



Lenovo ToolsCenter Suite CLI User's Guide



Version 1.4.0

Note

Before using this information and the product it supports, read the information in Appendix B “Notices” on page 127.

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About this publication

Lenovo ToolsCenter Suite CLI is a command line interface program that facilitates server management functions such as firmware configuration, system inventory, firmware and device driver updates, and other functions. This guide provides information about how to download and use ToolsCenter Suite CLI.

Who should read this guide

This guide is for system administrators or other individuals responsible for system administration who are familiar with firmware and device driver maintenance.

Conventions and terminology

Paragraphs that start with a Note, Important, or Attention in bold have specific meanings to highlight key information:

Note: These notices provide important tips, guidance, or advice.

Important: These notices provide information or advice that might help you avoid inconvenient or difficult situations.

Attention: These notices indicate possible damage to programs, devices, or data. An attention notice appears before the instruction or situation in which damage can occur.

The following table provides a description of commonly used terms in the *Lenovo ToolsCenter Suite CLI Users Guide*.

Table 1. Commonly used terms

Term	Definition
ASU	Advanced Setting Utility A utility that allows you to modify firmware settings from the command line on multiple operating-system platforms.
BIOS	Basic Input Output System The code that controls basic hardware operations, such as interactions with diskette drives, hard disk drives, and the keyboard.
BMC	Baseboard Management Controller Standard BMC-compliant device for monitoring system sensors and surfacing sensor data.
CDM	Common Diagnostic Model Standard diagnostics subprofile of the CIM specification.
CIM	Common Information Model Standard developed by the Distributed Management Task Force for enterprise level modeling of computer systems.
CIM Object Manager (or CIM broker)	High level service in the operating system that manages the creation and life cycle of managed object data. The format of managed data conforms to the CIM specification.

Table 1. Commonly used terms (continued)

Term	Definition
CIM Provider	Platform specific management software that interfaces between a CIM object manager and any lower level platform interfaces.
CLI	<p>Command Line Interface</p> <p>A type of computer interface in which the input command is a string of text characters.</p>
CMM	<p>Chassis Management Module</p> <p>A Flex System module that allows you to configure and manage all Flex System components that are installed.</p>
CMPI	<p>Common Management Programming Interface</p> <p>Programming API designed to bridge the differences between multiple CIMOM implementations and CIM provider APIs.</p>
CMR	Conversion Management Routine
CNA	<p>Converged Network Adapter</p> <p>An I/O device that combines the functionality of a host bus adapter (HBA) with that of a network interface controller (NIC).</p>
DIMM	<p>Dual Inline Memory Module</p> <p>A double SIMM (single inline memory module). Contains one or more random access memory (RAM) chips.</p>
DSA	<p>Dynamic System Analysis</p> <p>Strategic problem determination tool for data collection, fault detection and remediation.</p>
Firefox	Open source browser from Mozilla.
Fix-ID	Unique identifier for updates.
FoD	<p>Features on Demand</p> <p>A Windows Server 2012 feature that allows the install files for features to be removed from the operating system. This reduces the size of the operating system.</p>
FTP	<p>File Transfer Protocol</p> <p>A standard network protocol that is used for transferring files from one host to another over a TCP-based network.</p>
GUI	<p>Graphical User Interface</p> <p>A type of computer interface that presents a visual metaphor of a real-world scene, often of a desktop, by combining high-resolution graphics, pointing devices, menu bars and other menus, overlapping windows, icons and the object-action relationship.</p>
HBA	<p>Host Bus Adapter</p> <p>An integrated circuit adapter or circuit board that provides I/O processing and physical connectivity between a host system and storage devices or a network.</p>
HTTP	<p>Hypertext Transfer Protocol</p> <p>The set of rules utilized on the World Wide Web to transfer various types of files. Types of files can include graphics, audio, video, text, and multimedia.</p>

Table 1. Commonly used terms (continued)

Term	Definition
IMM	<p>Integrated Management Module</p> <p>Firmware that consolidates the service processor functionality, Super I/O, video controller, and remote presence capabilities in a single chip on the server system board. The IMM replaces the baseboard management controller (BMC) and Remote Supervisor Adapter II in IBM System x servers.</p>
IOM	<p>ISDN-oriented Modular Interface</p> <p>A system architecture and its bus used for communication between VLSI ICs for the lower layers of ISDN.</p>
IPMI	<p>Intelligent Platform Management Interface</p> <p>Industry standard interface for communications between management applications and baseboard management controllers.</p>
IPMI SEL	<p>Intelligent Platform Management Interface System Event Log</p> <p>Used to view System Event Log (SEL) entries.</p>
iSCSI	<p>Internet Small Computer System Interface</p> <p>An internet protocol based storage networking standard for linking data storage devices and transferring data.</p>
KCS	<p>Keyboard Controller Style Keyboard</p> <p>An interface that is used between a Baseboard Management Controller and payload processor in Intelligent Platform Management Interface architecture.</p>
KMS	<p>Key Management System</p> <p>A method for activating physical computers or virtual machines on a local network.</p>
LED	<p>Light Emitting Diode</p> <p>A two-lead semiconductor device that produces visible light when electric current passes through it.</p>
LightPath	<p>The light emitting diode (LED) indicators on each resource in your system provide status about informational and error events, location, and resource faults as well as other immediately required information.</p>
MAC	<p>Media Access Control</p> <p>sublayer of the data link layer (DLL) in the seven-layer Open Systems Interconnection (OSI) network reference model. It enables multiple terminals or network nodes to communicate within a multiple access network that incorporates a shared medium.</p>
Multitool	<p>Used to parse inventory logs to html and text views.</p>
OOB	<p>Out-of-Band</p> <p>Pertaining to user-specific data that has meaning only for connection-oriented (stream) sockets. The server generally receives stream data in the same order that it was sent. OOB data is received independent of its position in the stream (independent of the order in which it was sent).</p>

Table 1. Commonly used terms (continued)

Term	Definition
PCIE	Peripheral Component Interconnect Express A high-speed serial expansion bus standard for connecting a computer to peripheral devices.
PXE	Preboot Execution Environment An industry standard target/server interface that allows networked computers that are not yet loaded with an operating system to be configured and booted remotely. PXE is based on Dynamic Host Configuration Protocol (DHCP).
RAS	Reliability, Availability, Serviceability IBM standard requirements for system design and operation.
SFTP	Simple File Transfer Protocol A file transfer protocol with a level of complexity between TFTP and FTP.
SOL	Serial Over LAN Protocol for enabling serial communication over TCP/IP using standard IPMI commands.
TCS	ToolsCenter Suite
uEFI	unified Extensible Firmware Interface Replaces BIOS as the interface between the operating system and platform firmware.
UTF8	8-bit Unicode Transformation Format A variable-length character encoding that can encode all possible characters in Unicode, using 8-bit code units.
UX	UpdateXpress
UXSP	UpdateXpress System Pack A package of updates that have been verified to work well together and can be updated together.
UXSPI	UpdateXpress System Pack Installer A software application that applies UpdateXpress System Packs (UXSPs) and individual updates to your system.
VPD	Vital Product Data Configuration and informational data that is associated with a particular set of hardware or software and allows for administration from the system or network level, such as, but not limited to serial number and FRU.
WoL	Wake on LAN A technology that allows a computer to be powered on or awakened from sleep mode using a network message.

Publications and related information

To view a PDF file, you need Adobe Acrobat Reader, which can be downloaded for free from the <http://www.adobe.com/products/acrobat/readstep.html> website at www.adobe.com/products/acrobat/readstep.html.

Information centers and topic collections

The ToolsCenter InfoCenter <http://publib.boulder.ibm.com/infocenter/toolsctr/v1r0/index.jsp?topic> provides information for System x and BladeCenter tools.

Publications

The latest version of the *Lenovo ToolsCenter Suite CLI Users Guide* can be downloaded from ToolsCenter Suite CLI website.

This publication provides information about how to download and use Lenovo ToolsCenter Suite CLI to collect system information, configure firmware settings, and update firmware.

Web resources

The following websites and information center topics are resources for using ToolsCenter Suite CLI.

Websites

- ToolsCenter Suite CLI website
<http://support.lenovo.com/us/en/documents/Invo-tcli>
Use this website to download the Lenovo ToolsCenter Suite CLI tool and documentation.
- Lenovo ToolsCenter website
<https://support.lenovo.com/us/en/documents/LNVO-CENTER>
Use this website to download tools that support System x and BladeCenter products.
- Lenovo Flex System support products and services
<http://shop.lenovo.com/us/en/systems/servers/blades/flex-system/>
Use this web page to obtain information about Flex System products.
- Lenovo BladeCenter Support products and services
<http://shop.lenovo.com/us/en/systems/servers/blades/bladecenter/>
Use this website to obtain information about online technical support, downloads and drivers, and RETAIN tips for BladeCenter products.
- System x Support website
<http://shop.lenovo.com/us/en/systems/server-library/>
Use this website to obtain information about online product information for servers, storage and networking products.
- Lenovo ServerProven
<http://www.lenovo.com/us/en/serverproven/>
Use this website to obtain information about the hardware compatibility of BladeCenter, Flex, and System x systems with applications and middleware.
- Lenovo Service and Support
<http://support.lenovo.com/us/en/>
Use this website to obtain service and support information for Lenovo products.

- PureSystems Redbooks website
<http://www.redbooks.ibm.com/portals/puresystems/>
Use this website to find published Redbooks on Flex Systems.
- Features on Demand Redbook website
<http://lenovopress.com/redp4895-using-system-x-features-on-demand>
Use this website to download the *Using IBM System x Features on Demand* publication.

Forums

- Lenovo Forums website
<https://forums.lenovo.com>
Use this website to access the Lenovo Discuss forums, Knowledge Base, Blog, Support, and Product web pages.
- System x Forum website
developerWorks Forums
Use this website on ibm.com to learn about various forums that are available to discuss technology-related and product-related issues pertaining to System x hardware and software products. This website includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.
- BladeCenter Forum website
<https://www.ibm.com/developerworks/community/forums/html/forum?id=11111111-0000-0000-0000-000000000819>
Use this website on ibm.com to learn about various forums that are available to discuss technology-related and product-related issues pertaining to BladeCenter hardware and software products. This website includes a link for accessing the forum using a Rich Site Summary (RSS) feed.

Chapter 1. Technical overview

Lenovo ToolsCenter Suite CLI is a collection of server management tools that utilize a command line interface program to manage firmware, hardware, and operating systems for CMM, IMM, and Flex-IOM based systems using the applications listed in the table below. ToolsCenter Suite CLI is comprised of individual ToolsCenter application modules that are easily updated. The current release of Lenovo ToolsCenter Suite CLI replaces the Advanced Settings Utility, the Online Dynamic System Analysis tools, and the UXSPI for update function. It also includes the ToolsCenter Suite CLI Portable Edition.

You can run multiple ToolsCenter Suite CLI binaries on a client operating system while using ToolsCenter Suite CLI to manage multiples servers.

ToolsCenter Suite CLI provides multinode support for IMM and supports In-Band and Out-of-band modes for both single and multiple partitions within one complex.

The following table lists the ToolsCenter Suite CLI applications.

Table 2. ToolsCenter Suite CLI applications

Application	Description
config	<ul style="list-style-type: none">• View the current system configuration settings.• Create and change configuration settings for IMM-based systems.
inventory	<ul style="list-style-type: none">• Acquire system information for IMM-based systems.• Inventory and compares devices.
update	<ul style="list-style-type: none">• Download firmware and device driver updates.• Get device inventory information and check for available firmware and device driver updates.• Check for update packages in the local system folder.• Compare installed and available firmware and device driver versions, recommending updates to perform.• Update firmware and device drivers requiring upgrade.
miscellaneous	<ul style="list-style-type: none">• logmgr• ospower• Reboot IMM.• Reboot CMM.• Reboot IOM.• usblan

To get started using Lenovo ToolsCenter Suite CLI, see Chapter 3 “Downloading and using ToolsCenter Suite CLI” on page 7.

Chapter 2. Hardware and software requirements

Lenovo ToolsCenter Suite CLI has specific hardware and operating system requirements. Before you begin using ToolsCenter Suite CLI, review the topics in this section.

Hardware requirements

ToolsCenter Suite CLI supports IMM2, CMM, and Flex-IOM based systems. To successfully run ToolsCenter Suite CLI, the system on which you install ToolsCenter Suite CLI must meet certain hardware requirements.

Disk space requirements

To install ToolsCenter Suite CLI, the system must have a minimum of 300 MB of disk space.

Memory requirements

It is recommended that ToolsCenter Suite CLI run on a system with a minimum of 2 GB of physical memory.

Supported hardware

Use this information to identify systems that are supported by ToolsCenter Suite CLI.

Supported Intel and AMD processor-based systems

ToolsCenter Suite CLI supports the following Intel and AMD processor-based systems:

Table 3. Supported IBM systems

Server	Machine type
IBM BladeCenter HS23	7875, 1929
IBM BladeCenter HS23E	8038, 8039
IBM Flex System x220 Compute Node	7906, 2585
IBM Flex System x222 Compute Node	7916
IBM Flex System x240 Compute Node	7863, 8737, 8738, 8956
IBM Flex System x280 X6/x480 X6/x880 X6	4259, 7903
IBM Flex System x440 Compute Node	7917
IBM iDataPlex dx360 M4 server	7912, 7913
IBM iDataPlex dx360 M4 Water Cooled server	7918, 7919
IBM NeXtScale nx360 M4	5455
IBM System x3100 M4	2582
IBM System x3100 M5	5457
IBM System x3250 M4	2583
IBM System x3250 M5	5458
IBM System x3300 M4	7382
IBM System x3500 M4	7383

Table 3. Supported IBM systems (continued)

Server	Machine type
IBM System x3530 M4	7160
IBM System x3550 M4	7914
IBM System x3630 M4	7158, 7159
IBM System x3650 M4	7915
IBM System x3650 M4 BD	5466
IBM System x3650 M4 HD	5460
IBM System x3750 M4	8722, 8733
IBM System x3750 M4	8752, 8718
IBM System x3850 X5	7145, 7146
IBM System x3850 X6/x3950 X6	3837, 3839
IBM System x3950 X5	7143, 7191

Table 4. Supported Lenovo systems

Server	Machine type
Lenovo Flex System x240 Compute Node	7162, 2588
Lenovo Flex System x240 M5 Compute Node	2591, 9532
Lenovo Flex System x280 X6/x480 X6/x880 X6 Compute Node	4258, 7196
Lenovo Flex System x440	7167, 2590
Lenovo NeXtScale nx360 M5	5465, 5467
Lenovo System x3250 M6	3633, 3943
Lenovo System x3500 M5	5464
Lenovo System x3550 M5	5463, 8869
Lenovo System x3650 M5	5462, 8871
Lenovo System x3750 M4	8753
Lenovo System x3850 X6/x3950 X6	6241
Lenovo Converged HX 3310 Appliance	8693
Lenovo Converged HX 5510/7510 Appliance	8695

Server options

ToolsCenter Suite CLI supports the following third-party vendors:

- Brocade
- Broadcom
- Emulex
- Intel
- LSI

- Mellanox
- QLogic

Software requirements

The information in this section describes the required software for ToolsCenter Suite CLI.

To run ToolsCenter Suite CLI, you must have administrator or root-equivalent operating system privileges.

Required device drivers

It is strongly recommended to have the appropriate service processor device drivers installed and running before running ToolsCenter Suite CLI. This provides access to additional problem determination information, including the hardware event logs.

The following list provides information about collecting device drivers, firmware levels, and log data.

- To collect SCSI and USB device information (including diagnostics), the `sg` driver must be loaded. Run **lsmod** and verify that the `sg` driver is loaded before running ToolsCenter Suite CLI. If it is not loaded, run **modprobe sg**.
- To collect Emulex HBA information from a Linux system, the `emulex` driver and utility (`corekit`) must be installed. Run **lsmod** and verify that `lpfc` and `lpfcdfc` are loaded before running ToolsCenter Suite CLI.
- To collect Service Processor logs, configuration, and environmental data, the appropriate Service Processor driver must be installed. These drivers are available for download from the <http://www.lenovo.com/support> at <http://www.lenovo.com/support>.
- (Linux only) To update firmware using ToolsCenter Suite CLI on 64-bit Linux operating systems, the 32-bit compatibility library, `compat-libstdc++`, must be installed. You can use the following command to determine if this library is installed: `rpm -qa | grep compat-libstdc++-296`.
- To collect Emulex FC HBA data, the Emulex utility (**HBACmd**) must be installed.
- To transfer data collections to the support site using sFTP (by default) or FTP, `libcurl` must be installed.

Supported browsers

To view the information that is collected by ToolsCenter Suite CLI, you must use one of the following Web browsers.

- Internet Explorer 6.0 Service Pack 1 or later
- Mozilla 1.4.0 or later
- Firefox 1.04 or later

Supported operating systems

Use the information in this section to identify operating systems that are supported by ToolsCenter Suite CLI.

Windows

ToolsCenter Suite CLI supports the following Windows operating systems.

Microsoft Windows Server 2016 Editions

- Microsoft Windows Server 2016 (x86-64)

Microsoft Windows Server 2012 Editions

- Microsoft Windows Server 2012 (x86-64)
- Microsoft Windows Server 2012 R2 (x86-64)

Microsoft Windows Server 2008 Editions

- Microsoft Windows Server 2008 (x86-32/x86-64)
- Microsoft Windows Server 2008 R2 (x86-64)

Linux

ToolsCenter Suite CLI supports the following Linux operating systems.

Red Hat

- Red Hat Enterprise Linux 7 Server (x64) Editions (up to U3)
- Red Hat Enterprise Linux 6 Server (x86 & x64) Editions (up to U8)
- Red Hat Enterprise Linux 5 Server (x86 & x64) Editions (up to U10)

SUSE

- SUSE Linux Enterprise Server 12 (x64) (SP2)
- SUSE Linux Enterprise Server 11 (x86 & x64) (SP4)
- SUSE Linux Enterprise Server 10 (x86 & x64) (SP4)

Customized VMware ESXi

ToolsCenter Suite CLI supports the following customized VMware image versions of the ESXi operating systems on a remote target:

- ESXi 6.5
- ESXi 6.0 (up to U3)
- ESXi 5.5 (up to U3)

To increase performance of the Lenovo Customized VMware ESXi image, vendor CIM providers have been removed (from ESXi6.0U2). Removal of these elements prevents the ToolsCenter Suite CLI from updating I/O options through the customized VMware ESXi. To restore I/O module update capability, install the vendor CIM providers following instructions provided in the *Customized Image Reference Guide* available in the Documentation section of the Lenovo Customized VMware ESXi image download pages for each version of the operating system:

- Lenovo ESXi 6.5 versions at the [Download VMware vSphere version 6.5 page](#)
- Lenovo ESXi 6.0 versions at the [Download VMware vSphere version 6.0 page](#)
- Lenovo ESXi 5.5 versions at the [Download VMware vSphere version 5.5 page](#)

Chapter 3. Downloading and using ToolsCenter Suite CLI

The topics in this section describe how to download and use Lenovo ToolsCenter Suite CLI. ToolsCenter Suite CLI is a command line interface program that does not require installation.

Using ToolsCenter Suite CLI for Windows

This procedure describes how to download and extract ToolsCenter Suite CLI for Windows.

ToolsCenter Suite CLI is available for download from: ToolsCenter Suite CLI website.

- Step 1. Select a ToolsCenter Suite CLI package for your operating system:
 - `lnvgy_utl_tclixxx-1.x.x_winsrvr_i386.zip`
 - `lnvgy_utl_tclixxx-1.x.x_winsrvr_x86-64.zip`
- Step 2. Copy the ToolsCenter Suite CLI binary file to the target server or to a removable medium that has been inserted into the target machine.
- Step 3. After downloading the appropriate ToolsCenter Suite CLI zip file, manually extract the files.
- Step 4. Open a Command Prompt window.
- Step 5. On the command line, enter `cd` to change to the directory where the ToolsCenter Suite CLI binary file is located: `c:\onecli`.
- Step 6. Enter `OneCli.exe` and press the enter key. You are now ready to begin using ToolsCenter Suite CLI.

Using ToolsCenter Suite CLI for Linux

This procedure describes how to download and extract ToolsCenter Suite CLI for Linux.

ToolsCenter Suite CLI is available for download from: ToolsCenter Suite CLI website.

- Step 1. Select a ToolsCenter Suite CLI package for your Linux operating system:
 - `lnvgy_utl_tclixxx-1.x.x_rhel5_i386.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_rhel5_x86-64.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_rhel6_i386.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_rhel6_x86-64.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_rhel7_x86-64.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_sles10_i386.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_sles10_x86-64.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_sles11_i386.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_sles11_x86-64.tgz`
 - `lnvgy_utl_tclixxx-1.x.x_sles12_x86-64.tgz`
- Step 2. Copy the ToolsCenter Suite CLI binary file to the target server or to a removable medium that has been inserted into the target machine.
- Step 3. After downloading the appropriate ToolsCenter Suite CLI TGZ file, issue the `tar -xf binary_name` command to complete the file extraction.
- Step 4. Open a Linux Terminal window.

- Step 5. On the command line, enter `cd` to change to the directory where the ToolsCenter Suite CLI binary file is located.
- Step 6. Enter `./0necli` and press the enter key. You are now ready to begin using ToolsCenter Suite CLI.

Note: Do not extract the files in Windows and then copy the extracted files to Linux. There is link information between the *.o files, and extraction in Windows will cause this information to be lost.

ToolsCenter Suite CLI applications and commands

Applications represent each of the ToolsCenter Suite CLI functions. Applications map to the latest individual tool level, making tool updates quick and easy. ToolsCenter Suite CLI currently has the following applications:

- config
- inventory
- update
- misc
 - logmgr
 - ospower
 - rebootimm
 - rebootcmm
 - rebootiom
 - usblan

Commands are used in conjunction with applications. Each application supports a different set of commands. Commands map to the current individual tool function level.

Application and command syntax

All of the ToolsCenter Suite CLI applications use the same basic application and command syntax, customizable by varying commands and parameters.

ToolsCenter Suite CLI application and command syntax

```
./0necli <or> onecli.exe <application><command>[command option][connect option]
```

Note: `./0necli` is for Linux, and `onecli.exe` is for Windows.

To execute a ToolsCenter Suite CLI application, on a command line, enter the command string and press Enter.

IBM system support

The ToolsCenter Suite CLI provides legacy support for IBM systems compatible with earlier ToolsCenter versions.

If a ToolsCenter Suite CLI command is directed to a machine type that identifies it as an IBM target, the ToolsCenter Suite CLI checks to see if an earlier version of ToolsCenter is installed to support the IBM hardware, translates the command for use by the earlier ToolsCenter version, and sends the command to the earlier ToolsCenter version for processing. If the earlier ToolsCenter version required by the IBM hardware is not installed, an error message displays, indicating the ToolsCenter version required by the IBM hardware.

Notes:

- The path to the earlier ToolsCenter version must be specified in the **global.config** file.
- For commands relating to the Advanced Settings Utility (ASU), the ASU binary file must be unzipped before commands can be directed to it (for example; “unzip Invgy_utl_asu_asut90e-10.*_windows_x86-64.exe”). The full path to the location where the ASU executable main program, must then be specified (for example; “C:\asu_bin\asu64.exe”) in the **global.config** file.

ToolsCenter Suite CLI commands that support translation to earlier ToolsCenter versions for use with IBM products are listed below.

Configuration commands and parameters supporting IBM hardware

- batch
- comparedefault
- createuuid
- delete
- deletecert
- export
- generate
- import
- loaddefault
- nodes
- replicate
- restore
- save
- set
- show
- showdefault
- showdes
- showgroups
- showvalues

Inventory commands and parameters supporting IBM hardware

- getinfor
- formatlog
- upload
- -output <dir>
- -srcdata <file>
- -upload Lenovo
- -upload multitool
- -htmlreport
- -ffdc
- -hldec
- -proxy user:pwd@addr:port

- -imm

Update commands and parameters supporting IBM hardware

- compare
- flash
- -backup
- -type
- -forceid
- -dir
- -excludeid
- -includeid
- -scope
- -noscan
- -xml
- -esxi
- -mt

Lenovo ToolsCenter Suite CLI to IBM UXSPI command comparison

The following table compares commands and parameters used by the Lenovo ToolsCenter Suite CLI and IBM UXSPI tools.

Table 5. *Lenovo ToolsCenter Suite CLI to IBM UXSPI command comparison*

ToolsCenter Suite CLI Command	ToolsCenter Suite CLI parameter	UXSPI command	UXSPI parameter
acquire		acquire	The ToolsCenter Suite CLI acquire command is not platform dependent, so no command mapping is required.
scan		Not supported.	
compare	-scanxml	compare	Not supported.
	-noscan		-noinventory
	-backup		-update-args="IMM:-user= <i>userid</i> -password= <i>pwd</i> ,UEFI:-backup"
	-disable-imm-lan		Not supported.
	-mt		-m <i>type</i> , -machine-type= <i>type</i>
	-ostype		Not supported.
	-osarch		Not supported.
	-queryxml		Not supported.
	-comparexml		Not supported.
	-type fw		-F, -firmware
	-type dd		-D, -drivers

Table 5. Lenovo ToolsCenter Suite CLI to IBM UXSPI command comparison (continued)

ToolsCenter Suite CLI Command	ToolsCenter Suite CLI parameter	UXSPI command	UXSPI parameter
	-scope <i>Latest/Individual</i>		-L, -latest
	-scope <i>UXSP/Default</i>		Default (UXSP)
	-includeid		-i <i>update-ids</i> , -include= <i>update-ids</i>
	-excludeid		-e <i>update-ids</i> , -exclude= <i>update-ids</i>
	-forceid		-f <i>update-ids</i> , -force= <i>update-ids</i> , -o <i>update-ids</i> Note: The -o parameter works only with device drivers and has no functional impact on firmware.
	-dir		-l UXSP, -local=UXSP
	-esxi		-vmware-esxi= <i>url</i>
	-output		Ignore
	-mt		-m <i>type</i> , -machine-type= <i>type</i>
	-log		Not supported.
	-imm		Not supported.
flash	-scanxml	flash	Not supported.
	-noscan		-noinventory
	-backup		-update-args="IMM:-user= <i>userid</i> -password= <i>pwd</i> ,UEFI:-backup"
	-disable-imm-lan		Not supported.
	-mt		-m <i>type</i> , -machine-type= <i>type</i>
	-ostype		Not supported.
	-osarch		Not supported.
	-queryxml		Not supported.
	-comparexml		Not supported.
	-type fw		-F, -firmware
	-type dd		-D, -drivers
	-scope <i>Latest/Individual</i>		-L, -latest
	-scope <i>UXSP/Default</i>		Default (UXSP)
	-includeid		-i <i>update-ids</i> , -include= <i>update-ids</i>
	-excludeid		-e <i>update-ids</i> , -exclude= <i>update-ids</i>
	-forceid		-f <i>update-ids</i> , -force= <i>update-ids</i> , -o <i>update-ids</i> Note: The -o parameter works only with device drivers and has no functional impact on firmware.

Table 5. Lenovo ToolsCenter Suite CLI to IBM UXSPI command comparison (continued)

ToolsCenter Suite CLI Command	ToolsCenter Suite CLI parameter	UXSPI command	UXSPI parameter
	-dir		-I UXSP, -local=UXSP
	-esxi		-vmware-esxi= <i>url</i>
	-output		Ignore
	-xml		-xml
	-log		Not supported.
	-imm		Not supported.

Example of IBM script support

```
./OneCli update flash --scope individual --dir ./ --includeid elx-lnvgy_fw_fc_16a-lp16-11.0.270.24-1_linux_32-64
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
Lenovo Flex System
Non-ThinkServer platform
This is an IBM branded System.
Uxlite cmd:update -u -l /root/06f/./ -i elx-lnvgy_fw_fc_16a-lp16-11.0.270.24-1_linux_32-64 -L -e all
```

Chapter 4. Configuration

The topics in this section describe how to use the Lenovo ToolsCenter Suite CLI config application and commands to view the current system configuration settings and make changes to IMM2 and uEFI. The saved configuration information can be used to replicate or restore other systems. The config application also manages system certification.

For information about specific config application commands, refer to the following sections:

- “Commands that display configuration settings” on page 15
- “Commands that change or set system configuration settings” on page 30
- “Commands that save, replicate, and restore configuration settings” on page 36
- “Commands for certificate management” on page 45

Configuration setting

A configuration setting has three components: groupname, configname, and instance.

configuration setting format

```
<groupname>.<configname>[.instance]
```

This table provides a description of the configuration setting components.

Table 6. Configuration setting components

Component	Required/Optional	Description
groupname	Required	<ul style="list-style-type: none">• Required for all settings.• Unique identifier of a group; cannot be duplicated.• Use the showgroup command to view all of the supported groups in an instance.
configname	Required	<ul style="list-style-type: none">• Required for all settings.• Unique identifier of a configuration name; cannot be duplicated within a group, but can be duplicated in different groups.
instance	Optional	<ul style="list-style-type: none">• The instance ID of a setting instance.• Values start from 1 and are in an ascending order.• For more information, see “Instance and non-instance settings” on page 13.

Instance and non-instance settings

An instance setting includes the [.instance] component, otherwise it is considered a non-instance setting. An instance setting requires an instance ID.

Instance settings have a minimum and maximum number of allowed instances. To determine which settings have instances and the number of instances allowed, use the **showvalues** command with the **-instances** parameter. The output will provide the number of instances.

Single instances do not have an instance number and appear as a non-instance setting. The output of the **showvalues** command has the maximum number of instances as *single*. For example, the iSCSI initiatorName is a single instance.

You can use the **show** or **set** commands for single instances. This list provides some examples of single/non-instance settings:

- IMM.HttpPortControl
- IMM.RetryLimit
- IMM.LanOverUsbIMMIP
- IMM.NetworkSettingSync
- SYSTEM_PROD_DATA.SysInfoProdName
- AdvancedRAS.MachineCheckRecovery
- SystemRecovery.POSTWatchdogTimer
- Processors.TurboMode

If there are multiple instances, the settings will be shown multiple times. Multiple instances can be viewed using the **show** command. For example, if there are three user accounts in an IMM system, then you will see three *loginid* settings as shown in the following list.

- IMM.Loginid.1
- IMM.Loginid.2
- IMM.Loginid.3

However, if an IMM system has no user account, the **show** command will not display anything.

Other instance settings include the following examples:

- IMM.UserAccountManagementPriv.1
- IMM.Community_Name.1
- IMM.RemoteConsolePriv.1
- iSCSI.AttemptName.1
- VPD.CompVPD_PartNumber.1
- PXE.NicPortPxeMode.1

Creating and deleting instances

This topic describes how to create and delete instances.

There are restrictions for creating and deleting instances of settings that are part of a record. For more information about these restrictions, see “Record management” on page 15.

To create an instance, use the **set** command. If an instance does not already exist, and the instance number is between 1 and the maximum number of allowed instances, the instance is automatically created and set to the value specified in the **set** command.

To delete an instance, use the **delete** command. This command deletes an instance, if deleting the instance does not cause the number of instances for that setting to go below the minimum number of allowed instances for the setting.

Record management

Settings that have instances can be part of a record. A record is a group of settings that have dependencies on each other. For example, a user ID and a password are dependent on each other. A user ID must have a password and a password must have a user ID. Therefore, they are grouped in the same record.

Each record has a setting that is defined as the *record key*. It represents the primary setting for a record.

Settings that are part of a record are marked as:

- *recordKey*, if the setting is the record key, or
- *recordKey=key_name*, if the setting is part of a record but is not the key

Use the **showvalues** command with the **-instances** parameter to determine if a setting is part of a record. To see examples of the **showvalues** output for settings that are part of a record, see “showvalues command” on page 20.

All of the settings in a record are created or deleted as a group. To create an instance of a record, you must first perform a **set** on the key setting of that record. This automatically creates an instance and sets it to the default value for all of the other settings in that record. For more information about creating or deleting a setting instance, see “Creating and deleting instances” on page 14 and “set command” on page 32.

Commands that display configuration settings

The topics in this section provide detailed information about how to use the config application and commands to display different aspects of the system configuration settings.

Table 7. Commands that display configuration settings

Command	Description
show	Displays the value of one or more settings.
showvalues	Displays possible setting values.
showdefault	Displays the default setting values.
comparedefault	Displays the default and the current setting values.
showdes	Displays the setting detail information.
showgroups	Displays groups of settings.
nodes	Displays node numbers.

Setting classes

Classes are used to indicate groups of settings for commands that support functionality for multiple settings.

Commands that support classes are:

- show
- showvalues
- showdefault
- comparedefault
- showdes
- loaddefault

This table lists setting classes and their descriptions.

Table 8. Settings classes

Class	Description	Example
all	Includes all of the settings.	
authentication	All of the settings classified as authentication settings. This includes: <ul style="list-style-type: none"> • passwords • userIDs • authority-related settings 	This example lists the settings defined by authentication, including password settings. Password settings are not displayed unless the showvalues command is used with the password class. <pre>Onecli.exe config showvalues authentication</pre>
backupctl	<ul style="list-style-type: none"> • Lists all of the settings that are not restored when you run the restore command. • An additional flag is required for these settings to be included during a restore operation. For more information, see “restore command” on page 42. • Class filter for the show, showvalues, and showdefault commands. 	This example lists the settings that are not restored if saved. <pre>Onecli config show backupctl</pre>
noreplicate	<ul style="list-style-type: none"> • Lists all of the settings that are not replicated when you run the replicate command. These settings are usually unique to each system. • Class filter for the show, showvalues, and showdefault commands. 	This example lists the settings that are not replicated. <pre>Onecli config show noreplicate</pre>
password	<ul style="list-style-type: none"> • Lists all of the settings that are classified as password settings. • Password setting values are not displayed using the show command. • Use the password class with the showvalues and the showdefault commands. 	This example list the settings defined by the password settings. Password settings are displayed with the showvalues command and the password class. <pre>Onecli config showvalues password</pre>

Table 8. Settings classes (continued)

Class	Description	Example
readonly	<ul style="list-style-type: none">• Includes all of the settings that are read-only.• These are settings that you cannot change.	
writeonly	<ul style="list-style-type: none">• Includes all of the settings that are write-only.• These are settings that you can change but cannot be read, such as passwords.	

show command

Use the **show** command to view the current value of one or more settings.

show command syntax

```
OneCli.exe config show [command option] [--output<folder>][connection option]
```

Table 9. show command parameters

Parameter	Required/Optional	Notes
command option	Optional	<p>all Default value. Displays all of the supported settings.</p> <p>group name Displays the settings that belong to a group name.</p> <p>setting name The setting name value.</p>
--output	Optional	By default, the log file output is saved to: ../Onecli-%PID%-%date%-%time%/.
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p> <p>Note: Use only one connection option in a command line entry.</p>

Example of the show command

```
OneCli.exe config show --imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
IMM.Cert_CSR_Export_Format=DER
IMM.SSH_SERVER_KEY=Installed
```

```
IMM.PowerRestorePolicy=Restore  
IMM.PSUoversubscriptionMode=NonRedundant With Throttling  
IMM.AutoROMPromotion=Enabled
```

```
Memory.Sparing=Disable  
Memory.MemorySpeed=Max Performance
```

```
Processors.PerCoreP-state=Disable  
Processors.CoresinCPUPackage=All
```

```
LegacySupport.RehookINT19h=Disabled  
LegacySupport.LegacyThunkSupport=Enabled
```

```
The SHOW command execute successful!
```

showvalues command

Use the **showvalues** command to list all of the possible values for one or more settings. **showvalues** also lists the suppressed, greyed-out dependency information.

showvalues command syntax

```
OneCli.exe config showvalues[command option][--output<folder>][connection option]
```

Table 10. showvalues command parameters

Parameter	Required/Optional	Notes
command option	Optional	<p>all Default value. Displays all of the supported settings.</p> <p>group name Displays the settings that belong to a group name.</p> <p>setting name The setting name value.</p>
output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID-%date%-%time%/</code> .
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Example of the showvalues command

```
OneCli.exe config showvalues
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
IMM.SSL_HTTPS_SERVER_CSR=*generate=export
IMM.PowerRestorePolicy=Always Off=<Restore>=Always On
IMM.ThermalModePolicy=<Normal>=Performance
IMM.FrontButton_PWR_Perm=Disabled=<Enabled>
IMM.ManufacturingCertInfo=char[] minchars=0 maxchars=47 pattern=[a-zA-Z0-9./+]{0,47}$default=""
```

```
Power.S3Enable=<Disble>=Enable
```

This setting is suppressed if the result of the following expression is true: "


```
( Power.S3Enable == Disable ) "  
Memory.CKSelfRefresh=<AUTO>=L1: CK_DRIVEN=L2: CK_TRI_STATE=L3: CK_LOW=L4: CK_HIGH
```

```
This setting is suppressed if the result of the following expression is true: "  
( ( Memory.MemoryPowerManagement  
== Automatic ) || ( Memory.MemoryPowerManagement == Disable ) ) "
```

```
This setting is readonly if the result of the following expression is true: "  
( ! ( OperatingModes.ChooseOperatingMode == Custom Mode ) ) "
```

```
SYSTEM_PROD_DATA.SysInfoProdName=char[] minchars=0 maxchars=29  
SYSTEM_PROD_DATA.SysInfoProdIdentifier=char[] minchars=0 maxchars=64 default=  
"System X"  
SYSTEM_PROD_DATA.SysInfoProdIdentifierEx=char[] minchars=0 maxchars=128  
default="System X"
```

showdefault command

Use the **showdefault** command to show the default values of one or more settings.

showdefault command syntax

```
OneCli.exe config showdefault[command option][--output<folder>][connection option]
```

Table 11. showdefault command parameters

Parameter	Required/Optional	Notes
command option	Optional	all Default value. Displays all of the supported settings. group name Displays the settings that belong to a group name. setting name The setting name value.
--output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID%-%date%-%time%/</code> .
connection option	Optional	-imm <user;pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Note: Some settings do not have a default value and will not be included in the list.

Example of the showdefault command

```
OneCli.exe config showdefault
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
IMM.SMTP_Authentication=Disabled  
IMM.SMTP_UserName=  
IMM.SMTP_Password=  
IMM.SMTP_AuthMethod=CRAM-MD5  
IMM.SMTP_ReversePath=  
IMM.Select_LDAP_Servers=Use Pre-Configured LDAP Servers
```

```
Processors.CoresinCPUPackage=All
Processors.QPILinkFrequency=Max Performance
Power.Power_ActiveEnergyManager=Capping Enabled
Power.PowerPerformanceBias=Platform Controlled
Power.PlatformControlledType=Efficiency - Favor Performance
Power.WorkloadConfiguration=Balanced
DevicesandIOPorts.ActiveVideo=Onboard Device
DevicesandIOPorts.PCI64-BitResourceAllocation=Enable
DevicesandIOPorts.MMConfigBase=Auto
DevicesandIOPorts.IntelVTforDirectedIOVT-d=Enable
DevicesandIOPorts.COMPort1=Enable
```

comparedefault command

Use the **comparedefault** command to compare the current values to the default values of one or more settings.

comparedefault command syntax

```
OneCli.exe config comparedefault[command option][--output<folder>]
[connection option]
```

Table 12. comparedefault command parameters

Parameter	Required/Optional	Notes
command option	Optional	<p>all Default value. Displays all of the supported settings.</p> <p>group name Displays the settings that belong to a group name.</p> <p>setting name The setting name value.</p>
output	Optional	By default, the log file output is saved to: ../Onecli-%PID%- %date%- %time%/.
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Note: Some settings do not have a default value and will not be included in the list.

Example of the comparedefault command

```
OneCli.exe config comparedefault --imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
IMM.MinPasswordLen=5<0>
IMM.PwChangeInterval=0<0>
IMM.PwMaxFailure=5<5>
IMM.PwDiffChar=0<2>
IMM.DefPasswordExp=Disabled<Disabled>
```

```
IMM.FirstAccessPwChange=Disabled<Disabled>  
IMM.RemoteAlertRecipient_Status.1=Enabled  
IMM.RemoteAlertRecipient_Status.2=Enabled
```

The value contained in the <> is the default value, while the other value is current setting value.

showdes command

Use the **showdes** command to view a detailed description of one or more settings. For uEFI settings, the detailed description for this command is the same information that you access when you press F1 during startup.

showdes command syntax

```
OneCli.exe config showdes[command option][--output<folder>][connection option]
```

Table 13. showdes command parameters

Parameter	Required/Optional	Notes
command option	Optional	all Default value. Displays all of the supported settings. group name Displays the settings that belong to a group name. setting name The setting name value.
--output	Optional	By default, the log file output is saved to: ../Onecli-%PID %-%date%-%time%/.
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Example of the showdes command

```
OneCli.exe config showdes imm --imm USERID:PASSORD@10.240.252.102
```

This is the output generated from this example:

```
IMM.IMMInfo_Location: IMM Location
```

```
Help for IMM Location
```

```
-----  
Configure the "IMM Information", "location" setting.
```

```
IMM.IMMInfo_RoomId: IMM RoomId
```

```
Help for IMM RoomId
```

```
-----  
Configure the "IMM Information", "RoomId" setting.
```

IMM.IMMInfo_RackId: IMM RackId

Help for IMM RackId

Configure the "IMM Information", "RackId" setting.

showgroups command

Use the **showgroups** command to list the setting groups that are available on a server.

showgroups command syntax

```
OneCli.exe config showgroups[--output<folder>][connection option]
```

Table 14. showgroups command parameters

Parameter	Required/Optional	Notes
--output	Optional	By default, the log file output is saved to: ../Onecli-%PID%- <i>%date%</i> - <i>%time%</i> /.
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Note: The **showgroups** command does not require any command options.

Example of the showgroups command

```
OneCli.exe config showgroups --imm USERID:PASSORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
UEFI  
- AdvancedRAS  
- BackupBankManagement  
- DevicesandIOPorts  
- DiskGPTRecovery  
- LegacySupport  
- Memory  
- Node1  
- OperatingModes  
- POSTAttempts  
- Power  
- Processors  
- SystemRecovery  
BootModes  
BootOrder  
BroadcomGigabitEthernetBCM5720-910  
- BroadcomGigabitEthernetBCM5720-000AF72567E6  
- BroadcomGigabitEthernetBCM5720-000AF72567E7
```


IMM
LSIMegaRAIDConfigurationTool-070
PXE
SYSTEM_PROD_DATA
SecureBootConfiguration
UEFIMisc
VPD
iSCSI

The support group includes:

- uEFI
- BootModes
- BootOrder
- IMM
- PXE
- SYSTEM_PROD_DATA
- SecureBootConfiguration
- UEFIMisc
- VPD
- iSCSI

The subgroups of uEFI are:

- AdvancedRAS
- BackupBankManagement
- DevicesandIOPorts
- DiskGPTRecovery
- LegacySupport
- Memory
- Node1
- OperatingModes
- POSTAttempts
- Power
- Processors
- SystemRecovery

nodes command

Use the **nodes** command to detect the available nodes in the current system.

nodes command syntax

```
OneCli.exe config nodes[--output<folder>][connection option]
```

Table 15. nodes command parameters

Parameter	Required/Optional	Notes
-output	Optional	By default, the log file output is saved to: ../Onecli-%PID%-%date%-%time%/.
connection options	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. Note: Use only one connection option in a command line entry.

Notes:

- The **nodes** command can be used on a multinode or a single-node system.
- On a single node system, 1 is always reported.
- On a multinode system, the available number of nodes is reported.

Example of the nodes command

```
OneCli.exe config nodes
```

```
This is the output generated from this example:  
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
System Nodes : 1
```

Commands that change or set system configuration settings

The topics in this section provide detailed information about how to use the config application and commands to change and set the system configuration settings.

Table 16. Commands that change and set configuration settings

Command	Description
set	Changes a setting value to a new value.
loaddefault	Changes a setting value to the default value.

Table 16. Commands that change and set configuration settings (continued)

Command	Description
createuuid	Creates a uuid value and creates the setting.
delete	Deletes a setting instance group.

set command

Use the **set** command to create a setting or to change the value of a setting. The **set** command also creates an instance, when an instance number does not exist and if the instance value is less than or equal to the maximum number of allowed instances for a setting.

For more information about instances, see “Instance and non-instance settings” on page 13.

set command syntax

```
OneCli.exe config set <settingname> <settingvalue>[--output<folder>]  
[connection option]
```

Table 17. set command parameters

Parameter	Required/Optional	Notes
settingname	Required	The settingname parameter is required for changing a setting value.
settingvalue	Optional	The settingvalue parameter is the new value for the setting that is being changed.
--output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID %-%date%-%time%/</code> .
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Notes:

- If a **settingvalue** is blank, enter a value in quotes.
- If a **settingname** is a valid setting instance which did not exist before, the **set** command will create a setting instance.

Example of the set command

```
OneCli.exe config set IMM.DST Off --imm USERID:PASSORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
IMM.DST=Off  
Waiting for command completion status.  
Command completed successfully.
```


loaddefault command

Use the **loaddefault** command to load the default values of one or more settings.

loaddefault command syntax

```
OneCli.exe config loaddefault[command option][--output<folder>][connection option]
```

Table 18. loaddefault command parameters

Parameter	Required/Optional	Notes
command option	Optional	<p>all Default value. Displays all of the supported settings.</p> <p>group name Displays the settings that belong to a group name.</p> <p>setting name The setting name value.</p>
output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID%-%date%-%time%/</code> .
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Example of the loaddefault command

```
OneCli.exe config loaddefault BootModes.SystemBootMode
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
BootModes.SystemBootMode=UEFI Mode
Waiting for command completion status.
Command completed successfully.
```

createuuid command

Use the **createuuid** command to generate and set the Universally Unique Identifier.

createuuid command syntax

```
OneCli.exe config createuuid <uuidsetting> [--output<folder>][connection option]
```

Table 19. createuuid command parameters

Parameter	Required/Optional	Notes
uuidsetting	Required	The setting name is: SYSTEM_PROD_DATA. SysInfoUUID
--output	Optional	By default, the log file output is saved to: ../0necli-%PID%- %date%-%time%/.
connection options	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Note: The value of the uuid created by the **createuuid** command depends on the time slot and the system information. Therefore, each time this command is run, you will get different setting values.

Example of the creatuuid command

```
OneCli.exe config createuuid SYSTEM_PROD_DATA.SysInfoUUID
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
SYSTEM_PROD_DATA.SysInfoUUID=8037729c1e35b7010ac700059a3c7a00  
Waiting for command completion status.  
Command completed successfully.
```

delete command

Use the **delete** command to delete an instance of a setting.

delete command syntax

```
OneCli.exe config delete <setting_instance> [--output<folder>][connection option]
```

Table 20. delete command parameters

Parameter	Required/Optional	Notes
setting_instance	Required	A unique value is required for this parameter.
--output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID-%date%-%time%/</code> .
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Note: The **delete** command is used only for a setting instance. It does not work for a normal setting.

Example of the delete command

```
OneCli.exe config delete imm.loginid.6
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Deleting imm.loginid.6  
Waiting for command completion status.  
Command completed successfully.
```

Commands that save, replicate, and restore configuration settings

The topics in this section provide detailed information about how to use the config application and commands to save, replicate, and restore system configuration settings and how to run commands in batch mode.

Table 21. Commands that save, replicate, and restore a system

Command	Description
save	Saves the current settings.
replicate	Replicates the saved setting value to another system.

Table 21. Commands that save, replicate, and restore a system (continued)

Command	Description
restore	Restores a saved setting value to the current system.
batch	Runs multiple config commands in a batch file.

save command

Use the **save** command to save all of the settings to a file.

save command syntax

```
OneCli.exe config save --file<savetofilename>[--output<folder>][connection option]
```

Table 22. save command parameters

Parameter	Required/Optional	Notes
-file	Required	The file name where settings and values are stored. ToolsCenter Suite CLI reads the setting from the system and then stores the setting and value in the file.
-output	Optional	By default, the log file output is saved to: <code>../0necli-%PID%-%date%-%time%/</code> .
-group	Optional	The name of a group section. The group_name is the name used in the XML to group setting per subsystem, which should be obtained by running the command <code>showgroups</code> .
-excbakupctl	Optional	Used to exclude the VPD settings. The default is to include all VPD.
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Example of the save command

```
OneCli.exe config save --file saved.txt --imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Warning: Setting IMM.NTPHost1 has an invalid value and will not be saved.  
Warning: Setting IMM.NTPHost2 has an invalid value and will not be saved.  
Warning: Setting IMM.NTPHost3 has an invalid value and will not be saved.  
Warning: Setting IMM.NTPHost4 has an invalid value and will not be saved.  
Settings saved to saved.txt
```

The format of the content in the saved file is:

```
<settingname1>=<settingvalue1>  
<settingname2>=<settingvalue2>  
<settingname3>=<settingvalue3>
```

This is an example of the saved.txt file output:

```
IMM.PowerRestorePolicy=Restore  
IMM.ThermalModePolicy=Normal  
IMM.PowerOnAtSpecifiedTime=0:0:0:0:0  
IMM.MinPasswordLen=0  
IMM.PwChangeInterval=0  
IMM.PwMaxFailure=5  
IMM.PwDiffChar=0  
IMM.DefPasswordExp=Disabled  
IMM.FirstAccessPwChange=Disabled
```

replicate command

Use the **replicate** command to replicate all of the settings in the configuration file.

replicate command syntax

```
OneCli.exe config replicate --file<filename>[--output<folder>]  
[connection option]
```

Table 23. replicate command parameters

Parameter	Required/Optional	Notes
-file	Required	<ul style="list-style-type: none">The file name for the saved settings and values to be stored.ToolsCenter Suite CLI reads the setting and value from the file and applies it to the system.
-output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID%-%date%-%time%/</code> .
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Example of the replicate command

```
OneCli.exe config replicate --file saved.txt --imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
IMM.PowerRestorePolicy=Restore  
IMM.ThermalModePolicy=Normal  
IMM.PowerOnAtSpecifiedTime=0:0:0:0  
IMM.MinPasswordLen=0  
IMM.PwChangeInterval=0  
IMM.PwMaxFailure=5  
IMM.PwDiffChar=0  
IMM.DefPasswordExp=Disabled  
IMM.FirstAccessPwChange=Disabled
```

Waiting for command completion status.

IMM reported the following errors.

Failed to set the following settings:

```
IMM.RemoteAlertRecipient_CriticalAlertsCategory (IMM Error code : 10)  
IMM.RemoteAlertRecipient_SystemAlertsCategory (IMM Error code : 10)
```

IMM.RemoteAlertRecipient_WarningAlertsCategory (IMM Error code : 10)
Command completed with error.

restore command

Use the **restore** command to restore all of the settings that are defined in the update configuration file on the server.

restore command syntax

```
OneCli.exe config restore --file <filename>[--output<folder>][connection option]
```

Table 24. restore command parameters

Parameter	Required/Optional	Notes
-file	Required	<ul style="list-style-type: none">The file name for the saved settings and values to be stored.ToolsCenter Suite CLI reads the setting and value from the file and applies it to the system.
-output	Optional	By default, the log file output is saved to: <code>../0necli-%PID%-%date%-%time%/</code> .
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Note: The **restore** command is similar to the **replicate** command; the only difference is that **restore** can set the **noreplicate** settings. The **restore** command uses the saved configuration to restore a configuration when unexpected changes occur.

Example of the restore command

```
OneCli.exe config restore --file saved.txt --imm USERID:
PASSWORD@10.240.252.102
```

This is the output generated from this example:
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
IMM.PowerRestorePolicy=Restore
IMM.ThermalModePolicy=Normal
IMM.PowerOnAtSpecifiedTime=0:0:0:0
IMM.MinPasswordLen=0
IMM.PwChangeInterval=0
IMM.PwMaxFailure=5
IMM.PwDiffChar=0
IMM.DefPasswordExp=Disabled
IMM.FirstAccessPwChange=Disabled

```
Waiting for command completion status.  
IMM reported the following errors.  
Failed to set the following settings:  
  IMM.RemoteAlertRecipient_CriticalAlertsCategory (IMM Error code : 10)  
  IMM.RemoteAlertRecipient_SystemAlertsCategory (IMM Error code : 10)  
  IMM.RemoteAlertRecipient_WarningAlertsCategory (IMM Error code : 10)  
Command completed with error.
```

batch command

Use the **batch** command to queue config operations without any knowledge of the scripting capabilities of the operating system on which ToolsCenter Suite CLI is running. When you enter the **config** commands in a batch file, the ToolsCenter Suite CLI config application individually reads and executes each config command.

batch command syntax

```
OneCli.exe config batch --file <batchfilename>[--output<folder>][connection option]
```

The format in the batch file should be:

```
<command1> <command1 options>  
<command2> <command2 options>  
<command3> <command3 options>
```

The `-output` or connection option is not required for the command in the batch file as shown above.

Table 25. batch command parameters

Parameter	Required/Optional	Notes
<code>-file</code>	Required	<ul style="list-style-type: none">The file name of the batch file, which has the config commands.ToolsCenter Suite CLI individually reads and executes each command.
<code>-output</code>	Optional	By default, the log file output is saved to: <code>../Onecli-%PID%- %date%-%time%/</code> .
connection options	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Notes:

- In batch mode, the **show** and **set** commands ignore the suppressed information. You can see the suppressed settings current value using **show**, and set the suppressed settings without an error.
- All of the commands in a batch file must target an individual system and not multiple systems. A batch file that contains commands that target multiple systems is not supported.
- The example batch file shown below, contains the **set** and **show** commands. All of the **set** commands are sent to IMM at same time, and then all of the **show** commands are sent.

This is an example of batchfile.txt:

```
set IMM.Community_AccessType.1 Get  
set IMM.Duplex1 Auto  
set IMM.MTU1 1500  
set IMM.SNMPv1Agent Enabled  
set IMM.SNMPv3Agent Disabled  
show IMM.SNMPv3Agent
```



```
set IMM.SNMPv3Agent Enabled
show IMM.SNMPv3Agent
```

Example of the batch command

```
OneCli.exe config batch --file batchfile.txt --imm USERID:
PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
Batch mode start.
[set IMM.Community_AccessType.1 Get]
IMM.Community_AccessType.1=Get
```

```
[set IMM.Duplex1 Auto]
IMM.Duplex1=Auto
```

```
[set IMM.MTU1 1500]
IMM.MTU1=1500
```

```
[set IMM.SNMPv1Agent Enabled]
IMM.SNMPv1Agent=Enabled
```

```
[set IMM.SNMPv3Agent Disabled]
IMM.SNMPv3Agent=Disabled
```

```
Beginning intermediate batch update.
Waiting for command completion status.
Command completed successfully.
Completed intermediate batch update.
[show IMM.SNMPv3Agent]
IMM.SNMPv3Agent=Disabled
```

```
[set IMM.SNMPv3Agent Enabled]
IMM.SNMPv3Agent=Enabled
```

```
Beginning intermediate batch update.
Waiting for command completion status.
Command completed successfully.
Completed intermediate batch update.
[show IMM.SNMPv3Agent]
IMM.SNMPv3Agent=Enabled
```

```
Batch mode completed successfully.
```

Commands for certificate management

The topics in this section provide detailed information about how to use the config application and commands to manage certificates.

Table 26. Configuration commands for certificate management

Command	Description
generate	Generates a certificate.
export	Exports a certificate to a local system.
import	Imports a certificate from a local system to another system.
deletecert	Deletes a certificate.
getdevices	Gets the supported device inventory list.
getinfor	Gets device inventory information.

Using ToolsCenter Suite CLI for certificate management

ToolsCenter Suite CLI manages Certificate Authority (CA) and Certificate Sign Request (CSR) files on IMM-based systems using the **generate**, **import**, **export**, and **deletecert** commands.

Before you can manage a certificate on IMM, to ensure that the corresponding certificate server is disabled, complete these steps:

1. Verify that the IMM HTTPS Server Configuration for web server is disabled using this command line entry:

```
Onecli.exe config show IMM.SSL_Server_Enable
```

Output generated:

```
IMM.SSL_Server_Enable=Disabled
```

2. If the server is enabled, disable IMM HTTPS Server Configuration for Web Server using this command line entry:

```
Onecli.exe config set IMM.SSL_Server_Enable Disabled
```

Output generated:

```
Onecli.exe IMM.SSL_Server_Enable=Disabled
```

The IMM must be restarted before the selected value (enable / disable) takes effect. Use the command: **onecli misc rebootimm**.

3. Before using SSL Client Certificate Management, disable SSL Client Configuration for the LDAP Client first:

- a. Verify that the SSL Client Configuration for LDAP Client is disabled using this command line entry:

```
Onecli.exe config show IMM.SSL_Client_Enable
```

Output generated:

```
IMM.IMM.SSL_Client_Enable=Disabled
```

- b. If the server is enabled, disable the IMM SSL Client Configuration for LDAP using this command line entry:

```
Onecli.exe config set IMM.SSL_Client_Enable Disabled
```

Output generated:

```
IMM.SSL_Client_Enable=Disabled
```

After completing the steps noted above, you can use ToolsCenter Suite CLI to manage certificates on IMM.

The following procedure provides an overview of how to use the ToolsCenter Suite CLI config application and commands to:

- View the current status of certificate setting
- View the available commands for a setting
- Generate a Certificate Sign Request (CSR)
- Export a certificate sign request
- Generate a self-signed certificate
- Import a Certificate
- Delete a certificate

To view the current status of a certificate setting, use this command line entry:

```
Onecli.exe config show IMM.SSL_HTTPS_SERVER_CERT
```

Output generated:

```
IMM.SSL_HTTPS_SERVER_CERT=Private Key and CA-signed cert installed, Private Key stored, CSR available for download.
```

To view the available commands for a certificate setting, use this command line entry:

```
Onecli.exe config showvalues IMM.SSL_HTTPS_SERVER_CSR
```

Output generated:

```
IIMM.SSL_HTTPS_SERVER_CSR=*generate=export
```

IIMM.SSL_HTTPS_SERVER_CSR is supported by the **generate** and **export** commands.

To generate a Certificate Sign Request (CSR), use this command line entry:

```
Onecli.exe config generate IMM.SSL_HTTPS_SERVER_CSR template.xml
```

Output generated:

```
Certificate was generated successfully!
```

An xml file, such as `template.xml`, is required for the **generate** command and for all settings which support **generate**, except `SSH_SERVER_KEY`. For more information about the `template.xml`, see “The `template.xml` file” on page 54.

A certificate sign request must be signed by an independent certificate authority to be a certificate. You can use the config application to generate a Self-signed Certificate.

To generate a self-signed certificate, use this command line entry:

```
Onecli config generate IMM.SSL_HTTPS_SERVER_CERT asu.xml
```

Output generated:

```
Certificate was generated successfully!
```

To export a certificate sign request, use this command line entry:

```
Onecli config export IMM.SSL_HTTPS_SERVER_CSR tmp_csr.der
```

Output generated:

```
Certificate was exported successfully!
```

The `tmp_csr.der` file is saved in the current directory.

You can export a certificate or certificate sign request. If a certificate sign request is signed by a independent certificate authority, it is a CA-signed certificate.

To import a certificate, after completing the export a certificate sign request step, using independent certificate authority, sign the request in the `tmp_csr.der` file. You can only import the CA-signed certificate (which differs from the self-signed certificate) into the HTTPS Server Certificate Management section.

For the SSL Client Certificate Management section, use the first two settings which only permit CA-signed certificates to be imported:

- SSL_LDAP_CLIENT_CERT
- SSL_LDAP_CLIENT_CSR

These settings permit both self-signed and CA-signed certificates to be imported:

- SSL_CLIENT_TRUSTED_CERT1
- SSL_CLIENT_TRUSTED_CERT2
- SSL_CLIENT_TRUSTED_CERT3

If a certificate already exists, it must be deleted before importing another certificate.

For more detailed information about how to use the config applications and commands for certificate mangement, refer to the individual command topics in this section.

Generating a management certificate

If you want to generate a certificate which is not self-signed, you must first generate a certificate sign request file, and then sign it for it to be a certificate. Use certificate authority to sign a certificate sign request. Certificate authority is an entity that issues digital certificates for use by independent certificate authority.

This procedure describes how to set up a certificate authority for Linux.

Step 1. Download the latest OpenSSL binary file from: <http://www.openssl.org>. Use `openssl-1.0.0.tar.gz` as an example.

Step 2. Open a Linux shell, and extract the `tar -xvf openssl-1.0.0.tar.gz` file.

Step 3. Run this script to set up certificate authority.

```
CATOP=./demoCA
# create the directory hierarchy
mkdir -p ${CATOP}
mkdir -p ${CATOP}/certs
mkdir -p ${CATOP}/crl
mkdir -p ${CATOP}/newcerts
mkdir -p ${CATOP}/private
touch ${CATOP}/index.txt
echo 01 > ./demoCA/serial
#generate a certificate authority key, you need set a pass phrase for it
openssl genrsa -des3 -out ${CATOP}/private/cakey.pem 2048
#generate a certificate authority certificate, information required such
as Country name etc.openssl req -new -x509 -days 365 -key ${CATOP}/
private/cakey.pem -out ${CATOP}/cacert.pem
```

Step 4. To sign a certificate sign request using the certificate authority you just created, run this script:

Ensure that you do not sign the certificate sign request, whose common name is the same as any other certificate sign request signed by this certificate authority, otherwise certificate authority will fail to sign it.

```
#Suppose your certificate sign request file is "asu_csr.der"
#convert certificate sign request format from DER to PEM, certificate
sign request file could be got by asu export command
    openssl req -in asu_csr.der -inform DER -out asu_csr.pem -outform PEM
    #sign the certificate sign request using the certificate authority just
set up
    openssl ca -policy policy_anything -out asu_cert.pem -infile
asu_csr.pem
    #convert certificate format from PEM to DER, ready for asu import command
    openssl x509 -in asu_cert.pem -inform PEM -out asu_cert.der -outform DER
```

The result of running this script is a signed certificate: `asu_cert.der`. This is used for the certificate sign request file: `asu_csr.der`.

Revoking a management certificate

A management certificate cannot be signed twice. If it is necessary to sign a certificate again, it must first be revoked.

Run this script to revoke a certificate signed by a certificate authority.

```
openssl ca -revoke cert.pem
```

generate command

Use the **generate** command to generate a private key and public key pair with a self-signed certificate or a certificate sign request.

generate command syntax

```
OneCli.exe config generate<setting> --file<exportfilename>[--output<folder>]  
[connection option]
```

Table 27. generate command parameters

Parameter	Required/Optional	Notes
setting	Required	Certificate management setting
-file	Required	<ul style="list-style-type: none">This is the file name of *generate file, using the format of template.xml.For more information about the template.xml, see “The template.xml file” on page 54.
-output	Optional	By default, the log file output is saved to: ../0necli-%PID%-%date%-%time%/.
connection option	Optional	<p>-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM.</p> <p>-node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.</p>

Notes:

- The **generate** command is used specifically for certificate management. The supported settings are certificate management settings.
- The supported setting list can be generated using **showvalues** using a value such as **generate**.
- The values after the * are for the supported certificate management settings:
IMM.SSH_SERVER_KEY=*generate
IMM.SSL_HTTPS_SERVER_CERT=*generate=import=export
IMM.SSL_HTTPS_SERVER_CSR=*generate=export
IMM.SSL_LDAP_CLIENT_CERT=*generate=import=export
IMM.SSL_LDAP_CLIENT_CSR=*generate=export
IMM.SSL_SERVER_DIRECTOR_CERT=*generate=import=export
IMM.SSL_SERVER_DIRECTOR_CSR=*generate=export
IMM.SSL_CLIENT_TRUSTED_CERT1=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT2=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT3=*import=export=deletecert

Example of the generate command

```
OneCli.exe config generate IMM.SSL_HTTPS_SERVER_CERT  
--file template.xml --imm USERID:PASSWORD@10.240.252.102
```


This is the output generated from this example:
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
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Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
Waiting for command completion status.
Certificate was generated successfully!

The template.xml file

Use the template file (template.xml), located in the onecli folder, as an example of the correct syntax to use with the **generate** command for certificate management. You can modify this file to generate a certificate.

This table provides a list of the template.xml file variables and their definitions.

Table 28. template.xml file variables

Variables	Definition
Country Name	The two-letter ISO abbreviation for your country.
State or Province Name	The state or province where your organization is located. This entry cannot be abbreviated.
Locality Name	The city where your organization is located.
Organization Name	The exact legal name of your organization. Do not abbreviate your organization name.
Common Name	A fully qualified domain name that resolves to the SSL VPN device. For example, if you intend to secure the URL <code>https://ssl.yourdomain.com</code> , then the common name of the certificate sign request should be <code>ssl.yourdomain.com</code> .
Name	This is an optional field for entering a contact name.
Email Address	This is an optional field for entering a contact email address.
Organization Unit Name	This is an optional field for the name of the unit in your organization.
Surname	This is an optional field for entering a surname of contact person.
givenName	This is an optional field for entering a given name of contact name.
Initials	This is an optional field for entering initials of contact name.
dnQualifier	This is an optional field for entering the domain name qualifier.
Challenge password	This is an optional attribute. If you specify a challenge password in the certificate sign request, you must know the challenge password if you want to revoke the certificate later.
unstructuredName	This is an optional field for entering the unstructured name for contact

template.xml

Note: The name and value fields can not be blank. Optional items can be removed if unused.

```
<?xml version="1.0" encoding="utf-8"?>
<config version="2.1">
<new_key_and_self_signed_cert_info>
<item type="Required">
<vectorID>0001</vectorID>
<name>countryName</name>
<value minlen="2" maxlen="2">XX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>stateOrProvinceName</name>
<value minlen="1" maxlen="30">XXXX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>localityName</name>
```

```

<value minlen="1" maxlen="50">XXXX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>organizationName</name>
<value minlen="1" maxlen="60">XXXX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>commonName</name>
<value minlen="1" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>Name</name>
<value minlen="1" maxlen="60">XXXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>emailAddress</name>
<value minlen="1" maxlen="60">XXXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>validityPeriod</name>
<value minlen="0" maxlen="2">XX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>organizationalUnitName</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>Surname</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>givenName</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>Initials</name>
<value minlen="0" maxlen="20">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>dnQualifier</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
</new_key_and_self_signed_cert_info>
<new_key_and_cert_sign_req_info>
<item type="Required">
<vectorID>0001</vectorID>
<name>countryName</name>
<value minlen="2" maxlen="2">XX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>

```

```

<name>stateOrProvinceName</name>
<value minlen="1" maxlen="30">XXXX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>localityName</name>
<value minlen="1" maxlen="50">XXXX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>organizationName</name>
<value minlen="1" maxlen="60">XXXX</value>
</item>
<item type="Required">
<vectorID>0001</vectorID>
<name>commonName</name>
<value minlen="1" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>Name</name>
<value minlen="1" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>emailAddress</name>
<value minlen="1" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>organizationalUnitName</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>Surname</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>givenName</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>Initials</name>
<value minlen="0" maxlen="20">XXXX</value>
</item>
<item type="Optional">
<vectorID>0001</vectorID>
<name>dnQualifier</name>
<value minlen="0" maxlen="60">XXXX</value>
</item>
<item type="Optional">
<vectorID>0002</vectorID>
<name>challengePassword</name>
<value minlen="6" maxlen="30">XXXX</value>
</item>
<item type="Optional">
<vectorID>0002</vectorID>
<name>unstructuredName</name>

```

```
<value minlen="1" maxlen="60">XXXX</value>  
</item>  
</new_key_and_cert_sign_req_info>  
</config>
```

export command

Use the **export** command to export a selected certificate or certificate sign request (CSR) file. The **export** command generates a binary file that is saved in the current directory.

export command syntax

```
OneCli.exe config export<setting> --file<exportfilename>[--output<folder>]
[connection option]
```

Table 29. export command parameters

Parameter	Required/Optional	Notes
setting	Required	Certificate management setting
-file	Required	Export file name
output	Optional	By default, the log file output is saved to: ../Onecli-%PID%-date%-%time%/.
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Additional information

- The **export** command is used for certificate management. The supported settings are certificate management settings.
- Use the **showvalues** command with the * value to get the settings list. The values after the * are for the supported certificate management settings:
IMM.SSH_SERVER_KEY=*generate
IMM.SSL_HTTPS_SERVER_CERT=*generate=import=export
IMM.SSL_HTTPS_SERVER_CSR=*generate=export
IMM.SSL_LDAP_CLIENT_CERT=*generate=import=export
IMM.SSL_LDAP_CLIENT_CSR=*generate=export
IMM.SSL_SERVER_DIRECTOR_CERT=*generate=import=export
IMM.SSL_SERVER_DIRECTOR_CSR=*generate=export
IMM.SSL_CLIENT_TRUSTED_CERT1=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT2=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT3=*import=export=deletecert

Example of the export command

```
OneCli.exe config export IMM.SSL_HTTPS_SERVER_CERT --file temp.cert
--imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
```

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```
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Waiting for command completion status.  
Certificate was exported successfully!
```

import command

Use the **import** command to import a certificate into an IMM. You can only import a CA-signed certificate into the HTTPS Server Certificate Management section.

A CA-signed certificate differs from a self-signed certificate. In the SSL Client Certificate Management section for a CA-signed certificate, only CA-signed certificates can be imported. There are two settings:

- SSL_LDAP_CLIENT_CERT
- SSL_LDAP_CLIENT_CSR

For a self-signed certificate there are three settings:

- SSL_CLIENT_TRUSTED_CERT1
- SSL_CLIENT_TRUSTED_CERT2
- SSL_CLIENT_TRUSTED_CERT3

Both self-signed and CA-signed certificates can be imported. If a certificate already exists, you must delete it before importing another certificate. The certificate to be imported should be in DER format.

import command syntax

```
OneCli.exe config import<setting> --file<importfilename>[--output<folder>]
[connection option]
```

Table 30. import command parameters

Parameter	Required/Optional	Notes
setting	Required	Certificate management setting
-file	Required	Import file name
-output	Optional	By default, the log file output is saved to: ../0necli-%PID%-%date%-%time%/.
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Additional information

- The **import** command is used for certificate management. The supported settings are certificate manage settings.
- Use the **showvalues** command with the * value to get the settings list. The values after the * are for the supported certificate management settings:
IMM.SSH_SERVER_KEY=*generate
IMM.SSL_HTTPS_SERVER_CERT=*generate=import=export
IMM.SSL_HTTPS_SERVER_CSR=*generate=export
IMM.SSL_LDAP_CLIENT_CERT=*generate=import=export


```
IMM.SSL_LDAP_CLIENT_CSR=*generate=export
IMM.SSL_SERVER_DIRECTOR_CERT=*generate=import=export
IMM.SSL_SERVER_DIRECTOR_CSR=*generate=export
IMM.SSL_CLIENT_TRUSTED_CERT1=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT2=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT3=*import=export=deletecert
```

Example of the import command

```
OneCli.exe config import IMM.SSL_HTTPS_SERVER_CERT --file temp.cert
--imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
Waiting for command completion status.
Certificate was imported successfully!
```

deletecert command

Use the **deletecert** command to delete a certificate on an IMM.

deletecert command syntax

```
OneCli.exe config deletecert<setting>[--output<folder>][connection option]
```

Table 31. *deletecert* command parameters

Parameter	Required/Optional	Notes
setting	Required	Certificate management setting
--output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID-%date%-%time%/</code> .
connection option	Optional	-imm <user:pwd@ip> Use for OOB. Use for in-band, if you know the LAN over USB IP of the target IMM. Use to specify the target IMM. -node <x> Use for inband cases on a multinode system. Where x is a numeric value that indicates the node number. For example, if “-node 2” the target IMM is in the second node of a multinode system.

Additional information

- The **deletecert** command is used for certificate management. The supported settings are certificate management settings.
- Use the **showvalues** command with the * value to get the settings list. The values after the * are for the supported certificate management settings:
IMM.SSH_SERVER_KEY=*generate
IMM.SSL_HTTPS_SERVER_CERT=*generate=import=export
IMM.SSL_HTTPS_SERVER_CSR=*generate=export
IMM.SSL_LDAP_CLIENT_CERT=*generate=import=export
IMM.SSL_LDAP_CLIENT_CSR=*generate=export
IMM.SSL_SERVER_DIRECTOR_CERT=*generate=import=export
IMM.SSL_SERVER_DIRECTOR_CSR=*generate=export
IMM.SSL_CLIENT_TRUSTED_CERT1=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT2=*import=export=deletecert
IMM.SSL_CLIENT_TRUSTED_CERT3=*import=export=deletecert

Example of the deletecert command

```
OneCli.exe config deletecert IMM.SSL_HTTPS_SERVER_CERT --file temp.cert  
--imm USERID:PASSWORD@10.240.252.102
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Waiting for command completion status.
```

Certificate was deleted successfully!

Chapter 5. Inventory

The topics in this section describe how to use the Lenovo ToolsCenter Suite CLI inventory application and commands to acquire system information for IMM-based systems.

This table lists the inventory application commands.

Note: VMWare ESXi requires up to 20 minutes to initialize. To prevent ToolsCenter Suite CLI errors, be sure to allow adequate time for VMWare ESXi to initialize before performing any operations

Table 32. Inventory application commands

Command	Description
getdevices	Gets the supported device inventory list.
getinfor	Gets device inventory information.
formatlog	Translates the getinfor XML file content into other formats, such as HTML.
upload	Uploads the getinfor XML file content to a specified server.

getdevices command

Use the **getdevices** command to display the entire system device list. The output generated from this command can be used with the **getinfor** command.

getdevices command syntax

```
OneCli.exe inventory getdevices [<options>]
```

Table 33. *getdevices* command parameters

Parameter	Required/Optional	Notes
--output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID%-%date%-%time%/</code> . Note: Arguments for the <code>--output</code> parameter are case sensitive.

Example of the getdevices command

This example of the inventory application for the **getdevices** command displays the full inventory list of a server on the console. The output is saved to a log file directory. By default, the log file is saved to: `../Onecli-%PID%-%date%-%time%/`.

```
OneCli.exe inventory getdevices --output c:\onecli\log
```

This is the complete device list generated by this example for Linux and Microsoft Windows systems, as noted. All items are case sensitive.

```
1 - system_overview
2 - installed_applications (Windows only)
3 - installed_hotfixes (Windows only)
4 - installed_packages (Linux only)
5 - kernal modules (Linux only)
6 - device_drivers (Windows only)
7 - system_services (Windows only)
8 - network_settings
9 - resource_utilization
10 - processes
11 - os_configuration
12 - hardware_inventory
13 - pci_information
14 - firmware_vpd
15 - BMC_configuration
16 - environmental
17 - light_path
18 - PCIeDevice
19 - RAIDlink
20 - SSD
21 - Inband_RawData
22 - application_event (Windows only)
23 - var_log_boot_log (Linux only)
24 - var_log_mail_err (SUSE only)
25 - var_log_mail_warn (SUSE only)
26 - var_log_messages (Linux only)
27 - var_log_warn (SUSE only)
28 - var_log_cron (RHEL only)
29 - var_log_dmesg (RHEL only)
30 - var_log_secure (RHEL only)
31 - system_event (Windows only)
```

- 32 - security_event (Windows only)
- 33 - chassis_event_logs
- 34 - ipmi_event_logs
- 35 - asusettings
- 36 - Ffdc logs
- 37 - ExecutionLog

getinfor command

Use the **getinfor** command to generate device inventory information after using the **getdevices** command to obtain the device list. By default, the device list is output to the XML file.

getinfor command syntax

```
OneCli.exe inventory getinfor[--device][--upload [Lenovo/multitool]][username:password
@ftphost/path/][--output][--proxy userid:password@IP[:port]]
[--htmlreport][--ffdc][connection opt]
```

Table 34. *getinfor* command parameters

Parameter	Required/Optional	Notes
--device	Optional	<p>all The default value. Displays all of the supported settings.</p> <p>system_overview, processes Gets the complete list of supported devices.</p>
--output	Optional	By default, the log file output is saved to: <code>../Onecli-%PID-%date%-%time%/</code> .
--upload	Optional	<ul style="list-style-type: none"> If multitool is specified, the zipped XML file of the output directory is uploaded to Lenovo multitool web server. If Lenovo is specified, the zipped XML file of the output directory is uploaded to Lenovo ftp server. If the server address is specified, the zipped XML file of the output directory is uploaded to the specified server. the command parameter supports ftp and sftp. For example, <code>ftp://root:SYS2009health@10.240.193.x/log/</code> or <code>sftp://root:Password@10.240.193.x/log/</code>. If not specified, there is no upload.
--proxy	Optional	<p>Use proxy to connect to upload server.</p> <p>The format is <code>socks5://user:password@IP:port</code>.</p> <p>For IPv6 address, the format is <code>socks5://user:password@[IPv6]:port</code>.</p> <p>You need to specify the protocol (socks5, http, etc) which supports the upload function by the proxy server.</p>
--htmlreport	Optional	Output contains HTML format.
--ffdc	Optional	Use the misc application with the ffdc parameter to get the ffdc log.

Table 34. *getinfor* command parameters (continued)

Parameter	Required/Optional	Notes
-bmc	Optional	<p>If specified, the inventory application can receive information using only out-of-band mode.</p> <p>The format is user:password@IP:port.</p> <p>For IPv6 address, the format is user:password@[IPv6]:port.</p>
-esxi	Optional	<p>If specified, the inventory application can receive information only on the VMware ESXi operating systems.</p> <p>The format is user:password@IP:port.</p> <p>For IPv6 address, the format is user:password@[IPv6]:port.</p>
-sftp	Optional	<p>This should be specified in VMware ESXi operating systems if -ffdc is specified. The format is user:password@IP[:port][/directory/].</p> <p>Note: If you want to save the ffdc log in a certain directory on the SFTP server, ensure that you add “/” at the end of the specified SFTP directory.</p>

Portable Edition -inventory example

This is an example of the inventory application and the **getinfor** command using ToolsCenter Suite CLI Portable Edition on removable medium (CD-ROM, or USB key).

```
Onecli.exe inventory getinfor --output d:\onecli\inventory --htmlreport
--device lsi --upload lenovo --proxy user:
password@host:port --ffdc
```

The Inventory device xxx list is displayed on the console. A temporary directory is created to save the XML or HTML report.

formatlog command

Use the **formatlog** command to save the XML file, which is created by the **getinfor** command.

formatlog command syntax

```
OneCli.exe inventory formatlog [--srcdata][--output][--hldec]
```

Table 35. *formatlog* command parameters

Parameter	Required/Optional	Notes
-srcdata	Required	
-output	Optional	By default, the log file output is saved to <code>../Onecli-%PID-%date%-%time%/</code> . The <code>Onecli-update-compare.xml</code> file is saved in the <code>/onecli</code> folder. If any of the files already exist, they will be overwritten.

Example of the formatlog command

This example formats and saves the `-srcdata xxx.xml` file.

```
OneCli.exe inventory formatlog --srcdata xxx.xml --output d:\onecli\inventory
```

upload command

Use the **upload** command to upload log files to a server. The XML log files are generated using the **getinfor** command. If the **upload** command is specified, the log file is automatically uploaded to the specified server.

upload command syntax

```
OneCli.exe inventory upload [--srcdata<file>][--upload [Lenovo/multitool/serveraddress]\  
[username:password@ftphost]@ftphost/path/]
```

Table 36. *upload command parameters*

Parameter	Required/Optional	Notes
--srcdata	Required	Used to identify the log file that will be formatted and uploaded to a server.
--upload	Required	<ul style="list-style-type: none">• If multitool is specified, upload the files to a Lenovo multitool web server.• If Lenovo is specified, upload the files to a Lenovo server.• If the server address is specified, then the output files are uploaded the specified server. the command parameter supports ftp and sftp. For example, <code>Onecli inventory getinfor --output output --upload ftp://root:SYS2009health@10.240.193.x/log/</code>• If not specified, there is no upload.
--output	Optional	A report file is saved to the specified directory.

Example of the upload command

In this example, **--srcdata** is used to identify the log file name that will be formatted and uploaded to a server.

```
OneCli.exe inventory upload --srcdata xxx.xml  
--output d:\onecli\inventory  
--upload Lenovo --proxy user:  
password@host:port
```

Chapter 6. Update

The topics in this section describe how to use the Lenovo ToolsCenter Suite CLI update application and commands to update firmware and device driver information for IMM-based systems.

This table lists the update application commands.

Table 37. Update application commands

Command	Description
acquire	Downloads firmware and device drivers updates for the system and its options.
scan	Gets device inventory information and checks for available firmware and device driver updates.
query	Checks all the XML files for update packages in the local system folder.
compare	Compares installed and available firmware and device driver versions, generating a list of recommended updates.
flash	Updates firmware and device drivers requiring upgrade, based on results of the compare command.

The update command provides multi-node support during both in-band and out-of-band operation, with the following restrictions:

- **In-Band (IB) operation:**

During IB operation for single partitions in one complex, the scan, query, and compare commands work as same as in single-node systems. For System X core firmware updates, the ToolsCenter Suite CLI automatically flashes each node in the same partition. If flashing the IMM, the ToolsCenter Suite CLI will reboot each IMM after updating its firmware. The ToolsCenter Suite CLI can also flash non-core firmware updates for all devices in the current partition.

- **Out-of-Band (OOB) operation:**

During OOB operation, users must manually process each node in each partition and manually restart each IMM after its update is complete.

acquire command

Use the **acquire** command to download firmware and device driver updates, or update information, for supported devices, identified by machine type or package fixid, from a remote location such as Lenovo or IBM support.

- For an IMM target, updates can include IMM, UEFI, and DSA firmware and firmware or device drivers for optional devices.
- For a CMM target, updates can include CMM firmware and I/O module firmware.

acquire command syntax

```
Onecli.exe update acquire --mt <machine_type> [--ostype <operating_system>] [--scope <scope>]
[--includeid <includeids>] [--report] [--metaonly] [--type <type>] [--proxy <userid:password@IP[:port]>]
[--dir <folder>] [--output <folder>]
```

Table 38. *acquire* command parameters

Parameter	Required/Optional	Notes
-mt	Optional	<p>machine_type specifies the four-digit machine type of target device (IMM or CMM).</p> <p>If the <code>-scope</code> parameter is set to <code>individual</code>, the machine type is not required.</p> <p>For the I/O module target, the CMM machine type is specified.</p>
-ostype	Optional	<p>operating_system specifies operating system where you are running the ToolsCenter Suite CLI. Valid choices are <code>win2008</code>, <code>win2012</code>, <code>win2012r2</code>, <code>win2016</code>, <code>rhel5</code>, <code>rhel6</code>, <code>rhel7</code>, <code>sles10</code>, <code>sles11</code>, <code>sles12</code>, <code>esxi5.0</code>, <code>esxi5.1</code>, <code>esxi5.5</code>, <code>esxi6.0</code>, and <code>none</code>.</p> <p>None is the default setting and is used for operating system independent operations, such as xFW OOB updates.</p> <p>The <code>-ostype</code> parameter is not required for CMM or I/O module targets.</p>
-scope	Optional	<p>scope specifies the update scope. Valid choices are:</p> <ul style="list-style-type: none"> • <code>uxsp</code> (default) to download packages with UXSP • <code>latest</code> to download the latest package updates • <code>individual</code> to download packages specified by the <code>-includeid</code> parameter <p>For the CMM and I/O module targets, the <code>-scope</code> parameter can only be set to <code>latest</code> or <code>individual</code>.</p>
-dir	Optional	<p>folder specifies the path name location of the firmware package download directory.</p> <p>If no directory is specified, the current directory is used for downloads.</p>
-includeid	Optional	<p>The <code>ids</code> can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension to acquire.</p> <p>For example: <code>lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64</code></p> <p>By default: none is included.</p> <p>If the <code>-includeid</code> parameter <i>is not</i> specified, all packages are downloaded.</p> <p>If the <code>-includeid</code> parameter <i>is</i> specified, only the listed packages are downloaded: if no packages are listed, none are downloaded.</p>

Table 38. *acquire* command parameters (continued)

Parameter	Required/Optional	Notes
-report	Optional	If the -report parameter is specified, the acquire command will only output the IDs of the packages to update without downloading the packages or their metadata.
-metaonly	Optional	If the -metaonly parameter is specified, the acquire command will download only the XML files specifying the metadata for the update packages without downloading the update packages.
-proxy	Optional	userid:password@IP[:port] specifies the proxy information for connecting to the Lenovo Support website to download update packages or information. Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07:CB0D]. If the IPv6 is LLA (Link Local IPv6), the format is [FE80::3BA7:94FF:FE07:CB0D%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.
-type	Optional	type specifies the type of package to download. Valid choices are: <ul style="list-style-type: none"> • fw dd (default) to download firmware and device drivers • fw to download firmware • dd to download device drivers For the CMM and I/O module targets, only firmware can be downloaded.
-output	Optional	folder specifies the path name location and file name for the log file. By default, the log file output is saved to the ../Onecli-%PID %-%date%-%time%/ directory with a file name of ToolsCenter Suite CLI-update-scan.xml. Existing files are overwritten. Make sure that unique file names are specified, if multiple CLI commands are being run at the same time.

Example of the acquire command

In this example, we are downloading (**update acquire** command) information (**-metaonly** argument) about the latest updates (**-scope latest** argument) for a machine type 8737 server IMM (**-mt 8737** argument), storing it in the “pkg” directory (**-dir .\pkg** argument) and storing the log file in the “output” directory (**-output .\output** argument).

```
Onecli.exe update acquire --scope latest --mt 8737 --metaonly --output .\output --dir .\pkg
```

Lenovo ToolsCenter Suite CLI 0.3.02

Based on module version 0.2.0

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Acquiring list of updates for Machine-Type=8737 OS="OS Independent"...

```
Done
(1 of 122) : qlgc_dd_fc_9.1.11.26.b_windows_32-64 ... Done
(2 of 122) : ibm_utl_msm_14.05.02.03_windows_32-64 ... Done
(3 of 122) : elx_dd_iscsi_ibm14a-10.2.254.0-6_windows_32-64 ... Done
(4 of 122) : ibm_utl_msm_13.11.01.07_windows_32-64 ... Done
(5 of 122) : ibm_utl_msm_13.11.01.07_linux_32-64 ... Done
(6 of 122) : elx_dd_fc_ibm14a-10.2.261.4-6_windows_32-64 ... Done
.....
.....
(120 of 122) : ibm_fw_uefi_b2e146h-1.60_anyos_32-64 ... Done
(121 of 122) : ibm_fw_imm2_1a00660-4.90_anyos_noarch ... Done
(122 of 122) : brcd_dd_fc_bfa-3.0.3.0-b_rhel6_32-64 ... Done
```

Succeeded to run acquire command

scan command

Use the **scan** command to build a list of available firmware and device driver updates for the targeted device. The XML file that the **scan** command generates can then be used by the **compare** command.

- For Out-of-Band (OOB) mode, scan results include only System x firmware (IMM, UEFI, and DSA) and option firmware.
- For In-Band (IB) mode, both System x firmware and device drivers and firmware for installed options.

scan command syntax

```
Onecli.exe update scan [--imm <userid:password@IP[:port]>] [--esxi <userid:password@IP[:port]>]
[--cmm <userid:password@IP[:port]>] [--iobay <bay_number>] [--disable-imm-lan] [--output <folder>]
```


Table 39. scan command parameters

Parameter	Required/Optional	Notes
-imm	Optional	<p>userid:password@IP[:port] specifies access information for the target IMM.</p> <p>The scan command is applied to the IMM, by default. If the -imm parameter is specified, the ToolsCenter Suite CLI runs in Out-of-Band (OOB) mode; otherwise, the ToolsCenter Suite CLI runs in In-Band (IB) mode.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>
-esxi	Required (see note)	<p>userid:password@IP[:port] specifies access information for the target VMware ESXi Lenovo image.</p> <p>The -esxi parameter specifies a VMware ESXi Lenovo image scan operation. It is required when scanning a customized VMware ESXi target.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>
-cmm	Required (see note)	<p>userid:password@IP[:port] specifies access information for the target CMM.</p> <p>The -cmm parameter specifies a CMM or I/O module scan operation. It is required when scanning either of these targets. When scanning an I/O module target, the -iobay parameter must also be specified.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>

Table 39. scan command parameters (continued)

Parameter	Required/Optional	Notes
-iobay	Required (see note)	<p>bay_number specifies the I/O module bay number. Valid values are 1, 2, 3, or 4.</p> <p>The -iobay parameter specifies an I/O module scan operation. When scanning an I/O module target, the -cmm parameter must also be specified.</p>
-output	Optional	<p>folder specifies the path name location and file name for the scan report XML file.</p> <p>By default, the log file output is saved to the <code>../0necli-%PID-%date%-%time%/</code> directory with a file name of <code>0necli-update-scan.xml</code>. Existing files are overwritten. Make sure that unique file names are specified, if multiple CLI commands are being run at the same time.</p>

Example of the scan command

In this example, we are building a list of firmware (**update scan** command) installed in a CMM that is accessed with a user ID of "USERID", a password of "PASSWORD", and an IP address of "10.240.252.102" (**-cmm USERID:PASSWORD@10.240.252.102** argument) storing the scan report XML file (using the default file name) in the "output" directory (**-output .\872102cn03e\output** argument).

```
0necli.exe update scan --cmm USERID:PASSWORD@10.240.252.102 --output .\872102cn03e\output\
```

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
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Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
Start to scan CMM device
Finish CMM scan
Save the scan result to .\872102cn03e\output\0necli-update-scan.xml successfully
```

query command

Use the **query** command to build a list of firmware and device driver updates installed in the command target by examining the contents of the update package XML files. The XML file that the **query** command generates can then be used by the **compare** command.

query command syntax

```
0necli.exe update query --mt <machine_type> --ostype <operating_system> --osarch <architecture>
[--scope <scope>] [--type <type>] [--includeid <includeids>] [--forceid <forceids>]
[--dir <folder>] [--output <folder>]
```

Table 40. query command parameters

Parameter	Required/Optional	Notes
-mt	Required	<p>machine_type specifies the four-digit machine type of target device (IMM or CMM).</p> <p>For the I/O module target, the CMM machine type is specified.</p>
-ostype	Required	<p>operating_system specifies operating system where you are running the ToolsCenter Suite CLI. Valid choices are win2008, win2012, win2012r2, win2016, rhel5, rhel6, rhel7, sles10, sles11, sles12, esxi5.0, esxi5.1, esxi5.5, esxi6.0, and none.</p> <p>None is the default setting and is used for operating system independent operations, such as xFW Out -Of-Band (OOB) updates.</p> <p>The -ostype parameter is not required for CMM or I/O module targets.</p>
-osarch	Required	<p>architecture specifies operating system architecture where you are running the ToolsCenter Suite CLI. Valid choices are x86, x64, and none.</p> <p>None is the default setting and is used for operating system independent operations, such as xFW OOB updates.</p> <p>The -osarch parameter is not required for CMM or I/O module targets.</p>
-type	Optional	<p>type specifies the type of package to query. Valid choices are:</p> <ul style="list-style-type: none"> fw dd (default) to query firmware and device drivers fw to query firmware dd to query device drivers <p>Packages are not queried for the CMM and I/O module targets.</p>
-scope	Optional	<p>scope specifies the update scope. Valid choices are:</p> <ul style="list-style-type: none"> uxsp (default) to query packages with UXSP. latest to query the latest package updates. individual to query packages specified by the -includeid or -forceid parameter. <p>The -scope parameter is not used when querying the CMM or I/O module targets.</p>

Table 40. query command parameters (continued)

Parameter	Required/Optional	Notes
-includeid	Optional	<p>The ids can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension for queries.</p> <p>For example: lnvgv_dd_sraidmr_7.700.20.00_sles12_x86-64</p> <p>By default: none is included.</p> <p>If the -includeid parameter <i>is not</i> specified, only the packages specified by the -scope parameter are queried.</p> <p>If the -includeid parameter <i>is</i> specified, only the listed packages are queried in addition to those specified by the -scope parameter: if no packages are listed, no additional packages are queried.</p>
-forceid	Optional	<p>The ids can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension for queries. You can also specify an argument of all to force queries that can downgrade all listed packages.</p> <p>For example: lnvgv_dd_sraidmr_7.700.20.00_sles12_x86-64</p> <p>By default: none is included.</p> <p>The -forceid parameter to force firmware or device driver queries to support package downgrade. It works in the following cases:</p> <ul style="list-style-type: none"> • Query for downgrade packages. • Forces query of packages not listed in the scan.xml file. • Ignores the “never” tag in the package XML file. For example, when querying HBA updates for QLogic. • Ignores missing prerequisites, listing packages to install in all cases.
-dir	Optional	<p>folder specifies the path name location of the firmware package query directory.</p> <p>If no directory is specified, the current directory is used for queries.</p>
-output	Optional	<p>folder specifies the path name location and file name for the query result XML file.</p> <p>By default, the log file output is saved to the ../0necli-%PID-%date%-%time%/ directory with a file name of 0necli-update-query.xml. Existing files are overwritten. Make sure that unique file names are specified, if multiple CLI commands are being run at the same time.</p>

Example of the query command

In this example, we are building a list of firmware installed (**update query** command) in a machine type 8721 CMM (**-mt 8721** argument), where the XML file listing installed firmware is in the “.\872102cn03e\” directory (**-dir .\872102cn03e** argument) and storing the query result XML file in the “.\872102cn03e\output\” directory (**-output .\872102cn03e\output** argument).

```
Onecli.exe update query --mt 8721 --ostype none --osarch none --scope latest --dir .\ 872102cn03e\ --output .\872102cn03e\
```

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
```

```
Based on module version X.X.X
```

```
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```

```
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```

```
Invoking SHOW command ...
```

```
Connected to IMM by IP address 10.240.252.102
```

```
Read the all the packages in folder .\872102cn03e\
```

```
Start to parse the packages
```

```
Finish the package parsing
```

```
Save the query result to .\872102cn03e \output\Onecli-update-query.xml successfully
```

compare command

Use the **compare** command to compare the list of installed firmware and device drivers, generated by the **query** command, to the available update list, generated by the **scan** command, and recommend a set of updates to apply. The XML file that the **compare** command generates can then be used by the **flash** command.

Users can specify XML files generated by previously run **scan** and **query** commands using the **-scanxml** and **-queryxml** parameters. The **compare** command also checks the prerequisite requirements for all update packages and list updates in their required order for the **flash** command.

compare command syntax

```
Onecli.exe update compare {[--scanxml <filename>] [--noscan] [--backup] [ --imm <userid:password@IP[:port]>]
[--cmm <userid:password@IP[:port]>] [--esxi <userid:password@IP[:port]>] [--iobay <bay_number> ] [--disable-imm-lan]
[--mt <machine type>][--ostype <operating_system> --osarch <architecture>]} {[--queryxml <filename>]
[--scope <scope>] [--type <type>] [--includeid <includeids>] [--forceid <forceids>] [--excludeid <excludeids>]
[--dir <folder>]} [--output <folder>]
```

Table 41. compare command parameters

Parameter	Required/Optional	Notes
-scanxml	Optional	<p>filename specifies a scan result file to control the compare command. If a scan result file is specified, the follow command parameters can not be used:</p> <ul style="list-style-type: none"> • -noscan • -imm • -cmm • -iobay • -mt • -ostype • -osarch
-noscan	Optional	<p>If the -noscan parameter is specified, the compare command obtains query results directly for comparison without using the scan results.</p> <p>If the -noscan parameter is specified, the follow command parameters are not required:</p> <ul style="list-style-type: none"> • -scanxml • -imm • -cmm <p>For IMM targets, the -osarch parameter must also be specified.</p> <p>If the -queryxml parameter is <i>not</i> specified when using the -noscan parameter, you must specify the -mt, -ostype, and -osarch parameters.</p>
-backup	Optional	<p>If the -backup parameter is specified, the command compares backup IMM and UEFI firmware, instead of the default comparison of primary IMM and UEFI firmware.</p> <p>The -backup parameter is not used for CMM and I/O module targets.</p>

Table 41. compare command parameters (continued)

Parameter	Required/Optional	Notes
-imm	Optional	<p>userid:password@IP[:port] specifies access information for the target IMM.</p> <p>If the -imm parameter is specified, the ToolsCenter Suite CLI runs in Out-of-Band (OOB) mode; otherwise, the ToolsCenter Suite CLI runs in In-Band (IB) mode.</p> <p>If the -imm parameter is not required when using the -scanxml or -noscan parameters.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>
-cmm	Optional	<p>userid:password@IP[:port] specifies access information for the target CMM.</p> <p>The -cmm parameter specifies a CMM or I/O module for compare command scanning. It is required when scanning either of these targets. When scanning an I/O module target, the -iobay parameter must also be specified.</p> <p>If the -cmm parameter is not required when using the -scanxml or -noscan parameters.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>
-esxi	Optional	<p>userid:password@IP[:port] specifies access information for the target VMware ESXi Lenovo image.</p> <p>The -esxi parameter specifies a VMware ESXi Lenovo image scan operation. It is required when scanning an ESXi target.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>

Table 41. compare command parameters (continued)

Parameter	Required/Optional	Notes
-iobay	Optional	<p>bay_number specifies the I/O module bay number. Valid values are 1, 2, 3, or 4.</p> <p>The -iobay parameter specifies an I/O module compare operation. When comparing an I/O module target, the -cmm parameter must also be specified.</p>
-mt	Optional	<p>machine_type specifies the four-digit machine type of target device (IMM or CMM).</p> <p>The -mt parameter is required only when using the -noscan parameter (the system is not automatically obtaining the machine-type information).</p> <p>For the I/O module target, the CMM machine type is specified.</p>
-ostype	Optional	<p>operating_system specifies operating system where you are running the ToolsCenter Suite CLI. Valid choices are win2008, win2012, win2012r2, win2016, rhel5, rhel6, rhel7, sles10, sles11, sles12, esxi5.0, esxi5.1, esxi5.5, esxi6.0, and none.</p> <p>The -ostype parameter is required only when using the -noscan parameter (the system is not automatically obtaining the operating system information).</p> <p>None is the default setting and is used for operating system independent operations, such as xFW OOB updates.</p> <p>The -ostype parameter is not required for CMM or I/O module targets.</p>
-osarch	Optional	<p>architecture specifies operating system architecture where you are running the ToolsCenter Suite CLI. Valid choices are x86, x64, and none.</p> <p>None is the default setting and is used for operating system independent operations, such as xFW OOB updates.</p> <p>The -osarch parameter is needed only when the user is unable to determine their operating system information. It is used with the -noscan parameter.</p> <p>The -osarch parameter is not used for CMM or I/O module targets.</p>

Table 41. compare command parameters (continued)

Parameter	Required/Optional	Notes
-queryxml	Optional	<p>filename specifies a query result file to control the compare command. If a query result file is specified, the follow command parameters can not be used:</p> <ul style="list-style-type: none"> • -mt • -includeid • -forceid • -excludeid • -dir • -ostype • -osarch • -scope • -type
-type	Optional	<p>type specifies the type of package to compare. Valid choices are:</p> <ul style="list-style-type: none"> • fw dd (default) to compare firmware and device drivers • fw to compare firmware • dd to compare device drivers <p>Packages are not compared for the CMM and I/O module targets.</p>
-scope	Optional	<p>scope specifies the update scope. Valid choices are:</p> <ul style="list-style-type: none"> • uxsp (default) to compare packages with UXSP. • latest to compare the latest package updates. • individual to compare packages specified by the -includeid or -forceid parameter. Packages specified by the -excludeid parameter are not compared. <p>The -scope parameter is not used when comparing the CMM or I/O module targets.</p>

Table 41. compare command parameters (continued)

Parameter	Required/Optional	Notes
-includeid	Optional	<p>The ids can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension for queries and comparison.</p> <p>For example: <code>lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64</code></p> <p>By default: none is included.</p> <p>For the IMM target, if the <code>-includeid</code> parameter <i>is not</i> specified, only the packages specified by the <code>-scope</code> parameter are queried and compared.</p> <p>For the IMM target, if the <code>-includeid</code> parameter <i>is</i> specified, only the listed packages are queried and compared in addition to those specified by the <code>-scope</code> parameter: if no packages are listed, no additional packages are queried and compared.</p> <p>For the CMM and I/O module targets the <code>-scope</code> parameter is not used, so only those packages specified by the <code>-includeid</code> parameter are queried and compared.</p>
-excludeid	Optional	<p>excludeids is a comma-separated list that specifies the package IDs for the target device to exclude from compare queries.</p> <p>If the <code>-excludeid</code> parameter <i>is not</i> specified, all the packages specified by the <code>-scope</code> parameter are queried and compared.</p> <p>If the <code>-excludeid</code> parameter <i>is</i> specified, the listed packages are excluded from the list of compare queries specified by the <code>-scope</code> parameter, unless they are prerequisites for other packages: if no packages are listed, all the packages specified by the <code>-scope</code> parameter are queried and compared.</p> <p>For the CMM and I/O module targets the <code>-scope</code> parameter is not used, so only those packages specified by the <code>-includeid</code> parameter are queried and compared.</p>

Table 41. compare command parameters (continued)

Parameter	Required/Optional	Notes
-forceid	Optional	<p>The ids can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension for queries and comparison. You can also specify an argument of all to force query and comparison of all listed packages.</p> <p>For example: lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64</p> <p>By default: none is included.</p> <p>Use the -forceid parameter to force firmware or device driver queries and comparison that support package downgrades and in-box to out-of-box device driver updates. It works in the following cases:</p> <ul style="list-style-type: none"> • Query and compare for downgrade packages. • Ignores the “never” tag in the package XML file. For example, when querying and comparing HBA updates for QLogic devices. • Forces out-of-box device driver updates to override in-box device drivers. • Ignores missing prerequisites, listing packages to install in all cases.
-dir	Optional	<p>folder specifies the path name location of the firmware package compare query directory.</p> <p>If no directory is specified, the current directory is used for compare command queries.</p>
-output	Optional	<p>folder specifies the path name location and file name for the log file.</p> <p>By default, the log file output is saved to the ../Onecli-%PID %-%date%-%time%/ directory with a file name of ToolsCenter Suite CLI-update-compare.xml. Existing files are overwritten. Make sure that unique file names are specified, if multiple CLI commands are being run at the same time.</p>

Example of the compare command

In this example, we are creating an update list (**update compare** command) of the latest updates (**-scope latest** argument) for an IMM that is accessed with a user ID of “USERID”, a password of “PASSWORD”, and an IP address of “10.240.252.102” (**-imm USERID:PASSWORD@10.240.252.102** argument), storing it in the “.packages\” directory (**-dir .packages** argument) and storing the log file in the “.787502cn03e\output\” directory (**-output .787502cn03e\output** argument). In this example, the **compare** command performs its own scan and query functions, since no XML files are specified for the **-scanxml** and **-queryxml** parameters.

```
Onecli.exe update compare --scope latest --imm USERID:PASSWORD@10.240.252.102 --dir .packages\
--output .787502cn03e\output\
```

Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X

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Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
Start to scan the xFW.
Finish scan function, store the result in file .\787502cn03e\output\Onecli-update-scan.xml
Start to query the packages in the folder .\packages\
Finish query function, store the result in .\787502cn03e\output\Onecli-update-query.xml
Start to compare the query results with installed version
Finish the comparison
Save the compare result to .\787502cn03e\output\Onecli-update-compare.xml successfully

flash command

Use the **flash** command to deploy updates, in sequence, from the list generated by the **compare** command to the command target. Results of the update flash operation are stored in an XML file. If errors occur during a CMM or I/O module flash update, the **flash** command generates a second report file containing the FFDC log.

- For Out-of-Band (OOB) mode:
 - Scan results include only core System x firmware (IMM, UEFI, and DSA) and some PLDM supported adapters. When a scan of installed adapters indicates that an adapter has PLDM support, this will be flagged in the scan results allowing the adapter firmware to be flashed.
 - An SFTP server needs to be specified (**-sftp** parameter) when in OOB mode. Users can load the package payload to the temporary SFTP server manually, then specify the package location as part of the **-sftp** parameter. The ToolsCenter Suite CLI checks the SFTP folder and the local folder, as specified in compare command results XML file. If both locations contain an update payload, the ToolsCenter Suite CLI checks that they are the same, using the SFTP payload file if they are the same and generating an error and exiting the command if they are not the same. If only the SFTP location has a payload, this payload is used. If only the local location has a payload, it is uploaded to the SFTP server and flashed (the **-uselocalimg** parameter must be specified).
- For In-Band (IB) mode, both System x firmware and device drivers and firmware for installed options. An SFTP server does not need to be specified (**-sftp** parameter) when in IB mode.

Note: User IDs and passwords containing colons (:) or the at symbol (@) are not supported by the ToolsCenter CLI **flash** command.

flash command syntax

```
Onecli.exe update flash [--esxi <userid:password@IP[:port]>] [--comparexml <filename>] [--nocompare  
--includeid <ids>] [--includeid <includeids>] [--dir <folder>] [--backup] [--noreboot] [--output <folder>]  
[--imm <userid:password@IP[:port]>] [--cmm <userid:password@IP[:port]>] [--iobay <bay_number>]  
[--sftp <userid:password@IP [:port]>/firmware/] [--uselocalimg] [--ffdc <userid:password@IP [:port]>/ffdc/]
```

Table 42. flash command parameters

Parameter	Required/Optional	Notes
-esxi	Required (see note)	<p>userid:password@IP[:port] specifies access information for the target VMware ESXi Lenovo image.</p> <p>The -esxi parameter specifies a VMware ESXi Lenovo image flash operation. It is required when flashing a customized VMware ESXi target.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>
-comparexml	Optional	<p>filename specifies an XML file (typically named compare.xml) containing comparison results to control the flash command. All items listed in the comparison file will be flashed.</p>
-nocompare	Optional	<p>If the -includeid parameter is specified, the flash command will update firmware and device drivers without performing a comparison.</p> <p>The -includeid parameter must also be specified, listing the package IDs to update.</p>
-includeid	Optional	<p>The ids can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension to flash.</p> <p>For example: lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64</p> <p>By default: none is included.</p> <p>The -includeid parameter is required when using -nocompare parameter to manually specify the packages to flash.</p> <p>Only the listed packages are downloaded: if no packages are listed, none are downloaded.</p>
-dir	Optional	<p>folder specifies the path name location of the flash firmware package download directory.</p> <p>If no directory is specified, the current directory is used for downloads.</p> <p>The -dir parameter is not used when the -comparexml parameter is specified.</p>

Table 42. flash command parameters (continued)

Parameter	Required/Optional	Notes
-backup	Optional	<p>If the -backup parameter is specified, the command flashes the backup IMM and UEFI firmware, instead of the default flash update of the primary IMM and UEFI firmware.</p> <p>The -backup parameter is used only with the -nocompare parameter (no compare mode).</p> <p>The -backup parameter is not used for CMM and I/O module targets.</p>
-noreboot	Optional	<p>If the -noreboot parameter is specified, the device being flashed will <i>not</i> restart automatically after upgrade (devices automatically restart after update, by default) and the device must be manually restarted to begin using the new firmware or device driver.</p> <p>When flashing an IMM, the -noreboot parameter can only be used with the primary IMM.</p> <p>The -noreboot parameter is not used for I/O module targets.</p>
-imm	Optional	<p>userid:password@IP[:port] specifies access information for the target IMM.</p> <p>If the -imm parameter is specified, the ToolsCenter Suite CLI runs in Out-of-Band (OOB) mode; otherwise, the ToolsCenter Suite CLI runs in In-Band (IB) mode.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>
-cmm	Required (see note)	<p>userid:password@IP[:port] specifies access information for the target CMM.</p> <p>The -cmm parameter is required for the CMM and I/O module targets.</p> <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07: CBD0]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07: CBD0%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>

Table 42. flash command parameters (continued)

Parameter	Required/Optional	Notes
-iobay	Required (see note)	<p>bay_number specifies the I/O module bay number. Valid values are 1, 2, 3, or 4.</p> <p>The -iobay parameter is required for the I/O module target.</p>
-sftp	Optional	<p>userid:password@IP[:port] specifies access information for the SFTP server. Both read and write access are required.</p> <p>The SFTP server is used as a temporary storage location for the firmware update payload file. For the IMM target, the SFTP server is only used when in Out-of-Band (OOB) mode.</p> <p>By default (when <i>not</i> using the -uselocalimg parameter), users must manually copy the payload file to the SFTP location. The ToolsCenter Suite CLI does not check if a payload exists at the SFTP location: if the SFTP server already contains a payload file, it is overwritten by the local copy and, if no payload is available to copy, the IMM or CMM reports an error to ToolsCenter Suite CLI.</p> <p>For IOM updates, an SFTP rsa key must be specified as part of the -sftp parameter argument. Quotation marks are not needed when entering the command in a Linux environment because there is a semicolon (;) before the rsa key.</p> <p>The SFTP server is also used to temporarily store the FFDC log file, if the -ffdc parameter is not specified. (See the -ffdc parameter description for additional information.)</p> <p>When flashing a multi-node ESXi target (-esxi parameter), you should not specify the -sftp parameter.</p>
-uselocalimg	Optional	<p>If the -uselocalimg parameter is specified, the flash command forces copy of the payload file from the local folder to the SFTP server. If the SFTP server already contains a payload file, it is overwritten by the local copy.</p> <p>The -uselocalimg parameter is only used when ToolsCenter Suite CLI runs in Out-of-Band (OOB) mode, which requires an SFTP server as a temporary file server for payload files.</p> <p>By default (when <i>not</i> using the -uselocalimg parameter), users must manually copy the payload file to the SFTP location. The ToolsCenter Suite CLI does not check if a payload exists at the SFTP location: it passes the SFTP URL to the IMM or CMM and, if no payload is available to copy, the IMM or CMM reports an error to ToolsCenter Suite CLI.</p>

Table 42. flash command parameters (continued)

Parameter	Required/Optional	Notes
-ffdc	Optional	<p>userid:password@IP[:port] specifies access information for the SFTP server. Both read and write access are required.</p> <p>If the -ffdc parameter is specified and there are update failures, the flash command will try to output the FFDC log file from the IMM or CMM (for I/O module updates only) to the location specified by the current -output parameter. The -ffdc parameter specifies the SFTP server to be used to be a temporary storage location for the FFDC log file. After the log file is downloaded, it is deleted from the SFTP server.</p> <p>If the -ffdc parameter is <i>not</i> used, ToolsCenter Suite CLI will use the same SFTP location that the -sftp parameter uses to specify the file payload location.</p>
-output	Optional	<p>folder specifies the path name location and file name for the log file.</p> <p>By default, the log file output is saved to the <code>../0necli-%PID-%date%-%time%/</code> directory with a file name of <code>ToolsCenter Suite CLI-update-flash-status.xml</code>. Existing files are overwritten. Make sure that unique file names are specified, if multiple CLI commands are being run at the same time.</p>
-forceid	Optional	<p>Similar with -includeid. But it can add force tag for these updateids to enforce the downgrade. Besides the specified id, it also supports "all", which means it can add force tag for all the suggested flash packages.</p> <p>The ids can be a comma-separated list that specifies the package IDs which are usually the package file name without file extension to flash.</p> <p>For example: <code>lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64</code></p> <p>By default: none is included.</p> <p>The force tag works on below cases:</p> <ol style="list-style-type: none"> 1. Force to downgrade. 2. Force to install the package no matter the device is listed in the scan.xml or not. 3. Ignore "never" section tag in the package xml. For example, when querying HBA updates for QLogic. 4. Ignore the missing of prereq. Force to install the package. <p>There is no force tag for the flash packages by default.</p>

Example of the flash command

In this example, we are performing a flash update (**update flash** command) based on compare results stored in the “.\#VID:#PID\output\Onecli-update-compare.xml” file (**-comparexml .\#VID:#PID\output\Onecli-update-compare.xml** argument) for an I/O module in bay 2 (**-iobay 2** argument) that is accessed via a CMM with a user ID of “USERID”, a password of “PASSWORD”, an IP address of “10.240.252.102”, and a port number of “5989” (**-cmm USERID:PASSWORD@10.240.252.102[:5989]** argument), where the update package file is on a temporary SFTP server accessed with a user ID of “user”, a password/authentication string of “password;38:a8:21:16:cb:5d:0c:13:56:7c:2a:b9:f3:62:ed:17”, and an IP address of “10.240.252.102” (**-sftp user:password;38:a8:21:16:cb:5d:0c:13:56:7c:2a:b9:f3:62:ed:17@9.125.90.x** argument), and storing the log file in the “.\872102cn03e\output\” directory (**-output .\872102cn03e\output** argument).

```
Onecli.exe update flash --comparexml .\#VID:#PID\output\Onecli-update-compare.xml
--output .\872102cn03e\output\ --cmm USERID:PASSWORD@10.240.252.102[:5989]
--iobay 2
--sftp user:password;38:a8:21:16:cb:5d:0c:13:56:7c:2a:b9:f3:62:ed:17@9.125.90.x
```

Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X

Based on module version X.X.X

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Invoking SHOW command ...

Connected to IMM by IP address 10.240.252.102

Read the compare results from .\872102cn03e\output\Onecli-update-compare.xml

Need to flash the update ids:

ibm_fw_scsw_cn4093-7.7.2.25_anyos_noarch

Start to flash ibm_fw_scsw_cn4093-7.7.2.25_anyos_noarch

Connected to CIMOM at IP address:10.240.252.102 on Port:5989

Send payload to server

Starting the flash operation

Finish the flash ibm_fw_scsw_cn4093-7.7.2.25_anyos_noarch

Complete all the flash successfully. Check the flash results in .\872102cn03e\output\Onecli-update-flash.xml

Chapter 7. Miscellaneous

The topics in this section describe how to use the Lenovo ToolsCenter Suite CLI miscellaneous (misc) application and commands.

The following tables list the miscellaneous (misc) application and commands supported by ToolsCenter Suite CLI.

Table 43. Miscellaneous (misc) commands

Commands	Description
logmgr	Displays and clears the system and IMM event logs.
ospower	Powers on, powers off, and reboots the host sever OS; displays the current power state of the host server OS.
rebootimm	Manually reboots IMM.
rebootcmm	Manually reboots CMM.
rebootiom	Manually reboots IOM.
usblan	LAN over USB management.

logmgr command

Use the **logmgr** commands to display and clear the system event log and the IMM event log. The **logmgr** commands support in-band and out-of-band mode.

logmgr command syntax

```
OneCli.exe misc logmgr <cmds> [<options>] [<connect opts>]
```

Options

-help

Displays help information for commands and then exits without executing the command.

-output <arg>

Specifies the output directory.

Connection option

-imm <arg>

Specifies the IMM connection information.

Table 44. logmgr commands and syntax examples

Command	Syntax example	Description
showsel	OneCli.exe logmgr showsel --imm USERID:PASSWORD@ 10.240.197.65	<ul style="list-style-type: none">• Displays the system event log of the server.• Displays the remote IMM system event log using: --imm user:password@ip:port• Can be run on the local host OS without specifying the connection options.
clearsel	OneCli.exe misc logmgr clearsel	<ul style="list-style-type: none">• Clears the system event log of the server.• Clears the remote IMM system event log using: --imm user:password@ip:port• Can be run on the local host OS without specifying the connection options.
showimmlog	OneCli.exe misc logmgr showimmlog --imm USERID: PASSWORD@10.240.197.65	<ul style="list-style-type: none">• Displays the IMM event log of the server.• Displays the remote IMM event log using: --imm user:password@ip:port• Can be run on the local host OS without specifying the connection options.

Table 44. logmgr commands and syntax examples (continued)

Command	Syntax example	Description
clearimmlog	OneCli.exe misc logmgr clearimmlog	<ul style="list-style-type: none"> • Clears the IMM event log of the server. • Clears the remote IMM event log using: --imm user:password@ip:port • Can be run on the local host OS without specifying the connection options.
clearall	OneCli.exe misc logmgr clearall --imm USERID: PASSWORD@10.240.197.65	<ul style="list-style-type: none"> • Clears the IMM event log and the system event log of the server. • Clears the remote IMM event log and the system event using: --imm user:password@ip:port • Can be run on the local host OS without specifying the connection options.

Example of the clearimmlog command output

```

Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
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Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
start to clear IMM log from system
clear IMM log Successfully!

```

ospower command

Use the **ospower** commands to power on, power off, reboot the host server OS, and display the current OS power state of the host server. The **ospower** commands support in-band and out-of-band mode.

ospower command syntax

```
OneCli.exe misc ospower <cmds> [<options>] [<connect opts>]
```

Options

-help

Displays help information for commands and then exits without executing the command.

-output <arg>

Specifies the output directory.

Connection option

-imm <arg>

Specifies the IMM connection information.

Table 45. ospower commands and examples

Command	Syntax example	Description
turnon	OneCli.exe logmgr turnon --imm USERID:PASSWORD@ 10.240.xx.xx Lenovo OneCli tcli01d-1.0.0	<ul style="list-style-type: none">• Powers on the host server OS.• Powers on the remote system host OS using: --imm user:password@ip:port
turnoff	OneCli.exe ospower turnoff --imm USERID:PASSWORD@ 10.240.xx.xx	<ul style="list-style-type: none">• Powers off the host server OS.• Powers off the remote system host OS using: --imm user:password@ip:port
reboot	OneCli.exe misc ospower reboot --imm USERID: PASSWORD@10.240.xx.xx	<ul style="list-style-type: none">• Reboots the host server OS.• Reboots the remote system host OS using: --imm user:password@ip:port• Reboot only works if the current power state is on.
state	OneCli.exe misc ospower state --imm USERID: PASSWORD@10.240.xx.xx	<ul style="list-style-type: none">• Checks the host server OS power states.• Checks the power state of the remote system host OS using: --imm user:password@ip:port

Example of the state command output

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
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(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
start to check the System OS state  
Server Power is currently On!
```

rebootimm command

Use the **rebootimm** command to reboot IMM manually. This is similar to the **flash** command **-noreboot** parameter, which specifies that ToolsCenter Suite CLI will not reboot IMM after flashing firmware.

rebootimm command syntax

```
OneCli.exe misc rebootimm [--imm <userid:password@IP[:port]>]
```

Table 46. IMM - rebootimm command parameters

Parameter	Required/Optional	Notes
-imm	Optional	<ul style="list-style-type: none">• Target IMM information.• Reboot the target IMM.• By default, reboots the current systems IMM. <p>Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07:CB00]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07:CB00%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.</p>

Example of the rebootimm command

```
OneCli.exe misc rebootimm --imm USERID:PASSWORD@10.240.252.102[:5989]
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Issue the reboot command to IMM  
IMM is rebooting now  
Waiting 4 minutes to check.  
Successfully reboot IMM.
```

rebootcmm command

Use the **rebootcmm** command to reboot CMM manually. This is similar to the **flash** command **-noreboot** parameter, which specifies that ToolsCenter Suite CLI will not reboot CMM after flashing firmware.

rebootcmm command syntax

```
OneCli.exe misc rebootcmm [--cmm <userid:password@IP[:port]>]
```

Table 47. CMM - rebootcmm command parameters

Parameter	Required/Optional	Notes
-cmm	Required	CMM IP and credential information. Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07:CB0D]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07:CB0D%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.

Example of the rebootcmm command

```
OneCli.exe misc rebootcmm --cmm USERID:PASSWORD@10.240.252.102[:5989]
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
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Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Issue the reboot command  
CMM is rebooting now  
Waiting 4 minutes to check.  
Successfully reboot CMM.
```

rebootiom command

Use the **rebootcmm** command to reboot IOM manually.

rebootiom command syntax

```
OneCli.exe misc rebootiom[--cmm<userid:password@IP[:port]> --iobay<bay number>
```

Table 48. IOM - rebootiom command parameters

Parameter	Required/Optional	Notes
-cmm	Required	CMM IP and credential information. Note: Both IPv4 and IPv6 addresses are supported. Enclose IPv6 addresses in brackets. For example, [FE80::3BA7:94FF:FE07:CBDD]. If the IPv6 is LLA (Link Local IPV6), the format is [FE80::3BA7:94FF:FE07:CBDD%xxx]. Replace xxx with the name of the interface through which either the service processor or the sftp server (for the -sftp argument) can be reached on the local network of the OS on which the ToolsCenter Suite CLI runs.
-iobay	Required	IO bay number of the switch.

Example of the rebootiom command

```
OneCli.exe misc rebootiom --cmm USERID:PASSWORD@10.240.252.102[:5989]  
--iobay 2
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
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Invoking SHOW command ...  
Connected to IMM by IP address 10.240.252.102  
Issue the reboot command to IOM in slot 2  
IOM is rebooting now  
Waiting 4 minutes to check.  
Successfully reboot IOM.
```

usblan command

Use the `usblan` command to configure a LAN over USB.

usblan command syntax

```
Onecli.exe misc usblan [opts]
```

Supported [Opts]

-output <arg>

Specifies the output directory.

-h [help]

Specifies Help information.

All of the opts listed above are optional.

Table 49. *usblan commands and examples*

Command	Syntax example	Output example	Description
enable	onecli.exe usblan enable	Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X Based on module version X.X.X Licensed Materials - Property of Lenovo (C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved Succeed to enable IMM Lan over USB.	Enables all of the USB LAN devices on the OS side.
disable	onecli.exe usblan disable	Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X Based on module version X.X.X Licensed Materials - Property of Lenovo (C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved Succeed to disable IMM Lan over USB.	Disables all of the USB LAN devices on the OS side.
query	onecli.exe usblan query	Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X Based on module version X.X.X Licensed Materials - Property of Lenovo (C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved No /Device state /IMM IP /Host IP 0 /connected /169.254.95.118 /169.254.95.120	Queries all of the USB LAN devices status on the OS side. query output status: <ul style="list-style-type: none">• disabled: USBLAN interface is down• enabled: USBLAN interface is up, but IMM IP is not reachable• connected: IMM IP is reachable

Note : One and only one of the above commands should be specified in a command line.

Chapter 8. RDCLI commands

The topics in this section describe remote disk CLI (RDCLI) commands supported by the Lenovo ToolsCenter Suite CLI program.

The following tables lists supported RDCLI commands.

Table 50. RDCLI commands

Command	Description
rdmount	Mount CD/DVD drives or ISO image files on a remote IMM-based system.
rdumount	Unmount CD/DVD drives or ISO image files mounted using rdmount.

rdmount

Use **rdmount** to mount CD/DVD drives or ISO image files on a remote IMM-based system. The application authenticates with the IMM and functions as a file server to access the virtual disk. It can also query and return a list of drives that are already mounted. Virtual disks are unmounted using the **rdumount** command.

rdmount syntax

```
rdmount.exe {-s <ipaddress> -d <path>} [-l <user> -p <password>]
```

Options

- h** Displays help information.
- q** Queries the existing mounts and returns a list of 'tokens' that can then be used by **rdumount** to unmount a virtual disk.
- v** Requests verbose output.

Table 51. *rdmount* parameters

Parameter	Required/Optional	Notes
-s	Required	Where <i><ipaddress></i> is the IP address or hostname of the remote IMM.
-d	Required	Where <i><path></i> is the image or optical drive directory path.
-l	Optional	Where <i><user></i> is an authorized user ID for the IMM.
-p	Optional	Where <i><password></i> is the authorized user's password for the IMM.

rdumount

Use **rdumount** to unmount a virtual disk that was previously mounted using **rdmount**.

rdumount syntax

```
rdumount.exe <token>
```

Options

- h** Displays help information.

A *<token>* that identifies the drive to unmount must be specified.

You can run `rdmount.exe -q` to display a list of mounted drives and their tokens.

Chapter 9. ASU, DSA, and UXSPI proxy tools

Lenovo ToolsCenter Suite CLI supports the use of proxy tools for mapping Advanced Settings Utility, Dynamic System Analysis, and UpdateXpress System Pack Installer scripts. The ToolsCenter Suite CLI directory contains the `asu.exe`, `dsa.exe`, and `uxspi.exe` standalone executable binary files.

The topics in this section provide detailed information about how to map the ASU, DSA, and UXSPI scripted commands to ToolsCenter Suite CLI, adding functionality without writing new scripts.

ASU proxy tool

ToolsCenter Suite CLI can utilize scripts from prior releases of Advanced Settings Utility using the ASU proxy tool. The ASU proxy tool is an executable binary that maps a script to its corresponding ToolsCenter Suite CLI command.

ASU proxy tool syntax

```
asu.exe [command][-parameter]
```

For more information about ASU, refer to:

- The <http://support.lenovo.com/us/en/documents/LNVO-ASU> web page.
- The <http://support.lenovo.com/us/en/documents/LNVO-ASUPUB>, which is available for download.

The following table lists commands and parameters used by the ASU proxy tool and the corresponding ToolsCenter Suite CLI commands and parameters.

Table 52. ASU commands and parameters

ASU Command	ASU parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
show	-n	show	node
	-host -user -password		-imm user:pwd@host
	-group		The mapped result for <code>asu show -group IMM</code> is <code>OneCli show IMM</code> . The -group parameter is removed in the ToolsCenter Suite CLI command string.
showvalues	-n	showvalues	-node
	-host -user -password		-imm user:pwd@host
	-group		The mapped result for <code>asu show -group IMM</code> is <code>OneCli show IMM</code> . The -group parameter is removed in the ToolsCenter Suite CLI command string.
showdefault	-n	showdefault	-node
	-host -user -password		-imm user:pwd@host

Table 52. ASU commands and parameters (continued)

ASU Command	ASU parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
	-group		The mapped result for asu show -group IMM is OneCli show IMM. The -group parameter is removed in the ToolsCenter Suite CLI command string.
comparedefault	-n	comparedefault	-node
	-host -user -password		-imm user:pwd@host
showgroups	-n	showgroups	-node
	-host -user -password		-imm user:pwd@host
set	-n	set	-node
	-host -user -password		-imm user:pwd@host
loaddefault	-n	loaddefault	-node
	-host -user -password		-imm user:pwd@host
creatuuid	-host -user -password	creatuuid	-imm user:pwd@host
delete	-n	delete	-node
	-host -user -password		-imm user:pwd@host
save		save	The -file parameter is added by default.
	-n		-node
	-host -user -password		-imm user:pwd@host
	-group		The mapped result for asu show -group IMM is OneCli show IMM. The -group parameter is removed in the ToolsCenter Suite CLI command string.
replicate		replicate	The -file parameter is added by default.
	-host -user -password		-imm user:pwd@host
restore		restore	The -file parameter is added by default.
	-n		-node
	-host -user -password		-imm user:pwd@host
batch		batch	The -file parameter is added by default.
	-n		-node
	-host -user -password		-imm user:pwd@host
generate		generate	The -file parameter is added by default.
	-n		-node
	-host -user -password		-imm user:pwd@host

Table 52. ASU commands and parameters (continued)

ASU Command	ASU parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
export		export	The -file parameter is added by default.
	-n		-node
	-host -user -password		-imm user:pwd@host
import		import	The -file parameter is added by default.
	-n		-node
	-host -user -password		-imm user:pwd@host
deletecert	-n	deletecert	-node
	-host -user -password		-imm user:pwd@host
nodes	-host -user -password	nodes	-imm user:pwd@host
help	-n	showdes	-node
	-host -user -password		-imm user:pwd@host

Example of an ASU script using the **-group** parameter

```
asu.exe show --group GROUP1
```

This is the output generated from this example:
Lenovo ASU 0.1.5

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X
Based on module version X.X.X
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Invoking SHOW command ...
Connected to IMM by IP address 10.240.252.102
IMM.Cert_CSR_Export_Format=DER
IMM.SSH_SERVER_KEY=Installed
The SHOW command execute successful!
```

Example of an ASU script using the **-host** parameter

```
asu.exe help all --host 10.240.12.23 --user USERID --password password
```

In this example, the asu.exe **-host** parameter maps to:
OneCli.exe config showdes --imm USERID:password@10.240.12.23

Using the ASU proxy tool

This procedure describes how to use the ASU proxy tool for mapping to ToolsCenter Suite CLI commands.

Refer to “ASU proxy tool” on page 105 for detailed information about the ASU commands, parameters, and script examples to use with the ASU proxy tool.

There are two steps for mapping:

- Determine which ToolsCenter Suite CLI configuration command you will be mapping to.

- Determine which parameters are necessary for executing the command.

Step 1. Start the ASU proxy tool at the command prompt:

For Windows, enter `asu.exe`.

For Linux, enter `./asu`.

Step 2. Enter the ASU command and parameter or use a predefined script.

The ASU proxy tool maps to the ToolsCenter Suite CLI command and then executes it.

DSA proxy tool

ToolsCenter Suite CLI can utilize scripts from prior releases of Dynamic System Analysis using the DSA proxy tool. The DSA proxy tool is an executable binary that maps a script to its corresponding ToolsCenter Suite CLI command.

DSA proxy tool syntax

`dsa.exe [-parameter][file]`

For more information about DSA, refer to:

- The Lenovo ToolsCenter DSA website web page.
- The Lenovo Dynamic System and Analysis (DSA) Installation and User's Guide, which is available for download.

The DSA parameters table lists DSA parameters used by the DSA proxy tool and the corresponding ToolsCenter Suite CLI commands and parameters.

Table 53. DSA parameters

DSA parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter	
i	formatlog	srcdata	
d	getinfor	output	
h, ?, help		help	
ipmi-lan		imm	
t		upload	
upload		upload	
v		htmlreport	
text		Not supported	
vmware-esxi		esxi	
ffdc		ffdc	
hldec		hldec	
html		output	
[--proxy-address=addr] [--proxy-port=port] [--proxy-user=user] [--proxy-password=pwd]			--proxy user:pwd@addr:port

Notes about the dsa command parameters

- The DSA `i` parameter maps to the ToolsCenter Suite CLI **formatlog** command.
- All other DSA parameters map to the ToolsCenter Suite CLI **getinfor** command.

The DSA script examples table provides examples of DSA scripts and the ToolsCenter Suite CLI commands and parameters they map to.

Table 54. DSA script examples

DSA script	ToolsCenter Suite CLI command and parameters
<code>dsa.exe -i test_file -d C:\onecli\</code>	<code>OneCli inventory formatlog -srcdata test_file -output C:\onecli\</code>
<code>dsa.exe -upload -proxy-address=addr -proxy-port=port -proxy-user=user -proxy- password=pwd</code>	<code>OneCli inventory getinfor -output C:\Lenovo_Support\ -proxy user: pwd@addr:port -upload multitool</code>
<code>dsa.exe -v -ffdc</code>	<code>OneCli inventory getinfor -ffdc -htmlreport -output C:\Lenovo_ Support\</code>

Example of a DSA script using the -upload parameter

```
dsa.exe -upload --proxy-address=addr --proxy-port=port --proxy-user=user  
- proxy-password=pwd
```

This is the output generated from this example:

```
Lenovo Dynamic System Anaysis<C> Copyright Lenovo Corp. 2004-2015.  
<c> Copyright IBM Corp. 2004-2015. All Rights Reserved.
```

```
Call command: OneCli inventory getinfor --output  
C:\Lenovo_Support\ --proxy user:pwd@addr:port --upload multitool
```

Using the DSA proxy tool

This procedure describes how to use the DSA proxy tool for mapping to ToolsCenter Suite CLI commands.

Refer to “DSA proxy tool” on page 108 for detailed information about the DSA parameters and script examples to use with the DSA proxy tool.

There are two steps for mapping:

- Determine which inventory command you will be mapping to.
- Determine which parameter details are necessary for executing the command.

Step 1. Start the DSA proxy tool at the command prompt:

For Windows, enter `dsa.exe`.

For Linux, enter `./dsa`.

Step 2. Enter the DSA parameter and the parameter details for executing the script or use a predefined script.

-i
Maps to the ToolsCenter Suite CLI **formatlogxxxx**

All other dsa parameters
Map to **getinforxxxx**.

The DSA proxy tool maps to the ToolsCenter Suite CLI command and then executes it.

UXSPI proxy tool

ToolsCenter Suite CLI can utilize scripts from prior releases of UpdateXpress System Pack Installer using the UXSPI proxy tool. The UXSPI proxy tool is an executable binary that maps a script to its corresponding ToolsCenter Suite CLI command.

UXSPI proxy tool syntax

```
uxspi.exe [command][-parameter]
```

For more information about UXSPI, refer to:

- The <http://www-947.ibm.com/support/entry/portal/docdisplay?Indocid=LNVO-XPRESS> web page.
- The Lenovo UpdateXpress System Pack Installer (UXSPI) User's Guide, which is available for download.

The following table lists commands and parameters used by the UXSPI proxy tool and the corresponding ToolsCenter Suite CLI commands and parameters.

Table 55. UXSPI commands and parameters

UXSPI Command	UXSPI parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
acquire	-check -update	acquire	Not supported.
	-l UXSP-path, -local=UXSP-path		-dir UXSP-path
	m <i>type</i> , -machine-type= <i>type</i>		-mt <i>type</i>
	-meta-only		-metaonly
	-o <i>operating-system</i> , -os= <i>operating-system</i>		-ostype <i>operating-system</i>
	-L, -latest		-scope <i>latest</i>
	-i <i>update-id</i> , -id= <i>update-id</i>		-includeid <i>update-id</i> Note: Must be used with -scope individual.
	-r, -report		-report
	-proxy-address= <i>address</i>		-proxy <i>url</i>
	-proxy-port= <i>port</i>		
	-proxy-user= <i>user</i>		
	-proxy-password= <i>password</i>		
	-proxy-password-secure= <i>secure-password</i>		Not supported.
	-no-proxy		Empty
	-preview-user= <i>user</i>		Not supported.
	-preview-password= <i>password</i>		Not supported.
-preview-password-secure= <i>secure-password</i>	Not supported.		

Table 55. UXSPI commands and parameters (continued)

UXSPI Command	UXSPI parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
	-xml		-xml
	-vmware-esxi-update= 4.1/5.0		Not supported.
	-include-software		Not supported.
compare	-F, -firmware	compare	-type fw
	-D, -drivers		-type dd
	-include-software		Not supported.
	-f update-ids, -force=update-ids		-forceid update-ids
	-s update-ids, -select= update-ids/all/undetected		Not supported.
	-l UXSP, -local=UXSP		- dir UXSP
	-n, -new		Not supported.
	-e update-ids, -exclude=update-ids		-excludeid update-ids
	-i update-ids, -include=update-ids		-Includeid update-ids
	-ignore-undetected= update-ids		Not supported.
	-L, -latest		- scope latest
	-remote= remote_address		Not supported.
	-remote-user=user		Not supported.
	-remote-password=password		Not supported.
	-remote-password-secure= secure-password New		Not supported.
	-remote-dir=directory		Not supported.
	-noinventory		Not supported.
	-o, -linuxoverride= update-ids		-forceid update-ids Note: B the -f and -o parameters in UXSPI map to -forceid.
	-nouxsp		Not supported.
	-r, -report		Not supported.
	-tui		Not supported.
	-timeout=time		Not supported.
	-xml		Not supported.
	-disable-imm-lan		Not supported.
	-vmware-esxi=url		-esxi url
	-host= IMM_IP_Address		-imm url
	-update-args="IMM: -user=userid -password=pwd,UEFI:-backup"		

Table 55. UXSPI commands and parameters (continued)

UXSPI Command	UXSPI parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
	-esxi-updatefile		Not supported.
	-m <i>type</i> , -machine-type= <i>type</i>		-mt <i>type</i>
	-ignore-mtos-check		Not supported.
update	-F, -firmware	update	-type fw
	-D, -drivers		-type dd
	-include-software		Not supported.
	-f <i>update-ids</i> , -force= <i>update-ids</i>		-forceid <i>update-ids</i>
	-s <i>update-ids</i> , -select= <i>update-ids/all/undetected</i>		Not supported.
	-l UXSP, -local=UXSP		- dir UXSP
	-n, -new		Not supported.
	-e <i>update-ids</i> , -exclude= <i>update-ids</i>		-excludeid <i>update-ids</i>
	-i <i>update-ids</i> , -include= <i>update-ids</i>		-Includeid <i>update-ids</i>
	-ignore-undetected= <i>update-ids</i>		Not supported.
	-L, -latest		- scope latest
	-remote= <i>remote_address</i>		Not supported.
	-remote-user= <i>user</i>		Not supported.
	-remote-password= <i>password</i>		Not supported.
	-remote-password-secure= <i>secure-password</i> New		Not supported.
	-remote-dir= <i>directory</i>		Not supported.
	-noinventory		Not supported.
	-o, -linuxoverride= <i>update-ids</i>		-forceid <i>update-ids</i> Note: B the -f and -o parameters in UXSPI map to -forceid.
	-nouxsp		Not supported.
	-r, -report		Not supported.
	-tui		Not supported.
	-timeout= <i>time</i>		Not supported.
	-xml		Not supported.
	-disable-imm-lan		Not supported.
	-vmware-esxi= <i>url</i>		-esxi <i>url</i>
	-host= <i>IMM_IP_Address</i>		-imm <i>url</i>
	-update-args="IMM: -user= <i>userid</i> -password= <i>pwd</i> ,UEFI:-backup"		

Table 55. UXSPI commands and parameters (continued)

UXSPI Command	UXSPI parameter	ToolsCenter Suite CLI command	ToolsCenter Suite CLI parameter
	-esxi-updatefile		Not supported.
	-ignore-req		-noreq
	-ignore-hwcheck		Not supported.
	-m <i>type</i> , -machine-type= <i>type</i>		-mt <i>type</i>
	-ignore-mtos-check		Not supported.
bc (Scan commands)	-s, -scan	bc (Scan commands)	scan
	-mm-address= <i>address</i>		-cmm <i>url</i>
	-mm-user= <i>user</i>		
	-mm-password= <i>password</i>		
	-mm-password-secure= <i>secure-password</i>		Not supported.
bc (CMM update commands)	-m -mm	bc (CMM update commands)	Not supported. UXSPI needs input update file names, while ToolsCenter Suite CLI needs input package IDs. The IDs and files names can not match, so the proxy tool will not transfer these commands.
	-mm-address= <i>address</i>		
	-mm-user= <i>user</i>		
	-mm-password= <i>password</i>		
	-mm-password-secure= <i>secure-password</i>		
	-mm-file= <i>file1</i>		
	-mm-file2= <i>file2</i>		
	-mm-force		
bc (I/O-module update commands)	-i, -io	bc (I/O-module update commands)	Not supported. UXSPI needs input update file names, while ToolsCenter Suite CLI needs input package IDs. The IDs and files names can not match, so the proxy tool will not transfer these commands.
	-mm-address= <i>address</i>		
	-mm-user= <i>user</i>		
	-mm-password= <i>password</i>		
	-mm-password-secure= <i>secure-password</i>		
	-io-bay= <i>bayID</i>		
	-io-user= <i>user</i>		
	-io-password= <i>password</i>		
	-io-password-secure= <i>secure-password</i>		
	-io-file= <i>file1</i>		
	-io-file2= <i>file2</i>		

Example of an UXSPI proxy

```
./uxspi up -u -l ./ -i elx-lnvgy_fw_fc_16a-lp16-11.0.270.24-1_linux_32-64 -L -e all
```

Where the translated command is:

```
./OneCli update flash --dir ./ --scope individual --includeid elx-lnvgy_fw_fc_16a-lp16-11.0.270.24-1_linux_32-64
```

This is the output generated from this example:

```
Lenovo ToolsCenterSuite CLI tcliXXX-X.X.X  
Based on module version X.X.X  
Licensed Materials - Property of Lenovo  
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved  
Lenovo Flex System  
Non-ThinkServer platform
```

Using the UXSPI proxy tool

This procedure describes how to use the UXSPI proxy tool for mapping to ToolsCenter Suite CLI commands.

Refer to “UXSPI proxy tool” on page 110 for detailed information about the UXSPI commands, parameters, and script examples to use with the UXSPI proxy tool.

There are two steps for mapping:

- Determine which ToolsCenter Suite CLI configuration command you will be mapping to.
- Determine which parameters are necessary for executing the command.

Step 1. Start the UXSPI proxy tool at the command prompt:

For Windows, enter `uxspi.exe`.

For Linux, enter `./uxspi`.

Step 2. Enter the UXSPI command and parameter or use a predefined script.
The UXSPI proxy tool maps to the ToolsCenter Suite CLI command and then executes it.

Chapter 10. Troubleshooting and support

Use this section to troubleshoot and resolve problems with Lenovo ToolsCenter Suite CLI.

General limitations

ToolsCenter Suite CLI has the following known general limitations.

It is recommended not to use OneCli config on configuration with LSI adapters

It is recommended not to use OneCli config on configuration with LSI adapters because it's difficult to do settings on LSI adapters and it may impact the RAID controller.

ToolsCenter Suite CLI does not work with hostnames when passing the connection parameter

When using the ToolsCenter Suite CLI to pass connection parameters, it will fail when setting the host with a hostname, such as: `./OneCli config show -imm USERID:PASSWORD@immhostname`. Use an IPv4 address such as: `./OneCli config show -imm USERID:PASSWORD@10.19.65.245`.

Intel Driver Pack current version is always undetectable and may show as installed, undetected, or N/A

The ToolsCenter Suite CLI does not detect the current version of the Intel Driver Pack. As a result, the Intel Driver Pack update package is recommended for deployment on every execution of the ToolsCenter Suite CLI, regardless of the current version.

ToolsCenter Suite CLI uses IMM Lan over USB which uses "169.254.95. xx" network by default

The default setting for IMM Lan-over-USB is "169.254.95.xx". If the "169.254.95.xx" network is used for another application, such as Oracle RAC, running OneCli will change the network route table, which can cause the other application to behave unexpectedly. In this case, set the IP address in the "IMM Ethernet over USB IP Settings" section of the IMM web page to a non-conflict IP address so that OneCli will use this IP address to connect to IMM.

Broadcom CIM provider v17.0.5 or older installed on a customized VMware ESXi system warning message

If you have a Broadcom CIM provider v17.0.5 or older installed on a customized VMware ESXi system, you will see the following warning message in the log file: You have a Broadcom CIM provider v17.0.5 or older installed in your system. Broadcom CIM Provider versions older than 17.0.5 is not recommended to use for Firmware Update. If you want to update Firmware, please install the latest ESXi patch."

ASU, DSA, and UXSPI proxy tool limitations

The limitations listed in this section are specific to the ASU, DSA, and UXSPI proxy tools.

ToolsCenter Suite CLI only support call ASU and DSA Proxy tool from the directory in which the ToolsCenter Suite CLI executable exists

Calling the ToolsCenter Suite CLI using the ASU or DSA proxy tool only functions when called from the directory containing the OneCli executable. For example, if the OneCLI and ASU executables are both in the folder `/software/onecli/tmp`, the command will execute when calling the proxy tool from the folder `/software/onecli/tmp # ./asu show -host 10.19.65.245 -user USERID -password PASSWORD`; however, the command will fail when calling it from another folder, such as `/software/onecli# ./tmp/asu show -host 10.19.65.245 -user USERID -password PASSWORD`.

config limitations

The limitations listed in this section are specific to the config application.

ToolsCenter Suite CLI shows failure to set IMM to shared mode but actually it succeeds

Using the ToolsCenter Suite CLI config command to set "IMM.SharedNicMode" to "SharedOption_1" results in the error message "The SET command execute failure;" however, the configuration change is successful and the network interface of the Integrated Management Module (IMM) is changed to shared mode.

ToolsCenter Suite CLI succeeds executing loaddefault but fails to show the setting on SLES 11 and SLES 12

When users run the ToolsCenter Suite CLI config command to load default values for all settings, the result shows that the command is successful, but fails to show the settings on SLES 12.

Invalid configuration settings are not saved

Some initial values for settings are not valid as defined in the XML and are not saved.

Restarting the IMM for config values to take effect

For some settings to take effect, you might have to restart the IMM. You might also need to restart the IMM for any values that are set through the ToolsCenter Suite CLI config application and displayed in the IMM web interface.

Some Flex system settings cannot be set with null string

For some Flex systems, the IMM.IMMInfo_Contact, IMM.IMMInfo_Location, and IMMInfo_RoomId settings cannot be set with the value of *null string*.

Some settings might not match their default values

When using the **comparedefault** command, some settings might not match their default values, even though the **loaddefault** command was run before the **comparedefault** command.

ToolsCenter Suite CLI config does not support the loaddefault value for boot order

The ToolsCenter Suite CLI config application does not support the **loaddefault** value for boot order. The **loaddefault** command does not change the boot order to the default value.

ToolsCenter Suite CLI config might fail to get the set result

After the ToolsCenter Suite CLI config application sets some IMM network settings, this could cause an IMM connection section reset or an IP address change, resulting in the config application failing to get the set result.

ToolsCenter Suite CLI config needs an IMM2 user to work on IMM

Due to the security design, a Flex system has two types of user accounts:

CMM user (LDAP user)

CMM users are available for Web, CLI, and CIM interfaces.

IMM2 user (local user)

IMM2 users are available for IPMI and SNMPv3 interfaces

inventory limitations

The limitations listed in this section are specific to the inventory application.

Microsoft Windows might display wrong version for .sys file

Device driver version for .sys file displayed by Microsoft Windows Device Manager might be different from actual version in the %system%\system32\drivers\ folder. File version of the .sys device driver should be verified by checking the version of the file that is in the %system%\system32\drivers\ folder.

The value of DIMM serial number shown by the ToolsCenter Suite CLI is inconsistent with the serial number shown by the IMM web application (Retain tip 95884)

The DIMM serial number shown by ToolsCenter Suite CLI is not in the same byte order as the serial number shown by the IMM. For example, the DIMM serial number displays as 441B13BD on the IMM web page, which corresponds to the 4 byte sequence 44 1B 13 BD, while in the ToolsCenter Suite CLI the DIMM serial number is displayed as BD131B44, with a byte sequence of BD 13 1B 44.

ToolsCenter Suite CLI System Overview page shows wrong OS suite type on Windows server 2012 series OS

The ToolsCenter Suite CLI System Overview page shows the wrong OS suite type for the Windows server 2012 series operating system: the suite type will be always shown as "Standard Edition" on the inventory page. For the Windows 8 and Windows Server 2012 operating systems, since the suite type is not supported by winAPI, refer to the MSDN at <https://msdn.microsoft.com/en-us/library/ms724833%28d=printer,v=vs.85%29.aspx> for information.

ToolsCenter Suite CLI shows the volumes' layout and status unknown on windows 2012 series OS

The ToolsCenter Suite CLI shows the volume layout and status as unknown for Windows 2012 series operating systems when the partition type is static. Since the ToolsCenter Suite CLI will attempt to read the LDM (logical disk management) data from the Windows operating system for these properties, and LDM was deprecated in favor of Storage Spaces for Windows 8 and Windows 2012, the ToolsCenter Suite CLI shows an unknown status for these two properties of a static disk.

Brocade device driver limitation

Due to a Brocade device driver limitation, SLES 11.2 and RHEL 5.8 do not support all of the Brocade functions.

Cache Enable information might be inaccurate

Information about Level 1, 2, 3 Cache Enable might be inaccurate

Common tables with instances from multiple data sources may have blank fields

If there is no data for a particular field, the field is blank. This is most often encountered in common tables containing instances from multiple data sources.

Dates fall outside the valid date range for ToolsCenter Suite CLI

When ToolsCenter Suite CLI collects dates and times that are before January 1, 1970, 00:00:00, or after January 19, 2038, 03:14:07, ToolsCenter Suite CLI reports these dates and times as January 1, 1970, 00:00:00. These dates fall outside the valid date range for ToolsCenter Suite CLI.

Excessive number of HDDs takes longer to complete

Having an excessive number of HDDs creates a situation where ToolsCenter Suite CLI is not actually hanging but rather takes days to complete.

Extended collection times

If you encounter extended collection times, it might be helpful to disconnect external devices temporarily. This can include unplugging fibre cables or additional USB devices where information on these devices is not essential to the data collection.

IMM Configuration, Environmentals, and Chassis Event Logs might be missing on System x3850 X5

On System x3850 X5 Standard (7145, 7146) with Windows 2008, in some cases the IMM Configuration, Environmentals, and Chassis Event Logs are missing. If you run ToolsCenter Suite CLI again, this information will be available.

Intel Ethernet controller is displayed as Not Available

The description about the Intel Ethernet controller is displayed as Not Available on the Network Settings page under RHEL6.

LSI RAID configured as level "1E" is recognized as level "1"

In the ToolsCenter Suite CLI data collection, LSI RAID is configured as level "1E", but recognized as level "1".

Memory speed reported as Unknown in the Memory section of the Hardware Information report

ToolsCenter Suite CLI might report the memory speed as *Unknown* in the Memory section of the Hardware Information report. This is due to issues with SMBIOS support on some systems.

Merged log may appear to be out of order

On systems where the service processor clock does not have the same timezone settings as the local system, the merged log may appear to be out of order. The entries are sorted correctly but look incorrect because the timezone setting is not displayed.

ToolsCenter Suite CLI is displayed as Unknown in the item PartitionSubType

ToolsCenter Suite CLI is displayed as Unknown in the item PartitionSubType in the Disk Information table on the Hardware Inventory page when the HDD is in the GUID Partition Table (GPT) format on uEFI systems.

PCI Slot and device association might be inaccurate on the following systems:

- System x3850 X5 (7145, 7146)
- System x3950 X5 (7145, 7146)

Physical drive information associated with the IR might be invisible

When a server is configured with multiple RAID controllers (both IR & MR), the physical drive information associated with the IR might be invisible in the LSI information. This problem does not impact the functionality of the RAID or Disk.

QLogic device driver limitation

Due to a QLogic device driver limitation for QLogic 10 Gb CNA, Option 42C1800, the QLogic information on the Hardware Inventory page is not collected on a Windows 2008 Enterprise 64-bit operating system.

QLogic iSCSI Controller information cannot be collected

QLogic iSCSI Controller information cannot be collected in SLES10 Realtime and Red Hat5 Realtime.

QLogic utility limitation

Due to a QLogic utility limitation for QLogic 8 Gb FC Dual-port HBA, Option 42D0510, the QLogic information on the Hardware Inventory page is not collected on Red Hat Enterprise Linux 6 Update 2 (RHEL 6.2).

RAID display functionality has been reverted

To ensure the quality and stability of the ToolsCenter Suite CLI code, some display functionality of RAID information has been reverted to what was used in previous versions of ToolsCenter Suite CLI. This affects the RAID display on the following adapters:

- Megaraid 8480
- Serveraid MR10i
- Serveraid MR10is
- Serveraid MR10m
- Serveraid MR10k
- Serveraid M1015
- Serveraid M5014
- Serveraid M5015

On these adapters, the RAID information is generated from the output of separate command line tools. The format might not match other output in ToolsCenter Suite CLI.

ToolsCenter Suite CLI displays the manufacturer of a SATA hard disk as ATA in the Physical Drive Information table

When an LSI RAID controller connects with a SATA hard disk, ToolsCenter Suite CLI displays the manufacturer of the hard disk as *ATA* in the Physical Drive Information table.

ToolsCenter Suite CLI might report that an adapter is still present with a corrupt MAC address

When an adapter is removed from the system that was previously configured in a network virtual team using the Intel PROSet software package, ToolsCenter Suite CLI might report that the adapter is still present with a corrupt MAC address. You can safely disregard the information returned for this adapter.

v only detects the duplex speed information of one network adapter on RHEL5 U3

ToolsCenter Suite CLI can only detect the duplex speed information of one network adapter on RHEL5 U3 with Xen if multiple network adapters exist.

ToolsCenter Suite CLI shows incorrect core numbers for System x3850 X5 dual node configuration

On System x3850 X5 dual node configuration, ToolsCenter Suite CLI shows incorrect core numbers (always show one core) for processors on the 2nd node (CPU5-8).

Windows 2008 R2 SP1 indicates that IBMSPREM.EXE stopped working

After installing the chipset driver on Windows 2008 R2 SP1, you might receive a dialog box indicating that IBMSPREM.EXE has stopped working.

Windows: using the -upload through a proxy environment option

On a Windows operating system when trying to run ToolsCenter Suite CLI with the -upload through a proxy environment option, it might be necessary to turn off **check for server certificate revocation (requires restart)** from the **Tools → Internet Options → Advanced → Security** menu.

Windows: A disabled Broadcom Ethernet device reports no relevant information

In Windows, when a Broadcom Ethernet device is disabled in Network Connections, no relevant information regarding this device is collected.

Windows: ServeRaid 8e card information cannot be collected

ToolsCenter Suite CLI cannot collect ServeRaid 8e card information on a system with a Windows operating system.

update limitations

The limitations listed in this section are specific to the update application.

Note: For update limitations relating to the Lenovo UpdateXpress System Pack Installer, see limitations listed in the UXSPI documentation (see the UpdateXpress System Pack Installer InfoCenter).

Specific command needed to install ESXi6.0u2, ESXi6.0U3, ESXi6.5

The ESXi6.0u2 software bundle must be installed using the following command:
`esxcli software vib install --maintenance-mode -d file:/// <dir> / <zip_file_name>`

Where:

- `<dir>` is the directory where the CIM zip file is stored (for example, `/var/tmp/`)
- `<zip_file_name>` is the name of the zip file, using the form `lenovo_extension_lnv-xxx-offline_bundle.zip`

Note: After the installation is complete, reboot ESXi when prompted.

After installing ESXi, system requires 15 minutes to initialize

To prevent ToolsCenter Suite CLI errors when first restarting a system after ESXi has been installed, wait approximately 15 minutes for the system to initialize before performing any operations.

All ToolsCenter Suite CLI paths must use standard English-language alphanumeric characters

All ToolsCenter Suite CLI paths specified for the `-dir` or `-output` parameters must use standard English-language alphanumeric characters: and must not include spaces, special characters, or non-English-language characters.

The current version of the Intel Driver Pack is always undetectable

The ToolsCenter Suite CLI does not detect the current version of the Intel Driver Pack. As a result, the Intel Driver Pack update package is recommended for deployment each time the ToolsCenter Suite CLI executes regardless of the current version that is installed.

64-bit Linux requires 32-bit compatible libraries to update firmware

To update firmware with the ToolsCenter Suite CLI on 64-bit Linux operating systems, the 32-bit compatibility library (compat-libstdc++) must be installed. Use the following command to see if this library is installed:

```
rpm -qa grep compat-libstdc++-296
```

The glibc.i686 library is required to load shared libraries

If the glibc.i686 library is not installed, you might receive the following error when attempting to load a shared library:

```
libstdc++.so.6: can not open shared object: no such file or directory
```

The ToolsCenter Suite CLI update function does not support tape drives

The update function does not support the tape device driver firmware scan, compare, or flash functions.

ToolsCenter Suite CLI does not support firmware updates for LAN-over-USB bridged network ports

The ToolsCenter Suite CLI does not support firmware updates for systems where LAN-over-USB ports are bridged by bridge network ports.

For example, on a SLES11 XEN system, there might be network ports, such as the br0 (bridge) port, eth0 (Ethernet controller) port, and usb0 (LAN-over-USB) port. If the usb0 port is bridged by the br0 port, the ToolsCenter Suite CLI is unable to flash any firmware on the system due because it is unable to establish a CIM connection when the usb0 port is bridged by the br0 port. To solve this problem, the usb0 port must be manually removed from the bridged devices list of br0. To edit the bridged devices List of br0 on SLES systems, execute the `yast2` command at a command prompt to display the Network Card Setup GUI window; then, select **Network Bridge br0** and click **Edit**. In the next configuration window,

uncheck the usb0 selection and save the configuration; then, restart the system to use the ToolsCenter Suite CLI to update the system firmware.

Some SND switches restart after firmware update

For SND switches that have multi-image updates, such as the CN4093 or EN2092 switches, the switch firmware needs to be active after firmware update, causing the switch to restart automatically. The ToolsCenter Suite CLI “-noreboot” parameter will not prevent these switches from restarting after firmware upgrade.

User must verify presence of configuration file

The ToolsCenter Suite CLI uses a third-party library to parse the configuration file. Users must verify that the configuration file (global.config or IBM_systems_list.txt) is in the OneCLI binary file, that is in UTF-8 encoded format.

ToolsCenter Suite CLI does not support hard disk drive firmware detection for non-LSI controllers

The ToolsCenter Suite CLI does not support hard disk drive firmware detection for drives that are not connected to an LSI hard disk drive controller.

ToolsCenter Suite CLI does not restore USB LAN IP configuration

The ToolsCenter Suite CLI will not restore the USB LAN IP configuration (usb0 or usb1) after firmware update. The update process changes the USB LAN Device IP address to one that will connect to IMM, making the origin USB LAN IP address invalid.

ToolsCenter Suite CLI can not flash Emulex 16Gb FC (01CV842) adapter or Lenovo QLE2692 Dual Port 16Gb Fibre Channel PCIe adapter when using ESXi

ToolsCenter Suite CLI can not flash the firmware on these adapters when using ESXi

ToolsCenter Suite CLI does not support Intel firmware and device driver updates.

Intel firmware and device driver updates do not support agentless installation.

ToolsCenter Suite CLI does not support VMware ESXi 5.1.

ToolsCenter Suite CLI **openssl** command is not compatible with ESXi **opensslo** command. (does not support VMware ESXi 5.1 because .

Return codes

ToolsCenter Suite CLI issues a return code to indicate either successful execution of a command or to indicate an error occurred while the program was running. A return code of zero indicates the operation was successful, and a nonzero return code indicates an error.

To determine whether any errors occurred and when based on the associated timestamp, refer to one of the following log files:

- For Windows, review the C:\Lenovo_Support\onecli.log file.
- For Linux, review the /var/log/Lenovo_Support/onecli.log file.

The ToolsCenter Suite CLI return code tables provide a complete list of all return codes.

Table 56. ToolsCenter Suite CLI return codes

Return code	Decimal base	Description
0x00	0	Success
0x01	1	Invalid command line
0x02	2	Generic Failure
0x03	3	XML File missing
0x04	4	Reboot Failure

Table 56. ToolsCenter Suite CLI return codes (continued)

Return code	Decimal base	Description
0x05	5	Connect Failure
0x06	6	Platform Error
0x07	7	XML Format Error
0x08	8	Open DLL Failure
0x09	9	Get NULL Pointer
0x0A	10	No Interface Found
0x0B	11	Return Invalid Result
0x0C-0x1F	12-31	Reserved Generic Common Failure
0x20-0x3F	32-63	Inventory Diagnose application error
0x40-0x5F ¹	64-95	Update application error
0x60-0x7F ²	96-127	Configuration application error
0x80-0x9F	128-159	FoD application error
0xA0-0xDF	160-223	Misc applications error
0xE0-0xFF	224-255	Reserved
<p>Note:</p> <ol style="list-style-type: none"> 1. See Table 57 “ToolsCenter Suite CLI Update-related Return Codes” on page 122 for specific update-related return codes. 2. See Table 58 “ToolsCenter Suite CLI configuration-related return codes” on page 123 for specific configuration-related return codes. 		

Table 57. ToolsCenter Suite CLI Update-related Return Codes

Return code	Decimal base	Description
0x00	0	Success
0x40	64	Generic Acquire Module Failure
0x41	65	Generic Scan Module Failure
0x42	66	Generic Query Module Failure
0x43	67	Generic Comparison Module Failure
0x44	68	Generic Flash Module Failure
0x45	69	File related error occurred; cause could be missing file or IO error
0x46	70	CIM service failed. Check log/xml for more information
0x47	71	A device related error occurred.
0x48	72	Failed to generate common result XML file.
0x49	73	Failed to get OS type using scan command.
0x4a	74	Invalid/unsupported machine type
0x4b	75	Invalid/unsupported OS type
0x4c	76	Authentication failed; unable to validate userid and password.

Table 57. ToolsCenter Suite CLI Update-related Return Codes (continued)

Return code	Decimal base	Description
0x4d	77	Flash finished running but multiple packages failed to be flashed using multiple cases (for example, using both option update and xFirmware update).
0x4e	78	(IBM systems only.) Make sure UXSPI_PATH is set to the executable binary of UXSPI in global.config
0x4f	79	(IBM systems only.) Command not supported in UXSPI.
0x5a	89	Update flash failure: Error payload file does not exist.
0x50	80	(IBM systems only.) Current module is not supported. Only compare/flash are supported.
0x51	81	UXLite does not run successfully or the UXLite path was not set correctly.
0x52	82	Update module was not able to write to XML file.
0x53	83	Failed to run flash with ESXi.
0x54	84	Failed to run flash with IOSwitch.
0x55	85	Failed to run flash with CMM.
0x56	86	Failed to run flash with OOB.
0x58	87	Failed to run flash with xFirmware.
0x59	88	Failed to run flash with Option update.
0x5f	95	Update application failed to run due to undefined error.

Table 58. ToolsCenter Suite CLI configuration-related return codes

Return code	Decimal base	Description
0x60	96	Failed to run the command.
0x61	97	Failed to get information.
0x62	98	Failed to set a setting item or items.
0x63	99	Failed to open the file.
0x64	100	Failed to read the file.
0x65	101	Failed to write the file.
0x66	102	Failed to generate, export, import, or delete certification.
0x67	103	Failed to reconnect to IMM after the command had executed successfully. Try another method to check the result.
0x68	104	One or more commands are invalid in the batch file.

Appendix A. Accessibility features for ToolsCenter Suite CLI

Accessibility features help users who have a disability, such as restricted mobility or limited vision, to use information technology products successfully.

Lenovo and accessibility

See the Lenovo Accessibility website at <http://www.lenovo.com/lenovo/us/en/accessibility.html> for more information about the commitment that Lenovo has to accessibility.

Accessibility

The following list includes the major accessibility features in Lenovo ToolsCenter Suite CLI:

- Can be operated using only the keyboard
- Communicates all information independent of color
- Supports the attachment of alternate output devices
- Provides online documentation in an accessible format

Keyboard navigation

This product uses standard Microsoft Windows navigation keys.

The command line interface (CLI) is controlled by the keyboard.

You can use the following keyboard shortcuts from the graphical user interface:

Shortcut (Linux)	Shortcut (Windows)	Action
Alt+C	Alt+C	Close the graphical user interface.
Alt+N	Alt+N	Go to the next page.
Alt+P	Alt+P	Go to the previous page.
Tab	Tab	Go to the next control.
Shift+Tab	Shift+Tab	Move to the previous control.
Left arrow	Left arrow	Move back one character.
Right arrow	Right arrow	Move forward one character.
Backspace	Backspace	Delete the character to the left of the cursor.
Delete	Delete	Delete the character under the cursor.
Up arrow	Up arrow	Move focus and selection upwards through the radio buttons.
Down arrow	Down arrow	Move focus and selection downwards through the radio buttons.
Space	Space	Select or clear an option.

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