

WSMAN License and Privilege Specification

2012.03.08



Notes, Cautions, and Warnings



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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1.0 Introduction

The WSMAN License and Privilege Specification encompasses all the license and privilege information that is required to utilize the Web Services for Management (WS-Man) API provided by the integrated Dell Remote Access Controller (iDRAC7) with Lifecycle Controller 2.0 (LC2).

The Lifecycle Controller manageability capabilities are partitioned into distinct areas and represented by Dell Common Information Model (DCIM) profile specifications that provide comprehensive details about each manageability feature or capability. These features may be free, partially licensed, or fully licensed. Furthermore, the accessibility of a feature is defined by the credentials provided with the WS-Man request and map to the credential user assigned privilege, such as administrator or read-only access.

1.1 Licensing

Determining the extent of the available feature set and corresponding licensing on a given system consists of following steps.

1. Enumeration of the CIM Registered Profile, Interop namespace

An example of the iDRAC Card registered profile is displayed below. If a particular profile's RegisteredName is not returned, that feature is not supported.

```
DCIM_LCRegisteredProfile
  AdvertiseTypeDescriptions = WS-Identify
  AdvertiseTypeDescriptions = Interop Namespace
  AdvertiseTypes = 1
  AdvertiseTypes = 1
  InstanceID = DCIM:iDRACCard:1.0.0
  OtherRegisteredOrganization = DCIM
  ProfileRequireLicense = Remote Firmware Configuration
  ProfileRequireLicense = Remote Inventory
  ProfileRequireLicense = Virtual Console
  ProfileRequireLicense = Virtual Media
  ProfileRequireLicense = Two-Factor Authentication
  ProfileRequireLicense = Directory Services
  ProfileRequireLicense = IPv6
  ProfileRequireLicense = Dynamic DNS
  ProfileRequireLicenseStatus = LICENSED
  RegisteredName = iDRAC Card
  RegisteredOrganization = 1
  RegisteredVersion = 1.2.0
```

2. The ProfileRequireLicense - ProfileRequireLicenseStatus pair, shown above, further defines the features available within a particular profile. For a particular service class, methods 1 through x might be licensed, but x+1 may not be.

Performing an enumeration or Get operation (using the correct keys) on a particular class that is not licensed will return no information. Invoking a method on an unlicensed class will result in an error.

1.2 Privilege

The privilege of an individual user is determined by the network administrator. As an example, a user privilege defined to read-only will not be able to invoke methods of a class.

The following annex describes the mapping for iDRAC privileges. The integer value returned for the privilege represents a bit mask, where each bit represents a specific privilege. If a particular bit is set, then the corresponding privilege exists. The following table represents the bitmask mapping to the iDRAC privileges.

Table 1. Privilege Bit Mask

Bit	Privilege
1	Login
2	Configure iDRAC
3	Configure Users
4	Logs
5	System Control
6	Access Virtual Console
7	Access Virtual Media
8	System Operations
9	Debug

For example, a privilege value equal to decimal 91 can be arithmetically decoded into the appropriate privileges:

- $91 \bmod 2 = 1$, then Login privilege exists.
- $91 \div 2 = 45$, $45 \bmod 2 = 1$, then Configure privilege exists .
- $45 \div 2 = 22$, $22 \bmod 2 = 0$, then Configure Users privilege does not exist.
- $22 \div 2 = 11$, $11 \bmod 2 = 1$, then Logs privilege exists.
- $11 \div 2 = 5$, $5 \bmod 2 = 1$, then System Control privilege exists.
- $5 \div 2 = 2$, $2 \bmod 2 = 0$, then Access Virtual Console privilege does not exist.
- $2 \div 2 = 1$, $1 \bmod 2 = 1$, then Access Virtual Media privilege exists.

The same privilege value of decimal 91 can be decoded through binary operations:

- $91 \text{ and } 1 = 1$, then Login privilege exists.
- $91 \text{ and } 2 = 2$, then Configure privilege exists.
- $91 \text{ and } 4 = 0$, then Configure Users privilege does not exist.
- $91 \text{ and } 8 = 8$, then Logs privilege exists.
- $91 \text{ and } 16 = 16$, then System Control privilege exists.
- $91 \text{ and } 32 = 0$, then Access Virtual Console privilege does not exists.
- $91 \text{ and } 64 = 64$, then Access Virtual Media privilege exists.

1.3 Format of License and Privilege data

The subsequent profile features contained within the document is represented by the following fields:

Field	Description
Class	The unique identifier for the feature.
Instance	The feature text that is displayed to the user.
Operation	Describes the applicable operations that the feature's privileges are applied upon. Examples include Enum_get, which represent the enumerate and get commands.
Required Privilege	Describes the feature's required privilege.
Required License	Describes the feature's required license.

1.4 License Name and Description

The following table provides a description of each License name used in the subsequent sections.

License Name	Description
Auto Discovery	Functionality and configuration or retrieval of iDRAC credentials by iDRAC from provisioning server
Boot Capture	Boot capture allows the user to capture the last three boot sequences for later replay. (11G equivalent: it will start a new capture for every boot)
Console Collaboration	Supports multiple simultaneous connections to the virtual console and allows multiple connections to chat with each other
Crash Screen Capture	This agent based solution allows iDRAC to determine if the OS has crashed and capture a screenshot.
Crash Video Capture	Similar to screen capture but the iDRAC captures a full video
Dedicated NIC	Enabling the Dedicated NIC option / Functionality and configuration for iDRAC (requires hardware on base)
Device Monitoring	Device Monitoring enables viewing and configuring monitoring of devices in all interfaces. Configuration is anything that influences the behavior of monitoring. Inclusion List is storage (storage controllers, drives and external enclosures); Network Devices (LOMs,CNA, NIC,NDC and Mezz Cards) Exclusion list is sensors historically monitored via IPMI (IPMI is temperature, voltage, power, intrusion, power supplies, memory, CPU.)
Directory Services	LDAP and Active Directory based authentication services functionality and configuration for all interfaces.
Dynamic DNS	Enabling and Configuration of Dynamic Domain Name Service registration for iDRAC in all interfaces
Email Alerts	Support for Email Alerting
Integrated Dell Remote Access Controller 7	The master bit set in the license file for use by License Manager
Integrated Dell Remote Access Controller 7 Enterprise	The master bit set in the license file for use by License Manager
Integrated Dell Remote Access Controller 7 Express	The master bit set in the license file for use by License Manager

License Name	Description
Integrated Dell Remote Access Controller 7 Express for Blades	The master bit set in the license file for use by License Manager
IPv6	Defines if IPv6 stack is enabled or disabled and can thus be configured in all interfaces
Licensing Management	When feature is disabled: <ol style="list-style-type: none"> 1. License Manager is still enabled and managing Base License(s) for the platform 2. The License Manager cmds/links/etc. are DISABLED in all customer facing user interfaces <p> NOTE: OEM Personality Module is primary user of this bit.</p> <p> NOTE: License Management user interface is supported via RACADM and GUI whenever this bit is set. It overrides the LM_RACADM_CLI and LM_FULL_UI if they are off. This exception is made to ensure Base IPMI systems can be upgraded to higher level of license feature set.</p>
Part Replacement	Automatic Configuration and update of replaced parts
PK Authentication	Enable the usage and configuration of SSH based authentication using keys instead of username/password in all interfaces
Power Budget	The ability to configure and the functionality to limit the amount of power used by the system and directly attached storage enclosures.- via Node Manager on Intel Platforms
Power Monitoring	All Real-Time power counters on the server, Historical power counters (last-day, hour, etc.), and Real-Time power graph (only applies to the iDRAC GUI); The ability to configure and the functionality to view the power graphing, historical counter and real time power consumption.
RACADM	Defines if the RACADM CLI is enabled or disabled, which applies to Firmware, Local and Remote RACADM <p> NOTE: When this bit is off, all RACADM features should be disabled except for iDRAC firmware update and license management. RACADM should always support iDRAC firmware update. RACADM should only disable license management if LM_LICENSE_UI bit is off.</p>
Remote File Share	Attached Media Remote File Share - Clientless remote media capability for attaching ISO NOTE: Does not include network ISO boot for use remote OS deployment which is same as 11G
Remote Firmware Configuration	The ability to configure system components such as BIOS firmware, hardware controllers, etc. that do not have their own license bit via remote / out of band interfaces WSMAN, RACADM, GUI. <p> NOTE: This bit has no impact to License Management and iDRAC firmware update.</p>
Remote Firmware Update	Firmware update for any supported device from any supported interface. The only exception is iDRAC firmware update via GUI and remote RACADM, which is always available.

License Name	Description
Remote Inventory	Gets detailed system information at the component level (i.e. hard drives, RAID controllers, NICs, fans, power supplies, etc.). Gets all view classes of all devices (WSMAN, RACADM, SNMP)
Remote Inventory Export	Export of data for hardware, firmware, component configuration
Remote Operating System Deployment	The ability to eliminate PXE boot and enable Remote OS Deployment as in 11G
Remote Syslog	Configuration and usage of remote syslog support. Remote Syslog includes the support for real time delivery and confirmation of LCLog items to a remote Linux Syslog server.
Security Lockout	Currently only includes IP blocking and IP range to prevent specific IP v4 ranges from accessing iDRAC.
	 NOTE: This is an inclusion list/ range instead of exclusion.
Server Profile Export and Import	The functionality and configuration for backing up and restoring the servers hardware and firmware configuration (includes Motherboard Replacement).
Single Sign-On	Single sign-on feature allows for LDAP/AD credentials to be passed to the iDRAC for authentication; Enable the functionality and configuration in all interfaces.
SMASH CLP	All SMCLP commands that Dell supports.
	 NOTE: SSH support when SSH bit enabled
SNMP	The functionality to perform GET of all iDRAC MIBs and also configuration and generation of SNMP traps in all interfaces.
SSH	SSH Protocol Support, when enabled, allows SSH support on various interfaces (i.e. Serial Console redirect, SMCLP, FW RACADM) depending on the interface(s) enablement.
Telnet	Telnet Protocol Support, when enabled, allows Telnet support on various interfaces (i.e. Serial Console redirect, SMCLP, FW RACADM) depending on the interface(s) enablement.
Two-Factor Authentication	Enables Smartcard-based two factor authentication for local users and LDAP users functionality and configuration for all interfaces.
Update Package	In-band firmware update including DUP update and iDRAC FW update via local RACADM. Only used by OEM/PM.
	 NOTE: OEM Personality Module is primary user of this bit.
USC Device Configuration	USC device configuration
	 NOTE: OEM Personality Module is primary user of this bit.
USC Diagnostics	USC embedded diags
	 NOTE: OEM Personality Module is primary user of this bit.
USC Firmware Update	USC firmware update (Pre-OS)
	 NOTE: OEM Personality Module is primary user of this bit.

License Name	Description
USC Operating System Deployment	USC operating system deployment with driver media.  NOTE: OEM Personality Module is primary user of this bit.
Virtual Console	The functionality and configuration of remote video, mouse and keyboard support, which includes Quick launch, Local lockout and associated features but excludes Console collaboration, Console DVR and Chat.
Virtual Flash Partitions	Ability to create, manage, format, and boot to Virtual Flash partitions (requires physical media).
Virtual Folders	The functionality to redirect individual files system folders as if they were ISO images over virtual media.
Virtual Media	Support of the redirection of multiple floppies, CDs, and hard drives to the remote server; Includes iVMCLI support (vMedia Scripting) but excludes Virtual folders, Remote files share and flash.
Web GUI	This bit is used by GUI to determine if they should be enabling their full stack of GUI.  NOTE: If this bit is off, iDRAC firmware update page should still be available for use. If this bit is off and LM_LICENSE_UI bit is on, then the GUI should enable license management.
WSMAN	Defines if WSMAN Protocol Stack is to be enabled or disabled.  NOTE: OEM Personality Module is primary user of this bit.

1.5 Referenced Documents

All documents below shall be included by reference in these requirements. Requirements compliance shall be addressed and documented as if included directly in this document. In the case of divergence between this document and a reference document, this document shall be assumed to prevail. The implementer shall identify the divergence and assumed interpretations.

1.5.1 External Documents

- IEEE P802.1Qaz/D1.4 - Draft Standard for Local and Metropolitan Area Networks
- UEFI Specification Version 2.3

1.6 Glossary

Acronym or Term	Definition
BMC	Baseboard Management Controller
CEM	Comprehensive Embedded Management
CHAP	Challenge Handshake Authentication Protocol
CNA	Converged Network Adapter
DCB	Data Center Bridging

Acronym or Term	Definition
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name Server
EVB	Edge Virtual Bridge Protocol
FC	Fibre Channel
FCoE	Fibre Channel over Ethernet
FQDD	Fully Qualified Device Descriptor
HBA	Host Bus Adapter
IP	Internet Protocol
IQN	iSCSI Qualified Name
iSCSI	Internet Small Computer System Interface
LAN	Local Area Network
LC	Lifecycle Controller
LOM	LAN (NIC) On Motherboard
LUN	Logical Unit Numner
MAC	Media Access Control
MBA	Managed PC Boot Agent
MTU	Maximum Transmission Unit
NIC	Network Interface (plug-in) Card
OMSA	Open Manage Server Administrator
PCI	Peripheral Component Interconnect
PCIe	PCI express
SAN	Storage Area Network
SCSI	Small Computer System Interface
SRIOV	Single Root I/O Virtualization
TCP	Transmission Control Protocol
UEFI	Unified Extensible Firmware Interface – firmware for system BIOS replacement
USC	Unified Server Configurator
VF	Virtual Function
VLAN	Virtual LAN
VPD	Vital Product Data
WOL	Wake-On LAN
WWN	World-wide Name
WWPN	World-wide Part Name

2.0 Base Metrics

Table 2. Base Metrics License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_MetricServiceCapabiliti es		Enum_Get	LOGIN	NONE
DCIM_BaseMetricDefinition		Enum_Get	LOGIN	NONE
DCIM_AggregationMetricDefi nition		Enum_Get	LOGIN	NONE
DCIM_BMEElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_BMServiceAffectsElem ent		Enum_Get	LOGIN	NONE
DCIM_MetricDefForME		Enum_Get	LOGIN	NONE
DCIM_MetricForME		Enum_Get	LOGIN	NONE
DCIM_BaseMetricInstance	Energy Consumption	Enum_Get	LOGIN	Power Monitoring
DCIM_BaseMetricInstance	Instantaneous Power	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Peak Watt Power Consumption	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Peak Amp Power Consumption	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Min Power:1M	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Min Power:1H	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Min Power:1D	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Min Power:1W	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Max Power:1M	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Max Power:1H	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Max Power:1D	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Max Power:1W	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Avg Power:1M	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Avg Power:1H	Enum_Get	LOGIN	Power Monitoring
DCIM_AggrMetricInstance	Avg Power:1D	Enum_Get	LOGIN	Power Monitoring

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_AggrMetricInstance	Avg Power:1W	Enum_Get	LOGIN	Power Monitoring
DCIM_BaseMetricValue	Energy Consumption	Enum_Get	LOGIN	Power Monitoring
DCIM_BaseMetricValue	Instantaneous Power	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Peak Watt Power Consumption	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Peak Amp Power Consumption	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Min Power:1M	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Min Power:1H	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Min Power:1D	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Min Power:1W	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Max Power:1M	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Max Power:1H	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Max Power:1D	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Max Power:1W	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Avg Power:1M	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Avg Power:1H	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Avg Power:1D	Enum_Get	LOGIN	Power Monitoring
DCIM_AggregationMetricValue	Avg Power:1W	Enum_Get	LOGIN	Power Monitoring
DCIM_MetricService		Enum_Get	LOGIN	NONE
DCIM_MetricService		IM.ControlMetrics()	ESCC & LOGIN	Power Monitoring
DCIM_MetricService		IM.GetAvgPowerConsumptionByInterval()	LOGIN	Power Monitoring

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3.0 Base Server

Table 3. Base Server License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_ComputerSystem		Enum_Get	LOGIN	NONE
DCIM_ComputerSystem	IM.RequestStateChange()		ESCC & LOGIN	NONE
DCIM_SystemComponent		Enum_Get	LOGIN	NONE
DCIM_CSEnabledLogicalElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_CSElementCapabilities		Enum_Get	LOGIN	NONE

4.0 BIOS and Boot Management

Table 4. BIOS and Boot Management License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_BIOSService		Enum_Get	LOGIN	NONE
DCIM_BIOSPassword		Enum_Get	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BIOSService		IM.SetAttribute()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BIOSService		IM.SetAttributes()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BIOSService		IM.CreateTargetedConfigJob()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BIOSService		IM.DeletePendingConfiguration()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BIOSService		IM.ChangePassword()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BIOSEnumeration		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_BIOSInteger		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_BIOSString		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_BootSourceSetting		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_BootConfigSetting		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_BootConfigSetting		IM.ChangeBootOrderByInstanceId()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_BootConfigSetting		IM.ChangeBootSourceState()	ESCC & LOGIN	Remote Firmware Configuration

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5.0 CLP Service

Table 5. CLP Service License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
ALL		ALL		SMASH CLP

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6.0 CPU

Table 6. CPU License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_CPUView		Enum_Get	LOGIN	Remote Inventory

7.0 Event Filter

Table 7. Event Filter License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_EventFilter		Enum_Get	LOGIN	NONE
DCIM_EFConfigurationService		Enum_Get	LOGIN	NONE
DCIM_EFConfigurationService		IM.SetEventFilterByCategory()	CONFIGURE & LOGIN	Remote Firmware Configuration
DCIM_EFConfigurationService		IM.SetEventFilterByInstanceIdIds()	CONFIGURE & LOGIN	Remote Firmware Configuration

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8.0 Fan

Table 8. Fan License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_FanView		Enum_Get	LOGIN	Remote Inventory

9.0 iDRAC Card

Table 9. iDRAC Card License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_iDRACCardEnumeration	NIC.DNSRegister	Enum_Get	LOGIN	Dynamic DNS
DCIM_IDRACCardString	NIC.DNSRacName	Enum_Get	LOGIN	Dynamic DNS
DCIM_IDRACCardEnumeration	IPv6.DNSFromDHCP6	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.DNS1	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.DNS2	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardEnumeration	IPv6.Enable	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardEnumeration	IPv6.AutoConfig	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address1	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Gateway	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.LinkLocalAddresses	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardInteger	IPv6.PrefixLength	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address2	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardInteger	IPv6.IPv6NumOfExtAddresses	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address3	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address4	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address5	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address6	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address7	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address8	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address9	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address10	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address11	Enum_Get	LOGIN	IPv6

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_IDRACCardString	IPv6.Address12	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address13	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address14	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address15	Enum_Get	LOGIN	IPv6
DCIM_IDRACCardString	IPv6.Address16	Enum_Get	LOGIN	IPv6
DCIM_iDRACCardAttribute	SNMPTrapIpv6.DestinationNum	Enum_Get	LOGIN	IPv6 & SNMP
DCIM_IDRACCardEnumeration	SNMPTrapIpv6.State	Enum_Get	LOGIN	IPv6 & SNMP
DCIM_iDRACCardAttribute	SNMPTrapIpv6.DestIpv6Addr	Enum_Get	LOGIN	IPv6 & SNMP
DCIM_IDRACCardEnumeration	EmailAlert.Enable	Enum_Get	LOGIN	Email Alerts
DCIM_IDRACCardString	EmailAlert.Address	Enum_Get	LOGIN	Email Alerts
DCIM_IDRACCardString	EmailAlert.CustomMsg	Enum_Get	LOGIN	Email Alerts
DCIM_IDRACCardEnumeration	SNMP.Enable	Enum_Get	LOGIN	SNMP
DCIM_IDRACCardString	SNMP.AgentCommunity	Enum_Get	LOGIN	SNMP
DCIM_IDRACCardEnumeration	IPBlocking.RangeEnabled	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardString	IPBlocking.RangeAddress	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardString	IPBlocking.RangeMask	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardEnumeration	IPBlocking.BlockEnabled	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardInteger	IPBlocking.FailCount	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardInteger	IPBlocking.FailWindow	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardInteger	IPBlocking.PenaltyTime	Enum_Get	LOGIN	Security Lockout
DCIM_IDRACCardEnumeration	SysLog.SyslogEnable	Enum_Get	LOGIN	Remote Syslog
DCIM_IDRACCardString	SysLog.Port	Enum_Get	LOGIN	Remote Syslog
DCIM_IDRACCardString	SysLog.Server1	Enum_Get	LOGIN	Remote Syslog

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_IDRACCardString	SysLog.Server2	Enum_Get	LOGIN	Remote Syslog
DCIM_IDRACCardString	SysLog.Server3	Enum_Get	LOGIN	Remote Syslog
DCIM_IDRACCardEnumeration	AD.Enable	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.RacName	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.RacDomain	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardInteger	AD.AuthTimeout	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	AD.Schema	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.DomainController1	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.DomainController2	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.DomainController3	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.GlobalCatalog1	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.GlobalCatalog2	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.GlobalCatalog3	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	AD.CertValidationEnabled	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	AD.SSOEnable	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	AD.DCLookupEnable	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	AD.DCLookupByUserDomain	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.DCLookupDomainName	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	AD.GCLookupEnable	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	AD.GCRootDomain	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	LDAP.Enable	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.Server	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardInteger	LDAP.Port	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.BaseDN	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.UserAttribute	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.GroupAttribute	Enum_Get	LOGIN	Directory Services

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_IDRACCardEnumeration	LDAP.GroupAttributeLsDN	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.BindDN	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.BindPassword	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAP.SearchFilter	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	LDAP.CertValidationEnabled	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardString	LDAPRoleGroup.DN	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardInteger	LDAPRoleGroup.Privilege	Enum_Get	LOGIN	Directory Services
DCIM_IDRACCardEnumeration	SmartCard.SmartCardLogonEnable	Enum_Get	LOGIN	Two-Factor Authentication
DCIM_IDRACCardEnumeration	SmartCard.SmartCardCRLEnable	Enum_Get	LOGIN	Two-Factor Authentication
DCIM_iDRACCardAttribute	VirtualMedia.Attached	Enum_Get	LOGIN	Virtual Media
DCIM_iDRACCardAttribute	VirtualMedia.BootOnce	Enum_Get	LOGIN	Virtual Media
DCIM_iDRACCardAttribute	VirtualMedia.FloppyEmulation	Enum_Get	LOGIN	Virtual Media
DCIM_iDRACCardAttribute	VirtualMedia.EncryptionEnable	Enum_Get	LOGIN	Virtual Media
DCIM_IDRACCardEnumeration	VirtualConsole.Enable	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardString	VirtualConsole.EncryptEnable	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardEnumeration	VirtualConsole.LocalVideo	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardEnumeration	VirtualConsole.PluginType	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardInteger	VirtualConsole.MaxSessions	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardInteger	VirtualConsole.Port	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardInteger	VirtualConsole.Timeout	Enum_Get	LOGIN	Virtual Console
DCIM_IDRACCardAttribute	RACUserAdmin	Enum_Get	LOGIN	
DCIM_iDRACCardView		Enum_Get	LOGIN	NONE

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_iDRACCardService		Enum_Get	LOGIN	NONE
DCIM_iDRACCardService		ApplyAttributes(All)	ESCC & LOGIN	Remote Firmware Configuration & One of the Above
DCIM_iDRACCardService)	ApplyAttributes(Users)	ESCC & LOGIN & CONFIGURE_USERS	Remote Firmware Configuration & One of the Above
DCIM_iDRACCardService		SetAttribute(All)	ESCC & LOGIN	Remote Firmware Configuration & One of the Above
DCIM_iDRACCardService		SetAttribute(Users)	ESCC & LOGIN & CONFIGURE_USERS	Remote Firmware Configuration & One of the Above
DCIM_iDRACCardService		SetAttributes(All)	ESCC & LOGIN	Remote Firmware Configuration & One of the Above
DCIM_iDRACCardService		SetAttributes(Users)	ESCC & LOGIN & CONFIGURE_USERS	Remote Firmware Configuration & One of the Above
DCIM_iDRACCardService		CreateTargetedConfigJob()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_iDRACCardService		DeletePendingConfiguration()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_iDRACCardService		SendTestEmailAlert()	TEST_ALERTS & LOGIN	Remote Firmware Configuration & Email Alerts
DCIM_iDRACCardService		SendTestSNMPTrap()	TEST_ALERTS & LOGIN	Remote Firmware Configuration & SNMP

10.0 Job Control

Table 10. Job Control License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LifecycleJob		Enum_Get	LOGIN	
DCIM_JobService		Enum_Get	LOGIN	
DCIM_JobService		SetupJobQueue()	LOGIN & ESCC	
DCIM_JobService		DeleteJobQueue()	LOGIN & ESCC	
DCIM_JobService		CreateRebootJob()	LOGIN & ESCC	
DCIM_JobService		SetDeleteOnCompletionTimeout()	LOGIN & CONFIGURE	

11.0 LC Management

Table 11. LC Management License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LCString	SYSID	Enum_Get	LOGIN	NONE
DCIM_LCEnumeration	Licensed	Enum_Get	LOGIN	NONE
DCIM_LCString	Provisioning Server	Enum_Get	LOGIN	Auto Discovery
DCIM_LCEnumeration	Auto Discovery	Enum_Get	LOGIN	Auto Discovery
DCIM_LCEnumeration	Auto Discovery Factory Defaults	Enum_Get	LOGIN	Auto Discovery
DCIM_LCEnumeration	Part Configuration Update	Enum_Get	LOGIN	Part Replacement
DCIM_LCEnumeration	Part Firmware Update	Enum_Get	LOGIN	Part Replacement
DCIM_LCEnumeration	CSIOR	Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_LCEnumeration	Virtual Address Management	Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_LCString	Virtual Address Management App	Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_LCEnumeration	IPChangeNotifyPS	Enum_Get	LOGIN	Auto Discovery
DCIM_LCEnumeration	SystemServicesState	Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_LCService		Enum_Get	LOGIN	NONE
DCIM_LCService		IM.SetAttribute()	CONFIGURE & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.SetAttributes()	CONFIGURE & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.CreateConfigJob()	CONFIGURE & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.ReInitiateDHS()	CONFIGURE & LOGIN	Auto Discovery
DCIM_LCService		IM.ClearProvisioningS erver()	CONFIGURE & LOGIN	Auto Discovery

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LCService		IM.DownloadServerPublicKey()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.DownloadClientCertificates()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.DeleteAutoDiscoveryClientCerts()	ESCC & LOGIN	Auto Discovery
DCIM_LCService		IM.SetCertificateAndPrivateKey()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.SetPublicCertificate()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.DeleteAutoDiscoveryServerPublicKey()	ESCC & LOGIN	Auto Discovery
DCIM_LCService		IM.LCWipe()	ESCC & LOGIN	NONE
DCIM_LCService		IM.ExportFactoryConfiguration()	LOGIN	Remote Inventory Export
DCIM_LCService		IM.ExportHWInventory()	LOGIN	Remote Inventory Export
DCIM_LCService		IM.ExportLCLog()	LOGIN	NONE
DCIM_LCService		IM.InsertCommentInLCLog()	TEST_ALERTS & LOGIN	Remote Firmware Configuration
DCIM_LCService		IM.GetRSStatus()	LOGIN	NONE
DCIM_LCService		IM.BackupImage()	ESCC & LOGIN	Server Profile Export and Import
DCIM_LCService		IM.RestoreImage()	ESCC & LOGIN	NONE

12.0 License Management

Table 12. License Management License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LicensableDevice		Enum_Get	LOGIN	Licensing Management
DCIM_License		Enum_Get	LOGIN	Licensing Management
DCIM_LicenseManagementService		Enum_Get	LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ExportLicense()	LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ExportLicenseToNetworkShare()	LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ExportLicenseByDevice()	LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ExportLicenseByDeviceToNetworkShare()	LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ShowLicenseBits()	LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ImportLicenseFromNetworkShare()	ESCC & CONFIGURE & LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ImportLicense()	ESCC & CONFIGURE & LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.DeleteLicense()	ESCC & CONFIGURE & LOGIN	Licensing Management
DCIM_LicenseManagementService		IM.ReplaceLicense()	ESCC & CONFIGURE & LOGIN	Licensing Management

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13.0 Memory

Table 13. Memory License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_MemoryView		Enum_Get	LOGIN	Remote Inventory

14.0 OS Deployment

Table 14. OS Deployment License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_OSDeploymentService		Enum_Get	LOGIN	NONE
DCIM_OSDeploymentService		IM.GetHostMACInfo()	LOGIN	NONE
DCIM_OSDeploymentService		IM.GetDriverPackInfo()	LOGIN	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.UnpackAndAttach()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DetachDrivers()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DetachISOImage()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.UnpackAndShare()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.BootToNetworkISO()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.BootToPXE()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DownloadISOToVF	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.BootToISOFromVFI	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DetachISOFromVFI	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DeleteISOFromVFI	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.ConnectNetworkISOImage()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DisconnectNetworkISOImage()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.GetNetworkISOImageConnectionInfo()	LOGIN	Remote Operating System Deployment

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_OSDeploymentService		IM.SkipISOImageBoot()	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.ConnectRFSISOImage	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DisconnectRFSISOImage	LOGIN & ESCC	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.GetRFSISOImageConnectionInfo	LOGIN	Remote Operating System Deployment
DCIM_OSDeploymentService		IM.DeleteISOFromVFlash	LOGIN	Remote Operating System Deployment
DCIM_OSDConcreteJob		Enum_Get	LOGIN	NONE

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15.0 PCI Device

Table 15. PCI Device License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_PCIDeviceView		Enum_Get	LOGIN	Remote Inventory

16.0 Persistent Storage

Table 16. Persistent Storage License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_OpaqueManagementData		Enum_Get	LOGIN	Virtual Flash Partitions
DCIM_VFlashView		Enum_Get	LOGIN	Virtual Flash Partitions
DCIM_PersistentStorageService		Enum_Get	LOGIN	NONE
DCIM_PersistentStorageService		IM.InitializeMedia()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.VFlashStateChange()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.CreatePartition()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.CreatePartitionUsingImage()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.DeletePartition()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.FormatPartition()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.ModifyPartition()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.AttachPartition()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.DetachPartition()	LOGIN & Virtual Media	Virtual Flash Partitions
DCIM_PersistentStorageService		IM.ExportDataFromPartition()	LOGIN & Virtual Media	Virtual Flash Partitions

17.0 Physical Asset

Table 17. Physical Asset License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_ComputerSystemPacka ge		Enum_Get	LOGIN	NONE
DCIM_Chassis		Enum_Get	LOGIN	NONE

18.0 Power State Management

Table 18. Power State Management License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_CSPowerManagementService		Enum_Get	LOGIN	NONE
DCIM_CSPowerManagementService		IM.RequestPowerStateChange()	ESCC & LOGIN	NONE
DCIM_CSPowerManagementCapabilities		Enum_Get	LOGIN	NONE
DCIM_CSAssociatedPowerManagementService		Enum_Get	LOGIN	NONE
DCIM_PMSElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_SPHostedPowerManagementService		Enum_Get	LOGIN	NONE

19.0 Power Supply

Table 19. Power Supply License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_PowerSupply		Enum_Get	LOGIN	Device Monitoring
DCIM_PowerSupplyView		Enum_Get	LOGIN	Remote Inventory
DCIM_PowerRedundancySet		Enum_Get	LOGIN	Device Monitoring
DCIM_PSMemberOfCollection		Enum_Get	LOGIN	Device Monitoring
DCIM_SystemPSDevice		Enum_Get	LOGIN	Device Monitoring
DCIM_PSOwnPropertyCollectionElement		Enum_Get	LOGIN	Device Monitoring
DCIM_CSHostedPowerRedundancy		Enum_Get	LOGIN	Device Monitoring

20.0 Profile Registration

Table 20. Profile Registration License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_RegisteredProfile		Enum_Get	LOGIN	NONE
DCIM_LCRegisteredProfile		Enum_Get	LOGIN	NONE
DCIM_ElementConformsToProfile		Enum_Get	LOGIN	NONE
DCIM_LCElementConformsToProfile		Enum_Get	LOGIN	NONE

21.0 Record Log

Table 21. Record Log License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LCLogEntry		Enum_Get	LOGIN	NONE
DCIM_LCLogEntry		Set	LOGIN & CONFIGURE	NONE
DCIM_SELLogEntry		Enum_Get	LOGIN	NONE
DCIM_LCRecordLog		Enum_Get	LOGIN	NONE
DCIM_SELRecordLog		Enum_Get	LOGIN	NONE
DCIM_SELRecordLog		IM.ClearLog()	LOGIN & CLEAR_LOGS	NONE
DCIM_LCRecordLog		IM.GetConfigResults()	LOGIN	NONE
DCIM_LCRecordLogCapabilities		Enum_Get	LOGIN	NONE
DCIM_SELRecordLogCapabilities		Enum_Get	LOGIN	NONE
DCIM_LCElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_SELElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_LCUseOfLog		Enum_Get	LOGIN	NONE
DCIM_SELUseOfLog		Enum_Get	LOGIN	NONE
DCIM_LCLogManagesRecord		Enum_Get	LOGIN	NONE
DCIM_SELLogManagesRecord		Enum_Get	LOGIN	NONE

22.0 Role Based Authorization

Table 22. Role Based Authorization License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LocalRolePrivilege		Enum_Get		NONE
DCIM_LocalRolePrivilege		Set	CONFIGURE_USERS & LOGIN	NONE
DCIM_CLPPrivilege		Enum_Get	LOGIN	NONE
DCIM_Role		Enum_Get	LOGIN	NONE
DCIM_IPMIRole		Enum_Get	LOGIN	NONE
DCIM_IPMISOLRole		Enum_Get	LOGIN	NONE
DCIM_CLPRole		Enum_Get	LOGIN	NONE
DCIM_LocalRoleBasedAuthorizationService		Enum_Get	LOGIN	NONE
DCIM_IPMIRoleBasedAuthorizationService		Enum_Get	LOGIN	NONE
DCIM_IPMIRoleBasedAuthorizationService		IM.AssignRoles()	CONFIGURE_USERS & LOGIN	NONE
DCIM_CLPRoleBasedAuthorizationService		Enum_Get	LOGIN	NONE
DCIM_CLPRoleBasedAuthorizationService		IM.AssignRoles()	CONFIGURE_USERS & LOGIN	NONE
DCIM_LocalRoleBasedManagementCapabilities		Enum_Get	LOGIN	NONE
DCIM_IPMIRoleBasedManagementCapabilities		Enum_Get	LOGIN	NONE
DCIM_CLPRoleBasedManagementCapabilities		Enum_Get	LOGIN	NONE
DCIM_LocalRBAAElementCapabilities		Enum_Get	LOGIN	NONE

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_IPMIRBAElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_CLPRBAElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_LocalPrivilegeMemberOfCollection		Enum_Get	LOGIN	NONE
DCIM_IPMIRBAIdentityMemberOfCollection		Enum_Get	LOGIN	NONE
DCIM_IPMISOLRBAIdentityMemberOfCollection		Enum_Get	LOGIN	NONE
DCIM_CLPRBAIdentityMemberOfCollection		Enum_Get	LOGIN	NONE
DCIM_CLPPPrivilegeMemberOfCollection		Enum_Get	LOGIN	NONE
DCIM_RBAOwningCollectionElement		Enum_Get	LOGIN	NONE
DCIM_LocalRoleConcreteDependency		Enum_Get	LOGIN	NONE
DCIM_IPMIRBAServiceAffectsElementRole		Enum_Get	LOGIN	NONE
DCIM_LocalRBAServiceAffectsElementRole		Enum_Get	LOGIN	NONE
DCIM_CLPRBAServiceAffectsElementRole		Enum_Get	LOGIN	NONE

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23.0 Sensors

Table 23. Sensors License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_AssociatedSensor		Enum_Get	LOGIN	NONE
DCIM_NumericSensor		Enum_Get	LOGIN	NONE
DCIM_NumericSensor		Set	CONFIGURE & LOGIN	NONE
DCIM_PSNumericSensor		Enum_Get	LOGIN	NONE
DCIM_PSNumericSensor		Set	CONFIGURE & LOGIN	NONE
DCIM_Sensor		Enum_Get	LOGIN	NONE
DCIM_SystemSensorDevice		Enum_Get	LOGIN	NONE

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24.0 Service Processor

Table 24. Service Processor License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_SPComputerSystem		Enum_Get	LOGIN	NONE
DCIM_SPComputerSystem		IM.RequestedStateChange()	ESCC & LOGIN	NONE
DCIM_SPHostedTimeService		Enum_Get	LOGIN	NONE
DCIM_SPSystemDevice		Enum_Get	LOGIN	NONE
DCIM_TimeService		Enum_Get	LOGIN	NONE
DCIM_TimeService		IM.ManageTime()	ESCC & LOGIN	NONE

25.0 Simple Identity Management

Table 25. Simple Identity Management License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_Account		Enum_Get	LOGIN	NONE
DCIM_Account		IM.RequestStateChange()	CONFIGURE_USERS & LOGIN	NONE
DCIM_Account		Set	CONFIGURE_USERS & LOGIN	NONE
DCIM_AccountCapabilities		Enum_Get	LOGIN	NONE
DCIM_AccountOnSystem		Enum_Get	LOGIN	NONE
DCIM_AssignedAcctIdent		Enum_Get	LOGIN	NONE
DCIM_CLPAccountManagementService		Enum_Get	LOGIN	NONE
DCIM_CLPIdentity		Enum_Get	LOGIN	NONE
DCIM_CLPServiceAffectsIdentity		Enum_Get	LOGIN	NONE
DCIM_EnabledLogicalElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_IPMIAccountManagementService		Enum_Get	LOGIN	NONE
DCIM_IPMICLPAccountManagementCapabilities		Enum_Get	LOGIN	NONE
DCIM_IPMICLPElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_IPMIServiceAffectsIdentity		Enum_Get	LOGIN	NONE
DCIM_LANIdentity		Enum_Get	LOGIN	NONE
DCIM_LocalUserAccountManagementCapabilities		Enum_Get	LOGIN	NONE
DCIM_LocalUserAccountManagementService		Enum_Get	LOGIN	NONE

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_LocalUserElementCapabilities		Enum_Get	LOGIN	NONE
DCIM_LocalUserIdentity		Enum_Get	LOGIN	NONE
DCIM_LocalUserServiceAffectedIdentity		Enum_Get	LOGIN	NONE
DCIM_SerialIdentity		Enum_Get	LOGIN	NONE
DCIM_SPHostedSIMPService		Enum_Get	LOGIN	NONE

26.0 Simple NIC

Table 26. Simple NIC License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_NICEnumeration		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_NICInteger		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_NICString		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_NICView		Enum_Get	LOGIN	Remote Inventory
DCIM_NICStatistics		Enum_Get	LOGIN	Device Monitoring
DCIM_NICCapabilities		Enum_Get	LOGIN	Remote Inventory
DCIM_NICService		Enum_Get	LOGIN	NONE
DCIM_NICService		IM.SetAttribute()	LOGIN & ESCC	Remote Firmware Configuration
DCIM_NICService		IM.SetAttributes()	LOGIN & ESCC	Remote Firmware Configuration
DCIM_NICService		IM.CreateTargetedConfigJob()	LOGIN & ESCC	Remote Firmware Configuration
DCIM_NICService		IM.DeletePendingConfiguration()	LOGIN & ESCC	Remote Firmware Configuration

27.0 Simple RAID

Table 27. Simple RAID License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_ControllerView		Enum_Get	LOGIN	Remote Inventory
DCIM_EnclosureView		Enum_Get	LOGIN	Remote Inventory
DCIM_PhysicalDiskView		Enum_Get	LOGIN	Remote Inventory
DCIM_VirtualDiskView		Enum_Get	LOGIN	Remote Inventory
DCIM_RAIDInteger		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_RAIDString		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_RAIDEnumeration		Enum_Get	LOGIN	Remote Firmware Configuration
DCIM_ControllerBatteryView		Enum_Get	LOGIN	Remote Inventory
DCIM_EnclosureEMMView		Enum_Get	LOGIN	Remote Inventory
DCIM_EnclosureFanSensor		Enum_Get	LOGIN	Remote Inventory
DCIM_EnclosurePSUView		Enum_Get	LOGIN	Remote Inventory
DCIM_EnclosureTemperatureSensor		Enum_Get	LOGIN	Remote Inventory
DCIM_RAIDService		Enum_Get	LOGIN	NONE
DCIM_RAIDService		IM.CreateTargetedConfigJob()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.DeletePendingConfiguration()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.ResetConfig()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.CreateVirtualDisk()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.ClearForeignConfig()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.GetAvailableDisks()	LOGIN	Remote Firmware Configuration

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_RAIDService		IM.GetRAIDLevels()	LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.GetDHSDisks()	LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.CheckVDValues()	LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.AssignSpare()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.DeleteVirtualDisk()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.LockVirtualDisk()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.SetControllerKey()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.SetAttribute()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.SetAttributes()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.EnableControllerEncryption()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.RemoveControllerKey()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.ReKey()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.UnassignSpare()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.ConvertToRAID()	ESCC & LOGIN	Remote Firmware Configuration
DCIM_RAIDService		IM.ConvertToNonRAID()	ESCC & LOGIN	Remote Firmware Configuration

28.0 SMASH Collections

Table 28. SMASH Collections License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM ADMProfilesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSCapabilitiesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSCapacitiesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSConsolesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSLogsConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSSensorsConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSSettingsConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPCapabilitiesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPCapacitiesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPConsolesConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPLogsConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPSensorsConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPSettingsConcreteCollection		Enum_Get	LOGIN	SMASH CLP
DCIM ADMProfilesOwningCollectionElement		Enum_Get	LOGIN	SMASH CLP
DCIM_CSOwningCollectionElement		Enum_Get	LOGIN	SMASH CLP

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_SPOwningCollectionElement		Enum_Get	LOGIN	SMASH CLP
DCIM ADMProfilesMemberOfCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSCapabilitiesMemberOfCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_CSLogsMemberOfCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPCapabilitiesMemberOfCollection		Enum_Get	LOGIN	SMASH CLP
DCIM_SPSettingsMemberOfCollection		Enum_Get	LOGIN	SMASH CLP

29.0 SMCLP Admin Domain

Table 29. SMASH CLP Admin Domain License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
				SMASH CLP

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30.0 Software Inventory

Table 30. Software Inventory License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_SoftwareIdentity		Enum_Get	LOGIN	Remote Inventory

31.0 Software Update

Table 31. Software Update License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_SoftwareInstallationService	Enum_Get		LOGIN	NONE
DCIM_SoftwareInstallationService	InstallFromURI()		LOGIN & ESCC	Remote Firmware Update
DCIM_SoftwareInstallationService	InstallFromSoftwareIdentity()		LOGIN & ESCC	Remote Firmware Update
DCIM_SoftwareInstallationService	CreateRebootJob()		LOGIN & ESCC	Remote Firmware Update

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32.0 System Info

Table 32. System Info License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_SystemView		Enum_Get	LOGIN	NONE
DCIM_SystemInteger	Min Power Budget	Enum_Get	LOGIN	Power Budget
DCIM_SystemInteger	Max Power Budget	Enum_Get	LOGIN	Power Budget
DCIM_SystemInteger	Power Budget Value	Enum_Get	LOGIN	Power Budget
DCIM_SystemEnumeration	Power Budget Setting	Enum_Get	LOGIN	Power Budget
DCIM_SystemManagementService		Enum_Get	LOGIN	NONE
DCIM_SystemManagementService		IM.SetAttribute()	LOGIN & CONFIGURE	Remote Firmware Configuration (Operation level) and Attribute level checking based on Power Budget
DCIM_SystemManagementService		IM.SetAttribute(Power Budget)	LOGIN & CONFIGURE & ESCC	Remote Firmware Configuration (Operation level) and Attribute level checking based on Power Budget
DCIM_SystemManagementService		IM.SetAttributes()	LOGIN & CONFIGURE	Remote Firmware Configuration (Operation level) and Attribute level checking based on Power Budget
DCIM_SystemManagementService		IM.SetAttributes(Power Budget)	LOGIN & CONFIGURE & ESCC	Remote Firmware Configuration (Operation level) and Attribute level checking based on Power Budget
DCIM_SystemManagementService		IM.CreateTargetedConfigJob()	LOGIN & CONFIGURE	Remote Firmware Configuration

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_SystemManagementService		IM.DeletePendingConfiguration()	LOGIN & CONFIGURE	Remote Firmware Configuration
DCIM_SystemManagementService		IM.ShowErrorsOnLCD()	LOGIN & TEST_ALERTS	Remote Firmware Configuration
DCIM_SystemManagementService		IM.IdentifyChassis()	LOGIN & TEST_ALERTS	Remote Firmware Configuration

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33.0 Video

Table 33. Video License and Privileges

Class	Instance	Operation	Required Privilege	Required License Bit
DCIM_VideoView		Enum_Get	LOGIN	Remote Inventory