

IBM Hyper-Scale Manager as a Virtual Appliance
Version 1.6

User Guide



Note

Before using this information and the product it supports, read the information in "Notices" on page 47.

Management Tools Notices

This edition applies to Management Tools version 4.5 and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this guide

This Management Tools set of documents describe how to install and use the IBM XIV Management Tools 4.5.

This set of documents includes:

1. IBM® Hyper-Scale Manager Installation guides:
 - Installation guide for Virtual Appliance
 - Installation guide for Installation as an Application
2. IBM Hyper-Scale Manager Operations guide.

Who should use this guide

This document is for Storage Administrators who manage XIV® Systems.

Conventions used in this guide

These notices are used 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.

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If you need help, service, technical assistance, or want more information about IBM products, you can find various sources to assist you. You can view the following websites to get information about IBM products and services and to find the latest technical information and support.

- IBM website (ibm.com®)
- IBM Support Portal website (www.ibm.com/storage/support)
- IBM Directory of Worldwide Contacts website (www.ibm.com/planetwide)

Ordering publications

The IBM Publications Center is a worldwide central repository for IBM product publications and marketing material.

The IBM Publications Center website (www.ibm.com/shop/publications/order/) offers customized search functions to help you find the publications that you need. Some publications are available for you to view or download at no charge. You can also order publications. The publications center displays prices in your local currency.

Sending your comments

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

Procedure

To submit any comments about this book or any other IBM XIV Storage System documentation:

- Go to the feedback form (publib.boulder.ibm.com/infocenter/ibmxiv/r2/topic/com.ibm.xiv.doc/icfeedback.htm) in the IBM XIV Storage System information center. You can use this form to enter and submit comments.
- Send your comments by email to starpubs@us.ibm.com. Be sure to include the following information:
 - Exact publication title and version
 - Publication form number (for example, GA32-0770-00)
 - Page, table, or illustration numbers that you are commenting on
 - A detailed description of any information that needs to be changed

Chapter 1. Introducing the IBM Hyper-Scale Manager

IBM XIV Management Tools introduce the IBM Hyper-Scale Manager that reduces operational complexity and enhances capacity planning through integrated management for large and multi-site XIV deployments. The Management Tools:

- Shift the paradigm to an integrated management of XIV Systems across the enterprise
- Provide powerful health monitoring by integrating events and alerts across the managed XIV Systems

Diagram

The following diagram depicts the way the IBM Hyper-Scale Manager interacts with the XIV GUI and XIV Systems.

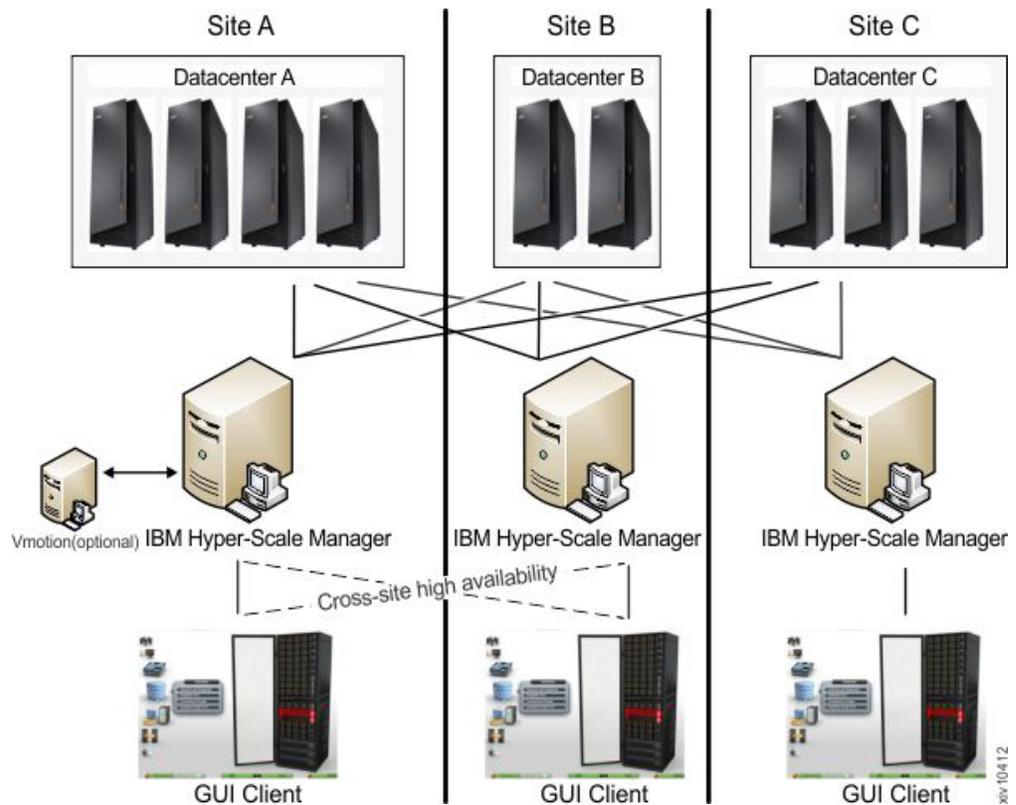


Figure 1. IBM Hyper-Scale Manager

Management Tools documentation set

The IBM XIV Management Tools documentation set includes the following publications:

- User guides and Quick Start guides for:
 - Installation as Virtual Appliance
 - Installation as Application
- Operations and Administration Guide

Definitions

The following definitions are in wide use throughout this document:

Manager Mode versus Direct Mode from the login dialog of the GUI

With the introduction of the IBM XIV IBM Hyper-Scale Manager, there are two ways to use the IBM XIV Management Tools:

Manager mode

Moving the GUI to work with the IBM Hyper-Scale Manager.

Direct mode

Using the GUI without IBM Hyper-Scale Manager. In this mode, the GUI manages the XIV Systems directly.

'Maintenance' account

Applicable to the Virtual Appliance installation only.

A IBM Hyper-Scale Manager SFTP user that transfers files to and from the IBM Hyper-Scale Manager. The default password is *xivmsMaintenance*. You can change this password through the root menu. See **Changing the maintenance password** on the **Installation Guide for VM**.

System machine account

The account which is used by the IBM Hyper-Scale Manager to connect to the XIV systems.

- This user does not change the configuration
- This user's name default is: *xiv_msms* and can be edited
- This user can be defined in LDAP (make sure it is added to all XIV storage admin groups in the LDAP)
- This user must have a storage administrator role (similarly to the *admin* user)
- This user must be defined with the same password on all XIV systems in the IBM Hyper-Scale Manager inventory
- This user must be defined in the IBM Hyper-Scale Manager (through the GUI or CLI)

Diagnose/Fix authentication problem

A process in which the GUI tries to fix the System Machine Account authentication issues among all XIV systems in the inventory.

- You need to supply admin credentials when starting this operation
- These credentials are used to add the System Machine Account automatically to all your XIVs (if needed)
- If some of the XIV systems use LDAP authentication, it informs you to manually add the System Machine Account to your LDAP directory

Discover new systems

A process in which the IBM Hyper-Scale Manager tries to authenticate a specific user in front of all of the systems that the IBM Hyper-Scale Manager knows that the user is not authenticated to.

- This button is on the **Systems > Preferences** dialog.
- Use this button only when it is known that the user was added to the system's access list and you need to display this system on the GUI screen. This is not done automatically, because of potential LDAP locking issues, due to authentication errors.

- Upon a successful completion of the process, if the user was granted with an access to a system that was not previously seen in the GUI, it will now be seen.

Manager Access Code

Any administrative action on the IBM Hyper-Scale Manager, that is performed from the GUI requires the Manager Access Code. This code can be changed from GUI and from the management menu. The default manager access code is *adminadmin*. See Changing the Manager Access Code on the User Guides.

Management Tools specifications

Specifications for the Management Tools deployment are available in the IBM Hyper-Scale Manager and GUI Release Notes:

- Specifications for the IBM Hyper-Scale Manager are available in the IBM XIV Storage System IBM Hyper-Scale Manager 1.6 Release Notes.
- Specifications for the IBM XIV GUI - both direct and manager modes - are available in the IBM XIV Storage System Management Tools 4.5 Release Notes.

Both Release Notes documents are available in the IBM XIV Knowledge Center:
http://www-01.ibm.com/support/knowledgecenter/STJTAG/com.ibm.help.xivgen3.doc/Gen3/xiv_gen3releasenotes.dita

Chapter 2. Installing the Management Tools on a VM

With the introduction of the IBM Hyper-Scale Manager, there are two ways to use the IBM XIV Management Tools:

Manager mode

Moving the GUI to work with the IBM Hyper-Scale Manager.

Direct mode

Using the GUI without IBM Hyper-Scale Manager. In this mode, the GUI manages the XIV Systems directly.

This chapter guides you how to work in Manager mode.

The installation of the IBM Hyper-Scale Manager is composed of:

1. Installing the IBM Hyper-Scale Manager virtual appliance
2. Installing the IBM Hyper-Scale Manager
3. Initializing the IBM Hyper-Scale Manager inventory

Installation-related tasks guide you through upgrading the IBM Hyper-Scale Manager and backing it up:

1. “Upgrading the IBM Hyper-Scale Manager” on page 21. This topic also applies if you are already using a previous version of the IBM Hyper-Scale Manager.
2. “Backing up the IBM Hyper-Scale Manager” on page 25

Installing the Manager on a virtual machine

Installing the IBM Hyper-Scale Manager virtual appliance

The IBM Hyper-Scale Manager deployment is running as a Virtual Appliance above an ESX server (VMWare Hypervisor only). Prior to the configuration of the IBM Hyper-Scale Manager, you need to install it as a VM using *Deploy OVF Template* in the ESX vSphere Client.

About this task

The virtual machine installation deploys the *ovf* image of the IBM Hyper-Scale Manager on your VMWare ESX.

Procedure

1. Prepare a VM according to the specifications on the IBM Hyper-Scale Manager Release Notes.
2. The installation procedure will ask for the following information. Please prepare it ahead:
 - Networking configuration: You can either work with DHCP or with Static IP. In case you work with Static IP, please prepare: IP Address and netmask, gateway and DNS parameters related to the static IP.
 - Hostname
 - A new password for 'root'
 - NTP servers (if any)
 - SMTP address (not mandatory)

3. Download the file from: [http://www-933.ibm.com/support/fixcentral/swg/selectFixes?parent=Enterprise+Storage+Servers&product=ibm/Storage_Disk/XIV+Storage+System+\(2810,+2812\)&release=1.3&platform=All&function=all](http://www-933.ibm.com/support/fixcentral/swg/selectFixes?parent=Enterprise+Storage+Servers&product=ibm/Storage_Disk/XIV+Storage+System+(2810,+2812)&release=1.3&platform=All&function=all).
4. Unzip it to your local PC that has accessibility to VMWare vSphere client. This will create a folder that contains 3 files used by the *.ovf deployment process, this user guide, a quick-start guide and an additional LICENSES folder with additional notes regarding the usage license.
5. Deploy *.ovf on your VMWare ESX. Follow the link for instructions (steps 1-11 only): http://pubs.vmware.com/vsphere-4-esx-vcenter/index.jsp?topic=/com.vmware.vsphere.vmadmin.doc_41/vsp_vm_guide/working_with_ovf_templates/t_import_a_virtual_appliance.html.

Note: The virtual machine will consume 76Gb of free space.

Note: You may see some warnings related to compatibility. Please ignore them and approve.

6. Power on the VM.
7. On the VMWare console, login with: user=root, password=xivmsRoot.
8. The wizard opens on screen. Follow the steps on the next section.

Installing the IBM Hyper-Scale Manager

The purpose of this task is to install the IBM Hyper-Scale Manager on the pre-installed VM.

Procedure

The wizard welcome screen guides you through the steps of the installation.

```

-----
----- IBM Hyper-Scale Manager v1.x.x.x -----
-----

Welcome to the IBM Hyper-Scale Manager installation procedure.

This setup will guide you through the installation process.

Required Steps
-----
Step 1: License Agreement
Step 2: Password Change
Step 3: Networking
Step 4: NTP & Regional Settings
Step 5: SMTP

Proceed? [Y/N] >

```

Click Y to proceed, or N to decline.

Step 1

On step 1 of the installation you are required to approve the license agreement.

Procedure

1. Click Enter to view the IBM Hyper-Scale Manager license agreement.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
---> Step 1: License Agreement  
      Step 2: Password Change  
      Step 3: Networking  
      Step 4: NTP & Regional Settings  
      Step 5: SMTP  
  
Step 1 - License Agreement  
-----  
  
Hit [ENTER] to view license agreement for using IBM Hyper-Scale Manager  
Press any key to continue
```

2. After reading the license agreement, click 1 to approve or 2 to decline it.

Note: You will not be allowed to proceed with the installation, or to use the IBM Hyper-Scale Manager if you do not approve the license agreement.

Step 2

On step 2 of the installation you are required to change the **root** password.

Procedure

Enter a new password, then retype it.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
      Step 1: License Agreement  
---> Step 2: Password Change  
      Step 3: Networking  
      Step 4: NTP & Regional Settings  
      Step 5: SMTP  
  
Step 2 >> Password Change  
-----  
  
Please change root password  
Password must be at 6 characters long  
Type new password for root
```

Step 3

On step 3 of the installation you are asked to configure the network.

Before you begin

Throughout the installation we present examples with values surrounded with brackets. The value inside the brackets is the default. Clicking *enter* without inserting a value, will insert the default value.

Procedure

1. First, select between Static IP and DHCP.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
Step 1: License Agreement  
Step 2: Password Change  
---> Step 3: Networking  
Step 4: NTP & Regional Settings  
Step 5: SMTP  
  
Step 3 -Network Configuration  
-----  
  
#-----  
# Active Network configuration:  
#-----  
# IP mode  
# Hostname  
  
1) Configure Static IP  
2) Configure DHCP  
3) Return (not supported, installation mode)  
Setup/Network/IP>
```

2. If Static IP was chosen, you need to enter the IP address and then the netmask, gateway and DNS parameters.
 - a. Enter your IP address to continue.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
Step 1: License Agreement  
Step 2: Password Change  
---> Step 3: Networking  
Step 4: NTP & Regional Settings  
Step 5: SMTP  
  
Step 3 -Network Configuration  
-----  
  
#-----  
# Active Network configuration:  
#-----  
# IP mode  
# Hostname  
  
Configure static IP address  
Enter IP address []:
```

- b. Enter the netmask, gateway and DNS parameters related to the static IP. Follow the questions on the screen.

```
----- IBM Hyper-Scale Manager v1.x.x.x -----
-----

Step 1: License Agreement
Step 2: Password Change
---> Step 3: Networking
Step 4: NTP & Regional Settings
Step 5: SMTP

Step 3 -Network Configuration
-----

#-----
# Active Network configuration:
#-----
# IP mode                OFF
# Hostname
# Domain search list
# Domain name servers

#-----
# New Network configuration:
#-----
# IP mode                STATIC
# Hostname
# IP address             1.1.1.1
# Netmask                1.1.1.1
# Gateway                1.1.1.1
# Domain search list    ibm.com xiv.ibm.com
# Domain name servers   1.1.1.1 2.2.2.2

Configure DNS addressess
1) Add domain to search list
2) Remove domain from search list
3) Continue to hostname configuration
Setup/Network/DNS>
```

Following the configuration of the DNS, IP, gateway and netmask, you will be asked to enter a fully-qualified hostname and then to approve the configuration.

- c. Click Y to approve and proceed to the next step.

```

----- IBM Hyper-Scale Manager v1.x.x.x -----
-----

Step 1: License Agreement
Step 2: Password Change
----> Step 3: Networking
Step 4: NTP & Regional Settings
Step 5: SMTP

Step 3 -Network Configuration
-----

#-----
# Active Network configuration:
#-----
# IP mode
# Hostname

#-----
# New Network configuration:
#-----
# IP mode           DHCP
# Domain search list  ibm.com xiv.ibm.com
# Domain name servers 1.1.1.1 2.2.2.2
# Hostname

Is the configuration correct? [Y/N] :

```

Clicking N will take you back to the beginning of step 3 of the installation above.

3. If you selected DHCP on step 1 above, enter the hostname and click Y to confirm.

```

----- IBM Hyper-Scale Manager v1.x.x.x -----
-----

Step 1: License Agreement
Step 2: Password Change
----> Step 3: Networking
Step 4: NTP & Regional Settings
Step 5: SMTP

Step 3 -Network Configuration
-----

#-----
# Active network configuration
#-----
# IP mode           NONE
# Hostname
# Domain search list
# Domain name servers

#-----
# New network configuration
#-----
# IP mode           DHCP
# Hostname           myHostname
# Domain search list Automatically retrieved
# Domain name servers Automatically retrieved

Is the configuration correct? [Y/N] :

```

Step 4

On this step you enter the NTP and regional settings. Select whether to enable NTP or configure static date & time. Additionally, you may need to define the timezone.

Before you begin

Optional: click 2 to set the timezone.

```
1) Enable NTP
2) Timezone
3) Change Date&time
4) Continue
Setup/Regional Settings>
```

Procedure

1. Select a global region.

```
Please identify a location so that time zone rules can be set correctly.
Please select a continent or ocean.
1) Africa
2) Americas
3) Antarctica
4) Arctic Ocean
5) Asia
6) Atlantic Ocean
7) Australia
8) Europe
9) Indian Ocean
10) Pacific Ocean
11) none - I want to specify the time zone using the Posix TZ format.
```

Next, you are asked to select a country from within the global region.

Note: You may be asked to select a sub region.

2. Optional: if you decide to configure NTP instead of static date & time, follow the instructions on this step. If you don't - go to the next step. Click 1 to enable NTP.

```

-----
----- IBM Hyper-Scale Manager v1.x.x.x -----
-----

Step 1: License Agreement
Step 2: Password Change
Step 3: Networking
---> Step 4: NTP & Regional Settings
Step 5: SMTP

Step 6 -NTP & Regional Configuration
-----

#-----
# Active NTP/Regional configuration:
#-----
# NTP status          DISABLED
# Date                12/31/2012 23:59:59
# Timezone            UTC

Configure NTP servers
1) Add NTP server
2) Remove NTP server
3) Return to previous menu
Setup/Regional Settings/NTP>

```

Add the NTP servers in your organization, one by one using the menu options above. When finished, click 3 to return to NTP & Regional Settings main menu.

3. If you decided to configure static date & time instead of NTP settings, click 3 to configure Date & Time.

```

Configure Date & Time
Local date&time is: <current date and time> Please enter a new date in format:
mm/dd/yyyy 24H:MM:SS >

```

Note: If you configured NTP, it is not mandatory to configure the Date & Time. Upon the next reboot, the NTP settings will take place.

4. Review the changes (in the NTP & Regional Settings main menu) and then click 4 to apply your changes. Alternately, you can repeat any of the previous steps in order to update the configuration.

Step 5

The next step is SMTP configuration.

About this task

SMTP configuration is used for enabling sending email messages to any recipient you configure in a service failure. The available SMTP email messages are:

Server is up

Subject: <hostname> Service xivms is up and running properly.

Body: Component: Main process was started successfully and is up and running.

Server is down

Subject: <hostname> Attention: service xivms stopped functioning properly.

Body: Component: Main process stopped.

Server has low disk space

Subject:<hostname> Attention: low disk space.

Body: Disk space passed the configured threshold max% and its usage now is: used%.

System Machine Account is not authenticated

Subject: <hostname> System Machine Account alert.

Body: The System Machine Account (user: xiv_msms) is not authenticated to work with the following systems:
<system name>

Note: This step is not mandatory.

Procedure

1. Click 1 to enable SMTP configuration.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
Step 1: License Agreement  
Step 2: Password Change  
Step 3: Networking  
Step 4: NTP & Regional Settings  
---> Step 5: SMTP  
  
Step 5 -SMTP Configuration  
-----  
  
#-----  
# Active SMTP configuration:  
#-----  
# SMTP status          DISABLED  
  
1) Enable SMTP configuration  
2) Apply All  
3) Return without saving  
Setup/SMTP>
```

2. Enter the SMTP server address. This server address serves for authentication only. The email recipient is displayed with a dummy sender.

Enter address of SMTP server []:

3. Enter the SMTP server port.

Enter the SMTP server port [25]:

4. Approve the configuration.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
Step 1: License Agreement  
Step 2: Password Change  
Step 3: Networking  
Step 4: NTP & Regional Settings  
---> Step 5: SMTP  
  
Step 5 -SMTP Configuration  
-----  
  
#-----  
# Active SMTP configuration:  
# -----  
# SMTP status          DISABLED  
  
#-----  
# New SMTP configuration  
#-----  
# SMTP status          ACTIVE  
# SMTP server          9.9.9.9  
# SMTP port            25  
  
Is the configuration correct? [Y/N] :
```

The installation is complete

The installation is now complete.

About this task

The last screen of the installation contains information about the way the IBM Hyper-Scale Manager is connected (Static IP or DHCP).

For static IP connectivity

```
Congratulations!  
-----  
You successfully installed IBM Hyper-Scale Manager v1.5  
You can now open any XIV GUI and point to the IP: 192.25.25.25 or  
DNS: my-multi-system-manaer.  
Enjoy a world of multi system features!  
Finalizing installation, please wait.  
The system is going to reboot.  
Press any key to continue
```

For DHCP connectivity

```
Congratulations!  
-----  
You successfully installed IBM Hyper-Scale Manager v1.5  
You can now open any XIV GUI and point to the DNS: my-multi-system-manaer.  
Enjoy a world of multi system features!  
Finalizing installation, please wait.  
The system is going to reboot.  
Press any key to continue
```

Procedure

Press any key. The IBM Hyper-Scale Manager restarts.

What to do next

Hand over the IP Address / hostname to the Storage Administrator in order to continue to the next section “Initializing the inventory.”

Initializing the inventory

Install the XIV GUI and set it to work with the IBM Hyper-Scale Manager.

Before you begin

- If you are using previous GUI versions: open the previous GUI and export systems list (**File > Export Systems File**) to a file in your local file system (to be imported later to the IBM Hyper-Scale Manager).
- Obtain the GUI from [http://www-933.ibm.com/support/fixcentral/swg/selectFixes?parent=Enterprise+Storage+Servers&product=ibm/Storage_Disk/XIV+Storage+System+\(2810,+2812\)&release=4.2&platform=All&function=all](http://www-933.ibm.com/support/fixcentral/swg/selectFixes?parent=Enterprise+Storage+Servers&product=ibm/Storage_Disk/XIV+Storage+System+(2810,+2812)&release=4.2&platform=All&function=all).

About this task

This task guides you through:

- Installing the XIV GUI and setting it to be managed by the IBM Hyper-Scale Manager.
- Initializing the systems inventory on the IBM Hyper-Scale Manager.

Procedure

1. Install XIV GUI and start it in Direct mode.
2. Connect the GUI to the IBM Hyper-Scale Manager.
 - a. Select **Systems > Preferences** from the menu. The **User Preferences** screen opens. Fill the **Primary Management Server** field and click **OK**.

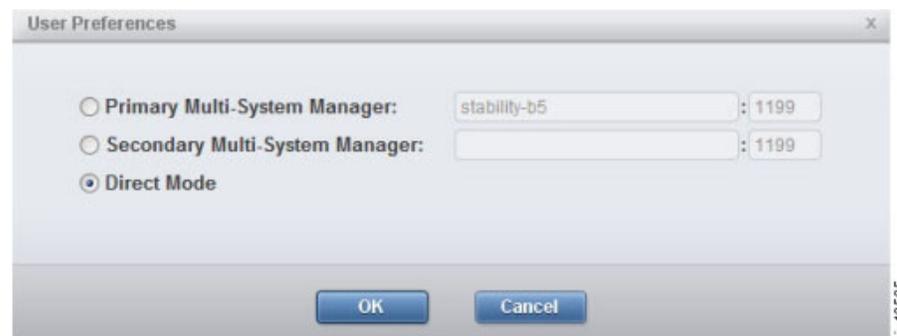


Figure 2. IBM Hyper-Scale Manager Primary Management Server

- b. The **Certificate Details** screen opens. The IBM Hyper-Scale Manager version 1.5 is published using an XIV default that is not signed by a CA, certificate. You can either:
 - **Trust Once** - only for the current GUI session.
 - **Trust Always** - never being asked again about it.
 - Replace the IBM Hyper-Scale Manager certificate.

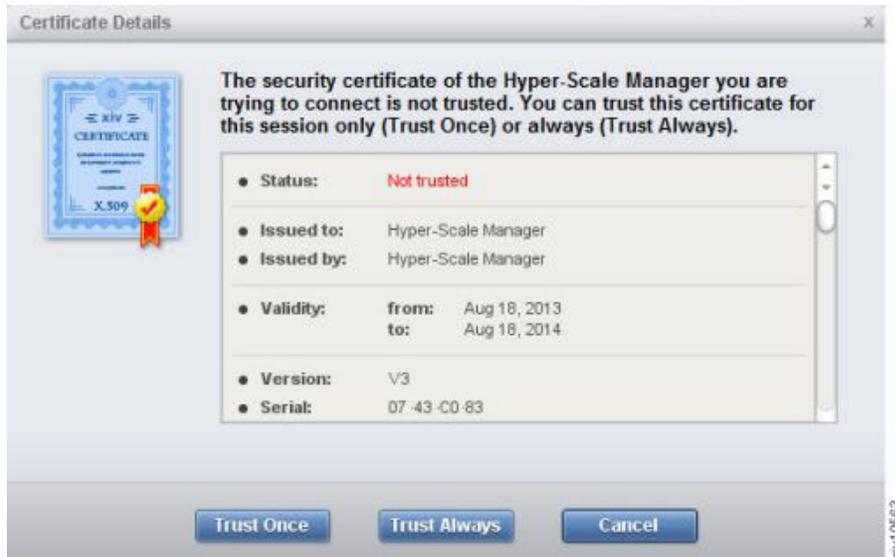


Figure 3. The Certificate Details screen

3. Configure the System Machine Account credentials. Open the **Systems > Manager Configuration** dialog. You are prompted to provide the Manager Access Code.
 - a. Fill the access code on the **IBM Hyper-Scale Manager Access Code** screen. In case the Manager Access code was not defined yet, the default is



Figure 4. IBM Hyper-Scale Manager Access Code

adminadmin. Read more about the Manager Access code on the “Definitions” on page 2 section.

- b. Open the **Credentials** tab of the **Manager Configuration** screen. Check the **Remember Me** checkbox to eliminate the must type the access code whenever you access the IBM Hyper-Scale Manager from the GUI.

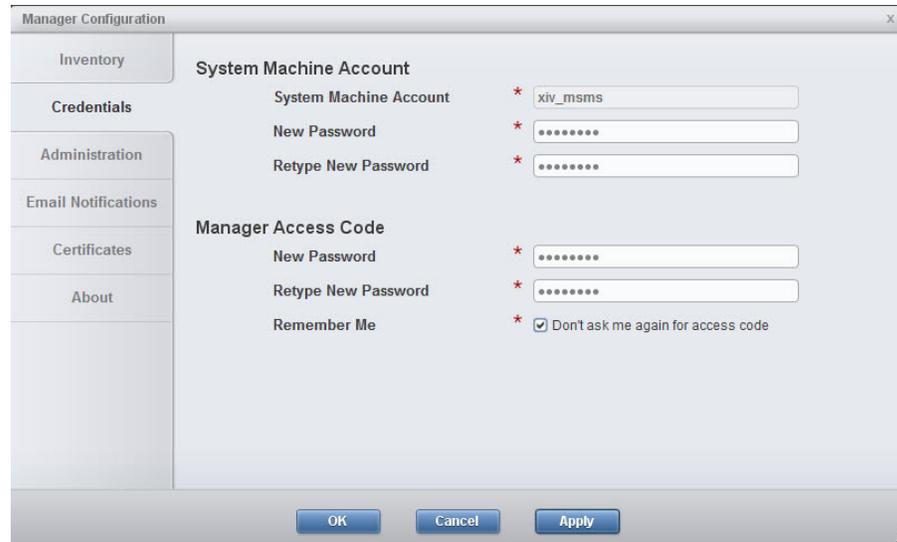
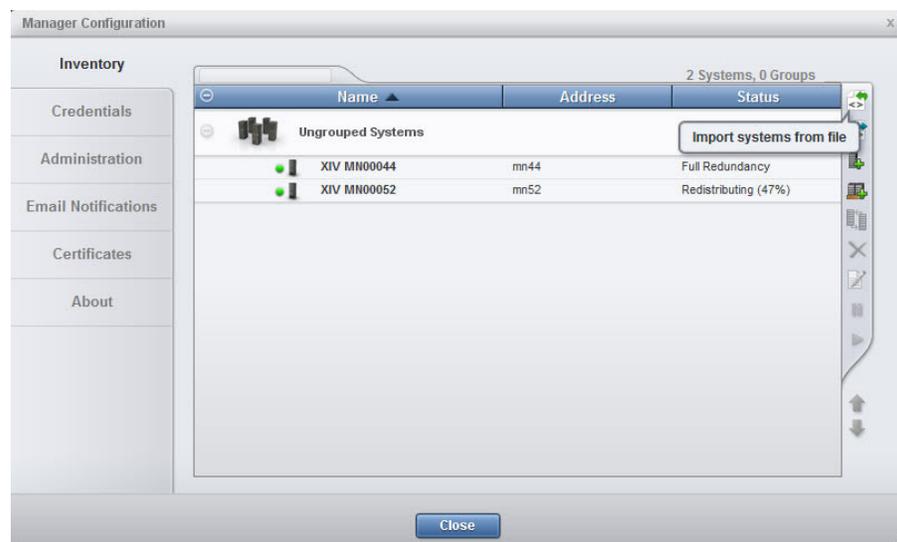


Figure 5. The Remember Me checkbox

4. On the same screen, determine a new password for the Systems Machine Account (this is a system user that monitors it on the IBM Hyper-Scale Manager). Fill the **Systems Machine Account** password and click **OK**.

Note: Only a correct access code can grant you access to the **Manager Configuration** screens.

5. On the **Manager Configuration** screen, open the **Inventory** tab. Perform the following sub steps:
 - a. If you have a previously exported system XML file, click **Import systems from file**, browse to the XML file, and import it. Else, jump to bullet b.



Systems are added to the screen.

- b. If the added screens get an Authentication Error status, select the not authenticated systems, right-click and select: **Diagnose/Fix Authentication Error** from the menu. Read more on the diagnose and fix process on the “Definitions” on page 2 topic.

Installing another IBM Hyper-Scale Manager

The number of IBM Hyper-Scale Manager instances that you can install is limitless. Each of these IBM Hyper-Scale Manager instances can monitor all XIV Systems in your organization. There is no redundancy or communication between the managers themselves.

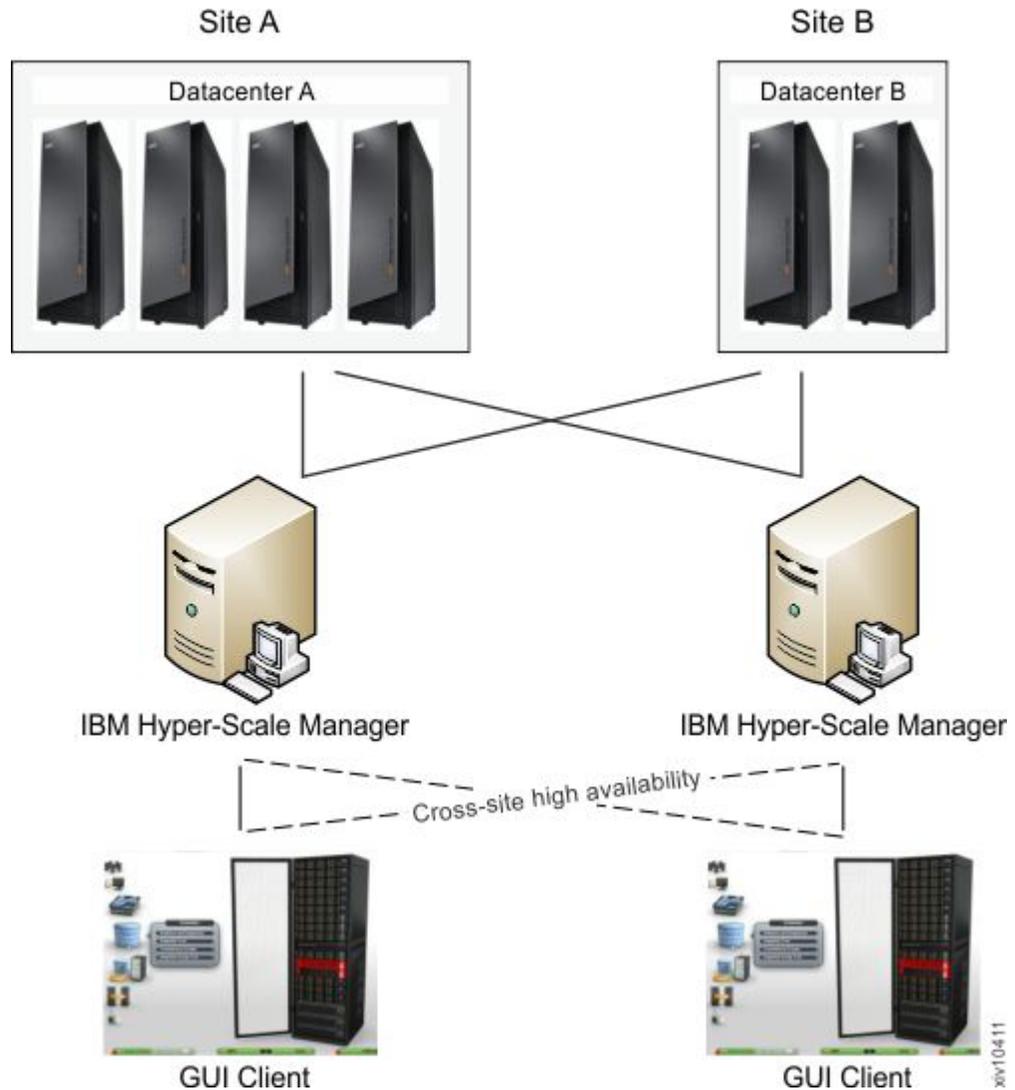


Figure 6. Cross site high availability

The GUI can be connected to two IBM Hyper-Scale Manager instances (Primary and Secondary) for the use of manual switch over in case one is not responding. This way, you can achieve high availability of Multi System Managers.

Using this architecture, you can gain high performance of the GUIs by connecting them to a IBM Hyper-Scale Manager located in their site, whereas other remotely located GUIs will connect to another Multi System Manager that is located on their site.

Best practice

While installing the new IBM Hyper-Scale Manager instance, set the Manager Access Code to be identical to the existing code.

Chapter 3. Upgrading the IBM Hyper-Scale Manager

This chapter discusses how to upgrade the IBM Hyper-Scale Manager to the most recent version available and how to roll-back an upgrade.

Upgrading the IBM Hyper-Scale Manager

Upgrading the IBM Hyper-Scale Manager to the most recent version available.

Before you begin

Make sure you have the installation file at hand: `XIV-Manager-Upgrade_1.5.0.*.tar.gz`.

About this task

This section describes how to upgrade to the current version of the IBM Hyper-Scale Manager. As part of the upgrade, this procedure backs up the IBM Hyper-Scale Manager inventory configuration. More details about the backup procedure are available here: “Backing up the IBM Hyper-Scale Manager” on page 25.

Procedure

1. Back up the database:
 - a. Click 5 on the root menu. The Backup and Restore Menu is displayed on screen.

```
Backup and Restore Menu
-----
1) Backup
2) Restore
3) Schedule Daily Backup
4) Remove Scheduled Backup
5) Exit
Your Selection>
```

- b. Click 1 to back up the database. The backup process takes place:

```
Your Selection>1
Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file:
backup/BACKUP_20120815_082926.tar.gz
Press any key to continue
```

The backup file name is displayed on screen.

- c. Press any key to return to the Backup and Restore Menu.
2. Export the backup to an external device:
 - a. Before you begin, ensure the following:
 - You need maintenance credentials in order to perform the following tasks.
 - The initial password of the maintenance user is `xivmsMaintenance`.

- Make sure the root user changes the password of the maintenance user as soon as possible. See here: “Changing the maintenance password” on page 40.

b. Export the backup.

```
sftp maintenance@msms-12-8-serv
Password:
Connecting to msms-12-8-serv.
sftp> cd backup
sftp> get BACKUP_20130404_233001.tar.gz
```

3. Upgrade the IBM Hyper-Scale Manager:

a. Upload the upgrade file to the upload folder using SFTP and maintenance user credentials.

b. Click 13 on the root menu.

```
Your Selection>13
This utility will run the upgrade procedure of IBM Hyper-Scale Manager
The backup database will run prior the upgrade.
Press any key to continue
```

c. Next, provided that an upgrade file was uploaded as stated above, select a file from the list:

```
Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file:
backup/BACKUP_20120815_105757.tar.gz

Please upload the upgrade file (*.tar.gz) using SFTP and user 'maintenance'
to upload folder.
Press any key to continue

Files in upload folder
-----
IBM Hyper-Scale Manager_Upgrade_1.5.*.tar.gz

Please enter the name of the upgrade file >
```

d. Enter the file name. You will be asked to confirm the upgrade.

```
IBM Hyper-Scale Manager will be upgraded to version 1.5.0.x.
Please confirm stopping the IBM Hyper-Scale Manager service
and upgrading now [Y/N] >
```

e. During the upgrade, you will be prompted to accept the new license. Enter 1 to confirm. Upon confirmation, the upgrade takes place, resulting in the following message:

```
The upgrade to IBM Hyper-Scale Manager version 1.5.0.x
completed successfully.
Following the upgrade, users that are logged into the IBM Hyper-Scale Manager
root menu will have to re-login.
```

4. The *upgrade* is complete. Open the XIV GUI.

What to do next

In case the upgrade fails, go to “Rolling-back the IBM Hyper-Scale Manager upgrade” on page 24.

Upgrading the IBM Hyper-Scale Manager from the GUI

Whenever it is opened in Manager mode, the XIV GUI checks the version of the IBM Hyper-Scale Manager. If the version is not the latest, you are asked to approve upgrading it.

About this task

This procedure does not back up the IBM Hyper-Scale Manager inventory configuration.

See Backup and Upgrade sections on **this Installation Guide**.

Procedure

1. Whenever the following GUI screen pops up, click **Upgrade Manager**. A window similar to the following is displayed:



Figure 7. Upgrading the IBM Hyper-Scale Manager from the GUI

2. Accept the Software License Agreement. The IBM Hyper-Scale Manager is upgraded and a window similar to the following is displayed:



Figure 8. The IBM Hyper-Scale Manager is upgraded

What to do next

In case the upgrade fails, go to the **Roll-back** section on this guide.

Rolling-back the IBM Hyper-Scale Manager upgrade

In case the upgrade does not end well, there is a need for a roll-back.

About this task

This section describes what to do in case that the upgrade fails. The section specifies how to roll-back the upgrade of the IBM Hyper-Scale Manager. This procedure restores the IBM Hyper-Scale Manager inventory configuration that was previously backed up. More details about the backup procedure are available here: "Backing up the IBM Hyper-Scale Manager" on page 25.

Procedure

1. Delete the VM.
2. Re-install the previous IBM Hyper-Scale Manager version. See: Chapter 2, "Installing the Management Tools on a VM," on page 5.
3. Import the back up and restore it. See: "Restoring the IBM Hyper-Scale Manager" on page 26 section.

Chapter 4. Backing up and restoring the Manager

Backing up the inventory configuration of the IBM Hyper-Scale Manager

This chapter describes how to back up the IBM Hyper-Scale Manager and how to restore it.

Backing up the IBM Hyper-Scale Manager

Backing up the inventory configuration of the IBM Hyper-Scale Manager

About this task

This section describes how to back up the inventory configuration of the IBM Hyper-Scale Manager. All of the backup and restore options are accessible from the *root* menu. This section describes the best practice.

The backup file is version-specific. It can be restored into a IBM Hyper-Scale Manager of the same version. Whenever you upgrade the IBM Hyper-Scale Manager to a new version, create a new backup file.

The backup procedure backs up the following configurations:

- IBM Hyper-Scale Manager inventory
- Users workspaces - where information about users and the systems they work on is saved
- RMI ports
- Trusted certificate
- SMTP configuration

The backup process does not back up other configurations and data, such as:

- Network, SMTP and NTP (See “Step 3” on page 7 of the installation).
- System Machine Account password (See “Changing the System Machine Account password” on page 36).
- Manager Access Code (See “Changing the manager access code” on page 40).
- IBM Hyper-Scale Manager certificate (see **Replacing the Certificate** on the **Operations Guide**).
- IBM Hyper-Scale Manager logs

In order to configure these not-to-be-saved configurations, refer to the relevant sections on this user guide.

Procedure

1. Back up the database:
 - a. Click 5 on the root menu. The Backup and Restore Menu is displayed on screen.

```
Backup and Restore Menu
-----
1) Backup
2) Restore
3) Schedule Daily Backup
4) Remove Scheduled Backup
5) Exit
Your Selection>
```

- b. Click 1 to back up the database. The backup process takes place:

```
Your Selection>1
Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file:
backup/BACKUP_20120815_082926.tar.gz
Press any key to continue
```

The backup file name is displayed on screen.

- c. Press any key to return to the Backup and Restore Menu.
2. Export the backup to an external device:
- a. Before you begin, ensure that:
- You need maintenance credentials in order to perform the following tasks.
 - The initial password of the maintenance user is `xivmsMaintenance`.
 - Make sure the root user changes the password of the maintenance user as soon as possible. See here: “Changing the maintenance password” on page 40.
- b. Export the backup. SFTP to the server using the maintenance account and export the backup file outside the IBM Hyper-Scale Manager

```
sftp maintenance@msms-12-8-serv
Password:
Connecting to msms-12-8-serv.
sftp> cd backup
sftp> get BACKUP_20130404_233001.tar.gz
```

Restoring the IBM Hyper-Scale Manager

Restoring the inventory configuration and preferences of the IBM Hyper-Scale Manager from a backup

About this task

This section describes how to restore the inventory configuration of the IBM Hyper-Scale Manager from a backup. All of the backup and restore options are accessible from the *root* menu. This section describes the best practice.

The backup file is version-specific. It can be restored into a IBM Hyper-Scale Manager of the same version. Whenever you upgrade the IBM Hyper-Scale Manager to a new version, create a new backup file.

The restore procedure restores the following configurations:

- IBM Hyper-Scale Manager inventory
- Users workspaces - where information about users and the systems they work on is saved

- RMI ports
- Trusted certificate
- SMTP configuration

The restore process does not restore other configurations and data, such as:

- Network and NTP (See “Step 3” on page 7 of the installation).
- System Machine Account password (See “Changing the System Machine Account password” on page 36).
- Manager Access Code (See “Changing the manager access code” on page 40).
- IBM Hyper-Scale Manager certificate (see Replacing the Certificate on the Operations Guide.)
- IBM Hyper-Scale Manager logs

In order to configure these not-restored configurations, please refer to the relevant sections in this user guide.

Procedure

1. Restore the IBM Hyper-Scale Manager database to the target Manager. On the menu of the target IBM Hyper-Scale Manager, click 2 to restore the database. Output similar to the following is displayed:

Note: This step is applicable only if the backup was exported to an external device.

- a. SFTP to the target IBM Hyper-Scale Manager using the maintenance account. Put the backup file in the backup folder.

```
sftp maintenance@msms-12-8-igorg
Password:
Connected to msms-12-8-igorg.
sftp> put BACKUP_20121101_131535.tar.gz upload
Uploading BACKUP_20121101_131535.tar.gz to
/upload/BACKUP_20121101_131535.tar.gz
BACKUP_20121101_131535.tar.gz
```

- b. Select a file to restore from:

```
Your Selection>2
Backup files to restore:
-----
BACKUP_20120815_085300.tar.gz
BACKUP_20120815_085000.tar.gz

Please select a backup file to restore >
BACKUP_20120815_085300.tar.gz
```

- c. Click Y to confirm.
- d. Confirm again:

```
Are you sure you want to restore BACKUP_20120815_085300.tar.gz? [Y/N] : y

Restore DB is going to override your current configuration.
It is recommended to run a backup prior restoring.
Do you want to run backup of the current configuration before restoring? [Y/N] :
```

- e. The restore takes place:

```

Backup files to restore:
-----
BACKUP_20120827_112834.tar.gz
BACKUP_20120827_112511.tar.gz
BACKUP_20120815_122049.tar.gz

Please select a backup file to restore >BACKUP_20120815_122049.tar.gz

Are you sure you want to restore BACKUP_20120815_122049.tar.gz? [Y/N] : y

Restore DB is going to override your current configuration.
It is recommended to run a backup prior to restoring.
Do you want to run backup of the current configuration before restoring? [Y/N] : y

Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file:
backup/BACKUP_20120827_112904.tar.gz
xivms v1.5.0.x is stopped

Restoring BACKUP_20120815_122049.tar.gz...
Restore completed successfully

Note: The following configurations were not restored
(the pre-restore configurations were kept):
System Machine Account password
Manager Access Code
Manager Certificate
If you wish to set them, please refer to the user guide for further explanations.

xivms v1.5.0.x is starting...

```

- f. Press any key to return to the **Backup and Restore** menu.
2. Once the restore is complete, you need to redefine the following:

The System Machine Account

See a definition to the System Machine Account here: “Definitions” on page 2.

You can configure it either from the GUI or on the IBM Hyper-Scale Manager menu.

On the GUI

Follow the instructions on step 4 of the “Initializing the inventory” on page 15 section.

From the IBM Hyper-Scale Manager menu

Go to: “Changing the System Machine Account password” on page 36.

The Manager Access Code

See a definition to the Manager Access Code here: “Definitions” on page 2.

You can configure it either from the GUI or on the IBM Hyper-Scale Manager menu.

On the GUI

Follow the instructions on step 4 of the “Initializing the inventory” on page 15 section.

From the IBM Hyper-Scale Manager menu

Go to: “Changing the manager access code” on page 40.

The IBM Hyper-Scale Manager certificate

If needed, replace the IBM Hyper-Scale Manager certificate (see Replacing the Certificate on the Operations Guide).

Chapter 5. Operating the IBM Hyper-Scale Manager

The IBM Hyper-Scale Manager allows access and distributes tasks among the following users:

Root user

The Root user is an OS super user that carries out administrative tasks.

Maintenance user

The Maintenance user carries out IBM Hyper-Scale Manager configuration tasks. This user is the customer's way to interact with any of the IBM Hyper-Scale Manager operations using SFTP protocol (that is, setting logs, copying the upgrade file, getting backups, etc.).

In addition, pay attention to the following:

No Shell access

The IBM Hyper-Scale Manager provides no Shell access whatsoever to any of the user types.

IBM technician accessibility

The technician user type does not have access to the GUI in manager mode. The GUI is accessible in direct mode.

Root user operations

Selecting an operation from the root user menu

The section lists the operations that are available from the root user menu.

Before you begin

You need root credentials in order to access this menu.

About this task

The IBM Hyper-Scale Manager root menu provides access to systems management operations.

Procedure

Login with root credentials. The following menu opens on screen:

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
Super user Menu  
-----  
IBM Hyper-Scale Manager is running  
  
1) Server Configuration Options  
2) Gather Server Logs  
3) Show Audit Log  
4) Show Upgrade Logs  
5) Manage Inventory Options  
6) Backup/Restore Options  
7) Change 'root' Password  
8) Change 'maintenance' Password  
9) Change Manager Access Code  
10) Start/Stop IBM Hyper-Scale Manager Service  
11) Replace IBM Hyper-Scale Manager Certificate  
12) Change XIV GUI Communication Ports  
13) Change RESTful Interface Port  
15) Upgrade IBM Hyper-Scale Manager  
15) Reboot  
16) Shutdown  
17) Exit  
Your Selection>
```

What to do next

The following sections explain how to carry out root user operations.

Server configuration options

The server configuration options allow to go back to the various configuration steps you are already familiar with from the IBM Hyper-Scale Manager installation. Using these scripts you can change the IBM Hyper-Scale Manager configuration after its installation.

About this task

This task allows you to change the server configuration.

Note: Changing the server configuration is not mandatory.

Procedure

1. Click 1 on the root menu. The Server configuration Menu opens on screen.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
  
Server Configuration Menu  
-----  
1) Network  
2) NTP & Regional Settings  
3) SMTP  
4) Exit  
Your Selection>
```

2. Select from the following options: Detailed information regarding the way to configure the server are available on the “Installing the IBM Hyper-Scale Manager” on page 6 in this document.

- 1 Network
- 2 NTP & Regional Settings
- 3 SMTP - in addition to the *Server address and port* that were defined during the installation (see the relevant section on the Installation chapter: “Step 5” on page 12, from this menu you can do the following:
 - Define the *sender email address* - the address that will be displayed on the *from* field of the emails.
 - Add a destination - email addresses that you can send emails to.
 - Test the SMTP configuration - by sending a confirmation email.

Relevant menu options:

```
1) Add destination  
2) Remove destination  
3) Remove all destinations  
4) Send confirmation emails  
5) Continue  
6) Return to the previous menu
```

- 4 Exit - return to the Super user menu.

Gathering the server logs

The Gather Server Logs menu option allows you to gather logs of the server activity.

About this task

This task allows you to gather server logs. The logs can be later collected by the Maintenance user (See here “Performing maintenance tasks” on page 44).

Procedure

1. Click 2 on the root menu. A log is collected and the file name is displayed on screen.

```

Your Selection>2
Gathering IBM Hyper-Scale Manager logs...
Gather logs completed successfully
SFTP using 'maintenance' account and get the file:
logs/msms_logs_20120815_081641.tar.gz
Press any key to continue

```

- Pressing any key returns you to the super user menu.

What to do next

SFTP using the maintenance user credentials to collect the log from the logs folder.

Displaying the audit log

This menu option displays a log of Server Admin activities.

About this task

The audit log displays the following Server Admin activities:

- Adding a system to the inventory
- Modifying the system address
- Removing a system from the inventory
- Suspending the monitoring of a system
- Suspending the monitoring of all of the systems
- Resuming the monitoring of a system
- Resume the monitoring of all of the systems
- Removing all of the systems from the inventory
- Setting the System Machine Account credentials
- Invalidating the user authentication
- Adding a System Machine Account user to a specific system
- Importing the system certificate
- Accepting the system certificate
- Removing the system certificate

The audit log is stored into a file that can be collected. See “Gathering the server logs” on page 31.

Procedure

- Click 3 on the root menu. A log is collected and is displayed on screen.

```

Your Selection>3
18:05:13,924 admin Remove all systems from the inventory. [Success]
11:32:38,964 admin Remove system 9.151.133.239 from the inventory [Success]
11:32:48,423 admin Add system [mn00010:7778] to the inventory [Success]
11:33:07,202 admin Robot user credentials change [Failed: Password was not changed]
11:34:39,320 admin Robot user credentials change [Success]

```

- Pressing any key returns you to the Super User menu.

Displaying the upgrade logs

This menu option displays the upgrade logs.

About this task

Upgrade logs can be displayed on screen and exported via SFTP.

Procedure

1. Click 4 on the root menu. The upgrade logs are displayed on screen.

```
-----  
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
Super User Menu  
-----  
1) Server Configuration Options  
2) Gather Server Logs  
3) Show Audit Logs  
4) Show Upgrade Logs  
5) Manager Inventory Options  
6) Backup/Restore Options  
7) Change 'root' Password  
8) Change 'maintenance' Password  
9) Change Manager Access code  
10) Start/Stop IBM Hyper-Scale Manager Service  
11) Replace IBM Hyper-Scale Manager Certificate  
12) Change XIV GUI Communication Ports  
13) Upgrade IBM Hyper-Scale Manager  
15) Reboot  
15) Shutdown  
16) Exit  
  
Your Selection>4  
  
Upgrade log files:  
-----  
upgrade_2013-01-15_12-00-00_23352.log  
upgrade_2013-01-16_15-00-00_30813.log  
  
Please select the log flie you wish to see >
```

2. Once a log is selected, the upgrade starts and similar output is displayed:

```
Created at: 15-01-2013 12/00/00  
This utility will run the upgrade procedure of the  
IBM Hyper-Scale Manager.  
Backup database will run prior to the upgrade.  
Backing up...  
Backup completed successfully.  
SFTP using 'maintenance' user and get the file:  
backup/BACKUP_20130115_121000.tar.gz  
  
File in the Upload folder  
-----  
UpgradeKit1.3.0-3.tar.gz  
  
Extracting /files/upload/UpgradeKit1.3.0-3.tar.gz
```

3. You may export the file via SFTP using the 'maintenance' user. See here: "Performing maintenance tasks" on page 44.

Managing inventory options

The inventory options allow for adding, modifying and removing XIV systems from being managed by the IBM Hyper-Scale Manager.

About this task

This menu lists all inventory management options.

Procedure

Click 1 on the menu. The Manager Inventory Configuration menu is displayed on screen.

```
----- IBM Hyper-Scale Manager v1.x.x.x -----  
-----  
Manager Inventory Configuration  
-----  
IBM Hyper-Scale Manager is running  
  
1) System Inventory List  
2) Add System  
3) Modify System  
4) Remove System  
5) System Monitoring Suspend  
6) System Monitoring Resume  
7) Re-authenticate All Users  
8) Change System Machine Account  
9) Manage System Certificates  
10) Manage Capacity Planning Data  
11) Exit  
Your Selection>
```

What to do next

The following sections explain how to carry out inventory-related operations.

The following menu items are documented on the Operations Guide:

- Manage system certificates
- Manage capacity planning data

System inventory list

The system inventory list displays the XIV Systems monitored by IBM Hyper-Scale Manager and their status.

About this task

This task allows you to view the inventory list.

Procedure

1. Click 1 on the Manager Inventory Configuration menu. The System Inventory List opens on screen. For each system, the list displays its name, address, status and ID.

```
Your Selection>1  
-----  
Name                Addresses                Status                Id  
-----  
Gen3p1-04           Gen3p1-04                Authentication Failure  Gen3p1-0  
4::null:null  
qa16                qa16                    Authentication Failure  qa16::nu
```

2. Press any key to return to the Manager Inventory Configuration menu.

Adding a system to the inventory

This menu option adds an XIV System to the inventory.

Procedure

1. Click 2 on the Manager Inventory Configuration menu. You are asked to enter the new system.

```
Your Selection>2
Enter new system addresses in the following format: address1 [address2] [address3]>
```

2. Enter the address of the new system.

Results

The system is added to the inventory and can be viewed from the system inventory list.

Modifying an XIV system in the inventory

This menu option modifies an XIV System to the inventory.

Procedure

1. Click 3 on the Manager Inventory Configuration menu. The following message is displayed on screen:

```
Your Selection>3
Enter a system address/ID to modify >
```

2. Enter the system's address or ID and then enter the new system addresses:

```
Your Selection>3
Enter a system address/ID to modify >qal6
Enter new addresses in the following format: address1 [address2] [address3]>
```

The system is now modified.

Removing a system from the inventory

This menu option removes an XIV System in the inventory.

Procedure

1. Click 4 on the Manager Inventory Configuration menu. A message is displayed on screen:

```
Your Selection>4
Enter a system address/ID to remove (--all for all systems) >
```

2. Enter an address or ID in order to remove a single system. Alternately, enter --all in order to remove all of the systems.

Suspending a system from monitoring

This menu option suspends an XIV System from being monitored by the IBM Hyper-Scale Manager.

Procedure

1. Click 5 on the Manager Inventory Configuration menu. A message is displayed on screen:

```
Your Selection>5
Enter a system address/ID to suspend (--all for all systems) >
```

2. Enter an address or ID in order to suspend a single system. Alternately, enter --all in order to suspend all of the systems.

Resuming the monitoring of a suspended XIV System

This menu option resumes the monitoring of a suspended XIV System.

Procedure

1. Click 6 on the Manager Inventory Configuration menu. A message is displayed on screen:

```
Your Selection>6
Enter a system address/ID to resume (--all for all systems) >
```

2. Enter an address or ID in order to resume a single suspended system. Alternately, enter --all in order to resume all of the suspended systems.

Re-authenticating users

This menu option re-authenticates the users across all of the XIV systems that are managed by the IBM Hyper-Scale Manager.

Procedure

1. Click 7 on the Manager Inventory Configuration menu. A message is displayed on screen:

```
Your Selection>7
This option will force re-authentication of all logged-in users. Are you sure? [Y/N] >
```

2. Press Y to continue. A message is displayed on screen:

```
Are you sure? [Y/N] >y
Invalidating all authentication records.
Logged in users will be re-authenticated automatically.
Press any key to continue
```

3. Press any key to perform the user authentication.

Changing the System Machine Account password

This menu option changes the System Machine Account password.

About this task

See a definition of the System Machine Account here: “Definitions” on page 2.

The password can be changed either from the Manager Inventory Configuration menu or via the GUI.

In addition, the password needs to be changed on all systems.

Procedure

Select whether to use the Manager Inventory Configuration menu or the GUI:

On the administrator menu

See here: “Managing inventory options” on page 33.

On the GUI

1. Login to the GUI using the manager access code (see here: “Initializing the inventory” on page 15).

2. Go to menu: **Systems > Server Admin Options > Credentials**. Fill in the System Machine Account (see a definition here: “Definitions” on page 2) password and click **Update**.
3. Re-authenticate the systems according to the new password: open **Systems > Manager Configuration> Inventory**. Wait until the systems arrive to the status of Authentication Error, select all those systems (using the CTRL or SHIFT keys), right-click and select **Diagnose/Fix Authentication error** from the context menu. Read more on the diagnose and fix process on the “Definitions” on page 2 topic.

Backing up the server database

The Backup/Restore menu options allow you to backup the server database and to restore this database from a backup.

About this task

The information stored on the IBM Hyper-Scale Manager database can be backed up and restored from this menu. This database contains the inventory configuration. Backing it up helps you to recover from a disaster in order to maintain service continuity by restoring the inventory. It can also be used for copying the inventory configuration from one IBM Hyper-Scale Manager to another.

Procedure

Click 4 on the management menu. The Backup and Restore Menu is displayed on screen.

```
Backup and Restore Menu
-----
1) Backup
2) Restore
3) Schedule Daily Backup
4) Remove Scheduled Backup
5) Exit
Your Selection>
```

What to do next

Backup and restore

A detailed instructions set for backup and restore is available on this section: Chapter 4, “Backing up and restoring the Manager,” on page 25.

Scheduling - and removing a schedule for - a daily backup

See the next sections.

See the next sections for detailed instructions about each menu option.

Backup

The Backup menu item allows you to backup the database.

About this task

A default scheduled backup is already configured at 23:30 daily. In addition to that, you can back up the database using this task.

Procedure

1. Click 1 to back up the database. The backup process takes place:

```
Your Selection>1
Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file: backup/BACKUP_20120815_082926.tar.gz
Press any key to continue
```

The backup file name is displayed on screen.

2. Press any key to return to the Backup and Restore Menu.

What to do next

You can SFTP using 'maintenance' account and get the file from 'backup' folder.

Restore

The Restore menu item allows you to restore the database from a backup.

Procedure

1. Click 2 to restore the database. The available backup files, that are stored on the backup folder that is accessible by the maintenance user, are displayed on screen:

```
Your Selection>2
Backup files to restore:
-----
BACKUP_20120815_085300.tar.gz
BACKUP_20120815_085000.tar.gz

Please select a backup file to restore >
```

2. Select a file to restore from:

```
Please select a backup file to restore >BACKUP_20120815_085300.tar.gz
```

3. Click Y to confirm.
4. Confirm again:

```
Are you sure you want to restore BACKUP_20120815_085300.tar.gz? [Y/N] : y

Restore DB is going to override your current configuration.
It is recommended to run a backup prior restoring.
Do you want to run backup of the current configuration before restoring? [Y/N] :
```

5. The restore takes place:

```

Backup files to restore:
-----
BACKUP_20120827_112834.tar.gz
BACKUP_20120827_112511.tar.gz
BACKUP_20120815_122049.tar.gz

Please select a backup file to restore >BACKUP_20120815_122049.tar.gz

Are you sure you want to restore BACKUP_20120815_122049.tar.gz? [Y/N] : y

Restore DB is going to override your current configuration.
It is recommended to run a backup prior to restoring.
Do you want to run backup of the current configuration before restoring? [Y/N] : y

Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file: backup/BACKUP_20120827_112904.tar.gz
xivms v1.5.0.x is stopped

Restoring BACKUP_20120815_122049.tar.gz...
Restore completed successfully

Note: Systems Machine Account Password was not restored.

xivms v1.5.0.x is starting...

```

6. Press any key to return to the **Backup and Restore** menu.

What to do next

Once the restore is complete, you need to redefine:

- The System Machine Account
- The Manager Access Code

See a definitions to both here: “Definitions” on page 2. You can do it either from the GUI or on the CLI.

On the GUI

Follow the instructions on step 4 “Initializing the inventory” on page 15 of the Initializing the inventory section.

From the CLI

Go to “Changing the System Machine Account password” on page 36.

Scheduling a daily backup

The Schedule Daily Backup menu item allows you to schedule a daily backup job. The default daily backup runs at 23:30.

Procedure

1. Click 3 to schedule a back up. The current daily backup schedule is also displayed on screen:

```

Your Selection>3
Select time (HH:MM) to run backup every day [23:30]? >

```

2. Select a new backup time in an HH:MM format.

```

Your Selection>3
Select time (HH:MM) to run backup every day [23:30]? >15:00
Scheduled daily backup at 15:00
Press any key to continue

```

3. Press any key to return to the Backup and Restore menu.

Removing a scheduled backup

The Remove Scheduled Backup menu item allows you to clear the daily backup job.

Procedure

1. Click 4 to remove a schedule.

```
Your Selection>4
Removed scheduled backup
Press any key to continue
```

The schedule is cleared.

2. Press any key to return to the Backup and Restore menu.

Changing the root password

This menu option allows you to change the password of the root user.

Procedure

1. Click 7 on the root menu.
2. Enter a new password.

Changing the maintenance password

This menu option allows you to change the password of the maintenance user.

Procedure

1. Click 8 on the root menu.
2. Enter a new password.

Changing the manager access code

This section describes how to change the manager access code.

Procedure

1. Click 5 on the menu.
2. Enter a new access code.

Starting and stopping the IBM Hyper-Scale Manager service

This menu option allows you to start (or stop) the IBM Hyper-Scale Manager service.

Procedure

1. Click 10 on the root menu.
 - a. If the service is up, you will be asked to stop it.
 - b. Alternately, you will be asked to start it.
2. Confirm.

Replacing the IBM Hyper-Scale Manager certificate

This task guides you through replacing the default IBM Hyper-Scale Manager certificate with your organization's certificate.

Before you begin

- Prepare a certificate file in PKCS12 format.
- SFTP the file using 'maintenance' account to 'upload' folder.

About this task

The IBM Hyper-Scale Manager is shipped with a default certificate. This task guides you through replacing the default certificate with your organization's certificate.

Procedure

1. Click 11 on the root menu.

```
Your Selection>11
```

```
This script installs a new certificate.  
You need to prepare a certificate file in PKCS#12 format.  
You need to SFTP the files using 'maintenance' account to 'upload' folder.
```

2. The available certificates that are on the *upload* folder will be displayed on screen. Enter a certificate file name and the key password.

```
Awaiting screen capture
```

Results

The server certificate is now replaced.

What to do next

The next time the GUI connects to the server, it will have to approve (trust) the new certificate.

Changing the communication ports

This task allows you to change the ports through which the IBM Hyper-Scale Manager connects with the IBM XIV Storage Management GUI.

About this task

The IBM Hyper-Scale Manager connects to the XIV GUI via 6 reserved, consecutive ports, starting with port 1199.

Procedure

1. Click 7 on the management menu. The number of the first port among the consecutive six is displayed on screen, for example, 1199.

```
Your Selection>7
```

```
The communication between XIV GUI and the IBM Hyper-Scale Manager  
is done via 6 consecutive, reserved ports.
```

```
Please enter a new starting port number higher than 1024 [1199] >
```

2. Enter a new port number that is higher than 1024. In this example, the entered port number is 1340.

Please enter a new starting port number [1199] >1340

The new sequence of six port numbers, 1340 to 1345, is also displayed on screen.

You are going to change the reserved ports from 1199-1205 to 1340-1346. Are you sure? [Y/N] >y

3. Click Y to approve the replacement. You are asked to restart the service.

You need to restart IBM Hyper-Scale Manager service in order for the changes to take effect.
Do you want to restart service now? [Y/N] >

4. Click Y to restart the IBM Hyper-Scale Manager service. Upon success, the following message is displayed on screen:

Change was completed successfully.
Point XIV GUI to connect to the new starting communication port.

If you select not to restart the service right now, the following notification will be displayed on screen:

Change was not completed yet. Remember to restart the IBM Hyper-Scale Manager service.

Results

As the service is up again, the ports have changed.

What to do next

Change the communication ports that connect the GUI to the IBM Hyper-Scale Manager through the **System > Preferences** menu.



Changing the RESTful Interface ports

This task allows you to change the ports through which the IBM Hyper-Scale Manager connects with the RESTful Interface.

About this task

The IBM Hyper-Scale Manager connects to the XIV GUI via a reserved port.

Procedure

1. Depending on the IBM Hyper-Scale Manager flavor:
 - On the installation as an application: click 8 on the management menu.
 - On the virtual appliance: click 13 on the super user menu.

The number of the port is displayed on screen. Here, this number is 8443.

```
Your Selection>8
Please enter a new RESTful interface port number [8443].
The port number should be greater than 1024 and less than 65536 >
```

2. Enter a new port number that is higher than 1024. In this example, the entered port number is 1025.

```
The port number should be greater than 1024 and less than 65536 >1025
You are going to change the reserved ports from 8443 to 1025. Are you sure? [Y/N] >
```

3. Enter Y to approve the replacement. You are asked to configure the firewall and restart the service.

```
Change was not completed yet. Remember to configure firewall and restart
IBM Hyper-Scale Manager service.
Press any key to continue
```

4. Click Y to restart the IBM Hyper-Scale Manager service. Upon success, the following message is displayed on screen:

```
Change was completed successfully.
```

Upgrading the IBM Hyper-Scale Manager

This menu option allows you to upgrade the IBM Hyper-Scale Manager.

About this task

For a complete description of the Upgrade and restore processes, see here: Chapter 3, “Upgrading the IBM Hyper-Scale Manager,” on page 21.

Procedure

1. Upload the upgrade file to the upload folder using SFTP and maintenance user credentials.
2. Click 13 on the root menu.

```
Your Selection>13
This utility will run the upgrade procedure of IBM Hyper-Scale Manager
The backup database will run prior the upgrade.
Press any key to continue
```

3. Next, provided that an upgrade file was uploaded as stated above, select a file from the list:

```

Backing up...
Backup completed successfully
SFTP using 'maintenance' account and get the file: backup/BACKUP_20120815_105757.tar.gz

Please upload the upgrade file (*.tar.gz) using SFTP and user 'maintenance'
to upload folder.
Press any key to continue

Files in upload folder
-----
Upgrade.tar.gz
Upgrade_1.5.tar.gz
dd.tar.gz

Please enter the name of the upgrade file >

```

4. Enter the file name. You will be asked to confirm the upgrade.

```

IBM Hyper-Scale Manager will be upgraded to version 1.5.0.x.
Please confirm stopping the IBM Hyper-Scale Manager service
and upgrading now [Y/N] >

```

5. During the upgrade, you will be prompted to accept the new license. Enter 1 to confirm. Upon confirmation, the upgrade takes place, resulting in the following message:

```

The upgrade to IBM Hyper-Scale Manager version 1.5.0.x completed successfully.

```

Results

The IBM Hyper-Scale Manager version is upgraded.

Rebooting the IBM Hyper-Scale Manager host

This menu option allows you to reboot the IBM Hyper-Scale Manager host.

Procedure

Click 15 on the root menu. Confirm the reboot.

Shutting down the virtual machine

This menu option shuts down the virtual machine.

Maintenance user operations

Performing maintenance tasks

Before you begin

- You need maintenance credentials in order to perform the following tasks.
- The initial password of the maintenance user is `xivmsMaintenance`.
- Make sure the root user changes the password of the maintenance user as soon as possible. See here: “Changing the maintenance password” on page 40.

About this task

The IBM Hyper-Scale Manager allows for inbound and outbound file delivery via SFTP. Such files delivery is required for the following tasks:

“Gathering the server logs” on page 31

The logs are available for collection from the logs folder.

“System inventory list” on page 34

The log of the system list operation can be collected from the logs folder.

Backing up the database

The backup file can be collected and stored anywhere outside the IBM Hyper-Scale Manager.

Restoring the database

This operation looks for a backup file. In some cases, the backup file has to be sent to the IBM Hyper-Scale Manager.

Replacing the security certificate

The security certificate has to be sent to the IBM Hyper-Scale Manager.

Upgrading the IBM Hyper-Scale Manager

The upgrade file has to be sent to the IBM Hyper-Scale Manager.

Procedure

For each of the above operations, make sure that the relevant file is sent to - or collected from the following directories:

logs The IBM Hyper-Scale Manager stores the logs in this directory.

backups

Backup files are written into here, and the restore operation looks for a file in here as well.

uploads

Certificates and upgrade files need to be stored here.

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