUNCTION; | typedef enum {  EFI\_PXE\_BASE\_CODE\_FUNCTION\_FIRST,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_DHCP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_DISCOVER,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_MTFTP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_UDP\_WRITE,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_UDP\_READ,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_ARP,  EFI\_PXE\_BASE\_CODE\_FUNCTION\_IGMP,  EFI\_PXE\_BASE\_CODE\_PXE\_FUNCTION\_LAST  } EFI\_PXE\_BASE\_CODE\_FUNCTION; | Replace old struct with R9 struct in Protocol/PxeBaseCodeCallBack.h |
| typedef struct {  EFI\_STATUS\_CODE\_DATA DataHeader; EFI\_DEVICE\_PATH\_PROTOCOL \*DevicePath;  UINT32 Bar;  VOID \*ReqRes;  VOID \*AllocRes;  } EFI\_RESOURCE\_ALLOC\_FAILURE\_ERROR\_DATA | typedef struct {  EFI\_STATUS\_CODE\_DATA DataHeader;  UINT32 Bar;  UINT16 DevicePathSize;  UINT16 ReqResSize;  UINT16 AllocResSize;  UINT8 \*DevicePath;  UINT8 \*ReqRes;  UINT8 \*AllocRes;  } EFI\_RESOURCE\_ALLOC\_FAILURE\_ERROR\_DATA; | Replace old struct with R9 struct in Common/StatusCodeTypeId.h |
| typedef struct {  UINT16 NumberOfHiiDataTables;  EFI\_GUID Revision;  } EFI\_HII\_EXPORT\_TABLE; | typedef struct {  UINT32 NumberOfHiiDataTables;  EFI\_GUID Revision;  } EFI\_HII\_EXPORT\_TABLE; | Replace old struct with R9 struct in Protocol/Hii.h |
| typedef  EFI\_STATUS  (EFIAPI \*EFI\_HII\_GET\_STRING) (  IN EFI\_HII\_PROTOCOL \*This,  IN EFI\_HII\_HANDLE Handle,  IN STRING\_REF Token,  IN BOOLEAN Raw,  IN CHAR16 \*LanguageString,  IN OUT UINT16 \*BufferLength,  OUT EFI\_STRING StringBuffer  ); | typedef  EFI\_STATUS  (EFIAPI \*EFI\_HII\_GET\_STRING) (  IN EFI\_HII\_PROTOCOL \*This,  IN EFI\_HII\_HANDLE Handle,  IN STRING\_REF Token,  IN BOOLEAN Raw,  IN CHAR16 \*LanguageString,  IN OUT UINTN \*BufferLength,  OUT EFI\_STRING StringBuffer  ); | Replace old struct with R9 struct in Protocol/Hii.h |
| typedef  EFI\_STATUS  (EFIAPI \*EFI\_HII\_GET\_FORMS) (  IN EFI\_HII\_PROTOCOL \*This,  IN EFI\_HII\_HANDLE Handle,  IN EFI\_FORM\_ID FormId,  IN OUT UINT16 \*BufferLength,  OUT UINT8 \*Buffer  ); | typedef  EFI\_STATUS  (EFIAPI \*EFI\_HII\_GET\_FORMS) (  IN EFI\_HII\_PROTOCOL \*This,  IN EFI\_HII\_HANDLE Handle,  IN EFI\_FORM\_ID FormId,  IN OUT UINTN \*BufferLength,  OUT UINT8 \*Buffer  ); | Replace old struct with R9 struct in Protocol/Hii.h |
| typedef struct {  UINT32 CF:1;  UINT32 Reserved1:1;  UINT32 PF:1;  UINT32 Reserved2:1;  UINT32 AF:1;  UINT32 Reserved3:1;  UINT32 ZF:1;  UINT32 SF:1;  UINT32 TF:1;  UINT32 IF:1;  UINT32 DF:1;  UINT32 OF:1;  UINT32 IOPL:2;  UINT32 NT:1;  UINT32 Reserved4:17;  } EFI\_EFLAGS\_REG; | typedef struct {  UINT32 CF:1;  UINT32 Reserved1:1;  UINT32 PF:1;  UINT32 Reserved2:1;  UINT32 AF:1;  UINT32 Reserved3:1;  UINT32 ZF:1;  UINT32 SF:1;  UINT32 TF:1;  UINT32 IF:1;  UINT32 DF:1;  UINT32 OF:1;  UINT32 IOPL:2;  UINT32 NT:1;  UINT32 Reserved4:2;  UINT32 VM:1;  UINT32 Reserved5:14;  } EFI\_EFLAGS\_REG; | Replace old struct with R9 struct in Protocol/LegacyBios.h |
| typedef struct {  UINT32 EAX;  UINT32 EBX;  UINT32 ECX;  UINT32 EDX;  UINT32 ESI;  UINT32 EDI;  EFI\_EFLAGS\_REG EFlags;  UINT16 ES;  UINT16 CS;  UINT16 SS;  UINT16 DS;  UINT32 EBP;  } EFI\_DWORD\_REGS; | typedef struct {  UINT32 EAX;  UINT32 EBX;  UINT32 ECX;  UINT32 EDX;  UINT32 ESI;  UINT32 EDI;  EFI\_EFLAGS\_REG EFlags;  UINT16 ES;  UINT16 CS;  UINT16 SS;  UINT16 DS;  UINT16 FS;  UINT16 GS;  UINT32 EBP;  UINT32 ESP;  } EFI\_DWORD\_REGS; | Replace old struct with R9 struct in Protocol/LegacyBios.h |
| typedef struct {  UINT16 AX;  UINT16 ReservedAX;  UINT16 BX;  UINT16 ReservedBX;  UINT16 CX;  UINT16 ReservedCX;  UINT16 DX;  UINT16 ReservedDX;  UINT16 SI;  UINT16 ReservedSI;  UINT16 DI;  UINT16 ReservedDI;  EFI\_FLAGS\_REG Flags;  UINT16 ReservedFlags;  UINT16 ES;  UINT16 CS;  UINT16 SS;  UINT16 DS;  UINT16 BP;  UINT16 ReservedBP;  } EFI\_WORD\_REGS; | typedef struct {  UINT16 AX;  UINT16 ReservedAX;  UINT16 BX;  UINT16 ReservedBX;  UINT16 CX;  UINT16 ReservedCX;  UINT16 DX;  UINT16 ReservedDX;  UINT16 SI;  UINT16 ReservedSI;  UINT16 DI;  UINT16 ReservedDI;  EFI\_FLAGS\_REG Flags;  UINT16 ReservedFlags;  UINT16 ES;  UINT16 CS;  UINT16 SS;  UINT16 DS;  UINT16 FS;  UINT16 GS;  UINT16 BP;  UINT16 ReservedBP;  UINT16 SP;  UINT16 ReservedSP;  } EFI\_WORD\_REGS; | Replace old struct with R9 struct in Protocol/LegacyBios.h |
| typedef struct {  ……  EFI\_SYSTEM\_TABLE \*EfiSystemTable;  ……  } EFI\_COMPATIBILITY16\_TABL | typedef struct {  ……  UINT32 EfiSystemTable;  ……  } EFI\_COMPATIBILITY16\_TABL | Replace old struct with R9 struct in Protocol/LegacyBios.h |
|  |  |  |
|  |  |  |
|  |  |  |

3. Unused Item Table

|  |  |  |
| --- | --- | --- |
| **Old Name** | **R9 Name** | **How to Fix** |
| EFI\_PEI\_VERIFICATION | None | Remove this interface in PeiCis.h |
| EFI\_BIS\_PROTOCOL\_REVISION | None | Remove this macro in Bis.h |
| EFI\_BIS\_PROTOCOL.Revision | None | Remove this member |
| EFI\_NETWORK\_INTERFACE\_IDENTIFIER\_PROTOCOL\_GUID\_31 | None | Remove this GUID out of MDE package. |
| EFI\_NETWORK\_INTERFACE\_IDENTIFIER\_PROTOCOL\_REVISION\_31 | None | Remove this macro out of MDE package. |
| PXE\_OPCODE\_VALID\_MAX | None | Remove this macro in EfiPxe.h |
| PXE\_STATFLAGS\_DB\_WRITE\_TRUNCATED | None | Remove this macro in EfiPxe.h |
| PXE\_ROMID\_MINORVER\_31 | None | Remove this macro in EfiPxe.h |
| PXE\_USB\_CONFIG\_INFO | None | Remove this structure in EfiPxe.h |
| PXE\_1394\_CONFIG\_INFO | None | Remove this structure in EfiPxe.h |
| EFI\_HANDLER\_DESCRIPTOR | None | In SmmBase.h |
| EFI\_SMM\_CPU\_CT\_SAVE\_STATE |  | Move this struct from MDE to related ModulePkg |
| EFI\_SMM\_CPU\_CT\_NOT\_ENABLED\_SAVE\_STATE |  | Move this struct from MDE to related ModulePkg |
| EFI\_PATH\_FILE\_NAME\_GUID | None | Remove this guid in Capsule.h |
| EFI\_HII\_STRING\_PACK\_HEADER | None | Use EFI\_HII\_STRING\_PACK replace it. |
| EFI\_TCP\_PROTOCOL\_GUID | None | Tcp.h is removed in R9. |
| EFI\_TCP\_PROTOCOL | None | Tcp.h is removed in R9. |

4. Add Item Table

|  |  |  |
| --- | --- | --- |
| **Old Name** | **R9 Name** | **How to fix** |
| EFI\_DRIVER\_CONFIGURATION\_PROTOCOL\_GUID | UEFI\_DRIVER\_CONFIGURATION\_PROTOCOL\_GUID | Use R9 name to record new GUID value defined in UEFI 2.0. Keep old name is used to record GUID value defined in EFI 1.10. |
| EFI\_DRIVER\_DIAGNOSTICS\_PROTOCOL\_GUID | UEFI\_DRIVER\_DIAGNOSTICS\_PROTOCOL\_GUID | Use R9 name to record new GUID value defined in UEFI 2.0. Keep old name is used to record GUID value defined in EFI 1.10. |
| None | EFI\_STATUS\_CODE\_STRING\_TOKEN | Added according to StatusCodes spec 0.92 |
| None | EFI\_STATUS\_CODE\_STRING | Added according to StatusCodes spec 0.92 |
| None | EFI\_DEVICE\_PATH\_EXTENDED\_DATA | Added according to StatusCodes spec 0.92 |
| None | EFI\_STATUS\_CODE\_START\_EXTENDED\_DATA | Added according to StatusCodes spec 0.92 |
| None | EFI\_MISC\_GROUP\_NAME\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_GROUP\_ITEM\_SET\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_SCHEDULED\_POWER\_ON\_MONTH\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_VOLTAGE\_PROBE\_DESCRIPTION\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_COOLING\_DEVICE\_TEMP\_LINK\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_TEMPERATURE\_PROBE\_DESCRIPTION\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_ELECTRICAL\_CURRENT\_PROBE\_DESCRIPTION\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_REMOTE\_ACCESS\_MANUFACTURER\_DESCRIPTION\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_MANAGEMENT\_DEVICE\_DESCRIPTION\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_MISC\_MANAGEMENT\_DEVICE\_COMPONENT\_DESCRIPTION\_DATA | Added according to Misc SubClass spec 0.92 |
| None | EFI\_SMM\_COMMUNICATE\_HEADER | Added according to SmmCis spec 0.9 |
| None | SMM\_COMMUNICATE\_HEADER\_GUID | Added according to SmmCis spec 0.9 |
| None | gSmmCommunicateHeaderGuid | Add this guid variable to SMM\_COMMUNICATE\_HEADER\_GUID |
| None | gEfiCapsuleGuid | Add this guid variable to EFI\_CAPSULE\_GUID |
| None | gEfiConfigFileNameGuid | Add this guid variable to EFI\_CONFIG\_FILE\_NAME\_GUID |
| None | gEfiEventLegacyBootGuid | Added according to DxeCis spec 0.91B |

# Porting to New HOB Library

Some interfaces of HOB library are altered to achieve clearer semantics and smaller code size. Therefore, the new HOB library is **NOT** compatible with the old one.

* **HOB Building Interfaces**
  + **Changes in library interfaces**

The interfaces of HOB building instances basically remain the same. The following example gives the detailed information:

* + **Old Interface:**

EFI\_STATUS

PeiBuildHobModule (

IN EFI\_PEI\_SERVICES \*\*PeiServices,

IN EFI\_GUID \*ModuleName,

IN EFI\_PHYSICAL\_ADDRESS MemoryAllocationModule,

IN UINT64 ModuleLength,

IN EFI\_PHYSICAL\_ADDRESS EntryPoint

);

* + **New Interface:**

VOID

EFIAPI

BuildModuleHob (

IN CONST EFI\_GUID \*ModuleName,

IN EFI\_PHYSICAL\_ADDRESS MemoryAllocationModule,

IN UINT64 ModuleLength,

IN EFI\_PHYSICAL\_ADDRESS EntryPoint

);

typedef struct {

EFI\_HII\_PACK\_HEADER *Header;*

RELOFST *LanguageNameString;*

RELOFST *PrintableLanguageName;*

UINT32 *NumStringPointers;*

UINT32 *Attributes;*

//RELOFST *StringPointers[];*

//EFI\_STRING *Strings[];*

} EFI\_HII\_STRING\_PACK;

* + **Porting BKMs:**

1. The first parameter of *PeiServices* is no longer required, so caller can simply skip it.
2. The naming convention of those functions has been changed from **PeiBuildHobXXX()** to **BuildXXXHob()**. For more details, please refer to section of “Porting Table for HOB Library”
3. The return type is changed from **EFI\_STATUS** to **VOID**. HOB library supposes that each HOB building is successful and will **ASSERT()** if build failure occurs. Therefore, caller does not need **ASSERT()** itself.
4. For **BuildGuidHob()** and **BuildGuidDataHob()**, the returned type is **VOID\***, which identifies the data area address of the newly built GUID HOB. Be noted that this address has already stripped the Header of GUID HOB.
   * **Caller Sample Code** (EdkNt32Pkg\Pei\FirmwareVolume\WinntFwh.c)
   * **Old Code:**

**...**

**Status = PeiBuildHobFv (**

**PeiServices,**

**FdBase,**

**FvHeader->FvLength**

**);**

**ASSERT\_EFI\_ERROR (Status);**

**...**

* + **New Code:**

**...**

**BuildFvHob (FdBase, FvHeader->FvLength);**

**...**

* **HOB Consuming Interfaces.** 
  + **Changes in library interfaces**
  + **Add a new library interface:**

**VOID \***

**EFIAPI**

**GetHobList (**

**VOID**

**);**

This interface returns the pointer to the HOB list. Caller does not need to know the details about the acquirement of that value.

* + **Provide 4 useful HOB consuming interfaces**

**VOID \***

**EFIAPI**

**GetNextHob (**

**IN UINT16 Type,**

**IN CONST VOID \*HobStart**

**);**

**VOID \***

**EFIAPI**

**GetFirstHob (**

**IN UINT16 Type**

**);**

**VOID \***

**EFIAPI**

**GetNextGuidHob (**

**IN CONST EFI\_GUID \*Guid,**

**IN CONST VOID \*HobStart**

**);**

**VOID \***

**EFIAPI**

**GetFirstGuidHob (**

**IN CONST EFI\_GUID \*Guid**

**);**

These four interfaces provide a neat solution to convenience developers and save code size. For more details, see Module Writer’s Guide.

* + **Remove some original HOB library interfaces:**

**GetHob()**, **GetHobList()**, **GetHobVersion()**, **GetHobBootMode()**, **GetHobCpu()**, **GetDxeCoreHobInfo()**, **GetNextFirmwareVolumeHob()**, **GetNextGuidHob()**.

The functionality of these interfaces are all covered by the above five interfaces, and the semantics of these functions are so obscure as to hide bugs, e.g. a living bug in **GetDxeCoreHobInfo()** in Release 8.5 beta. Also, the applications of these interfaces will have a possible negative impact on code size.

* + **Useful idioms to consume HOB:**

The main benefits of these five interfaces are to form useful idioms to write HOB-consuming code with clearer semantics and fewer bugs.

* + **Get the *only* HOB with a certain HOB type in the HOB list, e.g.**

**EFI\_HOB\_CPU \*CpuHob;**

**CpuHob = GetFirstHob (EFI\_HOB\_TYPE\_CPU);**

**if (CpuHob != NULL) {**

**IoSpace = CpuHob->IoSpace;**

**MemorySpace = CpuHob->MemorySpace;**

**}**

**if (CpuHob != NULL)** can be replaced with **ASSERT (CpuHob != NULL)** if that HOB is necessary.

* + **Get *all* HOBs with a certain HOB type in the HOB list, e.g.**

**EFI\_PEI\_HOB\_POINTERS   CpuHob;**

**CpuHob.Raw = GetHobList ();**

**while ((CpuHob.Raw = GetNextHob (EFI\_HOB\_TYPE\_CPU, CpuHob.Raw)) != NULL) {**

**//**

**// Find one valid instance**

**//**

**...**

**CpuHob.Raw = GET\_NEXT\_HOB (CpuHob);**

**}**

* + **Get the *only* GUID HOB with a GUID  in the HOB list, e.g.**

**EFI\_HOB\_GUID\_TYPE     \*GuidHob;**

**VOID                  \*Data;**

**UINTN                 DataSize;**

**GuidHob = GetFirstGuidHob (&gGuid);**

**if (CpuHob != NULL) {**

**Data = GET\_GUID\_HOB\_DATA (GuidHob);**

**DataSize = GET\_GUID\_HOB\_DATA\_SIZE (GuidHob);**

**}**

**if (GuidHob != NULL)** can be replaced with **ASSERT (GuidHob != NULL)** if that HOB is necessary.

* + **Get *all* GUID HOBs with a GUID  in the HOB list**

**EFI\_PEI\_HOB\_POINTERS  GuidHob;**

**VOID                  \*Data;**

**UINTN                 DataSize;**

**GuidHob.Raw = GetHobList ();**

**while((GuidHob.Raw = GetNextGuidHob (&gGuid,GuidHob.Raw)) != NULL) {**

**Data = GET\_GUID\_HOB\_DATA (GuidHob.Guid);**

**DataSize = GET\_GUID\_HOB\_DATA\_SIZE (GuidHob.Guid);**

**...**

**GuidHob.Raw = GET\_NEXT\_HOB (GuidHob);**

**}**

* + **Porting BKMs:**

1. Whenever caller needs to consume a HOB, it no long needs to call **(\*PeiServices)->PeiGetHobList(PeiServices, &HobList)** or **EfiLibGetSystemConfigurationTable (&gEfiHobListGuid, &gHobList)**.
2. Always use the above idioms to consume HOBs. Step-by-step porting:

* Obtain the *only* HOB or *all* HOBs satisfying a certain condition?
* Identify whether that HOB is *required* or *optional*?
* Choose the right idiom.

1. The caller is required to obtain the data fields by direct assignments.
2. The name of **GetNextGuidHob()** happens to coincide with the original interface. However, the parameter list has been changed, which ensures build error instead of runtime failure if compatible rises.
   * **Caller Sample Code (EdkModulePkg\Core\Dxe\FwVolBlock\FwVolBlock.c)**
   * **Old Code:**

**EFI\_STATUS**

**EFIAPI**

**FwVolBlockDriverInit (**

**IN EFI\_HANDLE ImageHandle,**

**IN EFI\_SYSTEM\_TABLE \*SystemTable**

**)**

**/\*++**

**Routine Description:**

**This routine is the driver initialization entry point. It initializes the libraries, consumes FV hobs and NT\_NON\_MM\_FV environment variable and produces instances of FW\_VOL\_BLOCK\_PROTOCOL as appropriate.**

**Arguments:**

**ImageHandle - The image handle.**

**SystemTable - The system table.**

**Returns:**

**EFI\_SUCCESS - Successfully initialized firmware volume block driver.**

**--\*/**

**{**

**EFI\_STATUS Status;**

**VOID \*HobList;**

**EFI\_PHYSICAL\_ADDRESS BaseAddress;**

**UINT64 Length;**

**EFI\_STATUS HobStatus;**

**//**

**// First walk hobs and create appropriate FVs.**

**//**

**Status = CoreGetConfigTable (&gEfiHobListGuid, &HobList);**

**//**

**// Core Needs Firmware Volumes to function**

**//**

**ASSERT\_EFI\_ERROR (Status);**

**BaseAddress = 0;**

**Length = 0;**

**HobStatus = GetNextFirmwareVolumeHob (**

**&HobList,**

**&BaseAddress,**

**&Length**

**);**

**while (!EFI\_ERROR (HobStatus)) {**

**//**

**// Produce an FVB protocol for it**

**//**

**ProduceFVBProtocolOnBuffer (BaseAddress, Length, NULL, NULL);**

**HobStatus = GetNextFirmwareVolumeHob (**

**&HobList,**

**&BaseAddress,**

**&Length**

**);**

**}**

**return EFI\_SUCCESS;**

**}**

* + **New Code:**

**EFI\_STATUS**

**EFIAPI**

**FwVolBlockDriverInit (**

**IN EFI\_HANDLE ImageHandle,**

**IN EFI\_SYSTEM\_TABLE \*SystemTable**

**)**

**/\*++**

**Routine Description:**

**This routine is the driver initialization entry point. It initializes the libraries, consumes FV hobs and NT\_NON\_MM\_FV environment variable and produces instances of FW\_VOL\_BLOCK\_PROTOCOL as appropriate.**

**Arguments:**

**ImageHandle - The image handle.**

**SystemTable - The system table.**

**Returns:**

**EFI\_SUCCESS - Successfully initialized firmware volume block driver.**

**--\*/**

**{**

**EFI\_PEI\_HOB\_POINTERS FvHob;**

**//**

**// Core Needs Firmware Volumes to function**

**//**

**FvHob.Raw = GetHobList ();**

**while ((FvHob.Raw = GetNextHob (EFI\_HOB\_TYPE\_FV, FvHob.Raw)) != NULL) {**

**//**

**// Produce an FVB protocol for it**

**//**

**ProduceFVBProtocolOnBuffer (**

**FvHob.FirmwareVolume->BaseAddress,**

**FvHob.FirmwareVolume->Length,**

**NULL,**

**NULL**

**);**

**FvHob.Raw = GET\_NEXT\_HOB (FvHob);**

**}**

**return EFI\_SUCCESS;**

**}**

* **Module Surfaces Area.**

MSA porting is very simple: a PEIM or DXE driver just needs to modify the follow field to use HOB library.

* + **Add *HobLib* in *LIBRARY\_CLASS* field**
  + **Add *DxeHobLib* or *PeiHobLib* in *libraries.common* field. It depends on *MODULE\_TYPE* to choose which.**

Be noted that DxeCoreHobLib is dedicated to DxeCore module.

* **Porting Tables for HOB Library**

As a brief summary, here list two porting tables to look up. Please apply with caution since there are subtle semantic changes among these interfaces.

* + **Renamed interfaces Table**

|  |  |  |
| --- | --- | --- |
| **Old Name** | **R9 Name** | **How to Fix** |
| PeiBuildHobModule | BuildModuleHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices |
| PeiBuildHobResourceDescriptor | BuildResourceDescriptorHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices |
| PeiBuildHobGuid | BuildGuidHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices & the fourth parameter of Hob. The returned value identifies the data area address of the newly built GUID HOB instead of the address of newly built GUID HOB. |
| PeiBuildHobGuidData | BuildGuidDataHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices. |
| PeiBuildHobFv | BuildFvHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices. |
| PeiBuildHobCpu | BuildCpuHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices. |
| PeiBuildHobStack | BuildStackHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices. |
| PeiBuildHobBspStore | BuildBspStoreHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices. |
| PeiBuildHobMemoryAllocation | BuildMemoryAllocationHob | Replace Old Name with R9 Name and drop the first parameter of PeiServices & second parameter of Name |

* + **Obsolete Interfaces Table**

|  |  |  |
| --- | --- | --- |
| **Old Name** | **R9 Name** | **How to Fix** |
| GetHob |  | Replace it with new interface of GetNextHob() and take care of the semantic changes. |
| GetHobListSize |  | Implement it with new interface of GetHobList() and take care of the semantic changes. |
| GetHobVersion |  | Implement it with new interface of GetHobList() and take care of the semantic changes. |
| GetHobBootMode |  | Implement it with new interface of GetHobList() and take care of the semantic changes. |
| GetCpuHobInfo |  | Implement it with new interface of GetNextHob(EFI\_HOB\_TYPE\_CPU, HobStart) or GetFirstHob(EFI\_HOB\_TYPE\_CPU) and take care of the semantic changes. |
| GetDxeCoreHobInfo |  | Implement it with new interface of GetNextHob(EFI\_HOB\_TYPE\_MEMORY\_ALLOCATION, HobStart) and take care of the semantic changes. |
| GetNextFirmwareVolumeHob |  | Implement it with new interface of GetNextHob(EFI\_HOB\_TYPE\_FV, HobStart) or GetFirstHob(EFI\_HOB\_TYPE\_FV) and take care of the semantic changes. |
| GetNextGuidHob |  | Implement it with new interface of GetNextGuidHob() or GetFirstGuidHob() and take care of the semantic changes. |
| GetPalEntryHobInfo |  | Implement it with new interface of GetNextGuidHob() or GetFirstGuidHob() and take care of the semantic changes. |
| GetIoPortSpaceAddressHobInfo |  | Implement it with new interface of GetNextGuidHob() or GetFirstGuidHob() and take care of the semantic changes. |

* + **Obsolete Interfaces Table**

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| --- | --- | --- |
| **Old Name** | **R9 Name** | **How to Fix** |
| DivU64x32 | DivU64x32  DivU64x32Remainder | The Remainder argument was removed. If you need the remainder use DivU64x32Remainder() if you don’t need the remainder remove the argument from DivU64x32 |
| #include “Tiano.h” |  | Delete from your code.  All .c files include AutoGen.h via a compiler switch. AutoGen.h contains standard include files for module type from each package. This mechanism also replaces the inclusion of protocol, guid, & PPI definitions. Library files have been removed too.  Only include files local to the module are usually still required. |
| #include “Efi.h” |  |
| #include EFI\_GUID\_DEFINITION () |  |
| #include EFI\_ARCH\_PROTOCOL\_DEFINITION () |  |
| #include EFI\_PROTOCOL\_DEFINITION () |  |
| #include EFI\_PPI\_DEFINITION () |  |
| #include “” |  |
|  |  |  |