Lenovo XClarity Essentials OneCLI User Guide

Version 4.4.0

Note

Before using this information and the product it supports, read the information in Appendix E “Notices” on page 219.

Thirtieth Edition (February 2024)

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About this publication

Lenovo XClarity Essentials OneCLI (OneCLI) is a collection of command line applications that facilitate Lenovo server management by providing functions, such as system configuration, system inventory, firmware and device driver updates. This guide provides information about how to download and use OneCLI.

Important:
- The previous umbrella name “ToolsCenter” is replaced by “XClarity Essentials”.
- OneCLI will only support 64-bit operating systems after V2.2.0. V2.1.0 32-bit binaries will be saved on Web site, so users can download it before running 32-bit operating systems.

Who should read this guide

This guide is for system administrators or other individuals responsible for system administration. Basic knowledge of system hardware, firmware, device driver, and operating system are required.

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 users 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 XClarity Essentials OneCLI Users Guide*.

Table 1. Commonly used terms

Term	Definition
ASU	Advanced Setting Utility A utility that allows users to modify firmware settings from the command line on multiple operating-system platforms.
BMC	Baseboard Management Controller Standard IPMI compliant device for monitoring system sensors and displaying the data of system sensors.
BMU	Bare Metal Update An OS environment update mode customized by Lenovo in memory of server.
CDM	Common Diagnostic Model Standard diagnostics subprofile of the CIM specification.
CIM	Common Information Model A standard developed by the Distributed Management Task Force for enterprise level modeling of computer systems.

Table 1. Commonly used terms (continued)

Term	Definition
CIM Object Manager (or CIM broker)	A 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.
CIM Provider	A platform specific management software that interfaces between a CIM object manager and any lower level platform interfaces.
CMM	Chassis Management Module A Flex System module that allows users to configure and manage all Flex System components that are installed.
CMPI	Common Management Programming Interface Programming API designed to bridge the differences between multiple CIMOM implementations and CIM provider APIs.
CNA	Converged Network Adapter An I/O device that combines the functionality of a host bus adapter (HBA) with that of a network interface controller (NIC).
DSA	Dynamic System Analysis Strategic problem determination tool for data collection, fault detection, and remediation.
fpusb	Front panel USB A OneCLI command that changes the configuration settings of the USB on the front panel of systems.
Fix-ID	Unique identifier for updates The unique string ID for each software packages to be updated.
FoD	Features on Demand A management software that provides a convenient way for users to order and activate optional features through the management software web interface.
FFDC	First Failure Data Capture. The FFDC feature instantly collects information about events and conditions that might lead up to a failure. The captured data in these files can be used to analyze a problem.
HBA	Host Bus Adapter 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.
IOM	I/O Module Up to four I/O modules can be installed in the Flex System Enterprise Chassis, including Ethernet switch modules, Fibre Channel switch modules, Infiniband, and pass-thru modules (optical and copper).
IPMI	Intelligent Platform Management Interface Industry standard interface for communications between management applications and baseboard management controllers.
IPMI SEL	Intelligent Platform Management Interface System Event Log A tool that used to view System Event Log (SEL) entries.
iSCSI	Internet Small Computer System Interface An Internet protocol-based storage networking standard for linking data storage devices and transferring data.
KCS	Keyboard Controller Style An interface that is used between a Baseboard Management Controller and payload processor in Intelligent Platform Management Interface architecture.

Table 1. Commonly used terms (continued)

Term	Definition
KMS	Key Management System A method for activating physical computers or virtual machines on a local network.
LightPath	The light emitting diode (LED) indicators on each resource in the target system provide status about informational and error events, location, and resource faults as well as other immediately required information.
Multitool	The Lenovo service site used to parse inventory logs to html and text views.
OOB	Out-of-Band 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).
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 A computer hardware engineering term involving reliability engineering, high availability, and serviceability design. Computers designed with higher levels of RAS have many features that protect data integrity and help them stay available for long periods of time without failure.
SMM	System Management Module A management device to provide integrated and remote systems management functions for ThinkSystem Dense products.
SOL	Serial Over LAN Protocol for enabling serial communication over TCP/IP using standard IPMI commands.
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 XClarity Essentials software application that applies UpdateXpress System Packs (UXSPs) and individual updates to IBM branded 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.

Publications and related information

Online help document and topic collections

For information about the System x and BladeCenter tools, go to the XClarity Essentials online help site http://sysmgt.lenovofiles.com/help/index.jsp

Publications

For the latest version of the *Lenovo XClarity Essentials OneCLI Users Guide*, go to:
Lenovo XClarity Essentials OneCLI Web site

Supported websites

This section provides support web resources.

- Lenovo XClarity Essentials OneCLI Web site

  Use this Web site to download the Lenovo XClarity Essentials OneCLI tool and documentation.
- Lenovo XClarity Essentials website

  Use this Web site to download tools that support Lenovo branded systems. XClarity Essentials products are also available for download to support IBM branded systems.
- Lenovo Flex System support products and services

  Use this Web page to obtain information about Flex System products.
- System x Support website

  Use this Web site to obtain information about online product information for servers, storage, and networking products.
- Lenovo ServerProven

  Use this Web site to obtain information about the hardware compatibility of ThinkSystem, Flex, System x systems and BladeCenter with applications and middleware.
- Lenovo Service and Support

  Use this Web site to obtain service and support information for Lenovo products.
- Features on Demand on LenovoPress

  Use this Web site to download the *Using Lenovo System x Features on Demand* publication.

Chapter 1. Technical overview

Lenovo XClarity Essentials OneCLI (hereinafter referred to as OneCLI) is a consolidated command line software for managing Lenovo systems. It replaces the previous generation of ToolsCenter tools (Advanced Settings Utility for system configuration, Online Dynamic System Analysis for system inventory collection, and UpdateXpress System Pack Installer for firmware and device driver update).

Users can run multiple OneCLI instances on a client operating system to manage multiple servers remotely.

The following table lists the functions and applications supported by OneCLI.

Note: When necessary, OneCLI will automatically enable the disabled CIM-over-HTTPs and IPMI-over-LAN on BMC, and restore them to the original state before exiting.

Table 2. OneCLI applications

Application	Description
config	• View the current system configuration settings. • Create and change configuration settings for BMC-based systems.
multiconfig	Remotely show or change the system configuration for multiple IMM- or XCC-based servers.
multiinventory	Acquire system information from multi servers.
inventory	• Collect system information for BMC-based systems. • Upload inventory results to Lenovo Web site.
update	• 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.
misc	• Encrypt credentials in plain text file. • Execute the CMOS action. • Collect the FFDC of BMC/CMM/SMM. • View or set the configurations of the front panel USB port. • Manage the system event logs and the BMC event logs. • Manage the LED status of hard disk drive. • Manage the host server OS power for single or multiple servers. • Create, clear, and save the RAID configuration for single or multiple servers. • Restart BMC/CMM/IOM/SMM. • Reseat the blades/switch on CMM. • Restore the BMU status on BMC. • Restore the SMM update progress. • Disable or enable SMM LAN. • Switch over CMM. • Query/enable/disable USB LAN. • Manage virtual medias on BMC. • Disk Secure Erase. • Change BMC password when first login or password expired for single or multiple systems. • Collect system health information for multiple systems. • Configure Raid for multiple systems. • Get disk drive SMART data. • Query/enable/disable cim/ipmilan/ipmikcs connection. • Assert/deassert Remote Physical Presence.

Table 2. OneCLI applications (continued)

Application	Description
diags	Run the diagnostics program of the remote server.
tui	Launch OneCLI interactive menu.
fod	Manage the FoD key.

The following table lists the OneCLI global parameters used in different applications.

Table 3. OneCLI global parameters

Parameter	Description
--bmc/imm, -b	Specify the access information of the target BMC. The format is userid:password@host[:port]. If the --bmc parameter is specified, OneCLI runs in out-of-band mode; otherwise, OneCLI runs in in-band mode. **Note:** Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. If the IPv6 is Link Local Address (LLA), the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name. If the service processor or the SFTP server connects to local network of the OS that runs OneCLI, the service processor, the SFTP server, and the OS shall have the same interface name.
--bmc-cim-port, -p	Specify the CIM port for in-band connection with BMC.
--bmc-password, -w	Specify the BMC password for in-band mode.
--bmc-rest-port	Specify the rest port for in-band connection with BMC.
--bmc-username, -u	Specify the BMC user name for in-band mode.
--configfile	Specify the file containing credentials in plain text. The template file is available in `Sample/credentials_config.json`.
--config	Specify the OneCLI configuration file path.
--check-trust, -C	Verify the SSL certificate by using the HTTPS protocol, or verify the fingerprint of remote host by using the SSH protocol.
--cmm, -c	Specify the CMM information. Format: user:password@IP:port
--help, -h	Specify the help information.
--never-check-trust, -N	Neither verify the SSL certificate by using the HTTPS protocol, nor verify the fingerprint of remote host by using the SSH protocol.
--node, -n	Specify the node index for in-band mode in the multi-node system.
--nolog	Run OneCLI without recording log.
--output, -o	Specify where OneCLI logs are generated. If not specified, the logs of each OneCLI command are saved in the corresponding folder. The format of folder name is logs/Onecli-%PID %-%date%-%time%/. **Note:** The arguments of the --output parameter are case-sensitive.

Table 3. OneCLI global parameters (continued)

Parameter	Description
--quiet, -q	Answer yes for all questions and display less screen output as required.
--redfish	Force to communicate with BMC through Redfish API directly.
--unattended	Specify the unattended mode for managing password and sensitive setting values.

Notes:

- For the parameters input:
  - The userid can contain the following characters: A-Z, a-z, 0-9, -,_.
  - The password can contain the following characters: A-Z, a-z, 0-9, ~`!@#$%^&*()-+={}[]|:;"'<>,?/_.
  - The userid and password cannot contain space or white-space characters.
  - If the password contains special characters, use "" on Windows and ‘’ on Linux to quote these special characters.
  - If the parameter contains path, the path name should not contain reserved characters.
- To start using OneCLI, see Chapter 3 “Downloading and using OneCLI” on page 11.

Chapter 2. Hardware and software requirements

Before using OneCLI, review the hardware and software requirements in this section carefully.

Hardware requirements

OneCLI supports all Lenovo x86 systems and some Lenovo ThinkServer systems. It can also act as a proxy to management IBM system x servers. To run OneCLI, ensure that the systems managed are in one of following tables.

Supported server models

OneCLI supports the following server models:

Table 4. Supported Lenovo systems

Series	Server models	
ThinkEdge	• SE350 V2 (7DA9) • SE360 V2 (7DAM)	• SE450 (7D8T) • SE455 V3 (7DBY)
ThinkSystem	• D2 Enclosure (7X20, 7X22, 7X85) • DX1100U Gateway (7D49) • DX1100U Performance/Capacity (7D4A) • DXN2000 Storage (7D5W) • SD530 (7X21) • SD530 V3 (7DD3, 7DDA) • SD550 V3 (7DD2, 7DD9) • SD555 V3 (7DDM, 7DDN) • SD630 V2 (7D1K) • SD650 DWC (7X58) • SD650 V2 (7D1M) • SD650–N V2 (7D1N) • SD650 V3 (7D7M) • SD650-N V3 (7D7N) • SD650-I V3 (7D7L) • SD665 V3 (7D9P) • SD665-N V3 (7DAZ) • SE350 (7D1X, 7D27, 7Z46) • SN550 (7X16) • SN550 V2 (7Z69) • SN850 (7X15) • SR150/SR158 (7Y54, 7Y55) • SR250 (7Y51, 7Y52) • SR250 V2 (7D7R, 7D7Q) • SR250 V3 (7DCM, 7DCL) • SR258 V2 (7D7S) • SR258 V3 (7DCN) • SR530 (7X07, 7X08) • SR550 (7X03, 7X04) • SR570 (7Y02, 7Y03) • SR590 (7X98, 7X99) • SR630 (7X01, 7X02) • SR630 V2 (7Z70, 7Z71) • SR630 V3 (7D72, 7D73, 7D74) • SR635 (7Y98, 7Y99)[1]	• SR635 V3 (7D9G, 7D9H) • SR645 (7D2X, 7D2Y) • SR645 V3 (7D9C, 7D9D) • SR650 (7D4K, 7X05, 7X06) • SR650 V2 (7D15, 7Z72, 7Z73) • SR650 V3 (7D75, 7D76, 7D77) • SR655 (7Y00, 7Z01)[1] • SR655 V3 (7D9E, 7D9F) • SR665 (7D2V, 7D2W) • SR665 V3 (7D9A, 7D9B) • SR670 (7D4L, 7Y36, 7Y37, 7Y38) • SR670 V2 (7Z22, 7Z23) • SR675 V3 (7D9Q, 7D9R) • SR850 (7X18, 7X19) • SR850 V2 (7D31, 7D32, 7D33) • SR850 V3 (7D96, 7D97, 7D98) • SR850P (7D2F, 7D2G, 7D2H) • SR860 (7X69, 7X70) • SR860 V2 (7Z59, 7Z60, 7D42) • SR860 V3 (7D93, 7D94, 7D95) • SR950 (7X11, 7X12, 7X13) • SR950 V3 (7DC4, 7DC5, 7DC6) • ST50 (7Y48, 7Y49)[3] • ST50 V2 (7D8J, 7D8K)[3] • ST58 V2 (7D8L)[3] • ST250 (7Y45, 7Y46) • ST250 V2 (7D8F, 7D8G) • ST250 V3 (7DCF, 7DCE) • ST258 V2 (7D8H) • ST258 V3 (7DCG) • ST550 (7X09, 7X10) • ST558 (7Y15, 7Y16) • ST650 V2/ST658 V2 (7Z74, 7Z75, 7Z76) • ST650 V3 (7D7A, 7D7B) • ST658 V3 (7D7C)

Table 4. Supported Lenovo systems (continued)

Series	Server models	
ThinkServer	• DN8848 V2 (7D6A, 7D8U)[2] • SE550 V2 (7D68)[2] • SR590/SR588 (7D4M) • SR588 V2/SR590 V2 (7D53)[2]	• SR660 V2/SR668 V2 (7D6L)[2] • SR860P (7D5D) • WH5900 Appliance (7D5V)
WenTian	• WA5480 G3/WA5488 G3 (7DE7)[2] • WR3220 G2/WR3228 G2 (7DEC)[2]	• WR5220 G3/WR5228 G3 (7D8Y)[2]
Solutions	• ThinkAgile VX Series (7D2Z, 7D43, 7DDK, 7Y11, 7Y12, 7Y13, 7Y14, 7Y91, 7Y92, 7Y93, 7Y94, 7Z12, 7Z13, 7Z58, 7Z62, 7Z63) • ThinkAgile MX Series (7D19, 7D1B, 7D1H,7D5R, 7D5S, 7D5T,7D66, 7D67, 7D6B, 7DGG, 7Z20)	• ThinkAgile HX Series (7D0W, 7D0Y, 7D0Z, 7D11, 7D20, 7D2T, 7D52, 7D5U, 7X81, 7X82, 7X83, 7X84, 7Y87, 7Y88, 7Y89, 7Y90, 7Y95, 7Y96, 7Z02, 7Z03, 7Z04, 7Z05, 7Z08, 7Z09, 7Z82, 7Z84, 7Z85)
System x	• HX 3310 Appliance (8693) • HX 5510/7510 Appliance (8695) • nx360 M5 (5465, 5467) • x240 Compute Node (7162, 2588) • x240 M5 Compute Node (2591, 9532) • x280 X6/x480 X6/x880 X6 Compute Node (4258, 7196)[4] • x440 (7167, 2590)	• x3250 M6 (3633, 3943) • x3500 M5 (5464) • x3550 M5 (5463, 8869) • x3650 M5 (5462, 8871) • x3750 M4 (8753) • x3850 X6/x3950 X6 (6241)[4]
Legacy ThinkServer	• RS160 • TS150	• TS460

1. This server model is AMD one socket processor-based server. For the specific commands, refer to Appendix B “Examples of OneCLI commands on SR635/SR655” on page 211. For this server, OneCLI only supports:
   - In-band inventory collection
   - BMC/UEFI firmware update
     - For the in-band update, BMC 4.44 AMBT26O is required.
     - For the out-of-band update, BMC 3.56 AMBT20Q is required.
   - In-band adapter firmware and device driver update
   - In-band LXPM update on Linux
   - BIOS setting configuration and save/restore
   - BMC partial setting configuration
   - Configuration with batch command
   - VPD information update
   - Out-of-band FFDC collection
   - In-band RAID configuration
2. For supported features and limitations of this server model, refer to Appendix C “OneCLI features supported on the ThinkServer/WenTian servers” on page 213.
3. OneCLI only supports in-band inventory collection with the OneCLI inventory command in this server model. For more information, refer to *Lenovo XClarity Essentials OneCLI User Guide for ThinkServer*.
4. This server model supports both the single node and the multiple node.

Note: The Legacy ThinkServer severs are only supported by OneCLI inventory application in in-band mode. For more information, refer to *Lenovo XClarity Essentials OneCLI User Guide for ThinkServer*.

Table 5. Supported IBM systems

Series	Server models	
System x	• dx360 M4 server (7912, 7913) • dx360 M4 Water Cooled server (7918, 7919) • HS23 (7875, 1929) • HS23E (8038, 8039) • nx360 M4 (5455) • x220 Compute Node (7906, 2585) • x222 Compute Node (7916) • x240 Compute Node (7863, 8737, 8738, 8956) • x280 X6/x480 X6/x880 X6 (4259, 7903)[1] • x440 Compute Node (7917) • x3100 M4 (2582) • x3100 M5 (5457) • x3250 M4 (2583)	• x3250 M5 (5458) • x3300 M4 (7382) • x3500 M4 (7383) • x3530 M4 (7160) • x3550 M4 (7914) • x3630 M4 (7158, 7159) • x3650 M4 (7915) • x3650 M4 BD (5466) • x3650 M4 HD (5460) • x3750 M4 (8722, 8733) • x3750 M4 (8752, 8718) • x3850 X5 (7145, 7146) • x3850 X6/x3950 X6 (3837, 3839)[1] • x3950 X5 (7143, 7191)
1. This server model supports both the single node and the multiple node.		

Server options

OneCLI supports options provided by the following vendors:

- Broadcom
- Intel
- Marvell
- Mellanox
- Microchip

Disk space requirements

To install OneCLI, the system must have a minimum of 300 MB of disk space.

Memory requirements

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

Software requirements

The information in this section describes the software requirements of OneCLI.

To run OneCLI, users should have administrator or root-equivalent operating system privileges for in-band functions running inside server host OS. For remote functions such as update package acquisition, out-of-band update, non-root account is acceptable.

Supported operating systems

Use the information in this section to identify operating systems supported by OneCLI.

Table 6. Operating systems supported by OneCLI

Operating systems	Editions
Windows	**Microsoft Windows Server 2022 Editions** • Microsoft Windows Server 2022 (x64) • Azure Stack HCI (Versions 23H2, 22H2, 21H2, 20H2 for ThinkAgile servers)

Table 6. Operating systems supported by OneCLI (continued)

Operating systems	Editions
	Microsoft Windows Server 2019 Editions • Microsoft Windows Server 2019 (x64)
	Microsoft Windows Server 2016 Editions • Microsoft Windows Server 2016 (x64) • Microsoft Windows Server, version 1709 (x64) • Microsoft Windows Server, version 1803 (x64)
	Microsoft Windows Server 2012 Editions • Microsoft Windows Server 2012 (x64) • Microsoft Windows Server 2012 R2 (x64)
	Microsoft Windows 10/11 Pro for Workstations, version 21H2/22H2[Note 1, 2]
Linux	**Red Hat** • Red Hat Enterprise Linux 9 Server(x64) Editions (up to U3) • Red Hat Enterprise Linux 8 Server (x64) Editions (up to U9) • Red Hat Enterprise Linux 7 Server (x64) Editions (up to U9)
	SUSE • SUSE Linux Enterprise Server 15 (x64) (up to SP5) • SUSE Linux Enterprise Server 12 (x64) (up to SP5)
VMware Customized ESXi image	• ESXi 6.7 • ESXi 6.5 (up to U3) • ESXi 6.0 (up to U3) • ESXi 5.5 (up to U3)
Ubuntu[3]	• Ubuntu 22.04 LTS • Ubuntu 20.04 LTS • Ubuntu 18.04 LTS

Notes:
1. OneCLI does not support Hyper-V windows and nano.
2. To ensure OneCLI could successfully run on SR635/SR655, user should install the RNDIS driver and enable RNDIS driver by following the steps in https://sysmgt.lenovofiles.com/help/topic/tsm/rndis_settings.html. OneCLI did not support the `usblan enable/disable/query` commands on SR655 with Win10/11 installed.
3. OneCLI only supports config and BMC-based log collection on Ubuntu.

Linux System cmd used by OneCLI

This section describes the required linux system cmds that OneCLI invokes.

These cmds shall be added to system path probably. Not all of the cmds block OneCLI function, but some warning messages are print on the screenshot. for example:
- Requires xdpyinfo. Receive message: sh: xdpyinfo: command not found.

The examples of cmds:
- Module-related cmds: modinfo modprobe lsmod
- Network-related cmds: ip ifconfig ethtool route hostname lsmod
- Other cmds: hwinfo cat date diskpart /bin/ps ls lspci xpdyinfo dmidecode

Required device drivers

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

The following list provides necessary device drivers and utilities when running OneCLI to collect system information.

- 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 OneCLI. If it is not loaded, run `modprobe sg`.
- To collect Emulex HBA information from a system with Linux host OS, the emulex driver and utility (corekit) must be installed. Run `lsmod` and verify that lpfc and lpfcdfc are loaded before running OneCLI.
- To collect Service Processor logs, configuration, and environmental data, the appropriate Service Processor driver must be installed. These drivers are available to download from: http://www.lenovo.com/support.
- To update firmware using OneCLI on 64-bit Linux operating systems, the 32-bit compatibility library, `compat-libstdc++`, must be installed. Users 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 collected by OneCLI, it is recommended to use one of the following Web browsers:

- Internet Explorer
- Chrome
- Firefox

Firewalls and proxy servers

Some functions of OneCLI, including update acquire, inventory upload, and FoD, require access to the Internet. Configure the firewall (if any) to enable OneCLI to perform these operations. If the management server does not have direct access to the Internet, configure XClarity Administrator to use a proxy server.

Ensure that the following DNS names and ports are open on the firewalls:

Table 7. Required Internet connections

OneCLI functions	DNS names	Ports	Protocols
update acquire	download.lenovo.com support.lenovo.com supportapi.lenovo.com	443 80	HTTPS HTTP
inventory upload	logupload.lenovo.com/BLL/Logupload.ashx	443 80	HTTPS
fod acquire/ generate/get/ replace	fod.lenovo.com/lkms/restapi/service fod.lenovo.com/lkms/angular/app/pages/index.htm#/welcome	443 80	HTTPS HTTP

Ports availability for the managed BMC, CMM, and SMM targets

If managed targets (such as compute node/rack server BMC, CMM, or SMM) are behind a firewall and if users intend to manage those devices with OneCLI that is outside of that firewall, all ports should be involved with communications between OneCLI and the baseboard management controller in each managed device are open.

Managed target	OneCLI case or cmd	Ports and protocols
IMM2	Most of OneCLI cases	IPMI with 623 CIM over HTTPS with 5989
XCC	Most of OneCLI cases	IPMI with 623 CIM over HTTPS with 5989 Rest over HTTPS with 443
XCC	Raid config	SSH with 22
BMC on ThinkServer	Raid config	Rest over HTTPS with 443
XCC	Platform update/secure erase	Port forwarding of 6990
BMC on ThinkSystem SR635/SR655	ffdc/config/update	IPMI with 623 Rest over HTTPS with 443
SMM	All SMM cases	IPMI with 623
CMM	All CMM cases	CIM over HTTPS with 5989

Note: Some management ports can be customized. If users customized the value of a management port instead of using the default port, and did not specify the customized port in the command-line interface, OneCLI will try the default port first, which definitely fails. In this case, OneCLI will report an error and use the default port of another service to acquire the customized port value. This process needs some time and might cause delay.

Chapter 3. Downloading and using OneCLI

The topics in this section describe how to download and use OneCLI. OneCLI is packaged as the compressed file (zip file for Windows and tgz file for Linux), which can be used by being decompressed, be removed by being deleted, and be upgraded by being replaced with the new files.

From V2.5.0, OneCLI supports to collect the inventory and service data by double-clicking the self-extracting executable file. This executable file automatically runs the OneCLI command to collect inventory and service data. After this procedure is completed, it automatically cleans up the files while leaving the execution result and output log at the default designated directory.

The extracted executable file has the same content as the compressed file. However, self-extracting and cleaning up at every invocation might bring system overload, so it is not recommended to use this feature at regular basis. This feature is suitable for the scenario that users have limited time to learn about the OneCLI parameters or hurry to troubleshoot a failing system.

Lenovo recommends the compressed file for regular usage. Considering the security, it is also recommended to decompress the files to a directory only accessible to administrative users.

The following tables show the formats of the compressed file and the self-extracting executable file for Windows and Linux:

Table 8. The format of compressed file and self-extracting executable file for Windows

Operating system	Compressed file	Self-extracting executable file
Microsoft Windows	lnvgy_utl_lxce_oneclixxx-x.x.x_ winsrv_x86-64.zip	lnvgy_utl_lxceb_oneclixxx-x.x.x_ winsrv_x86-64.exe

Table 9. The format of compressed file and self-extracting executable file for Linux

Operating system	Compressed file	Self-extracting executable file
SUSE Linux Enterprise Server Edition	lnvgy_utl_lxce_oneclixxx-x.x.x_linux_ x86-64.tgz	lnvgy_utl_lxceb_oneclixxx-x.x.x_ linux_x86-64.bin
Red Hat Enterprise Linux Edition	lnvgy_utl_lxce_oneclixxx-x.x.x_linux_ x86-64.tgz	lnvgy_utl_lxceb_oneclixxx-x.x.x_ linux_x86-64.bin
Notes: • From V2.6.0, OneCLI provides the RPM package for Red Hat Enterprise Linux 6 and its later versions. By default, OneCLI RPM is installed in `/opt/lenovo/lnvgy-utl-lxce-onecli`. After installing OneCLI RPM, users can run OneCLI by inputting `OneCLI`. • To install OneCLI RPM, run `rpm -ivh lnvgy_utl_lxce_oneclixxx-x.x.x_linux_x86-64.rpm`. • To update OneCLI RPM, run `rpm -Uvh lnvgy_utl_lxce_oneclixxx-x.x.x_linux_x86-64.rpm`.		

Downloading and using OneCLI on Windows

This section describes how to download and use OneCLI on Windows.

Procedure

Step 1. Download the OneCLI zip file from Lenovo XClarity Essentials OneCLI Web site to the target server or to the system administrator workstation.

Step 2. Copy the OneCLI zip file to the desired directory.

Step 3. Decompress the OneCLI zip file by double-clicking it in Windows file explorer or using a decompression software.

Step 4. Right-click Windows Command Prompt and select **Run as administrator** to launch Windows Command Prompt.

Step 5. Switch to the directory in step 2, and run `OneCli.exe`. All options are displayed.

Collecting inventory and service data on Windows

This section describes how to collect inventory and service data on Windows. This procedure might take 15 – 45 minutes. The output result will be stored in the `%SystemDrive%\Lenovo_Support` directory. By default, `%SystemDrive%` is the C drive.

Procedure

Step 1. Download the self-extracting executable file from Lenovo XClarity Essentials OneCLI Web site to the target server.

Note: The file extension is EXE on the download page.

Step 2. In Windows file explorer, right-click the executable file, and select **Run as administrator** to launch the program. The inventory and service data are collected.

Downloading and using OneCLI on Linux

This section describes how to download and use OneCLI on Linux. The procedure is the same for both Red Hat and SUSE platforms.

Procedure

Step 1. Download the OneCLI zip file from Lenovo XClarity Essentials OneCLI Web site to the target server or to the system administrator workstation.

Step 2. Copy the tgz file to the desired directory and decompress it by running the following shell command.

```
tar -xvf lnvgy_utl_lxce_oneclixxx-xxx.tgz
```

Step 3. Run `./OneCli`. All options are displayed.

Collecting inventory and service data on Linux

This section describes how to collect inventory and service data on Linux. This procedure might take 15 – 45 minutes. The output result will be stored in the `/var/log/Lenovo_Support` directory.

Procedure

Step 1. Download the self-extracting executable file from Lenovo XClarity Essentials OneCLI Web site to the target server.

Note: The file extension is BIN on the download page.

Step 2. Run the following shell command to make the file executable.

```
chmod +x lnvgy_utl_lxceb_oneclixxx-xxx.bin
```

Step 3. Run the following command to collect inventory and service data.

```
./lnvgy_utl_lxceb_oneclixxx-xxx.bin
```

OneCLI applications and commands

Applications represent major function areas that OneCLI supports. OneCLI currently has the following applications:

Note: Commands are used with applications. Each application supports a different set of commands.

Table 10. OneCLI applications and commands

Application	Command		
config	• show • showvalues • showdefault • compare • comparedefault • comparepending • showdes • showgroups	• nodes • createuuid • delete • loaddefault • set • backup • batch	• replicate • restore • save • deletecert • export • generate • import
multiconfig	• batch • replicate	• restore • set	• show
inventory	• formatlog • getdevices	• getinfor	• upload
update	• acquire • canceltask • checktask • compare	• flash • iflash • multicompare • multiflash	• multiscan • scan • startstaged
misc	• bmcpassword • cmos • edgeserver • encrypt • ffdc • fpusb • fwdeviceorder • hddlocate • hostinterface • logmgr • multibmcpassword • multiffdc • multiinventory • multiraid	• multiospower • multiservicedata • multisyshealth • multivm • ospower • portctrl • raid • rebootbmc • rebootcmm • rebootiom • rebootsmm • reseatblade • reseatcmm • reseatswitch	• restorebmu • restoresmm • rpp • serase • servicedata • servicelog • smartdata • smmlan • switchcmm • sysguard • syshealth • usblan • vm
diags	• run		
tui	N/A		
fod	• acquire • export • generate • get	• install • replace • report • showppin	• uploadreport • uninstall • multifod • multiinventory

Application and command syntax

/OneCli <or> OneCli.exe <application> <command> [command option] [connect option]

Note: `./OneCli` is for Linux, and `OneCli.exe` is for Windows.

To run OneCLI application, on a command line, enter the command string and press `Enter`.

IBM system support

The OneCLI only supports Lenovo systems. However, OneCLI supports redirecting to ToolsCenter products (ASU/UXSPi/DSA) for IBM systems, but does not supports the update acquire function.

OneCLI supports downloading the update packages from IBM Web site for IBM servers by setting "ACQUIRE_REPOSITORY=BOTH" in the `global.config` file. The default value is "NONE", but users can download the update packages from both Lenovo and IBM Web sites by setting the value to "BOTH".

If a OneCLI command is issued against a supported IBM system, it automatically invokes the corresponding ToolsCenter products (ASU/UXSPi/DSA) according to their binary path specified in OneCLI config file. If ToolsCenter product paths are not correctly specified, an error message displays, indicating the ToolsCenter version required by the IBM hardware.

Notes:
- The corresponding ToolsCenter product binary should be available (ASU for configuration, UXSPi for update, DSA for inventory collection).
- The path to the earlier ToolsCenter version must be specified in the `global.config` file.
- For commands related to the Advanced Settings Utility (ASU), the ASU binary file must be unzipped before commands can be directed to it (for example; "unzip lnvgy_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.

OneCLI commands that support translation to earlier ToolsCenter versions for use with IBM products are listed in the following.

Table 11. Commands and parameters supporting IBM hardware

Application	Commands	Parameters
config	• batch • comparedefault • createuuid • delete • deletecert • export • generate • import • loaddefault • nodes • replicate • restore • save • set • show • showdefault • showdes • showgroups • showvalues	N/A
inventory	• getinfor • formatlog • upload	• --output <dir> • --srcdata <file> • --upload multitool • --htmlreport • --ffdc • --hldec • --proxy user: pwd@addr:port • --bmc
update	• compare • flash	• --backup • --type • --forceid • --dir • --excludeid • --includeid • --scope • --noscan • --xml • --esxi • --mt •

Lenovo XClarity Essentials OneCLI to IBM UXSPi command comparison

The following table compares commands and parameters used by the Lenovo XClarity Essentials OneCLI and IBM UXSPi tools.

Table 12. Lenovo XClarity Essentials OneCLI to IBM UXSPi command comparison

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

Table 12. Lenovo XClarity Essentials OneCLI to IBM UXSPi command comparison (continued)

XClarity Essentials OneCLI Command	XClarity Essentials OneCLI parameter	UXSPi command	UXSPi parameter
	--backup		--update-args="IMM:--user=*userid* --password=*pwd*,UEFI:--backup"
	--disable-imm-lan		Not supported.
	--ostype		Not supported.
	--osarch		Not supported.
	--queryxml		Not supported.
	--comparexml		Not supported.
	--type fw		-F, --firmware
	--type dd		-D, --drivers
	--scope *Latest*/*Individual*		-L, --latest
	--scope *UXSP*/*Default*		Default (UXSP)
	--includeid		-i *update-ids*, --include=*update-ids*
	--excludeid		-e *update-ids*, --exclude=*update-ids*
	--forceid		-f *update-ids*, --force=*update-ids*,-o *update-ids* **Note:** The -o parameter works only with device drivers and has no functional impact on firmware.
	--dir		-l UXSP, --local=UXSP
	--esxi		--vmware-esxi=*url*
	--output		Not supported.
	--xml		--xml
	--log		Not supported.
	--bmc		Not supported.

Example of IBM script support

```
OneCli.exe update flash --dir c:\ --scope individual --includeid ibm_fw_dsa_dsala7o-9.63_anyos_32-64
```

Chapter 4. Configuration

The topics in this section describe how to use the Lenovo XClarity Essentials OneCLI config application and commands to view the current system configuration settings and modify BMC, UEFI and I/O settings. The saved configuration information can be used to replicate to another system or restore to current system. 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 19
- “Commands that change or set system configuration settings” on page 31
- “Commands that save, replicate, and restore configuration settings” on page 35
- “Commands for certificate management” on page 41
- Chapter 5 “Commands for application multiconfig” on page 51

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 13. Configuration setting components

Component	Required/Optional	Description
groupname	Required	• 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	• 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	• 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 17.

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 provides the number of instances.

Single instance settings 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 setting.

Users can use the `show` or `set` commands for single instance settings. This list provides some examples of single instance settings/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 a BMC system, then users will see three *loginid* settings as shown in the following list.
- IMM.Loginid.1
- IMM.Loginid.2
- IMM.Loginid.3

However, if a BMC 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 18.

To create an instance, use the `set` command. If an instance does not 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 29.

All of the settings in a record are created or deleted as a group. To create an instance of a record, users 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 18 and “set command” on page 34.

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 14. Commands that display configuration settings

Command	Description
compare	Compare the current values with the specified values for one or more settings. For more information, refer to “compare command” on page 22.
comparedefault	Compare the default and the current setting values. For more information, refer to “comparedefault command” on page 23.
comparepending	Compare the current values and the pending values. For more information, refer to “comparepending command” on page 24.
show	View the value of one or more settings. For more information, refer to “show command” on page 24.
showdes	View the details of settings. For more information, refer to “showdes command” on page 25.
showdefault	View the default setting values. For more information, refer to “showdefault command” on page 27.
showgroups	Display groups of settings. For more information, refer to “showgroups command” on page 28.
showvalues	Display possible setting values. For more information, refer to “showvalues command” on page 29.
nodes	Obtain nodes. For more information, refer to “nodes command” on page 30.

Setting classes

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

Commands that support classes include: `show`, `showvalues`, `showdefault`, `comparedefault`, `showdes`, and `loaddefault`.

This table lists setting classes and their descriptions.

Table 15. Settings classes

Class	Description	Example
all	Includes all of the settings.	
authentication	All of the settings classified as authentication settings, including: • 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. `OneCli.exe config showvalues authentication`
backupctl	• Lists all of the settings that are not restored when running 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 39. • Class filter for the `show`, `showvalues`, and `showdefault` commands.	This example lists the settings that are not restored if saved. `OneCli.exe config show backupctl`
noreplicate	• Lists all of the settings that are not replicated when running the `replicate` command. These settings are unique to each system. • Class filter for the `show`, `showvalues`, and `showdefault` commands.	This example lists the settings that are not replicated. `OneCli.exe config show noreplicate`
password	• 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. `OneCli.exe config showvalues password`
readonly	• Includes all of the settings that are read-only. • These settings cannot be change.	
writeonly	• Includes all of the settings that are write-only. • These settings can be changed but cannot be read, for example, passwords.	

The output of commands that display configuration settings

The format of most outputs is: %settingname%=%settingvalue%. For example:
- `IMM.SMTP_Authentication=Disabled`
- `IMM.SMTP_UserName=`

  Note: The value is empty string "".

The following are some examples of the output of the `showvalues` command:
- `IMM.PowerRestorePolicy=Always Off=<Restore>=Always On`

  Note: The possible value is separated by "=". The value contained in "<>" is the default value.
- `IMM.ManufacturingCertInfo=char[] minchars=0 maxchars=47 pattern=^[a-zA-Z0-9./+]{0,47}$default=""`
- `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 read-only if the result of the following expression is true: `( ! ( OperatingModes.ChooseOperatingMode == Custom Mode ) )`

Note: The `showvalues` command also shows the sentence to check whether the setting is suppressed/grayed/read-only or not.

- `IMM.SSL_HTTPS_SERVER_CSR=*generate=export`

  Note: This is for certification management settings. The output of the `comparedefault` command is `IMM.PwDiffChar=0<2>`. The value contained in "<>" is the default value and the other one is the current value.

Configuring the interactive mode

Users can use the interactive mode by configuring the --interactive (-i) option. In this mode, OneCLI supports to automatically configure the setting name after users press Tab.

The --interactive (-i) option supports the following commands: `set`, `show`, `showvalues`, `showdes`, and `showdefault`.

Do the following to configure the interactive mode:

Procedures

Step 1. Input "OneCli config show –i" to run the `show` command with the --interactive (-i) option, or input `OneCli config set –i` to run the `set` command with the --interactive (-i) option. The following information will be displayed:

```
Welcome to Auto Completion!
Tips:
1. Enter "exit()" to quit OneCLI.
2. Hit key "ESC" to reset all already entered options.
Now please follow wizard to complete options of command line.
setting name:
```

Step 2. Input the setting name:

a. Input part of setting name, for example, IMM.D.

b. Press Tab, and all setting names will be displayed on OneCLI. The following is the example of all setting names:

```
IMM.D
IMM.DeploymentBoot
IMM.DHCPConfig_Hostname
IMM.DHCPConfig_IP
IMM.DHCPConfig_GatewayAddress
IMM.DHCPConfig_Subnet
IMM.DHCPConfig_DomainName
IMM.DHCPConfig_DNS_Primary
IMM.DHCPConfig_DNS_Secondary
IMM.DHCPConfig_DNS_Tertiary
IMM.DNSSettings_Interface
IMM.DNSSettings_preference
IMM.DNSSettings_ServerIp1
IMM.DNSSettings_ServerIp2
IMM.DNSSettings_ServerIp3
IMM.DDNSSettings_Interface
IMM.DDNSSettings_preference
IMM.DDNSSettings_CustomDomain
setting name:
IMM.D
```

c. Input the entire setting name.

Note: The exclusive setting name will be input automatically, for example, IMM.DeploymentBoot.

Step 3. Do one of the following:

- If “output directory:” is displayed, input the output directory.
- To input the default value, press Enter.

Note: After OneCLI runs the entire command, the following outputs will be displayed:

```
output directory:
Invoking SHOW command
Connected to BMC at IP address 10.240.194.225 by IPMI
IMM.DeploymentBoot=Disabled
Success.
```

compare command

Use the `compare` command to compare the current values with the specified values for one or more settings.

compare command syntax

```
OneCli.exe config compare [command option] [common options]
```

Table 16. compare command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--file	Optional	Specify the file name, contains <setting>=<value> from command <save>.
--interactive, -i	Optional	Run OneCLI in the interactive mode.
--kcs	Optional	Force to use IPMI over KCS local interface.
--pending	Optional	Compare the current value and the pending value for one or more settings.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --config • --configfile • --check-trust, -C • --nolog • --node, -n • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Notes:

- When using with the **--pending** option, the `compare` command can be used as the `comparepending` command, and the format is `comparepending` or `compare --pending`.
- For some settings, the updated values are displayed in the pending list and will take effect after the reboot.

Example of the compare command

Compare the pending value with the current value:

```
onecli.exe config compare --pending --bmc USERID:PASSWORD@XX.XX.XX.XX
```

Compare the pending value with saved values in the specified file:

```
onecli.exe config compare --file save.txt --bmc USERID:PASSWORD@XX.XX.XX.XX
```

comparedefault command

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

comparedefault command syntax

```
OneCli.exe config comparedefault [command option] [<options>]
```

Table 17. comparedefault command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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

- The value contained in the <> is the default value, while the other value is current setting value. For example: `IMM.PwDiffChar=0<2>`, 0 is the current value and 2 is the default value.

Example of the comparedefault command

```
OneCli.exe config comparedefault --bmc userid:password@host
```

comparepending command

Use the `comparepending` command to compare the current values and the pending values of one or more settings.

comparepending command syntax

```
OneCli.exe config comparepending [command option] [<options>]
```

Table 18. comparepending command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the comparepending command

```
onecli.exe config comparepending --bmc USERID:PASSWORD@XX.XX.XX.XX
```

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] [<options>]
```

Table 19. show command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.
--kcs	Optional	Force to use IPMI over KCS local interface.
--smm	Optional	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --never-check-trust, -N • --node • --nolog • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the show command

In the normal mode:

```
onecli.exe config show --bmc USERID:PASSWORD@XX.XX.XX.XX
```

In the interactive mode:

```
onecli.exe config show -i
```

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 users access when pressing `F1` during startup.

showdes command syntax

```
OneCli.exe config showdes [command option] [<options>]
```

Table 20. showdes command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.
--kcs	Optional	Force to use IPMI over KCS local interface.
--smm	Optional	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the showdes command

In the normal mode:

```
onecli.exe config showdes imm --bmc USERID:PASSWORD@XX.XX.XX.XX
```

In the interactive mode:

```
onecli.exe config showdes -i
```

Example of the description of a setting:

```
IMM.IMMInfo_Location: IMM.IMMInfo_Location:XCC Location
Help for XCC Location
---------------------
Configure the "XCC Information", "location" setting.
```

Notes:
- Users can enter a maximum of 47 characters for this setting.
- Special characters @`"',{}#$%^*()!~:;?[]=|+&<> are not allowed.

showdefault command

Use the `showdefault` command to view the default values of one or more settings.

showdefault command syntax

```
OneCli.exe config showdefault [command option] [<options>]
```

Table 21. showdefault command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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

Example of the showdefault command

In the normal mode:

```
OneCli.exe config showdefault
```

In the interactive mode:

```
onecli.exe config showdefault -i
```

showgroups command

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

showgroups command syntax

```
OneCli.exe config showgroups [<options>]
```

Notes:

- The `showgroups` command does not require any command options.
- Groups vary on different systems. See the following for some sample groups. The following is an example of the groups list:
  - UEFI
    - AdvancedRAS
    - BackupBankManagement
    - DevicesandIOPorts
    - DiskGPTRecovery
    - LegacySupport
    - Memory
    - Node1
    - OperatingModes
    - POSTAttempts
    - Power
    - Processors
    - SystemRecovery BootModes BootOrder
  - BootModes
  - BootOrder
  - IMM
  - BroadcomGigabitEthernetBCM5720-910
    - BroadcomGigabitEthernetBCM5720-000AF72567E6
    - BroadcomGigabitEthernetBCM5720-000AF72567E7 IMM
  - PXE
  - SYSTEM_PROD_DATA
  - SecureBootConfiguration
  - UEFIMisc
  - VPD
  - iSCSI

Table 22. nodes command specific parameters

Parameter	Required/Optional	Notes
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the showgroups command

```
OneCli.exe config showgroups --bmc userid:password@host
```

showvalues command

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

showvalues command syntax

```
OneCli.exe config showvalues [command option] [<options>]
```

Table 23. showvalues command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--instances	Optional	Display the instances settings.
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.

Table 23. showvalues command specific parameters (continued)

Parameter	Required/Optional	Notes
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the showvalues command

In the normal mode:

```
onecli.exe config showvalues
```

In the interactive mode:

```
onecli.exe config showvalus -i
```

nodes command

Use the `nodes` command to obtain the available nodes in the current system.

nodes command syntax

```
OneCli.exe config nodes [<options>]
```

Notes:
- The `nodes` command does not require any command options.
- The `nodes` command can be used on a multi-node or a single-node system.
- On a single node system, 1 is always reported.
- On a multi-node system, the available number of nodes is reported.

Table 24. nodes command specific parameters

Parameter	Required/Optional	Notes
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the nodes command

```
OneCli.exe config nodes
```

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 25. Commands that change and set configuration settings

Command	Description
createuuid	Generate and set Universally Unique Identifier. For more information, refer to “createuuid command” on page 31.
delete	Delete a setting instance group. For more information, refer to “delete command” on page 32.
loaddefault	Set the setting value to the default value. For more information, refer to “loaddefault command” on page 33.
set	Change the setting value. For more information, refer to “set command” on page 34.

createuuid command

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

createuuid command syntax

```
OneCli.exe config createuuid <uuidsetting> [<options>]
```

Table 26. createuuid command specific parameters

Parameter	Required/Optional	Notes
uuidsetting	Required	The setting name is: SYSTEM_PROD_DATA. SysInfoUUID
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Note: The value of the uuid created by the `createuuid` command depends on the time slot and the system information. Therefore, each time running the command, users will get different setting values.

Example of the creatuuid command

```
OneCli.exe config createuuid SYSTEM_PROD_DATA.SysInfoUUID --bmc userid:password@host
```

Example of the UUID value got from createuuid command

```
The uuid for SYSTEM_PROD_DATA.SysInfoUUID value is 80b958fb5671b70127e57a51e2e00994
```

delete command

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

delete command syntax

```
OneCli.exe config delete <setting_instance> [<options>]
```

Table 27. delete command specific parameters

Parameter	Required/Optional	Notes
setting_instance	Required	A unique value is required for this parameter.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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 --bmc userid:password@host
```

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] [<options>]
```

Table 28. loaddefault command specific 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, such as IMM, UEFI, and so on. **setting name** The setting name value.
--exclude	Optional	Specify the settings group name not be loaded to default. The valid values include: login_settings, network_settings, and login_network_settings.
--kcs	Optional	Force to use IPMI over KCS local interface.

Table 28. loaddefault command specific parameters (continued)

Parameter	Required/Optional	Notes
--post	Optional	This parameter is only for UEFI settings. By using this parameter, users can load default settings in the same way as using the “Post Load Default Settings” function in UEFI (F1) menu. The changed settings take effect after restarting host server.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the loaddefault command

In the normal mode:

```
onecli.exe config loaddefault BootModes.SystemBootMode
```

In the post load setup (default as UEFI menu):

```
onecli.exe config loaddefault UEFI --post
```

set command

Use the `set` command to change the setting value. If the instance does not exist or the instance value is less than or equal to the allowed maximum value, users can create an instance by using the `set` command.

Notes:
- For more information about instances, see “Instance and non-instance settings” on page 17.
- If the settingvalue includes some blank, user needs to put the value in quotes.
- If the settingname is a valid setting instance which is not exist before, the set command will create this setting instance.
- If the settingvalue is not be input, OneCLI will use security mode to change the setting value.
- If users modify the account connecting to BMC when running the `set` command, the following error message might be displayed：
  `Failed to get update status due to BMC internal error.`

set command syntax

```
OneCli.exe config set <settingname> [settingvalue] [common options]
```

Table 29. set command specific parameters

Parameter	Required/Optional	Notes
--force	Optional	Run Redfish config `set` command without checking the setting values.
--interactive, -i	Optional	Configure the OneCLI interactive mode. In this mode, OneCLI guides user to input the parameter step by step. Users can also click **Tab** to generate the configuration setting name.
settingname	Required	Use the `set` command to change the setting value. Users should input the **settingname** parameter behind the `set` command in command line.
settingvalue	Optional	Specify the changed setting value. Users should input the **settingvalue** parameter behind the setting name in command line. **Notes:** • If the **settingvalue** is blank, enter a value in quotes. • If the **settingvalue** is not specified, OneCLI will change the setting value in the security mode. For more information, refer to "Changing setting values in security mode" on page 170.
--smm	Optional	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in square brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.

Example of the set command

```
OneCli.exe config set IMM.DST Off --bmc userid:password@host
```

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, backup, and restore system configuration settings and how to run commands in batch mode.

Table 30. Commands that save, replicate, and restore a system

Command	Description
backup	Backup all configuration settings, or back up SED AK on SE350 V2 and SE360 V2 by using the `--redfish` parameter. For more information, refer to "backup command" on page 36.
batch	Run multiple `config` commands in a batch file. For more information, refer to "batch command" on page 37.
replicate	Replicate the settings to the other system. For more information, refer to "replicate command" on page 38.
restore	Restore a saved setting value to the current system. For more information, refer to "restore command" on page 39.
save	Save the current settings. For more information, refer to "save command" on page 40.

backup command

Use the `backup` command to backup all configuration settings, or back up SED AK on SE350 V2 and SE360 V2 by using the `-redfish` parameter.

backup command syntax

OneCli.exe config backup [setting] --file [arg] –passphrase[arg] [common options] --redfish

Table 31. backup command specific parameters

Parameter	Required/Optional	Notes
--file	Required	Specify the key file name for restoring Self-encrypting Drive Authentication Key (SED AK) or configuration settings, which contains the enciphered messages.
--kcs	Optional	Force to use IPMI over KCS local interface.
--passphrase	Required	The passphrase to backup and restore SED AK or configuration settings in a file.
• --bmc, -b • --bmc-username, -u • --bmc-password, -w • --bmc-cim-port, -p • --config • --configfile • --check-trust, -C • --node, -n • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.

Example of the backup command

To backup SED AK:

```
OneCli.exe config backup Security.SED_AK --passphrase xxxxxx --file backup.txt
--bmc USERID:PASSWORD@XX.XX.XX.XX --redfish
```

To backup the configuration settings:

```
OneCli config backup --passphrase xxxxxx --scope wholeFile --file backup.txt
--bmc USERID:PASSWORD@XX.XX.XX.XX –redfish
```

batch command

Use the `batch` command to queue config operations without any knowledge of the scripting capabilities of the operating system that XClarity Essentials OneCLI is running on. When entering the `config` commands in a batch file, the XClarity Essentials OneCLI config application individually reads and runs each `config` command.

batch command syntax

```
OneCli.exe config batch --file <batchfilename> [<options>]
```

The format in the batch file should be:

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

Note: The --output or connection option is not required for the previous command in the batch file.

Table 32. batch command specific parameters

Parameter	Required/Optional	Notes
--file	Required	• The file name of the batch file, which has the `config` commands. • XClarity Essentials OneCLI individually reads and runs each command.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Notes:

- In batch mode, the `show` and `set` commands ignore the suppressed information. Users 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 following example batch file contains the `set` and `show` commands. All of the `set` commands are sent to BMC 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 --bmc userid:password@host
```

replicate command

Use the `replicate` command to replicate the settings in the configuration file to the target server. The settings in the nonreplicated group are saved in a specific file, and cannot be replicated.

replicate command syntax

```
OneCli.exe config replicate --file <filename> [<options>]
```

Table 33. replicate command specific parameters

Parameter	Required/Optional	Notes
--file	Required	• The file name for the saved settings and values to be stored. • XClarity Essentials OneCLI reads the setting and value from the file and applies it to the system.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Notes:
- Users can use the saved file got in the `save` command. If users create a file and specify with the --file option, follow the file format. For more information, refer to “save command” on page 40.
- The outputs of the `replicate` command contain a long list of the saved settings. OneCLI puts the outputs in a file and shows the summary in the command shell.

Example of the replicate command

```
OneCli.exe config replicate --file saved.txt --bmc userid:password@host
```

restore command

Use the `restore` command to restore the settings that are already saved in the file for the current server.

Notes:
- To restore the saved settings, use the `save` command to save the configuration in the file containing <setting>=<value>.
- For SE350 V2/SE360 V2, to restore the SED AK whose SED key is not installed, use the passphrase or backup file.
- To restore the configuration settings by using the backup file, the file should be an encrypted file saved with the `backup` command, the **--redfish** and **--passphrase** parameters.
- Users can use the saved file got in the `save` command. If users create the file and specify with the **--file** option, follow the file format. For more information, refer to "save command" on page 40.
- There may be a long list of settings in the outputs of `restore` command. Therefore, OneCLI puts the results including all saved settings in a file and shows the summary in the command shell.

restore command syntax

```
OneCli.exe config restore --file <filename> [<options>]
```

Table 34. restore command specific parameters

Parameter	Required/Optional	Notes
--file	Optional	• Specify the configuration file name for restoring settings, which should be used with the `save` command. • Specify the encrypted file name for restoring SED AK or the backup settings, which should be used with the `backup` command.
--passphrase	Optional	The passphrase to recover SED AK or configuration settings. • Specify the password used in the `generate` command when recovering SED AK with the passphrase. • Specify the password used in the `backup` command when recovering SED AK or configuration settings with the backup file.
--incbackupctl	Optional	Include VPD settings when restoring from the external file specified by "--file".
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-cim-port, -p • --bmc-username, -u • --bmc-password, -w • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.

Example of the restore command

To restore with saved settings:

```
onecli.exe config restore --file saved.txt --bmc USERID:PASSWORD@XX.XX.XX.XX
```

To restore SED AK only with passphrase that used to generate the SED AK:

```
OneCli.exe config restore Security.SED_AK --passphrase xxxxxx
--bmc USERID:PASSWORD@XX.XX.XX.XX --redfish
```

To restore SED AK with passphrase and backup file:

```
OneCli.exe config restore Security.SED_AK --passphrase xxxxxx
--file backup.txt --bmc USERID:PASSWORD@XX.XX.XX.XX --redfish
```

To restore configuration settings with backup file:

```
OneCli.exe config restore --passphrase xxxxxx --file backup.txt
--bmc USERID:PASSWORD@XX.XX.XX.XX --redfish
```

save command

Use the `save` command to save the settings of all groups to a specified file, for example, the UEFI group, the IMM group. However, the read-only and write-only settings cannot be saved by using the `save` command. The file containing the saved settings can be used in the `restore` command and the `replicate` command.

save command syntax

```
OneCli.exe config save --file <savetofilename> [--group <groupname>] [--excbackupctl] [<options>]
```

Table 35. save command specific parameters

Parameter	Required/Optional	Notes
--file	Required	The file name where settings and values are stored. OneCLI reads the setting from the system and then stores the setting and value in the file.
--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 showgroups.
--excbackupctl	Optional	Used to exclude the VPD settings. The default is to include all VPD.
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the save command

```
OneCli.exe config save --file saved.txt --bmc userid:password@host
```

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
```

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 36. Configuration commands for certificate management

Command	Description
deletecert	Delete a certificate. For more information, refer to “deletecert command” on page 44.
export	Export a certificate to a local system. For more information, refer to “export command” on page 44.
generate	Generate a certificate. For more information, refer to “generate command” on page 45.
import	Import a certificate from a local system to another system. For more information, refer to “import command” on page 49.

Notes:

- The commands in this table are 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
```

Using XClarity Essentials OneCLI for certificate management

XClarity Essentials OneCLI manages Certificate Authority (CA) and Certificate Sign Request (CSR) files on BMC-based systems using the `generate`, `import`, `export`, and `deletecert` commands.

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

1. Verify that the BMC HTTPS Server Configuration for Web server is disabled using this command:
   `OneCli.exe config show IMM.SSL_Server_Enable`
2. If the server is enabled, disable BMC HTTPS Server Configuration for Web Server using this command:
   `OneCli.exe config set IMM.SSL_Server_Enable Disabled`
   The BMC must be restarted before the selected value (enable / disable) takes effect. Use the command:
   `onecli misc rebootbmc`
3. The BMC must be restarted before the selected value (enable / disable) takes effect. Use the command:
   `onecli misc rebootbmc`

   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:
      `OneCli.exe config show IMM.SSL_Client_Enable`
   b. If the value is enabled, disable the BMC SSL Client Configuration for LDAP using this command:
      `OneCli.exe config set IMM.SSL_Client_Enable Disabled`

After completing the steps noted above, users can use XClarity Essentials OneCLI to manage certificates on BMC.

The following procedure provides an overview of how to use the XClarity Essentials OneCLI config application and commands to:

- View the 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

Getting the status of the certificate setting

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

```
OneCli.exe config show IMM.SSL_HTTPS_SERVER_CERT
```

An example of output:

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

Getting the available command for the setting

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

```
OneCli.exe config showvalues IMM.SSL_HTTPS_SERVER_CSR
```

An example of output:

```
IMM.SSL_HTTPS_SERVER_CSR=*generate=export
```

IMM.SSL_HTTPS_SERVER_CSR is supported by the `generate` and `export` commands.

Generating a Certificate Sign Request (CSR)

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

```
OneCli.exe config generate IMM.SSL_HTTPS_SERVER_CSR --file template.xml
```

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 46. "new_key_and_cert_sign_req_info" in the specified XML file is required to generate a CSR.

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

Generating a self-signed certificate

Users can use the config application to generate a Self-signed Certificate. "new_key_and_self_signed_cert_info" in the specified XML file is required to generate a self-signed certificate. To generate a self-signed certificate, use this command:

```
OneCli.exe config generate IMM.SSL_HTTPS_SERVER_CERT --file template.xml
```

Exporting a certificate sign request

To export a certificate sign request, use this command:

```
config export IMM.SSL_HTTPS_SERVER_CSR --file tmp_csr.der
```

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

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

Importing a 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. Users can only import the CA-signed certificate (which differs from the self-signed certificate) into the HTTPS Server Certificate Management.

The following two settings for SSL Client Certificate Management permit only 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 management, refer to the individual command topics in this section.

deletecert command

Use the `deletecert` command to delete a certificate on BMC.

deletecert command syntax

```
OneCli.exe config deletecert <setting> [<options>]
```

Table 37. deletecert command specific parameters

Parameter	Required/Optional	Notes
setting	Required	Certificate management setting
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the deletecert command

```
OneCli.exe config deletecert IMM.SSL_HTTPS_SERVER_CERT --bmc userid:password@host
```

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 as the specified file path.

export command specific syntax

```
OneCli.exe config export <setting> --file <exportfilename> [<options>]
```

Table 38. export command specific parameters

Parameter	Required/Optional	Notes
--setting	Required	Certificate management setting
--file	Required	The file path to save the exported certificate.

Table 38. export command specific parameters (continued)

Parameter	Required/Optional	Notes
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the export command

```
OneCli.exe config export IMM.SSL_HTTPS_SERVER_CERT --file temp.cert --bmc userid:password@host
```

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, and generate SED AK on SE350 V2/SE360 V2 when using with the `-redfish` parameter.

generate command syntax

```
OneCli.exe config generate <setting> --file <exportfilename> [<options>] --passphrase
```

Table 39. generate command specific parameters

Parameter	Required/Optional	Notes
--setting	Required	Specify the certificate management settings.
--file	Optional	• 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 46.
--kcs	Optional	Force to use IPMI over KCS local interface.

Table 39. generate command specific parameters (continued)

Parameter	Required/Optional	Notes
--passphrase	Optional	The passphrase to generate SED AK, which is not required when used to generate a random SED AK.
• --bmc, -b • --bmc-rest-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o • --redfish	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the generate command

To generate the certificate:

```
onecli.exe config generate IMM.SSL_HTTPS_SERVER_CERT --file template.xml
--bmc USERID:PASSWORD@XX.XX.XX.XX
```

To generate SED AK with the random method:

```
OneCli.exe config generate Security.SED_AK --bmc USERID:PASSWORD
@XX.XX.XX.XX --redfish
```

To generate SED AK with the passphrase method:

```
OneCli.exe config generate Security.SED_AK --passphrase xxxxxx
--bmc USERID:PASSWORD@XX.XX.XX.XX --redfish
```

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. Users can modify this file to generate a certificate.

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

Table 40. template.xml file variables

Variables	Definition
Country Name	The two-letter ISO abbreviation for user’s country.
State or Province Name	The state or province where user’s organization is located. This entry cannot be abbreviated.
Locality Name	The city where user’s organization is located.
Organization Name	The exact legal name of user’s organization. Do not abbreviate user’s organization name.

Table 40. template.xml file variables (continued)

Variables	Definition
Common Name	A fully qualified domain name that resolves to the SSL VPN device. For example, if users intend to secure the URL `https://ssl.yourdomain.com`, then the common name of the certificate sign request should be `ssl.yourdomain.com`.
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 user's 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. When specifying a challenge password in the certificate sign request and intending to revoke the certificate later, users must know the challenge password.
unstructuredName	This is an optional field for entering the unstructured name for contact

template.xml

Note: The name and value fields cannot be blank. Optional items should be removed if they are not used to avoid potential failure.

```
<?xml version="1.0" encoding="utf-8"?>
<asu 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>
</asu>
```

import command

Use the `import` command to import a certificate into a BMC.

import command syntax

```
OneCli.exe config import <setting> --file <importfilename> [<options>]
```

Table 41. import command specific parameters

Parameter	Required/Optional	Notes
--setting	Required	Certificate management setting
--file	Required	Import file name
--kcs	Optional	Force to use IPMI over KCS local interface.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the import command

```
OneCli.exe config import IMM.SSL_HTTPS_SERVER_CERT --file temp.cert --bmc userid:password@host
```

Chapter 5. Multiple configuration

The topics in this section describe how to use the OneCLI multiconfig application and commands to remotely show or change the system configuration for multiple IMM/XCC- based servers.

This table lists the multiconfig application commands:

Table 42. Application multiconfig commands

Command	Description
batch	Run multiple config commands in the batch file. For more information, refer to “batch command” on page 51.
replicate	Replicate all settings in the input update configuration file. For more information, refer to “replicate command” on page 52.
restore	Restore all settings defined in the update configuration file. For more information, refer to “restore command” on page 52.
set	Change the setting to new value. For more information, refer to “set command” on page 53.
show	Display the current system settings’ values. For more information, refer to “show command” on page 54.

batch command

Use the `batch` command to queue config operations without any knowledge of the scripting capabilities of the operating system on which OneCLI is running.

User input the config commands in the batch file, and then config application will run them one by one. Following is the sample format in the batch file:

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

Note: No “--output” or connection options is needed for the command in the batch file.

batch command syntax

```
OneCli.exe config batch <--file <batchfilename>> <--configfile <arg>> [common options]
```

Table 43. batch command specific parameters

Parameter	Required/Optional	Notes
--file	Required	The file name of batch file, which includes the config commands in it. Onecli will read the commands and run them one by one. This parameter is required.
--configfile	Required	Specify the config file for multi task command, the format refer to `Sample/multi_task_config.json`. | • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

replicate command

Use the `replicate` command to replicate all settings in the input update configuration file.

replicate command syntax

```
OneCli.exe config replicate --file <filename> [common options]
```

Table 44. replicate command specific parameters

Parameter	Required/Optional	Notes
--file	Required	Specify the file name of saved settings. OneCLI reads the setting from the system and then stores the setting and value in the file.
--kcs	Optional	Force to use IPMI over KCS local interface.
--quiet,-q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the replicate command

```
Onecli.exe config replicate –file saved.txt --bmc USERID:PASSWORD@xx.xx.xx.xx
```

restore command

Use the `restore` command to restore all settings defined in the update configuration file.

restore command syntax

```
OneCli.exe config restore --file <filename> [common options]
```

Table 45. restore command specific parameters

Parameter	Required/Optional	Notes
--file	Required	Specify the file name of saved settings. OneCLI reads the setting from the system and then stores the setting and value in the file.
--kcs	Optional	Force to use IPMI over KCS local interface.
--quiet,-q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the restore command

```
Onecli.exe config replicate –file saved.txt --bmc USERID:PASSWORD@xx.xx.xx.xx
```

set command

Use the `set` command to change the value of a setting or to list a setting. The `set` command also creates an instance if the instance number does not exist, and if the instance value is less than or equal to the maximum allowed instances for the setting. For more information about instances, see setting format.

Notes:
- If the settingvalue includes some blank, user needs to put the value in quotes.
- If the settingname is a valid setting instance which is not exist before, the set command will create this setting instance.
- If the settingvalue is not be input, OneCLI will use security mode to change the setting value.
- If users modify the account connecting to BMC when running the `set` command, the following error message might be displayed：
  `Failed to get update status due to BMC internal error.`

set command syntax

```
OneCli.exe multiconfig set <settingname> [settingvalue] <--configfile <arg>> [common options]
```

Table 46. set command specific parameters

Parameter	Required/Optional	Notes
settingname	Required	The setting which user wants to change the value of it. User must to input it. And it should right after the set command in command line.
settingvalue	Optional	The setting value which user wants to change to. If user input it, it should right after the setting name in command line.

Table 46. set command specific parameters (continued)

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi task command, the format refer to `Sample/multi_task_config.json`.
• --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

show command

Use the `show` command to see the current value of one or more settings.

show command syntax

```
OneCli.exe multiconfig show [command option] <--configfile <arg>> [common options]
```

Table 47. show command specific parameters

Parameter	Required/Optional	Notes
command option	Optional	The value can be put as “all”, group name or setting name. The “all” is used to display all supported settings, while group name is to display the settings belong to that group, and the setting name is only display the value for that setting. The group name can be got from showgroups command or see section “setting groups” for details. The default value for command option is “all”. If no command option is specified, the config application will show all the supported settings. If it is specified, it should right after show command in the command line.
--configfile	Required	Specify the config file for multi task command, the format refer to `Sample/multi_task_config.json`.
• --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --node • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Chapter 6. Inventory

The topics in this section describe how to use the OneCLI inventory application and commands to collect system information for BMC-based systems.

This table lists the inventory application commands.

Table 48. Inventory application commands

Command	Description
formatlog	Translate the inventory output XML file into the HTML file. For more information, refer to “formatlog command” on page 57.
getdevices	Obtain the inventory application supported devices list. For more information, refer to “getdevices command” on page 58.
getinfor	Obtain devices inventory information. For more information, refer to “getinfor command” on page 59.
upload	Uploads the XML files or other log files to a specified server or Lenovo service site. For more information, refer to “upload command” on page 60.

formatlog command

Use the `formatlog` command to transform the inventory XML files to HTML files.

formatlog command syntax

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

Table 49. formatlog command specific parameters

Parameter	Required/Optional	Notes
--hldec	Optional	Generate UEFI hidden logs by parsing inventory XML file specified with “--srcdata”. This is useful for trouble shooting.
--srcdata	Required	Specify the inventory XML result file.
• --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2

Example of the formatlog command

This example formats the `xxx.xml` file to HTML file and save the results to specified output folder.

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

getdevices command

Use the `getdevices` command to obtain the supported inventory categories. Users can then use “getinfor --device” to collect data for any category of interest.

getdevices command syntax

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

Table 50. getdevices command specific parameters

Parameter	Required/Optional	Notes
• --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the getdevices command

```
OneCli.exe inventory getdevices
```

This is the complete device list generated 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 - kernel_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 - persistent_memory
14 - pci_information
15 - firmware_vpd
16 - bmc_configuration
17 - bmc_environmental
18 - light_path
19 - pci_adapters
20- storage_devices
21 - ssd
22 - fod_key
23 - application_event (Windows only)
24 - var_log_boot_log (Linux only)
25 - var_log_mail_err (SUSE only)
26 - var_log_mail_warn (SUSE only)
27 - var_log_messages (Linux only)
28 - var_log_warn (SUSE only)
29 - var_log_cron (RHEL only)
30- var_log_dmesg (RHEL only)
31 - var_log_secure (RHEL only)
32 - system_event (Windows only)
```

```
33 - security_event (Windows only)
34 - bmc_event_logs
35 - ipmi_event_logs
36 - execution_log
37 - system_settings
```

getinfor command

Use the `getinfor` command to obtain hardware and software information for the target system through in-band or out-of-band method. By default, the inventory results are saved to an XML file.

getinfor command syntax

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

Table 51. getinfor command specific parameters

Parameter	Required/Optional	Notes
--cmm	Optional	If specified, the inventory application will only obtain the information of a remote CMM. • Default format: `user:password@IP` • IPv6 address format: `user:password@[IPv6]`
--device	Optional	Default value: `all` Displays all of the supported inventory items. Device name separated by commas or space, such as: `system_overview, processes` Gets the inventory information for the specified items.
--ffdc	Optional	If specified, the inventory application will retrieve the BMC FFDC log.
--hldec	Optional	Collect the UEFI hidden logs. This option is only supported for System X.
--htmlreport	Optional	If specified, the output results will contain HTML file report.
--proxy	Optional	Use proxy to connect to upload server. The format is `user:password`@host[:port]. For IPv6 address, the format is `socks5://user:password@[IPv6]:port`.
--servicelog	Optional	If specified, the inventory application will retrieve the BMC service data log.
--smm	Optional	If specified, the inventory application will only get the information for a remote SMM. The format is user:password@IP. For the IPv6 address, the format is user:password@[IPv6].

Table 51. getinfor command specific parameters (continued)

Parameter	Required/Optional	Notes
--upload	Optional	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
--sftp	Optional	SFTP connection information. Format: user:password@IP[port][dir/]. The address is used to save FFDC logs for VMWare ESXi.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

inventory example

This is an example of the inventory application and the `getinfor` command using OneCLI.

```
OneCli.exe inventory getinfor --output d:\onecli\inventory --htmlreport --ffdc --upload lenovo
```

Notes:
- To collect Windows event logs in Windows OS, change the configuration item in the `global.config` file to **ONECLI_EVENTLOG_MAX=All**. For more information, refer to Appendix D “OneCLI global configuration file” on page 217.
- When downloading any executable version of the OneCLI utility (Windows or Linux) from https://support.lenovo.com/solutions/lnvo-tcli and running this executable version by double-clicking its package, the global.config file will not be evaluated.

upload command

Use the `upload` command to upload the XML files or other log files to Lenovo service or other remote server.

upload command syntax

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

Table 52. upload command specific parameters

Parameter	Required/Optional	Notes
--cn	Optional	Specify the case number to upload the files to Lenovo System CARE. The case number should be composed of at least seven characters.
--mt	Optional	Specify with --sn. Specify the machine of the target system when uploading the files to System CARE.
--proxy	Optional	Use proxy to connect to upload server. The format is `user:password@host[:port]`. For IPv6 address, the format is `socks5://user:password@[IPv6]:port`.
--srcdata	Required	Used to identify the log file that will be uploaded.
--sn	Optional	Specify with --mt. Specify the serial number of the target system when uploading the files to System CARE.
--upload	Required	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
• --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2

Example of the upload command

In this example, **--srcdata** is used to identify the log file name that is uploaded.

```
OneCli.exe inventory upload --srcdata xxx.xml --upload lenovo
```

Chapter 7. Update

The topics in this section describe the following:
- How to use the OneCLI update application and commands to update firmware and device driver in IB mode for BMC-based system
- How to update firmware in OOB mode for BMC-based system
- How to update firmware for CMM-based components(CMM & I/O switch)
- How to update firmware remotely of the VMware ESXI OS for BMC-based system
- How to update firmware for SMM-based components.

This table lists the update application commands.

Table 53. Update application commands

Command	Description
acquire	Download firmware and device driver updates for the BMC-based system and firmware updates of CMM, SMM, and I/O switch module. For more information, refer to “acquire command” on page 64.
canceltask	Cancel the update task staged in XCC2 on the ThinkSystem V3 systems. For more information, refer to “canceltask command” on page 66.
checktask	Check the status of update task staged in XCC2 on the ThinkSystem V3 systems. For more information, refer to “checktask command” on page 67.
compare	Compare versions of installed firmware and device driver with candidate updates, and generates a list of recommended updates. For more information, refer to “compare command” on page 68.
flash	Apply updates of firmware and device drivers requiring upgrade, based on the result of the `compare` command. For more information, refer to “flash command” on page 73.
iflash	Parse and update the system firmware. For more information, refer to “iflash command” on page 77.
multicompare	Remotely compare the firmware information of multiple BMC, and specify the BMC information and the configuration parameters. For more information, refer to “multicompare command” on page 79.
multiflash	Remotely upgrade multiple BMC, and specify the BMC information and configuration parameters. For more information, refer to “multiflash command” on page 80.
multiscan	Remotely scan the firmware information of multiple BMC, and specify the BMC information and the configuration parameters. For more information, refer to “multiscan command” on page 81.

Table 53. Update application commands (continued)

Command	Description
scan	Get installed firmware and device driver inventory information of a BMC-based system or installed CMM firmware and I/O switch module firmware or installed SMM firmware. For more information, refer to "scan command" on page 82.
startstaged	Start the update task staged in XCC2 on the ThinkSystem V3 systems. For more information, refer to "startstaged command" on page 83.

acquire command

Use the `acquire` command to download firmware and device driver updates for BMC-based system, CMM-based component, and SMM-based component from Lenovo or IBM support site.

acquire command syntax

```
OneCli.exe update acquire [--mt <arg>] [--ostype|-t <arg>] [--scope|-s <arg>] [--dir <arg>] [--includeid|-I <arg>]
[--report] [--metaonly] [--proxy|-P <arg>] [--type|-T <arg>] [--xml] [--quiet|-q] [--platform] [--output|-o <arg>]
[--nolog] [--config <arg>] [--proxy-cacert <arg>] [--cacert <arg>] [--proxy-insecure] [--insecure] [--help|-h]
```

Table 54. acquire command specific parameters

Parameter	Required/Optional	Notes
--comparexml	Optional	Specify the file name for the packages to be downloaded based on the compare result.
--dir	Optional	Specify the path name of the directory that will be used by the command. If no "--dir", the current directory will be used.
--includeid, -I	Optional	Acquire the specified included packages or UXSP through IDs. Usually an ID is the package file name without extension. For example: • Target package ID: lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64 • UXSP ID: lnvgy_utl_uxsp_tcsp06p-2.40_win2012r2_32-64 It is allowed to input multiple packages IDs using a comma-separated list. By default: none is included.
--metaonly	Optional	If the --metaonly parameter is specified, the `acquire` command will only download the XML files specifying the metadata for the update packages without downloading the update packages payload.
--mt	Optional	Specify the machine type of target device. Lenovo server, chassis, and enclosure all have machine types.
--noprereq	Optional	If specified, users should not download the prerequisite packages.

Table 54. acquire command specific parameters (continued)

Parameter	Required/Optional	Notes
--ostype, -t	Optional	Specify the OS deployed on the target servers. Valid choices are win2008, win2012, win2012r2, win2016, rhel5, rhel6, rhel7, rhel8, rhel9, sles10, sles11, sles12, sles15, esxi5.0, esxi5.1, esxi5.5, esxi6.0, esxi6.5, platform, and none. "none" is the default setting and is used for OS independent updates, such as UEFI or BMC updates. When the ostype parameter is “platform”, OneCLI will acquire all packages required in update, including Maintenance OS, OneCLI, and platform UXSP. The --ostype parameter is not required for CMM, SMM, or I/O module targets.
--platform	Optional	Download the maintenance image and OneCLI tool for BMU secure erase and platform flash.
--proxy, -P	Optional	**userid:password@host[:port]** specifies the proxy information for connecting to the Lenovo Support Web site 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: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. Users can find the service processor or the SFTP server (for the --sftp argument) through this name on the local network of the OS that the OneCLI runs.
--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.
--scope, -s	Optional	Specify the scope of updates. Different scopes indicate different operation strategies. Valid choices are: • uxsp (default choice): Suggest acquiring UXSP for the specific MT and ostype. • latest: Suggest acquiring the latest packages or UXSP. • individual: Suggest acquiring the specific packages or UXSP. In this case, the --scope (-s) parameter should be used with the --includeid parameter.
--type, -T	Optional	**type** specifies the type of package to download. Valid choices are: • `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.
--xml	Optional	Specify the output XML.
--proxy-cacert	Optional	Specify the path of proxy CACert.
--cacert	Optional	Specify the path of CACert.
--proxy-insecure	Optional	Do HTTPS proxy connections without verifying the proxy

Table 54. acquire command specific parameters (continued)

Parameter	Required/Optional	Notes
--insecure	Optional	Allow insecure server connections when using SSL.
• --config • --configfile • --help,-h • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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 (**--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
```

Network requirement of the acquire command

OneCLI supports to acquire the updates for the IBM system and the Lenovo system.

- To acquire the updates for the IBM system from the IBM Web site, ensure that the firewall allows the following DNSes and ports. User can also obtain the URL from https://www-03.ibm.com/services/projects/ecc/serviceProviderIBM.gzip.

DNS	IP address	Port	Protocol
www.ibm.com	/	/	/
www-03.ibm.com	204.146.30.17	443 and 80	HTTP and HTTPS
eccgw01.boulder.ibm.com	207.25.252.197	443	HTTPS

- To acquire the updates for the Lenovo system from the Lenovo Web site, ensure that the firewall allows the following DNSes and ports. User can also obtain the URL from https://support.lenovo.com/services/ContentService/SearchDrivers.

DNS	Port	Protocol
support.lenovo.com	443 and 80	HTTP and HTTPS
download.lenovo.com	443 and 80	HTTPS

Notes: To use a proxy to run the `acquire` command, ensure that the proxy meets the following requirements:

- The proxy is accessible to one of the following DNS: www.ibm.com, www-03.ibm.com, eccgw01.boulder.ibm.com, support.lenovo.com, and download.lenovo.com.
- The proxy is set to “Use basic authentication”.
- The proxy is a non-terminating and forwarding proxy.

canceltask command

Use the `canceltask` command to cancel the update task staged in XCC2 on the ThinkSystem V3 systems.

canceltask command syntax

```
Usage: OneCli.exe update canceltask [--bmc|-b <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>]
[--taskid <arg>] [--xml]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 55. canceltask command specific parameters

Parameter	Required/Optional	Notes
--taskid	Optional	Specify the staged update task ID.
--xml	Optional	Specify the output XML.
• --bmc-password, -w • --bmc-rest-port • --bmc-username, -u • --check-trust, -C • --config • --help, -h • --never-check-trust, -N • --nolog • --output, -o • --quiet, -q	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the canceltask command

```
OneCli.exe update canceltask --taskid "314e2aa0-5192-4bf1-8d62-23ba990df67d"
--bmc userid:password@host
```

checktask command

Use the `checktask` command to check the status of update task staged in XCC2 on the ThinkSystem V3 systems.

checktask command syntax

```
Usage: OneCli.exe update checktask [--bmc|-b <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>]
[--taskid <arg>] [--xml]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 56. checktask command specific parameters

Parameter	Required/Optional	Notes
--taskid	Optional	Specify the staged update task ID.
--xml	Optional	Specify the output XML.
• --bmc-password, -w • --bmc-rest-port • --bmc-username, -u • --check-trust, -C • --config • --help, -h • --never-check-trust, -N • --nolog • --output, -o • --quiet, -q	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the checktask command

```
OneCli.exe update checktask --taskid "314e2aa0-5192-4bf1-8d62-23ba990df67d"
--bmc userid:password@host
```

compare command

Use the `compare` command to compare the list of installed firmware and device drivers, generated by the `scan` command, to the available update list, generated by the `query` command, and recommend a set of updates to apply. The XML file generated by the `compare` command can 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] [--bmc <userid:password@host[:port]>]
[--remoteos userid:passord@host[:port]>] [--cmm <userid:password@host[:port]>]
[--smm <userid:password@host[:port]>] [--esxi <userid:password@host[:port]>] [--iobay <bay_number>]
[--mt <machine type>] [ostype <operating_system> --osarch <architecture>] [--queryxml <filename>]
[--scope <scope>] [--type <type>] [--includeid <includeids>] [--forceid <forceids>] [--excludeid <excludeids>]
[--dir <folder>] [--output <folder>] [<options>]
```

Options

--remoteos

Specify the remote OS for OneCLI to manage system. After connecting to Linux OS, OneCLI supports to update firmware and device driver. Ensure that the OneCLI binary for the remote Linux OS is in the directory specified with “--dir”. The sample command is: ./OneCli update compare --remoteos root@xx.xx.xx.xx --dir packages --quiet.

Note: Before using this function, users should set “PasswordAuthentication yes” to enable the tunneled clear text passwords in `/etc/ssh/ sshd_config`.

Table 57. compare command specific parameters

Parameter	Required/Optional	Notes
--backup	Optional	By default, if the --backup parameter is specified, OneCLI flashes the IMM and UEFI backup firmware by running the `flash` command. The --backup parameter is only used with the --nocompare parameter (in no compare mode).
--checkdevice	Optional	Scan dd of the physical exist device.
--cmm	Optional	Specify the CMM information for scan functions. If the --scanxml parameter or the --noscan parameter is specified, this parameter is not required.
--dir	Optional	**folder** specifies the path name location of the packages directory. If no directory is specified, the current directory is used for the `compare` command queries.
--excludeid, -E	Optional	Never flash the excluded packages unless they are prerequisite. Users can set multiple IDs by separating them with comma(,). By default: none is excluded.
--forceid, -F	Optional	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. Users can also specify an argument of `all` to force query and comparison of all listed packages. For example: `lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64` By default: none is included. 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: • 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.
--iobay	Optional	**bay_number** specifies the I/O module bay number. Valid values are 1, 2, 3, or 4. The --iobay parameter specifies an I/O module compare operation. When comparing an I/O module target, the --cmm parameter must also be specified.

Table 57. compare command specific parameters (continued)

Parameter	Required/Optional	Notes
--includeid, -I	Optional	Specify the target package ID for different commands. Usually an ID is the package file name without extension. For example: lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64 It is allowed to input multiple packages IDs using a comma-separated list. By default: none is included. For the BMC target, if the --includeid parameter *is not* specified, only the packages specified by the --scope parameter are queried and compared. For the BMC target, if the --includeid parameter *is* specified, only the listed packages are queried and compared in addition to those specified by the --scope parameter: if no packages are listed, no additional packages are queried and compared. For the CMM, SMM and I/O module targets the --scope parameter is not used, so only those packages specified by the --includeid parameter are queried and compared.
--mt	Optional	Specify the machine type of target device. Lenovo server, chassis, and enclosure all have machine types. The --mt parameter is required only when using the --noscan parameter (the system is not automatically obtaining the machine-type information). For the I/O module target, the CMM machine type is specified.
--noscan	Optional	If the --noscan parameter is specified, the `compare` command obtains query results directly for comparison without using the scan results. If the --noscan parameter is specified, the following command parameters are not required: • --scanxml • --bmc • --cmm • --smm If the --queryxml parameter is *not* specified when using the --noscan parameter, users must specify the --mt, --ostype, and --osarch parameters.

Table 57. compare command specific parameters (continued)

Parameter	Required/Optional	Notes
--ostype, -t	Optional	Specify operating system deployed on the target system. Valid choices are win2008, win2012, win2012r2, win2016, rhel5, rhel6, rhel7, sles10, sles11, sles12, esxi5.0, esxi5.1, esxi5.5, esxi6.0, esxi6.5, platform, and none. "none" is the default setting and is used for operating system independent updates, such as UEFI or BMC updates. "platform" type represents a bundle of updates which are specially used for remote update. They include firmware only and are also OS independent. The --ostype parameter is not required for CMM, SMM, or I/O module targets. The --ostype parameter is required only when using the --noscan parameter (the system is not automatically obtaining the operating system information).
--osarch, -a	Optional	**architecture** specifies operating system architecture where users are running the OneCLI. Valid choices are x86, x64, and none. None is the default setting and is used for operating system independent operations, such as BMC & CMM firmware updates. The --osarch parameter is needed only when the user is unable to determine their operating system information. It is used with the --noscan parameter. The --osarch parameter is not used for CMM, SMM, or I/O module targets.
--queryxml	Optional	**filename** specifies a query result file to control the `compare` command. If a query result file is specified, the following command parameters cannot be used: • --mt • --includeid • --forceid • --dir • --ostype • --osarch • --scope • --type
--remoteos	Optional	Specify the remote OS login credential for OneCLI to manage system in the local host OS. Support Windows-to-Windows, Linux-to-Linux, and Windows-to-Linux.

Table 57. compare command specific parameters (continued)

Parameter	Required/Optional	Notes
--scanxml	Optional	**filename** specifies a scan result file to control the compare command. If a scan result file is specified, the following command parameters cannot be used: • --noscan • --bmc • --cmm • --smm • --iobay • --mt • --ostype • --osarch • --config
--scope, -s	Optional	Specify the scope of update operations. Different scopes mean different operation strategies. Valid choices are: • uxsp: operation strategy is to focus on UXSP and make bundle update. • latest: operation strategy is to help users to find and use latest updates. Even a particular package name is given by using "--includeid", OneCLI will still search whether there are later versions of the package and use the newest one if there are. • individual: operation strategy is to find and use the packages specified by the --includeid parameter.
--smm	Required	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in square brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name.
--type, -T	Optional	**type** specifies the type of package to compare. Valid choices are: • `fw|dd` (default) to compare firmware and device drivers • `fw` to compare firmware • `dd` to compare device drivers Packages are not compared for the CMM and I/O module targets.
• --bmc/imm, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-rest-port • --bmc-username, -u • --configfile • --check-trust, -C • --config • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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 a BMC that is accessed with a user ID of “userid”, a password of “password”, and an IP address of “host” (**--bmc userid:password@host** 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 --bmc userid:password@BMCIP --dir .\packages\
--output .\787502cn03e\output\
```

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, SMM or I/O module or core firmware flash update, the `flash` command retrieves the FFDC logs from BMC, CMM, or SMM.

- For In-Band (IB) mode, both firmware and device drivers are supported. An SFTP server is not required to be specified (**--sftp** parameter) in IB mode.
- For Remote Update (including Platform, OOB, BMU) mode:
  - Scan results include only firmware.
  - An SFTP server can be specified (**--sftp** parameter) when in OOB mode. Users can upload the package payload to the SFTP server manually, then specify the package location as part of the **--sftp** parameter. OneCLI checks the SFTP folder and the local folder, as specified in the `compare` command results XML file. If both locations contain an update payload, OneCLI checks if 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).

Note: An SFTP is not required for OOB(Out-Of-Band) update on ThinkSystem.

flash command syntax

```
Onecli.exe update flash [--esxi <userid:password@host[:port]>] [--comparexml <filename>]
[--nocompare--includeid <ids>] [--includeid <includeids>] [--dir <folder>] [--backup]
[--noreboot] [--output <folder>] [--bmc <userid:password@host[:port]>]
[--remoteos userid:passord@host[:port]>] [--cmm <userid:password@host[:port]>]
[--iobay <bay_number>] [--sftp <userid:password@host [:port]>] [--uselocalimg]
[--ffdc <userid:password@host [:port]>/ffdc/] [<options>] [--psu <arg>][--ftp <arg>] [--tftp <arg>]
```

Table 58. flash command specific parameters

Parameter	Required/Optional	Notes
--applytime	Optional	Specify the firmware apply time for bundle update. Valid values include: • OnStartUpdateRequest • OnReset: Default value for IB update. • Immediate: Default value for Remote update.
--backup	Optional	By default, if the --backup parameter is specified, OneCLI flashes the IMM and UEFI backup firmware by running the `flash` command. The --backup parameter is only used with the --nocompare parameter (in no compare mode).

Table 58. flash command specific parameters (continued)

Parameter	Required/Optional	Notes
--bmu	Optional	The --bmu parameter is the BMU OOB update parameter, which can only be used when the **--bmc** and **--sftp** parameters are specified.
--bundle	Optional	Update the firmware with bundled packages.
--checkdevice	Optional	Scan dd of the physical exist device.
--cmm	Optional	Specify the CMM information for scan functions. If the --scanxml parameter or the --noscan parameter is specified, this parameter is not required.
--comparexml	Optional	**filename** specifies an XML file (typically named compare.xml) containing comparison results to control the `flash` command. All suggested packages listed in the comparison file are flashed.
--dir	Optional	Specify the firmware package folder. By default, OneCLI runs the --dir parameter in the default folder. Do not use the --dir parameter if the --comparexml parameter is used.
--esxi	Required	Specify the esxi OS information, including OS user name, password, IP address, and port.
--ffdc	Optional	**userid:password@host[:port]** specifies access information for the SFTP server. Both read and write access are required. If the --ffdc parameter is specified and there are update failures, the `flash` command will try to output the FFDC log file from the BMC 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. If the --ffdc parameter is *not* used, OneCLI will use the same SFTP location that the --sftp parameter uses to specify the file payload location.
--fileserver	Optional	Format: <scheme>://[userid:password@]host[:port][/path]. • For XCC, specify sftp/http/https. For example, https://user:pwd@10.240.0.1/tmp. • For SMM, specify tftp. For example, tftp://10.240.0.1:123/tmp/images. • For CMM, specify sftp. For example, sftp://user:pwd@10.240.0.1/tmp/upload. • For ThinkServer, specify ftp/http/https. For example, ftp://10.240.0.1/tmp **Note:** If the options **--tfp**, **--tftp**, **--sftp**, and **--https** cannot be used, use **--fileserver** instead.

Table 58. flash command specific parameters (continued)

Parameter	Required/Optional	Notes
--forceid, -F	Optional	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. The force tag works on the following cases: 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. By default, there is no force tag for the flash packages.
--graceful	Optional	Gracefully power off OS in the platform update process.
--includeid, -I	Optional	This parameter should be used with the --nocompare parameter.
--iobay	Optional	**bay_number** specifies the I/O module bay number. Valid values are 1, 2, 3, or 4. The --iobay parameter specifies an I/O module scan operation. When scanning an I/O module target, the --cmm parameter must also be specified.
--nocompare	Optional	If this parameter is specified, the `flash` command will update the firmware and device drivers without performing a comparison. This parameter should be used with the --includeid parameter to specify the flash packages.
--noreboot	Optional	By default, BMC will automatically restart and take effect after the update. However, if the --noreboot parameter is specified, the flashed BMC will *not* restart automatically after the update. To activate the new firmware, users should manually restart the BMC. The --noreboot parameter is only used for flashing the primary IMM. By default, the --noreboot parameter will restart IMM automatically.
--noscan	Optional	If the --noscan parameter is specified, OneCLI obtains the query results for comparison by running the **compare** command without using the scan results.
--nostage	Optional	Update the firmware without staging the packages.
--platform	Optional	The --platform parameter is used to update the OOB and BMU update packages of the remote server in the platform. It can only be used when the --bmc parameter is specified.
--queryxml	Optional	Specify the file containing the query results to control the **compare** command.
--remoteos	Optional	Specify the remote OS login credential for OneCLI to manage system in the local host OS. Support Windows-to-Windows, Linux-to-Linux, and Windows-to-Linux.

Table 58. flash command specific parameters (continued)

Parameter	Required/Optional	Notes
--scanxml	Optional	Specify the file containing the scan results to control the **compare** command.
--sftp	Optional	Only used for the remote update of the firmware temporary payload file in the server. If the --uselocalimg parameter is specified, OneCLI will copy the firmware temporary payload file from the local folder to the SFTP server. If the SFTP server contains a firmware temporary payload file, this payload file will be overwritten with the local copy. By default, if the --uselocalimg parameter is not specified, OneCLI will check if the firmware temporary payload file is in the SFTP server. If yes, OneCLI will use the file on the SFTP server; if no, OneCLI will detect and upload the local file to the SFTP server.
--smm	Required	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name.
--type, -T	Optional	Specify the type of package or component to be downloaded, scanned, compared, or flashed.
--uselocalimg	Optional	If the --uselocalimg parameter is specified, OneCLI will copy the firmware temporary payload file from the local folder to the SFTP server. If the SFTP server contains a firmware temporary payload file, this payload file will be overwritten by the local copy. The --uselocalimg parameter is only used when OneCLI runs in the remote update mode. In this case, an SFTP server might be used as a temporary file server for payload files. By default, if the --uselocalimg parameter is not specified, OneCLI will check if the firmware temporary payload file is in the SFTP server. If yes, OneCLI will use the file on the SFTP server; if no, OneCLI will detect and upload the local file to the SFTP server.
--psu	Optional	The number of Power Supply Unit (PSU).

Table 58. flash command specific parameters (continued)

Parameter	Required/Optional	Notes
--tftp	Optional	TFTP server for SMM interface. Format: IP[:port][/path].
• --bmc/imm, -b • --bmc-username, -u • --bmc-password, -w • --bmc-cim-port, -p • --bmc-rest-port • --configfile • --check-trust, -C • --config • --nolog • --never-check-trust, -N • --nolog • --output, -o • --unattended	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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 .\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 “host”, and a port number of “5989” (**--cmm userid:password@host[: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 “host” (**--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 .\output\Onecli-update-compare.xml
--output .\872102cn03e\output\ --cmm userid:password@host[: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
```

iflash command

Use the `iflash` command to parse and update the system firmware. OneCLI will flash these system firmware packages one by one in legacy way (ipmi).

Table 59. iflash command specific parameters

Parameter	Required/Optional	Notes
--dir	Optional	Specify the directory of the firmware package. If no directory is specified, use the current directory. The --dir parameter is only used with the --nocompare parameter (in no compare mode).
--forceid	Optional	Similar with the --includeid parameter, 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. The --forceid parameter works on the following cases: 1. Force to downgrade. 2. Force to install the package no matter the device is listed in the scan.xml or not. 3. Ignore the “never” section tag in the package xml when querying HBA updates for QLogic. 4. Ignore the missing prereq. Force to install the package. By default, there is no force tag for the flash packages.
--includeid	Optional	Specify the target package ID for different commands. Usually an ID is the package file name without extension. For example: lnvgy_dd_sraidmr_7.700.20.00_sles12_x86-64
--noreboot	Optional	By default, BMC will automatically restart and take effect after the update. However, if the --noreboot parameter is specified, the flashed BMC will *not* restart automatically after the update. To activate the new firmware, users should manually restart the BMC. When flashing a BMC, the --noreboot parameter can only be used with the primary BMC. The --noreboot parameter is not used for I/O module targets.
--output, -o	Optional	Specify the output directory. By default, the output directory is saved in `./logs/`.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc-username • --bmc-password	Optional	Refer to Table 3 “OneCLI global parameters” on page 2. **Note:** Users can only use --bmc-username and --bmc-password for the **iflash** command in the ThinkSystem servers.
--backup	Optional	If the --backup parameter is specified, the command compares backup IMM and UEFI firmware, instead of the primary BMC and UEFI firmware.
--kcs	Optional	If the --kcs parameter is specified, the control channel will be over KCS.
--nolog	Optional	Run OneCLI without logging.
--config	Optional	Specify the OneCLI global config file path, in the format of `./global.config`.

Example of the iflash command

```
OneCli.exe update iflash [--dir <arg>] [--includeid|-I <arg>] [--forceid|-F <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--quiet|-q] [--kcs] [--noreboot] [--output|-o <arg>] [--help|-h] [--backup]
```

multicompare command

Use the `multicompare` command to remotely compare the firmware information of multiple BMC, and specify the BMC information and the configuration parameters by using a JSON configuration file. The output results are saved in the OneCLI logs in xml format, for example, `multi_task\20190429_154002\Success-10.240.194.248\Onecli-update-compare.xml`.

multicompare command syntax

```
OneCli.exe update multicompare <--configfile <arg>> [--dir <arg>] [--quiet|-q] [--check-trust|-C]
[--never-check-trust|-N] [--pattern <arg>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Options

--pattern
Filter the items in the compare result tables of multi servers through the regular expression. The outputs are displayed on the screen and recorded in the JSON file in the log directory.

--configfile
Specify the JSON configuration file. The template file is available in `Sample/multi_task_config.json` in OneCLI binary.

Table 60. multicompare command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the JSON configuration file for multi-task commands. The template file is available in `Sample/multi_task_config.json` in OneCLI binary.
--config	Optional	Specify the file path for the OneCLI config commands.
--dir	Optional	Specify the directory of the firmware package. If no directory is specified, use the current directory.
--pattern	Optional	Specify the pattern for filtering the results.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multicompare command

```
OneCli.exe update multicompare --configfile xxxconfig.json --quiet
```

multiflash command

Use the `multiflash` command to remotely upgrade the firmware of multiple BMC/SMM, update the firmware and driver for multiple Linux servers. It also specifies the information and the configuration parameters of the BMC/SMM and the Linux servers by using a JSON configuration file.

multiflash command syntax

```
OneCli.exe update multiflash <--configfile <arg>> [--dir <arg>] [--quiet|-q] [--forceid|-F <arg>] [--uselocalimg]
[--check-trust|-C] [--never-check-trust|-N] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Options

--configfile

Specify the JSON configuration file. The template file is available in `Sample/multi_task_config.json` or `Sample/ multi_remote_task_config.json` in OneCLI binary.

Table 61. multiflash command specific parameters

Parameter	Required/Optional	Notes
--applytime	Optional	Specify the firmware apply time for bundle update. Valid values include: • OnStartUpdateRequest • OnReset: Default value for IB update. • Immediate: Default value for Remote update.
--bundle	Optional	Update the firmware with bundled packages.
--configfile	Required	Specify the JSON configuration file for multi-task commands. The template file is available in `Sample/multi_task_config.json` in OneCLI binary.
--config	Optional	Specify the file path for the OneCLI config commands.
--dir	Optional	Specify the directory of the firmware package. If no directory is specified, use the current directory.
--forceid, -F	Optional	It supports to add the force tag for the update ID to enforce the downgrade. It also supports <all>, which means it can add force tag for all the suggested flash packages.
--includeid, -I	Optional	This parameter should be used with the **--nocompare** parameter.
--output, -o	Optional	Specify the output directory. By default, the output directory is saved in `./logs/`.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.

Table 61. multiflash command specific parameters (continued)

Parameter	Required/Optional	Notes
--scope, -s	Optional	Specify the scope of update operations. Different scopes mean different operation strategies. Valid choices are: • uxsp: operation strategy is to focus on UXSP and make bundle update. • latest: operation strategy is to help users to find and use latest updates. Even a particular package name is given by using "--includeid", OneCLI will still search whether there are later versions of the package and use the newest one if there are. • individual: operation strategy is to find and use the packages specified by the **--includeid** parameter.
--uselocalimg	Optional	If the --uselocalimg parameter is specified, the flash command forces to copy the payload file from the local folder to the SFTP server.
--platform	Optional	Update firmware with OOB method and Bare Metal Update (BMU) method.
• --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multiflash command

```
OneCLI update multiflash --configfile xxxconfig.json --sftp user:pass@ip/xx
```

multiscan command

Use the `multiscan` command to remotely scan the firmware information of multiple BMC, and specify the BMC information and the configuration parameters by using a JSON configuration file. The output results are saved in the OneCLI logs in xml format, for example, `multi_task\20190429_154002\Success-10.240.194.248\Onecli-update-scan.xml`.

multiscan command syntax

```
OneCli.exe update multiscan <--configfile <arg>> [--dir <arg>] [--quiet|-q] [--pattern <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Options

--pattern
Filter the items in the scan result tables of multi servers through the regular expression. The outputs are displayed on the screen and recorded in the JSON file in the log directory.

--configfile
Specify the JSON configuration file. The template file is available in `Sample/multi_task_config.json` in OneCLI binary.

Table 62. multiscan command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the JSON configuration file for multi-task commands. The template file is available in `Sample/multi_task_config.json` in OneCLI binary.
--config	Optional	Specify the file path for the OneCLI config commands.
--dir	Optional	Specify the directory of the firmware package. If no directory is specified, use the current directory.
--pattern	Optional	Filter the items in the scan result tables of multi servers through the regular expression. The outputs are displayed on the screen and recorded in the JSON file in the log directory.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multiscan command

```
OneCli.exe update multiscan --configfile xxxconfig.json --quiet --pattern “^UEFI”
```

scan command

Use the `scan` command to build a list of available firmware and device driver updates for the targeted device. The XML file generated with `scan` command can be used by the `compare` command.

- For Out-of-Band (OOB) mode, scan results include only firmware.
- For In-Band (IB) mode, scan results include both firmware and device drivers.

Options

--remoteos

Specify the remote OS login credential for OneCLI to manage the servers. After connecting to Linux OS, OneCLI supports to update firmware and device driver. Ensure that the OneCLI binary for the remote Linux OS is in the directory specified with the --dir parameter. The sample command is: ./OneCli update compare --remoteos root@xx. xx.xx.xx --dir packages --quiet.

Note: Before using this function, users should set “PasswordAuthentication yes” to enable the tunneled clear text passwords in `/etc/ssh/ sshd_config`.

scan command syntax

```
Onecli.exe update scan [--bmc <userid:password@host[:port]>] [--esxi <userid:password@host[:port]>]
[--remoteos userid:password@host[:port]][--cmm <userid:password@host[:port]>]
[--smm <userid:password@host[:port]>] [--iobay <bay_number>][--output<folder>] [<options>]
```

Table 63. scan command specific parameters

Parameter	Required/Optional	Notes
--iobay	Optional	**bay_number** specifies the I/O module bay number. Valid values are 1, 2, 3, or 4. The --iobay parameter specifies an I/O module scan operation. When scanning an I/O module target, the --cmm parameter must also be specified.
--cmm	Optional	Specify the CMM information for the scan functions. If the --scanxml parameter or the --noscan parameter is specified, this parameter is not required.
--esxi	Required	Specify the esxi OS information, including OS user name, password, IP address, and port.
--remoteos	Optional	Specify the remote OS login credential for OneCLI to manage system in the local host OS. Support Windows-to-Windows, Linux-to-Linux, and Windows-to-Linux.
--smm	Required	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in square brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0%xxx]. Replace xxx with the interface name.
• --bmc, -b • --bmc-username, -u • --bmc-password, -w • --bmc-rest-port • --bmc-cim-port, -p • --configfile • --check-trust, -C • --config • --output, -o • --nolog • --never-check-trust, -N	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

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 “host” (**--cmm userid:password@host** argument) storing the scan report XML file (using the default file name) in the “output” directory (**--output .\872102cn03e\output** argument).

```
Onecli.exe update scan --cmm userid:password@host --output .\872102cn03e\output\
```

startstaged command

Use the `startstaged` command to start the update task staged in XCC2 on the ThinkSystem V3 systems.

startstaged command syntax

```
Usage: OneCli.exe update startstaged [--bmc|-b <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 64. startstaged command specific parameters

Parameter	Required/Optional	Notes
--xml	Optional	Specify the output XML.
• --bmc-password, -w • --bmc-rest-port • --bmc-username, -u • --check-trust, -C • --config • --help, -h • --never-check-trust, -N • --nolog • --output, -o • --quiet, -q	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the startstaged command

```
OneCli.exe update startstaged --bmc userid:password@host
```

Chapter 8. Miscellaneous

The topics in this section describe how to use the Lenovo XClarity Essentials OneCLI `miscellaneous` commands.

The following table list the `miscellaneous` commands supported by XClarity Essentials OneCLI.

Table 65. Miscellaneous (misc) commands

Commands	Description
bmcpassword	Remotely change password of BMC accounts when first login or password expired. For more information, refer to “bmcpassword command” on page 87.
cmos	Execute the CMOS action. For more information, refer to “cmos command” on page 88.
edgeserver	Manage the status of the ThinkEdge servers. For more information, refer to “edgeserver command” on page 89.
encrypt	Encrypt credentials in plain text file. For more information, refer to “encrypt command” on page 89.
ffdc	Collect the FFDC of BMC/ESXi/CMM/SMM. For more information, refer to “ffdc command” on page 90.
fpusb	Set and view the configurations of the front panel USB port. For more information, refer to “fpusb commands” on page 92.
hddlocate	Manage the LED status of hard disk drive. For more information, refer to “hddlocate command” on page 93.
hostinterface	Manage Host Interface of BMC Redfish. For more information, refer to “hostinterface command” on page 94.
logmgr	Manage BMC event logs. For more information, refer to “logmgr commands” on page 95.
multibmcpassword	Remotely change password of BMC accounts for multiple systems when first login or password expired. For more information, refer to “multibmcpassword command” on page 97.
multiffdc	Obtain the BMC/SMM FFDC logs from multiple servers. For more information, refer to “multiffdc command” on page 97.
multiinventory	Remotely collect system information for multiple IMM-based or XCC-based servers. For more information, refer to “multiinventory command” on page 99.

Table 65. Miscellaneous (misc) commands (continued)

Commands	Description
multiraid	Remotely create, clear, and save the RAID configuration for multiple systems. For more information, refer to “multiraid command” on page 101.
multiospower	Turn on, turn off and restart the server, obtain the server power state, and restart the server to BIOS setup. For more information, refer to “multiospower commands” on page 108.
multiservicedata	Obtain service data information from multiple BMC. For more information, refer to “multiservicedata command” on page 110.
multisyshealth	Remotely collect system health information for multiple systems. For more information, refer to “multisyshealth command” on page 111.
multivm	List, mount, or unmout the virtual medias on multiple BMC. For more information, refer to “multivm commands” on page 112.
ospower	Power on, power off, or restart host OS. For more information, refer to “ospower command” on page 113.
portctrl	Query/enable/disable the cim/ipmilan/ipmikcs connection. For more information, refer to “portcrl command” on page 114.
raid	Create, clear, and save the RAID configurations. For more information, refer to “raid command” on page 117.
rebootbmc	Restart BMC. For more information, refer to “rebootbmc command” on page 134.
rebootcmm	Restart CMM. For more information, refer to “rebootcmm command” on page 135.
rebootiom	Restart I/O Module on the Flex chassis. For more information, refer to “rebootiom command” on page 135.
rebootsmm	Restart SMM. For more information, refer to “rebootsmm command” on page 136.
reseatblade	Reseat the blades on the Flex chassis. For more information, refer to “reseatblade command” on page 136.
reseatcmm	Reseat CMM. For more information, refer to “reseatcmm command” on page 137.
reseatswitch	Reseat the switch on the Flex chassis. For more information, refer to “reseatswitch command” on page 137.

Table 65. Miscellaneous (misc) commands (continued)

Commands	Description
restorebmu	Restore the BMU status on BMC. For more information, refer to “restorebmu command” on page 137.
restoresmm	Restore the SMM update progress. For more information, refer to “restoresmm command” on page 138.
rpp	Assert and deassert Remote Physical Presence(RPP), or obtain its status. For more information, refer to “rpp commands” on page 138.
serase	Securely and permanently erase the data of hard disk drives in the BMU mode. For more information, refer to “serase command” on page 140.
servicedata	Obtain service data information from BMC. For more information, refer to “servicedata command” on page 141.
servicelog	Obtain service data log from BMC. For more information, refer to “servicelog command” on page 141.
smartdata	Get the disk drive SMART data. For more information, refer to “smartdata command” on page 142.
smmlan	Disable or enable SMM LAN. For more information, refer to “smmlan commands” on page 143.
switchcmm	Toggle active CMM. For more information, refer to “switchcmm command” on page 144.
sysguard	Manage BMC system guard. For more information, refer to “sysguard command” on page 144.
syshealth	Query system health status. For more information, refer to “syshealth command” on page 145.
usblan	Enable or disable USB LAN. For more information, refer to “usblan command” on page 146.
vm	List, mount, or unmount the virtual media. For more information, refer to “vm commands” on page 147.

bmcpassword command

Use the `bmcpassword` command to remotely change the password of BMC accounts when users log in to BMC for the first time or the password is expired on the XCC-based servers.

bmcpassword command syntax

```
OneCli.exe misc bmcpassword <--bmc <arg>>
```

Table 66. bmcpassword command specific parameters

Parameter	Required/Optional	Notes
--newpwd	Optional	Specify the new password of BMC accounts. If this parameter is not specified, OneCLI will change the password of BMC accounts in the security mode. For more information, refer to "Changing password of BMC account in security mode" on page 170.
--quiet, -q	Optional	This parameter answers "yes" for all questions, and decreases the outputs displayed on screen.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --help,-h • --never-check-trust, -N • --node, -n • --nolog, -n • --output, -o	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.

Example of the bmcpassword command

```
OneCli.exe misc bmcpassword --bmc USERID:PASSWORD@host --newpwd xxxxxx
```

cmos command

Use the `cmos` command to execute the CMOS action. The system should be powered off before running the `cmos` command.

cmos command syntax

```
OneCli.exe [misc] cmos <command> [options]
```

Table 67. cmos command

Command	Syntax example	Description
clear	`OneCli.exe [misc] cmos clear`	Remotely clear the CMOS data.

Table 68. clear command specific parameters

Parameter	Required/Optional	Notes
--pap	Optional	Specify UEFI PAP(UEFI admin password).
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc, -b • --check-trust, -C • --config • --never-check-trust, -N • --output, -o • --nolog, -n	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the clear command

```
OneCli.exe cmos clear --bmc USERID:PASSWORD@xx.xx.xx.xx
```

edgeserver command

Use the `edgeserver` command to manage the status of the ThinkEdge servers.

edgeserver command syntax

```
OneCli.exe [misc] edgeserver <command> [options...]
```

Table 69. edgeserver commands

Commands	Description	Syntax
getsecurityinfo	Get ThinkEdge server security information from BMC.	`OneCli.exe [misc] edgeserver getsecurityinfo [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q] [--noping] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]`
lock	Lock the server.	`OneCli.exe [misc] edgeserver lock [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q] [--noping] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]`
unlock	Unlock server over BMC.	`OneCli.exe [misc] edgeserver unlock [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q] [--noping] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]`

Example of the edgeserver command

```
OneCli.exe edgeserver unlock -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

encrypt command

Use the `encrypt` command to encrypt, save, and update the credentials or the sensitive setting values in the specified plain text file.

encrypt command syntax

```
OneCli.exe misc encrypt <--configfile <arg>> [--unattended]
```

Table 70. encrypt command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the JSON configuration file. • For encrypting the credentials, the template file is available in `Sample/credentials_config.json`. • For encrypting the sensitive setting values, the template file is available in `Sample/setting.json`.
--unattended	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the encrypt command

```
OneCli.exe misc encrypt --configfile credentials.json --unattended
```

ffdc command

Use the `ffdc` command to collect the FFDC of BMC/ESXi/CMM/SMM.

ffdc command syntax

```
Onecli.exe [misc] ffdc [<options>]
```

Option

Usage

```
Usage: OneCli.exe [misc] ffdc [ [--cmm|-c <arg>] [--smm <arg>]
[--bmc|-b <arg>] [--esxi|-e <arg>] ]
[--cn <arg>] [--sn <arg>]
[--mt <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--upload <arg>]
[--proxy|-P <arg>] [--proxy-cacert <arg>]
[--cacert <arg>] [--proxy-insecure]
[--insecure] [--tftp <arg>]
[--sftp <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>]
[--bmc-cim-port|-p <int>] [--iobay <arg>]
[--node|-n <int>] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 71. ffdc command specific parameters

Parameter	Required/Optional	Notes
--cacert	Optional	Specify the path of CACert.
--cmm	Required	Specify CMM IP and credential information.
--cn	Optional	Specify the case number to upload the files to Lenovo System CARE. The case number should be composed of at least seven characters.
--esxi	Optional	Specify IP and credential information of VMware ESXI OS.
--insecure	Optional	Allow insecure server connections when using SSL.
--mt	Optional	Specify with --sn. Specify the machine of the target system when uploading the files to System CARE.

Table 71. ffdc command specific parameters (continued)

--proxy, -P	Optional	Specify proxy user credential and IP address used to connect to the target server specified in the --upload parameter. This parameter should be used with --upload. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--proxy-cacert	Optional	Specify the path of proxy CACert.
--proxy-insecure	Optional	Connect to HTTPS proxy without verifying.
--smm	Required	Specify the access information of the target SMM. The format is: userid:password@host[:port]. **Notes:** • Both the IPv4 address and the IPv6 address are supported. The IPv6 address shall be enclosed in brackets. For example, [FE80:3BA7:94FF:FE07:CBD0]. • If the IPv6 is LLA, the format is [FE80:3BA7:94FF:FE07:CBD0% xxx]. Replace xxx with the interface name.
--sn	Optional	Specify with --mt. Specify the serial number of the target system when uploading the files to System CARE.
--upload	Required	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
• --bmc, -b • --bmc-password, -w • --bmc-username, -u • --config • --check-trust, -C • --iobay • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the ffdc command

```
OneCli.exe misc ffdc --bmc userid:password@host
OneCli.exe misc ffdc --cmm userid:password@host --sftp root:password@host
OneCli.exe misc ffdc --smm userid:password@host --tftp host
```

fpusb commands

The topics in this section provide detailed information about how to use the fpusb commands to set and view the configurations of the front panel USB port.

Table 72. fpusb commands

Command	Description
set	Set the configurations of the front panel USB port. For more information, refer to "set command" on page 92.
status	View the configurations of the front panel USB port. For more information, refer to "status command" on page 93.

Notes:

- The front panel USB port does not support the following servers: ThinkSystem SD530, ThinkSystem SD650, System nx360 M5, System x240 M5 Compute Node, System x240 Compute Node, System x440 Compute Node, System x280/x480/x880 X6 Compute Node, System x3250 M6, System x3500 M5, System x3550 M5, System x3650 M5, System x3750 M4, System x3850 X6, and System x3950 X6.
- Before configuring the front panel USB port in the target server, select the **--bmc-username** option and the **--bmc-password** option to specify the SSH credentials for the BMC connection.

set command

Use the `set` command to set the configurations for the front panel USB port in the target server.

set command syntax

```
OneCli.exe [misc] fpusb set [command options]
```

Table 73. set command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-password, -w • --bmc-username, -u • --config • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.
--btn	Optional	Switch the owner by enabling or disabling ID button when the specified mode is shared.
--mode	Optional	Specify the mode for the front panel USB. The mode can be set as bmc, server and shared.
--owner	Optional	Set the preferred owner when the specified mode is shared. The values inlcude: server, and bmc.
--timeout	Optional	Set the inactivity time-out for the fpusb command of the BMC. The unit is minute.

Example of the set command

```
OneCli.exe fpusb set  --bmc userid:password@IP --mode shared --btn on
OneCli.exe fpusb set  --bmc-username userid –bmc-password password
--mode shared --timeout 30 --owner bmc
```

Notes:
- To set the owner, input the `status` command to check if the front panel USB port is in shared mode; if no, select the **--mode shared** option to set the front panel USB port to shared mode, and then select the owner.
- To set the inactivity time-out, input the `status` command to check if the front panel USB port is in shared mode and if BMC is the preferred owner; if no, select the **--mode shared** option to set the front panel USB port to shared mode, and select the **--owner bmc** option to set BMC as the preferred owner.

status command

Use the `status` command to view the configurations of the front panel USB port in the target server.

status command syntax

```
OneCli.exe [misc] fpusb status [options] [connection options]
```

Table 74. status command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-password, -w • --bmc-username, -u • --config • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the status command

```
OneCli.exe fpusb status --bmc userid:password@IP
OneCli.exe fpusb status --bmc-username userid --bmc-password password
```

hddlocate command

Use the `hddlocate` command to manage the LED status of hard disk drive.

Note: The `hddlocate` command is only supported in the ThinkServer/WenTian/KaiTian systems.

hddlocate command syntax

```
OneCli.exe [misc] hddlocate <command> [options...]
```

Table 75. hddlocate commands

Command	Syntax example	Description
show	`OneCli.exe [misc] hddlocate show [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q] [--slot|-S <int>] [--bmc-username|-u <arg>] [--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]`	Show the LED status of hard disk drive.
turnon	`OneCli.exe [misc] hddlocate turnon [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q] [--slot|-S <int>] [--bmc-username|-u <arg>] [--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]`	Turn on the LEDs of the hard disk drive and set them to blink by disk slot number.
turnoff	`OneCli.exe [misc] hddlocate turnoff [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q] [--slot|-S <int>] [--bmc-username|-u <arg>] [--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]`	Turn off the LEDs of the hard disk drive by disk slot number.

Table 76. hddlocate command specific parameters

Parameter	Required/Optional	Notes
--slot	Optional	Specify the slot number of the target hard disk drive for the LED status management.
• --bmc, -b • --check-trust, -C • --config • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the hddlocate command

```
OneCli.exe hddlocate turnon --slot 1 -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

hostinterface command

Use the `hostinterface` command to manage Host Interface of BMC Redfish.

hostinterface command syntax

```
OneCli.exe [misc] hostinterface <command> [options...]
```

Table 77. hostinterface commands

Command	Description
clear	Clear Host Interface account. For more information, refer to “clear command” on page 95.

Example of the hostinterface command

```
OneCli.exe hostinterface clear -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

clear command

Use the `clear` command to clear Host Interface account.

clear command syntax

```
OneCli.exe [misc] hostinterface clear [--bmc|-b <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>]
[--quiet|-q] [--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 78. clear command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-password, -w • --bmc-rest-port • --bmc-username, -u • --check-trust, -C • --config • --help, -h • --never-check-trust, -N • --nolog • --output, -o • --quiet •	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the clear command

```
OneCli.exe hostinterface clear -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

logmgr commands

Use the `logmgr` commands to obtain and clear BMC event logs. The `logmgr` commands support in-band and out-of-band mode.

logmgr command syntax

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

Table 79. logmgr commands and syntax examples

Command	Syntax example	Description
clearbmclog	`OneCli.exe misc logmgr clearbmclog`	• Clear the BMC event logs of the server. • Clear the remote BMC event logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying “--bmc”.
clearall	`OneCli.exe misc logmgr clearall --bmc userid:password@host`	• Clear the BMC event logs and the system event logs of the server. • Clear the remote BMC event logs and the system event logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying “--bmc”

Table 79. logmgr commands and syntax examples (continued)

Command	Syntax example	Description
clearsel	`OneCli.exe misc logmgr clearsel --bmc userid:password@host`	• Clear the system event logs of the server. • Clear the remote BMC system event logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying "--bmc".
showauditlog	`OneCli.exe misc logmgr showauditlog --bmc userid:password@host`	• Display the BMC audit event logs of the server. • Display the remote BMC audit event logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying "--bmc".
showbmclog	`OneCli.exe misc logmgr showbmclog --bmc userid:password@host`	• Display the BMC Platform event logs of the server. • Display the remote BMC event logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying "--bmc".
showmaintlog	`OneCli.exe misc logmgr showmaintlog --bmc userid:password@host`	• Display the BMC maintenance logs of the server. • Display the remote BMC maintenance logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying "--bmc".
showsel	`OneCli.exe logmgr showsel --bmc userid:password@host`	• Display the system event logs of the server. • Display the remote BMC system event logs by inputting `--bmc user:password@host:port`. • Can be run on the local host OS without specifying "--bmc".

Table 80. logmgr command specific parameters

Parameter	Required/Optional	Notes
--type, -T	Optional	Specify the type of BMC log to be cleared. AEL: Audit Event Log PEL: Platform Event Log ALL: Audit Event Log and Platform Event Log
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --nolog • --never-check-trust, -N • --output, -o	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.

Example of the logmgr command

```
OneCli.exe logmgr clearbmclog --bmc userid:password@host
```

multibmcpassword command

Use the `multibmcpassword` command to remotely change the password of BMC accounts for multiple systems when users log in to BMC for the first time or the password is expired on the XCC-based servers.

multibmcpassword command syntax

```
OneCli.exe [misc] multibmcpassword <--configfile <arg>>
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q]
[--newpwd <arg>] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 81. multibmcpassword command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
--newpwd	Optional	Specify the new password of BMC accounts.
• --check-trust, -C • --config • --help,-h • --never-check-trust, -N • --nolog, -n • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multibmcpassword command

```
OneCli.exe misc multibmcpassword --newpwd xxxxxxxx --configfile multi_task_config.json
```

multiffdc command

Use the `multiffdc` command to obtain the BMC/SMM FFDC logs from multiple servers.

multiffdc command syntax

```
OneCli.exe [misc] multiffdc [ [--smm <arg>] [--bmc|-b <arg>] ][--cn <arg>] [--sn <arg>]
[--mt <arg>] [--check-trust|-C] [--never-check-trust|-N] [--upload <arg>] [--proxy|-P <arg>]
[--proxy-cacert <arg>][--cacert <arg>] [--proxy-insecure][--insecure] [--tftp <arg>]
[--sftp <arg>] [--bmc-username|-u <arg>] [--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>]
[--bmc-cim-port|-p <int>] [--iobay <arg>] [--node|-n <int>] [--quiet|-q][--configfile <arg>]
[--output|-o <arg>][--nolog] [--config <arg>] [--help|-h]
```

Table 82. multiffdc command specific parameters

Parameter	Required/Optional	Notes
--cn	Optional	Specify the case number to upload the files to Lenovo System CARE. The case number should be composed of at least seven characters.
--iobay	Optional	**bay_number** specifies the I/O module bay number. Valid values are 1, 2, 3, or 4. The --iobay parameter specifies an I/O module scan operation. When scanning an I/O module target, the --cmm parameter must also be specified.
--mt	Optional	Specify with --sn. Specify the machine of the target system when uploading the files to System CARE.
--sn	Optional	Specify with --mt. Specify the serial number of the target system when uploading the files to System CARE.
--sftp	Optional	SFTP connection information. Format: user:password@IP[port][dir/]. The address is used to save FFDC logs for VMWare ESXi.
--smm	Optional	If specified, the inventory application will only get the information for a remote SMM. The format is user:password@IP. For the IPv6 address, the format is user:password@[IPv6].
--tftp	Optional	TFTP server for SMM interface. Format: IP[:port][/path].
--upload	Required	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
• --bmc/imm, -b • --check-trust, -C • --config • --configfile • --help, -h • --never-check-trust, -N • --node, -n • --nolog • --output, -o • --quiet	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multiffdc command

```
OneCli.exe misc multiffdc --configfile multi_task_config.json
```

multiinventory command

Use the `multiinventory` command to acquire system information from multi servers.

multiinventory command syntax

```
OneCli.exe [misc] multiinventory <command> [options…]
```

Table 83. multiinventory command

Command	Description
getinfor	Gets device inventory information from multiple servers. For more information, refer to "getinfor command" on page 99.

Example of the multiinventory command

```
OneCli.exe multiinventory getinfor --configfile xxxx/xxxx
```

getinfor command

Use the `getinfor` command to get device inventory information from multiple servers.

getinfor command syntax

```
OneCli.exe multiinventory getinfor <--configfile <arg>> [ [--cn <arg>] [--sn <arg>] [--mt <arg>]
[--check-trust|-C] [--never-check-trust|-N] [--device <arg>] [--upload <arg>]
[--proxy|-P <arg>] [--proxy-cacert <arg>] [--cacert <arg>] [--proxy-insecure]
[--insecure] [--htmlreport] [--ffdc] [--tftp <arg>] [--sftp <arg>] [--hldec]
[--quiet|-q] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 84. getinfor command specific parameters

Parameter	Required/Optional	Notes
--cn	Optional	Specify the case number to upload the files to Lenovo System CARE. The case number should be composed of at least seven characters.
--cacert	Optional	Specify the path of CACert.
--device, -d	Optional	Specify the device to get the status. The supported parameters used with --device: system, processor, fan, dimm, power, and pci_adapter. If not specified, the system health summary containing errors and warning events will be displayed.
--ffdc	Optional	If specified, the inventory application will retrieve the BMC FFDC log.
--hldec	Optional	Collect the UEFI hidden logs. This option is only supported for System X.
--htmlreport	Optional	If specified, the output results will contain HTML file report.
--insecure	Optional	Allow insecure server connections when using SSL.

Table 84. getinfor command specific parameters (continued)

Parameter	Required/Optional	Notes
--mt	Optional	Specify the machine type of target device. Lenovo server, chassis, and enclosure all have machine types. The --mt parameter is required only when using the --noscan parameter (the system is not automatically obtaining the machine-type information). For the I/O module target, the CMM machine type is specified.
--proxy	Optional	Use proxy to connect to Lenovo Web site. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--proxy-cacert	Optional	Specify the path of proxy CACert.
--proxy-insecure	Optional	Do HTTPS proxy connections without verifying the proxy
--sn	Optional	Specify with --mt. Specify the serial number of the target system when uploading the files to System CARE.
--sftp	Optional	SFTP connection information. Format: user:password@IP[port][dir/]. The address is used to save FFDC logs for VMWare ESXi.
--tftp	Optional	TFTP server for SMM interface. Format: IP[:port][/path].
--upload	Required	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
• --config • --configfile • --check-trust, -C • --never-check-trust, -N • --help, -h • --nolog • --output, -o • --quiet	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the getinfor command

```
OneCli.exe multiinventory getinfor --configfile xxxx/xxxx
```

multiraid command

Use the `multiraid` command to remotely create, clear, and save the RAID configuration, check the drive information, convert the JBOD drives to the unconfigured good drives, and convert the unconfigured good drives to the JBOD drives for multiple IMM/XCC-based servers.

multiraid command syntax

```
OneCli.exe [misc] multiraid <command> [options...]
```

Table 85. multiraid commands

Command	Description
add	Create RAID configuration. For more information, refer to “add command” on page 101.
clear	Clear RAID configuration. For more information, refer to “clear command” on page 102.
init	Fastly initialize volumes. For more information, refer to “init command” on page 103.
makegood	Convert the JBOD drives to the unconfigured good drives. For more information, refer to “makegood command” on page 104.
makejbod	Convert the unconfigured good drives to the JBOD drives. For more information, refer to “makejbod command” on page 105.
save	Save RAID configuration. For more information, refer to “save command” on page 106.
show	Show controller and drive information. For more information, refer to “show command” on page 107.

add command

Use the `add` command to create the RAID configuration for multiple IMM/XCC-based servers.

add command syntax

```
Usage: OneCli.exe [misc] multiraid add <--configfile <arg>> <--file|-f <arg>>
[--target|-t <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 86. add command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--file,-f	Requied	Specify the config file. The template file of software raid is available in `Sample/sw_raid.ini`. The template file of other raids is available in `Sample/hw_raid.ini`.

Table 86. add command specific parameters (continued)

Parameter	Required/Optional	Notes
--force	Optional	Forcibly create RAID configuration when there is no user interaction.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the add command

```
OneCli.exe misc multiraid add --configfile ./mutli_raid.json --file ./hw_raid.ini
```

clear command

Use the `clear` command to clear the RAID configuration for multiple IMM/XCC-based servers.

clear command syntax

```
Usage: OneCli.exe [misc] multiraid clear <--configfile <arg>> <--target|-t <arg>>
[--volume|-v <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 87. clear command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--force	Optional	If specified, it will forcibly create RAID configuration without user interaction.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.

Table 87. clear command specific parameters (continued)

Parameter	Required/Optional	Notes
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
--volume, -v	Optional	Specify the target volume ID. The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the clear command

```
OneCli.exe misc multiraid clear --configfile ./mutli_raid.json --target xxx
```

init command

Use the `init` command to fastly initialize volumes for multiple IMM/XCC-based servers.

Note: This command can only be used in the ThinkSystem servers with XCC level versions released later than October 2018.

init command syntax

```
Usage: OneCli.exe [misc] multiraid init <--configfile <arg>> <--target|-t <arg>>
[--volume|-v <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 88. init command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--force	Optional	Forcibly create RAID configuration when there is no user interaction.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.

Table 88. init command specific parameters (continued)

Parameter	Required/Optional	Notes
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
--volume, -v	Optional	Specify the target volume ID. The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the init command

```
OneCli.exe misc multiraid init --configfile ./mutli_raid.json --target xxx
```

makegood command

Use the `makegood` command to convert the JBOD drives to the unconfigured good drives for multiple IMM/XCC-based servers.

makegood command syntax

```
Usage: OneCli.exe [misc] multiraid makegood <--configfile <arg>> <--target|-t <arg>>
[--drive|-d <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 89. makegood command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--drive, -d	Optional	Specify target drive ID. The arguments can be grouped in multiple targets and separated by commas. If it is not specified, it means all.

Table 89. makegood command specific parameters (continued)

Parameter	Required/Optional	Notes
--force	Optional	Forcibly create RAID configuration when there is no user interaction.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the makegood command

```
OneCli.exe misc multiraid makegood --configfile ./mutli_raid.json --target xxx
```

makejbod command

Use the `makejbod` command to convert the unconfigured good drives to the JBOD drives for multiple IMM/XCC-based servers.

Note: This command can only be used in the ThinkSystem servers.

makejbod command syntax

```
Usage: OneCli.exe [misc] multiraid makejbod <--configfile <arg>> <--target|-t <arg>>
[--drive|-d <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 90. makejbod command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.

Table 90. makejbod command specific parameters (continued)

Parameter	Required/Optional	Notes
--drive, -d	Optional	Specify target drive ID. The arguments can be grouped in multiple targets and separated by commas. If it is not specified, it means all.
--force	Optional	Forcibly create RAID configuration when there is no user interaction.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the makejbod command

```
OneCli.exe misc multiraid makejbod --configfile ./mutli_raid.json --target xxx
```

save command

Use the `save` command to save the RAID configuration for multiple IMM/XCC-based servers.

save command syntax

```
Usage: OneCli.exe [misc] multiraid save <--configfile <arg>> <--file|-f <arg>>
[--target|-t <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 91. save command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.

Table 91. save command specific parameters (continued)

Parameter	Required/Optional	Notes
--file,-f	Requied	Specify the config file. The template file of software raid is available in `Sample/sw_raid.ini`. The template file of other raids is available in `Sample/hw_raid.ini`.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the save command

```
OneCli.exe misc multiraid save --configfile ./mutli_raid.json --file ./hw_raid.ini
```

show command

Use the `show` command to show controller and drive information for multiple IMM/XCC-based servers.

show command syntax

```
Usage: OneCli.exe [misc] multiraid show <--configfile <arg>> [--target|-t <arg>]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 92. show command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.

Table 92. show command specific parameters (continued)

Parameter	Required/Optional	Notes
--target,-t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
• --config • --check-trust, -C • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the show command

```
OneCli.exe misc multiraid show --configfile ./mutli_raid.json
```

multiospower commands

Use the `multiospower` commands to turn on, turn off and restart the server, obtain the server power state, and restart the server to BIOS setup.

multiospower command syntax

```
OneCli.exe misc multiospower <command> [options]
```

Table 93. multiospower commands

Option	Description
boottosetup	Restart the server to BIOS setup. For more information, refer to “boottosetup command” on page 108.
reboot	Restart the server. For more information. refer to “reboot command” on page 109.
state	Obtain the server power state. For more information. refer to “state command” on page 109.
turnon	Turn on the server. For more information. refer to “turnon command” on page 110.
turnoff	Turn off the server. For more information. refer to “turnoff command” on page 110.

Example of the multiospower commands

```
OneCli.exe misc multiospower status --configfile xxxx/xxxx
```

boottosetup command

Use the `boottosetup` command to restart the server to BIOS setup.

boottosetup command syntax

```
OneCli.exe misc multiospower <boottosetup> [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q]
```

```
[--configfile <arg>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 94. boottosetup command specific parameters

Parameter	Required/Optional	Notes
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the boottosetup command

```
OneCli.exe misc multiospower boottosetup --configfile xxxx/xxxx
```

reboot command

Use the `reboot` command to restart the server.

reboot command syntax

```
OneCli.exe misc multiospower <reboot> [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q]
[--configfile <arg>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 95. reboot command specific parameters

Parameter	Required/Optional	Notes
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the reboot command

```
OneCli.exe misc multiospower reboot --configfile xxxx/xxxx
```

state command

Use the `state` command to obtain the server power state.

state command syntax

```
OneCli.exe misc multiospower <state> [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q]
[--configfile <arg>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 96. state command specific parameters

Parameter	Required/Optional	Notes
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the state command

```
OneCli.exe misc multiospower state --configfile xxxx/xxxx
```

turnon command

Use the `turnon` command to turn on the server.

turnon command syntax

```
OneCli.exe misc multiospower <turnon> [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q]
[--configfile <arg>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 97. turnon command specific parameters

Parameter	Required/Optional	Notes
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the turnon command

```
OneCli.exe misc multiospower turnon --configfile xxxx/xxxx
```

turnoff command

Use the `turnoff` command to turn off the server.

turnoff command syntax

```
OneCli.exe misc multiospower <turnoff> [--check-trust|-C] [--never-check-trust|-N] [--quiet|-q]
[--configfile <arg>] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 98. turnoff command specific parameters

Parameter	Required/Optional	Notes
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the turnoff command

```
OneCli.exe misc multiospwer turnoff --configfile xxxx/xxxx
```

multiservicedata command

Use the `multiservicedata` command to obtain service data information from multiple BMC.

multiservicedata command syntax

```
OneCli.exe [misc] multiservicedata [--bmc|-b <arg>] [--type|-T <arg>] [--check-trust|-C]
```

```
[--never-check-trust|-N][--bmc-username|-u <arg>] [--bmc-password|-w <arg>]
[--bmc-rest-port|-p <int>] [--quiet|-q][--cn <arg>] [--sn <arg>][--mt <arg>]
[--upload <arg>][--proxy|-P <arg>] [--proxy-cacert <arg>][--cacert <arg>]
[--proxy-insecure][--insecure] [--configfile <arg>][--output|-o <arg>]
[--nolog][--config <arg>] [--help|-h]
```

Table 99. multiservicedata command specific parameters

Parameter	Required/Optional	Notes
--cn	Optional	Specify the case number to upload the files to Lenovo System CARE. The case number should be composed of at least seven characters.
--mt	Optional	Specify with --sn. Specify the machine of the target system when uploading the files to System CARE.
--sn	Optional	Specify with --mt. Specify the serial number of the target system when uploading the files to System CARE.
--type, -T	Optional	Specify the type of service data obtained from BMC. osfailure: Last OS failure screen healthreport: Health report all: Last OS failure screen and health report
--upload	Required	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
• --config • --configfile • --check-trust, -C • --help, -h • --never-check-trust, -N • --nolog • --output, -o • --quiet	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multiservicedata command

```
OneCli.exe misc multiservicedata --configfile multi_task_config.json
```

multisyshealth command

Use the `multisyshealth` command to remotely collect system health information for multiple IMM/XCC-based servers.

multisyshealth command syntax

```
OneCli.exe misc multisyshealth <--configfile <arg>> [--device|-d <arg>]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>] [--help|-h]
```

Table 100. multisyshealth command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the config file for multi-task command. The template file is available in `Sample/multi_task_config.json`.
--device, -d	Optional	Specify the device to get the status. The supported parameters used with --device: system, processor, fan, dimm, power, and pci_adapter. If not specified, the system health summary containing errors and warning events will be displayed.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --config • --help,-h • --nolog, -n • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the multisyshealth command

```
OneCli.exe misc multisyshealth --configfile ./mutli_systemhealth.json
```

multivm commands

Use the `multivm` command to list, mount, or unmount the virtual media on multiple BMC.

multivm command syntax

```
Usage: OneCli.exe [misc] multivm mount <--configfile <arg>> [--id|-I <arg>]
[--path|-P <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--writeprotected] [--unattended]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 101. multivm commands and syntax examples

Command	Syntax example	Description
list	`OneCLI multivm list --bmc <bmc connection info>`	List the virtual media status on BMC.
mount	`OneCLI multivm mount --id <virtual media id> --path <httpfs or nfs url> --bmc <bmc connection info>`	Mount virutal media on BMC by using ID.
umount	`OneCLI multivm umount --id <virtual media id> --bmc <bmc connection info>`	Unmount virutal media on BMC by using ID.

Table 102. multivm command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the configuration file for multiple task commands, the format is: `Sample/muti_task_config.json`.
--id, -I	Only required in the `mount` and `umount` commands.	Specify the virtual media ID, for example, RDOC1, EXT1, and Remote1. For ThinkBMC, the virtual media ID is CD.
--path, -P	Only required in the `mount` and `umount` commands.	Specify the URL of virtual media path, which supports NFS and HTTPFS. Support NFS and CIFS in ThinkBMC. **NFS URL address form:** • ipaddress:/path/to/file • domain-name:/path/to/file **NFS (ThinkBMC) form:** • nfs://host[:port]/path/to/file **CIFS(ThinkBMC) form:** • cifs://[username:password@]host[:port]/path/to/file **HTTPFS URL address form:** • https://ipaddress[:port]/path/to/file • https://domain-name[:port]/path/to/file The domain-name can be alphanumeric characters “.”, “-”, or “_” and should be composed of at least two domain items. The port number is optional.

Example of the multivm command

```
OneCli.exe misc multivm list --configflie multitask.json
```

ospower command

Use the `ospower` commands to power on, power off, and restart host OS, and display the power status of the host server OS. The `ospower` commands support in-band mode and out-of-band mode.

ospower command syntax

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

Table 103. ospower commands and examples

Command	Syntax example	Description
acpower	`OneCli.exe ospower acpower --bmc userid:password@ host`	Remotely perform AC power cycle by inputting `--bmc user:password@host:port`.
boottosetup	`OneCli.exe ospower boottosetup --bmc userid:password@ host`	Restart the host server to make the UEFI setting take effect.

Table 103. ospower commands and examples (continued)

Command	Syntax example	Description
reboot	`OneCli.exe ospower reboot --bmc userid:password@host`	• Restart the host server OS. • Restart the remote host OS by inputting `--bmc user:password@host:port`. • Restart only works if the current power state is on.
state	`OneCli.exe misc ospower state --bmc userid:password@host`	• Check the host server OS power status. • Check the power status of the remote host OS by inputting `--bmc user:password@host:port`.
turnoff	`OneCli.exe ospower turnoff --bmc userid:password@host`	• Turn off the host server OS. • Turn off the remote host OS by inputting `--bmc user:password@host:port`.
turnon	`OneCli.exe ospower turnon --bmc userid:password@host`	• Turn on the host server OS. • Turn on the remote host OS by inputting `--bmc user:password@host:port`.

Table 104. ospower command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the state command

```
OneCli.exe ospower state --bmc userid:passwordD@host
```

portctrl commands

Use the `portctrl` command to display and configure CIM, IPMI, or all interfaces and discovery protocols.

portctrl command syntax

```
OneCli.exe misc portctrl <command> [options] [connection options]
```

Option

--help
Display the help information for commands.

Connection option

--bmc <arg>/--bmc-username <arg> --bmc-password <arg>

Specify the BMC connection information.

Table 105. portctrl commands

Option	Description
all	Display and configure all interfaces and discovery protocols. For more information, refer to “all command” on page 115.
cim	Display and configure CIM over HTTPS. For more information. refer to “cim command” on page 115.
ipmikcs	Display and configure IPMI over KCS. For more information. refer to “ipmikcs command” on page 116.
ipmilan	Display and configure IPMI over LAN. For more information. refer to “ipmilan command” on page 116.

Example of the portctrl command

```
OneCli.exe misc portctrl cim off --bmc-username USERID --bmc-password PASSWORD
```

all command

Use the `all` command to display and configure all interfaces and discovery protocols.

all command syntax

```
OneCli.exe misc portctrl <all> [on|off] [--bmc <arg>] [--bmc-username|-u <arg>] [--bmc-password|-w <arg>]
[--check-trust|-C] [--never-check-trust|-N] [--bmc-rest-port|-p <int>] [--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>] [--help|-h]
```

Table 106. all command specific parameters

Parameter	Required/Optional	Notes
on	Optional	Enable all interfaces and discovery protocols.
off	Optional	Disable all interfaces and discovery protocols.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the all command

```
OneCli.exe misc portctrl all on --bmc USERID:PASSWORD@xx.xx.xx.xx
```

cim command

Use the `cim` command to display and configure CIM over HTTPS.

cim command syntax

```
OneCli.exe misc portctrl <cim> [on|off] [--bmc <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>][--check-trust|-C] [--never-check-trust|-N] [--bmc-rest-port|-p <int>]
[--quiet|-q] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 107. cim command specific parameters

Parameter	Required/Optional	Notes
on	Optional	Enable CIM over HTTPS.
off	Optional	Disable CIM over HTTPS.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the cim command

```
OneCli.exe misc portctrl cim on --bmc USERID:PASSWORD@xx.xx.xx.xx
```

ipmikcs command

Use the `ipmikcs` command to display and configure IPMI over KCS.

ipmilan command syntax

```
OneCli.exe misc portctrl <ipmikcs> [on|off] [--bmc <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--check-trust|-C] [--never-check-trust|-N] [--bmc-rest-port|-p <int>]
[--quiet|-q] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 108. ipmikcs command specific parameters

Parameter	Required/Optional	Notes
on	Optional	Enable IPMI over KCS.
off	Optional	Disable IPMI over KCS.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the ipmikcs command

```
OneCli.exe misc portctrl ipmikcs on --bmc USERID:PASSWORD@xx.xx.xx.xx
```

ipmilan command

Use the `ipmilan` command to display and configure IPMI over LAN.

ipmilan command syntax

```
OneCli.exe misc portctrl <ipmilan> [on|off] [--bmc <arg>] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--check-trust|-C] [--never-check-trust|-N] [--bmc-rest-port|-p <int>]
[--quiet|-q] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 109. ipmilan command specific parameters

Parameter	Required/Optional	Notes
on	Optional	Enable IPMI over LAN.
off	Optional	Disable IPMI over LAN.
--quiet, -q	Optional	This parameter answers “yes” for all questions, and decreases the outputs displayed on screen.
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the ipmilan command

```
OneCli.exe misc portctrl ipmilan off --bmc USERID:PASSWORD@ xx.xx.xx.xx
```

raid command

Use the `raid` command to create, clear, and save the RAID configuration, check the drive information, convert the JBOD drives to the unconfigured good drives, and convert the unconfigured good drives to the JBOD drives.

Notes:
- It is risky to change the RAID configuration because all data on the disk might not be available.
- From V2.4.0, OneCLI supports the RAID configuration on M.2 SSD with the matching XCC level. The RAID configuration on M.2 SSD supports the following commands: `add`, `clear`, `save`, and `show`.
- From V2.5.0, OneCLI supports Software Raid configuration with Intel RSTe Software on Linux. The Software Raid configuration with Intel RSTe Software supports the following commands: `show`, `add`, and `clear`.
- From V2.8.0, OneCLI supports Broadcom RAID configuration with storcli utility on Windows and Linux. The Broadcom RAID configuration supports the following commands: `show`, `add`, `save`, `clear`, `makegood`, and `makejbod`.
- From V3.0.0, OneCLI supports M.2 controller RAID configuration in the in-band mode on Windows and Linux. The M.2 controller RAID configuration supports the following commands: `show`, `add`, `save`, and `clear`.
- From V3.5.1, OneCLI supports Broadcom RAID/Microchip RAID configuration through out-of-band mode for the ThinkServer servers.

Table 110. raid commands

Command	Description
add	Create RAID configuration. For more information, refer to “add command” on page 124.
addhsp	Assign the drive as hot spare. For more information, refer to “addhsp command” on page 125.
changemode	Change the connector mode for Microchip RAID adapter. For more information, refer to “changemode command” on page 126.
clear	Clear RAID configuration. For more information, refer to “clear command” on page 126.

Table 110. raid commands (continued)

Command	Description
fwdeviceorder	Enable or disable the “firmware device ordering” feature of the RAID adapter. For more information, refer to “fwdeviceorder command” on page 129.
init	Quickly initialize volumes. For more information, refer to “init command” on page 129.
makegood	Convert the JBOD drives to the unconfigured good drives. For more information, refer to “makegood command” on page 130.
makejbod	Convert the unconfigured good drives to the JBOD drives. For more information, refer to “makejbod command” on page 131.
rmhsp	Remove the hot spare. For more information, refer to “rmhsp command” on page 132.
save	Save RAID configuration. For more information, refer to “save command” on page 133.
show	Show controller and drive information. For more information, refer to “show command” on page 134.

Template policy file

The following is the template policy file for Hardware Raid configuration. For the latest template policy file, refer to RAID_HW_new.ini in OneCLI binary.

```
# Sample template to create hardware RAID configuration using --ctrl parameter.
#
# USAGE NOTE
# Broadcom and Marvell controller RAID can be remotely created and configured by OneCLI running in the local
# via out-of-band mode.
# Broadcom, Microchip and Marvell controller RAID can be created and configured by OneCLI running in the local
# via inband mode.
# One or more volumes can be created in Broadcom and Microchip controller RAID, but only one volume can be
# created in Marvell controller RAID.
#
# Note:
# 1. Broadcom 5xx series cards do not have cache, so the cache related settings are not applicable, such as
# Read Policy, Write Policy and I/O Policy.
#
#
# To use this sample, uncomment and edit a block of example based on your needs.

# EXAMPLE
# Create one simple RAID1 volume for Broadcom controller RAID, one simple RAID1 volume for Microchip controller
# RAID and one simple RAID0 volume for Marvell controller RAID.
# For Broadcom controller RAID, create one RAID1 volume which consumes 200GB.
# For Microchip controller RAID, create one RAID1 volume which consumes 300GB.
# For Marvell controller RAID, create one RAID0 volume that consumes all volume capacity.
# For controller RAID on ThinkServer, create one RAID0 volume that consumes 446GB.
```

```
# This is for Broadcom controller
# [ctrl1-vol0]
# disks=0,1
# hot_spares=2
# raid_level=1
# vol_name=volume0
# write_policy=0
# read_policy=0
# io_policy=0
# access_policy=0
# cache_policy=0
# volume_size=200GB
# strip_size=64K
# [ctrl1]
# global_hot_spares=3
#
# This is for Microchip controller
# [ctrl2-vol1]
# disks=3,4
# hot_spares=5
# raid_level=1
# vol_name=volume1
# io_policy=1
# volume_size=300GB
# strip_size=128K
#
# This is for Marvell controller
# [ctrl3]
# raid_level=0
# vol_name=m2vol
# strip_size=64K
#
# This is for Broadcom controller on ThinkServer
# [ctrl4-vol0]
# disks=6
# raid_level=0
# vol_name=EEE
# write_policy=0
# read_policy=0
# access_policy=0
# cache_policy=0
# volume_size=446GB
# strip_size=256K
# initialization=0

# SYNTAX EXPLANATION
#
# disks
# In out-of-band mode:
# [Broadcom] [Required] Specify drive(s) index separated by ",", supporting ”rest”(case insensitive).
# Specify span(s) index separated by ":"when RAID level is 1E, 10, 50, 60 or 00.(For example, 0,1:2,3)
# [Microchip] [Required] Specify drive(s) index separated by ",". Specify span(s) index separated by ":"
# when RAID level is 10, 50, 60 or 00.(For example, 0,1:2,3)
# [Marvell] [Unsupported]
# [ThinkServer] [Required] The same as Broadcom oob way except not supporting ”rest”.
#
# In inband mode:
# [Broadcom] [Required] The same as Broadcom oob way except not supporting ”rest”.
# [Microchip] [Required] Specify drive(s) index separated by ",".
# [Marvell] [Unsupported]
#
```

```
# [Format] disks=0,1
#
# hot_spares
# Drive group for hot spare. Specify drive(s) index separated by ",".
# In out-of-band mode:
# [Broadcom] [Optional]
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
# [ThinkServer] [Unsupported]
#
# In inband mode:
# [Broadcom] [Optional]
# [Microchip] [Optional]
# [Marvell] [Unsupported]
#
# [Format] hot_spares=2,3
#
# raid_level
# [Required]
# In out-of-band mode:
# [Broadcom] Values: 0, 1, 5, 1E, 6, 10, 50, 60, 00.
# [Microchip] Values: 0, 1, 5, 1E, 6, 10, 50, 60, 00, 1triple, 10triple.
# [Marvell] Values: 0, 1.
# [ThinkServer] Values: 0, 1, 5, 1E, 6, 10, 50, 60, 00 and so on.
#
# In inband mode:
# [Broadcom] Values: The same as Broadcom oob way.
# [Microchip] Values: 0, 1, 5, 1E, 6, 10, 50, 60, 00, 1triple, 10triple.
# [Marvell] Values: The same as Marvell oob way.
#
# [Format] raid_level=1
#
# vol_name
# [Required] Allowed characters: A-Z, a-z, 0-9, -(dash), .(period), and _(underscore).
# Marvell NVMe RAID: vol_name is unapplicable.
# [ThinkServer] [Optional]
# [Format] vol_name=volume1
#
# write_policy
# Cache write policy
# In out-of-band mode:
# [Broadcom] [Optional] Values: 0-Write Through, 1-Always Write Back, 2-Write Back with BBU. Default value 0.
# [Microchip] [Optional] Values: 1-Always Write Back, 2-Write Back, 3-Off. Default value 3.
# [Marvell] [Unsupported]
# [Broadcom on ThinkServer] [Optional] Values: 0-Write Through, 1-Unprotected Write Back. Default value 0.
# [Microchip on ThinkServer] [Unsupported]
#
# In inband mode:
# [Broadcom] [Optional] The same as Broadcom oob way.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
#
# [Format] write_policy=0
#
# read_policy
# Cache read policy.
# In out-of-band mode:
# [Broadcom] [Optional] In System X, values: 0-No Read Ahead, 1-Read Ahead, 2-Adaptive Read Ahead. Default value 0.
# In ThinkSystem, values: 0-No Read Ahead, 1-Always Read Ahead. Default value 0.
# [Microchip] [Optional] Values: 0-No Read Ahead, 1-Read Ahead. Default value 0.
# [Marvell] [Unsupported]
```

```
# [Broadcom on ThinkServer] [Optional] Values: 0-Off, 1-Read Ahead. Default value 0.
# [Microchip on ThinkServer] [Unsupported]
#
# In inband mode:
# [Broadcom] [Optional] The same as Broadcom oob way.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
#
# [Format] read_policy=0
#
# io_policy
# In out-of-band mode:
# [Broadcom] [Optional] Cache IO policy. Values: 0-Direct I/O, 1-Cached I/O. Default value 0.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
# [ThinkServer] [Unsupported]
#
# In inband mode:
# [Broadcom] [Optional] The same as Broadcom oob way.
# [Microchip] [Optional] Acceleration Method. values: 0-None, 1-Controller Cache, 2-SsdIOBypass.
# [Marvell] [Unsupported]
#
# [Format] io_policy=0
#
# access_policy
# Access policy.
# In out-of-band mode:
# [Broadcom] [Optional] Values: 0-Read Write, 2-Read Only, 3-Blocked. Default value 0.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
# [ThinkServer] [Optional] The same as Broadcom oob way.
#
# In inband mode:
# [Broadcom] [Optional] The same as Broadcom oob way.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
#
# [Format] access_policy=0
#
# cache_policy
# Disk cache policy.
# In out-of-band mode:
# [Broadcom] [Optional] 0-Unchanged, 1-Enable, 2-Disable. Default value 0.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
# [ThinkServer] [Optional] The same as Broadcom oob way.
#
# In inband mode:
# [Broadcom] [Optional] The same as Broadcom oob way.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
#
# [Format] cache_policy=1
#
# volume_size
# New volume size. Unit: MB/GB.
# In out-of-band mode:
# [Broadcom] [Required] Support percentage.
# [Microchip] [Required]
# [Marvell] [Unsupported]
# [Marvell on ThinkServer] [Unsupported] Marvell will use all space by default.
```

```
# [Broadcom/Mircochip on ThinkServer] [Required] Not support percentage.
#
# In inband mode:
# [Broadcom] [Required]
# [Microchip] [Required]
# [Marvell] [Unsupported]
#
# [Format] volume_size=50%
# volume_size=500GB
#
# strip_size
# Strip Size. Unit: K
# In out-of-band mode:
# [Broadcom] [Optional] Values: 8K, 16K, 32K, 64K, 128K and so on. Default value 128K.
# [Microchip] [Optional] The same as Broadcom oob way.
# [Marvell] [Required] Values: 32K, 64K, 128K, 256K, 512K.
# [ThinkServer] [Required] Values: 64K, 128K, 256K, 512K, 1024K.
#
# In inband mode:
# [Broadcom] [Optional] The same as Broadcom oob way.
# [Microchip] [Optional] The same as Broadcom oob way.
# [Marvell] [Required] The same as Marvell oob way.
#
# [Format] strip_size=64K
#
# initialization
# Initialization for this volume.
# In out-of-band mode:
# [Broadcom] [Optional] Values: 0-No initialization, 1-Quick initialization, 2-Full initialization.
# To run full initialization on System x servers use IMM or UEFI, on ThinkSystem servers
# use XCC or LXPM, or use the vendor provided RAID setup utility tool in both cases.
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
# [Broadcom on ThinkServer] [Optional] Values: 0-No initialization, 1-Quick initialization, 2-Full initialization.
# Default value 0.
# [Microchip on ThinkServer] [Unsupported]
#
# In inband mode:
# [Broadcom] [Unsupported]
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
#
# [Format] initialization=0
#
# global_hot_spares
# Drive group for global hot spare. Specify drive(s) index separated by ",".
# In out-of-band mode:
# [Broadcom] [Optional]
# [Microchip] [Unsupported]
# [Marvell] [Unsupported]
# [ThinkServer] [Unsupported]
#
# In inband mode:
# [Broadcom] [Optional]
# [Microchip] [Optional]
# [Marvell] [Unsupported]
#
# [Format] global_hot_spares=2
#
# END OF FILE
```

The following is the template policy file for Software Raid configuration. For the latest template policy file, refer to RAID_SW_new.ini in OneCLI binary.

```
# Sample template to configure RAID volumes with Intel RSTe Software RAID and Intel(R) virtual RAID using
# --ctrl parameter.
#
# Intel VROC and Intel Rapid Storage Technology Enterprise (Intel RSTe) were previously related products in
# the same product family.
# The SATA RAID portion of the product family was called Intel RSTe and the NVMe RAID portion was called Intel VROC.
# However, starting in Q1 2019, with the launch of Intel VROC 6.0, the Intel RSTe name was removed, and all RAID
#  solutions in this product
# family were branded as Intel VROC. The SATA functionality remains, but is now branded as Intel VROC (SATA RAID).

# USAGE NOTE
# Software RAID can be created and configured by OneCLI running in the Operating System.
# If the disk count is sufficient, one array and up to two volumes of mixed RAID levels can be created.
# Ensure that the proper Intel software RAID driver is installed on Windows.
#
# To use this sample, uncomment and edit a block of example based on your needs.

# EXAMPLE 1
# For Intel VROC via out-of-band mode, create one RAID0 volume which consumes 300GB.
#[ctrl1-vol0]
#  disks=1,2
#  raid_level=0
#  vol_name=volume1
#  volume_size=300GB
#  strip_size=128K
#
# EXAMPLE 2
# For Intel VROC via inband mode in windows, create one RAID0 volume which consumes 50GB and one RAID0 volume
# which consumes rest capacity.
#[ctrl0-vol0]
# disks=1,2
# raid_level=0
# vol_name=vol0
# vol_capacity=50GB
# vol_strip_size=64K
# RAID_write_hole=Off
#[ctrl0-vol1]
# disks=1,2
# raid_level=0
# vol_name=vol1
# vol_strip_size=64K
# RAID_write_hole=Off
#[ctrl0]
# global_hot_spares=3

# SYNTAX EXPLANATION
#
# disks
# [Required] Specify drive(s) index separated by ",".
# [Format] disks=0,1
#
# raid_level
# [Required] Values: 0, 1, 5, 10.
# [Format] raid_level=1
#
# vol_name
# [Required] Allowed characters: A-Z, a-z, 0-9, -(dash), .(period), and _(underscore).
# [Format] vol_name=vol0
```

```
#
# volume_size
# In out-of-band mode:
# [Required] New volume size. Unit: MB / GB.
# [Format] volume_size=500GB
#
# vol_capacity
# In inband mode:
# [Optional] Capacity of the volume, in gigabyte (use the value number). Default value is all available space.
# The second volume under the same Array uses all the remaining space by default.
# [Format] vol_capacity=50GB
#
# strip_size
# In out-of-band mode:
# [Optional] Values: 4K, 8K, 16K, 32K, 64K, 128K. Default value 128K.
# [Format] strip_size=64K
#
# vol_strip_size
# In inband mode:
# [Optional] Strip size of the volume, in kilobyte.
# RAID1, not support the stripSize setting.
# RAID0, default value(128K), values : 4K, 8K, 16K, 32K, 64K, 128K.
# RAID5, default value(64K), values : 4K, 8K, 16K, 32K, 64K, 128K.
# RAID10, default value(64K), values : 4K, 8K, 16K, 32K, 64K, 128K.
# [Format] vol_strip_size=64K
#
# global_hot_spares
# [Optional] Drive group for global hot spare , specify drive(s) index separated by ",".
#  If no value is specified, there will be no global hot spare.
# [Format] global_hot_spares=3
#
# RAID_write_hole
# In inband mode:
# [Optional] Close RAID Write Hole policy(RAID5). Default value(Off), values : Off, Distributed.
# [Format] RAID_write_hole=Off
#
#
#
# END OF FILE
```

Example of the raid command

```
OneCli.exe misc raid add --bmc userid:password@host--file raid.ini
```

add command

Use the `add` command to create RAID configuration.

add command syntax

```
Usage: ./OneCli [misc] raid add <--file|-f <arg>> [--bmc|-b <arg>]
[--ctrl <arg>] [--target|-t <arg>]
[--force] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 111. add command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--file, -f	Required	Specify the policy file of RAID configuration.
--force	Optional	Forcibly create RAID configuration when there is no user interaction.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the add command

```
OneCli.exe misc raid add --bmc xxxx:xxxx@xx.xx.xx.xx --file raid.ini
```

addhsp command

Use the `addhsp` command to assign the drive as hot spare.

addhsp command syntax

```
Usage: ./OneCli [misc] raid addhsp <--drive|-d <arg>> [--bmc|-b <arg>]
[--ctrl <arg>] [--target|-t <arg>]
[--dg <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 112. addhsp command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--drive, -d	Optional	Specify target drive ID. The arguments can be grouped in multiple targets and separated by commas. If it is not specified, it means all.

Table 112. addhsp command specific parameters (continued)

Parameter	Required/Optional	Notes
--dg	Optional	Specify drive groups. The argument can be specified multiple targets by commas. If it is specified, it means assigning the drive as dedicated hot spare. If it is not specified, it means assigning the drive as a global hot spare.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the addhsp command

```
OneCli.exe misc raid addhsp --target 0 --drive 0 --bmc userid:password@host
```

changemode command

Use the `changemode` command to change the connector mode for Microchip RAID adapter.

changemode command syntax

```
Usage: ./OneCli [misc] raid changemode <--connectorid|-c <arg>> <--mode <arg>>
[--ctrl <arg>] [--target|-t <arg>]
[--force] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 113. changemode command specific parameters

Parameter	Required/Optional	Notes
--connectorid, -c	Required	Specify connector ID for Microchip RAID adapter.
--ctrl	Required	Specify controller ID starting with index 1. Example: --ctrl 1.
--mode	Required	Specify the mode for the front panel USB. The mode can be set as bmc, server and shared.

Example of the changemode command

```
OneCli.exe misc raid changemode -connectorid 0 -mode MIX –ctrl 1
```

clear command

Use the `clear` command to clear RAID configuration.

clear command syntax

```
Usage: ./OneCli [misc] raid clear [--bmc|-b <arg>] [--ctrl <arg>]
```

```
[--target|-t <arg>] [--volume|-v <arg>]
[--force] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 114. clear command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--force	Optional	Force to create RAID configuration when there is no user interaction.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
--volume, -v	Optional	Specify the target volume ID. The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the clear command

```
OneCli.exe misc raid clear –ctrl 1 --bmc xxxx:xxxx@xx.xx.xx.xx
```

ekm command

Use the `ekm` command to display the external key management status of the RAID adapter, and enable or disable the external key management.

ekm command syntax

```
Usage: OneCli.exe [misc] raid ekm [--bmc|-b <arg>] [--ctrl <arg>]
[--mode <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--force]
[--quiet|-q] [--bmc-username|-u <arg>]
[--bmc-password|-w <arg>] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 115. ekm command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--mode	Optional	Specify the external key management mode. Values: enable, disable.
• --bmc, -b • --bmc-username, -u • --bmc-password, -w • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the ekm command

```
OneCli.exe raid ekm --bmc xxxx:xxxx@xx.xx.xx.xx
```

envol command

Use the `envol` command to display the encryption status of the virtual disks/volumes managed by RAID adapter, and enable the encryption of the virtual disks/volumes.

envol command syntax

```
Usage: OneCli.exe [misc] raid envol [--bmc|-b <arg>] [--ctrl <arg>]
[--volume|-v <arg>] [--mode <arg>]
[--check-trust|-C] [--never-check-trust|-N]
[--force] [--quiet|-q]
[--bmc-username|-u <arg>] [--bmc-password|-w <arg>]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 116. envol command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--mode	Optional	Specify the volume encryption mode. Value: enable.

Table 116. envol command specific parameters (continued)

Parameter	Required/Optional	Notes
--volume, -v	Optional	Specify the target volume ID. The argument can be specified to multiple targets by comma. If not specified, it means all.
• --bmc, -b • --bmc-username, -u • --bmc-password, -w • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the envol command

```
OneCli.exe raid envol --bmc xxxx:xxxx@xx.xx.xx.xx
```

fwdeviceorder command

Use the `fwdeviceorder` command to enable or disable the “firmware device ordering” feature of the RAID adapter.

fwdeviceorder command syntax

```
Usage: OneCli.exe [misc] raid fwdeviceorder [--bmc|-b <arg>] [--mode <arg>]
[--ctrl <arg>] [--force]
[--check-trust|-C] [--never-check-trust|-N]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 117. fwdeviceorder command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--mode	Optional	Specify the firmware device order mode. The values include: on, off.

Example of the fwdeviceorder command

```
OneCli.exe misc raid fwdeviceorder --bmc xxxx:xxxx@xx.xx.xx.xx
```

init command

Use the `init` command to quickly initialize volumes. This command can only be used in the ThinkSystem servers with XCC level versions released after October 2018.

init command syntax

```
Usage: ./OneCli [misc] raid init <--bmc|-b <arg>> [--ctrl <arg>]
[--target|-t <arg>] [--volume|-v <arg>]
[--force] [--check-trust|-C]
```

```
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 118. init command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.
--volume, -v	Optional	Specify the target volume ID. The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the init command

```
OneCli.exe misc raid init --ctrl 1 --volume 0,1 --bmc xxxx:xxxx@xx.xx.xx.xx
```

makegood command

Use the `makegood` command to convert the JBOD drives to the unconfigured good drives.

makegood command syntax

```
Usage: ./OneCli [misc] raid makegood [--bmc|-b <arg>] [--ctrl <arg>]
[--target|-t <arg>] [--drive|-d <arg>]
[--force] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 119. makegood command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--drive, -d	Optional	Specify target drive ID. The arguments can be grouped in multiple targets and separated by commas. If it is not specified, it means all.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the makegood command

```
OneCli.exe misc raid makegood --ctrl 1 --bmc xxxx:xxxx@xx.xx.xx.xx
```

makejbod command

Use the `makejbod` command to convert the unconfigured good drives to the JBOD drives. This command can only be used in the ThinkSystem servers.

makejbod command syntax

```
Usage: ./OneCli [misc] raid makejbod [--bmc|-b <arg>] [--ctrl <arg>]
[--target|-t <arg>] [--drive|-d <arg>]
[--force] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 120. makejbod command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--drive, -d	Optional	Specify target drive ID. The arguments can be grouped in multiple targets and separated by commas. If it is not specified, it means all.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the makejbod command

```
OneCli.exe misc raid makejbod --ctrl 1 --bmc xxxx:xxxx@xx.xx.xx.xx
```

rmhsp command

Use the `rmhsp` command to remove the hot spare.

rmhsp command syntax

```
Usage: ./OneCli [misc] raid rmhsp <--drive|-d <arg>> [--bmc|-b <arg>]
[--ctrl <arg>] [--target|-t <arg>]
[--force] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 121. rmhsp command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--drive, -d	Optional	Specify target drive ID. The arguments can be grouped in multiple targets and separated by commas. If it is not specified, it means all.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the rmhsp command

```
OneCli.exe misc raid rmhsp --target 0 --drive 0 --bmc userid:password@host
```

save command

Use the `save` command to save RAID configuration.

save command syntax

```
Usage: ./OneCli [misc] raid save <--file|-f <arg>> [--bmc|-b <arg>]
[--ctrl <arg>] [--target|-t <arg>]
[--check-trust|-C] [--never-check-trust|-N]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 122. save command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--file, -f	Required	Specify the policy file of RAID configuration.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the save command

```
OneCli.exe misc raid save --file policy.ini --bmc xxxx:xxxx@xx.xx.xx.xx
```

show command

Use the `show` command to show the drive information to the controllers.

show command syntax

```
Usage: ./OneCli [misc] raid show [--bmc|-b <arg>] [--ctrl <arg>]
[--target|-t <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--quiet|-q]
[--output|-o <arg>] [--nolog]
[--config <arg>] [--help|-h]
```

Table 123. show command specific parameters

Parameter	Required/Optional	Notes
--ctrl	Optional	Specify controller ID starting with index 1. Example: --ctrl 1.
--target, -t	Optional (Deprecated from V3.5.1)	It is recommended to use the `--ctrl` option instead. Specify the target controller ID. The following is the description on ID: • **1**: ctrl[1] • **m2**/**m.2**: Single m.2 raid • **m2-1**/**m.2-1**: Multi m.2 raid The argument can be specified to multiple targets by comma. If not specified, it means all.

Example of the show command

```
OneCli.exe misc raid show --bmc xxxx:xxxx@xx.xx.xx.xx
```

rebootbmc command

Use the `rebootbmc` command to restart BMC. The `rebootbmc` command still works for backward compatibility, so the script solution will not destroy the `rebootimm` command specified in the scripts.

rebootbmc command syntax

```
OneCli.exe [misc] rebootbmc [--bmc <userid:password@host[:port]>][<options>]
```

Table 124. rebootbmc command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the rebootbmc command

```
OneCli.exe misc rebootbmc --bmc userid:password@host[:port]
```

rebootcmm command

Use the `rebootcmm` command to restart CMM.

rebootcmm command syntax

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

Table 125. rebootcmm command specific parameters

Parameter	Required/Optional	Notes
• --check-trust, -C • --cmm • --never-check-trust, -N • --nolog • --output, -o	Required	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the rebootcmm command

```
OneCli.exe misc rebootcmm --cmm userid:password@host[:port]
```

rebootiom command

Use the `rebootiom` command to restart I/O Module on the Flex chassis.

rebootiom command syntax

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

Table 126. rebootiom command specific parameters

Parameter	Required/Optional	Notes
• --check-trust, -C • --cmm • --iobay • --never-check-trust, -N • --nolog • --output, -o	Required	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the rebootiom command

```
OneCli.exe misc rebootiom --cmm userid:password@host[:port]
--iobay 2
```

rebootsmm command

Use the `rebootsmm` command to restart SMM.

rebootsmm command syntax

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

Table 127. rebootsmm command specific parameters

Parameter	Required/Optional	Notes
--smm	Required	Specify SMM IP and credential information.

Example of the rebootsmm command

```
OneCli.exe misc rebootsmm --smm userid:password@ host
```

reseatblade command

Use the `reseatblade` command to reseat the blades on the Flex chassis.

reseatblade command syntax

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

Table 128. reseatblade command specific parameters

Parameter	Required/Optional	Notes
--cmm	Required	Specify CMM IP and credential information.
--nodebay	Required	Specify the switch bay ID to be scanned.

Example of the reseatblade command

```
OneCli.exe misc reseatblade --cmm userid:password@host --nodebay 1
```

reseatcmm command

Use the `reseatcmm` command to reseat CMM.

reseatcmm command syntax

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

Table 129. reseatcmm command specific parameters

Parameter	Required/Optional	Notes
--cmm	Required	Specify CMM IP and credential information.
--standby	Optional	If the --standby parameter is specified, the `reseatcmm` command will reseat the standby CMM instead of the primary CMM.

Example of the reseatcmm command

```
OneCli.exe misc reseatcmm --cmm userid:password@host
```

reseatswitch command

Use the `reseatswitch` command to reseat the switch on the Flex chassis.

reseatswitch command syntax

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

Table 130. reseatswitch command specific parameters

Parameter	Required/Optional	Notes
--cmm	Required	Specify CMM IP and credential information.
--iobay	Required	Specify I/O bay number of the switch.

Example of the reseatswitch command

```
OneCli.exe misc reseatswitch --cmm userid:password@host --iobay x
```

restorebmu command

Use the `restorebmu` command to restore the BMU status on BMC.

restorebmu command syntax

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

Table 131. restorebmu command specific parameters

Parameter	Required/Optional	Notes
--bmc	Optional	Specify information of the target BMC.
--node, -n	Optional	Specify the node index for in-band mode on the multi-node system.
--config	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the restorebmu command

```
OneCli.exe misc restorebmu --bmc userid:password@host
```

restoresmm command

Use the `restoresmm` command to restore the SMM update progress.

restoresmm command syntax

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

Table 132. restoresmm command specific parameters

Parameter	Required/Optional	Notes
--smm	Required	Specify SMM IP and credential information.

Example of the restoresmm command

```
OneCli.exe misc restoresmm --smm userid:password@host
```

rpp commands

Use the `rpp` commands to assert and deassert Remote Physical Presence(RPP), or obtain its status.

rpp commands syntax

```
OneCli.exe misc rpp <command> [options]
```

Table 133. rpp commands

Command	Description
assert	Assert RPP in the target server. For more information, refer to “assert command” on page 138.
deassert	De-Assert RPP in the target server. For more information, refer to “deassert command” on page 139.
status	Obtain RPP status. For more information, refer to “status command” on page 139.

Example of the rpp command

```
OneCli.exe misc rpp status –bmc USERID:PASSWORD@xxx.xxx.xxx.xxx
```

assert command

Use the `assert` command to assert RPP in the target server.

assert command syntax

```
OneCli.exe misc rpp <assert> [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N]
[--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 134. assert command specific parameters

Parameter	Required/Optional	Notes
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the assert command

```
OneCli.exe misc rpp assert --bmc USERID:PASSWORD@ xx.xx.xx.xx
```

deassert command

Use the `deassert` command to deassert RPP in the target server.

deassert command syntax

```
OneCli.exe misc rpp <deassert> [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N]
[--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 135. deassert command specific parameters

Parameter	Required/Optional	Notes
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the deassert command

```
OneCli.exe misc rpp deassert --bmc USERID:PASSWORD@xx.xx.xx.xx
```

status command

Use the `status` command to obtain RPP status.

status command syntax

```
OneCli.exe misc rpp <status> [--bmc|-b <arg>] [--check-trust|-C] [--never-check-trust|-N]
[--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 136. status command specific parameters

Parameter	Required/Optional	Notes
• --bmc/imm, -b • --help, -h • --nolog	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the status command

```
OneCli.exe misc rpp status --bmc USERID:PASSWORD@xx.xx.xx.xx
```

serase command

Use the `serase` command to securely and permanently erase the data of hard disk drives in the BMU mode.

Notes:
- Using the standardized secure erase/sanitize commands applicable to the media-specific techniques, OneCLI supports to erase SATA/SAS/NVMe drives attached to the backplane, managed by a RAID controller, or connected with an HBA adapter.
- Following are the erase methods:

Erase methods	Descriptions
Secure Erase	**When using Secure Erase/Block Erase/Enhanced Erase, a pre-defined pattern or default value(0 or 1) will be written on the user addressable area of the media.**
Block Erase	
Enhanced Erase	
Cryptographic Erase	**Cryptographic Erase is applicable to SED or NVMe drive with media encryption key(MEK). The MEKs will be sanitized and make recovery of the decrypted Target Data infeasible.**

- By default, the onboard SATA disks are in the frozen status,so OneCLI cannot perform the secure erase on them. OneCLI will try to set the onboard SATA disks to the unfrozen status by changing the UEFI/XCC settings when booting the server to Maintenance OS. If the onboard SATA disks are still in frozen status, check if the UEFI version of the target server is the latest, and set the TPM jumper (physical presence jumper) to the asserted status on the server board. For more information about the system board jumpers, go to https://thinksystem.lenovofiles.com/help/index.jsp, select the target server model, and click **Server components → System board jumpers**.

serase command syntax

```
OneCli.exe misc serase <--bmc <userid:password@IP[:port]>> <--sftp user:password@IP[port][dir/]> <--dir <filePath>>
```

Table 137. serase command specific parameters

Parameter	Required/Optional	Notes
--bmc, -b	Required	Specify the access information of the target BMC. The format is: user:password@host[:port].
--dir	Optional	Specify the path of the Maintenance OS boot file and the OneCLI package file.
--sftp	Required	Specify the SFTP connection information. The format is: user:password@IP[:port][/directory/]. The address is used to upload the maintenance OS boot file and the OneCLI package file.

Example of the serase command

```
OneCli.exe serase -bmc USERID:PASSWORD@xx.xx.xx.xx --sftp root:password@xx.xx.xx.xx --dir xxx
```

Note: Before running the `serase` command, users should run the following command to download necessary files for secure erase. For more information about secure erase, refer to "Secure data deletion for all data storage devices" on page 173.

```
OneCli.exe update acquire --platform --dir xxx
```

servicedata command

Use the `servicedata` command to obtain service data information from BMC.

servicedata command syntax

```
OneCli.exe misc servicedata [--bmc|-b <arg>] [--type|-T <arg>] [--check-trust|-C] [--never-check-trust|-N]
[--bmc-username|-u <arg>] [--bmc-password|-w <arg>] [--bmc-rest-port|-p <int>] [--quiet|-q] [--cn <arg>]
[--sn <arg>] [--mt <arg>] [--upload <arg>] [--proxy|-P <arg>] [--proxy-cacert <arg>] [--cacert <arg>]
[--proxy-insecure] [--insecure] [--output|-o <arg>] [--nolog] [--config <arg>] [--help|-h]
```

Table 138. servicedata command specific parameters

Parameter	Required/Optional	Notes
--type, -T	Required	Specify the type of service data obtained from BMC. osfailure: Last OS failure screen healthreport: Health report all: Last OS failure screen and health report

Example of the servicedata command

```
OneCli.exe misc servicedata –type all -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

servicelog command

Use the `servicelog` command to obtain service data log from BMC.

servicelog command syntax

```
OneCli.exe [misc] servicelog [options]
```

Table 139. servicelog command specific parameters

Parameter	Required/Optional	Notes
--cacert	Optional	Specify the path of CACert.
--cn	Optional	Specify the case number to upload the files to Lenovo System CARE. The case number should be composed of at least seven characters.
--insecure	Optional	Allow insecure server connections when using SSL.
--iobay	Optional	**bay_number** specifies the I/O module bay number. Valid values are 1, 2, 3, or 4.
--mt	Optional	Specify with --sn. Specify the machine of the target system when uploading the files to System CARE.

Table 139. servicelog command specific parameters (continued)

Parameter	Required/Optional	Notes
--proxy, -P	Optional	Specify proxy user credential and IP address used to connect to the target server specified in the --upload parameter. This parameter should be used with --upload. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--proxy-cacert	Optional	Specify the path of proxy CACert.
--proxy-insecure	Optional	Connect to HTTPS proxy without verifying.
--sftp	Optional	SFTP connection information. Format: user: password@IP[port][dir/]. The address is used to save FFDC logs for VMWare ESXi.
--sn	Optional	Specify with --mt. Specify the serial number of the target system when uploading the files to System CARE.
--tftp	Optional	TFTP server for SMM interface. Format: IP[:port][/path].
--upload	Optional	This parameter can be specified with the following arguments: lenovo and server address. If specified with lenovo, the format is: --upload lenovo. The inventory data is uploaded to Lenovo Upload Facility. Users should specify the case number, or specify both machine type and serial number. If specified with server address, the format is: --upload server address. The inventory data is uploaded to the target server. The supported protocols include: TFTP, FTP, and SFTP. If not specified, no inventory data will be uploaded.
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --config • --check-trust, -C • --output, -o • --never-check-trust, -N • --node, -n • --nolog,-n	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the servicelog command

```
OneCli.exe servicelog --bmc USERID:PASSWORD@xx.xx.xx.xx
```

smartdata command

Use the `smartdata` command to get the SMART data of disk drive.

smartdata command syntax

```
Onecli.exe [misc] smartdata [<options>]
```

Option

Usage

```
OneCli.exe [misc] smartdata  [--bmc|-b <arg>] [--node|-n <int>]
[--check-trust|-C] [--never-check-trust|-N]
[--bmc-username|-u <arg>] [--bmc-password|-w <arg>]
[--bmc-rest-port|-p <int>] [--bmc-cim-port|-p <int>]
[--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>]
[--help|-h]
```

Table 140. smartdata command specific parameters

Parameter	Required/Optional	Note
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --config • --check-trust, -C • --help, -h • --never-check-trust, -N • --node, -n • --nolog, -n • --output, -o • --quiet	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the smartdata command

```
OneCli.exe misc smartdata -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

smmlan commands

Use the `smmlan` commands to enable or disable SMM LAN.

smmlan command syntax

```
OneCli.exe [misc] smmlan <command> [options]
```

Table 141. smmlan commands and syntax examples

Command	Syntax example	Description
disable	`OneCli.exe misc smmlan disable`	Disable the SMM LAN by following the XCC connection information about SMM.
enable	`OneCli.exe misc smmlan enable`	Enable the SMM LAN by following the XCC connection information about SMM.
query	`OneCli.exe misc smmlan query`	Query the SMM LAN status by following the XCC connection information about SMM.

Note: Only one of the above commands should be specified in a command line.

Table 142. smmlan command specific parameters

Parameter	Required/Optional	Notes
--bmc	Optional	Specify the target BMC information.
--config	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.
--method	Optional	Support the following values for the `enable` command: dhcp, static, and DHCP-Failover.

Example of the smmlan command

```
OneCli.exe misc smmlan enable –bmc userid:password@host
```

switchcmm command

Use the `switchcmm` command to toggle active CMM.

switchcmm command syntax

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

Table 143. switchcmm command specific parameters

Parameter	Required/Optional	Notes
--cmm	Required	Specify CMM IP and credential information.

Example of the switchcmm command

```
OneCli.exe misc switchcmm --cmm userid:password@host
```

sysguard command

Use the `sysguard` command to manage BMC system guard.

sysguard command syntax

```
OneCli.exe [misc] sysguard <command> [options...]
```

Table 144. sysguard command

Command	Description
clearsnapshot	Clear all snapshots data under BMC System Guard. For more information, refer to “clearsnapshot command” on page 144.

Example of the sysguard command

```
OneCli.exe sysguard clearsnapshot -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

clearsnapshot command

Use the `clearsnapshot` command to clear all snapshots data under BMC System Guard.

clearsnapshot command syntax

```
OneCli.exe [misc] sysguard clearsnapshot [--bmc|-b <arg>] [--check-trust|-C]
[--never-check-trust|-N] [--bmc-username|-u <arg>] [--bmc-password|-w <arg>]
[--bmc-rest-port|-p <int>] [--quiet|-q] [--output|-o <arg>]
[--nolog] [--config <arg>] [--help|-h]
```

Table 145. clearsnapshot command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-password, -w • --bmc-rest-port • --bmc-username, -u • --check-trust, -C • --config • --help, -h • --never-check-trust, -N • --nolog • --output, -o • --quiet	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the clearsnapshot command

```
OneCli.exe sysguard clearsnapshot -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

syshealth command

Use the `syshealth` command to query the system health status. Only the ThinkSystem servers support this command.

syshealth command syntax

```
OneCli.exe [misc] syshealth <command>[options]
```

Table 146. syshealth command specific parameters

Parameter	Required/Optional	Notes
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --config • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.
--device	Optional	Specify the device to get the status. The supported parameters used with --device: system, processor, fan, dimm, power, and pci_adapter. If not specified, the system health summary containing errors and warning events will be displayed.

Example of the syshealth command

```
OneCli.exe syshealth
OneCli.exe misc syshealth --bmc userid:password@host
OneCli.exe misc syshealth --device power
OneCli.exe misc syshealth --device power --bmc userid:password@host
```

usblan command

Use the `usblan` commands to enable or disable USB LAN in host OS.

usblan command syntax

```
Onecli.exe [misc] usblan <cmds> [<options>]
```

Table 147. usblan commands and examples

Command	Syntax example	Output example	Description
disable	`onecli.exe usblan disable`	`Succeed to disable BMC Lan over USB.`	Disable all of the LAN-over-USB devices on the host OS side.
enable	`onecli.exe usblan enable`	`Succeed to enable BMC Lan over USB.`	Enable all of the LAN-over-USB devices on the host OS side.
query	`onecli.exe usblan query`	`No /Device state /BMC IP /Host IP` `0 /connected /host /host`	Query all of the LAN-over-USB devices status on the host OS side. Its output statuses include: • disabled: LAN-over-USB interface is off • enabled:LAN-over-USB interface is on, but BMC IP is not reachable • connected: BMC IP is reachable

Note: Only one of the previous commands should be specified in a command line at the same time.

Table 148. usblan command specific parameters

Parameter	Required/Optional	Notes
• --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --check-trust, -C • --config • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

vm commands

Use the `vm` commands to list, mount, or unmount the virtual media.

vm command syntax

```
OneCli.exe [misc] vm <command> [options]
```

Table 149. vm commands and syntax examples

Command	Syntax example	Description
list	`OneCLI vm list --bmc <bmc connection info>`	List the virtual media status on BMC.
mount	`OneCLI vm mount --id <virtual media id> --path <httpfs or nfs url> --bmc <bmc connection info>`	Mount virutal media on BMC by using ID.
umount	`OneCLI vm umount --id <virtual media id> --bmc <bmc connection info>`	Unmount virutal media on BMC by using ID.

Table 150. vm command specific parameters

Parameter	Required/Optional	Notes
--id, -I	Only required in the `mount` and `umount` commands.	Specify the virtual media ID, for example, RDOC1, EXT1, and Remote1. For ThinkBMC, the virtual media ID is CD. **Note:** ThinkBMC is the BMC for the ThinkServer systems listed in Appendix C “OneCLI features supported on the ThinkServer/WenTian servers” on page 213.
--path, -P	Only required in the `mount` and `umount` commands.	Specify the URL of virtual media path, which supports NFS and HTTPFS. Support NFS and CIFS in ThinkBMC. **NFS URL address form:** • ipaddress:/path/to/file • domain-name:/path/to/file **NFS (ThinkBMC) form:** • nfs://host[:port]/path/to/file **CIFS(ThinkBMC) form:** • cifs://[username:password@]host[:port]/path/to/file **HTTPFS URL address form:** • https://ipaddress[:port]/path/to/file • https://domain-name[:port]/path/to/file The domain-name can be alphanumeric characters “.”, “-”, or “_” and should be composed of at least two domain items. The port number is optional.

Example of the vm command

```
OneCli.exe misc vm list -b USERID:PASSWORD@xxx.xxx.xxx.xxx
```

Chapter 9. Diagnostics

This section describes how to use the `diagnostics` command supported by Lenovo XClarity Essentials OneCLI.

The following table lists the `diagnostics` command supported.

Table 151. Diagnostics(diags) command

Command	Description
run	Run the diagnostics program of the remote server. For more information, refer to "run command" on page 149.

run command

Use the `run` command to run the diagnostics program of the remote server.

Notes:
- To enable or disable advanced memory test, refer to "Enabling/disabling advanced memory test" on page 171.
- Restart the remote server before running the diagnostics program. If the message "System reboot is required, confirm to continue (yes/no)" is displayed, input **yes**/**y** to run the diagnostics program, or input **no**/**n** to exit.
- For the ThinkServer/WenTian/KaiTian servers, only WR5220 G3 and WR5228 G3 support the diags function, and it only supports the **hdd**, **hdd_full**, **mem**, and **mem_full** parameters.

run command syntax

```
OneCli.exe [misc] diags run [options] [connection options]
```

Table 152. run command specific parameters

Parameter	Required/Optional	Notes
--bmc, -b	Required	Refer to Table 3 "OneCLI global parameters" on page 2.
• --check-trust, -C • --config • --help,-h • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 "OneCLI global parameters" on page 2.
--item	Optional	The values include: hdd, hdd_full, mem, mem_full, and pmem. If not specified, hdd, mem, and pmem are the default parameters. The value is case insensitive. **Note:** "pmem" stands for Intel Optane DC Persistent Memory Module.
--force	Optional	If specified, it will run the diagnostics program without interaction.

Example of the run command

```
OneCli.exe diags run --bmc userid:password@IP --item mem_full,hdd,pmem
```

Chapter 10. tui

Users can use the OneCLI tui application to launch OneCLI Interactive Menu. It supports users to update firmware, update VPD, perform advanced system configuration, collect FFDC logs and inventory information, and configure RAID in in-band mode.

Input tui syntax to enter into OneCLI Interactive Menu, and input the item number to start the program based on the actual needs.

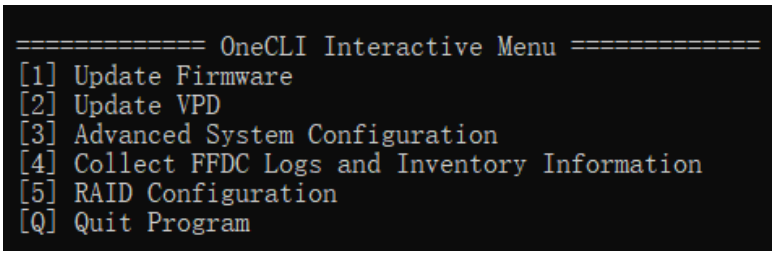


Figure 1. OneCLI Interactive Menu

Table 153. Submenus of OneCLI Interactive Menu

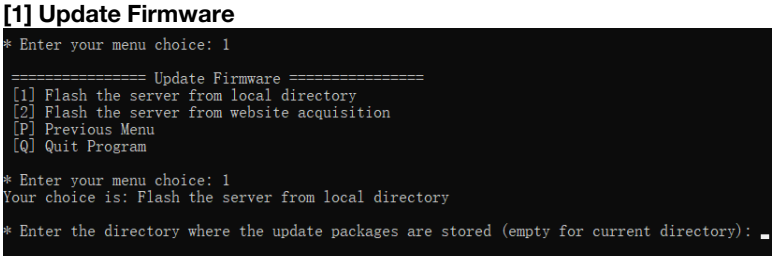
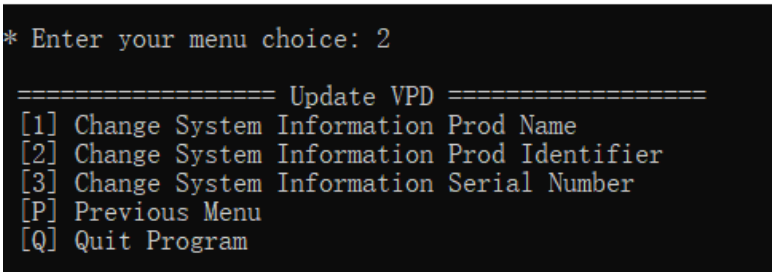
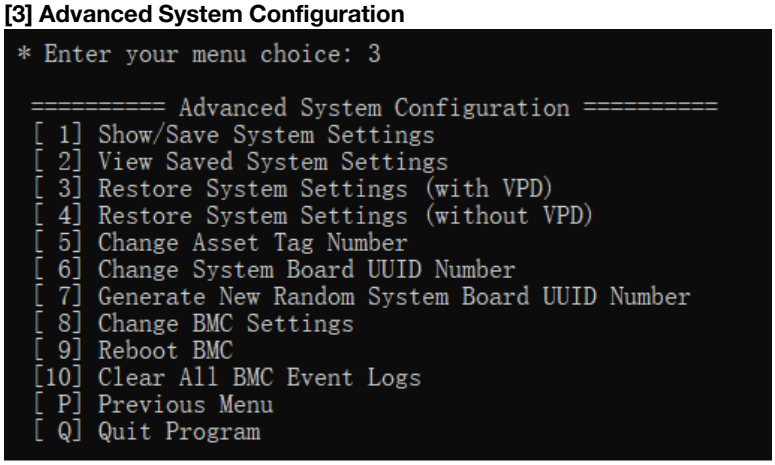
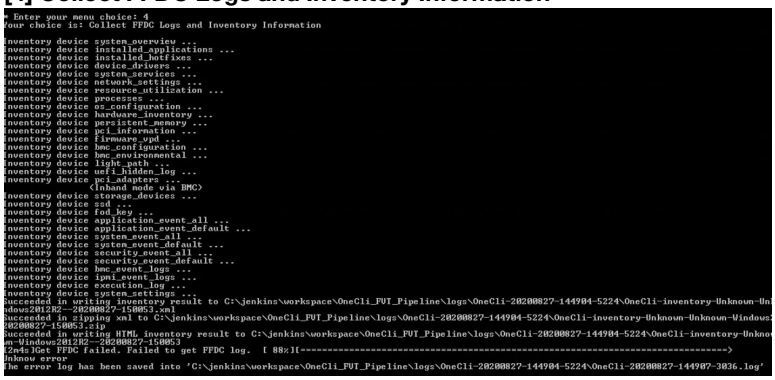
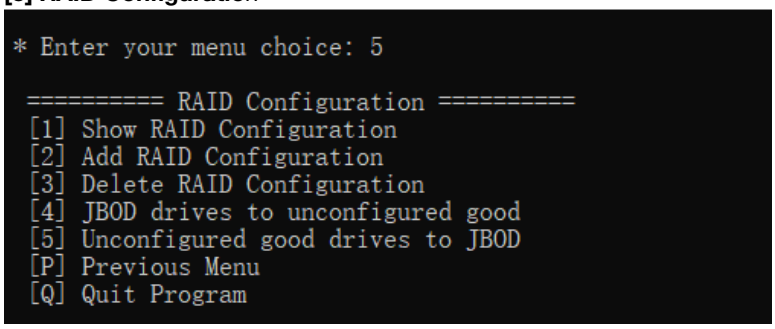
Submenus	Description
[1] Update Firmware 	Input **1** to enter into the Update Firmware interface, and then input one of the following values: • **1**: Flash the server from local directory. Input the directory storing the updated packages and press Enter to run the program. The flash result will be displayed when the program completes. • **2**: Flash the server from website acquisition. • **3**: Return to the previous menu. • **Q**: Quit program.
[2] Update VPD 	Input **2** to enter into the Update VPD interface, and then input one of the following values: • **1**: Change system information prod name. • **2**: Change system information prod identifier. • **3**: Change system information serial number. • **P**: Return to the previous menu. • **Q**: Quit program.

Table 153. Submenus of OneCLI Interactive Menu (continued)

Submenus	Description
[3] Advanced System Configuration 	Input **3** to enter into the Advanced System Configuration interface, and then input one of the following values: • **1**: View or save the system settings. • **2**: View the saved system settings. • **3**: Restore the system settings with VPD. • **4**: Restore the system settings without VPD. • **5**: Change asset tag number. • **6**: Change system board UUID number. • **7**: Generate new random system board UUID number. • **8**: Change BMC settings. • **9**: Reboot BMC. • **10**: Clear all BMC event logs. • **P**: Return to the previous menu. • **Q**: Quit program.
[4] Collect FFDC Logs and Inventory Information 	Input **4** to collect FFDC logs and inventory information. The path for saving FFDC logs and inventory information will be displayed when the program completes.
[5] RAID Configuration 	Input **5** to enter into the RAID Configuration interface, and then input one of the following values: • **1**: View RAID configuration. • **2**: Add RAID configuration. • **3**: Delete RAID configuration. • **4**: Convert the JBOD drives to the unconfigured good drives. • **5**: Convert the unconfigured good drives to the JBOD drives. • **P**: Return to the previous menu. • **Q**: Quit program.
[Q] Quit Program	Input **Q** to exit the program.

tui syntax

```
OneCli.exe tui
```

Chapter 11. The FoD key

The topics in this section describe how to use the FoD key application commands of OneCLI.

For information about specific FoD key application commands, refer to the following:
- “Commands that generate and acquire the FoD key” on page 153
- “Commands that generate, get, replace, and upload FoD key information” on page 154
- “Commands that install, uninstall, and export the FoD key, and report the FoD key information” on page 158

Commands that generate and acquire the FoD key

The topics in this section provide detailed information about how to use the FoD key application and commands to generate and acquire the FoD key.

Table 154. Commands that acquire FoD key information

Command	Description
acquire	Generate and acquire the FoD key from Lenovo Web site and install the key to the target key repository. For more information, refer to “acquire command” on page 153.

acquire command

Use the `acquire` command to generate and acquire the FoD key from Lenovo Web site and install the key to the target key repository.

acquire command syntax

```
OneCli.exe [misc] fod acquire <--uid >> <--auth <auth_code>> <--kmsid <kms_id>> <--mt <mt>>
<--installin <mt_sn>> [--all] [--dir <dir_name>] [--proxy <proxy_info>] [<options>]
```

Table 155. acquire command specific parameters

Parameter	Required/Optional	Notes
--all	Optional	Get all the FoD keys for the specified system.
--auth	Required	Specify Lenovo authorization code.
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public
--dir	Optional	Specify the directory to save the downloaded key file. The default value is the current directory.
--installin	Optional	System machine type and serial number of the target system.
--kcs	Optional	Force to use IPMI over KCS local interface.
--kmsid	Required	Specify Lenovo ID credential for Lenovo Web site interactive.

Table 155. acquire command specific parameters (continued)

Parameter	Required/Optional	Notes
--mt	Optional	Specify system machine type for system/option feature.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy.Format: --privproto DES or --privproto.
--privpasswd	Optional	Privacy password.
--proxy	Optional	Use proxy to connect to Lenovo Web site. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`
--switch	Optional	SWITCH connection information. Format: user:password@IP: port
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
--uid	Optional	Specify unique identifier information.
• --bmc, -b • --bmc-username, -u • --bmc-password, -w • --bmc-cim-port, -p • --cmm, -c • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the acquire command

```
OneCli.exe fod acquire --mt 2582 --uid xxx --auth xxx --kmsid userid:password
--bmc userid:password@host
```

Note: If the FoD key is already generated in KMS, the `acquire` command will report the failure in generating. Acquire and install the FoD key through the steps in the following section.

Commands that generate, get, replace, and upload FoD key information

The topics in this section provide detailed information about how to use the FoD key application and commands to generate, get, replace, and upload FoD key information.

Table 156. Commands that generate, get, replace, and upload FoD key information

Command	Description
generate	generate the FoD key on Lenovo Web site. For more information, refer to “generate command” on page 155.
get	Get the generated FoD key from Lenovo Web site. For more information, refer to “get command” on page 156.
replace	Replace the FoD key for the specified system on Lenovo Web site. For more information, refer to “replace command” on page 156.
uploadreport	Upload the SDSi status report to Intel. For more information, refer to “uploadreport command” on page 157.

generate command

Use the `generate` command to generate the FoD key on Lenovo Web site.

generate command syntax

```
OneCli.exe [misc] fod generate <--uid <uid>> <--auth <auth_code>> <--kmsid <kms_id>> <--mt <mt>> <--installin <mt_sn>>
[--proxy <proxy_info>] [<options>]
```

Table 157. generate command specific parameters

Parameter	Required/Optional	Notes
--auth	Required	Specify Lenovo authorization code.
--installin	Required	System machine type and serial number of the target system. Install the FoD key.
--kmsid	Required	Specify Lenovo ID credential for Lenovo Web site interactive.
--mt	Required	Specify system machine type for system/option feature. Specify device code for IOM switch.
--proxy	Optional	Use proxy to connect to Lenovo Web site. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--uid	Required	Specify unique identifier information.
• --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the generate command

```
OneCli.exe fod generate --uid xxx --auth xxx --kmsid userid:password
```

```
--mt 7X02 --output purley --installin xxxxx--log 5
```

get command

Use the `get` command to get the generated FoD key from Lenovo Web site.

get command syntax

```
OneCli.exe [misc] fod get <--uid <uid>> <--kmsid <kms_id>> [--all] [--dir <dir_name>] [--proxy <proxy_info>]
[<options>]
```

Table 158. get command specific parameters

Parameter	Required/Optional	Notes
--all	Optional	Get all the FoD keys for the specified system.
--dir	Optional	Specify the directory to save the downloaded key file. The default value is the current directory.
--kmsid	Optional	Specify Lenovo ID credential for Lenovo Web site interactive.
--proxy	Optional	Use proxy to connect to Lenovo Web site. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--uid	Required	Specify unique identifier information.
• --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the get command

```
OneCli.exe fod get --uid xxx [--kmsid userid:password] --output get
```

replace command

Use the `replace` command to replace the FoD key for the specified system on Lenovo Web site.

replace command syntax

```
OneCli.exe [misc] fod replace <--featurecode <feature_code>> <--uid <uid>> <--olduid <old_uid>> <--kmsid<kms_id>>
[--installin <install_in>] [--dir <dir_name>] [--proxy <proxy_info>] [<options>]
```

Table 159. replace command specific parameters

Parameter	Required/Optional	Notes
--dir	Optional	Specify the directory to save the downloaded key file. The default value is the current directory.
--featurecode	Required	Specify the feature code of the FoD key to be replaced.
--installin	Optional	System machine type and serial number of the target system. Install the FoD key.

Table 159. replace command specific parameters (continued)

Parameter	Required/Optional	Notes
--kmsid	Required	Specify Lenovo ID credential for Lenovo Web site interactive.
--olduid	Required	Specify the previous unique identifier information.
--proxy	Optional	Use proxy to connect to Lenovo Web site. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
--uid	Required	Specify unique identifier information.
• --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the replace command

```
OneCli.exe fod replace --featurecode xxxx --uidxxx --olduid xxx --kmsid userid:password
--installin xxxxxx --output replace
```

uploadreport command

Use the `uploadreport` command to upload the SDSi state report to Intel.

uploadreport command syntax

OneCli.exe [misc] fod uploadreport <--kmsid <kms_id>> [--file <file_path>] [<options>]

Table 160. uploadreport command specific parameters

Parameters	Required/Optional	Notes
--kmsid	Optional	Specify Lenovo ID credential for Lenovo Web site interactive.
--file	Optional	Specify the SDSi state report to be uploaded to Intel.
--proxy	Optional	Use proxy to connect to Lenovo Web site. The format is user: password@host[:port]. For IPv6 address, the format is socks5://user:password@[IPv6]:port.
• --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the uploadreport command

OneCli.exe fod uploadreport -file D:\getsysinfo\getsysinfo [--kmsid userid:password]

Commands that install, uninstall, and export the FoD key, and report the FoD key information

The topics in this section provide detailed information about how to use the FoD key application and commands to install, uninstall, and export the FoD key, and report the FoD key information.

Table 161. Commands that install, uninstall, and export the FoD key, and report the FoD key information

Command	Description
export	Export the FoD key from the target key repository. For more information, refer to “export command” on page 158.
exportreport	Export the Intel SDSi status report from the target key repository to the local. For more information, refer to “exportreport command” on page 159.
install	Install the target FoD key to the target key repository. For more information, refer to “install command” on page 160.
report	Report the FoD key information from the target key repository. For more information, refer to “report command” on page 161.
showppin	Get the processor index, PPIN, the machine type, and serial number of target server. For more information, refer to “showppin command” on page 162.
uninstall	Uninstall the FoD key from the target key repository. For more information, refer to “uninstall command” on page 163.

export command

Use the `export` command to export the FoD key from the target key repository.

export command syntax

```
OneCli.exe [misc] fod export <--keyid <key_id>> [<options>]
```

Table 162. export command specific parameters

Parameter	Required/Optional	Notes
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public
--kcs	Optional	Force to use IPMI over KCS local interface.
--keyid	Required	Specify the FoD key ID that can be acquired from command report. If the key ID is specified to “all”, all the FoD keys in the target key repository will be exported.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy.Format: --privproto DES or --privproto.

Table 162. export command specific parameters (continued)

Parameter	Required/Optional	Notes
--privpasswd	Optional	Privacy password.
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`
--switch	Optional	SWITCH connection information. Format: user:password@IP: port
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --cmm, -c • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the export command

```
OneCli.exe fod export --keyid 8e347c0bd269cd57 --bmc userid:password@10.240.204.147 --output reportkey
```

exportreport command

Use the `exportreport` command to export the Intel SDSi status report from the target key repository to the local.

exportreport command syntax

```
OneCli.exe fod exportreport <--socketid <socket_id>> <connection options> [--output <folder>]
```

Table 163. exportreport command specific parameters

Parameter	Required/Optional	Notes
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public
--kcs	Optional	Force to use IPMI over KCS local interface.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy.Format: --privproto DES or --privproto.
--privpasswd	Optional	Privacy password.
--socketid	Optional	Specify the processor index. If the **--socketid** argument is not specified, then all SDSi status reports will be exported.

Table 163. exportreport command specific parameters (continued)

Parameter	Required/Optional	Notes
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`
--switch	Optional	SWITCH connection information. Format: user:password@IP: port
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --cmm, -c • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the exportreport command

OneCli.exe fod exportreport --socketid 1 --bmc useraccount:password@xx.xx.xx.xx

install command

Use the `install` command to install the target the FoD key to the target key repository.

install command syntax

```
OneCli.exe [misc] fod install <--keyfile <key_file>> [<options>]
```

Table 164. install command specific parameters

Parameter	Required/Optional	Notes
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public.
--kcs	Optional	Force to use IPMI over KCS local interface.
--keyfile	Required	Specify the path or file name of the FoD key file on local system. Example: --keyfile ./test/, --keyfile key.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy. Format: `--privproto DES` or `--privproto`

Table 164. install command specific parameters (continued)

Parameter	Required/Optional	Notes
--privpasswd	Optional	Privacy password.
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`
--switch	Optional	SWITCH connection information. Format: user:password@IP: port
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --cmm, -c • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the install command

```
OneCli.exe fod install --keyfile OneCli-222232-20170620-102814\7.key --switch userid:password@host
--tftp host:xxxx --community private --authproto MD5 --privproto DES
```

report command

Use the `report` command to report the FoD key information from the target key repository.

report command syntax

```
OneCli.exe [misc] fod report [<options>]
```

Table 165. report command specific parameters

Parameter	Required/Optional	Notes
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public
--kcs	Optional	Force to use IPMI over KCS local interface.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy.Format: --privproto DES or --privproto.
--privpasswd	Optional	Privacy password.
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`

Table 165. report command specific parameters (continued)

Parameter	Required/Optional	Notes
--switch	Optional	SWITCH connection information. Format: user:password@IP: port
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --cmm, -c • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the report command

```
OneCli.exe fod report --switch host --tftp host --community private
```

showppin command

Use the `showppin` command to get the processor index, PPIN, the machine type, and serial number of target server.

showppin command syntax

```
OneCli.exe fod showppin <connection options> [--output <folder>]
```

Table 166. showppin command specific parameters

Parameter	Required/Optional	Notes
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public
--kcs	Optional	Force to use IPMI over KCS local interface.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy.Format: --privproto DES or --privproto.
--privpasswd	Optional	Privacy password.
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`
--switch	Optional	SWITCH connection information. Format: user:password@IP: port

Table 166. showppin command specific parameters (continued)

Parameter	Required/Optional	Notes
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --cmm, -c • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the showppin command

OneCli.exe fod showppin --bmc useraccount:password@xx.xx.xx.xx

uninstall command

Use the `uninstall` command to uninstall the FoD key from the target key repository.

uninstall command syntax

```
OneCli.exe [misc] fod uninstall <--keyid <key_id>> [<options>]
```

Table 167. uninstall command specific parameters

Parameter	Required/Optional	Notes
--authproto	Optional	The parameter only for snmpv3, Protocol supported value: MD5/SHA, default: No auth. Format: --authproto MD5 or --authproto.
--community	Optional	Community for snmpv1v2. Supported value: public/private/ protect, default: public.
--kcs	Optional	Force to use IPMI over KCS local interface.
--keyid	Required	Specify the FoD key ID that can be acquired from command report. If the key ID is specified to “all”, all the FoD keys in the target key repository will be uninstalled.
--node, -n	Optional	Node index for in-band case on a multi-node system.
--privproto	Optional	The parameter only for snmpv3. Privacy protocol supported value: DES/AES, default: No privacy.Format: --privproto DES or --privproto.
--privpasswd	Optional	Privacy password.
--sftp	Optional	Specify the SFTP server. Format: `user:password@IP:port`
--switch	Optional	SWITCH connection information. Format: user:password@IP: port

Table 167. uninstall command specific parameters (continued)

Parameter	Required/Optional	Notes
--tftp	Optional	TFTP server for snmp interface. Format: user:password@host: port
• --bmc, -b • --bmc-cim-port, -p • --bmc-password, -w • --bmc-username, -u • --cmm • --check-trust, -C • --never-check-trust, -N • --nolog • --output, -o	Optional	Refer to Table 3 “OneCLI global parameters” on page 2.

Example of the uninstall command

OneCli.exe fod uninstall --keyid xxxxxx --output uninstall --bmc userid:password@host

multifod commands

The topics in this section provide detailed information about how to use multifod application and commands to generate and acquire multiple FoD keys by using the specified arguments from KMS, and install the existing multiple FoD keys to the specified system.

Table 168. multifod commands

Command	Description
acquire	Generate and acquire multiple FoD keys from Lenovo website and install these keys to the target key repository. For more information, refer to “acquire command” on page 164.
install	Install the existing multiple FoD keys to the specified system. For more information, refer to “install command” on page 165.

acquire command

Use the `acquire` command to generate and acquire multiple FoD keys from Lenovo website and install these keys to the target key repository.

acquire command syntax

```
OneCli.exe multifod acquire <--auth <auth_code>> <--kmsid <kms_id>> <--configfile <connection_arg>>
[--insecure] [--output <folder>]
```

Table 169. acquire command specific parameters

Parameter	Required/Optional	Notes
--auth	Required	Specify Lenovo authorization code.
--configfile	Required	Specify the config file for multi task command. For the format, refer to `Sample/multi_task_config.json`
--insecure	Optional	Allow insecure server connections when using SSL
--kmsid	Required	Specify Lenovo ID credential for Lenovo Web site interactive.

Example of the acquire command

```
OneCli.exe multifod acquire --auth xxx --kmsid userid:password
--insecure --configfile multi_task_config.json --log 5
```

install command

Use the `install` command to install the existing multiple FoD keys to the specified system.

install command syntax

```
OneCli.exe multifod install <--keyfile <key_file>> <--configfile <connection_file>> [--output <folder>]
```

Table 170. install command specific parameters

Parameter	Required/Optional	Notes
--configfile	Required	Specify the configuration file for the `multi task` command. For the format, refer to `Sample/multi_task_config.json`.
--keyfile	Required	Specify the path and file name of the FoD key file on local system. Example: --keyfile ./test/, --keyfile key.

Example of the install command

```
OneCli.exe multifod install --keyfile dir --configfile multi_task_config.json --log 5
```

Chapter 12. RDCLI commands

The topics in this section describe the remote disk CLI (RDCLI) for remote media mount tasks. This command only supports pre-ThinkSystem servers. For remote media mount against ThinkSystem, check sample commands explained in `remote_media_mount_for_thinksystem.sh` under folder `Sample` in OneCLI binary (zip for Windows and tgz for Linux)

The following tables lists supported RDCLI commands.

Table 171. RDCLI commands

Command	Description
rdmount	Mount CD/DVD drives, ISO image files, or USB key on a remote BMC-based. For more information, refer to "rdmount" on page 167.
rdumount	Unmount CD/DVD drives, ISO image files, or USB key mounted using rdmount. For more information, refer to "rdumount" on page 168.

rdmount

Use `rdmount` to mount CD/DVD drives, ISO image files, or USB key on a remote BMC-based system. The application authenticates with the BMC 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.

Note: After V2.4.0, the `rdmount` command and the `rdumount` command can be used in the ThinkSystem servers with the matching XCC level.

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 be used by rdumount to unmount a virtual disk.

-v
Requests verbose output.

Table 172. rdmount parameters

Parameter	Required/Optional	Notes
-s	Required	Where <*ipaddress*> is the IP address or hostname of the remote BMC.
-d	Required	Where <*path*> is the image or optical drive directory path.

Table 172. rdmount parameters (continued)

Parameter	Required/Optional	Notes
-l	Optional	Where <*user*> is an authorized user ID for the BMC.
-p	Optional	Where <*password*> is the authorized user's password for the BMC.

rdumount

Use `rdumount` to unmount CD/DVD drives, ISO image files, or USB key mounted using `rdmount`.

rdumount syntax

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

Options

-h
Displays help information.

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

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

Chapter 13. OneCLI scenarios

This topic provides information about useful OneCLI scenarios. To view more solutions and tips, go to Data Center Support website and search “OneCLI”.

Auto-completion function

From V3.4.0, OneCLI supports the auto-completion function on Linux and Windows.

Users can run the script to install the auto-completion function, restart the shell to make the function take effect, and use the tab button to auto-complete the application name, command name, option name, and option value.

Following are the scrips and shells of the specific operating systems:

Table 173. Scrip and shell

Operating system	Scrip	Shell
Linux	install_completion.sh	bash
Windows	install_completion.ps1	powershell

Acquiring update packages for a target server

Pre-requisite: Refer to Network requirement of the acquire command.

Before applying updates to a target server, users should get the latest update packages for that specific server. OneCLI provides the function to acquire the package.

Typically, users can run a single OneCLI command to acquire the latest UXSP (recommended update stack) from Lenovo site for the target server according to the specific machine type and operating systems.

To acquire the latest UXSP to c:\pkgs\, which can then be updated/installed inside an RHEL7 installed on server xxxx, see the following sample command:

```
OneCli.exe update acquire --mt xxxx --ostype rhel7 --dir c:\pkgs
```

Note: Users can acquire updates for an OS different from the one where OneCLI runs. For example, run OneCLI on Windows to acquire a UXSP for RHEL7

Changing or recovering UEFI administrator password

OneCLI supports users to change or recover the UEFI administrator password.

Note: Only users with the supervisor user authority can perform the following steps.

- To change the UEFI administrator password, run the following command:
  ```
  OneCLi config set IMM.UefiAdminPassword "xxx" --bmc userid:password@bmc_ip
  ```
  where,

  xxx means the new UEFI administrator password.
- To recover the UEFI administrator password, run the following command:
  ```
  OneCLi config set IMM.UefiAdminPassword "" --bmc userid:password@bmc_ip
  ```

Changing password of BMC account in security mode

From V2.9.0, OneCLI supports to change the password of BMC account in the security mode without specifying it in the command line. In the security mode, OneCLI encrypts the password of BMC account and saves it in the file specified in OneCLI config file.

Steps

1. Run the `encrypt` command to encrypt the file with plain text setting values.

   Notes:
   - Sample command:
     ```
     OneCli encrypt --configfile config_plaintext.json --unattended
     ```
   - The template file is available in `Sample/setting.json`.
2. Remove the plain text file.
3. Run the `bmcpassword` command to change the password of BMC account in the plain text file based on the plain text password information.

   Notes:
   - Sample command:
     ```
     OneCli bmcpassword
     ```
   - It is not recommended to specify the “--newpwd” parameter to change the password of BMC account when running the `bmcpassword` command.

JSON configuration file sample

The following is the JSON configuration file sample for the `bmcpassword` command:

```
{
  //list settings name and value.
  "sensitive_settings":{
                "IMM.Password.1":"1qazP232wsx3edc",
                "IMM.Password.2":"1qP2wsxwer@!$@%",
                "IMM.Password.3":"1qP2wsxwerbled",
                "newpwd":"1q2w3e4r5t"
  }
}
```

Changing setting values in security mode

From V2.6.0, OneCLI supports users to change the setting values in the security mode without specifying them in the command line. In the security mode, OneCLI encrypts the setting values and saves them in the file specified by users in OneCLI config file.

Note: Only the config `set` command supports this function.

Steps

1. Run the `encrypt` command to encrypt the file with plain text setting values.

   Note: The template file is available in `Sample/setting.json`.
   Sample command:
   ```
   OneCli encrypt --configfile setting.json --unattended
   ```
2. Remove the file.
3. Run the OneCLI config `set` command to change the setting name of the file with plain text setting values information.

   Notes:
   - It is unnecessary for the user to specify the setting values when running the `set` command.
   - Sample command:

```
OneCli config set IMM.Password.1
```

Collecting system inventory data remotely through BMC

To collect the system inventory data (including BMC FFDC) for troubleshooting, a single OneCLI command is required.

To generate HTML report of full inventory data of a server from a Windows OS remotely, see the following sample command:

```
OneCli.exe inventory getinfor --ffdc --htmlreport --bmc userid:password@host
```

Enabling/disabling advanced memory test

To enable or disable advanced memory test, do the following:

Note: To view the result of advanced memory test, check the XCC/BMC system event logs.

Enabling advanced memory test

For systems installed with the Intel processors, do the following:

1. Enable the memory test:
   ```
   OneCli.exe config show Memory.MemoryTest --override --bmc
   xcc_user_id:xcc_password@xcc_external_ip
   # If the output is Enabled, skip the following command.
   OneCli.exe config set Memory.MemoryTest Enable --override --bmc
   xcc_ip:xcc_password@xcc_ip
   OneCli.exe config set IMM.UEFIMemoryTest Repair --override --bmc
   xcc_user_id:xcc_password@xcc_external_ip
   OneCli.exe config set IMM.UEFIMemoryTestPolicy XXXX --override --bmc
   xcc_user_id:xcc_password@xcc_external_ip
   ```

   Wherein, the values of XXXX include:
   - **Once**: Run memory test for once only.
   - **Always**: Run the memory test each time the system is powered on or restarted.
2. Restart the system and wait until the memory test completes.

For SR645/SR665 installed with AMD EPYC 7003, do the following:

1. Configure settings if all or part of the system DIMMs are from SK Hynix, below settings have no impact on the non-SK Hynix DIMMs:
   ```
   OneCli.exe config show Memory.SpecificVendorTestOption1 --override --imm
   xcc_user_id:xcc_password@xcc_external_ip
   # If the output is 0x8000, skip the following command.
   OneCli.exe config set Memory.SpecificVendorTestOption1 0x8000 --override --imm
   xcc_user_id:xcc_password@xcc_external_ip
   OneCli.exe config show Memory.SpecificVendorTestOption2 --override --imm
   xcc_user_id:xcc_password@xcc_external_ip
   # If the output is 0, skip the following command.
   OneCli.exe config set Memory.SpecificVendorTestOption2 0 --override --imm
   xcc_user_id:xcc_password@xcc_external_ip
   ```
2. Configure the memory test:
   - If the system firmware version is earlier than d8e130f-2.60, run the following command:
     ```
     OneCli.exe config set IMM.UEFIMemoryTestOptions XXXX --override --bmc
     xcc_user_id:xcc_password@xcc_external_ip
     ```

     Wherein, the values of XXXX include:
     - **0x0407**: Run memory test for once only.
     - **0x1407**: Run the memory test each time the system is powered on or restarted.

- If the system firmware version is d8e130f-2.60 or later version, run the following commands:
  ```
  OneCli.exe config set IMM.UEFIMemoryTest Repair --override --bmc
  xcc_user_id:xcc_password@xcc_external_ip
  OneCli.exe config set IMM.UEFIMemoryTestPolicy XXXX --override --bmc
  xcc_user_id:xcc_password@xcc_external_ip
  ```

  Wherein, the values of XXXX include:
  - **Once**: Run memory test for once only.
  - **Always**: Run the memory test each time the system is powered on or restarted.

3. Restart the system and wait until the memory test completes.

Disabling advanced memory test

For systems installed with the Intel processors, do the following:

1. Disable the memory test:
   ```
   OneCli.exe config set Memory.MemoryTest Disable --bmc xcc_user_id:xcc_password@xcc_external_ip
   OneCli.exe config set IMM.UEFIMemoryTest Disabled --override --bmc
   xcc_user_id:xcc_password@xcc_external_ip
   ```
2. Restart the system to make the changes take effect.

For SR645/SR665 installed with AMD EPYC 7003, Do the following:

1. Disable the memory test:
   - If the system firmware version is earlier than d8e130f-2.60, run the following command:
     ```
     OneCli.exe config set IMM.UEFIMemoryTestOptions 0 --override --bmc
     xcc_user_id:xcc_password@xcc_external_ip
     ```
   - If the system firmware version is d8e130f-2.60 or later version, run the following command:
     ```
     OneCli.exe config set IMM.UEFIMemoryTest Disabled --override --bmc
     xcc_user_id:xcc_password@xcc_external_ip
     ```
2. Restart the system and wait until the memory test completes.

Remotely updating firmware for multiple BMC

From v2.5.0, OneCLI supports to remotely upgrade multiple BMC by running the `multiflash` command. Users can specify the BMC information and the configuration parameters by using a JSON configuration file.

Steps:

1. Acquire all necessary files for the multiple BMC by running the following command:
   ```
   OneCli.exe update acquire --ostype platform --mt xxxx,xxxx,xxxx --dir C:\pkg
   ```
2. Input the information of multiple BMC and the configuration parameters to a JSON configuration file.

   Note: For the JSON configuration file sample, refer to `Sample/multi_task_config.json` in OneCLI binary or "JSON configuration file sample" on page 172.
3. Input the target server BMC password and the SFTP password to the following `multiflash` command in the interactive mode.
   ```
   OneCLI update multiflash --configfile multi_task_config.json [--sftp user:pass@ip/xx]
   ```
4. Reflash the multiple server firmware in batch by running the `multiflash` command.

JSON configuration file sample

The following is the JSON configuration file sample for the `multiflash` command:

```
{
//Set the concurrency number, the max value is 50, if more than 50, use 50 as default
"parallel_number": 50,
//Set start task order by order or by random, 0 is for random; none zero is for order by order.
"parallel_order": 1,
// List of credentials to log in to the servers BMC
"bmc_credential":
```

```
{
// Use an alias to designate a user account, then specify that alias in the "target_bmc" section.
// Such as:   "alias_user1@192.168.100.222",
//                        "alias_user1@192.168.100.233",
//                        "alias_websrv1@websrv1.test.lenovo.com",
// If no alias precedes the BMC address then the "default_alias" is assumed by default.
"default_alias": "USERID",
"alias_user1":   "USERID",
"alias_websrv1": "ADMIN"
},
"target_bmc": [
//By default use "default_user" from bmc_credential or will use the user specified which defined in bmc_credential
"192.168.1.99",
"alias_user1@192.168.1.100",
"[2002:97b:c2bb:830:42f2:1001:1001:[10ee-10ef]]"
// Target bmc address using format:
// "127.0.0.1:5989"
// "127.0.0.[1-5]"
// "127.0.[2-3].[1-2]"
// "127.0.0.1", "127.0.0.2:5989"
// "[2002:97b:c2bb:830:42f2:1001:1001:ab30]"
// "[2002:97b:c2bb:830:42f2:1001:1001:ab30]:5989"
// "[2002:97b:c2bb:830:42f2:[1001-1002]:1001:[1fe0-1fe1]]"
// "user2@www.host.name"
// "www.host.name:5988"
],
"sftp_crendetial": "root",
"sftp_host":"192.168.1.121"
}
```

Secure data deletion for all data storage devices

From V2.8.0, OneCLI supports securely erasing data for all data storage devices on Lenovo ThinkSystem servers. The secure erase is defined in the following ways: the effective erasure of all traces of existing data from a data storage device, overwriting the data completely in such a way that access to the original data, or parts of them, becomes infeasible for a given level of effort. OneCLI supports the secure erase command by leverage BMU solution.

Do the following to perform secure data deletion:

Step 1. Prepare the BMU environment by inputting the following OneCLI command:

```
./OneCli update acquire --platform --dir xxx
```

Note: The package will be uploaded to sftp server if specified option '--sftp' is added.

Step 2. Run OneCLI secure erase command to launch the BMU solution.

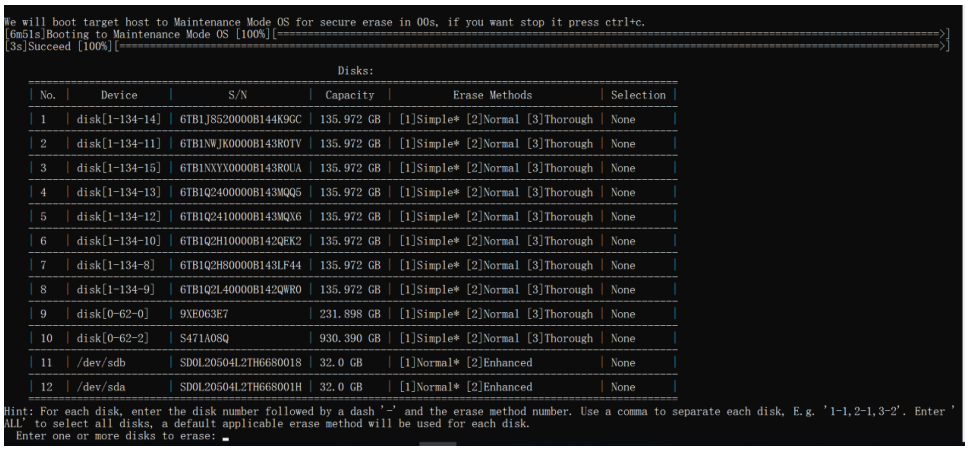
```
./OneCli serase --bmc userid:password@ipaddress [--sftp userid:password@ipaddress:6990] --dir xxx
```

Note: Set the sftp port as 6990. The default port 22 cannot work.

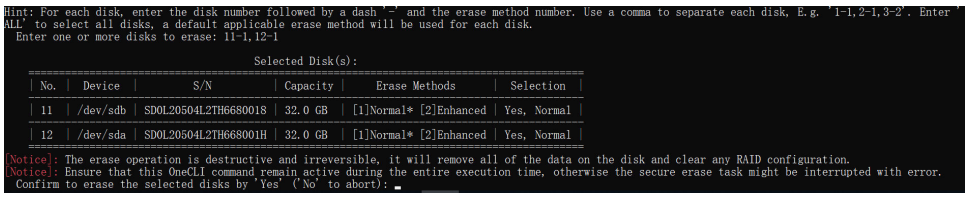
OneCLI will boot the remote target server to Maintenance OS.

Step 3. Check the OneCLI scan results and select the disk to perform secure erase operation after the Maintenance OS booting.

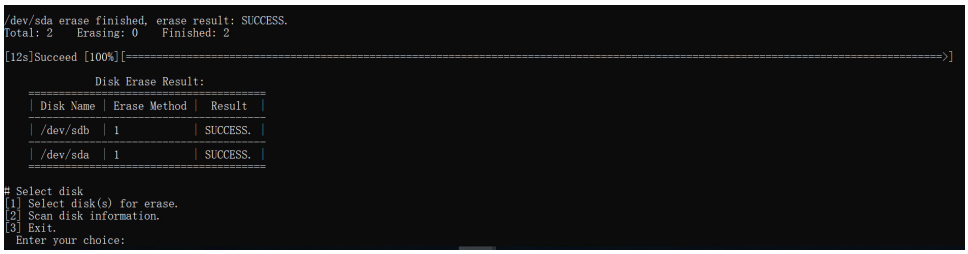
a. OneCLI will scan all the available disk(s) on the target server and show the disk(s) table.



b. Follow the OneCLI hints to select the target disk and erase method.



c. After all the erase operations completion, OneCLI will report the results. Make sure that the OneCLI commands remain active during the entire execution time, otherwise the task might be interrupted by error.



Staging firmware to remote server in out-of-band mode on ThinkSystem V3

The bundle update function is introduced in the ThinkSystem V3 servers. OneCLI supports to remotely stage all firmware to the ThinkSystem V3 servers in the specified applytime on XCC2. Users can also set the apply time, check, cancel, or start the staged update task based on the actual needs.

Steps

1. Send the firmware package (the ZIP file) to XCC2 and set the applytime for applying the firmware.

   Note: The applytime values includes **Immediate**, **OnReset**, and **OnStartUpdateRequest**.

   Sample command:

   ```
   OneCli.exe update flash --bmc userid:password@bmcip --dir C:\pkg --bundle --applytime onreset
   ```

2. Check, cancel, or start the staged update task:
   - Check the staged update task:

     Sample command:

     ```
     OneCli.exe update checktask --bmc userid:password@bmcip [--taskid "314e2aa0-5192-4bf1-8d62-23ba990df67d"]
     ```

- Cancel the staged update task:

  Sample command:

  ```
  OneCli.exe update canceltask --bmc userid:password@bmcip [--taskid "314e2aa0-5192-4bf1-8d62-23ba990df67d"]
  ```
- Start the staged update task whose applytime is set as **OnStartUpdateRequest**:

  Sample command:

  ```
  OneCli.exe update startstaged --bmc userid:password@bmcip [--taskid "314e2aa0-5192-4bf1-8d62-23ba990df67d"]
  ```

Note: If XCC2 firmware is staged and the apply time is **OnReset** or **OnStartUpdateRequest**, the XCC2 firmware will not be restarted automatically. To restart XCC firmware, users should manually restart XCC2 on web page or use the `rebootbmc` command.

Staging firmware to local server within host OS on ThinkSystem V3

Some I/O components can only be updated on Lenovo Customized Bare Metal Environment, and OneCLI can not apply the firmware of them immediately on the host OS of ThinkSystem V3. In this case, OneCLI package all these firmware components in to a ZIP file and stage this file to XCC2. By default, XCC2 will apply these firmware after the system is reset.

Sample command:

```
OneCli.exe update flash --bundle --dir C:\pk
```

Notes:
- The default apply time is `OnReset`.
- If XCC2 firmware is staged and the apply time is **OnReset** or **OnStartUpdateRequest**, the XCC2 firmware will not be restarted automatically. To restart XCC firmware, users should manually restart XCC2 on web page or use the `rebootbmc` command.

Setting One Time Boot

From V3.5.0, OneCLI supports to communicate with BMC through Redfish API by using the –redfish parameter. Users can also set One Time Boot under the Boot group.

Settings supported in Boot group
- BootSourceOverrideEnabled
- BootSourceOverrideMode
- BootSourceOverrideTarget
- UefiTargetBootSourceOverride

Example of setting One Time Boot to Mounted ISO

```
OneCli config batch --file onetimeboot.txt --redfish
File “onetimeboot.txt”:
set Boot.BootSourceOverrideEnabled Once
set Boot.BootSourceOverrideMode UEFI
set Boot.BootSourceOverrideTarget Cd
```

Setting CPU power capping on ThinkSystem V3

OneCLI supports to set the status, reason, and value of CPU power capping by using the **-redfish** parameter on the ThinkSystem V3 servers.

Supported settings
- `CPUPowerCapping.CPU{N}_PowerLimitedValue`

- CPUPowerCapping.CPUDomainPowerLimitCause
- CPUPowerCapping.CPUPowerLimited

Note: Wherein, *{N}* stands for the socket number of CPU.

Example

```
OneCli config show CPUPowerCapping --redfish -b xxxx:xxxx@xxxx
CPUPowerCapping.CPU1_PowerLimitedValue=255
CPUPowerCapping.CPU2_PowerLimitedValue=255
CPUPowerCapping.CPUDomainPowerLimitCause=PSUFailSafe
CPUPowerCapping.CPUPowerLimited=true
```

Setting security for ThinkEdge servers

OneCLI supports to set the security by using the **-redfish** parameter on the ThinkEdge servers.

Example of supported values

```
OneCli config showvalues Security --redfish
Security.ChassisIntrusionEnabled=true=false
Security.EncryptionEnabled=true=false
Security.HostShutdown=true=false
Security.MotionDetection=true=false
Security.SED_AK=*generate=backup=restore
Security.StepCounter=0
Security.ThresholdLevel=4_Steps=10_Steps=20_Steps=50_Steps=100_Steps=500_Steps
```

Example of SED Authentication Key (AK) Management

- To generate SED AK with the random method:
  `OneCli.exe config generate Security.SED_AK --bmc USERID:PASSWORD@XX.XX.XX.XX --redfish`
- To generate SED AK with the passphrase method:
  `OneCli.exe config generate Security.SED_AK --passphrase xxxxxx --bmc USERID:`
  `PASSWORD@XX.XX.XX.XX --redfish`
- To backup SED_AK to a file and restore with the file:
  `OneCli.exe config backup Security.SED_AK --passphrase xxxxxx --file backup.txt`
  `--bmc USERID:PASSWORD@XX.XX.XX.XX --redfish`
  `OneCli.exe config restore Security.SED_AK --passphrase xxxxxx --file backup.txt`
  `--bmc USERID:PASSWORD@XX.XX.XX.XX --redfish`

Setting XCC cache SED key from remote key management server

OneCLI supports to set XCC cache SED key by using the **-redfish** parameter from remote key management server.

Example of supported values

```
OneCli config show BMC --redfish
BMC.EKMSCacheExpirationIntervalHours=1
BMC.EKMSLastPollingTime=
BMC.EKMSLocalCachedKeyEnabled=false
BMC.EKMSLocalCachedKeyStatus=NoCached
BMC.EKMSPollIntervalMinutes=60
BMC.EKMSPollingEnabled=false
BMC.EKMSPollingStatus=Failed
```

Example of result of the showvalues command

```
BMC.EKMSCacheExpirationIntervalHours=LowerBound=1 UpperBound=336 ScalarIncrement=1
```

```
BMC.EKMSLocalCachedKeyEnabled=true=false
BMC.EKMSPollIntervalMinutes=LowerBound=5 UpperBound=1440 ScalarIncrement=1
BMC.EKMSPollingEnabled=true=false
```

Setting XCC extended audit log

OneCLI supports to set XCC extended audit log by using the **-redfish** parameter.

Example

```
OneCli config set BMC.AuditLogCapabilities Enabled --redfish
```

Setting XCC protective power capping

OneCLI supports to set XCC protective power capping by using the **-redfish** parameter.

Example of supported values

```
OneCli config show BMC --redfish
BMC.FailsafePowerLimit_AllowableMax=750
BMC.FailsafePowerLimit_Capped=false
BMC.FailsafePowerLimit_SetPoint=0
BMC.FailsafePowerLimit_State=Disabled
```

Example of XCC protective power capping

```
OneCli config showvalues BMC.FailsafePowerLimit_SetPoint --redfish
BMC.FailsafePowerLimit_SetPoint=LowerBound=1 ScalarIncrement=1 [0 means that disable failsafe power limit]
```

Setting XCC MPFA function

OneCLI supports to set XCC Memory Predict Failure Analysis (MPFA) function by using the **-redfish** parameter.

Example

```
OneCli config set BMC.MPFAHealthStatusEnabled true --redfish
```

Updating a local server within host OS

When users have candidate update packages available inside the host OS of a server, only a single OneCLI command shall apply the applicable updates within the host OS for that server.

To apply the UXSP (available at /tmp/pkgs/) to a server installed with a SLES12 from within that SLES12, see the following sample command:

```
./OneCli update flash --dir /tmp/pkgs/
```

For the ThinkSystem V3 servers, the service pack is named as Update Bundles. For some IO components (for example, Broadcom NX1 Adapter and some Intel NIC/HDD/SSD), the agentless or executable firmware binaries are not available in the host OS. In this case, these IO components would be staged to XCC2 with delay update on system reset.

Updating legacy drive firmware on ThinkSystem V3 servers (in-band mode)

This section describes how to update legacy drive firmware on ThinkSystem V3 servers without restarting the host in in-band mode.

1. Acquire all necessary files for a specific host OS, for example, rhel8.

   Sample command:

   ```
   OneCli update acquire --ostype rhel8 --mt xxxx --dir ./xxxx-pkg
   ```

   Note: The BIN and EXE executable firmware packages of the legacy HDD/SSD can only be downloaded along with Update Bundles by using OneCLI.
2. Do one of the following:
   - On Linux, find out `lnvgy_fw_drives_all-xxxx_linux_x86-64.bin` under the directory `./xxxx-pkg`.
   - On Windows, find out `lnvgy_fw_drives_all_xxxx_windows_x86-64.exe` under the directory `.\xxxx-pkg`.
3. Flash the hard drive packages in the host OS or run the binary file, do one of the following:
   - On Linux, do one of the following:
     – Flash the hard drive packages in the host OS.

       Sample command:

       ```
       OneCli update flash --scope individual --includeid lnvgy_fw_drives_all-xxxx_linux_x86-64 --dir ./xxxx-pkg
       ```
     – Run the binary file:
       `lnvgy_fw_drives_all-xxxx_linux_x86-64.bin -s`
   - On Windows, do one of the following:
     – Flash the hard drive packages in the host OS.

       Sample command:

       ```
       OneCli update flash --scope individual --includeid lnvgy_fw_drives_all_xxxx_windows_x86-64 --dir .\xxxx-pkg
       ```
     – Run the binary file:
       `lnvgy_fw_drives_all_xxxx_windows_x86-64.exe -s`

Updating a remote server

Steps:

1. Acquire all necessary files for platform update against the target server.

   Sample command :

   ```
   OneCli.exe update acquire --ostype platform --mt xxxx --dir C:\pkg
   ```
2. Flash the update packages in out-of-band mode to the target server.

   Sample command:

   ```
   OneCli.exe update flash --bmc userid:password@bmcip --dir C:\pkg --uselocalimg --platform
   ```

   Notes:
   - OneCLI restarts the server automatically after some components are updated, for example, Hard Drive and Broadcom NX1 Network adapters. Use the following command to skip these updates and avoid restarting the server.
     `OneCli.exe update flash --bmc userid:password@bmcip --dir C:\pkg --uselocalimg`
   - The `--fileserver` parameter is mandatory for SystemX and optional for ThinkSystem. When using this parameter on the ThinkSystem servers, port 6990 must be enabled.

     Sample command:

     ```
     --fileserver sftp://user:password@host/tmp/
     ```

Viewing and changing the setting value of a remote server through BMC

To view the current value of setting **IMM.SSH_Enable**, see the following sample command:

```
OneCli.exe config show IMM.SSH_Enable --bmc userid:password@host
```

To change the value of setting **IMM.SSH_Enable** to **Enabled**, see the following sample command:

```
OneCli.exe config set IMM.SSH_Enable Enabled --bmc userid:password@host
```

Chapter 14. ASU, DSA, and UXSPi proxy tools

Lenovo XClarity Essentials OneCLI provides three proxy tools serving as the command line translator, which accepts ASU/DSA/UXSPi commands and then invokes corresponding OneCLI commands. The proxy tools are distributed together with OneCLI binary. They are `asu.exe`, `dsa.exe`, and `uxspi.exe`.

The topics in this section provide detailed information about how proxy tools maps ASU, DSA, and UXSPi command to XClarity Essentials OneCLI command.

ASU proxy tool

The ASU proxy tool is an executable binary that accepts ASU command syntax and invokes the corresponding OneCLI command.

ASU proxy tool syntax

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

For more information about ASU, refer to:
https://datacentersupport.lenovo.com/us/en/solutions/lnvo-asu

The following table lists commands and parameters used by the ASU proxy tool and the corresponding XClarity Essentials OneCLI commands and parameters.

Table 174. Matrix of ASU and OneCLI commands and parameters

ASU		OneCLI	
Com-mand	**Parameter**	**Com-mand**	**Parameter**
show	-n	show	node
	--host --user --password		--bmc user:pwd@host
	--group		The mapped result for `asu show --group BMC` is `OneCli show BMC`. The **--group** parameter is removed in the OneCLIcommand string.
showval-ues	-n	showval-ues	--node
	--host --user --password		--bmc user:pwd@host
	--group		The mapped result for `asu show --group BMC` is `OneCli show BMC`. The **--group** parameter is removed in the OneCLI command string.
showde-fault	-n	showde-fault	--node
	--host --user --password		--bmc user:pwd@host
	--group		The mapped result for `asu show --group BMC` is `OneCli show BMC`. The **--group** parameter is removed in the OneCLI command string.
compar-edefault	-n	compar-edefault	--node
	--host --user --password		--bmc user:pwd@host
show-groups	-n	show-groups	--node

Table 174. Matrix of ASU and OneCLI commands and parameters (continued)

ASU		OneCLI	
Command	**Parameter**	**Command**	**Parameter**
	--host --user --password		--bmc user:pwd@host
set	-n	set	--node
	--host --user --password		--bmc user:pwd@host
loaddefault	-n	loaddefault	--node
	--host --user --password		--bmc user:pwd@host
creatuuid	--host --user --password	creatuuid	--bmc user:pwd@host
delete	-n	delete	--node
	--host --user --password		--bmc user:pwd@host
save		save	The **--file** parameter is added by default.
	-n		--node
	--host --user --password		--bmc user:pwd@host
	--group		The mapped result for `asu show --group BMC` is `OneCli show BMC`. The **--group** parameter is removed in the OneCLI command string.
replicate		replicate	The **--file** parameter is added by default.
	--host --user --password		--bmc user:pwd@host
restore		restore	The **--file** parameter is added by default.
	-n		--node
	--host --user --password		--bmc user:pwd@host
batch		batch	The **--file** parameter is added by default.
	-n		--node
	--host --user --password		--bmc user:pwd@host
generate		generate	The **--file** parameter is added by default.
	-n		--node
	--host --user --password		--bmc user:pwd@host
export		export	The **--file** parameter is added by default.
	-n		--node
	--host --user --password		--bmc user:pwd@host
import		import	The **--file** parameter is added by default.
	-n		--node
	--host --user --password		--bmc user:pwd@host
deletecert	-n	deletecert	--node
	--host --user --password		--bmc user:pwd@host
nodes	--host --user --password	nodes	--bmc user:pwd@host

Table 174. Matrix of ASU and OneCLI commands and parameters (continued)

ASU		OneCLI	
Com-mand	**Parameter**	**Com-mand**	**Parameter**
help	-n	showdes	--node
	--host --user --password		--bmc user:pwd@host

Example of an ASU script using the --group parameter

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

Example of an ASU script using the --host parameter

```
asu.exe help all --host host --user userid --password password
```

In this example, the asu.exe **--host** parameter maps to:

```
OneCli.exe config showdes --bmc userid:password@host
```

DSA proxy tool

The DSA proxy tool is an executable binary that accepts DSA command syntax and invokes the corresponding OneCLI command.

DSA proxy tool syntax

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

For more information about DSA, refer to:
https://datacentersupport.lenovo.com/us/en/solutions/lnvo-dsa

The DSA parameters table lists DSA parameters used by the DSA proxy tool and the corresponding XClarity Essentials OneCLI commands and parameters.

Table 175. Matrix of DSA and OneCLI commands and parameters parameters and

DSA parameter	OneCLI command	OneCLI parameter
i	formatlog	srcdata
d	getinfor	output
diags		diags
disable-bmc-lan		disable-bmc-lan
no-bmc-lan		no-bmc-lan
h, ?, help		help
ipmi-lan		bmc
t		upload
upload		upload
v		htmlreport

Table 175. Matrix of DSA and OneCLI commands and parameters parameters and (continued)

DSA parameter	OneCLI command	OneCLI parameter
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 XClarity Essentials OneCLI `formatlog` command.
- All other DSA parameters map to the XClarity Essentials OneCLI `getinfor` command.

The DSA script examples table provides examples of DSA scripts and the XClarity Essentials OneCLI commands and parameters they map to.

Table 176. DSA script examples

DSA script	XClarity Essentials OneCLI command and parameters
`dsa.exe -i test_file -d C:\onecli\`	`OneCli inventory formatlog --srcdata test_file --output C:\onecli\`
`dsa.exe -upload --proxy-address=addr --proxy-port=port --proxy-user=user -proxy-password=pwd`	`OneCli inventory getinfor --output C:\Lenovo_Support\ --proxy user:pwd@addr:port --upload multitool`
`dsa.exe -v --ffdc`	`OneCli inventory getinfor --ffdc --htmlreport --output C:\Lenovo_Support\`

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 Analysis<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
```

UXSPi proxy tool

The UXSPI proxy tool is an executable binary that accepts UXSPi command syntax and invokes the corresponding OneCLI command.

UXSPi proxy tool syntax

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

For more information about UXSPI, refer to:
https://datacentersupport.lenovo.com/us/en/solutions/lnvo-xpress

The following table lists commands and parameters used by the UXSPI proxy tool and the corresponding XClarity Essentials OneCLI commands and parameters.

Table 177. Matrix of UXSPi and OneCLI commands and parameters

UXSPi		OneCLI	
Com-mand	**Parameter**	**Com-mand**	**Parameter**
acquire	--check -update	acquire	Not supported.
	-l UXSP-path, --local=UXSP-path		--dir UXSP-path
	m *type*, --machine-type=*type*		--mt *type*
	--meta-only		--metaonly
	-o *operating-system*, --os=*operating-system*		--ostype *operating-system*
	-L, --latest		--scope *latest*
	-i *update-id*, --id=*update-id*		--includeid *update-id* **Note:** Must be used with --scope individual.
	-r, --report		--report
	--proxy-address=*address*		--proxy *url*
	--proxy-port=*port*		
	--proxy-user=*user*		
	--proxy-password= *password*		
	--proxy-password-secure= *secure-password*		Not supported.
	--no-proxy		Empty
	--preview-user=*user*		Not supported.
	--preview-password= *password*		Not supported.
	--preview-password-secure= *secure-password*		Not supported.
	--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

Table 177. Matrix of UXSPi and OneCLI commands and parameters (continued)

UXSPi		OneCLI	
Command	**Parameter**	**Command**	**Parameter**
	-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*		--bmc *url*
	--update-args="IMM: --user=*userid* --password=*pwd*,UEFI:--backup"		
	--esxi-updatefile		Not supported.
	-m *type*, --machine-type=*type*		--mt *type*
	--ignore-mtos-check		Not supported.
update	-F, --firmware	update	--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

Table 177. Matrix of UXSPi and OneCLI commands and parameters (continued)

UXSPi		OneCLI	
Command	**Parameter**	**Command**	**Parameter**
	-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*		--bmc *url*
	--update-args="IMM: --user=*userid* --password=*pwd*,UEFI:--backup"		
	--esxi-updatefile		Not supported.
	--ignore-req		--noreq
	--ignore-hwcheck		Not supported.
	-m *type*, --machine-type=*type*		--mt *type*
	--ignore-mtos-check		Not supported.
bc (Scan commands)	-s, --scan	bc (Scan commands)	scan
	--mm-address=*address*		--cmm *url*
	--mm-user=*user*		
	--mm-password=*password*		
	--mm-password-secure=*secure-password*		Not supported.

Table 177. Matrix of UXSPi and OneCLI commands and parameters (continued)

UXSPi		OneCLI	
Command	**Parameter**	**Command**	**Parameter**
bc (CMM update commands)	-m --mm	bc (CMM update commands)	Not supported. UXSPi needs input update file names, while OneCLI needs input package IDs. The IDs and files names cannot match, so the proxy tool will not transfer these commands.
	--mm-address=*address*		
	--mm-user=*user*		
	--mm-password=*password*		
	--mm-password-secure=*secure-password*		
	--mm-file=*file1*		
	--mm-file2=*file2*		
	--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 OneCLI needs input package IDs. The IDs and files names cannot match, so the proxy tool will not transfer these commands.
	--mm-address=*address*		
	--mm-user=*user*		
	--mm-password=*password*		
	--mm-password-secure=*secure-password*		
	--io-bay=*bayID*		
	--io-user=*user*		
	--io-password=*password*		
	--io-password-secure=*secure-password*		
	--io-file=*file1*		
	--io-file2=*file2*		

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
```

Chapter 15. Troubleshooting and support

Use this section to troubleshoot and resolve problems with Lenovo XClarity Essentials OneCLI.

General limitations

XClarity Essentials OneCLI has the following known general limitations.

OneCLI cannot connect to the SFTP server that only supports the deprecated algorithms ssh-rsa and ssh-dss.

After upgrading the SSH client, OneCLI supports algorithms ssh-ed25519, ecdsa-sha2-nistp521, ecdsa-sha2-nistp384, ecdsa-sha2-nistp256, sk-ssh-ed25519@openssh.com, sk-ecdsa-sha2-nistp256@openssh.com, rsa-sha2-512, and rsa-sha2-256. The SFTP server that only supports the deprecated algorithms ssh-rsa and ssh-dss cannot be connected to OneCLI.

OneCLI does not support to mount/unmount virtual media under in-band mode.
OneCLI retrieves a temporary account from BMC when running in-band scenarios, but the temporary account does not have the privilege to mount/unmount virtual media.

OneCLI does not support inventory and raid configuration on Virtual Raid on CPU (VRoC).

The glibc.i686 and glibc-locale libraries are required to load shared libraries.
If the glibc.i686 and glibc_locale libraries are not installed, users might receive the following error when attempting to load a shared library:`OneCli error while load shared libraries: libstdc++.so.6: cannot open shared object: no such file or directory.`

OneCLI uses BMC Lan over USB which uses "169.254.95. xx" network by default.
The default setting for BMC 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 "BMC Ethernet over USB IP Settings" section of the BMC Web page to a non-conflict IP address so that OneCli will use this IP address to connect to BMC.

OneCLI might print warning message when Broadcom CIM provider v17.0.5 or older installed on a customized the VMware ESXI system.
If users have a Broadcom CIM provider v17.0.5 or older installed on a customized the VMware ESXI system, the following warning message will be displayed in the log file: `You have a Broadcom CIM provider v17.0.5 or older installed in the target system. Broadcom CIM Provider versions older than 17.0.5 is not recommended to use for Firmware Update. If you want to update Firmware, install the latest ESXi patch."`

Config limitations

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

OneCLI may fail to restore settings in backup file for SR645 V3.
Users run the `backup` command to save the settings in the encrypted way for SR645 V3. However, the settings might not be restored in the backup file and the passphrase.

The state of LAN-over-USB is saved as “enabled” when using the config command “backup” to save the configuration with an encrypted way in in-band mode.
When users use the config command `backup` to save the configuration with an encrypted way in in-band mode, LAN-over-USB will be enabled and its state will be saved as **enabled**. When users perform the config command `restore` to recover from the saved configuration file, the LAN-over-USB state might still be displayed as **enabled** no matter what the initial state it is.

When using the config set command to modify the properties of the active account connecting to BMC, even the command succeeds, OneCLI still returns the failure result.

When running the `config set` command to modify the active account properties. For example,

- Account name: OneCli.exe config set imm.loginid.3 test2 --bmc test1:PASSW0RD@host
- Account password: OneCli.exe config set imm.password.3 Passw0rd --bmc test2:PASSW0RD@host

Even the command is executed successfully, OneCLI still returns the error message:

```
Failed to get update status due to BMC internal error.
```

BIOS settings are not saved in OS on SR635/SR655.

When running the OneCLI config command `Onecli.exe config save --group BIOS --file save.txt` in the OS on SR635/SR655, the command might return success, but no BIOS settings can be found in the `save.txt` file.

Add IPMI/SNMP interface for an existing account(without IPMI or SNMP) in batch mode.

It is required to provide the password for the specified account when adding IPMI or SNMP interface in `IMM.Accessible_Interfaces.*`. It is recommended to run the batch file containing both `IMM.Accessible_Interfaces.*` and `IMM.Password.*` in batch mode; otherwise, OneCLI will fail with error code 93(0x5D).

A BMC local user account is required in OneCLI out-of-band configuration.

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 is difficult to do settings on LSI adapters and it may impact the RAID controller.

OneCLI shows failure to set BMC to shared mode but actually it succeeds

Using OneCLI config command to set "BMC.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 BMC is changed to shared mode.

Not valid configuration settings are not saved

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

Restarting the BMC for config values to take effect

For some settings to take effect, users might have to restart the BMC. Users might also need to restart the BMC for any values that are set through the OneCLI config application and displayed in the BMC 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.

OneCLI config might fail to get the set result

After the OneCLI config application sets some BMC network settings, it could cause a BMC connection section reset or an IP address change, resulting in the config application failing to get the set result.

OneCLI config does not restore/replicate some settings from the saved file

When running command restore and replicate of OneCLI config, users could meet the following actions:

- Filter some settings to restore because the value is empty.
- Skip some settings for this type of command. For example, VPD settings for command restore.
- Ignore some settings which can’t be found on the target system.

OneCLI does not translate 1/0 to True/False for suppress-if sentence in the output of command showvalues

A DC cycle is mandatory for any setting change (except those related to BMC/IMM) to take effect after user run OneCLI to change that setting.

Inventory limitations

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

Users with LDAP authentication (for example, LXCA account) could not collect IPMI logs (for example, IPMI event logs and system settings).
Users could use XCC local account to collect IPMI logs.

No Mellanox adapters raw data in inventory result since OneCLI V2.9.0
Users can download the Mellanox utility to generate raw data from: https://www.mellanox.com/downloads/MFT/WinMFT_x64_4_14_0_105.exe.

The value of DIMM serial number shown by OneCLI is inconsistent with the serial number shown by the BMC Web application (Retain tip 95884)
The DIMM serial number shown by OneCLI is not in the same byte order as the serial number shown by the BMC. For example, the DIMM serial number displays as 441B13BD on the BMC Web page, which corresponds to the 4 byte sequence 44 1B 13 BD, while in OneCLI the DIMM serial number is displayed as BD131B44, with a byte sequence of BD 13 1B 44.

OneCLI shows the volumes' layout and status unknown on windows 2012 series OS
OneCLI shows the volume layout and status as unknown for Windows 2012 series operating systems when the partition type is static. This is because logical disk management (LDM) is deprecated in favor of Storage Spaces for Windows 8 and Windows 2012. When OneCLI attempts to read LDM data from the Windows operating system for these properties, OneCLI shows an unknown status for these two properties of a static disk.

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 situation is most often encountered in common tables containing instances from multiple data sources.

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

Extended collection times
If users encounter extended collection times, it might be helpful to disconnect external devices temporarily. For example, unplug fiber cables or additional USB devices where information about these devices is not essential to the data collection.

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.

Memory speed reported as Unknown in the Memory section of the Hardware Information report
XClarity Essentials OneCLI might report the memory speed as *Unknown* in the Memory section of the Hardware Information report, which is caused by the issues with SMBIOS support on some systems.

OneCLI is displayed as Unknown in the item PartitionSubType
OneCLI 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.

QLogic utility limitation

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

XClarity Essentials OneCLI 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, XClarity Essentials OneCLI displays the manufacturer of the hard disk as *ATA* in the Physical Drive Information table.

XClarity Essentials OneCLI shows incorrect core numbers for System x3850 X5 dual node configuration

On System x3850 X5 dual node configuration, XClarity Essentials OneCLI shows incorrect core numbers (always show one core) for processors on the second node (CPU5-8).

Upload through a proxy server on Windows shall meet some specific system configuration requirements

On a Windows operating system when trying to run the `upload` command or `getinfor` command with the --upload option through a proxy server by specifying --proxy option, turn off **check for server certificate revocation (requires restart)** from the **Tools → Internet Options → Advanced → Security** menu.

OneCLI does not show slot number for some PCI devices sometimes on Linux Operating systems

Route information in network settings, and video controllers and video heads in hardware inventory are absent on SLES 15.

The Init Configuration item is blank in inventory logs on SLES 12 and SLES 15.

OneCLI shows Xorg core dump when running inventory on some Red Hat 7 operating systems.

When OneCLI collects the graphics information, the core dump of some earlier versions of Xorg might be displayed. Users can fix this problem by upgrading Xorg.

The “VMware Privilege Logs” item is gray in HTML log on VMWare ESXi 6.7.

The “VMware_Privilege” item has been removed from the “root/cimv2” namespace of VMware, so there is no information on VMware privilege logs.

The "Other Devices" item is not displayed on OneCLI on Red Hat 6/7/8.

OneCLI displays the information on other devices through the file `/etc/sysconfig/hwconf`. This file has been removed from Red Hat 6, so the “Other Device” item is not displayed on OneCLI on Red Hat 6/7/8.

Some items are unreadable in Chassis Event Log on OneCLI inventory report

The CIM client used by OneCLI for collecting the data does not support UTF-8. Therefore, the message on the Chassis Event Log page may be unreadable.

Update limitations

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

Notes:

- For update limitations relating to the Lenovo UpdateXpress System Pack Installer, see limitations listed in the UXSPi documentation at:
  https://datacentersupport.lenovo.com/docs/LNVO-XPRSUG
- To download packages from IBM Web site through proxy, ensure that the proxy server can access domain www.ibm.com and www-03.ibm.com for Windows operating systems and IP address 207.25.252.197 and 129.42.160.51 for Linux operating systems.

The installed driver version is displayed as "Undetected" in the update compare results.

For some network adapters, RAID adapters, and chipsets, if the installed driver name does not match any out-of-box driver in the server update packages, the installed driver version will be displayed as

Undetected in the update compare results. In this case, OneCLI could not select the correct driver for update.

Workaround: Users should use OneCLI with the **--force** parameter or manually install the out-of-box driver to override the in-box driver.

The installed driver version is displayed as "N/A" in the update compare results.
For some network adapters, RAID adapters, and chipsets, if the installed driver version is non-sequential compared with the out-of-box driver in server update packages, the installed driver version will be displayed as **N/A** in the update compare results. By default, OneCLI will recognize the installed driver as in-box driver and install the corresponding out-of-box driver.

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, restart ESXi when prompted.

User should enable Ethernet Over USB and CIM Over HTTPS on XCC web UI before remotely updating firmware using OneCLI under ESXi.
The firmware to be updated could be sent to XCC succssfully after these two options are enabled.

After installing ESXi, system requires 15 minutes to initialize.
To prevent OneCLI 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 OneCLI paths must use standard English-language alphanumeric characters.
All OneCLI 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.

64-bit Linux requires 32-bit compatible libraries to update firmware
To update firmware with the XClarity Essentials OneCLI 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 XClarity Essentials OneCLI update function does not support tape drives
The update function does not support the tape device driver firmware scan, compare, or flash functions.

XClarity Essentials OneCLI does not support firmware updates for LAN-over-USB bridged network ports

The XClarity Essentials OneCLI 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 XClarity Essentials OneCLI 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, run 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 XClarity Essentials OneCLI 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 shall be active after firmware update, causing the switch to restart automatically. The XClarity Essentials OneCLI "--noreboot" parameter will not prevent these switches from restarting after firmware upgrade.

User must verify presence of configuration file

The XClarity Essentials OneCLI 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.

XClarity Essentials OneCLI does not restore USB LAN IP configuration

The XClarity Essentials OneCLI 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 BMC, making the origin USB LAN IP address not valid.

XClarity Essentials OneCLI does not support the VMware ESXI 5.1.

XClarity Essentials OneCLI **openssl** command is not compatible with ESXi **opensslo** command.

OneCLI OOB can only flash OOB enabled packages that now is indicated by pldmSupport or oobSupport tag in package xml for OOB enabled Adapters.

OneCLI cannot flash the system firmware in a host OS when the ipmi service of the host is not available.

If "IMM.LanOverUsb" is set to "Disabled", OneCLI will flash the system firmware through USB LAN device. In this case, OneCLI cannot update IB system firmware.

OneCLI cannot compare matrox video driver.

ESXI 6.5: IMM is unresponsive after updating firmware by using OneCLI.

OneCLI cannot update the core firmware in host when the IP address in network conflicts with the local USB LAN IP (default IP: 169.254.95.118).

OneCLI cannot compare Intel Driver Pack versions for the non-ThinkSystem servers.

Intel Driver Pack only releases the package for the ThinkSystem servers after 2017. Therefore, from V2.1.0, OneCLI only supports to compare the Intel Driver Pack versions for the ThinkSystem servers. However, Intel Driver Pack releases a build for the non-ThinkSystem servers in 2018.

If the server XCC firmware is not the latest version, OneCLI might fail to update the M.2 & NVMe Adapter firmware in host.

OneCLI cannot update the M.2 & NVMe Adapter firmware in host when there are conflicts between the network IP and the local USB LAN IP (default IP: 169.254.95.118).

Even the "mtrox-lnvgy_dd_video_4.11.0_rhel7_x86-64" driver package only supports RHEL7.3, this driver package will be displayed in RHEL7.4/RHEL7.5 of OneCLI.

The latest version of the "mtrox-lnvgy_dd_video_4.11.0_rhel7_x86-6" driver package is in the in-box driver of OS. However, users might still see this driver package in RHEL7.4/RHEL7.5. When users flash this driver package in RHEL7.4/RHEL7.5, a message will be displayed, showing that this driver package is in the latest version.

When HDD/SSD is not connected to the RAID controller in the OOB mode, OneCLI does not support to scan or compare the HDD/SSD firmware.

OneCLI might delay displaying the firmware update progress.

If OneCLI frequently checks the firmware update progress, BMC will be busy. Now OneCLI supports to check the firmware update progress every 10 seconds. Therefore, the firmware update progress might not be displayed in real time. For example, when OneCLI shows that the progress of updating UEFI is 43%, the actual update progress might be 100%, and the system can be powered off.

OneCLI will fail to acquire the update packages with a certificate interception proxy

When users use OneCLI to acquire an update package with a proxy from Lenovo Technical Support or IBM Support, and the proxy has a certificate interception configuration, the certificate issuer name will be changed to the proxy name. In this case, OneCLI cannot verify the certificate or acquire the update package. To solve this problem, users can add the proxy certificate to `esupport.pem` (for Lenovo Technical Support) or `TrustList.pem` (for IBM Support) in OneCLI binary.

Miscellaneous limitations

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

OneCli may report failure when booting to setup a server if the target server's host OS is RHEL or SLES.

When the OS of the target system host is RHEL or SLES, the following message might be displayed after running `OneCli ospower boottosetup --bmc USERID:PASSWORD@10.240.X.X`:

```
Failed to enter BIOS setup, waiting OS system status timeout.
```

In this case, do the following:

- For Red Hat® Enterprise Linux (RHEL) v7 and later versions:
  1. Manually configure the operating system to change the power status to power off. For instructions, see the Changing Behavior when Pressing the Power Button in Graphical Target Mode
  2. Run the command `OneCli ospower boottosetup --bmc USERID:PASSWORD@10.240.X.X` again.
- For SUSE Linux Enterprise Server (SLES):
  1. Manually power off the server through the local SLES interface, enter the root password on the SLES session, select **Remember authentication**, or check the security policy to confirm whether the mandatory authentication can be disabled.
  2. Run the command `OneCli ospower boottosetup --bmc USERID:PASSWORD@10.240.X.X` again.

OneCLI could not run the raid clear command for the ThinkServer systems.

When running the `raid clear` command in the ThinkServer systems and error message “The request failed due to an internal service error. The service is still operational.” is displayed, do one of the following:

- If the target volume is not deleted, run the `raid clear` command again to delete the target volume.
- If the target volume is deleted, ignore this error message.

Long time might be consumed in physical drive secure erase (speed: about 0.38GB/min) for the ThinkSystem servers installed with 4350/5350/9350 HBA/RAID adapters.

OneCLI could not perform secure erase on SATA SSD connected to Marvell RAID controllers.

There is an internal time-out of 9 seconds in the Marvell RAID firmware, and the SSD might not respond to the command in time. Then, the Marvell RAID firmware will reset the SSD, the secure erase will fail, the SSD will be locked and could not work. In this case, run the following command to unlock SSD:

```
hdparm --user-master u --security-unlock user123 %diskName%
```

It is also recommended to do the following:

- For 7mm SATA SSDs, connect to Broadcom RAID controllers to perform secure erase.
- For M.2 SATA SSDs, connect to Enablement Kit without Marvell RAID firmware (for example, ThinkSystem M.2 SATA/NVMe 2-Bay Enablement Kit) to perform secure erase.

ASU/DSA/UXSPi proxy tool limitations

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

OneCLI only supports calling ASU, DSA, and UXSPi proxy tool from the directory in which executable binary file exists

Calling OneCLI using the ASU, DSA, or UXSPi proxy tool only functions when called from the directory containing the executable binary file. For example, if the OneCLI and ASU executables are both in the folder `/software/onecli/tmp`, the command will run when calling the proxy tool from the folder `/software/onecli/tmp # ./asu show --host host--user userid --password password`; however, the command will fail when calling it from another folder, such as `/software/onecli# ./tmp/asu show --host host --user userid --password password`.

Return codes

XClarity Essentials OneCLI issues a return code to indicate either successful execution of a command or to indicate that an error occurred while the program was running. A return code of zero indicates that 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.

Return codes	Table
Common return codes	Table 178 “OneCLI common return codes” on page 196
config-related return codes	Table 179 “OneCLI config-related return codes” on page 198
update-related return codes	Table 180 “OneCLI update-related return codes” on page 199
FFDC-related return codes	Table 181 “OneCLI FFDC-related return codes” on page 200
raid-related return codes	Table 182 “OneCLI raid-related return codes” on page 201
diags-related return codes	Table 183 “OneCLI diags-related return codes” on page 201
FoD-related return codes	Table 184 “OneCLI FoD-related return codes” on page 201

Table 178. OneCLI common return codes

Return code	Decimal base	Description
0x00	0	Success.
0x01	1	Generic failure.
0x03	3	Invalid application.
0x04	4	Invalid command.
0x05	5	Invalid parameter.
0x06	6	Local file does not exist.
0x07	7	Invalid file.
0x08	8	Failed to create directory.
0x09	9	Failed to open file.
0x0A	10	Failed to read file.

Table 178. OneCLI common return codes (continued)

Return code	Decimal base	Description
0x0B	11	Failed to write file.
0x0C	12	Authentication failed.
0x0D	13	Connection failed.
0x0E	14	Ping failed.
0x0F	15	Upload failed.
0x10	16	Download failed.
0x11	17	Internal error.
0x12	18	Time-out.
0x13	19	Failed to get XCC account through KCS.
0x14	20	Users are running on an IBM system. Do not use proxy tool in onecli extract path when set the executable binary of legacy ToolsCenter path in global.config.
0x15	21	LAN-over-USB device is disabled on BMC side. Enable it manually.
0x16	22	The BMC default internal IP conflicts with external machine. Correct the problem, and try again.
0x17	23	Failed to restart host system.
0x18	24	Failed to restart BMC.
0x19	25	Platform error.
0x1a	26	• For windows servers, LAN-over-USB device is not detected.. • For linux servers, some tools are not installed, including lsusb,lsmod,and modprobe.
0x1b	27	Failed to get driver information
0x1c	28	Failed to get machine type.
0x1e	30	Internal error of BMC.
0x1f	31	Failed to find applicable hardware component.
0x20	32	Failed to load LAN-over-USB device driver.
0x21	33	For windows servers: Failed to run commands without root permission. Switch to root user and try again. For linux servers: Failed to run commands without administrator permission. Switch to administrator user and try again.
0x22	34	Failed to update due to ESXI internal error.
0x23	35	CMM internal error.
0x24	36	Failed to verify the certificate/fingerprint for the connection(s) specified.
0x25	37	Manually quit OneCLI.
0x26	38	Invalid file folder.
0x27	39	Failed to encrypt/decrypt.
0x28	40	Fail to find the matching credential.
0x29	41	Fail to find the matching tool package for remote machine.

Table 178. OneCLI common return codes (continued)

Return code	Decimal base	Description
0x2a	42	Remote operation not support this remote machine.
0x2b	43	Could not find credential file.
0x2c	44	The path behind the option remoteos does not exist.
0x2d	45	Attended or unattended mode conflict.
0x2e	46	Passphrase error.
0x2f	47	Interrupted by user.
0x30	48	Encrypted file is not exist.
0x31	49	Encrypted file is invalid.
0x32	50	Failed to connect KCS. Check IPMI over KCS status.
0x33	51	Unable to access IPMI service with a password over 20 characters according to IPMI standard.
0x34	52	There is no RESTful service for the target server.
0x35	53	Check the format of input for connection parameter. For credential encrypt user, can't find crypt.json.
0x36	54	The password provided for this account must be changed before access is granted.
0x37	55	BMC CIM Over HTTPS is disabled.
0x38	56	Invalid BMC/CMM/SMM Address.
0x39	57	Check BMU requirement failed.
0x3a	58	One or more tasks failed.
0x3b	59	One or more tasks skipped.
0x3c	60	Fail to get data from Rest interface of BMC.

Table 179. OneCLI config-related return codes

Return code	Decimal base	Description
0x5C	92	Invalid data field.
0x5D	93	Failed to change the settings. It is recommended to change the settings in batch mode by using the provided password.
0x5E	94	The required FoD key has not been installed.
0x5F	95	The setting has invalid current value.
0x60	96	Operation unavailable. Users should wait a moment and retry later.
0x61	97	Certificate does not exist.
0x62	98	The default value is empty.
0x63	99	Invalid e-maill address of destination.
0x64	100	The current version of firmware does not support this function. To resolve this issue, update the target firmware to the latest version.

Table 179. OneCLI config-related return codes (continued)

Return code	Decimal base	Description
0x65	101	Redfish internal error.
0x66	102	Failed to parse BMC data.
0x67	103	BMC data error.
0x68	104	The command is not supported on current system.
0x69	105	Query BMC error.
0x6A	106	Invalid certificates.
0x6B	107	Failed restoration.
0x6C	108	Failed replication.
0x6D	109	The password can only be changed in low security level.
0x6E	110	Previous passwords are not allowed. Try another passwords.
0x6F	111	The password does not meet password policy requirements.
0x70	112	User already exists.
0x71	113	Failed to run commands when executing batch command.
0x72	114	BMC internal error: No priviledge to complete this operation.
0x73	115	Invalid setting value.
0x74	116	Failed to display the instance setting. Create the instance first.
0x75	117	Invalid commands in the batch file.
0x76	118	Failed to reconnect to BMC after the command is executed successfully. To check the result, try another method.
0x77	119	Failed to generate, export, import, or delete certificates.
0x78	120	Failed to set the setting items.
0x79	121	Failed to get information.
0x7A	122	Create the record key of instance first.
0x7B	123	Unable to find setting.
0x7C	124	BMC internal error.
0x7D	125	Failed to run command.

Table 180. OneCLI update-related return codes

Return code	Decimal base	Description
0x7d	125	Skip updating this package.
0x7c	124	Update does not take effect after successful flash.
0x7b	123	Current BMC version does not support this package. Upgrade BMC to the latest version and try again.
0x7a	122	Failed to update because this package does not support current method.
0x79	121	Failed to update because this device does not support current method.
0x78	120	The candidate update is older than the allowed minimum version.

Table 180. OneCLI update-related return codes (continued)

Return code	Decimal base	Description
0x77	119	Current BMC setting disallows downgrade.
0x76	118	Device error.
0x75	117	Another update in progress.
0x74	116	Failed to prepare update environment.
0x73	115	BMC RDOC space not enough. Remove other mounted device from BMC RDOC.
0x72	114	Failed to set up BMU environment.
0x71	113	Failed to boot into Maintenance Mode OS.
0x70	112	Failed to acquire.
0x6f	111	Unsupported OS.
0x6e	110	Failed to get OS type by using the scan command.
0x6d	109	No package needs update.
0x6c	108	UXSPI does not support the current command run in the IBM system.
0x6b	107	Update blue not supported.
0x6a	106	Failed to run UXSPI. For more information about the error, see UXSPI logs.
0x69	105	Failed to update flash because the error backup does not support the update.
0x68	104	Invalid or unsupported machine type.
0x67	103	Update error: Flash finished running, however multiple packages failed to be flashed. Check flash status xml for further information.
0x66	102	Users are running on an IBM system. Ensure that UXSPI_PATH is set to the executable binary of UXSPI in global.config.
0x65	101	Update error: Failed to generate common_result.xml.
0x64	100	Update not found.
0x63	99	No applicable update available in the Repository for the specified machine type or OS.
0x62	98	Failed to connect to the Repository.
0x61	97	Unrevoverable error.
0x60	96	Failed to download some update packages.

Table 181. OneCLI FFDC-related return codes

Return code	Decimal base	Description
0x7D	125	Download SMM FFDC error: setup environment failed.
0x7C	124	Download SMM FFDC error: start dump failed.
0x7B	123	Download SMM FFDC error: query failed.
0x7A	122	Download SMM FFDC error: tar ffdc files failed.
0x79	121	Download SMM FFDC error: tftp server is not found.

Table 181. OneCLI FFDC-related return codes (continued)

Return code	Decimal base	Description
0x78	120	FFDC log is uploaded to the specified FTP/TFTP server, but fails to download FFDC log from FTP/TFTP server.
0x77	119	Failed to get FFDC log.

Table 182. OneCLI raid-related return codes

Return code	Decimal base	Description
0x7D	125	Ensure that the command of RAID configuration runs on the ThinkSystem server with the latest XCC firmware version.
0x7C	124	The target device does not exist.
0x7B	123	RAID config has no config to save.
0x7A	122	RAID config ini file error.
0x79	121	RAID config fails to operate.
0x78	120	There are no volumes. Add volumes at first.
0x77	119	The operation fails on some targets.
0x76	118	There are no controllers.
0x75	117	The operation fails on all targets.
0x74	116	RAID config does not support this command on M.2 SSD.
0x73	115	There are no disks of the target device.
0x72	114	Disk state error.
0x71	113	Current system does not support Intel RSTe software RAID.
0x70	112	There are no containers.

Table 183. OneCLI diags-related return codes

Return code	Decimal base	Description
0x34	52	Failed to trigger diagnostic.
0x35	53	Failed to get status of diagnostic.
0x36	54	Failed to get result of diagnostic.

Table 184. OneCLI FoD-related return codes

Return code	Decimal base	Description
0x7D	125	FoD key file is not valid.
0x7C	124	Specified machine type or serial number is not valid.
0x7B	123	FoD key file is not found.
0x7A	122	FoD key is not found from target key repository.
0x79	121	FoD key ID is not valid.
0x78	120	Active key exists in KMS Web site.

Table 184. OneCLI FoD-related return codes (continued)

Return code	Decimal base	Description
0x77	119	Authentication code does not exist.
0x76	118	Unique identifier is not valid.
0x75	117	Failed to Install the FoD key.
0x74	116	Failed to uninstall the FoD key.
0x73	115	Failed to export the FoD key.
0x72	114	Failed to report the FoD key.
0x71	113	Failed to get current tier.
0x70	112	Failed to execute command.
0x6F	111	The command is not supported on current system.
0x6E	110	Unable to find the processor specified by 'socketid' on current system.
0x6D	109	Failed to export the status report.
0x6C	108	The FoD SDSi is not supported on current system.
0x6B	107	Failed to get PPIN.
0x6A	106	The FoD SDSi is only supported with redfish interface.
0x69	105	The FoD SDSi dose not exist on current system.
0x68	104	The FoD SDSi specified by the `socketid` command does not exist on current system.
0x67	103	The FoD installed is not supported when specifying directory of parameter keyfile.
0x66	102	Could not find the match key from specified folder.
0x65	101	Failed to export part of keys from target system.
0x64	100	The key does not support the `uninstall` and the `export` commands.
0x63	99	The KMS website reports failure.
0x62	98	Failed to operate file.
0x61	97	Failed to generate the FoD key from KMS website.
0x60	96	The specified FoD key does not exist in the current system.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0x00/0	Success.	0x00/0	Success.
0x01/1	Invalid command.	0x04/4	Invalid command.
0x02/2	Generic failure.	0x01/1	Generic failure.
0x03/3	XML file is missing.	0x06/6	Local file does not exist.
0x04/4	Restart OS Failure.	0x17/23	Failed to restart host system.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0 (continued)

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0x05/5	Failed to connect.	0x0D/13	Failed to connect.
0x06/6	Platform error.	0x19/25	Function not supported on target system.
0x07/7	Input xml file format error.	0x07/7	The file is not valid.
0x08/8	OPEN DLL FAILURE.	0x11/17	Internal error.
0x09/9	GET NULL POINTER.	0x11/17	Internal error.
0x0A/10	NO INTERFACE FOUND.	0x11/17	Internal error.
0x0B/11	RETURN INVALID RESULT.	0x11/17	Internal error.
0x0C/12	Unknown exception.	0x01/1	Generic failure.
0x0D/13	Invalid parameter.	0x05/5	Invalid parameter.
0x0E/14	Local file does not exist.	0x06/6	Local file does not exist.
0x0F/15	Failed to create directory.	0x08/8	Failed to create directory.
0x10/16	Failed to read or write file.	0x09/9	Failed to open file.
0x11/17	Ping BMC failed.	0x0E/14	Ping failed.
0x12/18	Fail to get XCC account through KCS.	0x13/19	Fail to get XCC account through KCS.
0x13/19	• BMC Lan Over USB device driver is not detected (for windows). • Miss some tools, such as: lsusb, lsmod, and modprobe (for linux).	0x1A/26	• LAN-over-USB device is not detected. Make sure that RNDIS is correctly installed (for windows). • LAN-over-USB device is not detected. Make sure that following tools are installed: lsusb, lsmod, and modprobe (for linux).
0x14/20	No package needs update.	0x6E/110	No package needs update.
0x15/21	Users are running on a blue system. Do not use proxy uxspi in onecli extract path when set the executable binary of UXSPI path in global.config.	0x14/20	Users are running on a blue system. Do not use proxy uxspi in onecli extract path when set the executable binary of UXSPI path in global.config.
0x16/22	Authentication with BMC failed.	0x0C/12	Authentication failed.
0x17/23	Authentication failed by FTP server.	0x0C/12	Authentication failed.
0x18/24	Fail to create directory or put file in FTP server: No such file or directory, or permission denied for the specified user name.	0x0F/15	Upload failed.
0x19/25	LXCE has no enable permission. Enable BMC Lan Over USB device manually.	0x15/21	LAN-over-USB device is disabled on BMC side. Enable it manually.
0x1A/26	Fail to upload data to specified FTP server.	0x0F/15	Upload failed.
0x1B/27	Fail to connect through IPMI.	0x0D/13	Failed to connect.
0x1C/28	Ping CMM failed.	0x0E/14	Ping failed.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0 (continued)

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0x1D/29	Fail to get driver information.	0x01/1	Generic failure.
0x1E/30	Fail to get machine type.	0x01/1	Generic failure.
0x1F/31	Fail to get firmware information.	0x01/1	Generic failure.
0x20/32	Fail to read inventory XML.	0x0A/10	Failed to read file.
0x21/33	Fail to write inventory XML.	0x0B/11	Failed to write file.
0x22/34	Fail to write inventory HTML.	0x0B/11	Failed to write file.
0x23/35	UXSP xml do not exist. Check the UXSP package.	0x06/6	Local file does not exist.
0x24/36	Time-out.	0x12/18	Time-out.
0x60/96	Failed to run the command.	0x01/1	Generic failure.
0x61/97	Failed to get information.	0x7D/125	Failed to get information.
0x62/98	Failed to set the setting items.	0x7C/124	Failed to set the setting items.
0x63/99	Failed to open the file.	0x09/9	Failed to open file.
0x64/100	Failed to read the file.	0x0A/10	Failed to read file.
0x65/101	Failed to write the file.	0x0B/11	Failed to write file.
0x66/102	Failed to generate/export/import/delete certification.	0x7B/123	Failed to generate/export/import/delete certification.
0x67/103	Failed to reconnect to BMC after the command is executed successfully. Users could try another method to check the result.	0x7A/122	Failed to reconnect to BMC after the command is executed successfully. Users could try another method to check the result.
0x68/104	One or more commands are not valid in the batch file.	0x79/121	One or more commands are not valid in the batch file.
0x69/105	Failed to show the instance setting. The instance should be created at first.	0x78/120	Failed to show the instance setting. The instance should be created at first.
0x6A/106	Invalid value for set command.	0x77/119	Invalid value for set command.
0x40/64	Update error: Acquire command failed.	0x01/1	Generic failure.
0x41/65	Update error: Scan command failed.	0x01/1	Generic failure.
0x42/66	Update error: Query command failed.	0x01/1	Generic failure.
0x43/67	Update error: Compare command failed.	0x01/1	Generic failure.
0x44/68	Update error: Flash command failed.	0x01/1	Generic failure.
0x45/69	Update error: File related error occurred, see log/xml for more information.	0x0B/11	Failed to write file.
0x46/70	Update error: CIM service fails. See log/xml for more information.	0x01/1	Generic failure.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0 (continued)

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0x47/71	Update error: There is something wrong with the device. See log/xml for more information.	0x78/120	Update error: There is something wrong with the device. See log/xml for more information.
0x48/72	Update error: Failed to generate common_result.xml.	0x0B/11	Failed to write file.
0x49/73	Could not get OS type using scan command.	0x6F/111	Failed to get OS type.
0x4A/74	Invalid/unsupported machine type.	0x68/104	No applicable update available on the repository for specified machine-type/ OS.
0x4B/75	Invalid/unsupported OS.	0x70/112	Current Operating System is not supported.
0x4C/76	Authentication failed, unable to validate userid/password.	0x0C/12	Authentication failed.
0x4D/77	Update error: Flash finished running, however multiple packages failed to be flashed. Check flash status xml for more information.	0x0B/11	Failed to write file.
0x4E/78	Users are running on an IBM system. Make sure that UXSPI_PATH is set correctly to the executable binary of UXSPI in global.config.	0x72/114	Users are running on an IBM system. Make sure that UXSPI_PATH is set correctly to the executable binary of UXSPI in global.config.
0x4F/79	Users are running on an IBM system. But the current command is not supported in UXSPI.	0x6D/109	Users are running against an IBM system, but the current command is not supported.
0x50/80	Update blue not supported.	0x6D/109	Users are running against an IBM system, but the current command is not supported.
0x51/81	UXSPI does not run successfully, to trace error, see log relate to UXSPI.	0x11/17	Internal error.
0x52/82	Update module was not able to write to XML file.	0x0B/11	Failed to write file.
0x53/83	Update flash module failure: failed to run flash with ESXi. See log/xml for more detail information.	0x01/1	Generic failure.
0x54/84	Update flash module failure: failed to run flash with IOSwitch. See log/xml for more detail information.	0x01/1	Generic failure.
0x55/85	Update flash module failure: failed to run flash with CMM Update. See log/ xml for more detail information.	0x01/1	Generic failure.
0x56/86	Update flash module failure: failed to run flash with OOB. See log/xml for more detail information.	0x01/1	Generic failure.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0 (continued)

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0x57/87	Update flash module failure: Error occurred when running xFirmware for in-band flash.	0x01/1	Generic failure.
0x58/88	Update flash module failure: Error occurred when running Option Update for in-band flash.	0x01/1	Generic failure.
0x5A/90	Update flash failure: Error payload file does not exist.	0x07/7	Local file does not exist. (dynamic message)
0x5B/91	Update flash failure: Error backup does not support.	0x6C/108	Backup bank does not exist.
0x5C/92	The BMC default internal IP conflicts with external machine. Correct the problem, and try again.	0x16/22	The BMC default internal IP conflicts with external machine. Correct the problem, and try again.
0x5E/94	Update flash failure: current BMC does not support internal SFTP for this case.	0x7B/123	Current BMC version does not support this package. Upgrade BMC to the latest version, and try again.
0x5F/95	Update application fails to run.	0x01/1	Generic failure.
0xD0/208	Download SMM FFDC error: setup environment failed.	0x7D/125	Download SMM FFDC error: setup environment failed.
0xD1/209	Download SMM FFDC error: start dump failed.	0x7C/124	Download SMM FFDC error: start dump failed.
0xD2/210	Download SMM FFDC error: query failed.	0x7B/123	Download SMM FFDC error: query failed.
0xD3/211	Download SMM FFDC error: tar ffdc files failed.	0x7A/1222	Download SMM FFDC error: tar ffdc files failed.
0xD4/212	Download SMM FFDC error: upload path does not exist.	0x0F/15	Upload failed.
0xD5/213	Download SMM FFDC error: upload failed.	0x0F/15	Upload failed.
0xD6/214	Download SMM FFDC error: tftp server is not found.	0x79/121	Download SMM FFDC error: tftp server is not found.
0xD7/215	Download SMM FFDC error: time-out.	0x12/18	Time-out.
0xD8/216	Download SMM FFDC error: unknown error.	0x01/1	Generic failure.
0xD9/217	FFDC log is uploaded to the specified FTP/TFTP server, but fails to download FFDC log from FTP/TFTP server.	0x78/120	FFDC log is uploaded to the specified FTP/TFTP server, but fails to download FFDC log from FTP/TFTP server.
0xDA/218	Failed to get FFDC log.	0x77/119	Failed to get FFDC log.
0xB0/176	Raid config fails to operate.	0x7D/125	Raid config fails to operate.
0xB1/177	Raid config ini file error.	0x7C/124	Raid config ini file error.
0xB2/178	Raid config has no config to operate.	0x7B/123	Raid config has no config to operate.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0 (continued)

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0xB3/179	Raid config does not need make good.	0x7A/122	Raid config does not need make good.
0xB4/180	Raid config does not need make jbod.	0x79/121	Raid config does not need make jbod.
0x34/52	Fail to trigger diags.	0x7D/18	Fail to trigger diags.
0x35/53	Fail to get status of diags.	0x7C/124	Fail to get status of diags.
0x36/54	Fail to get result file.	0x7B/123	Fail to get result file.
0x37/55	Diagnostics time-out.	0x12/18	Time-out.
0x80/128	Failed to run the command.	0x01/1	Generic failure.
0x81/129	The FoD key file is not valid.	0x7D/125	The FoD key file is not valid.
0x82/130	Specified machine type or serial number is not valid.	0x7C/124	Specified machine type or serial number is not valid.
0x83/131	The FoD key file is not found.	0x7B/123	The FoD key file is not found.
0x84/132	Authentication failed.	0x0C/12	Authentication failed.
0x85/133	The FoD key is not found from target key repository.	0x7A/122	The FoD key is not found from target key repository.
0x86/134	The FoD key ID is not valid.	0x79/121	The FoD key ID is not valid.
0x87/135	Active key exists in KMS Web site.	0x78/120	Active key exists in KMS Web site.
0x88/136	Authentication code does not exist.	0x77/119	Authentication code does not exist.
0x89/137	Unique identifier is not valid.	0x76/118	Unique identifier is not valid.
0x8A/138	Failed to install the FoD key.	0x75/117	Failed to Install the FoD key.
0x8B/139	Failed to uninstall the FoD key.	0x74/116	Failed to export the FoD key.
0x8C/140	Failed to export the FoD key.	0x73/115	Fail to export the FoD key.
0x8D/141	Failed to report the FoD key.	0x72/114	Failed to report the FoD key.
0x8E/142	Failed to get current tier.	0x71/113	Failed to get current tier.
0xA0/160	MODULEMANAGER_ERROR	Deprecated	
0xA1/161	MODULEMANAGER_NO_NEWER_ UPDATE	Deprecated	
0xA2/162	MODULEMANAGER_XML_PARSE_ ERROR	Deprecated	
0xA3/163	MODULEMANAGER_DOWNLOAD_ ERROR	Deprecated	
0xA4/164	MODULEMANAGER_INCOMPATIBLE_ ERROR	Deprecated	
0xA5/165	MODULEMANAGER_COPY_ERROR	Deprecated	
0xDD/221	Switch does not support EHCM or the CMM build is not supported to check EHCM.	0x76/118	Switch does not support EHCM or the CMM build is not supported to check EHCM.

Table 185. Mapping table of return codes between OneCLI V2.3.0 and OneCLI V2.4.0 (continued)

V2.3.0		V2.4.0	
Return code/ decimal base	**Description**	**Return code/ decimal base**	**Description**
0xDE/222	Check EHCM time-out because the EHCMState is busy or setting up.	0x12/18	Time-out.
0xDF/223	Reseat failed.	0x01/1	Generic failure.

Appendix A. Accessibility features for OneCLI

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

Lenovo and accessibility

See the Lenovo Accessibility Web site for more information about the commitment that Lenovo has to accessibility.

Accessibility

The following list includes the major accessibility features in Lenovo XClarity Essentials OneCLI:

- 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.

Linux	Windows	Action
Ctrl+C	Ctrl+C	Stop the running OneCLI.

Appendix B. Examples of OneCLI commands on SR635/SR655

This section provides the general format and examples of OneCLI commands on SR635/SR655.

General format of the inventory command (in-band mode)

```
OneCLI inventory getinfor --htmlreport
```

General format of the ffdc command (out-of-band mode)

```
OneCLI ffdc --bmc USERID:PASSWORD@bmchost
```

General format of the update command

```
OneCLI update flash --bmc USERID:PASSWORD@bmchost
OneCLI update flash
```

General format of the batch update command (out-of-band mode)

```
OneCLI update multiflash --configfile multi_task.json
```

Note: When running OneCLI on Windows OS in in-band mode, the AMI RNDIS device driver should be installed manually.

Commands and examples for BIOS (UEFI) and BMC settings

- **Commands:**
  - BIOS (UEFI) settings: show, showvalues, showdefault, showdes, set, save, batch, restore, replicate
  - BMC settings: show, set, save, batch
- **Examples:**
  - BIOS (UEFI) settings:

    ```
    OneCLI config show Bios
    OneCLI config show “Bios.QOOOO1 Boot Mode” --bmc USERID:PASSWORD@bmchost
    OneCLI config set “Bios.QOOOO1 Boot Mode” “UEFI only” --bmc USERID:PASSWORD@bmchost
    OneCLI config save --file sr635_bios.txt
    ```

  - BMC settings:

    ```
    OneCLI config show BMC --bmc USERID:PASSWORD@bmchost
    OneCLI config set BMC.Network1 true
    OneCLI config batch --file batch.txt
    The content of the batch.txt file includes:
        set BMC.DHCP1 false
        set BMC. HostIPAddress1 “xx.xx.xx.xx”
        set BMC.HostIPSubnet1 “xx.xx.xx.xx”
        set BMC.GatewayIPAddress1 “xx.xx.xx.xx”
    ```

Appendix C. OneCLI features supported on the ThinkServer/ WenTian servers

This section provides the supported OneCLI features and specific limitations for the ThinkServer/WenTian servers.

Supported features

In-band and out-of-band features:

Features	Reference
Collect FFDC.	“ffdc command” on page 90
Collect inventory.	Chapter 6 “Inventory” on page 57
Collect service data from BMC.	“servicedata command” on page 141
Collect system health status.	“syshealth command” on page 145
Configure BIOS/BMC settings.	Chapter 4 “Configuration” on page 17
Configure RAID.	“raid command” on page 117
Encrypt data.	“encrypt command” on page 89
Manage BMC password.	“bmcpassword command” on page 87
Manage BMC reboot.	“rebootbmc command” on page 134
Manage the LED status of hard disk drive.	“hddlocate command” on page 93.
Manage OS power.	“ospower command” on page 113
Manage system logs.	“logmgr commands” on page 95
Manage virtual media.	“vm commands” on page 147
Perform diagnostics.	Chapter 9 “Diagnostics” on page 149
Update the firmware.	Chapter 7 “Update” on page 63
Use TUI mode for OneCLI command.	Chapter 10 “tui” on page 151

In-band features:

Features	Reference
Manage USB LAN.	“usblan command” on page 146

Multiple systems management features:

Features	Reference
Collect FFDC logs from multiple BMC.	“multiffdc command” on page 97
List, mount, or umount virtual media on multiple BMC.	“multivm commands” on page 112
Manage firmware update on multiple BMC.	“multiflash command” on page 80
Manage password on multiple BMC.	“multibmcpassword command” on page 97.

Features	Reference
Manage power on multiple servers.	“multiospower commands” on page 108
Manage service data on multiple BMC.	“multiservicedata command” on page 110.
Obtain the BMC FFDC logs from multiple servers.	“multiffdc command” on page 97
Obtain service data information from multiple BMC.	“multiservicedata command” on page 110
Remotely change password of BMC accounts for multiple systems in the first login or the password expiration scenarios.	“multibmcpassword command” on page 97
Remotely collect system health information for multiple systems.	“multisyshealth command” on page 111
Remotely create, clear, and save the RAID configuration for multiple systems.	“multiraid command” on page 101
Remotely show or change the system configuration for multiple servers.	Chapter 5 “Multiple configuration” on page 51
Remotely upgrade the firmware of multiple servers.	“multiflash command” on page 80
Turn on, turn off and restart the server, and obtain the server power state.	“multiospower commands” on page 108

Limitations

The hddlocate command is not supported in the DN8848 V2 server.

When running OneCLI raid commands in out-of-band mode (for example, add or delete a RAID array), it is recommended to wait 30-60s until BMC update the data in the back end. Then OneCLI will retrieve the latest results by using OneCLI raid show command.

For the multiple virtual media instances (for example, CD1, CD2) that can be enabled on the ThinkServer servers, OneCLI will mount the image to the first available virtual media in ascending order of the index.

When running OneCLI on Windows OS in in-band mode, the AMI RNDIS device driver should be installed manually. This driver is supported in the ThinkServer/WenTian servers. For more information, refer to https://datacentersupport.lenovo.com/cn/zc/products/servers/thinkserver/sr590v2-china-only/7d53/downloads/driver-list/.

For the ThinkServer/WenTian servers, OneCLI doesn’t support the following:

- ESXi related functions
- BMC firmware level downgrade

OneCLI preserves the configuration settings when updating the BMC firmware level on the ThinkServer SR590 V2/SR660 V2/DN8848 V2 servers. Users can upgrade the BMC firmware in BMC web without preserving configuration settings.

OneCLI preserves the configuration settings when upgrading the BMC firmware level. However, this feature is not supported in the following BMC versions:

- ThinkServer SR590 V2: BMC version is 5.34 and earlier.
- ThinkServer SR660 V2: BMC version is 5.49 and earlier.
- ThinkServer DN8848 V2: BMC version is 5.14 and earlier.

In this case, users should upgrade the BMC firmware on BMC web interface without preserving configuration settings.

If the HTTPS server is used for the firmware update, OneCLI only supports the self-signed certificate, and both read and write permissions are required. If the FTP server is used for storing the payload files for the firmware update, the read, write, and delete permissions are required.

OneCLI (in-band mode) connects to BMC when USB LAN is enabled, but USB LAN will be disabled when the remote console is turned off. Therefore, if user turns on/off the remote console when running OneCLI, OneCLI in-band commands might not work properly.

Appendix D. OneCLI global configuration file

The configuration items of OneCLI are listed in the `global.config` file in INI format. For more information, refer to the `global.config` file in OneCLI binary.

Note: When using `global.config` in the executable version of OneCLI, the --config parameter should be used for specifying the absolute path.

The configuration items varied depending on OneCLI versions. Following is the example:

```
# XClarity Essentials OneCLI consolidates ToolsCenter 1.x tools, i.e. UXSPI for update, DSA for inventory,
# ASU for configuration
# To point XClarity Essentials OneCLI to old ToolsCenter 1.x version to help manage old MTM using proxy tools
# that come with XClarity Essentials OneCLI
# Users can change the following three config items
# Example for Windows:
# To set UXSPI path, users can change the value of "UXSPI_PATH" from "NONE" to the absolute path to where
#users put the UXSPI executable file prepared separately
# Do not set the path to the proxy tool "uxspi.exe" inside XClarity Essentials OneCLI
# UXSPI_PATH=C:\lnvgy_utl_uxspi_10.1_winsrvr_32-64.exe
UXSPI_PATH=NONE
# To set DSA path, users can change the value of "DSA_PATH" from "NONE" to the absolute path to where users
# put the DSA executable file prepared separately
# Do not set the path to the proxy tool "dsa.exe" inside XClarity Essentials OneCLI
# DSA_PATH=C:\lnvgy_utl_dsa_dsala5q-10.1_portable_windows_x86-64.exe
DSA_PATH=NONE
# To set ASU path, users should first extract "asu.exe" out of the official ASU executable wrapper
# (e.g, lnvgy_utl_asu_asut90e-10.1_windows_x86-64.exe), then, change the value of "ASU_PATH" from "NONE"
# to the absolute path to where users put "asu.exe" extracted above
# Do not set the path to the proxy tool inside XClarity Essentials OneCLI
# default value is "NONE"
# ASU_PATH=C:\asu\asu64.exe
ASU_PATH=NONE
# Set the number of Windows log entries OneCLI inventory collect. It could be an integer, or "All".
ONECLI_EVENTLOG_MAX=4096
```

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