



MELLANOX

SN2010 AND SX1012

GETTING STARTED WITH HC3

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INTRODUCTION

This guide provides general configuration examples. The configurations found here may not be applicable for all environments. Consult Mellanox's official documentation for further information in regards to your environment's unique configuration.

REQUIREMENTS

- The switch should be racked, cabled, and powered on.
- The switch should be connected to the network, presumably with DHCP enabled.
- A USB to serial adapter for a serial connection to a workstation with a terminal program for initial setup.

Use Device Manager (in Windows, or its equivalent in other operating systems) to determine the COM port for access through the terminal program.

ACCESS THE SWITCH

NOTE

The following steps may not be applicable for all switch software versions and are provided as-is for general recommendations. Scale Computing does not monitor or maintain third party products. Contact Mellanox for advanced switch configuration tasks.

Configuration will be handled through the serial console and a terminal program. The default username and password is admin.

A Configuration Wizard will appear after login. A sample configuration is shown below. For reference, mgmt0 is the management interface for the switch.

Configuration wizard

Do you want to use the wizard for initial configuration? **yes**

Step 1: Hostname? [switch-2f5160]

Step 2: Use DHCP on mgmt0 interface? [yes] **no**

Step 3: Use zeroconf on mgmt0 interface? [no]

Step 4: Primary IPv4 address and masklen? [0.0.0.0/0] **10.0.0.1/24**

Step 5: Default gateway? **10.0.0.1**

Step 6: Primary DNS server? **10.0.0.1**

```
Step 7: Domain name? scalecomputing.local
Step 8: Enable IPv6? [yes] no
Step 9: Admin password (Enter to leave unchanged)?
```

You have entered the following information:

1. Hostname: switch-2f5160
2. Use DHCP on mgmt0 interface: no
3. Use zeroconf on mgmt0 interface: no
4. Primary IPv4 address and masklen: 10.0.0.1/24
5. Default gateway: 10.0.0.1
6. Primary DNS server: 10.0.0.1
7. Domain name: scalecomputing.local
8. Enable IPv6: no
9. Admin password (Enter to leave unchanged): (unchanged)

To change an answer, enter the step number to return to.
Otherwise hit <enter> to save changes and exit.

Choice:

Zero-touch is disabled
Configuration changes saved.

To return to the wizard from the CLI, enter the "configuration jump-start"
command from configure mode. Launching CLI...

```
switch-2f5160 [standalone: master] >
```

Once configured, the switch can be accessed on the web interface console within a web browser:
`http://<switch-IP-address>`

MELLANOX SX1012 BREAKOUT CABLE CONFIGURATION

This section is only required for the Mellanox SX1012. As the Mellanox SX1012 is capable of 40 Gb per second (Gbps) per-port, each of the 40 Gbps ports must be configured for the breakout cable type in order to negotiate them to the correct speed for the Scale Computing nodes. This is done easily through the command-line interface.

1. Connect to the switch using the management IP configured in the previous section.
2. Enter the password created in the previous section for the admin user.
3. Follow the commands below for each interface.

```
en
# configure terminal
(config)# interface ethernet 1/1 module-type qsfp-split-4 force
(config)# interface ethernet 1/2 module-type qsfp-split-4 force
(config)# interface ethernet 1/3 module-type qsfp-split-4 force
(config)# interface ethernet 1/4 module-type qsfp-split-4 force
(config)# interface ethernet 1/5 module-type qsfp-split-4 force
(config)# interface ethernet 1/6 module-type qsfp-split-4 force
(config)# interface ethernet 1/7 module-type qsfp-split-4 force
(config)# interface ethernet 1/8 module-type qsfp-split-4 force
(config)# interface ethernet 1/9 module-type qsfp-split-4 force
(config)# interface ethernet 1/10 module-type qsfp-split-4 force
(config)# exit
# write memory
# exit
```

Once configured, the switch can be accessed on the web interface console within a web browser:
`http://<switch-IP-address>`

GENERAL CONFIGURATION

This is a general reference point for the expected switch configuration. Access Mode ports allow only one VLAN to be configured for a switch port. Hybrid Mode ports can carry multiple VLANs.

1. Assign the LAN ports as Hybrid Ports with the default native VLAN 1, or create a new VLAN to match the network's default traffic if it differs. Ports assigned to the LAN VLAN should be Hybrid Ports.
 - a. **All ports are set to Access Mode for VLAN 1 by default.** If you are not utilizing VLANs in your environment, you will not need to configure the VLAN settings for the switch ports further.
2. Assign the Backplane ports as Access Port VLAN Mode ports with a unique VLAN ID separate from anything else in the network topology.
3. It is optional if Flow Control is enabled or not, but it is generally recommended to enable it.
4. Configure an uplink port to the local network as a Hybrid port with only the native VLAN ID and any other necessary VLAN IDs assigned.
5. Spanning Tree may or may not need to be disabled to function without network issues in the local environment. Most often it is necessary to disable it.
6. Ensure any changes are written to the switch memory to save the configuration.

RESOURCES

MELLANOX

- [SN2010 - Mellanox Spectrum 1U Switch Systems Hardware User Manual](#)
- [SX1012 - Mellanox SwitchX and SwitchX-2 1U Switch Systems Hardware User Manual](#)

FEEDBACK & SUPPORT

DOCUMENT FEEDBACK

Scale Computing welcomes your suggestions for improving our documentation. Please send your feedback to documentation@scalecomputing.com.

TECHNICAL SUPPORT AND RESOURCES

There are many technical support resources available for use. Access this document, and many others, at <http://www.scalecomputing.com/support/login/>.

Online Community

Scale Computing has an online forum and community! This is a great medium in which to solicit the advice of your peers, benefit from their experience, find and discuss documentation, and participate in ongoing conversations. Please note this community is not intended to provide ScaleCare Support assistance or replace other Scale Computing communication channels. Find the Scale Legion HC3 Discussion Forum at <https://scalelegion.community>.

Online Support

You can submit support cases and view account information online through the Scale Computing Customer and Partner Portals at <http://www.scalecomputing.com/support/login/>. You can also Live Chat with support through www.scalecomputing.com during standard hours Monday-Friday from 8-8 local time.

Telephone Support

Support is available for critical issues 24/7 by phone at +1 877-SCALE-59 (+1 877-722-5359) in the US and at +44 (0) 808 234 0699 in Europe. Telephone support is recommended for the fastest response on priority issues, and the only response after standard Support hours.