

# Software Update Profile

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# 1. Scope

The Software Update Profile extends the management capabilities of referencing profiles by adding the capability to update platform firmware or software.

# 2. Normative References

Refer to the following documents for more information.

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

- DMTF DSP1033, Profile Registration Profile 1.0.0
- Dell Lifecycle Controller Best Practices Guide 1.0, [http://en.community.dell.com/techcenter/extras/m/white\\_papers/20066173.aspx](http://en.community.dell.com/techcenter/extras/m/white_papers/20066173.aspx)
- Dell WSMAN Licenses and Privileges 1.0
- 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>
- Dell Tech Center MOF Library: <http://www.delltechcenter.com/page/DCIM.Library.MOF>
- Related Managed Object Format (MOF) files:
  - DCIM\_SoftwareInstallationService.mof
  - DCIM\_LCElementConformsToProfile.mof
  - DCIM\_LCRegisteredProfile.mof

# 3. Terms and Definitions

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

## 3.1. Can

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

## 3.2. Cannot

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

## 3.3. Conditional

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

## 3.4. Mandatory

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

## 3.5. May

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

## 3.6. Need not

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

### 3.7. Optional

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

### 3.8. Referencing profile

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

### 3.9. Shall

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

### 3.10. Shall not

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

### 3.11. 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.

### 3.12. Should not

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

### 3.13. Interop Namespace: root/interop

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

### 3.14. Implementation Namespace: root/dcim

Implementation Namespace: root/dcim is where instrumentation instantiates classes relevant to executing core management tasks.

### 3.15. ENUMERATE

Refers to WS-MAN `ENUMERATE` operation as described in Section 8.2 of DSP0226\_V1.1 and Section 9.1 of DSP0227\_V1.0

### 3.16. GET

Refers to WS-MAN `GET` operation as defined in Section 7.3 of DSP00226\_V1.1 and Section 7.1 of DSP0227\_V1.0

## 4. Symbols and Abbreviated Terms

### 4.1. CIM

Common Information Model

### 4.2. DCIM

Dell Common Information Model

## 5. Synopsis

Profile Name: Software Update

Version: 4.0.0

Organization: DCIM

CIM Schema Version: 2.41.0 Final

Central Class: DCIM\_SoftwareInstallationService Scoping Class: DCIM\_ComputerSystem

The Software Update Profile extends the management capability of the referencing profiles by adding the capability to update the platform's firmware or software.

DCIM\_InstallationService shall be the Central Class. CIM\_ComputerSystem shall be the Scoping Class. Table 1 identifies profiles that are related to this profile.

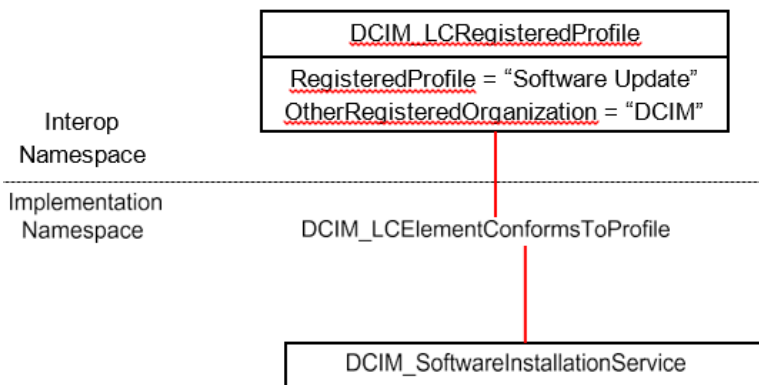
**Table 1.** Related Profiles

Profile Name	Organization	Version	Relationship
Profile Registration	DCIM	1.0	Reference
Job Control Profile	Dell	1.3.0	Mandatory

## 6. Description

The Software Update Profile describes the management interface for driver/firmware updates.

Figure 1 represents the class schema for the Software Update Profile. The software update in a managed system is represented by the instance of DCIM\_SoftwareInstallationService class. The software update profile information is represented with the instance of LC\_RegisteredProfile. The result of a software update represented as the instance of DCIM\_SoftUpdateConcreteJob.



**Figure 1.** Software Update Profile: Class Diagram

## 7. Implementation Description

This section describes the implementation of Dell Software Update Profile.

**Table 2.** CIM Elements: Software Update Profile

Element Name	Requirement	Description
Classes		
DCIM_SoftwareInstallationService	Mandatory	The class shall be implemented in both the <i>Implementation Namespaces</i> : <i>root/dcim</i> . See section 7.1

Element Name	Requirement	Description
DCIM_LCElementConformsToProfile	Mandatory	The class shall be implemented in both the Interop Namespace: root/interop and Implementation Namespace: root/dcim. See section 7.1 and 7.2
DCIM_LCRegisteredProfile	Mandatory	The class shall be implemented in the <i>Interop Namespace: root/interop</i> . See section 7.2
Indications		
None defined in this profile		

## 7.1. DCIM\_SoftwareInstallationService

This section describes the implementation for the DCIM\_SoftwareInstallationService. This class is instantiated in the Implementation Namespace: root/dcim.

The DCIM\_LCElementConformsToProfile association's ManagedElement property shall references the DCIM\_SoftwareInstallationService instance(s).

### 7.1.1. Resource URIs for WinRM®

The class Resource URI shall be:

[http://schemas.dell.com/wbem/wscim/1/cim-schema/2 /  
DCIM\\_SoftwareInstallationService?cimnamespace=root/dcim](http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_SoftwareInstallationService?cimnamespace=root/dcim)

The key properties are SystemCreationClassName, CreationClassName, SystemName, and Name. The instance Resource URI for DCIM\_SoftwareInstallationService instance shall be:

[http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM\\_SoftwareInstallationService?  
cimnamespace=root/dcim+SystemCreationClassName=DCIM\\_ComputerSystem+SystemName=IDRAC:ID  
+CreationClassName=DCIM\\_SoftwareInstallationService+Name=SoftwareUpdate](http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_SoftwareInstallationService?cimnamespace=root/dcim+SystemCreationClassName=DCIM_ComputerSystem+SystemName=IDRAC:ID+CreationClassName=DCIM_SoftwareInstallationService+Name=SoftwareUpdate)

### 7.1.2. Operations

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

**Table 3.** DCIM\_SoftwareInstallationService.- Operations

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

### 7.1.3. Class Properties

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

**Table 4.** DCIM\_SoftwareInstallationService- Properties

Property Name	Type	Requirement	Additional Requirement
CreationClassName	String	Mandatory	The property value shall be "DCIM_SoftwareInstallationService".
Name	String	Mandatory	The property value shall be "SoftwareUpdate".



Property Name	Type	Requirement	Additional Requirement
ElementName	String	Mandatory	The property value shall be "Software Installation Service".
SystemCreationClassName	String	Mandatory	The property value shall be "DCIM_ComputerSystem".
SystemName	String	Mandatory	The property value shall be "IDRAC:ID".

## 7.2. Software Update Profile Registration – DCIM\_LCRegisteredProfile

This section describes the implementation for the DCIM\_LCRegisteredProfile class. This class shall be instantiated in the Interop Namespace: root/interop.

The DCIM\_LCElementConformsToProfile association(s)' ConformantStandard property shall reference the DCIM\_LCRegisteredProfile instance.

### 7.2.1. Resource URIs for WinRM®

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

The key property shall be the InstanceID property.

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

### 7.2.2. Operations

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

**Table 5.** DCIM\_LCRegisteredProfile - Operations

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

### 7.2.3. Class Properties

The following table lists the implemented properties for DCIM\_LCRegisteredProfile instance representing Software Update Profile implementation. The "Requirements" column shall denote whether the property is implemented (for requirement definitions, see section 3). The "Additional Requirements" column shall denote either possible values for the property, or requirements on the value formulation.

**Table 6.** Class: DCIM\_LCRegisteredProfile

Properties	Type	Requirement	Additional Requirements
InstanceID	string	Mandatory	This property shall have a value of "DCIM:SoftwareUpdate:4.0.0"
RegisteredName	string	Mandatory	This property shall have a value of "Software Update".
RegisteredVersion	string	Mandatory	This property shall have a value of "4.0.0".
RegisteredOrganization	uint16	Mandatory	This property shall have a value of 1 (Other).
OtherRegisteredOrganization	string	Mandatory	This property shall match "DCIM".
AdvertiseTypes[]	uint16	Mandatory	This property array shall have values: "1(Other)" and "1(Other)".
Properties	Type	Requirement	Additional Requirements

Properties	Type	Requirement	Additional Requirements
AdvertiseTypeDescriptions[]	string	Mandatory	This property array shall have values “WS-Identify” and “Interop Namespace”.
ProfileRequireLicense[]	string	Mandatory	This property array shall describe the required licenses for this profile. If no license is required for the profile, the property shall have value NULL.
ProfileRequireLicenseStatus[]	string	Mandatory	This property array shall contain the status for the corresponding license in the same element index of the ProfileRequireLicense array property. Each array element shall contain: <ul style="list-style-type: none"> <li>• “LICENSED”</li> <li>• “NOT_LICENSED”</li> </ul> If no license is required for the profile, the property shall have value NULL.

## 8. Methods

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

### 8.1. DCIM\_SoftwareInstallationService.InstallFromURI ()

InstallFromURI method is used to generate the JobID for the update operation.

**Table 7.** DCIM\_SoftwareInstallationService.InstallFromURI () Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 8.** SoftwareInstallationService.InstallFromURI () Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	URI	String	URI location of firmware to update a component.
IN	Target	CIM_SoftwareIdentity REF	Reference to CIM_SoftwareIdentity. InstanceID value of this instance maps with firmware to be updated.
IN	ProxySupport	Uint16	It specifies if proxy is to be used or not. Default is 1 (Off). <ul style="list-style-type: none"> <li>• 1 → Off</li> <li>• 2 → On - use default proxy settings</li> <li>• 3 → On - use passed in parameters for proxy</li> </ul>
IN	ProxyType	Uint16	It specifies the proxy type of the proxy server. Default is 0 (HTTP). <ul style="list-style-type: none"> <li>• 0 → HTTP</li> <li>• 1 → SOCKS</li> </ul>
IN	ProxyServer	String	This string represents the IP Address of the proxy server
IN	ProxyUname	String	This string represents the username for proxy server
IN	ProxyPasswd	String	This string represents the password to login into proxy server

Qualifiers	Name	Type	Description/Values
IN	ProxyPort	String	This string represents the proxy port for the proxy server
IN	IgnoreCertWarning	Uint16	Specifies if certificate warning is to be ignored when HTTPS is specified. If IgnoreCertWarning is on, certificate will be ignored. Default is 1 → (Off). <ul style="list-style-type: none"> <li>• 1 → Off</li> <li>• 1 → On</li> </ul>
OUT	Message	string	Job Completed Error Message in English.
OUT	MessageID	string	Error Message ID may be used to look- up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message Arguments[]	string	Substitution variables for dynamic error message.
OUT	Job <sup>1</sup>	CIM_ConcreteJob REF	Reference to concrete job. InstanceID value of this instance contains the generated JobID for the update operation. <sup>1</sup>

NOTE: 1 – If return code is 4096 (Job Created), the newly created job does not execute if the LC core services are not running (DCIM\_LCEnumeration with AttributeName equal to “LifecycleControllerState” has the CurrentValue property equal to “Disabled”).

**Table 9.** SoftwareInstallationService.InstallFromURI () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SUP001	Insufficient Method Parameters	NA
SUP002	Job Creation Failure	NA
SUP003	Either URI or Target or both are missing OR exceeding in length	NA
SUP004	Invalid Namespace	NA
SUP019	Lifecycle Controller is not enabled.	NA
SUP024	Invalid InstanceID	NA
SUP007	Component is not updateable	NA
SUP006	Could not create job file	NA

## 8.2. DCIM\_SoftwareInstallationService.InstallFromSoftwareIdentity ()

The successful execution of this method shall create a job to install software that is referenced by the Target parameter.

**Table 10.** DCIM\_SoftwareInstallationService.InstallFromSoftwareIdentity () Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 11.** DCIM\_SoftwareInstallationService.InstallFromSoftwareIdentity () Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	Target	CIM_SoftwareIdentity REF	Reference to CIM_SoftwareIdentity. InstanceID value of this instance maps with firmware to be updated.
OUT	Message	string	Job Completed Error Message in English.
OUT	MessageID	string	Error Message ID may be used to look- up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message Arguments[]	string	Substitution variables for dynamic error message.
OUT	Job <sup>1</sup>	CIM_ConcreteJob REF	Reference to concrete job. InstanceID value of this instance contains generated JobID for update operation. <sup>1</sup>

NOTE: 1 – If return code is 4096 (Job Created), the newly created job does not execute if the LC core services are not running (DCIM\_LCEnumeration with AttributeName equal to “LifecycleControllerState” has the CurrentValue property equal to “Disabled”).

**Table 12.** DCIM\_SoftwareInstallationService.InstallFromSoftwareIdentity () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SUP001	Insufficient Method Parameters	NA
SUP002	Job Creation Failure	NA
SUP003	Either URI or Target or both are missing OR exceeding in length	NA
SUP004	Invalid Namespace	NA
SUP019	Lifecycle Controller is not enabled.	NA
SUP024	Invalid InstanceID	NA
SUP007	Component is not updateable	NA
SUP006	Could not create job file	NA

### 8.3. DCIM\_SoftwareInstallationService.CreateRebootJob ()

This method is used to generate the reboot job to apply the updates.

**Table 13.** DCIM\_SoftwareInstallationService.CreateRebootJob ()Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 14.** DCIM\_SoftwareInstallationService.CreateRebootJob ()Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	RebootJobType	Uint16	Input parameter to represent the type of reboot. RebootJobType shall be one of the following values: <ul style="list-style-type: none"> <li>• 1 - "PowerCycle",</li> <li>• 2 - "Graceful Reboot without forced shutdown",</li> <li>• 3 - "Graceful Reboot with forced shutdown"</li> </ul>
OUT	MessageID	string	Error Message ID may be used to look- up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message Arguments[]	string	Substitution variables for dynamic error message.
OUT	Job <sup>1</sup>	CIM_ConcreteJob REF	Reference to concrete job. InstanceID value of this instance contains generated JobID for update operation. <sup>1</sup>

NOTE: 1 – If return code is 4096 (Job Created), the newly created job will not execute if the LC core services are not running (DCIM\_LCEnumeration with AttributeName equal to "LifecycleControllerState" has the CurrentValue property equal to "Disabled").

**Table 15.** DCIM\_SoftwareInstallationService.CreateRebootJob () Method:: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SUP001	Insufficient Method Parameters	NA
SUP002	Job Creation Failure	NA
SUP004	Invalid Namespace	NA
SUP005	Value Invalid reboot value.	NA
SUP019	Lifecycle Controller is not enabled.	NA

## 8.4. SoftwareInstallationService:SetUpdateSchedule()

The SetUpdateSchedule() method is used to set the periodic updates from repository. This method will return an error if the AutomaticUpdates attribute is Disabled.

**Table 16.** DCIM\_SoftwareInstallationService.SetUpdateSchedule () Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 17.** DCIM\_SoftwareInstallationService.SetUpdateSchedule ()Method: Parameters

Qualifiers	Name	Type	Description/Values
IN,REQ	IPAddress	String	IP address of the NFS or CIFS share such as 192.168.10.12. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified..
IN	Domain	String	The domain of the user name for access to the share, if any. This is normally combined in front of the user name with a backslash '\' like "DOMAIN\user_name". This may be NULL.

Qualifiers	Name	Type	Description/Values
IN,REQ	ShareName	String	Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN	ShareType	Unit16	Type of the share or storage. <ul style="list-style-type: none"> <li>• 0 – NFS</li> <li>• 2 – CIFS</li> </ul> If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN, REQ	Username	String	User name for the remote share
IN	Password	String	Password for the remote share
IN	CatalogName	String	The name of the catalog file if not the default
IN	ApplyReboot	Unit16	<ul style="list-style-type: none"> <li>• 0: Reboot Required</li> <li>• 1: No Reboot</li> </ul> Default :0
IN, REQ	Time	String	hh:mm. Represents hour and minute of day to run.
IN	DayOfMonth	String	<ul style="list-style-type: none"> <li>• 1-28,</li> <li>• L</li> <li>• '*'</li> </ul> Default:*
Qualifiers	Name	Type	Description/Values
IN	WeekOfMonth	String	<ul style="list-style-type: none"> <li>• *</li> <li>• 1-4</li> <li>• L</li> </ul> Only one of the above characters. Default:*
IN	DayOfWeek	String	*,Mon,Tue,Wed,Thu,Fri,Sat,Sun Comma delimited.
IN	ProxyHostName	String	The hostname of the proxy server, if any. This maybe NULL
IN	ProxyUserName	String	The user name for access to the proxy server, if any. This may be NULL
IN	ProxyPassword	String	The password for access to the proxy server, if any. This may be NULL
IN,REQ	Repeat	Unit16	1-366
OUT	MessageID	String	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	String	Substitution variables for dynamic error messages

**Table 18.** DCIM\_SoftwareInstallationService.SetUpdateSchedule () Method:: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
RED050	[1] → Automatic Update Schedule creation failed	NA
[2] → RED053	[3] → Invalid value for the parameter, <parameter>	
[4] → RED054	[5] → Required Parameter missing <parameter>	
[6] → RED061	[7] → Automatic Update Schedule already exists	

## 8.5. SoftwareInstallationService:GetUpdateSchedule()

The GetUpdateSchedule() method is used to retrieve the periodic updates from repository. The property UpdateScheduler is the attribute value for the attribute of the same name.

**Table 19.** DCIM\_SoftwareInstallationService.GetUpdateSchedule ()Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 20.** DCIM\_SoftwareInstallationService.GetUpdateSchedule ()Method: Parameters

Qualifiers	Name	Type	Description/Values
OUT	IPAddress	String	The name of the iDRAC user associated with this task, if any. It may be NULL
OUT	ShareName	String	Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value 0 (NFS), 1(FTP) 2 (CIFS),
OUT	ShareType	Unit16	Type of the share or storage. <ul style="list-style-type: none"> <li>• 0 – NFS</li> <li>• 1 – FTP</li> <li>• 2 – CIFS</li> </ul> If ShareType is blank or null, it shall be considered as NFS type. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS),
OUT	Username	String	User name for the remote share
OUT	ApplyReboot	Unit16	<ul style="list-style-type: none"> <li>• 0: Reboot Required</li> <li>• 1: No Reboot</li> </ul>
OUT	CatalogName	String	The name of the catalog file if not the default
OUT	ProxyHostName	String	The hostname of the proxy server, if any. This maybe NULL
OUT	ProxyUserName	String	The user name for access to the proxy server, if any. This may be NULL
OUT	ProxyPassword	String	The password for access to the proxy server, if any. This may be NULL
OUT	Domain	bool	The domain of the user name for access to the share, if any. This is normally combined in front of the user name with a backslash '\' like "DOMAIN\user_name". This may be NULL.

Qualifiers	Name	Type	Description/Values
OUT	Time	String	hh:mm Represents hour and minute of day to run.
Qualifiers	Name	Type	Description/Values
OUT	DayOfMonth	String	<ul style="list-style-type: none"> <li>• 1-28</li> <li>• L</li> <li>• 1*</li> </ul> Default:*
OUT	WeekOfMonth	String	<ul style="list-style-type: none"> <li>• *</li> <li>• 1-4</li> <li>• L</li> </ul> Only one of the above characters. Default:*
OUT	DayOfWeek	String	*,Mon,Tue,Wed,Thu,Fri,Sat,Sun Comma delimited.
OUT	Repeat	Unint16	1-366
OUT	MessageID	String	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	String	Substitution variables for dynamic error messages

**Table 21.** DCIM\_SoftwareInstallationService.SetUpdateSchedule () Method:: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
RED051	Automatic Update Schedule list failed	

## 8.6. SoftwareInstallationService .ClearUpdateSchedule()

The ClearUpdateSchedule() method is used to clear all the periodic updates from repository. This method also sets attribute UpdateScheduler to Disabled.

**Table 22.** DCIM\_SoftwareInstallationService.ClearUpdateSchedule ()Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 23.** DCIM\_SoftwareInstallationService.ClearUpdateSchedule ()Method: Parameters

Qualifiers	Name	Type	Description/Values
OUT	MessageID	String	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

**Table 24.** DCIM\_SoftwareInstallationService.ClearUpdateSchedule () Method:: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
RED052	Automatic Update Schedule clear failed	



## 8.7. DCIM\_SoftwareInstallationService.InstallFromRepository()

This method will create the list of the updates contained in the repository that are supported by LC and applicable to the system and installed hardware. The successful execution of this method shall create a job

The list will be copied to a persistent location so that user can query for the updatablelist by using GetRepoBasedUpdateList WS-Man Command later.

If the input parameter ApplyUpdate value is true then only the applicable packages are applied and GetRepoBasedUpdateList will give the jobID's for all the jobs queued up for the devices

**Table 25.** DCIM\_SoftwareInstallationService.InstallFromRepository () Method: Return Values

Value	Description
2	Error
4096 <sup>1</sup>	Job started <sup>1</sup>

**Table 26.** DCIM\_SoftwareInstallationService .InstallfromRepository Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	IPAddress	String	IP address of the NFS ,CIFS share such as 192.168.10.12. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS). Default value is ftp.dell.com
IN	ShareName	String	Share name for the network share such as "imageshare". The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS)
IN	ShareType	Uint16	Type of the share or storage. <ul style="list-style-type: none"><li>• 0 – NFS</li><li>• 1 – FTP</li><li>• 2 – CIFS</li></ul> If ShareType is blank or null, it shall be considered as NFS type.
IN	Mountpoint	String	The local directory where the share will be mounted(in case of CIFS)
IN	UserName	String	User name for the remote share. The parameter is necessary for CIFS
IN	Password	String	Password for the remote share. The parameter is necessary for CIFS
IN	Workgroup	String	Workgroup for the share
IN	ProxySupport	Bool	Values can be TRUE or FALSE Default is FALSE. Needs to be TRUE in case User wants to set proxy details
IN	ProxyType	Uint16	Specifies the proxy type of the server <ul style="list-style-type: none"><li>• 0 – HTTP</li><li>• 1 – SOCKS4</li></ul> Default is HTTP
IN	ProxyServer	String	IP of the proxy server. Mandatory in case ProxySupport=TRUE

Qualifiers	Name	Type	Description/Values
IN	ProxyUname	String	User name for proxy server. Mandatory in case ProxySupport=TRUE
IN	ProxyPasswd	String	Password for the proxy server Mandatory in case ProxySupport=TRUE
IN	ProxyPort	String	Port for the proxy server Default is set to 80
IN	RebootNeeded	Bool	Reboot for updates <ul style="list-style-type: none"> <li>• TRUE</li> <li>• FALSE</li> </ul> Default value is set to FALSE. TRUE means system(host) goes for a reboot at the same time FALSE means updates will be effective from next time the system reboots
IN	CatalogFile	String	Name of the catalog file on the repository Default is Catalog.xml
Qualifiers	Name	Type	Description/Values
IN	ApplyUpdate	UInt16	<ul style="list-style-type: none"> <li>• FALSE</li> <li>• TRUE</li> </ul> If it is set to true then the updatable packages from Catalog XML are staged. If it is set to false then no updates are applied. The list of updatable packages can be seen by invoking the GetRepoBasedUpdateList. Default value is set to True.
OUT	JobId	String	Return a JOB ID which can be used to monitor the progress of the InstallFromRepository method.

NOTE: 1 – If return code is 4096 (Job Created), the newly created job does not execute if the LC core services are not running (DCIM\_LCEnumeration with AttributeName equal to “LifecycleControllerState” has the CurrentValue property equal to “Disabled”).

NOTE 2: If the CIFS share is set with a mountpoint, then user needs to give mountpoint in the input or else the job will fail.

**Table 27.** DCIM\_SoftwareInstallationService.InstallFromRepository () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SUP001	Insufficient Method Parameters	NA
SUP002	Job Creation Failure	NA
SUP026	The input value entered for the parameter <parameter> is invalid.	NA
SUP027	Missing required parameter <parameter>	NA
SUP019	Lifecycle Controller is not enabled.	NA

## 8.8. DCIM\_SoftwareInstallationService .GetRepoBasedUpdateList ()

This method is used to get the list of packages and a list of devices that will be updated when a particular repository is used. The user must run InstallFromRepository command before running GetRepoBasedUpdateList().

If ApplyUpdate=false, then no updates will be applied or scheduled. If ApplyUpdate=True, then the list will have jobId's for all the jobs queued up for the devices.

**Table 28.** DCIM\_SoftwareInstallationService.GetRepoBasedUpdateList () Method: Return Values

Value	Description
2	Error
0	Invoke successful

**Table 29.** DCIM\_SoftwareInstallationService . GetRepoBasedUpdateList Method: Parameters

Qualifiers	Name	Type	Description/Values
OUT	PackageList	String	Returns the list of updatable packages that will be applied from the specified repository used with the InstallfromRepository command. The output would be in xml format

**Table 30.** DCIM\_SoftwareInstallationService. **GetRepoBasedUpdateList Method:** Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SUP028	The GetRepoBasedUpdateList method did not complete successfully.	NA
SUP029	Firmware versions on server match catalog, applicable updates are not present in the repository.	NA
SUP030	Proxy IP and User Credential parameter are valid only if the ProxySupport paramter is TRUE.	NA

## 9. Use Cases

See Lifecycle Controller (LC) Integration Best Practices Guide.

## 10. CIM Elements

No other requirements are defined.

## 11. Privilege and License Requirement

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

**Table 31.** Privilege and License Requirements

Class and Method	Operation	User Privilege Required	License Required
DCIM_SoftwareInstallationService	ENUMERATE, GET	Login	None.
DCIM_SoftwareInstallationService. InstallFromURI()	INVOKE	Login, Configure	LM_REMOTE_FIRMWARE_UPDATE

Class and Method	Operation	User Privilege Required	License Required
DCIM_SoftwareInstallationService. InstallFromSoftwareIdentity()	INVOKE	Login, Configure	LM_REMOTE_FIRMWARE_UPDATE
DCIM_SoftwareInstallationService. CreateRebootJob()	INVOKE	Login, Configure	LM_REMOTE_FIRMWARE_UPDATE
DCIM_SoftwareInstallationService. InstallFromRepository()	INVOKE	Login, Configure	LM_REMOTE_FIRMWARE_UPDATE
DCIM_SoftwareInstallationService. GetRepoBasedUpdateList()	INVOKE	Login, Configure	LM_REMOTE_FIRMWARE_UPDATE
DCIM_LCRegisteredProfile	ENUMERATE, GET	Login	None.
DCIM_LCElementConformsToProfile	ENUMERATE, GET	Login	None.

## 12. Change log

Version	Date	Description
4.0.0	20-Jun-2017	Added Proxy Parameters to InstallFromUri method to support for HTTP/HTTPS Shares.