



IBM System x
IBM ToolsCenter Suite
User's Guide

Version 9.50





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User's Guide

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Note

Before using this information and the product it supports, read the information in “Notices” on page 101.

Edition notice

This edition applies to version 9.50 of ToolsCenter Suite and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this publication

This publication provides information about how to download and use IBM® ToolsCenter Suite.

Conventions and terminology

In this book, when you are instructed to enter a command, type the command and press Enter.

These notices are designed to highlight key information.

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

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

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

The following table provides a description of commonly used acronyms in the *IBM ToolsCenter Suite User's Guide* and graphical user interface.

Table 1. Acronyms

Acronym	Definition
BIOS	Basic Input Output System
CNA	Converged Network Adapter
DIMM	Dual Inline Memory Modules
FoD	Features on Demand
FTP	File Transfer Protocol
HBA	Host Bus Adapter
HTTP	Hypertext Transfer Protocol
iSCSI	Internet Small Computer System Interface
IPMI	Intelligent Platform Management Interface
IPMI SEL	Intelligent Platform Management Interface System Event Log
IMM	Integrated Management Module
KCS	Keyboard Controller Style Keyboard
KMS	Key Management System
LED	Light Emitting Diode
MAC	Media Access Control
OOB	Out of Band
PCIE	Peripheral Component Interconnect Express
PXE	Preboot Execute Environment
uEFI	Unified Extensible Firmware Interface

Table 1. Acronyms (continued)

Acronym	Definition
UTF8	8-bit Unicode Transformation Format
UXSP	UpdateXpress System Pack
VPD	Vital Product Data
WoL	Wake on LAN

Publications and related information

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

Information centers and topic collections

IBM ToolsCenter for System x® and BladeCenter® information center provides integrated information for multiple IBM Systems x and BladeCenter tools, including ToolsCenter Suite: **IBM ToolsCenter for System x and BladeCenter information center**.

Publications

The IBM ToolsCenter Suite User's Guide: This publication is available for download on the IBM Support website in several languages, and provides information about how to download and use to collect system information, configure firmware settings, and update firmware.

Web resources

The following websites and information center topics relate to ToolsCenter Suite.

Websites

- **IBM ToolsCenter for System x and BladeCenter**
<http://www-947.ibm.com/support/entry/portal/docdisplay?lnidocid=tool-center>
View this website to download tools that support IBM System x and IBM BladeCenter products.
- **IBM ToolsCenter Suite support portal**
<http://www.ibm.com/support/entry/portal/docdisplay?lnidocid=TOOL-TCSUITE>
View this website to download the IBM ToolsCenter Suite tool and documentation.
- **IBM PureSystems Redbooks®**
<http://www.redbooks.ibm.com/portals/puresystems/>
View this website to find published Redbooks on IBM Flex Systems.
- **Using IBM System x Features on Demand Redbook**
<http://www.redbooks.ibm.com/redbooks.nsf/RedpieceAbstracts/redp4895.html?Open>
View this website to download the *Using IBM System x Features on Demand* publication.
- **IBM Flex System Compute Nodes**

http://pic.dhe.ibm.com/infocenter/flexsys/information/topic/com.ibm.acc.common.nav.doc/compute_blades.html

View this section of the IBM Flex System Information Center to obtain information on IBM Flex System Compute Nodes.

- **Support for IBM BladeCenter**

<http://www-03.ibm.com/systems/bladecenter/support/>

View this website to find information about online technical support, downloads and drivers, and RETAIN[®] tips, and to provide feedback about IBM BladeCenter products.

- **Support for IBM System x**

<http://www-03.ibm.com/systems/x/support/>

View this website to find information about online technical support, downloads and drivers, and RETAIN tips, and to provide feedback about IBM System x products.

- **IBM ServerProven[®]**

www.ibm.com/servers/eserver/serverproven/

View this website to learn about hardware compatibility of IBM System x and IBM BladeCenter systems with IBM applications and middleware.

Forums

- **IBM System x Forum**

<https://www.ibm.com/developerworks/community/forums/html/forum?id=11111111-0000-0000-0000-000000002691#topicsPg=0>

View this website on ibm.com[®] to learn about various forums that are available to discuss technology-related and product-related issues pertaining to IBM System x hardware and software products. This website includes a link for obtaining the forum using a Rich Site Summary (RSS) feed.

- **IBM BladeCenter Forum**

<https://www.ibm.com/developerworks/community/forums/html/forum?id=11111111-0000-0000-0000-000000000819>

View this website on ibm.com to learn about various forums that are available to discuss technology-related and product-related issues pertaining to IBM BladeCenter hardware and software products. This website includes a link for accessing the forum using a Rich Site Summary (RSS) feed.

How to send your comments

Your feedback is important in helping to provide the most accurate and highest quality information.

If you have any comments about this publication or any other IBM ToolsCenter for System x and BladeCenter publication:

- Go to the IBM ToolsCenter for System x and BladeCenter information center website at <http://publib.boulder.ibm.com/infocenter/toolstr/v1r0/index.jsp>. There you will find the feedback page where you can enter and submit comments.
- Complete one of the forms at the back of any IBM ToolsCenter for System x and BladeCenter publication and return it by mail, by fax, or by giving it to an IBM representative.

New in this release

IBM ToolsCenter Suite 9.50 provides a number of enhancements since the previous release, 9.41.

New system support

The following hardware is supported by IBM ToolsCenter Suite 9.50:

- IBM NeXtScale nx360 M4, type 5455
- IBM System x3250 M5, type 5458
- IBM System x3650 M4 BD, type 5466
- IBM System x3850 X6 / x3950 X6, type 3837, 3839

New operating system support

The following operating systems are supported by IBM ToolsCenter Suite 9.50:

- Red Hat Enterprise Linux 6 Update 5 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 10 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 10 Server with Xen (x86 & x64) Editions

For complete operating system support information, see “Supported operating systems” on page 4.

New server options support

None

Problem(s) fixed

None

Enhancement(s)

IBM ToolsCenter Suite 9.50 includes the following enhancements:

- An out of band (OOB) configuration option.
- An out of band (OOB) updates option.
- An out of band (OOB) information option.
- FoD mass activation helps you to manage feature on demand keys for multiple machines.
- A new Graphical User Interface (GUI) log in that can use either a Windows or a Linux root account.
- A backlevel firmware installation warning that indicates when a backlevel version of firmware or drivers is being installed.
- The ability to perform a third party software installation using the individual updates function.
- The ability to perform an operating system (OS) agnostic firmware installation that can use either the recommended or the individual updates option.
- The ability to perform an undetected firmware and driver installation using the recommended updates option.

- An Update Wizard GUI.
- Color coding to indicate system health status for Active Status, using Red/Yellow/Green indicators.
- An event ID info center link to view Event Log information in the System Health option of the System Information function.
- IPv6 support for information, Features on Demand (FoD), and an updates proxy setting.
- Automatic detection of the FoD unique identifier for IMM and RAID option cards FoD key installation.

Known limitations

None

Workarounds

None

Warnings

For Red Hat and SUSE Linux, to run ToolsCenter Suite you need to run the `"/usr/sbin/setenforce 0"` command to close SELINUX.

Dependencies

None

Chapter 1. Technical overview

IBM ToolsCenter Suite is a collection of server management tools that help manage your IBM System x, IBM BladeCenter, and IBM Flex System environment. ToolsCenter Suite provides full support of inband management of updates, configuration, and system information on a local machine and out of band (OOB) management of updates, configuration, and system information on a remote machine.

The three main functions of ToolsCenter Suite are:

System Information:

The System Information function collects full system information, catalogs this information, and enables you to send the collected information to an IBM support team or customer site FTP server. This function also provides system health status, including the IMM system event logs and Light Path information.

ToolsCenter Suite collects full system information about the following aspects of a system for both a local machine and a remote machine:

- Alerts
- Basic analysis and highlights
- Hardware
- Logs
- Software (including Operating Systems)

Configuration:

The Configuration function allows you to modify firmware settings. You can change frequently used settings or change an individual configuration in full settings.

Frequently Used Settings:

- Activation Key Management (For Features on Demand)
- Boot Order
- Energy and Performance
- IMM User Accounts
- System Contact
- FoD Mass Activation

Full settings:

- BootOrder
- IMM
- iSCSI
- Network
- PXE
- SYSTEM_PROD_DATA
- uEFI

Update:

The Update function allows you to update the UpdateXpress System Pack

firmware and driver and individual firmware and drivers by connecting to the IBM website or a local repository. There are three methods for updating:

- Download Updates
- Individual Updates
- Recommended Updates

Prerequisites

ToolsCenter Suite requires the following prerequisites.

- You must have administrator or root-equivalent operating-system privileges to use ToolsCenter Suite.
- An Internet connection is required to download updates from the IBM website, or to send the collected system information file to the IBM website or the customer site FTP server.
- A browser supported by ToolsCenter Suite. For a complete list of supported browsers, refer to the Supported web browsers topic of the *IBM ToolsCenter Suite User's Guide*.
- To ensure ToolsCenter Suite works correctly, verify that Java script and CSS are enabled in your browser settings.

Chapter 2. ToolsCenter Suite Support List

Before you begin using ToolsCenter Suite, review the hardware, software, and operating system support sections.

Hardware and software support lists

ToolsCenter Suite has specific hardware, operating system, and browser support lists. If you attempt to run ToolsCenter Suite on a server, browser, or operating system that is not on the list, this will be at your own risk with no functional guarantee.

Supported hardware

IBM ToolsCenter Suite supports the IBM systems listed in Table 1.

Table 2. Supported IBM systems

Server	Machine type
IBM BladeCenter HS22	7870, 1936, 7809, 1911
IBM BladeCenter HS22V	7871, 1949
IBM BladeCenter HS23	7875, 1929
IBM BladeCenter HS23E	8038, 8039
IBM BladeCenter HX5	1909, 1910, 7872, 7873
IBM Flex System x220 Compute Node	7906, 2585
IBM Flex System x222 Compute Node	7916
IBM Flex System x240 Compute Node	8737, 8738, 7863
IBM Flex System x440 Compute Node	7917
IBM NeXtScale nx360 M4	5455
IBM System x iDataPlex® Direct Water Cooled dx360 M4 server	7918, 7919
IBM System x iDataPlex dx360 M2 server	7321, 6380, 7323
IBM System x iDataPlex dx360 M3	6391
IBM System x iDataPlex dx360 M4	7912, 7913
IBM System x3100 M4	2582
IBM System x3200 M3	7327, 7328
IBM System x3250 M3	4251, 4252, 4261
IBM System x3250 M4	2583
IBM System x3250 M5	5458
IBM System x3400 M2	7836, 7837
IBM System x3400 M3	7378, 7379
IBM System x3500 M2	7839
IBM System x3500 M3	7380
IBM System x3500 M4	7383
IBM System x3530 M4	7160

Table 2. Supported IBM systems (continued)

Server	Machine type
IBM System x3550 M2	7946, 4198
IBM System x3550 M3	7944, 4254
IBM System x3550 M4	7914
IBM System x3620 M3	7376
IBM System x3630 M3	7377
IBM System x3630 M4	7158
IBM System x3650 M2	7947, 4199
IBM System x3650 M3	7945, 4255, 5454
IBM System x3650 M4	7915
IBM System x3650 M4 BD	5466
IBM System x3650 M4 HD	5460
IBM System x3690 X5	7147, 7192
IBM System x3690 X5	7148, 7149
IBM System x3750 M4	8722, 8733
IBM System x3755 M3	7164
IBM System x3850 X5 and x3950 X5	7143, 7191
IBM System x3850 X5 and x3950 X5	7145, 7146
IBM System x3850 X6 and x3950 X6	3837, 3839

Supported software

This topic describes the supported software and web browsers for ToolsCenter Suite.

Supported web browsers

To view the information that is collected by ToolsCenter Suite, you must use one of these web browsers.

- Firefox 3.6 or later
- Google Chrome 19.0 or later
- Internet Explorer 8.0 Service Pack 1 or later

ToolsCenter Suite uses the OS default browser. If you want to use a specific browser, using the browser configuration, configure it as the default browser.

Supported operating systems

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

Windows

ToolsCenter Suite supports the following Windows operating systems.

Windows Server 2012 Edition

- Microsoft Windows Server 2012
- Microsoft Windows Server 2012 R2

Windows Server 2011 Editions

- Microsoft Windows Small Business Server 2011
- Microsoft Windows Small Business Server 2011 Essentials

Windows Server 2008 Editions

- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2008 R2 SP1
- Microsoft Windows Server 2008 R2 HPC Edition (x64, Reseller Option Kit)
- Microsoft Windows Server 2008, Datacenter Edition (x86, x64)
- Microsoft Windows Server 2008, Enterprise Edition (x86, x64)
- Microsoft Windows Server 2008 Foundation
- Microsoft Windows Server 2008 HPC Edition
- Microsoft Windows Server 2008, Standard Edition (x86, x64)
- Microsoft Windows Server 2008, Web Edition (x86, x64)
- Windows Essential Business Server 2008 Premium Edition
- Windows Essential Business Server 2008 Standard Edition

Linux

ToolsCenter Suite supports the following Linux operating systems.

Red Hat

- Red Hat Enterprise Linux 6 Server (x86 & x64) Editions, (up to U5)
- Red Hat Enterprise Linux 5 Update 10 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 10 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 9 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 9 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 8 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 8 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 7 Server (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Update 7 Server with Xen (x86 & x64) Editions
- Red Hat Enterprise Linux 5 Server (x86 & x64) Editions, (up to U6)
- Red Hat Enterprise Linux 5 Server with Xen (x86 & x64) Editions, (up to U6)

SUSE

- SUSE Linux Enterprise Server 11 (x86 & x64) SP3
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) SP3
- SUSE Linux Enterprise Server 11 (x86 & x64) SP2
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) SP2
- SUSE Linux Enterprise Server 11 (x86 & x64) (up to SP1)
- SUSE Linux Enterprise Server 11 with Xen (x86 & x64) (up to SP1)
- SUSE Linux Enterprise Real Time 10 AMD64/EM64T
- SUSE Linux Enterprise Server 10 (x86 & x64) (up to SP4)
- SUSE Linux Enterprise Server 10 with Xen (x86 & x64) (up to SP4)

Chapter 3. Downloading IBM ToolsCenter Suite

This section provides information about downloading ToolsCenter Suite.

Instructions for downloading IBM ToolsCenter Suite

ToolsCenter Suite is a self-extracting application that does not need to be installed.

About this task

You can download ToolsCenter Suite from the IBM ToolsCenter Suite support portal website at <http://www.ibm.com/support/entry/portal/docdisplay?lnodocid=TOOL-TCSUITE>.

Procedure

1. Select one of the following shipment packages:
 - `ibm_utl_tcsuite_9.50_winsrvr_i386.zip`
 - `ibm_utl_tcsuite_9.50_winsrvr_x86-64.zip`
 - `ibm_utl_tcsuite_9.50_rhel5_i386.tgz`
 - `ibm_utl_tcsuite_9.50_rhel5_x86-64.tgz`
 - `ibm_utl_tcsuite_9.50_rhel6_i386.tgz`
 - `ibm_utl_tcsuite_9.50_rhel6_x86-64.tgz`
 - `ibm_utl_tcsuite_9.50_sles10_i386.tgz`
 - `ibm_utl_tcsuite_9.50_sles10_x86-64.tgz`
 - `ibm_utl_tcsuite_9.50_sles11_i386.tgz`
 - `ibm_utl_tcsuite_9.50_sles11_x86-64.tgz`
2. After downloading the appropriate ToolsCenter Suite zip file, extract the downloaded file.

Chapter 4. Using IBM ToolsCenter Suite

This section describes how to use IBM ToolsCenter Suite.

Starting IBM ToolsCenter Suite

After you have downloaded and copied the appropriate ToolsCenter Suite zip file for the target server and extracted the files, you can start the IBM ToolsCenter Suite program. ToolsCenter Suite must be run on the target server.

Before you begin

When starting ToolsCenter Suite for the first time, you are prompted to read the terms of the license agreement. After accepting the terms of the license agreement, this page is not displayed again. If you need to reference the license agreement again, there is a link in the About menu item for viewing the license agreement.

Note: ToolsCenter Suite does not support running concurrent sessions of ToolsCenter Suite. If another session of ToolsCenter Suite is already open with active operations that cannot be stopped, such as configuration and inventory updates or compare and updates, a message displays stating:

Another user is currently logged in and performing an operation that cannot be interrupted. Wait for several minutes, and log in again.

However, if the session that is already open is able to stop, a message displays stating:

Another user is currently logged in with the same user ID. Do you want to log in with the same user ID?

If you select Yes, the user currently logged in will automatically be logged out. If you select No, you will return to the login page, where you can enter a different user ID.

About this task

The first time you are starting ToolsCenter Suite:

- For a Windows system, perform steps 1, 3, and 4.
- For a Linux system, perform steps 2 through 4.

On subsequent sessions of ToolsCenter Suite:

- For a Windows, perform steps 1 and 4.
- For a Linux, perform steps 2 and 4.

Procedure

1. For Windows, double click **run.bat**. The ToolsCenter Suite script file launches the Tomcat server and starts the default browser using `https://localhost:8843/tcsuite/login.html`.

Note: The first time using ToolsCenter Suite, the ToolsCenter Suite License Agreement page opens. On subsequent sessions of ToolsCenter Suite, the log in window opens.



Figure 1. License Agreement

- For Linux, double click **run.sh**. The ToolsCenter Suite script file launches the Tomcat server and starts the default browser pointing to <https://localhost:8843/tcsuite/login.html> .

Note: The first time using ToolsCenter Suite, the ToolsCenter Suite License Agreement page opens. On subsequent sessions of ToolsCenter Suite, the log in window opens.

- Read the license agreement and click **I accept**.
After initially starting ToolsCenter Suite, and you have accepted the license agreement , the log in window opens.

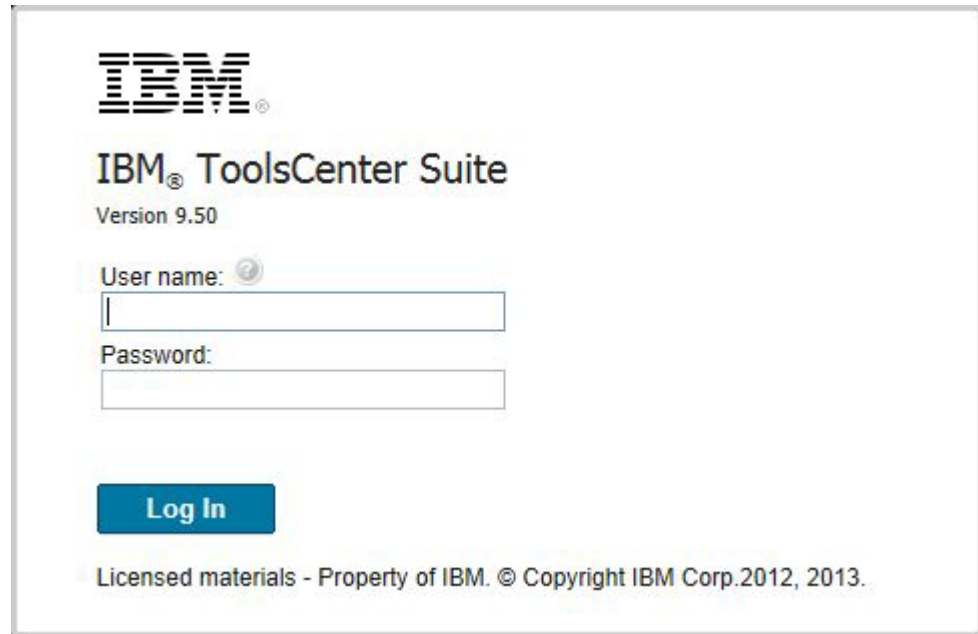


Figure 2. Log In window

4. In the log in window, enter the following information and then click **Log In**.
 - a. User name
 - b. Password

The IBM ToolsCenter Suite Home page opens.

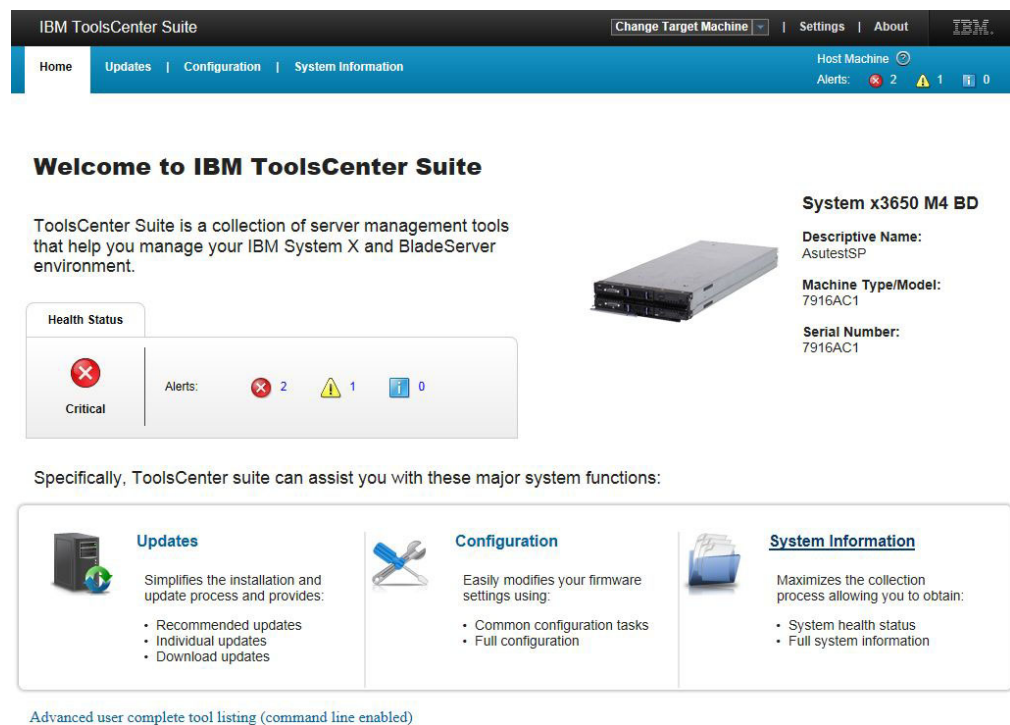


Figure 3. Home page

What to do next

The Home page provides access to the IBM ToolsCenter Suite functions, the **Settings** and **About** menu items, the **Advanced User Complete Tool Listing**, and the following information:

- Machine name
- Descriptive Name
- Machine Type/Model
- Serial Number
- Health Status
- Alerts

Using the Advanced User Complete Tool Listing

The Advanced User Complete Tool Listing provides a list of command line and deployment tools and IBM support page links for each of these advanced user tools.

Procedure

1. To view the list of the Command Line and Deployment Tools, select **Advanced User Complete Tool Listing** on the Home page. The Advanced User Complete Tools Listing window opens.

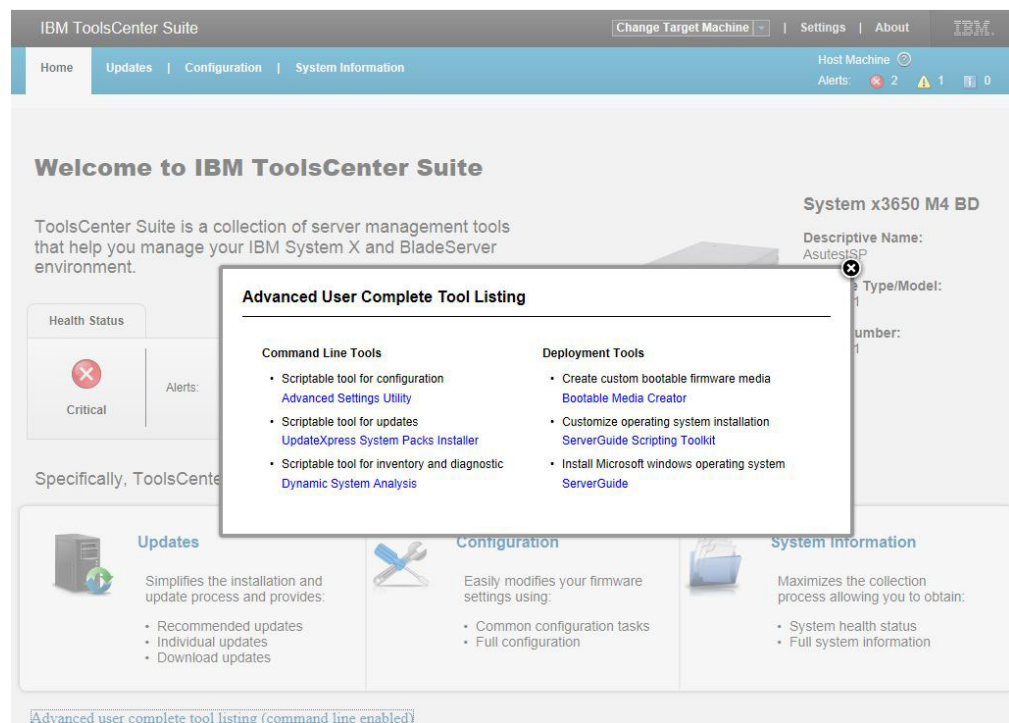


Figure 4. Advanced User Complete Tool Listing

2. Select a link to view one of the items in the list. A browser window opens for the related IBM support page.
3. To close the Advanced User Complete Tool Listing window and return to the Home page, click x.

IBM ToolsCenter Suite menu options

The ToolsCenter Suite graphical user interface has the following menu options:

Change Target Machine

You can use Change Target Machine to:

Connect to remote machines, or

Connect to ToolsCenter Suite host machine

Settings

You can use settings to configure the internet connection settings. For more information, see “Internet Connection settings.”

About About provides the ToolsCenter Suite version, the License and Agreement link, the IBM ToolsCenter Suite website link, and a link to download for the latest version of the *IBM ToolsCenter Suite User's Guide*.

Home Home displays the ToolsCenter Suite Home page.

Updates

Updates provides several options for downloading and installing firmware and driver updates.

Configuration

Configuration assists you in modifying firmware settings.

System Information

System Information maximizes the collection process and provides system health status and full system information.

Settings

Use the settings menu option to configure the IBM ToolsCenter Suite internet connection settings:

Internet Connection settings:

This topic describes how to configure and test your internet connection. The proxy settings are used for the Send to IBM and Send to FTP options of the System Information function, and the option for updating and using feature on demand by proxy. Proxy settings use an HTTP proxy. IBM ToolsCenter Suite uses the **HTTP/1.1 CONNECT** method with UTF-8 encoding and passive ftp mode to connect with HTTP proxy.

Procedure

1. Select the **Settings** menu option located in the top right section of the IBM ToolsCenter Suite screen. The Settings dialog box opens.
2. Select one of following options for configuring your internet connection:
 - a. **The management server can access the Internet without a proxy server:** The IP address or host name, Port, Username, and Password fields are greyed out.
 - b. **The management server requires a proxy server to access the Internet:** For this option, complete the following steps:
 - 1) Enter the **IP address or host name**.
 - 2) Enter the **Port**.
 - 3) Select **Requires authentication**. This enables the authentication fields. Enter the following information:
 - Enter the **User name**.

- Enter the **Password**.
3. Click **Test Internet Connection**. This operation verifies if the internet connection is working.

Settings

Internet Connection

Select one of the following methods for configuring your internet connection:

- ☐ The management server can access the Internet without a proxy server.
- ☒ The management server requires a proxy server to access the Internet.

IP address or hostname: Port:

☒ Requires authentication

User name:

Password:

Test Internet Connection

OK **Cancel**

Figure 5. Menu Settings - Internet Connection Test

The internet connection test checks the proxy settings and displays the results. Use the mouse hover feature to see additional information.

4. Click **OK** to save the internet connection settings or click **Cancel** to not save any changes and exit Settings.

Using the Updates function

Using the Updates function, you can update firmware, device drivers, add support for new systems, and manage updates on a local machine using inband mode and out of band (OOB) mode for a remote machine. This section describes how to check the compliance of firmware and drivers, and how to download and install the updates.

Procedure

1. On the Home page or from the ToolsCenter Suite menu, select **Updates**.

The Firmware and Driver Updates page opens.

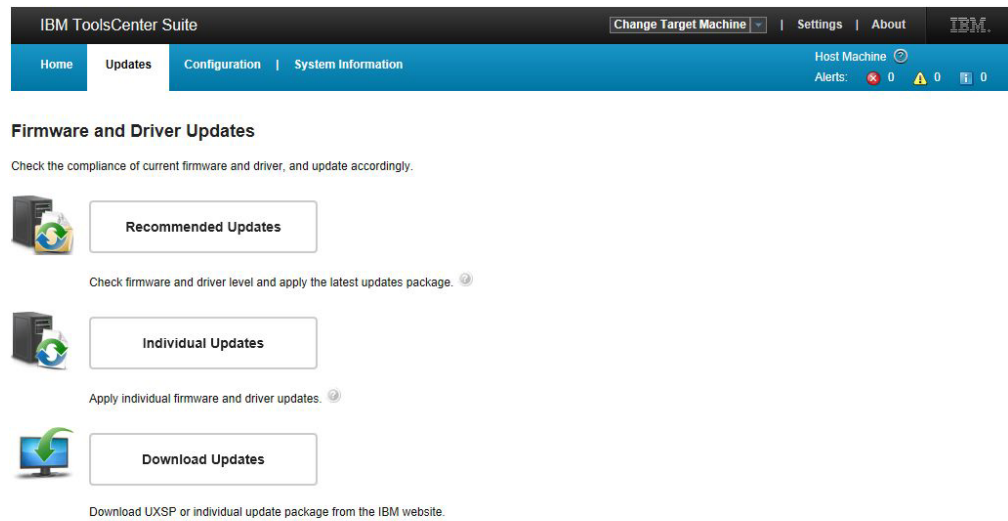


Figure 6. Firmware and Driver Updates

Tip: If you hover the mouse over a question mark, additional information for each update type displays.

2. Select one of the update options:

- **Recommended Updates:** Check firmware and driver levels of the latest UpdateXpress System Pack and compare them with the local machine installed firmware and driver levels, from the IBM website or in a local directory. You can selectively download and apply UpdateXpress System Pack firmware and driver updates from the IBM website or selectively apply firmware and driver UpdateXpress System Pack updates from a local directory.
- **Individual Updates:** Check firmware and driver levels and compare the currently installed firmware and drivers to individual updates on the IBM website or in a local directory. You can selectively download and apply firmware and driver updates from the IBM website or selectively apply firmware and driver updates from a local directory.
- **Download Updates:** Download UpdateXpress System Pack or an individual update package for a specific machine type and operating system. Updates are downloaded to the specified directory and can be applied at any time.

Example: You can download Updates that can be applied when a lab machine (A) needs to update the firmware or a driver, but does not have internet access. You can use another lab machine (B) with internet access, to download the update packages for lab machine A. Use one of the following two methods; the first method is easier to use and recommended.

- a. Copy the entire ToolsCenter Suite working directory on lab machine B to lab machine A. Launch ToolsCenter Suite on lab machine A. The updates can be done from the local directory.
- b. If lab machine A has ToolsCenter Suite software, copy the downloaded update packages under the ToolsCenter Suite working directory on lab

machine B to ToolsCenter Suite working directory on lab machine A. Launch ToolsCenter Suite in lab machine A. The updates can then be done from the local directory.

Using the Recommended Update Wizard

This option checks the firmware and driver levels and applies the package of updates. This option is the preferred method for obtaining firmware and driver updates for the server. The UpdateXpress System Pack consists of an integration-tested software bundle of updatable firmware and device driver updates for each IBM System x, IBM BladeCenter server, and IBM Flex System.

Using the latest UXSP updates package from the IBM website

Use this option to download and apply the latest UpdateXpress System Pack updates package from the IBM website.

Procedure

1. Select **Recommended Updates** on the Firmware and Driver Updates page. The Firmware Updates Settings page of the Recommended Update Wizard page opens.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine | Alerts: 0 0 0

Recommended Update Wizard

1. Firmware Updates Settings | 2. Check Firmware Compliance | 3. Update Firmware

Compare the currently installed firmware to the following source:

☒ The latest UXSP updates package from the IBM website

☐ Import UXSP updates package:

Update Content:

☐ Also include updates that are not installed or undetected

<Back | Next> | Cancel

Figure 7. Recommended Update Wizard

2. Select **The latest UXSP updates package from the IBM website**.
3. Optional: You can select to **Also include updates that are not installed or undetected**. Select this option only if you have any unknown devices and you need to detect all possible hardware in this system.
4. Click **Next** to complete the check firmware compliance step, or **Cancel** to exit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.

- Click **Cancel** to continue the update process.

The check firmware compliance step acquires the current machine's UXSP firmware and driver levels from the IBM website.

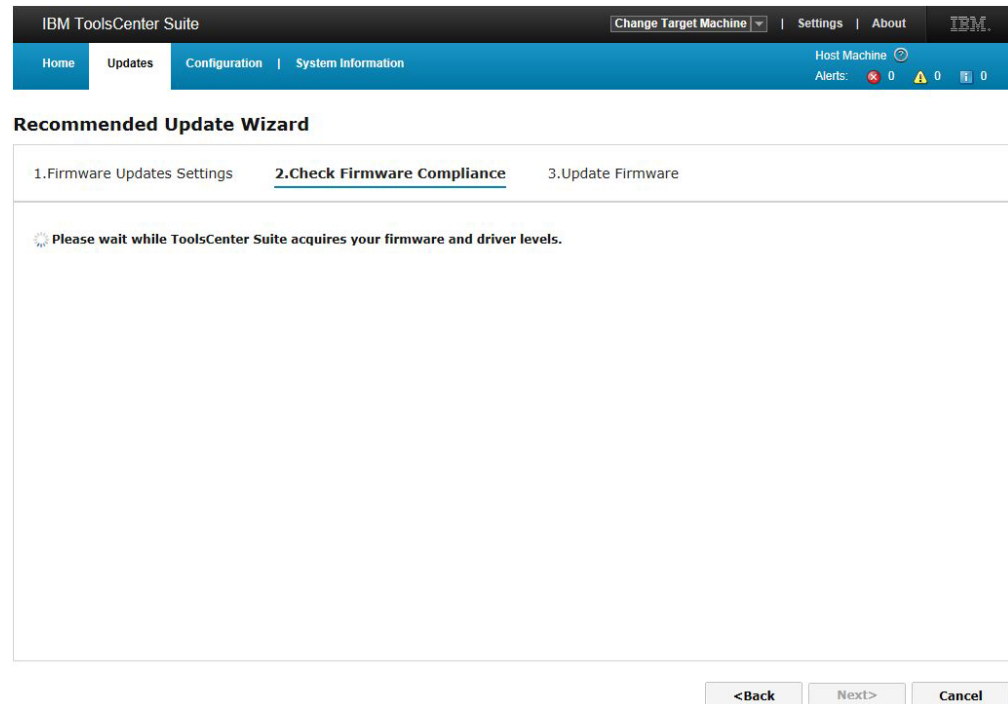


Figure 8. Acquire current machine's UXSP firmware and driver levels

During the acquire operation, the progress icon displays and the Updates page is locked, **Cancel** is enabled, and the following message displays:

Please wait while ToolsCenter Suite acquires your firmware and driver levels.

After the acquire operation completes, the checking compliance operation begins.

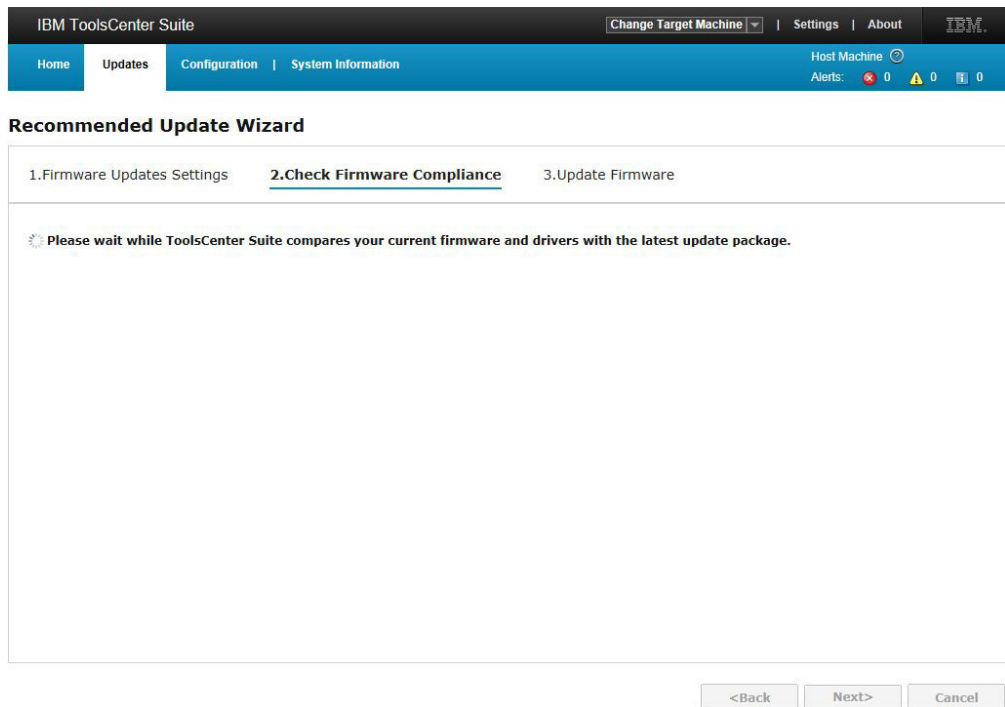


Figure 9. Check current machine's UXSP firmware and driver levels

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message displays:

Please wait while ToolsCenter Suite compares your current firmware and drivers with the latest update package.

Note: If you are not connected to the Internet, the Configure Internet Connection dialog box opens. Check your configuration or try again, otherwise, click **OK** to continue or **Cancel**. For more information, see “Internet Connection settings” on page 13.

When compliance checking is complete, the number of items with new versions displays in the firmware and driver updates table.

IBM ToolsCenter Suite Change Target Machine | Settings | About IBM

Home Updates Configuration | System Information Host Machine Alerts: 0 0 0

Recommended Update Wizard

1. Firmware Updates Settings **2. Check Firmware Compliance** 3. Update Firmware

Compliance check complete. Select the desired firmware components and then click "Next" to update.

▼ **7 firmware and drivers items available.** The recommended items were selected by default.

	Name	Severity	New Version	Installed Version	Reboot Required
<input type="checkbox"/>	intel_dd_intelcpu_9.2.3.1020_winsvr_32-64	Suggested	9.2.3.1020	Undetected	Yes
<input type="checkbox"/>	mtrox_dd_video_2.04.001_winsvr_32-64	Suggested	2.04.001	Undetected	Yes
<input type="checkbox"/>	mlnx_fw_nic_4.40.14223p8_windows_32-64	Suggested	4.40.14223p8	Undetected	Yes

▼ **4 HBA/CNA items available.** If an HBA/CNA update is needed, contact the vendor to confirm it.

	Name	Severity	New Version	Installed Version	Reboot Required
<input checked="" type="checkbox"/>	elx_dd_nic_ibm1212-4.6.203.1-6_windows_32-64	Suggested			Yes
<input checked="" type="checkbox"/>	be2nd62.sys		4.6.203.1	4.1.370.0	
<input type="checkbox"/>	brcd_dd_cna_3.2.1.1_windows_32-64	Suggested	3.2.1.1	Undetected	Yes

<Back Next> Cancel

Figure 10. Recommended Updates Check Firmware Compliance results table

By default, all updates listed in the table are checked and preselected for updating and can be deselected.

The firmware and driver updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected
- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

The HBA/CNA updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected
- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

5. Select one or more updates in the left column.

6. Click **Next** to proceed with the update process. If you selected to install firmware or drivers that includes OS agnostic software (including uEFI/IMM/DSA/FPGA updates), for inband updates, ToolsCenter Suite checks whether the entered user name and password is able to pass the IMM user authentication. If it passes, the update process continues.

Complete the following steps:

- Enter the IMM credentials:

- IMM User Name
 - Password
- Click **Target the secondary firmware bank** to have the secondary or alternate flash bank targeted if it is available. If a secondary or alternate device is not supported the IMM may ignore this option.
 - Click **Continue Updates**.

If IMM authentication passes, the firmware and driver installation continues. To install OS agnostic software, the IMM account and password must pass authentication. If you cannot pass IMM account and password authentication, deselect OS agnostic software to continue the firmware and driver installation without OS agnostic software.

- Click **Continue Update** to proceed to the update firmware step by downloading the UXSP updates from the IBM website and apply the downloaded firmware and drivers, or click **Cancel** to return to the Firmware and Driver Updates page. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

During the download operation, the progress of the current downloading item indicates the total bytes and the downloaded bytes. A progress bar provides the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

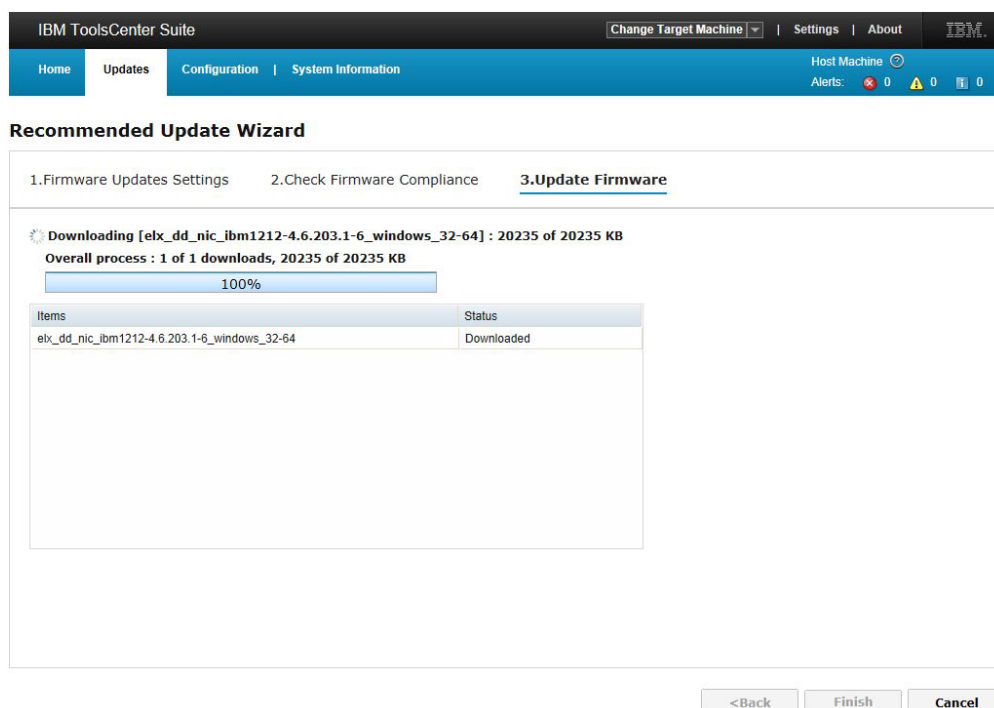


Figure 11. Recommended Updates UXSP downloading from the IBM website

When the download operation completes, the update operation begins.

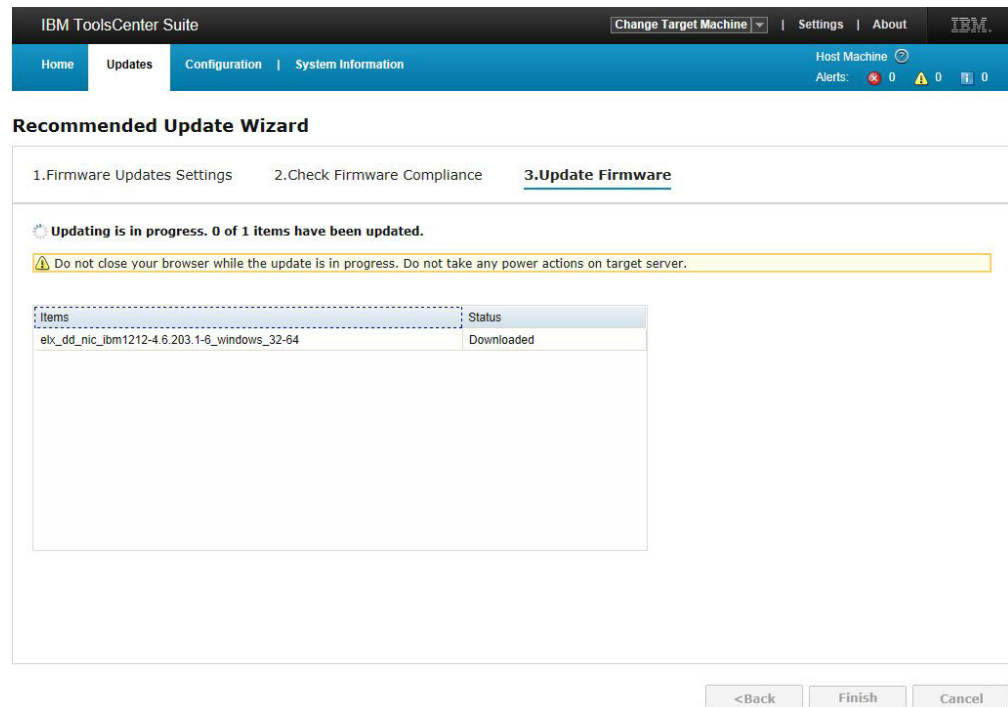


Figure 12. Update Firmware operation

During the update operation, a progress icon and the following message displays:

Updating is in progress.
x of y items have been updated.
Do not close your browser while the update is in progress.
Do not take any power actions on target server.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

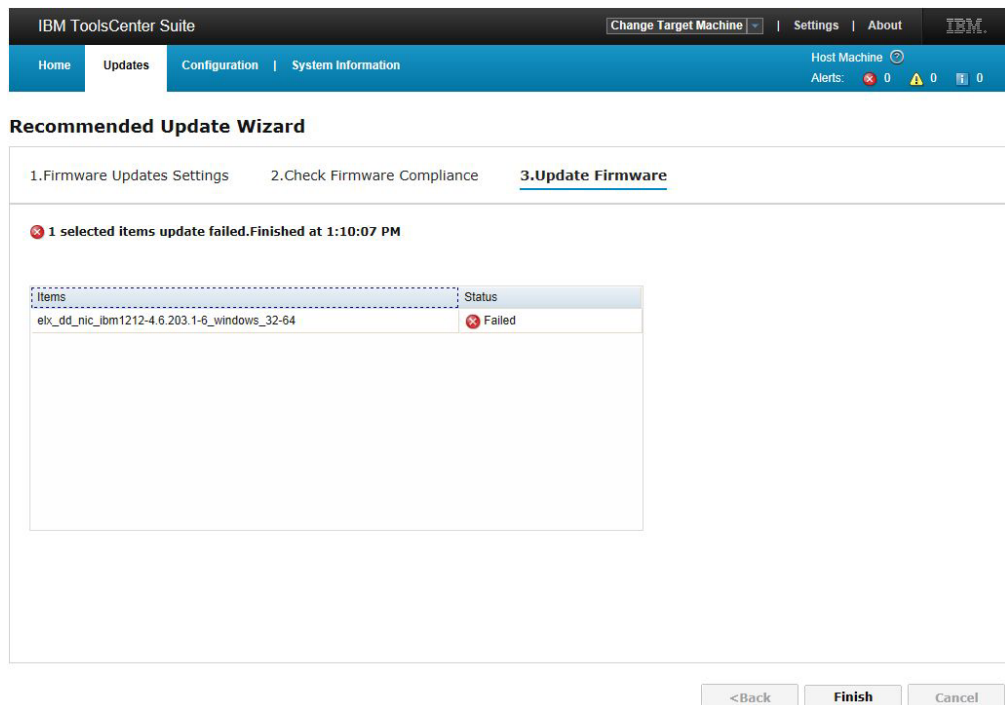


Figure 13. Recommended Updates Updating Firmware and Driver Result

8. Click **Finish** to return to the Firmware and Drivers Updates page.

Using the Import UXSP updates package option

Use this option if you have a UXSP updates package (or individual updates) in a local directory and want to apply them.

Procedure

1. Select **Recommended Updates** on the Firmware and Driver Updates page. The Firmware Updates Settings page of the Recommended Update Wizard page opens.

Figure 14. Recommended Update Firmware Updates Settings package

2. Select **Import UXSP updates package** and on the next line, enter the directory path where the updates are located. If you enter an invalid local directory address, the following message displays:
Cannot find the given local directory.
Make sure the directory path is valid.
3. Optional: You can select **Also include updates that are not installed or undetected**. Select this option only if you have any unknown devices and you need to detect all possible hardware in this system
4. Click **Next** to proceed or **Cancel** to exit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message displays:

Please wait while ToolsCenter Suite compares your current firmware and drivers with the latest update package.

When the operation is complete, a table containing firmware and drive updates displays.

The firmware and driver updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected
- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

The HBA/CNA updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected
- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

5. Select one or more updates in the left column.
6. Click **Next** to proceed with the update process. If you selected to install firmware or drivers that includes OS agnostic software (including uEFI/IMM/DSA/FPGA updates), for inband updates, ToolsCenter Suite checks whether the entered user name and password is able to pass the IMM user authentication. If it passes, the update process continues.

Complete the following steps:

- a. Enter the IMM credentials:
 - IMM User Name
 - Password
- b. Click **Target the secondary firmware bank** to have the secondary or alternate flash bank targeted if it is available. If a secondary or alternate device is not supported the IMM may ignore this option.
- c. Click **Continue Updates**.

If IMM authentication passes, the firmware and driver installation continues. To install OS agnostic software, the IMM account and password must pass authentication. If you cannot pass IMM account and password authentication, deselect OS agnostic software to continue the firmware and driver installation without OS agnostic software.

7. Click **Continue Update** to continue the updates process from the local directory, or click **Cancel** to return to the Firmware and Driver Updates page. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

During the update operation, a progress icon displays.

Updating is in progress.

x of y items have been updated.

Do not close your browser while the update is in progress.

Do not take any power actions on target server.

The status for each update displays as: Pending, Updating, Updated, or Failed.

Note: For inband and out of band (OOB) updates, if you selected to install a prior version of firmware or drivers, a backlevel warning dialog box opens. Select **Continue installation** or select **Cancel** to stop the installation.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

8. Click **Finish** to return to the Firmware and Driver Updates page.

Using the Individual Update Wizard

Use this option to get the latest version of each firmware and device driver package. This method can be used if you want to install individual updates or when IBM support instructs you to install individual updates. The Individual Updates option may download newer updates and fix packs, if available, than the UpdateXpress System Pack Recommended Updates option. You can check and compare the currently installed firmware and driver to individual updates from the IBM website or install individual updates from a local directory.

Using Individual updates from the IBM website

Use this option to download and apply individual firmware and driver updates from the IBM website.

Procedure

1. Select **Individual Updates** on the Firmware and Driver Updates page. The Firmware Updates Settings page of the Individual Update Wizard opens.

IBM ToolsCenter Suite | Change Target Machine | Settings | About | IBM

Home | Updates | Configuration | System Information | Host Machine | Alerts: 0 0 0

Individual Update Wizard

1. Firmware Updates Settings | 2. Check Firmware Compliance | 3. Update Firmware

Compare the currently installed firmware to the following source:

☒ Individual updates from the IBM website
☐ Import individual updates

Update Content:

☐ Include third party software

<Back | Next> | Cancel

Figure 15. Individual Update Wizard

2. Select **Individual updates from the IBM website**.
3. Optional: You can select **Include third party's software**. Third party software is vendor management software, such as Broadcom or LSI.

Note: This process may take some time because the size of the third-party software may be larger than the size of the third-party firmware and device driver software.

4. Click **Next** to proceed or **Cancel** to quit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

The current machine's individual firmware and driver levels are acquired from the IBM website. During the acquire operation, **Cancel** is enabled, and the following message displays:

Please wait while ToolsCenter Suite acquires your firmware and driver levels.

After the acquire operation completes, the checking compliance operation begins. While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message displays:

Please wait while ToolsCenter Suite compares your current firmware and drivers with the latest update package.

When compliance checking is complete, the number of items with new versions displays above the firmware and driver updates table.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

IBM

Home

Updates

Configuration

System Information

Host Machine

Alerts: 0 0 0

Individual Update Wizard

1.Firmware Updates Settings

2.Check Firmware Compliance

3.Update Firmware

Compliance check complete. Select the desired firmware components and then click "Next" to update.

12 IBM firmware and drivers items available.

	Name	Severity	New Version	Installed Version	Reboot Required
<input type="checkbox"/>	elx_dd_nic_ibm1212-4.6.203.1-6_windows_32-64	Suggested			Yes
<input type="checkbox"/>	be2nd62.sys		4.6.203.1	4.1.370.0	
<input type="checkbox"/>	ibm_fw_uefi_cce126e-1.00_anyos_32-64	Initial Release	1.00 (CCE126E)	1.00 (CCE125E)	Yes
<input type="checkbox"/>	ibm_fw_dsa_dsytc4k-9.41_anyos_32-64	Suggested	9.41 (DSYTC4K)	9.41 (DSYTC3J)	Yes
<input type="checkbox"/>	brcd_dd_cna_3.2.1.1_windows_32-64	Suggested	3.2.1.1	Undetected	Yes
<input type="checkbox"/>	elx_dd_fc_ibm1212-2.74.016.001-6_windows_32-64	Suggested	2.74.016.001-6	Undetected	Yes
<input type="checkbox"/>	elx_dd_cna_ibm1212-2.74.016.001-6_windows_32-64	Suggested	2.74.016.001-6	Undetected	Yes
<input type="checkbox"/>	elx_dd_iscsi_ibm1212-4.6.130.0-6_windows_32-64	Suggested	4.6.130.0-6	Undetected	Yes
<input type="checkbox"/>	mtrox_dd_video_2.04.001_winsrvr_32-64	Suggested	2.04.001	Undetected	Yes

<Back

Next>

Cancel

Figure 16. Individual Updates Check Compliance Results Table

The firmware and driver updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected
- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

Note: If you selected to install third party software, a second table below the firmware and drivers update table displays a list of third party software.

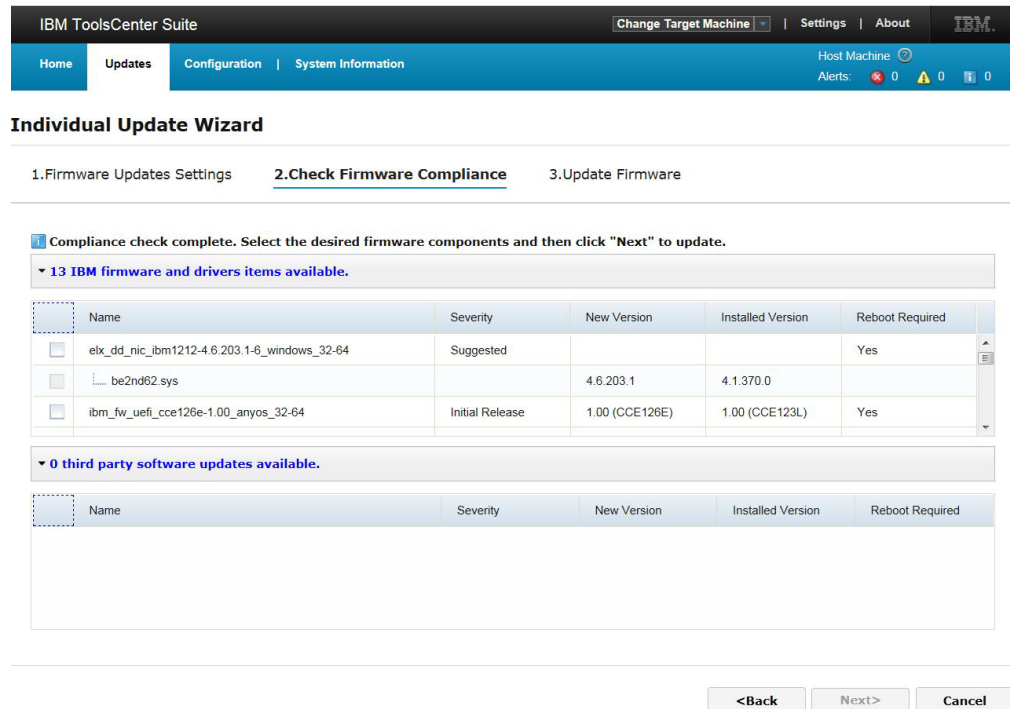


Figure 17. Individual Updates third party software updates table

5. Select one or more updates in the left column.
6. Click **Next** to proceed with the update process. If you selected to install firmware or drivers that includes OS agnostic software (including uEFI/IMM/DSA/FPGA updates), for inband updates, ToolsCenter Suite checks whether the entered user name and password is able to pass the IMM user authentication. If it passes, the update process continues.

Complete the following steps:

- a. Enter the IMM credentials:
 - IMM User Name
 - Password
- b. Click **Target the secondary firmware bank** to have the secondary or alternate flash bank targeted if it is available. If a secondary or alternate device is not supported the IMM may ignore this option.
- c. Click **Continue Updates**.

If IMM authentication passes, the firmware and driver installation continues. To install OS agnostic software, the IMM account and password must pass authentication. If you cannot pass IMM account and password authentication, deselect OS agnostic software to continue the firmware and driver installation without OS agnostic software.

7. Click **Continue Update** to continue the updates process by downloading the updates from the IBM website and apply the downloaded firmware and drivers, or click **Cancel** to return to the Firmware and Driver Updates page. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

During the download operation, the progress of the current downloading item indicates the total bytes and the downloaded bytes. A progress bar provides the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

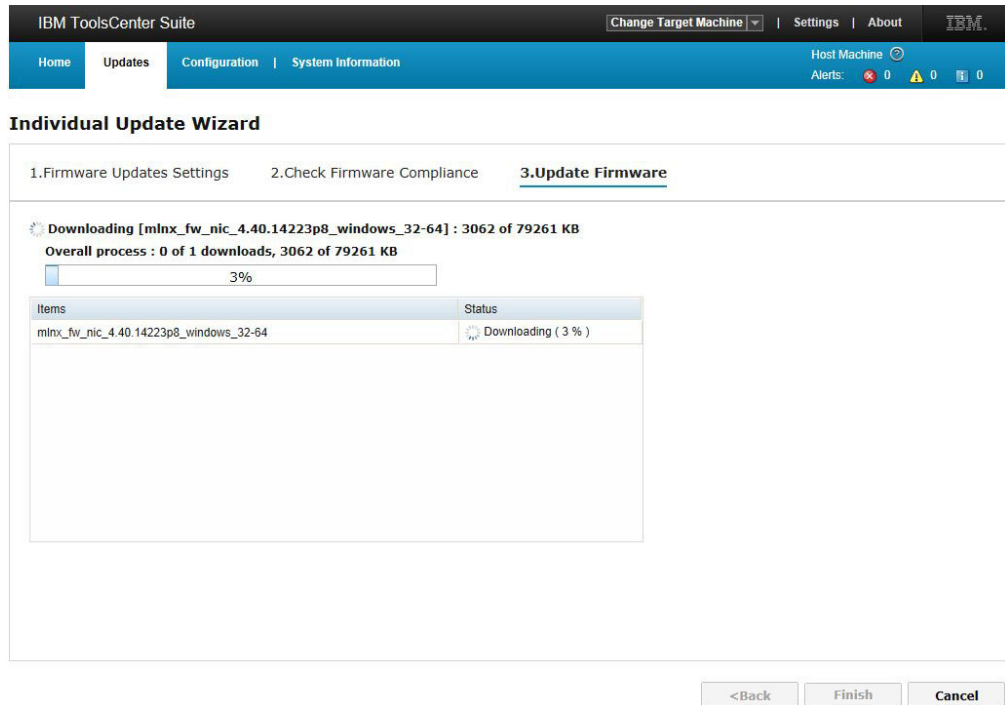


Figure 18. Individual Updates downloading from the IBM website

When all of the firmware and drivers have been downloaded, the update begins.

During the update operation, the following information displays:

- Updating is in progress.
x of y items have been updated.
Do not close your browser while the update is in progress.
Do not take any power actions on target server.
- The status for each update displays.

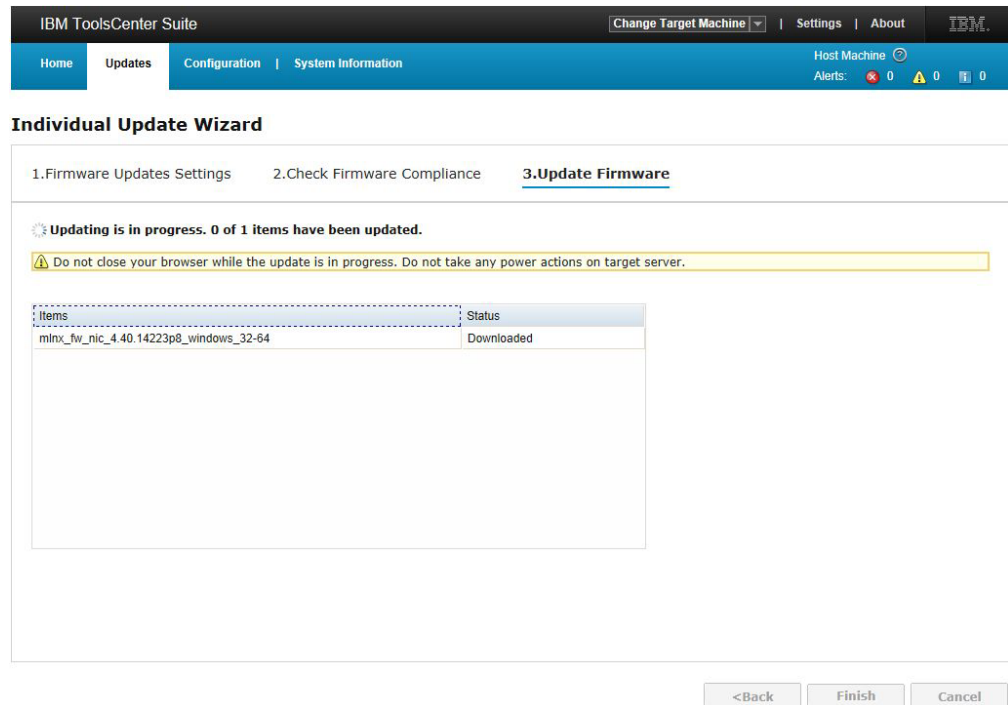


Figure 19. Individual updates updating firmware and driver

Note: For inband and out of band (OOB) updates, if you selected to install a prior version of firmware or drivers, a backlevel warning dialog box opens. Select **Continue installation** or select **Cancel** to stop the installation.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

- Click **Finish** to return to the Firmware and Drivers Updates page.

Using individual updates in a local directory

Use this option if you already have updates (UXSP or individual) in a local directory and want to apply them.

Procedure

- Select **Individual Updates** on the Firmware and Driver Updates page. The Firmware Updates Settings page of the Individual Update Wizard opens.

Figure 20. Individual updates in a local directory option

2. Select **Import individual updates** and on the next line, enter the directory path where the individual updates are located. If you enter an invalid local directory address, the following message displays:
Cannot find the given local directory.
Make sure the directory path s valid.
3. Optional: You can select **Include third party's software**. Third party software is vendor management software, such as Broadcom or LSI.

Note: This process may take some time because the size of the third-party software may be larger than the size of the third-party firmware and device driver software.

4. Click **Next** to proceed or **Cancel** to quit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message displays:

Please wait while ToolsCenter Suite checks your firmware and driver levels.

When the operation is complete, a table containing firmware and drive updates displays.

The firmware and driver updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or undetected

- **Reboot Required:** Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

Note: If you selected to include third party software, the compare result table has two sections, one section is the firmware and driver, and another section is the third party software, with one section for the firmware and driver listing and the other for the third party software.

5. Select one or more updates in the left column.
6. Click **Next** to proceed with the update process. If you selected to install firmware or drivers that includes OS agnostic software (including uEFI/IMM/DSA/FPGA updates), for inband updates, ToolsCenter Suite checks whether the entered user name and password is able to pass the IMM user authentication. If it passes, the update process continues.

Complete the following steps:

- a. Enter the IMM credentials:
 - IMM User Name
 - Password
- b. Click **Target the secondary firmware bank** to have the secondary or alternate flash bank targeted if it is available. If a secondary or alternate device is not supported the IMM may ignore this option.
- c. Click **Continue Updates**.

If IMM authentication passes, the firmware and driver installation continues. To install OS agnostic software, the IMM account and password must pass authentication. If you cannot pass IMM account and password authentication, deselect OS agnostic software to continue the firmware and driver installation without OS agnostic software.

7. Click **Continue Update** to continue the updates process from the local directory, or click **Cancel** to return to the Firmware and Driver Updates page. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

During the update operation, a progress icon displays.

Updating is in progress.

x of y items have been updated.

Do not close your browser while the update is in progress.

Do not take any power actions on target server.

Note: For inband and out of band (OOB) updates, if you selected to install a prior version of firmware or drivers, a backlevel warning dialog box opens. Select **Continue installation** or select **Cancel** to stop the installation.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

8. Click **Finish** to return to the Firmware and Driver Updates page.

Using the Download Update Wizard

Use this option to download a UpdateXpress System Pack or an individual update package for a specific machine type and operating system. The updates are downloaded to the ToolsCenter Suite's working directory, where they are stored until you are ready to apply the updates, using the **Recommended updates in a local directory** option or the **Individual updates in a local directory** option.

Download UXSP from the IBM Website

The following procedure explains how to use the Download UXSP from the IBM Website option.

Procedure

1. Select **Download Updates** on the Firmware and Driver Updates page. The Download Updates Settings page of the Download Update Wizard opens.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine
Alerts: 0 0 0

Download Update Wizard

1.Download Updates Settings 2.Download Firmware

Select target server type:

Machine type:
IBM Flex System x222 Compute Node / Machine Type:7916

Operating system:
Microsoft Windows

Select the package to download:

☒ Download UXSP from the IBM Website
☐ Download individual firmware and drivers from the IBM Website

<Back Next> Cancel

Figure 21. Download UXSP updates

2. In the **Select target server type** section, complete the following steps:
 - From the **Machine type** list, select the target server type.
 - From the **Operating system** list, select the operating system for the target server.
 -
3. In the **Select a package to download** section, select **Download UXSP from the IBM Website**.
4. Click **Next** or **Cancel** to quit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.The Download Firmware page opens.

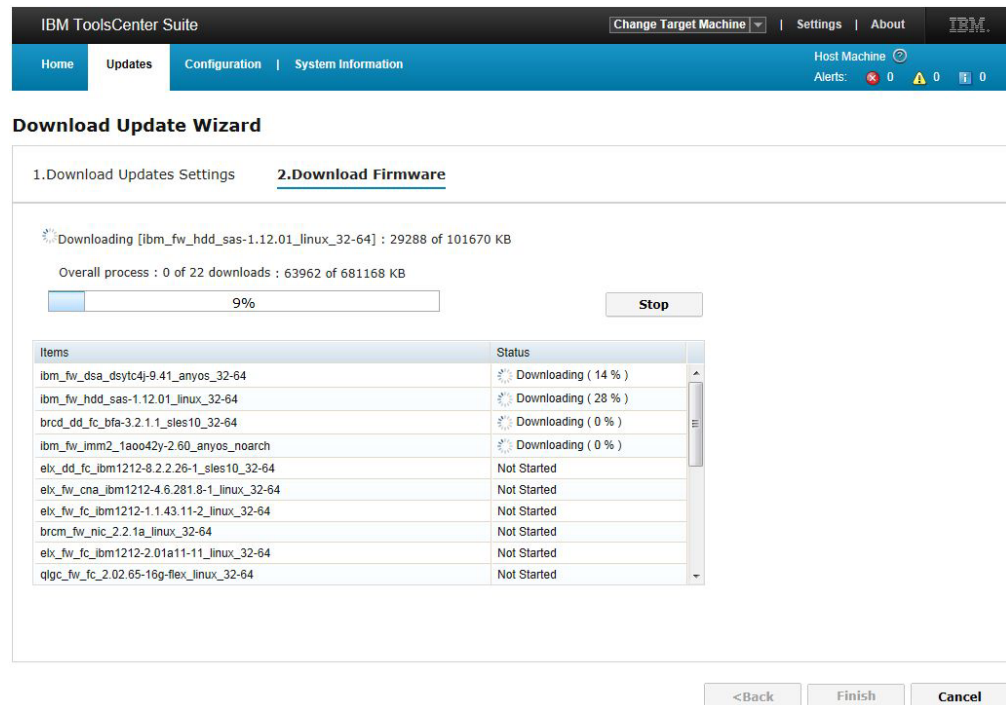


Figure 22. Download firmware updates progress

During the download operation, the progress of the current downloading item indicates the total bytes and the downloaded bytes. A progress bar provides the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

When all of the downloads are complete, the total number of items downloaded successfully and the name of the folder containing the updates displays. Each update has a status of Downloaded.

5. Click **Finish** to return to the Firmware and Driver Updates page.

Download individual firmware and drivers from the IBM website

The following procedure explains how to use the Download individual firmware and drivers from the IBM Website option.

Procedure

1. Select **Download Updates** on the Firmware and Driver Updates page. The Download Updates Settings page of the Download Update Wizard opens.

Figure 23. Download individual updates

2. Select **Download individual firmware and drivers from the IBM Website** on the Firmware and Driver Updates page.
3. Optional: In the **Update Content** section, you can also select **Include third party's software**.

Note: This process may take some time because the size of the third-party software may be larger than the size of the third-party firmware and device driver software.

4. Click **Next** or **Cancel** to quit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

The Download Firmware page opens.

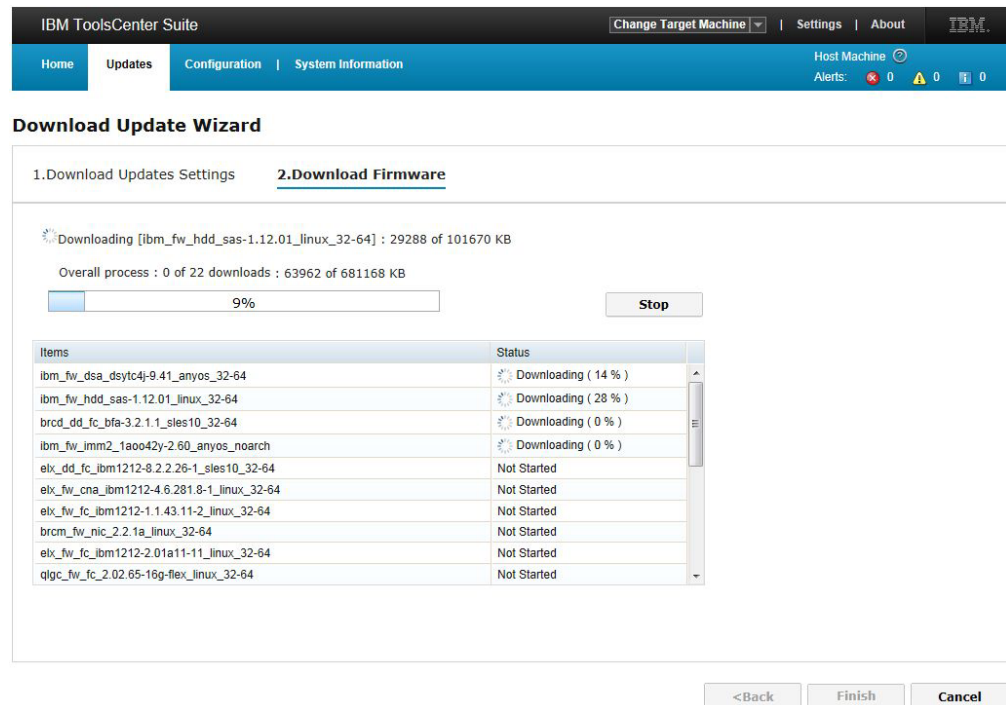


Figure 24. Download individual firmware and driver updates progress

During the download operation, the progress of the current downloading item indicates the total bytes and the downloaded bytes. A progress bar provides the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

When all of the downloads are complete, the total number of items downloaded successfully and the name of the folder containing the updates displays. Each update has a status of Downloaded.

- Click **Finish** to return to the Firmware and Driver Updates page.

Using the Configuration function

Using the Configuration function, you can view and change one or multiple settings on your system and manage the configuration a local machine using inband mode and out of band (OOB) mode for a remote machine. This section describes how to display and configure individual and frequently used settings or perform a complete system configuration. You can also change the settings for IBM System x IMM-based and a uEFI-based servers. IMM replaces the Remote Supervisor Adapter and baseboard management controller functions on IMM-based servers. uEFI replaces the basic input/output system (BIOS) and defines a standard interface among the operating system, platform firmware, and external devices.

Procedure

- On the Home page or from the ToolsCenter Suite menu, select **Configuration**. The Configuration Overview page opens.

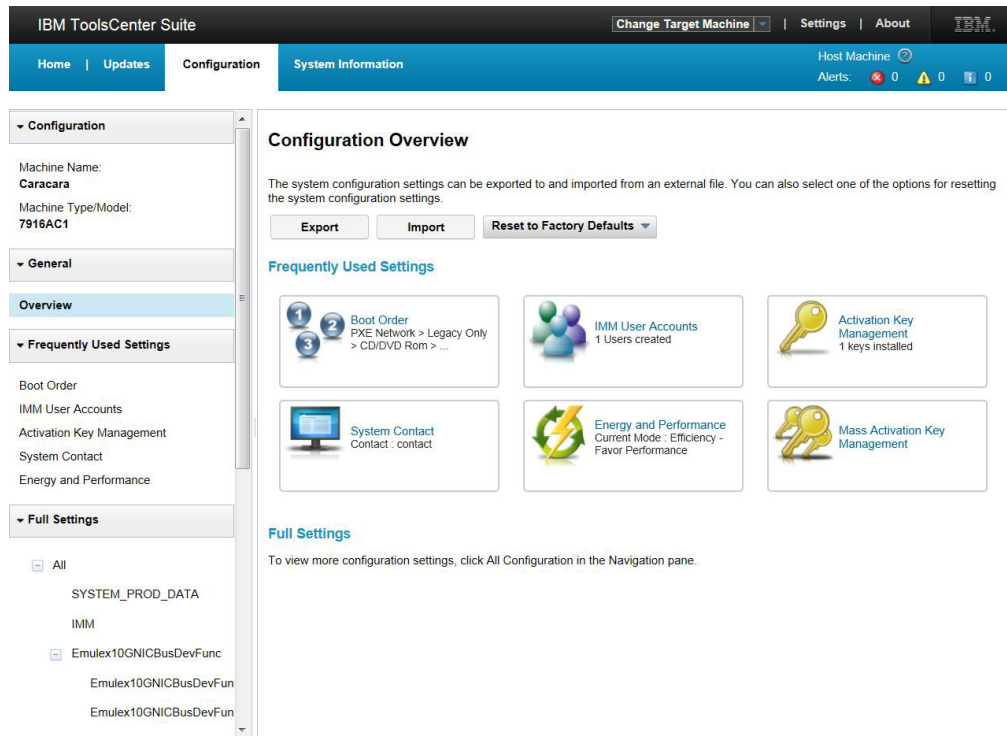


Figure 25. Configuration Overview

2. Select one of the configuration options on the Configuration Overview page:
 - System configuration setting options provide easy access for the following actions. For more information, see “Configuration settings.”
 - Export
 - Import
 - Reset to Factory Defaults
 - Frequently Used Settings are selected from the Configuration Overview page or from the navigation pane. For more information, see “Frequently used settings” on page 39.
 - Boot Order
 - IMM User Accounts
 - Activation Key Management
 - System Contact
 - Energy and Performance
 - Mass Activation Key Management
 - Full Settings allows you to view more configuration settings, from the navigation pane, select **Full Settings** > **All**. For more information, see “Full Settings” on page 58.

Configuration settings

The Configuration Overview page provides you with easy access to the export, import, and reset to factory defaults options.

About this task

Use the export, import and reset to factory defaults options described in this procedure as it applies to your specific situation.

- **Export:** Exports the current machine settings before making a configuration changes or installing updates.
- **Import:** Restores or replicates configuration settings to a machine after exporting the settings.
- **Reset to Factory Defaults:** Restores the machine settings before configuration changes or updates are applied.

Procedure

On the Configuration Overview page, select one of the following actions:

- **Export:** The Opening saveall.out dialog box opens.
Select one of the following options:
 - Click **Open**. A browser window opens displaying the export file contents.
 - Click **Save**. The Save As dialog box opens.

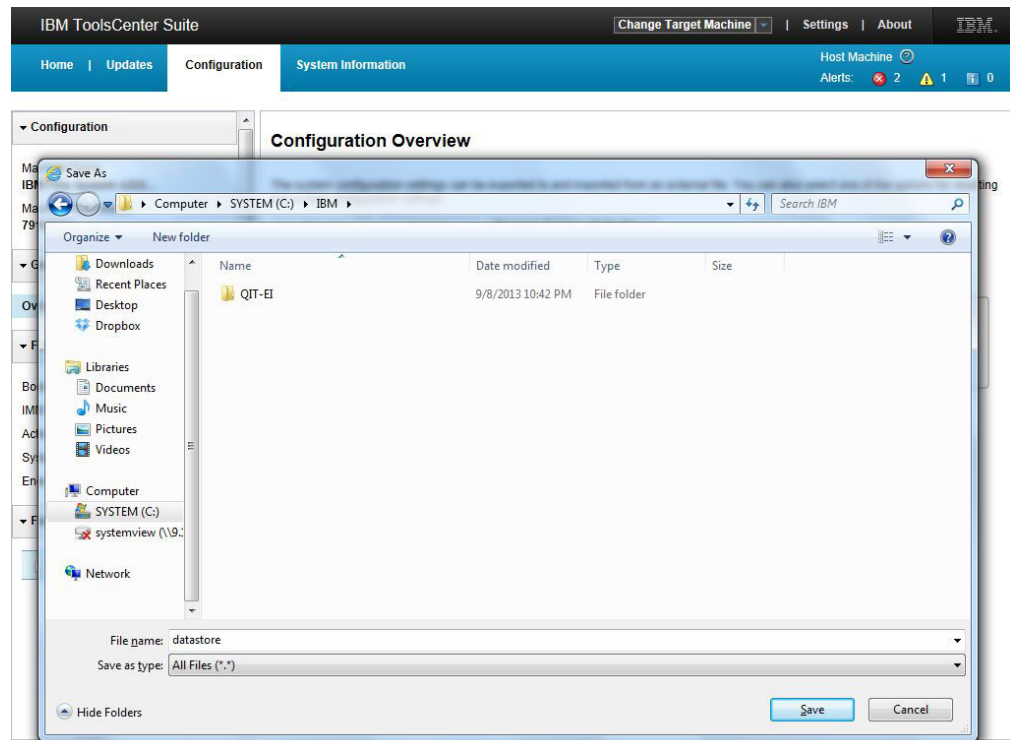


Figure 26. Configuration - Export Action

Select a folder for saving the export file and click **Save** or **Cancel** to exit the Save As operation.

- Click **Cancel** to exit the Export operation.
- **Import:** The Import Configuration File dialog box opens.

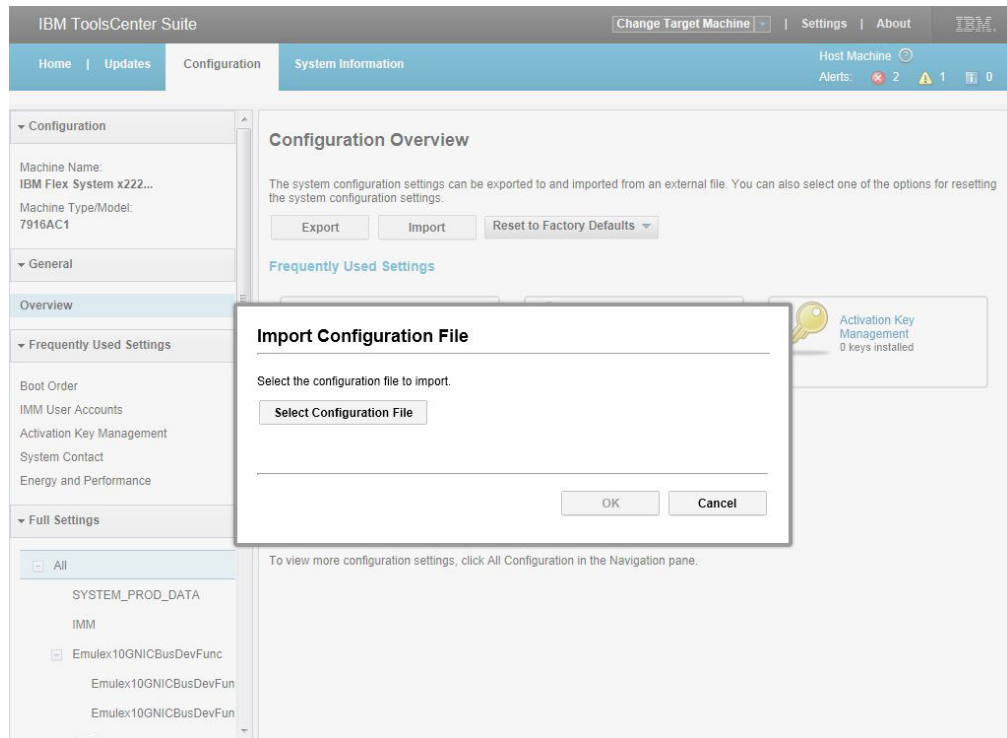


Figure 27. Configuration - Import Action

Select one of the following options:

- Click **Select Configuration File** and browse to select the file from the Choose File to Upload dialog box and click **Open** or **Cancel** to exit the file selection operation. The Import Configuration File dialog box opens displaying the name of the selected configuration file.
- Click **OK** to continue the import operation or click **Cancel** to exit this operation.

If you chose to import the configuration file exported from another machine, the Confirm to Replicate Configuration Settings dialog box opens.

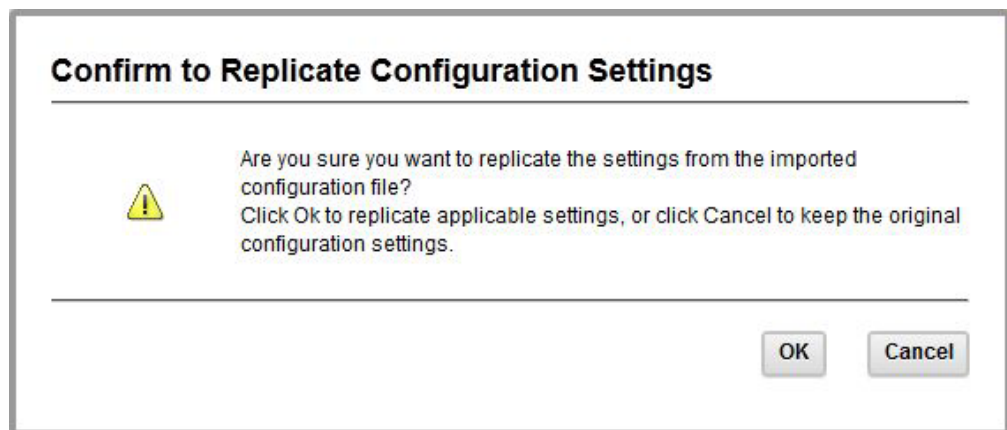


Figure 28. Configuration - Import Action - Replicate Configuration Settings

- Click **OK** to replicate the applicable settings for this machine or click **Cancel** to keep the original configuration settings.

If you chose to import the configuration file exported from the same server, the Confirm to Restore Configuration Settings dialog box opens.

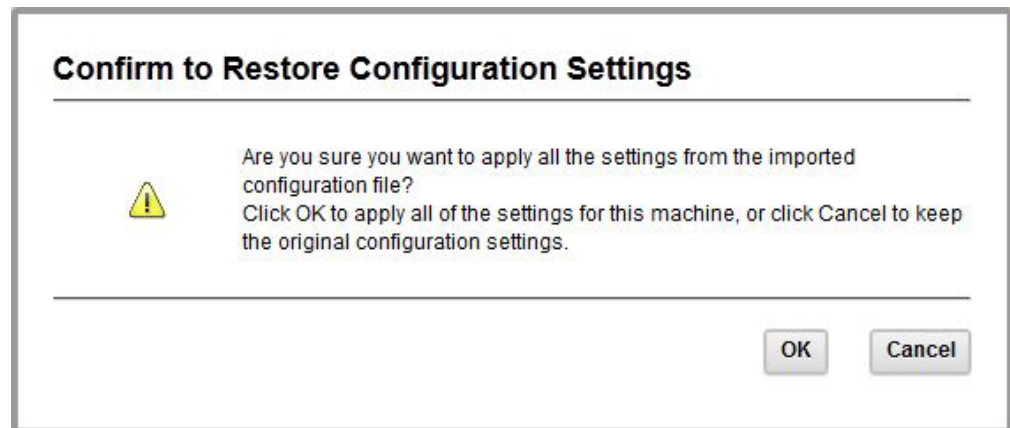


Figure 29. Configuration - Import Action - Restore Configuration Settings

- **Reset to Factory Defaults:** Select one of the following reset options:
 - Reset All Settings to Factory Defaults:
 - Click **OK** to reset all of the settings to the factory default settings.
 - When this configuration is complete, you must restart the system.
 - Click **Cancel** to exit this operation.
 - Reset to IMM Factory Defaults:
 - Click **OK** to reset all IMM settings to the factory default settings. The IMM will restart after the IMM settings are cleared.
 - When the IMM restarts, you must configure the IMM network interface to restore connectivity. After the IMM configuration is cleared, the IMM will be restarted.
 - Click **Cancel** to exit this operation.
 - Reset to uEFI Factory Defaults:
 - Click **OK** to reset the uEFI settings to the factory default settings.
 - When the uEFI configuration is complete, you must restart the system.
 - Click **Cancel** to exit this operation.

Frequently used settings

The Configuration Overview page displays an abbreviated, current status for each of these settings. You can use this option to view and change individual, frequently used settings.

Procedure

From the Configuration Overview page or from the navigation pane, you can select one of the following frequently used settings:

- Boot Order
- IMM User Accounts
- Activation Key Management
- System Contact

- Energy and Performance

Boot Order

Use this option to view and change the Boot Order and Wake on LAN Boot Order sequences of the system devices. The boot order sequence is stored in the IMM and used by the server firmware during the startup process.

Procedure

1. Select **Boot Order** from the navigation pane or from the Configuration Overview page. The Configuration - Boot Order page opens.

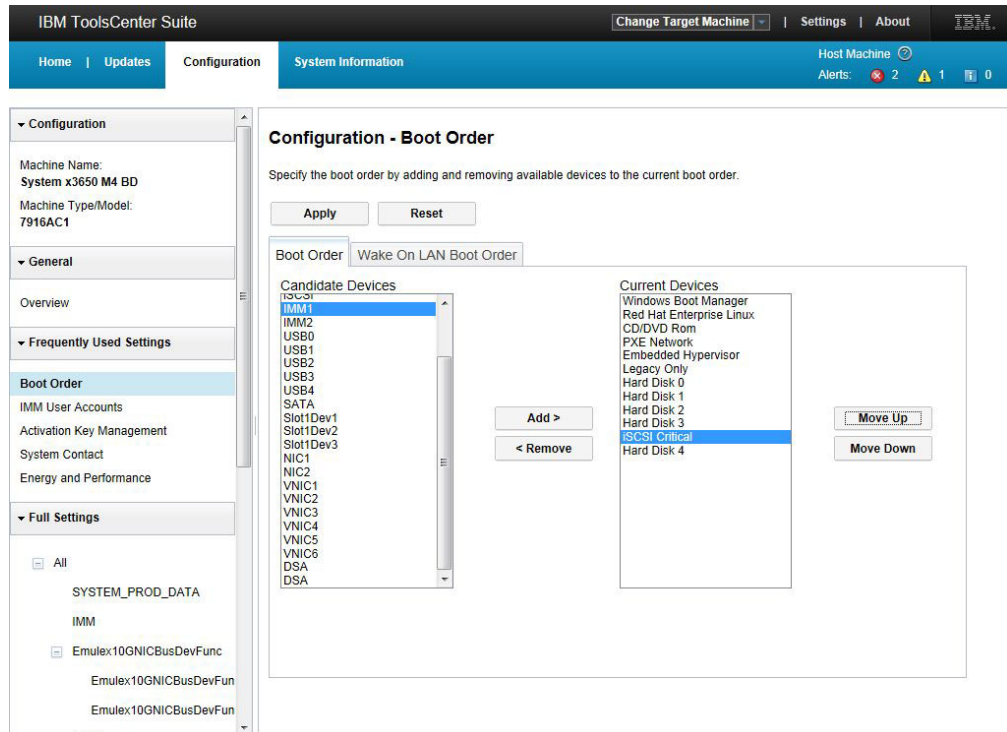


Figure 30. Configuration - Boot Order

2. Select one of the following boot order tabs:
 - Boot Order
 - Wake On LAN Boot Order

In the dual list box, the current boot order is shown as Current Devices on the right, the available devices is shown as Candidate Devices on the left.

3. To change the order of the Current Devices list, perform the following applicable steps:
 - a. To change only the Current Devices sequence, select the device and click either the **Move Up** or **Move Down**.
 - b. To add a device to the Current Devices list, select the device to be added from the Candidate Devices list, and click **Add >**.
 - c. To remove a device from the Current Devices list, select the device to be removed and click **Remove >**.
4. To cancel any changes, click **Reset**.
5. To save the new current device sequence changes, click **Apply**.

IMM User Account

You can use this option to create, modify, or delete, an IMM user account.

Procedure

1. Select **IMM UserAccount** from the Configuration Overview page or from the navigation pane. The Configuration - IMM User Accounts page opens.

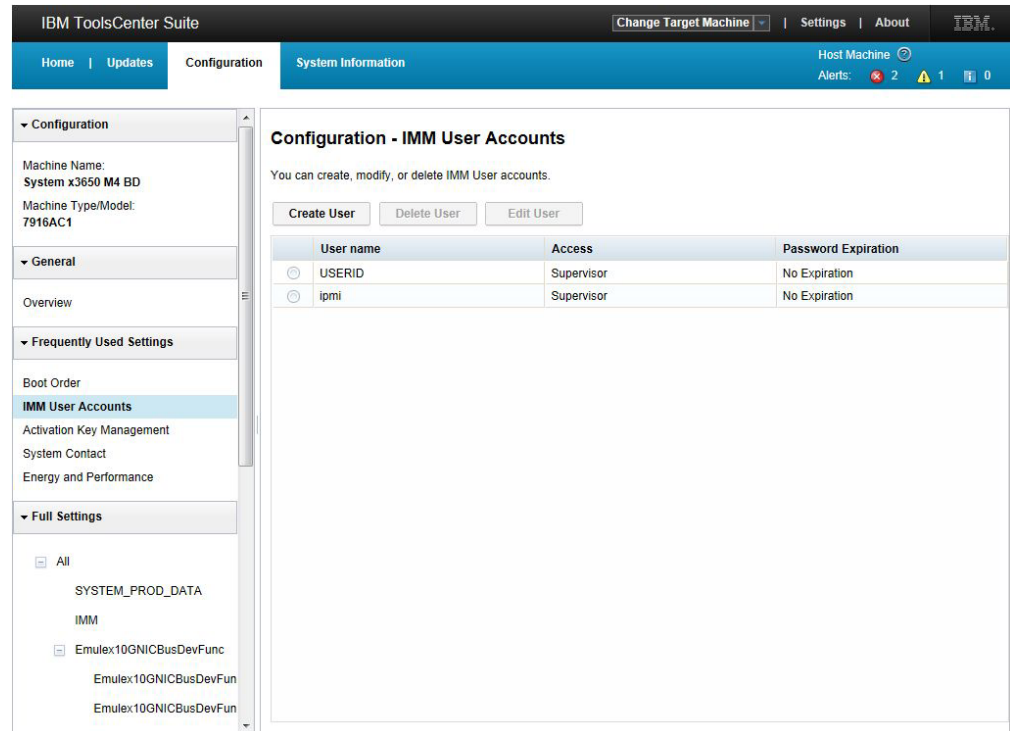


Figure 31. Configuration - IMM User Accounts

Existing IMM users are shown in the IMM User Account List. The list provides the following information for each user:

- User name
 - Access
 - Password Expiration
2. To create a new user, click **Create User**. The Create User dialog box opens.
 - a. Click the **User Credentials** tab. Enter the following User Credentials and then click **OK** or click **Cancel** to exit the Create User dialog box.
 - User Name
 - Password
 - Confirm password

Note: The user name rules and password rules will be checked automatically after entering the information in each field, verifying whether it satisfies these rules.

When the new user has been created, it will be added to the IMM User Accounts List.

- a. Click the **Authority** tab to select one of the follow user access levels:
 - Supervisor: Has no restrictions.

- Read-only: Has only read-only access, and cannot perform any save, modify, clear, or state affecting operations.
 - Custom: User may or may not have any restrictions, depending on which custom authority level is assigned to the user.
3. To delete an existing user from the IMM User Account List, select the **User name** you want to delete, and click **Delete User**. In the Delete IMM User dialog box, click **OK** to confirm the IMM User deletion or click **Cancel** to exit.
 4. To edit an existing user, select the **User Name** and click **Edit User**. The Edit User dialog box opens. You can change the following IMM User options.
 - Click the **User Credentials** tab to change your User name and Password.
 - Click the **Authority** tab to select one of the follow user access levels:
 - Supervisor: Has no restrictions.
 - Read-only: Has only read-only access, and cannot perform any save, modify, clear, or state affecting operations.
 - Custom: User may or may not have any restrictions, depending on which custom authority level is assigned to the user.
 5. When you have finished editing the user information, click **OK** or click **Cancel** to exit the Edit User dialog box.

Activation Key Management

Features on Demand allows you to activate a feature on a server or an option with a software key, that is referred to as the Features on Demand activation key. You can use this function to view the currently installed keys list and install keys from the IBM website, export local installed keys, and delete installed key files. For more information about Features on Demand, see the Using IBM System x Features on Demand Redbook.

About this task

The following steps provide an overview of the options available when using the Activation Key Management option:

Procedure

1. Select **Activation Key Management** from the Configuration Overview page or from the navigation pane. The Configuration - Activation Key Management page opens.

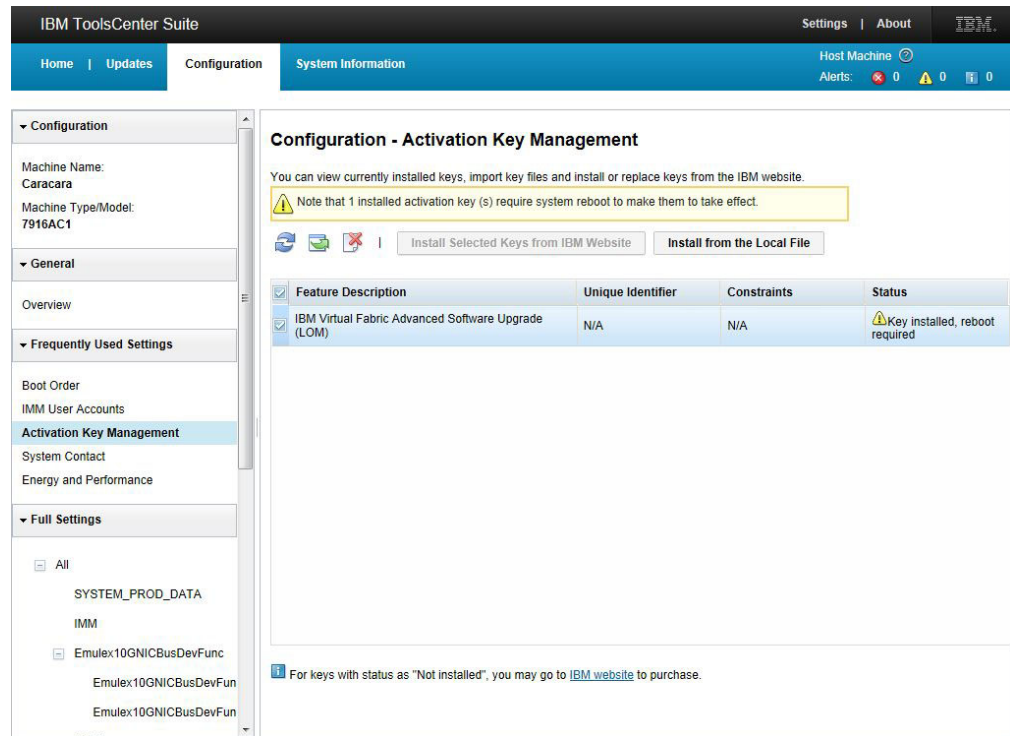


Figure 32. Configuration - Activation Key Management

The installed feature activation keys are displayed in the current installed keys table. The table provide the following information:

- Feature Description
- Unique Identifier
- Constraints
- Status

If there is a live internet connection, the available activation keys for the current system can be purchased from the IBM website by using the selecting **Install Selected Keys from IBM Site** or by selecting **IBM website**.

- The Configuration - Activation Key Management page provides the following actions to select from:
 - Refresh
 - Export
 - Delete
 - Install Selected Keys from IBM Website
 - Install from the Local File
- To download a key file or open a key file in a browser window, select the key file and click **Export**. The File Download dialog box opens. Select one of the following options:
 - Open
 - Save
 - Cancel
- To remove keys, select one or more key files from the list and click **Delete**. The Confirm to Remove keys dialog box opens. Select one of the following options:
 - OK

- Cancel
5. To install an activation key from the IBM website, select the key with a status of Not installed and click **Install Selected Keys from IBM Website**. The Install Activation Key from IBM website dialog box opens.
 - a. Enter the information in the Install Activation Key from IBM Website dialog box:
 - IBM ID
 - Password
 - Details for each key
 - b. Click **Install Now** to install activation keys from the IBM website.
 If there is an IBM ID error or if the password is not recognized, the following error message dialog is shown:
 The IBM ID or password is not recognized.
 If there is an FOD ID error, the following error message dialog is displayed:
 The Feature-On Demand IDs for the indicated license are not recognized. Note that an authorization code and Feature-On-Demand ID are required.
 6. To install one or more keys from the local file, select one or more key files from the list, click **Install from the Local files**. The Choose File to Upload dialog box opens. Complete the following steps:
 - a. Select the File Upload directory location and click **Open**.
 - b. Select the activation key files to upload to the server. The Activation Keys Installation dialog box opens. A progress bar provides the key installation percentage and a table lists the installed activation key information.
 - c. Select any local activation keys from the list and click **OK**.
 - d. To refresh the current installed keys list and the available keys list, click **Refresh** at any time.

Note: When you click **Refresh**, the installed feature activation keys for the current system and the available activation keys for that system, display in the activation key list.

System Contact

The System Contact information function is used to identify a system to operations and support personnel. You can use this function to add or modify the system contact information.

Procedure

1. Select **System Contact** from the Configuration Overview page or from the navigation pane. The Configuration - System Contact page opens.

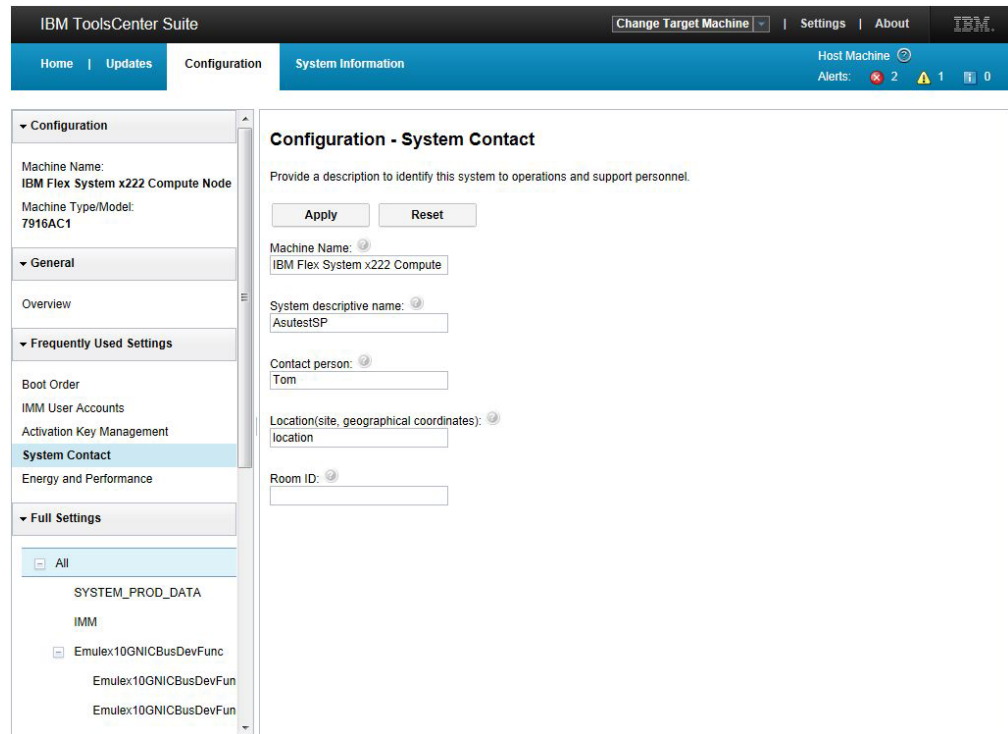


Figure 33. Configuration - System Contact

2. Enter the following applicable information for the Machine Name that is displayed.
 - Machine Name
 - System descriptive name
 - Contact person
 - Location (site, geographical coordinates, etc.)
 - Room ID
3. To apply and save the new system contact information, click **Apply**
4. To restore the original system contact information, click **Reset**.

Energy and Performance

Energy and Performance settings are determined by the machine type. Use the applicable option to change the values of the Energy and Performance settings. Performance and power tuning is based on a best estimation. Due to circumstantial differences, the results may not be the same as the best estimation.

Energy and Performance settings for M4 machine types:

Use this procedure to change the values of the Energy and Performance settings for M4 machine types. M4 machines have four energy and performance options. The default state for M4 is Efficiency.

Procedure

1. Select **Energy and Performance** from the Configuration Overview page or from the navigation pane. The Configuration - Energy and Performance page opens.

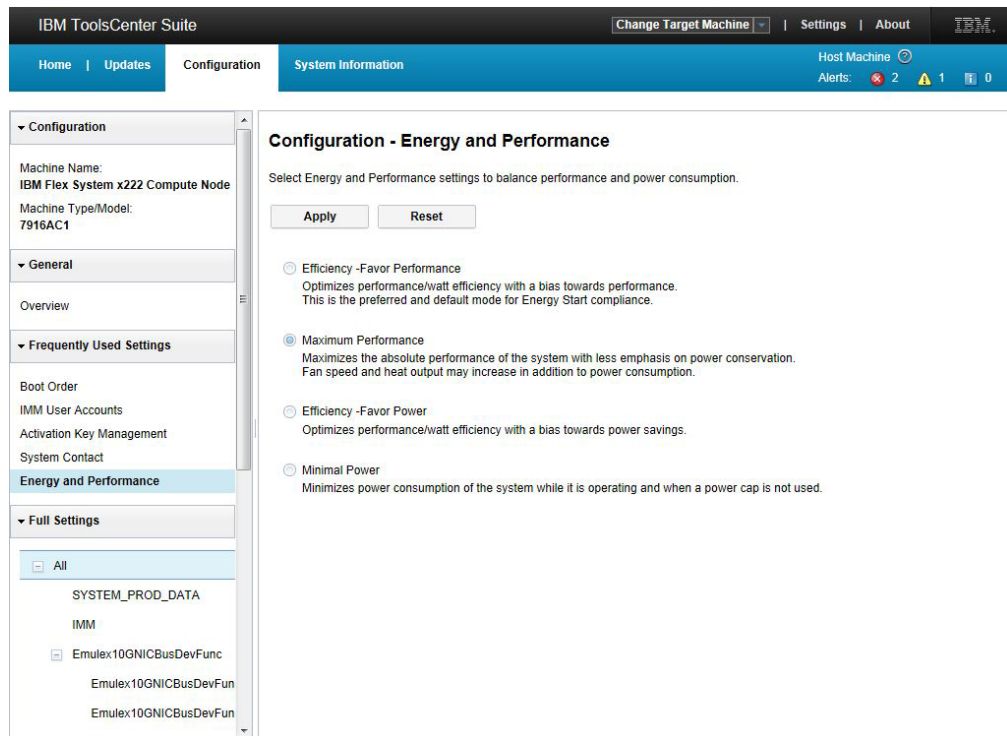


Figure 34. Configuration - Energy and Performance

2. Select one of the following performance settings for your system:
 - **Efficiency - Favor Performance:** This setting optimizes performance and watt efficiency with a bias towards performance. This is the preferred setting for Energy Star compliance.
 - **Maximum Performance:** This setting maximizes the absolute performance of the system with less emphasis on power conservation. Fan speed and heat output may increase in addition to power consumption.
 - **Efficiency - Favor Power:** This setting optimizes performance and watt efficiency with a bias towards power savings, and is applicable for M4 machine types only.
 - **Minimal Power:** This setting minimizes power consumption of the system while it is operating and when a power cap is not used.
3. Click **Apply** to apply and save the Energy and Performance setting change, or click **Reset** to return to the previous Energy and Performance setting. If no changes are made to the selected options, the **Apply** and **Reset** buttons are not available.

Energy and Performance settings for pre-M4 machine types:

Use this procedure to change the values of the Energy and Performance settings for machine types that are older than M4 machines. For these machines types, there are three energy and performance options.

Procedure

1. Select **Energy and Performance** from the Configuration Overview page or from the navigation pane. The Configuration - Energy and Performance page opens.
2. Select one of the following performance settings for your system:

- **Efficiency:** This setting optimizes performance and watt efficiency. This is the preferred setting for Energy Star compliance.
 - **Maximum Performance:** This setting maximizes the absolute performance of the system with less emphasis on power conservation. Fan speed and heat output may increase in addition to power consumption.
 - **Minimal Power:** This setting minimizes power consumption of the system while it is operating and when a power cap is not set.
3. Click **Apply** to apply and save the Energy and Performance setting change, or click **Reset** to return to the previous Energy and Performance setting. If no changes are made to the selected options, the **Apply** and **Reset** buttons are not available.

Mass Activation Key Management function

You can use the Mass Activation Key Management function to inventory systems vital product data (VPD), download activation keys from the IBM website, and install and export activation keys for multiple target machines at the same time.

Procedure

1. Select **Mass Activation Key Management** from the Configuration Overview page. The Feature on Demand Mass Activation Key Management page opens. From this page you can:
 - Acquire the VPD inventory of the target machines
 - Get keys (includes acquiring and downloading keys)
 - Install keys
 - Export keys
 - View the history of the mass activation key management tasks

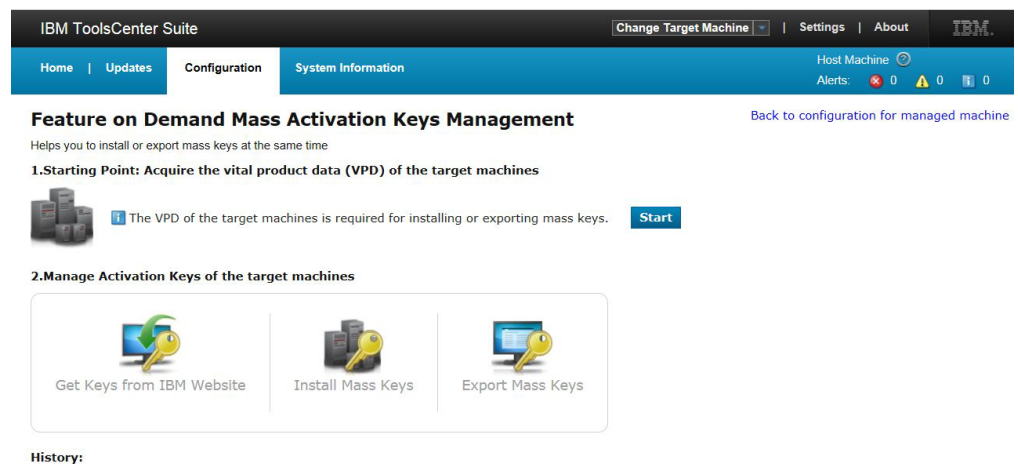


Figure 35. Features on Demand Mass Activation Keys Management primary page

- Optional: After initially using the Mass Activation Key Management function, a history displays information about previously completed mass activation key tasks, and indicates what tasks were completed, such as a key was installed and a date stamp indicating when the install finished. You can click **View Details** to view a list with detailed information for each history item. For more information on the History, see “Viewing the history of activation key management” on page 55.

VPD Inventory:

To manage the activation keys on target machines, you must first acquire the vital product data (VPD) for each machine.

Procedure

- Select **Mass Activation Key Management** from the Configuration Overview page. The Feature on Demand Mass Activation Keys Management primary page opens.
- Click **Start** to acquire the VPD of the target machines. The VPD of the target machines is required for importing or exporting mass keys.
The Acquire the VPD of the Target Machines page opens.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine Alerts: 0 0 0

Acquire the VPD of the Target Machines

Enter the IP address, IMM user name, and the password of the target machines to acquire each system's VPD

0 machine in the list.

ImportIP... Add Remove Refresh

IP Address	Access	Product Name	Description	System VPD (MachineType/Model/Serial No.)
------------	--------	--------------	-------------	---

Return

Figure 36. Acquiring VPD of the target machines

- When initially importing the VPD, click **ImportIP**. On subsequent imports of the VPD, you can click **ImportIP** or **Import IP Addresses for Target Machines**. The import file must be in CSV (.csv) format. The file contents contain the following information for each target machine:
 - IP address
 - IMM user name
 - Password

You can create or edit an existing spread sheet (XLSX) file and save it as a CSV file. The text format for each line in a CSV file is: <ip>,<user>,<password>.

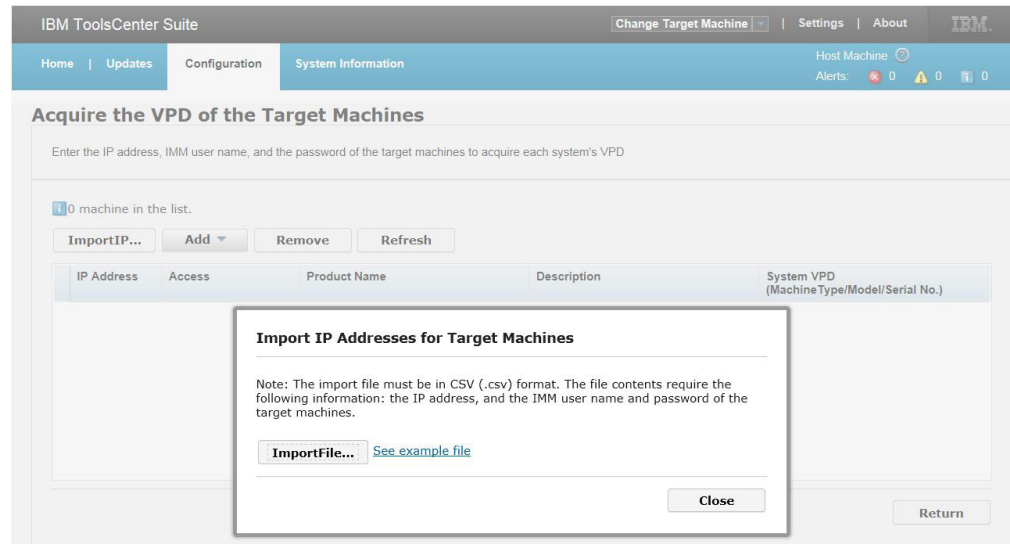


Figure 37. Acquiring VPD using an import file

4. Optional: Click **See example file** to view the contents and formatting of a sample CSV file.
5. In the Import IP Addresses for Target Machines dialog box, click **ImportFile**. In the File Upload dialog box, select the file and click **Open**. The Acquire the VPD of the Target Machines page updates and displays the number of target machines successfully collected and a list containing the VPD for each of the target machines.

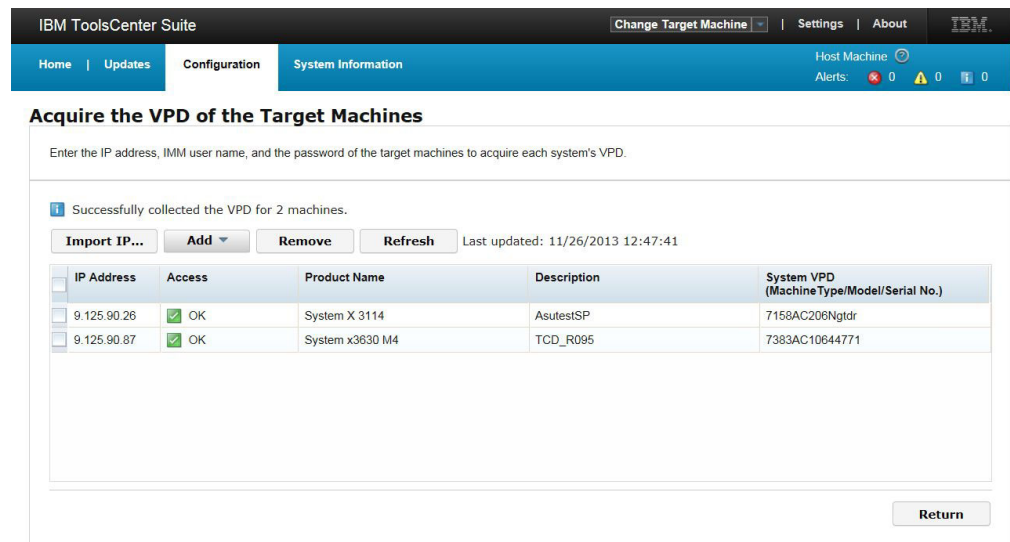


Figure 38. Imported file results

The list provides the following VPD for each target machine:

- IP Address
- Access
- Product Name
- Description
- System VPD (Machine Type/Model/Serial No.)

6. On the Acquire the VPD of the Target Machines page, to add a new machine, click **Add**. The Add New Machine dialog box opens.

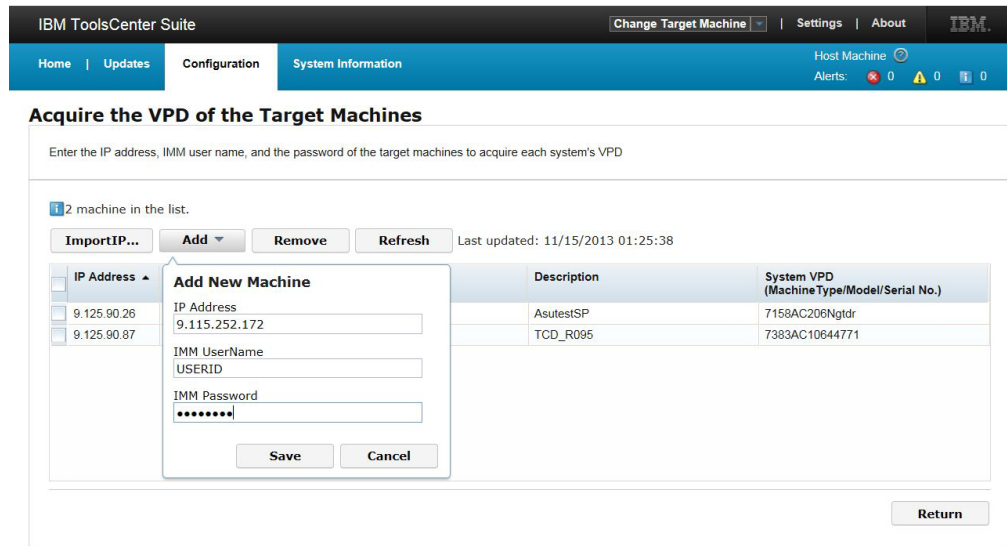


Figure 39. Adding a new machine

7. Enter the following information and then click **Save**.

- IP Address
- IMM UserName
- IMM Password

While the system is checking the new machine, the querying icon displays. After the authentication is complete, the new machine displays in the list.

8. Optional: If you entered a duplicate IP address, the Confirm to Acquire the Duplicated IP Address dialog box opens. Click **OK** to acquire the systems with the duplicated IP address or click **Cancel** to retain the previously acquired system VPD for these machines and only acquire VPD for the new IP addresses. If the task fails, the machine list is updated and reflects there is no access to this IP address. You can hover the mouse over the question mark to view details concerning the failure.
9. Optional: To view the reason for an invalid entry in the list, hover the mouse over the question mark icon.
10. Optional: To remove an invalid entry from the list, select the **IP Address** and then click **Remove**.
11. Click **Return** to return to the FoD Mass Activation Key Management primary page.

Get keys:

After acquiring vital product data for the target machines, you can get the activation key information from the IBM website and download the keys.

Procedure

1. Select **Mass Activation Key Management** from the Configuration Overview page. The Feature on Demand Mass Activation Keys Management primary page opens.

2. From the Manage Activation Keys on the target machine section, click **Get Keys from the IBM Website**. The Enter the IBM ID and Authorization Code page opens.
3. Enter the following information and then click **Next**.
 - IBM ID
 - User Password
 - Authorization Code

The following message displays while authorization is being processed:
Please wait while ToolsCenter Suite is acquiring the information for the authorization code from the IBM website.

IBM ToolsCenter Suite Change Target Machine | Settings | About IBM

Home | Updates | Configuration | System Information Host Machine Alerts: 0 0 0

Get Mass Activation Keys from IBM website with One Authorization Code

1. Enter the IBM ID and Authorization Code 2. Select Target Machines 3. DownloadKeys

Input IBM ID and Authorization code to verify activation key status

IBM ID: @invalid.domain Go to [IBM WebSite](#) to register one IBM ID

User Password: ••••••••

Authorization Code: AT769749260R

Please wait while ToolsCenter Suite acquiring the information for the authorization code from IBM website.

Next Cancel

Figure 40. IBM Website Authorization Code page

After the authorization code from the IBM website has been acquired, the Select Target Machines page opens.

1. Enter the IBM ID and Authorization Code **2. Select Target Machines** 3. DownloadKeys

Target Machine: 0 Selected

Authorization code: DQXAAAAAAAAAT769749260R (40 keys unused, 95 keys in total)
Feature: IBM Integrated Management Module Advanced Upgrade

IP Address	Product Name	Description	System VPD (MachineType/Model/Serial No.)	FOD UID(MachineType/Serial No.)	Activation Key Status
9.115.252.172			7912Ac1AbCd123	7912AbCd123	Installed
9.125.90.26	System X 3114	AsutestSP	7158AC206Ngtdr	715806Ngtdr	Installed
9.125.90.87	System x3630 M4	TCD_R095	7383AC10644771	73830644771	Generated

<Back Next Cancel

Figure 41. Acquired key information

- On the Select Target Machines page, select the IP Address of the target machine for downloading the activation keys. The download process begins. When the download is complete, the DownloadKeys page opens indicating the number of keys successfully downloaded and the Activation Key Status shows the key download status.

1. Enter the IBM ID and Authorization Code 2. Select Target Machines **3. DownloadKeys**

1 keys downloaded.

Authorization code: DQXAAAAAAAAAT769749260R (40 keys unused, 95 keys in total)
Feature: IBM Integrated Management Module Advanced Upgrade

IP Address	Product Name	Description	System VPD (MachineType/Model/Serial No.)	FOD UID(MachineType/Serial No.)	Activation Key Status
9.125.90.87	System x3630 M4	TCD_R095	7383AC10644771	73830644771	Downloaded

Finish

Figure 42. Activation Key download complete

- When all of the activation keys have finished downloading, click **Finish**. The Feature on Demand Mass Activation Keys Management primary page opens. To install the downloaded, keys see "Install keys" on page 53/

Install keys:

After getting the activation keys, you can install the activation keys on target machines.

Procedure

1. Click **Install Mass Keys**. All of the downloaded keys will now be installed. This process verifies the IP address and user credentials previously entered.

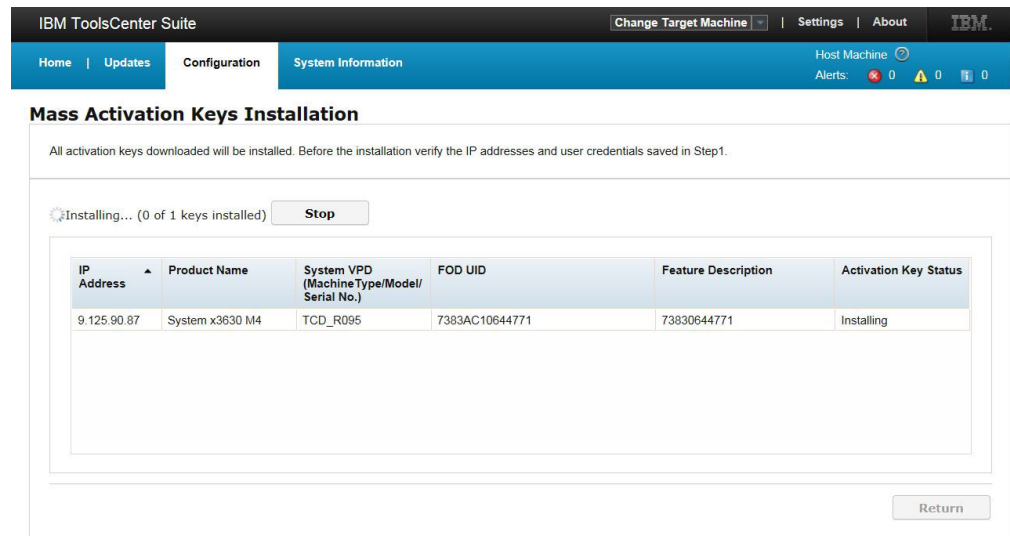


Figure 43. Activation Keys installing

If the activation keys have been installed successfully, the status displays as **Installed**. If any of the activation keys failed to install successfully, the status displays as **Failed**. The tooltip provides the reason for the installation failure.

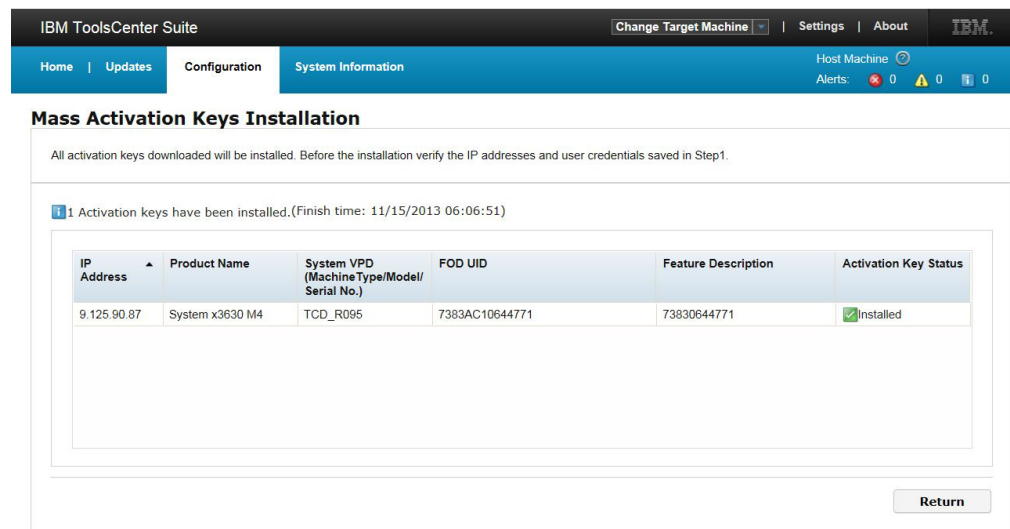


Figure 44. Activation keys installed

2. Click **Return** to return to the Feature on Demand Mass Activation Keys Management primary page.

Export keys:

The keys installed on systems can be exported as a backup for installing again in the future.

Procedure

1. On the Feature on Demand Mass Activation Keys Management primary page, from the **Manage Activation Keys on the target machine** section, select **Export Mass Keys**. The Export Settings page opens.

IBM ToolsCenter Suite | Change Target Machine | Settings | About

Home | Updates | Configuration | System Information | Host Machine | Alerts: 0 0 0

Export Mass Activation Keys

1.Export Settings | 2.Export Process

Select local path to save activation keys:
c:/fod

Select target machines from inventory list.
2 machines selected.

	IP Address	Product Name	Description	System VPD (Machine Type/Model/SerialNO)
<input checked="" type="checkbox"/>	9.125.90.26	System X 3114	AsutestSP	7158AC206Ngldr
<input checked="" type="checkbox"/>	9.115.252.172			7912Ac1AbCd123

<Back | Next | Cancel

Figure 45. Export Settings page

2. In the **Select local path to save activation keys** section, enter the local directory where the exported activation keys will be saved.
3. In the **Select target machines from inventory list** section, select the IP address of the target machines for exporting activation keys. The export process begins and the status updates as each export completes.

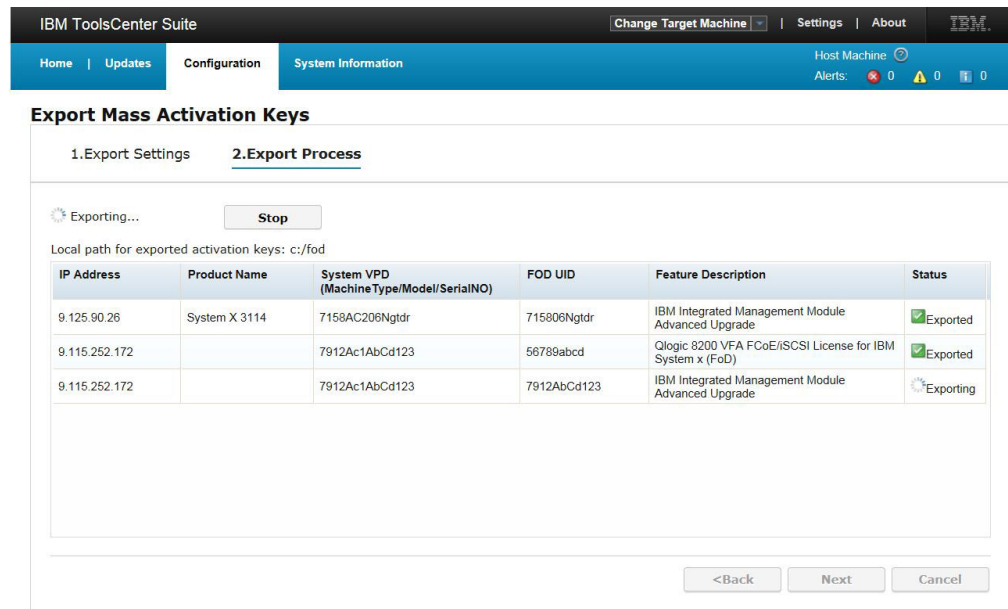


Figure 46. Export Process

While an activation key is being exported, the status is Exporting. When all of the activation keys have been exported, the status displays as Exported.

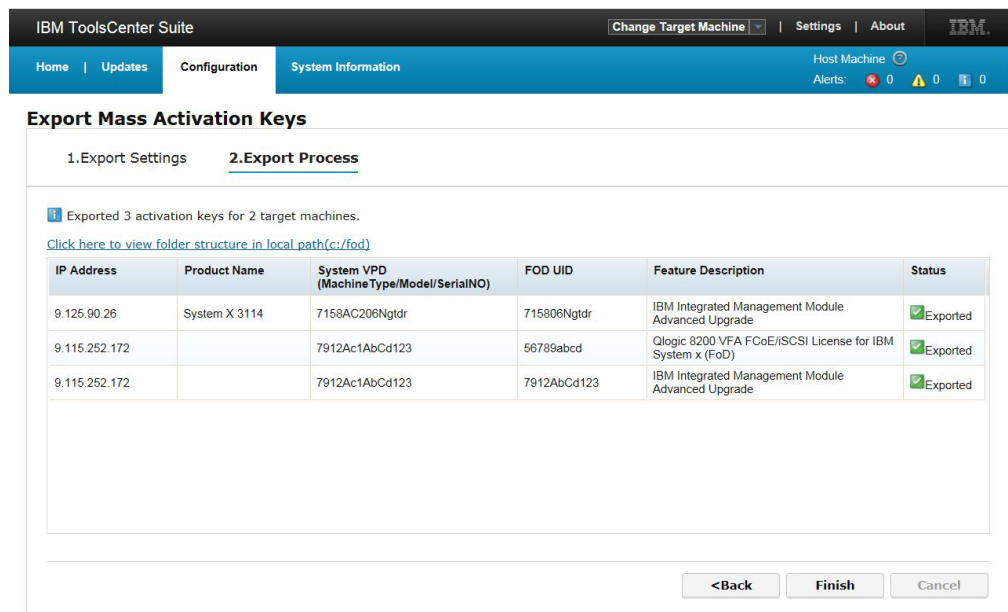


Figure 47. Export complete

- When the export is complete, you can click **Click here to view the folder structure in the local path** or click **Finish** to exit the export process and return to Feature on Demand Mass Activation Keys Management primary page.

Viewing the history of activation key management:

The history section of the Feature on Demand Mass Activation Keys Management primary page displays the last successfully completed activation key management tasks.

Procedure

- To view the history detail for each activation key management task, on the Feature on Demand Mass Activation Keys Management primary page in the History section click **View Details** for task.
 - This figure provides the history of the downloaded key that is pending installation. This information includes the following:
 - IP Address
 - Product Name
 - System VPD
 - FOD UID
 - Feature Description

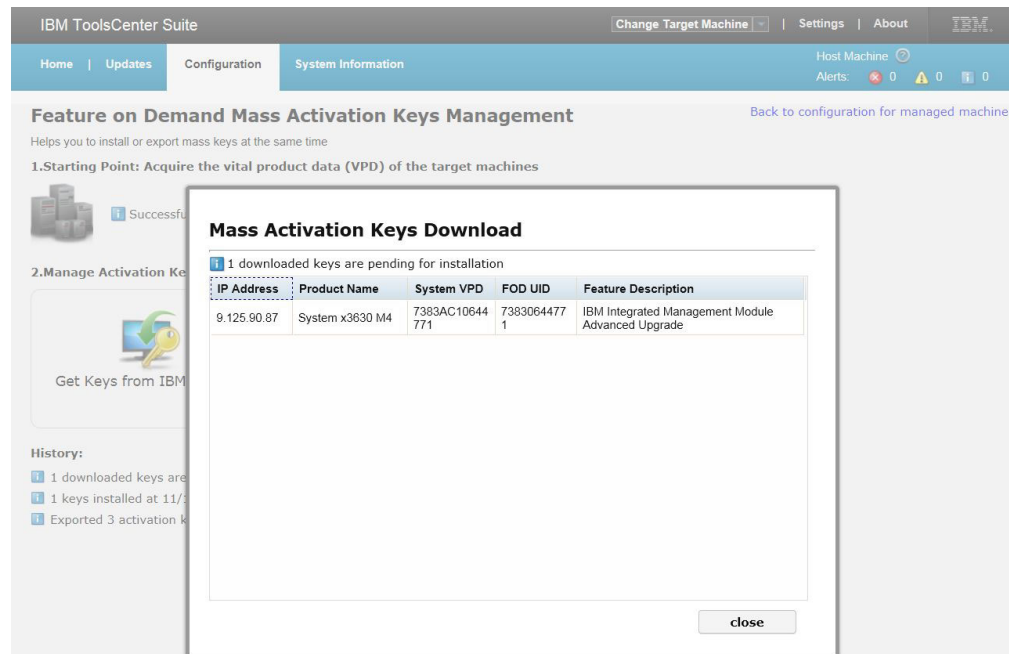


Figure 48. Downloaded keys pending installation detail information

- This figure provides the history of the detail information for an installed key. This information include the following:
 - IP Address
 - Product Name
 - System VPD
 - FOD UID
 - Feature Description

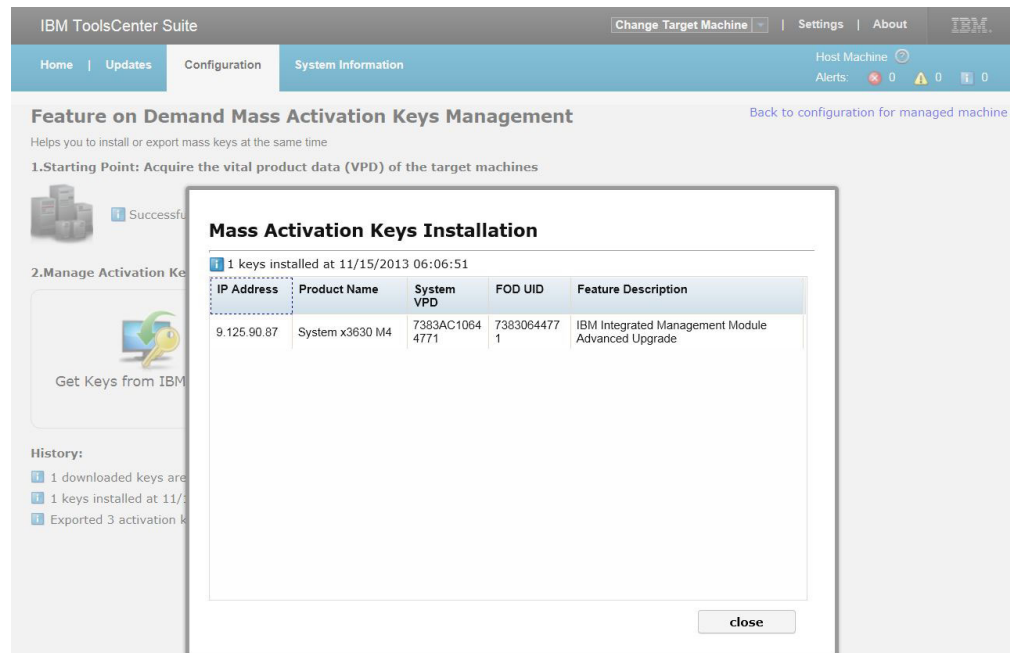


Figure 49. Installed keys detail information

- This figure provides the history of exported keys detail information and includes the folder location, name of the key file, and a description for each activation key.

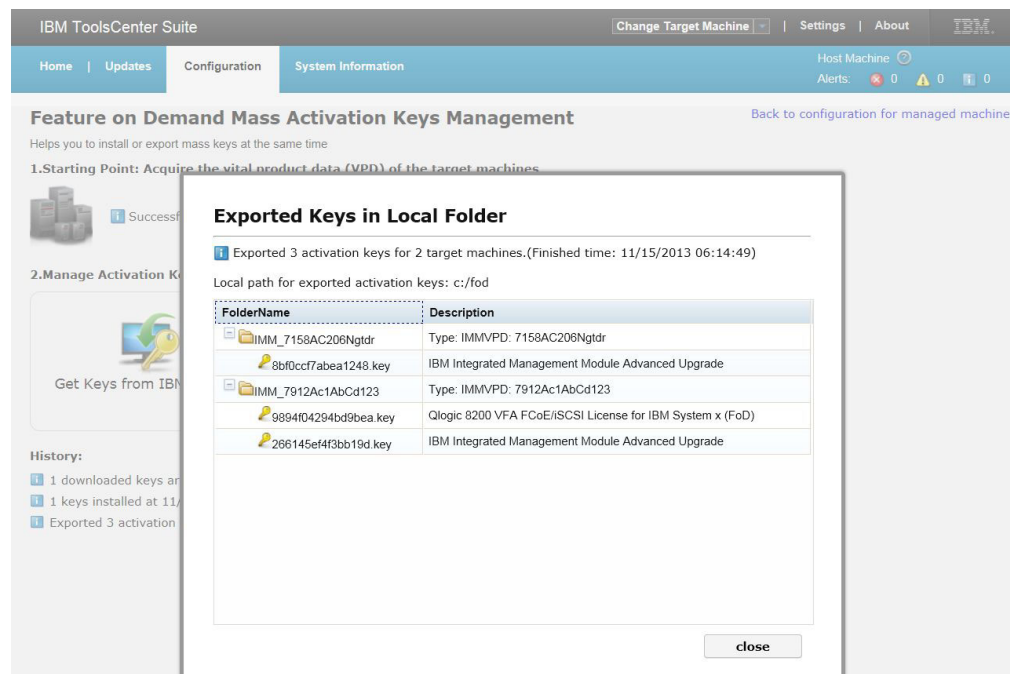


Figure 50. Exported keys to a local folder detail information

- Click **Close** when you have finished viewing the details.

Full Settings

Full settings is not a fixed group of settings and varies depending on the machine type and model. You can use the Full Settings function to view all of the system settings.

About this task

The **Full Settings**All option includes:

- SYSTEM_PROD_DATA
- IMM
- iSCSI
- UEFI
- BootOrder
- PXE

Procedure

1. From the navigation menu, select **Full Settings** > **All**. The Configuration - All Configuration page opens. This page provides a table listing for all of the settings, their group name and the current value. If you hover the mouse over each entry in the table, a definition of the setting displays.

The screenshot shows the IBM ToolsCenter Suite interface. The top navigation bar includes 'Home', 'Updates', 'Configuration', and 'System Information'. The 'Configuration' tab is active. On the left, a sidebar shows the 'Configuration' menu with 'Full Settings' expanded and 'All' selected. The main content area is titled 'Configuration - All Configuration' and contains a table of settings.

Setting Name	Group Name	Value
SYSTEM_PROD_DATA.SysEncloseAssetTag	SYSTEM_PROD_DATA	
SYSTEM_PROD_DATA.SysInfoProdName	SYSTEM_PROD_DATA	7916AC1
SYSTEM_PROD_DATA.SysInfoUDI	SYSTEM_PROD_DATA	
SYSTEM_PROD_DATA.SysInfoUUID	SYSTEM_PROD_DATA	4023BB12F0A3B601DBA1B4A0f
SYSTEM_PROD_DATA.SysInfoSerialNum	SYSTEM_PROD_DATA	7916AC1
SYSTEM_PROD_DATA.SysInfoProdIdentifier	SYSTEM_PROD_DATA	IBM Flex System x222 Compute
IMM.IPv6HostIPAddressWithPrefix1	IMM	:::64
IMM.VMMigration_EventCategoryType	IMM	none
IMM.SMTP_AuthMethod	IMM	CRAM-MD5
IMM.IMMInfo_Lowest_U	IMM	0
IMM.PXE_NextBootEnabled	IMM	Disabled
IMM.DDNS_Enable	IMM	Enabled
IMM.IMMInfo_Name	IMM	TCSTest

Figure 51. Configuration - All settings

2. On this page you have several options for viewing or changing the settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displays in the first line of the table.
 - To change the value of a setting, in the Value column, click the drop-down menu and select a value.

- To apply a setting change, click **Apply**. The Apply the settings changes? dialog box opens. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait...

Update the Settings successfully.

Click **OK** to load the settings. The following message is displayed:

Loading, please wait...

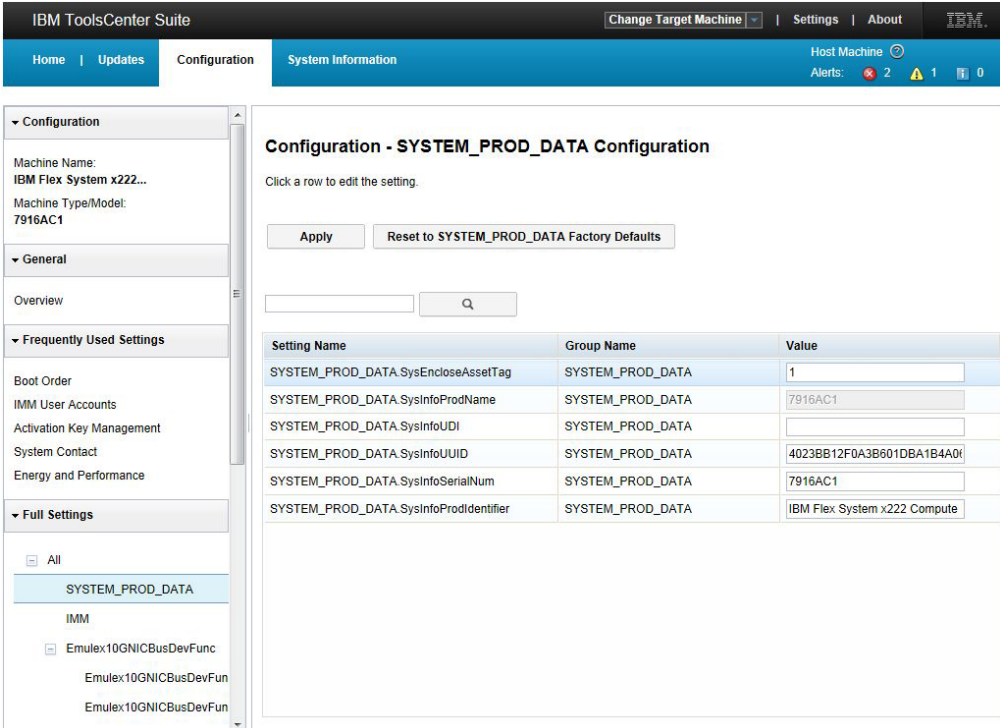
- To reset the settings, click **Reset to All Factory Defaults**. The Reset to Factory Default dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.
3. To view individual settings, in the navigation menu, click **All** and click the setting you want to view. The individual setting information display in the right pane, providing the group name and current value for this setting.

SYSTEM_PROD_DATA settings

SYSTEM_PROD_DATA is user-configurable vital product data (VPD) settings. Use this option to view the SYSTEM_PROD_DATA settings and to make changes to the value of these settings.

Procedure

1. From the navigation menu, select **Full Settings** > **All** > **SYSTEM_PROD_DATA**. The Configuration - SYSTEM_PROD_DATA Configuration page opens.



IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine: Alerts: 2 1 0

Configuration

Machine Name: IBM Flex System x222...
Machine Type/Model: 7916AC1

General

Overview

Frequently Used Settings

Boot Order

IMM User Accounts

Activation Key Management

System Contact

Energy and Performance

Full Settings

All

SYSTEM_PROD_DATA

IMM

Emulex10GNICBusDevFunc

Emulex10GNICBusDevFun

Emulex10GNICBusDevFun

Configuration - SYSTEM_PROD_DATA Configuration

Click a row to edit the setting.

Apply Reset to SYSTEM_PROD_DATA Factory Defaults

Setting Name Group Name Value

SYSTEM_PROD_DATA.SysEncloseAssetTag	SYSTEM_PROD_DATA	1
SYSTEM_PROD_DATA.SysInfoProdName	SYSTEM_PROD_DATA	7916AC1
SYSTEM_PROD_DATA.SysInfoUDI	SYSTEM_PROD_DATA	
SYSTEM_PROD_DATA.SysInfoUUID	SYSTEM_PROD_DATA	4023BB12F0A3B601DBA1B4A0
SYSTEM_PROD_DATA.SysInfoSerialNum	SYSTEM_PROD_DATA	7916AC1
SYSTEM_PROD_DATA.SysInfoProdIdentifier	SYSTEM_PROD_DATA	IBM Flex System x222 Compute

Figure 52. Configuration - SYSTEM_PROD_DATA

This page provides a table listing all of the SYSTEM_PROD_DATA settings, their group name and the current value. Hover the mouse over an entry in the table, to view a definition of that setting.

- On this page you have several options for viewing or changing SYSTEM_PROD_DATA settings.

Note: The SYS_PROD_DATA_SysInfoProdName setting's values cannot be changed.

- To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displays in the first line of the table.
- To add or change the value of a setting, in the Value column, enter a value.
- To apply a setting change, click **Apply**. The Apply the settings changes? dialog box opens. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait...

Update the Settings successfully.

Click **OK** to load the settings. The following message displays:

Loading, please wait...

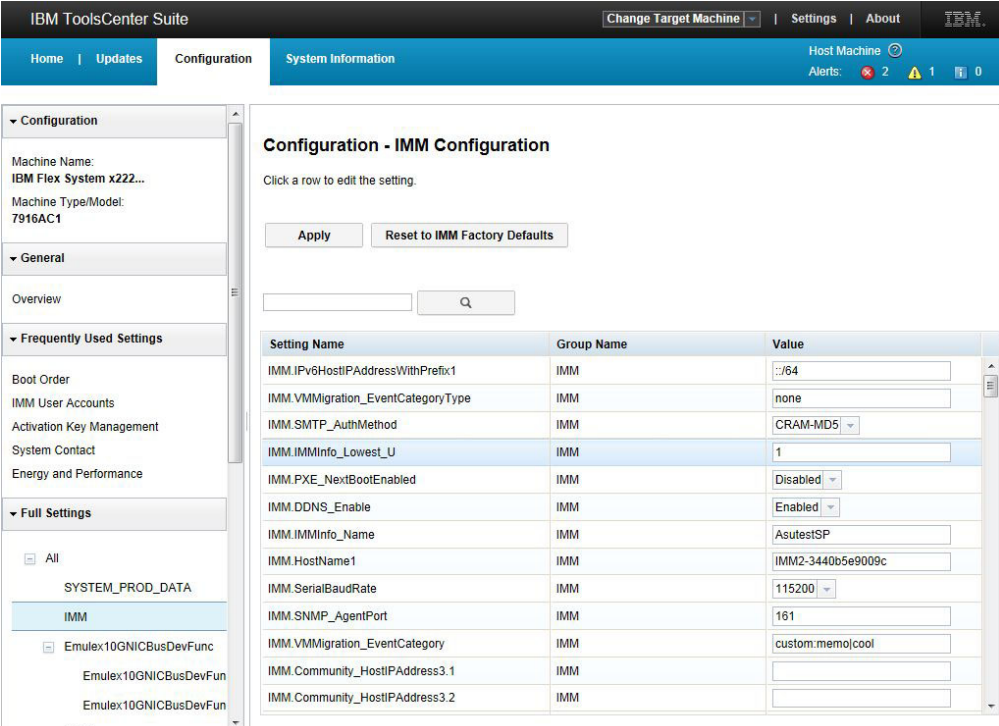
- To reset the settings, click **Reset to SYSTEM_PROD_DATA Factory Defaults**. The Reset to factory default dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.

IMM settings

Use this option to view the IMM settings and to make changes to these settings.

Procedure

- From the navigation pane, select **Full Settings > All > IMM**. The Configuration - IMM Configuration page opens.



IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine

Alerts: 2 1 0

Configuration - IMM Configuration

Click a row to edit the setting.

Apply Reset to IMM Factory Defaults

Search

Setting Name	Group Name	Value
IMM.IPv6HostIPAddressWithPrefix1	IMM	:/64
IMM.VMMigration_EventCategoryType	IMM	none
IMM.SMTP_AuthMethod	IMM	CRAM-MD5
IMM.IMMInfo_Lowest_U	IMM	1
IMM.PXE_NextBootEnabled	IMM	Disabled
IMM.DDNS_Enable	IMM	Enabled
IMM.IMMInfo_Name	IMM	AsutestSP
IMM.HostName1	IMM	IMM2-3440b5e9009c
IMM.SerialBaudRate	IMM	115200
IMM.SNMP_AgentPort	IMM	161
IMM.VMMigration_EventCategory	IMM	custom: memo cool
IMM.Community_HostIPAddress3.1	IMM	
IMM.Community_HostIPAddress3.2	IMM	

Figure 53. Configuration - IMM settings

This page provides a table listing all of the IMM settings, their group name, and the current value. Hover the mouse over each entry in the table, to view a definition of the settings.

2. On this page you have several options for viewing or changing IMM settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displays in the first line of the table.
 - To change the value of a setting, in the Value column, select a value from the list.
 - To apply a setting change, click **Apply**. The Apply the settings changes? dialog box opens. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displays until a new setting value is applied:
Applying settings. Please wait...
Update the Settings successfully.

Click **OK** to load the settings. The following message displays:
Loading, please wait...
 - To reset the settings, click **Reset to IMM Factory Defaults**. The Reset to factory default? dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.

iSCSI settings

Use this option to view the iSCSI settings or individual settings and to make changes to these settings. The iSCSI settings are grouped into a record. The record key for the record is the **iSCSI.AttemptName** setting. Each record represents an attempt. The term attempt is equivalent to the term instance. More than one attempt can be defined. If more that one attempt is defined, the same setting names that define the attempt group are used, but each attempt contains the next sequential instance number. For example, **iSCSI.MacAddress.1** and **iSCSI.MacAddress.2** belong to the "first" attempt and the "second" attempt respectively. The only parameter that is defined as a global iSCSI setting to all attempts and that does not require an instance index is the **iSCSI.InitiatorName**.

Procedure

1. From the navigation menu, select **Full Settings > All > iSCSI** . The Configuration - iSCSI Configuration page opens.

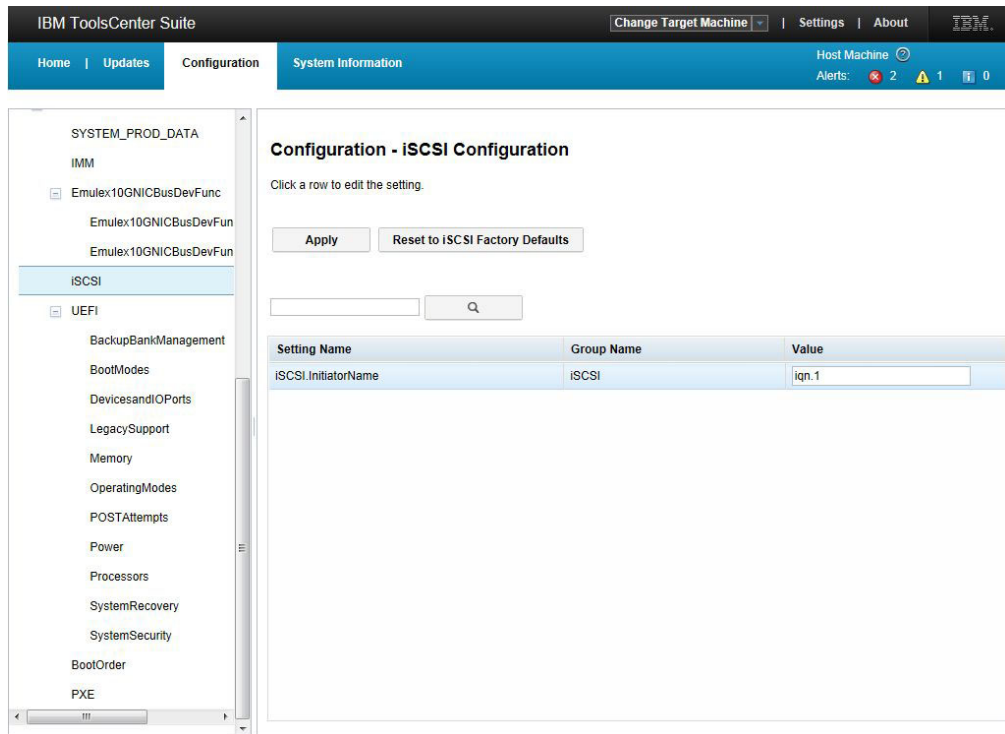


Figure 54. Configuration - iSCSI

This page provides a table listing all of the iSCSI settings, their group name and the current value. If you hover the mouse over an entry in the table, you can view a definition of that setting.

2. On this page you have several options for viewing or changing iSCSI settings.

- To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displays in the first line of the table.
- To change the value of a setting, in the Value column, enter the new value.
- To apply a setting change, click **Apply**. If an incorrect value was entered, a dialog box displays this information. Click **Close**. If a correct value was entered, The Apply the setting changes? dialog box displays. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages are displayed until a new setting value is applied:

Applying settings. Please wait...

Update the Settings successfully.

Click **OK** to load the settings. The following message displays:

Loading, please wait...

- To reset the settings, click **Reset to iSCSI factory defaults**. The Reset to factory default dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.

3. To view individual settings, in the navigation menu, click **All > iSCSI** and click the setting you want to view. The individual setting information displays in the right pane, providing the group name and the current value for this setting.

UEFI settings

You can use this option to view and make changes to the UEFI settings.

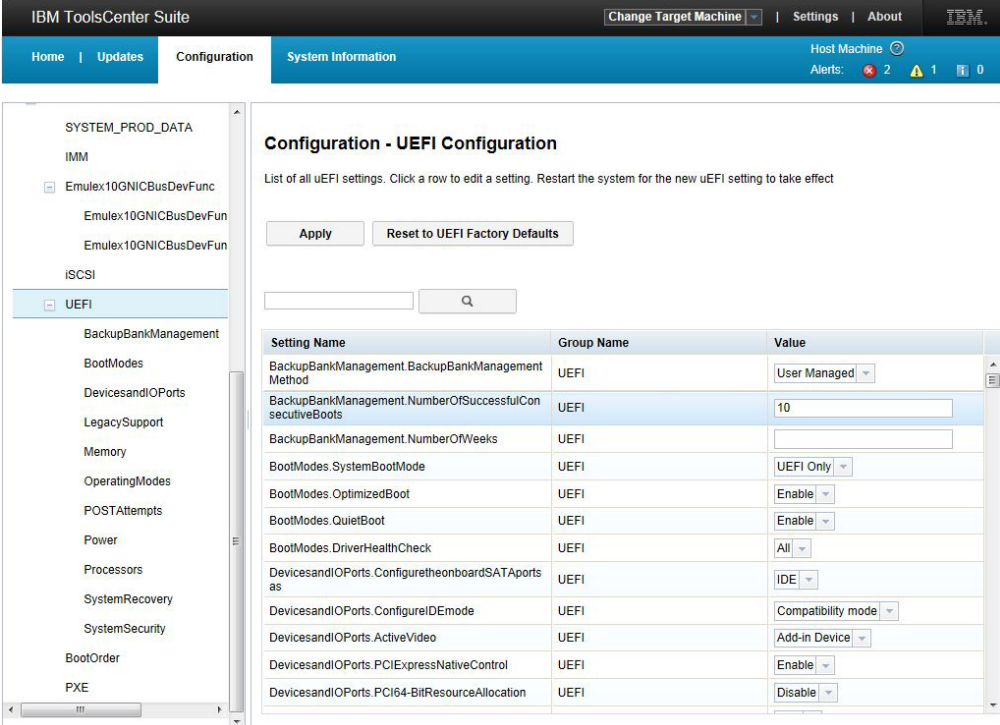
About this task

The UEFI option includes the following settings:

- BackupBankManagement
- BootModes
- DevivesandIOPorts
- LegacySupport
- Memory
- OperatingModes
- POSTAttempts
- Power
- Processors
- SystemRecovery
- SystemSecurity

Procedure

1. From the navigation menu, select **Full Settings > All > uEFI**. The Configuration - uEFI Configuration page opens.



IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine: [icon] Alerts: 2 1 0

SYSTEM_PROD_DATA

IMM

Emulex10GNICBusDevFunc

Emulex10GNICBusDevFun

Emulex10GNICBusDevFun

iSCSI

UEFI

BackupBankManagement

BootModes

DevicesandIOPorts

LegacySupport

Memory

OperatingModes

POSTAttempts

Power

Processors

SystemRecovery

SystemSecurity

BootOrder

PXE

Configuration - UEFI Configuration

List of all uEFI settings. Click a row to edit a setting. Restart the system for the new uEFI setting to take effect

Apply Reset to UEFI Factory Defaults

Setting Name Group Name Value

BackupBankManagement.BackupBankManagement.Method	UEFI	User Managed
BackupBankManagement.NumberOfSuccessfulConsecutiveBoots	UEFI	10
BackupBankManagement.NumberOfWeeks	UEFI	
BootModes.SystemBootMode	UEFI	UEFI Only
BootModes.OptimizedBoot	UEFI	Enable
BootModes.QuietBoot	UEFI	Enable
BootModes.DriverHealthCheck	UEFI	All
DevicesandIOPorts.ConfiguretheonboardSATAports	UEFI	IDE
DevicesandIOPorts.ConfigureIDEmode	UEFI	Compatibility mode
DevicesandIOPorts.ActiveVideo	UEFI	Add-in Device
DevicesandIOPorts.PCIExpressNativeControl	UEFI	Enable
DevicesandIOPorts.PCI64-BitResourceAllocation	UEFI	Disable

Figure 55. Configuration - uEFI settings

This page provides a table listing all of the uEFI settings, their group name and the current value. If you hover the mouse over an entry in the table, you can view a definition of that setting.

2. On this page you have several options for viewing or changing UEFI settings.
 - To search for a setting, enter the name in the search field and click on the search icon. (This is not a case sensitive search.) The best match for this setting will be found and displays in the first line of the table.

- To change the value of a setting, in the Value column, click the **Value** list and select a value.
- To apply a setting change, click **Apply**. The Apply the settings changes? dialog box opens. Click **OK** to proceed or **Cancel** to exit this operation. If you select **OK**, the following messages display until a new setting value is applied:

Applying settings. Please wait...

Update the Settings successfully.

Click **OK** to load the settings. The following message displays:

Loading, please wait...

- To reset the settings, click **Reset to uEFI Factory Defaults**. The Reset to factory default dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.
3. To view individual settings, from the navigation menu, select **All > uEFI** and select the setting you want to view. The individual setting information displays in the right pane, providing the group name and the current value for this setting.

BootOrder settings

You can use this option to configure the BootOrder settings. Any changes made to BootOrder settings, will take affect after a system reboot.

Procedure

1. From the navigation menu, select **Full Settings > All > BootOrder** or perform a search on boot order. The Configuration - BootOrder Configuration page opens.

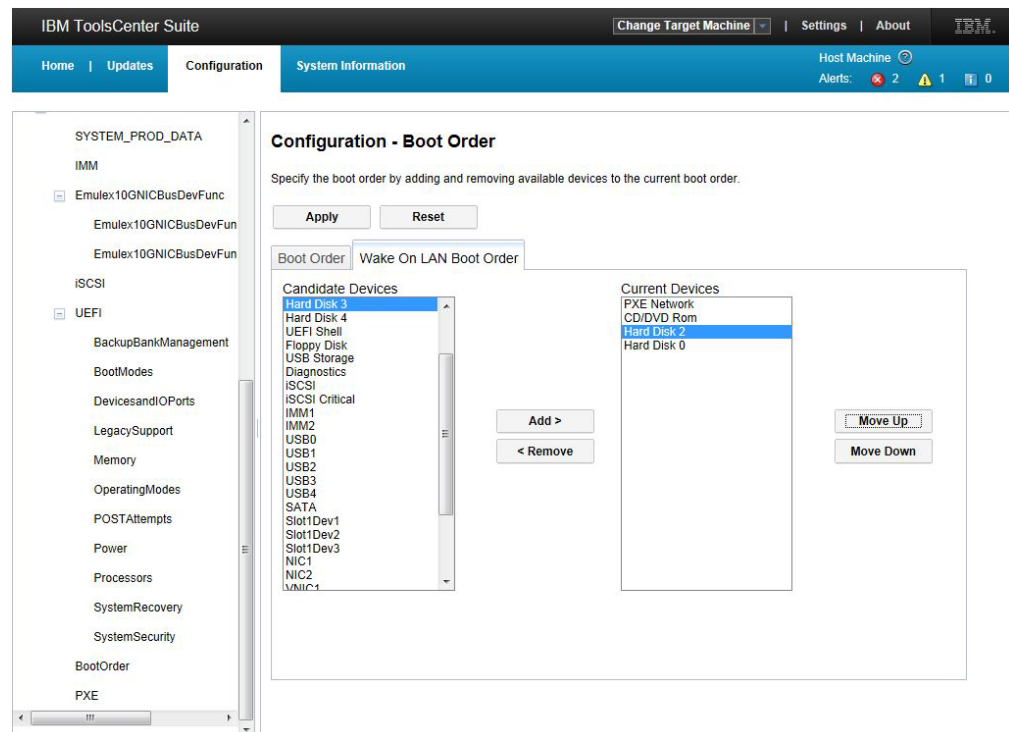


Figure 56. Configuration - BootOrder

If you hover the mouse over a BootOrder setting name, an explanation for that BootOrder setting displays.

2. Select one of the following options:

- To reset the settings, click **Reset to BootOrder Factory Defaults**. The Reset to factory default dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.
- Click **Boot Order** in the Value column to select one of the boot order items listed. The Configure Boot Order dialog box opens. Click **OK** to continue or click **Cancel** to exit the dialog box and return to the Configuration - BootOrder page.

Related tasks:

“Boot Order” on page 40

Provides additional information about Boot Order configuration.

PXE settings

PXE is an environment to boot computers using a network interface independent of data storage devices, such as hard disks or installed operating systems. You can use this option to configure Preboot Execute Environment (PXE) settings.

Procedure

1. From the navigation menu, select **Full Settings > All > PXE**. The Configuration - PXE page opens.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine: Alerts: 2 1 0

SYSTEM_PROD_DATA

IMM

Emulex10GNICBusDevFunc

Emulex10GNICBusDevFunc

Emulex10GNICBusDevFunc

iSCSI

UEFI

BackupBankManagement

BootModes

DevicesandIOPorts

LegacySupport

Memory

OperatingModes

POSTAttempts

Power

Processors

SystemRecovery

SystemSecurity

BootOrder

PXE

Configuration - PXE Configuration

Click a row to edit the setting.

Apply Reset to PXE Factory Defaults

Setting Name	Group Name	Value
PXE.NicPortPxeMode.1	PXE	UEFI and Legacy Support
PXE.NicPortPxeMode.2	PXE	UEFI and Legacy Support
PXE.NicPortMacAddress.1	PXE	34:40:B5:E9:03:A4
PXE.NicPortMacAddress.2	PXE	34:40:B5:E9:03:A8
PXE.NicPortPxeProtocol.1	PXE	AUTO
PXE.NicPortPxeProtocol.2	PXE	IPv4

Figure 57. Configuration - PXE

The PXE settings table provides a list of PXE MAC addresses, PXE port devices, and PXE port protocols. To view more information for each PXE setting listed, hover the mouse over each line and a description for that setting displays.

2. Select one of the following options:

- To reset the settings, click **Reset to PXE Factory Defaults**. The Reset to factory default dialog box opens. Click **OK** to proceed with resetting the values or click **Cancel**.
- Click to select an entry in the Value column.
 - Change the MAC addresses by entering a new address.
 - Select a PXE port device value from the list.
 - Select a PXE port protocol value from the list.
- Click **Apply** to save the new PXE settings.

Using the System Information function

Using the System Information function, you can scan and view realtime status, check active status, view light path status and event logs for your system, and manage system information on a local machine using inband mode and out of band (OOB) for a remote machine. You can collect full system information for analysis, service, and support. These files can be sent to IBM Support or to a customized FTP server.

Procedure

1. On the Home page or from the ToolsCenter Suite menu, select **System Information**. The System Information - Overview page opens.

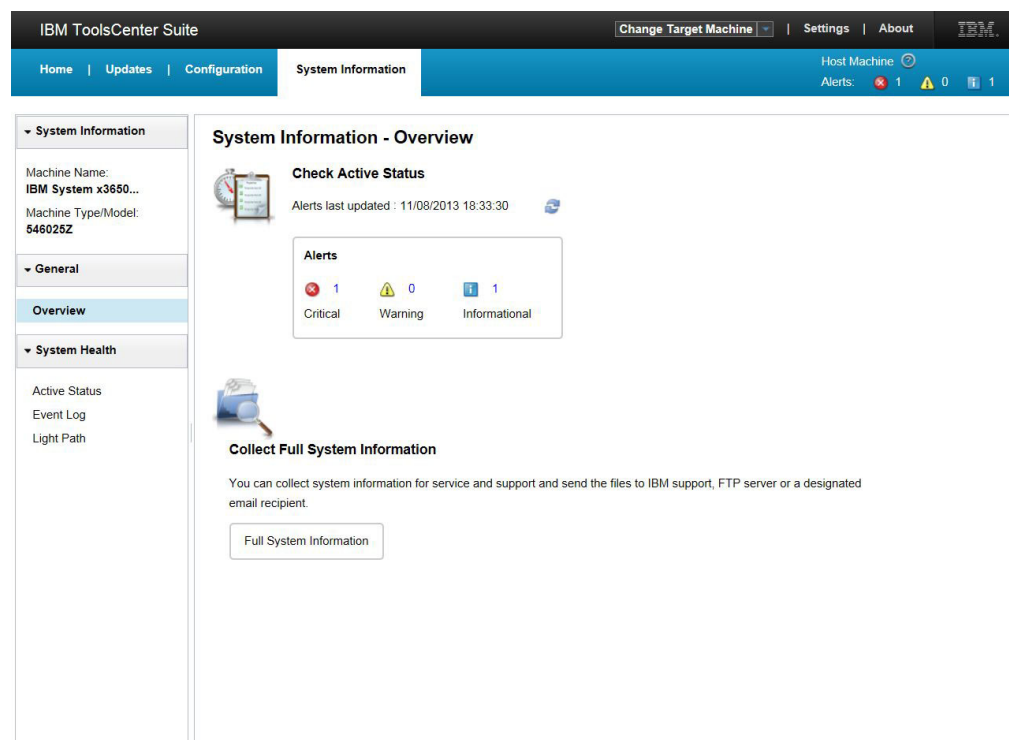


Figure 58. System Information - Overview

The **Full System Information** button can be used to collect full system information.

2. To update the Active Status, click **Refresh**. The Alerts section displays any new alerts since the Active Status was last checked. There are three types of alerts:
 - Critical displays a red icon
 - Warning displays a yellow icon

- Information displays a green icon
- To view the System Overview report, click the report link in the Collect Full System Information section. The System Overview Report opens in a browser window. To return back to the System Information Overview page, close the browser window.
 - From the navigation pane, you can select the following System Health options:
 - **Active Status**
 - **Event Log**
 - **Light Path**

Active Status

You can use the Active Status option to view system health status.

About this task

The following steps explain how to use the features of the Active Status page.

Procedure

- From the navigation pane, select **Active Status**. The Active Status page opens.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine: [Icon] Alerts: 1 0 1

System Information

Machine Name: IBM System x3650...
Machine Type/Model: 546025Z

General

Overview

System Health

Active Status

Event Log

Light Path

System Health - Active Status

Alerts last updated : 11/08/2013 18:33:30

Click each row to view details, and click Event ID to check detailed IMM and uEFI logs.

Filter by: Severity: Any

Severity	Message	Event ID	Message Time
Error	Sensor CPU 1 OverTemp has transitioned to non-recoverable.	800706010301ffff	10/19/2013 15:00:34
Information		0000000000000000	01/01/1970 00:00:00

Figure 59. System Health - Active Status

- In Active Status table, you can click on each row to view details for that row. See Figure 60 on page 68.

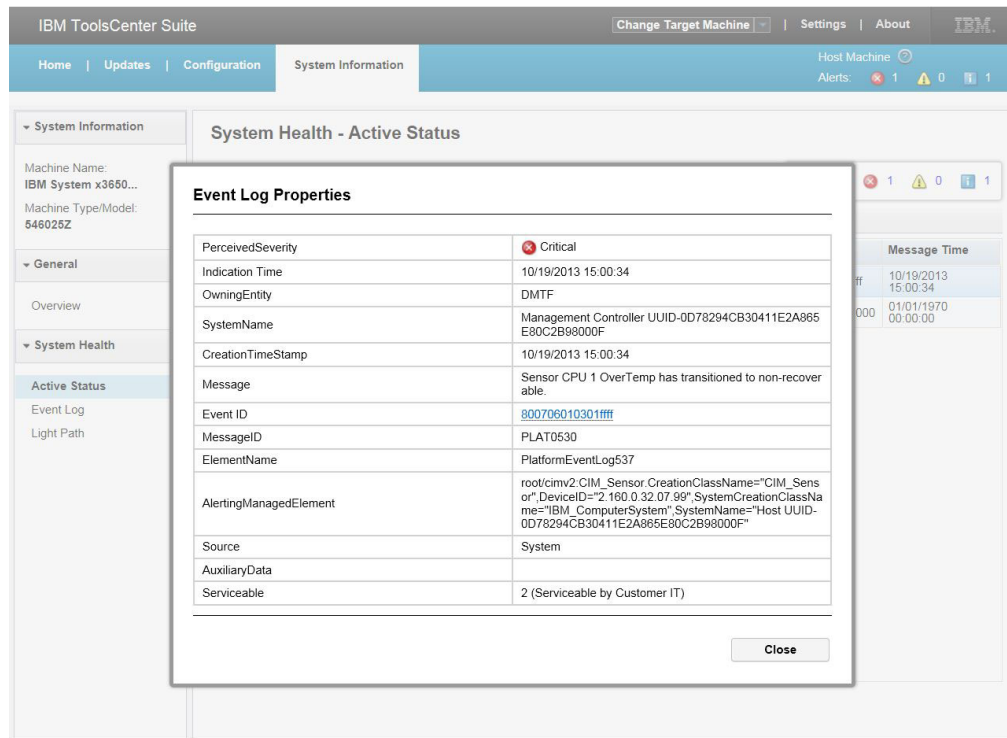


Figure 60. System Health - Active Status Property example

- To update the Active Status, click **Refresh**. The Alerts section displays any new alerts since the Active Status was last checked. There are three types of alerts:
 - Critical displays a red icon
 - Warning displays a yellow icon
 - Information displays a green icon
- The Alerts table can be sorted to view information specific to the three table categories:
 - Severity
 - Message
 - Message Time
- From the Severity list, you select to view one of the following severity levels in the Alerts table.
 - Critical
 - Warning
 - Informational

Event Log information

You can use the Event Log information to view detailed information for critical, warning, and informational events collected from the IMM system event logs.

About this task

The following steps explain how to use the features on the Event Log page, beginning with the options at the top of the page.

Procedure

1. From the navigation pane, select **Event Log**. The System Information - Event Log page opens.

There are three levels of severity recorded in the event logs:

- Critical displays as a red icon
- Warning displays as a yellow icon
- Informational displays as a green icon

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine: Alerts: 1 0 1

System Information - Event Log

Last updated: 11/08/2013 18:31:50

Click [Installation and Service Guide](#) for suggestions on resolving detected problems.

Filter by: Severity: Any Source: All

Events: 4 264 517

Severity	Message	Event ID	Source	Message Time
Critical	Please ensure that the Management Controller SN# 06CNZ14 is flashed with the correct firmware. The Management Controller is unable to match its firmware to the server.	4000001f00000000	System	08/22/2013 15:49:41
Critical	processor 1 has a Configuration Mismatch.	806f05070301ffff	Processors	08/29/2013 02:37:47
Critical	Sensor CPU 1 OverTemp has transitioned to non-recoverable.	800706010301ffff	System	10/19/2013 15:00:34
Critical	Sensor CPU 1 OverTemp has transitioned to critical from a less severe state.	800702010301ffff	System	10/19/2013 15:04:09
Warning	Security: Userid: USRERID had 1 login failures from WEB client at IP address 9.111.21.244.	4000001000000000	System	08/02/2013 13:19:28
Warning	Security: Userid: USRERID had 1 login failures from a CIM client at IP address :ffff:9.111.21.251.	4000008c00000000	System	08/22/2013 16:57:47
Warning	DHCP[0.0.0.0] failure, no IP address assigned.	4000000d00000000	System	08/29/2013 20:34:23
Warning	Security: Userid: USRERID had 1 login failures from WEB client at IP address 9.111.23.235.	4000001000000000	System	09/23/2013 10:15:44
Warning	DHCP[0.0.0.0] failure, no IP address assigned.	4000000d00000000	System	09/23/2013 10:34:05
Warning	DHCP[0.0.0.0] failure, no IP address assigned.	4000000d00000000	System	09/26/2013 21:20:07
Warning	Security: Userid: 4htA4P70 had 1 login failures from a CIM client at IP address :ffff:169.254.95.120.	4000008c00000000	System	09/29/2013 17:59:01
Warning	Security: Userid: 4htA4P70 had 2 login failures from a CIM client at IP address :ffff:169.254.95.120.	4000008c00000000	System	09/29/2013 17:59:03
Warning	Security: Userid: 4htA4P70 had 3 login failures from a CIM client at IP address :ffff:169.254.95.120.	4000008c00000000	System	09/29/2013 17:59:05
Warning	Security: Userid: 4htA4P70 had 4 login failures from a CIM client at IP	4000008c00000000	System	09/29/2013

Figure 61. System Information - Event Log

2. To collect the latest Event Log status, click **Refresh**. When you initially open the **Event Log** page, previously-collected Event log information is listed in the table.
3. Click **Installation and Service Guide** to view suggested actions for detected problems found in the event logs.

The following page is an example of the Installation and Service Guide. The Installation and Service Guide provides installation and service guide information.

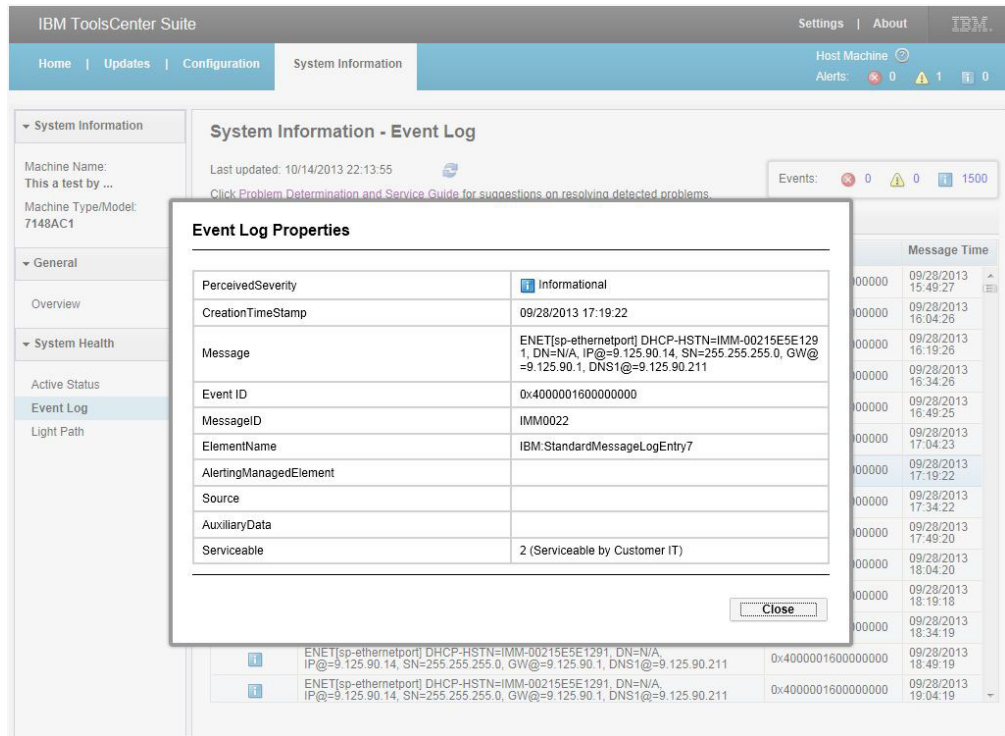


Figure 62. Installation and Service Guide

4. From the Severity list, you can select one of the following filtering options:
 - Any
 - Critical
 - Warning
 - Informational
5. From the Source list, you can select one of the following filtering options:
 - All
 - Audit
 - Cooling
 - Power
 - Disks
 - Memory
 - Processors
 - System
 - Test
 - Other
 - Unknown
6. You can sort by report category by clicking a column heading. The Event Log has the following column headings:
 - Severity
 - Message
 - Event ID
 - Source
 - Message Time

7. You can double click an Event ID to view an Event Log Property.
- The following figure provides an example of an Event Log property with a **PerceivedSeverity** of Critical.

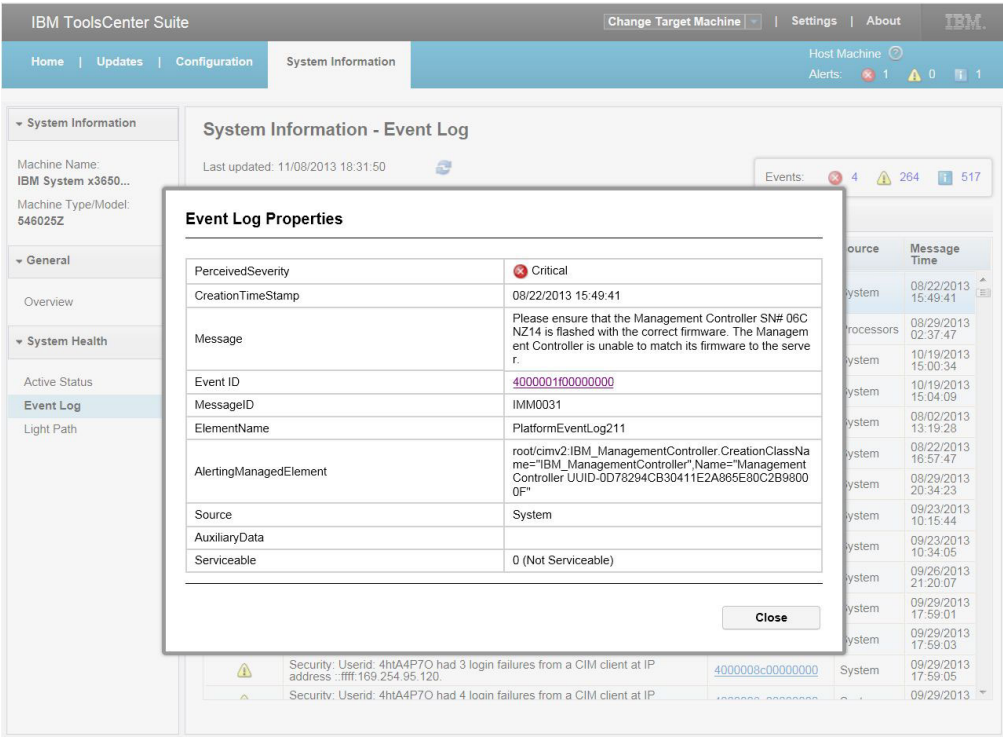


Figure 63. Event Log Properties

8. You can click the Event ID link to view additional information that can assist you with problem determination and resolution.
- The Event ID links to Info Center event ID link:

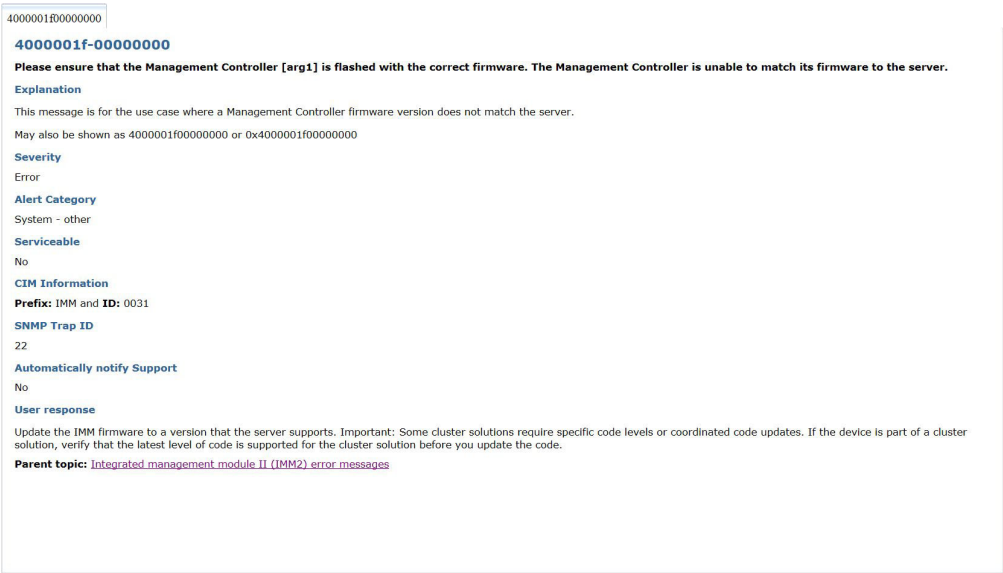


Figure 64. Event Log Event ID Link

Light Path status

You can use the Light Path status option to view the location and status for LEDs located on the front panel and Detail LEDs in various locations on the planar.

Procedure

1. From the navigation pane, select **Light Path** . The System Information - Light Path information page opens.

IBM ToolsCenter Suite

Change Target Machine | Settings | About

Home | Updates | Configuration | System Information

Host Machine | Alerts: 1 0 1

System Information

Machine Name: IBM Flex System ...
Machine Type/Model: 7916AC1

General

Overview

System Health

Active Status
Event Log
Light Path

System Information - Light Path

LEDs on the front panel of Machine (Level 1)

LED Label	Location	Status
Fault	Front Panel	Off
Check Log	Front Panel	Off
Power	Front Panel	On
Identity	Not Present	Off

Detail LEDs

LED Label	Location	Status
Identification	Front Panel	Off
LP	LightPath Card	On
MIS	LightPath Card	Off
MEM	LightPath Card	Off
S BRD	LightPath Card	Off
NMI	LightPath Card	Off
TEMP	LightPath Card	Off
CPU 1	Planar	Off
CPU 2	Planar	Off
DIMM 1	Planar	Off
DIMM 2	Planar	Off
DIMM 3	Planar	Off
DIMM 4	Planar	Off

Figure 65. System Information - Light Path status

2. To collect the latest light path information, click **Refresh**. When you initially open the Light Path page, previously-collected Light Path information is listed in the tables.
3. You can view the following Light Path status on this page:

LEDs on the front panel of the machine (Level 1):

The status reported for front-panel LEDs is **On** or **Off**. The location displays as **Front Panel** or **Not Present**.

- Fault
- Identity
- Power
- Check Log

Detail LEDs:

The status reported for Detail LEDs is **On** or **Off**, except IMM2 Heartbeat, which has a status of Blinking. The location varies for each machine type.

- CPU 1
- CPU 2

- DIMM 1
- DIMM 2
- DIMM 2
- DIMM 4
- DIMM 5
- DIMM 6
- DIMM 7
- DIMM 8
- DIMM 9
- DIMM 10
- DIMM 11
- DIMM 12
- DIMM 13
- DIMM 14
- DIMM 15
- DIMM 16
- PCIE 1
- PCIE 2
- Battery
- IMM2 Heartbeat
- Mezz Card

Collecting Full System Information

You can use the Full System Information function to query a system and view full system information for analysis, service, and support. The files generated by the collection process can be sent to IBM support, sent to an FTP server, or saved locally.

Procedure

1. On the System Information - Overview page, the first time you are collecting information, click **System Full Information** . Click **Collect Again** after the information has been initially collected to refresh the full system information before viewing the report. The Collect Full System Information dialog box displays while the full system information is being collected.

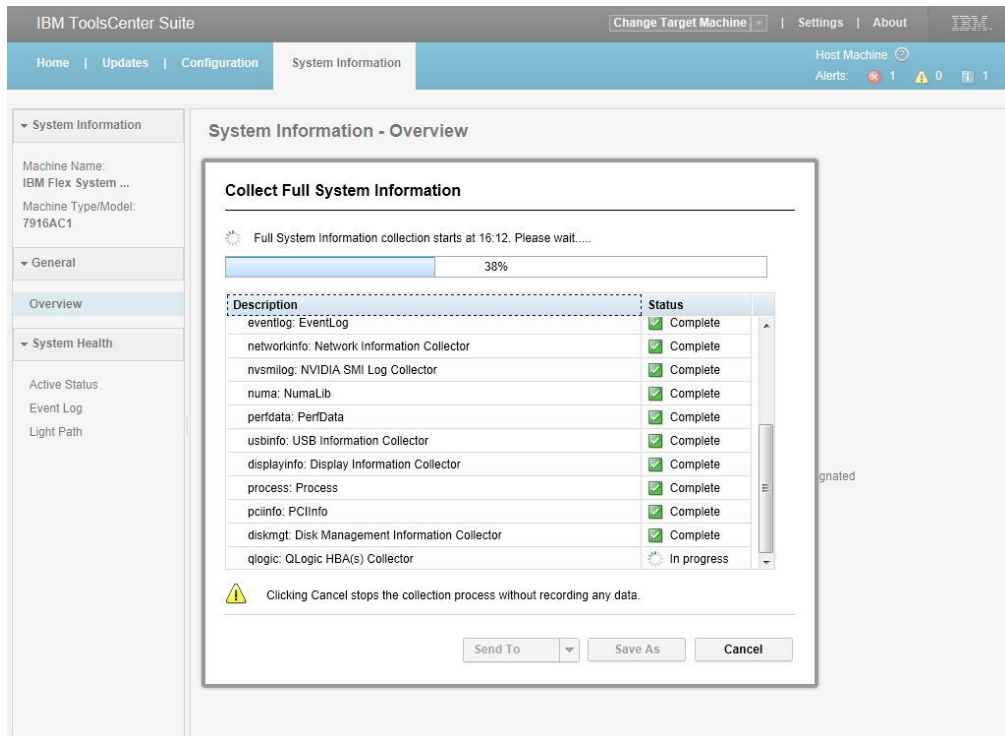


Figure 66. System Information - Collect Full System Information

As the collection progresses, an inventory list is generated which provides the status for each inventory item, indicating *Initializing* while collecting information and *Complete* when done. When the Full System Information collection is complete, the following page displays.

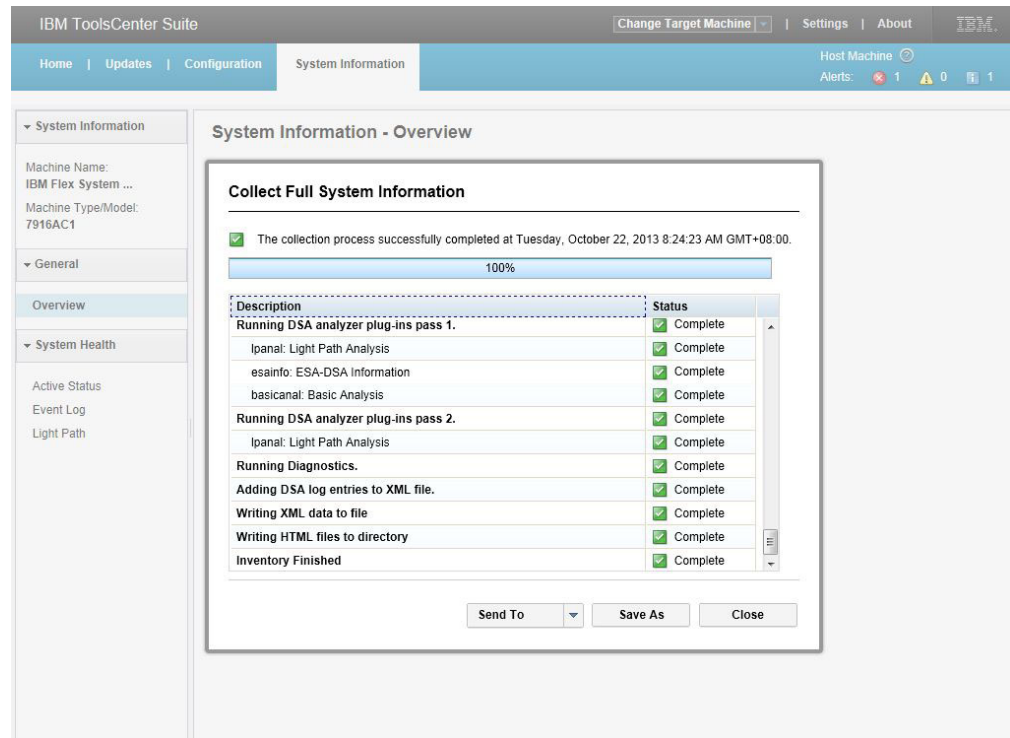


Figure 67. System Information - Collect Full System Information Completed

2. Click **Send To** and then select one of the following options, which are explained in further detail below.
 - IBM Support
 - Custom FTP

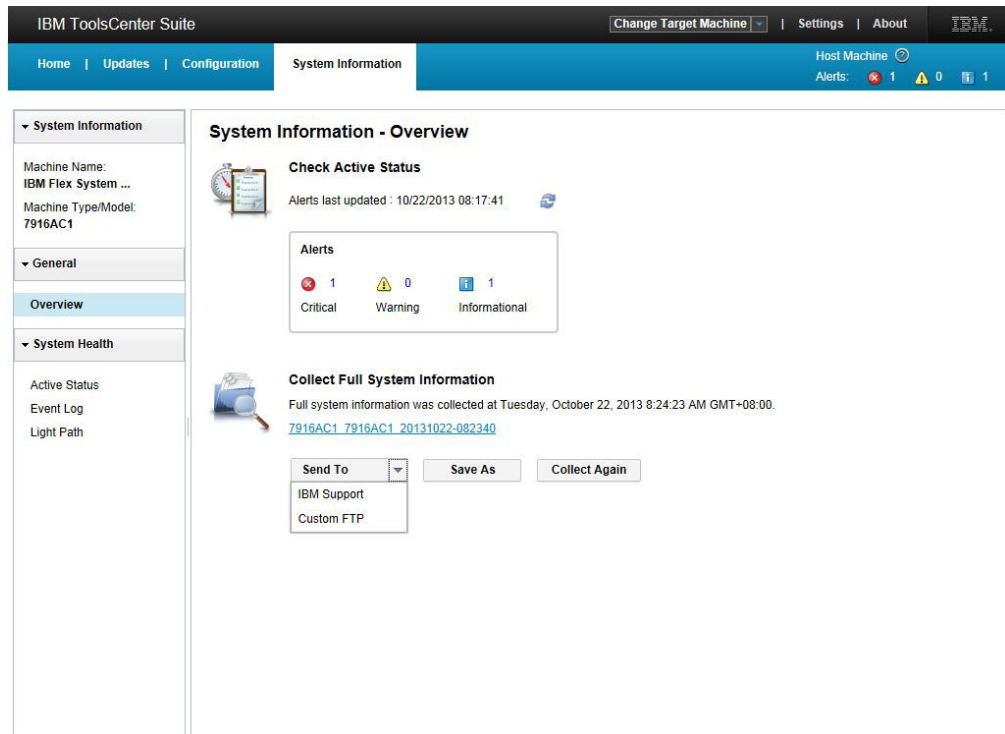


Figure 68. Full System Information Send To options

- To send the full system information report directly to IBM Support, click **Send to IBM Support**. The following window displays a message while the collection is being sent.

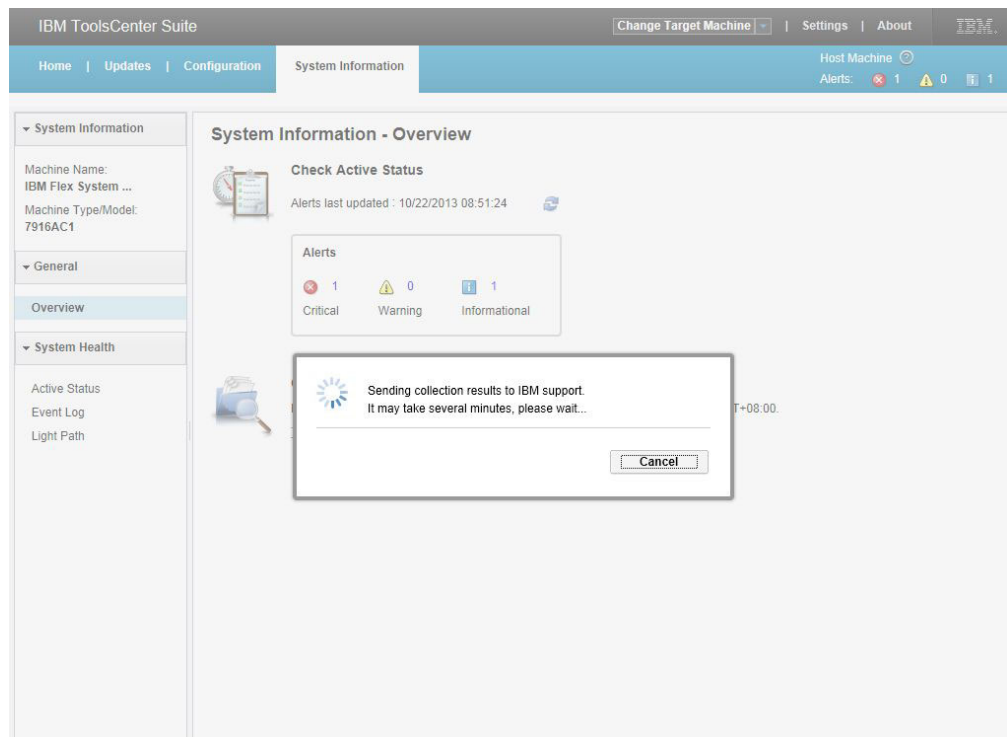
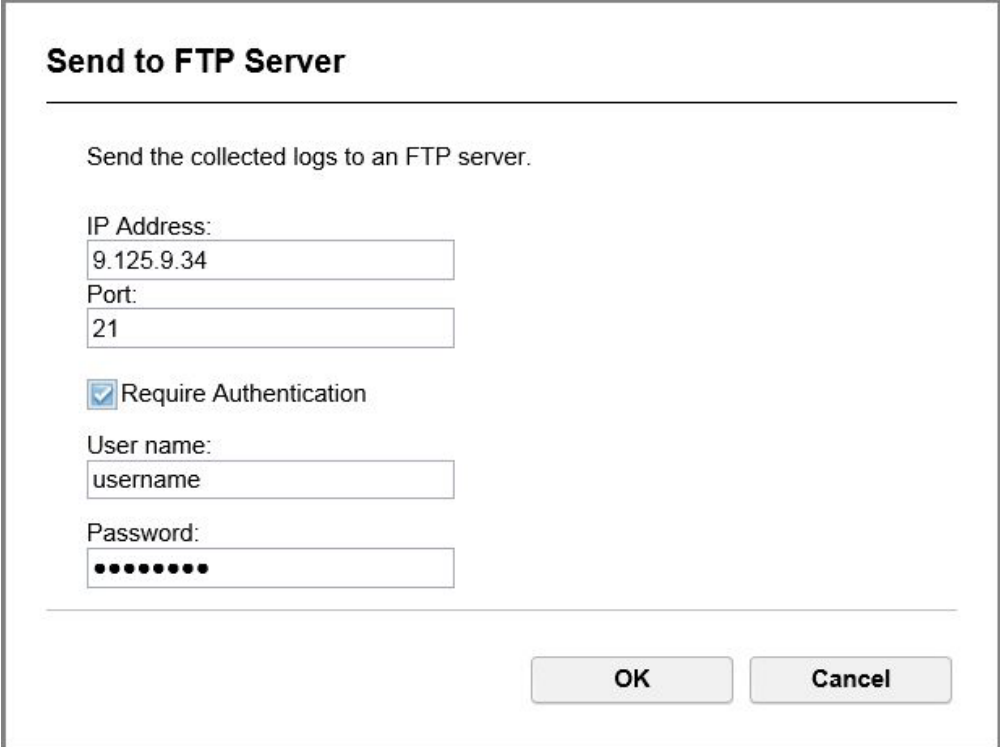


Figure 69. Full System Information being sent to IBM Support

When this operation completes, click **Close**. If the send to IBM Support fails, the Configure Internet Connection dialog box displays.

Note: If you are not connected to the Internet, the Configure Internet Connection dialog box displays. Check your configuration and try again, otherwise, click **OK** to continue or **Cancel**. For more information see “Internet Connection settings” on page 13.

- To send the collected logs to a customized FTP server, click **Send to FTP Server**. The Send to FTP Server dialog box opens.

The image shows a dialog box titled "Send to FTP Server". Inside the dialog, there is a heading "Send the collected logs to an FTP server." followed by several input fields. The "IP Address:" field contains "9.125.9.34". The "Port:" field contains "21". There is a checked checkbox labeled "Require Authentication". Below this, the "User name:" field contains "username". The "Password:" field is filled with ten black dots. At the bottom right of the dialog are two buttons: "OK" and "Cancel".

Send to FTP Server

Send the collected logs to an FTP server.

IP Address:
9.125.9.34

Port:
21

☒ Require Authentication

User name:
username

Password:
●●●●●●●●●●

OK Cancel

Figure 70. Full System Information Report being sent to FTP server

Complete the following steps and then click **OK**.

- Enter the IP Address
- Enter the Port
- Optional: Select **Require Authentication**. If you select this option, enter the following information:
 - User name
 - Password

After entering the FTP server information, the following window displays a message while the collection is being sent.

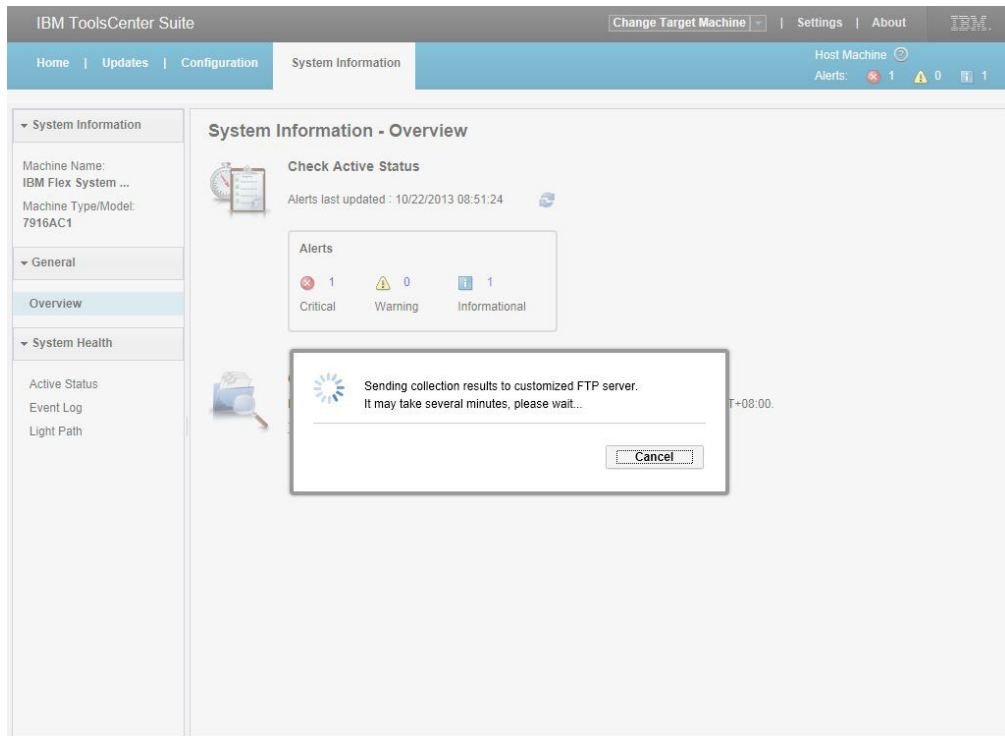


Figure 71. Full System Information being sent to customized FTP Server

3. To download the Full Collection Information zip file to a local directory, click **Save As**. The Save As file dialog box displays the name of the full system report zip file.

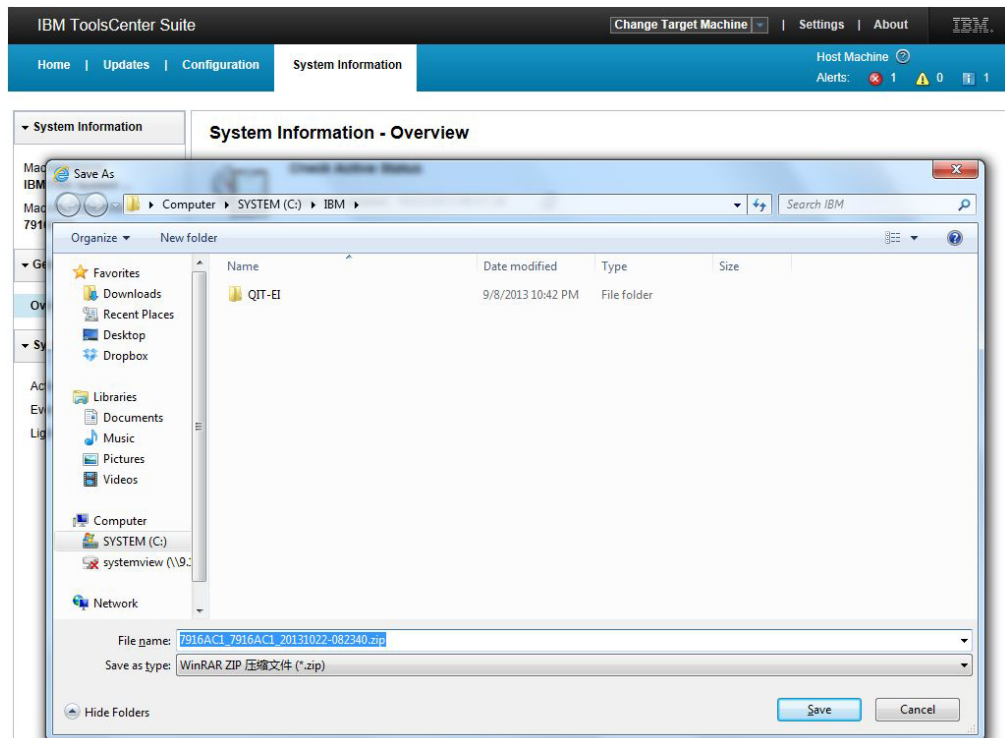


Figure 72. Full System Information Save As option

Select one of the following options.

- Click **Save** to save the Full Collection Information zip file.
The Save As dialog box opens to select a folder for saving the zip file.
- Click **Cancel** to exit this operation.

Viewing the ToolsCenter Suite report

Use this option to view the ToolsCenter Suite report and detailed information produced by the Collect Full System Information function.

Procedure

1. Click **Full System Information report** link on the System Information - Overview page to view the full system information report. The System Overview report displays in a browser window as shown below.

You can also click **Collect Again** to collect full system information again before viewing the report. The Collect Full System Information dialog box displays while the full system information is updated. For more information, see “Collecting Full System Information” on page 73.

System Overview	
Computer System	
Manufacturer	IBM
Version	02
Product Name	System x3650 M4 BD -[7916AC1]
Serial Number	7916AC1
System UUID	40230b12-40a3-4601-dba1-b4a06317a653
Operating System	
Computer Name	WIN-KBC2P8GM33F
Product Name	Windows Server 2012 R2 64-bit
Suite Type	Standard Edition
Version	6.3
Service Pack	No service packs installed
Build Number	9431
Vendor	Microsoft Corporation
Registered Owner	Windows User
Product ID	00133-32500-00010-A4562
Installation Date	09/12/2013 03:03:24
Uptime	21 hours 56 minutes 44 seconds
Time of Last Boot	10/21/2013 10:26:00
Time Zone	
Local Date Time	10/22/2013 08:22:00
Current Time Zone	Pacific Daylight Time
GMT Date and Time	10/22/2013 15:22:00
Current User	
User Name	Administrator

Figure 73. System Information - Full System Information Report

2. From the navigation menu, you can select specific items listed within the five main report categories to get more detailed information. The available report information is determined by machine type, operating system, installed hardware and software. Information that is not applicable to your system will be greyed out in the navigation menu.
 - **Software**
 - System Overview
 - Installed Packages
 - Kernel Modules
 - Network Settings
 - Resource Utilization
 - Processes
 - OS Configuration
 - Linux Config Files
 - **Hardware**

- Hardware Inventory
 - PCI Information
 - Firmware/VPD
 - IMM Configuration
 - Environmentals
 - Drive Health
 - LSI Controller
 - LSI IDE Controller
 - Mellanox Adapter
 - PMC RAID
 - ServeRAID
 - ServeRAID Logs
 - Qlogic
 - Emulex
 - Broadcom
 - Brocade Adapter
 - VMware ESXi
 - Light Path
 - IMM Built-in Self Test
 - FoD Activation Key
 - **Platform Logs**
 - /var/log/boot.log
 - /var/log/cron
 - /var/log/dmesg
 - /var/log/messages
 - /var/log/secure
 - **IMM Logs**
 - Chassis Event Log
 - IPMI Event
 - **Analysis**
 - Merged Log
 - UpdateXpress
 - File Loader Results
 - Diagnostics Log
 - DSA Error Log
3. When you have finished viewing information, click to close the browser window.

IBM ToolsCenter Suite files

This section describes where IBM ToolsCenter Suite files are stored.

The ToolsCenter Suite log file

The ToolsCenter Suite log file is stored in the %ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\logs directory. %ToolsCenterSuite% is the working directory.

New log information is appended to the tcsuite_20120909225751.log file. The number in the log file name represents: year/month/date/hour/minute/second.

Update files

The update files that are downloaded using one of the Update options are stored in the following directories.

UpdateXpress System Pack XML and binary files

%ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\depot\Update\%MachineType%\%OperatingSystem%\uxsp

Individual XML and binary files

%ToolsCenterSuite%\apache-tomcat-7.0.26\webapps\tcsuite\WEB-INF\depot\Update\%MachineType%\%OperatingSystem%\individual

%ToolsCenterSuite% is the ToolsCenter Suite working directory; %MachineType% is the four-digit machine type of the server and represents the machine type selected; and %OperatingSystem% is the server operating system.

Chapter 5. Using the Change Target Machine function for remote connectivity

This section describes how to use the Change Target Machine function for connecting to remote machines from the ToolsCenter Suite host machine.

Connecting to a remote machine

The IBM ToolsCenter Suite host can connect to remote machines, manage them in out of band mode using IMM. The out of band management functionality includes: Configuration, System Information, and Updates for System X firmware.

Procedure

1. On the Home page, from the **Change Target Machine** list, select **Connect to remote machines**. The Connect to Remote Machine dialog box opens.

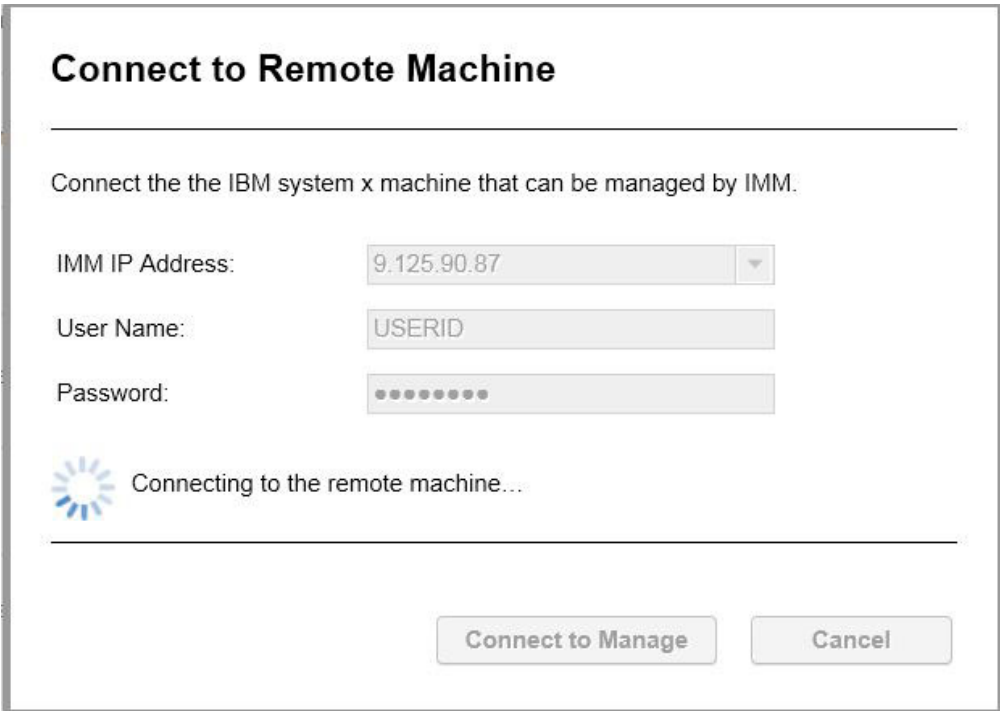


Figure 74. OOB log in

2. Enter the following information and then click **OK**.
 - IMM IP Address

Note: After a connection to a remote machine has been made, the IMM IP Address can be selected from the IMM IP Address list.

- User Name
- Password

While the Host Machine connects to the remote machine, a message stating "Connecting to the remote machine..." displays.

When the remote connection is complete, the ToolsCenter Suite Home page opens on the remote machine. In the menu banner, the target machine information displays.

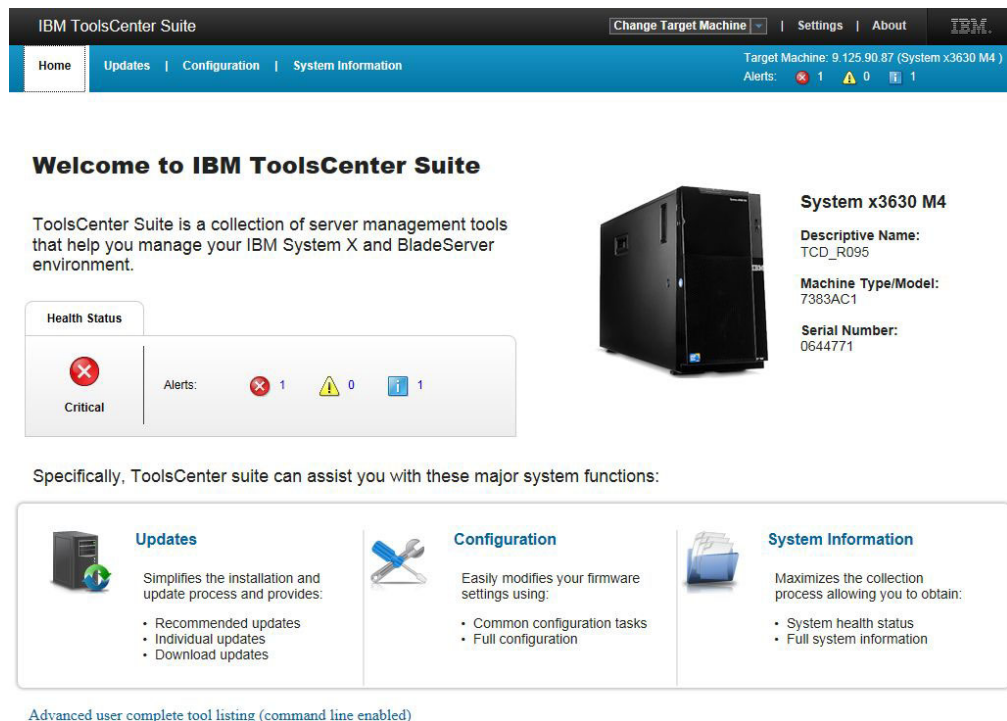


Figure 75. Remote machine Home page

Related reference:

“IBM ToolsCenter Suite menu options” on page 13

The ToolsCenter Suite graphical user interface has the following menu options:

Using the Updates function on a remote machine

You can update firmware and add support for a remote machine using the Updates function. This section describes how to check the compliance of firmware and how to download and install the updates.

Procedure

1. On the Home page or from the ToolsCenter Suite menu, select **Updates**. The Firmware Updates page opens.

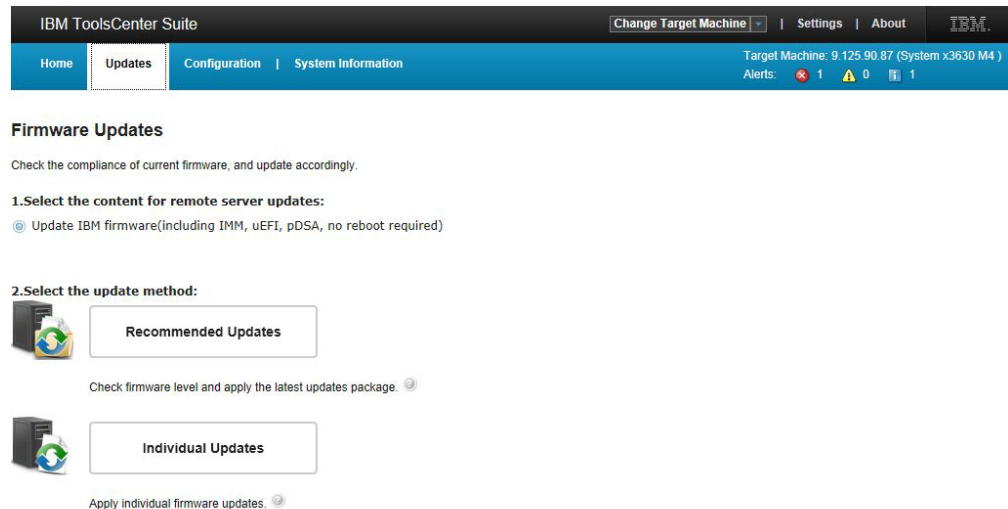


Figure 76. Firmware Updates

Tip: If you hover the mouse over a question mark, additional information for each update type displays.

2. In the Select the Content for Remote server updates section, select **Update IBM firmware (including IMM, uEFI, pDSA)**. This option does not require a reboot.
3. In the Select the Update Method section, select one of the update options:
 - **Recommended Updates:** Check firmware level and apply the latest updates package.
 - **Individual Updates:** Apply individual firmware updates.

Recommended Updates from the IBM website on a remote machine

This option checks the firmware levels of the remote machine and applies the IMM, uEFI, pDSA UXSP firmware downloaded from the IBM website.

Before you begin

Start ToolsCenter Suite on the host computer and connect to a remote machine. See “Connecting to a remote machine” on page 83.

About this task

This procedure provides an example of using Recommended Updates from the IBM website.

Procedure

1. Select **Recommended Updates** on the Firmware Updates page. The Firmware Updates Settings page opens.
2. Select **The latest UXSP updates package from the IBM website**.
3. Optional: You can select to **Also include updates that are not installed or undetected**. Select this option only if you have any unknown devices and you need to detect all possible hardware in this system.

4. Click **Next** to complete the check firmware compliance step, or **Cancel** to exit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:

- Click **OK** to exit the update wizard.
- Click **Cancel** to continue the update process.

The check firmware compliance step acquires the current machine's UXSP firmware and driver levels from the IBM website.

During the acquire operation, the progress icon displays and the Updates page is locked, **Cancel** is enabled, and the following message displays:

Please wait while ToolsCenter Suite acquires your firmware and driver levels.

After the acquire operation completes, the checking compliance operation begins.

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message displays:

Please wait while ToolsCenter Suite compares your current firmware and drivers with the latest update package.

Note: If you are not connected to the Internet, the Configure Internet Connection dialog box opens. Check your configuration or try again, otherwise, click **OK** to continue or **Cancel**. For more information, see "Internet Connection settings" on page 13.

When the operation is complete, a table containing firmware updates displays.

The firmware updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected
- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update

5. Select one or more updates in the left column.
6. Click **Continue Update** to proceed to the update firmware step by downloading the UXSP updates from the IBM website and apply the downloaded firmware and drivers, or click **Cancel** to return to the Firmware and Driver Updates page. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

During the download operation, the progress of the current downloading item indicates the total bytes and the downloaded bytes. A progress bar provides the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

When the download operation completes, the update operation begins.

During the update operation, a progress icon and the following message displays:

Updating is in progress.
x of y items have been updated.
Do not close your browser while the update is in progress.
Do not take any power actions on target server.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

7. Click **Finish** to return to the Firmware and Drivers Updates page.

Recommended Updates in a local repository for the remote machine

This option checks the firmware levels of the remote machine and applies the IMM, uEFI, pDSA UXSP package previously downloaded and located in a local repository.

Before you begin

Start ToolsCenter Suite on the host computer and connect to a remote machine. See “Connecting to a remote machine” on page 83.

About this task

This procedure provides an example of using Recommended Updates with the option to import UXSP updates package from a local repository.

Procedure

1. Select **Recommended Updates** and click **Next** on the Firmware Updates page. The Firmware Updates Settings page of the Update Wizard for Recommended Update opens.
2. Select **Import UXSP updates package** and on the next line enter the local directory of the updates package. If you enter an invalid local directory address, the following message displays:
Cannot find the given local directory.
Make sure the directory path is valid.
3. Click **Next** to proceed or **Cancel** to exit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message is displayed:

Please wait while ToolsCenter Suite checks your firmware levels.

When the operation is complete, a table containing firmware updates displays.

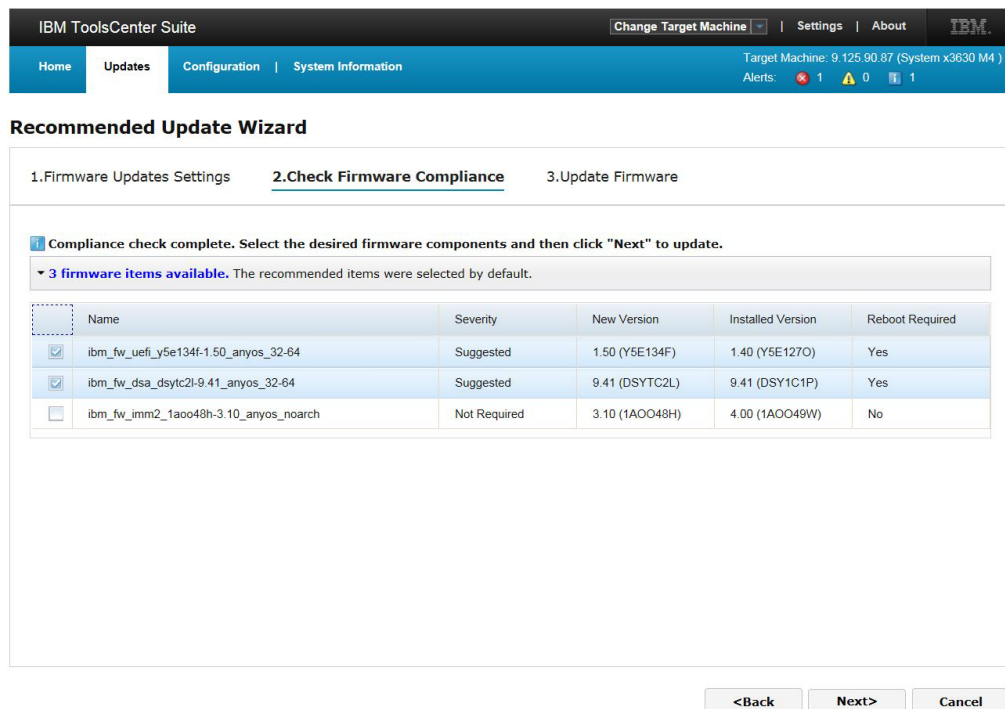


Figure 77. OOB Recommended Update compliance results table

The firmware updates table provides the following information for each update listed in the table:

- Name: update name
 - Severity: Initial Release, Suggested, Critical, or Not Required
 - New Version: new version identifier
 - Installed Version: current version identifier or Undetected
 - Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update
4. Select one or more updates in the left column.
 5. Click **Next** to proceed with the update process.

During the update operation, a progress icon is displayed.

Updating is in progress.

x of y items have been updated.

Do not close your browser while the update is in progress.

Do not take any power actions on target server.

The status for each update is displayed as: Pending, Updating, Updated, or Failed.

Note: For inband updates and out of band (OOB) updates, if you selected to install a prior version of firmware or drivers, a backlevel warning dialog box opens. Select **Continue installation** or select **Cancel** to stop the installation.

When the update operation is complete, the table provides the status of the updates indicating successful or failed. A timestamp provides the time the update operation finished.

6. Click **Finish** to return to the Firmware Updates page.

Individual Updates from the IBM website for a remote machine

This option checks the firmware and driver levels of the remote machine and applies the IMM, uEFI, pDSA firmware downloaded from the IBM website.

Before you begin

Start ToolsCenter Suite on the host computer and connect to a remote machine. See “Connecting to a remote machine” on page 83.

About this task

This procedure provides an example of using Individual Updates from the IBM website.

Procedure

1. Select **Individual Updates** on the Firmware Updates page. The Firmware Updates Settings page opens.
2. Select **Individual updates from the IBM website** and click **Next**.

The remote machine's firmware levels are acquired from the IBM website. During the acquire operation, **Cancel** is enabled, and the following message is displayed:

Please wait while ToolsCenter Suite acquires your firmware levels.

After the acquire operation completes, the checking compliance operation begins. While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message is displayed:

Please wait while ToolsCenter Suite
checks your firmware levels with the latest update package

When compliance checking is complete, the number of firmware items available is displayed above the firmware updates table.

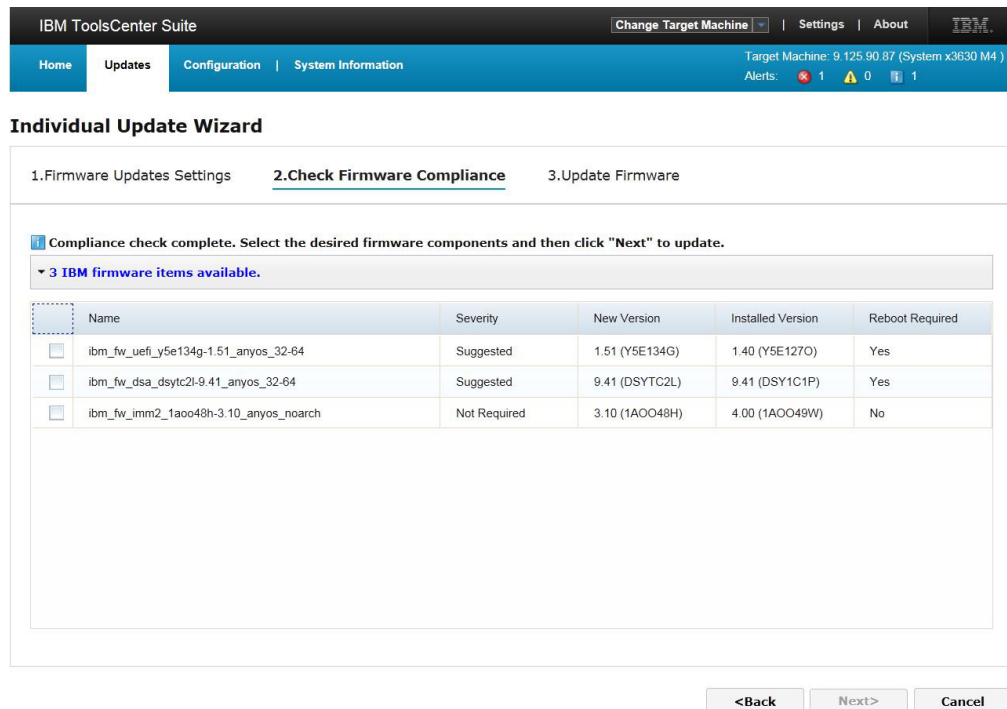


Figure 78. OOB Individual Update compliance results table

The firmware updates table provides the following information for each update listed in the table:

- Name: update name
 - Severity: Initial Release, Suggested, Critical, or Not Required
 - New Version: new version identifier
 - Installed Version: current version identifier or Undetected
 - Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update
3. Select one or more updates in the left column.
 4. Click **Next** to proceed with the update process.
 5. Click **Continue Update** to continue the updates process by downloading the updates from the IBM website and apply the downloaded firmware, or click **Cancel** to return to the Firmware Updates page. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

During the download operation, the progress of the current downloading item indicates the total bytes and the downloaded bytes. A progress bar provides the overall progress of all download items. The updates listed in the table display status as Not Started, Downloading, and Downloaded. Click **Stop** to stop the current downloading item.

When all of the firmware has been downloaded, the update begins.

During the update operation, the following information displays:

- Updating is in progress.
x of y items have been updated.
Do not close your browser while
the update is in progress.
Do not take any power actions on target server
- The status for each update is displayed.

Note: For inband and out of band (OOB) updates, if you selected to install a prior version of firmware or drivers, a backlevel warning dialog box opens. Select **Continue installation** or select **Cancel** to stop the installation.

When the update operation is complete, the table provides the status of the updates. A timestamp provides the time the update operation finished.

6. Click **Finish** to return to the Firmware Updates page.

Individual Updates in a local repository for a remote machine

This option checks the firmware of the remote machine and applies the IMM, uEFI, pDSA firmware previously downloaded and located in a local repository.

Before you begin

Start ToolsCenter Suite on the host computer and connect to a remote machine. See “Connecting to a remote machine” on page 83.

About this task

This procedure provides an example of using Individual Updates from a local repository.

Procedure

1. Select **Individual Updates** on the Firmware Updates page. The Firmware Updates Settings page opens.
2. Select **Import individual updates** and on the next line enter the local directory of the individual updates. If you enter an invalid local directory address, the following message displays:
Cannot find the given local directory.
Make sure the directory path is valid.
3. click **Next**.
4. Click **Next** to proceed or **Cancel** to exit this operation. If **Cancel** is selected, the Confirm to Cancel Updates dialog box displays, asking if you are sure you want to cancel the whole update process? Select one of the follow options:
 - Click **OK** to exit the update wizard.
 - Click **Cancel** to continue the update process.

While the compliance checking operation is working, the Updates page is locked, **Cancel** is disabled, and the following message displays:

Please wait while ToolsCenter Suite checks your firmware levels.

When the operation is complete, a table containing firmware updates displays.

The firmware updates table provides the following information for each update listed in the table:

- Name: update name
- Severity: Initial Release, Suggested, Critical, or Not Required
- New Version: new version identifier
- Installed Version: current version identifier or Undetected

- Reboot Required: Yes - rebooting is necessary for the update or No - rebooting is not necessary for the update
5. Select one or more updates in the left column.
 6. Click **Next** to proceed with the update process.

During the update operation, a progress icon displays.

Updating is in progress.

x of y items have been updated.

Do not close your browser while the update is in progress.

Do not take any power actions on target server.

The status for each update displays as: Pending, Updating, Updated, or Failed.

Note: For inband and out of band (OOB) updates, if you selected to install a prior version of firmware or drivers, a backlevel warning dialog box opens. Select **Continue installation** or select **Cancel** to stop the installation.

When the update operation is complete, the table provides the status of the updates indicating successful or failed. A timestamp provides the time the update operation finished.

7. Click **Finish** to return to the Firmware Updates page.

Using the Configuration function on a remote machine

The ToolsCenter Suite Configuration function can be used on a remote machine in the same way it is used on a host machine. On the remote machine, you can view and change one or multiple settings on your system and configure individual and frequently used settings or perform a complete system configuration. You can also change the settings for IBM System x IMM-based and a uEFI-based server. IMM replaces the Remote Supervisor Adapter and baseboard management controller functions on IMM-based servers. uEFI replaces the basic input/output system (BIOS) and defines a standard interface among the operating system, platform firmware, and external devices.

Procedure

1. On the Home page or from the ToolsCenter Suite menu, select **Configuration**. The Configuration Overview page opens.

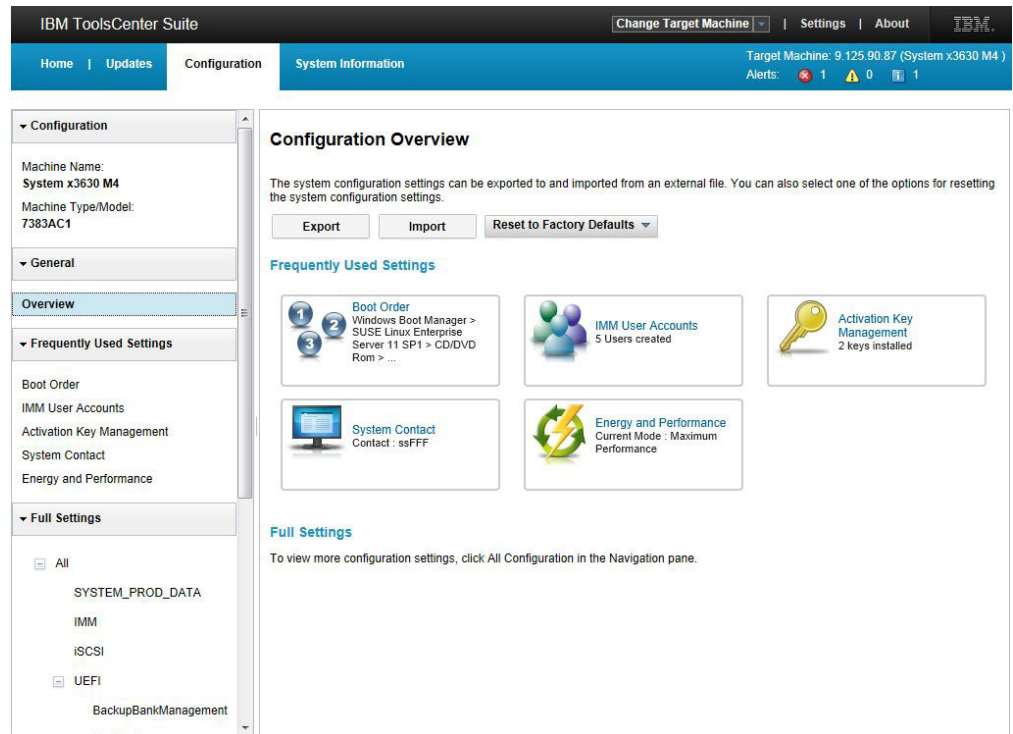


Figure 79. Configuration function on a remote machine

- For detailed information about using the Configuration function, see “Using the Configuration function” on page 35.

Using the System Information function on a remote machine

The ToolsCenter Suite System Information function can be used on a remote machine in the same way it is used on a host machine. On the remote machine, you can scan and view real-time status, check active status, light path status, and event logs for your system. You can collect full system information for analysis, service, and support. These files can be sent to IBM Support or to a customized FTP server.

Procedure

- On the Home page or from the ToolsCenter Suite menu, select **System Information**.

The System Information - Overview page opens.

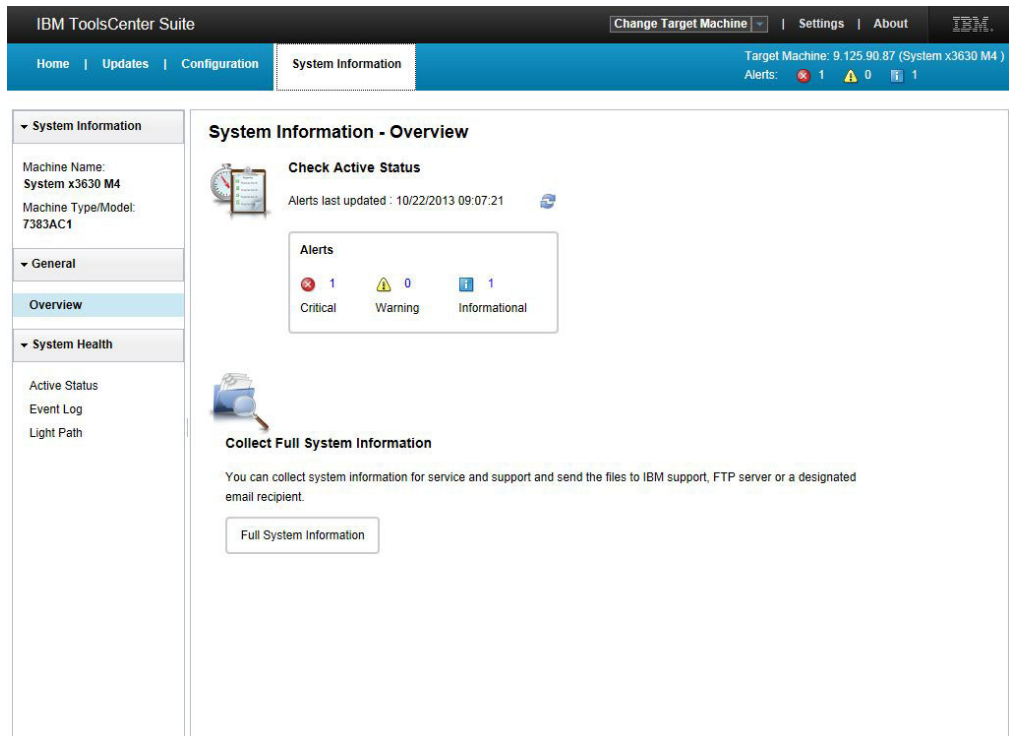


Figure 80. System Information function on a remote machine

2. For detailed information about using the System Information function, see "Using the System Information function" on page 66.

Chapter 6. Troubleshooting and support

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

Known limitations

The current known limitations for IBM ToolsCenter Suite 9.50 are:

Unzipping the downloaded ToolsCenter Suite package to the ToolsCenter Suite working directory causes the system to crash

Unzipping the downloaded ToolsCenter Suite package to the ToolsCenter Suite working directory causes the system to crash because the ToolsCenter Suite working directory name is too long. Unzip the downloaded ToolsCenter Suite package under the system root directory.

Windows 64-bit operating systems

For all Windows 64-bit operating systems, you will get RAW data and be missing the logic device table information on Windows OS.

Full Settings option

In the Full Settings option, when changing the value of **Power.PowerPerformanceBias**, there is no error message reported even though the setting change is not successful.

In Firefox, for Boot Order in Configuration

In Firefox, for Boot Order in Configuration, select the blank row of the list builder widget. The last row of the list builder widget will be selected and highlighted.

Workarounds

The following workarounds are applicable to IBM ToolsCenter Suite 9.50:

Custom mode is not currently supported for Energy and Performance of Frequently Used Settings of Configuration.

Workaround:

Use Full Settings to change these values.

When using IE on some Windows operating systems, the progress icon may not rotate

Workarounds:

For Windows 2008, under **Windows Server Manager > Configure IE ESC**, turn off the **Internet Explore Enhanced Security Configuration** for the current user.

When using IE on some Windows operating systems, there is no activation key install progress page when install activation key from Local file.

Workarounds:

- For Windows 2012, under **Server Manager > Local Server**, turn off the IE Enhanced Security Configuration.
- For Windows 2008, under **Windows Server Manager > Configure IE ESC**, turn off the Internet Explore Enhanced Security Configuration for the current user.

Warnings

The following warnings are applicable to IBM ToolsCenter Suite 9.50:

- For Red Hat and SUSE Linux, to run ToolsCenter Suite you need to run the `"/usr/sbin/setenforce 0"` command to close SELINUX.
- To run ToolsCenter Suite in a Linux environment, change the execution privilege of `run.sh`.
- In Internet Explorer v10 (IE10), the password entry field now has an Eye icon. The Eye icon allows you to read the password info. This is a new function of IE 10.
- We do not recommend that you use browser actions such as back, forward, refresh in a browser window. IBM ToolsCenter Suite does not fully support back, forward, and refresh. Under some circumstances, using these browser functions can cause unexpected results.
- System Information and Updates use the proxy configured in the Setting menu item and not the proxy configured in the browser configuration.
- **SYSTEM_PROD_DATA.SysInfoProdName** in the Full Settings option of the Configuration function is not editable, to ensure the server behaves correctly.

Getting help and technical assistance

Use this information to locate technical assistance for your IBM System x, BladeCenter, and Intellistation tools.

About this task

If you need help, service, or technical assistance or just want more information about IBM products, you will find a wide variety of sources available from IBM to assist you. This section contains information about where to go for additional information about IBM and IBM products, what to do if you experience a problem with your system, and whom to call for service, if it is necessary.

Before you call

Use this information before you call Service and Support and report a problem.

About this task

Before you call, make sure that you have taken these steps to try to solve the problem yourself:

- Ensure that you have the latest version of the tool installed.
- Check all cables to make sure that they are connected.
- Check the power switches to make sure that the system and any optional devices are turned on.
- Use the troubleshooting information in your system documentation, and use the diagnostic tools that come with your system.
- Go to the IBM support website at www-947.ibm.com/support/entry/portal/overview to check for technical information, hints, tips, and new device drivers.
- Use an IBM discussion forum on the IBM website to ask questions.

You can solve many problems without outside assistance by following the troubleshooting procedures that IBM provides in the online help or in the documentation that is provided with your IBM product. The documentation that

comes with IBM systems also describes the diagnostic tests that you can perform. Most systems, operating systems, and programs come with documentation that contains troubleshooting procedures and explanations of error messages and error codes. If you suspect a software problem, see the documentation for the operating system or program.

Using the documentation

Use this information for locating detailed information on using the documentation.

About this task

Information about your IBM system and preinstalled software, if any, or optional device is available in the documentation that comes with the product. That documentation can include information centers, online documents, printed documents, readme files, and help files. See the troubleshooting information in your system documentation for instructions for using the diagnostic programs. The troubleshooting information or the diagnostic programs might tell you that you need additional or updated device drivers or other software. IBM maintains pages on the World Wide Web where you can get the latest technical information and download device drivers and updates. To access these pages, go to the IBM support website at www-947.ibm.com/support/entry/portal/overview and follow the instructions. Also, some documents are available through the IBM Publications Center website at www.ibm.com/shop/publications/order/.

Getting help and information from the World Wide Web

Use this information to find the latest information about IBM systems, optional devices, services, and support.

About this task

On the World Wide Web, the IBM website has up-to-date information about IBM systems, optional devices, services, tools, and support.

- The address for IBM System x information is www.ibm.com/systems/x/.
- The address for IBM BladeCenter information is www.ibm.com/systems/bladecenter/.
- The address for IBM IntelliStation® information is www.ibm.com/intellistation/.
- The address for IBM Flex System information is <http://www-03.ibm.com/systems/pureflex/flex-converged-infrastructure.html>

You can find service information for IBM systems and optional devices at www-947.ibm.com/support/entry/portal/overview.

Software service and support

Use this information to contact IBM service and support with questions about your IBM System x and BladeCenter tools.

About this task

Through IBM Support Line, you can get telephone assistance, for a fee, with usage, configuration, and software problems with System x servers, BladeCenter products, IntelliStation workstations, and appliances. For information about which products are supported by Support Line in your country or region, see www.ibm.com/services/sl/products/.

For more information about Support Line and other IBM services, see www.ibm.com/services/, or see www.ibm.com/planetwide/ for support telephone numbers. In the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

Hardware service and support

Use this contact information to order new equipment or request IBM service support.

About this task

You can receive hardware service through IBM Services or through your IBM reseller, if your reseller is authorized by IBM to provide warranty service. See www.ibm.com/planetwide/ for support telephone numbers, or in the U.S. and Canada, call 1-800-IBM-SERV (1-800-426-7378).

In the U.S. and Canada, hardware service and support is available 24 hours a day, 7 days a week. In the U.K., these services are available Monday through Friday, from 9 a.m. to 6 p.m.

Appendix. Accessibility features for IBM ToolsCenter Suite

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

Accessibility features

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

- 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

The ToolsCenter Suite topic collection in the IBM ToolsCenter for System x and BladeCenter information center, and its related publications, are accessibility-enabled and support Next Generation Platform.

Keyboard navigation

This product uses standard Microsoft Windows navigation keys.

IBM and accessibility

See the IBM Human Ability and Accessibility Center website at www.ibm.com/able for more information about the commitment that IBM has to accessibility.

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User's Guide
Version 9.50

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