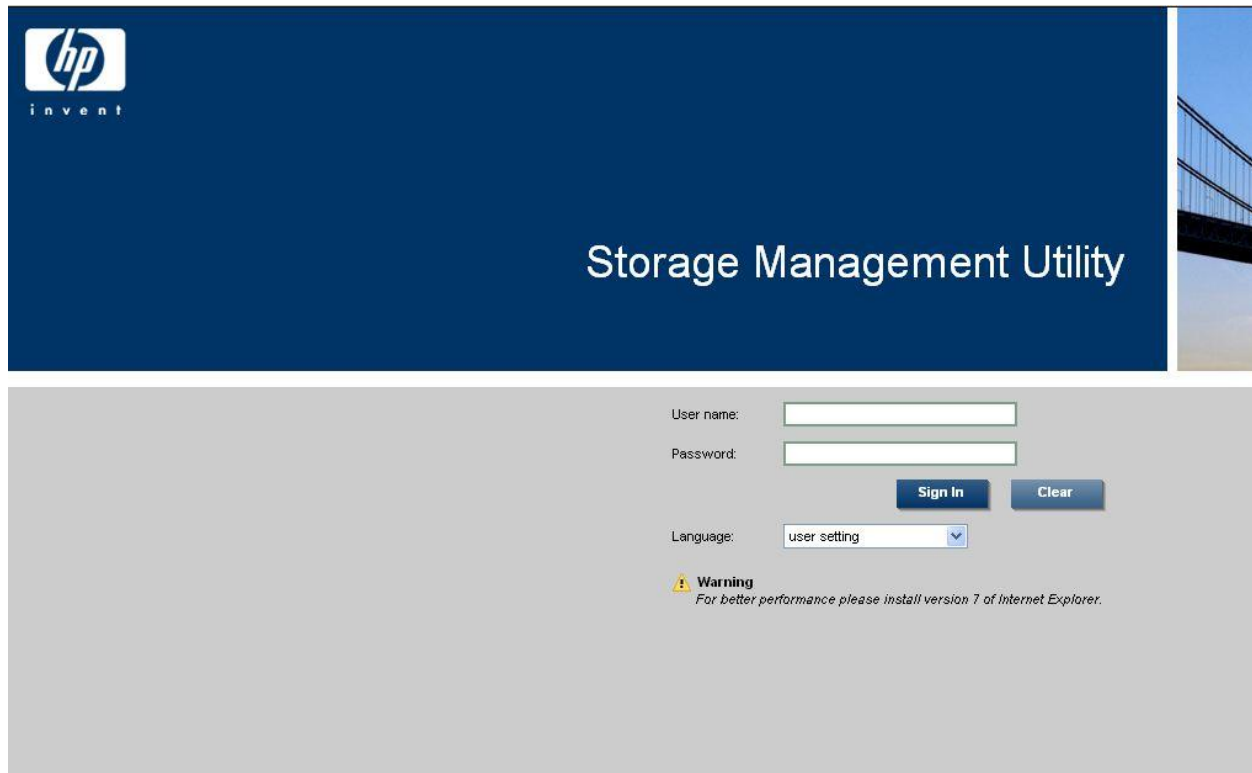


# HP MSA 2300 Series Configuration Guide

1. Logon to console
2. Configure system settings
3. Create Vdisks
4. Create Volumes
5. Assign volumes to Hosts
6. Create Global Spares
7. Rename Host

## Login to console:

The MSA series will have 1 or 2 console ports. The ports will come with default IP address of 10.0.0.2 and 10.0.0.3. Once you enter in the IP address to your web browser you will see the screen below.



hp  
invent

## Storage Management Utility

User name:

Password:

Language:

**Warning**  
*For better performance please install version 7 of Internet Explorer.*

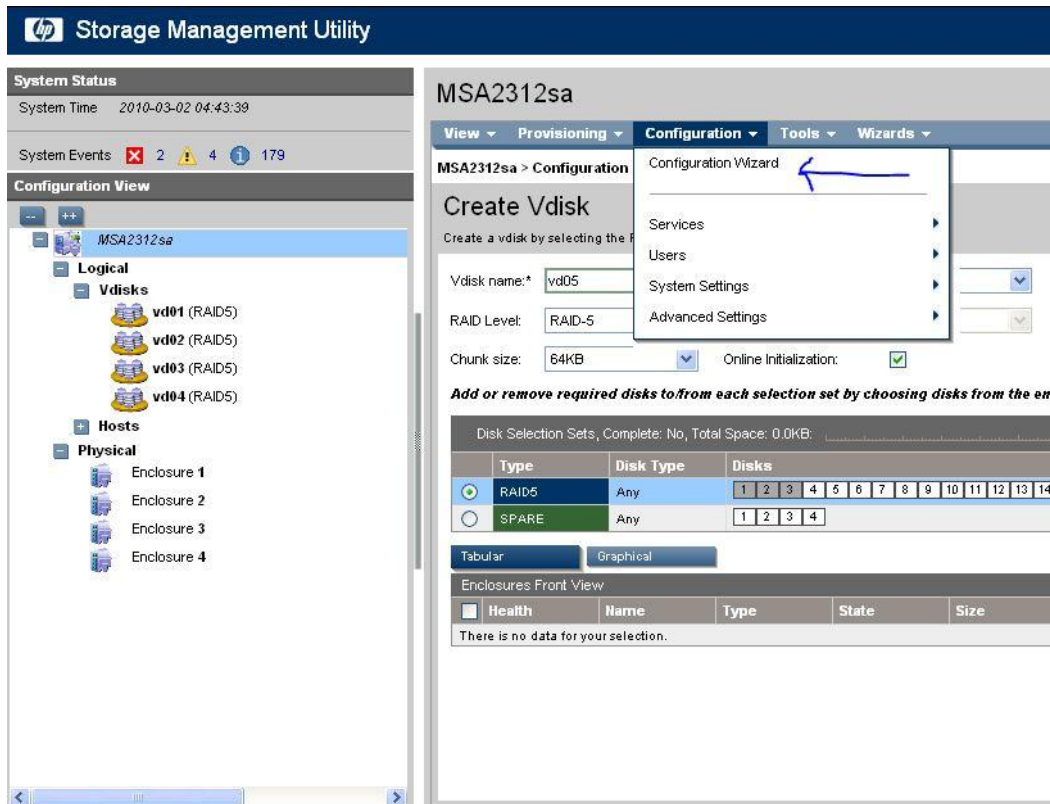
Once at the logon screen you can login using the default factory credentials below.

User – manage

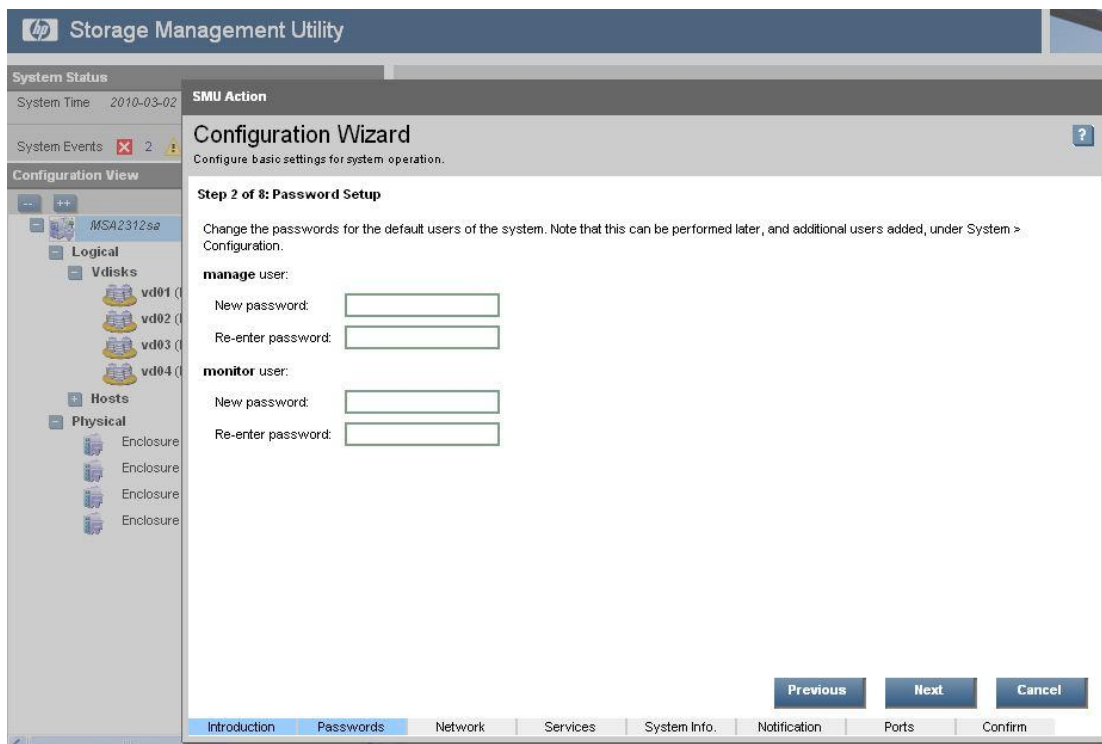
Password - !manage

## Configure system settings

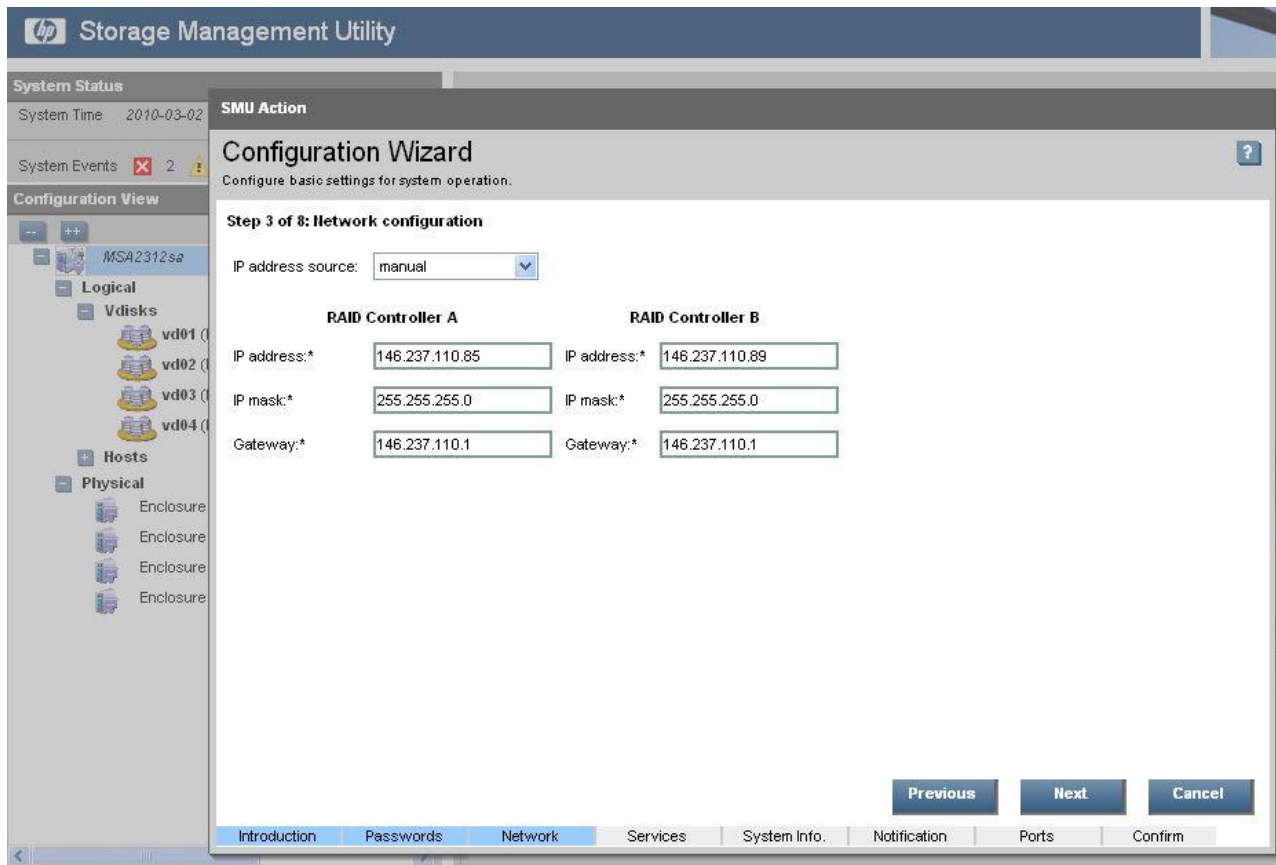
You will need to configure system settings to set the IP address of the console ports, change passwords, setup error reporting and services running on the array.



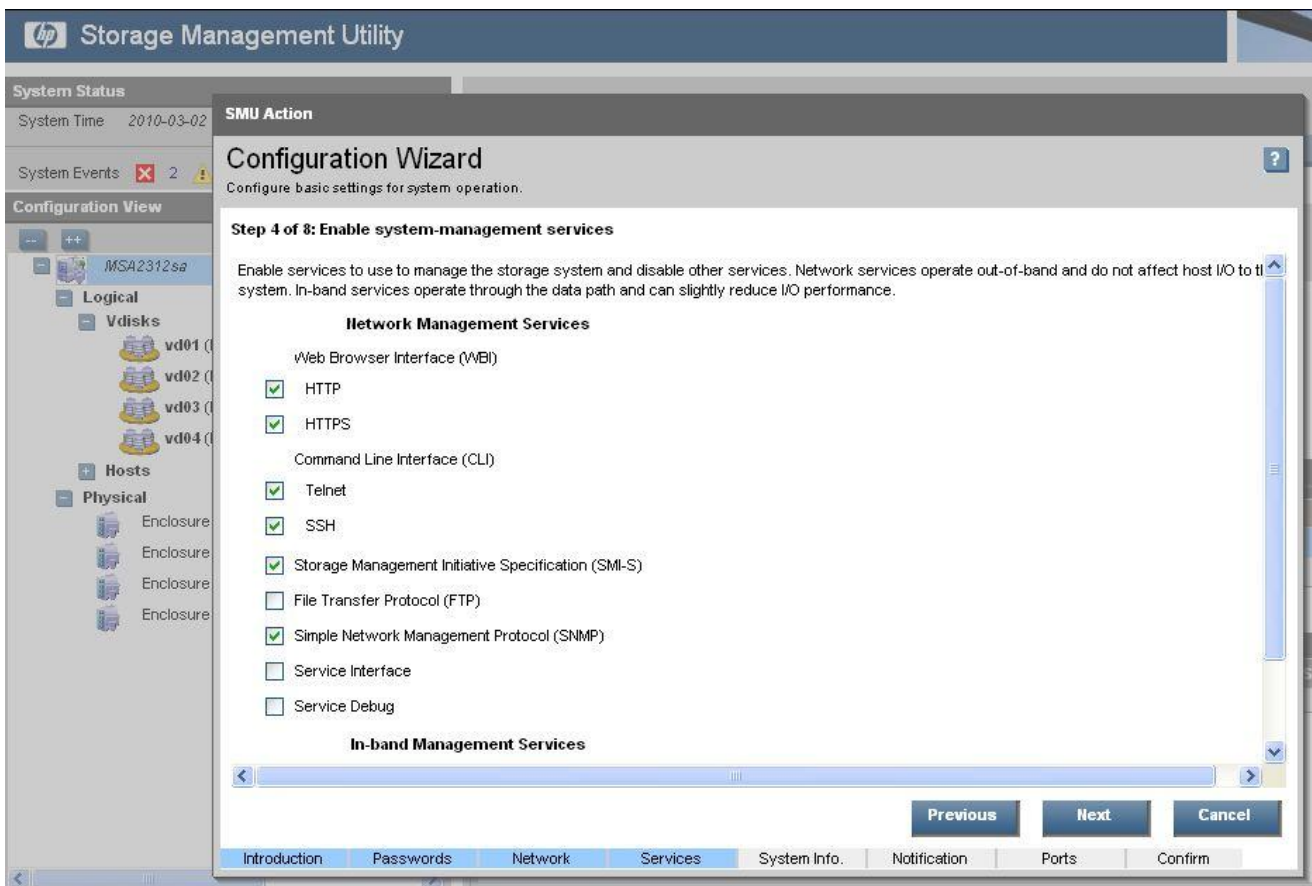
From the screen above select the Configuration Wizard from "Configuration" menu at the top of screen.



The screen above will allow you to change the passwords for the account you are logged in with.



The 3<sup>rd</sup> screen on the configuration wizard allows you to set the IP address for the controllers available in the device.

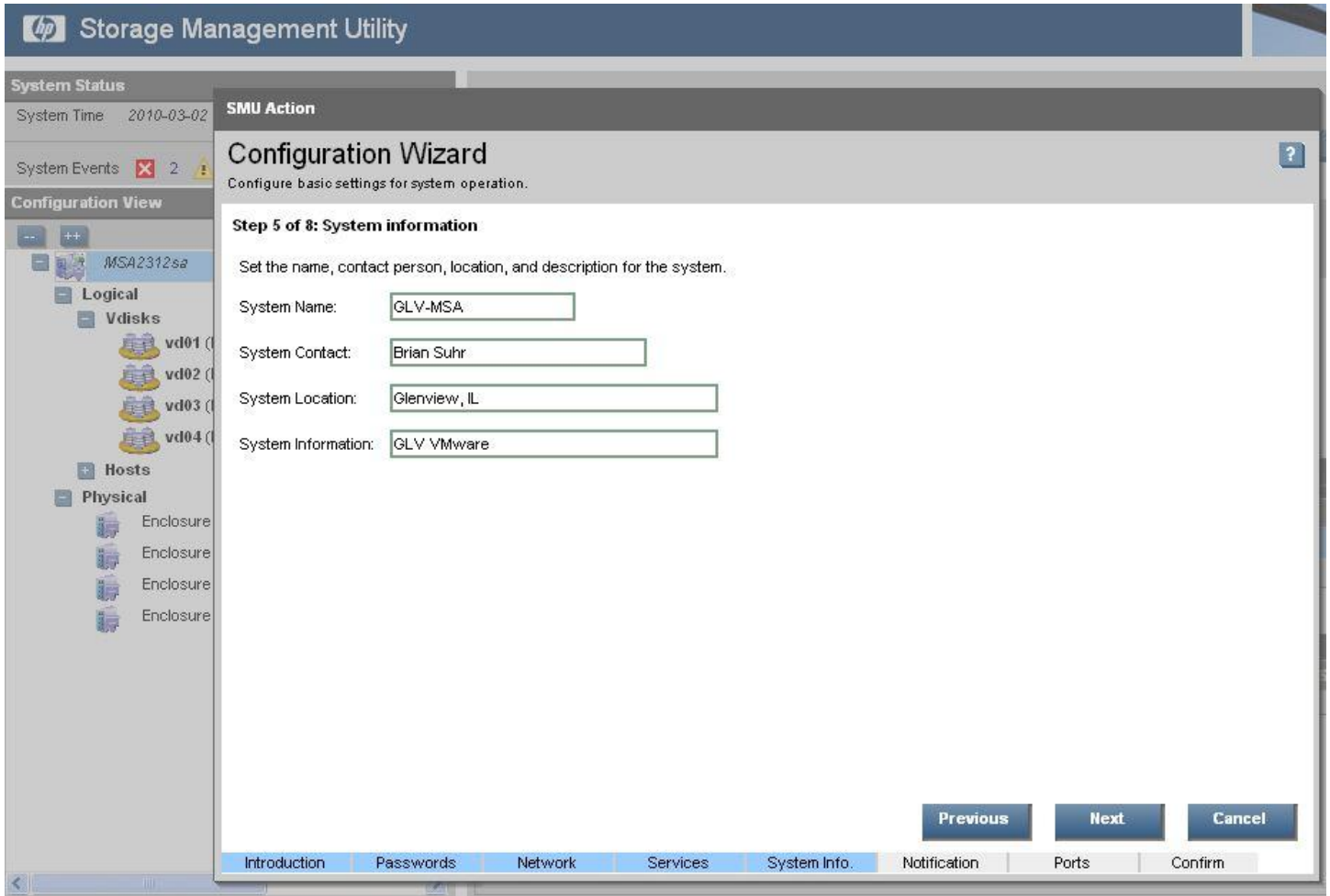


The screen above screen will allow you to enable/disable system services.

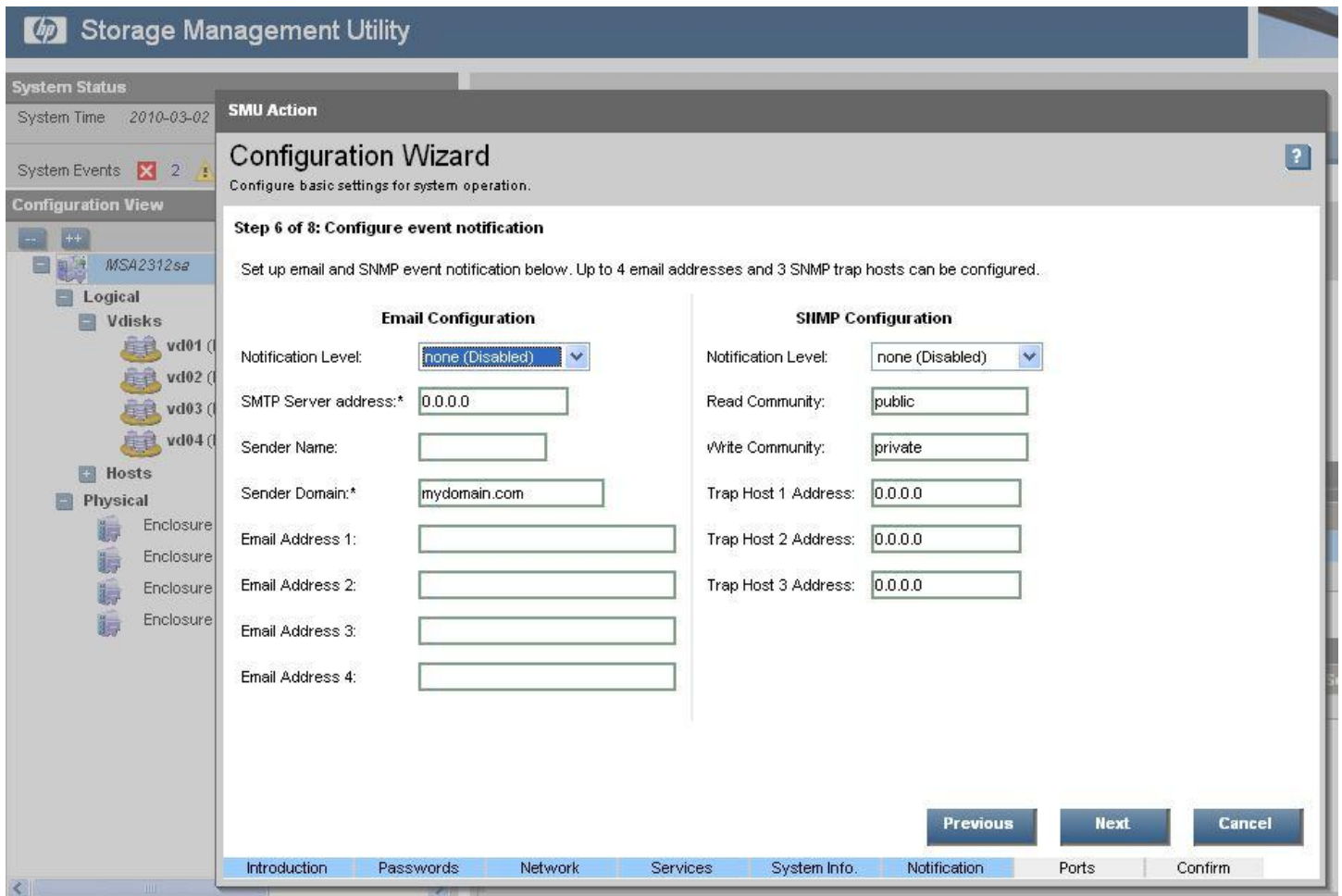
Web browser settings allow you to select how secure you want the connection to be.

CLI – gives you the option to allow Telnet & SSH connections for command line configurations.

The remaining options are std. support protocols.



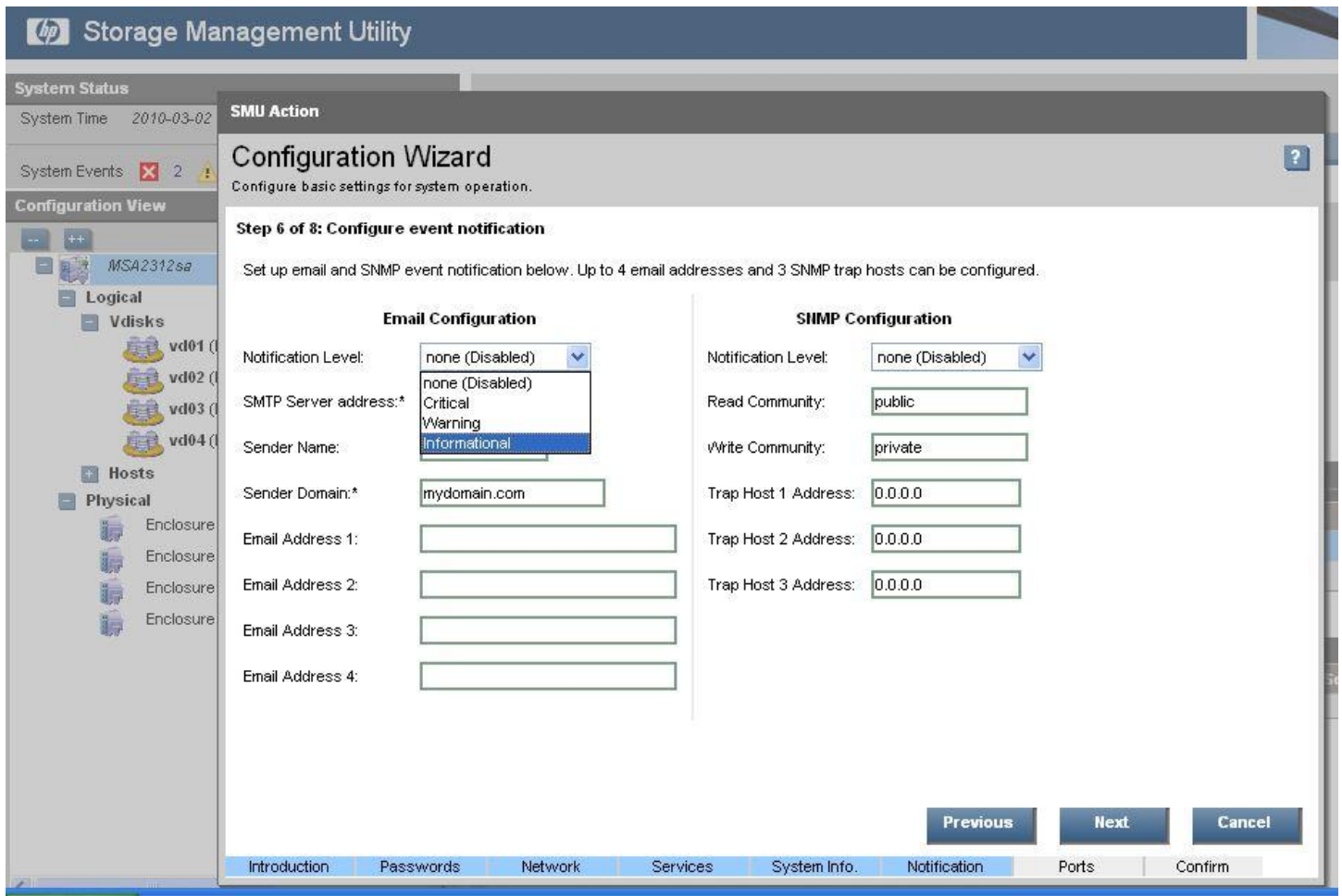
Step 5 allows you to specify system name, contact and location of the Storage Device.



Step 6 allows you to enable Email alerting and SNMP configuration. These will allow the device to send out notifications.

SMTP server – This is the mail server that will relay the messages.

Email Address 1-4 fields are used for address that you want the notifications sent out to. If you need more than 4 you should create and use a Distribution list.



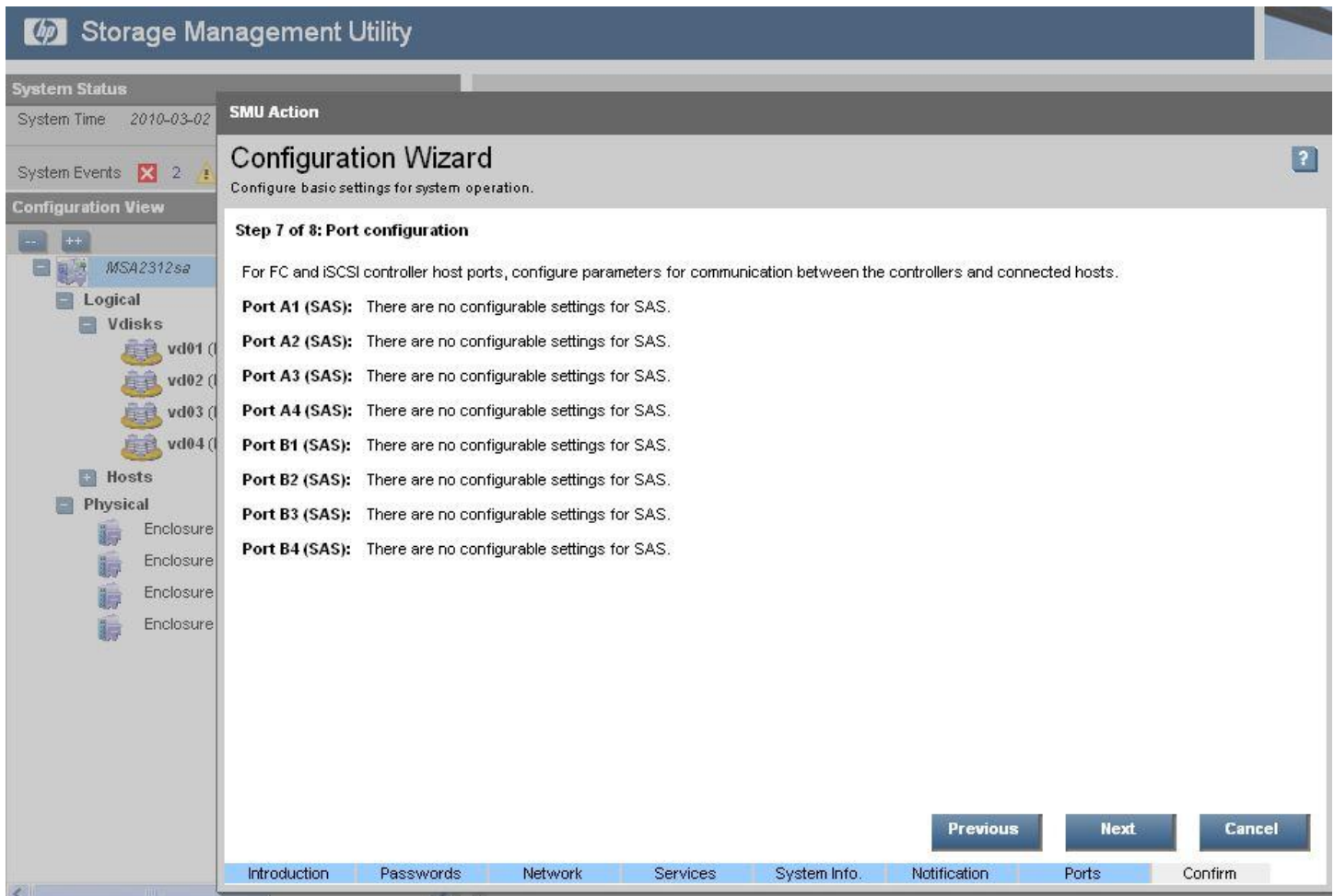
You have several levels of Notification settings that are available.

Critical – This will only send out notifications on critical warnings.

Warning – This level will send out notices on both Critical and Warning level errors.

Informational – This selection will send out notices for all events on the system.

To turn off notification you will want to select “none (Disabled)” and no events will be sent.



Step 7 is for configuring parameters of Fiber Channel and iSCSI ports. Since the device used for this document creating used SAS disks there was nothing to configure on this stage.

## Creating Vdisks:

The screenshot displays the HP Storage Management Utility interface. On the left, the 'Configuration View' shows a tree structure for 'MSA2312sa' with 'Logical' and 'Physical' sections. Under 'Logical', 'Vdisks' is expanded, showing 'vd01 (RAID5)', 'vd02 (RAID5)', and 'vd03 (RAID5)'. A volume 'Volume vd02\_v001 (1798.5GB)' is listed under 'vd02'. On the right, the 'Vdisks' section is active, showing a 'View' dropdown set to 'Provisioning'. A context menu is open over the 'Vdisks' header, with a blue arrow pointing to the 'Create Vdisk' option. Below the menu, there are two tables. The first table, 'Vdisks Overview', shows a summary of the Vdisks with a health status of 'OK' and a total capacity of 4.9TB. The second table, 'Vdisks', provides a detailed view of each Vdisk.

Health	Component	Count	Capacity
OK	Vdisks	3	4.9TB

Health	Name	Size	Free	RAID
OK	vd01	1798.5GB	0B	RAID5
OK	vd02	1798.5GB	0B	RAID5
OK	vd03	1348.8GB	1348.8GB	RAID5

To create new Vdisks refer to the screen above and the directions below.

1. Click on Vdisks from the Tree view on the left side.
2. On left side of screen click on Provisioning from top menu and select "Create Vdisk".
3. Refer to image below for remaining steps.



System Status

System Time 2010-03-02 04:37:41

System Events 2 4 179

Configuration View

MSA2312sa

- Logical
  - Vdisks
    - vd01 (RAID5)
    - vd02 (RAID5)
    - vd03 (RAID5)
    - vd04 (RAID5)
  - Hosts
  - Physical
    - Enclosure 1
    - Enclosure 2
    - Enclosure 3
    - Enclosure 4

vd01 (RAID5)

View Provisioning Configuration Tools

vd01 (RAID5) View > Overview

Vdisk Overview

Details about a specific vdisk

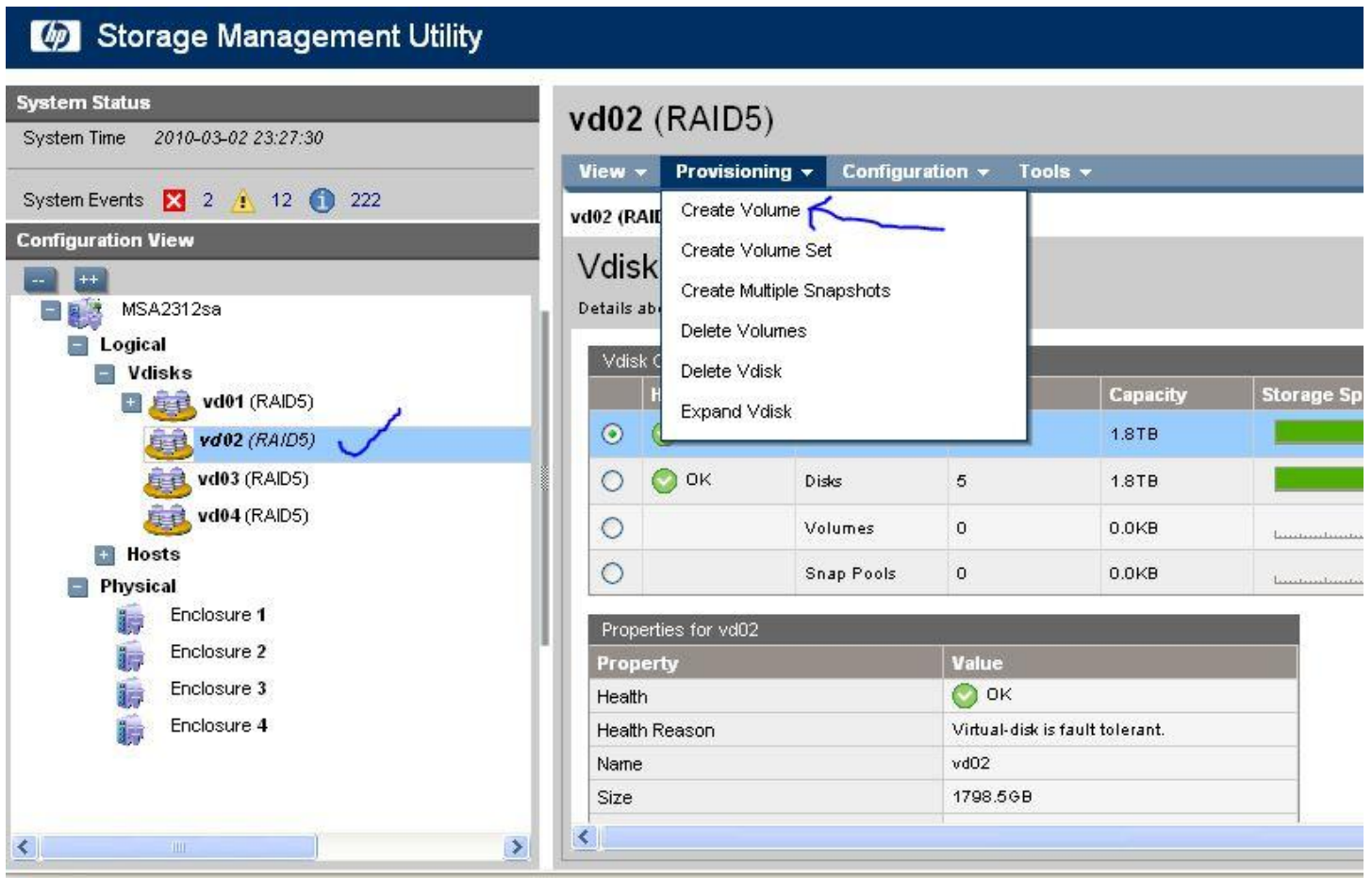
	Snap Pools	0	0.0KB
--	------------	---	-------

Properties for vd01

Property	Value
Health	OK
Health Reason	Virtual-disk is fault tolerant.
Name	vd01
Size	1798.5GB
Free	1798.5GB
Current Owner	A
Preferred Owner	A
Serial Number	00c0ffda174f00001f1f8c4b00000000
RAID	RAID5
Disks	5
Spares	0
Chunk Size	64k
Created	2010-03-01 20:10:07
Minimum Disk Size	449.6GB
Status	FTOL
Current Job	Initialize (72%)

To find out the progress on the disk initialization process, refer to the screen above and you are able to view the "Current Job" status.

## Create Volumes:

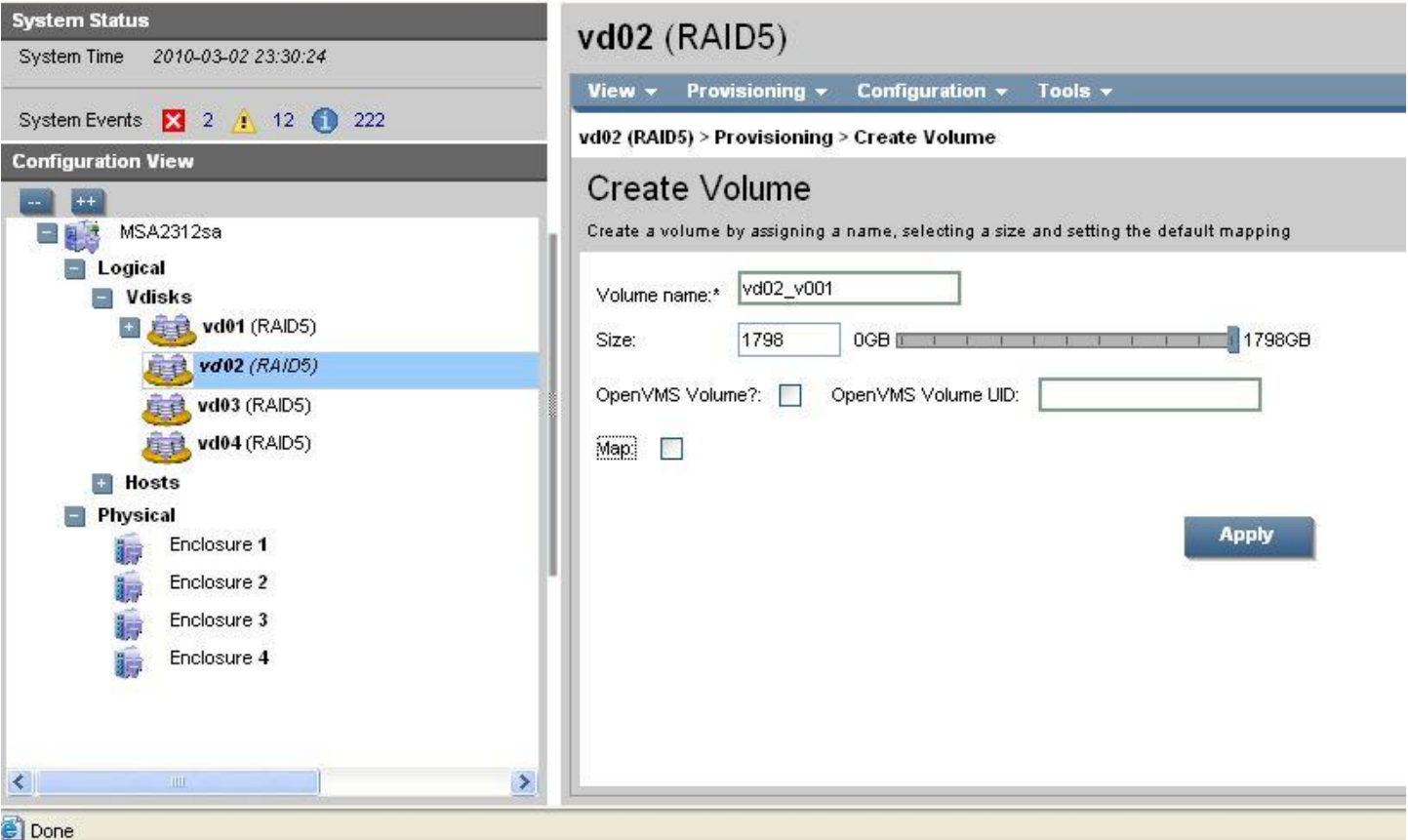


The screenshot displays the HP Storage Management Utility interface. On the left, the 'Configuration View' shows a tree structure under 'Logical' > 'Vdisks'. The vdisk 'vd02 (RAID5)' is selected and highlighted with a blue checkmark. On the right, the 'vd02 (RAID5)' details pane is open, showing a 'Provisioning' menu with 'Create Volume' selected and indicated by a blue arrow. Below the menu is a table with columns for 'Capacity' and 'Storage Sp'. At the bottom, a 'Properties for vd02' table is visible.

Property	Value
Health	OK
Health Reason	Virtual-disk is fault tolerant.
Name	vd02
Size	1798.5GB

Next step is to create volumes on the Vdisks that you already created. Think of a Volume is similar to a LUN/Partition on the disk. So you could create a large volume and then slice it up into several smaller volumes.

1. Click on the Vdisk you wish to create the volume on from the Tree in the left volume.
2. From the Provisioning menu at the top of the left screen choose "Create Volume"
3. You will then be presented with a screen similar to the next image below.



Once you clicked on “Create Volume” you are presented with the options listed above.

1. Enter in your Volume name.
2. Adjust the size that you want for this volume. It will default to the max available space on the Vdisk.
3. The OpenVMS options would only be used if you are connecting the storage to a VMS computer.
4. Do not check the “Map” option for now. In the next section you will learn how to map to hosts.
5. Click the “Apply” button to create the volume.

## Host Mapping: (Assigning Volumes)

The screenshot displays the HP Storage Management Utility interface. On the left, the 'Configuration View' shows a tree structure for 'MSA2312sa' with 'Logical' and 'Physical' sections. Under 'Logical', there are 'Vdisks' (vd01, vd02, vd03, vd04) and 'Hosts'. The 'Physical' section lists 'Enclosure 1' through 'Enclosure 4'. The volume 'vd02\_v001 (1798.5GB)' is selected. On the right, the 'Volume vd02\_v001 (1798.5GB)' details pane is open, showing a 'Provisioning' menu with options: 'Delete Volume', 'Default Mapping', 'Explicit Mappings' (highlighted with a blue arrow), 'Create Snapshot', 'Create Volume Copy', 'Roll Back Volume', 'Abort Volume Copy', and 'Delete Schedule'. An 'Apply' button is visible at the bottom right of the details pane. The Windows taskbar at the bottom shows the 'start' button, system tray icons, and the address bar with '146.237.110.85 [A] (...)'.

Now that you have created Vdisks and Volumes on the disks you will now need to assign the Volumes to your hosts. You are able to manually add Hosts to the console. The system is very good at auto finding new hosts.

1. You will want to select the Volume from the tree that you wish to assign Hosts to.
2. Then select "Explicit Mappings" from the "Provisioning" menu on the left side menu.
- 3.

## Volume vd02\_v001 (1798.5GB)

View ▾ Provisioning ▾ Configuration ▾ Tools ▾

Volume vd02\_v001 (1798.5GB) > Provisioning > Explicit Mappings

### Explicit Volume Mappings

Modify the volume mappings to specific hosts by using the default map or explicit map settings

	Type	Host ID	Name	Ports	LUN	Access
<input type="radio"/>	Default	500605B0019C88F0				not-mapped
<input type="radio"/>	Explicit	500605B0019CE3D0	GLVVM001a	A1,A2,A3,A4,B1,B2,B3,B4	2	read-write
<input type="radio"/>	Default	500605B0019C88F4				not-mapped
<input checked="" type="radio"/>	Explicit	500605B0019CE3D4	GLVVM001b	A1,A2,A3,A4,B1,B2,B3,B4	2	read-write

Map:  (Clear to remove existing mapping)

LUN:\*  Access:

Select ports from the view or list below:

Graphical

Tabular



Apply

You will now be presented with the Explicit Volume Mappings screen.

1. From the top table you will need to select the Host that you wish to map to the Volume.
2. You will need to check the Map box.
3. In the LUN field enter the name that you wish to use
4. Choose the Access level. Default is read-write
5. Then select which ports on each Storage Processor you wish to map to. Default is all ports on all processors.

## Creating Global Spares:

**System Status**  
System Time 2010-03-02 04:54:15

System Events ✖ 2 ⚠ 4 ℹ 179

**Configuration View**

- MSA2312sa
  - Logical
    - Vdisks
      - vd01 (RAID5)
      - vd02 (RAID5)
      - vd03 (RAID5)
      - vd04 (RAID5)
    - Hosts
      - 500605B0019CE3D0
      - 500605B0019C88F0
      - 500605B0019CE3D4
      - 500605B0019C88F4
    - Physical
      - Enclosure 1
      - Enclosure 2
      - Enclosure 3
      - Enclosure 4

**MSA2312sa**

View ▾ Provisioning ▾ Configuration ▾ Tools ▾ W

MSA2312sa

System

Select an

- Provisioning Wizard
- Add Host
- Create Vdisk
- Create Multiple Snapshots
- Delete Vdisks
- Delete Volumes
- Remove Hosts
- Manage Global Spares ←
- Delete Schedule

System	Host	Volumes	0
<input type="radio"/>		Snap Pools	0
<input type="radio"/>		Snapshots	0
<input type="radio"/>		Schedules	0
<input type="radio"/>		Configuration Limits	
<input type="radio"/>		Licensed Features	
<input type="radio"/>		Versions	

**System Information**

Property	Value
Health	<span style="color:green">✔</span> OK
Redundancy Mode	Active-Active ULP

Global spares are extra disks that can be used as spares for failed drives for any Vdisk in any enclosure. The other way to handle spares would be to specify a Spare that is dedicated to a specific Vdisk.

To start click on the storage enclosure at the top of the Tree View on the left. Refer to picture above and then select Manage Global Spares from the Provisioning menu.

# MSA2312sa

View ▾ Provisioning ▾ Configuration ▾ Tools ▾ Wizards ▾

MSA2312sa > Provisioning > Manage Global Spares

## Manage Global Spares

Add or remove disks from the selection set to define the global spares

Disk Sets, Total Space: 900.2GB:  900.2GB

Type	Disk Type	Disks	Size	Complete
<input checked="" type="radio"/> GLOBAL SP	All	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	900.00GB	<input checked="" type="checkbox"/>

Tabular

Graphical

Enclosures Front View

<input type="checkbox"/>	Health	Name	Type	State	Size	Enclosure	Serial Number	Status
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> OK	Disk 1.1	SAS	GLOBAL SP	450.0GB	Enclosure-1	JMX3368C	OK
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> OK	Disk 2.1	SAS	GLOBAL SP	450.0GB	Enclosure-2	3QQ293HE00009013SLKZ	OK

[Modify Spares](#)

You will now see the Manage Global Spares page.

You will now be presented with any unassigned disks. To enable them as Global Spares all you need to do is select them and choose Modify Spares.

## Rename Host:

The screenshot displays the HP Storage Management Utility interface. On the left, the 'Configuration View' shows a tree structure under 'MSA2312sa'. The 'Hosts' section is expanded, and the host '500605B0019CE3D4' is selected. On the right, the 'Provisioning' menu is open, showing options: 'Manage Host Mappings', 'Remove Host', 'Rename Host', and 'Configure CHAP'. A blue arrow points to the 'Rename Host' option. Below the menu, a 'Host Overview' table shows the host's components and counts. At the bottom, a 'Properties for' table lists the host's details.

**System Status**  
System Time 2010-03-02 22:30:29

System Events ✖ 2 ⚠ 6 ℹ 198

**Configuration View**

- MSA2312sa
  - Logical
    - Vdisks
      - vd01 (RAID5)
        - Volume vd01\_v001 (1798.5GB)
      - vd02 (RAID5)
      - vd03 (RAID5)
      - vd04 (RAID5)
    - Hosts
      - GLVVM001
      - 500605B0019C88F0
      - 500605B0019CE3D4**
      - 500605B0019C88F4
    - Physical
      - Enclosure 1

**500605B0019CE3D4**

View ▾ Provisioning ▾

500605B0019CE3D4

- Manage Host Mappings
- Remove Host
- Rename Host
- Configure CHAP

Host Overview

Component	Count
Host	
Maps	1

Properties for 500605B0019CE3D4

Property	Value
Host ID	500605B0019CE3D4
Name	
Discovered	Yes
Mapped	Yes
Profile	Standard

To make it easier to identify your hosts you can give them custom names.

To do this you will select the host connection that you wish to change from the left column.

Then from the provisioning menu choose Rename Host

System Status

System Time 2010-03-02 22:32:01

System Events 2 6 198

Configuration View

MSA2312sa

- Logical
  - Vdisks
    - vd01 (RAID5)
      - Volume vd01\_v001 (1798.5GB)
      - vd02 (RAID5)
      - vd03 (RAID5)
      - vd04 (RAID5)
  - Hosts
    - GLVVM001a**
    - 500605B0019C88F0
    - GLVVM001b
    - 500605B0019C88F4
- Physical
  - Enclosure 1

# GLVVM001

View ▾ Provisioning ▾

GLVVM001 > Provisioning > Rename Host

## Rename Host

Modify the name

Name:\*

Profile:  ▾

**Modify Name**

You are now able to type in a more suitable name to help with identifying which host you are working with.

Profile option is how you choose between Standard, HP-UX and Open VMS options.

System Status

System Time 2010-03-02 22:32:35

System Events 2 6 198

Configuration View

MSA2312sa

- Logical
  - Vdisks
    - vd01 (RAID5)
      - Volume vd01\_v001 (1798.5GB)
    - vd02 (RAID5)
    - vd03 (RAID5)
    - vd04 (RAID5)
  - Hosts
    - GLVVM001a
    - 500605B0019C88F0
    - GLVVM001b
    - 500605B0019C88F4
- Physical
  - Enclosure 1

# GLVVM001a

View Provisioning

GLVVM001a > View > Overview

## Host Overview

Details about a specific host

Host Overview	
Component	Count
<input checked="" type="radio"/> Host	
<input type="radio"/> Maps	1

Properties for GLVVM001a	
Property	Value
Host ID	500605B0019CE3D0
Name	GLVVM001a
Discovered	Yes
Mapped	No
Profile	Standard

After renaming the host interface you can see from the summary that you now have a friendly name and the host can still be referenced by the Host ID.