

The text "Data Center Support" is centered in a white, sans-serif font against a blue background that features a perspective view of a server aisle in a data center.

# **Firmware update best practices for Lenovo x server in Windows environments**

**Bootable Media Creator  
(BoMC)**

**Lenovo ToolsCenter UpdateXpress**

**ToolsCenter Suite CLI (OneCLI)**

| May 2017

# Abstract

This paper details firmware update methods for use with the Lenovo® x server.

The firmware update procedures in this paper use Lenovo's ToolsCenter software and the Lenovo x server with which they operate.

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<http://datacentersupport.lenovo.com>

# Revisions

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## Introduction

ToolsCenter is a collection of server management tools to help manage your server environment. It makes managing your server environment less complicated, more productive and cost-effective, can help reduce your cost of computing by providing an effective and simple way to update device drivers, server firmware and firmware of supported options contained within the server on most of your System x products.

Bootable Media Creator (BoMC) provides firmware updating capabilities on a bootable media such as a CD, DVD, USB key, or PXE files for a network boot. It leverages UXSPI to perform the update by bundling the UXSPI utility onto the bootable media. Since BoMC creates bootable media that runs independent of any OS installed on a system, it is unable to perform device driver updates. Updates supporting multiple systems can be contained on a single bootable media image.

ToolsCenter UpdateXpress can apply individual updates to the system as well as UpdateXpress System Packs which are a group of drivers and firmware updates tested as a bundle to verify that they work together without issues.

ToolsCenter provides both a GUI interface and a command-line interface (Suite CLI, OneCLI) to allow for both attended, easily customized updates and scripted updates. It can acquire updates from a local path, a network shared folder, or directly from [support.lenovo.com](http://support.lenovo.com)

### **RECOMMENDED FIRMWARE UPDATE METHODS**

There are multiple methods with unique and individual procedures for performing firmware updates. The preferred methods to perform firmware updates are to use the ToolsCenter UpdateXpress or Bootable Media creator. These tools are able to:

- L** Display an inventory of installed firmware and drivers
- L** Download firmware and drivers from ibm.com
- L** Download an UXSP from ibm.com
- L** Update all of the firmware and drivers in your system, including RAID, HDD, NIC, and Fibre Channel devices
- L** Apply updates in the correct order to completely update a system with the fewest reboots
- L** Create a bootable CD/DVD/USB key/PXE image to perform firmware updates (BoMC)

## About this paper

This article is intended to provide information about the firmware (FW) update process on Lenovo x servers. There are a number of ways to implement this action. This paper will introduce and explain how to update the firmware through Lenovo ToolsCenter software. These tools not only update FW, but also can process other requests. For more information, refer to the user guide for these tools.

**L** *Lenovo Bootable Media Creator Installation and User's Guide (v10.2)*  
[https://download.lenovo.com/servers\\_pdf/bomc\\_bk\\_10.2.pdf](https://download.lenovo.com/servers_pdf/bomc_bk_10.2.pdf)

**L** *Lenovo UpdateXpress System Pack Installer User's Guide (v10.1)*  
[https://download.lenovo.com/servers\\_pdf/uxspi\\_userguide\\_10.1.pdf](https://download.lenovo.com/servers_pdf/uxspi_userguide_10.1.pdf)

**L** *Lenovo ToolsCenter Suite CLI User's Guide (v1.3.1)*  
[https://us.download.lenovo.com/servers\\_pdf/onecli\\_bk\\_v1.31.pdf](https://us.download.lenovo.com/servers_pdf/onecli_bk_v1.31.pdf)

# Prepare for Firmware update

Before you start to perform the firmware update procedure, you should have already downloaded or installed the following:

- L** Downloaded the required firmware package from the Lenovo Data Center Support Web site at: <http://datacentersupport.lenovo.com/>
- L** Downloaded and installed the ToolsCenter software from: <https://support.lenovo.com/solutions/lvno-center>

## Bootable Media Creator

You can use Lenovo Bootable Media Creator (BoMC) to create bootable media that is suitable for applying firmware updates, running preboot diagnostics, and deploying Microsoft Windows operating systems on supported System x systems.

System x tools each have their own bootable CD. Using Bootable Media Creator, you can create a single bootable image on supported media (such as CD, DVD, ISO image, USB flash drive, or a set of PXE files) that bundles multiple System x tools and updates from UpdateXpress System Packs, which contain Windows and Linux firmware and device driver updates. You can also create a Lenovo ServerGuide Setup and Installation CD for deploying Windows operating systems and updates on supported systems.

**Important:** Device drivers are not included on the bootable image and must be updated separately.

Bootable Media Creator can acquire the latest bootable environment, UpdateXpress System Pack, individual updates, and Lenovo Preboot Dynamic System Analysis from the local system or it can download these tools and the Lenovo ServerGuide from the Lenovo Web site. An Internet connection is required to download tools and updates from the Lenovo Web site. You can use an HTTP proxy when connecting to the Web. If you use an HTTP proxy, the HTTP server must support Secure Sockets Layer (SSL).

**Prerequisites:** You must have administrator or root-equivalent operating-system privileges to use Bootable Media Creator.

## Create Bootable media

1. Run “Invgy\_utl\_bomc\_10.3\_windows\_i386.exe” with administrator permission.

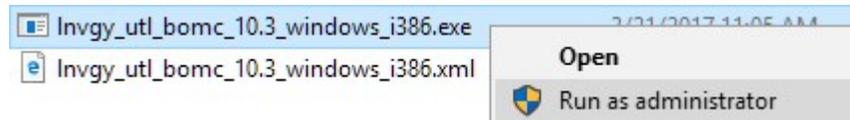


Figure 1. Run BoMC as administrator

2. Enter a descriptive name for the package label, and then click **Next**.

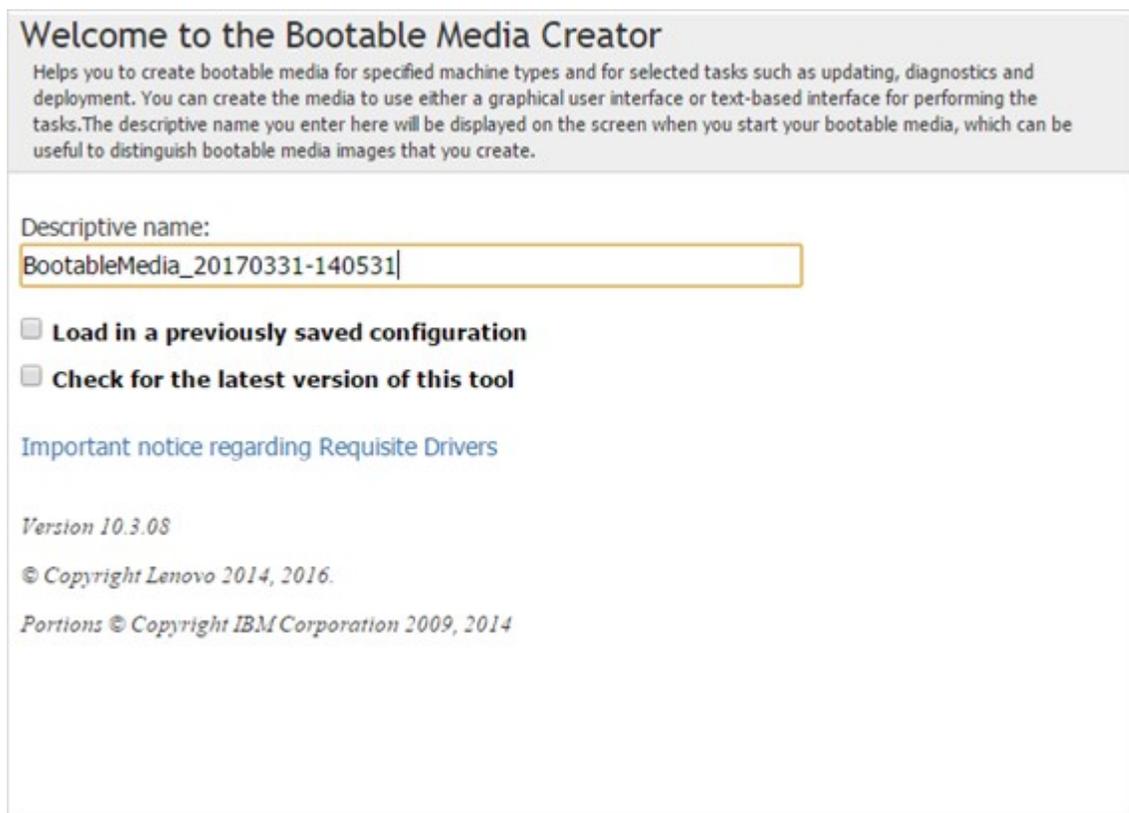


Figure 2. Enter boot media package descriptive name

3. Check **Updates**, and then click **Next**.

### Media Purpose

Specify what you would like your bootable media to do. Based on what you select here, you will later be prompted for the appropriate information.

- Updates**

Will help you update the firmware on the machine types you choose. Note that this does not support IBM IntelliStation Pro, and it includes firmware updating only, and the drivers will need to be updated separately. The updating will be performed by the UpdateXpress System Pack Installer (UXSPI).
- Diagnostics**

Bundles the dynamic system analysis (DSA) tool on the bootable media.
- Deployment**

**Lenovo ServerGuide Setup and Installation CD**  
This will allow you to deploy Windows operating systems with Updates on the machine types you choose. The updating will be performed by the UpdateXpress System Pack Installer (UXSPI).
- Enable Task AutoRun**

Allows a task to automatically begin when your bootable media is run on the target machine. Choose which task to use.
- Create media to use a text-based (non-graphical) user interface**

You will select your tasks (updates) on the target machine using a command-line type of interface as opposed to a graphical interface. This option would be useful for target environments that do not support graphical interfaces.

Figure 3. Chose the media purpose

4. Select the download package acquire location, and then click **Next**.

**Acquire Location**

You can choose to acquire updates, tools and bootable image from System X web site or from local directory.

- Check the System X web site** - Downloads the appropriate updates automatically from the System X site.
  - UpdateXpress System Packs (UXSP's)** - UpdateXpress System Packs contain an integration-tested bundle of online, updateable firmware updates for each System x and BladeCenter server. This is the preferred method to obtain firmware for the server.
  - Latest available individual updates** - Check the System X web site for the latest individual version of each firmware package. This is the preferred method when you wish to install the latest updates or when System X support instructs you to install the latest updates. This option may download newer updates and hotfixes, if available, than the UXSP option above.
- Look in a local directory** - Specify a directory on the local file system containing specific individual files to include in the bootable media. The directory should have been populated with the required files either in a previous session of this tool, or manually. See [here](#) for specific requirements on manually obtaining required files.

Figure 4. Select the acquire location

5. Setup proxy connectivity, if necessary, and then click **Next**.

**HTTP Proxy**

If you require an HTTP Proxy to connect to the Internet, enter that information here. An Internet connection is needed in order to download the appropriate updates from the System X web site.

- Do not use proxy**
- Use proxy**
  - Host Name:  Port:
  - Authenticate using the following credentials**
    - User Name:
    - Password:

Figure 5. Setup proxy

6. Select all of the specified systems, and then click **Next**.

**Targeted Systems**  
Specify what systems this bootable media should support.

Please select servers:

<input type="checkbox"/>	Product Family	Machine Type	Updates
<input type="checkbox"/>	BladeCenter HX5	1909	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BladeCenter HX5	1910	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BladeCenter HS22	1911	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BladeCenter Server HS23	1929	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BladeCenter HS22	1936	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BladeCenter HS22V	1949	<input checked="" type="checkbox"/>
<input type="checkbox"/>	System x3100 M4	2582	<input checked="" type="checkbox"/>
<input type="checkbox"/>	System x3250 M4	2583	<input checked="" type="checkbox"/>
<input type="checkbox"/>	System x340 M4	2584	<input checked="" type="checkbox"/>

Select All   Unselect All   Add...   Remove   Update List   Roll Back

Figure 6. Specify the systems

7. Enter the target directory, and then click **Next**.

**Target Directory**  
Indicate which directory on your computer you want to download the updates and other resource files to. The downloaded files are only needed during the media creation process. If you will not need these downloaded files later, then you can delete them after your media has been created, after this wizard is completed.

Directory:

Figure 7. Target directory

8. Chose the media format, and then click **Next**.

The screenshot shows a window titled "Media Format" with a subtitle: "Select the options for the type of media that you wish to create. For CD and DVD devices, the image file format will be ISO." Below the subtitle, there is a "Device type:" label and a dropdown menu currently set to "CD/DVD". Underneath, there are two radio button options: "Write directly to device" (which is unselected) and "Write to image file" (which is selected). Below the "Write to image file" option is a text input field containing the path "C:\package\_dir\bootable.iso" and a "Browse" button to its left.

Figure 8. Select the media format

9. Configure the unattended mode, and then click **Next**.

The screenshot shows a window titled "Unattended Mode Configuration" with a subtitle: "Helps you to configure your created image able to run in a completely unattended mode. In that case, it will upload the log files onto your TFTP server, FTP server, your network file share(NFS/Samba) or your USB drive and shutdown your clients after the firmware update process. If you want to upload the log files onto the TFTP, FTP server, NFS or Samba server, please make sure the directory has been created and anonymous access granted." Below the subtitle, there are two radio button options: "Do not use unattended mode" (which is selected) and "Use unattended mode" (which is unselected). Underneath, there are two labels: "Upload log files to:" and "Server Address:". The "Upload log files to:" label is followed by a dropdown menu set to "TFTP Server". The "Server Address:" label is followed by an empty text input field. Below these, there is a "Save to directory" label and a text input field. A note below the input field reads: "Specify a directory to save the unattended log files. This directory should start from the root. Also, when uploading to TFTP server, FTP server, NFS and Samba server, make sure the directory has been created and the anonymous access granted."

Figure 9. Unattended mode configuration

10. Check the setting to make sure they are correct, and then click **Next**.

### Confirm Choices

That is all of the information necessary to begin creating your bootable media. Review your selections below and click the Next button when you are ready to begin media creation.

Machine Type	5463
Update Location	System X Web Site
Use Text-Based User Interface	NO
Update Type	Latest Individual updates
Proxy IP Address	NO
Proxy Port Number	NO
Proxy User Name	NO
Media Purpose	Updates
Enable Task Auto Run	uxspi
Image File Name	C:\workingdir\bootable.iso
Target Directory	C:\workingdir
Overwrite Existing Image	NO
Include VMWare ESXI Update	NO
Use Unattend Mode	NO
Descriptive Name	BootableMedia_20170410-150557

### Save Configuration

You can save your choices to a file and import them into this tool later.

Figure 10. Confirm choices

11. BoMC starts to download and create bootable media. After the process is complete, click **Next**. (Click the + Sign to explore more details.)

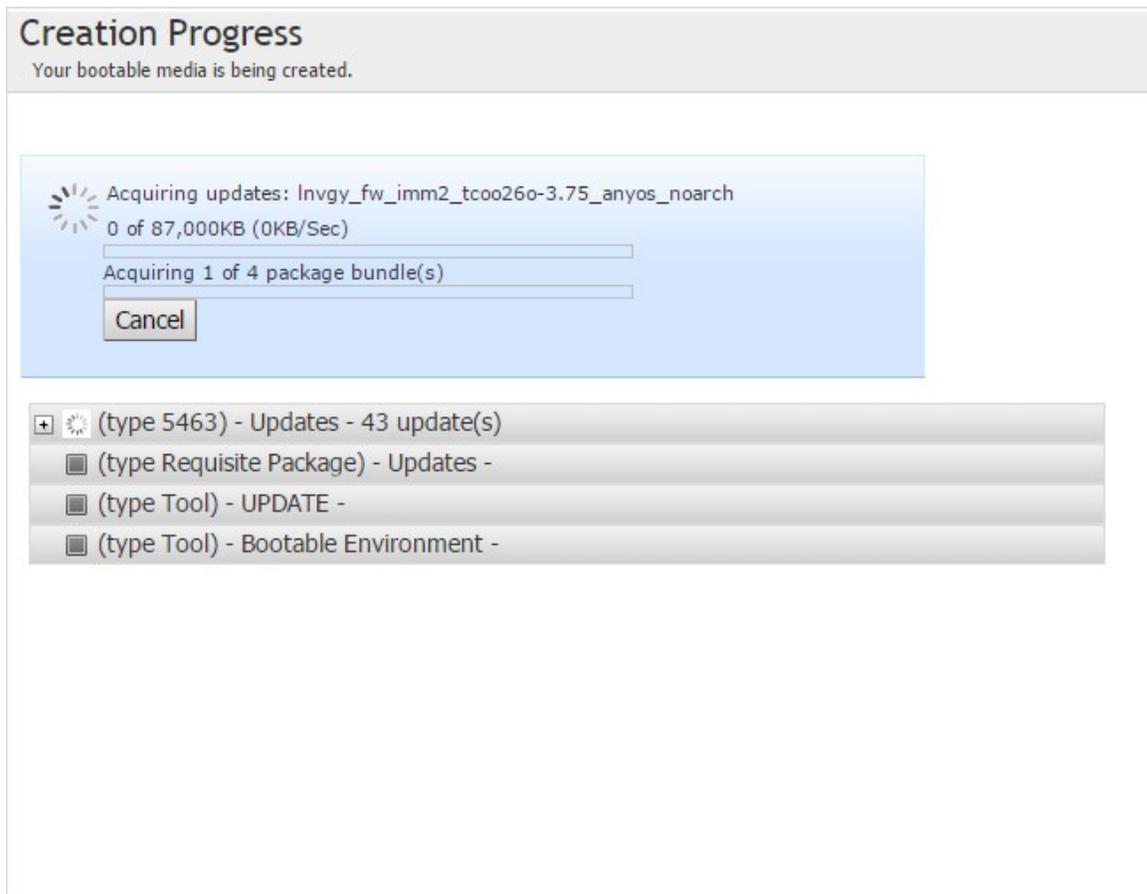


Figure 11. Creation progress screen

12. The Creation Progress screen will show a complete message. Click **Next** to finish the boot media procedure.

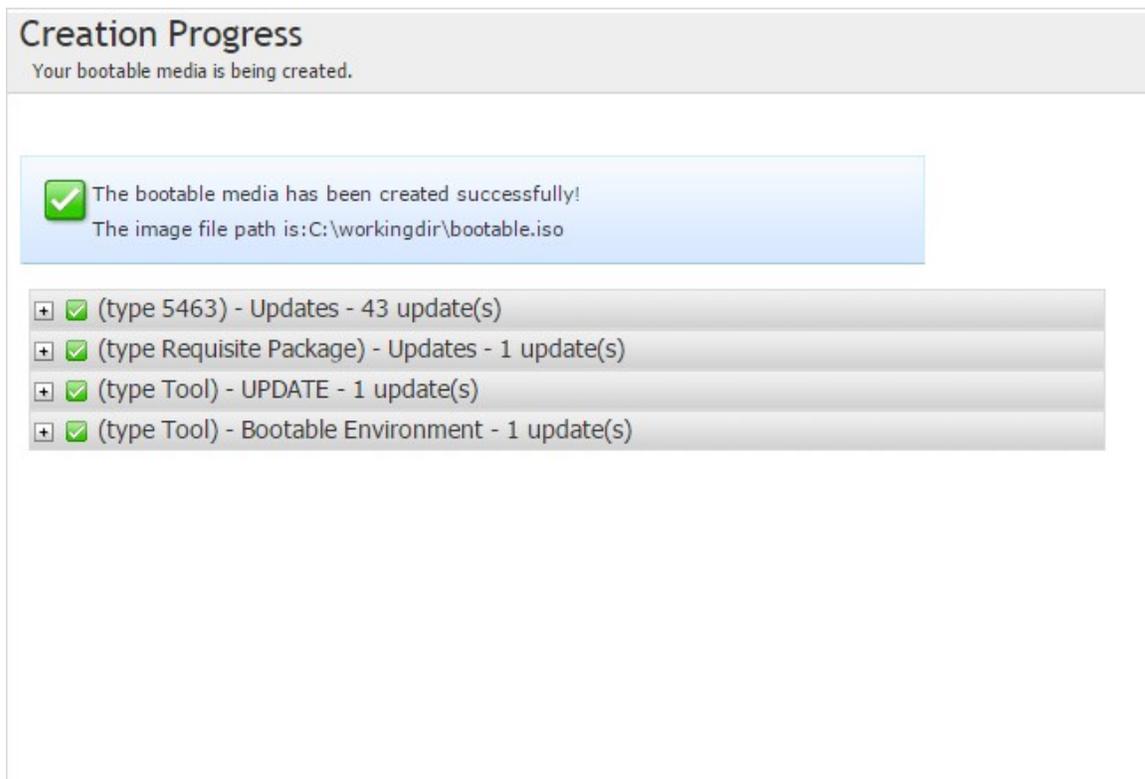


Figure 12. Complete the process

# Update firmware by using bootable media

1. Boot from the bootable media; click **Updates**.

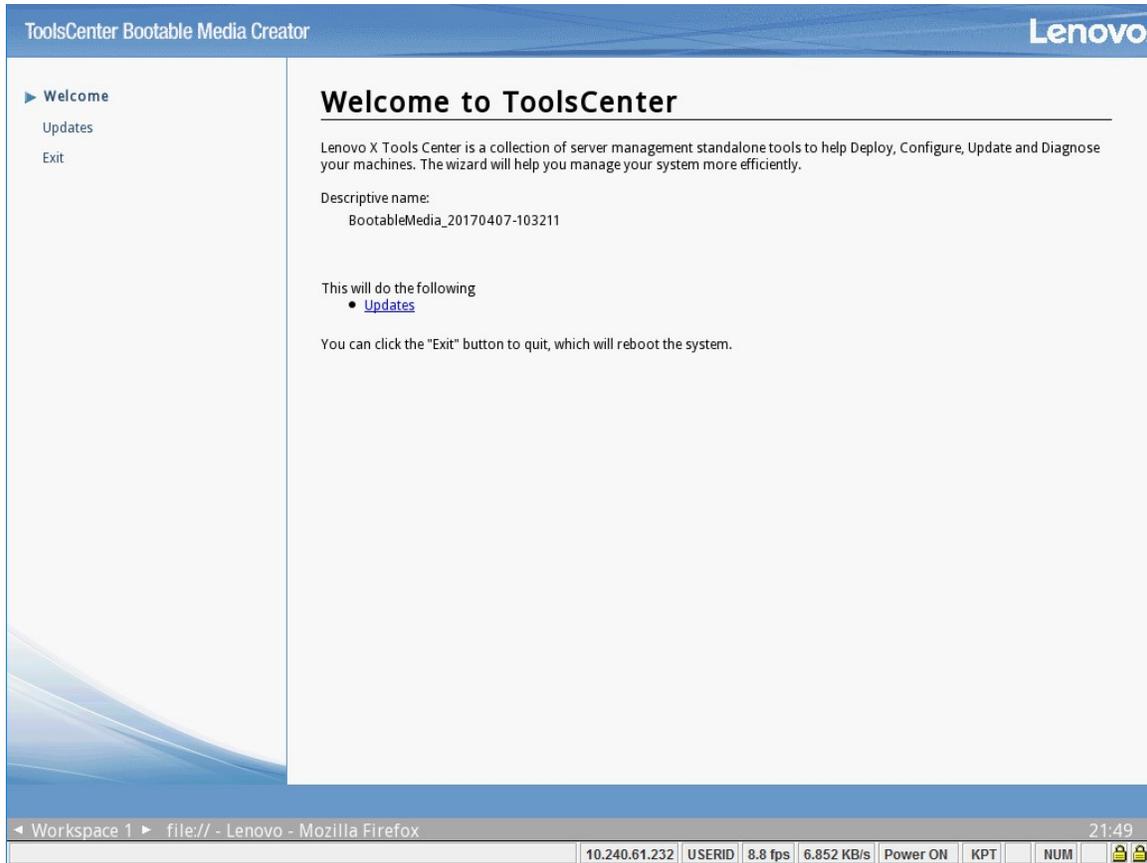


Figure 13. Boot from the bootable media

## 2. Click **click here to start update**

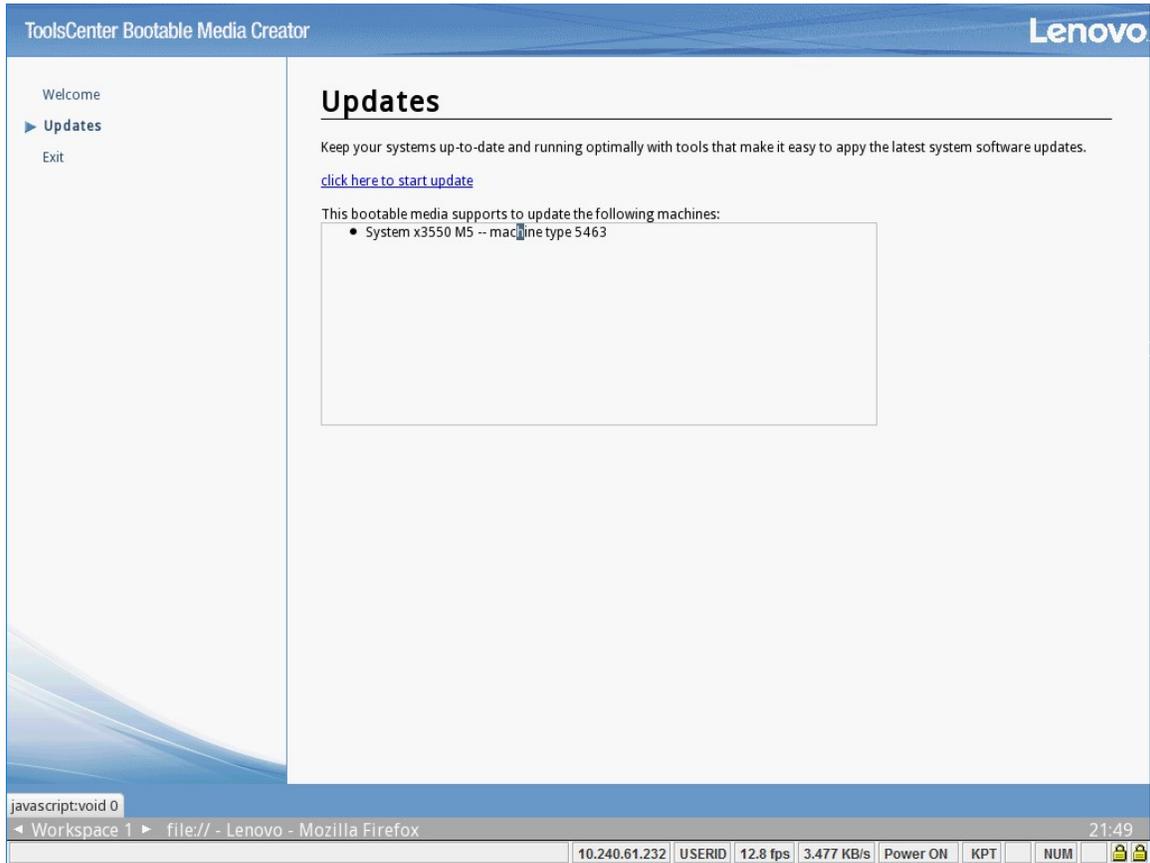


Figure 14. Updates

- BoMC will compare updates. Select the desired update item(s), and then click **Next**.

Active Machine Type: 5463

## Update Recommendation

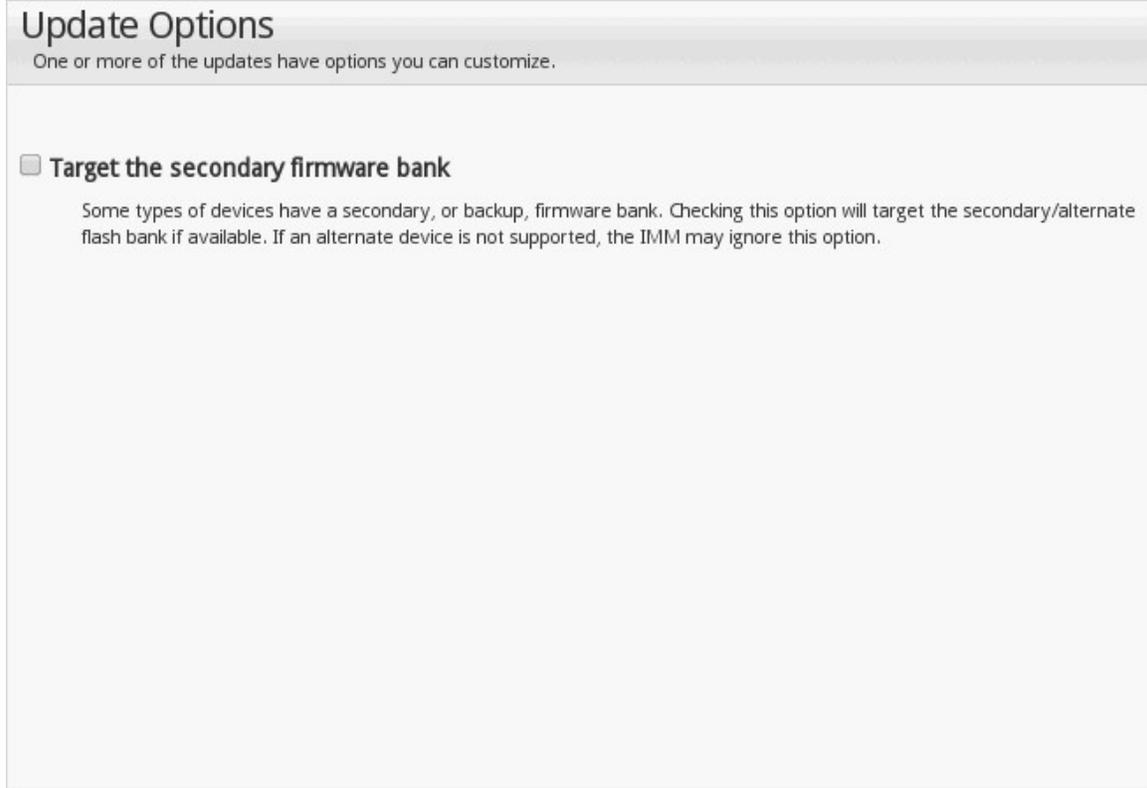
The information below shows which components need updating.

 33 seconds remaining to navigate to execution page...  
[click here to stop->](#)

	Name	Severity	New Version	Installed Version	Reboot	Updated I
Machine-Type="5463"						
<input type="checkbox"/>	Lenovo Online SAS/SATA Har	Suggested			No reboot req	Invgy_fw_hde
	...IBM-ESXSAL13SEB300		SB35	TB37		
	...IBM-ESXSST300MM0006		B56T	L56R		
	...IBM-ESXSST300MM0006		B56T	L56R		
	...IBM-ESXSST300MM0006		B56T	L56R		
	...IBM-ESXSST300MM0006		B56T	L56R		
<input type="checkbox"/>	IBM RDX drive firmware upda	Critical	1.6	Undetected	No reboot req	ibm_fw_tape
<input type="checkbox"/>	x3550 M5 UEFI Firmware	Critical			Reboot Requir	Invgy_fw_uef
	...UEFI		TBE108I-1.20	TBE128J-2.32		
<input type="checkbox"/>	x3550 M5 UEFI Firmware	Critical			Reboot Requir	Invgy_fw_uef
	...UEFI		TBE128J-2.32	TBE128J-2.32		
<input type="checkbox"/>	Intel Network Linux Firmwar	Suggested	5.05	Undetected	Reboot Requir	intc-Invgy_fw

Figure 15. Update Recommendation screen

4. Check **Target the secondary firmware bank**, if necessary, and then click **Next**.



**Update Options**  
One or more of the updates have options you can customize.

**Target the secondary firmware bank**

Some types of devices have a secondary, or backup, firmware bank. Checking this option will target the secondary/alternate flash bank if available. If an alternate device is not supported, the IMM may ignore this option.

Figure 16. Update Options

5. Click **Next** once the update is completed.

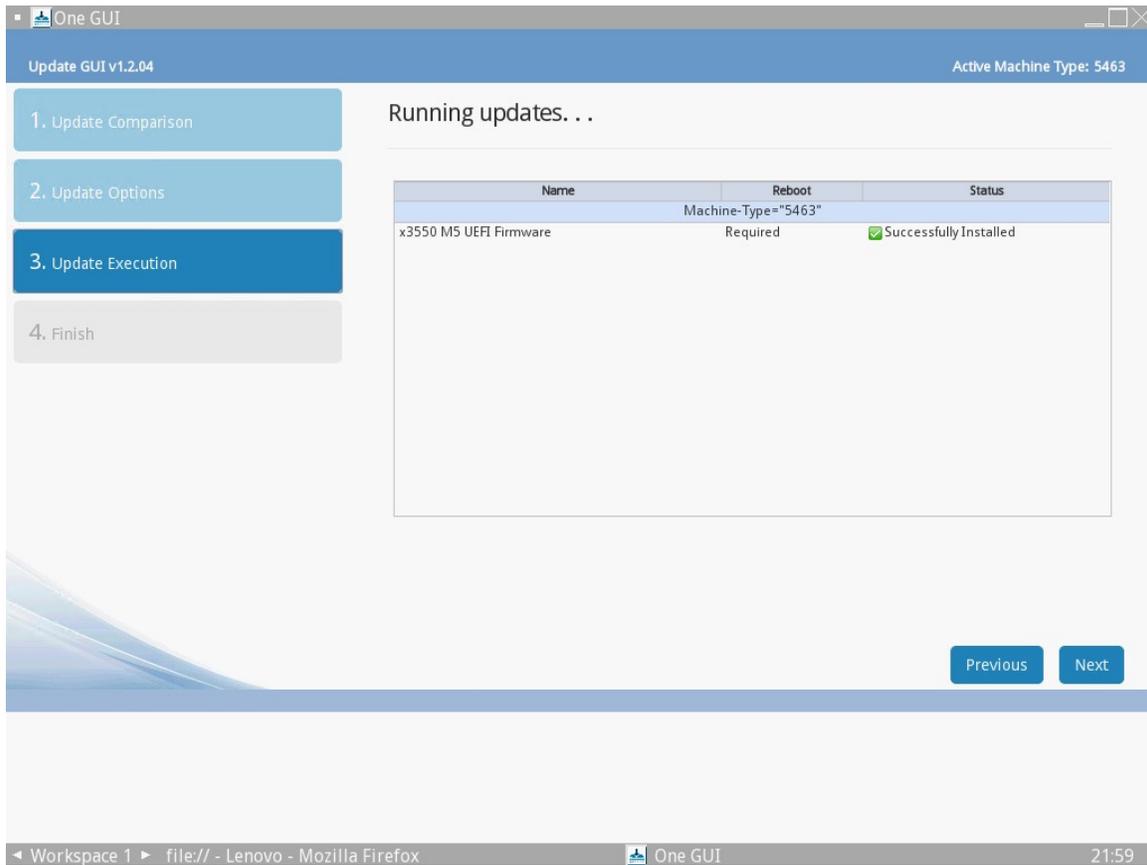


Figure 17. Running updates

6. Click **View Log** to review update details, and then click **Finish** to complete the update procedure.

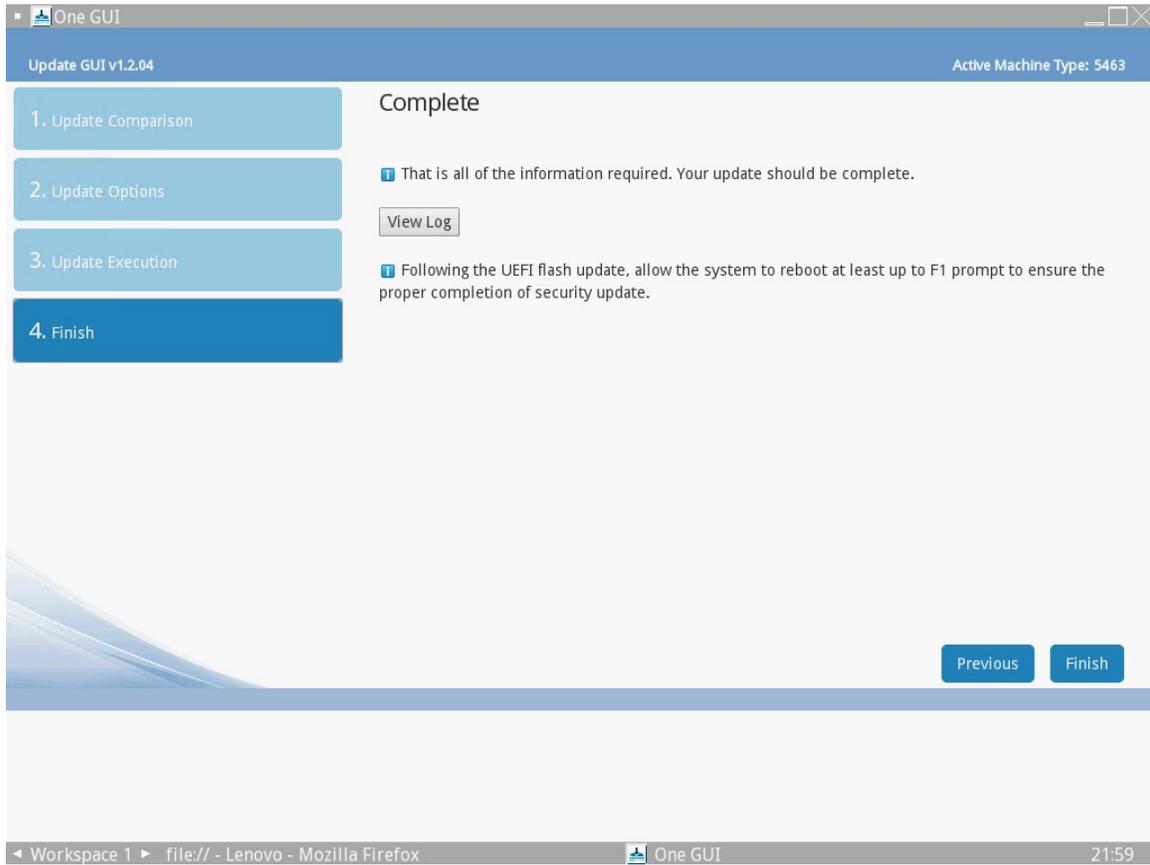


Figure 17. BoMC update Complete

# Lenovo ToolsCenter UpdateXpress

The Lenovo ToolsCenter UpdateXpress (UpdateXpress) is a utility that deploys the UpdateXpress System Pack or the required latest individual updates to the system. The utility downloads updates from the Lenovo Support Web site and can also apply the updates on the local or remote system.

The UpdateXpress utility performs the following major tasks:

- L** Acquires the UpdateXpress System Pack or the latest individual updates.
- L** Applies the driver updates.
- L** Applies the firmware updates.

UpdateXpress uses the standard HTTP (port 80) and HTTPS (port 443) to get the updates from the Lenovo Support Web site. Make sure the firewall does not block these ports.

## Update Firmware by using UpdateXpress

1. Run “tcupdatexpress.exe” with administrator permission.

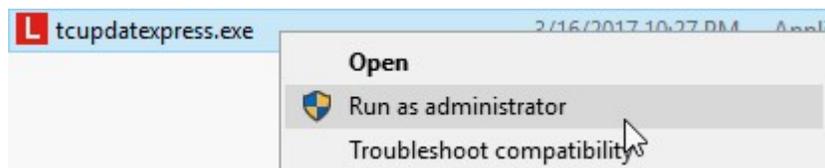


Figure 18. Run UpdateXpress as administrator

## 2. Click **Next**.

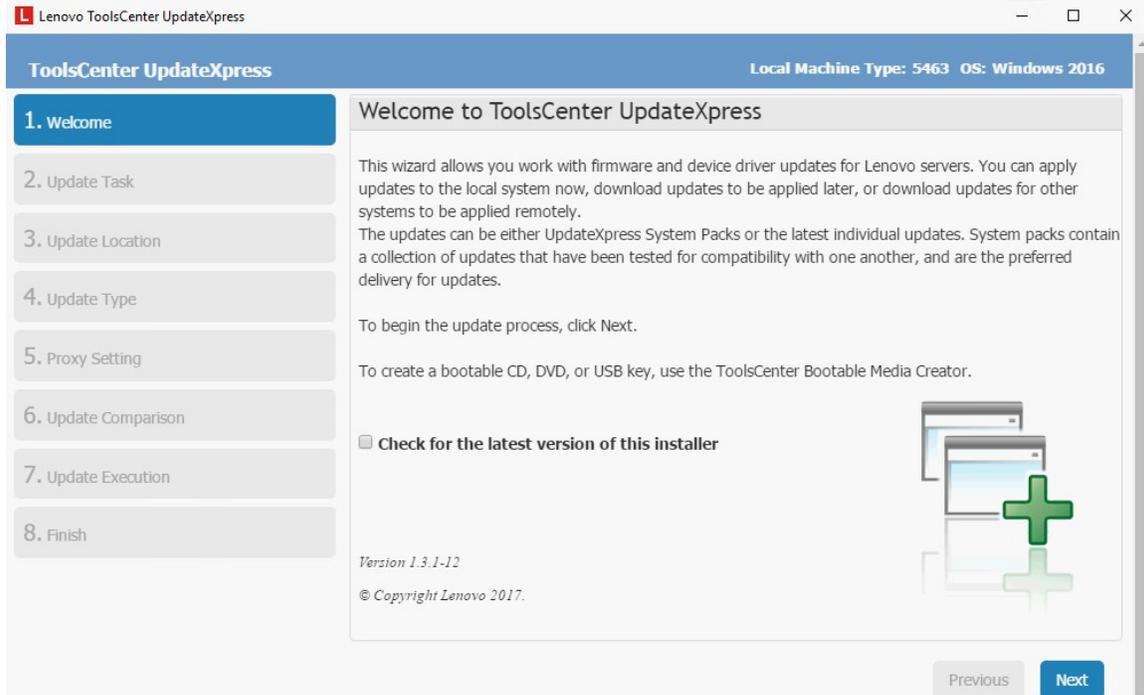


Figure 19. ToolsCenter UpdateXpress

## 3. Select **Update the local machine** and then click **Next**.

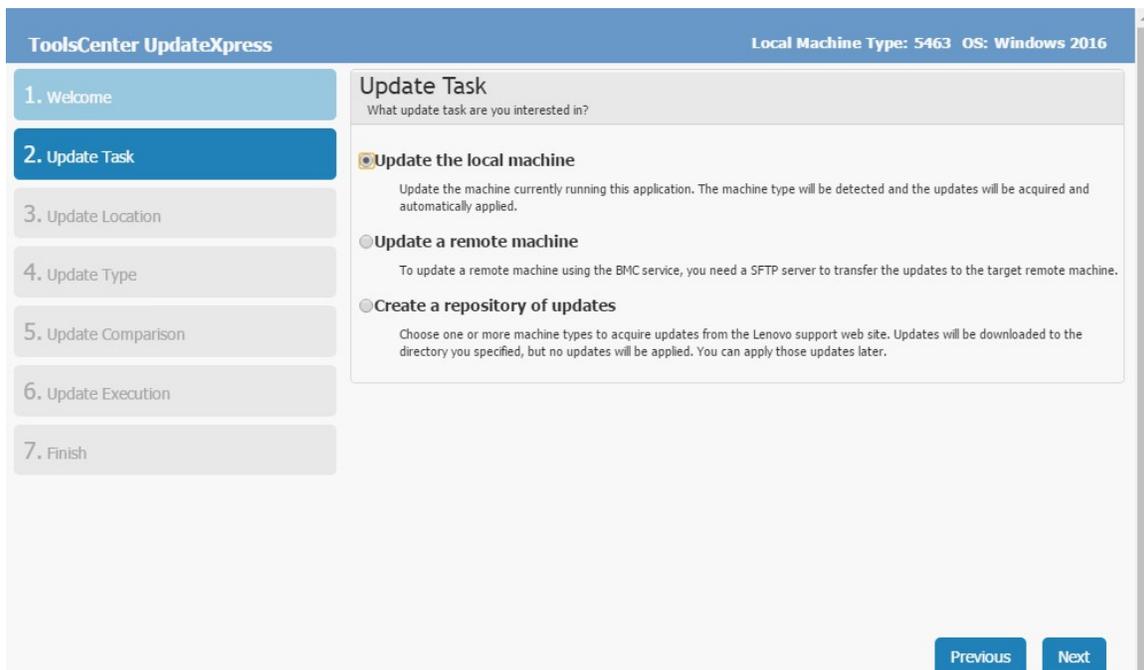


Figure 20. Update task

4. Select **Check the Lenovo support web site** to download the updates from the Lenovo support site (select **Look in a local directory** and specify the directory on local system if the updates are already downloaded), and then click **Next**.

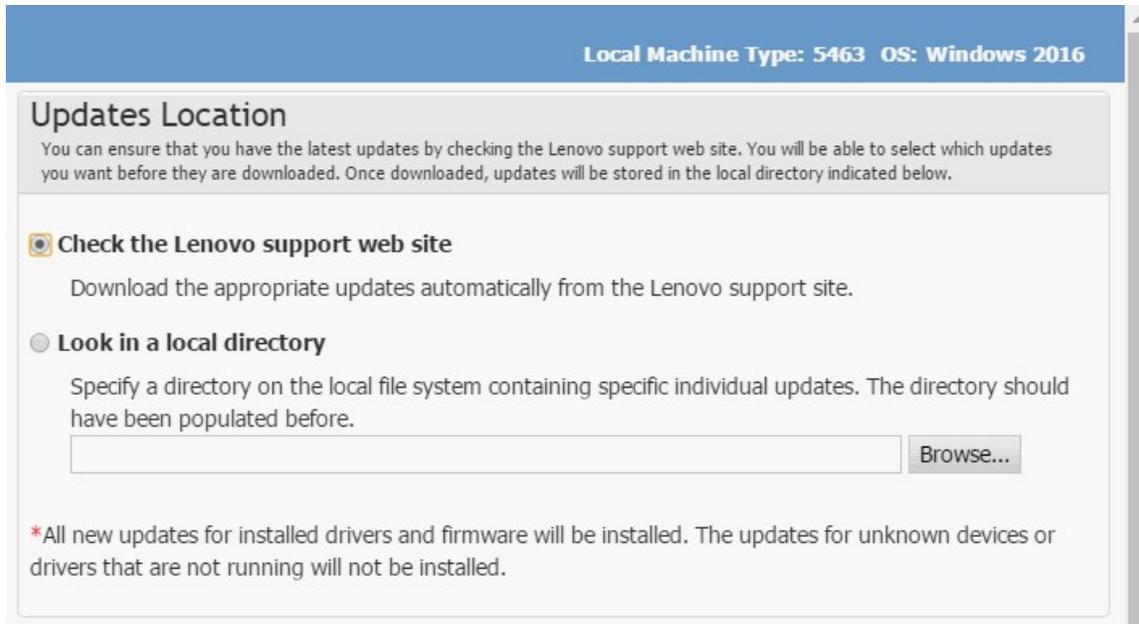


Figure 21. Updates location

5. Select update type, and then click **Next**.

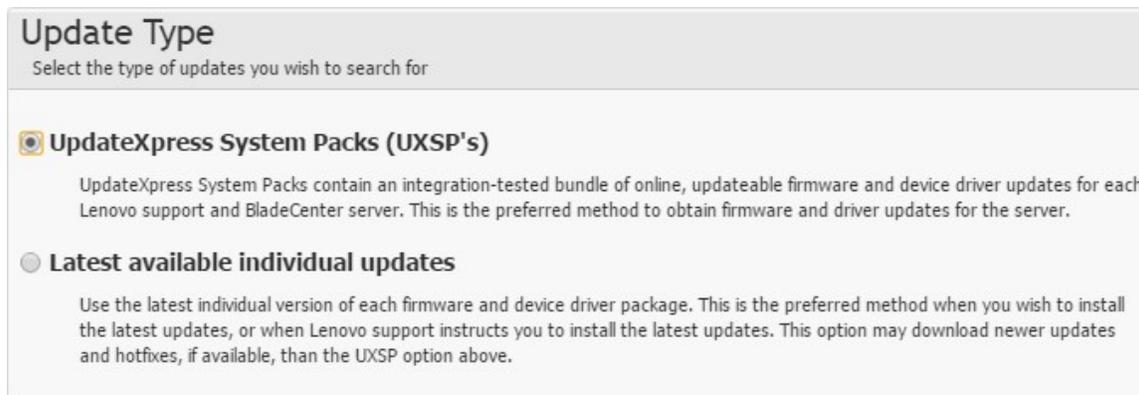


Figure 22. Update type

6. Set up the HTTP proxy, if necessary, and then click **Next**.



The screenshot shows a dialog box titled "HTTP Proxy Setting". Below the title is a grey header bar with the text "Enter the HTTP Proxy information here if you require to connect to the Internet. Internet connection is needed in order to download the appropriate updates from the Lenovo support web site." Below this is a white area containing a checkbox that is currently unchecked, followed by the text "I require a proxy server to connect to the Internet."

Figure 23. HTTP proxy setting

7. Enter the directory on local system to save the updates, and then click **Next**.



The screenshot shows a dialog box titled "Target Directory". Below the title is a grey header bar with the text "Choose a directory on your computer to save the updates." Below this is a white area with the label "Directory:" followed by a text input field containing the path "C:\Users\Administrator\Desktop". Below the input field is a button labeled "Browse..." which is highlighted with a yellow border.

Figure 24. Target directory

8. Select the desired item(s), and then click **Next**.

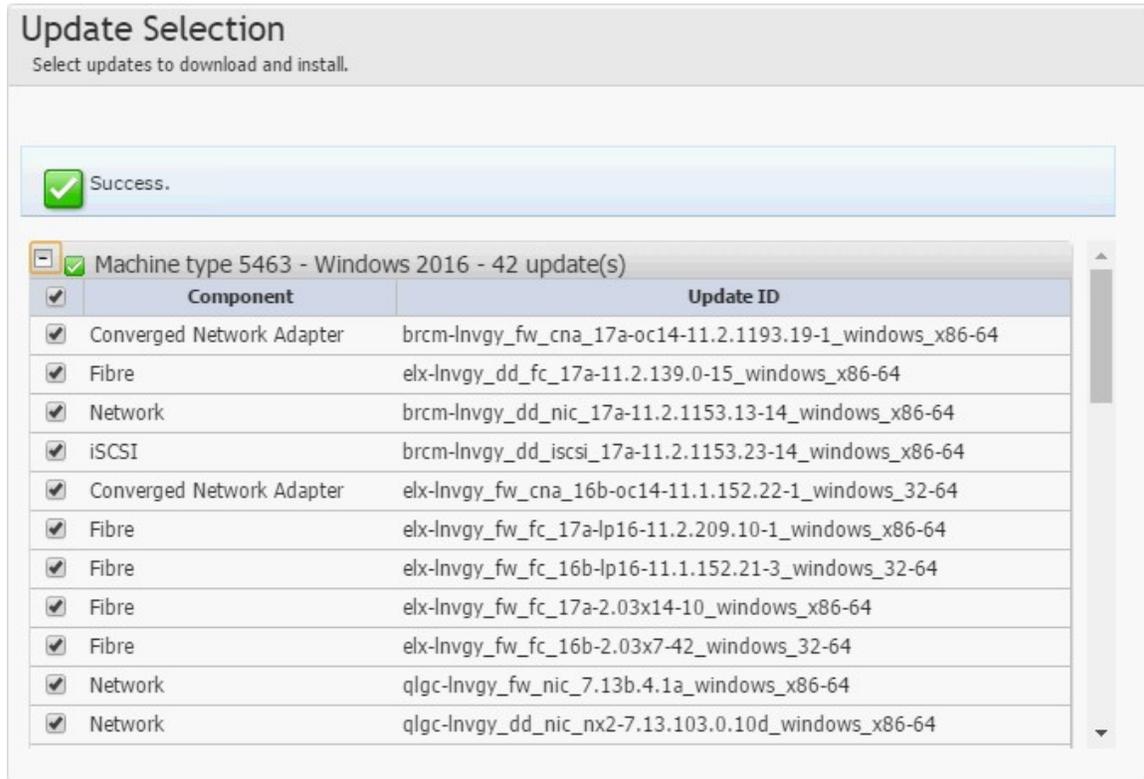


Figure 25. Update selection

- UpdateXpress will acquire the package automatically. Click **Next** after the download process is finished.

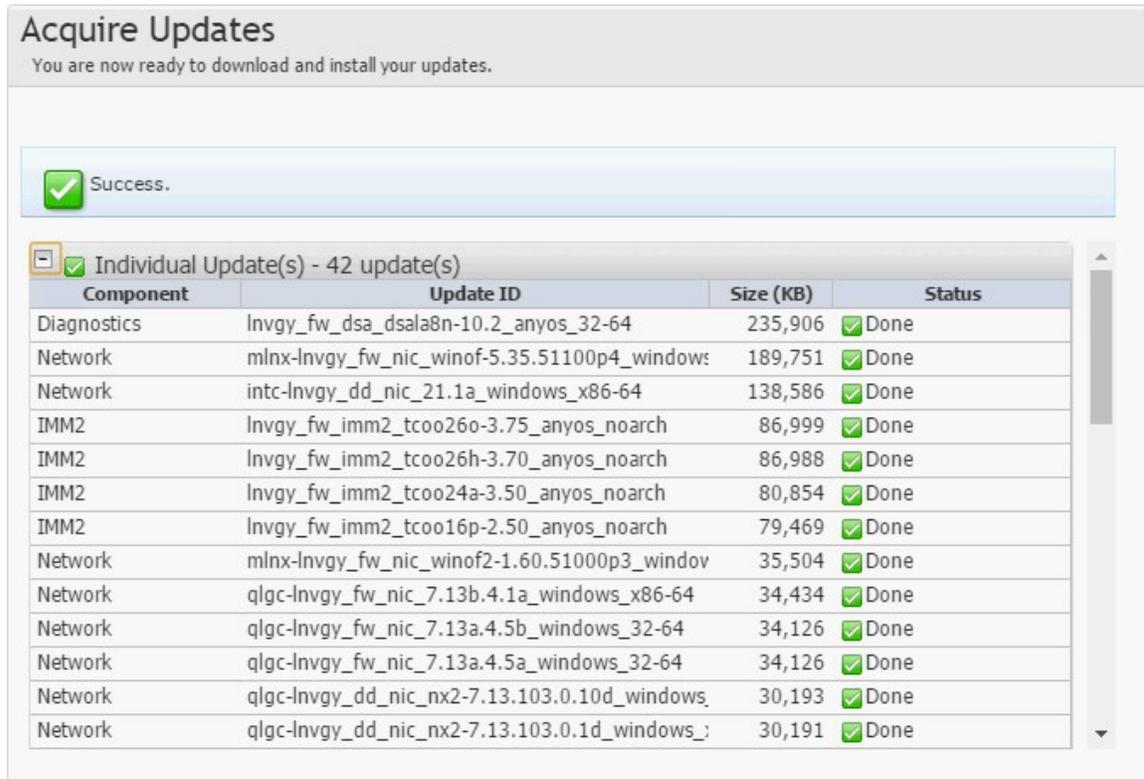


Figure 26. Acquire updates

10. Select the desired item(s), and then click **Next**.

**Update Recommendation**  
The information below shows which components need to be updated.

	Name	Severity	New Version	Installed Version	Reboot	Updated ID
<input type="checkbox"/>	Machine-Type="5463", OS=Windows 2016					
<input type="checkbox"/>	x3550 M5 UEFI Firmware	Critical			Reboot Requir	Invgy_fw_uefi_t
	└─UEFI		TBE108I-1.20	TBE128J-2.32		
<input type="checkbox"/>	x3550 M5 UEFI Firmware	Critical			Reboot Requir	Invgy_fw_uefi_t
	└─UEFI		TBE128J-2.32	TBE128J-2.32		
<input checked="" type="checkbox"/>	Qlogic NetXtreme II 10Gb Dri	Suggested			Reboot Requir	qlgc-Invgy_dd_r
	└─evbda.sys		7.13.104.0	7.13.65.105		
<input type="checkbox"/>	Online Qlogic NetXtreme II Fi	Suggested	7.13b.4.1a	Undetected	Reboot Requir	qlgc-Invgy_fw_r
<input checked="" type="checkbox"/>	Emulex NIC Device Driver for Initial Release				Reboot Requir	brcm-Invgy_dd_
	└─ocnd65.sys		11.2.1153.13	11.0.273.8008		
<input type="checkbox"/>	Intel Network Windows Drive	Suggested	21.1a	Undetected	No reboot req	intc-Invgy_dd_n
<input type="checkbox"/>	Intel Network Firmware Upda	Suggested	5.05	Undetected	Reboot Requir	intc-Invgy_fw_n
<input type="checkbox"/>	Mellanox WinOF (ConnectX-3 Initial Release				Reboot Requir	mlnx-Invgy_fw

Figure 27. Update recommendation

11. Click **Begin** to start the update procedure, and then click **Next**.

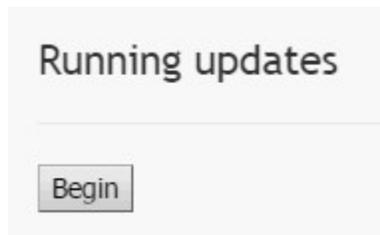


Figure 28. Begin update procedure

12. Click **Finish** to complete the update procedure.

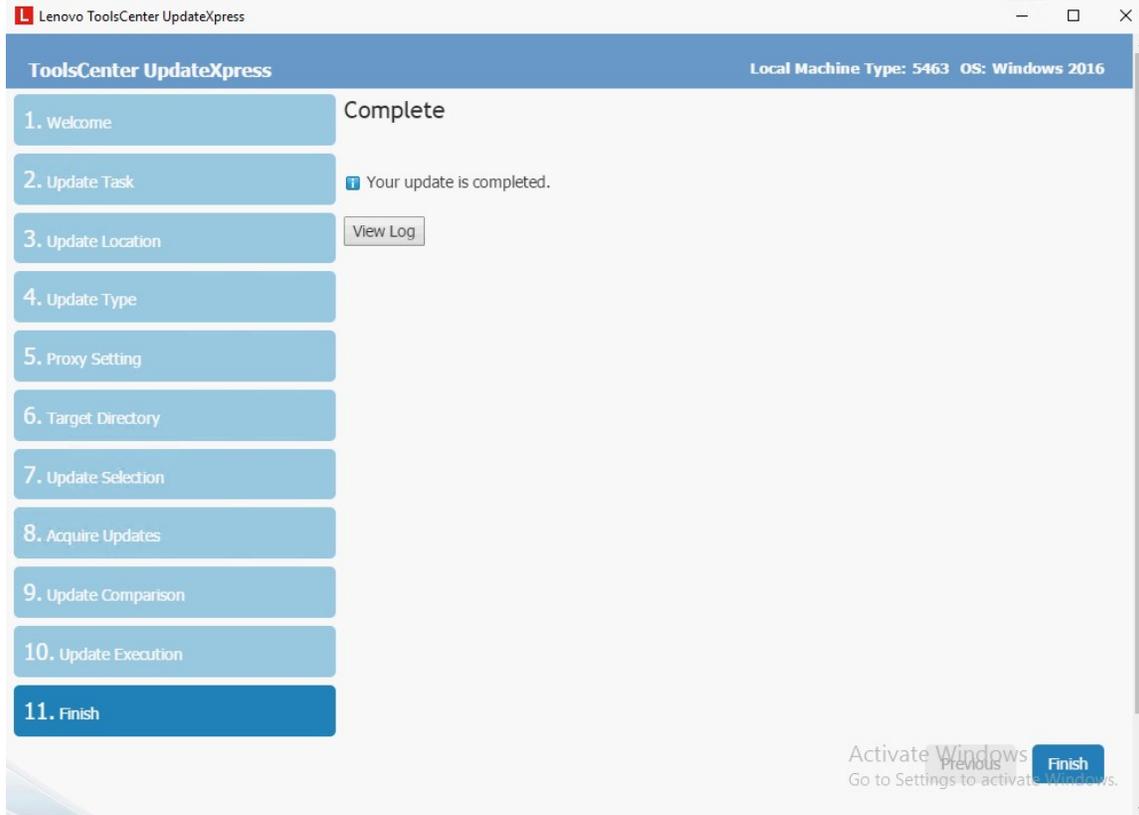


Figure 29. Finish the update procedure

# ToolsCenter Suite CLI

Lenovo ToolsCenter Suite is a collection of server management tools that utilize a command-line interface (CLI) program to manage firmware, hardware, and operating systems for CMM and IMM. ToolsCenter Suite CLI (OneCLI) is comprised of individual ToolsCenter application modules that are easily updated. The first release of Lenovo ToolsCenter Suite CLI replaces the Advanced Settings Utility (ASU) and Online Dynamic System Analysis tools (DSA) and includes the ToolsCenter Suite CLI Portable Edition.

## Update firmware by using OneCLI

Open a command prompt window and on the command line, enter **cd** to change to the directory where the ToolsCenter Suite CLI binary file is located.

```
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

c:\>cd onecli

c:\OneCLI>
```

## Acquire command

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

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

### Example of the acquire command

In this example, we are downloading the latest updates for machine type 5463, storing it in the “pkg” directory and storing the log file in the “output” directory.

```
Onecli.exe update acquire --scope latest --mt 5463 --dir \pkg_dir
```

```
c:\OneCLI>onecli update acquire --scope latest --mt 5463 --dir c:\download_pkg

Lenovo ToolsCenterSuite CLI tcli08r-1.3.1
Based on module version 1.3.1
Licensed Materials - Property of Lenovo
(C) Copyright Lenovo Corp. 2013-2016 All Rights Reserved
Not specify the OS type, then Onecli will use "none" by default.
Start to download from Lenovo.....
```

```

Acquiring list of updates for Machine-Type=5463 OS="OS Independent"...
Done
(1 of 9) : Invgy_fw_uefi_tbe128j-2.32_anyos_32-64 ... Done
(2 of 9) : Invgy_fw_uefi_tbe128i-2.31_anyos_32-64 ... Done
(3 of 9) : Invgy_fw_uefi_tbe108f-1.20_anyos_32-64 ... Done
(4 of 9) : Invgy_fw_uefi_tbe108i-1.20_anyos_32-64 ... Done
(5 of 9) : Invgy_fw_imm2_tcoo24a-3.50_anyos_noarch ... Done
(6 of 9) : Invgy_fw_imm2_tcoo16p-2.50_anyos_noarch ... Done
(7 of 9) : Invgy_fw_imm2_tcoo26h-3.70_anyos_noarch ... Done
(8 of 9) : Invgy_fw_imm2_tcoo26o-3.75_anyos_noarch ... Done
(9 of 9) : Invgy_fw_dsa_dsala8n-10.2_anyos_32-64 ... Done

Succeed in running acquire command

c:\OneCLI>

```

## Compare command

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

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

### Example of the compare command

In this example, we are creating an update list (update compare command) of the latest updates for a local machine type 5463 server, storing it in the “pkg” directory and storing the log file in the “output” directory. 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 --dir \pkg_dir\
```

```

c:\onecli>onecli update compare --scope latest --dir c:\download_pkg

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Connection option unspecified, use inband style!
Start inband inventorying...

```

```

[Agentless Software Identity Information]
Description:      Firmware package containing controller firmware, UEFI
Driver, and other sub components.
Element Name:     Card:MegaRAID Controller Firmware
Version String:   24.16.0-0092
Classifications: 10
Classifications Desc: Firmware
Product Name:

.
.
.

Inventory results saved to: c:\onecli\OneCli-5388-20170411-224819\Onecli-
update-scan.xml
Querying updates done, the result is stored to c:\onecli\OneCli-5388-20170411-
224819\Onecli-update-query.xml
Comparing Updates:
(1)[ ]x3550 M5 UEFI Firmware
  Category      :UEFI
  Severity      :Critical
  Reboot        :Reboot Required to take effect
  Update ID     :lnvgy_fw_uefi_tbe108i-1.20_anyos_32-64
  Reason        :8-The package version is not newer than installed

  Update        :UEFI
  New Version   :TBE108I-1.20
  Installed     :TBE128J-2.32
.
.
.

Compare updates done, the result is stored to c:\onecli\OneCli-5388-20170411-
224819\Onecli-update-compare.xml
Succeed in running compare command

c:\onecli>

```

## Flash command

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

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

### 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.

*Onecli.exe update flash --comparexml \#VID:#PID\output\Onecli-update-compare.xml --output .\output\_dir\*

```
c:\onecli>onecli update flash --comparexml c:\onecli\OneCli-5388-20170411-224819\Onecli-update-compare.xml --output c:\onecli\output\

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Start inband flashing...
Flash results:c:\onecli\output\Onecli-update_flash_status.xml
Current flashing ID:lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64
xFirmware inband flash.....
Load XML Successfully:c\tbe128j\lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64.xml
updateid : lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64 update ststus:Parse Firmware Package XML Success.
updateid : lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64 update ststus:Start to unzip payload File.
updateid : lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64 update ststus:Start Calling iFlash to Update Package.
updateid : lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64 update ststus:Package installation successfully.
Flash results:c:\onecli\output\Onecli-update-flash.xml
Flash Results:
(1) x3550 M5 UEFI Firmware
    Component      :UEFI
    Update ID      :lnvgy_fw_uefi_tbe128j-2.32_anyos_32-64
    Reboot         :Reboot Required to take effect
    Result         :Success.
Totally flashing 1 update(s).
1 update(s) succeeded.
See the Onecli-update-flash.xml and Onecli logs in the output directory for details.
Succeed in running flash command

c:\onecli>
```

# References and further reading

- L** Lenovo data center Support Web site:  
<http://datacentersupport.lenovo.com/>
- L** ToolsCenter for Lenovo x86 servers  
<https://support.lenovo.com/uu/en/solutions/Invo-center>
- L** Bootable Media Creator (BoMC) for Lenovo x86 servers  
<https://support.lenovo.com/uu/en/solutions/Invo-bomc>
- L** Lenovo ToolsCenter UpdateXpress  
<https://support.lenovo.com/uu/en/solutions/ht503692>
- L** Lenovo ToolsCenter Suite CLI (OneCLI)  
<https://support.lenovo.com/uu/en/solutions/Invo-tcli>
- L** Lenovo Press  
<https://lenovopress.com/>

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