

HP MSA 2040 SAN Storage – Connecting to the Network



You can set network port IP addresses manually using the command-line interface port and cable. If you have not done so already, you need to enable your system for using the command-line interface port.

Network ports on controller module A and controller module B are configured with the following factory-default IP settings:

- Management Port IP Address: 10.0.0.2 (controller A), 10.0.0.3 (controller B)
 - IP Subnet Mask: 255.255.255.0
 - Gateway IP Address: 10.0.0.1
1. From your network administrator, obtain an IP address, subnet mask, and gateway address for controller A, and another for controller B.
 2. Use the provided USB cable to connect controller A to a

USB port on a host computer.

3. Windows customers should locate the downloaded device driver described in Downloading a device driver for Windows computers.
4. Start and configure a terminal emulator, such as Hyper Terminal or VT-100, using the display settings / connection settings in Table.

Terminal emulation mode	VT-100 or ANSI (for color support)
Font	Terminal
Translations	None
Columns	80
Baud Rate	115,200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None
Parameter	Value

- In the terminal emulator, connect to controller A. Press Enter to display the CLI prompt (#).
At the login prompt, enter the default user **manage**.

Enter the default password **!manage**.

- At the prompt, type the following command to set the values you obtained in step 1 for each network port, first for controller A and then for controller B:
set network-parameters ip address netmask netmask gateway gateway controller a|b

For example:

```
# set network-parameters ip 192.168.0.10 netmask  
255.255.255.0 gateway 192.168.0.1 controller a
```

```
# set network-parameters ip 192.168.0.11 netmask
```

```
255.255.255.0 gateway 192.168.0.1 controller b
```

- Type the following command to verify the new IP addresses:

```
show network-parameters
```

- Use the ping command to verify network connectivity.

For example:

```
# ping 192.168.0.1 (gateway)
```

In the host computer's command window, type the following command to verify connectivity, first for controller A and then for controller B:

```
ping controller-IP-address
```

- If you cannot access your system for at least three minutes after changing the IP address, your network might require you to restart the Management Controller(s) using the CLI. When you restart a Management Controller, communication with it is temporarily lost until it successfully restarts. Type the following command to restart the management controller on both controllers:

```
restart mc both
```

- When you are done using the CLI, exit the emulator.

[source: HP Documentation]

All about DATA backups &

rotation

DATA backup is to make copies of particular data in order to use those copies for restoring the information if a failure occurs (a data loss event due to deletion, corruption, theft, viruses etc.).

there are four common backup types implemented and generally used in most of these programs: **full backup**, **differential backup**, **incremental backup** and **mirror backup**.

Backup type	Data backed up	Backup time	Restore time	Storage space
Full backup	All data	Slowest	Fast	High
Incremental backup*	Only new/modified files/folders	Fast	Moderate	Lowest
Differential backup	All data since last full	Moderate	Fast	Moderate
Mirror backup	Only new/modified files/folders	Fastest	Fastest	Highest

*recommended backup type

▪ Full backup

Full back up is the starting point for all other types of backup and contains all the data in the folders and files that are selected to be backed up.

▪ Differential backup

Differential backup contains all files that have changed since the last FULL backup. The advantage of a differential backup is that it shortens restore time compared to a full back up or an incremental backup.

▪ Incremental backup

Incremental backup stores all files that have changed since the last FULL, DIFFERENTIAL OR INCREMENTAL backup. The advantage of an incremental backup is that it takes the least time to complete.

▪ **Mirror backup**

Mirror backup is identical to a full backup, with the exception that the files are not compressed in zip files and they cannot be protected with a password. A mirror backup is most frequently used to create an exact copy of the source data.

▪ **Smart backup**

Smart backup is a backup type which combines the full, differential and incremental backup types with cleanup operations in order to efficiently manage the backups according with the backup settings and the free disk space in destination. The Smart backup type starts with a full backup.

Tape Rotation

A good tape rotation schedule is vital to ensure data recovery. The best rotation schedule is one that provides you with a long and varied history of file versions.

Grandfather-Father-Son Backup Scheme

mon	tues	wed	thurs	fri
				week 1
				week 2
				week 3
		wed	thurs	week 4
mon	tues	month 1	month 1	

This is the most commonly used media rotation schedule. This scheme uses daily (Son), weekly (Father), and monthly (Grandfather) backup sets. Four backup tapes are labeled for the day of the week each backs up.

Tower of Hanoi Backup Scheme

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A		A		A		A		A		A		A		A	
	B			B				B				B			
		C								C					
					D										
															E

.....[Media set].....[Return to day 1]

The Tower of Hanoi rotation schedule is widely used. In this schedule, one tape set "A" is used every other backup session (daily sessions in this example). Start Day 1 with "A" and repeat every other backup session (every other day). The next tape set "B" starts on the first non-"A" backup day and repeats every fourth backup session. Media set "C" starts on the first non-"A" or non-"B" backup day and repeats every eighth session. Media set "D" starts on the first non-"A", non-"B", or non-"C" backup day and repeats every sixteenth session. Media set "E" alternates with media set "D".