

# iDRAC6 CIM Element Mapping



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# PREFACE

This document introduces the reader with the property and method mapping associated with the CIM Object Diagram. The approved specification documents used are:

1. IPMI CIM Mapping Guideline (Rev 0.60, 2/6/2006)
2. IPMI Interface Specification v2.0 (Rev 1.0, February 12 2004)
3. DSP1013 version 1.0.0a
4. CIM Profiles Analysis for PLDMv15
5. DSP1006 (SMASH Collections Profile)
6. DSP1007 (SM CLP Admin Domain Profile)
7. DSP1025 (Software Update Profile)
8. DSP1039 (Role Based Authorization Profile)
9. DSP1011 (Physical Asset Profile)
10. DSP1037 (DHCP Client Profile)
11. DSP1036 (IP Interface Profile)
12. DSP1005 (CLP Service Profile)
13. DSP1023 (Software Inventory Profile)
14. DSP1004 (Base Server Profile)
15. DSP1033 (Profile Registration Profile)
16. DSP1038 (DNS Client Profile)
17. DSP1010 (Record Log Profile)
18. DSP1027 (Power State Management Profile)
19. DSP1018 (Service Processor Profile)
20. DSP1053 (Base Metrics Profile)
21. DSP 1014 (Ethernet Port Profile)
22. DELL 1007 (Active Directory Client Profile)
23. DELL 1008 (Virtual Media Profile)
24. DELL Multi Factor Authentication Profile (refers to DMTF Simple Identity Profile)

# Terms and Definitions

## Default Instance Operations

The Default Instance Operations are EnumerateInstanceNames, EnumerateInstances, and GetInstance.

## Default Association Operations

The Default association operations are AssociatorNames, Associators, ReferenceNames, and References

# Revision History

<i>Version</i>	<i>Date</i>	<i>Description</i>
<b>1.0</b>	31 <sup>st</sup> August, 2009	Initial Draft

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# 1 DSP1006 (SMASH Collections Profile)

## CIM Elements: SMASH Collections Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_ConcreteCollection	Mandatory	See Section <a href="#">1.1.1</a>
DCIM_MemberOfCollection	Conditional	See Section <a href="#">1.2.1</a>
DCIM_OwningCollectionElement	Mandatory	See Section <a href="#">1.2.2</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">1.1.2</a>
<b>Indications</b>		
None defined in this profile		

## 1.1 Instance Providers

### 1.1.1 DCIM\_ConcreteCollection

DCIM\_ConcreteCollection instances represent the collection of CIM\_ManagedElement like grouping of Capabilities, Sensors, and Hardware etc...

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_ConcreteCollection
EnumerateInstanceNames	Enumerates the key values of DCIM_ConcreteCollection that represents the Host System
GetInstance	For getting the properties of DCIM_ConcreteCollection instance.

Elements	Existence (M/O/C)	Element Value
InstanceID	M	All of the following values. "DCIM:HostCapabilityCollection" "DCIM:HostSettingCollection" "DCIM:HostCapacityCollection" "DCIM:HostProfilesCollection" "DCIM:HostHardwareCollection" "DCIM:HostLogsCollection" "DCIM:SPLogsCollection" "DCIM:SPCapabilityCollection" "DCIM:SPSettingCollection" "DCIM:SPProfilesCollection"
ElementName	M	Any one of the following values, "Capabilities", "Settings", "Capacities", "Hardware" "Logs" "Profiles"

### 1.1.2 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile instance
GetInstance	For getting the properties of a particular physical package

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:SMASH Collections Profile"
RegisteredName	M	"SMASH Collections"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

## 1.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 1.2.1 DCIM\_MemberOfCollection

Elements	Existence (M/O/C)	Base Class	Element Value
Collection	M	DCIM_ConcreteCollection	DCIM_ConcreteCollection - Section <a href="#">1.1.1</a>

Member	M	CIM_SettingData CIM_EnabledLogicalElementCapabilities CIM_RegisteredProfile CIM_RecordLog CIM_PhysicalElement	DCIM_DNSGeneralSettingData – Section <a href="#">12.1.1</a> DCIM_DNSSettingData - Section <a href="#">12.1.3</a> DCIM_StaticIPAssignmentSettingData - Section <a href="#">7.1.6</a> DCIM_DHCPSettingData – Section <a href="#">6.1.3</a> DCIM_IPAssignmentSettingData - Section <a href="#">7.1.3</a> DCIM_CLPSettingData - Section <a href="#">8.1.3</a> DCIM_USBRedirectionCapabilities - Section <a href="#">19.1.5</a> DCIM_CLPCapabilities - Section <a href="#">8.1.1</a> DCIM_DHCPCapabilities - Section <a href="#">6.1.2</a> DCIM_OEMMFAMangementCapabilities - Section <a href="#">18.1.2</a> DCIM_OEMActiveDirectoryCapabilities - Section <a href="#">20.1.1</a> DCIM_MetricServiceCapabilities - Section <a href="#">16.1.4</a> DCIM_EnabledLogicalElementCapabilities - Section <a href="#">17.1.6</a> DCIM_RegisteredProfile instances of all the supported profiles DCIM_RecordLog - Section <a href="#">13.1.3</a> DCIM_PhysicalPackage - Section <a href="#">5.1.5</a> DCIM_Card – Section <a href="#">5.1.1</a> DCIM_Chassis – Section <a href="#">5.1.2</a> DCIM_Chip - Section <a href="#">5.1.7</a>
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## 1.2.2 DCIM\_OwningCollectionElement

Elements	Existence (M/O/C)	Base class	Element Value
OwningElement	M	CIM_ManagedElement	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a> DCIM_HostComputerSystem – Section <a href="#">10.1.1</a>
OwnedElement	M	DCIM_ConcreteCollection	DCIM_ConcreteCollection – Section <a href="#">1.1.1</a>

## 2 DSP1007 (SM CLP Admin Domain Profile)

### CIM Elements: SM CLP Admin Domain Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_AdminDomain	Mandatory	See section <a href="#">2.1.1</a>
DCIM_ConcreteCollection	Mandatory	See section <a href="#">2.1.2</a>
DCIM_MemberOfCollection	Optional	See section <a href="#">2.2.1</a>
DCIM_OwningCollectionElement	Mandatory	See section <a href="#">2.2.2</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">2.1.3</a>
DCIM_SystemComponent	Conditional	See Section <a href="#">2.2.3</a>
<b>Indications</b>		
None defined in this profile		

### 2.1 Instance Providers

#### 2.1.1 DCIM\_AdminDomain

This instance represents the single point of aggregation for the Managed Elements being managed by a CLP Service.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_AdminDomain.
EnumerateInstanceNames	Enumerates the key values of DCIM_AdminDomain that represents the Host System
GetInstance	For getting the properties of this instance.

Elements	Existence (M/O/C)	Element Value
CreationClassName	M	"DCIM_AdminDomain"
Name	M	"MAP"
ElementName	O	"SM CLP Admin Domain"
EnabledState	O	5(Refers "Not Applicable")
RequestedState	O	12(Refers "Not Applicable")
EnabledDefault	O	2(Refers "Enabled")
TransitioningToState	O	12(Refers "Not Applicable")

### 2.1.2 DCIM\_ConcreteCollection

This instance refers to the hardware collection of elements.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_ConcreteCollection
EnumerateInstanceNames	Enumerates the key values of DCIM_ConcreteCollection
GetInstance	For getting the properties of a single system capability

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:HostHardwareCollection"
ElementName	M	"Hardware"

### 2.1.3 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile instance
GetInstance	For getting the properties of a particular physical package

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:SM CLP Admin Domain Profile"
RegisteredName	M	"SM CLP Admin Domain"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"



## 2.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 2.2.1 DCIM\_MemberOfCollection

Elements	Existence (M/O/C)	Base Class	Element Value
Collection	M	DCIM_ConcreteCollection	DCIM_ConcreteCollection - Section <a href="#">2.1.2</a>
Member	M	CIM_PhysicalElement	DCIM_PhysicalPackage - Section <a href="#">5.1.5</a> DCIM_Chassis – Section <a href="#">5.1.2</a> DCIM_Card – Section <a href="#">5.1.1</a> DCIM_PhysicalMemory – Section <a href="#">5.1.4</a>

### 2.2.2 DCIM\_OwningCollectionElement

Elements	Existence (M/O/C)	Base class	Element Value
OwningElement	M	CIM_ManagedElement	DCIM_AdminDomain - Section <a href="#">2.1.1</a>
OwnedElement	M	DCIM_ConcreteCollection	DCIM_ConcreteCollection – Section <a href="#">2.1.2</a>

## 2.2.3 DCIM\_SystemComponent

Elements	Existence (M/O/C)	Base class	Element Value
GroupComponent	M	CIM_System	DCIM_AdminDomain - Section <a href="#">2.1.1</a>
PartComponent	M	CIM_ManagedSystemElement	DCIM_HostComputerSystem – Section <a href="#">10.1.1</a>

Elements 1: DCIM\_SystemComponent

## 3 DSP1025 (Software Update Profile)

### CIM Elements: Software Update Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_HostedService	Mandatory	See Section <a href="#">3.2.1</a>
DCIM_SoftwareInstallationService	Mandatory	See Section <a href="#">3.1.1</a>
DCIM_ElementCapabilities	Mandatory	See Section <a href="#">3.2.2</a>
DCIM_SoftwareInstallationServiceCapabilities	Mandatory	See Section <a href="#">3.1.2</a>
DCIM_ServiceAffectsElement	Optional	See Section <a href="#">3.2.3</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">3.1.3</a>
DCIM_JobQueue	Optional	See Section <a href="#">3.1.4</a>
<b>Indications</b>		
None Defined in this Profile		

### 3.1 Instance Providers

#### 3.1.1 DCIM\_SoftwareInstallationService

This instance represents the service available to install or update the software entities in managed elements such as Host or BMC.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_SoftwareInstallationService.
EnumerateInstanceNames	Enumerates the key values of DCIM_SoftwareInstallationService that represents the Host System
GetInstance	For getting the properties of this instance.
InvokeMethod	For Invoking the method InstallFromURI()

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_SoftwareInstallationService"
Name	M	"SoftwareInstallationService1"
SystemName	M	<DCIM_SPComputerSystem.Name>
EnabledState	O	5(Refers "Not Applicable")
RequestedState	O	12(Refers "Not Applicable")
EnabledDefault	O	2(Refers "Enabled")
TransitioningToState	O	12(Refers "Not Applicable")

MethodName	Input values	Output
InstallFromURI	URI - String	Job – REF to DCIM_ConcreteJob

### 3.1.2 DCIM\_SoftwareInstallationServiceCapabilities

This instance represents the Capabilities of the DCIM\_SoftwareInstallationService.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_SoftwareInstallationServiceCapabilities.
EnumerateInstanceNames	Enumerates the key values of DCIM_SoftwareInstallationServiceCapabilities that represents the Host System
GetInstance	For getting the properties of this instance.

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:SoftwareInstallationServiceCapabilities"
ElementName	M	"Software Installation Service Capabilities"
SupportedTargetTypes	M	iDRAC name got from the racadm backend.
SupportedInstallOptions	M	4 (refers to "Install")
SupportedURISchemes	M	8 refers to ("tftp")

CanAddToCollection	O	"FALSE"
SupportedAsynchronousActions	O	5 (refers to "Install From URI")
SupportedExtendedResourceTypes	O	2 (refers to "Not Applicable")
SupportedSynchronousActions	O	2 (refers to "None Supported")

### 3.1.3 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile instance
GetInstance	For getting the properties of a particular physical package

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Software Update Profile"
RegisteredName	M	"Software Update"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 3.1.4 DCIM\_JobQueue

Operations Supported	Description
EnumerateInstances	Lists the Job Queue available.
EnumerateInstanceNames	Lists only the key values of the Job Queue
GetInstance	Fetches the Job Queue's details.

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
SystemName	M	Value of DCIM_SPCoMputerSystem.Name

Elements	Existence(M/O/C)	Element Value
CreationClassName	M	"DCIM_JobQueue"
Name	M	"CLP Service JobQueue"
OperationalStatus	M	2 (refers to OK)
HealthState	M	5 (refers to OK)
ElementName	M	"Job Queue"
MaxJobsOnQueue	M	0
QueueStatus	M	2
QueueStatusInfo	M	"No Additional Status"

### 3.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

#### 3.2.1 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_SoftwareInstallationService - Section <a href="#">3.1.1</a>

#### 3.2.2 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_SoftwareInstallationService - Section <a href="#">3.1.1</a>
Capabilities	M	CIM_Capabilities	DCIM_SoftwareInstallationServiceCapabilities - Section <a href="#">3.1.2</a>

### 3.2.3 DCIM\_ServiceAffectsElement

DCIM\_ServiceAffectsElement is used to associate DCIM\_HostComputerSystem with DCIM\_SoftwareInstallationService

Elements	Existence (M/O/C)	Base Class	Element Value
AffectedElement	M	CIM_ManagedElement	DCIM_HostComputerSystem - Section <a href="#">10.1.1</a>
AffectingElement	M	CIM_Service	DCIM_SoftwareInstallationService- Section <a href="#">3.1.1</a>
ElementAffects	M	-	5 (refers to "Manages")

### 3.2.4 DCIM\_ServiceAffectsElement

DCIM\_ServiceAffectsElement is used to associate DCIM\_SoftwareIdentity with DCIM\_SoftwareInstallationService

Elements	Existence (M/O/C)	Base Class	Element Value
AffectedElement	M	CIM_ManagedElement	DCIM_SoftwareIdentity - Section <a href="#">9.1.1</a>
AffectingElement	M	CIM_Service	DCIM_SoftwareInstallationService- Section <a href="#">3.1.1</a>
ElementAffects	M	-	5 (refers to "Manages")

## 4 DSP1039 (Role Based Authorization Profile)

### CIM Elements: Role Based Authorization

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_ConcreteDependency (Privilege)	Optional	Section <a href="#">4.2.1</a>
DCIM_ConcreteDependency (Role)	Optional	Section <a href="#">4.2.1</a>
DCIM_ElementCapabilities	Mandatory	Section <a href="#">4.2.2</a>
DCIM_HostedService	Mandatory	Section <a href="#">4.2.3</a>
DCIM_MemberOfCollection (Privilege)	Optional	Section <a href="#">4.2.4</a>
DCIM_MemberOfCollection (Identity)	Optional	Section <a href="#">4.2.4</a>
DCIM_OwningCollectionElement	Mandatory	Section <a href="#">4.2.5</a>

DCIM_Privilege	Optional	Section <a href="#">4.1.1</a>
DCIM_RoleBasedManagementCapabilities	Mandatory	Section <a href="#">4.1.2</a>
DCIM_RegisteredProfile	Mandatory	Section <a href="#">4.1.3</a>
DCIM_Role	Mandatory	Section <a href="#">4.1.4</a>
DCIM_RoleBasedAuthorizationService	Mandatory	Section <a href="#">4.1.5</a>
DCIM_RoleLimitedToTarget	Mandatory	Section <a href="#">4.2.6</a>
DCIM_ServiceAffectsElement	Mandatory	Section <a href="#">4.2.7</a>
DCIM_ServiceServiceDependency	Optional	Section <a href="#">4.2.8</a>
<b>Indications</b>		
None defined in this profile		

## 4.1 Instance Providers

### 4.1.1 DCIM\_Privilege

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Privilege which represents the privileges of a role
EnumerateInstanceNames	Enumerates the key values of Privilege instance
GetInstance	For getting the properties of a particular privilege
ModifyInstance	Supports modifying, PrivilegeGranted

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:LocalPrivilege:"<Unique Identifies ranges from 1 to 16>, "DCIM:ADPrivilege:"<17-21>, "DCIM:CLP:Administrator", "DCIM:CLP:Operator", "DCIM:CLP:ReadOnly"
PrivilegeGranted	M	"TRUE"
Activities	O	Will be '7' & the number corresponds to the entry in the Activity Qualifiers.

ActivityQualifiers	O	For iDRAC - Any combination of ""Log in to iDRAC6","Configure iDRAC6","Configure Users","Clear Logs", "Execute Server Control Commands", "Access Console Redirection","Access Virtual Media","Test Alerts","Execute Diagnostic Commands"" For CLP Privileges – Any combination listed in section <a href="#">4.1.1.2</a> Else empty till it is configured expect for 2 <sup>nd</sup> instance(corresponds to user "root") which has all the privileges in the beginning.
QualifierFormats	O	Will be '9' & the number corresponds to the entry in the Activity Qualifiers.
RepresentsAuthorizationRights	M	TRUE if the user has the Configure Users or Configure iDRAC6 privilege else FALSE.

Modify Instances	Possible Input Values
ActivityQualifiers	String

#### 4.1.1.1 Supported Privileges for iDRAC

- 0 - Log in to iDRAC Privilege
- 1 - Configure iDRAC Privilege
- 2 - Configure Users Privilege
- 3 - Clear Logs Privilege
- 4 - Execute Server Control Commands Privilege
- 5 - Access Console Redirection Privilege
- 6 - Access Virtual Media Privilege
- 7 - Test Alerts Privilege
- 8 - Execute Diagnostics Privilege

#### 4.1.1.2 Supported Privileges for CLP

- 1.cd, exit,help,show,version,reset,start,stop,set,load,dump,create,delete
- 2.cd, exit,help,show,version,reset,start,stop,set,load,dump
- 3. cd, exit,help,show,version



## 4.1.2 DCIM\_RoleBasedManagementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Privilege which indicates the capabilities for role-based privilege management
EnumerateInstanceNames	Enumerates the key values of RoleBasedManagementCapabilities instance
GetInstance	For getting the properties of a particular RoleBasedManagementCapabilities

Elements	Existence (M/O/C)	Element Value
InstanceID	M	Any one of the following value:  "DCIM:IPMIRoleBasedManagementCapabilities", "DCIM:CLPRoleBasedManagementCapabilities", "DCIM:LocalRoleBasedManagementCapabilities"
SharedPrivilegeSupported	M	"FALSE"
ActivitiesSupported	O	For DCIM_RoleBasedManagementCapabilities .InstanceID="DCIM:LocalRoleBasedManagement Capabilities" instance, the value will be "7,7,7,7,7,7,7,7"  For other instances this value will be empty
ActivityQualifiersSupported	O	For DCIM_RoleBasedManagementCapabilities .InstanceID="DCIM_LocalRoleBasedManagement Capabilities" instance, the value will be  "Log in to iDRAC6", "Configure iDRAC6", "Clear Logs", "Execute Server Control Commands", "Access Console Redirection", "Access Virtual Media", "Test Alerts", "Execute Diagnostic Commands"  For other instances this value will be empty.
QualifierFormatsSupported	O	For LocalRoleBasedManagementCapabilities instance, the value will be "9,9,9,9,9,9,9,9"  For other instances this value will be empty.

SupportedMethods	M	For LocalRoleBasedManagementCapabilities the value will be 8 (refers to "ModifyPrivilege")  For other Capabilities the value will be 6 (refers to "AssignRole")
ElementName	M	Any one of the following value:  "IPMI Role Based Management Capabilities" "CLP Role Based Management Capabilities" "Local Role Based Management Capabilities"

### 4.1.3 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of RoleBased Authorization Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of RoleBased Authorization Registered Profile

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Role Based Authorization Profile"
RegisteredName	M	"Role Based Authorization"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 4.1.4 DCIM\_Role

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Role which represents an authorized role
EnumerateInstanceNames	Enumerates the key values of Role instance
GetInstance	For getting the properties of a particular Role

Elements	Existence (M/O/C)	Element Value
CreationClassName	M	"DCIM_Role"
Name	M	Can be any one the following values: "DCIM:Local:Role:<Unique Identifier ranges from 1- 16>", "DCIM:AD:Role:<Unique Identifier ranges from 17-21>", "DCIM IPMI User", "DCIM IPMI Operator", "DCIM IPMI Administrator", "DCIM IPMI SOL Role 1", "DCIM:CLP:Administrator" "DCIM:CLP:Operator" "DCIM:CLP:ReadOnly"
RoleCharacteristics	M	Empty for ADRoles,Local Roles 2,3 for SOL Role,IPMI Roles 2 for CLP Roles (refers to "Static")
CommonName	M	Can be any one of the following values: "DCIM:Local:Role:<Unique Identifies ranges from 1-16>", "DCIM:AD:Role<Unique Identifier ranges from 17-21>", "DCIM:IPMI:User", "DCIM:IPMI:Operator" "DCIM:IPMI:Administrator", "DCIM:IPMI:SOL", "CIM:CLP:Administrator", "CIM:CLP:Operator" "CIM:CLP:Read Only"
ElementName	M	Can be any one of the following values: "DCIM:Local Role <Unique Identifier ranges from 1-16>", "DCIM AD Role <Unique Identifier ranges from 17-21>". "DCIM IPMI User Role", "DCIM IPMI Operator Role", "DCIM IPMI Administrator Role", "DCIM IPMI SOL Role", "SM CLP Administrator", "SM CLP Operator", "SM CLP Read Only"

#### 4.1.5 DCIM\_RoleBasedAuthorizationService

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RoleBasedAuthorizationService which represents the service that handles the role management
EnumerateInstanceNames	Enumerates the key values of RoleBasedAuthorizationService instance
GetInstance	For getting the properties of a particular RoleBasedAuthorizationService
InvokeMethod	Method Invocation in RoleBasedAuthorizationService

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCComputerSystem"
CreationClassName	M	"DCIM_RoleBasedAuthorizationService"
SystemName	M	Value of DCIM_SPCComputerSystem.Name
Name	M	Any one of the following value:  "DCIM IPMI Role Based Authorization Service", "DCIM Local Role Based Authorization Service", "DCIM CLP Role Based Authorization Service"
ElementName	M	Any one of the following value:  "IPMI Role Based Authorization Service" "Local Role Based Authorization Service" "CLP Role Based Authorization Service"
RequestedState	O	12(Refers "Not Applicable")
TransitioningToState	O	12(Refers "Not Applicable")

MethodName	Input values
AssignRole. (For IPMI & CLP Roles only)	REF to DCIM_Identity Reference Array of DCIM_Role

## 4.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 4.2.1 DCIM\_ConcreteDependency

DCIM\_ConcreteDependency is used to associate Identity with Role and RoleBasedAuthorizationService with Privilege

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ManagedElement	DCIM_Identity – Section <a href="#">18.1.5</a>
Dependent	M	CIM_ManagedElement	DCIM_Role – Section <a href="#">4.1.4</a>

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ManagedElement	DCIM_RoleBasedAuthorizationService – Section <a href="#">4.1.5</a>
Dependent	M	CIM_ManagedElement	DCIM_Privilege – Section <a href="#">4.1.1</a>

### 4.2.2 DCIM\_ElementCapabilities

DCIM\_ElementCapabilities is used to associate RoleBasedAuthorizationService with RoleBasedManagementCapabilities.

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_RoleBasedAuthorizationService – Section <a href="#">4.1.5</a>
Capabilities	M	CIM_Capabilities	DCIM_RoleBasedManagementCapabilities - Section <a href="#">4.1.2</a>

### 4.2.3 DCIM\_HostedService

DCIM\_HostedService is used to associate ComputerSystem with RoleBasedAuthorizationService.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_RoleBasedAuthorizationService – Section <a href="#">4.1.5</a>

### 4.2.4 DCIM\_MemberOfCollection

DCIM\_MemberOfCollection is used to associate Role with Privilege.

Elements	Existence (M/O/C)	Base Class	Element Value
GroupComponent	M	CIM_Collection	DCIM_Role – Section <a href="#">4.1.4</a>
PartComponent	M	CIM_ManagedElement	DCIM_Privilege – Section <a href="#">4.1.1</a>

### 4.2.5 DCIM\_OwningCollectionElement

DCIM\_OwningCollectionElement associates ComputerSystem with Role.

Elements	Existence (M/O/C)	Base Class	Element Value
OwningElement	M	CIM_ManagedElement	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
OwnedElement	M	CIM_Collection	DCIM_Role – Section <a href="#">4.1.4</a>

### 4.2.6 DCIM\_RoleLimitedToTarget

Defines the scope of the role.

Elements	Existence (M/O/C)	Base Class	Element Value
DefiningRole	M	DCIM_Role	DCIM_Role – Section <a href="#">4.1.4</a>
TargetElement	M	CIM_ManagedElement	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>

## 4.2.7 DCIM\_ServiceAffectsElement

DCIM\_ServiceAffectsElement associates

1. Role with RoleBasedAuthorizationService and
2. Privilege with RoleBasedAuthorizationService

On enumerating DCIM\_ServiceAffectsElement, at least one instance of DCIM\_Role associated with DCIM\_RoleBasedAuthorization and one instance of DCIM\_Privilege associated with DCIM\_RoleBasedAuthorization should occur.

Elements	Existence (M/O/C)	Base Class	Element Value
AffectedElement	M	CIM_ManagedElement	The instance should represent DCIM_Role – Section <a href="#">4.1.4</a> , DCIM_Privilege – Section <a href="#">4.1.1</a>
AffectingElement	M	CIM_Service	DCIM_RoleBasedAuthorizationService – Section <a href="#">4.1.5</a> .
ElementAffects	M		5 (refers to “Manages”)

## 4.2.8 DCIM\_ServiceServiceDependency

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_Service	Instance of DCIM_OEMMFAManagementService
Dependent	M	CIM_Service	DCIM_RoleBasedAuthorizationService – Section <a href="#">4.1.5</a> .
TypeOfDependency	M		5 (refers to “Cooperate”)

# 5 DSP1011 (Physical Asset Profile)

CIM Elements: Physical Asset

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_Card	Conditional	See Section <a href="#">5.1.1</a>
DCIM_Chassis	Conditional	See Section <a href="#">5.1.2</a>
DCIM_Chip	Conditional	See Section <a href="#">5.1.7</a>

DCIM_ComputerSystemPackage	Conditional	See Section <a href="#">5.2.1</a>
DCIM_ConfigurationCapacity	Optional	Not Implemented
DCIM_ConnectedTo	Optional	Not Implemented
DCIM_Container	Optional	See Section <a href="#">5.2.2</a>
DCIM_ElementCapabilities	Conditional	See Section <a href="#">5.2.3</a>
DCIM_ElementCapacity	Conditional	Not Implemented
DCIM_PackageInConnector	Optional	Not Implemented
DCIM_PhysicalAssetCapabilities	Optional	See Section <a href="#">5.1.3</a>
DCIM_PhysicalComponent	Conditional	Not Implemented
DCIM_PhysicalConnector	Conditional	Not Implemented
DCIM_PhysicalFrame	Conditional	Not Implemented
DCIM_PhysicalMemory	Conditional	Not Implemented. See Section <a href="#">5.1.4</a>
DCIM_PhysicalPackage	Conditional	See Section <a href="#">5.1.5</a>
DCIM_Rack	Conditional	Not Implemented
DCIM_Realizes	Conditional	See Section <a href="#">5.2.4</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">5.1.6</a>
DCIM_Slot	Conditional	Not Implemented
DCIM_SystemPackaging	Conditional	Not Implemented
<b>Indications</b>		
Not Defined for this Profile		

## 5.1 Instance Providers

### 5.1.1 DCIM\_Card

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Card
EnumerateInstanceNames	Enumerates the key values of Card instance
GetInstance	For getting the properties of this instance

Elements	Existence(M/O/C)	Element Value
Tag	M	<SDR EntityID>."<SDR EntityInstance>
CreationClassName	M	"DCIM_Card"
HostingBoard	M	"TRUE" or "FALSE"
PackageType	M	EntityID – Refer to IPMI Spec 2.0 – Table 43-13
Manufacturer	C	<fru_data.BoardInfo.BoardMfr> from FRU Data – GetFRUData ()
Model	C	<fru_data.ProductInfo.ProductPartNum> from FRU Data – GetFRUData ()
SerialNumber	C	<fru_data.BoardInfo.BoardSerialNum> from FRU



Elements	Existence(M/O/C)	Element Value
		Data – GetFRUData ()
PartNumber	C	<fru_data.BoardInfo.BoardPartNum> from FRU Data – GetFRUData ()
Caption	O	<ID String bytes> from SDR
SKU	C	<SystemInfo.SKUNumber> from SMBIOS
VendorCompatibilityStrings	M	“DCIM_Card:”<Component name>
ElementName	M	<Component name>” Card “<Unique identifier>
CanBeFRUed	O	“TRUE”(if it can be FRUed) or “FALSE”(if it can not be FRUed)

### 5.1.2 DCIM\_Chassis

DCIM Chassis instance represents the physical representation of the Host system.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Chassis
EnumerateInstanceNames	Enumerates the key values of Chassis instance
GetInstance	For getting the properties of this instance

Elements	Existence (M/O/C)	Element Value
Tag	M	<SDR EntityID>”:”<SDR EntityInstance>”:”<SDR Sensor Number>
CreationClassName	M	“DCIM_Chassis”
PackageType	M	EntityID – Refer to IPMI Spec 2.0 – Table 43-13
ChassisPackageType	M	17
Manufacturer	C	<fru_data.BoardInfo.BoardMfr> from FRU Data – GetFRUData ()
Model	C	<fru_data.ProductInfo.ProductPartNum> from FRU Data – GetFRUData ()
SerialNumber	C	<fru_data.BoardInfo.BoardSerialNum> from FRU Data – GetFRUData ()
PartNumber	C	<fru_data.BoardInfo.BoardPartNum> from FRU Data – GetFRUData ()
Caption	O	<ID String bytes> from SDR
SKU	C	<SystemInfo.SKUNumber> from SMBIOS
VendorCompatibilityStrings	M	“DCIM_Chassis:”<Component name>
ElementName	M	<Component name>” Chassis “<Unique identifier>

### 5.1.3 DCIM\_PhysicalAssetCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_PhysicalAssetCapabilities
EnumerateInstanceNames	Enumerates the key values of DCIM_PhysicalAssetCapabilities instance
GetInstance	For getting the properties of this instance

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:PhysicalAssetCapabilities"
ElementName	M	"Physical Asset Capabilities"
FRUInfoSupported	M	"TRUE"

### 5.1.4 DCIM\_PhysicalMemory

Note: The Hardware does not have physical memory and hence the instance can not be enumerated on request

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_PhysicalMemory
EnumerateInstanceNames	Enumerates the key values of DCIM_PhysicalMemory instance
GetInstance	For getting the properties of this instance

Elements	Existence(M/O/C)	Element Value
Tag	M	<MemoryDevice. AssetTag > from SMBIOS
CreationClassName	M	"DCIM_PhysicalMemory"
FormFactor	M	<MemoryDevice. FormFactor> from SMBIOS
MemoryType	M	3 ("Synchronous DRAM")
Speed	M	<MemoryDevice. Speed > from SMBIOS
Capacity	M	<MemoryDevice. Size > from SMBIOS

BankLabel	M	<MemoryDevice. BankLocator > from SMBIOS
Manufacturer	O	<MemoryDevice. Manufacturer > from SMBIOS
Model	O	<fru_data.ProductInfo.ProductPartNum> from FRU Data – GetFRUData ()
SerialNumber	O	<SerialNo field> from FRU Data – GetFRUData ()
PartNumber	O	<MemoryDevice. PartNo > from SMBIOS
SKU	O	<SystemInfo.SKUNumber> from SMBIOS
VendorCompatibilityStrings	M	Refer IPMI Spec v2.0 – Table 43-13
ElementName	M	<Component name>” Physical Memory “ < Unique identifier >
CanBeFRUed	O	“TRUE”(if it can be FRUed) or “FALSE”(if it can not be FRUed)

### 5.1.5 DCIM\_PhysicalPackage

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_PhysicalPackage
EnumerateInstanceNames	Enumerates the key values of DCIM_PhysicalPackage instance
GetInstance	For getting the properties of this instance

Elements	Existence (M/O/C)	Element Value
Tag	M	<SDR EntityID>:"<SDR EntityInstance>
CreationClassName	M	“DCIM_PhysicalPackage”
PackageType	M	EntityID – Refer to IPMI Spec 2.0 – Table 43-13
Manufacturer	C	<fru_data.BoardInfo.BoardMfr> from FRU Data – GetFRUData ()
Model	C	<fru_data.ProductInfo.ProductPartNum> from FRU Data – GetFRUData ()
SerialNumber	C	<fru_data.BoardInfo.BoardSerialNum> from FRU Data – GetFRUData ()
Caption	O	<SDR-ID>
PartNumber	C	<fru_data.BoardInfo.BoardPartNum> from FRU Data – GetFRUData ()
SKU	C	<SystemInfo.SKUNumber> from SMBIOS
VendorCompatibilityStrings	M	“DCIM_PhysicalPackage:”<Component name>
ElementName	M	<Component name>” PhysicalPackage “<Unique identifier>

This instance represents the instances of DCIM\_Card (Section 5.1.1), DCIM\_Chassis (Section 5.1.2) and DCIM\_PhysicalMemory (Section 5.1.3).

### 5.1.6 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile instance
GetInstance	For getting the properties of this instance

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:Physical Asset Profile"
RegisteredName	M	"Physical Asset"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 5.1.7 DCIM\_Chip

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Chip
EnumerateInstanceNames	Enumerates the key values of DCIM_Chip instance
GetInstance	For getting the properties of this instance

Elements	Existence (M/O/C)	Element Value
Tag	M	<SDR EntityID>":"<SDR EntityInstance>
CreationClassName	M	"DCIM_Chip"
Manufacturer	C	<fru_data.BoardInfo.BoardMfr> from FRU Data – GetFRUData ()

Elements	Existence (M/O/C)	Element Value
Model	C	<fru_data.ProductInfo.ProductPartNum> from FRU Data – GetFRUData ()
SerialNumber	C	<fru_data.BoardInfo.BoardSerialNum> from FRU Data – GetFRUData ()
Caption	O	<SDR-ID>
PartNumber	C	<fru_data.BoardInfo.BoardPartNum> from FRU Data – GetFRUData ()
SKU	C	<SystemInfo.SKUNumber> from SMBIOS
ElementName	M	<Component name>” Chip “<Unique identifier>
CanBeFRUed	O	“TRUE”(if it can be FRUed) or “FALSE”(if it can not be FRUed)

## 5.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 5.2.1 DCIM\_ComputerSystemPackage

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	DCIM_PhysicalPackage	DCIM_PhysicalPackage - Section <a href="#">5.1.5</a>
Dependent	M	CIM_ComputerSystem	DCIM_HostComputerSystem – Section <a href="#">10.1.1</a>
PlatformGUID	M	-	GUID of Base Server – Taken from SMBIOS, value of UUID

### 5.2.2 DCIM\_Container

Elements	Existence (M/O/C)	Base Class	Element Value
GroupComponent	M	DCIM_PhysicalPackage	DCIM_PhysicalPackage - Section <a href="#">5.1.5</a>

PartComponent	M	CIM_PhysicalElement	DCIM_Chassis – Section <a href="#">5.1.2</a> DCIM_Card – Section <a href="#">5.1.1</a> DCIM_Chip - Section <a href="#">5.1.7</a>
LocationWithinContainer	O	-	Not Supported

### 5.2.3 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_PhysicalPackage – Section <a href="#">5.1.5</a>
Capabilities	M	CIM_Capabilities	DCIM_PhysicalAssetCapabilities – Section <a href="#">5.1.3</a>

### 5.2.4 DCIM\_Realizes

There are no instances currently available for this class, as hardware does not have support.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_PhysicalElement	DCIM_PhysicalPackage – Section <a href="#">5.1.5</a>
Dependent	M	CIM_LogicalDevice	DCIM_EthernetPort - Section <a href="#">17.1.1</a>

## 6 DSP1037 (DHCP Client Profile)

### CIM Elements: DHCP Client

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_DHCPCapabilities	Mandatory	See sections <a href="#">6.1.2</a>
DCIM_DHCPProtocolEndPoint	Mandatory	See sections <a href="#">6.1.1</a>
DCIM_DHCPSettingData	Optional	See sections <a href="#">6.1.3</a>
DCIM_ElementCapabilities	Mandatory	See section <a href="#">6.2.1</a>
DCIM_ElementSettingData	Conditional	See sections <a href="#">6.2.2</a>
DCIM_SAPDependency	Mandatory	See section <a href="#">6.2.3</a>
DCIM_HostedAccessPoint	Mandatory	See sections <a href="#">6.2.4</a>
DCIM_RemoteAccessAvailableToElement	Conditional	See sections <a href="#">6.2.5</a>
DCIM_RemoteServiceAccessPoint	Optional	See sections <a href="#">6.1.4</a>

DCIM_RegisteredProfile	Optional	See section <a href="#">6.1.5</a>
<b>Indications</b>		
None defined in this profile		

## 6.1 Instance Providers

### 6.1.1 DCIM\_DHCPProtocolEndPoint

Operations Supported	Description
EnumerateInstances	Lists down the configurations of a DHCP Client.
EnumerateInstanceNames	Lists only the key values of all dhcp configurations
GetInstance	Fetches a particular dhcp client's configuration.

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_DHCPProtocolEndpoint"
SystemName	M	Value of DCIM_SPComputerSystem.Name
Name	M	"DHCPProtocolEndpoint1"
NameFormat	M	"DHCPProtocolEndpoint[InstanceNo]"
ProtocolIFType	M	1 (refers to "other")
OtherTypeDescription	C	"DHCP"
ElementName	M	"DHCP Protocol Endpoint"
EnabledState	M	2(refers to Enabled. This value is set if ClientState is 8) 3(refers to Disabled. This value is set if ClientState is 0)
ClientState	M	8 (refers to Bound) 0 (refers to Unknown)
RequestedState	O	12(Refers "Not Applicable")

### 6.1.2 DCIM\_DHCPCapabilities

Operations Supported	Description
EnumerateInstances	Lists the common capabilities supported by the DHCP client.
EnumerateInstanceNames	Lists only the key values of dhcp capabilities
GetInstance	Fetches the dhcp client options supported.

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:DHCPCapabilities"
ElementName	M	"DHCP Capabilities"
ElementNameEditSupported	M	FALSE
OptionsSupported	M	3 (refers to "Subnet Mask") 8 (refers to "Domain Name Server") 17 (refers to "Domain Name")

### 6.1.3 DCIM\_DHCPSettingData

Operations Supported	Description
EnumerateInstances	List the desired DHCP client's configurations
EnumerateInstanceNames	Lists only the key values of desired DHCP client's configurations
GetInstance	Fetches the desired DHCP client's configurations

Elements	Existence (M/O/C)	Element Value
AddressOrigin	M	4 (refers to "DHCP")
InstanceID	M	"DCIM:DHCPSettingData"
ElementName	M	"DHCP Setting Data"

### 6.1.4 DCIM\_RemoteServiceAccessPoint

Operations Supported	Description
EnumerateInstances	List the desired RSAP instances
EnumerateInstanceNames	Lists only the key values of desired RSAP
GetInstance	Fetches the desired RSAP's details



Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
CreationClassName	M	"DCIM_RemoteServiceAccessPoint"
SystemName	M	Value of DCIM_SPCoMputerSystem.Name
Name	M	"DHCP Server Address"
AccessContext	M	6 (refers to "DHCP Server")
AccessInfo	C	<Server IPAddress >
InfoFormat	M	3 (refers to "IPv4 Address")
ElementName	M	"DHCP Server Address"

### 6.1.5 DCIM\_RegisteredProfile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:DHCP Client Profile"
RegisteredName	M	"DHCP Client "
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify" (refers to "Other")

## 6.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 6.2.1 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	DCIM_ProtocolEndpoint	DCIM_DHCPProtocolEndpoint - Section <a href="#">6.1.1</a>
Capabilities	M	CIM_Capabilities	DCIM_DHCCapabilities - Section <a href="#">6.1.2</a>

### 6.2.2 DCIM\_ElementSettingData

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	DCIM_ProtocolEndpoint	DCIM_DHCPProtocolEndpoint - Section <a href="#">6.1.1</a>
SettingData	M	CIM_SettingData	DCIM_DHCCSettingData - Section <a href="#">6.1.3</a>
IsDefault	M	-	<Default Configuration>
IsNext	M	-	<Next Configuration to be applied >
IsCurrent	M	-	<Current Configuration>

### 6.2.3 DCIM\_SAPSAPDependency

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	DCIM_ProtocolEndpoint	DCIM_IPProtocolEndpoint - Section <a href="#">7.1.2</a>
Dependent	M	DCIM_ProtocolEndpoint	DCIM_DHCPProtocolEndpoint - Section <a href="#">6.1.1</a>

### 6.2.4 DCIM\_HostedAccessPoint

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ComputerSystem	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	DCIM_ProtocolEndpoint	DCIM_DHCPProtocolEndpoint - Section <a href="#">6.1.1</a>

## 6.2.5 DCIM\_RemoteAccessAvailableToElement

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ServiceAccessPoint	DCIM_RemoteServiceAccessPoint – Section <a href="#">6.1.4</a>
Dependent	M	DCIM_ProtocolEndpoint	DCIM_DHCPProtocolEndpoint - Section <a href="#">6.1.1</a>

## 6.2.6 DCIM\_EndpointIdentity

Elements	Existence (M/O/C)	Base Class	Element Value
SystemElement	M	CIM_ProtocolEndpoint	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>
SameElement	M	DCIM_ProtocolEndpoint	DCIM_DHCPProtocolEndpoint - Section <a href="#">6.1.1</a>

# 7 DSP1036 (IP Interface Profile)

## CIM Elements: IP Interface:

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_BindsToLANEndpoint	Optional	See section <a href="#">7.2.1</a>
DCIM_ElementCapabilities	Conditional	See section <a href="#">7.2.2</a>
DCIM_EnabledLogicalElementCapabilities	Optional	See section <a href="#">7.1.1</a>
DCIM_ElementSettingData	Conditional	See section <a href="#">7.2.3</a>
DCIM_HostedAccessPoint	Mandatory	See section <a href="#">7.2.4</a>
DCIM_HostedService	Conditional	See section <a href="#">7.2.5</a>
DCIM_IPAssignmentSettingData	Conditional	See section <a href="#">7.1.3</a>
DCIM_IPConfigurationService	Optional	See section <a href="#">7.1.4</a>
DCIM_IPProtocolEndpoint	Mandatory	See section <a href="#">7.1.2</a>
DCIM_OrderedComponent	Conditional	See section <a href="#">7.2.6</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">7.1.7</a>
DCIM_RemoteAccessAvailableToElement	Conditional	See section <a href="#">7.2.7</a>

DCIM_RemoteServiceAccessPoint	Optional	See section <a href="#">7.1.5</a>
DCIM_ServiceAffectsElement	Conditional	See section <a href="#">7.2.8</a>
DCIM_StaticIPAssignmentSettingData	Conditional	See section <a href="#">7.1.6</a>
<b>Indications</b>		
None defined in this profile		

## 7.1 Instance Providers

### 7.1.1 DCIM\_EnabledLogicalElementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EnabledLogicalElementCapabilities which gives out all IP Interface capabilities
EnumerateInstanceNames	Enumerates the key values of IPInterface Capabilities
GetInstance	For getting the properties of a single IPInterface capability
ModifyInstance	Supports modifying, ElementNameEditSupported

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:IP Protocol Endpoint Capabilities"
ElementNameEditSupported	M	"FALSE"
RequestedStateSupported	M	2(refers to Enabled) 3(refers to Disabled)
ElementName	C	"IP Protocol Endpoint Capabilities"

### 7.1.2 DCIM\_IPProtocolEndpoint

Represents the IP interface associated with the Ethernet Interface.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_IPProtocolEndpoint
EnumerateInstanceNames	Enumerates the key values of IPProtocolEndpoint
GetInstance	For getting the properties of a single IPProtocolEndpoint

InvokeMethod	For invoking the method RequestStateChange()
--------------	--

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
CreationClassName	M	"DCIM_IPProtocolEndpoint"
SystemName	M	Value of DCIM_SPCoMputerSystem.Name
Name	M	"IPProtocolEndpoint1"
NameFormat	M	"IPProtocolEndpoint[InstanceNo]"
RequestedState	M	0(refers to "Unknown") 2(refers to "Enabled") 3(refers to "Disabled").
EnabledState	M	2(refers to Enabled) 3(refers to Disabled)
ElementName	M	"IP Protocol Endpoint"
ProtocolIFType	M	4096 (refers to "Ipv4")
Ipv4Address	M	<IPAddr> field from libami nwGetNWExtIPCfg()
SubnetMask	M	<SubNet Mask Addr> field from libami nwGetNWExtIPCfg()
AddressOrigin	M	<CfgMethod> field from libami nwGetNWExtIPCfg() 3(refers to Static) 4(refers to DHCP)

MethodName	Input values
RequestStateChange	RequestedState = 2(Enable) or RequestedState = 3(Disable)

### 7.1.3 DCIM\_IPAssignmentSettingData

This is the aggregation point for the Setting Data instances that define a configuration that can be applied to an IPInterface.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_IPAssignmentSettingData
EnumerateInstanceNames	Enumerates the key values of IPAssignmentSettingData
GetInstance	For getting the properties of a single IPAssignmentSettingData

Elements	Existence(M/O/C)	Element Value
InstanceID	M	Can be any one of the following values "DCIM:IPAssignmentSettingData-<IP Address Settings>  IP Address setting can be 1. Static or 2. DHCP
AddressOrigin	M	2(refers to "Not Applicable")
ElementName	M	"IP Assignment Setting Data "<Unique Identifier>

#### 7.1.4 DCIM\_IPConfigurationService

DCIM\_IPConfigurationService represents the ability to configure an IP interface.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_IPConfigurationService
EnumerateInstanceNames	Enumerates the key values of IPConfigurationService
GetInstance	For getting the properties of a single IPConfigurationService
InvokeMethod	Invoke the method ApplySettingToIPProtocolEndpoint() for DCIM_IPConfigurationService.

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_IPConfigurationService"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"IPConfigurationService1"
ElementName	M	"IP Configuration Service"
EnabledState	O	5(Refers "Not Applicable")
RequestedState	O	12(Refers "Not Applicable")
EnabledDefault	O	2(Refers "Enabled")
TransitioningToState	O	12(Refers "Not Applicable")

MethodName	Input values
ApplySettingToIPProtocolEndpoint()	1.Configuration(The setting to apply) – REF to DCIM_IPAssignmentSettingData

2.Endpoint – REF to DCIM_IPProtocolEndpoint
--

### 7.1.5 DCIM\_RemoteServiceAccessPoint

Operation	Messages
EnumerateInstances	Enumerate the instances of RemoteServiceAccessPoint, which represents the managed system's view of the default gateway.
EnumerateInstanceNames	Enumerates the key values of RemoteServiceAccessPoint
GetInstance	For getting the properties of a single RemoteServiceAccessPoint.

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_RemoteServiceAccessPoint"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"Default Gateway"
AccessContext	M	2 (refers to Default Gateway)
AccessInfo	M	<Gateway Server IP Address>
InfoFormat	M	3 (refers to IPv4 Address)
ElementName	M	"Default Gateway"

### 7.1.6 DCIM\_StaticIPAssignmentSettingData

Operation	Messages
EnumerateInstances	Enumerate the instances of Static DCIM_IPAssignmentSettingData, which represents a static configuration that can be applied to an instance of DCIM_IPProtocolEndpoint.
EnumerateInstanceNames	Enumerates the key values of DCIM_StaticIPAssignmentSettingData
GetInstance	For getting the properties of a single DCIM_StaticIPAssignmentSettingData
ModifyInstance	Supports modifying IPv4Address, SubnetMask, GatewayIPv4Address

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:StaticIPAssignmentSettingData"
AddressOrigin	M	<CfgMethod> field from libami nwGetNWExtIPCfg()
IPv4Address	O	<IPAddress>
SubnetMask	O	<NetMask>
GatewayIPv4Address	O	<Gateway Server IPAddress>
ElementName	M	"Static IP Assignment Setting Data"

Modify Instances	Possible Input Values
GatewayIPv4Address	String
SubnetMask	String
IPv4Address	String

### 7.1.7 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of IPInterface Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of IPInterface Registered Profile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:IP Interface Profile"
RegisteredName	M	"IP Interface"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"



## 7.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
GetInstance
Associators
AssociatorNames
References
ReferenceNames

### 7.2.1 DCIM\_BindsToLANEndpoint

This associates LANEndpoint with IPProtocolEndpoint.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	DCIM_LANEndpoint	DCIM_LANEndpoint - Section <a href="#">17.1.4</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>

### 7.2.2 DCIM\_ElementCapabilities

DCIM\_ElementCapabilities associates DCIM\_IPProtocolEndpoint with DCIM\_EnabledLogicalElementCapabilities.

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities – Section <a href="#">7.1.1</a>

### 7.2.3 DCIM\_ElementSettingData

DCIM\_ElementSettingData associates DCIM\_IPProtocolEndpoint with IPAssignmentSettingData and DCIM\_StaticIPAssignmentSettingData.

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>
SettingData	M	CIM_SettingData	DCIM_IPAssignmentSettingData – Section <a href="#">7.1.3</a> DCIM_StaticIPAssignmentSettingData – Section <a href="#">7.1.6</a>
IsDefault	M		<Default Configuration>
IsCurrent	M		<Current Configuration>
IsNext	M		<Next Configuration to be applied>

### 7.2.4 DCIM\_HostedAccessPoint

DCIM\_HostedAccessPoint associates DCIM\_HostComputerSystem with DCIM\_RemoteServiceAccessPoint and DCIM\_IPProtocolEndpoint.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCComputerSystem - Section <a href="#">15.1.1</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_RemoteServiceAccessPoint – Section <a href="#">7.1.5</a> DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>

### 7.2.5 DCIM\_HostedService

DCIM\_HostedService associates DCIM\_HostComputerSystem with DCIM\_IPConfigurationService.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCComputerSystem - Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_IPConfigurationService – Section <a href="#">7.1.4</a>

## 7.2.6 DCIM\_OrderedComponent

DCIM\_OrderedComponent associates DCIM\_IPAssignmentSettingData with DCIM\_StaticIPAssignmentSettingData.

Elements	Existence (M/O/C)	Base Class	Element Value
GroupComponent	M	CIM_ManagedElement	DCIM_IPAssignmentSettingData – Section <a href="#">7.1.3</a>
PartComponent	M	CIM_ManagedElement	DCIM_StaticIPAssignmentSettingData – Section <a href="#">7.1.6</a> DCIM_DNSSettingData - Section <a href="#">12.1.3</a> DCIM_DHCPSettingData – Section <a href="#">6.1.3</a>
AssignedSequence	M		The value can be “0” or “1” or “2”

## 7.2.7 DCIM\_RemoteAccessAvailableToElement

DCIM\_RemoteAccessAvailableToElement associates the DCIM\_IPProtocolEndpoint instance with the DCIM\_RemoteServiceAccessPoint instance that represents the network gateway.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	DCIM_RemoteServiceAccessPoint	DCIM_RemoteServiceAccessPoint – Section <a href="#">7.1.5</a>
Dependent	M	CIM_EnabledLogicalElement	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a> DCIM_DNSProtocolEndpoint – Section <a href="#">12.1.2</a> DCIM_DHCPProtocolEndpoint – Section <a href="#">6.1.1</a>
OrderOfAccess	M		1

## 7.2.8 DCIM\_ServiceAffectsElement

This association associates DCIM\_IPProtocolEndpoint with DCIM\_IPConfigurationService.

Elements	Existence (M/O/C)	Base Class	Element Value
AffectedElement	M	CIM_ManagedElement	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>
AffectingElement	M	CIM_Service	DCIM_IPConfigurationService – Section <a href="#">7.1.4</a>
ElementAffects	M		5 (refers to “Manages”)

## 8 DSP1005 (CLP Service Profile)

### CIM Elements: CLP Service

Element Name	Requirement	Notes
<b>Classes</b>		
DCIM_BindsTo	Optional	Not Implemented
DCIM_CLPCapabilities	Mandatory	See Section <a href="#">8.1.1</a>
DCIM_CLPProtocolEndpoint	Mandatory	See Section <a href="#">8.1.2</a>
DCIM_CLPSettingData	Optional	See Section <a href="#">8.1.3</a>
DCIM_ConcreteDependency	Optional	Not Implemented
DCIM_ConcreteJob	Mandatory	See Section <a href="#">8.1.4</a>
DCIM_ElementCapabilities	Mandatory	See Section <a href="#">8.2.1</a>
DCIM_ElementSettingData (CLP Service)	Optional	See Section <a href="#">8.2.4</a>
DCIM_ElementSettingData (CLP Session)	Optional	See Section <a href="#">8.2.5</a>
DCIM_Error	Mandatory	Not Implemented
DCIM_HostedAccessPoint	Mandatory	See Section <a href="#">8.2.6</a>
DCIM_HostedJobDestination	Mandatory	See Section <a href="#">8.2.8</a>
DCIM_HostedService	Mandatory	See Section <a href="#">8.2.7</a>
DCIM_JobDestinationJobs	Conditional	See Section <a href="#">8.2.9</a>
DCIM_JobQueue	Mandatory	See Section <a href="#">8.1.5</a>
DCIM_OwningCollectionElement	Mandatory	See Section <a href="#">8.2.14</a>
DCIM_OwningJobElement (CLP Service)	Conditional	See Section <a href="#">8.2.10</a>
DCIM_OwningJobElement (CLP Session)	Conditional	See Section <a href="#">8.2.11</a>
DCIM_Privilege	Mandatory	See Section <a href="#">8.1.8</a>
DCIM_ProtocolService	Mandatory	See Section <a href="#">8.1.6</a>
DCIM_ProvidesEndpoint	Mandatory	See Section <a href="#">8.2.2</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">8.1.7</a>
DCIM_Role	Mandatory	See Section <a href="#">4.1.4</a>
DCIM_RoleLimitedToTarget	Mandatory	See Section <a href="#">8.2.16</a>
DCIM_ServiceAccessBySAP	Optional	See Section <a href="#">8.2.3</a>
DCIM_ServiceAffectsElement (Admin Domain)	Mandatory	See Section <a href="#">8.2.12</a>
DCIM_ServiceAffectsElement (Job Queue)	Mandatory	See Section <a href="#">8.2.13</a>
DCIM_IdentityContext	Optional	See Section <a href="#">8.2.15</a>
DCIM_TCPProtocolEndpoint	Optional	See Section <a href="#">8.1.9</a>
<b>Indications</b>		
None defined in this profile		

## 8.1 Instance Providers

### 8.1.1 DCIM\_CLPCapabilities

Operations Supported	Description
EnumerateInstances	Lists the common Capabilities supported for all the clp sessions.
EnumerateInstanceNames	Lists only the key values of all the clp capabilities.
GetInstance	Fetches the clp capabilities information.

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:CLPCapabilities"
ElementName	M	" Capabilities of Command Line Protocol Service"
ElementNameEditSupported	M	"FALSE"
MaxConnections	M	1
CLPVersions	M	"1.0.2"
SMMEAddressVersions	M	"1.0.0"
MaxListeningPorts	O	1

### 8.1.2 DCIM\_CLPProtocolEndpoint

The instance will be created when a smashclp session is established through ssh/telnet interface.

Operations Supported	Description
EnumerateInstances	Lists the CLP Protocol Endpoint details.
EnumerateInstanceNames	Lists only the key values of all the CLP Protocol Endpoint.
GetInstance	Fetches particular CLP Protocol Endpoint's information.
ModifyInstance	Modifies the following properties, ElementName, CurrentDefaultTarget, OutputFormat, OutputVerbosity, OutputLanguage, OutputPosition, OutputOrder, DisplayOption, KeepTime, OutputCount, WaitBehavior

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_CLPProtocolEndpoint"
SystemName	M	Value of DCIM_SPComputerSystem.Name
Name	M	Obtained using netstat utility
NameFormat	M	"CLPProtocolEndpoint-LocalIP:LocalPort-RemoteIP:RemotePort"
ProtocolIFType	M	1 (refers to "Other")
OtherTypeDescription	M	"CLP"
ElementName	M	"CLP Protocol EndPoint"
CurrentDefaultTarget	M	Initial value will be "/". Later it reflects the CurrentDefaultTarget value of corresponding CLP Session.
KeepTime	M	Initial value will be 300. Later it reflects the KeepTime value of corresponding CLP Session.
WaitBehavior	M	"FALSE"
OutputFormat	M	Initial value will be 2 (refers to "Text"). Later it reflects the OutputFormat value of corresponding CLP Session.
Outputverbosity	M	3 (refers to "Terse")
OutputLanguage	M	"eng"
Outputposition	M	2 (refers to "Begin")
OutputOrder	M	2 (refers to "Default")
DisplayOption	M	"all"
OutputCount	M	4294967295 ( Decimal equivalent of 0xFFFFFFFF)

Modify Instances	Possible Input Values
DisplayOption	String
OutputCount	Numeric
KeepTime	Numeric
OutputOrder	2( Refers to "default") 3( Refers to "reverse")
OutputPosition	2( Refers to "begin") 3( Refers to "end")
OutputLanguage	String
OutputVerbosity	2( Refers to "error") 3( Refers to "terse") 4( Refers to "verbose")
OutputFormat	2( Refers to "text") 4( Refers to "keyword") 5( Refers to "clpxml")

CurrentDefaultTarget	String
ElementName	String Not supported if ElementNameEditSupported is FALSE for CLPCapabilities

### 8.1.3 DCIM\_CLPSettingData

Operations Supported	Description
EnumerateInstances	Lists the CLP Setting Data details.
EnumerateInstanceNames	Lists only the key values of all the CLP Setting Data.
GetInstance	Fetches particular CLP Setting Data's information.

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:CLPSettingData"
ElementName	M	"Specification Defaults"
CommandDefaultTarget	M	"/"
KeepTime	M	300
WaitBehavior	M	FALSE
OutputFormat	M	2 (refers to "Text")
OutputVerbosity	M	3 (refers to "Terse")
OutputLanguage	M	"eng"
Outputposition	M	2 (refers to "Begin")
OutputOrder	M	2 (refers to "Default")
OutputCount	M	4294967295 (Decimal equivalent of 0xFFFFFFFF)
DisplayOption	M	"all"

### 8.1.4 DCIM\_ConcreteJob

Operations Supported	Description
EnumerateInstances	Lists the Concrete Job available.
EnumerateInstanceNames	Lists only the key values of the Concrete Job
GetInstance	Fetches the Concrete Job's details.

Elements	Existence(M/O/C)	Element Value
ElementName	M	"Concrete Job"
InstanceID	M	<Job Name>"-<RemotePort>"-<UniqueID>"
JobState	M	The values can be any one of the following 4 (refers to "Running") 7 (refers to "Completed") 8 (refers to "Terminated") 9 (refers to "Killed") 10 (refers to "Exception")
JobStatus	M	The values can be any one of the following "Running" "Completed" "Terminated" "Killed" "Exception"
DeleteOnCompletion	M	"TRUE"
TimeBeforeRemoval	M	<Time Period>
JobRunTimes	O	1
OperationalStatus	M	Can be any one of the following combination -17 ( refers to "Completed"), 2 (refers to "OK") -17 ( refers to "Completed"), 10 (refers to "Exception")

### 8.1.5 DCIM\_JobQueue

Operations Supported	Description
EnumerateInstances	Lists the Job Queue available.
EnumerateInstanceNames	Lists only the key values of the Job Queue
GetInstance	Fetches the Job Queue's details.

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
SystemName	M	Value of DCIM_SPCoMputerSystem.Name
CreationClassName	M	"DCIM_JobQueue"
Name	M	"CLP Service JobQueue"
OperationalStatus	M	2 (refers to 'OK')
HealthState	M	5 (refers to "OK")
ElementName	M	"Job Queue"
MaxJobsOnQueue	M	0 ( represents No maximum queue depth)
QueueStatus	M	2(refers to "No Additional Status")
QueueStatusInfo	M	"No Additional Status"



Elements	Existence(M/O/C)	Element Value
EnabledDefault	O	2(refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")
EnabledState	O	2("Enabled")
RequestedState	O	5("No Change")
MaxTimeOnQueue	O	00000000000000.000000:000 ( represents no time limit)

### 8.1.6 DCIM\_ProtocolService

Operations Supported	Description
EnumerateInstances	Lists the Protocol Service available.
EnumerateInstanceNames	Lists only the key values of the Protocol service.
GetInstance	Fetches the Protocol service's details.
ModifyInstance	Modifies the following properties, ElementName
InvokeMethod	Method invocation in ProtocolService

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCComputerSystem"
SystemName	M	Value of DCIM_SPCComputerSystem.Name
CreationClassName	M	"DCIM_ProtocolService"
Name	M	"CLPProtocolService"
Protocol	M	4 (refers to "CLP")
RequestedState	M	5(by default). If RequestStateChange() is invoked, this will contain the value of RequestedState param.
EnabledState	M	Can be any of the following value 2(refers to "Enabled") 3(refers to "Disabled")
ElementName	M	"Protocol Service 2"
OperationalStatus	M	2 (refers to "Ok")
HealthState	C	5 (refers to "OK")
MaxConnections	M	0
EnabledDefault	O	2(refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

Modify Instances	Possible Input Values
ElementName	String

Methods	Possible Input Values
RequestStateChange	RequestedState = 2 ("Enabled") RequestedState = 3 ("Disabled")

### 8.1.7 DCIM\_RegisteredProfile

Operations Supported	Description
EnumerateInstances	Lists the CLP Service available.
EnumerateInstanceNames	Lists only the key values of the clp service.
GetInstance	Fetches the clp service's details.

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:Command Line Protocol Service Profile"
RegisteredName	M	"Command Line Protocol Service "
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	No Value Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 8.1.8. DCIM\_Privilege

Operations Supported	Description
EnumerateInstances	Lists the Privileges available.
EnumerateInstanceNames	Lists only the key values of the Privileges
GetInstance	Fetches the Privileges s details.

Elements	Existence(M/O/C)	Element Value <sup>i</sup>
InstanceID	M	"DCIM:LocalPrivilege:<1-16>" "DCIM:ADPrivilege:<17-21>" "DCIM:CLP:Administrator" "DCIM:CLP:Operator" "DCIM:CLP:ReadOnly"
PrivilegeGranted	M	"TRUE"
RepresentsAuthorizationRights		"FALSE"
ElementName	M	The value can be any one of the following 1. "SM CLP Administrator Privilege", 2. "SM CLP Operator Privilege", 3. "SM CLP ReadOnly Privilege"
Activities	M	7 (refers to "Execute")  This value will be repeated depending upon the number of qualifiers represented in 'ActivityQualifiers'. Say if ActivityQualifiers="cd","show" ,"exit" then Activities=7,7,7
ActivityQualifiers	M	The value can contain one or more values of the following values 1. "cd", 2. "exit", 3. "help", 4. "show", 5. "version", 6. "reset", 7. "start", 8. "stop", 9. "set", 10. "load", 11. "dump", 12. "create", 13. "delete"
QualifierFormats	M	9(refers to "Command Line Instruction")  This value will be repeated depending upon the number of qualifiers represented in 'ActivityQualifiers'. Say if ActivityQualifiers="cd","show" ,"exit" then QualifierFormats=9,9,9

## 8.1.9 DCIM\_TCPProtocolEndpoint

Operation	Messages
EnumerateInstances	Enumerate the instances of TCPProtocolEndpoint
EnumerateInstanceNames	Enumerates the key values of TCPProtocolEndpoint instance
GetInstance	For getting the properties of TCPProtocolEndpoint instance

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_TCPProtocolEndpoint"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	Will be obtained through Netstat Utility
NameFormat	M	"TCP:ServiceName:Type-IP:Port" or "TCP:ServiceName:Configured [Unique Identifier]"
ProtocolIFType	M	4111 (refers to "TCP")
EnabledState	M	If type is configured, it will have value 3 (refers to "Disabled") or 2 (refers to "Enabled")
PortNumber	M	Will be fetched from netstat utility.
ElementName	M	"TCP Protocol Endpoint – "< listening   remote   configured > " port " <PortNumber>
EnabledDefault	O	2(refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")
RequestedState	O	12 (refers to "Not Applicable")

## 8.2. Association Classes

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 8.2.1 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_Service	DCIM_ProtocolService - Section <a href="#">8.1.6</a>
Capabilities	M	CIM_Capabilities	DCIM_CLPCapabilities - Section <a href="#">8.1.1</a>

### 8.2.2 DCIM\_ProvidesEndpoint

Whenever there will be an established clp session, this association instance will be created to associate the created session with clp service instance.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_Service	DCIM_ProtocolService - Section <a href="#">8.1.6</a>
Dependent	M	CIM_ProtocolEndpoint	DCIM_CLPProtocolEndpoint - Section <a href="#">8.1.2</a>

### 8.2.3 DCIM\_ServiceAccessBySAP

Whenever there will be an established clp session, this association instance will be created to associate the created tcp session with telnet service instance.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_Service	DCIM_ProtocolService - Section <a href="#">8.1.6</a>
Dependent	M	CIM_ProtocolEndpoint	DCIM_TCPProtocolEndpoint - Section <a href="#">8.1.9</a>

### 8.2.4 DCIM\_ElementSettingData (CLP Service)

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_Service	DCIM_ProtocolService – Section <a href="#">8.1.6</a>
SettingData	M	CIM_SettingData	DCIM_CLPSettingData - Section <a href="#">8.1.3</a>
IsDefault	M	-	<Default Configuration>
IsNext	M	-	<Next Configuration to be applied when restarting service>

### 8.2.5 DCIM\_ElementSettingData (CLP Session)

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	DCIM_ProtocolEndpoint	DCIM_CLPProtocolEndpoint – Section <a href="#">8.1.2</a>
SettingData	M	CIM_SettingData	DCIM_CLPSettingData - Section <a href="#">8.1.3</a>
IsCurrent	M	-	<Current Configuration>

### 8.2.6 DCIM\_HostedAccessPoint

Whenever there will be an established clp session, this association instance will be created to associate the created session with ComputerSystem instance.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ComputerSystem	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_ProtocolEndpoint	DCIM_CLPProtocolEndpoint - Section <a href="#">8.1.2</a> DCIM_TCPProtocolEndpoint - Section <a href="#">8.1.9</a>

### 8.2.7 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ComputerSystem	DCIM_SPCoMputerSystem - Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_ProtocolService - Section <a href="#">8.1.6</a>

### 8.2.8 DCIM\_HostedJobDestination

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ComputerSystem	DCIM_SPCoMputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_JobDestination	DCIM_JobQueue - Section <a href="#">8.1.5</a>

### 8.2.9 DCIM\_JobDestinationJobs

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_JobDestination	DCIM_JobQueue - Section <a href="#">8.1.5</a>
Dependent	M	CIM_Job	DCIM_ConcreteJob – Section <a href="#">8.1.4</a>

### 8.2.10 DCIM\_OwningJobElement (CLP Service)

Elements	Existence (M/O/C)	Base Class	Element Value
OwningElement	M	CIM_Service	DCIM_ProtocolService – Section <a href="#">8.1.6</a>
OwnedElement	M	CIM_Job	DCIM_ConcreteJob – Section <a href="#">8.1.4</a>

### 8.2.11 DCIM\_OwningJobElement ( CLP Session)

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ProtocolEndpoint	DCIM_CLP ProtocolEndpoint – Section <a href="#">8.1.2</a>
Dependent	M	CIM_Job	DCIM_ConcreteJob – Section <a href="#">8.1.4</a>

### 8.2.12 DCIM\_ServiceAffectsElement (Admin Domain)

Elements	Existence (M/O/C)	Base Class	Element Value
AffectingElement	M	CIM_Service	DCIM_ProtocolService – Section <a href="#">8.1.6</a>
AffectedElement	M	CIM_System	DCIM_AdminDomain – Section <a href="#">2.1.1</a>
ElementAffects	M	-	5 (refers to “Manages”)

### 8.2.13 DCIM\_ServiceAffectsElement (Job Queue)

Elements	Existence (M/O/C)	Base Class	Element Value
AffectingElement	M	CIM_Service	DCIM_ProtocolService – Section <a href="#">8.1.6</a>
AffectedElement	M	CIM_JobDestination	DCIM_JobQueue - Section <a href="#">8.1.5</a>
ElementAffects	M	-	5 (refers to “Manages”)

### 8.2.14 DCIM\_OwningCollectionElement

Elements	Existence (M/O/C)	Base Class	Element Value
OwningElement	M	CIM_ManagedElement	DCIM_SPComputerSystem - Section <a href="#">15.1.1</a>
OwnedElement	M	CIM_Collection	DCIM_Role - Section <a href="#">4.1.4</a>

### 8.2.15 DCIM\_IdentityContext

Elements	Existence (M/O/C)	Base Class	Element Value
ElementInContext	M	CIM_Identity	DCIM_Identity – Section <a href="#">18.1.7</a>
ElementProvidingContext	M	CIM_Service	DCIM_ProtocolService – Section <a href="#">8.1.6</a>



## 8.2.16 DCIM\_RoleLimitedToTarget

Elements	Existence (M/O/C)	Base Class	Element Value
DefiningRole	M	CIM_Role	DCIM_Role – Section <a href="#">4.1.4</a>
TargetElement	M	CIM_ManagedElement	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a> DCIM_AdminDomain – Section <a href="#">2.1.1</a>

## 9 DSP1023 (Software Inventory Profile)

The installed firmware on BMC will be represented by this profile.

### CIM Elements: Software Inventory

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_SoftwareIdentity	Mandatory	See Section <a href="#">9.1.1</a>
DCIM_InstalledSoftwareIdentity	Conditional	See Section <a href="#">9.2.1</a>
DCIM_ElementSoftwareIdentity	Optional	See Section <a href="#">9.2.2</a>
DCIM_SystemSpecificCollection	Optional	See Section <a href="#">9.1.2</a>
DCIM_HostedCollection	Conditional	See Section <a href="#">9.2.3</a>
DCIM_MemberOfCollection	Conditional	See Section <a href="#">9.2.6</a>
DCIM_SoftwareIdentityResource	Optional	See Section <a href="#">9.1.3</a>
DCIM_SAPAvailableForElement	Conditional	See Section <a href="#">9.2.4</a>
DCIM_HostedAccessPoint	Optional	See Section <a href="#">9.2.5</a>
DCIM_OrderedComponent	Optional	Not Implemented
DCIM_OrderedDependency	Optional	Not Implemented
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">9.1.4</a>
<b>Indications</b>		
None defined in this profile		

### 9.1 Instance Providers

#### 9.1.1 DCIM\_SoftwareIdentity

Represents the installed firmware for BMC.

Operations Supported	Description
EnumerateInstances	Enumerates the firmwares installed

EnumerateInstanceNames	Enumerates the key values of the firmwares installed
GetInstance	Fetching the properties of a specific instance.

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM: < FirmwareName >" FirmwareName obtained from the racadm backend.
IsEntity	M	"TRUE"
VersionString	O	<FirmwareRevision1>." FirmwareRevision2"< The value for FirmwareRevision1 and 2 is obtained from IPMICMD - GetDeviceID()
MajorVersion	C	Will contain value of Firmware Major Version.
MinorVersion	C	Will contain value of Firmware Minor Version
RevisionNumber	C	0 ( iDRAC firmware version will always be of "a.b" type, so hard-coding Revision Number to '0' )
BuildNumber	C	Will contain Build Number
Classifications	O	10(firmware)
IdentityInfoType	O	"DCIM:SoftwareFamily"
IdentityInfoValue	O	"DCIM:Firmware:iDRAC:firmimg.id2"
InstallDate	O	Will Contain the Value of last updated date
Manufacturer	O	"DCIM"

### 9.1.2 DCIM\_SystemSpecificCollection

Operations Supported	Description
EnumerateInstances	Enumerates the firmwares installed
EnumerateInstanceNames	Enumerates the key values of the firmwares installed
GetInstance	Fetching the properties of a specific instance.

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:System Specific Collection"
ElementName	M	"Available Software"

### 9.1.3 DCIM\_SoftwareIdentityResource

Operations Supported	Description
EnumerateInstances	Enumerates the firmwares installed

EnumerateInstanceNames	Enumerates the key values of the firmwares installed
GetInstance	Fetching the properties of a specific instance.

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_SoftwareIdentityResource"
SystemName	M	Value of DCIM_SPComputerSystem.Name
Name	M	"SoftwareIdentityResource1"
InfoFormat	M	200 (refers to "URL")
AccessInfo	M	"127.0.0.1"
ResourceType	O	4(refers to "Installer")
RequestedState	O	12(refers to "Not Applicable")
EnabledDefault	O	2(Refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

#### 9.1.4 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of Base Server Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of Base Server Registered Profile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:Software Inventory Profile"
RegisteredName	M	"Software Inventory"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

## 9.2 Association Classes

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 9.2.1 DCIM\_InstalledSoftwareIdentity

Elements	Existence (M/O/C)	Base Class	Element Value
System	M	CIM_ComputerSystem	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
InstalledSoftware	M	CIM_SoftwareIdentity	DCIM_SoftwareIdentity – Section <a href="#">9.1.1</a>

### 9.2.2 DCIM\_ElementSoftwareIdentity

The element that is dependent on this software is BMC (i.e. sp1)

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_SoftwareIdentity	DCIM_SoftwareIdentity – Section <a href="#">9.1.1</a>
Dependent	M	CIM_ComputerSystem	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
ElementSoftwareStatus	M	-	6(refers to “Installed”)

### 9.2.3 DCIM\_HostedCollection

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ComputerSystem	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_SystemSpecificCollection	DCIM_SystemSpecificCollection – Section <a href="#">9.1.2</a>

## 9.2.4 DCIM\_SAPAvailableForElement

Elements	Existence (M/O/C)	Base Class	Element Value
AvailableSAP	M	CIM_ServiceAccessPoint	DCIM_SoftwareIdentityResource – Section <a href="#">9.1.3</a>
ManagedElement	M	CIM_ManagedElement	DCIM_SoftwareIdentity – Section <a href="#">9.1.1</a>

## 9.2.5 DCIM\_HostedAccessPoint

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ComputerSystem	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_SoftwareIdentityResource – Section <a href="#">9.1.3</a>

## 9.2.6 DCIM\_MemberOfCollection

Elements	Existence (M/O/C)	Base Class	Element Value
Collection	M	CIM_Collection	DCIM_SystemSpecificCollection – Section <a href="#">9.1.2</a>
Member	M	CIM_ManagedElement	DCIM_SoftwareIdentity – Section <a href="#">9.1.1</a>

# 10 DSP1004 (Base Server Profile)

### CIM Elements: Base Server Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_HostComputerSystem	Mandatory	See section <a href="#">10.1.1</a>
DCIM_EnabledLogicalElementCapabilities	Mandatory	See section <a href="#">10.1.2</a>
DCIM_ComputerSystemPackage	Mandatory	See section <a href="#">5.2.1</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">10.1.3</a>
DCIM_ElementCapabilities	Mandatory	See Section <a href="#">10.2.1</a>
<b>Indications</b>		
None defined in this profile		

## 10.1 Instance Providers

### 10.1.1 DCIM\_HostComputerSystem

We are assuming that OEM will have a single host system to manage (i.e. the Base Server) through the BMC. In that case we will have a single instance DCIM\_HostComputerSystem derived from CIM\_ComputerSystem referring to the host system, though the architecture supports to have more than one blade management through a simple updating to an INI file.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_HostComputerSystem.
EnumerateInstanceNames	Enumerates the key values of DCIM_HostComputerSystem that represents the Host System
GetInstance	For getting the properties of this instance.
InvokeMethod	For Invoking the method RequestStateChange()

Elements	Existence (M/O/C)	Element Value
CreationClassName	M	"DCIM_HostComputerSystem"
Name	M	"srv:"<ServiceTag>":"<GUID>
Dedicated	M	0 (refers to "Not Dedicated")
ElementName	M	"Host Computer System"
IdentifyingDescriptions	O	"CIM:GUID", "CIM:Model:SerialNumber", "CIM:Tag", "DCIM:ServiceTag"
OtherIdentifyingInfo	Ø	<GUID>, <Model:SerialNumber>, <Tag>, <ServiceTag>
EnabledState	M	Indicates the current power state of the System.  The Values is obtained from < CurrentStatus > property of IPMI - LIBIPMI_GetChassisStatus().
RequestedState	M	Can be any one of the following: 2(Refers to "Enable"), 3(Refers to "Disable")
OperationalStatus	M	The value can be any one of the following 0 (refers to "Unknown") 1 (refers to "Other") 2 (refers to "Ok") 3(refers to "Degraded") 6(refers to "Error") Value is obtained from IPMICMD_GetHostHealth()
PrimaryStatus	M	The value can be any one of the following 0 (refers to "Unknown") 1 (refers to "OK") 2(refers to "Degraded") 3(refers to "Error")

HealthState	M	The value can be any one of the following 0 (refers to "Unknown") 5(refers to "OK") 10(refers to "Degraded") 25(refers to "CriticalFailure")  Obtained from IPMICMD_GetHostHealth()
EnabledDefault	O	2(Refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

Method	Possible Input Values
RequestStateChange	RequestedState : The input parameter for RequestedState can be any one of the following: 2(Refers to "Enable"), 3(Refers to "Disable"), 11(Refers to "Reset")

### 10.1.2 DCIM\_EnabledLogicalElementCapabilities

This instance holds the capabilities of the system with regard to the supported power operations. We are presuming to have information on the system capabilities to have instance of this class.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EnabledLogicalElementCapabilities which gives out all system capabilities
EnumerateInstanceNames	Enumerates the key values of System Capabilities
GetInstance	For getting the properties of a single system capability

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Host Computer System Capabilities"
RequestedStatesSupported	M	The values can be any one of the following 2 (refers to "Enabled"), 3 (refers to "Disabled"), 11(refers to "Reset")
ElementNameEditSupported	M	"FALSE"
ElementName	O	"Host Computer System Capabilities"

### 10.1.3 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of Base Server Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of Base Server Registered Profile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:Base Server Profile"
RegisteredName	M	"Base Server "
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 10.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames



## 10.2.1 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ComputerSystem	DCIM_HostComputerSystem - Section <a href="#">10.1.1</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities - Section <a href="#">10.1.2</a>

# 11 DSP1033 (Profile Registration)

## CIM Elements: Profile Registration

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_RegisteredProfile	Mandatory	See section <a href="#">11.1.1</a>
DCIM_ElementConformsToProfile	Mandatory	See section <a href="#">11.2.1</a>
DCIM_ReferencedProfile	Mandatory	See section <a href="#">11.2.2</a>
<b>Indications</b>		
None defined in this profile		

## 11.1 Instance Providers

### 11.1.1 DCIM\_RegisteredProfile

This Profile advertises implementation profile, conformance to a CIM model.

Each profile will have an instance of DCIM\_RegisteredProfile to advertise the details of the same profile.

Below is the property mapping for DCIM\_RegisteredProfile instance.

Operation	Messages
EnumerateInstances	Enumerate the instances of RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of CIM_RegisteredProfile that represents the Host System
GetInstance	For getting the properties of this instance.

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Profile Registration Profile"
RegisteredOrganization	M	2 (refers to "DMTF")
RegisteredName	M	"Profile Registration"
RegisteredVersion	M	"1.0.0"
AdvertiseTypes	M	1 (refers to "Other")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

## 11.2 Association Providers

### 11.2.1 DCIM\_ ReferencedProfile

This is used to associate an instance DCIM\_RegisteredProfile with an instance of DCIM\_RegisteredProfile of another profile that references the dependent profile as a related profile.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_ReferencedProfile
EnumerateInstanceNames	Enumerates the key values of DCIM_RegisteredProfile

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	DCIM_RegisteredProfile	DCIM_RegisteredProfile – Section <a href="#">11.1.1</a>
Dependent	M	DCIM_RegisteredProfile	DCIM_RegisteredProfile instances of all the supported profiles

## 11.2.2 DCIM\_ ElementConformsToProfile

This is used to associate an instance DCIM\_RegisteredProfile with an instance of CIM\_ManagedElement. The instance of CIM\_ManagedElement will represent the Central class instances of all supported profiles.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_ElementConformsToProfile
EnumerateInstanceNames	Enumerates the key values of DCIM_ElementConformsToProfile

Elements	Existence (M/O/C)	Base Class	Element Value
ConformantStandard	M	DCIM_RegisteredProfile	DCIM_RegisteredProfile – Section <a href="#">11.1.1</a>
ManagedElement	M	CIM_ManagedElement	Central Instances of all the supported profiles

## 12 DSP1038 (DNS Client Profile)

### CIM Elements: DNS Client

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_DNSGeneralSettingData	Optional	See section <a href="#">12.1.1</a>
DCIM_DNSProtocolEndpoint	Optional	See section <a href="#">12.1.2</a>
DCIM_DNSSettingData	Optional	See section <a href="#">12.1.3</a>
DCIM_ElementCapabilities	Optional	See section <a href="#">12.2.1</a>
DCIM_ElementSettingData	Optional	See sections <a href="#">12.2.2</a>
DCIM_EnabledLogicalElementCapabilities	Optional	See section <a href="#">12.1.4</a>
DCIM_SAPSAPDependency	Mandatory	See sections <a href="#">12.2.3</a>
DCIM_HostedAccessPoint	Mandatory	See sections <a href="#">12.2.4</a>
DCIM_RemoteAccessAvailableToElement	Conditional	See sections <a href="#">12.2.5</a>
DCIM_RemoteServiceAccessPoint	Optional	See sections <a href="#">12.1.5</a>
DCIM_RegisteredProfile	Mandatory	See Section <a href="#">12.1.6</a>
<b>Indications</b>		
None defined in this profile		

## 12.1 Instance Providers

### 12.1.1 DCIM\_DNSGeneralSettingData

Operations Supported	Description
EnumerateInstances	List the options supported for a DNS Client's configurations
EnumerateInstanceNames	Lists only the key values of DNS Configurations supported options.
GetInstance	Fetches the options supported for a DNS Client's configurations

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:DNSGeneralSettingData"
AddressOrigin	M	2 (refers to "Not Applicable"), as assignment of IP is independent of DNS
AppendPrimarySuffixes	O	"FALSE"
AppendParentSuffixes	O	"FALSE"
ElementName	M	"DNS General Setting Data"

### 12.1.2 DCIM\_DNSProtocolEndpoint

Operations Supported	Description
EnumerateInstances	Lists the DNS Client Configurations for a single IP Endpoint
EnumerateInstanceNames	Lists only the key values of DNS Client Configurations
GetInstance	Fetches a particular DNS Client's Configurations
ModifyInstance	Modifies the following properties, HostName
InvokeMethod	For Invoking the method RequestStateChange()

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_DNSProtocolEndpoint"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"DNSProtocolEndpoint-Static" or "DNSProtocolEndpoint-DHCP"
NameFormat	M	"ClassName-ConfiguredMethod"
ProtocolIFType	M	1 ("other")

Elements	Existence(M/O/C)	Element Value
OtherTypeDescription	C	"DNS"
ElementName	M	"DNS Protocol Endpoint "<Unique Identifier>
EnabledState	M	2 (refers to "Enabled") or 3 (refers to "Disabled")  The value is obtained from libami and the API is nwGetManualDNSCfg()
DomainName	M	From libami and the API is nwGetAIDNSCfg()
RegisterThisConnectionsAddress	M	From libami and the API is nwGetAIDNSCfg()
HostName	M	From libami and the API is GetHostName()
RequestedState	M	2 (refers to "Enabled"), 3 (refers to "Disabled") 11(refers to "Reset")
DHCPOptionsToUse	O	8(refers to "Domain Name Server"), 17(refers to "Domain Name")
EnabledDefault	O	2(Refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

Method	Possible Input Values
RequestStateChange	RequestedState = 2 ("Enabled") RequestedState = 3 ("Disabled")

Modify	Possible Input Values
HostName	String

### 12.1.3 DCIM\_DNSSettingData

The configuration is specific to an ip interface. Two instances of DNS Setting Data will be there, one for Static and another for DHCP assigned DNS Server addresses.

Operations Supported	Description
EnumerateInstances	List the desired DNS client's configurations
EnumerateInstanceNames	Lists only the key values of desired DNS client's configurations
GetInstance	Fetches the desired DNS client's configurations
ModifyInstance	Supports modifying DNSServerAddresses, RequestedHostName, RegisterThisConnectionsAddress and DomainName

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:DNSSettingData-Static" or "DCIM:DNSSettingData-DHCP"
AddressOrigin	M	2 (refers to "Not Applicable"), as assignment of IP is independent of DNS
RequestedHostName	M	From libami and the API is GetHostName()
DNSServerAddresses	M	From libami and the API is nwGetManualDNSCfg()
DomainName	O	From libami and the API is nwGetAllDNSCfg()
ElementName	M	"DNS Setting Data "<Unique Identifier>
RegisterThisConnectionsAddress	M	From libami and the API is nwGetAllDNSCfg()

Modify	Possible Input Values
RequestedHostName	String
DomainName	String
RegisterThisConnectionsAddress	Boolean
DNSServerAddresses	String[]

#### 12.1.4 DCIM\_EnabledLogicalElementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of CIM_EnabledLogicalElementCapabilities which gives out all DNS capabilities
EnumerateInstanceNames	Enumerates the key values of DNS Capabilities
GetInstance	For getting the properties of a single DNS capability

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:DNS Protocol Endpoint Capabilities"
RequestedStatesSupported	M	2 (refers to "Enabled") , 3 (refers to "Disabled")
ElementName	M	"DNS Protocol Endpoint Capabilities"
ElementNameEditSupported	M	"FALSE"

### 12.1.5 DCIM\_RemoteServiceAccessPoint

Operations Supported	Description
EnumerateInstances	Lists all Access Points representing DNS Server addresses.
EnumerateInstanceNames	Lists only the key values of DNS Server Access Points
GetInstance	Fetches a particular DNS Server address access point.

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_RemoteServiceAccessPoint"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	This property contains any one of the following values, "DNS Server 1" "DNS Server 2" "DHCP Assigned DNS Server 1" "DHCP Assigned DNS Server 2"
AccessContext	M	3 (refers to "DNS Server")
AccessInfo	M	<DNS Server IP Address>
ElementName	M	Same as Name property value
InfoFormat	M	3 (refers to "IPv4 Address")
EnabledDefault	O	2(Refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

## 12.1.6 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DNS Client Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of DNS Client Registered Profile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:DNS Client Profile"
RegisteredName	M	"DNS Client"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

## 12.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
GetInstance
Associators
AssociatorNames
References
ReferenceNames



### 12.2.1 DCIM\_ElementCapabilities

DCIM\_ElementCapabilities associates DNSProtocolEndpoint with EnabledLogicalElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_DNSProtocolEndpoint – Section <a href="#">12.1.2</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities – Section <a href="#">12.1.4</a>

### 12.2.2 DCIM\_ElementSettingData

DCIM\_ElementSettingData associates DNSProtocolEndpoint with DNSSettingData, DCIM\_HostComputerSystem with DNSGeneralSettingData, IPProtocolEndpoint with IPAssignmentSettingData and StaticIPAssignmentSettingData

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_DNSProtocolEndpoint – Section <a href="#">12.1.2</a>
ElementSettingData	M	CIM_SettingData	DCIM_DNSSettingData – Section <a href="#">12.1.3</a> DCIM_DNSGeneralSettingData – Section <a href="#">12.1.1</a>
IsCurrent	M		1 (refers to "IsCurrent") or 2(refers to "IsNotCurrent"). The value depends on the displayed Endpoint instance
IsNext	O	-	Can be any one of the following value 0 ( refers to "Unknown"), 1 ( refers to "Is Next"), 2 (refers to "Is Not Next")
IsDefault	O	-	Can be any one of the following value 0 ( refers to "UnKnown"), 2 ( refers to "Is Not Default")

### 12.2.3 DCIM\_SAPSAPDependency

DCIM\_SAPSAPDependency associates DNSProtocolEndpoint with IPProtocolEndpoint

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ServiceAccessPoint	DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_DNSProtocolEndpoint – Section <a href="#">12.1.2</a>

### 12.2.4 DCIM\_HostedAccessPoint

DCIM\_HostedAccessPoint associates ComputerSystem with RemoteServiceAccessPoint and IPProtocolEndpoint.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_RemoteServiceAccessPoint – Section <a href="#">12.1.5</a> DCIM_IPProtocolEndpoint – Section <a href="#">7.1.2</a>

### 12.2.5 DCIM\_RemoteAccessAvailableToElement

DCIM\_RemoteAccessAvailableToElement associates RemoteServiceAccessPoint with DNSProtocolEndpoint.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_RemoteServiceAccessPoint	DCIM_RemoteServiceAccessPoint – Section <a href="#">12.1.5</a>
Dependent	M	CIM_EnabledLogicalElement	DCIM_DNSProtocolEndpoint – Section <a href="#">12.1.2</a>
OrderOfAccess	M		It can be from 1 till 2, representing the DNS Server Addresses

# 13 DSP1010 (Record Log Profile)

## CIM Elements: Record Log Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_ElementCapabilities	Conditional	See section <a href="#">13.2.1</a>
DCIM_EnabledLogicalElementCapabilities	Optional	See section <a href="#">13.1.1</a>
DCIM_LogManagesRecord	Conditional	See section <a href="#">13.2.2</a>
DCIM_LogEntry	Optional	See section <a href="#">13.1.2</a>
DCIM_RecordLog	Mandatory	See section <a href="#">13.1.3</a>
DCIM_RegisteredProfile	Mandatory	See section <a href="#">13.1.4</a>
DCIM_UseOfLog	Mandatory	See section <a href="#">13.2.3</a>
<b>Indications</b>		
None defined in this profile		

## 13.1 Instance Providers

### 13.1.1 DCIM\_EnabledLogicalElementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EnabledLogicalElementCapabilities
EnumerateInstanceNames	Enumerates the key values of DCIM_EnabledLogicalElementCapabilities instance
GetInstance	For getting the properties of a particular DCIM_EnabledLogicalElementCapabilities instance

DCIM\_EnabledLogicalElementCapabilities represents the capabilities of the log.

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:RecordLog Capabilities"
ElementName	M	"RecordLog Capabilities"
ElementNameEditSupported	M	"FALSE"

### 13.1.2 DCIM\_LogEntry

DCIM\_LogEntry represents the log entry within the log in the managed system.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_LogEntry
EnumerateInstanceNames	Enumerates the key values of DCIM_LogEntry instance
GetInstance	For getting the properties of a particular LogEntry

Elements	Existence (M/O/C)	Element Value
InstanceID	M	Any one of the following value 1. "DCIM:RAC LOG:"<Unique Identifier> 2. "DCIM:SEL LOG:"<Unique Identifier>
LogInstanceID	O	Any one of the following value 1. <DCIM_SPCoMputerSystem.Name>" RAC Log" 2. <DCIM_SPCoMputerSystem.Name>" SEL Log"
LogName	O	Any one of the following value 1. "DCIM iDRAC Log Entry" 2. "DCIM System Event Log Entry"
RecordID	M	Any one of the following value 1. "DCIM:RAC LOG:"<Unique Identifier> 2. "DCIM:SEL LOG:"<Unique Identifier>
CreationTimestamp	M	Timestamp from the IPMI SEL structure
RecordData	O	Fetches from the PetToPem mapping structure and is available only for SEL Log.
RecordFormat	O	Format of the RecordData and is available only for SEL Log.
ElementName	M	"DCIM System Event Log Entry" or "DCIM iDRAC Log Entry"
Description	O	Event message from the backend

### 13.1.3 DCIM\_RecordLog

It represents System Event Logs. This instance will consist of multiple LogEntry instances representing actual log entry. And the association between them will be LogManagesRecord.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RecordLog

EnumerateInstanceNames	Enumerates the key values of RecordLog instance
GetInstance	For getting the properties of a particular RecordLog
InvokeMethod	For Invoking the method ClearLog()

Elements	Existence (M/O/C)	Element Value
InstanceID	M	Any one of the following values 1. "DCIM: RAC Log" 2. "DCIM: SEL Log"
MaxNumberOfRecords	M	Maximum number of records allowed
LogState	M	4 (refers to "Not Applicable")
OverwritePolicy	M	The value can be any one of the following 2 (refers to Wraps When Full), 7 (Never Overwrites)
RequestedState	M	12 (refers to 'Not Applicable')
EnabledState	M	The value can be any one of the following When SEL Log is full, EnabledState="6"(refers to Enabled but offline), If the SEL Log has free space, EnabledState="2"(refers to Enabled) This value is fetched from SEL Info using IPMI library
OperationalStatus	M	2 (refers to "Ok")
HealthState	M	5 (refers to "Ok")
ElementName	M	"Record Log "<Unique Identifier>
CurrentNumberOfRecords	M	Fetched from the SEL using IPMI library
EnabledDefault	O	2(Refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

Method	Possible Input Values
ClearLog	No input required

### 13.1.4 DCIM\_RegisteredProfile

DCIM\_RegisteredProfile identifies the Record Log Profile in order for a client to determine the conformance with the profile.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile instance
GetInstance	For getting the properties of a particular RegisteredProfile

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:RecordLog Profile"
RegisteredName	M	"Record Log"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	C	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 13.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 13.2.1 DCIM\_ElementCapabilities

DCIM\_ElementCapabilities associates an instance of DCIM\_RecordLog with an instance of DCIM\_EnabledLogicalElementCapabilities that describes the capabilities of DCIM\_RecordLog.

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_RecordLog, – Section <a href="#">13.1.3</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities - Section <a href="#">13.1.1</a>

### 13.2.2 DCIM\_LogManagesRecord

DCIM\_LogManagesRecord associates the DCIM\_RecordLog instance, which represents the log, with an instance of DCIM\_LogEntry, which represents an entry within the log.

Elements	Existence (M/O/C)	Base Class	Element Value
Log	M	CIM_Log	DCIM_RecordLog - Section <a href="#">13.1.3</a>
Record	M	CIM_RecordForLog	DCIM_LogEntry - Section <a href="#">13.1.2</a>

### 13.2.3 DCIM\_UseOfLog

DCIM\_UseOfLog associates DCIM\_RecordLog, which represents the log, with a subclass of CIM\_ManagedSystemElement, which represents the element that uses or populates the log.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_Log	DCIM_RecordLog - Section <a href="#">13.1.3</a>
Dependent	M	CIM_ManagedSystemElement	DCIM_HostComputerSystem – Section <a href="#">10.1.1</a>

# 14 DSP1027 (Power State Management Profile)

## CIM Elements: Power State Management Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_PowerManagementCapabilities	Mandatory	See sections <a href="#">14.1.2</a>
DCIM_PowerManagementService	Mandatory	See sections <a href="#">14.1.1</a>
DCIM_AssociatedPowerManagementService	Mandatory	See section <a href="#">14.2.1</a>
DCIM_ElementCapabilities	Mandatory	See section <a href="#">14.2.2</a>
DCIM_HostedService	Mandatory	See section <a href="#">14.2.3</a>
DCIM_RegisteredProfile	Mandatory	See section <a href="#">14.1.3</a>
<b>Indications</b>		
None defined in this profile		

## 14.1 Instance Providers

### 14.1.1 DCIM\_PowerManagementService

This instance corresponds to the power control of the host system through IPMI.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_PowerManagementService
EnumerateInstanceNames	Enumerate the key values of DCIM_PowerManagementService
GetInstance	For getting the properties of a single PowerManagementService
InvokeMethod	Method invocation for RequestPowerStateChange

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	Mandatory	"DCIM_HostComputerSystem"
SystemName	Mandatory	<DCIM_HostComputerSystem.Name>
CreationClassName	Mandatory	"DCIM_PowerManagementService"
Name	Mandatory	"IPMI Power Service"
ElementName	Mandatory	"Power Management Service"



Method	Possible Input Values
RequestPowerStateChange	1.PowerState = The PowerState input parameter can contain either of these values: 2, 5, 6, 8, 9 2. REF to DCIM_HostComputerSystem 3. Time – Datetime value

### 14.1.2 DCIM\_PowerManagementCapabilities

The instance corresponds to the IPMI Power Control capabilities for Host system.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_PowerManagementCapabilities.
EnumerateInstanceNames	Enumerates the key values of DCIM_PowerManagementCapabilities
GetInstance	For getting the properties of this instance.

Elements	Existence (M/O/C)	Element Value
InstanceID	Mandatory	"DCIM:Power Management Capabilities"
PowerChangeCapabilities	Mandatory	The values should have the following entries 3 (refers to "Power State Settable"), 4 (refers to "Power Cycling Supported") 5 (refers to "Timed Power On Supported") 6 (refers to "Off Hard Power Cycling Supported") 8 (refers to "Graceful Shutdown Supported")
PowerStatesSupported	Mandatory	The values should have the following entries 2 (refers to "Power On"), 5 (refers to "Power Cycle-soft off"), 6 (refers to Power Off-hard), 8 (refers to "Power Off-soft") 9 (refers to "Power Cycle (Off-Hard)")
ElementName	Mandatory	"Power Management Capabilities"

### 14.1.3 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of DCIM_RegisteredProfile instances
GetInstance	For getting the properties of DCIM_RegisteredProfile

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:PowerManagementService Profile"
RegisteredOrganization	M	2 (refers to "DMTF")
RegisteredName	M	"Power State Management"
RegisteredVersion	M	"1.0.0"
AdvertiseTypes	M	1 (refers to "Other")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

## 14.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 14.2.1 DCIM\_AssociatedPowerManagementService

This association associates PowerManagementService with ComputerSystem

Elements	Existence (M/O/C)	Base class	Element Value
ServiceProvided	M	CIM_Service	DCIM_PowerManagementService – Section <a href="#">14.1.1</a>
UseOfService	M	CIM_ManagedElement	DCIM_HostComputerSystem – Section <a href="#">10.1.1</a>
PowerState	Mandatory		Current Power state of the system
RequestedPowerState	Conditional		As lastly requested by RequestPowerStateChange() method

## 14.2.2 DCIM\_ElementCapabilities

This associates PowerManagementService with PowerManagementCapabilities.

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_PowerManagementService – Section <a href="#">14.1.1</a>
Capabilities	M	CIM_Capabilities	DCIM_PowerManagementCapabilities – Section <a href="#">14.1.2</a>

## 14.2.3 DCIM\_HostedService

HostedService associates ComputerSystem with PowerManagementService.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_PowerManagementService – Section <a href="#">14.1.1</a>

# 15 DSP1018 (Service Processor Profile)

The Service Processor refers to the BMC of the system.

### CIM Elements: Service Processor Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_SPComputerSystem	Mandatory	See section <a href="#">15.1.1</a>
DCIM_ElementCapabilities	Conditional	See section <a href="#">15.2.1</a>
DCIM_EnabledLogicalElementCapabilities	Optional	See section <a href="#">15.1.2</a>
DCIM_RegisteredProfile	Mandatory	See section <a href="#">15.1.3</a>
DCIM_TimeService	Optional	See section <a href="#">15.1.4</a>
DCIM_HostedService	Conditional	See section <a href="#">15.2.2</a>
DCIM_ServiceAffectsElement	Optional	See section <a href="#">15.2.3</a>
<b>Indications</b>		
None defined in this profile		

## 15.1 Instance Providers

### 15.1.1 DCIM\_SPComputerSystem

An instance of DCIM\_SPComputerSystem represents each service processor installed in the enclosure.

This instance corresponds to the BMC, which is assumed to be present and doesn't require any locator in SDR. So, this instance will be created if DCIM\_HostComputerSystem instance exists and this is also derived from CIM\_ComputerSystem class.

Operation	Messages
EnumerateInstances	Enumerate the instance of DCIM_SPComputerSystem which gives both the base class properties and additional properties for the BMC
EnumerateInstanceNames	Enumerates the key values of DCIM_SPComputerSystem that represents the BMC
GetInstance	For getting the properties of this instance.
ModifyInstance	Allows modifying ElementName
InvokeMethod	Supports RequestStateChange () method on BMC (Only reset is supported).

Elements	Existence (M/O/C)	Element Value
Dedicated	M	28 (refers to "Management Controller")
Name	M	"idrac:" <ServiceTag> ":" <GUID>
CreationClassName	M	"DCIM_SPComputerSystem"
ElementName	M	"SP Computer System"
PrimaryStatus	M	1 (refers to "OK")
EnabledState	M	2 (refers to "Enabled")
RequestedState	M	2
OperationalStatus	M	2 (refers to "Ok")
HealthState	M	5 (refers to "Ok")
EnabledDefault	O	2(Refers to "Enabled")
TransitioningToState	O	12(refers to "Not Applicable")

Method	Possible Input Values
RequestStateChange	RequestedState = 11 ("Reset")

Modify	Possible Input Values
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ElementName	String  Supported only if the ElementNameEditSupported property for SPComputerSystem in EnableLogicalElementCapabilities is TRUE
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### 15.1.2 DCIM\_EnabledLogicalElementCapabilities

DCIM\_EnabledLogicalElementCapabilities indicates support for managing the state of the service processor

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EnabledLogicalElementCapabilities which gives out all BMC capabilities
EnumerateInstanceNames	Enumerates the key values of BMC Capabilities
GetInstance	For getting the properties of a single BMC capability
ModifyInstance	Supports modifying, ElementNameEditSupported

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:SP Computer System Capabilities"
RequestedStatesSupported	M	11 (refers to "Reset")
ElementNameEditSupported	M	"FALSE"
ElementName	C	"SP Computer System Capabilities"

### 15.1.3 DCIM\_RegisteredProfile

DCIM\_RegisteredProfile identifies the Service Processor Profile in order for a client to determine whether an instance of DCIM\_ComputerSystem is conformant with this profile.

Operation	Messages
EnumerateInstances	Enumerate the instance of Service Processor Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of Service Processor Registered Profile

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Service Processor Profile"
RegisteredName	M	"Service Processor".
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	2 (refers to "DMTF").
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

#### 15.1.4 DCIM\_TimeService

DCIM\_RegisteredProfile identifies the Service Processor Profile in order for a client to determine whether an instance of DCIM\_ComputerSystem is conformant with this profile.

Operation	Messages
EnumerateInstances	Enumerate the instance of TimeService class
EnumerateInstanceNames	Enumerates the key values of TimeService instance
GetInstance	For getting the properties TimeService
ModifyInstance	Modifies the following properties, ElementName
InvokeMethod	Supports ManageTime () method to get Service processor time

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_TimeService"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"iDRAC Time Service"
ElementName	M	"Time Service"

Method	Possible Input Values
ManageTime	1. GetRequest = FALSE (Boolean value) 2. ManagedElement = Reference to DCIM_SPCoMputerSystem instance

## 15.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 15.2.1 DCIM\_ElementCapabilities

DCIM\_ElementCapabilities associates an instance of DCIM\_EnabledLogicalElementCapabilities with an instance of DCIM\_SPCoMputerSystem.

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_SPCoMputerSystem - Section <a href="#">15.1.1</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities – Section <a href="#">15.1.2</a>

### 15.2.2 DCIM\_HostedService

HostedService associates ComputerSystem with TimeService.

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCoMputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_TimeService – Section <a href="#">15.1.4</a>

### 15.2.3 DCIM\_ServiceAffectsElement

ServiceAffectsElement associates ComputerSystem with TimeService.

Elements	Existence (M/O/C)	Base Class	Element Value
AffectedElement	M	CIM_System	DCIM_SPCOMPUTERSYSTEM – Section <a href="#">15.1.1</a>
AffectingElement	M	CIM_Service	DCIM_TimeService – Section <a href="#">15.1.4</a>
ElementAffects	M	-	5(Refers to “Manages”)

## 16 DSP1053 (Base Metrics Profile)

### CIM Elements: Base Metrics

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_AggregationMetricDefinition	Optional	See section <a href="#">16.1.1</a>
DCIM_AggregationMetricValue	Optional	See section <a href="#">16.1.2</a>
DCIM_BaseMetricDefinition	Optional	See section <a href="#">16.1.6</a>
DCIM_BaseMetricValue	Optional	See section <a href="#">16.1.7</a>
DCIM_ConcreteDependency	Optional	Not Implemented
DCIM_ElementCapabilities	Mandatory	See section <a href="#">16.2.1</a>
DCIM_HostedService	Mandatory	See section <a href="#">16.2.2</a>
DCIM_MetricDefForME	Mandatory	See section <a href="#">16.2.3</a>
DCIM_MetricForME	Conditional	See section <a href="#">16.2.4</a>
DCIM_MetricInstance	Conditional	See section <a href="#">16.2.5</a>
DCIM_MetricService	Mandatory	See section <a href="#">16.1.3</a>
DCIM_MetricServiceCapabilities	Mandatory	See section <a href="#">16.1.4</a>
DCIM_RegisteredProfile	Mandatory	See section <a href="#">16.1.5</a>
DCIM_ServiceAffectsElement	Mandatory	See section <a href="#">16.2.6</a>
<b>Indications</b>		
None defined in this profile		



## 16.1 Instance Providers

### 16.1.1 DCIM\_AggregationMetricDefinition

DCIM\_AggregationMetricDefinition defines metrics to capture system power Consumption (Average, minimum, maximum) details.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_AggregationMetricDefinition.
EnumerateInstanceNames	Enumerates the key values of DCIM_AggregationMetricDefinition
GetInstance	For getting the properties of this instance.

Elements	Existence (M/O/C)	Element Value
BreakdownDimensions	O	Should be empty or have the value of "Time Period over which the metric is calculated"
Calculable	O	3 (refers to "Non-Summable")
ChangeType	M	5 (refers to "Simple Function")
DataType	M	13 (refers to "uint64")
GatheringType	M	3 (refers to "Periodic")
Id	M	Any one of the following value 1. "AveragePowerConsumption", 2. "MaximumPowerConsumption", 3. "MinimumPowerConsumption" 4. "SystemPeakPowerStatistics" 5. "SystemPeakAmperageStatistics", 6. "CumulativeSystemPower"
IsContinuous	O	"TRUE"
TimeScope	O	3 (refers to "Interval")
ProgrammaticUnits	M	Any one of the following value 1. "watt" 2. "ampere" 3. "watt * 10^3 / hour"
Name	M	"DCIM:System Power Consumption"
SimpleFunction	M	Any one of the following value 2 (refers to "minimum"), 3 (refers to maximum), 4 (refers to Average)

## 16.1.2 DCIM\_AggregationMetricValue

DCIM\_AggregationMetricValue conveys the actual recorded data of a metric that has been maintained.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_AggregationMetricValue which gives out all system metric values
EnumerateInstanceNames	Enumerates the key values of Metric Values
GetInstance	For getting the properties of a single metric

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:AggregationMetricValue:"<Unique Identifier> E.g.: AggregationMetricValue5
MetricDefinitionId	M	Any one of the following value 1. "AveragePowerConsumption", 2. "MaximumPowerConsumption", 3. "MinimumPowerConsumption" 4. "SystemPeakPowerStatistics" 5. "SystemPeakAmperageStatistics", 6. "CumulativeSystemPower"  Should be same as ID property of DCIM_AggregationMetricDefinition (Section <a href="#">16.1.1</a> )
MetricValue	M	Read values of last Minute, Hour, Day, Week's Average, minimum, maximum power consumption from IPMI APIs LIBIPMI_GetAvgPwrConsumpStatistics() LIBIPMI_GetMaxPwrConsumpStatistics() LIBIPMI_GetMinPwrConsumpStatistics()  Read values of system peak power in amps & watts, cumulative system power form IPMI APIs "IPMICMD_GetPowerConsumption()"
Volatile	M	"TRUE"
BreakdownDimension	O	Should be empty OR have the value of "Time Period over which the metric is calculated"
BreakdownValue	O	Should be empty OR it will have any one of the following values related to MetricDefinitionId property. "One Minute", "One Hour", "One Day", "One Week"

TimeStamp	O	Represents CurrentTime if 'MetricDefinitionId' property has a value for "AveragePowerConsumption".  For other Metrics it represents when the metric value was gathered/occured.
AggregationTimeStamp	M	DateTime
AggregationDuration	M	Time in figure

### 16.1.3 DCIM\_MetricService

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_MetricService
EnumerateInstanceNames	Enumerates the key values of Metric Service
GetInstance	For getting the properties of a metric service
InvokeMethod	Method invocation in MetricService

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	O	"DCIM_SPComputerSystem"
CreationClassName	O	"DCIM_MetricService"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"DCIM:MetricService:"<Unique Identifier>
ElementName	M	"Metric Service"

Methods	Possible Input Values
ControlMetrics	1. Subject - REF to DCIM_HostComputerSystem. 2. Definition – REF to DCIM_AggregationMetricDefiniton 3. MetricCollectionEnabled – uint16 value
ControlMetricsByClass	1. Subject - REF to DCIM_HostComputerSystem. 2. Definition – REF to DCIM_AggregationMetricDefiniton. 3. MetricCollectionEnabled – uint16 value
ShowMetricsByClass	1. Definition – REF to DCIM_AggregationMetricDefiniton or DCIM_BaseMetricDefiniton 2. Subject - REF to DCIM_HostComputerSystem
ShowMetrics	1. Definition – REF to DCIM_AggregationMetricDefiniton or DCIM_BaseMetricDefiniton 2. Subject - REF to DCIM_HostComputerSystem
GetMetricValues	1. Definition – REF to DCIM_AggregationMetricDefiniton or DCIM_BaseMetricDefiniton 2. Range – uint16 value 3. Count – uint16 value

### 16.1.4 DCIM\_MetricServiceCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_MetricServiceCapabilities which represents the physical packaging of the host system
EnumerateInstanceNames	Enumerates the key values of Metric Service Capabilities
GetInstance	For getting the properties of a metric service capability

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:MetricServiceCapabilities"
ElementName	M	"Metric Service Capabilities"
SupportedMethods	M	2 (refers to "ControlMetrics"), 3 (refers to "ControlMetricsByClass"), 4 (refers to "ShowMetric"), 5 (refers to "ShowMetricByClass"), 6 (refers to "GetMetricValues")
ControllableMetrics	M	Any of the following value "SystemPeakPowerStatistics", "SystemPeakAmperageStatistics", "CumulativeSystemPower"  Should map with AggregationMetricDefinition.ID property
MetricControlTypes	M	2(refers to "Discrete"), 2(refers to "Discrete"), 2(refers to "Discrete")
ControllableManagedElements	M	"DCIM_HostComputerSystem"
ManagedElementControlTypes	M	2(refers to "Discrete")

### 16.1.5 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile which represents the physical packaging of the host system
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile
GetInstance	For getting the properties of a RegisteredProfile

Elements	Existence (M/O/C)	Element Value
InstanceID	O	"DCIM:Base Metrics Profile"
RegisteredOrganization	O	2 (refers to "DMTF")
RegisteredName	M	"Base Metrics"
RegisteredVersion	M	"1.0.0"
AdvertiseTypes	M	1 (refers to "Other")
OtherRegisteredOrganization	C	Not Applicable Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 16.1.6 DCIM\_BaseMetricDefinition

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile which represents the physical packaging of the host system
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile
GetInstance	For getting the properties of a RegisteredProfile

Elements	Existence (M/O/C)	Element Value
BreakdownDimensions	O	-
Calculable	O	3 (refers to "Non-Summable")
ChangeType	M	4 (refers to "Gauge")
DataType	M	13 (refers to "uint64")
GatheringType	M	4 (refers to "OnRequest")
Id	M	Any one of the following value : "CurrentSystemBoardMonitorCurrent" "CurrentSystemPowerConsumption"
IsContinuous	O	"TRUE"
TimeScope	O	2 (refers to "Point")
ProgrammaticUnits	M	Any one of the following value : "ampere" "watt"
Name	M	Any one of the following value, "DCIM:System Power Consumption" "DCIM:System Input Power"

### 16.1.7 DCIM\_BaseMetricValue

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_BaseMetricValue which gives out all system metric values
EnumerateInstanceNames	Enumerates the key values of Metric Values
GetInstance	For getting the properties of a single metric

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:BaseMetricValue:"<Unique Identifier>"
MetricDefinitionId	M	Any one of the following value "CurrentSystemBoardMonitorCurrent" "CurrentSystemPowerConsumption"  Should be same as ID property of DCIM_BaseMetricDefinition (Section <a href="#">19.1.6</a> )
MetricValue	M	Read current system power consumption and current Input Current value using IPMI API.  IPMICMD_GetInstPowerConsumption()
Volatile	M	"TRUE"
TimeStamp	O	Current Time
BreakdownDimension	O	-
BreakdownValue	O	-

### 16.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 16.2.1 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_MetricService – Section <a href="#">16.1.3</a>
Capabilities	M	CIM_Capabilities	DCIM_MetricServiceCapabilities - Section <a href="#">16.1.4</a>

### 16.2.2 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_MetricService – Section <a href="#">16.1.3</a>

### 16.2.3 DCIM\_MetricDefForME

Elements	Existence (M/O/C)	Base class	Element Value
Antecedent	M	CIM_ManagedElement	DCIM_HostComputerSystem Section <a href="#">10.1.1</a>
Dependent	M	CIM_BaseMetricDefinition	DCIM_AggregationMetricDefinition - Section <a href="#">16.1.1</a>
MetricCollectionEnabled	M	-	2(Enabled), 3(Disabled)

### 16.2.4 DCIM\_MetricForME

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ManagedElement	DCIM_HostComputerSystem Section <a href="#">10.1.1</a>
Dependent	M	CIM_BaseMetricValue	DCIM_AggregationMetricValue – Section <a href="#">16.1.2</a>

### 16.2.5 DCIM\_MetricInstance

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_BaseMetricDefinition	DCIM_AggregationMetricDefinition – Section <a href="#">16.1.1</a>
Dependent	M	CIM_BaseMetricValue	DCIM_AggregationMetricValue – Section <a href="#">16.1.2</a>

## 16.2.6 DCIM\_ServiceAffectsElement

Elements	Existence (M/O/C)	Base class	Element Value
AffectedElement	M	CIM_ManagedElement	DCIM_AggregationMetricDefinition - Section <a href="#">16.1.1</a>
AffectingElement	M	CIM_Service	DCIM_MetricService - Section <a href="#">16.1.3</a>
ElementAffects	M	-	5(Manages)

## 17 Ethernet Port Profile

### CIM Elements: Ethernet Port

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_EthernetPort	Mandatory	See section <a href="#">17.1.1</a>
DCIM_ElementCapabilities	Conditional	See section <a href="#">17.2.1</a>
DCIM_HostedService	Conditional	See section <a href="#">17.2.2</a>
DCIM_NetworkPortConfigurationService	Optional	See section <a href="#">17.1.2</a>
DCIM_ServiceAffectsElement	Conditional	See section <a href="#">17.2.3</a>
DCIM_RegisteredProfile	Mandatory	See section <a href="#">17.1.3</a>
DCIM_LANEEndpoint	Mandatory	See Section <a href="#">17.1.4</a>
DCIM_EnabledLogicalElementCapabilities	Mandatory	See section <a href="#">17.1.6</a>
DCIM_PortController	Optional	See Section <a href="#">17.1.5</a>
<b>Indications</b>		
None defined in this profile		

### 17.1 Instance Providers

#### 17.1.1 DCIM\_EthernetPort

DCIM\_EthernetPort represents the hardware and device aspects of an <sup>ii</sup>Ethernet interface.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EthernetPort



EnumerateInstanceNames	Enumerates the key values of DCIM_EthernetPort.
GetInstance	For getting the properties of this instance.

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCOMPUTERSYSTEM"
CreationClassName	M	"DCIM_EthernetPort"
SystemName	M	<DCIM_SPCOMPUTERSYSTEM.Name>
DeviceID	M	"EthernetPort1"
ElementName	M	"Ethernet Port"
Name	M	"eth0"
PortType	M	1 (refers to "10-100BaseT")
NetworkAddresses	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.mac_cfg.BurnedMAC
Capabilities	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.wolsupported
EnabledCapabilities	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.woloopts
LinkTechnology	M	2 (refers to "Ethernet")
PermanentAddress	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.mac_cfg.BurnedMAC
EnabledState	M	Got from libami nwGetNWInterfaceStatus(). If the function returns NW_INTERFACE_ENABLE, EnabledState is 2 and if it returns NW_INTERFACE_DISABLE, EnabledState is 3. Else it is 0
Speed	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.speed
MaxSpeed	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.speed
RequestedSpeed	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.speed
RequestedState	M	Same as EnabledState
FullDuplex	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.duplex
AutoSense	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.autoneg
ActiveMaximumTransmissionUnit	M	Got from libami nwGetNWExtEthCfg(cfg) cfg.eth_cfg.maxtxpkt

### 17.1.2 DCIM\_NetworkPortConfigurationService

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_NetworkPortConfigurationService
EnumerateInstanceNames	Enumerates the key values of NetworkPortConfigurationService
GetInstance	For getting the properties of a NetworkPortConfigurationService

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_NetworkPortConfigurationService"
SystemName	M	<DCIM_SPComputerSystem.Name>
EnabledState	C	5
RequestedState	C	12
Name	M	"NetworkPortConfigurationService1"

### 17.1.3 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile
GetInstance	For getting the properties of a RegisteredProfile

Elements	Existence (M/O/C)	Element Value
InstanceID	O	"DCIM:Ethernet Port Profile"
RegisteredOrganization	O	2 (refers to "DMTF") for InstanceID="DCIM:Ethernet Port Profile"
RegisteredName	M	"Ethernet Port"
RegisteredVersion	M	"1.0.0"
AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

### 17.1.4 DCIM\_LANEndpoint

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_LANEndpoint
EnumerateInstanceNames	Enumerates the key values of DCIM_LANEndpoint
GetInstance	For getting the properties of a DCIM_LANEndpoint

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
CreationClassName	M	"DCIM_LANEndpoint"
SystemName	M	<DCIM_SPCoMputerSystem.Name>
Name	M	Obtained from libami nwGetAllNwCfg()
NameFormat	M	"LANEndpoint-[MACAddress]"
ProtocolIFType	M	6 (refers to "Ethernet CSMA/CD")
MACAddress	M	This property shall be formatted as 12 unseparated caseinsensitive hex digits.
RequestedState	M	12 (refers to "Not Applicable")
EnabledState	M	Can be any one of the following value 2 (refers to "Enabled"), 3 (refers to "Disabled")
ElementName	M	"LAN Endpoint "<Unique Identifier>

### 17.1.5 DCIM\_PortController

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_LANEndpoint
EnumerateInstanceNames	Enumerates the key values of DCIM_LANEndpoint
GetInstance	For getting the properties of a DCIM_LANEndpoint

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
CreationClassName	M	"DCIM_PortController"
SystemName	M	<DCIM_SPCoMputerSystem.Name>
Name	M	"PortController1"
ControllerType	M	2 (refers to "Ethernet")
ProtocolSupported	M	2
MaxNumberControlled	M	0
DeviceID	M	PortController-1.0.0
RequestedState	M	12 (refers to "Not Applicable")
EnabledState	M	5 (refers to "Not Applicable")
ElementName	M	"Port Controller"

### 17.1.6 DCIM\_EnabledLogicalElementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EnabledLogicalElementCapabilities
EnumerateInstanceNames	Enumerates the key values of EnabledLogicalElementCapabilities
GetInstance	For getting the properties of this class.

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Ethernet Port Capabilities"
RequestedStatesSupported	M	2,3,11
ElementName	M	"Ethernet Port Capabilities"
ElementNameEditSupported	M	"FALSE"

## 17.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 17.2.1 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_EthernetPort - Section <a href="#">17.1.1</a> DCIM_PortController – Section <a href="#">17.1.5</a> DCIM_LANEndpoint – Section <a href="#">17.1.4</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities – Section <a href="#">17.1.6</a>

## 17.2.2 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_NetworkPortConfigurationService – Section <a href="#">17.1.2</a>

## 17.2.3 DCIM\_ServiceAffectsElement

Elements	Existence (M/O/C)	Base class	Element Value
AffectedElement	M	CIM_ManagedElement	DCIM_EthernetPort - Section <a href="#">17.1.1</a>
AffectingElement	M	CIM_Service	DCIM_NetworkPortConfigurationService - Section <a href="#">17.1.2</a>
ElementAffects	M	-	5(Manages)

# 18 DELL Multi Factor Authentication Profile(refers to DMTF Simple Identity Profile)

### CIM Elements: Multi factor Authentication

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_OEMMFAAccount	Optional	See section <a href="#">18.1.1</a>
DCIM_OEMMFAManagementcapabilities	Mandatory	See section <a href="#">18.1.2</a>
DCIM_OEMMFAManagementService	Mandatory	See section <a href="#">18.1.3</a>
DCIM_AccountOnSystem	Conditional	See section <a href="#">18.2.1</a>
DCIM_AccountSettingData	Optional	Not Implemented(Has been removed on request from Dell)
DCIM_AssignedIdentity	Conditional	See section <a href="#">18.2.2</a>
DCIM_ElementCapabilities	Mandatory	See section <a href="#">18.2.3</a>

DCIM_ElementSettingData	Optional	Not Implemented
DCIM_EnabledLogicalElementCapabilities	Optional	See section <a href="#">18.1.4</a>
DCIM_Group	Optional	Not Implemented (No Group Concept in the re-vamped SIM).
DCIM_HostedService	Mandatory	See section <a href="#">18.2.4</a>
DCIM_Identity	Optional	See section <a href="#">18.1.5</a>
DCIM_IdentityContext	Optional	See section <a href="#">18.2.5</a>
DCIM_MemberOfCollection	Conditional	Not Implemented
DCIM_OwningCollectionElement	Conditional	See section <a href="#">18.2.6</a>
DCIM_ServiceAffectsElement	Conditional	See section <a href="#">18.2.7</a>
DCIM_SettingsDefineCapabilities	Optional	Not Implemented
DCIM_RegisteredProfile	Mandatory	See section <a href="#">18.1.6</a>
<b>Indications</b>		
None defined in this profile		

## 18.1 Instance Providers

### 18.1.1 DCIM\_OEMMFAAccount

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_OEMMFAAccount
EnumerateInstanceNames	Enumerates the key values of DCIM_OEMMFAAccount
GetInstance	For getting the properties of this instance.
ModifyInstance	Supports modifying User Id and UserPassword

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_OEMMFAAccount"
SystemName	M	Value of DCIM_SPComputerSystem.Name
Name	M	"DCIM User <Unique Identifier ranges from 1 to 16>"

UserID	M	For first two instances this value will be "anonymous" & "root".  From 3rd instance, this value will be obtained until its get configured in iDRAC. Till then this value will be empty. When a user like "testuser" is configured, then this value changes to "testuser".
UserPassword	C	This Value will always be empty. Even after configuration it will be empty, may be one can try to login with Web Page or give a winrm request with the newly created user & Passwd to chk if it is valid user & password  But before attempting Web page login minimum privilege "log in to iDRAC" has to be set.
OrganizationName	M	"DCIM"
ElementName	M	"DCIM MFA Account <Unique Identifier ranges from 1 to 16>"
PasswordHistoryDepth	O	0
MaximumSuccessiveLoginFailures	O	0
RequestedState	M	For first two instances this value will be 2 (refers to "Enabled").  For other instances this value will be 3 (refers to "Disabled").(Until a user is configured)
EnabledState	M	For first two instances this value will be 2 (refers to "Enabled").  For other instances this value will be 3 (refers to "Disabled").(Until a user is configured)
TransitioningToState	O	12 ( refers to "Not Applicable")
EnabledDefault	O	2

Modify Instances	Possible Input Values
UserID	String
UserPassword	String

### 18.1.2 DCIM\_OEMMFAMangementCapabilities

DCIM\_OEMMFAMangementCapabilities indicates support for managing the account with which the service is associated and indicates supported operations.

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_OEMMFAMangementCapabilities
EnumerateInstanceNames	Enumerates the key values of DCIM_OEMMFAMangementCapabilities
GetInstance	For getting the properties of a single DCIM_OEMMFAMangementCapabilities

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:MFA Management Capabilities"
ElementNameEditSupported	M	"TRUE"
MaxElementNameLen	C	64
ElementName	M	"MFA Management Capabilities"
RequestedStatesSupported[]	M	2,3,11
OperationsSupported	M	2,3,4

### 18.1.3 DCIM\_OEMMFAMangementService

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_OEMMFAMangementService
EnumerateInstanceNames	Enumerates the key values of OEMMFAMangementService
GetInstance	For getting the properties of a OEMMFAMangementService
ModifyInstance	Supports modifying ElementName

Elements	Existence (M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
CreationClassName	M	"DCIM_OEMMFAMangementService"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"MFA Management Service"
EnabledState	M	2
ElementName	M	"MFA Management Service"
TransitioningToState	O	12 (refers to "Not Applicable")
EnabledDefault	O	2
RequestedState	M	5 (refers to "No Change")



Modify	Possible Input Values
ElementName	String  Supported only if the ElementNameEditSupported property for OEMMFAManagementService in OEMMFAManagementCapabilities is TRUE

#### 18.1.4 DCIM\_EnabledLogicalElementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_EnabledLogicalElementCapabilities
EnumerateInstanceNames	Enumerates the key values of EnabledLogicalElementCapabilities
GetInstance	For getting the properties of this class.
ModifyInstance	Supports modifying, ElementNameEditSupported

Elements	Existence (M/O/C)	Element Value
InstanceID	M	"DCIM:Account Capabilities:1"
RequestedStatesSupported	M	2,3
ElementName	M	"Account Capabilities"
ElementNameEditSupported	M	"FALSE"

#### 18.1.5 DCIM\_Identity

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Identity
EnumerateInstanceNames	Enumerates the key values of Identity
GetInstance	For getting the properties of this class.

Elements	Existence (M/O/C)	Element Value
InstanceID	M	Any one of the following value: "DCIM:LocalAccount:Identity: <Unique Identifier ranges from 1 to 16>" "DCIM:LANUser:Identity: <Unique Identifier ranges from 1 to 16>" "DCIM:SerialUser:Identity: <Unique Identifier ranges from 1 to 16>" "DCIM:CLP:Identity: <Unique Identifier ranges from 1 to 16>" "DCIM:ADGroup:identity: <Unique Identifier ranges from 1 to 5>"
ElementName	M	Any one of the following value: "DCIM Account Identity <Unique Identifier ranges from 1 to 16>" "DCIM LAN USER Identity <Unique Identifier ranges from 1 to 16>" "DCIM Serial User Identity <Unique Identifier ranges from 1 to 16>" "DCIM CLP Identity <Unique Identifier ranges from 1 to 16>" "DCIM Group identity <Unique Identifier ranges from 1 to 5>"
CurrentlyAuthenticated	O	FALSE

### 18.1.6 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerates the key values of RegisteredProfile
GetInstance	For getting the properties of a RegisteredProfile

Elements	Existence (M/O/C)	Element Value
InstanceID	O	"DCIM:Simple Identity Profile"
RegisteredOrganization	O	2 (refers to "DMTF")
RegisteredName	M	"Simple identity"
RegisteredVersion	M	"1.0.0"

AdvertiseTypes	M	1 (refers to "Other")
AdvertiseTypeDescriptions	C	"WS-Identify"

## 18.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 18.2.1 DCIM\_AccountOnSystem

Elements	Existence (M/O/C)	Base Class	Element Value
GroupComponent	M	CIM_System	DCIM_SPCComputerSystem– Section <a href="#">15.1.1</a>
PartComponent	M	CIM_Account	DCIM_OEMMFAccount - Section <a href="#">18.1.1</a>

### 18.2.2 DCIM\_AssignedIdentity

Elements	Existence (M/O/C)	Base Class	Element Value
IdentityInfo	M	CIM_Identity	DCIM_Identity - Section <a href="#">18.1.5</a>
ManagedElement	M	CIM_ManagedElement	DCIM_OEMMFAccount - Section <a href="#">18.1.1</a>

### 18.2.3 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_ManagedElement	DCIM_OEMMFAccount – Section <a href="#">18.1.1</a> DCIM_OEMMFAManagementService – Section <a href="#">18.1.3</a>

Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities - Section <a href="#">18.1.4</a> DCIM_OEMMFAMangementCapabilities - Section <a href="#">18.1.2</a>
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#### 18.2.4 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPComputerSystem - Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_OEMMFAMangementService - Section <a href="#">18.1.3</a>

#### 18.2.5 DCIM\_IdentityContext

Elements	Existence (M/O/C)	Base Class	Element Value
ElementInContext	M	CIM_Identity	DCIM_Identity - Section <a href="#">18.1.5</a>
ElementProvidingContext	M	CIM_Service	DCIM_ProtocolService - Section <a href="#">8.1.6</a>

#### 18.2.6 DCIM\_OwningCollectionElement

Elements	Existence (M/O/C)	Base Class	Element Value
OwningElement	M	CIM_ManagedElement	DCIM_SPComputerSystem - Section <a href="#">15.1.1</a>
OwnedElement	M	CIM_Collection	DCIM_OEMActiveDirectoryGroup - Section <a href="#">20.1.3</a>

#### 18.2.7 DCIM\_ServiceAffectsElement

Elements	Existence (M/O/C)	Base class	Element Value
AffectedElement	M	CIM_ManagedElement	DCIM_Identity - Section <a href="#">18.1.5</a>
AffectingElement	M	CIM_Service	DCIM_OEMMFAMangementService - Section <a href="#">18.1.3</a>
ElementAffects	M	-	5(Manages)

# 19 DELL Virtual Media Profile

## CIM Elements: Virtual Media Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_RegisteredProfile	Mandatory	See section <a href="#">19.1.1</a>
DCIM_BindsTo	Conditional	Not Implemented
CIM_ElementCapabilities	Conditional	See section <a href="#">19.2.1</a>
CIM_ElementCapabilities	Conditional	See section <a href="#">19.2.2</a>
CIM_EnabledLogicalElementCapabilities	Optional	See section <a href="#">19.1.2</a>
DCIM_HostedAccessPoint	Mandatory	See section <a href="#">19.2.3</a>
DCIM_HostedService	Mandatory	See section <a href="#">19.2.4</a>
DCIM_LogicalIdentity	Conditional	Not implemented
DCIM_RemoteAccessAvailableToElement	Conditional	See section <a href="#">19.2.5</a>
DCIM_RemoteServiceAccessPoint	Conditional	See section <a href="#">19.1.3</a>
DCIM_SAPAvailableForElement	Mandatory	See section <a href="#">19.2.6</a>
DCIM_SAPAvailableForElement	Optional	See section <a href="#">19.2.7</a>
DCIM_ServiceAccessBySAP	Mandatory	See section <a href="#">19.2.8</a>
DCIM_ServiceAffectsElement	Mandatory	See section <a href="#">19.2.9</a>
DCIM_ServiceAffectsElement	Optional	See section <a href="#">19.2.10</a>
DCIM_USBDevice	Mandatory	See section <a href="#">19.1.4</a>
DCIM_USBRedirectionCapabilities	Mandatory	See section <a href="#">19.1.5</a>
DCIM_USBRedirectionSAP	Mandatory	See section <a href="#">19.1.6</a>
DCIM_OEMVirtualMediaService	Mandatory	See section <a href="#">19.1.7</a>
DCIM_TCPProtocolEndpoint	Mandatory	See section <a href="#">8.1.9</a>
<b>Indications</b>		
None defined in this profile		

## 19.1 Instance Providers

### 19.1.1 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the instances of Virtual Media Registered Profile
EnumerateInstanceNames	Enumerates the key values of Registered Profile instance
GetInstance	For getting the properties of Virtual Media Registered Profile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:OEM Virtual Media Profile" , "DCIM:USB Redirection Profile"
RegisteredName	M	"Virtual Media" , "USB Redirection"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	1 (refers to "Other"). 2 (refers to "DMTF")
OtherRegisteredOrganization	M	"DCIM" Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to Other)
AdvertiseTypeDescriptions	C	"WS-Identify"

### 19.1.2 DCIM\_EnabledLogicalElementCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of Capabilities instance which represents the physical packaging of the host system
EnumerateInstanceNames	Enumerates the key values of Capabilities instance
GetInstance	For getting the properties of a capabilities instance
ModifyInstance	Supports modifying, ElementNameEditSupported

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:USB Redirection SAP Capabilities:"<Unique identifier>
ElementName	M	"USB Redirection SAP Capabilities " <Unique identifier >
RequestedStatesSupported	M	2 (refers to "Enabled") 3 (refers to "Disabled")
ElementNameEditSupported	M	FALSE

### 19.1.3 DCIM\_RemoteServiceAccessPoint

Operation	Messages
EnumerateInstances	Enumerate the instances of RemoteServiceAccessPoint
EnumerateInstanceNames	Enumerates the key values of RemoteServiceAccessPoint
GetInstance	For getting the properties of RemoteServiceAccessPoint

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"Virtual Media"
CreationClassName	M	"DCIM_RemoteServiceAccessPoint"
AccessContext	M	1 (refers to "Other")
AccessInfo	M	Initial value will be "0.0.0.0" It will refer to <IP Address> when USB Redirection occurs.
InfoFormat	M	3 (refers to "IPv4 Address")
ElementName	M	"Virtual Media"
OtherAccessContext	M	"Virtual Media Destination"

### 19.1.4 DCIM\_USBDevice

Operation	Messages
EnumerateInstances	Enumerate the instances of USBDevices
EnumerateInstanceNames	Enumerates the key values of USBDevices
GetInstance	For getting the properties of USBDevices

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCoMputerSystem"
CreationClassName	M	"DCIM_USBDevice"
SystemName	M	<SPCoMputerSystem.Name>
DeviceID	M	"DCIM:USBDevice: "<DeviceCount>
USBVersion	O	513 (decimal equivalent of 0x201)
ClassCode	M	8 ( Mass storage)
SubClassCode	O	6
CommandTimeout	M	Value of 0 represented in datetime format

### 19.1.5 DCIM\_USBRedirectionCapabilities

Operation	Messages
EnumerateInstances	Enumerate the instances of Capabilities instance which represents the physical packaging of the host system
EnumerateInstanceNames	Enumerates the key values of Capabilities instance
GetInstance	For getting the properties of a USBRedirection capabilities instance

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:USB Redirection Capabilities"
ElementNameEditSupported	M	"FALSE"
MaxElementNameLength	C	0
USBVersionsSupported[]	M	513 (decimal equivalent of 0x201)
ClassesSupported[]	M	8
SubClassesSupported[]	O	9
MaxDevicesSupported[]	M	2
SAPCapabilitiesSupported[]	M	2,32768
RequestedStatesSupportedForCreatedSAP	C	0
InfoFormatsSupported	C	1
SingleClassPerSAP	M	TRUE
MaxDevicesPerSAP	M	2
ConnectionModesSupported[]	M	2
RequestedStatesSupported[]	M	-



### 19.1.6 DCIM\_USBRedirectionSAP

Operation	Messages
EnumerateInstances	Enumerate the instances of USBRedirectionSAP
EnumerateInstanceNames	Enumerates the key values of USBRedirectionSAP instance
GetInstance	For getting the properties of USBRedirectionSAP instance
InvokeMethod	Method invocation in USBRedirectionSAP

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPCComputerSystem"
SystemName	M	<DCIM_SPCComputerSystem.Name>
Name	M	"DCIM:VMSAP:"<Unique Identifier>
CreationClassName	M	"DCIM_USBRedirectionSAP"
ElementName	C	"DCIM Virtual Media Session"
EnabledState	M	Any one of the following value 2( refers to "Enabled" ) 6 (refers to "Enabled but offline")
RequestedState	M	5
ConnectionMode	O	2
ResetTimeout	M	00000000000000.000000:000
SessionTimeout	M	00000000000000.000000:000

Methods	Possible Input Values
RequestStateChange	RequestedState = 2 ("Enabled") or RequestedState = 3 ("Disabled")

### 19.1.7 DCIM\_OEMVirtualMediaService

Operation	Messages
EnumerateInstances	Enumerate the instances of Virtual Media Service
EnumerateInstanceNames	Enumerates the key values of Virtual Media Service instance
GetInstance	For getting the properties of Virtual Media Service instance
InvokeMethod	Method invocation of Virtual Media Service

Elements	Existence(M/O/C)	Element Value
SystemCreationClassName	M	"DCIM_SPComputerSystem"
SystemName	M	<DCIM_SPComputerSystem.Name>
Name	M	"DCIM:vmSvc:1"
CreationClassName	M	"DCIM_OEMVirtualMediaService"
ElementName	M	"DCIM Virtual Media Service"
MaxCurrentEnabledSAPs	M	1
EnabledState	M	3
RedirectionServiceType	M	4 (refers to "USB")
RequestedState	M	3
FlashKeyEnabled	O	"FALSE"
FloppyEmulation	O	"FALSE"
SingleBoot	O	"FALSE"

Methods	Possible Input Values
RequestStateChange	RequestedState = 2 ("Enabled") or RequestedState = 3 ("Disabled")
ResetFlashKeySize	-

## 19.2 Association Providers

Operations Supported
EnumerateInstances
EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 19.2.1 DCIM\_ElementCapabilities – DCIM\_OEMVirtualMediaService with DCIM\_USBRedirectionCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	DCIM_ManagedElement	DCIM_OEMVirtualMediaService Section <a href="#">19.1.7</a>
Capabilities	M	DCIM_RedirectionServiceCapabilities	DCIM_USBRedirectionCapabilities – Section <a href="#">19.1.5</a>

### 19.2.2 DCIM\_ElementCapabilities – DCIM\_USBRedirectionSAP with DCIM\_EnabledLogicalElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	DCIM_ManagedElement	DCIM_USBRedirectionSAP Section <a href="#">19.1.6</a>
Capabilities	M	CIM_Capabilities	DCIM_EnabledLogicalElementCapabilities – Section <a href="#">19.1.2</a>

### 19.2.3 DCIM\_HostedAccessPoint

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCoMputerSystem Section <a href="#">15.1.1</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_USBRedirectionSAP – Section <a href="#">19.1.6</a>

### 19.2.4 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCoMputerSystem Section <a href="#">15.1.1</a>
Dependent	M	DCIM_USBRedirectionService	DCIM_OEMVirtualMediaService – Section <a href="#">19.1.7</a>

### 19.2.5 DCIM\_RemoteAccessAvailableToElement

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_ServiceAccessPoint	DCIM_RemoteServiceAccessPoint - Section <a href="#">19.1.3</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_USBRedirectionSAP – Section <a href="#">19.1.6</a>

### 19.2.6 DCIM\_SAPAvailableForElement – DCIM\_USBRedirectionSAP to DCIM\_SPComputerSystem

Elements	Existence (M/O/C)	Base Class	Element Value
AvailabileSAP	M	CIM_ServiceAccessPoint	DCIM_USBRedirectionSAP Section <a href="#">19.1.6</a>
ManagedElement	M	CIM_System	DCIM_SPComputerSystem – Section <a href="#">15.1.1</a>

### 19.2.7 DCIM\_SAPAvailableForElement - DCIM\_USBRedirectionSAP to DCIM\_USBDevice

Elements	Existence (M/O/C)	Base Class	Element Value
AvailabileSAP	M	CIM_ServiceAccessPoint	DCIM_USBRedirectionSAP Section <a href="#">19.1.6</a>
ManagedElement	M	CIM_LogicalDevice	DCIM_USBDevice – Section <a href="#">19.1.4</a>

### 19.2.8 DCIM\_ServiceAccessBySAP

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	DCIM_USBRedirectionService	DCIM_OEMVirtualMediaService Section <a href="#">19.1.7</a>
Dependent	M	CIM_ServiceAccessPoint	DCIM_USBRedirectionSAP – Section <a href="#">19.1.6</a>

## 19.2.9 DCIM\_ServiceAffectsElement – DCM\_OEMVirtualMediaService to DCIM\_SPCoMputerSystem

Elements	Existence (M/O/C)	Base Class	Element Value
AffectingElement	M	DCIM_USBRedirectionService	DCIM_OEMVirtualMediaService Section <a href="#">19.1.7</a>
AffectedElement	M	CIM_System	DCIM_SPCoMputerSystem – Section <a href="#">15.1.1</a>

## 19.2.10 DCIM\_ServiceAffectsElement – DCM\_OEMVirtualMediaService to DCIM\_USBDevice

Elements	Existence (M/O/C)	Base Class	Element Value
AffectingElement	M	DCIM_USBRedirectionService	DCIM_OEMVirtualMediaService Section <a href="#">19.1.7</a>
AffectedElement	M	CIM_LogicalDevice	DCIM_USBDevice – Section <a href="#">19.1.4</a>

# 20 Active Directory Client Profile

CIM Elements:Active Directory Client Profile

Element Name	Requirement	Description
<b>Classes</b>		
DCIM_ElementCapabilities	Conditional	See section <a href="#">20.2.1</a>
DCIM_OEMActiveDirectoryCapabilities	Mandatory	See sections <a href="#">20.1.1</a>
DCIM_HostedService	Mandatory	See section <a href="#">20.2.2</a>
DCIM_ServiceAffectsElement	Conditional	See section <a href="#">20.2.3</a> <b>Error! Reference source not found.</b>
DCIM_OEMActiveDirectoryGroup	Conditional	See section <a href="#">20.1.3</a> <b>Error! Reference source not found.</b>
DCIM_OEMActiveDirectoryService	Mandatory	See sections <a href="#">20.1.20</a>
DCIM_RegisteredProfile	Mandatory	See section <a href="#">20.1.4</a>
DCIM_Identity	Optional	See section <a href="#">20.1.5</a>
DCIM_Role	Optional	See section <a href="#">20.1.6</a>
DCIM_Privilege	Optional	See section <a href="#">20.1.7</a>
<b>Indications</b>		
None defined in this profile		

## 20.1 Instance Providers

### 20.1.1 DCIM\_OEMActiveDirectoryCapabilities

Operation	Messages
EnumerateInstances	Enumerate the Instances of DCIM_OEMActiveDirectory Capabilities
EnumerateInstanceNames	Enumerate the Key Values of DCIM_OEMActiveDirectory Capabilities
Associators	Gets the associated Classes to the requested Class.
AssociatorNames	Gets the keyproperties of the associated classes to the requested Class
References	Gets the association class for the requested class.
ReferenceNames	Gets the keyproeprties of the assocaiton class of the requested class.

Properties	Existence(M/O/C)	Notes
InstanceID	Mandatory	"DCIM:ActiveDirectoryCapabilities"
RequestedStatesSupported	Mandatory	2 ( Refers to "Enabled"), 3 (Refers to "Disabled")
ElementNameEditSupported	Mandatory	FALSE
MaxElementNameLen	Conditional	<b>Error! Reference source not found.0</b>
Methodology	Mandatory	4
NumberOfDomainControllersSupported	Mandatory	3
NumberOfGlobalCatalogsSupported	Mandatory	3

## 20.1.2 DCIM\_OEMActiveDirectoryService

Operation	Messages
EnumerateInstances	Enumerate the Instances of DCIM_OEMActiveDirectory Capabilities
EnumerateInstanceNames	Enumerate the Key Values of DCIM_OEMActiveDirectory Capabilities
Associators	Gets the associated Classes to the requested Class.
AssociatorNames	Gets the keyproperties of the associated classes to the requested Class
References	Gets the association class for the requested class.
ModifyInstance	Modifies the modifyable property as requested.
ReferenceNames	Gets the keyproperties of the assocaiton class of the requested class.

Properties and Methods	Existence(M/O/C)	ElementValue
SystemCreationClassName	Mandatory	"DCIM_SPComputerSystem"
CreationClassName	Mandatory	"DCIM_OEMActiveDirectoryService"
SystemName	Mandatory	Value of DCIM_SPComputerSystem.Name
Name	Mandatory	"Active Directory Service"
RequestedState	Mandatory	0
EnabledState	Mandatory	0
ElementName	Mandatory	"DCIM Active Directory Service".
SchemaType	Mandatory	1(Refers "Extended) or 2(Refers to "Standard")
RootDomain	Conditional	<RootDomain that is configured>(till that it will be empty)
DeviceObjectDomain	Mandatory	<DomainName that is configured>(till that it will be empty)
DeviceObjectName	Mandatory	<GroupName that is configured>(till that it will be empty)>
AuthTimeout	Mandatory	Timeout period in dateTime format
DomainControllerAddresses	Conditional	<AdServer Address that is configured>(till that it will be empty)
GlobalCatalogAddresses	Optional	<AdServer Address>only when schemtype is standard schema(2)
AutomaticTrustEnabled	Conditional	TRUE/FALSE

Modify	Possible Input Values
ElementName	String  Supported only if the

	ElementNameEditSupported property for OEMActiveDirectoryService in OEMActiveDirectoryCapabilities is TRUE
GlobalCatalogAddresses	String  Supported only if the value for the property SchemaType is 1
DomainControllerAddresses	String
EnabledState	2 (Refers to "Enabled") 3 (Refers to "Disabled")
DeviceObjectName	String
SchemaType	1 (Refers "Extended") 2 (Refers to "Standard")

Invoke	Possible Input Values
RequestStateChange( )	2 (Refers to "Enabled") 3 (Refers to "Disabled")

### 20.1.3 DCIM\_OEMActiveDirectoryGroup

Operation	Messages
EnumerateInstances	Enumerate the Instances of DCIM_OEMActiveDirectoryGroup
EnumerateInstanceNames	Enumerate the Key Values of DCIM_OEMActiveDirectoryGroup
Associators	Gets the associated Classes to the requested Class.
AssociatorNames	Gets the keyproperties of the associated classes to the requested Class
References	Gets the association class for the requested class.
ReferenceNames	Gets the keyproeprties of the assocaiton class of the requested class.

Elements	Requirement	Notes
CreationClassName	Mandatory	"DCIM_OEMActiveDirectoryGroup"
Name	Mandatory	"DCIM Group "<Unique identifier>
ElementName	Mandatory	<Group name as configured >(till then it will be empty)



Elements	Requirement	Notes
DeviceObjectDomain	Mandatory	<Domain Name as configured>(till then it will be empty)

Modify	Possible Input Values
ElementName	String
DeviceObjectDomain	String

#### 20.1.4 DCIM\_RegisteredProfile

Operation	Messages
EnumerateInstances	Enumerate the Instances of DCIM_RegisteredProfile
EnumerateInstanceNames	Enumerate the Key Values of DCIM_RegisteredProfile

Elements	Existence(M/O/C)	Element Value
InstanceID	M	"DCIM:Active Directory Client Profile" ,
RegisteredName	M	"Active Directory Client"
RegisteredVersion	M	"1.0.0"
RegisteredOrganization	M	1 (refers to "Other").
OtherRegisteredOrganization	M	"DCIM" Note : This property contains valid data only when 'RegisteredOrganization' property contains value 1 (refers to "Other")
AdvertiseTypes	M	1 (refers to Other)
AdvertiseTypeDescriptions	C	"WS-Identify"

#### 20.1.5 DCIM\_Identity

Operation	Messages
EnumerateInstances	Enumerate the Instances of DCIM_OEMActiveDirectoryGroup
EnumerateInstanceNames	Enumerate the Key Values of DCIM_OEMActiveDirectoryGroup
Associators	Gets the associated Classes to the requested Class.
AssociatorNames	Gets the keyproperties of the associated classes to the requested Class
References	Gets the association class for the requested class.
ReferenceNames	Gets the keyproeprties of the assocaiton class of the requested class.

Elements	Requirement	Notes
InstanceID	Mandatory	"DCIM:ADGroup:identity: "<Unique identifier>
ElementName	Mandatory	"DCIM Group identity " <Unique identifier>
CurrentlyAuthenticated	Optional	"FALSE"

### 20.1.6 DCIM\_Role

Operation	Messages
EnumerateInstances	Enumerate the Instances of DCIM_OEMActiveDirectoryGroup
EnumerateInstanceNames	Enumerate the Key Values of DCIM_OEMActiveDirectoryGroup
Associators	Gets the associated Classes to the requested Class.
AssociatorNames	Gets the keyproperties of the associated classes to the requested Class
References	Gets the association class for the requested class.
ReferenceNames	Gets the keyproeprties of the assocaiton class of the requested class.

Elements	Requirement	Notes
CreationClassName	Mandatory	"DCIM_Role"
Name	Mandatory	"DCIM :AD:Role:<#>(numbers will be 17,18,19,20,21)
ElementName	Mandatory	"DCIM AD Role "<Unique identifier>
RoleCharacteristics	Mandatory	2,3 (for IPMI LAN Roles) 2 (for CLP Role & SOL Role), No values for AD

## 20.1.7 DCIM\_Privilege

Operation	Messages
EnumerateInstances	Enumerate the instances of DCIM_Privilege which represents the privileges of a role
EnumerateInstanceNames	Enumerates the key values of Privilege instance
GetInstance	For getting the properties of a particular privilege
ModifyInstance	Supports modifying, PrivilegeGranted

Elements	Existence (M/O/C)	Element Value
InstanceID	Mandatory	"DCIM:ADPrivilege:<Unique Identifier ranges from 17 to 21>"
PrivilegeGranted	Mandatory	"TRUE"
Activities	Optional	Can be only 7 .But the number of times 7 occur will depend on the no. of strings in ActivityQualifiers
ActivityQualifier	Optional	Can be any combinations of these values or empty till it is configured. " "Log in to iDRAC6","Configure iDRAC6","Configure Users","Clear Logs","Execute Server Control Commands","Access Console Redirection","Access Virtual Media","Test Alerts","Execute Diagnostic Commands" "
QualifierFormats	Optional	Can be only 9 .But the number of times 9 occur will depend on the no. of strings in ActivityQualifiers
RepresentsAuthorizationRights	Mandatory	Will be True if ActivityQualifiers is "Configure idrac6" or "Configure Users" else FALSE

## 20.2 Association Providers

Operations Supported
EnumerateInstances

EnumerateInstanceNames
Associators
AssociatorNames
References
ReferenceNames

### 20.2.1 DCIM\_ElementCapabilities

Elements	Existence (M/O/C)	Base Class	Element Value
ManagedElement	M	CIM_Service	DCIM_OEMActiveDirectoryService Section <a href="#">20.1.2</a>
Capabilities	M	CIM_EnabledLogicalElementCapabilities	DCIM_OEMActiveDirectoryCapabilities – Section <a href="#">20.1.1</a>

### 20.2.2 DCIM\_HostedService

Elements	Existence (M/O/C)	Base Class	Element Value
Antecedent	M	CIM_System	DCIM_SPCComputerSystem Section <a href="#">15.1.1</a>
Dependent	M	CIM_Service	DCIM_OEMActiveDirectoryService – Section <a href="#">20.1.2</a>

### 20.2.3 DCIM\_ServiceAffectsElement

Elements	Existence (M/O/C)	Base Class	Element Value
AffectingElement	M	CIM_Group	DCIM_OEMActiveDirectoryGroup – Section <a href="#">20.1.3</a>
AffectedElement	M	CIM_Service	DCIM_OEMActiveDirectoryService Section <a href="#">20.1.2</a>
ElementAffects	M	-	5 (refers to "Manages")

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## 21 Dell OS Deployment Profile

The Dell OS Deployment Profile (DELL1035) was prepared by Dell™ Engineering. This CIM profile integrates into other CIM profiles published by Dell and the DMTF. DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems management and interoperability.

The information in this specification and referenced specifications should be sufficient for a provider or consumer of this data to identify unambiguously the classes, properties, methods, and values that shall be instantiated and manipulated to represent and manage the OS Deployment feature of managed systems and subsystems that are modeled using the DMTF CIM core and extended model definitions.

The target audience for this specification is implementers who are writing CIM-based providers or consumers of management interfaces that represent the component described in this document.

### Scope

The OS Deployment Profile extends the management capabilities of referencing profiles by adding the capability to represent the configuration of OS Deployment features. The OS Deployment feature consists of:

- Provide supported OS's and version information from the embedded OS driver pack
- Unpack the OS Driver Update Package and extract drivers for a specified OS. The drivers are placed on local FLASH nvram.
- Expose the unpacked drivers to the host as a selected USB device (driver, floppy, CDROM).
- Ability to download PXE or ISO bootable images.
- Ability to boot to the downloaded bootable images.

### Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

### Approved References

DMTF DSP1033, *Profile Registration Profile 1.0.0*

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DMTF DSP0200, *CIM Operations over HTTP 1.2.0*  
DMTF DSP0004, *CIM Infrastructure Specification 2.3.0*  
DMTF DSP1000, *Management Profile Specification Template*  
DMTF DSP1001, *Management Profile Specification Usage Guide*

### **Other References**

ISO/IEC Directives, Part 2, *Rules for the structure and drafting of International Standards*,

<http://isotc.iso.org/livelink/livelink.exe?func=ll&objId=4230456&objAction=browse&sort=subtype>

Unified Modeling Language (UML) from the Open Management Group (OMG),  
<http://www.uml.org>

## **Terms and Definitions**

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

### **can**

used for statements of possibility and capability, whether material, physical, or causal

### **cannot**

used for statements of possibility and capability, whether material, physical, or causal

### **conditional**

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

### **mandatory**

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

### **may**

indicates a course of action permissible within the limits of the document

### **need not**

indicates a course of action permissible within the limits of the document

### **optional**

indicates a course of action permissible within the limits of the document

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**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

**shall**

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

**shall not**

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

**should**

indicates that among several possibilities, one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required

**should not**

indicates that a certain possibility or course of action is deprecated but not prohibited

## Symbols and Abbreviated Terms

**CIM**

Common Information Model

### Synopsis

**Profile Name:** OS Deployment

**Version:** 0.2.0

**Organization:** Dell

**CIM Schema Version:** 2.19.1

**Central Class:** DCIM\_OSDeploymentService

**Scoping Class:** CIM\_ComputerSystem

The OS Deployment Profile extends the management capability of the referencing profiles by adding the capability to support OS deployment activities by manipulating OS Deployment features provided by the service processor.

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These features include:

- Identify the list of OS drivers.
- Unpack the OS Driver Update Package and extract drivers for a specified OS. The drivers are placed on local FLASH nvram.
- Expose the unpacked drivers to the host as a USB device.
- Expose the drivers to the network in a secure manner for access by a management application.
- Support representation of a managed storage partition for provisioning OS images (eg WinPE)
- Support downloading to managed storage partition
- Support booting from provisioning OS image downloaded to managed storage partition

DCIM\_OSDeploymentService shall be the Central Class. CIM\_ComputerSystem shall be the Scoping Class. The instance of DCIM\_OSDeploymentService shall be the Central Instance. The instance of CIM\_ComputerSystem with which the Central Instance is associated through the CIM\_HostedService association shall be the Scoping Instance. 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	Mandatory



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## Description

The OS Deployment Profile describes the OS deployment configuration service and the methods exposed to manage the service processor OS deployment features. The profile also describes the relationship of the OS Deployment Profile classes to DMTF and Dell profile version information.

The interface for the OS deployment feature consists of the following functionality:

- Method to provide the supported OS's and version information of the embedded driver pack.
- Method to unpack selected OS drivers and attach to the system as a selected USB device (drive, floppy, or CDROM).
- Method to detach the attached driver USB device.
- Method to download PXE or ISO images to Maser "OSD" partition.
- Method to boot system from "OSD" partition.
- Method to boot system to PXE.

Figure 1 represents the class schema for the OS Deployment Profile. For simplicity, the prefix CIM\_ has been removed from the names of the classes that are standard DMTF classes.

The OS Deployment feature in a service processor is represented by the instance of DCIM\_OSDeploymentService class. The DCIM\_OSDeploymentService has extrinsic methods for accomplishing the various OS deployment features described above.

The OS Deployment profile information is represented with the instance of CIM\_RegisteredProfile.

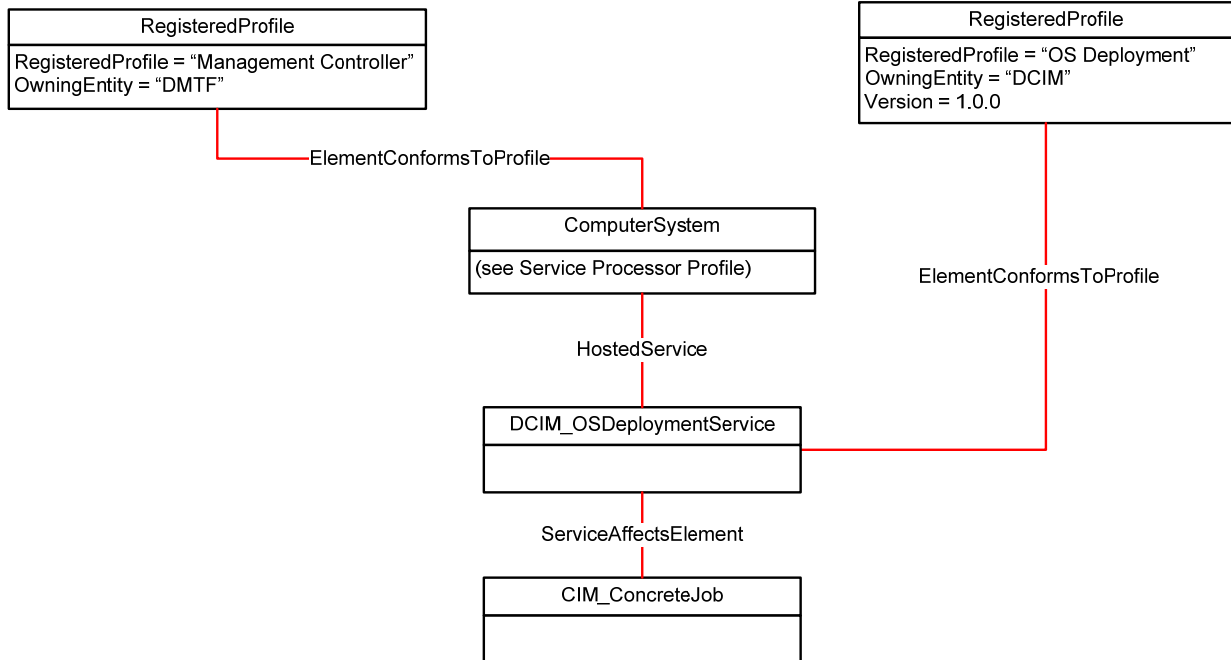


Figure 1 – OS Deployment Profile: Class Diagram

## Implementation Requirements

Requirements and guidelines for propagating and formulating certain properties of the classes are discussed in this section. Methods are listed in section 0 and properties are listed in section 0.

### ***DCIM\_OSDeploymentService***

One instance of DCIM\_OSDeploymentService shall be instantiated.

#### ElementName

The value of ElementName shall be formulated by the following pattern:

ElementName = “OSD”

### ***CIM\_ConcreteJob***

At most one instance of CIM\_ConcreteJob shall be instantiated. An instance of CIM\_ConcreteJob may be returned as an output parameter for all the extrinsic methods supported by DCIM\_OSDeploymentService

#### Name

The value of Name shall be formulated by the following pattern:

Name = “DCIM\_OSDeploymentService.ExtrinsicMethodName”, ex:

Name=”UnpackAndAttach”

CIM\_ConcreteJob reference returned as an output of

DCIM\_OSDeploymentService.UnpackAndAttach, shall have the following Name;

- CIM\_ConcreteJob.Name = “Unpack And Attach”  
CIM\_ConcreteJob reference returned as an output of  
DCIM\_OSDeploymentService.DownloadISOImage, shall have the following Name;

- CIM\_ConcreteJob.Name = “Download ISO Image”.  
CIM\_ConcreteJob reference returned as an output of  
DCIM\_OSDeploymentService.BootToISOImage, shall have the following Name;

- CIM\_ConcreteJob.Name = “Boot To ISO Image”.

### JobStatus

The value of JobStatus (free form string) property value shall be one of the entries in Table 2

**Table 2 - JobStatus**

Job Name	JobStatus	JobStatus Description
“Unpack And Attach”	Creating Dynamic Partition	Creating a dynamic partition where drivers will be extracted to
“Unpack And Attach”	Unpacking And Copying	Unpack drivers individually and copy to the partition until all drivers are unpacked and copied
“Unpack And Attach”	Attaching Dynamic Partition	Attach the dynamic partition to the Host OS
“Unpack And Attach”	Completed	Unpack and Attach completed
“Download ISO Image”	Download Started	Download started
“Download ISO Image”	Download Failed	Download failed, retry
“Download ISO Image”	Download Completed	Download completed successfully
BootToISOImage	Expose Image to Host OS	Exposing image to Host OS
BootToISOImage	Set Boot target and Reboot	Changing the boot order to boot to image and reboot to trigger Boot
BootToISOImage	Completed	Completed

## Methods

This section details the requirements for supporting intrinsic operations and extrinsic methods for the CIM elements defined by this profile.

### **Method: DCIM\_OSDeploymentService.GetDriverPackInfo()**

The GetDriverPackInfo method is used to get the driver pack version number and the supported Operating System list.

Return values for GetDriverPackInfo() shall be as specified in Table 2 where the method-execution behavior matches the return-code description. GetDriverPackInfo() method’s parameters are specified in Table 3 – DCIM\_OSDeploymentService.GetDriverPackInfo() Method: Parameters.

If the output parameters contain a non-null reference to a CIM\_ConcreteJob, then both Version and OSList contain nulls. Next call to the GetDriverPackInfo after the Job is

successfully completed shall return non-null values for output parameters Version and OSList.

**Table 2 - DCIM\_OSDeploymentService.GetDriverPackInfo() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

**Table 3 - DCIM\_OSDeploymentService. GetDriverPackInfo() Method: Parameters**

Qualifiers	Name	Type	Description/Values
OUT	Version	String	NULL or Version of the driver pack.
OUT	OSList	String[]	NULL or Contains list of operating systems supported for this server.
OUT	Job	CIM_ConcreteJob	NULL or reference to a CIM_ConcreteJob

***Method: DCIM\_OSDeploymentService.UnpackAndAttach()***

The UnpackAndAttach() method is used to unpack specified OS drivers from the driver package appropriate for the target system and expose the partition the drivers are on to the system as a USB device.

Return values for UnpackAndAttach() shall be as specified in 4 where the method-execution behavior matches the return-code description. UnpackAndAttach() method's parameters are specified in Table 5 – DCIM\_OSDeploymentService.UnpackAndAttach() Method: Parameters.

No standard messages are defined for this method.

**Table 4 - DCIM\_OSDeploymentService.UnpackAndAttach() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

**Table 5 - DCIM\_OSDeploymentService.UnpackAndAttach() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN	OSName	String	Name of the OS to unpack drivers for, this value shall match one of the strings in OSList returned for GetDriverPackInfo
IN	ExposureStartTime	DateTime	Identifies date and time of start of exposure. If NULL then the job will be started immediately. If the Unknown value is used the job will be pending and will not have a scheduled start time.
IN	ExposureDuration	DateTime	Identifies the amount of time up to 18 hours for the.
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of OSD – USB attach job.

***Method: DCIM\_OSDeploymentService.DetachOSDPartition()***

Method for closing the unpacked OS drivers that had been exposed as USB endpoints to the managed system.

**Table 4 - DCIM\_OSDeploymentService.DetachOSDPartition() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is unsupported.
2	Error occurred

***Method: DCIM\_OSDeploymentService.DownloadISOImage()***

The DownloadISOImage() method is used to download the pre-OS image to the iDRAC. The following transport mechanism and security attributes are the IN parameters for the method.

Return values for DownloadISOImage () shall be as specified in 4 where the method-execution behavior matches the return-code description. DownloadISOImage () method’s parameters are specified in Table 5 –

DCIM\_OSDeploymentService.UnpackAndAttach() Method: Parameters.

No standard messages are defined for this method.

**Table 7 - DCIM\_OSDeploymentService. DownloadISOImage () Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

**Table 8 - DCIM\_OSDeploymentService. DownloadISOImage () Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN	IPAddress	String	IP address of TFTP or NFS share
IN	NFSShare	String	NFS share point
IN	ImageName	String	Image file name/path
IN	ShareType	Uint32	0=TFTP, 1=NFS
IN (optional)	UserName	String	Username if applicable
IN (optional)	Password	String	Password in applicable
IN (optional)	Port	Uint32	Port num if applicable
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of OSD – Download ISO Image job.

***Method: DCIM\_OSDeploymentService.BootToISOImage()***

The BootToISOImage() method is used to Boot to the previously download pre-OS image in the iDRAC.

Return values for BootToISOImage () shall be as specified in Table 9 where the method-execution behavior matches the return-code description.

No standard messages are defined for this method.

**Table 9 - DCIM\_OSDeploymentService. DownloadISOImage () Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

***Method: DCIM\_OSDeploymentService.BootToPXE()***

The BootToPXE() method is used to Boot to server using the PXE mechanism.

Return values for BootToPXE () shall be as specified in Table 10 where the method-execution behavior matches the return-code description.

No standard messages are defined for this method.

**Table 9 - CIM\_OSDeploymentService. DownloadISOImage () Method: Return Code Values**

Value	Description
0	Request was successfully executed.
1	Method is not supported in the implementation.
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

### ***Profile Conventions for Operations***

Support for operations for each profile class (including associations) is specified in the following subclauses. Each subclause includes either the statement “All operations in the default list in section 0 are supported as described by DSP0200 version 1.2” or a table listing all of the operations that are not supported by this profile or where the profile requires behavior other than that described by DSP0200.

The default list of operations is as follows:

- GetInstance
- EnumerateInstances
- EnumerateInstanceNames
- Associators
- AssociatorNames
- References
- ReferenceNames

A compliant implementation shall support all of the operations in the default list for each class, unless the “Requirement” column states something other than *Mandatory*.

### ***DCIM\_OSDeploymentService Operations***

Table 5 lists operations that either have special requirements beyond those from DSP0200 or shall not be supported.

**Table 5 - DCIM\_OSDeploymentService Operations**

Operation	Requirement	Messages
EnumerateInstances	Unspecified	None
EnumerateInstanceNames	Unspecified	None
Associators	Unspecified	None
AssociatorNames	Unspecified	None
References	Unspecified	None
ReferenceNames	Unspecified	None

---

## ***CIM\_ConcreteJob***

Table 6 lists operations that either have special requirements beyond those from DSP0200 or shall not be supported.

**Table 6 - CIM\_ConcreteJob Operations**

<b>Operation</b>	<b>Requirement</b>	<b>Messages</b>
EnumerateInstances	Unspecified	None
EnumerateInstanceNames	Unspecified	None
Associators	Unspecified	None
AssociatorNames	Unspecified	None
References	Unspecified	None
ReferenceNames	Unspecified	None

## ***CIM\_ServiceAffectsElement Operations***

Table 7 lists operations that either have special requirements beyond those from DSP0200 or shall not be supported.

**Table 7 - CIM\_ServiceAffectsElement Operations**

<b>Operation</b>	<b>Requirement</b>	<b>Messages</b>
EnumerateInstances	Unspecified	None
EnumerateInstanceNames	Unspecified	None
Associators	Unspecified	None
AssociatorNames	Unspecified	None
References	Unspecified	None
ReferenceNames	Unspecified	None

## **Use Cases**

This section contains object diagrams and use cases for the OS Deployment Profile.

### ***Object Diagram***

Figure 2 represents a possible instantiation of the OS Deployment Profile including advertising the profile.

The object diagram in Figure 2 shows how an instance of CIM\_RegisteredProfile is used to identify the version of OS Deployment profile with an instance of DCIM\_OSDeploymentService and its associated instances are conformant.

For simplicity, the prefix CIM\_ has been removed from the names of the standard classes in the figure.



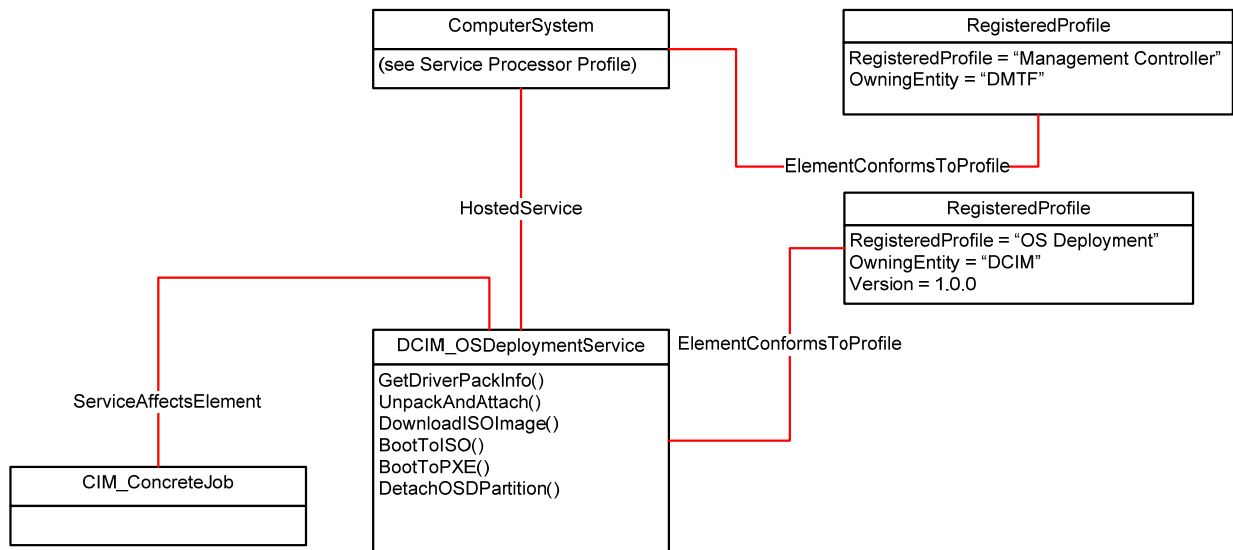


Figure 2 – OS Deployment Profile: Object Diagram

### ***Discover OSD profile***

Following sequence of CIM operations shall be used to discover the version of OSD profile implemented

1. Enumerate (namespace='root/interop', classname="CIM\_RegisteredProfile")
2. Filter the returned enumeration using property filter (RegisteredProfile="OS Deployment")
3. Result shall contain one instance of CIM\_RegisteredProfile containing property version="1.0.0"

### ***Get driver pack version information and supported OSes***

Following sequence of CIM Operations shall be used to retrieve the Driver pack version and supported Operating Systems for OS deployment

1. Follow the steps (1,2,3) from 9.2
2. Associators (objectpath= "instance returned from step 9.2.3", resultclass="DCIM\_OSDeploymentService") OR Enumerate (namespace="root/dcim", classname="DCIM\_OSDeploymentService")
3. Result shall contain one instance of DCIM\_OSDeploymentService
4. Invoke extrinsic method using the following parameters
  - a. object path = object path returned from 9.3.3
  - b. Method name = "GetDriverPackInfo"

- 
5. Invoke method shall return the following output parameters
    - a. Version = String version
    - b. SupportedOperatingSystems = String array of OS namesOR
    - a. CIM\_ConcreteJob
  6. If the Job output parameter from step 5 contains a non-null value then both Version and OSList shall contain null values. The next call to GetDriverPackInfo after the Job is completed shall return non null values for output parameters Version and OSList.

### ***Unpack drivers and Attach to Host OS***

Following sequence of CIM Operations shall be used to unpack drivers for the selected OS to a local partition and attach the partition to the Host OS.

1. Follow the steps (1,2,3) from 9.2
2. Follow the steps (2, 3) from 9.3
3. Invoke extrinsic method using the following parameters
  - a. object path = object path returned from 9.3.3
  - b. Method name = “UnpackAndAttach”
  - c. OSName = “”
  - d. ExposureStartTime = “”
  - e. ExposureDuration = “”
4. Invoke method shall return the following output parameters
  - a. Job = object path to CIM\_ConcreteJob (reports the status of unpack and attach)

### ***Download ISO image to iDRAC***

Following sequence of CIM Operations shall be used to download an pre-OS ISO image to the local share/partition.

1. Follow the steps (1,2,3) from 9.2
2. Follow the steps (2, 3) from 9.3
3. Invoke extrinsic method using the following parameters
  - a. object path = object path returned from 9.3.3

- 
- b. Method name = “DownloadISOImage”
  - c. TBD = TDB
  - d. TBD = TDB
  - e. TBD = TDB
4. Invoke method shall return the following output parameters
    - a. Job = object path to CIM\_ConcreteJob (reports the status download)

### ***Boot to ISO image***

Following sequence of CIM Operations shall be used to Boot to the download pre-OS ISO image.

1. Follow the steps (1,2,3) from 9.2
2. Follow the steps (2, 3) from 9.3
3. Invoke extrinsic method using the following parameters
  - a. object path = object path returned from 9.3.3
  - b. Method name = “BootToISOImage”

### ***Boot to PXE***

Following sequence of CIM Operations shall be used to Boot to a PXE.

1. Follow the steps (1,2,3) from 9.2
2. Follow the steps (2, 3) from 9.3
3. Invoke extrinsic method using the following parameters
  - a. object path = object path returned from 9.3.3
  - b. Method name = “BootToPXE”

### ***Detach OSD Partition***

Following sequence of CIM Operations shall be used to detach the previously exposed OSD partition.

1. Follow the steps (1,2,3) from 9.2
2. Follow the steps (2, 3) from 9.3
3. Invoke extrinsic method using the following parameters
  - a. object path = object path returned from 9.3.3
  - b. Method name = “DetachOSDPartition”

---

### **Status of current Task**

Following sequence of CIM Operations shall be used to read the current status of the last method executed.

1. Follow the steps (1,2,3) from 9.2
2. Follow the steps (2, 3) from 9.3
3. Associators (objectpath= “instance returned from step 9.3.3”, resultclass=”CIM\_ServiceAffectsElement”) OR Enumerate (namespace=”root/dcim”, classname=”CIM\_ConcreteJob”)
4. Result shall contain one instance of CIM\_ConcreteJob
5. The following properties of CIM\_ConcreteJob shall be used to identify the state and completion status of the last executed method.
  - a. InstanceID = “OSD: UnpackAndAttach: 1”
  - b. Name = “UnpackAndAttach”
  - c. JobState = “Running | Suspended | Completed | ....”

### **CIM Elements**

Table 8 shows the instances of CIM Elements for this profile. Instances of the CIM Elements shall be implemented as described in Table 8. Sections 0 (“Implementation Requirements” and “Methods”) may impose additional requirements on these elements.

**Table 8 - IM Elements: OS Deployment Profile**

Element Name	Requirement	Description
<b>Classes</b>		
CIM_HostedService	Mandatory	See section 10.1
DCIM_OSDeploymentService	Mandatory	See section 10.3
CIM_ServiceAffectsElement	Conditional	See section 10.2
CIM_ConcreteJob	Conditional	See section 10.4
CIM_RegisteredProfile	Mandatory	See section 10.5
CIM_ElementConformsToProfile	Mandatory	See section 10.6

***CIM\_HostedService***

CIM\_HostedService is used to associate an instance of DCIM\_OSDeploymentService with the instance of CIM\_ComputerSystem.

**Table 9 - Class: CIM\_HostedService**

Properties	Notes	Description
Antecedent	Mandatory	<b>Key:</b> Shall reference the Scoping Instance. Cardinality 1 indicating one and exactly one reference
Dependent	Mandatory	<b>Key:</b> Shall reference the Central Instance Cardinality 1..* indicating one or more references

***CIM\_ServiceAffectsElement***

Table 10 details the requirements for instances of CIM\_ServiceAffectsElement. This class is conditional and shall only exist if there is an instance of CIM\_ConcreteJob exists.

**Table 10 - Class: CIM\_ServiceAffectsElement**

Elements	Requirement	Notes
AffectingElement	Mandatory	<b>Key</b> This property shall be a reference to the Central Instance of the profile (DCIM_OSDeploymentProfile) Cardinality 1
AffectedElement	Mandatory	<b>Key</b> This property shall be a reference to CIM_ConcreteJob. Cardinality *

***DCIM\_OSDeploymentService***

DCIM\_OSDeploymentService is used to provide a central class for the OS Deployment profile.

**Table 11 - Class: DCIM\_OSDeploymentService**

Properties and Methods	Requirement	Description
SystemCreationClassName	Mandatory	<b>Key</b>
CreationClassName	Mandatory	<b>Key</b>
SystemName	Mandatory	<b>Key</b>
Name	Mandatory	<b>Key</b>
ElementName	Mandatory	This property shall have value of "DCIM OS Deployment Service".

***CIM\_ConcreteJob***

CIM\_ConcreteJob is used to track the Job returned as OUT parameters of DCIM\_OSDeploymentService execute methods. This class is conditional and shall only exist if one of the extrinsic methods of DCIM\_OSDeploymentService returns a Job as an output parameter.

**Table 12 - Class: DCIM\_OSDeploymentService**

Properties and Methods	Requirement	Description
InstanceID	Mandatory	<b>Key</b>
Name	Mandatory	
JobState	Mandatory	
JobStatus	Optional	
OperationalStatus	Mandatory	

---

### ***CIM\_RegisteredProfile***

The CIM\_RegisteredProfile class is defined by the Profile Registration Profile. The requirements denoted in Table 13 are in addition to those mandated by the Profile Registration Profile.

**Table 13 - Class: CIM\_RegisteredProfile**

<b>Properties</b>	<b>Requirement</b>	<b>Description</b>
RegisteredName	Mandatory	This property shall have a value of "OS Deployment".
RegisteredVersion	Mandatory	This property shall have a value of "0.2.0".
RegisteredOrganization	Mandatory	This property shall have a value of 1 (Other).
OtherRegisteredOrganization	Mandatory	This property shall match "DCIM"

### ***CIM\_ElementConformToProfile***

See Profile Registration Profile for more details on this class.