



# XClarity Contoller Firmware Installation Tips

For a list of the fixes, enhancements, and updates that were made for this release, see the Update Change History that is provided with this update package. The Update Change History also lists all prerequisites and co-requisites for this update.

Lenovo typically releases firmware in bundles called UpdateXpress System Packs (UXSPs). To ensure that all of the firmware updates are compatible, you should update all firmware at the same time.

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## Overview

This file contains the latest information about installing the XClarity Controller firmware.

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## Installation and setup instructions

Lenovo provides several tools that can be used to install and set up firmware, depending on the firmware setup procedures used by your organization.

Before updating the firmware, it is a good practice to back up the firmware configuration.

### Lenovo tools

See the following table to determine the best Lenovo tool to use for installing and setting up the XClarity Controller firmware:

- **In-band.** The installation or update can be performed while the operating system is running by running the tool inside of the host operating system.
- **Out-of-band (OOB).** The installation or update must be performed while the system is powered on. However, the tool is not running in the host operating system. Instead, the tool is communicating with the XClarity Controller interface on the server.

Tool	In-band	OOB	Graphical User Interface	Command-Line Interface
XClarity Provisioning Manager	Yes		X	
XClarity Controller	No	Yes	X	X
XClarity Essentials	Yes	Yes	X	X
XClarity Administrator	No	Yes	X	X

- **XClarity Provisioning Manager**

From Lenovo XClarity Provisioning Manager, you can update the XClarity Controller firmware, the UEFI firmware, and the XClarity Provisioning Manager software.

**Note:** By default, the Lenovo XClarity Provisioning Manager Graphical User Interface is displayed when you press F1. If you have changed that default to be the text-based system setup, you can bring up the Graphical User Interface from the text-based system setup interface.

- **XClarity Essentials (ToolsCenter Suite CLI)**

Lenovo ToolsCenter Suite CLI is a collection of server management tools that utilize a command line interface program to manage firmware, hardware, and operating systems for Chassis Management Module, XClarity Controller, and Flex-IOM based systems. ToolsCenter Suite CLI is comprised of individual ToolsCenter application modules that are easily updated.

Specific details about updating firmware using Lenovo XClarity Essentials are available at:

[http://toolscenter.lenovofiles.com/help/topic/toolsctr\\_cli\\_lenovo/onediscupdate.html](http://toolscenter.lenovofiles.com/help/topic/toolsctr_cli_lenovo/onediscupdate.html)

You can download XClarity Essentials at the following site:

<https://datacentersupport.lenovo.com/us/en/solutions/Invo-tdi>

- **XClarity Administrator**

If you are managing multiple servers using the Lenovo XClarity Administrator, you can update firmware for all managed servers through that interface, which can be used to store and deploy UXSPs. In addition, you can apply firmware update policies to ensure that all managed servers are running the same level of firmware.

Specific details about updating firmware using Lenovo XClarity Administrator is available at:

[http://flexsystem.lenovofiles.com/help/topic/com.lenovo.lxca.doc/update\\_fw.html](http://flexsystem.lenovofiles.com/help/topic/com.lenovo.lxca.doc/update_fw.html)

- **XClarity Controller**

If you need to install a specific update, you can use the XClarity Controller interface for a specific server. Typically, you should update firmware using an UpdateXpress System Pack (UXSP) to ensure that all related firmware and device drivers are updated together.

Specific details about updating firmware through the XClarity Controller interface is available at:

[http://sysmgt.lenovofiles.com/help/topic/com.lenovo.thinksystem.xcc.doc/NN1ia\\_c\\_manageserverfirmware.html](http://sysmgt.lenovofiles.com/help/topic/com.lenovo.thinksystem.xcc.doc/NN1ia_c_manageserverfirmware.html)

## **ESXi support**

Performing in-band updates with ESXi host operating systems is not supported. Instead, perform the updates using the out-of-band method for the selected Lenovo tool. Alternatively, you can use the Lenovo ToolsCenter suite to create bootable media (an ISO) for the update.

Additional information about using Lenovo Bootable Media Creator is available at:

[http://toolscenter.lenovofiles.com/help/topic/bomc\\_lenovo/bomc\\_main.html?cp=0\\_1\\_0](http://toolscenter.lenovofiles.com/help/topic/bomc_lenovo/bomc_main.html?cp=0_1_0)

## **Vendor-supported updates**

For certain adapters, updates are supported using vendor utilities and packages. Obtain the updates and the procedures for performing the updates directly from the vendor.

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## **Configuration hints and tips**

- When installing firmware for a server, you should always install the complete set of firmware for that server at the same time (bundle). The best practice is to install the firmware using the UpdateXpress System Pack (UXSP) bundle through XClarity Essentials.
- The BMC (XClarity Controller) must be reset after a firmware update to apply the configuration changes. You can reset the BMC through the XClarity Controller interface. However, if you update the firmware using the UXSP bundle, the management processor will be updated automatically.

- If you update firmware through the XClarity Controller, make sure that you have downloaded and installed the latest device drivers for the operating system that is running on the server.
- To perform an in-band update through Windows or Linux, the RNDIS driver must be installed and the Ethernet-over-USB (sometimes called LAN over USB) interface must be enabled.

Additional information about configuring Ethernet over USB is available at:

[http://sysmgt.lenovofiles.com/help/topic/com.lenovo.systems.management.xcc.doc/NN1ia\\_c\\_configuringUSB.html](http://sysmgt.lenovofiles.com/help/topic/com.lenovo.systems.management.xcc.doc/NN1ia_c_configuringUSB.html)

## Related Information

Link	QR Code
Lenovo Data Center forums <a href="https://forums.lenovo.com/t5/Datacenter-Systems/ct-p/sv_eg">https://forums.lenovo.com/t5/Datacenter-Systems/ct-p/sv_eg</a>	
Lenovo Data Center Support <a href="http://datacentersupport.lenovo.com">http://datacentersupport.lenovo.com</a>	
Lenovo ThinkSystem Rack Server Customer Documentation <a href="http://thinksystem.lenovofiles.com/help/topic/rack_servers/overview_rack_servers.html">http://thinksystem.lenovofiles.com/help/topic/rack_servers/overview_rack_servers.html</a>	
XClarity Controller Customer Documentation <a href="http://sysmgt.lenovofiles.com/help/index.jsp?topic=/com.lenovo.systems.management.xcc.doc/product_page.html">http://sysmgt.lenovofiles.com/help/index.jsp?topic=/com.lenovo.systems.management.xcc.doc/product_page.html</a>	
Lenovo Product Security Advisories <a href="https://datacentersupport.lenovo.com/us/en/product_security/home">https://datacentersupport.lenovo.com/us/en/product_security/home</a>	

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## Open Source

The Lenovo XClarity Controller firmware is based on the Embedded Linux Integration Environment (ELIE). To obtain open source code licenses, go to <https://github.com/lenovo/ELIE/tree/master/elie-2.0.3/licenses/>.

This product contains open source code in the compiled form. Contact Lenovo Support for information about obtaining the original source code.

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