



Web Interface Overview

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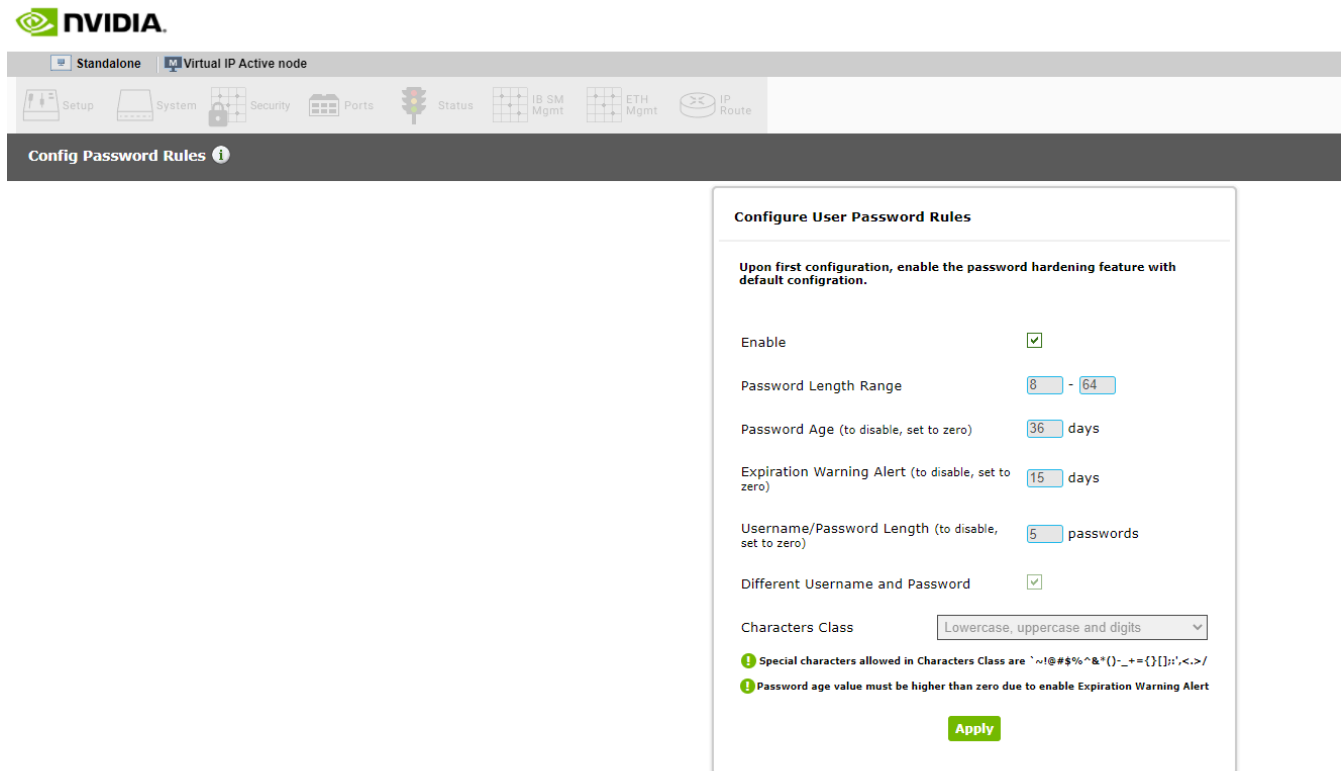
The MLNX-OS package equipped with web-based GUI that accepts input and provides output by generating webpages that can be viewed by the user using a web browser.

Note

The maximum allowed number of WebUI session is 225. Trying to open new sessions beyond this limitation is rejected.

Password Hardening

Upon initial login through the web interface, if the initial login was not completed through the CLI the following prompt will appear (by default, password hardening is enabled).



The screenshot shows the NVIDIA MLNX-OS web interface. The top navigation bar includes the NVIDIA logo and tabs for 'Standalone' and 'Virtual IP Active node'. Below the navigation bar are icons for 'Setup', 'System', 'Security', 'Ports', 'Status', 'IB SM Mgmt', 'ETH Mgmt', and 'IP Route'. The main content area is titled 'Config Password Rules' and displays a dialog box for configuring user password rules. The dialog box contains the following settings:

- Enable:**
- Password Length Range:** 8 - 64
- Password Age (to disable, set to zero):** 36 days
- Expiration Warning Alert (to disable, set to zero):** 15 days
- Username/Password Length (to disable, set to zero):** 5 passwords
- Different Username and Password:**
- Characters Class:** Lowercase, uppercase and digits

Below the settings, there are two warning messages:

- Special characters allowed in Characters Class are `~!@#%&*()*~+={}|:;',<.>/`**
- Password age value must be higher than zero due to enable Expiration Warning Alert**

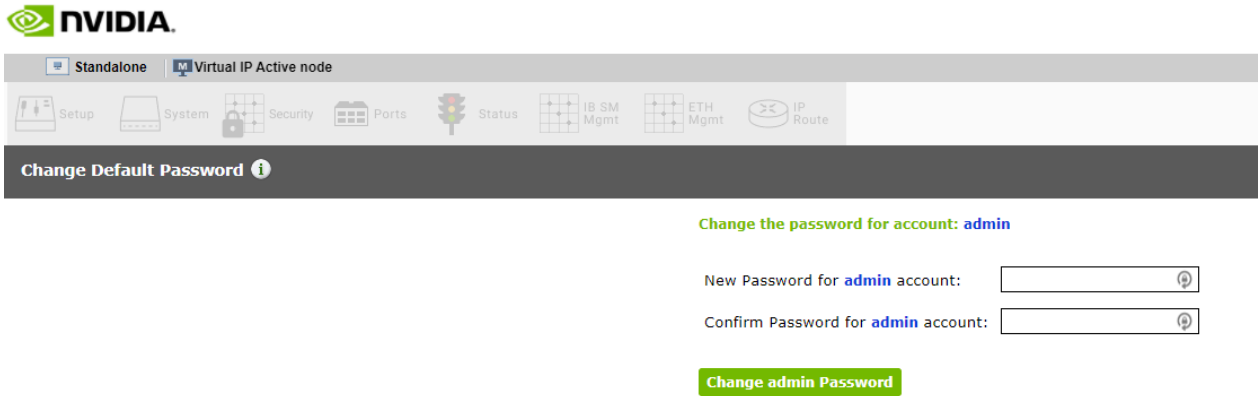
An 'Apply' button is located at the bottom of the dialog box.

Changing Default Password

The password may be required to be changed upon initial login through the web interface if initial login was not completed through the CLI.

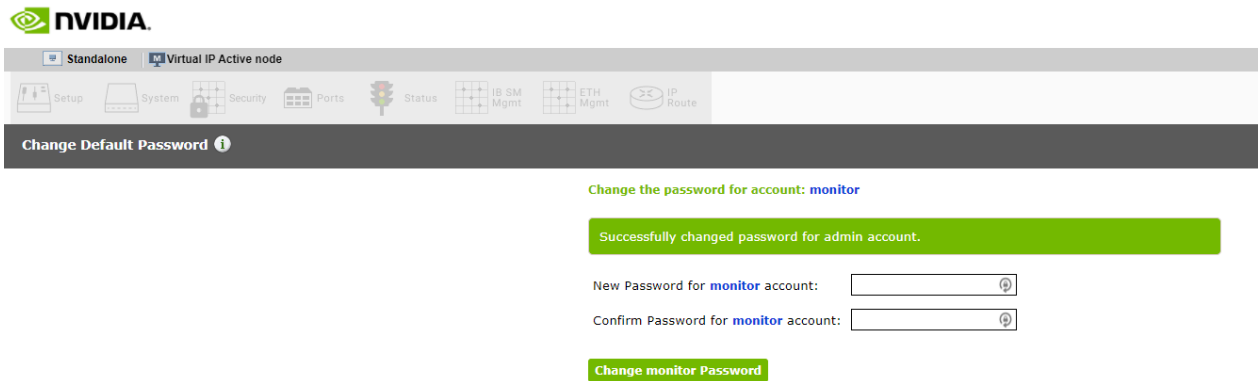
Upon initial login do the following:

1. Login as admin.
2. If the following screen appears (this screen will appear if default password was never changed), type in a new password ("admin" may be reused as the new password).



The screenshot shows the NVIDIA web interface. At the top left is the NVIDIA logo. Below it, there are two tabs: 'Standalone' and 'Virtual IP Active node'. A navigation bar contains icons for Setup, System, Security, Ports, Status, IB SM Mgmt, ETH Mgmt, and IP Route. Below the navigation bar, the page title is 'Change Default Password'. The main content area shows the text 'Change the password for account: admin'. Below this, there are two input fields: 'New Password for admin account:' and 'Confirm Password for admin account:'. At the bottom of the form is a green button labeled 'Change admin Password'.

3. Only after successfully changing the admin password (this must be done first), change the monitor password. If the password is not changed, all pages (besides the logout page) will be locked.



The screenshot shows the NVIDIA web interface. At the top left is the NVIDIA logo. Below it, there are two tabs: 'Standalone' and 'Virtual IP Active node'. A navigation bar contains icons for Setup, System, Security, Ports, Status, IB SM Mgmt, ETH Mgmt, and IP Route. Below the navigation bar, the page title is 'Change Default Password'. The main content area shows the text 'Change the password for account: monitor'. Above this text is a green success message: 'Successfully changed password for admin account.'. Below the success message, there are two input fields: 'New Password for monitor account:' and 'Confirm Password for monitor account:'. At the bottom of the form is a green button labeled 'Change monitor Password'.

4. After successfully changing the monitor password, the home page may be accessed and the system may be used.

You may enter the page. You will be automatically redirected to the homepage in 1 second(s).

5. Click on the home page link or wait 5 seconds until the countdown reaches 0 and the page is redirected automatically.

Warning

Warning: Entering the monitor user before the default password is changed will block the system (all pages besides the logout page will be blocked).

About Web UI

The web interface makes available the following perspective tabs:

- Setup
- System
- Security
- Ports
- Status
- IB SM Management
- IB Router

Note

Make sure to save your changes before switching between menus or submenus. Click the “Save” button to the right of “Save Changes?”.

The screenshot shows the NVIDIA MLNX-OS Management Console interface. At the top, there is a navigation bar with options like Standalone, Virtual IP Active node, Setup, System, Security, Ports, Status, IB SM Mgmt, ETH Mgmt, and IP Route. The main content area is titled "Ports Information" and features a "Ports" sub-menu. A central image shows a network switch. Below it, the "Splitter ports:" section is set to "1/1". The "Port Info" table lists details for port 1/1, including its type (IB), description (infiniband-default), and various capabilities. The "Port Counters" table shows zero values for RX bytes, RX packets, RX errors, Symbol errors, VL15 dropped packets, TX bytes, TX packets, TX wait, and TX discarded packets. A "Clear Port 1/1 Counters" button is visible next to the counters table.

Port Info		Port Counters	
Port number :	1/1	RX bytes :	0
Port type :	IB	RX packets :	0
IB Subnet :	infiniband-default	RX errors :	0
Port description :		Symbol errors :	0
Logical port state :	Down	VL15 dropped packets :	0
Physical port state :	Polling		
Current line rate :	-		
Supported speeds :	sdr, qdr, fdr, edr, hdr, ndr		
Speed :	-		
Supported widths :	1X, 2X, 4X		
Width :	4X		
Max supported MTUs :	4222		
MTU :	0		
VL admin capabilities :	VL0 - VL7		
Operational VLs :	-		
Threshold Level :	N/A		

Setup Menu

The Setup menu makes available the following submenus (listed in order of appearance from top to bottom):

Submenu Title	Description
Interfaces	Obtains the status of, configures, or disables interfaces to the fabric. Thus, you can: set or clear the IP address and netmask of an interface; enable DHCP to dynamically assign the IP address and netmask; and set interface attributes such as MTU, speed, duplex, etc.
HA	Creates, joins or modifies an InfiniBand subnet
Routing	Configures, removes or displays the default gateway, and the static and dynamic routes
Hostname	Configures or modifies the hostname Configures or deletes static hosts Note: Changing hostname stamps a new HTTPS certificate

Submenu Title	Description
DNS	Configures, removes, modifies or displays static and dynamic name servers
Login Messages	Edits the login messages: Message of the Day (MOTD), Remote Login message, and Local Login message
Address Resolution	Adds static and dynamic ARP entries, and clears the dynamic ARP cache
IPSec	Configures IPSec
Neighbors	Displays IPv6 neighbor discovery protocol
Virtualization	Manages the virtualization and virtual machines
Virtual Switch Mgmt	Configures the system profile
Web	Configures web user interface and proxy settings
SNMP	Configures SNMP attributes, SNMP admin user, and trap sinks
Email Alerts	Configures the destination of email alerts and the recipients to be notified
XML gateway	Provides an XML request-response protocol to get and set hardware management information
JSON API	Manages JSON API
Logging	Sets up system log files, remote log sinks, and log formats
Configurations	Manages, activates, saves, and imports OS configuration files, and executes CLI commands
Docker	Manages docker images and containers.
Date and	Configures the date, time, and time zone of the switch system

Submenu Title	Description
Time	
NTP	Configures NTP (Network Time Protocol) and NTP servers
Licensing	Manages OS licenses

System Menu

The System menu makes available the following sub-menus (listed in order of appearance from top to bottom):

Submenu Title	Description
Modules	Displays a graphic illustration of the system modules. By moving the mouse over the ports in the front view, a pop-up caption is displayed to indicate the status of the port. The port state (active/down) is differentiated by a color scheme (green for active, gray/black for down). By moving the mouse over the rear view, a pop-up caption is displayed to indicate the leaf part information.
Inventory	Displays a table with the following information about the system modules: module name, type, serial number, ordering part number and ASIC firmware version
Power Management	Displays a table with the following information about the system power supplies: power supply name, power, voltage level, current consumption, and status. A total power summary table is also displayed providing the power used, the power capacity, and the power available.
OS Upgrade	Displays the installed OS images (and the active partition), uploads a new image, and installs a new image
Reboot	Reboots the system. Make sure that you save your configuration prior to clicking reboot.

Security Menu

The Security menu makes available the following submenus (listed in order of appearance from top to bottom):

Submenu Title	Description
Users	Manages (setting up, removing, modifying) user accounts
Admin Password	Modifies the system administrator password
SSH	Displays and generate host keys
AAA	Configures AAA (Authentication, Authorization, and Accounting) security services such as authentication methods and authorization
Login Attempts	Manages login attempts
RADIUS	Manages Radius client
TACACS+	Manages TACACS+ client
LDAP	Manages LDAP client
Certificate	Manages certificates

Ports Menu

The Ports menu displays the port state and enables some configuration attributes of a selected port. It also enables modification of the port configuration. A graphical display of traffic over time (last hour or last day) through the port is also available.

Submenu Title	Description
Ports	Manages port attributes, counters, transceiver info and displays a graphical counters histogram
Phy Profile	Provides the ability to manage PHY profiles
Monitor Session	Displays monitor session summary and enables configuration of a selected session
Protocol Type	Manages the link protocol type
Telemetry	Displays and configures telemetry

Status Menu

The Status menu makes available the following submenus (listed in order of appearance from top to bottom):

Submenu Title	Description
Summary	Displays general information about the switch system and the OS image, including current date and time, hostname, uptime of system, system memory, CPU load averages, etc.
Profile and Capabilities	Displays general information about the switch system capabilities such as the enabled profiles (e.g IB/ETH) and their corresponding values
What Just Happened	Displays and configures What Just Happened packet drop reasons
Temperature	Provides a graphical display of the switch module sensors' temperature levels over time (1 hour). It is possible to display either the temperature level of one module's sensor or the temperature levels of all the module sensors' together.
Power Supplies	Provides a graphical display of one of the switch's power supplies voltage level over time (1 hour)
Fans	Provides a graphical display of fan speeds over time (1 hour). The display is per fan unit within a fan module.
CPU Load	Provides a graphical display of the management CPU load over time (1 hour)
Memory	Provides a graphical display of memory utilization over time (1 day)
Network	Provides a graphical display of network usage (transmitted and received packets) over time (1 day). It also provides per interface statistics.
Logs	Displays the system log messages. It is possible to display either the currently saved system log or a continuous system log.
Maintenance	Performs specific maintenance operations automatically on a predefined schedule
Alerts	Displays a list of the recent health alerts and enables the user to configure health settings

Submenu Title	Description
Virtualization	Displays the virtual machines, networks and volumes

IB SM Mgmt Menu

The IB SM Mgmt menu makes available the following submenus (listed in order of appearance from top to bottom):

Submenu Title	Description
Summary	Displays the local Subnet Manager (SM) status (running time, failures, etc)
Base SM	Manages basic SM configuration (enabling SM, priority level, and restoring initial configuration)
Advanced SM	Manages basic SM configuration (enabling SM, priority level, and restoring initial configuration)
Expert SM	Configures security and GUID based prefixes (m_key, sm_key, sa_key, etc), and manages special SM attributes that should not be changed except by expert users of the Subnet Manager who understand the risks of manipulating these attributes.
Compute nodes	Adds compute nodes using network adapter port GUIDs
Root nodes	Adds root nodes using switch GUIDs
Partitions	Manages partition keys (sets removes or displays the partition keys)
Basic Qos	Configures basic QoS attributes such as default QoS settings, and VL arbitration low and high entries. It also displays and manages SL-to-VL mappings.

IB Router Menu

The IB Router menu makes available the following sub-menus (listed in order of appearance from top to bottom):

Submenu Title	Description
IB Router Global	Enables/disables IB router
IB Router Configuration	Manages IB router admin state and IB router interfaces

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