lenovo

Lenovo ThinkServer Partner Pack for System
Center Configuration Manager
User Guide

ThinkThink**ThinkServer**Think

Note: Before using this information and the product it supports, ensure that you read and understand Appendix A "Notices in page 30".

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1   Introduction

The purpose of this guide is to explain the processes involved in monitoring and managing Lenovo servers through the Lenovo ThinkServer Partner Pack for System Center Configuration Manager (SCCM).

1.1   System Overview

The Lenovo Partner Pack for Microsoft System Center Configurations Management (SCCM) provides centralized firmware management of Lenovo ThinkServer servers' components, including ThinkServer System Manager, BIOS, "Deployment Manager Application", "Windows Driver Package for Deployment Manager" and "Linux Driver Package for Deployment Manager" and users notification feature. Implemented as a plug-in of SCCM, the Partner Pack is integrated into SCCM by using the native Admin Console interface allowing IT administrators to manage ThinkServers by using familiar tools and "one pane of glass" management.

The Lenovo ThinkServer Partner Pack for Microsoft System Center Configurations Manager manages the Lenovo ThinkServer with only Intel® Xeon® processor E5-2600 v3 or Intel® Xeon® processor E5-2600 v2 product family and above.

Knowledge on other tools is not necessary to use the Lenovo ThinkServer Partner Pack.

1.2   Key Features and Benefits

The Lenovo ThinkServer Partner Pack for SCCM provides the following features:

- It can be possible to perform platform firmware upgrades remotely via the plug-in. It will provide this capability only on 5th generation and later servers (Applicable RQ750).
- Centralized firmware upgrade via the plug-in will provide the ability to upgrade the firmware on the target host via its ThinkServer System Manager. The firmware components that can be upgraded in this manner are:
    1. ThinkServer System Manager
    2. BIOS
    3. Deployment Manager Application
    4. Windows Driver Package for Deployment Manager
    5. Linux Driver Package for Deployment Manager
- It is possible for users to specify a firmware bundle file from local host or a network location with necessary information. Network protocol supported: Samba(CIFS), NFS, and TFTP.
- From the plug-in it will be possible to specify a group of Lenovo servers and upgrade the firmware of their components.
- Centralized firmware upgrade will run in the background and users will be allowed to check on the status of the firmware upgrade in real-time.
- There will be a wizard to guide the user in launching the firmware upgrade.

- It will automatically notify user when the firmware upgrade process is done.
- It will automatically detect the firmware version of all monitored servers as scheduled.
- It will automatically notify users which servers need a firmware upgrade.
- It is possible to import existing ThinkServer System Manager Credentials from a SCOM database.
- It is possible for the user to manage (add, edit, delete) ThinkServer System Manager Credentials.
- Only firmware upgrade is supported, downgrade is not supported.

Notice: when **ThinkServer System Manager NIC Selection** of BIOS is configured as **Shared NIC Port**, all features of this plugin are not available.

2   Installing Lenovo ThinkServer Partner Pack

Run the *LenovoThinkServerPartnerPack.EXE* installation file from the installation package and follow the prompts. This will extract the Lenovo ThinkServer Partner Pack for System Center Configuration Manager into the directory you choose during the installation process.

The default location is
C:\Program Files(x86)\LenovoThinkServerPartnerPack

For detailed information please refer to the Installation Guide.

3 Working with Lenovo ThinkServer Partner Pack

This section explains various features of the Lenovo ThinkServer Partner Pack's user interface.

3.1 Firmware Type

Lenovo ThinkServer Partner Pack for System Center Configuration Manager can support the following five types of firmware:

1. ThinkServer System Manager
2. BIOS
3. Deployment Manager Application
4. Windows Driver Package for Deployment Manager
5. Linux Driver Package for Deployment Manager

If the specified firmware's version is lower than installed, it will not be able to continue to update.

Attention：RQ750 can support only ThinkServer System Manager and BIOS.

3.2 Firmware Upgrade

On the left pane, right click the **Firmware upgrade** tab to view the Firmware **Upgrade Wizard** screen.
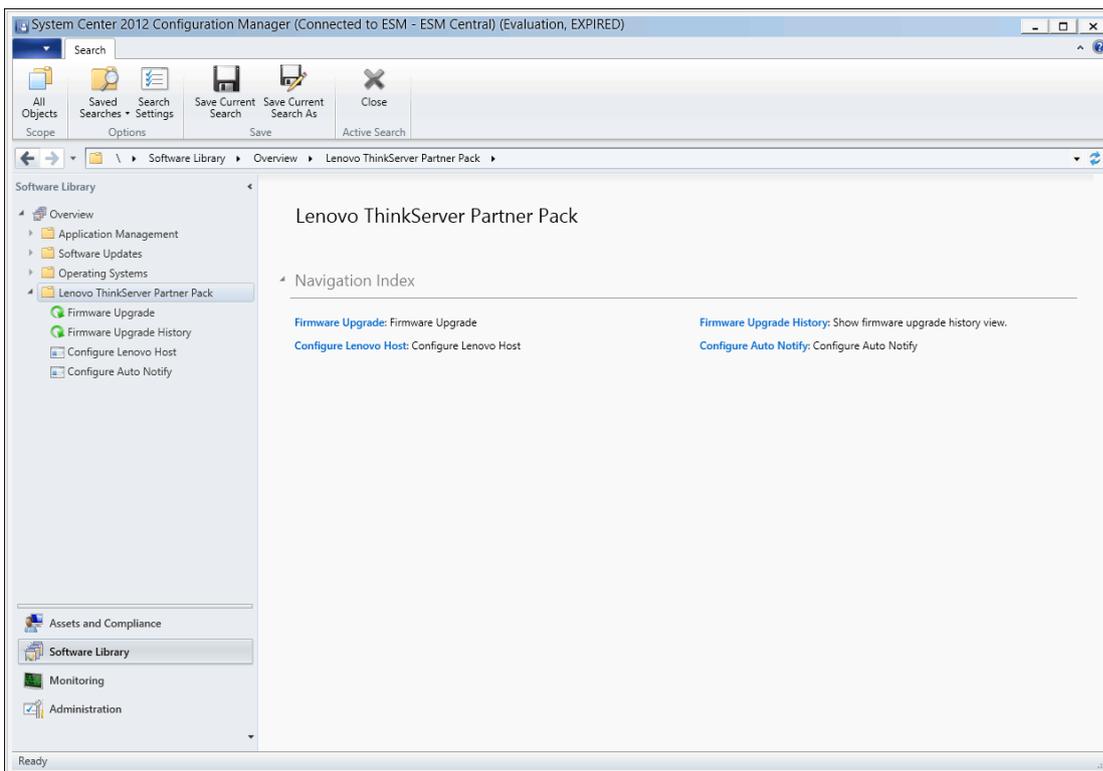
Figure 1: Monitoring Overview Screen

3.2.1 Firmware Upgrade Wizard Step 1

When specify a firmware bundle file from a local location:
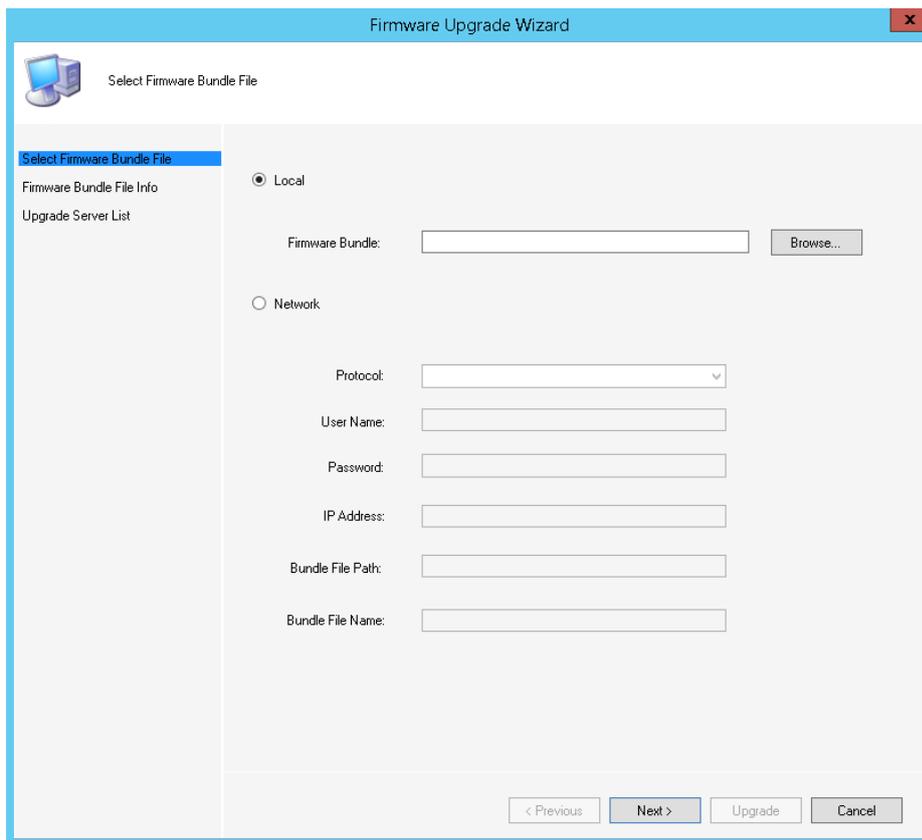
Figure 2: Select local firmware bundle file screen

Click *Browse* button to choose a local bundle file.
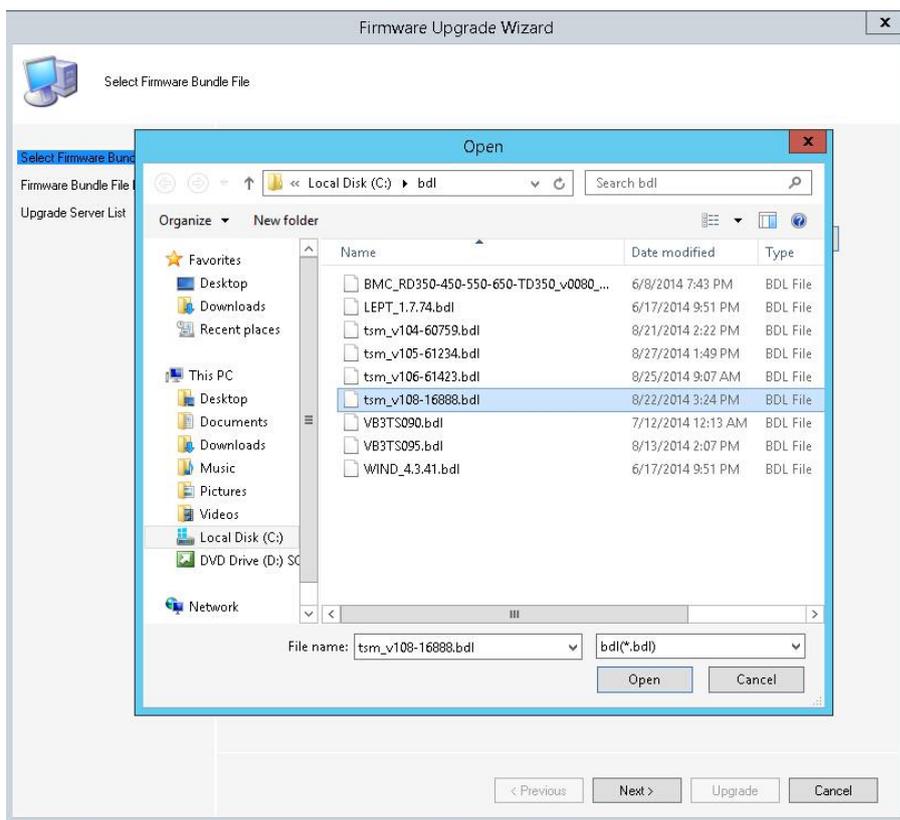
Figure 3: Click browse button screen

When specify a firmware bundle file from a network location (Attention: RQ750 can support only TFTP):

1. Samba (CIFS): User Name, Password, IP address, Bundle File Path and Bundle File Name are required.

Figure 4: Select the firmware bundle file picture of the CIFS protocol

2. NFS: IP Address, Bundle File Path, Bundle File Name are required.
Note: Windows Component *NFS Client* is required.

For example: [Bundle File Path] input home/share/nfs
            [Bundle File Name] input tsm_v106-61423.bdl
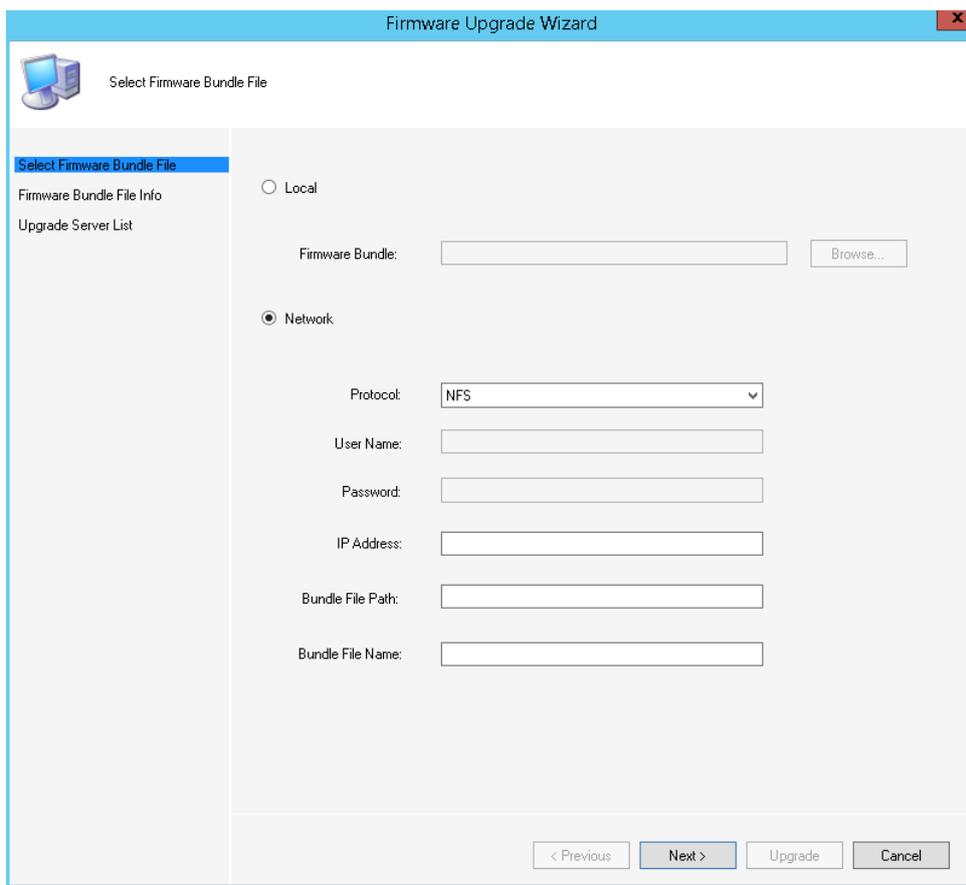
Figure 5: Select the firmware bundle file picture of the NFS protocol

3. TFTP: IP Address, Bundle File Name are required.
For example: [Bundle File Name] input   tsm_v106-61423.bdl
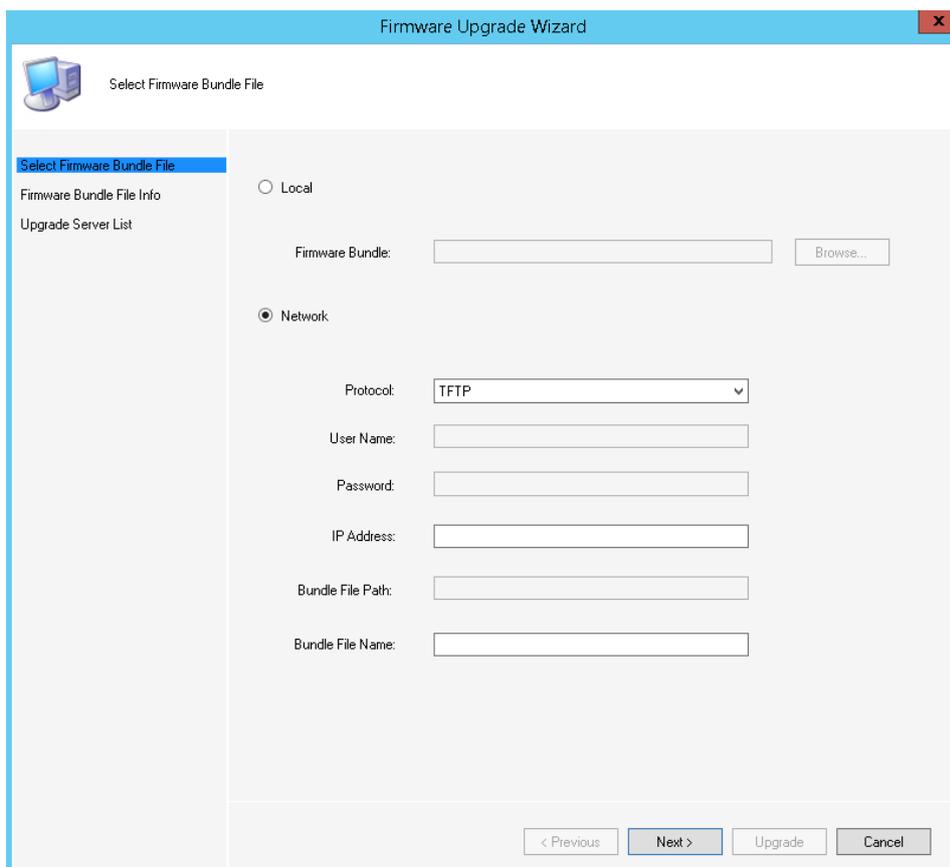
Figure 6: Select the firmware bundle file picture of the TFTP protocol

3.2.2 Firmware Upgrade Wizard Step 2
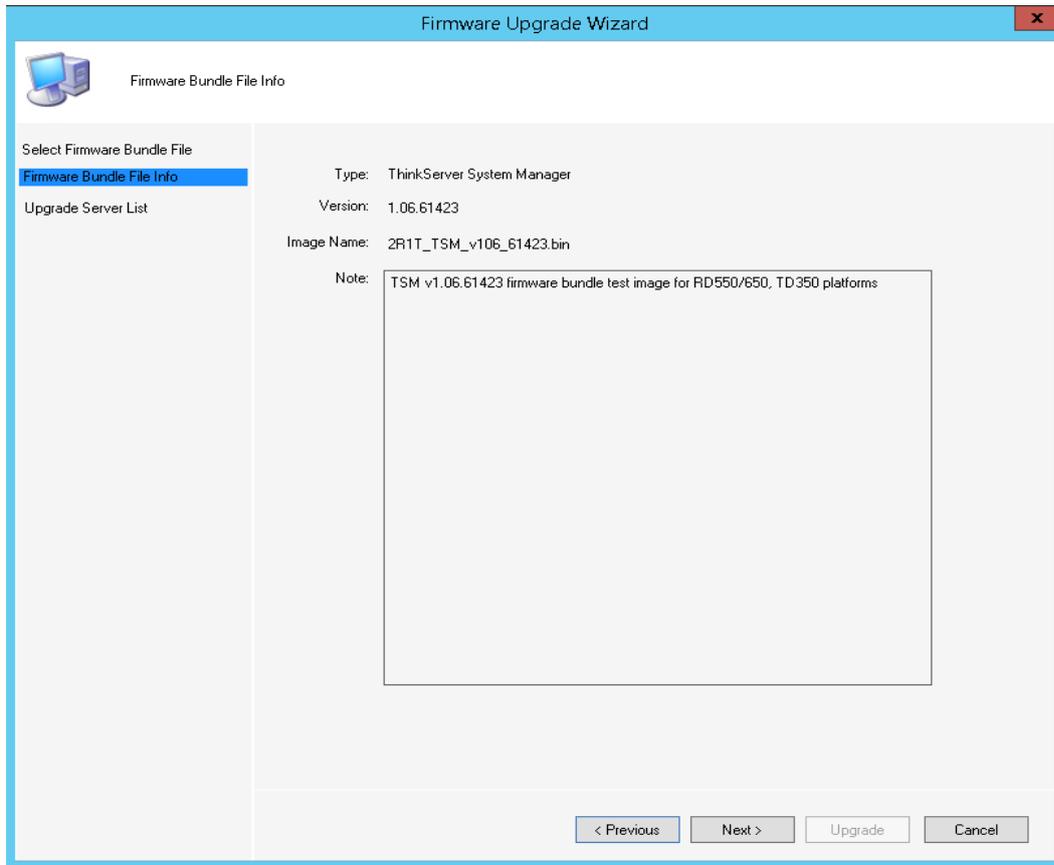
Figure 7: Firmware bundle file info screen

3.2.3 Firmware Upgrade Wizard Step 3

Check desired devices to upgrade.

About RQ750 BIOS upgrade, Partner Pack will not check the version in the upgrade process, So the BIOS bundle file which is lower than the current version of the BIOS can also be upgraded, The reason is that Partner Pack is unable to get the bundle file's version by RQ750's BMC.
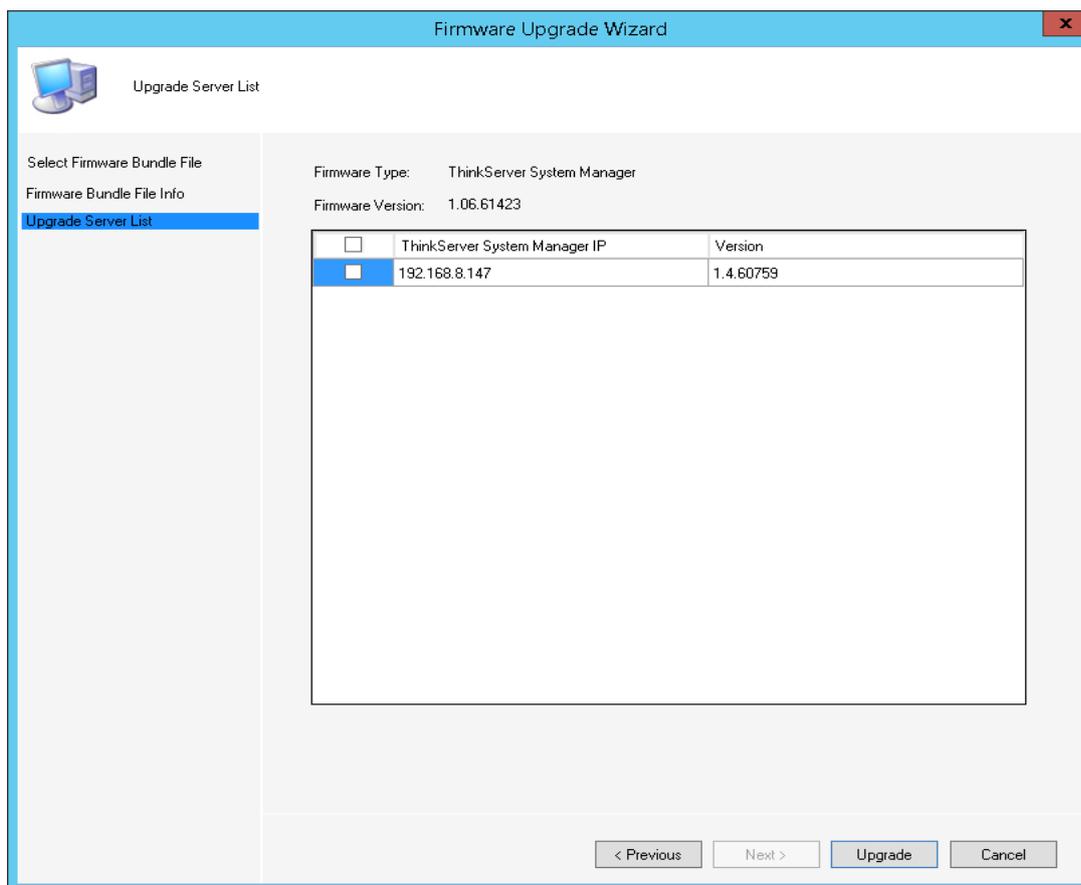
Figure 8: Upgrade server list screen

Choose corresponding machine model when upgrading BIOS firmware. BIOS firmware upgrading will cause hardware reset, please save your working contents before doing that.

3.2.4 Firmware Upgrading List

This Screen displays the current running firmware upgrade.
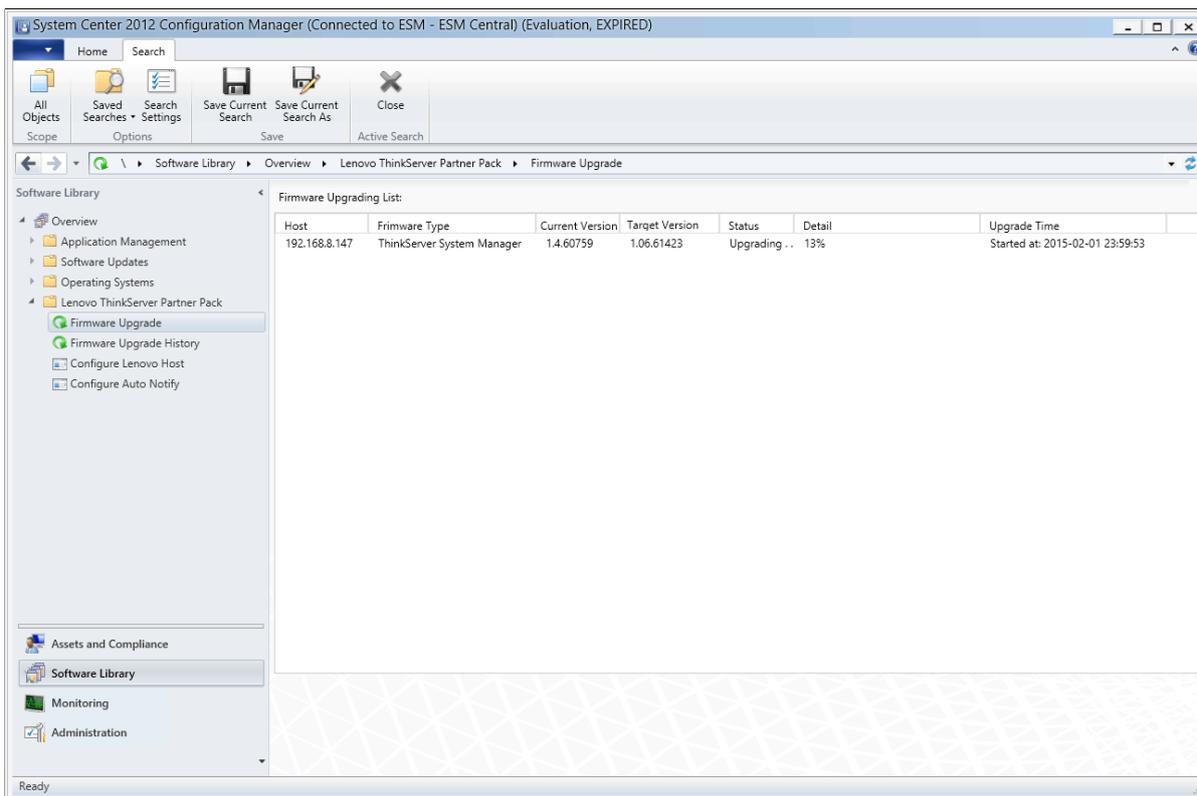
Figure 9: Upgrading status screen

3.3   Firmware Upgrade History

This Screen displays all Firmware upgrade history.
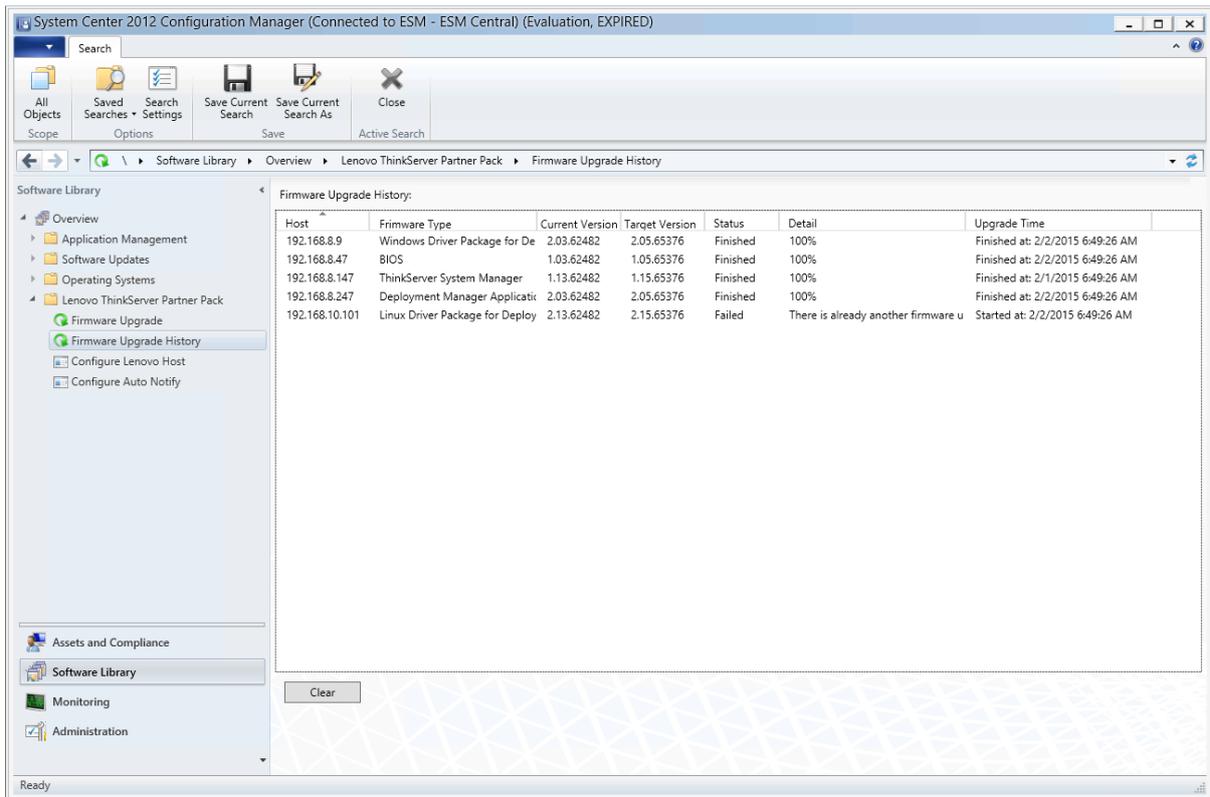
Figure 10: Firmware upgrade history screen

Information listed below will be displayed:

- Host: **ThinkServer System Manager IP**
- Type: **Firmware type**
- Status: **Finished**, **Failed**
- Current Version: **The current version of firmware for upgrade.**
- Target Version: **The version to upgrade.**
- Detail: **The information about upgrade process.**
- Upgrade Time: **The end time of upgrade.**

3.4   Configure Lenovo Host

1. It is possible to import existing ThinkServer System Manager Credentials from a SCOM database.

2. It will be possible for users to manage (add, edit, delete) ThinkServer System Manager Credentials.

3.4.1 Import ThinkServer System Manager Information
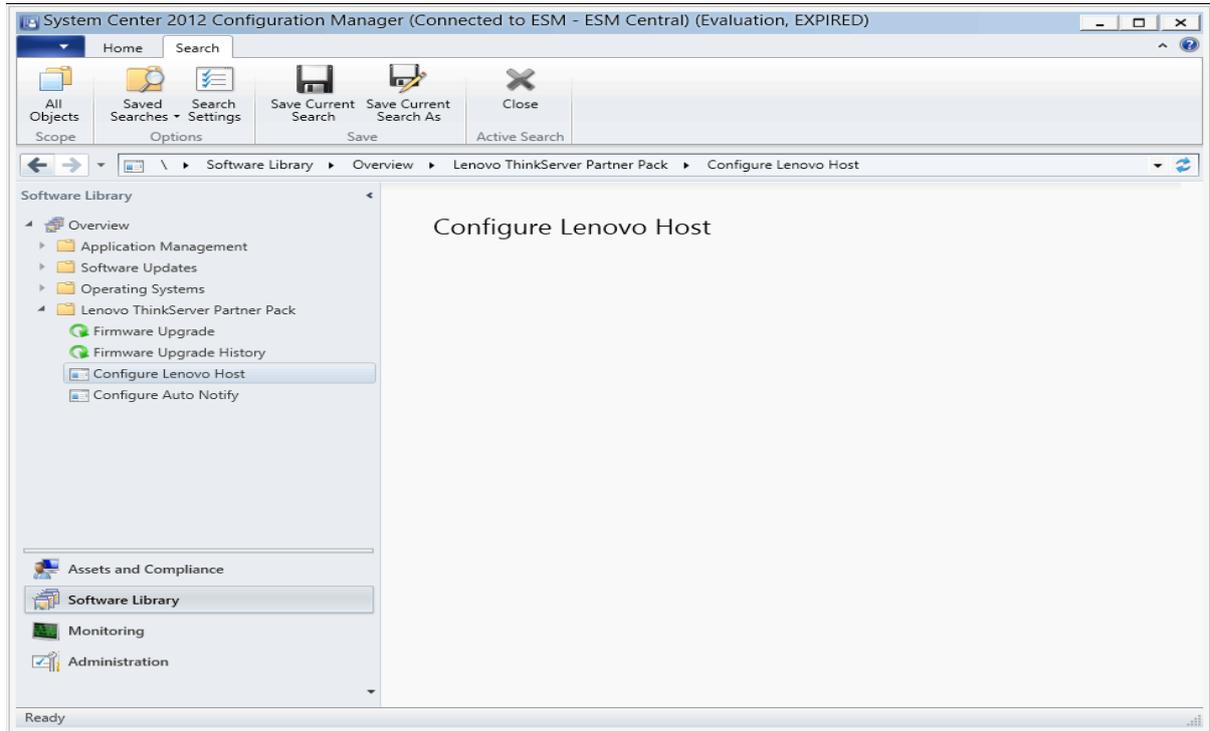
Figure 11:Configure Lenovo host screen

Right Click *Configure Lenovo Host* tab to show *ThinkServer System Manager Credential Management*
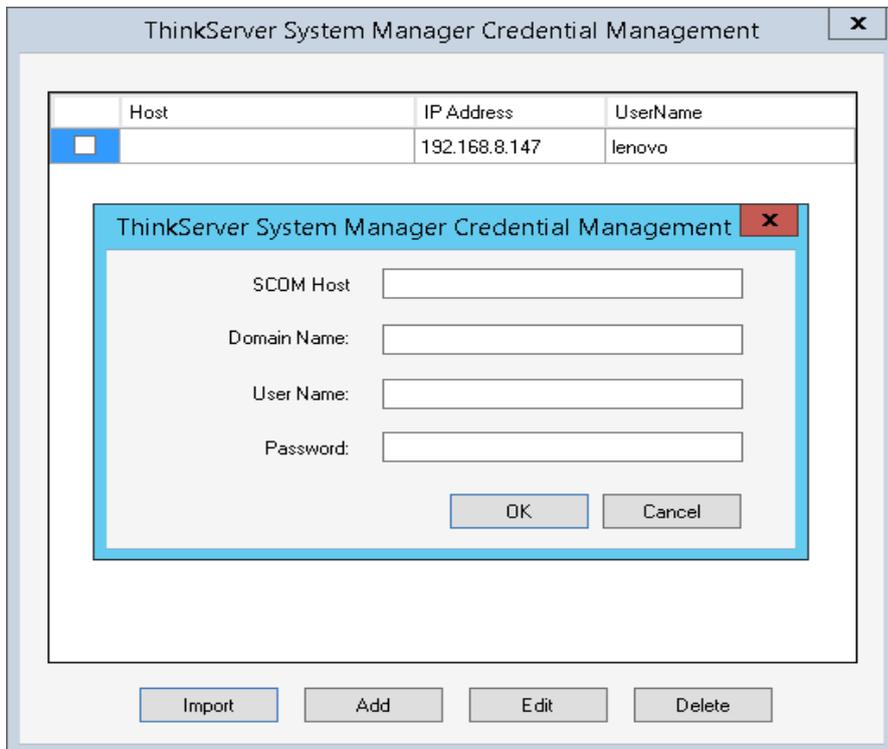
Figure 12: ThinkServer System Manager info import screen
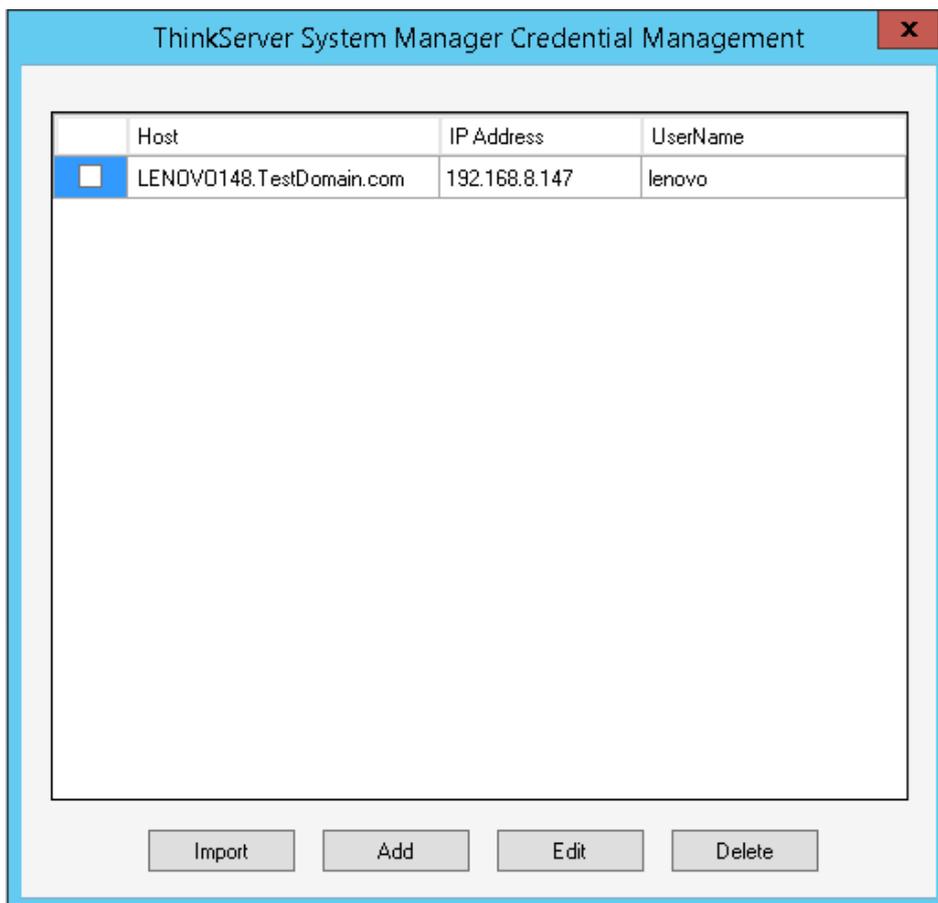
Figure 13: ThinkServer System Manager Credential Management screen

Information listed below will be displayed:

- Host: **The hostname of the OS installed on the machine.**
- IP Address: **The ThinkServer System Manager IP Address.**
- User Name: **User name used to login into the ThinkServer System Manager**

1. Click the *Import* button to open Import screen.
2. Click the *Add* button to open Add ThinkServer System Manager screen.
3. Click the *Edit* button to open Edit ThinkServer System Manager screen.
4. Click the *Delete* button to open Delete ThinkServer System Manager screen.

3.4.2 Add ThinkServer System Manager Information

This window provides an interface for user to add a new ThinkServer System Manager.

The default value of User Name is *Lenovo*, Password is *len0vO*.
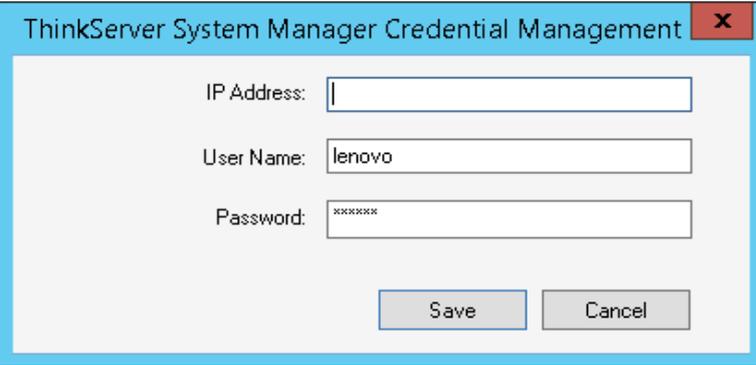
Figure 14: Add ThinkServer System Manager information screen

3.4.3 Edit ThinkServer System Manager Information

The window provides an easy interface for user to edit an existing ThinkServer System Manager.

The default value of IP Address, User Name and Password can be displayed.
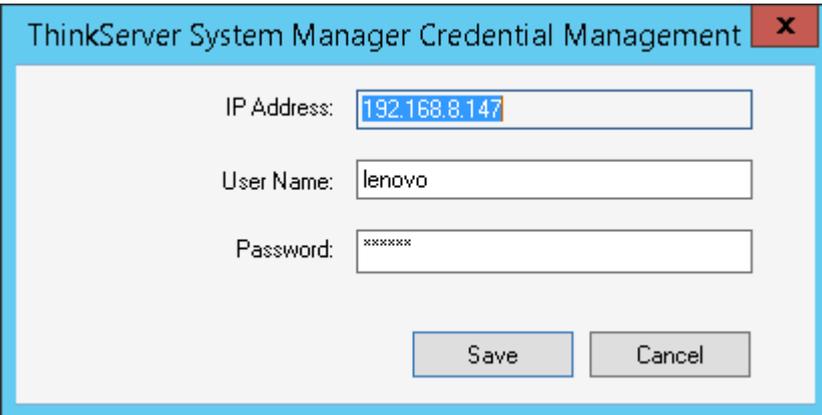
Figure 15: Edit ThinkServer System Manager info screen

3.4.4 Delete ThinkServer System Manager Information

This window provides an interface for user to manage credential information of ThinkServer System Manager.
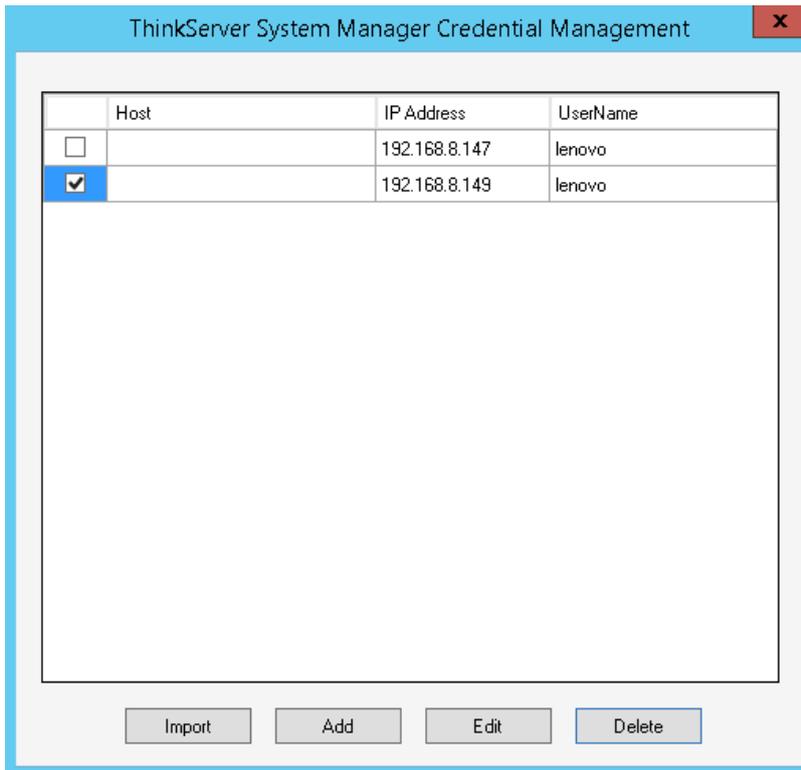
Figure 16: Delete ThinkServer System Manager Information Screen.

3.5   Configure Auto Notify
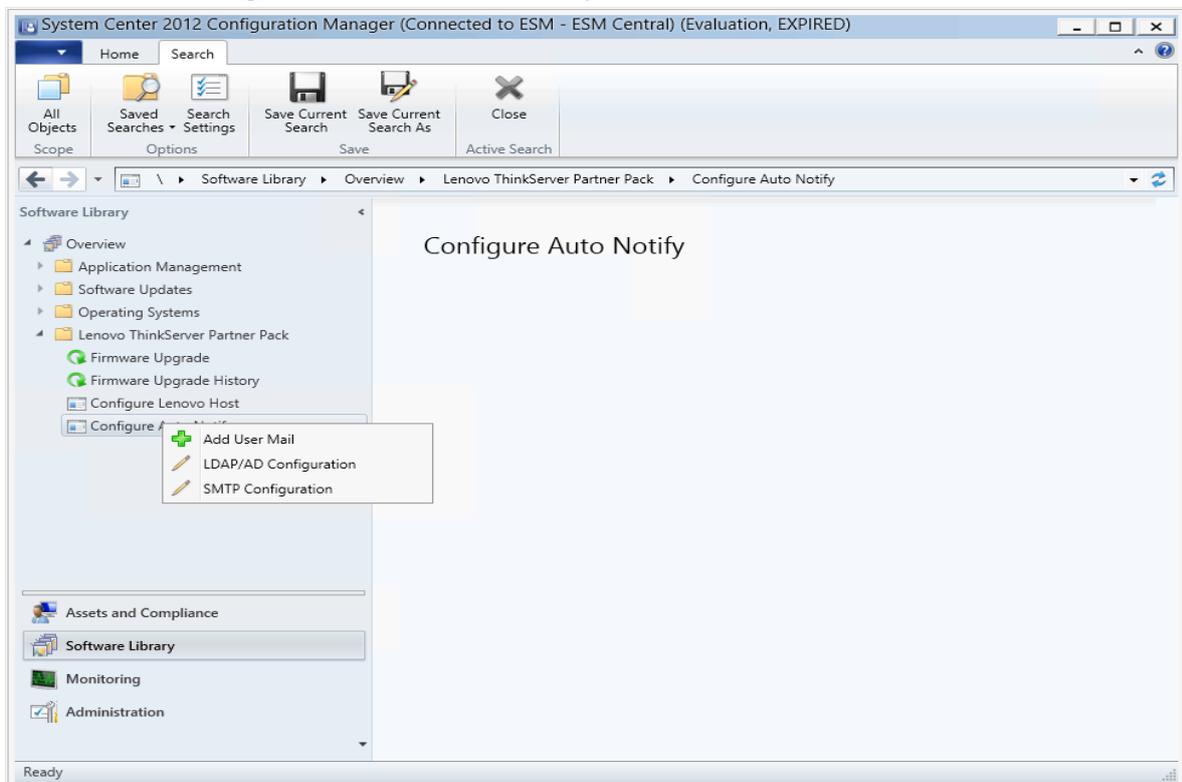
Figure 17: Configure auto notify screen

3.5.1 Add User Mail

The window provides an interface for user to choose which users should be notified.

- User Name: **The user should be notified.**

- Mail Address: **The mail address.**

- Upgrade Complete: **whether the user should be notified when a firmware upgrade has finished (Failed or Succeed).**

- Auto Notify: **whether the user should be notified when a monitored device needs a firmware upgrade.**

Figure 18: Add User Mail screen

Click the [Save] button to save email info into the local database.

3.5.2 LDAP/AP Configuration.

This window provides an interface for user to configure an available LDAP or AD server.

Figure 19: LDAP/AD configuration screen

3.5.3 SMTP Configuration

The window provides an easy interface for user to specify a SMTP server used to send notification mails.
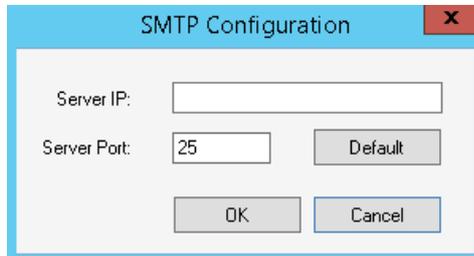
Figure 20: SMTP Configuration screen

4   Firmware Upgrade Notify Service

A service named *Lenovo Upgrade Notify Service* will be installed as *Auto Start* after Lenovo ThinkServer Partner Pack has been installed.

Properly configured as *3.4* described, the service will run in background to check all monitored devices to see if any device has a newer version of firmware than other compatible devices. When found, the service will send a mail contains all devices which need a firmware upgrade to all configured address to notify corresponding users.

4.1.1   Mail Notification Time

Lenovo Upgrade Notify Service will send mail in two cases:

1. The service can send mail when firmware update finished, regardless of success or failure.
2. The service can send mail when it detects a new version firmware.
   Service will check all managed host's firmware version every 30 minutes, and to get the highest firmware version. When any lower firmware version has been found, service will trigger mail.

4.1.2   Mail Format

1. The mail of update complete.
   Subject: Notify User Firmware Upgrade Finished
   Body:

Firmware upgrade finished:		
Firmware Type	HOST	Status
ThinkServer System Manager	192.168.8.147	Succeed
This is a system generated mail, please do NOT reply directly.		

2. The mail of auto notification.
   Subject: Firmware Upgrade Notify
   Body:

New Firmware Version detected (Grantly):

ThinkServer System Manager: Version (1.8.16888)

BIOS:

Product Name	Version
RD650	1.12.0
RD350/RD450	0.96.0

Windows Driver Package for Deployment Manager: Version (4.3.41)

Firmware listed below can be upgraded:

ThinkServer System Manager:

IP	Current Version
192.168.8.147	1.6.61423

BIOS:

IP	Product Name	Current Version
192.168.8.147	RD650	1.10.0
192.168.8.149	RD450	0.95.0

Windows Driver Package for Deployment Manager:

IP	Current Version
192.168.8.149	0.0.0

New Firmware Version detected (RQ750):

ThinkServer System Manager: Version (2.2.0)

BIOS: Version (0.22.0)

Firmware listed below can be upgraded:

ThinkServer System Manager:

IP	Current Version
192.168.8.121	2.1.0

BIOS:

IP	Current Version
192.168.8.121	0.21.0

This is a system generated mail, please do NOT reply directly.

5   Troubleshooting

5.1   Error messages

This table displays the *Configure Lenovo Host* error messages and their resolutions.

Error Message	Resolution
There are no suitable machine.	Please connect one or more 5th generation machine ThinkServer System Manager.
The ThinkServer System Manager IP is existing.	Delete the ThinkServer System Manager add again.
The specified server is unable to connect.	Check whether the SCOM server has installed.
Failed to delete ThinkServer System Manager Info.	The local database operation failure, please try again.
Domain Name cannot be empty.	Please enter a valid domain name.
Failed to edit ThinkServer System Manager Info.	The local database operation failure, please try again.
Password cannot be empty.	Please enter a valid password.
User Name cannot be empty.	Please enter a valid user name.
SCOM Host cannot be empty.	Please enter a valid SCOM host.
Please select at least one row to remove.	Select only one row of information for editing.
A password must be minimum 1 character long and maximum 16 characters long. White spaces are not allowed.	Please enter the password with 1-16 characters) specification character.
Username must be minimum 1 ASCII character and maximum 16 ASCII characters. User names are case-sensitive.	Please enter the characters in conformity with the (1-16 ASCII) standard.

This table displays the *Firmware Upgrade* Lenovo host error messages and their resolutions.

Error Message	Resolution
The Bundle File Name cannot be empty.	Please enter a valid bundle file name.
The Bundle Path cannot be empty.	Please select a valid bundle file.
Please input a valid IP address.	Please enter a valid IP address.
The Password cannot be empty.	Please enter a valid password.

The Protocol cannot be empty.	Please enter a valid protocol.
The User Name cannot be empty.	Please enter a valid user name.
Please select at least one row to upgrade.	Please check at least one row.
There are no ThinkServer System Manager Information, please execute Configure Lenovo Host.	Local database is in the absence of ThinkServer System Manager information, please go to 【ThinkServer System Manager Configuration Management】.
The specified bundle file is not existed	Please make sure that the bundle file path is valid when choosing a network location. To check the availability: Samba (CIFS): type the full path of the bundle files folder into the address bar of Windows Explorer and press *Enter*, input username and password, confirm. NFS: execute "mount //yourNFSIP/yoursharefolder Y:", check whether or not your NFS path can be mounted and show itself inside Windows Explorer. TFTP: use any ftp tool or just Windows Explorer to access the TFTP server. Note: The specified path cannot contains of \, it must been replaced by /

This table displays the configure auto notify error messages and their resolutions.

Error Message	Resolution
Domain cannot be empty.	Please enter a valid domain name.
Password cannot be empty.	Please enter a valid password.
Server IP cannot be empty.	Please enter a valid server IP.
The LDAP/AD is not applicable, please check your input.	Please check the LDAP/AD server Settings.
User Name cannot be empty.	Please enter a valid user name.
The SMTP Server is not applicable, please check your input.	Please contact the mail server administrator, and check if the mail server is accessible.
Server IP cannot be empty.	Please enter a valid server IP.
Server Port cannot be empty.	Please enter a valid server port.
Mail address is not exist.	Given user name doesn't have a valid email

	address, please enter a user name that has a valid email address.
The User Name already exists.	Given user name is already existing in the local database, please enter another one.
Save failed.	The local database operation failure, please try again.
User Name cannot be empty.	Please enter a valid user name.
The mail address removed failed!	The local database operation failure, please try again.
Please select at least one row to remove.	Please select at least item which want to remove.

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