

Lifecycle Controller (LC) Management Profile

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CONTENTS

67			
68	1	Scope	8
69	2	Normative References.....	8
70	3	Terms and Definitions	8
71	4	Symbols and Abbreviated Terms	10
72	5	Synopsis	10
73	6	Description	11
74	7	Implementation Requirements	12
75	7.1	DCIM_LCService	12
76	7.2	DCIM_LCEnumeration.....	13
77	7.3	DCIM_LCString.....	16
78	7.4	Lifecycle Controller (LC) Management Registration – DCIM_LCRegistered Profile	19
79	8	Methods.....	20
80	8.1	DCIM_LCService.SetAttribute().....	20
81	8.2	DCIM_LCService.SetAttributes()	22
82	8.3	DCIM_LCService.CreateConfigJob().....	24
83	8.4	DCIM_LCService.ReInitiateDHS().....	25
84	8.5	DCIM_LCService.ReInitiateAutoDiscovery()	27
85	8.6	DCIM_LCService.ClearProvisioningServer().....	30
86	8.7	DCIM_LCService.DownloadServerPublicKey().....	30
87	8.8	DCIM_LCService.DownloadClientCerts().....	31
88	8.9	DCIM_LCService.DeleteAutoDiscoveryClientCerts ()	32
89	8.10	DCIM_LCService.SetCertificateAndPrivateKey()	34
90	8.11	DCIM_LCService.SetPublicCertificate()	35
91	8.12	DCIM_LCService.DeleteAutoDiscoveryServerPublicKey()	35
92	8.13	DCIM_LCService.InsertCommentInLCLog()	36
93	8.14	DCIM_LCService.ExportLCLog().....	37
94	8.15	DCIM_LCService.ExportCompleteLCLog()	38
95	8.16	DCIM_LCService.ExportHWInventory()	40
96	8.17	DCIM_LCService.ExportFactoryConfiguration().....	42
97	8.18	DCIM_LCService.ExportSystemConfiguration().....	44
98	8.19	DCIM_LCService.ImportSystemConfiguration()	46
99	8.20	DCIM_LCService.LCWipe().....	48
100	8.21	DCIM_LCService.TestNetworkShare().....	49
101	8.22	DCIM_LCService.BackupImage().....	50
102	8.23	DCIM_LCService.RestoreImage()	53
103	8.24	DCIM_LCService.GetRSSStatus().....	55
104	8.25	DCIM_LCService.GetRemoteServicesAPIStatus ()	56
105	8.26	DCIM_LCService.ExportCertificate()	58
106	8.27	DCIM_LCService.ImportSystemConfigurationPreview()	59
107	8.28	DCIM_LCService. RunePSADiagnostics ()	61
108	8.29	DCIM_LCService. ExportePSADiagnosticsResult ()	63
109	8.30	DCIM_LCService. ExportTechSupportReport ().....	64
110	8.31	DCIM_LCService. SystemErase()	65
111	9	Use Cases.....	68
112	10	CIM Elements.....	68
113	11	Privilege and License Requirement	68
114		ANNEX A (informative) Change Log.....	72
115			

Figures

Figure 1 – LC Management Profile: Class Diagram	11
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Tables

Table 1 – Related Profiles	11
Table 2 – Class Requirements: Power State Management Profile	12
Table 3 – DCIM_LCService - Operations	13
Table 4 – DCIM_LCService - Properties	13
Table 2 – DCIM_LCEnumeration - Operations	13
Table 3 – Class: DCIM_LCEnumeration	14
Table 4 – DCIM_LCEnumeration Attributes	15
Table 5 – DCIM_LCString - Operations	17
Table 6 – Class: DCIM_LCString	18
Table 7 – DCIM_LCString Attributes	18
Table 8 – DCIM_LCRegisteredProfile - Operations	19
Table 9 – Class: DCIM_LCRegisteredProfile	20
Table 10 – DCIM_LCService.SetAttribute() Method: Return Code Values	21
Table 11 – DCIM_LCService.SetAttribute() Method: Parameters	21
Table 12 – DCIM_LCService.SetAttribute() Method: Standard Messages	22
Table 13 – DCIM_LCService.SetAttributes() Method: Return Code Values	23
Table 14 – DCIM_LCService.SetAttributes() Method: Parameters	23
Table 15 – DCIM_LCService.SetAttributes() Method: Standard Messages	24
Table 16 – DCIM_LCService.CreateConfigJob() Method: Return Code Values	25
Table 17 – DCIM_LCService.CreateConfigJob() Method: Parameters	25
Table 18 – DCIM_LCService.CreateConfigJob() Method: Standard Messages	25
Table 19 – DCIM_LCService.ReInitiatedHS() Method: Return Code Values	26
Table 20 – DCIM_LCService.ReInitiatedHS() Method: Parameters	26
Table 21 – DCIM_LCService.ReInitiatedHS() Method: Standard Messages	26
Table 19 – DCIM_LCService.ReInitiateAutoDiscovery() Method: Return Code Values	28
Table 20 – DCIM_LCService.ReInitiateAutoDiscovery() Method: Parameters	28
Table 21 – DCIM_LCService.ReInitiateAutoDiscovery() Method: Standard Messages	29
Table 22 – DCIM_LCService.ClearProvisioningServer() Method: Return Code Values	30
Table 23 – DCIM_LCService.ClearProvisioningServer() Method: Parameters	30
Table 24 – DCIM_LCService.ClearProvisioningServer() Method: Standard Messages	30
Table 25 – DCIM_LCService.DownloadServerPublicKey() Method: Return Code Values	30
Table 26 – DCIM_LCService.DownloadServerPublicKey() Method: Parameters	30
Table 27 – DCIM_LCService.DownloadServerPublicKey() Method: Standard Messages	31
Table 28 – DCIM_LCService.DownloadClientCerts() Method: Return Code Values	32
Table 29 – DCIM_LCService.DownloadClientCerts() Method: Parameters	32
Table 30 – DCIM_LCService.DownloadClientCerts() Method: Standard Messages	32
Table 31 – DCIM_LCService.DeleteAutoDiscoveryClientCerts() Method: Return Code Values	33
Table 32 – DCIM_LCService.DeleteAutoDiscoveryClientCerts() Method: Parameters	33
Table 33 – DCIM_LCService.DeleteAutoDiscoveryClientCerts() Method: Standard Messages	33
Table 34 – DCIM_LCService.SetCertificateAndPrivateKey() Method: Return Code Values	34
Table 35 – DCIM_LCService.SetCertificateAndPrivateKey() Method: Parameters	34

162	Table 36 – DCIM_LCService.SetCertificateAndPrivateKey() Method: Standard Messages	34
163	Table 37 – DCIM_LCService.SetPublicCertificate() Method: Return Code Values.....	35
164	Table 38 – DCIM_LCService.SetPublicCertificate() Method: Parameters	35
165	Table 39 – DCIM_LCService.SetPublicCertificate() Method: Standard Messages	35
166	Table 40 – DCIM_LCService.DeleteAutoDiscoveryServerPublicKey() Method: Return Code Values.....	36
167	Table 41 – DCIM_LCService.DeleteAutoDiscoveryServerPublicKey() Method: Parameters	36
168	Table 42 – DCIM_LCService.DeleteAutoDiscoveryServerPublicKey() Method: Standard Messages	36
169	Table 43 – DCIM_LCService.InsertCommentInLCLog() Method: Return Code Values.....	36
170	Table 44 – DCIM_LCService.InsertCommentInLCLog() Method: Parameters.....	36
171	Table 45 – DCIM_LCService.InsertCommentInLCLog() Method: Standard Messages	37
172	Table 46 – DCIM_LCService.ExportLCLog() Method: Return Code Values	37
173	Table 47 – DCIM_LCService.ExportLCLog() Method: Parameters	37
174	Table 48 – DCIM_LCService.ExportLCLog() Method: Standard Messages	38
175	Table 46 – DCIM_LCService.ExportCompleteLCLog() Method: Return Code Values.....	39
176	Table 47 – DCIM_LCService.ExportCompleteLCLog() Method: Parameters	39
177	Table 48 – DCIM_LCService.ExportCompleteLCLog() Method: Standard Messages	40
178	Table 49 – DCIM_LCService.ExportHWInventory() Method: Return Code Values	41
179	Table 50 – DCIM_LCService.ExportHWInventory() Method: Parameters.....	41
180	Table 51 – DCIM_LCService.ExportHWInventory() Method: Standard Messages	41
181	Table 52 – DCIM_LCService.ExportFactoryConfiguration() Method: Return Code Values	43
182	Table 53 – DCIM_LCService.ExportFactoryConfiguration() Method: Parameters	43
183	Table 54 – DCIM_LCService.ExportFactoryConfiguration() Method: Standard Messages.....	43
184	Table 55 – DCIM_LCService.ExportSystemConfiguration() Method: Return Code Values	45
185	Table 56 – DCIM_LCService.ExportSystemConfiguration() Method: Parameters	45
186	Table 57 – DCIM_LCService.ExportSystemConfiguration() Method: Standard Messages.....	45
187	Table 56 – DCIM_LCService.ImportSystemConfiguration() Method: Parameters	47
188	Table 57 – DCIM_LCService.ImportSystemConfiguration() Method: Standard Messages	47
189	Table 58 – DCIM_LCService.LCWipe() Method: Return Code Values	49
190	Table 59 – DCIM_LCService.LCWipe() Method: Parameters	49
191	Table 60 – – DCIM_LCService.LCWipe() Method: Standard Messages.....	49
192	Table 62 – DCIM_LCService.TestNetworkShare() Method: Parameters	50
193	Table 63 – DCIM_LCService.TestNetworkShare() Method: Standard Messages.....	50
194	Table 62 – DCIM_LCService.BackupImage() Method: Parameters	51
195	Table 63 – DCIM_LCService.BackupImage() Method: Standard Messages	53
196	Table 64 – DCIM_LCService.RestoreImage() Method: Return Code Values	54
197	Table 65 – DCIM_LCService.RestoreImage() Method: Parameters	54
198	Table 66 – DCIM_LCService.RestoreImage() Method: Standard Messages	55
199	Table 67 – DCIM_LCService.GetRSSStatus() Method: Return Code Values	56
200	Table 68 – DCIM_LCService.GetRSSStatus() Method: Parameters	56
201	Table 69 – DCIM_LCService.GetRSSStatus() Method: Standard Messages	56
202	Table 67 – DCIM_LCService.GetRemoteServicesAPIStatus() Method: Return Code Values.....	57
203	Table 68 – DCIM_LCService.GetRemoteServicesAPIStatus() Method: Parameters.....	57
204	Table 70 – DCIM_LCService.GetRemoteServicesAPIStatus() Method: Standard Messages	57
205	Table 71 – DCIM_LCService.ExportCertificate() Method: Return Code Values	58
206	Table 72 – DCIM_LCService.ExportCertificate() Method: Parameters	58
207	Table 73 – DCIM_LCService.ExportCertificate() Method: Standard Messages.....	58
208	Table 74 – DCIM_LCService.ImportSystemConfigurationPreview() Method: Return Code Values	60
209	Table 75 – DCIM_LCService.ImportSystemConfigurationPreview() Method: Parameters	60

210	Table 76 – DCIM_LCService.ImportSystemConfigurationPreview() Method: Standard Messages	60
211	Table 77 – DCIM_LCService. RunePSADiagnostics () Method: Return Code Values.....	62
212	Table 78 – DCIM_LCService. RunePSADiagnostics () Method: Parameters	62
213	Table 79 – DCIM_LCService. RunePSADiagnostics () Method: Standard Messages	63
214	Table 80 – DCIM_LCService. ExportePSADiagnosticsResult() Method: Return Code Values	64
215	Table 81 – DCIM_LCService. ExportePSADiagnosticsResult() Method: Parameters	64
216	Table 82 – DCIM_LCService. ExportePSADiagnosticsResult() Method: Standard Messages	64
217	Table 83 – DCIM_LCService. ExportTechSupportReport() Method: Return Code Values	65
218	Table 84 – DCIM_LCService. ExportTechSupportReport () Method: Parameters	65
219	Table 85 – DCIM_LCService. ExportTechSupportReport () Method: Standard Messages	65
220	Table 83 – DCIM_LCService. UpdateOSAppHealthData() Method: Return Code Values.....	66
221	Table 84 – DCIM_LCService. UpdateOSAppHealthData () Method: Parameters.....	66
222	Table 85 – DCIM_LCService. UpdateOSAppHealthData () Method: Standard Messages	66
223	NOTE: By default, all System Components are included in the erase process. Table 88 –	
224	DCIM_LCService. SystemErase () Method: Standard Messages	68
225	Table 74 – Privilege and License Requirements	68
226		

Lifecycle Controller (LC) Management

1 Scope

The Lifecycle Controller (LC) Management Profile describes the management of the Dell Lifecycle Controller and its configuration attributes. The profile details certificate management and the LC configuration services that are necessary for the LC's proper functionality. The LC configuration attributes are modeled as attribute collections for an individual LC; typically there is one LC per system platform.

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*
- DMTF DSP1061, *BIOS Management Profile 1.0*
- *Dell Job Control Profile 1.0.0*
- DMTF DSP0004, *CIM Infrastructure Specification 2.3*
- *Dell Lifecycle Controller Best Practices Guide 1.0*,
http://en.community.dell.com/techcenter/extras/m/white_papers/20066173.aspx
- *Dell WSMAN Licenses and Privileges 1.0*
- 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_LCAttribute.mof
 - DCIM_LCElementConformsToProfile.mof
 - DCIM_LCEnumeration.mof
 - DCIM_LCRegisteredProfile.mof
 - DCIM_LCService.mof
 - DCIM_LCString.mof

3 Terms and Definitions

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

258 **3.1**
259 **Conditional** – Indicates requirements to be followed strictly in order to conform to the document when the
260 specified conditions are met.

261 **3.2**
262 **Mandatory** – Indicates requirements to be followed strictly in order to conform to the document and from
263 which no deviation is permitted.

264 **3.3**
265 **May** – Indicates a course of action permissible within the limits of the document.

266 **3.4**
267 **Optional** – Indicates a course of action permissible within the limits of the document.

268 **3.5**
269 **can** – Used for statements of possibility and capability, whether material, physical, or causal.

270 **3.6**
271 **cannot** – Used for statements of possibility and capability, whether material, physical, or causal.

272 **3.7**
273 **need not** – Indicates a course of action permissible within the limits of the document.

274 **3.8**
275 **referencing profile** – Indicates a profile that owns the definition of this class and can include a reference
276 to this profile in its “Related Profiles” table.

277 **3.9**
278 **shall** – Indicates requirements to be followed strictly in order to conform to the document and from which
279 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

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

3.14

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

3.15

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

3.16

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

3.17

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

LC – Lifecycle Controller

4.3

VD – Virtual Disk

5 Synopsis

Profile Name: LC Management

Version: 1.6.0

Organization: DCIM

CIM Schema Version: 2.26 Experimental

Central Class: DCIM_LCService

Scoping Class: CIM_ComputerSystem

The LC Management Profile extends the management capability of the referencing profiles by adding the capability to describe lifecycle controller (LC) through its attributes. Each DCIM_LCAAttribute derived instance represents an LC configuration-related attribute.

The DCIM_LCService class shall be the Central Class. The DCIM_ComputerSystem class shall be the Scoping Class. The DCIM_LCService instance shall be the Central Instance. The DCIM_ComputerSystem instance 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	DCIM	1.0	Reference

6 Description

The LC Management Profile describes the LC attribute configuration service and the attributes instances that the service manages. The profile also describes the relationship of the LC attribute service to the Dell profile version information.

Figure 1 represents the class schema for the Lifecycle Controller (LC) Management. The LC service in a managed system is represented by the instance of the DCIM_LCService class. The LC attributes are represented by the DCIM_LCAAttribute class derivation: DCIM_LCEnumeration and DCIM_LCString classes.

The LC Management Profile information is represented with the instance of the DCIM_LCRegisteredProfile.

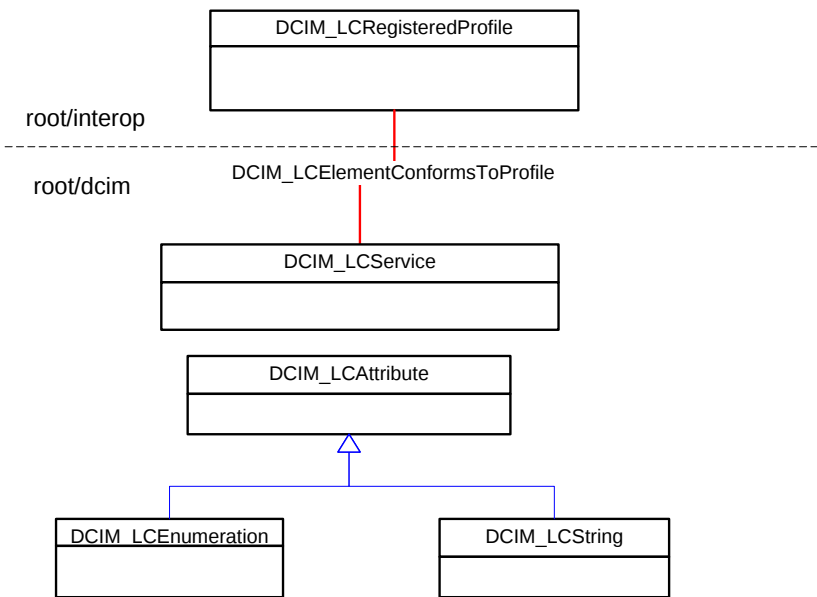


Figure 1 – LC Management Profile: Class Diagram

7 Implementation Requirements

This section describes the implementation of Dell LC Management.

Table 2 – Class Requirements: Power State Management Profile

Element Name	Requirement	Description
Classes		
DCIM_LCService	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.1.
DCIM_LCEnumeration	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.2.
DCIM_LCString	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.3.
DCIM_LCElementConformsToProfile	Mandatory	The class shall be implemented in both the <i>Interop</i> and <i>Implementation Namespaces</i> . See section 7.1 and 7.4.
DCIM_LCRegisteredProfile	Mandatory	The class shall be implemented in the <i>Interop Namespace</i> . See section 7.4.
Indications		
None defined in this profile		

7.1 DCIM_LCService

This section describes the implementation for the DCIM_LCService class.

This class is instantiated in the Implementation Namespace.

The DCIM_LCElementConformsToProfile association's ManagedElement property shall references the DCIM_LCService instance(s).

7.1.1 Resource URIs for WinRM®

The class Resource URI is:

`"http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_LCService?__cimnamespace=root/dcim"`

The key properties are the SystemCreationClassName, CreationClassName, SystemName, Name

The instance Resource URI for DCIM_LCService instance is:

`"http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_LCService?__cimnamespace=root/dcim+SystemCreationClassName=DCIM_ComputerSystem+SystemName=DCIM:ComputerSystem+CreationClassName=DCIM_LCService+Name=DCIM:LCService"`

7.1.2 Operations

The following table lists the operations implemented on DCIM_LCService.

Table 3 – DCIM_LCService - 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_LCService instance in a system. The “Requirements” column shall denote whether the property is implemented (for requirement definitions, see section 3.1, 3.2, and 3.4). The “Additional Requirements” column shall denote either possible values for the property, or requirements on the value formulation.

Table 4 – DCIM_LCService - Properties

Property Name	Type	Requirement	Additional Requirement
CreationClassName	String	Mandatory	The property value shall be “DCIM_LCService”
Name	String	Mandatory	The property value shall be “DCIM:LCService”
ElementName	String	Mandatory	The property value shall be “LC Service”
SystemCreationClassName	String	Mandatory	The property value shall be “DCIM_ComputerSystem”
SystemName	String	Mandatory	The property value shall be “DCIM:ComputerSystem”

7.2 DCIM_LCEnumeration

This section describes the implementation for the DCIM_LCEnumeration class.

This class shall be instantiated in the Implementation Namespace.

7.2.1 Resource URIs for WinRM®

The class Resource URI shall be “http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_LCEnumeration?__cimnamespace=root/dcim”

The key property shall be the InstanceID.

The instance Resource URI for DCIM_LCEnumeration instance shall be:
“http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_LCEnumeration?__cimnamespace=root/dcim+InstanceID=<InstanceID>”

7.2.2 Operations

The following table lists the operations implemented on DCIM_LCEnumeration.

Table 2 – DCIM_LCEnumeration - Operations

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

378

379 **7.2.3 Class Properties**

380 The following table lists the implemented properties for DCIM_LCEnumeration instance representing an
 381 LC enumeration attribute. The “Requirements” column shall denote whether the property is implemented
 382 (for requirement definitions, see section 3). The “Additional Requirement” column shall denote either
 383 possible values for the property, or requirements on the value formulation.

384 **Table 3 – Class: DCIM_LCEnumeration**

Properties	Type	Requirement	Additional Requirements
InstanceID	string	Mandatory	The property value shall have a unique value.
AttributeName	String	Mandatory	The property value shall be from the “AttributeName” column in Table 4.
CurrentValue[]	string	Mandatory	The property value shall be one of the values in the “PossibleValues” column at the corresponding row in Table 4.
PendingValue[]	string	Mandatory	The property value shall be one of the values in the “PossibleValues” column at the corresponding row in Table 4.
DefaultValue[]	string	Mandatory	The property value shall represent the default value of the attribute and shall be one of the values in the “PossibleValues” column at the corresponding row in Table 4
IsReadOnly	boolean	Mandatory	The property value shall the value in the “IsReadOnly” column at the corresponding row in Table 4.
ElementName	string	Mandatory	The property value shall be the FQDD of the LC.
PossibleValues[]	string	Mandatory	The property value shall be equal to the array of the values in “PossibleValues” column at the corresponding row in Table 4.

385 The following table describes the requirements for the AttributeName, and PossibleValues properties for
 386 the DCIM_LCEnumeration class.
 387

Table 4 – DCIM_LCEnumeration Attributes

AttributeName	IsReadOnly	PossibleValues	Description
---------------	------------	----------------	-------------

AttributeName	IsReadOnly	PossibleValues	Description
Licensed	True	• Yes • No	Whether the Part Replacement feature is licensed.
Part Configuration Update	False	• Disabled • Apply always • Apply only if firmware match	Part configuration update method.
Part Firmware Update	False	• Disable • Allow version upgrade only • Match firmware of replaced part	• Disable (default) – firmware update is not allowed. • Allow version upgrade only – Allow firmware update only on up-revision. • Match firmware of replaced part – Always update firmware.
Collect System Inventory on Restart	False	• Disabled • Enabled	• Enabled (default) – Enable collecting system inventory on restart • Disabled – Disable collecting inventory on restart
AutoDiscovery	True	• On • Off	• Whether Auto Discovery feature is turned on or off.
Discovery Factory Defaults	True	• On • Off	• Off (default) – Do not reset to factory defaults when performing auto discovery • On – Reset to factory defaults when performing auto discovery.
IPChangeNotifyPS	False	• On • Off	• On – Notify provisioning server of an IP change. • Off – Do not notify provisioning server of an IP change.
VirtualAddressManagement	False	• Console • FlexAddress	• Console – Console manages the virtual addresses • FlexAddress – (Blade only) Virtual addresses are managed through the flex addressing. Note: If this attribute is configured through console, see to section “Setting virtual address attributes on CNA” in Simple NIC Profile.
LifecycleControllerState	False	• Enabled • Disabled • Recovery	Enabled (Default) The LC core services shall be enabled to enable the update and inventory collection features.
BIOS Reset To Defaults Requested	False	• True • False	• False (default) – Do not reset the BIOS to defaults • True – Reset the BIOS to defaults. Note: This action needs the system reboot.

390 This section describes the implementation for the DCIM_LCString class.

391 This class shall be instantiated in the Implementation Namespace.

392 **7.3.1 Resource URIs for WinRM®**

393 The class Resource URI shall be “http://schemas.dell.com/wbem/wscim/1/cim-
394 schema/2/DCIM_LCString?__cimnamespace=root/dcim”

395 The key property shall be the InstanceID.

396 The instance Resource URI for DCIM_LCString instance shall be:

397 “http://schemas.dell.com/wbem/wscim/1/cim-

398 schema/2/DCIM_LCString?__cimnamespace=root/dcim+InstanceID=<InstanceID>”

399 **7.3.2 Operations**

400 The following table details the implemented operations on DCIM_LCString.

401 **Table 5 – DCIM_LCString - Operations**

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

402 **7.3.3 Class Properties**

403 The following table lists the implemented properties for DCIM_LCString instance representing an LC
404 string attribute. The “Requirements” column shall denote whether the property is implemented (for
405 requirement definitions, see section 3). The “Additional Requirement” column shall denote either possible
406 values for the property, or requirements on the value formulation.

Table 6 – Class: DCIM_LCString

Properties	Type	Requirement	Additional Requirements
InstanceID	string	Mandatory	The property value shall have unique value.
AttributeName	string	Mandatory	The property value shall be from the "AttributeName" column in Table 7.
CurrentValue[]	string	Mandatory	The property shall represent the current value of the attribute.
PendingValue[]	string	Mandatory	The property value shall represent the pending value of the attribute.
DefaultValue[]	string	Mandatory	The property value shall represent the default value of the attribute.
IsReadOnly	boolean	Mandatory	The property value shall be the value in the "IsReadOnly" column at the corresponding row in Table 7.
ElementName	string	Mandatory	The property value shall be the FQDD of the LC.
MinLength	uint64	Mandatory	The property value shall be the value in the "MinLength" column at the corresponding row in Table 7. The CurrentValue and PendingValue shall have equal or higher number of characters than the MinLength property value from the corresponding row. The omission or NULL shall denote that no known constraint exists on the CurrentValue and PendingValue properties.
MaxLength	uint64	Mandatory	The property value shall be the value in the "MaxLength" column at the corresponding row in Table 7. The CurrentValue and PendingValue shall have equal or lower number of characters than the MaxLength property value. The omission or NULL shall denote that no known constraint exists on the CurrentValue and PendingValue properties.
StringType	uint32	Mandatory	The property shall describe the type of string in the CurrentValue, PendingValue, and DefaultValue properties and have one of the following values: • 0 - "Unknown", • 2 - "ASCII", • 3 - "hex", • 4 - "unicode", • 5 - "regex"

408 The following table describes possible DCIM_LCString attributes and the requirements for the
 409 AttributeName, MinLength, and MaxLength properties. The column headers represent the properties of
 410 the DCIM_LCString class. Each of the cells represents the values of the properties.

411 •

412 **Table 7 – DCIM_LCString Attributes**

AttributeName	IsRead Only	MinLength	MaxLength	Description
---------------	-------------	-----------	-----------	-------------

AttributeName	IsRead Only	MinLength	MaxLength	Description
SYSID	TRUE	N/A	N/A	Dell System ID.
Provisioning Server	FALSE	0	255	Provisioning server address and port. Attribute value examples: • Hostname • hostname.domain.com • 1.1.1.1 • Mypc:8080 • Myps.dell.com(1.2.3.4):8080 • Host1:80,host2:8080, • Hostname[2001:db8:0000:1428:57ab]:443
VirtualAddressManagement Application*	FALSE*	0	32	The console name of the Virtual Address Management Application, if the DCIM_LCEnumeration VirtualAddressManagement attribute is set to CurrentValue equals "Console".

* - Note that VirtualAddressMangementApplication attribute is settable only if the VirtualAddressManagement DCIM_LCEnumeration instance's CurrentValue is set to "Console".

7.4 Lifecycle Controller (LC) Management Registration – DCIM_LCRegistered Profile

This section describes the implementation for the DCIM_LCRegisteredProfile class.

This class shall be instantiated in the Interop Namespace.

The DCIM_LCElementConformsToProfile association(s)' ConformantStandard property shall reference the DCIM_LCRegisteredProfile instance.

7.4.1 Resource URIs for WinRM®

The class WBEM 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 WBEM URI shall be: "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_LCRegisteredProfile?__cimnamespace=root/interop+InstanceID=DCIM:LCManagement:1.1.0"

7.4.2 Operations

The following table lists the operations implemented on DCIM_LCRegisteredProfile.

Table 8 – DCIM_LCRegisteredProfile - Operations

Operation Name	Requirements	Required Input
Get	Mandatory	Instance URI

Operation Name	Requirements	Required Input
Enumerate	Mandatory	Class URI

7.4.3 Class Properties

The following table details the properties implemented for the DCIM_LCRegisteredProfile instance representing Lifecycle Controller (LC) Management 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 9 – Class: DCIM_LCRegisteredProfile

Properties	Type	Requirement	Additional Requirements
InstanceId	string	Mandatory	This property shall have a value of “DCIM:LCManagement:1.1.0”
RegisteredName	string	Mandatory	This property shall have a value of “LC Management”.
RegisteredVersion	string	Mandatory	This property shall have a value of “1.6.0”.
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)”
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: “LICENSED” “NOT_LICENSED” 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_LCService.SetAttribute()

The SetAttribute() method is used to set or change the value of an LC attribute.

445 Invoking the SetAttribute() method shall change the value of the DCIM_LCAAttribute.CurrentValue or
 446 DCIM_LCAAttribute.PendingValue property to the value specified by the AttributeValue parameter if the
 447 DCIM_LCAAttribute.IsReadOnly property is FALSE. Invoking this method when the
 448 DCIM_LCAAttribute.IsReadOnly property is TRUE shall result in no change to the value of the
 449 DCIM_LCAAttribute.CurrentValue property. The results of changing this value is described with the
 450 SetResult parameter.

451 Return code values for the SetAttribute() method are specified in Table 10 and parameters are specified
 452 in Table 11.

453 **NOTE:** Invoking the SetAttribute() method multiple times can result in the earlier requests being
 454 overwritten or lost.

455 **Table 10 – DCIM_LCService.SetAttribute() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
2	Error occurred

456 **Table 11 – DCIM_LCService.SetAttribute() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	AttributeName	string	DCIM_LCAAttribute.AttributeName
IN, REQ	AttributeValue[]	string	Pending or Current value to be set.
OUT	SetResult	string	Invoking the SetAttribute may result in the CurrentValue or PendingValue property being set. A value of: • “Set CurrentValue” means CurrentValue property is set. • “Set PendingValue” means PendingValue property is set.
OUT	RebootRequired	string	A value of • “Yes” means a reboot is required to set this value. • “No” means a reboot is not required to set this value.
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 12 – DCIM_LCService.SetAttribute() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	NA
LC003	Failed to change the FW Update mode	NA
LC004	PS info not formatted correctly	NA
LC005	Invalid FW update mode	NA
LC007	Invalid parameter	NA
LC008	Unsupported method parameter value	NA
LC012	Lifecycle Controller is being used by another process	NA
LC015	Invalid Part Configuration Update	NA
LC016	Missing required parameter	<parameter>
LC036	System Services is disabled	NA
LC041	Virtual Address Mgmt file error	NA
LC042	Virtual Address Mgmt using FlexAddr	NA
LC048	Invalid value of IPChangeNotifyPS	NA
LC049	Invalid value of VirtualAddressManagement	NA
LC057	Invalid AttributeName.	NA
LC058	Invalid AttributeValue for AttributeName.	<parameter>
LC059	Cannot set ReadOnly AttributeName.	<parameter>
LC062	An instance of Export or Import System Configuration is already running.	

460 8.2 DCIM_LCService.SetAttributes()

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

462 Invoking the SetAttributes() method shall change the values of the DCIM_LCAttribute.CurrentValue or
 463 PendingValue properties that correspond to the names specified by the AttributeName parameter and the
 464 values specified by the AttributeValue parameter if the respective DCIM_LCAttribute.IsReadOnly property
 465 is FALSE. Invoking the method when the respective DCIM_LCAttribute.IsReadOnly property is TRUE
 466 shall result in no change to the corresponding value of the DCIM_LCAttribute.CurrentValue property.

467 Return code values for the SetAttributes() method are specified in Table 13, and parameters are
 468 specified in Table 14.

469 **NOTE:** Invoking the SetAttributes() method multiple times can result in the earlier requests being
 470 overwritten or lost.

471

Table 13 – DCIM_LCService.SetAttributes() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

472

Table 14 – DCIM_LCService.SetAttributes() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	AttributeName[]	string	The array parameter shall contain the AttributeName property values for the attributes to be modified.
IN, REQ	AttributeValue[]	string	The array parameter shall contain the desired attribute values at the corresponding array element with the attribute name in the AttributeName array parameter. For example, if there are two attributes in the AttributeName array: AttributeName1 and AttributeName2, the array index 1 shall contain the value for AttributeName1 and array index 2 shall contain the value for AttributeName2. Attributes with array values shall not be set using this method, rather the SetAttribute() method shall be used to set the array attributes one at a time.. If the value is valid, the CurrentValue or PendingValue property of the specified attribute shall be modified.
OUT	SetResult[]	string	Invoking the SetAttributes may result in the CurrentValue or PendingValue property of each input element being set. AttributeValue array shall have a corresponding SetResult value in the SetResult array. A return value of: • “Set CurrentValue” means CurrentValue property is set. • “Set PendingValue” means PendingValue property is set.
OUT	RebootRequired[]	string	Each input element’s AttributeValue array shall have a corresponding RebootRequired value in the RebootRequired array. A value of: • “Yes” means a reboot is required to set this value. • “No” means a reboot is not required to set this value
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

Qualifiers	Name	Type	Description/Values
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

Table 15 – DCIM_LCService.SetAttributes() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	NA
LC003	Failed to change the FW Update mode	NA
LC004	PS info not formatted correctly	NA
LC005	Invalid FW update mode	NA
LC007	Invalid parameter	NA
LC008	Unsupported method parameter value	NA
LC012	Lifecycle Controller is being used by another process	NA
LC015	Invalid Part Configuration Update	NA
LC016	Missing required parameter	<parameter>
LC036	System Services is disabled	NA
LC041	Virtual Address Mgmt file error	NA
LC042	Virtual Address Mgmt using FlexAddr	NA
LC048	Invalid value of IPChangeNotifyPS	NA
LC049	Invalid value of VirtualAddressManagement	NA
LC057	Invalid AttributeName.	NA
LC058	Invalid AttributeValue for AttributeName.	<parameter>
LC059	Cannot set ReadOnly AttributeName.	<parameter>
LC062	An instance of Export or Import System Configuration is already running.	

8.3 DCIM_LCService.CreateConfigJob()

The CreateConfigJob() method is used to apply the pending values created by the SetAttribute and SetAttributes methods. The successful execution of this method creates a job for application of pending attribute values.

Return code values for the CreateConfigJob() method are specified in Table 16, and parameters are specified in Table 17.

NOTE: Subsequent calls to CreateConfigJob after the first CreateConfigJob will result in error until the first job is completed.

483

Table 16 – DCIM_LCService.CreateConfigJob() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

484

Table 17 – DCIM_LCService.CreateConfigJob() Method: Parameters

Qualifiers	Name	Type	Description/Values
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status ¹
OUT	MessageID	string	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message	string	Error Message in English corresponding to MessageID is returned if the method fails to execute
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

485

486

Table 18 – DCIM_LCService.CreateConfigJob() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	
LC012	Lifecycle Controller is being used by another process	NA
LC013	There are no pending values to set	NA
LC045	An instance of CreateConfigJob is already running	NA
JCP017	Maximum job limit reached, cannot create new jobs	NA
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	NA
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA
LC062	An instance of Export or Import System Configuration is already running.	

487

488 **8.4 DCIM_LCService.ReInitiateDHS()**

489 The ReInitiateDHS() method is used to reinitiate the provisioning server discovery and handshake.

490

Table 19 – DCIM_LCService.ReInitiateDHS() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

491

Table 20 – DCIM_LCService.ReInitiateDHS() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	ProvisioningServer	string	An optional parameter to specify provisioning server addresses and ports used for auto discovery. If omitted, the Lifecycle Controller shall get the value from DHCP or DNS.
IN, REQ	ResetToFactoryDefaults	boolean	If set to "true", all configuration information is replaced with the auto discovery factory defaults. If set to "false", an error will be returned
IN, REQ	PerformAutoDiscovery	uint16	- A value of "Off = 1" disables auto discovery. - A value of "Now = 2" enables and initiates auto discovery immediately. - A value of "NextBoot = 3" will delay reconfiguration and auto discovery until next A/C cycle. NOTE: If NextBoot has value 3, then upon successful execution, the Discovery Factory Defaults attribute shall be set to "On".
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

492

Table 21 – DCIM_LCService.ReInitiateDHS() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	NA
LC004	PS info not formatted correctly	NA
LC008	Unsupported method parameter value	NA
LC009	Insufficient method parameters	NA

493

494 **8.5 DCIM_LCService.RelInitiateAutoDiscovery()**

495 The RelInitiateAutoDiscovery() method is used to reinitiate the discovery and handshake with static IP
496 configuration. If the method successfully executes, the iDRAC shall be in the static IP mode after the
497 auto-discovery is initiated and thus, shall not require DHCP setup. The static IP information for auto-
498 discovery can be set either through the optional input parameters of this method or through the iDRAC
499 attributes in the iDRAC Card Profile.

500 After the successful auto-discovery initiation, if the IPAddress parameter has non-NULL value, then the
501 iDRAC IPv4 address shall be set to that parameter's value, otherwise the iDRAC IPv4 Address shall be
502 set to the Address attribute in the IPv4 Information group in the iDRAC Card Profile.

503 After the successful auto-discovery initiation, if the Mask parameter has non-NULL value, then the iDRAC
504 IPv4 address net mask shall be set to that parameter's value, otherwise the iDRAC IPv4 address net
505 mask shall be set to the to the Netmask attribute in the IPv4 Information group in the iDRAC Card Profile.

506 After the successful auto-discovery initiation, if the Gateway parameter has non-NULL value, then the
507 iDRAC IPv4 gateway address shall be set to that parameter's value, otherwise the iDRAC IPv4 gateway
508 shall be set to the to the Gateway attribute in the IPv4 Information group in the iDRAC Card Profile.

509 After the successful auto-discovery initiation, if the DNS parameter has non-NULL value, then the iDRAC
510 IPv4 DNS address shall be set to that parameter's value, otherwise the iDRAC IPv4 DNS address shall
511 be set to the to the DNS1 attribute in the IPv4 Information group in the iDRAC Card Profile.

512 After the successful auto-discovery initiation, if the Domain parameter has non-NULL value, then the
513 iDRAC domain name shall be set to that parameter's value, otherwise the iDRAC domain name shall be
514 set to the to the DNSDomainName attribute in the NIC Information group in the iDRAC Card Profile.

515

Table 22 – DCIM_LCService.RelInitiateAutoDiscovery() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

516

Table 223 – DCIM_LCService.RelInitiateAutoDiscovery() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	ProvisioningServer	string	An optional parameter to specify provisioning server addresses and ports used for auto discovery. If omitted, the Lifecycle Controller shall get the value from DNS.
IN, REQ	PerformAutoDiscovery	uint16	- A value of "Off = 1" disables auto discovery. - A value of "Now = 2" enables and initiates auto discovery immediately. - A value of "NextBoot = 3" will delay reconfiguration and auto discovery until next A/C cycle. NOTE: If NextBoot has value 3, then upon successful execution, the Discovery Factory Defaults attribute shall be set to "On".
IN	IPAddress	string	An optional parameter for specifying the iDRAC static IP configuration after the reset to the factory defaults occurs. The parameter shall be IPv4 address. The iDRAC IPv4 address shall be set to this parameter value after the reset occurs. NOTE: If this parameter is not specified then iDRAC shall be set to the value of the Address attribute in the IPv4 Information group in the iDRAC Card Profile.
IN	Mask	string	An optional parameter for specifying the iDRAC static IP configuration after the reset to the factory defaults occurs. The iDRAC shall be set to this net mask after the reset of iDRAC configuration. NOTE: If this parameter is not specified then iDRAC shall be set to the value of the Netmask attribute in the IPv4 Information group in the iDRAC Card Profile.

Qualifiers	Name	Type	Description/Values
IN	Gateway	string	An optional parameter for specifying the iDRAC static IP configuration after the reset to the factory defaults occurs. The parameter shall be IPv4 address. The iDRAC shall be set to this gateway IP address after the reset of iDRAC configuration. NOTE: If this parameter is not specified then iDRAC shall be set to the value of the Gateway attribute in the IPv4 Information group in the iDRAC Card Profile.
IN	DNS	string	An optional parameter for specifying the iDRAC static IP configuration after the reset to the factory defaults occurs. The parameter shall be IPv4 address. The iDRAC shall be set to this DNS IP address after the reset of iDRAC configuration. NOTE: If this parameter is not specified then iDRAC shall be set to the value of the DNS1 attribute in the IPv4 Information group in the iDRAC Card Profile.
IN	Domain	string	An optional parameter for specifying the iDRAC static IP configuration after the reset to the factory defaults occurs. The iDRAC shall be set to this domain after the reset of iDRAC configuration. NOTE: If this parameter is not specified then iDRAC shall be set to the value of the DNSDomainName attribute in the NIC Information group in the iDRAC Card Profile.
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

517

Table 234 – DCIM_LCService.RelInitiateAutoDiscovery() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	NA
LC004	PS info not formatted correctly	NA
LC008	Unsupported method parameter value	NA

MessageID (OUT parameter)	Message	MessageArguments[]
LC009	Insufficient method parameters	NA
LC065	Static IP information is not configured correctly <attribute key>.	attribute key

8.6 DCIM_LCService.ClearProvisioningServer()

The ClearProvisioningServer() method is used to clear the provisioning server values.

Table 245 – DCIM_LCService.ClearProvisioningServer() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 256 – DCIM_LCService.ClearProvisioningServer() Method: Parameters

Qualifiers	Name	Type	Description/Values
OUT	MessageID	string	Error MessageID is returned if the method fails to execute
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 267 – DCIM_LCService.ClearProvisioningServer() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	

8.7 DCIM_LCService.DownloadServerPublicKey()

The DownloadServerPublicKey() method is used to set a public certificate in the chain of trust for provisioning server. The successful invocation of this method shall set the certificate inside the KeyContent parameter to the iDRAC trusted Root CA list. The certificate will be used to authenticate the provisioning server access to iDRAC.

Table 278 – DCIM_LCService.DownloadServerPublicKey() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started

Table 289 – DCIM_LCService.DownloadServerPublicKey() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, OctetString, REQ	KeyContent	string	Base64 encoded public CA certificate.

Qualifiers	Name	Type	Description/Values
OUT	Job	CIM_ConcreteJob REF	Returned to track the setting of the public key.
OUT	MessageID	string	Error Message ID can be used to index into Dell Message registry files.
OUT	Message	string	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages.

530

531

Table 30 – DCIM_LCService.DownloadServerPublicKey() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	NA
LC016	Missing required parameter	<parameter>
LC017	Invalid value of parameter	<parameter>
LC040	Resource Allocation Failure	
LC046	An instance of DownloadServerPublicKey is already running	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

532

533 8.8 DCIM_LCService.DownloadClientCerts()

534 DCIM_LCService.DownloadClientCerts() is used to copy a CA cert and private key to the iDRAC to sign
535 the iDRAC certificate. When this command is issued the iDRAC will generate a new auto-discovery client
536 certificate and sign it using the CA cert and private key. The CA cert then needs to be added to the
537 provisioning server trusted Root CA list before performing auto-discovery.

538 **Table 31 – DCIM_LCService.DownloadClientCerts() Method: Return Code Values**

Value	Description
2	Error occurred
4096	Job started

539 **Table 32 – DCIM_LCService.DownloadClientCerts() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, OctetString, REQ	KeyContent	string	Base64 encoded private key content.
IN, REQ	Password	string	Private key password.
IN, OctetString, REQ	CACContent	string	Base64 encoded root certificate content.
OUT	Job	CIM_ConcreteJob REF	Returned to track the setting of the public key.
OUT	MessageID	string	Error Message ID can be used to index into Dell Message registry files.
OUT	Message	string	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages.

540 **Table 293 – DCIM_LCService.DownloadClientCerts() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	NA
LC016	Missing required parameter	<parameter>
LC017	Invalid value of parameter	<parameter>
LC040	Resource Allocation Failure	
LC047	An instance of DownloadClientCerts is already running	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

541 **8.9 DCIM_LCService.DeleteAutoDiscoveryClientCerts ()**

542 The DeleteAutoDiscoveryClientCerts() method is used to wipe all configurations from the Lifecycle
543 controller before the system is retired.

544 **Table 304 – DCIM_LCService.DeleteAutoDiscoveryClientCerts() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
2	Error occurred

545 **Table 315 – DCIM_LCService.DeleteAutoDiscoveryClientCerts() 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

546 **Table 326 – DCIM_LCService.DeleteAutoDiscoveryClientCerts() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	

547

8.10 DCIM_LCService.SetCertificateAndPrivateKey()

The SetCertificateAndPrivateKey() method is used to set iDRAC owned server certificate and public and private key pairs using the contents of a PKCS#12 file. iDRAC will serve the certificate to identify itself during web server based connections such as for iDRAC's web application and WSMAN instrumentation connections. The certificate will also be served for connections with directory services.

Table 337 – DCIM_LCService.SetCertificateAndPrivateKey() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 348 – DCIM_LCService.SetCertificateAndPrivateKey() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	Type	string	This parameter specifies the certificate use. Note: The parameter shall have “server” value.
IN, REQ	PKCS12	string	An input parameter that represents the Base64 encoded contents of PKCS#12 file to set. Note this is the content of the file and not a file name.
IN, REQ	PKCS12pin	string	Password to decode the PKCS12.
OUT	MessageID	String	Error Message ID can be used to index into Dell Message registry files.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute.
OUT	MessageArguments[]	String	Substitution variables for dynamic error messages.

Table 359 – DCIM_LCService.SetCertificateAndPrivateKey() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	
LC016	Missing required parameter	"Type", "PKCS12", "PKCS12pin"
LC017	Invalid value of parameter	"Type", "PKCS12", "PKCS12pin"

8.11 DCIM_LCService.SetPublicCertificate()

The SetPublicCertificate() method is used to set a public certificate in the chain of trust for directory services. The successful invocation of this method shall set the certificate inside the Certificate parameter to the iDRAC trusted Root CA list. The certificate will be used to authenticate the directory service access to iDRAC.

Table 40 – DCIM_LCService.SetPublicCertificate() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 41 – DCIM_LCService.SetPublicCertificate() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	Type	string	This parameter specifies the service the certificate is for. "directoryCA" = CA certificate for Active Directory or LDAP server
IN, REQ	Certificate	string	An input parameter that represents the certificate to set. The certificate must be in X509 format and Base64 encoded.
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 42 – DCIM_LCService.SetPublicCertificate() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	
LC016	Missing required parameter %s	"Type", "Certificate"
LC017	Invalid value of parameter %s	"Type", "Certificate"

8.12 DCIM_LCService.DeleteAutoDiscoveryServerPublicKey()

The DeleteAutoDiscoveryServerPublicKey() method is used to delete the server public key set previously by the auto discovery method.

Table 363 – DCIM_LCService.DeleteAutoDiscoveryServerPublicKey() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 374 – DCIM_LCService.DeleteAutoDiscoveryServerPublicKey() 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 385 – DCIM_LCService.DeleteAutoDiscoveryServerPublicKey() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	

8.13 DCIM_LCService.InsertCommentInLCLog()

The InsertCommentInLCLog() method is used to insert additional user comments into the Lifecycle Controller log.

Table 396 – DCIM_LCService.InsertCommentInLCLog() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 407 – DCIM_LCService.InsertCommentInLCLog() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	Comment	string	This parameter holds the text that shall be inserted into the LC log Comment field.
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 418 – DCIM_LCService.InsertCommentInLCLog() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	
LC008	Unsupported method parameter value	
LC014	Comment length must be between 1 and 255 characters	

8.14 DCIM_LCService.ExportLCLog()

The ExportLCLog() method is used to export the log from the Lifecycle Controller to a remote share.

Table 429 – DCIM_LCService.ExportLCLog() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

Table 50 – DCIM_LCService.ExportLCLog() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target export server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Username	String	User name for the target export server.
IN	Password	String	Password for the target export server.
IN	Workgroup	String	The applicable workgroup.
OUT	Job	CIM_ConcreteJob REF	[1] Returned to keep track of config job status ¹ .
OUT	MessageID	String	Error Message ID- can be used to index into Dell Message registry files.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute.
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages.

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Table 51 – DCIM_LCService.ExportLCLog() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table 43
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table 44
LC022	LCL Export was successful	
LC023	Cannot access network share	
LC030	Filepath is a read-only file system	
LC037	An instance of LCExport is already running	
LC040	Resource Allocation Failure	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

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589 **8.15 DCIM_LCService.ExportCompleteLCLog()**

590 The ExportLCLog() method is used to export the log from the Lifecycle Controller to a remote share.

591 **Table 52 – DCIM_LCService.ExportCompleteLCLog() Method: Return Code Values**

Value	Description
1	Not Supported
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

592 **Table 53 – DCIM_LCService.ExportCompleteLCLog() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target export server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Username	String	User name for the target export server.
IN	Password	String	Password for the target export server.
IN	Workgroup	String	The applicable workgroup.
OUT	Job	CIM_ConcreteJob REF	[2] Returned to keep track of config job status ¹ .
OUT	MessageID	String	Error Message ID- can be used to index into Dell Message registry files.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute.
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages.

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Table 54 – DCIM_LCService.ExportCompleteLCLog() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table 45
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table 46
LC022	LCL Export was successful	
LC023	Cannot access network share	
LC030	Filepath is a read-only file system	
LC037	An instance of LCExport is already running	
LC040	Resource Allocation Failure	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

596

597

598 Note: Exporting of log files will be in tar.gz format. Users are at their liberty to change the extension.

599 **8.16 DCIM_LCService.ExportHWInventory()**

600 The ExportHWInventory() method is used to export the hardware inventory from the Lifecycle Controller
 601 to a remote share.

602 **Table 55 – DCIM_LCService.ExportHWInventory() Method: Return Code Values**

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

603 **Table 56 – DCIM_LCService.ExportHWInventory() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target export server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	XMLSchema	uint8	The schema to be used for the Hardware Inventory XML output: 0 (CIM-XML), 1(Simple). If this parameter is not specified, then the output shall be in CIM-XML schema XML.
IN	Username	String	User name for the target export server.
IN	Password	String	Password for the target export server.
IN	Workgroup	String	The applicable workgroup.
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status ¹
OUT	MessageID	String	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute.
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages.

604
605
606 **Table 477 – DCIM_LCService.ExportHWInventory() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table 48
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table 49
LC023	Cannot access network share	
LC025	Insufficient space on network share	
LC027	Hardware Inventory Export was	

MessageID (OUT parameter)	Message	MessageArguments[]
	successful	
LC029	Filepath is invalid	
LC030	Filepath is a read-only file system	
LC038	An instance of Hardware Inventory is already running	
LC040	Resource Allocation Failure	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

8.17 DCIM_LCService.ExportFactoryConfiguration()

The ExportFactoryConfiguration() method is used to export the factory configuration from the Lifecycle Controller to a remote share.

610 **Table 508 – DCIM_LCService.ExportFactoryConfiguration() Method: Return Code Values**

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

611 **Table 519 – DCIM_LCService.ExportFactoryConfiguration() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target export server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Username	String	User name for the target export server.
IN	Password	String	Password for the target export server.
IN	Workgroup	String	The applicable workgroup.
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status.
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.

612 **Table 60 – DCIM_LCService.ExportFactoryConfiguration() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table 52
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table 53
LC023	Cannot access network share	
LC025	Insufficient space on network share	
LC029	Filepath is invalid	
LC030	Filepath is a read-only file system	
LC033	Factory Configuration Export was successful	
LC034	Factory Configuration was not found on the system	
LC039	An instance of Factory Configuration is already running	

MessageID (OUT parameter)	Message	MessageArguments[]
LC040	Resource Allocation Failure	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

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614 **8.18 DCIM_LCService.ExportSystemConfiguration()**

615 This method is used to export the system configuration from the Lifecycle Controller to a file on a remote
616 share.

617 **Table 61 – DCIM_LCService.ExportSystemConfiguration() Method: Return Code Values**

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

618 **Table 62 – DCIM_LCService.ExportSystemConfiguration() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target export server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Username	String	User name for the target export server.
IN	Password	String	Password for the target export server.
IN	Workgroup	String	WorkGroup name if it is needed.
IN	Target	String	To identify the component for Export. It identifies the one or more FQDDs .Selective list of FQDDs should be given in comma separated format . Default = "All" .
IN	ExportUse	uint16	Type of Export intended for use : Default =0, Clone=1 , Replace=2.
IN	IncludeInExport	uint16	Extra information to include in the export: Default=0, Include read only = 1, Include password hash values = 2, Include read only and password hash values=3.
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status.
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.

619 **Table 63 – DCIM_LCService.ExportSystemConfiguration() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table
LC023	Cannot access network share	
LC040	Resource Allocation Failure	
LC062	An instance of Export or Import	

MessageID (OUT parameter)	Message	MessageArguments[]
	System Configuration is already running.	
LC063	Cannot create new jobs until the existing running jobs are completed or deleted.	
LC064	Parameter exceeds maximum length <max parameter length> for <parameter name>	Parameter name, see Table
JCP017	Maximum job limit reached, cannot create new jobs	

8.19 DCIM_LCService.ImportSystemConfiguration()

This method is used to import the system configuration from the Lifecycle Controller from a file on a remote share. The successful invocation of this method shall return a job. The job execution results shall be logged in the Lifecycle log as part of configuration results. The Dell Record Log Profile provides the DCIM_LCRecordLog.GetConfigResults() method to retrieve the configuration results from the lifecycle logs based on the returned job's JobID (see Dell Record Log Profile for more details).

627

Table 64 – DCIM_LCService.ImportSystemConfiguration() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

628

Table 65 – DCIM_LCService.ImportSystemConfiguration() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target import server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Target	String	To identify the component for Import. It identifies the one or more FQDDs .Selective list of FQDDs should be given in comma separated format . Default = "All" .
IN	ShutdownType	uint16	Type of the host shut down before perform the import operation. Type of shut down: Graceful=0, Forced =1
IN	TimeToWait	uint16	The time to wait for the host to shut down. Default and minimum value is 300 seconds. Maximum value is 3600 seconds.
IN	EndHostPowerState	uint16	The desired host power state after the import operation is finished. Default value is 1 - On. Type of state: Off=0, On=1
IN	Username	String	User name for the target import server.
IN	Password	String	Password for the target import server.
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status.
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.

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Table 66 – DCIM_LCService.ImportSystemConfiguration() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table
LC023	Cannot access network share	

MessageID (OUT parameter)	Message	MessageArguments[]
LC040	Resource Allocation Failure	
LC062	An instance of Export or Import System Configuration is already running.	
LC063	Cannot create new jobs until the existing running jobs are completed or deleted.	
LC064	Parameter exceeds maximum length <max parameter length> for <parameter name>	Parameter name, see Table
JCP017	Maximum job limit reached, cannot create new jobs	

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632 **8.20 DCIM_LCService.LCWipe()**

633 This LCWipe() method is used to delete all configurations from the Lifecycle controller before the system
634 is retired.

635

636

Table 67 – DCIM_LCService.LCWipe() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

637

Table 68 – DCIM_LCService.LCWipe() 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

638

Table 549 – – DCIM_LCService.LCWipe() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC012	Lifecycle Controller is being used by another process	
LC044	An instance of LCWipe is already running	

639

8.21 DCIM_LCService.TestNetworkShare()

640

The TestNetworkShare() method is used to test network connection for the Lifecycle Controller.

641

Table 70 – DCIM_LCService.TestNetworkShare() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

Table 71 – DCIM_LCService.TestNetworkShare() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	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), 3-TFTP, 5-HTTP or not specified. In case of ftp, ftp.dell.com is the default IP taken
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), or not specified.
IN	ShareType	Unit16	Type of the share or storage. • 0 – NFS • 2 – CIFS • 1-FTP • 3-TFTP • 5-HTTP 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	Username	String	User name for the remote share
IN	Password	String	Password for the remote share
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 72 – DCIM_LCService.TestNetworkShare() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter	<parameter>
LC017	Invalid value of parameter	"ShareType"
LC023	Cannot access network share	NA

8.22 DCIM_LCService.BackupImage()

The BackupImage() method is used to backup firmware and configurations for the Lifecycle Controller.

Table 73 – DCIM_LCService.BackupImage() Method: Return Code Values

Value	Description
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2	Error occurred
4096 ¹	A DCIM_ConcreteJob is returned ¹

647

Table 554 – DCIM_LCService.BackupImage() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	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	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. • 0 – NFS • 2 – CIFS • 4 – VFLASH 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	Passphrase	String	The passphrase for the image. The parameter shall be required, if the ShareType parameter has value 0 (NFS), or 2 (CIFS) or not specified.
IN	ImageName	String	The name of the backup file. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN	Username	String	User name for the remote share
IN	Password	String	Password for the remote share
IN	Workgroup	String	Workgroup for the share
IN	ScheduledStartTime	String	Start time for the job execution in format: yyymmddhhmmss. The string "TIME_NOW" means immediate.
IN	UntilTime	String	End time for the job execution in format: yyymmddhhmmss. : If this parameter is not NULL, then ScheduledStartTime parameter shall also be specified.
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	Job	DCIM_ConcreteJob Ref	The job that represents this operation ¹
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

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

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Table 75 – DCIM_LCService.BackupImage() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	
LC017	Invalid value of parameter	"ShareType"
LC023	Cannot access network share	NA
LC051	Cannot create multiple Export jobs.	NA
SUP017	Invalid start time.	
SUP018	Invalid until time.	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	

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8.23 DCIM_LCService.RestoreImage()

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This RestoreImage() method is used to restore firmware and configurations.

Table 76 – DCIM_LCService.RestoreImage() Method: Return Code Values

Value	Description
2	Error occurred
4096 ¹	A DCIM_ConcreteJob is returned ¹

Table 77 – DCIM_LCService.RestoreImage() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	IPAddress	String	IP address of the NFS or CIFS share. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN.	ShareName	String	Share name for the network share, The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN	ShareType	Uint16	Type of the share or storage. • 0 – NFS • 2 – CIFS • 4 – VFLASH If ShareType is blank or null, it shall be considered as NFS type
IN	Passphrase	String	The passphrase for the image. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN	ImageName	String	The name of the backup file. The parameter shall be required, if the ShareType parameter has value 0 (NFS), 2 (CIFS), or not specified.
IN	Username	String	User name for the remote share
IN	Password	String	Password for the remote share
IN	Workgroup	String	Workgroup for the share
IN, REQ	PreserveVDConfig	Uint16	Whether to preserve the VD (Virtual Disk) configuration.
IN	ScheduledStartTime	String	Start time for the job execution in format: yyyyymmddhhmmss. The string "TIME_NOW" means immediate.
IN	UntilTime	String	End time for the job execution in format: yyyyymmddhhmmss. : If this parameter is not NULL, then ScheduledStartTime parameter shall also be specified.
OUT	Job	DCIM_ConcreteJob Ref	The job that represents this operation ¹
OUT	MessageID	String	Error Message ID may be used to look-up in the Dell Message registry files. For more information, see Error Message Registry.
OUT	Message	String	Error Message in English corresponding to MessageID is returned if the method fails to execute

Qualifiers	Name	Type	Description/Values
OUT	MessageArguments[]	string	Substitution variables for dynamic error messages

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 78 – DCIM_LCService.RestoreImage() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC002	General failure	LC002
LC017	Invalid value of parameter	“ShareType”, “PreserveVDConfig”
LC023	Cannot access network share	NA
LC052	Cannot create multiple Import jobs.	NA
SUP017	Invalid start time	
SUP018	Invalid until time	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	

8.24 DCIM_LCService.GetRSStatus()

The GetRSStatus() method is used to obtain the Data Manager (Remote Services) status.

NOTE: The GetRemoteServicesAPIStatus() method execution reports more granular and detailed status of the Remote Services API.

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Table 79 – DCIM_LCService.GetRSStatus() Method: Return Code Values

Value	Description
0	Request was successfully executed.
2	Error occurred

665

Table 80 – DCIM_LCService.GetRSStatus() Method: Parameters

Qualifiers	Name	Type	Description/Values
OUT	Status	string	The status for the Data Manager: Ready Not Ready Reloading
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

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Table 81 – DCIM_LCService.GetRSStatus() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
RSI0001	The remote service is available	
RSI0002	The remote service is currently not available	
RSI0003	The remote service is reloading data	
RSI0004	The remote service is unavailable	

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8.25 DCIM_LCService.GetRemoteServicesAPIStatus ()

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The GetRemoteServicesAPIStatus() method is used to obtain the overall remote services API status that includes both the host system status as well as the remote services (Data Manager) status. The overall rolled up status shall be reflected in the Status output parameter.

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NOTE: The LCStatus output parameter value includes the status reported by the DMStatus output parameter in the GetRSStatus() method and the Lifecycle Controller status. Thus, GetRSStatus() method invocation is redundant.

674 **Table 82 – DCIM_LCService.GetRemoteServicesAPIStatus() Method: Return Code Values**

Value	Description
0	Request was successfully executed.
2	Error occurred

675 **Table 83 – DCIM_LCService.GetRemoteServicesAPIStatus() Method: Parameters**

Qualifiers	Name	Type	Description/Values
OUT	ServerStatus	uint8	The host system status: • 0 – Powered Off • 1 – In POST • 2 – Out of POST • 3 – Collecting System Inventory • 4 – Automated Task Execution • 5 – Lifecycle Controller Unified Server Configurator • 6 – Server has halted at F1/F2 error prompt because of a POST error • 7 – Server has halted at F1/F2/F11 prompt because there are no bootable devices available • 8 – Server has entered F2 setup menu • 9 – Server has entered F11 Boot Manager menu
OUT	LCStatus	uint8	The Lifecycle Controller status that includes the Data Manager status: • 0 – Ready • 1 – Not Initialized • 2 – Reloading data • 3 – Disabled • 4 – In Recovery • 5 – In Use
OUT	Status	uint8	The overall status of the Remote Services API: • 0 – Ready • 1 – Not Ready
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

676 **Table 84 – DCIM_LCService.GetRemoteServicesAPIStatus() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC060	Lifecycle Controller Remote	NA

MessageID (OUT parameter)	Message	MessageArguments[]
	Services is not ready.	
LC061	Lifecycle Controller Remote Services is ready.	NA

8.26 DCIM_LCService.ExportCertificate()

The ExportCertificate() method is used to export unique generated SSL Certificates from the Lifecycle Controller to a file in remote share.

Table 85 – DCIM_LCService.ExportCertificate() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

Table 86 – DCIM_LCService.ExportCertificate() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	Type	uint16	The type of the certificate 2 = Custom Signing Certificate
IN, REQ	IPAddress	string	The IP address of the target export server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Username	String	User name for the target export server.
IN	Password	String	Password for the target export server.
IN	Workgroup	String	The applicable workgroup.
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status.
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 87 – DCIM_LCService.ExportCertificate() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table 72
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table 72
LC023	Cannot access network share	
LC025	Insufficient space on network share	

MessageID (OUT parameter)	Message	MessageArguments[]
LC029	Filepath is invalid	
LC030	Filepath is a read-only file system	
LC040	Resource Allocation Failure	
LC064	The value exceeds the maximum length of %d characters for %s	
LC065	Static IP information is not configured correctly	
LC066	An instance of Export Certificate is already running	
LC067	Export SSL Certificate success	
LC069	Certificate does not Exist on the System.	
JCP017	Maximum job limit reached, cannot create new jobs	
JCP018	Backup Job is running, cannot create new jobs until the existing Backup job is completed or is cancelled	
JCP019	Restore Job is running, cannot create new jobs until the existing Restore job is completed or is cancelled	NA

8.27 DCIM_LCService.ImportSystemConfigurationPreview()

This method is used to preview the results of the application of the XML template ahead of the actual application with out any reboot.It also gives the information about the failure. [The successful invocation of this method shall return a job.](#)

687 **Table 88 – DCIM_LCService.ImportSystemConfigurationPreview() Method: Return Code Values**

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

688 **Table 89 – DCIM_LCService.ImportSystemConfigurationPreview() Method: Parameters**

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	string	The IP address of the target import server.
IN, REQ	ShareName	string	The directory path to the mount point.
IN, REQ	FileName	string	The target output file name.
IN, REQ	ShareType	uint16	Type of share: NFS=0, CIFS=2
IN	Username	String	User name for the target import server.
IN	Password	String	Password for the target import server.
IN	Workgroup	String	WorkGroup name if it is needed.
IN	Target	String	To identify the component for ImportPreview. It identifies the one or more FQDDs .Selective list of FQDDs should be given in comma separated format . Default = "All" .
OUT	Job	CIM_ConcreteJob REF	Returned to keep track of config job status.
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.

689 **Table 90 – DCIM_LCService.ImportSystemConfigurationPreview() Method: Standard Messages**

MessageID (OUT parameter)	Message	MessageArguments[]
LC016	Missing required parameter <parameter name>	Parameter name, see Table 75
LC017	Invalid value of parameter <parameter name>	Parameter name, see Table 75
LC023	Cannot access network share	
LC040	Resource Allocation Failure	
LC062	An instance of Export or Import System Configuration is already running.	
LC063	Cannot create new jobs until the existing running jobs are completed or deleted.	
LC064	Parameter exceeds maximum	Parameter name, see Table 75

MessageID (OUT parameter)	Message	MessageArguments[]
	length <max parameter length> for <parameter name>	
JCP017	Maximum job limit reached, cannot create new jobs	

690 8.28 DCIM_LCService. RunePSADiagnostics ()

691 The method is used to run the diagnostics based on the runmode switch and save the report in the Maser
692 partition (MAS002). The diagnostics can be run in either express or extended mode or as a long run
693 which encompasses all diagnostic tests.

Table 91 – DCIM_LCService. RunePSADiagnostics () Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

Table 92 – DCIM_LCService. RunePSADiagnostics () Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	RunMode	Uint32	Type of diagnostic to run. 0 – is the express tests() 1- is extended set of tests() 2 – run (long)all tests NOTE: Default value is 0 (express tests)
IN,REQ	RebootJobType	Uint32	Creates a specific reboot job to power cycle the host system. This parameter only creates the RebootJob and does not schedule it. Shall contain the requested reboot type: 1 - PowerCycle 2 - Graceful Reboot without forced shutdown 3 - Graceful Reboot with forced shutdown. NOTE: This parameter only creates the RebootJob and does not schedule it.
IN	ScheduledStartTime	String	Schedules the configuration job and the optional reboot job at the specified start time. A special value of "TIME_NOW" schedules the job(s) immediately. Start time for the job execution in format: yyyyymmddhhmmss. The string "TIME_NOW" means immediate.
IN	UntilTime	String	Defines a time window for scheduling the job(s). However, this parameter is dependent on "ScheduledStartTime" and "ScheduledStartTime" parameters. Once scheduled, jobs will be executed within the time window. End time for the job execution in format: yyyyymmddhhmmss. : If this parameter is not NULL, then ScheduledStartTime parameter shall also be specified.
OUT	Job	CIM_ConcreteJob REF	a reference to the ConcreteJob is returned
OUT	MessageID	String	Error MessageID is returned if the method fails to execute

Qualifiers	Name	Type	Description/Values
OUT	Message	String	Error Message in English corresponding to the MessageID
OUT	MessageArguments	String[]	Any dynamic string substitutions for the Message

Table 79 – DCIM_LCService. RunePSADiagnostics () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SYS083	Export of Diagnostics results failed as no MASER session could be acquired.	Parameter name, see Table 78
SYS084	Export of Diagnostics results failed as the partition containing the results could not be mounted.	
SYS085	Successfully exported diagnostics results.	
SYS095	Unable to unmount a MASER partition.	

8.29 DCIM_LCService. ExportePSADiagnosticsResult ()

This method will export the result file of the last completed diagnostics into the respective remote share path (cifs/nfs).The result file will have time stamps to show when the diagnostics was run.

Table 93 – DCIM_LCService. ExportePSADiagnosticsResult() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

Table 94 – DCIM_LCService. ExportePSADiagnosticsResult() Method: Parameters

Qualifiers	Name	Type	Description/Values
IN, REQ	IPAddress	String	IP address of network share
IN, REQ	ShareName	String	Network sharepoint address
IN, REQ	FileName	String	Diagnostic Result File name
IN, REQ	ShareType	Uint8	Type of network share (NFS=0 and CIFS=2)
IN	Username	String	The username to be used to access the network share for the export result
IN	Password	String	The password to be used to access the network share
OUT	Job	CIM_ConcreteJob REF	a reference to the ConcreteJob is returned
OUT	MessageID	String	Error MessageID is returned if the method fails to execute
OUT	Message	String	Error Message in English corresponding to the MessageID
OUT	MessageArguments	String[]	Any dynamic string substitutions for the Message
OUT	MessageID	String	Error MessageID is returned if the method fails to execute

Table 95 – DCIM_LCService. ExportePSADiagnosticsResult() Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SYS083	Export of Diagnostics results failed as no MASER session could be acquired.	Parameter name, see Table 81
SYS084	Export of Diagnostics results failed as the partition containing the results could not be mounted.	
SYS085	Successfully exported diagnostics results.	
SYS086	Unable to copy the diagnostics results file to the network share.	
SYS095	Unable to unmount a MASER partition.	

8.30 DCIM_LCService. ExportTechSupportReport ()

This method is used to collect the TSR i.e hardware, OS and App data, then compressed the zip file saves into the respective remote share path (cifs/nfs).

Note: Collecting and exporting of OS App data is not supporting in ES1.4 release.

Table 96 – DCIM_LCService. ExportTechSupportReport() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

Table 97 – DCIM_LCService. ExportTechSupportReport () Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	DataSelectorArrayIn	Uint16[]	DataSelectorArrayIn to select the data", "0" - For HW Data "1" – For OSApp Data Without PII "2" – For OSApp Data "3" – For TTY Logs <i>Note: Default value is "HW Data". And MUT data be part of every TSR report.</i>
IN, REQ	IPAddress	String	IP address of network share
IN, REQ	ShareName	String	Network sharepoint address
IN, REQ	ShareType	Uint8	Type of network share (NFS=0 and CIFS=2)
IN	Username	String	The username to be used to access the network share for the export result
IN	Password	String	The password to be used to access the network share
OUT	Job	CIM_ConcreteJob REF	a reference to the ConcreteJob is returned
OUT	MessageID	String	Error MessageID is returned if the method fails to execute
OUT	Message	String	Error Message in English corresponding to the MessageID
OUT	MessageArguments	String[]	Any dynamic string substitutions for the Message
OUT	MessageID	String	Error MessageID is returned if the method fails to execute

Table 98 – DCIM_LCService. ExportTechSupportReport () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SYS094	[3] Another instance of embedded health report job is already running	Parameter name, see Table 81

8.31 DCIM_LCService. UpdateOSAppHealthData ()

This method is used to generate OS and App health data.

If the method is unable to collect the OS and App health data automatically then user needs to do manual execution to update the OS and App health data. Manual execution will expose the virtual USB drive or mount the virtual drive .

Table 99 – DCIM_LCService. UpdateOSAppHealthData() Method: Return Code Values

Value	Description
2	Error occurred
4096	Job started: REF returned to started CIM_ConcreteJob

Table 100 – DCIM_LCService. UpdateOSAppHealthData () Method: Parameters

Qualifiers	Name	Type	Description/Values
IN	UpdateType	uint16	Agent Lite OSApp plugIn: 0 Manual execution: 1 [4] <i>Note: Default value is “Agent Lite OSApp plugin”</i>
OUT	Job	CIM_ConcreteJob REF	a reference to the ConcreteJob is returned
OUT	MessageID	String	Error MessageID is returned if the method fails to execute
OUT	Message	String	Error Message in English corresponding to the MessageID
OUT	MessageArguments	String[]	Any dynamic string substitutions for the Message
OUT	MessageID	String	Error MessageID is returned if the method fails to execute

Table 101 – DCIM_LCService. UpdateOSAppHealthData () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SYS094	[1] Another instance of embedded health report job is already running	Parameter name, see Table 81

8.32 DCIM_LCService. SystemErase()

This method is to create granular, user selectable, categories to increase flexibility and improve the repurposing aspect of the existing System Wipe feature.

This method will take the component name as input. Multiple options can also be provided. A job ID will be returned to the user upon successful creation of job.

Table 102- DCIM_ LCService : SystemErase() Method: Return code values

Value	Description
2	Failed
4096	Job created to complete the task

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Table 103- DCIM_LCService : SystemErase() Method: Parameters

Qualifiers	Parameter	Type	Description/value
IN,REQ	Component	String	The system and storage components to be erased: System Components: BIOS DIAG DrvPack LCDData IDRAC
OUT	Job	CIM_ConcreteJob REF	a reference to the ConcreteJob is returned
OUT	MessageID	String	Error MessageID is returned if the method fails to execute
OUT	Message	String	Error Message in English corresponding to the MessageID
OUT	MessageArguments	String[]	Any dynamic string substitutions for the Message

728

729 Command:

```

730 winrm i SystemErase http://schemas.dmtf.org/wbem/wscim/1/cim-
731 schema/2/root/dcim/DCIM_LCService?SystemCreationClassName=DCIM_ComputerSystem
732 +CreationClassName=DCIM_LCService+SystemName=DCIM:ComputerSystem+Name=DCIM:LC
733 Service -u:root -p:password -r:https://192.168.0.18/wsman -SkipCNcheck -
734 SkipCAcheck -encoding:utf-8 -a:basic -file: SystemErase.xml

```

735 SystemErase_input.xml:

```

736 <p: SystemErase_INPUT xmlns:p="http://schemas.dmtf.org/wbem/wscim/1/cim-
737 schema/2/root/dcim/DCIM_LCService">
738 <p: Component > BIOS </p: Component >
739 <p: Component > DIAG</p: Component >
740 </p: SystemErase_INPUT>

```

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742

Table 104 – DCIM_LCService. SystemErase () Method: Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
RAC042	Invalid number of input parameters	NA
LC017	Invalid value for parameter <parameter>	NA
LC016	Missing required parameter, <parameter>.	Include all the parameters required for the command. Check Lifecycle Controller Profile documentation and try again.
LC044	An instance of Lifecycle Controller system configuration wipe is already running	NA
LC063	[2] Cannot create new jobs until the existing running jobs are completed or deleted.	NA
LC040	Memory resource allocation failure.	Power cycle system and retry the operation. If the problem persists, reapply firmware packages for Lifecycle Controller and iDRAC.

743

744 9 Use Cases

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

746 10 CIM Elements

747 No additional requirements have been defined.

748 11 Privilege and License Requirement

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

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Table 105 – Privilege and License Requirements

Class and Method	Instance (GroupID.Attribute Name)	Operation	User Privilege Required	License Required
DCIM_LCString	SYSID	ENUMER ATE, GET	Login	NONE
DCIM_LCEnumeration	Licensed	ENUMER ATE, GET	Login	NONE
DCIM_LCString	CMCIP			NONE

DCIM_LCString	Provisioning Server	ENUMERATE, GET	Login	LM_AUTO_DISCOVERY
DCIM_LCEnumeration	Auto Discovery	ENUMERATE, GET	Login	LM_AUTO_DISCOVERY
DCIM_LCEnumeration	Discovery Factory Defaults	ENUMERATE, GET	Login	LM_AUTO_DISCOVERY
DCIM_LCEnumeration	Part Configuration Update	ENUMERATE, GET	Login	LM_PART_REPLACEMENT
DCIM_LCEnumeration	Part Firmware Update	ENUMERATE, GET	Login	LM_PART_REPLACEMENT
DCIM_LCEnumeration	Collect System Inventory on Restart	ENUMERATE, GET	Login	LM_REMOTE_CONFIGURATION
DCIM_LCEnumeration	VirtualAddressManagement	ENUMERATE, GET	Login	LM_REMOTE_CONFIGURATION
DCIM_LCString	VirtualAddressManagementApplication	ENUMERATE, GET	Login	LM_REMOTE_CONFIGURATION
DCIM_LCEnumeration	IPChangeNotifyPS	ENUMERATE, GET	Login	LM_AUTO_DISCOVERY
DCIM_LCEnumeration	Lifecycle Controller State	ENUMERATE, GET	Login	LM_REMOTE_CONFIGURATION
DCIM_LCService		ENUMERATE, GET	Login	NONE
DCIM_LCService. SetAttribute()		INVOKE	Login, System Control	LM_REMOTE_CONFIGURATION
DCIM_LCService. SetAttributes()		INVOKE	Login, System Control	LM_REMOTE_CONFIGURATION
DCIM_LCService. CreateConfigJob()		INVOKE	Login, System Control	LM_REMOTE_CONFIGURATION
DCIM_LCService. ReInitiateDHS()		INVOKE	Login, System Control	LM_AUTO_DISCOVERY
DCIM_LCService. ReInitiateAutoDiscovery()		INVOKE	Login, System Control	LM_AUTO_DISCOVERY
DCIM_LCService. ClearProvisioningServer()		INVOKE	Login, System Control	LM_AUTO_DISCOVERY
DCIM_LCService. DownloadServerPublicKey()		INVOKE	Login, System Control	LM_REMOTE_CONFIGURATION

DCIM_LCService. DownloadClientCerts()		INVOKE	Login, System Control	LM_REMOTE_CONFI GURATION
DCIM_LCService. DeleteAutoDiscoveryClientCert s()		INVOKE	Login, System Control	LM_AUTO_DISCOVE RY
DCIM_LCService. SetCertificateAndPrivateKey()		INVOKE	Login, System Control	LM_REMOTE_CONFI GURATION
DCIM_LCService. SetPublicCertificate()		INVOKE	Login, System Control	LM_REMOTE_CONFI GURATION
DCIM_LCService. DeleteAutoDiscoveryServerPu blicKey()		INVOKE	Login, System Control	LM_AUTO_DISCOVE RY
DCIM_LCService.LCWipe()		INVOKE	Login, System Control	NONE
DCIM_LCService.LCWipe().Ex portFactoryConfiguration()		INVOKE	Login	LM_BASIC_REMOTE _INVENTORY_EXPO RT
DCIM_LCService. ExportHWInventory()		INVOKE	Login	LM_BASIC_REMOTE _INVENTORY_EXPO RT
DCIM_LCService. ExportLCLog()		INVOKE	Login	NONE
DCIM_LCService. ExportCompleteLCLog()		INVOKE	Login	NONE
DCIM_LCService.. InsertCommentInLCLog()		INVOKE	Login, System Operations	LM_REMOTE_CONFI GURATION
DCIM_LCService. GetRSStatus()		INVOKE	Login	NONE
DCIM_LCService. GetRemoteServicesAPIStatus ()		INVOKE	Login	NONE
DCIM_LCService.TestNetwork Share()		INVOKE	Login	LM_REMOTE_CONFI GURATION
DCIM_LCService.BackupImag e()		INVOKE	Login, System Control	LM_BACKUP_REST ORE
DCIM_LCService.RestoreImag e()		INVOKE	Login, System Control	LM_RESTORE
DCIM_LCService.ExportCertifi cate()		INVOKE	Login	LM_REMOTE_CONFI GURATION

DCIM_LCService.ExportSystemConfiguration()		INVOKE	Administrator	LM_REMOTE_CONFIGURATION
DCIM_LCService.ImportSystemConfiguration()		INVOKE	Administrator	LM_REMOTE_CONFIGURATION
DCIM_LCService.ImportSystemConfigurationPreview()		INVOKE	Administrator	LM_REMOTE_CONFIGURATION
DCIM_LCRegisteredProfile		ENUMERATE, GET	Login	None.
DCIM_LCElementConformsToProfile		ENUMERATE, GET	Login	None.
DCIM_LCService.RunePSADiagnostics ()		INVOKE	Login, System Control	LM_REMOTE_CONFIGURATION
DCIM_LCService.ExportePSADiagnosticsResult ()		INVOKE	Login, System Control	LM_REMOTE_CONFIGURATION
DCIM_LCService.ExportTechSupportReport ()		INVOKE	Login, System Control	None
DCIM_LCService.UpdateOSAppHealthData()		INVOKE	Login, System Control	None
DCIM_LCService.SystemErase()		INVOKE	Login, System Control	None

ANNEX A (informative)

Change Log

Version	Date	Description
1.6.0		Added the IPAddress, Mask, Gateway, DNS, Domain optional parameters to the DCIM_LCService.ReInitiateDHS() method. Added the DCIM_LCService.ExportSystemConfiguration() method.
1.6.0	4/23/2012	Added optional MaxExecutionTime input parameter to DCIM_LCService.ExportSystemConfiguration() method. Added messages LC016 and LC017 to methods -DCIM_LCService.ExportLCLog(), DCIM_LCService.ExportHWInventory(), DCIM_LCService.ExportFactoryConfiguration() and DCIM_LCService.ExportSystemConfiguration(). Added LC062 error message to the SetAttribute(), SetAttributes(), and CreateTargetedConfigJob() methods.
1.6.0	4/25/2012	Add licensing and privilege requirement for ExportSystemConfiguration().
1.6.0	4/30/2012	Remove MaxExecutionTime input parameter from DCIM_LCService.ExportSystemConfiguration() method.
1.6.0	5/08/2012	Added DCIM_LCService.ReInitiateAutoDiscovery() method to support Auto-Discovery with static IP. Removed optional parameters (IPAddress, Mask, Gateway, DNS, Domain) from DCIM_LCService.ReInitiateDHS().
1.6.0	6/05/2012	Added DCIM_LCService.ExportCertificate method to support export of uniquely generated SSL certificates
1.6.1	6/18/2012	Added DCIM_LCService.ImportSystemConfiguration() method to support importing system configuration settings.
1.6.2	6/25/2012	Added DCIM_LCService.TestNetworkShare() method to test network connection.
1.6.2	7/10/2012	Added Target to DCIM_LCService.ExportSystemConfiguration() method. Added ScheduledStartTime and UntilTime to DCIM_LCService.ImportSystemConfiguration() method.
1.6.2	7/25/2012	Changed privilege requirement to Administrator for DCIM_LCService.ImportSystemConfiguration() method.
1.6.3	4/24/2013	Added details for ExportCompleteLCLog
1.6.4	5/8/2013	Added details for RunePSADiagnostics and ExportePSADiagnostics
1.6.5	5/9/2013	Added
1.6.	5/31/1013	Added details for ExportHealthReport

5		
1.6.5	10/30/2013	Added support for selective import/export feature for the following methods . DCIM_LCService.ImportSystemConfiguration(),DCIM_LCService.ImportSystemConfigurationPreview(),DCIM_LCService.ExportSystemConfiguration()
1.6.5	5/22/2014	Updated the privilege for ExportSystemConfiguration from login to administrator as per technologist's inputs
1.6.6	7/15/2014	System Erase
1.6.7	7/15/2014	Added parameter to ExportSystemConfiguration for PasswordHash story
1.7.0	7/20/2014	Tech Support Report
1.8.0	9/9/2014	Updated the correct version

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