

Lenovo ThinkServer Partner Pack for VMware vCenter User Guide



Note: Before using this information and the product it supports, ensure that you read and understand Appendix A "Notices" on page 41.

Fifth Edition (August 2015)
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1 Introduction

1.1 Purpose

The purpose of this guide is to explain the processes involved in monitoring and managing Lenovo ThinkServers through the Lenovo ThinkServer Partner Pack for VMware vCenter.

1.2 System Overview

The Lenovo ThinkServer Partner Pack for VMware vCenter provides detailed system information about the Lenovo ThinkServer hosts in the VMware virtualized environment. The information includes extended inventory and status information about processors, memory, fans, temperature sensors, and more. It also enables additional capabilities such as launching a remote console or the Lenovo ThinkServer System Manager interface, and firmware upgrade. It can be used to manage any ESXi host that is managed by a vCenter Server.

The Partner Pack integrates into vCenter by using the open plug-in architecture and allows "one pane of glass" management for the virtualized environment.

1.3 Key Features and Benefits

The features of the Lenovo ThinkServer Partner Pack for VMware vCenter are as follows:

- The Auto discovery of Lenovo Hosts in a Data center feature enables you to easily identify all the ESXi hosts and BMC IPs and to add multiple hosts to the vCenter in a single click.
- The Custom polling interval configuration overrides the default vSphere Web Client polling interval value and allows you to quickly acquire the health of inventory.
- The Link and Launch options at Host Actions widget launches ThinkServer's Lenovo ThinkServer System Manager page & Console of the server.
- Firmware Upgrade entries provide a wizard for user to upgrade the firmware of servers' components, including BIOS, BMC and LEPT.
- The Lenovo ThinkServer Partner Pack for VMware vCenter:
 - Provides details for inventory and alerting of Lenovo hosts within the vSphere Web Client page and recommends or executes the vCenter actions based on the Lenovo server events.
 - o Displays detailed information of Lenovo servers at the vSphere Web Client host level.
 - Displays server information including Host Name, Lenovo ThinkServer System Manager IP, BIOS Version and Lenovo ThinkServer System Manager version under Web Client Summary Page for each host.
 - Provides inventory of the detailed server information including FRUs, Memory, System board, Fan, Sensor, Power Supplies and Processors are available under the Manage > Settings > Hardware option.
 - Contains the System Event Log that provides the detailed System Event Log (SEL) entries that can be filtered based on the alert type and severity type. The Clear Log link clears the accumulated system event logs. The Export Log link exports system event logs into a file.



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

1.4 User Roles and Responsibilities

To access the Lenovo ThinkServer Partner Pack for VMware vCenter, the user should be logged on to the VMware vSphere Web Client. The Partner Pack works closely with the vCenter provided role-based security access. vCenter classifies these roles into three categories:

Role	Responsibilities
Administrator- The vCenter administrator role maps to this category	 Runs the setup wizard Edits the password database Uses the properties link to edit properties Accesses the Lenovo ThinkServer Partner Pack for VMware vCenter at homepage. Firmware Upgrade.

 Table 1: vCenter Roles and Responsibilities

2 Installing Lenovo ThinkServer Partner Pack for VMware vCenter

Run the *LenovoThinkServerPartnerPack*. *exe* installation file from the installation package and follow the prompts. The installation wizard installs the Lenovo ThinkServer Partner Pack for VMware vCenter at the desired location and easily registers to vCenter / VCSA (vCenter Server Appliance) through an HTML application, which is integrated along with the Partner Pack installation component. For detailed information on Installing Lenovo ThinkServer Partner Pack for VMware vCenter, refer to the installation guide.

3 Working with Lenovo ThinkServer Partner Pack for VMware vCenter

This section explains navigation of Web Client, which helps users to understand the Web Client UI and its functionalities.

3.1 Navigating to Web Client

- 1. Open the browser and enter the URL https://VcenterIP:Port/vSphere-client. For instance, https://10.12.13.25:9443/vSphere-client
- 2. Enter the username and password for the Web Client. If you do not have the credentials, contact the Administrator and receive the authentication information to log on to Web Client.
- 3. Click Login.

🖉 vSphere Web Client - Windows Internet Explorer	Sandar, Supporter Mand and	
	🝷 😼 Certificate Error 😽 🔀 📴 Bing	• م
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		
🚖 Favorites 🛛 🍰 🙋 Suggested Sites 👻 🙋 Web Slice Gallery 🕶		
💋 vSphere Web Client	🏠 ▼ 🔝 ▼ 🖃 👼 ▼ <u>P</u> age ▼ Safety ▼	T <u>o</u> ols ▼ 🔞 ▼ "
A		
vm ware [.]		
1		
User name:	VMware vSphere Web Client	
Password:		
I ise Windows session authentication		
Login		
Download the Client Integration Plug-in 🚯 Help		
Done	1 ocal intranet Protected Mode: Off	

Figure 1: Web Client Login Screen

4. After the successful login, you will be directed to the home page.

3.1.1 Home Page Screen Elements

The Home page displays the following sections:

- Inventories
- Monitoring
- Administration

The left navigation pane of the Web Client Home page displays the following tabs:

- Home
- vCenter
- Rules and Profiles
- vCenter Orchestrator
- Administration
- Tasks
- Log Browser
- Events
- Tags
- New Search
- Saved Searches



Figure 2: Web Client Home Page

5. Once the Lenovo ThinkServer Partner Pack for VMware vCenter is installed and registered you can find the **Lenovo ThinkServer Partner Pack** icon in **Administration** section.

vmware [®] vSphere Web	Client 🔒 🖻	D Updated	at 2:39 PM 💍	Administrator@VCE	NTER - I Help	- I Q Search	
	Home						-
ሰ Home	Home						
🕝 vCenter	Inventories						
🚰 Rules and Profiles							
O vCenter Orchestrator	<u>></u>		<u>a</u>		<u> </u>	0	
Section 4	> vCenter	Hosts and Clusters	VMs and Templates	Storage	Networking	vCenter Orchestrator	
🗊 Tasks		Center					
📄 Log Browser	Monitoring	Center					
Events		_			-		
🧭 Tags	S	4		- 2			
🔍 New Search	> Task Console	Event Console	Host Profiles	VM Storage Profiles	Customization Specification		
🔚 Saved Searches	>			Tronics	Manager		
	Administration				-		
		~	_				
		X		8			
	Roles	Licensing	vCenter	Lenovo			
			Solutions Manager	Partner Pack			
				L	-		
	Watch How	-to Videos					

Figure 3: Web Client Screen with Lenovo ThinkServer Partner Pack for VMware vCenter icon

6. Click the Lenovo ThinkServer Partner Pack icon.

3.2 Auto Discovering the Hosts

To use the Auto Discovery feature, perform the following steps:

- 1. On the **Web Client** home page, under **Administration** section, click the **Lenovo ThinkServer Partner Pack** icon.
- 2. The Auto Discovery page is displayed.

vmware [®] vSphere Web Cl	🕶 I 🔍 Search 👻	
🖣 Home 🕨 🔊 🖡	Auto Discovery	I
Administration	Discovery History	🔹 🛐 Recent Tasks 🛛 🗖
	Host / RMC IP Address 1	All Rupping Failed
Roles		
- Licensing		
Licenses	Το 0.0.0.	
Reports		
- Solutions	Discover	
vCenter Server Extensions		, I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.
Configuration Manager		
Auto Discovery		My Tasks 👻 More Tasks
Firmware Upgrade		
Firmware Upgrade List		Vork in Progress
SMTP Configuration		
LDAP/AD Configuration		
Add User Mail		
Service Configuration		
		▼ 🔯 Alarms 🗆 🗖

Figure 4: Lenovo Auto Discovery Screen

- 3. On the **Auto Discovery** page, in the **Host/BMC IP Address** section, at the **From** and **To** text box, type the start range and end range of the host's IP Address.
- 4. On using the **Auto Discovery** feature, you can perform several discoveries by submitting the tasks to vCenter. The **History** tab will capture each auto discovery task and show the results.
- The discovery is limited to only 2 subnets. You can search from X.X.0.0 to X.X.255.255 range. For instance, starting range from 10.90.0.0 to 10.90.255.255 is allowed.
- You can simultaneously discover both ESXi Host & BMC IP address if both are available in a single subnet by choosing the Host / BMC IP Address range. If the BMC is in other subnet, you can utilize the **Optional BMC Range** option to discover the BMC IPs in a Data center.
- 5. The Hosts with the given IP address range are listed.

Auto Discovery							
Discovery History							
Host / BMC IP Address ()	Host / BMC IP Address () + Optional BMC Range ()						
From 192 . 168 . 222	. 150						
To 192 . 168 . 222	. 190						
	Discover						
ESXi host BMC							
Host	BMC						
192.168.222.152	NA						
192.168.222.158	NA						
	Add selected Host						

Figure 5: Auto Discovery Screen

- 6. Select the hosts to be added and click **Add Selected Host** to add the host to vCenter. However, if the host is already added then, the corresponding check box will be disabled to avoid adding the same host again.
- 7. The **History** tab will show the past 30 days of Auto discovery history. Using the history tab, you can also submit the Add host to vCenter.

Auto Discovery						
Discovery History						
Task	Status	Start Time	Completion Time	•		
LenovoAutoDiscTask	 Success 	2/21/2014 3:01 F	2/21/2014 3:02 PM			
LenovoAutoDiscTask	 Success 	2/21/2014 1:06 F	2/21/2014 1:06 PM	::		
LenovoAutoDiscTask	 Success 	2/20/2014 6:46 F	2/20/2014 6:46 PM			
LenovoAutoDiscTask	 Success 	2/20/2014 1:14 F	2/20/2014 1:14 PM			
LenovoAutoDiscTask	✓ Success	2/20/2014 11:37	2/20/2014 11:38 AM	-		
LenovoAutoDiscTask Status : Success Criteria : Host /BMC IP Address From : 192.168.222.150 To : 192.168.222.190 ESXi host BMC						
Host BMC						
192.168.222.152	NA					
192.168.222.158	NA					
· · · · · · · · · · · · · · · · · · ·						

Figure 6: Auto Discovery History Screen

3.2.1 Add Host Feature

- The Add Host feature
 - Enables you to add multiple hosts in a single click.
 - Collects each ESXi's username & password to discover the BMC IP address.
 - Enables you to select the location where the host needs to be added, such as Data center, Cluster or Folder.
- The License select/Add option provides the flexibility to either select the proper license or enter valid license.
- Once the necessary details are captured, the Partner Pack will submit the Add host tasks to the Native vCenter task manager, you can easily view the progress of add host in the Task manager.

Add He	Add Host 🛞						
	Host	User Name	Password	BMC	Location	License	Lockdown Mode
	192.168.8.198				Select Location 🔹	Select License Key	
	192.168.8.144				Select Location 🔹	Select License Key	
	192.168.8.209				Select Location 🔹	Select License Key	
Importa	Important : Refore adding host to vCenter, incomplete / error rows must be removed.						

Figure 7: Add Host Screen

(1) The following details should be noted to Add Hosts to vCenter.

- You have to enter a correct user name and password of ESXi host to fetch the BMC IP address.
- If there is no "Data center" or "Folder" created, you will receive a pop up to create **Data center** at the vCenter before proceeding with Add host option.
- If you do not have a valid license, then you can still use the evaluation version of ESXi host to add it to vCenter.
- If the evaluation license is expired, Add host feature's license field will be disabled; you cannot select the "expired licenses". Choose a "Valid License or key-in a new License to proceed with Add host.
- Add host feature verifies that the host is not already being managed. If the host is already being managed by another vCenter Server system, Add host feature displays a note at the bottom of the screen and a warning icon at the Host column.

3.3 Configuring Polling interval

The Lenovo ThinkServer Partner Pack for VMware vCenter provides the flexibility to configure the polling interval for the Lenovo inventory pages. You can configure from 30 seconds to 3600 seconds in the Polling Configuration page. The configured polling interval will override the default polling interval of native vCenter, this helps you to obtain the quick notification of health status and alerts of Lenovo inventories.

To configure the polling interval perform the following steps:

1. Under Lenovo ThinkServer Partner Pack for VMware vCenter sections, in the left pane, click **Configuration Manager**.



Figure 8: Configuration Manager Navigation Screen

Lenovo Configuration Manager					
Polling Configuration		Edit			
Polling Interval (in seconds) :	30				

Figure 9: Custom Polling Configuration Screen

- 2. On the Lenovo Configuration Manager page, in the Polling Configuration section, click Edit.
- 3. In the Edit Polling Interval dialog box, enter a valid time interval in seconds and click Save.

Edit Polling Interval	×
Polling Interval (in seconds) :	30 *
Save	Cancel

Figure 10: Edit Polling Interval Dialog Box

4. You can enter a value from 30 to 3600 seconds in polling interval. If you try to enter beyond this limit, a **Warning** message is displayed.

Warning
Please provide values between 30 to 3600.
ОК
Figure 11: Warning Message

5. The Polling interval is configured successfully message is displayed once the correct value has been entered and saved.



Figure 12: Success Message

3.4 Firmware Upgrade

The Lenovo ThinkServer Partner Pack for VMware vCenter can upgrade the firmware of serves' components, including BIOS, BMC and LEPT..

- 1. On the left navigation pane, click on Firmware Upgrade.
- Specify the location of firmware bundle file, a Samba, NFS or TFTP server can be used here. Input necessary information, user name, password etc., click Next. (RQ750 can support only TFTP)

vmware [,] vSphere Web Cli	ent 🔒 🖉	
(Home) 🕲 I	Firmware Upgrade	
Administration	Protocol:	Samba(CIFS)
→ Access Control	Username:	
Roles	Password:	
	1 03399010.	
Licenses	IP Address:	0.0.0
Reports	Bundle Path:	
- Solutions	Bundle Filename:	
vCenter Server Extensions		
▼ Lenovo ThinkServer Partner Pack		
Configuration Manager		
Auto Discovery		Next
Firmware Upgrade		
Firmware Upgrade List		
SMTP Configuration		
LDAP/AD Configuration		
Add User Mail		
Service Configuration		

Figure 13: Firmware Upgrade for Samba

For Samba service Username, Password, IP Address, Bundle Path, Bundle Filename is necessary.

vmware vSphere Web Cli	ient 🔒 🖉
🖣 Home 🕞 😨 🖡	Firmware Upgrade
Administration Access Control Roles Licenses Reports Solutions	Protocol: NFS Username: Password: IP Address: 0 Bundle Path: Bundle Filename:
vCenter Server Extensions Lenovo ThinkServer Partner Pack Configuration Manager Auto Discovery Firmware Upgrade	Next
Firmware Upgrade List Configure Auto Notify SMTP Configuration LDAP/AD Configuration Add User Mail Service Configuration 	

Figure 14: Firmware Upgrade for NFS

For NFS service IP Address, Bundle Path, Bundle Filename is necessary.

vmware [®] vSphere Web Cli	ient 🔒 🖉	
📢 Home 🕨 🔊 🖡	Firmware Upgrade	
Administration + Access Control Roles	Protocol: Username:	TFTP
	Password: IP Address:	0.0.0.0
Reports	Bundle Path:	
vCenter Server Extensions	Bundle Fliename:	
Configuration Manager Auto Discovery		Next
Firmware Upgrade		
Firmware Upgrade List Configure Auto Notify SMTP Configuration LDAP/AD Configuration Add User Mail		
Service Configuration		

Figure 15: Firmware Upgrade for TFTP

For TFTP service IP Address, Bundle Filename is necessary.

3. Firmware information, type, version etc., will be displayed, click **Next**. (RQ750 only support Bios and BMC upgrade)

vmware [®] vSphere Web Cl	ient 🔒 🖉	
(Home 🕑 🗐	Firmware Upgrade	
Administration		
	Bundle Filename:	tsm v115-65376.bin
Roles	Firmware Type:	
✓ Licensing	Firmware Version:	1 45 65070
Licenses		
Reports	Firmware Comment:	DEVICE_NAME:BMC NOTE:BMC v1 15 65376 firmware image 4R1T platforms
✓ Solutions		
vCenter Server Extensions		
✓ Lenovo ThinkServer Partner Pack		
Configuration Manager		
Auto Discovery		
Firmware Upgrade		
Firmware Upgrade List		
✓ Configure Auto Notify		
SMTP Configuration		Rock Not
LDAP/AD Configuration		
Add User Mail		
Service Configuration		

Figure 16: Firmware information confirm

4. All 5th generation host monitored will be listed, choose one or more hosts and click **Upgrade**.

vmware [®] vSphere Web Cli	ient 🔒 🗗				Ů i root@iocalos → i Help
(Home) 🕲 🖡	Firmware Upgrade				
Administration Access Control Roles Licencing	Upgrade Server List Firmware Type: Firmware Version:	LG_BMC 1.15.65376			
Licenses	ALL	Host	IP Address	Version	Status
Reports		192.168.8.144	192.168.8.149	1.6.61423	
- Solutions		192.168.8.119	192.168.8.191		BMC does not support upgrading
vCenter Server Extensions					
		ſ	Back Upgrade		
Configuration Manager					
Auto Discovery					
Firmware Upgrade					
Firmware Upgrade List					
Configure Auto Notify					
SMTP Configuration					
Add Llear Mail					
Service Configuration					

Figure 17: choose host to Firmware Upgrade

5. Information about current operation will be displayed.

	vmware [®] vSphere Web Cli	ient 🔒 🗗			Ŭ root@localos → Help ·
	🖣 Home 🕨 🔊 🖡	Firmware Upgrade			
I	Administration	Firmware upgrade operatio	on is began in background		
I		Bundle Filename:	tsm v115-65376.bin		
I	Roles	Eirmwara Tyno:			
I		e:	L0_BMC		
I	Licenses	Firmware Version:	1.15.65376		
I	Reports	Host		IP Address	Version
I	✓ Solutions	192.168.8.144		192.168.8.149	1.6.61423
I	vCenter Server Extensions				
I					
I	Configuration Manager				
I	Auto Discovery				
I	Firmware Upgrade				
I	Firmware Upgrade List				
I	✓ Configure Auto Notify				
I	SMTP Configuration				
I	LDAP/AD Configuration				
I	Add User Mail				
I	Service Configuration				
1					

Figure 18: Firmware Upgrade operation is showed

6. On the left navigation pane, click on **Firmware Upgrade History** to view all upgrade history including the status of current upgrade operation.

vmware [®] vSphere Web Cl	ient 🔒 🗗	X.				ា ប
(Home) 🕲 I	Firmware Upgrade	List				
Administration	Current Firmware U	/pgrade:				
→ Access Control	Host	Tyme	Version	Status	Begin Time	
Roles	1921688144	LG BMC	1 15 65376	Pending	2015-01-07 07:50:00	
↓ Licensing	132.100.0.144	20_800	1.13.03310	1 chang	2013 01 01 01:30:00	
Licenses						
Reports	Firmware Upgrade	History:				
✓ Solutions	Host	Туре	Version	Status	Finished Time	
vCenter Server Extensions	192.168.8.144	LG_LIND	1.1.1	Succeed	2014-12-30 07:48:36	
✓ Lenovo ThinkServer Partner Pack						
Configuration Manager						
Auto Discovery						
Firmware Upgrade						
Firmware Upgrade List						
SMTP Configuration						
LDAP/AD Configuration						
Add User Mail						
Service Configuration						

Figure 19: Firmware Upgrade History View

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 verison by RQ750's BMC.

3.5 Auto Notify Configuration

Auto Notify feature will scan all the firmware version of 5th servers monitored by vCenter, and if it has detected that a firmware should be upgraded, users will be notified via mail.

1. On the left navigation pane, click on **SMTP Configuration** under **Auto Notify Configuration**. Specify the IP address and port of SMTP server used to send mails.

vmware [®] vSphere Web Cl	ient 🔒 🗗				U
📢 Home 🕨 🔊 🖡	SMTP configuration				
Administration					
	Server IP:				
Roles		132.100.0.0		Edit	
- Licensing	Server Port:	25			
Licenses					
Reports					
✓ Solutions					
vCenter Server Extensions			SMTP configuration		×
✓ Lenovo ThinkServer Partner Pack					
Configuration Manager					
Auto Discovery			Server IP:	192.168.8.6	
Firmware Upgrade			Server Port:	25	
Firmware Upgrade List					
✓ Configure Auto Notify				OK Cancel	
SMTP Configuration					
LDAP/AD Configuration					
Add User Mail					
Service Configuration			·		

Figure 20: SMTP configuration

2. Click **LDAP/AD configuration** to specify IP address, port and domain of LDAP or AD server used for retrieving mail address of users.

vmware [®] vSphere Web Cli	ient 🔒 🗗					ひ
Home 🕨 🔊 I	LDAP/AD configuration					
Administration						
→ Access Control	Protocol:			Edit		
Roles	Cowor ID:	402.460	0.4.42			
✓ Licensing	Server II .	192.108.	8.142			
Licenses	Domain:	testdoma				
Reports	User Name:	administ	trator			
✓ Solutions	Password:	******	LDAP/AD configuration		×	
vCenter Server Extensions						
✓ Lenovo ThinkServer Partner Pack						
Configuration Manager			Protocol:	🔾 LDAP 🛛 💿	AD	
Auto Discovery			Server IP:	192.168.8.142		
Firmware Upgrade			Domain:	testdomain.com		
Firmware Upgrade List			User Name:	administrator		
			Descuerd			
SMTP Configuration			Password.	*******		
LDAP/AD Configuration						
Add User Mail				ОК	Cancel	
Service Configuration						
			l			

Figure 21: LDAP/AD configuration

3. Click **Add User** to add user that should be notified, the corresponding mail address will be displayed. Check **Auto Notify** for auto notification, and check **Upgrade Complete** for notification after upgrade.

vmware [®] vSphere Web Cl	ient 🔒 🗗					Ů I root@
📢 Home 🕞 🔊 🖡	Notify Setting					
Administration						
+ Access Control	Liser Configuratio	an:				
Roles	User Conigeration					
✓ Licensing	User Name:	I	Add Use	r		
Licenses						
Reports	User List:					
- Solutions	Select	User ID	Display Name	Mail Address	Upgrade Complete	Auto Notify
vCenter Server Extensions		user1	user1	esmpro@mail.esmmailsv	-	✓
▼ Lenovo ThinkServer Partner Pack						
Configuration Manager				Dalata	Rovo	1
Auto Discovery				Delete	Save	
Firmware Upgrade						
Firmware Upgrade List						
SMTP Configuration						
LDAP/AD Configuration						
Add User Mail						
Service Configuration						

Figure 22: Notify setting

4. Click **Enable/Disable Auto Notify**, click **Enable** button to enable auto notify feature, click **Disable** button to disable auto notify feature.

(Home) 🕲 I	Service Setting		
Administration			
	Enable auto notify		Frakla
Roles			
Licenses			
Reports			
		wCenter Info	
vCenter Server Extensions		POOROT MIC	
Configuration Manager		vCenter User:	
Auto Discovery		vCenter Password:	
Firmware Upgrade			
Firmware Upgrade List			
			Cancel
SMTP Configuration			
LDAP/AD Configuration			
Add User Mail			O
Service Configuration			

Figure 23: Enable auto notify feature

VMWare [®] vSphere Web Cli	ient 🔒 🗗		
(Home) 🔊 I	Service Setting		
Administration			
	Disable auto notify	Dischla	
Roles	Disable acto notity.	Disable	
- Licensing			
Licenses			
Reports			
- Solutions			
vCenter Server Extensions			
✓ Lenovo ThinkServer Partner Pack		Disable auto notify.	
Configuration Manager		Are you sure to disable auto notify?	
Auto Discovery		OK Cancel	
Firmware Upgrade			
Firmware Upgrade List			<u> </u>
SMTP Configuration			
LDAP/AD Configuration			
Add User Mail			
Service Configuration			

Figure 24: Disable auto notify feature

3.6 Accessing the Host

The Lenovo ThinkServer Partner Pack for VMware vCenter works with each Host.

To access the Host:

- 6. On the left navigation pane, click on vCenter.
- 7. Select Data Centers > Clusters/Hosts.
- 8. Select the Host IP/Name to get the Partner Pack widgets/settings.
- 9. The Web Client Tab Screen is displayed.



Figure 25: Web Client Tab Screen

3.7 Essential Setup before Launching the Lenovo ThinkServer Partner Pack:

Ensure to update the Lenovo ThinkServer System Manager IP (BMC IP), user name, password for each host before launching the Partner Pack. To update them, perform the following steps.

This configuration is enable on VSCA 6.0 only, The Edit button will be disabled on VSCA 5.1/5.5 system.

- 1. Navigate to Web Client's Manage > Settings > Hardware > Extended Power Management screen.
- 2. Click Edit to enter the ILO / BMC / Lenovo ThinkServer System Manager details.
- 3. Click **Clear** to delete the extended power setting.

192.168.8.144 Actions -			=.
Getting Started Summary Mo	nitor Manage Related Objects		
Settings Networking Storage	Alarm Definitions Tags Permissions		
	Extended Power Management		
Power Management	IP Address	192.168.8.201	
PCI Devices	MAC Address	FE:FD:FC:FA:FB:FC	
System Board	UserName	lenovo	
Extended Power Management	Edit Clear		
Extended Processor			
Extended Sensor			
Extended Memory			
Extended Fan			
Extended Power Supply ::			
FRU			
T			
∢ :: ►			

Figure 26: VMware IPMI/iLO Settings for Power Management Screen

3.8 Monitoring Summary Details

The **Summary** page displays the entire system details, such as Server Model, Type, Number of Processors, Count of NICs, Number of Virtual Machines, State of the Server, CPU details, Memory details and Storage details, in the form of widgets.

Widgets such as Hardware, Fault Tolerance, Related Objects, Configuration, Tags, and Licenses are displayed by default.

After installation of Lenovo ThinkServer Partner Pack for VMware vCenter, Server Information related Widgets, Host Actions and Device Information details are displayed. These widgets provide the detailed data for each host respectively.

▼ Server Information □				1	Device Information	
Host Name		192.168.22	2.152		BIOS Version	V2.02
Power Status		Powered O	n		Host IP	192.168.222.152
					TSM IPV4	192.168.222.160
VM Information					TSM Version	1.3
VM Name	VM V	Version Status				
Innotest machine	08		Powered On		 Host Actions 	
windows223	08		Powered On	L	Launch TSM	
					Launch Host Console	
				Ŀ		
				Ŀ		

Figure 27: Lenovo ThinkServer Partner Pack for VMware vCenter Widgets on Summary Screen

3.8.1 Server Information Widget

The **Server Information** widget displays details related to Host Name, Power Status of Host, and VM information such as VM Name, VM Version and Status of each VM. This screen gives an overview of a Host where one or multiple VMs are running.

 Server Information 	 Server Information 					
Host Name		192.168.22	2.152			
Power Status		Powered O	n			
VM Information						
VM Name	VM V	ersion	Status			
Innotest machine	08		Powered On			
windows223	08		Powered On			

Figure 28: Server Information Widget

Power-On Feature:

- In the Power Status field, the Power on link is enabled if the server is powered off.
- Click on the Power On link and the server gets powered on by using BMC information.
- Once the server is powered on and registered with vCenter, the Power Status field is updated. The status updation may take several minutes.

3.8.2 Device Information Widget

The **Device Information** widget displays details such as BIOS Version, Host IP, Lenovo ThinkServer System Manager IPV4, Lenovo ThinkServer System Manager Version and so on.

Device Information					
BIOS Version	4.6.2013				
Host Name/IP	192.168.8.193				
TSM IPV4	192.168.8.191				
TSM Version	1.10				

Figure 29: Device Information Widget

3.8.3 Host Actions Widget

The Host Actions widget displays the link to:

• Launch Lenovo ThinkServer System Manager- Clicking the link opens the Lenovo ThinkServer System Manager page. You can access the Lenovo ThinkServer System Manager web page by providing proper login id and password. If you do not have one, contact your Administrator to get the authentication details.

 Host Actions 	
Launch TSM	
Launch Host Console	

Figure 30: Host Actions Widget

Remote Management Controller - Windows Internet E:	cplorer	and the second se			
👷 Favorites 🛛 👍 🙋 Suggested Sites 👻 🙋 Web Slic	e Gallery 🔻				
📸 🕶 🖾 🐨 📾 🕶 <u>P</u> age 🕶 <u>S</u> afety 🕶 T <u>o</u> ols	- 🕢 - 🔊 🔊				
					Support Help About
ThinkServer Management Module					enovo
	Logon to:				
	Username:				
	Password:				
		ок	Cancel		

Figure 31: ThinkServer Web Page Screen

• Launch Host Console: On clicking Launch Host Console, the viewer.jnlp file will be prompted; you can save it on the disk or click Open. Java webstart will launch the console.

If you do not have Java Web Start, the file may not open with the associated application. Ensure that the system is updated with JRE 7.0 or above.



Figure 32: ThinkServer Console Screen

3.9 Viewing the Monitor Page

The **Monitor** page will be updated with Extended SEL tab after the successful completion of Lenovo ThinkServer Partner Pack for VMware vCenter registration.

Summary	Monitor	Manage Related Objects						
Issues P	erformance	Storage Reports	Tasks	Events	Hardware Status	Log Browser	Extended SEL	

Figure 33: Monitor Tab Screen

3.9.1 Extended SEL

Once the Extended SEL is selected, the information related to Events, Sensor Type, Severity and Time is displayed. This helps you to identify and fix the critical issue which has occurred on the server. Since the extended SEL works through out of band functionality, the server alerts are sent even if the system is in panic situation.

Extended SEL provides additional information like severity. You can easily identify the critical or fatal incidents by using the filter. SEL filter shows the data based on the keyword entered in the filter screen.

There are three types of severities with extended SEL:

- **Info** This gives the information of changes which has occurred on the server. It could be your event log cleared info, time stamp changed info, etc.
- **Warning** This gives the alerts for some components which are going to fail. For instance, if the power supply threshold is exceeded, then the warning message will be displayed.
- **Failed** This enables users to understand the fatal / critical events which have occurred on the server.

Summary Monitor Manage Related Objects					
Issues Performance Storag	e Reports Tasks Events H	ardware Status Log Browser	Extended SEL		
Clear Log	Q Filter				
Time	Severity	Sensor Type	Events		
9/18/2013 07:40 PM	Info	EventLoggingDisabled	Assert + Event Logging Disablec		
9/18/2013 07:46 PM	Info	SystemEvent	Assert + System Event Timestan		
9/18/2013 07:46 PM	Info	SystemEvent	Assert + System Event Timestan		
9/18/2013 11:20 PM	Failed	PowerSupply	Assert + Power Supply Power Su		
9/18/2013 11:20 PM	Failed	PowerSupply	Deassert + Power Supply Power		

Figure 34: Extended SEL Screen

Extended SEL providing export feature, click Export Log to export all or specified time range of extended logs into a file.

3.10 Accessing Inventory Information

All the inventory related information is available under the **Manage** page. Lenovo ThinkServer Partner Pack for VMware vCenter has added following pages under VMware Webclient's Manage Page.

Navigate through **Manage > Settings > Hardware** to find the Lenovo ThinkServer Partner Pack for VMware vCenter Inventory information.



Figure 35: Lenovo ThinkServer Partner Pack for VMware vCenter Inventory Screen

The inventory information of the following components can be retrieved:

- System Board
- Extended Processor
- Extended Sensor
- Extended Memory
- Extended Fan
- Extended Power Supply
- Field Replaceable Unit

3.10.1 System Board

The System Board displays the Host's Manufacturer, Model Number and UUID.

Settings	Networking \$	Storage	Alarm Definitions	Tags	Permissions
44			System Board De	etails	
Virtua	al Machines		Manufacturer		LENOVO
Syste	m		Model		RD340
🗕 Hardy	ware		UUID		20202020-2020-2020-2020202020202020
Proce	essors				
Memo	ory				
Powe	r Management				
PCI D	evices				
Syste	m Board				

Figure 36: System Board Screen

3.10.2 Extended Power Management

The **Extended Power Management** screen setting the information of BMC from the VSCA version 6.0. This function will be disabled when the version of VSCA older than 6.0.

Settings Storage Networking	Alarm Definitions Tags Permissions	
44	Extended Power Management	
	IP Address	192.168.8.201
Processors	MAC Address	FE:FD:FC:FA:FB:FC
Метогу	UserName	lenovo
Power Management	Edit Clear	
PCI Devices		
System Board		
Extended Power Management		
Extended Processor		
Extended Sensor		
Extended Memory		
Extended Fan		
Extended Power Supply		
FRU		
4 :: b		

Figure 37: Extended Power Management

3.10.3 Extended Processor

The **Extended Processor** screen displays the data related to Processors Manufacturer Name, Model, Speed, Description, CPU Cores, CPU Threads, Number of Processors and Over All Status etc.

41	Processor							
✓ Hardware	Manufacturer		Intel					
Processors	Model			Genuir	ne Intel(R) CPU @ 2.10GHz			
Memory	CPU Cores 6 CPU Threads		6					
Power Management				12				
PCI Devices	Number of Processors			1				
System Board	Overall Status		📀 Normal					
Extended Power	Manufacture	Name	Speed		Description	Status		
Management	Intel	CPU 1	2.095 (ЭНz	Genuine Intel(R) CPU @ 2.10GHz	🥑 Normal		
Extended Processor								
Extended Sensor								
Extended Memory								
Extended Fan								
Extended Power Supply								
FRU								
▼ ▲ ∷ ▶								

Figure 38: Extended Processor Screen

3.10.4 Extended Sensor

The **Extended Sensor** screen displays the data related to Sensor Count, Overall Status, Name, Current Reading, Status and so on.

Settings Storage Networking	Alarm Definitions Tags Permis	ssions	
	Temperature Sensor		
Hardware	Sensor Count	4	
Processors	Overall Status	🕏 Normal	
Memory	Name	Current Reading	Status
Power Management	Ambient Temp	27 °C	 Normal
PCI Devices	CPU1 DTS	41 °C	 Normal
System Board	CPU2 DTS	42 °C	 Normal
Extended Power Management	Exhaust Temp	37 °C	 Normal
Extended Processor			
Extended Sensor	Details of Ambient Temp		A
Extended Memory	Normal Maximum	-59 °C	
Extended Fan	Normal Minimum	-117 °C	
Extended Power Supply	Sensor Minimum Reading	-128 °C	
FRU	Sensor Maximum Reading	127 °C	
· · · · · · · · · · · · · · · · · · ·	Lower Critical	3 °C	•

Figure 39: Extended Sensor Screen.

Each sensor also displays the details of threshold under the Detail section.

Details of SystemBoard 1 Inlet Amb Temp		•
Normal Maximum	38 °C	1
Sensor Minimum Reading	-128 °C	::
Sensor Maximum Reading	127 °C	
Lower Critical	5 °C	-
Lower Non-Critical	7 °C	
Upper Critical	41 °C	Ŧ

Figure 40: Sensor Description Screen

Note: The CPU DTS Margin reading is not an absolute temperature value in Celsius or Fahrenheit, but actually an offset from the maximum CPU junction temperature. In other words, CPU DTS Margin is the distance from the maximum operating temperature of the CPU.

3.10.5 Extended Memory

The Extended Memory screen displays the details related to Memory Count, Over All Memory size in (GB), Overall Memory Status, Name, Description, Manufacture, Type, Capacity, Serial Number, Part Number, Bank Label and Max Memory Speed

44	Memory				
Hardware	 Memory Count 		1		
Processors	Overall Memory Size		32 GB		
Memory	Overall Memory Status		📀 Norm	al	
Power Management	Name			Description	
PCI Devices	CPU1_DIMMC1			CPU1_DIMMC1	
System Board					
Extended Power Management					
Extended Processor					
Extended Sensor Extended Memory	Details of CPU1_DIMMC	C1	_		
Extended Fan	** Manufacturer	Samsung			
Extended Dower Sunnk	Туре	DDR3			
гоц	Capacity	32.0 GB			
FRU	Serial Number	0050F7DF			
	Part Number	M386B4G7	NRMO-CN	1A	

Figure 41: Extended Memory Screen

On selecting the Memory module, more details of memory like Manufacturer, Type of DIMM's, etc. is displayed in Detail section.

Details of CPU1_DIMMA1	
Manufacturer	Samsung
Туре	DDR3
Capacity	4.0 GB
Serial Number	223D9B19
Part Number	M393B5270DH0-YK0
Bank Label	CPU1_BANK0
Max Memory Speed	1600 MHz

Figure 42: Memory Details Screen

3.10.6 Extended Fan

The **Extended Fan** screen displays the data related to Fan Count, Overall Fan Status, Rotational Speed, Active Cooling, Control Mode, Status, Lower Critical, Lower Non Critical, Lower Non Recoverable and Normal Maximum and so on.

Hardware	Fan Count		6					
Processors	Overall Fan	Status	🥑 Normal					
Memory	Name	Rotational Sp	eed	Active Cooling	Control Mode	Status		
Power Management	Fan 1	1386 RPM				Normal		
PCI Devices	Fan 2	1323 RPM				Normal		
System Board	Fan 3	1386 RPM				Normal		
Extended Power	Fan 4	1323 RPM				Normal		
Fytended Drocessor	Fon 6	1373 RPM				Normal		
Extended Sensor	Details of Far	11						
Extended Memory	Lower Critic	al	6	30 RPM				
Extended Fan	Normal Max	imum	1	2411 RPM				
Extended Power Supply	Normal Mini	mum	8	757 RPM				
FRU	Sensor Maxi	imum Reading	1	6065 RPM				

Figure 43: Extended Fan Screen

On selecting the particular fan, the details of thresholds are displayed on the detail section.

I			_
	Details of FAN2-2		•
	Lower Critical	2040 RPM	
	Lower Non-Critical	2520 RPM	::
	Lower Non-Recoverable	120 RPM	
	Normal Maximum	5760 RPM	r.
	Sensor Maximum Reading	12120 RPM	
н			

Figure 44: Fan Details Screen

3.10.7 Extended Power Supply

The **Extended Power Supply** screen displays the details related to Power Supply Count, Overall Power Supply Status, Name, Status and Reading.

a 192.168.222.158 Actions -					=
Summary Monitor Manage	Related Objects				
Settings Networking Storage	Alarm Definitions	Tags Permissio	ns		
	Power Supply				
System Resource Allocatic	Power Supply Co	ount		1	
Security Profile	Overall Power Su	ipply Status		🖉 Normal	
System Swap	Name	Status	Descrip	otion	
	PSU1 Status	 Normal 	PowerS	SupplyPresenceDetected	
Processors					
Memory					
Power Management					
PCI Devices					
System Board					
Extended Processor			-		
Extended Sensor	Name	Reading	Status		
Extended Memory	Power Reading	152 Watts	 Norn 	nal	
Extended Fan					
Extended Power Supply					
FRU					

Figure 45: Extended Power Supply of IVB Model Hosts Screen

	5				
н	Power Supply				
Security Profile	Power Supply	Count		2	
System Swap	Overall Power	Supply Status		🥑 Normal	
Hardware					
Processors	Name	Reading	Status		
Memory	PSU1 Power	56 Watts	🥑 Norm	al	
Power Management	PSU2 Power	8 Watts	🥑 Norm	al	
PCI Devices					
System Board					
Extended Power Management					
Extended Processor					
Extended Sensor					
Extended Memory					
Extended Fan					
Extended Power Supply					
FRU	-				

Figure 46: Extended Power Supply of Grantley Model Hosts Screen

3.10.8 Field Replaceable Unit (FRU)

The Field Replaceable Unit (FRU) screen displays the data related to FRU. This data is displayed in tabs. On clicking Product tab, the product details are displayed. Likewise, Chassis and Board component also displays the respective information.

44		FRU						
Security Profile	•	FRU Count		1				
System Swap		Component FR	U Size	512 Bytes				
F Hardware		Product Cl	nassis Board					
Processors			24		0-1-10	11	A	Enter
Memory		Name	version	Model Number	Serial Number	Manuracturer	Asset Lag	Extra
Power Management		RD650	FFFFFFFFF	000000000000000000000000000000000000000		LENOVO		
PCI Devices								
System Board								
Extended Power Management								
Extended Processor								
Extended Sensor		4						
Extended Memory								
Extended Fan								
Extended Power Supply								
FRU								

Figure 47: FRU Screen.

4 Error Handling

The common error messages captured in Lenovo ThinkServer Partner Pack for VMware vCenter are:

- Host unreachable. Please verify vCenter host status.
- Unable to connect to the host. Please try again later.
- IPMI/ILO Settings for Extended Power Setting is not configured. Configuration should be done under section System, Power Management.
- Unable to retrieve the data. Refer to the server log.
- Unable to retrieve information from the server. Refer to the server log.
- Connection errors. Refer to the server log.
- Unable to retrieve data from the host. Refer to the server log.
- Matching content " " Not Found.
- Host IP is not set. Refer to the server log.

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