Hitachi Virtual Storage Platform G130

88-02-0x

(with SVP) Installation Guide

This guide provides information and instructions for installing and setting up your Hitachi Virtual Storage Platform VSP G130 storage system along with the supplied service processor (SVP).

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Installing your storage system that includes an SVP

Hitachi Virtual Storage Platform G130 storage systems that ship with a service processor (SVP) are designed for self-installation, so you can set up your storage system for the first time without assistance from a Hitachi Vantara representative.

Step 1: Unpack the storage system

Before you begin

Make sure your data center meets all site preparation requirements before you install the storage system. In addition, if you are not using a Hitachi Universal V2 rack, make sure the electrical specifications of your rack meet the power requirements of the storage system.

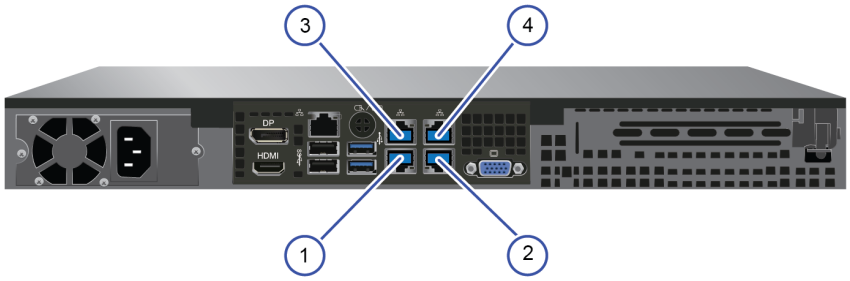
Procedure

1. Inspect all materials for signs of damage. If you see damage, discontinue the installation and contact your Hitachi Vantara representative.
2. Retain all packing materials in case you need to transport or ship the storage system in the future.
3. Check the items you received against the packing list. If any items are missing or damaged, discontinue the installation and contact your Hitachi Vantara representative.
4. Place the keys for the front bezel in a safe place.

Step 2: Cable a management console

Because your storage system is factory-installed in a rack, the LAN 3 and LAN 4 port connections to the storage system controllers have already been made, and the power cable is already connected to a power distribution unit (PDU). However, you must make the LAN 1 and LAN 2 port connections described in the following table using customer-supplied Ethernet cables.

Note: All four LAN ports on the SVP are 1-GbE interfaces.



SVP LAN port	Description
1	Do not connect a cable to the LAN 1 port at this time. You will connect to this port after you complete the **Initial Startup** wizard.
2	Connect the LAN 2 port to a Windows-based management console.
3	The LAN 3 port is already connected to the user LAN port on controller 1.
4	The LAN 4 port is already connected to the user LAN port on controller 2.

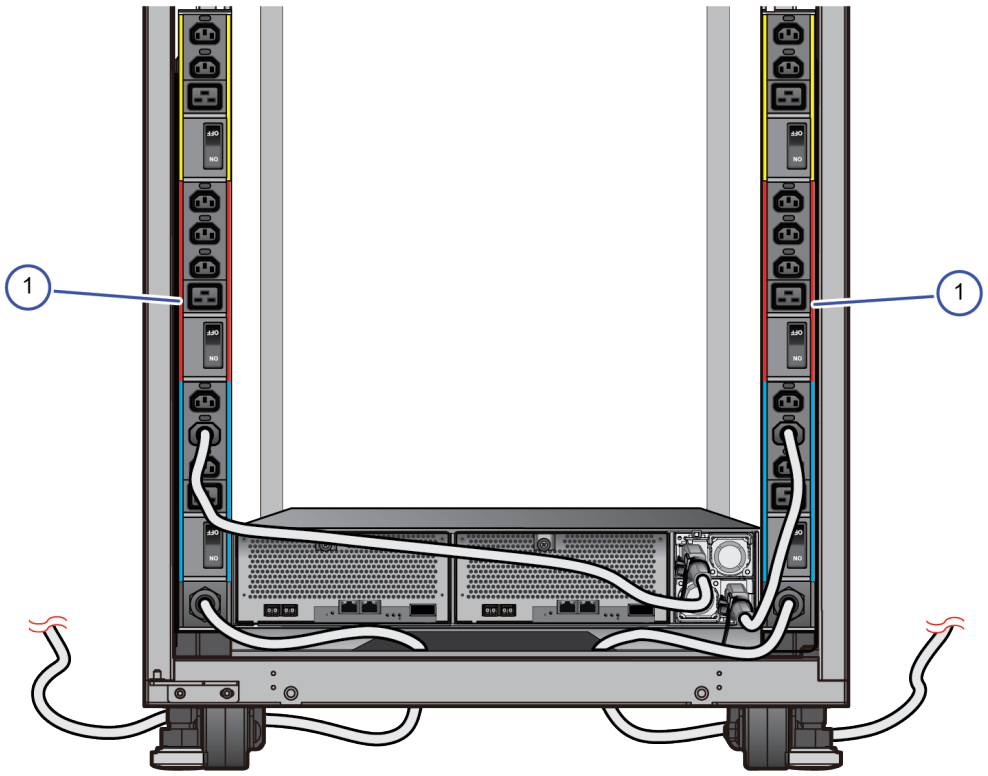
Step 3: Power on the storage system

Procedure

1. Confirm that the power cables on the rear panel are connected to separate PDUs, as shown in the following figure. Then connect the PDUs to external power sources.

   Note: For best practice, establish power redundancy by routing the power connections from each PDU to external power sources on different branch circuits.

   To prevent the storage system from being turned off by accident, make sure the external power sources are not controlled by a wall switch.

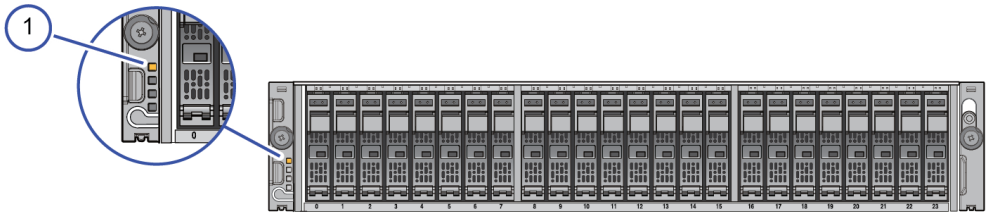


Item	Description
1	PDUs on the left and right sides of the rack

2. Power on the PDUs.
3. Power on the SVP by pressing the Power On/Off button on the left side of the front panel. Confirm that the power LED on the front panel of the SVP is lit green.

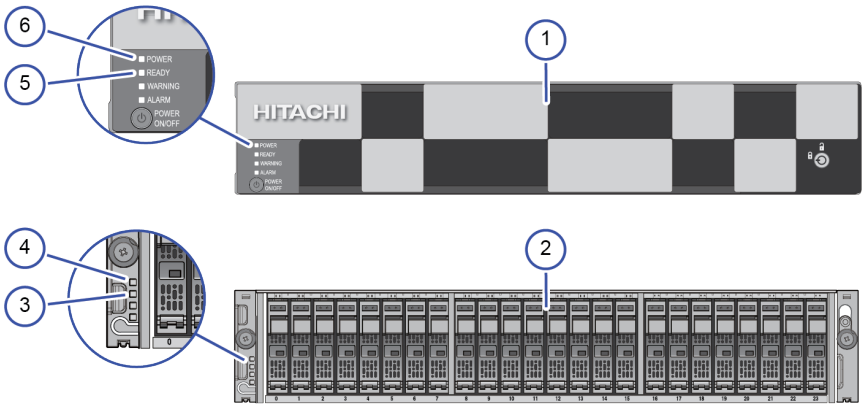
Item	Description
1	Power LED on the front of the SVP
2	Power On/Off button on the front of the SVP

4. Confirm that the top (**POWER**) LED on the lower left front side of the controller is lit amber, as shown in the following figure. If the storage system has a drive tray, confirm that the **POWER** LED on the lower left front side of the drive tray is lit green.



Item	Description
1	POWER LED on the front of the controller

5. On the lower left front side of the controller, press and hold the **POWER ON/OFF** button until the **POWER** LED changes to green (about 3 seconds), and then release the button.



Item	Description
1	Controller (front bezel attached)
2	Controller (front bezel removed)
3	READY LED on controller (front bezel removed)
4	POWER LED on controller (front bezel removed)
5	READY LED on controller (front bezel attached)
6	POWER LED on controller (front bezel attached)

6. Wait for the green **READY** LED on the front of the controller to go on (approximately 16-25 minutes).

> **Note:** If the **READY** LED does not go on after 30 minutes, contact customer support.

Step 4: Perform the initial startup and setup

Initial startup and initial setup of the storage system are performed using the Windows-based management console connected to the SVP.

Preparing a storage system that has an SVP

Preparing the storage system requires you to stop the storage system service, run the **Initial Startup** wizard, check licenses, and then run the **Initial Setup** wizard. Optionally, you can also configure the storage system to generate syslog and SNMP notifications about alerts and events. You perform these tasks using the management console connected to the SVP.

Before you begin

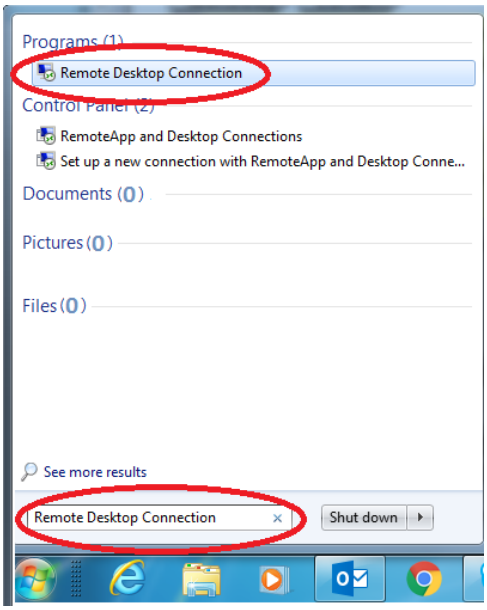
- Confirm that the Windows-based management console is connected to the SVP.
- Configure the management console to use an IP address of 10.0.0.*xxx*, where *xxx* = 1-99 or 101-254, and a subnet mask of 255.255.255.0.

Stopping the storage system service

Procedure

1. Run Remote Desktop Connection on the management console. For Windows 10:
   a. Open the Cortana icon in the taskbar on the management console.

   b. In the search box, type `Remote Desktop Connection`, and then click **Remote Desktop Connection** in the search results window.



c. In **Computer** on the **Remote Desktop Connection** window, type the default SVP IP address `10.0.0.100`
d. In the lower left side of the window, click **Show Options**.
e. In **User name**, type `SVP-PC\SVP`
f. Click **Connect**.
g. When prompted to enter your credentials, type `raid-login` in **Password**, and then click **OK**.

h. If prompted that the identity of the remote computer cannot be verified, click **Yes** to continue.

2. Double-click the **Open StorageDeviceList** shortcut on the desktop:

3. Wait for the status to change to **Ready**. This can take several minutes for the first time.

4. Click **Stop Service**, and then click **Confirm** in the **Stop Service** window.

5. Wait for the **Ready** status to change to **Stopped**.

Next steps

Run the **Initial Startup** wizard.

Running the Initial Startup wizard

The **Initial Startup** wizard allows you to enter the account settings and the IPv4 or IPv6 network settings used by the storage system. If you need to change these settings in the future, run the **Initial Startup** wizard again.

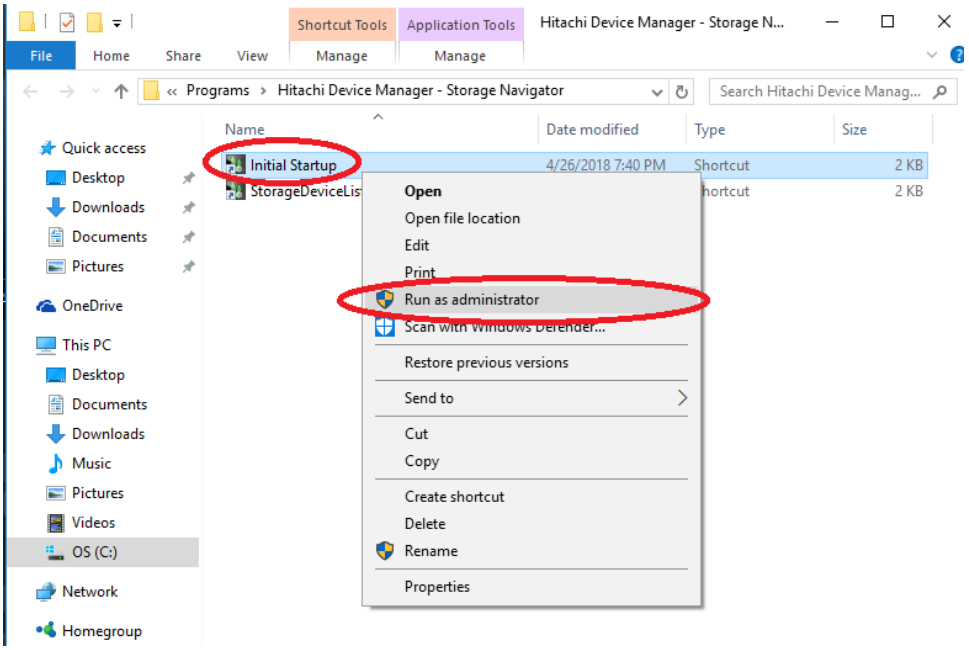
Before you begin

Have the following configuration settings ready to enter in the **Initial Startup** wizard:

- The default storage system password: `raid-maintenance`
- The IP addresses for the two controllers and the SVP
- The subnet mask (IPv4) or subnet prefix length (IPv6) for the storage system
- The default gateway for the storage system
- The IP addresses for up to three DNS servers

Procedure

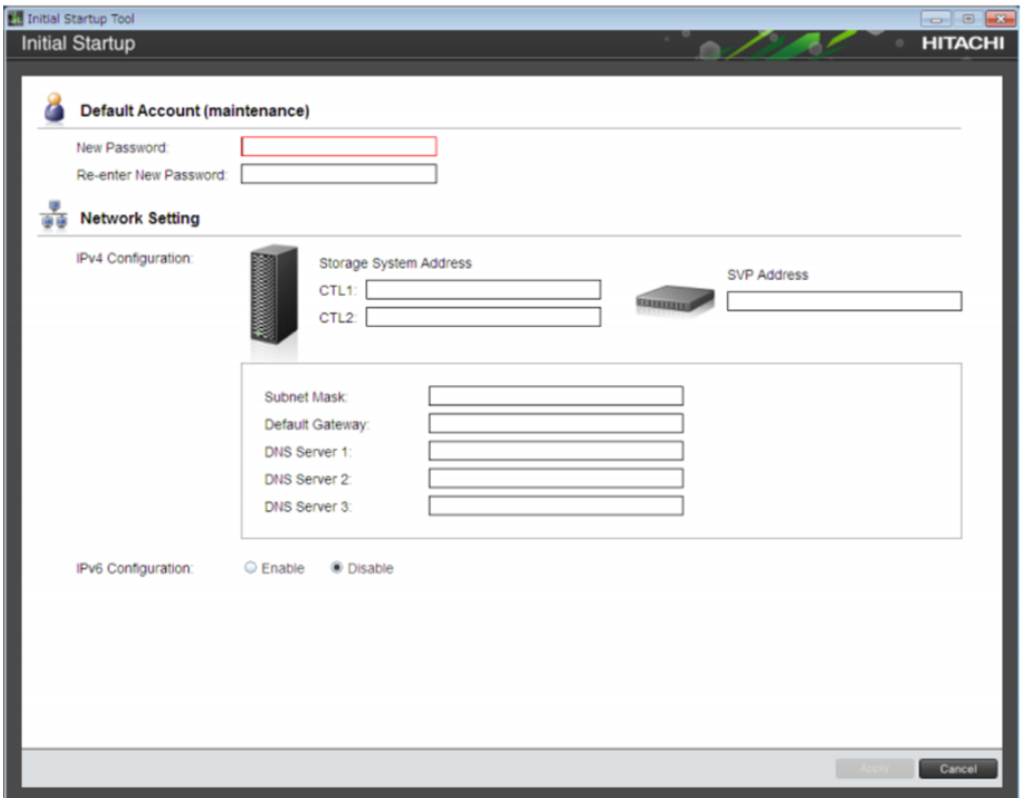
1. In the **Remote Desktop Connection** window, click the Start button, and then click **Hitachi Device Manager - Storage Navigator**.
2. Right-click **Initial Startup**, point to **More**, and then click **Open file location**.
3. In the window that appears, right-click **Initial Startup**, and then click **Run as administrator**.



4. When prompted about allowing this app to make changes to your device, click **Yes**.
5. Click **Start Setup**.

6. At the **Checking Environment** window, click **OK**, and then wait for the **Initial Startup** wizard to check the environment (approximately 1 minute).

7. Specify the IPv4 or IPv6 configuration settings for the production network to which the storage system will be connected by entering the information described in the following table.

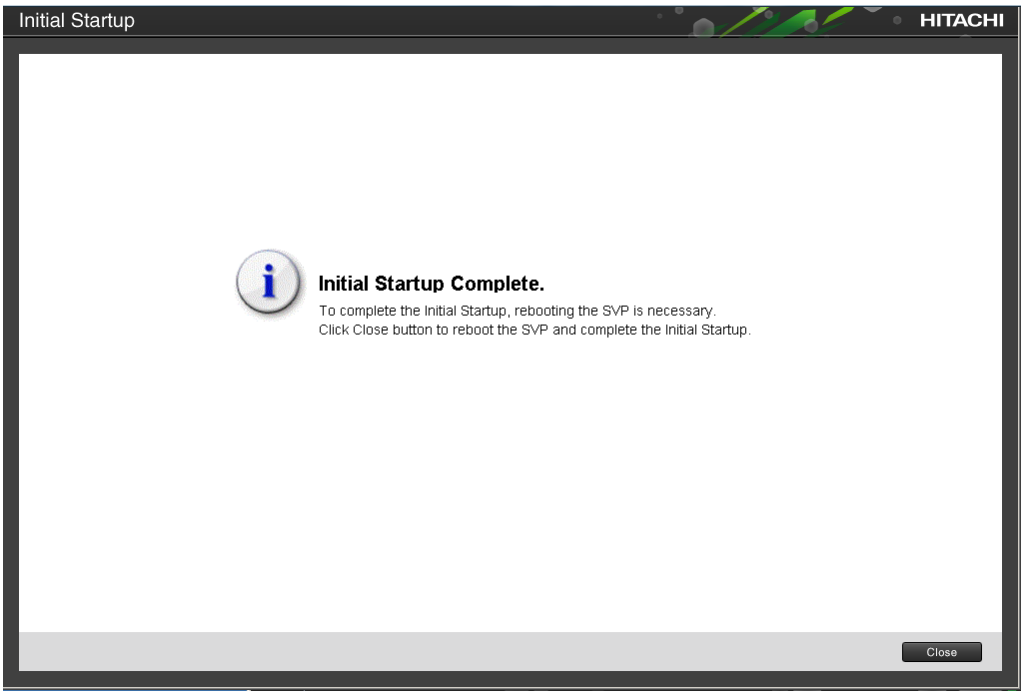


Setting	Description
Default Account (maintenance)	
New Password	New default account (maintenance) password. **Important:** Record the new password and keep it in a safe place. You will need it later in this procedure and if maintenance is required for your storage system.
Re-enter New Password	Same password that you typed in New Password.
Network Setting	
Storage System Address	IP address of the production network to which the storage system will be connected. Defaults: ▪ CTL1: 192.168.0.16 ▪ CTL2: 192.168.0.17

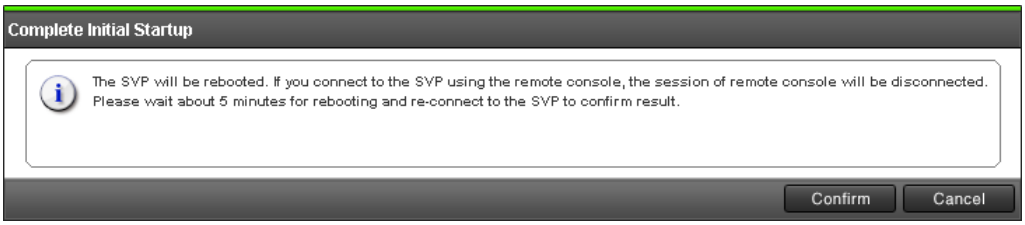
SVP Address	IP address used to access the SVP via your production network. Default: 192.168.0.15
Subnet Mask	IPv4 only. IP address mask that identifies the range of IP addresses in the subnet to which the storage system will be connected.
Subnet Prefix Length	IPv6 only. Subnet prefix length of the network to which the storage system will be connected.
Default Gateway	IP address of the default gateway to which the storage system will be connected. The gateway is the IP address of the router used to communicate outside the local subnet.
DNS Server 1 DNS Server 2 DNS Server 3	IP addresses for up to three Domain Name Systems (DNS) servers.

8. Click **Apply**.
9. Wait for the **Initial Startup Complete** message, and then click **Close**.

Note: If an error message appears, ping the IP addresses of the two controllers and SVP. If you receive a response, repeat the Initial Startup. If you do not receive a response, contact customer support.



10. In the **Complete Initial Startup** window, click **Confirm**.



11. Wait for the SVP to reboot (approximately 5 minutes).
12. Connect the LAN 1 port on the SVP to your production network.

> **Note:** If your network has BPDU enabled to prevent loops, connect the user LAN port on controller 1 to an Ethernet switch on the production network instead of attaching it to the SVP. Then refer to the SVP installation and maintenance instructions for the Hitachi Vantara-supplied SVP to configure the SVP for a non-bridged operation.

13. Using the new SVP IP address you specified in the **Initial Startup** wizard, log in to the SVP via Remote Desktop Connection from your production network.
14. On the desktop, double-click the **Open StorageDeviceList** icon.
15. Mouse over the **Storage Device List** window to highlight it, and then double-click the icon of the registered storage system.
16. Log in to Device Manager - Storage Navigator using the new maintenance password you specified in the **Initial Startup** wizard, and then click **Login**.

Next steps

Verify that licenses are installed.

Checking licenses

Storage systems that are factory-installed in a rack already have software licenses installed.

As a best practice, confirm that the appropriate licenses are installed.

Before you begin

Log in to Device Manager - Storage Navigator using Remote Desktop Connection.

Procedure

1. On the **Maintenance Utility** menu, click **Licenses**.
2. If a message reports a problem with the website's security certificate, click **Continue to this website (not recommended)**.
3. In the **Licenses** window, confirm that the appropriate licenses are installed. If they are not, see the *System Administrator Guide* for instructions on installing licenses.

Next steps

Run the **Initial Setup** wizard.

Running the Initial Setup wizard

The **Initial Setup** wizard allows you to configure system information, date and time settings, and network settings.

The **Initial Setup** wizard settings are presented on three windows. Buttons at the bottom of each window allow you to apply or skip the settings on that window. If you skip settings, you can complete them later by running the **Initial Setup** wizard again. To display details about the settings in the windows, click the question mark icon in the bottom right.

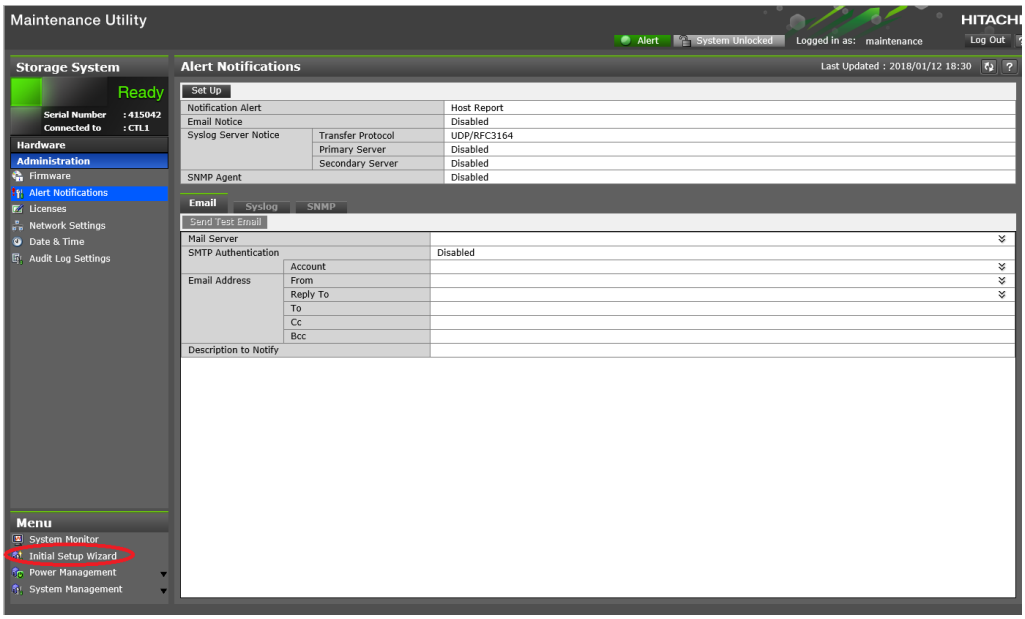
Before you begin

- Using the production network IP address you specified in the **Initial Startup** wizard, log in to the SVP via Remote Desktop Connection from your production network.
- Log in to Device Manager - Storage Navigator.

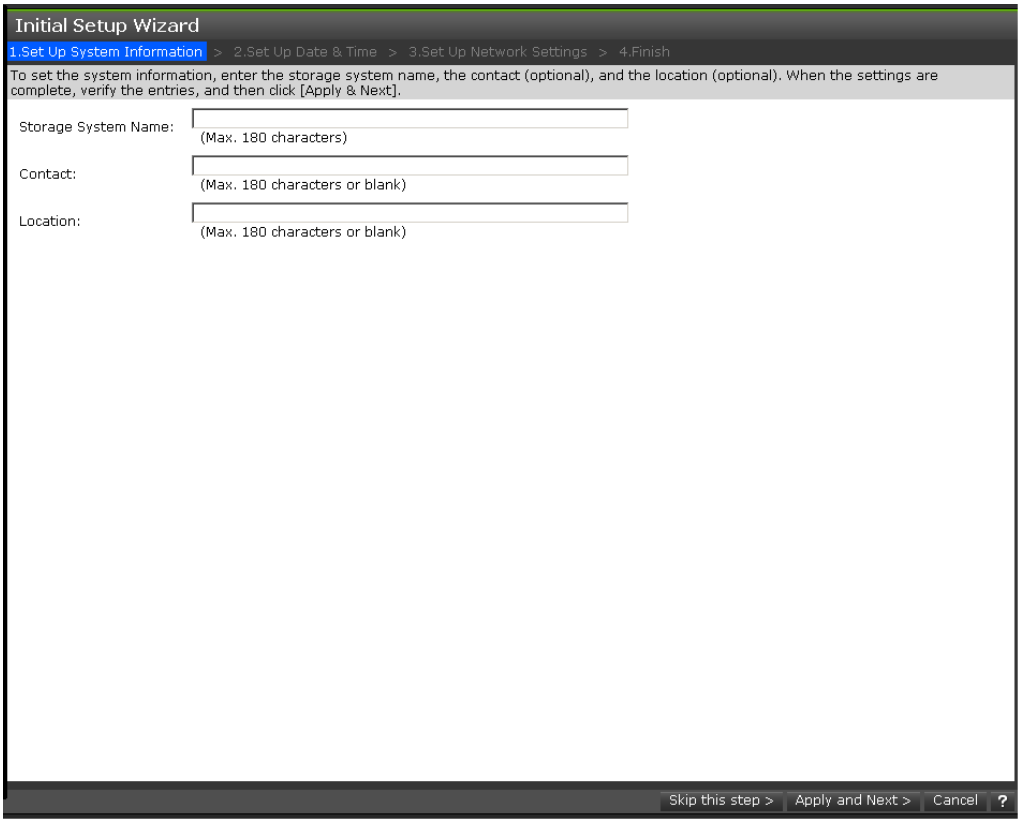
Procedure

1. On the **Maintenance Utility** menu, click **Licenses**.
2. If a message reports a problem with the website's security certificate, click **Continue to this website (not recommended)**.
3. In the maintenance utility navigation tree, under **Menu**, click **Initial Setup Wizard**.

   Tip: Initial Setup Wizard is near the bottom of the navigation tree. If you do not see this selection, scroll down the tree.



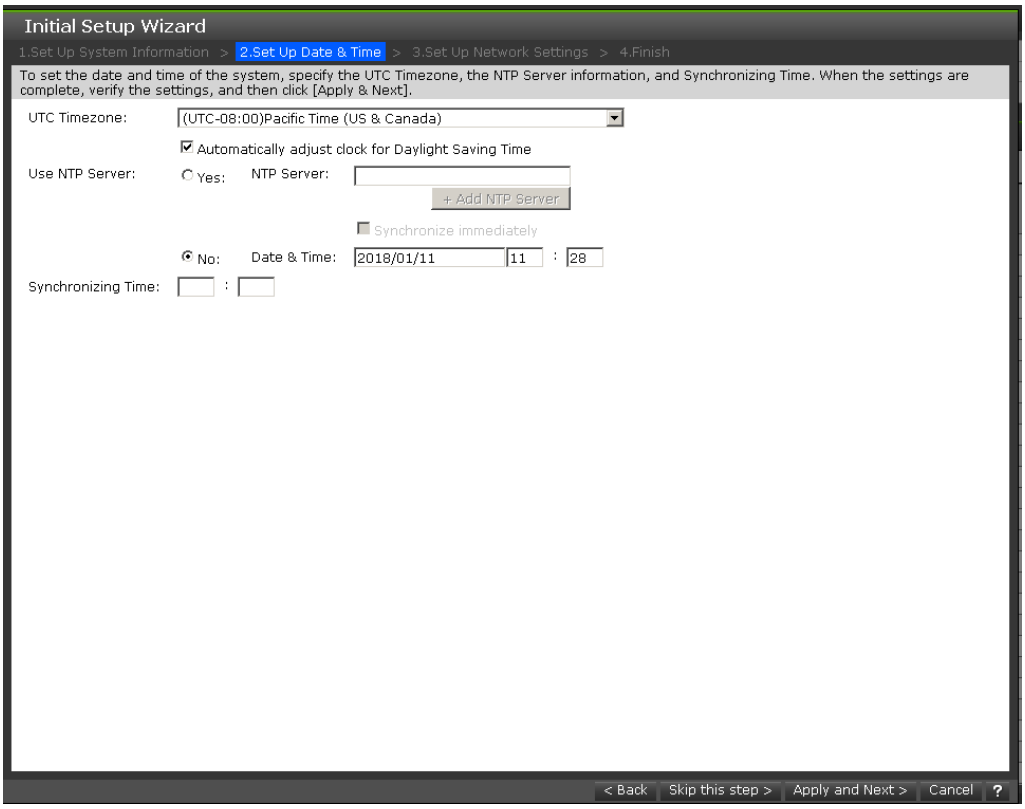
4. Enter the system information, and then click **Apply and Next**.



Setting	Description
Storage System Name	Name used to identify the storage system. This name will appear in the maintenance utility, so use a name that is meaningful.

Contact	Name of the contact person associated with the storage system.
Location	Location of the storage system.

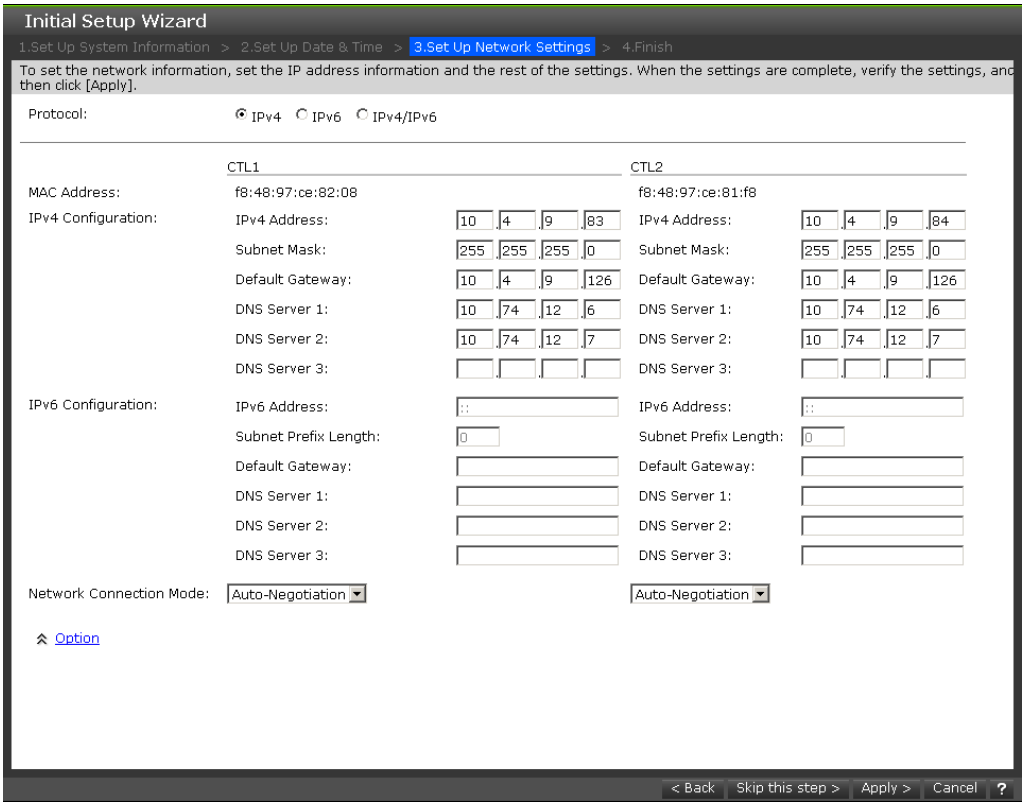
5. Enter the date and time settings, and then click **Apply and Next**.



Setting	**Description**
UTC Timezone	Time zone in which the storage system is located.
Automatically adjust clock for Daylight Saving Time	If the time zone in which the storage system is located follows Daylight Saving Time, check this box to have the storage system automatically adjust its time twice a year.

Use NTP Server	Determines whether the storage system time is synchronized with an NTP server. ▪ **Yes**: Synchronize system time with an NTP server. Enter the IP address or domain name of the NTP server. To add more than three servers, click the **+ Add NTP Server** button. To synchronize the system time to the NTP server time now, check **Synchronize immediately**. ▪ **No**: Do not synchronize system time with an NTP server. In **Date & Time**, enter the date and time that the storage system will use.
Synchronizing Time	To synchronize the storage system time with the NTP server at a specific time, enter the time when the two will be synchronized.

6. Review the network settings, which you entered previously in the **Initial Startup** wizard, and change them if necessary. For example:



Setting	Description
Protocol	IP addressing method to be used for configuring the storage system.
MAC Address	Read-only field that shows the MAC address for controllers 1 and 2.
IPv4 Configuration/ IPv6 Configuration	▪ **IPv4 Address**: IPv4 address of the production network to which the storage system is connected (IPv4 only). ▪ **IPv6 Address**: IPv6 address of the production network to which the storage system is connected (IPv6 only). ▪ **Subnet Mask**: IP address mask that identifies the range of IP addresses in the subnet to which the storage system is connected. ▪ **Subnet Prefix Length**: Subnet prefix length of the network to which the storage system is connected (IPv6 only). ▪ **Default Gateway**: IP address of the default gateway to which the storage system is connected. The gateway is the IP address of the router used to communicate outside the local subnet. ▪ **DNS Server 1-3**: If your configuration uses DNS to resolve IP addresses (for example, the IP address for the NTP server used with the storage system), enter up to three DNS IP addresses.
Network Connection Mode	Determines whether the storage system negotiates the speed and duplex mode automatically with the attached device. The default setting (**Auto-Negotiation**) connects the storage system at the highest speed and appropriate duplex setting supported by itself and the connected device.

Option	▪ **DNS Domain Name**: IP address of the DNS server that will perform address resolution. ▪ **DNS Search Order**: Search domain names. Use the **Up** and **Down** buttons to order the domain names. ▪ **Maintenance Port**: Do not change these values. ▪ **Internal Network**: Do not change this value.

7. Click **Apply**.
8. When prompted that the initial settings are complete, click **Close**.

Next steps

(Optional) Configure syslog and SNMP notifications.

Configure syslog and SNMP notifications

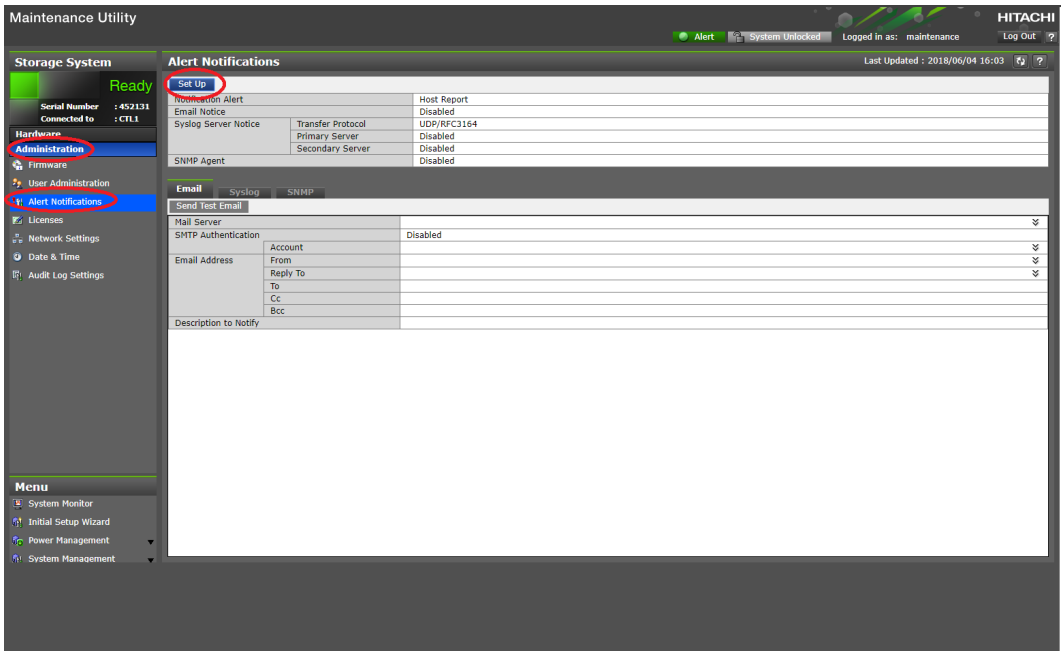
Before you begin

Make sure the storage system is connected to your production network.

Procedure

1. In the navigation tree of the maintenance utility, under **Administration**, click **Alert Notifications**. Then click **Set Up** in the **Alert Notifications** pane on the right.

   Note: Although a tab is provided for configuring email notifications, we recommend that you set up email notifications using Hi-Track Remote Monitoring system.



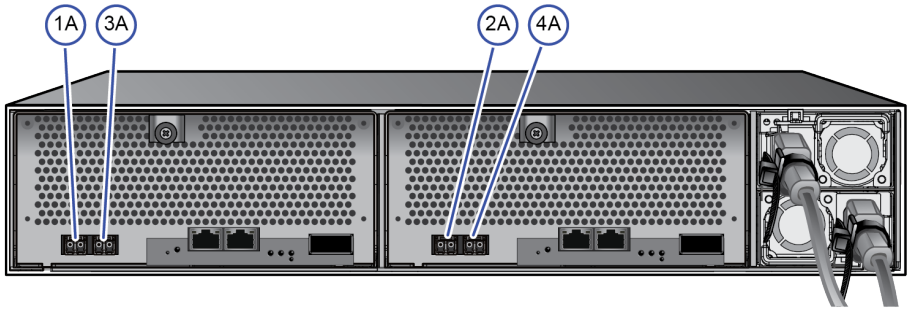
2. To configure the storage system to send notifications in syslog format, complete the settings in the **Syslog** tab. Then open a firewall port on your network for transferring syslogs.
3. To configure the storage system to send notifications as SNMP traps, complete the settings in the **SNMP** tab.
4. Click **Apply**, and then click **OK**.

Step 5: Make host connections

Before you connect Fibre Channel hosts to the storage system, the storage system and hosts must be prepared.

Host attachment tasks include configuring ports and preparing the host hardware and software for connection to the storage system. For information and instructions, see the host attachment preparation procedures in the *Open-Systems Host Attachment Guide*. You will also find the following resources helpful:

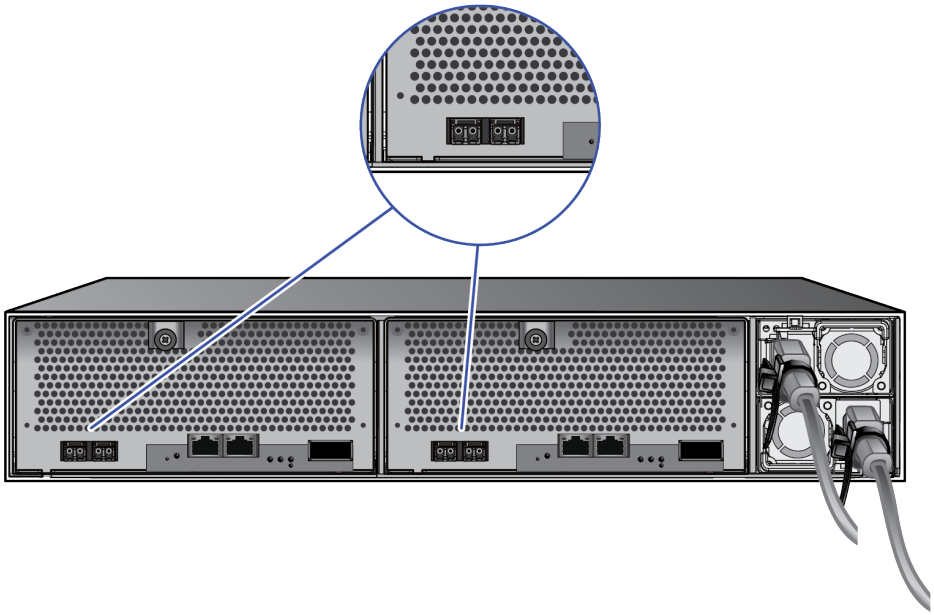
- For the latest interoperability and compatibility information about supported hosts and host attachment hardware, see the Hitachi Vantara Interoperability Reports.
- For information about preparing your hosts for use with the storage system, see the documentation for the product.



Cabling Fibre Channel ports

Each controller supports 16-Gbps Fibre Channel connectivity to host computers using LC-LC optical cables connected to a Fibre Channel switch. To eliminate single paths of failure, connect the ports on each controller to separate switches for redundancy.

Important: For important information and instructions about connecting to hosts, refer to the *Open-Systems Host Attachment Guide*.



Before you begin

Make sure the storage system is connected to your production network.

Procedure

1. Connect the Fibre Channel data ports on each storage system controller to your Fibre Channel switch.

2. Connect your Fibre Channel switch to the Fibre Channel HBA card in each host computer or server.

Step 6: Register your storage system with Hitachi Vantara Support

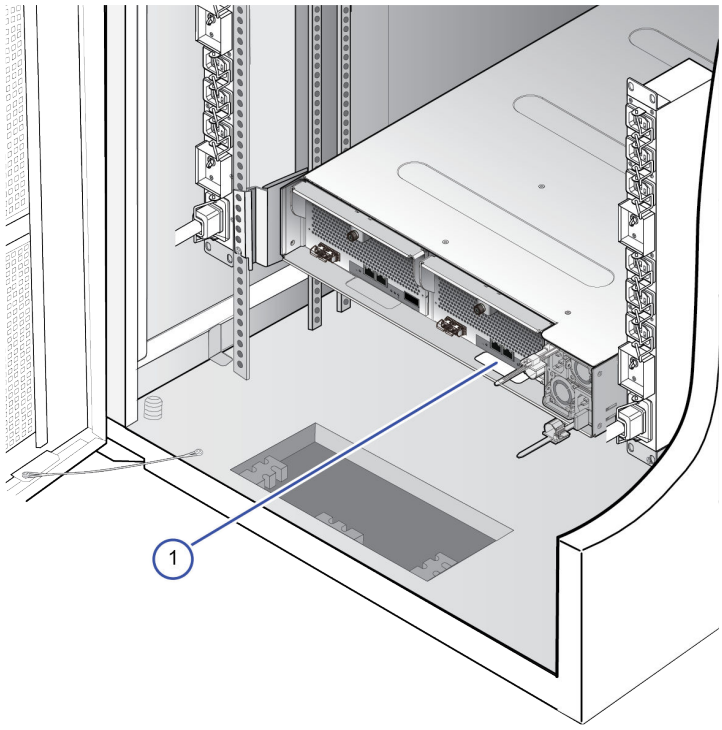
If you have not already registered for access to Hitachi Support Connect, do so now. Otherwise, you will not be able to download and install Hi-Track Remote Monitoring system, and you will encounter delays in getting your storage system running and supported.

Before you begin

- If you do not yet have a Support Connect account, register on Support Connect. For details, click here.

Procedure

1. Locate the product serial number (labeled **MFG. NO.**) on the rear of the controller. You will need this number to register your storage system.



Item	Description
1	Product serial number on rear of controller

2. Open a web browser on your PC or mobile device.
3. Go to Support Connect, click **Verify a Product**, and follow the on-screen instructions to register your storage system. If you have registered Hitachi Vantara products previously, add a site on Support Connect.

Step 7: Install Hi-Track Remote Monitoring system

Hi-Track Remote Monitoring system monitors your storage system and notifies the Hitachi Vantara Support Connect when assistance is required. Hi-Track runs on Windows, Linux, and Solaris operating systems.

Before you begin

- If you do not have a Support Connect account, register for Support Connect. You will need your product serial number and an e-mail domain that is recognized as a Hitachi Vantara customer.
- Log in to Support Connect to obtain the Site ID for the location at which the storage system is installed. If the location is not listed, add a site on Support Connect.

Procedure

1. Download the Hi-Track application and documentation.
2. Open the *Hi-Track Monitor Installation Guide*, and follow the installation instructions.
3. After you configure Hi-Track with the appropriate Site ID, log in to Support Connect and create a Support Connect case to inform Hitachi Vantara that your system is installed and that Hi-Track is enabled.

   Installing Hi-Track completes the self-installation of your storage system.

Where to go from here

After concluding the self-installation successfully, perform the following post-installation activities.

Configure the storage system for the first time

After you complete the self-installation of your storage system, configure the storage system to suit your requirements using the management software (Storage Advisor, Device Manager - Storage Navigator, Command Control Interface, or Hitachi Command Suite).

Typical configuration activities include the following:

- Onboard the storage system
- Create pools
- Create volumes to attach to servers
- Create a message that appears at login
- Create user accounts
- Back up system settings in case you need to restore them in the future

For more information, see the software user documentation.

Read the release notes

Your storage system undergoes constant development and improvement.

Each time your storage system's firmware is updated, read the release notes. The release notes provide important information about new features and functions as well as bug fixes.

Read the latest technical bulletins

Technical bulletins are provided to communicate technical information about your storage system and to assist you with additional information about the proper use, handling, and solving of technical issues.

You can subscribe to receive technical bulletins, and then you can access technical bulletins on Hitachi Vantara Support Connect.

Support

The following resources provide additional information about the storage system:

- Support Connect home page
- Product interoperability
- Hitachi Vantara Community

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