



Lenovo XCC Logger Utility User Guide for Linux



Note: Before using this information, read the general information in [“Notices”](#) on page xvii.

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Chapter 1. Introduction

This guide will provide instruction about how to use the features available in the Lenovo XCC Logger Utility.

The Lenovo XCC Logger Utility provides a set of tools for getting/saving events from the XCC of Think System. With the help of Lenovo XCC Logger Utility, administrators can get the hardware events that generated by local XCC and record these events to the Event Log/Syslog of local Windows/Linux operating system in a flexible way.

This guide is for the Linux version of Lenovo XCC Logger Utility.

Chapter 2. System Requirements

To use the Linux version of Lenovo XCC Logger Utility, the system must meet all the following requirements:

1. Operating system is one of the following:
 - Red Hat Enterprise Linux 8.4 or later
 - Red Hat Enterprise Linux 9.0 or later
 - SUSE Linux Enterprise Server 15.3 or later
 - SUSE Linux Enterprise Server 15.4 or later
 - Ubuntu 22.04.x or later
2. IPMI driver installed and enabled on the operating system

It is recommended to install the latest KeePass XC with its cli command on the operating system.

Chapter 3. Installation

This chapter shows how to install Lenovo XCC Logger Utility on the operating system

During the installation, Lenovo XCC Logger Utility will enable the Ethernet-over-USB feature of XCC and get the IP address. A new XCC account with read-only privilege will also be created in XCC for getting XCC events.

The credential of the new account will be saved encrypted. If KeePass XC with its cli command is installed on the operating system, the “keepassxc.cli” command will be used to save the encrypted credential. Otherwise, a local file will be used.

Note: Lenovo XCC Logger Utility will prepare the environment by accessing the local XCC via KCS interface. Therefore, the KCS interface of XCC need to be enabled.

For Red Hat Enterprise Linux or SUSE Linux Enterprise Server system

1. Download xcclogger-*.rpm package from Lenovo support
2. Change the current directory to the directory of the package above
3. Run the following command to install the package

```
# sudo /usr/bin/rpm -ivh xcclogger-*.rpm
```

```
[root@rhel86 ~]# sudo /usr/bin/rpm -ivh xcclogger-1.0-7.x86_64.rpm
Verifying... ##### [100%]
Preparing... ##### [100%]
Updating / installing...
 1:xcclogger-1.0-7 ##### [100%]
Begin initialize procedure.
Getting XCC IP...
Creating XCC account...
Using credential file.
Saved credential
Update configuration file.
A new certificate is imported.
Initialize procedure finished normally.
```

For Ubuntu system

1. Download xcclogger-*.deb package from Lenovo support
2. Change the current directory to the directory of the package above
3. Run the following command to install the package

```
# sudo /usr/bin/dpkg -i xcclogger-*.deb
```

```
lenovo@ubuntu224:~$ sudo /usr/bin/dpkg -i xcclogger-1.0.7.x86_64.deb
[sudo] password for lenovo:
Selecting previously unselected package xcclogger.
(Reading database ... 73248 files and directories currently installed.)
Preparing to unpack xcclogger-1.0.7.x86_64.deb ...
Unpacking xcclogger (1.0.7) ...
Setting up xcclogger (1.0.7) ...
Begin initialize procedure.
Getting XCC IP...
Creating XCC account...
Using credential file.
Saved credential
Update configuration file.
A new certificate is imported.
Initialize procedure finished normally.
```

Manually initialize

This chapter is optional for the user. It shows how to manually initialize Lenovo XCC Logger Utility again after the package has been installed on the operating system according to one of the instructions above.

Note: If the user does not encounter any problem during installation and does not want to manually alter the running environment of Lenovo XCC Logger Utility, it is unnecessary to perform a manually initialize.

Command syntax for manually initialization:

```
# sudo /opt/lenovo/xcclogger/xcclogger -i [-u]
```

The manually initialize procedure will perform the exact same operation as the installation procedure. It is generally used after the system recovered from abnormal state which has caused Lenovo XCC Logger Utility not initialized properly during the package installation or some necessary runtime files have been accidentally removed.

(optional) If “-u” is also specified, instead of creating/updating the dedicate XCC account for reporting, Lenovo XCC Logger Utility will prompt user to input an existing XCC account/password combination. The credential will be stored encrypted.

Chapter 4. Reporting events

This chapter shows how to report events using Lenovo XCC Logger Utility

Reporting events by command

Command syntax for event reporting:

```
# /opt/lenovo/xcclogger/xcclogger -r [-u] [-s <start time> | --starttime <start time>] [-e <end time> | --endtime <end time>]
```

If only the “-r” option is specified, Lenovo XCC Logger Utility will use the saved credential to access the Redfish service of XCC through virtual network connection (Ethernet-over-USB).

If the “-u” are also specified with “-r”, Lenovo XCC Logger Utility will prompt user to input username and password for event reporting instead of the saved one, but only for this time. The saved credential will NOT be overwritten and still can be used for later calls without “-u”.

If “-s” or “--starttime” is specified, only the events generated no earlier than the time specified by <start time> will be reported.

If “-e” or “--endtime” is specified, only the events generated no later than the time specified by <end time> will be reported.

<start time> and <end time> should be the time string with the format YYYY-MM-DD HH:mm:SS, quoted with quotation marks. For example: -s “2000-01-01 12:00:00”

All the platform logs will be acquired from XCC and only the new events generated after the last reporting will be reported to system log. If the events have been “cleared” after the last reporting, all the events acquired in this call will be reported.

A record will be saved in “check.dat” under the installation path of Lenovo XCC Logger Utility. It contains the content of the latest event for locating the last reported event. If this file is removed or corrupted, the next call of event reporting will report all the events and generate a new record file. If the <start time> and/or <end time> is used, this record will be ignored.

According to the configuration of Lenovo XCC Logger Utility, some type of the events may be suppressed and not reported to system log (by default, all types of logs will be reported), and the event message format can be customized. Please refer to the [Configuration] chapter for more detail.

```
[root@rhel86 ~]# /opt/lenovo/xcclogger/xcclogger -r
Begin report procedure.
Found 4 platform event.
Ignore check point data, may be first reporting.
reported 4 platform new events
Found 121 audit event.
Ignore check point data, may be first reporting.
reported 121 audit new events
Found 1 active event.
Ignore check point data, may be first reporting.
reported 1 active new events
Found 72 maintenance event.
Ignore check point data, may be first reporting.
reported 72 maintenance new events
Found 0 sa event.
Report procedure finished normally.
[root@rhel86 ~]# █
```

```
Jun 23 08:23:10 LENOVO-LA0X1754 XCCLogger[51519]: [2021-12-08T07:11:56.590+00:00][1211][Warning][LogEntry] Numeric sensor CMOS Battery going low (lower non-critical) has asserted.
Jun 23 08:23:10 LENOVO-LA0X1754 XCCLogger[51519]: [2021-12-08T07:11:56.715+00:00][1212][Critical][LogEntry] Numeric sensor CMOS Battery going low (lower critical) has asserted.
Jun 23 08:23:10 LENOVO-LA0X1754 XCCLogger[51519]: [2021-12-08T07:11:56.998+00:00][1213][Critical][LogEntry] Fault in slot PCIe Riser 1 on system ThinkSystem SR650V3.
```

Reporting events as cron jobs

To monitor the XCC event and report them periodically, Lenovo XCC Logger Utility can also be executed as cron jobs like other commands. Please refer to the man page of crontab for more detail.

For this purpose, a Linux shell script “add_task.sh” in Lenovo XCC Logger Utility is available. It can also be downloaded together with Lenovo XCC Logger Utility.

Command syntax:

- Add or renew a task

```
# /bin/bash add_task.sh -i <time interval in seconds>
```

For the first time this command is executed, a cron job for Lenovo XCC Logger Utility will be created. From the second time and later, it will update the old task with new interval specified in parameter.

Note: The time interval is in seconds and must be a multiple of 60.

- Delete a task

```
# /bin/bash add_task.sh -d
```

The cron job for Lenovo XCC Logger Utility will be removed.

Chapter 5. Configuration

This chapter shows how to check and change the configuration of Lenovo XCC Logger Utility.

By default, a configuration file called "config.ini" is created in the installation directory (/opt/lenovo/xcclogger/), which may have the following content:

```
[xcc]
ipaddr = 169.254.95.118
username = xcclogger

[report]
severity_ok = true
severity_warning = true
severity_critical = true
severity_others = true
platformlog = true
auditlog = true
activelog = true
maintenancelog = true
salog = true
format_string = [%Created%][%EventId%][%Severity%][%Name%] %Message%
```

- "xcc - ipaddr" is the IP address of the virtual network device of Ethernet-over-USB feature.
 - It is acquired automatically from XCC during the installation.
 - It is not recommended to change it manually except when user needs to get the events from another network address.

Note: The credential saved or used for reporting must belong to the same XCC that the IP address directs.
- "xcc - username" is the username of XCC account.
 - By default, it will be "xcclogger" and this account will be automatically created or renewed by Lenovo XCC Logger Utility during installation.
 - If manually initialization is performed after installation and another username is specified by parameter "-U", that username will be stored here.
 - It should not be changed manually otherwise the credential may become invalid.
- "report - severity_ok", "report - severity_warning", "report - severity_critical" and "report - severity_others" indicate whether the event with the specified level should be reported. If set to false, they will be suppressed and not reported.

- “platformlog”, “auditlog”, “activelog”, “maintenancelog” and “salog” indicate whether the event with the specified category should be reported. If set to false, they will be suppressed and not reported.
- "report - format_string" can be used to customize the event message. The keyword surrounded by "%" will be replaced with the corresponding string in the event content.

Supported keywords:

Keyword	Meaning	Sample
Created	Time when the event generated	2021-12-02T11:31:12.628+00:00
EventId	The index of the event	1
Severity	The severity level of the event	<ul style="list-style-type: none"> • OK • Warning • Critical
Name	The name of the event category	LogEntry
Message	The event message	The connector Front VGA Detect has been connected.

Chapter 6. Uninstallation

This chapter shows how to uninstall Lenovo XCC Logger Utility from operating system

Note: All the files in /opt/lenovo/xcclogger together with the directory will be removed after uninstallation. If there are files that need to preserve, please copy, or move them to another directory before executing the uninstallation command.

For Red Hat Enterprise Linux or SUSE Linux Enterprise Server system

1. Run the following command to uninstall the package

```
# sudo /usr/bin/rpm -e xcclogger
```

```
[root@rhel86 ~]# sudo /usr/bin/rpm -e xcclogger
Begin delete procedure.
Delete procedure finished normally.
```

For Ubuntu system

1. Run the following command to uninstall the package

```
# sudo /usr/bin/dpkg -r xcclogger
```

```
lenovo@ubuntu224:~$ sudo /usr/bin/dpkg -r xcclogger
(Reading database ... 73251 files and directories currently installed.)
Removing xcclogger (1.0.7) ...
Begin delete procedure.
Delete procedure finished normally.
```

Chapter 7. FAQ

This chapter shows tips and troubleshooting for Lenovo XCC Logger Utility

How to update the credential or set another XCC account

Please use [“Manually initialize” on page 6](#)

Use “-u” parameters to specify another existing XCC account other than creating a default one.

How to report the old events again

The latest reported event is recorded in “check.dat”. If this file is removed, all the events will be reported even if they have been reported before. Commands:

```
# /usr/bin/rm -f /var/log/check.dat
```

```
# /opt/lenovo/xcclogger/xcclogger -r
```

IPMI request failed during installation

Please make sure the IPMI driver is installed and enabled, and KCS feature of XCC is enabled.

KCS status can be verified on WebUI of XCC. Locate to [BMC Configuration] - [Security], make sure the [IPMI over KCS Access] is set to "Enabled" as follows:

The screenshot displays the XClarity Controller WebUI interface. On the left is a dark sidebar with navigation options: Storage, Remote Console, Firmware Update, Server Configuration, BMC Configuration (highlighted), Backup and Restore, License, Network, and Security. The main content area shows the system name 'ACT-MV-Colossus2' and a status bar with a power icon and a warning icon. Three configuration cards are visible: 'SSL Certificate Management' with a status of 'A signed certificate is installed. Expiration: July 8, 2030 5:32 AM'; 'SSH Server' with a status of 'A SSH server key is installed.' and a toggle set to 'On'; and 'IPMI over KCS Access' with a status of 'Enabled' and a toggle switch that is currently turned on. A descriptive text below the IPMI toggle reads: 'This setting determines whether or not IPMI access Control to the BMC should be allowed on the KCS channel.'

KeePass XC is installed but not used by Lenovo XCC Logger Utility

First, please make sure the CLI command “keepassxc.cli” is available, which can be tested with the following command:

```
# keepassxc.cli -v
```

Second, if the CLI command above is installed after Lenovo XCC Logger Utility, a manually initialize of Lenovo XCC Logger Utility is needed to create the credential database under the control of KeePass XC. Please refer to [“Manually initialize” on page 6](#).

Failed to enable virtual network adapter for “Ethernet-over-USB” in SUSE Linux Enterprise Server system

In SUSE Linux Enterprise Server, Ethernet-over-USB device usb0 fails to get the IP assignment from the DHCP service, which is provided by the XCC.

The message "usb0: cannot request a link local address" is shown in the OS logs. (where DHCP = Dynamic Host Configuration Protocol, XCC = Lenovo XClarity Controller)

The root cause is the IP checking rule added in network management which rejects the linked local address.

This is a permanent restriction.

Workaround

Set a static IP address for usb0 in the YaST network configuration. To do this, proceed as follows:

1. Select an XClarity Controller from the list of detected cards in the Overview tab of the YaST network card configuration module and click Edit.
2. In the Address tab, choose Statically Assigned IP Address. Enter the IP 169.254.95.120. Enter /24 in Subnet Mask.
3. Optionally, users can enter a fully qualified Hostname for this address, which will be written to the /etc/hosts configuration file.
4. Click Next.
5. To activate the configuration, click OK.

During installation or manual initialization, the message shows “Password is set but failed to renew. Ignore.”

Basically, this is NOT an error message and NOT necessarily means the installation or manual initialization is failed. This message can be ignored.

When Lenovo XCC Logger Utility creates an XCC account, it will set a random password for the account. For security purpose, it will try to change the password of the account to another random password phrase at once.

However, if the “Minimum password change interval” is set to non-zero in the XCC’s configuration, as a result, the password cannot be changed immediately.

In this case, Lenovo XCC Logger Utility will use the first password and cancel the change. This circumstance will not affect normal operation of the Lenovo XCC Logger Utility.

During installation or manual initialization, the message shows “Failed to set password by IPMI! Check the Minimum password change interval and wait for the set interval to reset the password, or set the interval to 0”

Unlike the circumstance in the section above, this symptom will affect the normal operation of the Lenovo XCC Logger Utility. Generally, if all the three conditions are “True”, this error will happen.

1. This is at least the second time that Lenovo XCC Logger Utility is installed or initialized. (Therefore, the account already exists in the XCC)
2. The “Minimum password change interval” is set to non-zero in the XCC’s configuration.
3. The time difference between this installation/initialization and the last installation/initialization is less than the interval set in 2) above

Then the password changing request is refused by XCC and the installation/initialization is failed.

This problem can be solved in 2 ways:

The first solution is to wait until “Minimum password change interval” has passed and retry to install or manually initialize.

The second solution is set “Minimum password change interval” to zero or a lesser value than the “time difference” in 3) above. The following part shows how to do it:

1. Open XCC WebUI login page in the browser.
2. Type valid XCC administrator username and password to login (NOT the username of the operating system)
3. Locate “BMC Configuration” - “User/LDAP” - “Global Settings”
4. Change “Minimum password change interval” to 0 or a lesser value than the “time difference”
5. Click “Apply”

Then retry to install or manually initialize.

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