

# System Info Profile

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## 1 Scope

The DCIM System Info Profile describes the properties and interfaces for executing system management tasks related to the management of the host system. The profile standardizes and aggregates the description for the platform's basic properties into a system view representation and provides static methodology for the clients to query the system views without substantial traversal of the model.

## 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 DSP0226, *Web Services for Management (WS-Management) Specification 1.1.0*
- DMTF DSP0227, *WS-Management CIM Binding Specification 1.0.0*
- *Dell Lifecycle Controller Best Practices Guide v1.0*, <link TBD>
- *Dell WSMAN Licenses and Privileges 1.0*
- *Dell LC XML Schema Guide*
- Dell Tech Center MOF Library:  
<http://www.delltechcenter.com/page/DCIM.Library.MOF>
- Related Managed Object Format (MOF) files:
  - DCIM\_SystemView.mof
  - DCIM\_SystemAttribute.mof
  - DCIM\_SystemEnumeration.mof
  - DCIM\_SystemInteger.mof
  - DCIM\_SystemString.mof
  - DCIM\_SystemManagementService.mof
  - DCIM\_LCElementConformsToProfile.mof
  - DCIM\_LCRegisteredProfile.mof

## 3 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

### 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: root/interop**

Interop Namespace: root/interop is where instrumentation instantiates classes to advertise its capabilities for client discovery.

### 3.9

**Implementation Namespace: root/dcim**

Implementation Namespace: root/dcim 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 – management controller for blades and monolithic servers

### 4.3

**CMC** - Chassis Manager Controller – management controller for the modular chassis

### 4.4

**WBEM** - Web-Based Enterprise Management

### 4.5

**PFC** - Power Factor Corrector – controls the power drawn from the power supply.

## 5 Synopsis

**Profile Name:** System Info

**Version:** 1.4.0

**Organization:** Dell

**CIM Schema Version:** 2.26 Experimental

**Dell Schema Version:** 1.0.0

**Interop Namespace:** root/interop: root/interop

**Implementation Namespace:** root/dcim: root/dcim

**Central Class:** DCIM\_SystemView

**Scoping Class:** DCIM\_ComputerSystem

The Dell System Info Profile is a component profile that contains the Dell specific implementation requirements for system view.

DCIM\_SystemView shall be the Central Class.

Table 1 identifies profiles that are related to this profile.

**Table 1 – Related Profiles**

| Profile Name                 | Organization | Version | Relationship |
|------------------------------|--------------|---------|--------------|
| Profile Registration Profile | DMTF         | 1.0     | References   |

## 6 Description

The Dell System Info Profile describes platform's basic properties. The host system's information is represented by an instance of DCIM\_SystemView class.

Figure 1 details the class diagram of the Dell System Info Profile.

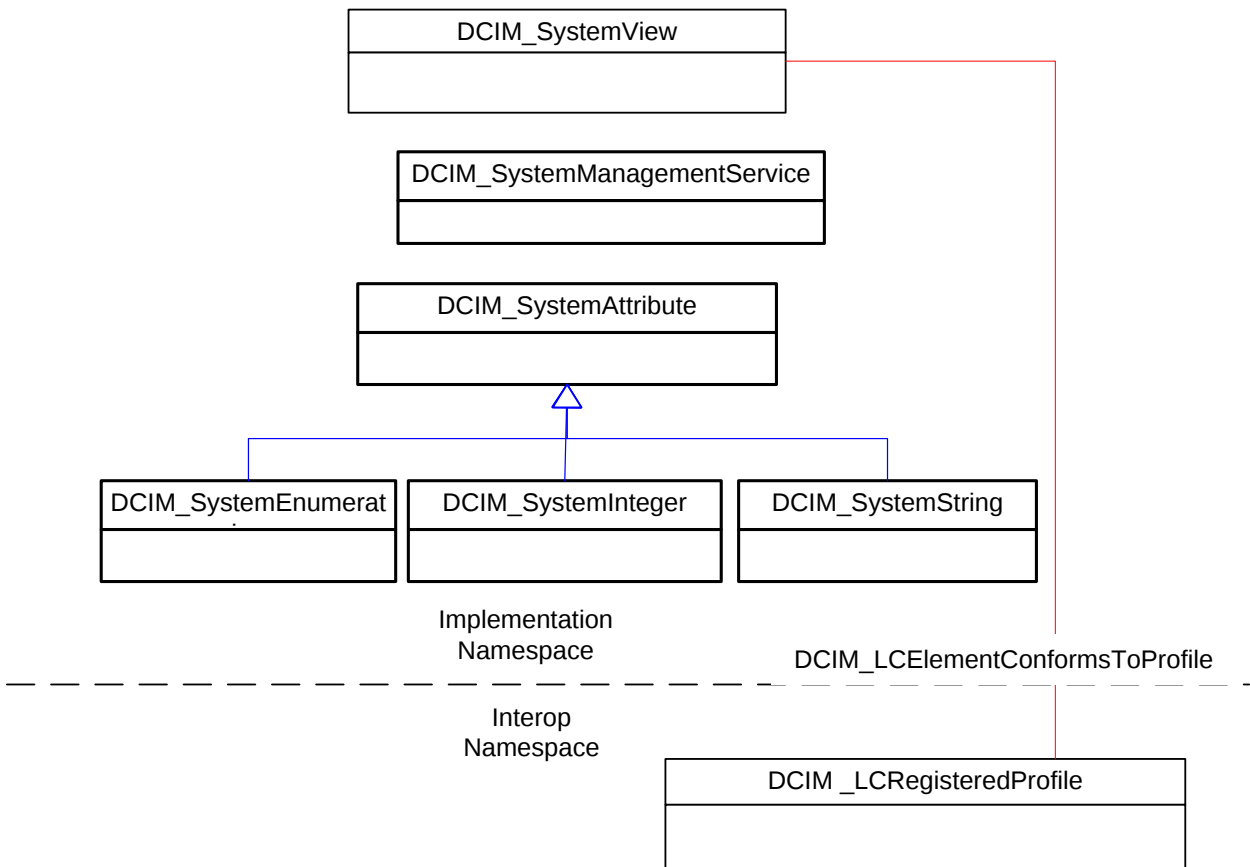


Figure 1 – Class Diagram

Figure 2 details typical Dell System Info Profile implementation for a platform. In order for client to discover the instrumentation's support of this profile, SystemInfoProfile is instantiated in the Interop Namespace: root/interop. SystemInfoProfile instance describes the information about the implemented profile: most importantly, the name and version of the profile and the organization name that produced the profile.

Systemview1 is the system views representing the platform's basic properties in the Implementation Namespace: root/dcim. It is associated to the Interop namespace's SystemInfoProfile instance.

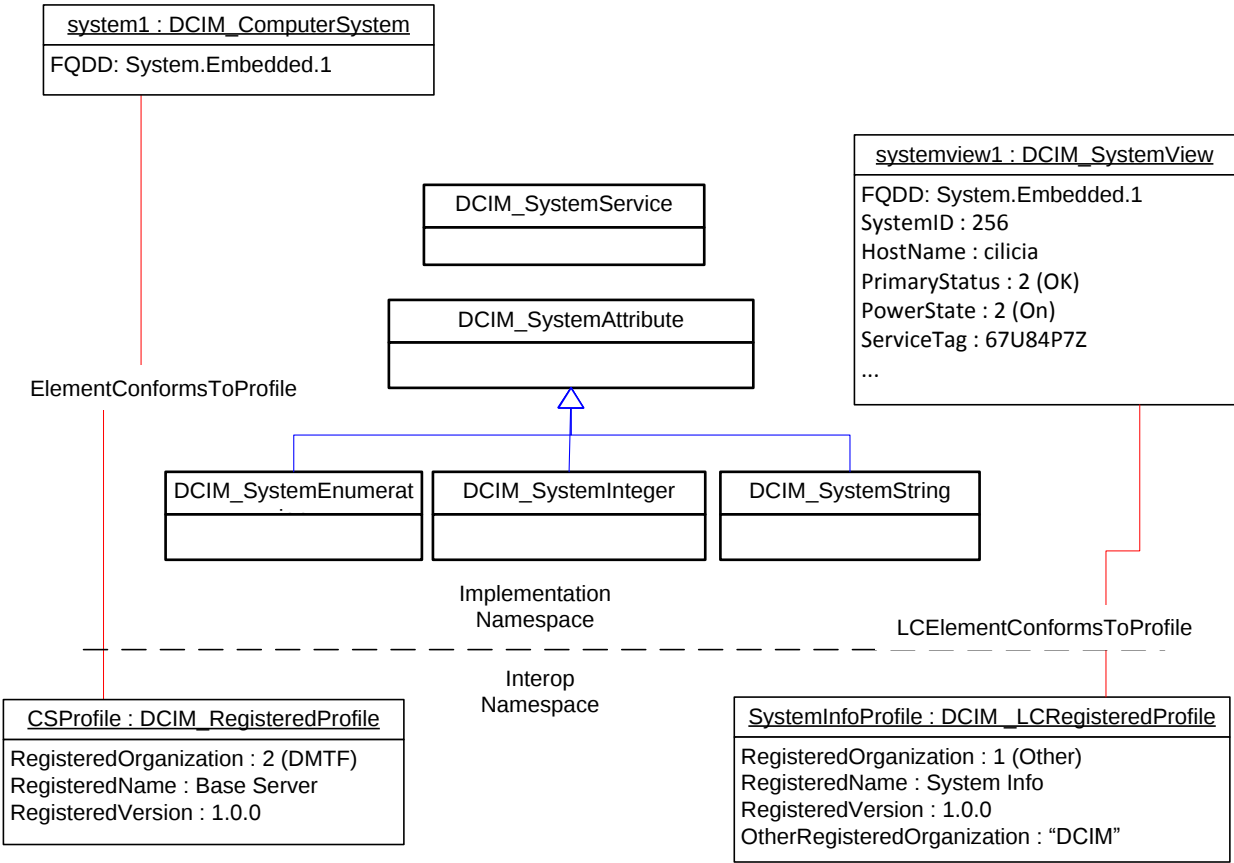


Figure 2 – System Info Profile Implementation

## 7 Implementation Description

This section describes the requirements and guidelines for implementing Dell System Info Profile.

**Table 2 – Class Requirements: System Info Profile**

| Element Name                    | Requirement | Description                                                                                                                                                  |
|---------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classes</b>                  |             |                                                                                                                                                              |
| DCIM_SystemView                 | Mandatory   | The class shall be implemented in the <i>Implementation Namespace: root/dcim</i> . See section 7.1.                                                          |
| DCIM_HostNetworkInterfaceView   | Mandatory   | The class shall be implemented in the <i>Implementation Namespace: root/dcim</i> . See section 7.2.                                                          |
| DCIM_SystemEnumeration          | Mandatory   | The class shall be implemented in the <i>Implementation Namespace: root/dcim</i> . See section 7.3                                                           |
| DCIM_SystemString               | Mandatory   | The class shall be implemented in the <i>Implementation Namespace: root/dcim</i> . See section 7.4                                                           |
| DCIM_SystemInteger              | Mandatory   | The class shall be implemented in the <i>Implementation Namespace: root/dcim</i> . See section 7.5                                                           |
| DCIM_SystemManagementService    | Mandatory   | The class shall be implemented in the <i>Implementation Namespace: root/dcim</i> . See section 7.7.                                                          |
| DCIM_LCElementConformsToProfile | Mandatory   | The class shall be implemented in both the <i>Interop Namespace: root/interop</i> and <i>Implementation Namespace: root/dcims</i> . See sections 7.1 and 7.8 |
| DCIM_LCRegisteredProfile        | Mandatory   | The class shall be implemented in the <i>Interop Namespace: root/interop</i> . See section 7.8                                                               |
| <b>Indications</b>              |             |                                                                                                                                                              |
| None defined in this profile    |             |                                                                                                                                                              |

### 7.1 DCIM\_SystemView – System View

This section describes the implementation for the DCIM\_SystemView class.

This class shall be instantiated in the Implementation Namespace: root/dcim.

The DCIM\_LCElementConformsToProfile association(s) shall reference the DCIM\_SystemView instance(s).

#### 7.1.1 Resource URIs for WinRM®

The class Resource URI shall be “http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM\_SystemView?\_\_cimnamespace=root/dcim”

The key property shall be the InstanceID.

267 The instance Resource URI for DCIM\_SystemView instance shall be:  
 268 "http://schemas.dell.com/wbem/wscim/1/cim-  
 269 schema/2/DCIM\_SystemView?\_\_cimnamespace=root/dcim+InstanceID=System.Embedded.1"

## 270 7.1.2 Operations

271 The following table lists the operations implemented on DCIM\_SystemView.

272 **Table 3 – DCIM\_SystemView – Operations**

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

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## 274 7.1.3 Properties

275 The following table details the implemented properties for DCIM\_SystemView instance that represents  
 276 the host system. The "Requirements" column shall denote whether the property is implemented (for  
 277 requirement definitions, see section 3). The "Additional Requirements" column shall denote either  
 278 possible values for the property, or requirements on the value formulation.

279 **Table 4 – DCIM\_SystemView – Properties**

| Property Name        | Requirements | Type   | Requirement and Description                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| InstanceID           | Mandatory    | string | The property shall be "System.Embedded.1"                                                                                                                                                                                                                                                                                                                                                   |
| FQDD                 | Mandatory    | string | The property shall be "System.Embedded.1"                                                                                                                                                                                                                                                                                                                                                   |
| DeviceDescription    | Mandatory    | string | A string containing the friendly Fully Qualified Device Description, a property that describes the device and its location                                                                                                                                                                                                                                                                  |
| AssetTag             | Mandatory    | string | Asset tag of the system.                                                                                                                                                                                                                                                                                                                                                                    |
| BaseBoardChassisSlot | Optional     | String | The property represents the modular chassis slot numbers that the server blade occupies in the modular enclosure.<br>This property shall be represented for modular server blades.                                                                                                                                                                                                          |
| BatteryRollupStatus  | Mandatory    | uint32 | The property shall contain the battery rollup status of all the system components and shall contain one of the following values: <ul style="list-style-type: none"> <li>• 0(Unknown)</li> <li>• 1(OK)</li> <li>• 2(Degraded)</li> <li>• 3(Error).</li> </ul> BatteryRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status. |
| BIOSReleaseDate      | Mandatory    | String | String number of the BIOS release date. The date string, if supplied, is in mm/dd/yyyy format.                                                                                                                                                                                                                                                                                              |
| BIOSVersionString    | Mandatory    | String | System BIOS version.                                                                                                                                                                                                                                                                                                                                                                        |

| Property Name          | Requirements | Type   | Requirement and Description                                                                                                                                                                                                                                                                                                                                        |
|------------------------|--------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BladeGeometry          | Optional     | uint16 | The property shall represent the geometric dimension of the server blade enclosure in modular enclosure described. The property defines value maps for the geometry description in slot height and width.<br>This property shall be represented for modular server blades.                                                                                         |
|                        |              |        | 0-singleWidthHalfHeight                                                                                                                                                                                                                                                                                                                                            |
|                        |              |        | 1-dualWidthHalfHeight                                                                                                                                                                                                                                                                                                                                              |
|                        |              |        | 2-singleWidthFullHeight                                                                                                                                                                                                                                                                                                                                            |
|                        |              |        | 3-dualWidthFullHeight                                                                                                                                                                                                                                                                                                                                              |
|                        |              |        | 4-singleWidthQuarterHeight                                                                                                                                                                                                                                                                                                                                         |
|                        |              |        | 5-1UHalfWidth                                                                                                                                                                                                                                                                                                                                                      |
|                        |              |        | 6-1UQuarterWidth                                                                                                                                                                                                                                                                                                                                                   |
|                        |              |        | 7-1UFullWidth                                                                                                                                                                                                                                                                                                                                                      |
| BoardPartNumber        | Mandatory    | String | The property shall represent the motherboard part number.                                                                                                                                                                                                                                                                                                          |
| BoardSerialNumber      | Mandatory    | String | The property shall represent the motherboard serial number.                                                                                                                                                                                                                                                                                                        |
| EstimatedSystemAirflow | Mandatory    | uint16 | The property shall represent estimated airflow over the chassis in Cubic Feet per Minute                                                                                                                                                                                                                                                                           |
| ChassisName            | Mandatory    | String | The property shall be “Main System Chassis” for monolithic and “Server Blade” for modular’s server blades.                                                                                                                                                                                                                                                         |
| ChassisServiceTag      | Optional     | String | This property represents the service tag for the modular enclosure chassis.<br>This property shall be represented for modular server blades.                                                                                                                                                                                                                       |
| ChassisModel           | Optional     | String | This property represents the chassis model for the modular enclosure chassis.                                                                                                                                                                                                                                                                                      |
| ChassisSystemHeight    | Mandatory    | uint16 | The property shall be in U of rack space units.<br>The property shall be applicable only for monolithic server.                                                                                                                                                                                                                                                    |
| CMCIP                  | Optional     | String | This property represents the IP address for the modular enclosure chassis management controller (CMC).<br>This property shall be represented for modular server blades.                                                                                                                                                                                            |
| CPLDVersion            | Mandatory    | String | The property shall represent the CPLD version.                                                                                                                                                                                                                                                                                                                     |
| CPURollupStatus        | Mandatory    | uint32 | The property shall contain the rollup status of all the CPUs and shall contain one of the following values: <ul style="list-style-type: none"> <li>• 0(Unknown)</li> <li>• 1(OK)</li> <li>• 2(Degraded)</li> <li>• 3(Error).</li> </ul> CPURollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status. |
| ExpressServiceCode     | Mandatory    | String | ExpressServiceCode of the system.                                                                                                                                                                                                                                                                                                                                  |

| Property Name              | Requirements | Type   | Requirement and Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------|--------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FanRollupStatus            | Mandatory    | uint32 | <p>The property shall contain the fan rollup status of all the system components and shall contain one of the following values:</p> <ul style="list-style-type: none"> <li>• 0(Unknown)</li> <li>• 1(OK)</li> <li>• 2(Degraded)</li> <li>• 3(Error).</li> </ul> <p>FanRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.</p>                                              |
| HostName                   | Mandatory    | String | System name string in ASCII.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| LicensingRollupStatus      | Mandatory    | uint32 | <p>The property shall contain the licensing rollup status of all the system components and shall contain one of the following values:</p> <ul style="list-style-type: none"> <li>• 0(Unknown)</li> <li>• 1(OK)</li> <li>• 2(Degraded)</li> <li>• 3(Error).</li> </ul> <p>LicensingRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.</p>                                  |
| LifecycleControllerVersion | Mandatory    | String | <p>The property shall represent the overall product release version for the Lifecycle Controller (LC). The property format shall be M + "." + N + "." + U where: M - the major version (in numeric form); N - the minor version (in numeric form); and U - the update version (in numeric form).</p> <p>NOTE: The property does not represent a particular firmware version that LC consists of but rather the overall LC product version.</p> |
| Manufacturer               | Mandatory    | String | System Manufacturer string. For example: DELL Inc.                                                                                                                                                                                                                                                                                                                                                                                             |
| MaxCPUSockets              | Mandatory    | uint32 | Maximum CPU sockets in the system.                                                                                                                                                                                                                                                                                                                                                                                                             |
| MaxDIMMSlots               | Mandatory    | uint32 | The number of slots or sockets available for memory devices in the system memory array.                                                                                                                                                                                                                                                                                                                                                        |
| MaxPCleSlots               | Mandatory    | uint32 | Maximum PCIe slots in the system.                                                                                                                                                                                                                                                                                                                                                                                                              |
| MemoryOperationMode        | Mandatory    | String | System memory operation mode. Denotes the mode of operation for system memory such as mirrored, advanced ECC, or optimized mode. Note: "Memory Operation mode is shown as Unknown for UDIMM since its not supported".                                                                                                                                                                                                                          |
| Model                      | Mandatory    | String | Model of the system. For example: PowerEdge R720.                                                                                                                                                                                                                                                                                                                                                                                              |
| PlatformGUID               | Mandatory    | String | <p>System GUID uniquely identifies the system.</p> <p>The property is also known as BIOS GUID.</p> <p>This GUID matches in value with the representation of the GUID surfaced through OS based GUI and SNMP.</p>                                                                                                                                                                                                                               |
| PopulatedCPUSockets        | Mandatory    | uint32 | Populated CPU sockets in the system.                                                                                                                                                                                                                                                                                                                                                                                                           |
| PopulatedDIMMSlots         | Mandatory    | uint32 | System memory sockets current capacity.                                                                                                                                                                                                                                                                                                                                                                                                        |
| PopulatedPCleSlots         | Mandatory    | uint32 | Populated PCIe slots in the system.                                                                                                                                                                                                                                                                                                                                                                                                            |

| Property Name          | Requirements | Type   | Requirement and Description                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PowerCap               | Mandatory    | Uint32 | The current power cap (in Watts) of the associated managed system element.                                                                                                                                                                                                                                                                                                                        |
| PowerCapEnabledState   | Mandatory    | uint16 | Whether the cap on the power consumption is enabled.                                                                                                                                                                                                                                                                                                                                              |
| PowerState             | Mandatory    | uint16 | The current power state of the system.                                                                                                                                                                                                                                                                                                                                                            |
| PrimaryStatus          | Mandatory    | uint32 | The property shall contain current information on the system health state excluding storage sub-systems. PrimaryStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.                                                                                                                                                                 |
| PSRollupStatus         | Mandatory    | uint32 | <p>The property shall contain the power supply rollup status of all the system components and shall contain one of the following values:</p> <ul style="list-style-type: none"> <li>0(Unknown)</li> <li>1(OK)</li> <li>2(Degraded)</li> <li>3(Error).</li> </ul> <p>PSRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.</p> |
| RollupStatus           | Mandatory    | uint32 | <p>The property shall contain the rollup status of all the system components and shall contain one of the following values:</p> <ul style="list-style-type: none"> <li>0(Unknown)</li> <li>1(OK)</li> <li>2(Degraded)</li> <li>3(Error).</li> </ul> <p>RollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.</p>                |
| ServerAllocation       | Optional     | uint32 | <p>The property shall represent the power allocated by Chassis Manager to the blade server in Watt.</p> <p>This property shall be represented for modular server blades.</p>                                                                                                                                                                                                                      |
| ServiceTag             | Mandatory    | String | Service tag of the system.                                                                                                                                                                                                                                                                                                                                                                        |
| smbiosGUID             | Mandatory    | String | <p>System GUID uniquely identifies the system.</p> <p>The property is also known as BIOS GUID.</p> <p>The smbiosGUID value matches exactly the SMBIOS representation of the GUID.</p>                                                                                                                                                                                                             |
| StorageRollupStatus    | Mandatory    | uint32 | <p>The property shall contain the storage rollup status of all the system components and shall contain one of the following values:</p> <ul style="list-style-type: none"> <li>0(Unknown)</li> <li>1(OK)</li> <li>2(Degraded)</li> <li>3(Error).</li> </ul> <p>StorageRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.</p> |
| SysMemErrorMethodology | Mandatory    | uint16 | The primary hardware error correction or detection method supported by the system's memory array.                                                                                                                                                                                                                                                                                                 |
| SysMemFailOverState    | Mandatory    | String | System memory fail over state.                                                                                                                                                                                                                                                                                                                                                                    |
| SysMemLocation         | Mandatory    | uint16 | The physical location of the memory array, whether on the system board or an add-in board.                                                                                                                                                                                                                                                                                                        |

| Property Name           | Requirements | Type   | Requirement and Description                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|--------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SysMemPrimaryStatus     | Mandatory    | uint32 | SystemMemoryPrimaryStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status for the system memory.                                                                                                                                                                                                                                   |
| SysMemTotalSize         | Mandatory    | uint32 | The property shall be in Mbytes. The maximum memory capacity in MB.                                                                                                                                                                                                                                                                                                                          |
| SysMemMaxCapacitySize   | Mandatory    | Uint64 | The property shall be in Mbytes. The maximum memory capacity in MB that could be installed on the platform.<br><br>Note that this property represents the sum of totals for the possible memory that could be installed in each slot regardless of currently installed memory capacity.                                                                                                      |
| SystemID                | Mandatory    | uint32 | System ID describes the model of the system in integer value. The SystemID property is usually used to identify the compatibility of the updateable software/firmware.                                                                                                                                                                                                                       |
| SystemRevision          | Mandatory    | uint16 | System Revision describes whether the platform was the first or second revision of the corresponding model. The revisions are usually correlated with an upgrade of the CPU model in the same platform model.                                                                                                                                                                                |
| TempRollupStatus        | Mandatory    | uint32 | The property shall contain the temperature rollup status of all the system components and shall contain one of the following values: <ul style="list-style-type: none"> <li>• 0(Unknown)</li> <li>• 1(OK)</li> <li>• 2(Degraded)</li> <li>• 3(Error).</li> </ul> TempRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status. |
| UUID                    | Mandatory    | String | UUID uniquely identifies the system. The property is also known as BIOS GUID.<br>The UUID value matches the WMI® representation of the UUID/GUID.                                                                                                                                                                                                                                            |
| VoltRollupStatus        | Mandatory    | uint32 | The property shall contain the voltage rollup status of all the system components and shall contain one of the following values: <ul style="list-style-type: none"> <li>• 0(Unknown)</li> <li>• 1(OK)</li> <li>• 2(Degraded)</li> <li>• 3(Error).</li> </ul> VoltRollupStatus provides a high level status value, intended to align with Red-Yellow-Green type representation of status.     |
| LastSystemInventoryTime | Mandatory    | String | This property provides the last time "System Inventory Collection On Reboot(CSIOR)" was performed. The value is represented as yyyyymmddHHMMSS.                                                                                                                                                                                                                                              |
| LastUpdateTime          | Mandatory    | String | This property provides the last time the data was updated. The value is represented as yyyyymmddHHMMSS                                                                                                                                                                                                                                                                                       |

## 7.2 DCIM\_HostNetworkInterfaceView – NetworkInterface View

This section describes the implementation for the DCIM\_HostNetworkInterfaceView class.

This class shall be instantiated in the Implementation Namespace: root/dcim.

### 7.2.1 Resource URIs for WinRM®

The class Resource URI shall be “http://schemas.dmtf.org/wbem/wscim/1/cim-schema/2/DCIM\_HostNetworkInterfaceView?\_\_cimnamespace=root/dcim”

The key property shall be the InstanceID.

The instance Resource URI for DCIM\_SystemView instance shall be:  
“http://schemas.dmtf.org/wbem/wscim/1/cim-schema/2/DCIM\_HostNetworkInterfaceView?\_\_cimnamespace=root/dcim+InstanceID=System.Embedded.1”

### 7.2.2 Operations

The following table lists the operations implemented on DCIM\_HostNetworkInterfaceView.

**Table 5 – DCIM\_HostNetworkInterfaceView – Operations**

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

### 7.2.3 Properties

The following table details the implemented properties for DCIM\_HostNetworkInterfaceView instance that represents the host system. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirements” column shall denote either possible values for the property, or requirements on the value formulation.

| Property Name     | Requirements | Type     | Requirement and Description                                                                                                    |
|-------------------|--------------|----------|--------------------------------------------------------------------------------------------------------------------------------|
| InstanceID        | Mandatory    | String   | Unique value representing one IP address.                                                                                      |
| DeviceFQDD        | Optional     | String[] | List of Fully Qualified Device Description for the Network Device                                                              |
| DeviceDescription | Mandatory    | String   | Interface description                                                                                                          |
| Status            | Mandatory    | UInt8    | Status of the Interface<br>0- Up<br>1- down<br>2- Testing<br>3- Unknown<br>4- Dormant<br>5- Not Present<br>6- Lower layer down |

| Property Name    | Requirements | Type     | Requirement and Description                                                                                                                                              |
|------------------|--------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type             | Mandatory    | UInt8    | Type of Interface<br>0- Other<br>1- Ethernet<br>2- Tokenring<br>3- Point-To-Point<br>4- Loopback<br>5- ATM<br>6- IEEE80211 Wireless<br>7- Tunnel<br>8- IEEE1394 Fireware |
| Name             | Mandatory    | string   | Name of the Interface                                                                                                                                                    |
| DHCPEnabled      | Mandatory    | Boolean  | This property states whether DHCP is enabled or not<br>0- NO<br>1- Yes                                                                                                   |
| MACAddress       | Mandatory    | String   | A string containing the MAC address.                                                                                                                                     |
| IPv4DNSServer    | Optional     | String[] | List of IPv4 DNS Servers present                                                                                                                                         |
| IPv4Gateway      | Optional     | String[] | Array of IPv4 Gateway addresses                                                                                                                                          |
| IPv4DHCPServer   | Optional     | String   | DHCP Server for IPv4 addressing                                                                                                                                          |
| IPv4Address      | Optional     | String[] | Host IPv4 Address                                                                                                                                                        |
| IPv4SubnetMask   | Optional     | String[] | Host Network's Mask. Only valid for IPv4 addresses.                                                                                                                      |
| IPv6Address      | Optional     | String[] | Host IPv6 Address                                                                                                                                                        |
| IPv6Gateway      | Optional     | String[] | Array of IPv6 Gateway addresses                                                                                                                                          |
| IPv6DHCPServer   | Optional     | String   | DHCP Server for IPv6 addressing                                                                                                                                          |
| IPv6PrefixLength | Optional     | uint8    | IPv6 Link Local Prefix Length. Only valid for IPv6 addresses.                                                                                                            |
| IPv6AddrScope    | Optional     | UInt32   | Array of IPv6 address scope (Per IPv6 address)                                                                                                                           |
| IPv6DNSServer    | Optional     | String[] | List of IPv6 DNS Servers present                                                                                                                                         |

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## 7.3 DCIM\_SystemEnumeration – System Enumeration Attributes

This section describes the implementation for the DCIM\_SystemEnumeration class.

Each DCIM\_SystemEnumeration instance is logically associated to a DCIM\_SystemView instance, where the DCIM\_SystemEnumeration.FQDD property is equal to the FQDD property on the DCIM\_SystemView instance.

This class shall be instantiated in the Implementation Namespace: root/dcim.

### 7.3.1 Resource URIs for WinRM®

The class Resource URI shall be “http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM\_SystemEnumeration?\_\_cimnamespace=root/dcim”

The key property shall be the InstanceID.

The instance Resource URI for DCIM\_SystemEnumeration instance shall be:  
“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM\_SystemEnumeration?\_\_cimnamespace=root/dcim+InstanceID=<FQDD>:<AttributeName>”

### 7.3.2 Operations

The following table lists the operations implemented on DCIM\_SystemEnumeration.

**Table 6 – DCIM\_SystemEnumeration – Operations**

| Operation Name                               | Requirements | Required Input  |
|----------------------------------------------|--------------|-----------------|
| Get                                          | Mandatory    | Instance URI    |
| Enumerate                                    | Mandatory    | Class URI       |
| DCIM_SystemManagementService.SetAttribute()  | Mandatory    | See section 8.1 |
| DCIM_SystemManagementService.SetAttributes() | Mandatory    | See section 8.2 |

### 7.3.3 Class Properties

The following table lists the implemented properties for DCIM\_SystemEnumeration instance representing a system attribute. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirements” column shall denote either possible values for the property, or requirements on the value formulation..

**Table 7 – Class: DCIM\_SystemEnumeration**

| Properties           | Requirements | Type    | Additional Requirements                                                                                                                    |
|----------------------|--------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| InstanceID           | Mandatory    | String  | The property value shall be formed as follows: "System.Embedded.1:<AttributeName property value>".                                         |
| AttributeName        | Mandatory    | String  | The property value shall be from the "AttributeName" column in Table 12 and Table 17.                                                      |
| AttributeDisplayName | Mandatory    | String  | The property value shall be from the "AttributeDisplayName" column in Table 12 and Table 17.                                               |
| GroupID              | Mandatory    | String  | See section 7.6.1, 7.6.2, 7.6.3 and 7.6.4.                                                                                                 |
| GroupDisplayName     | Mandatory    | String  | See section 7.6.1, 7.6.2, 7.6.3 and 7.6.4.                                                                                                 |
| CurrentValue[]       | Mandatory    | String  | The property value shall be one of the values in the "PossibleValues" column at the corresponding row in Table 12 and Table 17..           |
| DefaultValue[]       | Mandatory    | String  | The property value shall be one of the values in the "PossibleValues" column at the corresponding row in Table 12 and Table 17..           |
| PendingValue[]       | Mandatory    | String  | The property value shall be one of the values in the "PossibleValues" column at the corresponding row in Table 12 and Table 17.            |
| IsReadOnly           | Mandatory    | Boolean | The property value shall be from the "IsReadOnly" column in Table 12 and Table 17.                                                         |
| FQDD                 | Mandatory    | String  | The property shall be set to "System.Embedded.1".                                                                                          |
| DisplayOrder         | Optional     | uint16  | The property shall represent the sequence number denoting the preferred placement of the attribute in the list of all system attributes.   |
| Dependency           | Optional     | String  | The property shall be NULL.                                                                                                                |
| PossibleValues[]     | Mandatory    | String  | The property value shall be equal to the array of the values in "PossibleValues" column at the corresponding row in Table 12 and Table 17. |

## 333 **7.4 DCIM\_SystemString – System String Attributes**

334 This section describes the implementation for the DCIM\_SystemString class that represents a string type  
 335 System attribute.

336 This class shall be instantiated in the Implementation Namespace: root/dcim.

### 337 **7.4.1 Resource URIs for WinRM®**

338 The class Resource URI shall be "http://schemas.dell.com/wbem/wscim/1/cim-  
 339 schema/2/DCIM\_SystemString?\_\_cimnamespace=root/dcim"

340 The key property shall be the InstanceID.

341 The instance Resource URI for DCIM\_SystemString instance shall be:  
 342 http://schemas.dell.com/wbem/wscim/1/cim-  
 343 schema/2/DCIM\_SystemString?\_\_cimnamespace=root/dcim+InstanceID=  
 344 System.Embedded.1:<AttributeName> (AttributeName comes from Table 5)

### 7.4.2 Operations

The following table lists the operations implemented on DCIM\_SystemString.

**Table 8 – DCIM\_SystemString - Operations**

| Operation Name                               | Requirements | Required Input  |
|----------------------------------------------|--------------|-----------------|
| Get                                          | Mandatory    | Instance URI    |
| Enumerate                                    | Mandatory    | Class URI       |
| DCIM_SystemManagementService.SetAttribute()  | Mandatory    | See section 8.1 |
| DCIM_SystemManagementService.SetAttributes() | Mandatory    | See section 8.2 |

### 7.4.3 Class Properties

The following table lists the implemented properties for DCIM\_SystemString instance representing a system string attribute. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirements” column shall denote either possible values for the property, or requirements on the value formulation

**Table 9 – Class: DCIM\_SystemString**

| Properties           | Requirements | Type    | Additional Requirements                                                                                                                        |
|----------------------|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------|
| InstanceID           | Mandatory    | String  | The property value shall be formed as follows: System.Embedded.1:<AttributeName property value>”.                                              |
| AttributeName        | Mandatory    | String  | The property value shall be from the “AttributeName” column in Table 13, and Table 15.                                                         |
| AttributeDisplayName | Mandatory    | String  | The property value shall be from the “AttributeDisplayName” column in Table 13, and Table 15.                                                  |
| GroupID              | Mandatory    | String  | See section 7.6.1, 7.6.2, 7.6.3 and 7.6.4.                                                                                                     |
| GroupDisplayName     | Mandatory    | String  | See section 7.6.1, 7.6.2, 7.6.3 and 7.6.4.                                                                                                     |
| CurrentValue[]       | Mandatory    | String  | The property value shall represent the current value of the attribute.                                                                         |
| DefaultValue[]       | Mandatory    | String  | The property value shall represent the default value of the attribute.                                                                         |
| PendingValue[]       | Mandatory    | String  | The property value shall represent the pending value of the attribute. If the property value is NULL, then the attribute has no pending value. |
| IsReadOnly           | Mandatory    | Boolean | The property value shall be the value in the “IsReadOnly” column at the corresponding row in Table 13, and Table 15.                           |
| FQDD                 | Mandatory    | String  | The property shall be set to “System.Embedded.1”.                                                                                              |
| DisplayOrder         | Optional     | uint16  | The property shall represent the sequence number denoting the preferred placement of the attribute in the list of all system attributes.       |
| Dependency           | Optional     | String  | The property shall be NULL.                                                                                                                    |
| MinLength            | Mandatory    | uint64  | The property value shall be the value in the “MinLength” column at the corresponding row in Table 13, and Table 15.                            |
| MaxLength            | Mandatory    | uint64  | The property value shall be the value in the “MaxLength” column at the corresponding row in Table 13, and Table 15.                            |

## 355 **7.5 DCIM\_SystemInteger – System Integer Attributes**

356 This section describes the implementation for the DCIM\_SystemInteger class.

357 Each DCIM\_SystemInteger instance is logically associated to a DCIM\_SystemView instance, where the  
 358 DCIM\_SystemInteger.FQDD property is equal to the FQDD property on the DCIM\_SystemView instance.

359 This class shall be instantiated in the Implementation Namespace: root/dcim.

### 360 **7.5.1 Resource URIs for WinRM®**

361 The class Resource URI shall be “http://schemas.dell.com/wbem/wscim/1/cim-  
 362 schema/2/DCIM\_SystemInteger?\_\_cimnamespace=root/dcim”

363 The key property shall be the InstanceID.

364 The instance Resource URI for DCIM\_SystemInteger instance shall be:  
365 "http://schemas.dell.com/wbem/wscim/1/cim-  
366 schema/2/DCIM\_SystemInteger?\_\_cimnamespace=root/dcim+InstanceID= <FQDD>:<AttributeName>"

## 367 7.5.2 Operations

368 The following table lists the operations implemented on DCIM\_SystemInteger.

369 **Table 10 – DCIM\_SystemInteger - Operations**

| Operation Name                               | Requirements | Required Input  |
|----------------------------------------------|--------------|-----------------|
| Get                                          | Mandatory    | Instance URI    |
| Enumerate                                    | Mandatory    | Class URI       |
| DCIM_SystemManagementService.SetAttribute()  | Mandatory    | See section 8.1 |
| DCIM_SystemManagementService.SetAttributes() | Mandatory    | See section 8.2 |

370

## 371 7.5.3 Class Properties

372 The following table lists the implemented properties for DCIM\_SystemInteger instance representing a  
373 system attribute. The "Requirements" column shall denote whether the property is implemented (for  
374 requirement definitions, see section 3). The "Additional Requirements" column shall denote either  
375 possible values for the property, or requirements on the value formulation

**Table 11 – Class: DCIM\_SystemInteger**

| Properties           | Requirement | Type    | Additional Requirements                                                                                                                        |
|----------------------|-------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------|
| InstanceID           | Mandatory   | String  | The property value shall be formed as follows: “System.Embedded.1:<AttributeName property value>”.                                             |
| AttributeName        | Mandatory   | String  | The property value shall be from the “AttributeName” column in Table 14, Table 16, and Table 20.                                               |
| AttributeDisplayName | Mandatory   | String  | The property value shall be from the “AttributeDisplayName” column in Table 14, Table 16, and Table 20.                                        |
| GroupID              | Mandatory   | String  | See section 7.6.1, 7.6.2, 7.6.3 and 7.6.4.                                                                                                     |
| GroupDisplayName     | Mandatory   | String  | See section 7.6.1, 7.6.2, 7.6.3 and 7.6.4.                                                                                                     |
| CurrentValue[]       | Mandatory   | String  | The property value shall represent the current value of the attribute.                                                                         |
| DefaultValue[]       | Mandatory   | String  | The property value shall represent the default value of the attribute.                                                                         |
| PendingValue[]       | Mandatory   | String  | The property value shall represent the pending value of the attribute. If the property value is NULL, then the attribute has no pending value. |
| IsReadOnly           | Mandatory   | Boolean | The property value shall be from the “IsReadOnly” column in Table 14, Table 16, and Table 20.                                                  |
| FQDD                 | Mandatory   | String  | The property shall be set to “System.Embedded.1”.                                                                                              |
| DisplayOrder         | Optional    | uint16  | The property shall represent the sequence number denoting the preferred placement of the attribute in the list of all system attributes.       |
| Dependency           | Optional    | String  | The property shall be NULL.                                                                                                                    |
| LowerBound           | Mandatory   | uint64  | The property value shall be from the “LowerBound” column in Table 14, Table 16, and Table 20.                                                  |
| UpperBound           | Mandatory   | uint64  | The property value shall be from the “UpperBound” column in Table 14, Table 16, and Table 20.                                                  |

## 377 7.6 System Attributes

378 This section lists and describes the attributes and their logical grouping.

### 379 7.6.1 Server Power Attributes

380 This section describes the attributes for managing system’s power. The attributes are used to set power  
381 cap and thresholds , manage power allocation, and redundancy settings.

382 The GroupID property for the DCIM\_SystemEnumeration, DCIM\_SystemString, and  
383 DCIM\_SystemInteger shall be “ServerPwr.1”.

384 The GroupDisplayName property for the DCIM\_SystemEnumeration, DCIM\_SystemString, and  
385 DCIM\_SystemInteger shall be “Server Power”.

386 The following table lists the values for the DCIM\_SystemEnumeration of this group. Each of the column  
387 headings correspond to a property name on the DCIM\_SystemEnumeration class. The Description  
388 column contains the description for each of the attribute. Each row contain the values for the properties  
389 listed in the column headings. The PossibleValues property is an array property represented in the table  
390 as comma delimited list.

391

**Table 12 – DCIM\_SystemEnumeration Server Power Attributes**

| AttributeName     | AttributeDisplayName           | IsReadOnly | PossibleValues                                                   | Description                                                                                                                                                      |
|-------------------|--------------------------------|------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PowerCapSetting   | Power Cap Setting              | FALSE      | "Disabled", "Enabled"                                            | Enable or disable the cap on the system power consumption.                                                                                                       |
| PSRedPolicy       | Power Supply Redundancy Policy | FALSE      | "N/A", "Not Redundant", "AC/Input", "Redundant", "PSU Redundant" | Enables monitoring of the power supply redundancy.<br><br>NOTE: Power Supply Profile describes the power supply redundancy status based on this attribute value. |
| PSPFCEnabled      | Power Supply PFC Enable        | FALSE      | "Disabled", "Enabled"                                            | Enable or Disable the Power Supply Power Factor Corrector on the system.                                                                                         |
| PSRapidOn         | PSRapidOn                      | FALSE      | "Disabled", "Enabled"                                            | Enable or Disable the Power Supply RapidOn                                                                                                                       |
| RapidOnPrimaryPSU | Rapid on Primary PSU           | FALSE      | "PSU1", "PSU2", "PSU1", "PSU3", "PSU2", "PSU4"                   | Enable or Disable the RapidOnPrimary Power Supply Unit.                                                                                                          |

392 The following table lists the values for the DCIM\_SystemString of this group. Each column heading  
 393 corresponds to a property name on the DCIM\_SystemString class. The Value Expression column  
 394 contains constraints on string value formulation. Each row contains the values for the properties listed in  
 395 the column headings.

396

**Table 13 – DCIM\_SystemString Server Power Attributes**

| AttributeName    | Attribute Description        | IsReadOnly | MinLength | MaxLength | Value Expression |
|------------------|------------------------------|------------|-----------|-----------|------------------|
| ActivePolicyName | Active Power Cap Policy Name | TRUE       | 0         | 128       |                  |

397 The following table lists the values for the DCIM\_SystemInteger of this group. Each column heading  
 398 correspond to a property name on the DCIM\_SystemInteger class. Each row contains the values for the  
 399 properties listed in the column headings.

400

401

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**Table 14 – DCIM\_SystemInteger Server Power Attributes**

| AttributeName                    | AttributeDisplayName             | IsReadOnly | LowerBound | UpperBound |
|----------------------------------|----------------------------------|------------|------------|------------|
| PowerCapValue <sup>1</sup>       | Power Cap Value                  | FALSE      |            |            |
| PowerCapMaxThres <sup>1</sup>    | Power Cap Max Threshold          | TRUE       |            |            |
| PowerCapMinThres <sup>1</sup>    | Power Cap Min Threshold          | TRUE       |            |            |
| pciePowerAllocation <sup>1</sup> | PCIe Power Power Allocation      | FALSE      |            |            |
| ActivePowerCapVal <sup>1</sup>   | Active Power Cap Value           | TRUE       | 0          | 65535      |
| ActivePowerCapValBTUhr           | Active Power Cap Value in BTU/hr | TRUE       | 0          | 65535      |
| RapidOnPrimSecPSUMask            | Rapid on Primary Sec PSU Mask    | TRUE       |            |            |
| RapidOnPrimaryPSU                | Rapid on Primary PSU             | FALSE      |            |            |

403 NOTE: 1 – The attributes PendingValue, CurrentValue and DefaultValue are in Watt units.

404 **7.6.2 Server Topology Attributes**405 This section describes the attributes for managing system's topology. The attributes are used to manage  
406 location and physical configuration settings.407 The GroupID property for the DCIM\_SystemEnumeration, DCIM\_SystemString, and  
408 DCIM\_SystemInteger shall be "ServerTopology.1".409 The GroupDisplayName property for the DCIM\_SystemEnumeration, DCIM\_SystemString, and  
410 DCIM\_SystemInteger shall be "Server Topology".411 The following table lists the values for the DCIM\_SystemString of this group. Each column heading  
412 corresponds to a property name on the DCIM\_SystemString class. The Value Expression column  
413 contains constraints on string value formulation. Each row contains the values for the properties listed in  
414 the column headings.415 **Table 15 – DCIM\_SystemString Server Topology Attributes**

| AttributeName | Attribute Description | IsReadOnly | MinLength | MaxLength | Value Expression |
|---------------|-----------------------|------------|-----------|-----------|------------------|
|---------------|-----------------------|------------|-----------|-----------|------------------|

| AttributeName         | Attribute Description                   | IsReadOnly | MinLength | MaxLength | Value Expression |
|-----------------------|-----------------------------------------|------------|-----------|-----------|------------------|
| DataCenterName        | Data Center Name                        | FALSE      | 0         | 128       |                  |
| AisleName             | Aisle Name                              | FALSE      | 0         | 128       |                  |
| RackName              | Rack Name                               | FALSE      | 0         | 128       |                  |
| ChassisName           | Chassis Name(Modular Only)              | TRUE       | 0         | 64        |                  |
| BladeSlotNumInChassis | Blade Slot Num In Chassis(Modular Only) | TRUE       | 0         | 64        |                  |
| RoomName              | Room Name                               | TRUE       | 0         | 128       | RoomName         |

The following table lists the values for the DCIM\_SystemInteger of this group. Each column heading corresponds to a property name on the DCIM\_SystemInteger class. Each row contains the values for the properties listed in the column headings.

**Table 16 – DCIM\_SystemInteger Server Topology Attributes**

| AttributeName          | AttributeDisplayName        | IsReadOnly | LowerBound | UpperBound |
|------------------------|-----------------------------|------------|------------|------------|
| RackSlot               | Rack Slot                   | FALSE      | 1          | 255        |
| SizeOfManagedSystemInU | Size of Managed System in U | TRUE       |            |            |

### 7.6.3 LCD Attributes

This section describes the attributes for managing system's power. The attributes are used to set the system LCD settings.

The GroupID property for the DCIM\_SystemEnumeration and DCIM\_SystemString shall be "LCD.1".

The GroupDisplayName property for the DCIM\_SystemEnumeration and DCIM\_SystemString shall be "LCD".

The following table lists the values for the DCIM\_SystemEnumeration of this group. Each column heading corresponds to a property name on the DCIM\_SystemEnumeration class. The Description column contains the description for each of the attribute. Each row contains the values for the properties listed in the column headings. The PossibleValues property is an array property represented in the table as comma delimited list.

**Table 17 – DCIM\_SystemEnumeration LCD Attributes**

| AttributeName | AttributeDisplayName | IsReadOnly | PossibleValues |
|---------------|----------------------|------------|----------------|
|---------------|----------------------|------------|----------------|

| AttributeName | AttributeDisplayName | IsReadOnly | PossibleValues                                                                                                                                                                                                                                |
|---------------|----------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Configuration | LCD Configuration    | FALSE      | ""User Defined",<br>"Model Name",<br>"None",<br>"iDRAC IPv4 Address",<br>"iDRAC MAC Address",<br>"OS System Name",<br>"Service Tag",<br>"IPv6 Address",<br>"Ambient Temperature",<br>"System Watts",<br>"Asset Tag",<br>"OEM PM LCD Override" |

The following table lists the values for the DCIM\_SystemString of this group. Each column heading corresponds to a property name on the DCIM\_SystemString class. The Value Expression column contains constraints on string value formulation. Each row contains the values for the properties listed in the column headings.

**Table 18 – DCIM\_SystemString LCD Attributes**

| AttributeName     | Attribute Description       | IsReadOnly | MinLength | MaxLength | Value Expression |
|-------------------|-----------------------------|------------|-----------|-----------|------------------|
| CurrentDisplay    | Current LCD Display String  | TRUE       | 0         | 62        |                  |
| UserDefinedString | User Defined String for LCD | FALSE      | 0         | 62        |                  |

## 7.6.4 Thermal Configuration Attributes

This section describes the attributes for managing system's power. The attributes are used to set the system thermal configuration.

The GroupID property for the DCIM\_SystemEnumeration and DCIM\_SystemInteger shall be "ThermalConfig.1".

The GroupDisplayName property for the DCIM\_SystemEnumeration and DCIM\_SystemInteger " shall be "Thermal Configuration".

The following table lists the values for the DCIM\_SystemEnumeration of this group. Each column heading corresponds to a property name on the DCIM\_SystemEnumeration class. The Description column contains the description for each of the attribute. Each row contains the values for the properties listed in the column headings. The PossibleValues property is an array property represented in the table as comma delimited list.

**Table 19 – DCIM\_SystemEnumeration Thermal Configuration Attributes**

| AttributeName                  | AttributeDisplayName              | IsReadOnly | PossibleValues                      |
|--------------------------------|-----------------------------------|------------|-------------------------------------|
| FreshAirCompliantConfiguration | Fresh Air Compliant Configuration | TRUE       | "Not Applicable",<br>"Yes",<br>"No" |

The following table lists the values for the DCIM\_SystemInteger of this group. Each column heading corresponds to a property name on the DCIM\_SystemInteger class. Each row contains the values for the properties listed in the column headings.

454

**Table 20 – DCIM\_SystemInteger Thermal Configuration Attributes**

| AttributeName                   | AttributeDisplayName               | IsReadOnly | LowerBound                    | UpperBound |
|---------------------------------|------------------------------------|------------|-------------------------------|------------|
| EventGenerationInterval         | Event Generation Interval          | FALSE      | 0 (disables event generation) | 365        |
| CriticalEventGenerationInterval | Critical Event Generation Interval | FALSE      | 0                             | 365        |

### 455 7.6.5 Server OS Attributes

456 This section describes the attributes for managing system's operating system. The attributes are used to  
 457 manage server OS name, OS version and host name.

458 The GroupID property for the DCIM\_SystemEnumeration, DCIM\_SystemString shall be "ServerOS.1".

459 The GroupDisplayName property for the DCIM\_SystemEnumeration, DCIM\_SystemString, and  
 460 DCIM\_SystemInteger shall be "Server Operating System".

461 The following table lists the values for the DCIM\_SystemString of this group. Each column heading  
 462 corresponds to a property name on the DCIM\_SystemString class. The Value Expression column  
 463 contains constraints on string value formulation. Each row contains the values for the properties listed in  
 464 the column headings.

465

**Table 21 – DCIM\_SystemString Server OS Attributes**

| AttributeName | Attribute Description   | IsReadOnly | MinLength | MaxLength | Value Expression |
|---------------|-------------------------|------------|-----------|-----------|------------------|
| HostName      | Host Name               | FALSE      | 0         | 62        |                  |
| OSName        | Operating Sytem Name    | FALSE      | 0         | 62        |                  |
| OSVersion     | Operating Sytem Version | TRUE       | 0         | 62        |                  |

466 The following table lists the values for the DCIM\_SystemInteger of this group. Each column heading  
 467 corresponds to a property name on the DCIM\_SystemInteger class. Each row contains the values for the  
 468 properties listed in the column headings.

469

**Table 22 – DCIM\_SystemInteger Server OS Attributes**

| AttributeName       | Attribute Description           | IsReadOnly | LowerBound | UpperBound |
|---------------------|---------------------------------|------------|------------|------------|
| ServerPoweredOnTime | Server Powered On Time Duration | TRUE       |            |            |

470

### 471 7.6.6 Thermal Settings Attributes

472 This section describes the attributes for setting the managable system's power. The attributes are used to  
 473 set the system thermal Settings.

474 The GroupID property for the DCIM\_SystemEnumeration shall be "ThermalSettings.1".

475 The GroupDisplayName property for the DCIM\_SystemEnumeration shall be "Thermal Settings".

476 The following table lists the values for the DCIM\_SystemEnumeration of this group. Each column heading  
 477 corresponds to a property name on the DCIM\_SystemEnumeration class. The Description column  
 478 contains the description for each of the attribute. Each row contains the values for the properties listed in

479 the column headings. The PossibleValues property is an array property represented in the table as  
480 comma delimited list.

481

Table 23 – DCIM\_SystemEnumeration Thermal Settings Attributes

| AttributeName  | AttributeDisplayName            | IsReadOnly | PossibleValues                                                       |
|----------------|---------------------------------|------------|----------------------------------------------------------------------|
| ThermalProfile | Thermal Profile                 | FALSE      | Auto, Maximum performance, Minimum powe                              |
| AirExhaustTemp | Average Air Exhaust Temperature | FALSE      | 70,40,45,50,55,60,65                                                 |
| FanSpeedOffset | Fan Speed Offset                | FALSE      | None, Low Fan Speed, High Fan Speed, Medium Fan Speed, Max Fan Speed |
| BaseAlgortihm  | Base Algorithm                  | FALSE      |                                                                      |

482

Table 17 – DCIM\_SystemInteger Thermal Settings Attributes

| AttributeName           | AttributeDisplayName          | IsReadOnly | LowerBound | UpperBound |
|-------------------------|-------------------------------|------------|------------|------------|
| MinimumFanSpeed         | Minimum Fan Speed             | FALSE      | 0          | 65535      |
| MFSMinimumLimit         | MFS Minimum Limit             | TRUE       |            |            |
| MFSMaximumLimit         | MFS Maximum Limit             | TRUE       |            |            |
| FanSpeedLowOffsetVal    | Fan Speed Low Offset Value    | TRUE       |            |            |
| FanSpeedMediumOffsetVal | Fan Speed Medium Offset Value | TRUE       |            |            |
| FanSpeedHighOffsetVal   | Fan Speed High Offset Value   | TRUE       |            |            |
| FanSpeedMaxOffsetVal    | Fan Speed Max Offset Value    | TRUE       |            |            |

| AttributeName | AttributeDisplayName | IsReadOnly | LowerBound | UpperBound |
|---------------|----------------------|------------|------------|------------|
|               |                      |            |            |            |

### 7.6.7 Quick Sync Attributes

This section describes the attributes for managing system's quick sync .The attributes are used to set Quick Sync Access, Quick Sync Presence, Quick Sync Inactivity Timer Enable and Quick Sync Inactivity Timeout.

The GroupID property for the DCIM\_SystemEnumeration and DCIM\_SystemInteger shall be "QuickSync.1".

The GroupDisplayName property for the DCIM\_SystemEnumeration and DCIM\_SystemInteger shall be "Quick Sync".

The following table lists the values for the DCIM\_SystemEnumeration of this group. Each of the column headings correspond to a property name on the DCIM\_SystemEnumeration class. The Description column contains the description for each of the attribute. Each row contain the values for the properties listed in the column headings. The PossibleValues property is an array property represented in the table as comma delimited list.

**Table 24 – DCIM\_SystemEnumeration Sync Quick Attributes**

| AttributeName         | AttributeDisplayName               | IsReadOnly | PossibleValues                                                               | Description                                                 |
|-----------------------|------------------------------------|------------|------------------------------------------------------------------------------|-------------------------------------------------------------|
| Access                | Quick Sync Access                  | FALSE      | "Disable","Read Only",<br>[1] <i>Note: The default value is "Read Write"</i> | Represents the configuration of Quick Sync feature.         |
| Presence              | Quick Sync Presence                | TRUE       | "Not Supported","Absent" and "Present"                                       | Represents whether the Quick Sync feature is present or not |
| InactivityTimerEnable | Quick Sync Inactivity Timer Enable | FALSE      | "Enable", "Disable"<br>[2] <i>Note: The default value is "Enable"</i> .      | Represents enabling or disabling the Inactivity Timer.      |

The following table lists the values for the DCIM\_SystemInteger of this group. Each column heading corresponds to a property name on the DCIM\_SystemInteger class. Each row contains the values for the properties listed in the column headings.

**Table 25 – DCIM\_SystemInteger Sync Quick Attributes**

| AttributeName | AttributeDisplayName | IsReadOnly | LowerBound | UpperBound |
|---------------|----------------------|------------|------------|------------|
|---------------|----------------------|------------|------------|------------|

|                   |                                      |       |                                                   |      |
|-------------------|--------------------------------------|-------|---------------------------------------------------|------|
| InactivityTimeout | Quick Sync Inactivity Timeout value. | FALSE | 15<br>[3] <i>Note: The default value is "30".</i> | 3600 |
|-------------------|--------------------------------------|-------|---------------------------------------------------|------|

## 7.6.8 Backplane SGPIO Mode Attributes

This section describes the attributes for backplane operating mode .The attributes are used to read the current bus mode of backplane.

The GroupID property for the DCIM\_SystemEnumeration and DCIM\_SystemInteger shall be "Backplane.1".

The GroupDisplayName property for the DCIM\_SystemEnumeration and DCIM\_SystemInteger shall be "BackplaneBusMode".

The following table lists the values for the DCIM\_SystemEnumeration of this group. Each of the column headings correspond to a property name on the DCIM\_SystemEnumeration class. The Description column contains the description for each of the attribute. Each row contain the values for the properties listed in the column headings. The PossibleValues property is an array property represented in the table as comma delimited list.

**Table 26 – DCIM\_SystemEnumeration Backplane SGPIO Mode Attributes**

| AttributeName    | AttributeDisplayName | IsReadOnly | PossibleValues            | Description                                 |
|------------------|----------------------|------------|---------------------------|---------------------------------------------|
| BackplaneBusMode | BackplaneBusMode     | TRUE       | "Unknown", "I2C", "SGPIO" | Represents the current busmode of BackPlane |

## 7.7 DCIM\_SystemManagementService – System Management Service

This section describes the implementation for the DCIM\_SystemManagementService class.

This class shall be instantiated in the Implementation Namespace: root/dcim.

### 7.7.1 Resource URIs

The class Resource URI shall be "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM\_SystemManagementService?\_\_cimnamespace=root/dcim"

The key property shall be the SystemCreationClassName, SystemName, CreationClassName, and Name.

The instance Resource URI for DCIM\_SystemManagementService instance shall be:

"http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM\_SystemManagementService?\_\_cimnamespace=root/dcim+SystemCreationClassName=DCIM\_ComputerSystem+SystemName=srv:system+CreationClassName=DCIM\_SystemManagementService+Name=DCIM:SystemManagementService"

### 7.7.2 Operations

The following table lists the operations implemented on DCIM\_SystemManagementService.

**Table 27 – DCIM\_SystemManagementService - Operations**

| Operation Name | Requirements | Required Input |
|----------------|--------------|----------------|
|----------------|--------------|----------------|

|                                                                |           |                 |
|----------------------------------------------------------------|-----------|-----------------|
| Get                                                            | Mandatory | Instance URI    |
| Enumerate                                                      | Mandatory | Class URI       |
| Invoke                                                         | Mandatory | Instance URI    |
| DCIM_SystemManagementService.SetAttribute()                    | Mandatory | See section 8.1 |
| DCIM_SystemManagementService.SetAttributes()                   | Mandatory | See section 8.2 |
| DCIM_SystemManagementService.CreateTargetedConfigJob()         | Mandatory | See section 8.3 |
| DCIM_SystemManagementService.DeletePendingConfiguration()<br>) | Mandatory | See section 8.4 |
| DCIM_SystemManagementService.ShowErrorsOnLCD()                 | Mandatory | See section 8.5 |
| DCIM_SystemManagementService.IdentifyChassis()                 | Mandatory | See section 8.6 |

### 7.7.3 Properties

The following table lists the implemented properties for DCIM\_SystemManagementService instance representing system management service in a system. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3). The “Additional Requirements” column shall denote either possible values for the property, or requirements on the value formulation.

**Table 28 – DCIM\_SystemManagementService- Properties**

| Property Name           | Requirements | Description/Additional Requirement                                 |
|-------------------------|--------------|--------------------------------------------------------------------|
| SystemCreationClassName | Mandatory    | The property value shall be “DCIM_ComputerSystem”.                 |
| CreationClassName       | Mandatory    | The property value shall be “DCIM_SystemManagementService”.        |
| SystemName              | Mandatory    | The property value shall be “srv:system”.                          |
| Name                    | Mandatory    | This property shall have a value of “DCIM:SystemManagementService” |
| ElementName             | Mandatory    | The property value shall be “System Management Service”.           |

## 7.8 System Info Profile Profile Registration

This section describes the implementation for the DCIM\_LCRegisteredProfile class.

This class shall be instantiated in the Interop Namespace: root/interop.

The DCIM\_ElementConformsToProfile association(s) shall reference the DCIM\_LCRegisteredProfile instance.

### 7.8.1 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: SystemInfo:1.0.0”

### 7.8.2 Operations

The following table lists the operations implemented on for DCIM\_LCRegisteredProfile.

557

**Table 29 – DCIM\_LCRegisteredProfile - Operations**

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

558

### 559 7.8.3 Properties

560 The following table lists the implemented properties for DCIM\_LCRegisteredProfile instance representing  
561 System Info Profile implementation. The “Requirements” column shall denote whether the property is  
562 implemented (for requirement definitions, see section 3). The “Additional Requirements” column shall  
563 denote either possible values for the property, or requirements on the value formulation

564

**Table 30 – DCIM\_LCRegisteredProfile**

| Property Name               | Type   | Requirement | Additional Requirements                                              |
|-----------------------------|--------|-------------|----------------------------------------------------------------------|
| InstanceID                  | String | Mandatory   | DCIM:SystemInfo:1.0.0                                                |
| RegisteredName              | String | Mandatory   | This property shall have the value "System Info".                    |
| RegisteredVersion           | String | Mandatory   | This property shall have the value "1.4.0".                          |
| RegisteredOrganization      | Uint16 | Mandatory   | This property shall have the value 1 (Other).                        |
| OtherRegisteredOrganization | String | Mandatory   | The property value shall match "DCIM".                               |
| AdvertiseTypes[]            | Uint16 | Mandatory   | The property array shall contain: ["1(Other), 1(Other)"]             |
| AdvertiseTypeDescriptions[] | String | Mandatory   | The property array shall contain: "WS-Identify", "Interop Namespace" |

565

## 566 8 Methods

567 This section details the requirements for supporting extrinsic methods for the CIM elements defined by  
568 this profile.

### 569 8.1 DCIM\_SystemManagementService.SetAttribute()

570 The SetAttribute() method is used to set or change the value of a system attribute.

571 Invocation of the SetAttribute() method shall change the value of the attribute's CurrentValue or  
572 attribute's PendingValue property to the value specified by the AttributeValue parameter if the attribute's  
573 IsReadOnly property is FALSE. If this method is invoked when the attribute's IsReadOnly property is  
574 TRUE, it shall result in no change to the value of the attribute's CurrentValue property. The result of  
575 changing this value is described with the SetResult parameter.

576 Return code values for the SetAttribute() method are specified in Table 31 and parameters are specified  
577 in Table 32. Invoking the SetAttribute() method multiple times can result in the earlier requests being  
578 overwritten or lost.

579

**Table 31 – SetAttribute() Method: Return Code Values**

| Value | Description             |
|-------|-------------------------|
| 0     | Completed with no error |
| 2     | Failed                  |

**Table 32 – SetAttribute() Method: Parameters**

| Qualifiers | Name               | Type   | Description/Values                                                                                                                                                                                              |
|------------|--------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | Target             | String | Shall be set to "System.Embedded.1"                                                                                                                                                                             |
| IN, REQ    | AttributeName      | String | Shall be the GroupID property value followed by "#" character and then followed by the AttributeName property value for the attribute to be modified.<br>Example: "ServerPwr.1#PowerCapSetting"                 |
| IN, REQ    | AttributeValue[]   | String | Shall contain the desired attribute value.<br>If the value is valid, the CurrentValue or PendingValue property of the specified attribute will be modified.                                                     |
| OUT        | SetResult          | String | Returns: <ul style="list-style-type: none"> <li>"Set CurrentValue property" when the attributes current value is set.</li> <li>"Set PendingValue property" when the attributes pending value is set.</li> </ul> |
| OUT        | RebootRequired     | String | Returns: <ul style="list-style-type: none"> <li>"Yes" if reboot is required,</li> <li>"No" if reboot is not required.</li> </ul>                                                                                |
| OUT        | MessageID          | String | Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry                                                                                    |
| OUT        | Message            | String | Error Message                                                                                                                                                                                                   |
| OUT        | MessageArguments[] | String | Error MessageArguments                                                                                                                                                                                          |

**Table 33 – SetAttribute() Method: Standard Messages**

| MessageID (OUT parameter) | Message                                                          | MessageArguments[]           |
|---------------------------|------------------------------------------------------------------|------------------------------|
| SYS001                    | The command was succesful                                        |                              |
| SYS002                    | The command failed                                               |                              |
| SYS003                    | Missing parameter(s) %s                                          | AttributeName/AttributeValue |
| SYS004                    | Invalid parameter value for %s                                   | AttributeName/AttributeValue |
| SYS005                    | AttributeName and AttributeValue count mismatch                  |                              |
| SYS006                    | Cannot set ReadOnly AttributeName %s                             | AttributeName                |
| SYS007                    | Input out of range for %s                                        | AttributeName                |
| SYS008                    | Invalid boolean in AttributeValue for AttributeName %s           | AttributeName                |
| SYS009                    | String exceeds maximum length for AttributeName %s               | AttributeName                |
| SYS010                    | Invalid character in AttributeValue for AttributeName %s         | AttributeName                |
| SYS011                    | Configuration is already committed, cannot set the configuration |                              |
| SYS012                    | User is not authorized to perform this operation                 |                              |
| SYS013                    | Invalid AttributeName %s                                         | AttributeName                |
| SYS014                    | Invalid AttributeValue for AttributeName %s                      | AttributeName                |

| MessageID (OUT parameter) | Message                                                                  | MessageArguments[] |
|---------------------------|--------------------------------------------------------------------------|--------------------|
| SYS015                    | Job created                                                              |                    |
| SYS016                    | Job completed with errors                                                |                    |
| SYS017                    | Job failed                                                               |                    |
| SYS018                    | Job completed                                                            |                    |
| SYS019                    | Required dependancy input not found                                      |                    |
| SYS020                    | Invalid Required Attribute value                                         |                    |
| SYS023                    | No pending configurations                                                |                    |
| SYS024                    | Attribute dependency failed                                              |                    |
| JCP017                    | Maximum job limit reached, cannot create new jobs                        |                    |
| LC062                     | An instance of Export or Import System Configuration is already running. |                    |

582

## 583 8.2 DCIM\_SystemManagementService.SetAttributes()

584 The SetAttributes() method is used to set or change the values of a group of attributes.

585 Invocation of the SetAttributes() method shall change the values of the attribute's CurrentValue or  
586 PendingValue properties that correspond to the names specified by the AttributeName parameter and the  
587 values specified by the AttributeValue parameter if the respective attribute's IsReadOnly property is  
588 FALSE. . If this method is invoked when the attribute's IsReadOnly property is TRUE, it shall result in no  
589 change to the value of the attribute's CurrentValue property.

590 Return code values for the SetAttributes() method are specified in Table 34, and parameters are  
591 specified in Table 35.

592 Invoking the SetAttributes() method multiple times can result in the earlier requests being overwritten or  
593 lost.

594 **Table 34 – SetAttributes() Method: Return Code Values**

| Value | Description             |
|-------|-------------------------|
| 0     | Completed with no error |
| 2     | Failed                  |

595 **Table 35 – SetAttributes() Method: Parameters**

| Qualifiers | Name            | Type   | Description/Values                                                                                                                                                                                                                                   |
|------------|-----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | Target          | String | Shall be set to "System.Embedded.1"                                                                                                                                                                                                                  |
| IN, REQ    | AttributeName[] | String | Shall contain array of attributes where each element shall be the GroupID property value followed by "#" character and then followed by the AttributeName property value for the attribute to be modified.<br>Example: "ServerPwr.1#PowerCapSetting" |

| Qualifiers | Name               | Type   | Description/Values                                                                                                                                                                                                                                   |
|------------|--------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | AttributeValue[]   | String | Shall contain the desired attribute values.<br>If the value is valid, the CurrentValue or PendingValue property of the specified attribute will be modified.<br>Note: Attributes with multi-element array values shall not be set using this method. |
| OUT        | SetResult[]        | String | Returns: <ul style="list-style-type: none"> <li>• "Set CurrentValue property" when the attributes current value is set.</li> <li>• "Set PendingValue property" when the attributes pending value is set.</li> </ul>                                  |
| OUT        | RebootRequired[]   | String | Returns: <ul style="list-style-type: none"> <li>• "Yes" if reboot is required,</li> <li>• "No" if reboot is not required.</li> </ul>                                                                                                                 |
| OUT        | MessageID[]        | String | Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry                                                                                                                         |
| OUT        | Message[]          | String | Error Message                                                                                                                                                                                                                                        |
| OUT        | MessageArguments[] | String | Error MessageArguments                                                                                                                                                                                                                               |

596

**Table 36 – SetAttributes() Method: Standard Messages**

| MessageID (OUT parameter) | Message                                                      | MessageArguments[]           |
|---------------------------|--------------------------------------------------------------|------------------------------|
| SYS001                    | The Command was succesful                                    |                              |
| SYS002                    | The command failed                                           |                              |
| SYS003                    | Missing parameter(s) %s                                      | AttributeName/AttributeValue |
| SYS004                    | Invalid parameter value for %s                               | AttributeName/AttributeValue |
| SYS005                    | AttributeName and AttributeValue count mismatch              |                              |
| SYS006                    | Cannot set ReadOnly<br>AttributeName %s                      | AttributeName                |
| SYS007                    | Input out of range for %s                                    | AttributeName                |
| SYS008                    | Invalid boolean in AttributeValue<br>for AttributeName %s    | AttributeName                |
| SYS009                    | String exceeds maximum length for<br>AttributeName %s        | AttributeName                |
| SYS010                    | Invalid character in AttributeValue<br>for AttributeName %s  | AttributeName                |
| SYS011                    | Configuration already committed,<br>cannot set configuration |                              |
| SYS012                    | User is not Authorized to perform<br>this operation          |                              |
| SYS013                    | Invalid AttributeName %s                                     | AttributeName                |
| SYS014                    | Invalid AttributeValue for<br>AttributeName %s               | AttributeName                |
| SYS015                    | Job created                                                  |                              |
| SYS016                    | Job completed with errors                                    |                              |
| SYS017                    | Job failed                                                   |                              |

| MessageID (OUT parameter) | Message                                                                  | MessageArguments[] |
|---------------------------|--------------------------------------------------------------------------|--------------------|
| SYS018                    | Job completed                                                            |                    |
| SYS019                    | Required Dependency input not found                                      |                    |
| SYS020                    | Invalid Required Attribute value                                         |                    |
| SYS023                    | No pending configurations                                                |                    |
| SYS024                    | Attribute dependency failed                                              |                    |
| JCP017                    | Maximum job limit reached, cannot create new jobs                        |                    |
| LC062                     | An instance of Export or Import System Configuration is already running. |                    |

### 8.3 DCIM\_SystemManagementService.CreateTargetedConfigJob()

The CreateTargetedConfigJob() method is used to apply the pending values created by the SetAttribute, SetAttributes, ChangeBootSourceState, and ChangeBootOrderByInstanceID methods. The successful execution of this method creates a job to apply the pending values.

The CreateTargetedConfigJob() method supports the following optional input parameters:

- RebootJobType: When provided in the input parameters, it creates a specific reboot job to "PowerCycle", "Graceful Reboot without forced shutdown", or "Graceful Reboot with forced shutdown". This parameter only creates the RebootJob and does not schedule it.  
NOTE: Many attributes in the profile do not require a reboot job. Thus, it may not be necessary to specify this parameter.
- ScheduledStartTime: When provided in the input parameters, schedules the "configuration job" and the optional "reboot job" at the specified start time. A special value of "TIME\_NOW" schedules the job(s) immediately.
- UntilTime: This parameter has a dependency on "ScheduledStartTime", together "ScheduledStartTime" and "UntilTime" define a time window for scheduling the job(s). Once scheduled, jobs will be executed within the time window.

If CreateTargetedConfigJob method is executed without the three optional parameters discussed above, then configuration job is created but not scheduled. However, this configuration job can be scheduled later using the DCIM\_JobService.SetupJobQueue () method from the "Job Control Profile". DCIM\_JobService.SetupJobQueue () can be executed to schedule several configuration jobs including the reboot job. Refer to "Job Control Profile" for more details.

Return code values for the CreateTargetedConfigJob() method are specified in Table 34, and parameters are specified in Table 35.

Subsequent calls to CreateTargetedConfigJob after the first CreateTargetedConfigJob will result in error until the first job is completed."

**Table 37 – CreateTargetedConfigJob() Method: Return Code Values**

| Value | Description |
|-------|-------------|
| 2     | Failed      |
| 4096  | Job Created |

623

**Table 38 – CreateTargetedConfigJob() Method: Parameters**

| Qualifiers | Name               | Type                | Description/Values                                                                                                                                      |
|------------|--------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | Target             | String              | Shall be set to "System.Embedded.1"                                                                                                                     |
| IN         | ScheduledStartTime | String              | Start time for the job execution in format: yyyyymmddhhmmss.<br>The string "TIME_NOW" means immediate.                                                  |
| IN         | UntilTime          | String              | End time for the job execution in format: yyyyymmddhhmmss.<br>If this parameter is not NULL, then ScheduledStartTime parameter shall also be specified. |
| OUT        | Job                | CIM_ConcreteJob REF | Reference to the newly created pending value application job.                                                                                           |
| OUT        | MessageID          | String              | Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.                           |
| OUT        | Message            | String              | Error Message                                                                                                                                           |
| OUT        | MessageArguments[] | String              | Error MessageArguments                                                                                                                                  |

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625

**Table 39 – CreateTargetedConfigJob() Method: Standard Messages**

| MessageID (OUT parameter) | Message                                                   | MessageArguments[]           |
|---------------------------|-----------------------------------------------------------|------------------------------|
| SYS001                    | The command was succesful                                 |                              |
| SYS002                    | The command failed                                        |                              |
| SYS003                    | Missing parameter(s) %s                                   | AttributeName/AttributeValue |
| SYS004                    | Invalid parameter value for %s                            | AttributeName/AttributeValue |
| SYS005                    | AttributeName and AttributeValue count mismatch           |                              |
| SYS006                    | Cannot set ReadOnly AttributeName %s                      | AttributeName                |
| SYS007                    | Input out of range for %s                                 | AttributeName                |
| SYS008                    | Invalid boolean in AttributeValue for AttributeName %s    | AttributeName                |
| SYS009                    | String exceeds maximum length for AttributeName %s        | AttributeName                |
| SYS010                    | Invalid character in AttributeValue for AttributeName %s  | AttributeName                |
| SYS011                    | Configuration already committed, cannot set configuration |                              |
| SYS012                    | User is not Authorized to perform this operation          |                              |
| SYS013                    | Invalid AttributeName %s                                  | AttributeName                |
| SYS014                    | Invalid AttributeValue for AttributeName %s               | AttributeName                |
| SYS015                    | Job created                                               |                              |
| SYS016                    | Job completed with errors                                 |                              |
| SYS017                    | Job failed                                                |                              |

| MessageID (OUT parameter) | Message                                                                  | MessageArguments[] |
|---------------------------|--------------------------------------------------------------------------|--------------------|
| SYS018                    | Job completed                                                            |                    |
| SYS019                    | Required dependancy input not found                                      |                    |
| SYS020                    | Invalid Required Attribute value                                         |                    |
| SYS023                    | No pending configurations                                                |                    |
| SYS024                    | Attribute dependency failed                                              |                    |
| SYS029                    | Unsupported parameter name <parameter name>                              | Parameter Name     |
| JCP017                    | Maximum job limit reached, cannot create new jobs                        |                    |
| LC062                     | An instance of Export or Import System Configuration is already running. |                    |

## 8.4 DCIM\_SystemManagementService.DeletePendingConfiguration()

The DeletePendingConfiguration() method is used to cancel the pending values created by the SetAttribute and SetAttributes methods. The DeletePendingConfiguration() method cancels the pending configuration changes made before the configuration job is created with CreateTargetedConfigJob(). This method only operates on the pending changes prior to CreateTargetedConfigJob() being called. After the configuration job is created, the pending changes can only be canceled by calling DeleteJobQueue() method in the Job Control profile.

Return code values for the DeletePendingConfiguration() method are specified in Table 40, and parameters are specified in Table 41.

**Table 40 – DeletePendingConfiguration() Method: Return Code Values**

| Value | Description             |
|-------|-------------------------|
| 0     | Completed with no error |
| 2     | Failed                  |

**Table 41 – DeletePendingConfiguration() Method: Parameters**

| Qualifiers | Name               | Type   | Description/Values                                                                                                            |
|------------|--------------------|--------|-------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | Target             | String | Shall be equal to "System.Embedded.1"                                                                                         |
| OUT        | MessageID          | String | Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry. |
| OUT        | Message            | String | Error Message                                                                                                                 |
| OUT        | MessageArguments[] | String | Error MessageArguments                                                                                                        |

**Table 42 – DeletePendingConfiguration() Method: Standard Messages**

| MessageID (OUT parameter) | Message                   | MessageArguments[] |
|---------------------------|---------------------------|--------------------|
| SYS001                    | The command was succesful |                    |

| MessageID (OUT parameter) | Message                                                                  | MessageArguments[]           |
|---------------------------|--------------------------------------------------------------------------|------------------------------|
| SYS002                    | The command failed                                                       |                              |
| SYS003                    | Missing parameter(s) %s                                                  | AttributeName/AttributeValue |
| SYS004                    | Invalid parameter value for %s                                           | AttributeName/AttributeValue |
| SYS005                    | AttributeName and AttributeValue count mismatch                          |                              |
| SYS006                    | Cannot set ReadOnly<br>AttributeName %s                                  | AttributeName                |
| SYS007                    | Input out of range for %s                                                | AttributeName                |
| SYS008                    | Invalid boolean in AttributeValue for AttributeName %s                   | AttributeName                |
| SYS009                    | String exceeds maximum length for AttributeName %s                       | AttributeName                |
| SYS010                    | Invalid character in AttributeValue for AttributeName %s                 | AttributeName                |
| SYS011                    | Configuration already committed, cannot set configuration                |                              |
| SYS012                    | User is not authorized to perform this operation                         |                              |
| SYS013                    | Invalid AttributeName %s                                                 | AttributeName                |
| SYS014                    | Invalid AttributeValue for AttributeName %s                              | AttributeName                |
| SYS015                    | Job created                                                              |                              |
| SYS016                    | Job completed with errors                                                |                              |
| SYS017                    | Job failed                                                               |                              |
| SYS018                    | Job completed                                                            |                              |
| SYS019                    | Required dependancy input not found                                      |                              |
| SYS020                    | Invalid Required Attribute value                                         |                              |
| SYS023                    | No pending configurations                                                |                              |
| SYS024                    | Attribute dependency failed                                              |                              |
| JCP017                    | Maximum job limit reached, cannot create new jobs                        |                              |
| LC062                     | An instance of Export or Import System Configuration is already running. |                              |

## 8.5 DCIM\_SystemManagementService.ShowErrorsOnLCD()

The ShowErrorsOnLCD() method is used to hide and unhide LCD Errors.

Return code values for the ShowErrorsOnLCD() method are specified in Table 43, and parameters are specified in Table 44.

**Table 43 – ShowErrorsOnLCD() Method: Return Code Values**

| Value | Description             |
|-------|-------------------------|
| 0     | Completed with no error |

| Value | Description |
|-------|-------------|
| 2     | Failed      |

**Table 44 – ShowErrorsOnLCD() Method: Parameters**

| Qualifiers | Name               | Type    | Description/Values                                                                                                            |
|------------|--------------------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | Show               | Boolean | Whether to show or hide LCD errors                                                                                            |
| OUT        | MessageID          | String  | Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry. |
| OUT        | Message            | String  | Error Message                                                                                                                 |
| OUT        | MessageArguments[] | String  | Error MessageArguments                                                                                                        |

**Table 45 – ShowErrorsOnLCD() Method: Standard Messages**

| MessageID (OUT parameter) | Message                                      | MessageArguments[] |
|---------------------------|----------------------------------------------|--------------------|
| SYS001                    | The command was succesful                    |                    |
| SYS002                    | The command failed                           |                    |
| SYS003                    | Missing parameter(s) <parameter name>        | Show               |
| SYS004                    | Invalid parameter value for <parameter name> | Show               |
| SYS024                    | Attribute dependency failed                  |                    |

## 8.6 DCIM\_SystemManagementService.IdentifyChassis()

The IdentifyChassis() method is used to turn on and off LEDs on the chassis in order to identify the system.

Return code values for the IdentifyChassis() method are specified in Table 46, and parameters are specified in Table 47.

**Table 46 – IdentifyChassis() Method: Return Code Values**

| Value | Description             |
|-------|-------------------------|
| 0     | Completed with no error |
| 2     | Failed                  |

**Table 47 – IdentifyChassis() Method: Parameters**

| Qualifiers | Name          | Type  | Description/Values                                                                                                                     |
|------------|---------------|-------|----------------------------------------------------------------------------------------------------------------------------------------|
| IN, REQ    | IdentifyState | UInt8 | This parameter represents the requested state of the identifying LED.<br>0 – “Disabled”<br>1 – “Enabled”<br>2 – “Time Limited Enabled” |

| Qualifiers | Name               | Type   | Description/Values                                                                                                                                                                                                                                      |
|------------|--------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IN         | DurationLimit      | UInt8  | This parameter represents the requested time limit in seconds for identifying chassis before the identifying LED turns back off. The parameter shall be specified and non-NULL, if the IdentifyState parameter has value of 2 – “Time Limited Enabled”. |
| OUT        | MessageID          | String | Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.                                                                                                                           |
| OUT        | Message            | String | Error Message                                                                                                                                                                                                                                           |
| OUT        | MessageArguments[] | String | Error MessageArguments                                                                                                                                                                                                                                  |

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**Table 48 – IdentifyChassis() Method: Standard Messages**

| MessageID (OUT parameter) | Message                                      | MessageArguments[]          |
|---------------------------|----------------------------------------------|-----------------------------|
| SYS001                    | The command was succesful                    |                             |
| SYS002                    | The command failed                           |                             |
| SYS003                    | Missing parameter(s) <parameter name>        | DurationLimit/IdentifyState |
| SYS004                    | Invalid parameter value for <parameter name> | Show                        |
| SYS024                    | Attribute dependency failed                  |                             |

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## 9 Use Cases

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See *Lifecycle Controller (LC) Integration Best Practices Guide*.

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## 10 CIM Elements

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No additional details specified.

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## 11 Privilege and License Requirement

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The following table describes the privilege and license requirements for the listed operations.

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**Table 49 – Privilege and License Requirements**

| SetAttributes                     | Operation | User Privilege Required | License Required |
|-----------------------------------|-----------|-------------------------|------------------|
| ServerPwr.1#PowerCapSetting       | INVOKE    | System Control          | None.            |
| ServerPwr.1#PowerCapValue         | INVOKE    | System Control          | None.            |
| QuickSync.1#Access                | INVOKE    | System Control          | None.            |
| QuickSync.1#InactivityTimerEnable | INVOKE    | System Control          | None             |
| QuickSync.1#InactivityTimeout     | INVOKE    | System Control          | None             |

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**Table 505 – Privilege and License Requirements**

| <b>Class and Method</b>                                       | <b>Operation</b>  | <b>User Privilege Required</b> | <b>License Required</b>                             |
|---------------------------------------------------------------|-------------------|--------------------------------|-----------------------------------------------------|
| DCIM_SystemView                                               | ENUMERATE,<br>GET | Login                          | None.                                               |
| DCIM_SystemInteger                                            | ENUMERATE,<br>GET | Login                          | None.                                               |
| DCIM_HostNetworkInterfaceView                                 | ENUMERATE,<br>GET | Login                          | None                                                |
| DCIM_SystemEnumeration                                        | ENUMERATE,<br>GET | Login                          | None.                                               |
| DCIM_SystemString                                             | ENUMERATE,<br>GET | Login                          | None.                                               |
| DCIM_System Management Service                                | ENUMERATE,<br>GET | Login                          | None.                                               |
| DCIM_SystemManagementService.<br>SetAttribute()               | INVOKE            | Login, Configure               | LM_POWER_BUDGETING &<br>LM_REMOTE_CONFIGURAT<br>ION |
| DCIM_SystemManagementService.<br>SetAttributes()              | INVOKE            | Login, Configure               | LM_POWER_BUDGETING &<br>LM_REMOTE_CONFIGURAT<br>ION |
| DCIM_SystemManagementService.<br>CreateTargetedConfigJob()    | INVOKE            | Login, Configure               | LM_REMOTE_CONFIGURAT<br>ION                         |
| DCIM_SystemManagementService.<br>DeletePendingConfiguration() | INVOKE            | Login, Configure               | LM_REMOTE_CONFIGURAT<br>ION                         |
| DCIM_SystemManagementService.<br>ShowErrorsOnLCD()            | INVOKE            | Login, System<br>Operations    | LM_REMOTE_CONFIGURAT<br>ION                         |
| DCIM_SystemManagementService.<br>IdentifyChassis()            | INVOKE            | Login, System<br>Operations    | LM_REMOTE_CONFIGURAT<br>ION                         |
| DCIM_LCRegisteredProfile                                      | ENUMERATE,<br>GET | Login                          | None.                                               |
| DCIM_LCElementConformsToProfile                               | ENUMERATE,<br>GET | Login                          | None.                                               |

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## ANNEX A (informative)

### Change Log

| Version | Date       | Description                                                                                                                                                                                                                                                                                                                                                            |
|---------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.4.0   |            | Added the Thermal Configuration attribute.<br>Added LC062 error message to the SetAttribute(), SetAttributes(), CreateTargetedConfigJob(), and DeletePendingConfiguration() methods.                                                                                                                                                                                   |
| 1.4.0   | 9/6/2012   | Added LCD group attributes – CurrentDisplay, UserDefinedString<br>Added ThermalConfig group attributes – EventGenerationInterval, CriticalEventGenerationInterval<br>Added ServerOS group attributes – HostName, OSName, OSVersion<br>Added methods – ShowErrorsOnLCD(), IdentifyChassis()<br>Updated privilege and licensing requirement for added methods/attributes |
| 1.4     | 6/14/2013  | Added Thermal Settings Attributes                                                                                                                                                                                                                                                                                                                                      |
| 1.4.1   | 10/24/2013 | Added Quick Sync Attributes.                                                                                                                                                                                                                                                                                                                                           |
| 1.5.0   | 7/15/2014  | Added DCIM_HostNetworkInterfaceView                                                                                                                                                                                                                                                                                                                                    |
| 1.5.1   | 7/15/2014  | Backplane SGPIO attributes                                                                                                                                                                                                                                                                                                                                             |
| 1.5.2   | 12/01/2014 | Added property EstimatedSystemAirflow to DCIM_SystemView                                                                                                                                                                                                                                                                                                               |

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