

Base Server and Physical Asset Profile

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1. Scope

The Base Server and Physical Asset Profile is the autonomous profile that defines the classes used to describe basic server and its hardware components (FRU). The scope of this profile is limited to simple servers that are directly realized in physical components. The profiles referenced by the Base Server Profile extend the management capabilities by adding the capability to represent server configuration, boot control, provisioning, and hardware.

2. Normative References

Refer to the following documents for more information.

Note: For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- DMTF DSP1033, Profile Registration Profile 1.0.0
- DMTF DSP1004, Base Server Profile 1.0.0
- DMTF DSP1011, Physical Asset Profile 1.0.0
- Dell Lifecycle Controller Best Practices Guide 1.0,
http://en.community.dell.com/techcenter/extras/m/white_papers/20066173.aspx
- Dell WSMAN Licenses and Privileges 1.0
- DMTF DSP0226, Web Services for Management (WS-Management) Specification 1.1.0
- DMTF DSP0227, WS-Management CIM Binding Specification 1.0.0
- Dell SMBIOS Implementation Specification 2.0
- Dell Lifecycle Controller Best Practices Guide v1.0, <link TBD>
- Dell Tech Center MOF Library: <http://www.delltechcenter.com/page/DCIM.Library.MOF>
- Related Managed Object Format (MOF) files:
 - o DCIM_ComputerSystem.mof
 - o DCIM_ComputerSystemPackage.mof
 - o DCIM_Chassis.mof
 - o DCIM_PhysicalPackage.mof
 - o DCIM_Slot.mof
 - o DCIM_SystemComponent.mof
 - o DCIM_CSEnabledLogicalElementCapabilities.mof
 - o DCIM_CSElementCapabilities.mof
 - o DCIM_RegisteredProfile.mof
 - o DCIM_ElementConformsToProfile.mof
 - o DCIM_LCRegisteredProfile.mof
 - o DCIM_LCElementConformsToProfile.mof

3. Terms and Definitions

3.1. Conditional

Indicates requirements to be followed strictly in order to conform to the document when the specified conditions are met.

3.2. Mandatory

Indicates requirements to be followed strictly in order to conform to the document and from which no deviation is permitted.

3.3. May

Indicates a course of action permissible within the limits of the document.

3.4. Optional

Indicates a course of action permissible within the limits of the document.

3.5. Referencing profile

Indicates a profile that owns the definition of this class and can include a reference to this profile in its “Related Profiles” table.

3.6. Shall

Indicates requirements to be followed strictly in order to conform to the document and from which no deviation is permitted.

3.7. FQDD

Fully Qualified Device Descriptor is used to identify a particular component in a system.

3.8. Interop Namespace

Interop Namespace is where instrumentation instantiates classes to advertise its capabilities for client discovery.

3.9. Implementation Namespace

Implementation Namespace is where instrumentation instantiates classes relevant to executing core management tasks.

3.10. ENUMERATE

Refers to WS-MAN ENUMERATE operation as described in Section 8.2 of DSP0226_V1.1 and Section 9.1 of DSP0227_V1.0

3.11. GET

Refers to WS-MAN GET operation as defined in Section 7.3 of DSP00226_V1.1 and Section 7.1 of DSP0227_V1.0

4. Symbols and Abbreviated Terms

4.1. CIM

Common Information Model

4.2. iDRAC

Integrated Dell Remote Access Controller to perform out-of-band operations on Blades and Rack and Towers.

4.3. CMC

Chassis Manager Controller to perform out-of-band operations on Blade systems.

4.4. FQDD

Fully Qualified Device Description – a user-friendly name for the object

5. Synopsis

Profile Name: Base Server and Physical Asset Profile

Version: 4.0.0

Organization: Dell

CIM Schema Version: 2.26 Experimental

Dell Schema Version: 1.0.0

Interop Namespace: root/interop

Implementation Namespace: root/dcim

Central Class: DCIM_ComputerSystem

Scoping Class: DCIM_ComputerSystem

The Dell Base Server and Physical Asset Profile is a component profile that contains the Dell specific implementation requirements for computer system.

DCIM_ComputerSystem is the Central Class.

Table 1 lists profiles that are related to this profile.

Table 1. Related Profiles

Profile Name	Organization	Version	Relationship
Base Server Profile	DMTF	1.0	Specializes
Physical Asset Profile	DMTF	1.0	Specializes

6. Description

The *Base Server Profile* is an autonomous profile that defines the minimum top-level object model needed to model simple server hardware and related software. Other profiles add additional management objects to this basic server model to provide system configuration, boot control, and other provisioning capabilities.

DCIM_ComputerSystem represents the server system

Figure 1 presents the class schema for the BaseServer Profile.

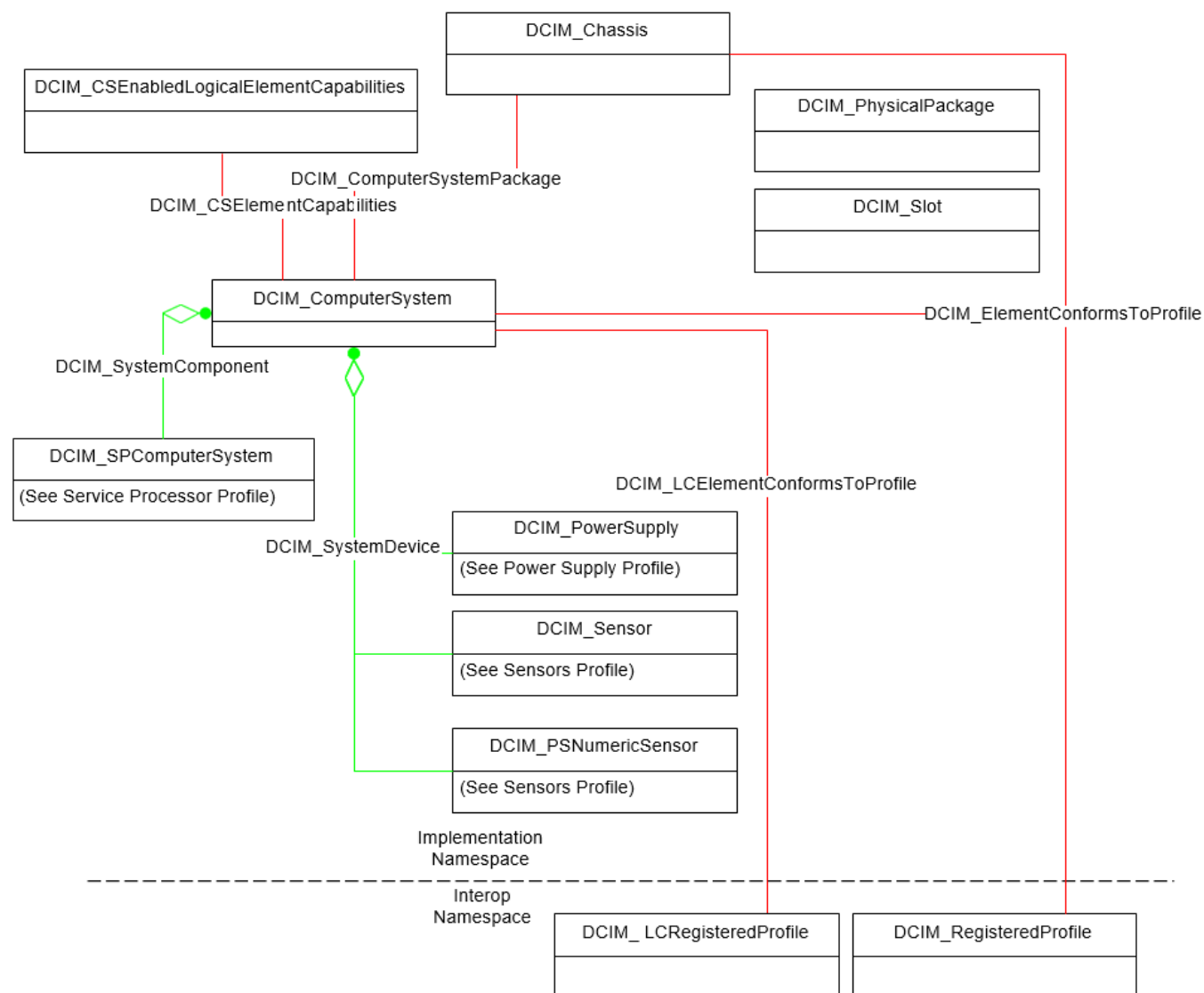


Figure 1. Base Server and Physical Asset Profile Implementation

The platform's FRU information is also represented through this profile. The DCIM_PhysicalPackage class represents the FRU information of the platform's components. The information usually includes the product name, manufacturer, version information, as well as identifiers such as part number and serial number that represent the FRU. The profile's FRU representation includes the following components:

- Power supply
- System Planar
- NDC
- PERC
- DIMM
- MEZZ/Daughter cards
- Backplane

The information regarding whether devices can be added to or removed from the system hardware is represented through the profile. The DCIM_Slot Class provides the details of what type of slot it is, whether the slot is

occupied and the association to the device if present in that slot. The profile's slot representation includes the following types of slots in a system:

- PCIe Slot
- Power Supply
- DIMM
- Processor
- SD card
- Hard disk drives (Internal and external)
- Enclosure slots (PSU, Fan, etc.)

7. Implementation Description

This section describes the requirements and guidelines for implementing BaseServer Profile.

Table 2. Class Requirements: Base Server and Physical Asset Profile

Element Name	Requirement	Description
Classes		
DCIM_ComputerSystem	Mandatory	The class is implemented in the Implementation Namespace. See section 7.1.
DCIM_ComputerSystemPackage	Mandatory	The class is implemented in the Implementation Namespace. See section 7.2.
DCIM_CSEnabledLogicalElementCapabilities	Mandatory	The class is implemented in the Implementation Namespace. See section 7.3.
DCIM_SystemComponent	Mandatory	The class is implemented in the Implementation Namespace. See section 7.1.
DCIM_CSElementCapabilities	Mandatory	The class is implemented in the Implementation Namespace. See section 7.1 and 7.3.
DCIM_Chassis	Mandatory	The class is implemented in the Implementation Namespace. See section 7.4.
DCIM_PhysicalPackage	Mandatory	The class is implemented in the Implementation Namespace. See section 7.8.
DCIM_Slot	Mandatory	The class is implemented in the Implementation Namespace. See section 7.9
DCIM_LCRegisteredProfile	Mandatory	The class is implemented in the Interop Namespace. See section 7.7.
DCIM_LCElementConformsToProfile	Mandatory	The class is implemented in both the Interop and implementation Namespaces. See section 7.7.
DCIM_RegisteredProfile	Mandatory	The class is implemented in the Interop Namespace. See section 7.6.
DCIM_ElementConformsToProfile	Mandatory	The class is implemented in both the Interop and implementation Namespaces. See section 7.6.

7.1. DCIM_ComputerSystem – Host Computer System

This section describes the implementation for the DCIM_ComputerSystem class. This class is instantiated in the Implementation Namespace. The DCIM_ElementConformsToProfile association(s) references the DCIM_ComputerSystem instance(s).

7.1.1. Resource URIs for WinRM®

The class Resource URI is:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2 /DCIM_ ComputerSystem?cimnamespace=root/dcim”

The key properties are CreationClassName, Name.

The instance Resource URI for DCIM_ComputerSystem instance is:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_ ComputerSystem?cimnamespace=root/dcimName=srv:system+CreationClassName=DCIM_ ComputerSystem”

7.1.2. Operations

The following table lists the implemented operations on DCIM_ComputerSystem.

Table 3. DCIM_ComputerSystem - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance Resource URI
Enumerate	Mandatory	Class Resource URI
Invoke	Mandatory	Instance Resource URI and Method parameters
Associators	Mandatory	Instance Resource URI
References	Mandatory	Instance Resource URI

7.1.3. Class Properties

The table details the implemented properties for DCIM_ComputerSystem instance in a system. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirement” column shall denote either possible values for the property, or requirements on the value formulation

Table 4. DCIM_ComputerSystem - Properties

Property Name	Type	Requirement	Additional Requirement
CreationClassName	string	Mandatory	The property value shall be “DCIM_ComputerSystem”
Name	string	Mandatory	The property value shall be “srv:system”
EnabledState	uint16	Mandatory	This property value shall be one of the following: • 2 (Enabled) –Host system is powered on • 3 (Disabled) – Host system is powered off
RequestedState	uint16	Mandatory	This property shall be 0 (Unknown).

Property Name	Type	Requirement	Additional Requirement
OperationalStatus[]	uint16	Mandatory	OperationalStatus shall indicate the current health of the computer system and its sub-components excluding storage sub-systems. Only the first element of the array shall be populated. The first element value shall be one of the following: • 0(Unknown) • 2(OK) • 3(Degraded) • 6(Error).
HealthState	uint16	Mandatory	HealthState shall indicate the current health of the computer system and its sub-components excluding storage sub-systems. The property value shall be one of the following: • 0(Unknown) • 5 (OK) • 10 (Degraded/Warning) • 25(Error)
PrimaryStatus	uint16	Mandatory	The property shall contain up-to-date information on health state of the system excluding storage sub-systems. PrimaryStatus provides a high level status value, intended to align with Red-Yellow- Green type representation of status. The property value shall be one of the following: • 0(Unknown) • 1(OK) • 2 (Degraded) • 3 (Error)
IdentifyingDescriptions[]	String	Mandatory	The property shall be an array of strings providing explanations and details behind the entries in the OtherIdentifyingInfo array. Each element of this array shall be related to the entry in OtherIdentifyingInfo that is located at the same index. The array property value shall be ["CIM:GUID", "CIM:Tag", "DCIM:ServiceTag"]
OtherIdentifyingInfo[]	String	Mandatory	This array property shall contain [<the platform GUID>, "mainsystemchassis", <the platform service tag>].
ElementName	String	Mandatory	ElementName property value shall be the host name of the system.
Dedicated[]	Uint16	Mandatory	This property value shall be 0 (Not Dedicated).

7.2. DCIM_ComputerSystemPackage - Computer System Package

This section describes the implementation for the DCIM_ComputerSystemPackage class. This class is instantiated in the Implementation Namespace.

7.2.1. Resource URIs for WinRM®

The class Resource URI is:

"http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_ComputerSystemPackage?cimnamespace=root/dcim"

The key properties are Antecedent and Dependent.

The instance Resource URI for DCIM_ComputerSystemPackage instance is:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_ComputerSystemPackage?cimnamespace=root/dcim+Antecedent=<Reference to DCIM_ComputerSystem>+Dependent=<Reference to DCIM_Chassis>”

7.2.2. Operations

The following table lists the implemented operations on DCIM_ComputerSystemPackage.

Table 5. DCIM_ComputerSystemPackage - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance Resource URI
Enumerate	Mandatory	Class Resource URI

7.2.3. Class Properties

The following table lists the implemented properties for DCIM_ComputerSystemPackage instance in a system. The “Type” column shall denote the corresponding property type. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirement” column shall denote either possible values for the property, or requirements on the value formulation.

Table 6. DCIM_ComputerSystemPackage – Properties

Properties Name	Type	Requirement	Additional Requirements
Antecedent	Reference	Mandatory	The property value shall reference the DCIM_ComputerSystem instance.
Dependent	Reference	Mandatory	The property value shall reference DCIM_Chassis instance.
PlatformGUID	string	Mandatory	The property value shall represent the platform GUID of the system.

7.3. DCIM_CSEnabledLogicalElementCapabilities - Enabled Logical Element Capabilities

This section describes the implementation for the DCIM_CSEnabledLogicalElementCapabilities class. This class is instantiated in the Implementation Namespace.

7.3.1. Resource URIs for WinRM®

The class Resource URI is

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_CSEnabledLogicalElementCapabilities?cimnamespace=root/dcim”

The key property is the InstanceID.

The instance Resource URI for DCIM_CSEnabledLogicalElementCapabilities instance is:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_CSEnabledLogicalElementCapabilities?cimnamespace=root/dcim+InstanceID= DCIM:ComputerCap:1”

7.3.2. Operations

The table lists the implemented operations on DCIM_CSEnabledLogicalElementCapabilities.

Table 7. DCIM_CSEnabledLogicalElementCapabilities - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance Resource URI
Enumerate	Mandatory	Class Resource URI
Associators	Mandatory	Instance Resource URI
References	Mandatory	Instance Resource URI

7.3.3. Class Properties

The table lists the implemented properties for DCIM_CSEnabledLogicalElementCapabilities instance in a system. The “Type” column shall denote the corresponding property type. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, section 3). The “Additional Requirement” column shall denote either possible values for the property, or requirements on the value formulation.

Table 8. DCIM_CSEnabledLogicalElementCapabilities - Properties

Property Name	Type	Requirement	Additional Requirement
InstanceID	string	Mandatory	The property value shall be “DCIM:ComputerCap:1”
RequestedStatesSupported[]	uint16	Mandatory	This array property value shall be [2(Enabled), 3(Disabled), 11(Reset)]
ElementName	string	Mandatory	The property value is “Computer System Capabilities”
ElementNameEditSupported	boolean	Mandatory	This property value shall be FALSE.

7.4. DCIM_Chassis - Chassis

This section describes the implementation for the DCIM_Chassis class. This class is instantiated in the Implementation Namespace.

7.4.1. Resource URIs for WinRM®

The class Resource URI is

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_Chassis? cimnamespace=root/dcim”The key property is the CreationClassName and Tag.

The instance Resource URI for DCIM_Chassis instance is:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_Chassis?cimnamespace=root/dcim+CreationClassName=DCIM_Chassis+Tag=mainsystemchassis”

7.4.2. Operations

The following table details the implemented operations on DCIM_Chassis.

Table 9. DCIM_Chassis - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance Resource URI
Enumerate	Mandatory	Class Resource URI

7.4.3. Properties

The table lists the implemented properties for DCIM_Chassis instance in a system. The “Type” column shall denote the corresponding property type. The “Requirements” column shall denote whether the property is

implemented (for requirement definitions, see section 3). The “AdditionalRequirement” column shall denote either possible values for the property, or requirements on the value formulation

Table 10. DCIM_Chassis - Properties

Property Name	Type	Requirement	Additional Requirement
CreationClassName	string	Mandatory	This property value shall be “DCIM_Chassis”
Tag	string	Mandatory	This property value shall be “mainsystemchassis”
Manufacturer	string	Mandatory	The property shall identify the manufacturer of the platform.
Model	string	Mandatory	The property shall identify the platform model.
PartNumber	string	Mandatory	This property value shall represent the platform's part number.
SerialNumber	string	Mandatory	This property value shall represent the platform's service tag.
SKU	string	Mandatory	This property value shall represent the platform's serial number.
ChassisPackageType	uint16	Mandatory	This property value shall be 17(Main System Chassis).
ElementName	String	Mandatory	This property value shall have the format “DCIM<Model> Chassis”
PackageType	uint16	Mandatory	This property value shall be 3(Chassis/Frame) for monolithic platforms, or 16 (Blade) for blade platform.
CanBeFRUed	boolean	Mandatory	This property value shall be TRUE.
SystemID	uint16	Mandatory	This property value shall be the 3 digit Dell System ID for the platform.

7.5. DCIM_RegisteredProfile - DMTF Base Server Profile Registration

This section describes the implementation for the DCIM_RegisteredProfile class. This class shall be instantiated in the Interop Namespace. The DCIM_ElementConformsToProfile association(s) shall reference the DCIM_RegisteredProfile instances.

7.5.1. Resource URIs

The class Resource URI shall be:

“http://schemas.dmtf.org/wbem/wscim/1/cim-schema/2/CIM_RegisteredProfile?cimnamespace=root/interop”

The key property shall be the InstanceID property.

The instance Resource URI shall be:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_RegisteredProfile?cimnamespace=root/interop+InstanceID= DCIM:CSRegisteredProfile:1”

7.5.2. Operations

The following table details the implemented operations on for DCIM_RegisteredProfile.

Table 11. DCIM_RegisteredProfile - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI
Enumerate	Mandatory	Class URI

7.5.3. Class Properties

The table lists the implemented properties for DCIM_RegisteredProfile instance representing Base Server and Physical Asset Profile implementation. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3.1, 3.2, and 3.4). The “Additional Requirement” column shall denote either possible values for the property, or requirements on the value formulation.

Table 12. DCIM_RegisteredProfile Properties

Property Name	Type	Requirement	Additional Requirements
InstanceID	string	Mandatory	This property value shall be “DCIM:CSRegisteredProfile:1”.
RegisteredName	string	Mandatory	This property value shall be “Base Server”.
RegisteredVersion	string	Mandatory	This property value shall be “1.0.0”.
RegisteredOrganization	uint16	Mandatory	This property value shall be 2 (DMTF).
AdvertiseTypes[]	uint16	Mandatory	This property value shall be [1,1].
AdvertiseTypeDescriptions[]	string	Mandatory	This property value shall be [“WS-Identify”, “Interop Namespace”].

7.6. DCIM_RegisteredProfile - DMTF Physical Asset Profile Registration

This section describes the implementation for the DCIM_RegisteredProfile class. This class shall be instantiated in the Interop Namespace. The DCIM_ElementConformsToProfile association(s) shall reference the DCIM_RegisteredProfile instances.

7.6.1. Resource URIs

The class Resource URI shall be “http://schemas.dmtf.org/wbem/wscim/1/cim-schema/2/CIM_RegisteredProfile?cimnamespace=root/interop”

The key property shall be the InstanceID property.

The instance Resource URI shall be: “http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_RegisteredProfile?cimnamespace=root/interop+InstanceID=DCIM:PhysicalAssetRegisteredProfile:1”

7.6.2. Operations

The following table details the implemented operations on for DCIM_RegisteredProfile.

Table 13. DCIM_RegisteredProfile - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI
Enumerate	Mandatory	Class URI

7.6.3. Class Properties

The following table details the implemented properties for DCIM_RegisteredProfile instance representing Base Server and Physical Asset Profile implementation. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, section 3). The “Additional Requirement” column shall denote either possible values for the property, or requirements on the value formulation

Table 14. DCIM_RegisteredProfile

Property Name	Type	Requirement	Additional Requirements
InstanceID	string	Mandatory	This property value shall be "DCIM:PhysicalAsset:1.0.0".
RegisteredName	string	Mandatory	This property value shall be "Physical Asset".
RegisteredVersion	string	Mandatory	This property value shall be "1.0.0".
RegisteredOrganization	uint16	Mandatory	This property value shall be 2 (DMTF).
AdvertiseTypes[]	uint16	Mandatory	This property value shall be [1 (Other) ,1 (Other)].
AdvertiseTypeDescriptions[]	string	Mandatory	This property value shall be ["WS-Identify", "Interop Namespace"].

7.7. DCIM_LCRegisteredProfile

This section describes the implementation for the DCIM_LCRegisteredProfile class. This class shall be instantiated in the Interop Namespace. The DCIM_ElementConformsToProfile association(s) shall reference the DCIM_LCRegisteredProfile instance.

7.7.1. Resource URIs for WinRM®

The class Resource URI shall be "http://schemas.dmtf.org/wbem/wscim/1/cim-schema/2/CIM_RegisteredProfile?cimnamespace=root/interop"

The key property shall be the InstanceID property.

The instance Resource URI shall be: "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_LCRegisteredProfile? cimnamespace=root/interop+InstanceID=DCIM:BaseServerAndPhysicalAsset:1.0.0"

7.7.2. Operations

The following table details the implemented operations on for DCIM_LCRegisteredProfile.

Table 15. DCIM_LCRegisteredProfile - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI
Enumerate	Mandatory	Class URI

7.7.3. Class Properties

The following table details the implemented properties for DCIM_LCRegisteredProfile instance representing Base Server and Physical Asset Profile implementation. The "Requirements" column shall denote whether the property is implemented (for requirement definitions, section 3). The "Additional Requirement" column shall denote either possible values for the property, or requirements on the value formulation

Table 16. DCIM_LCRegisteredProfile

Property Name	Type	Requirement	Additional Requirements
InstanceID	string	Mandatory	This property value shall be "DCIM:BaseServerAndPhysicalAsset:1.0.0".
RegisteredName	string	Mandatory	This property value shall be "Base Server and Physical Asset".
RegisteredVersion	string	Mandatory	This property value shall be "1.1.0".
RegisteredOrganization	uint16	Mandatory	This property value shall be 1 (Other).

Property Name	Type	Requirement	Additional Requirements
OtherRegisteredOrganization	string	Mandatory	This property value shall be "DCIM".
AdvertiseTypes[]	uint16	Mandatory	This property value shall be [1,1].
AdvertiseTypeDescriptions[]	string	Mandatory	This property value shall be ["WS-Identify", "Interop Namespace"].

7.8. DCIM_PhysicalPackage

This section describes the implementation for the DCIM_PhysicalPackage class. This class describes the FRU information of the system components.

This class is instantiated in the Implementation Namespace.

7.8.1. Resource URIs for WinRM®

The class Resource URI is

"http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_PhysicalPackage?cimnamespace=root/dcim"

The key property is the CreationClassName and Tag.

The instance Resource URI for DCIM_PhysicalPackage instance is:

"http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_PhysicalPackage?cimnamespace=root/dcim+CreationClassName=DCIM_PhysicalPackage+Tag= mainsystemchassis"

7.8.2. Operations

The following table details the implemented operations on DCIM_PhysicalPackage.

Table 17. DCIM_PhysicalPackage - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance Resource URI
Enumerate	Mandatory	Class Resource URI

7.8.3. Properties

The table lists the implemented properties for DCIM_PhysicalPackage instance in a system. The "Type" column shall denote the corresponding property type. The "Requirements" column shall denote whether the property is implemented (for requirement definitions, see section 3). The "Additional Requirement" column shall denote either possible values for the property, or requirements on the value formulation

Table 18. DCIM_PhysicalPackage - Properties

Property Name	Type	Requirement	Additional Requirement
CreationClassName	string	Mandatory	This property value shall be "DCIM_PhysicalPackage"
DeviceFQDD	string	Mandatory	This property shall have the value of the FQDD for the device of which FRU the instance represents.
ElementName	string	Mandatory	This property value shall represent the user friendly product name of the FRU.
Manufacturer	string	Mandatory	The property shall identify the manufacturer of the FRU.

Property Name	Type	Requirement	Additional Requirement
PackageType	uint16	Mandatory	This property value shall represent the FRU type. The following are examples of the values for this property value for different FRU types: • Power supply - 6 (Power Supply) • System Planar - 9 (Module/Card) • NDC - 9 (Module/Card) • PERC - 9 (Module/Card) • DIMM - 13 (Memory) • MEZZ/Daughter cards - 9 (Module/Card) • Backplane - 4 (Cross Connect/Backplane)
PartNumber	string	Mandatory	The property shall represent the part number of the FRU. If the part number is not available, the value shall be set to NULL.
SerialNumber	string	Mandatory	The property shall represent the serial number of the FRU. If the serial number is not available, the value shall be set to NULL.
Tag	string	Mandatory	This property shall be the key and shall have unique value.
Version	string	Mandatory	The property shall represent the version of the FRU. If the version is not available, the value shall be set to NULL.

7.9. DCIM_Slot

This section describes the implementation for the DCIM_Slot class. This class provides overall picture of the system hardware where devices can be added or removed.

This class is instantiated in the Implementation Namespace.

7.9.1. Resource URIs for WinRM®

The class Resource URI is

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_Slot? cimnamespace=root/dcim”

The key property is the CreationClassName and Tag. The instance Resource URI for DCIM_Slot instance is:

“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_Slot?
cimnamespace=root/dcim+CreationClassName=DCIM_Slot+Tag=<Tag>”

7.9.2. Operations

The following table details the implemented operations on DCIM_Slot.

Table 19. DCIM_Slot - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance Resource URI
Enumerate	Mandatory	Class Resource URI

7.9.3. Properties

The table lists the implemented properties for DCIM_Slot instance in a system. The “Type” column shall denote the corresponding property type. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirement” column shall denote either possible values for the property, or requirements on the value formulation

Table 20. DCIM_Slot - Properties

Property Name	Type	Requirement	Additional Requirement
CreationClassName	string	Mandatory	This property value shall be "DCIM_Slot"
DeviceFQDD	string	Mandatory	The property shall represent the FQDD for the device that is plugged in into the slot.
ElementName	string	Mandatory	The property shall represent the slot name.
EmptySlot	Boolean	Mandatory	The property shall represent whether the slot is empty: • TRUE – Empty • FALSE – Occupied
Number	uint16	Mandatory	The property shall represent the numeric slot number. If the slot number contains alphabets, this property shall be NULL and the slot number shall be obtained from property NumberDescription.
NumberDescription	string	Mandatory	The property shall represent the slot number containing alphanumeric value.
EnabledState	uint16	Mandatory	The property shall represent whether the slot is enabled. • 2 – Enabled • 3 – Disabled
ConnectorLayout	uint16	Mandatory	The property shall represent the slot type. Unknown length PCIe slot shall have value 18 (PCI-E). Other slot types includes: 0(Unknown), 40001(Power Supply), 40002(Fan), 40003(DIMM), 40004(Processor), 40005(SD Card), 40006(IDSDM), 40007(Physical Disk), 40008(Enclosure Fan), 40009(Enclosure Power Supply)
Tag	string	Mandatory	This property shall be the key and shall have unique value.

8. Methods

This section details the requirements for supporting extrinsic methods for the DCIM_ComputerSystem class.

8.1. DCIM_ComputerSystem.RequestStateChange()

Invoking the DCIM_ComputerSystem.RequestStateChange() method changes the element's state to the value specified in the RequestedState parameter.

- A value of 2 (Enabled) shall correspond to a request to power on the system.
- A value of 3 (Disabled) shall correspond to a request to power off the system.
- A value of 11 (Reset) shall correspond to a request to power cycle the system.

The method shall be successful, if upon the completion of the method the system has been requested to transition to the desired state indicated by the RequestedState parameter. An actual change in the state may not occur, even if the method was executed successfully. The EnabledState property shall indicate the current state of the system.

Detailed requirements of the RequestStateChange() method are specified in Table 21 and Table 22.

Invoking the DCIM_ComputerSystem.RequestStateChange() method multiple times could result in earlier requests being overwritten or lost.

Table 21. DCIM_ComputerSystem.RequestStateChange() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 22. DCIM_ComputerSystem.RequestStateChange() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	RequestedState	uint16	Valid state values : • 2 (Enabled) • 3 (Disabled) • 11 (Reset)
OUT	MessageID	string	Error Message ID- can be used to index into Dell Message registry files
OUT	Message	string	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

Table 23. DCIM_ComputerSystem.RequestStateChange() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SYS002	The command failed	
SYS003	Missing parameter(s) %s	RequestedState
SYS004	Invalid parameter value for %s	RequestedState
SYS021	The command failed to set %s	RequestedState

8.1.1. DCIM_ComputerSystem.RequestStateChange() Conditional Support

When the DCIM_CSEnabledLogicalElementCapabilities.RequestedStatesSupported property contains at least one value, the DCIM_ComputerSystem.RequestStateChange() method shall be implemented and supported. The DCIM_ComputerSystem.RequestStateChange() method shall not return a value of 1 (Not Supported).

9. Use Cases

See Lifecycle Controller (LC) Integration Best Practices Guide.

10. CIM Elements

No additional details specified.

11. Privilege and License Requirement

The following table describes the privilege and license requirements for the listed operations. For the detailed explanation of the privileges and licenses, refer to the Dell WSMAN Licenses and Privileges specification.

Table 24. Privilege and License Requirements

Class and Method	Operation	User Privilege Required	License Required
DCIM_ComputerSystem	ENUMERATE, GET	Login	None.
DCIM_ComputerSystem.RequestStateChange()	INVOKE	Login, System Control	None.

Class and Method	Operation	User Privilege Required	License Required
DCIM_ComputerSystemPackage	ENUMERATE, GET	Login	None.
DCIM_CSEnabledLogicalElementCapabilities	ENUMERATE, GET	Login	None.
DCIM_SystemComponent	ENUMERATE, GET	Login	None.
DCIM_CSElementCapabilities	ENUMERATE, GET	Login	None.
DCIM_Chassis	ENUMERATE, GET	Login	None.
DCIM_PhysicalPackage	ENUMERATE, GET	Login	None.
DCIM_RegisteredProfile	ENUMERATE, GET	Login	None.
DCIM_ElementConformsToProfile	ENUMERATE, GET	Login	None.
DCIM_LCRegisteredProfile	ENUMERATE, GET	Login	None.
DCIM_LCElementConformsToProfile	ENUMERATE, GET	Login	None.