Power State Management

₂ Profile

Document Number: DCIM1050
 Document Type: Specification

Document Status: Published

25 Document Language: E

26 Date: 2012-03-08

²⁷ Version: 1.0.0

) I	
32	
33	
34	
35	
36	
37	
38	
39	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
50	
51	
52 53 54 55 56 57	THIS PROFILE IS FOR INFORMATIONAL PURPOSES ONLY, AND MAY CONTAIN TYPOGRAPHICAL ERRORS AND TECHNICAL INACCURACIES. THE CONTENT IS PROVIDED AS IS, WITHOUT EXPRESS OR IMPLIED WARRANTIES OF ANY KIND. ABSENT A SEPARATE AGREEMENT BETWEEN YOU AND DELL™ WITH REGARD TO FEEDBACK TO DELL ON THIS PROFILE SPECIFICATION, YOU AGREE ANY FEEDBACK YOU PROVIDE TO DELL REGARDING THIS PROFILE SPECIFICATION WILL BE OWNED AND CAN BE FREELY USED BY DELL.
58	
59 60	© 2012 Dell Inc. All rights reserved. Reproduction in any manner whatsoever without the express written permission of Dell, Inc. is strictly forbidden. For more information, contact Dell.
61	
62 63 64	Dell and the DELL logo are trademarks of Dell Inc. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims proprietary interest in the marks and names of others.
65 86	

67		CONTENTS	
68	1	Scope	5
69	2	Normative References	5
70	3	Terms and Definitions	5
71	4	Symbols and Abbreviated Terms	
72	5	Synopsis	8
73	6	Description	9
74	7	Implementation Requirement	
75		7.1 DCIM_CSPowerManagementService - Power Management Service	10
76		7.2 DCIM_CSPowerManagementCapabilities - Power Management Capabilities	
77		7.3 Associated Power Management Service	
78		7.4 Power State Management Profile Registration	14
79	8	Methods	17
80		8.1 DCIM_CSPowerManagementService.RequestPowerStateChange()	17
81	9	Use Cases	19
82	10	CIM Elements	
83 84	11	Privilege and License Requirement	19

Figures Tables Table 15 - DCIM CSPowerManagementService.RequestPowerStateChange() Method: Return Code Table 16 – DCIM_CSPowerManagementService.RequestPowerStateChange() Method: Parameters ... 17 Table 17 – DCIM CSPowerManagementService.RequestPowerStateChange() Standard Messages 17

Power State Management Profile

110	1	Scope
111 112		Power State Management Profile describes the classes, associations, properties, and methods used nage the power of a system.
113	2	Normative References
114	Refer	to the following documents for more information.
115 116		E: For dated references, only the edition cited applies. For undated references, the latest edition of ferenced document (including any amendments) applies.
117	•	DMTF DSP1027, Power State Management Profile 2.0.0
118	•	DMTF DSP1033, Profile Registration Profile 1.0.0
119	•	DMTF DSP0226, Web Services for Management (WS-Management) Specification 1.1.0
120	•	DMTF DSP0227, WS-Management CIM Binding Specification 1.0.0
121	•	Dell Lifecycle Controller Best Practices Guide 1.0,
122		http://en.community.dell.com/techcenter/extras/m/white_papers/20066173.aspx
123	•	Dell WSMAN Licenses and Privileges 1.0
124	•	Dell Tech Center MOF Library:
125		http://www.delltechcenter.com/page/DCIM.Library.MOF
126	•	Related Managed Object Format (MOF) files:
127		o DCIM_CSPowerManagementService.mof
128		 DCIM_CSPowerManagementCapabilities.mof
129		 DCIM_CSAssociatedPowerManagementService.mof
130		 DCIM_PMSElementCapabilities.mof
131		 DCIM_SPHostedPowerManagementService.mof

132 **3** Terms and Definitions

109

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

- 134 **3.1**
- 135 **Conditional** Indicates requirements to be followed strictly in order to conform to the document when the
- 136 specified conditions are met.
- 137 **3.2**
- 138 Mandatory Indicates requirements to be followed strictly in order to conform to the document and from
- which no deviation is permitted.
- 140 **3.3**
- 141 May Indicates a course of action permissible within the limits of the document.
- 142 **3.4**
- 143 **Optional** Indicates a course of action permissible within the limits of the document.
- 144 **3.5**
- can Used for statements of possibility and capability, whether material, physical, or causal.
- 146 **3.6**
- 147 **cannot** Used for statements of possibility and capability, whether material, physical, or causal.
- 148 **3.7**
- **need not** Indicates a course of action permissible within the limits of the document.
- 150 **3.8**
- 151 referencing profile Indicates a profile that owns the definition of this class and can include a reference
- to this profile in its "Related Profiles" table.
- 153 **3.9**
- shall Indicates requirements to be followed strictly in order to conform to the document and from which
- no deviation is permitted.

- 156 **3.10**
- shall not Indicates requirements to be followed strictly in order to conform to the document and from
- which no deviation is permitted.
- 159 **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.
- 162 **3.12**
- should not Indicates that a certain possibility or course of action is deprecated but not prohibited
- 164 **3.13**
- 165 **FQDD** Fully Qualified Device Descriptor is used to identify a particular component in a system.
- 166 **3.14**
- 167 Interop Namespace Interop Namespace is where instrumentation instantiates classes to advertise its
- 168 capabilities for client discovery.
- 169 3.15
- 170 **Implementation Namespace** Implementation Namespace is where instrumentation instantiates
- 171 classes relevant to executing core management tasks.
- 172 **3.16**
- 173 ENUMERATE Refers to WS-MAN ENUMERATE operation as described in Section 8.2 of
- 174 DSP0226 V1.1 and Section 9.1 of DSP0227 V1.0
- 175 **3.17**
- 176 GET Refers to WS-MAN GET operation as defined in Section 7.3 of DSP00226_V1.1 and Section 7.1
- 177 of DSP0227 V1.0

178

179 **4** Symbols and Abbreviated Terms

- 180 **4.1**
- 181 CIM Common Information Model
- 182 **4.2**
- 183 iDRAC Integrated Dell Remote Access Controller management controller for blades and monolithic
- 184 servers
- 185 **4.3**
- 186 **CMC -** Chassis Manager Controller management controller for the modular chassis
- 187 **4.4**
- 188 **CS -** Computer System
- 189 **4.5**
- 190 **PM -** Power Management
- 191 **4.6**
- 192 SP Service Processor
- 193 **4.7**
- 194 **LC** Lifecycle Controller
- 195

196 **5** Synopsis

- 197 **Profile Name:** Power State Management
- 198 **Version:** 1.0.0
- 199 Organization: Dell
- 200 **CIM Schema Version:** 2.26 Experimental
- 201 **Dell Schema Version:** 1.0.0
- 202 Interop Namespace: root/interop
- 203 Implementation Namespace: root/dcim
- 204 Central Class: DCIM_CSPowerManagementService
- 205 **Scoping Class:** DCIM_ComputerSystem
- The Dell Power State Mangement Profile is a component profile that contains the Dell specific
- 207 implementation requirements for system view.
- 208 DCIM_CSPowerManagementService is the Central Class.
- Table 1 identifies profiles that are related to this profile.

210 Table 1 – Related Profiles

Profile Name	Organization	Version	Relationship
Power State Management	DMTF	1.0	Specialize
Profile Registration	DCIM	1.0	Reference

6 Description

The *Power State Management Profile* defines the behavior of the power management service and the related classes used to describe and control power state and hardware reset management for a system. The profile describes the classes, property values, and methods that constitute Immediate Power State Change.

Figure 1 represents the class schema of the *Power State Management Profile* and shows the elements of the *Power State Management Profile*, and the dependent relationships between the elements of *Power State Management Profile* and the referencing profiles.

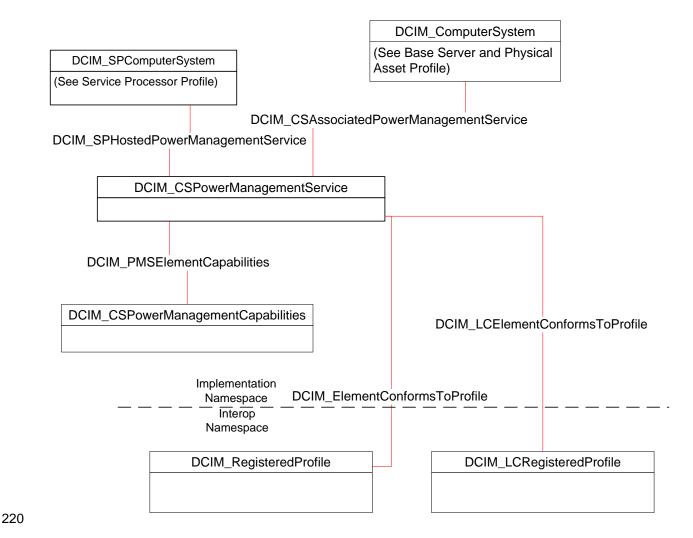


Figure 1 – Power State Management Profile Implementation

7 Implementation Requirement

222

224

225

223 This section describes the implementation of Dell Power State Management Profile.

Table 2 – Class Requirements: Power State Management Profile

Element Name	Requirement	Description
Classes		
DCIM_CSPowerManagementService	Mandatory	The class shall be implemented in the Implementation Namespace. See section 7.1.
DCIM_CSPowerManagementCapabilities	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.2.
DCIM_CSAssociatedPowerManagementService	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.3.
DCIM_PMSElementCapabilities	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.1 and 7.2.
DCIM_SPHostedPowerManagementService	Mandatory	The class shall be implemented in the <i>Implementation Namespace</i> . See section 7.1.
DCIM_ElementConformsToProfile	Mandatory	The class shall be implemented in both the <i>Interop</i> and <i>Implementation Namespaces</i> . See section 7.1, 7.4.1 and 7.4.2.
DCIM_RegisteredProfile	Mandatory	The class shall be implemented in the <i>Interop Namespace</i> . See section 7.4.1 and 7.4.2.
DCIM_LCElementConformsToProfile	Mandatory	The class shall be implemented in both the <i>Interop</i> and <i>Implementation Namespaces</i> . See section 7.4.3.
DCIM_LCRegisteredProfile	Mandatory	The class shall be implemented in the <i>Interop Namespace</i> . See section 7.1 and 7.4.3.
Indications	•	
None defined in this profile		

7.1 DCIM_CSPowerManagementService - Power Management Service

- This section describes the implementation for the DCIM_CSPowerManagementService class that represents the service controlling the system power state.
- 228 This class is instantiated in the Implementation Namespace.
- The DCIM_CSPowerManagementService instance is associated to the DCIM_ComputerSystem host
- 230 computer system instance through the DCIM CSAssociatedPowerManagementService association. The
- 231 DCIM_CSAssociatedPowerManagementService.ServiceProvided property references the
- 232 DCIM_CSPowerManagementService instance.

- 233 The DCIM_CSPowerManagementService instance is associated to the DCIM_SPComputerSystem
- 234 service processor instance through the DCIM SPHostedPowerManagementService association. The
- 235 DCIM SPHostedPowerManagementService. Dependent property references the
- 236 DCIM CSPowerManagementService instance.
- 237 The DCIM_ElementConformsToProfile and DCIM_LCElementConformstToProfile association(s)
- references the DCIM_CSPowerManagementService instance(s).

7.1.1 Resource URIs for WinRM®

240 The class Resource URI is:

239

249

251

252

253

254

255

256

257

- 241 "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_
- 242 CSPowerManagementService?__cimnamespace=root/dcim"
- 243 The key properties are the SystemCreationClassName, CreationClassName, SystemName, Name
- 244 The instance Resource URI for DCIM CSPowerManagementService instance is:
- 245 "http://schemas.dell.com/wbem/wscim/1/cim-
- 246 schema/2/DCIM_CSPowerManagementService?__cimnamespace=root/dcim+SystemCreationClassNam
- 247 e=DCIM SPComputerSystem+SystemName=systemmc+CreationClassName=DCIM CSPowerManage
- 248 mentService+Name= pwrmgtsvc:1"

7.1.2 Operations

250 The following table lists the operations implemented on DCIM_CSPowerManagementService.

Table 3 – DCIM_CSPowerManagementService - 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_CSPowerManagementService instance in a system. The "Requirements" column shall denote whether the property is implemented (for requirement definitions, see section 3). The "Additional Requirements" column shall denote either possible values for

the property, or requirements on the value formulation.

Table 4 – DCIM_CSPowerManagementService - Properties

Property Name	Requirement	Туре	Additional Requirement
	Mandatory		The property value shall be
CreationClassName		String	"DCIM_CSPowerManagementService"
Name	Mandatory	String	The property value shall be "pwrmgtsvc:1"
	Mandatory		The property value shall be "Power
ElementName		String	Management Service"
	Mandatory		The property value shall be
SystemCreationClassName		String	"DCIM_SPComputerSystem"
SystemName	Mandatory	String	The property value shall be "systemmc"

258 .

7.2 DCIM_CSPowerManagementCapabilities - Power Management Capabilities

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

7.2.1 Resource URIs

263 The class Resource URI is

259

262

272

273

274

275

276 277

278

- 264 "http://schemas.dell.com/wbem/wscim/1/cim-
- 265 schema/2/DCIM_CSPowerManagementCapabilities?__cimnamespace=root/dcim"
- The key property is the InstanceID.
- The instance Resource URI for DCIM_CSPowerManagementCapabilities instance is:
- 268 "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM_
- 269 PowerManagementCapabilities?__cimnamespace=root/dcim+InstanceID= DCIM:pwrmgtcap1"

270 **7.2.2 Operations**

The following table lists the operations implemented on DCIM_CSPowerManagementCapabilities.

Table 5 – DCIM_CSPowerManagementCapabiltites - Operations

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

7.2.3 Class Properties

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

Table 6 – DCIM_CSPowerManagementCapabiltites - Properties

Property Name	Requirement	Туре	Additional Requirement
InstanceID	Mandatory	string	The property value shall be "DCIM:pwrmgtcap1"
			This property value shall have the following array of values:
			[3 (Power State Settable), 4 (Power Cycling Supported), 7 (HW Reset Supported), 8 (Graceful Shutdown Supported)] depend on
PowerChangeCapabilities	Mandatory[]	uint16	PowerStatesSupported]
ElementName	Mandatory	String	The property value shall be "Power Management Capabilities"

Property Name	Requirement	Туре	Additional Requirement
			This property value shall have all the following array of values:
Dower Ctates Cupperted	Mandatandi	uint16	[2 (On), 5(Power cycle-off soft), 8 (Off,soft), 10 (Master Bus Reset), 11 (NMI), 12 (Off-soft
PowerStatesSupported	Mandatory[]	uint16	graceful)]
			This property value shall have all the following array of values:
RequestedPowerStatesS			[2 (On), 5(Power cycle-off soft), 8 (Off,soft), 10 (Master Bus Reset), 11 (NMI), 12 (Off-soft
upported	Mandatory[]	uint16	graceful)]

7.3 279 **Associated Power Management Service**

- 280 This section describes the implementation for the DCIM_CSAssociatedPowerManagementService class.
- 281 This class is instantiated in the Implementation Namespace.

282 7.3.1 Resource URIs

- 283 The class Resource URI is:
- 284 "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM
- CSAssociatedPowerManagementService?__cimnamespace=root/dcim" 285
- 286 The key properties are ServiceProvided and UserofService.
- 287 The instance Resource URI for DCIM CSAssociatedPowerManagementService instance is:
- "http://schemas.dell.com/wbem/wscim/1/cim-schema/2/DCIM 288
- 289 SystemEnumeration?__cimnamespace=root/dcim+ServiceProvided=<Reference to
- DCIM_CSPowerManagementService>+UserofService=<Reference to DCIM_ComputerSystem>" 290

7.3.2 Operations 291

293

294

292 The following table lists the operations implemented on DCIM_CSAssociatedPowerManagementService.

Table 7 – DCIM CSAssociatedPowerManagementService - Operations

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

7.3.3 Class Properties

295 The following table lists the implemented properties for DCIM CSAssociatedPowerManagementService 296

instance in a system. The "Requirements" column shall denote whether the property is implemented (for 297

requirement definitions, see section 3). The "Additional Requirements" column shall denote either

298 possible values for the property, or requirements on the value formulation.

Properties	Requirement	Туре	Additional Requirements
ServiceProvided	Mandatory	Reference	The property value shall be the Instance URI of DCIM_CSPowerManagementService class.
UserofService	Mandatory	Reference	The property value shall be the Instance URI of DCIM_ComputerSystem.
PowerState	Mandatory	uint16	The property value shall be one of the following: • 2(on), • 13(off) NOTE: In 13 (off) state, although system is off, system has 'flea' or standby power, and iDRAC is powered on.
RequestedPowerState	Mandatory	uint16	The property value is always 0.
PowerOnTime	Mandatory	datetime	The property value is always "NULL",

7.4 Power State Management Profile Registration

- 301 This section describes the implementation for the DCIM_LCRegisteredProfile class.
- This class is instantiated in the Interop Namespace.
- 303 The DCIM_ElementConformsToProfile association(s) shall reference the DCIM_LCRegisteredProfile
- 304 instance.

300

305

7.4.1 DMTF Profile Registration Version 1.0

306 **7.4.1.1 Resource URIs**

- 307 The class Resource URI is:
- 308 "http://schemas.dmtf.org/wbem/wscim/1/cim-
- 309 schema/2/CIM_RegisteredProfile?__cimnamespace=root/interop"
- The key property shall be the InstanceID property.
- 311 The instance Resource URI is:
- 312 "http://schemas.dell.com/wbem/wscim/1/cim-
- 313 schema/2/DCIM_LCRegisteredProfile?__cimnamespace=root/interop+InstanceID=DCIM:PowerStateMan
- 314 agementRegisteredProfile:1"

315 **7.4.1.2 Operations**

The following table lists the operations implemented on for DCIM_LCRegisteredProfile.

317 Table 9 – DCIM_LCRegisteredProfile - Operations

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

7.4.1.3 Class Properties

318

323

324

325

336

337

342

- The following table lists the implemented properties for DCIM_LCRegisteredProfile instance in a system.
- 320 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
- 322 the property, or requirements on the value formulation.

Table 10 – DCIM_LCRegisteredProfile - Properties

Property Name	Requirement	Туре	Additional Requirements
	Mandatory		DCIM:PowerStateManagementRegistered
InstanceID		String	Profile:1
	Mandatory		This property value shall be "Power State
RegisteredName	-	String	Management"
RegisteredVersion	Mandatory	String	This property value shall be "1.0.0".
RegisteredOrganization	Mandatory	Uint16	This property value shall be 2 (DMTF).

7.4.2 DMTF Profile Registration version 2.0

7.4.2.1 Resource URIs

- 326 The class Resource URI is:
- 327 "http://schemas.dmtf.org/wbem/wscim/1/cim-
- 328 schema/2/CIM_RegisteredProfile?__cimnamespace=root/interop"
- 329 The key property shall be the InstanceID property.
- 330 The instance Resource URI is:
- 331 "http://schemas.dell.com/wbem/wscim/1/cim-
- 332 schema/2/DCIM_LCRegisteredProfile?__cimnamespace=root/interop+InstanceID=DCIM:PowerStateMan
- 333 agementRegisteredProfile:2"

334 **7.4.2.2 Operations**

335 The following table lists the operations implemented on for DCIM LCRegisteredProfile.

Table 11 – DCIM_LCRegisteredProfile - Operations

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

7.4.2.3 Class Properties

The following table lists the implemented properties for DCIM_LCRegisteredProfile instance in a system.

The "Requirements" column shall denote whether the property is implemented (for requirement

definitions, see section 3). The "Additional Requirements" column shall denote either possible values for

341 the property, or requirements on the value formulation.

Table 12 - DCIM LCRegisteredProfile - Properties

Property Name	Requirement	Туре	Additional Requirements
	Mandatory		DCIM:PowerStateManagementRegistered
InstanceID		String	Profile:2
	Mandatory		This property value shall be "Power State
RegisteredName	_	String	Management"

Property Name	Requirement	Туре	Additional Requirements
RegisteredVersion	Mandatory	String	This property value shall be "2.0.0".
RegisteredOrganization	Mandatory	Uint16	This property value shall be 2 (DMTF).
OtherRegisteredOrganization	Mandatory	String	The property value shall be "DCIM".

7.4.3 Dell Profile Registration version 1.0

344 **7.4.3.1 Resource URIs**

343

355

356

361

- 345 The class Resource URI is:
- 346 "http://schemas.dmtf.org/wbem/wscim/1/cim-
- 347 schema/2/CIM_RegisteredProfile?__cimnamespace=root/interop"
- The key property shall be the InstanceID property.
- 349 The instance Resource URI is:
- 350 "http://schemas.dell.com/wbem/wscim/1/cim-
- 351 schema/2/DCIM_LCRegisteredProfile?__cimnamespace=root/interop+InstanceID=DCIM:PowerStateMan
- 352 agement:1.0.0"

353 **7.4.3.2 Operations**

The following table lists the operations implemented on for DCIM_LCRegisteredProfile.

Table 13 – DCIM_LCRegisteredProfile - Operations

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

7.4.3.3 Class Properties

- 357 The following table lists the implemented properties for DCIM_LCRegisteredProfile instance in a system.
- 358 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 14 – DCIM_LCRegisteredProfile - Properties

Property Name	Requirement	Туре	Additional Requirements
InstanceID	Mandatory	String	DCIM:PowerStateManagement:1.0.0
	Mandatory		This property value shall be "Power State
RegisteredName		String	Management"
RegisteredVersion	Mandatory	String	This property value shall be "1.0.0".
RegisteredOrganization	Mandatory	Uint16	This property value shall be 1 (Other).
OtherRegisteredOrganization	Mandatory	String	The property value shall be "DCIM".
AdvertisedTypes[]	Mandatory	Uint16	This property array shall contain [1(Other), 1 (Other)].
AdvertiseTypeDescriptions[]	Mandatory	String	This property array shall contain ["WS-Identify", "Interop Namespace"].
			This property array shall describe the required licenses for this profile.
ProfileRequireLicense[]	Mandatory	String	If no license is required for the profile, the property shall have value NULL.

Property Name	Requirement	Туре	Additional Requirements
			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"
ProfileRequireLicenseStatus[]	Mandatory	String	If no license is required for the profile, the property shall have value NULL.

8 Methods

362

365

375

376

- 363 This section details the requirements for supporting extrinsic methods for the
- 364 DCIM_CSPowerManagementService class.

8.1 DCIM_CSPowerManagementService.RequestPowerStateChange()

- 366 The RequestPowerStateChange() method is used to set the host system power state. The
- 367 PowerChangeCapabilities property array of the associated instance of
- 368 CIM_PowerManagementCapabilities is used to represent the capabilities of the
- RequestPowerStateChange() method. When this method is supported, the PowerChangeCapabilities
- property shall contain the value 3 (Power State Settable).
- 371 RequestPowerStateChange() method return code values shall be as specified in Table 15.
- 372 RequestPowerStateChange() method parameters are specified in Table 16.
- Invoking the RequestPowerStateChange() method multiple times could result in earlier requests being overwritten or lost.

Table 15 – DCIM_CSPowerManagementService.RequestPowerStateChange() Method: Return Code Values

Value	Description
0	The initiation of Pending/Immediate Power State Change was successful.
2	Error occurred

377 Table 16 – DCIM_CSPowerManagementService.RequestPowerStateChange() Method: Parameters

Qualifiers	Name	Туре	Description/Values
IN	PowerState	uint16	See section 8.1.1.
OUT	MessageID	String	Error MessageID
OUT	Message	String	Error Message
OUT	MessageArgument s[]	String	Error MessageArguments

378 Table 17 – DCIM_CSPowerManagementService.RequestPowerStateChange() Standard Messages

MessageID (OUT parameter)	Message	MessageArguments[]
SYS003	Missing parameter(s) %s	PowerState
SYS004	Invalid parameter value for %s	PowerState

MessageID (OUT parameter)	Message	MessageArguments[]
SYS002	The command failed	NA
SYS021	The command failed to set <pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	PowerState

8.1.1 PowerState

379

- 380 The PowerState parameter indicates the desired power state of the computer system.
- 381 When the value used for the PowerState parameter is not equal to one of the values in the
- 382 PowerStatesSupported property array of the associated instance of CIM PowerManagementCapabilities,
- 383 the method shall return 2.
- When the value used for the PowerState parameter is not equal to one of the values in the
- 385 RequestedPowerStatesSupported property of the associated instance of
- 386 CIM_PowerManagementCapabilities, the method shall return 2.
- 387 When the value 5 (Power Cycle (Off–Soft)) or the value 15 (Power Cycle (Off-Soft Graceful)) is supported
- for the PowerState parameter, the PowerChangeCapabilities property array of the associated instance of
- 389 CIM_PowerManagementCapabilities shall contain the value 4 (Power Cycling Supported).
- When the value 6 (Power Cycle (Off-Hard)) or the value 16 (Power Cycle (Off-Hard Graceful)) is
- 391 supported for the PowerState parameter, the PowerChangeCapabilities property array of the associated
- instance of CIM_PowerManagementCapabilities shall contain the value 6 (Off Hard Power Cycling
- 393 Supported).
- When the values 10 (Master Bus Reset) and 11 (Diagnostic Interrupt (NMI)) are supported for the
- 395 PowerState parameter, the PowerChangeCapabilities property array of the associated instance of
- 396 CIM_PowerManagementCapabilities shall contain the value 7 (HW Reset Supported).
- When the value is 12 (Off-Soft Graceful), 13 (Off-Hard Graceful), 14 (Master Bus Reset Graceful), 15
- 398 (PowerCycle (Off-Soft Graceful), or 16 (Power Cycle (Off-Hard Graceful)), is supported for the
- 399 PowerState parameter, the PowerManagementCapabilities property array of the associated instance of
- 400 CIM PowerManagementCapabilities shall contain value 8 (Graceful Shutdown supported).
- When the CIM_PowerManagementService.RequestPowerStateChange() method returns a value of 0 or
- 402 4096, the RequestedPowerState property of the instance of CIM AssociatedPowerManagementService
- 403 that references the CIM_PowerManagementService instance and the CIM_ComputerSystem instance
- indicated by the ManagedElement parameter shall be set to the value of the PowerState parameter of the
- 405 method.

The values of CIM_PowerManagementService.RequestPowerStateChange() method PowerState parameter shall have the meaning specified in Table 18.

Table 18 - PowerState Parameter Values

408 409

PowerState enum Value	Description
2 (Power On)	Initiate the transition of the system to full on state (corresponding ACPI state G0/S0).
5 (Power Cycle (Off Soft))	Transition the system to off state (corresponding ACPI state G2/S5), in which the system consumes a minimal amount of power, followed by a transition to on state (corresponding ACPI state G0/S0).
8 (Power Off – Soft)	Initiate the transition of the system to off state (corresponding ACPI state G2/S5), in which the system consumes a minimal amount of power.
10 (Master Bus Reset)	Perform hardware reset on the system.
11 (Diagnostic Interrupt (NMI))	Assert an NMI on the system.

PowerState enum Value	Description
12 (Power Off - Soft Graceful)	Perform an orderly transition to power off state (corresponding ACPI state G2/S5), in which the system consumes a minimal amount of power.

9 Use Cases

See Lifecycle Controller (LC) Integration Best Practices Guide.

CIM Elements

414 No additional details specified.

11 Privilege and License Requirement

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

Table 19 - Privilege and License Requirements

Class and Method	Operation	User Privilege Required	License Required
DCIM_CSPowerManagementService	ENUMERATE, GET	Login	None.
DCIM_CSPowerManagementService. RequestPowerStateChange()	INVOKE	Login, System Control	None.
DCIM_CSPowerManagementCapabilities	ENUMERATE, GET	Login	None.
DCIM_CSAssociatedPowerManagement Service	ENUMERATE, GET	Login	None.
DCIM_PMSElementCapabilities	ENUMERATE, GET	Login	None.
DCIM_SPHostedPowerManagementServ ice	ENUMERATE, GET	Login	None.
DCIM_ElementConformsToProfile	ENUMERATE, GET	Login	None.
DCIM_RegisteredProfile	ENUMERATE, GET	Login	None.
DCIM_LCRegisteredProfile	ENUMERATE, GET	Login	None.
DCIM_LCElementConformsToProfile	ENUMERATE, GET	Login	None.