



## cnMatrix Switch Group Configuration (cnMaestro GUI Based) Overview



## Switch Group Description

A Switch Group represents a virtual stack of switches, independent of their locations or networks. The Switch Group functionality allows users to manage multiple switches in a consistent and uniform manner.

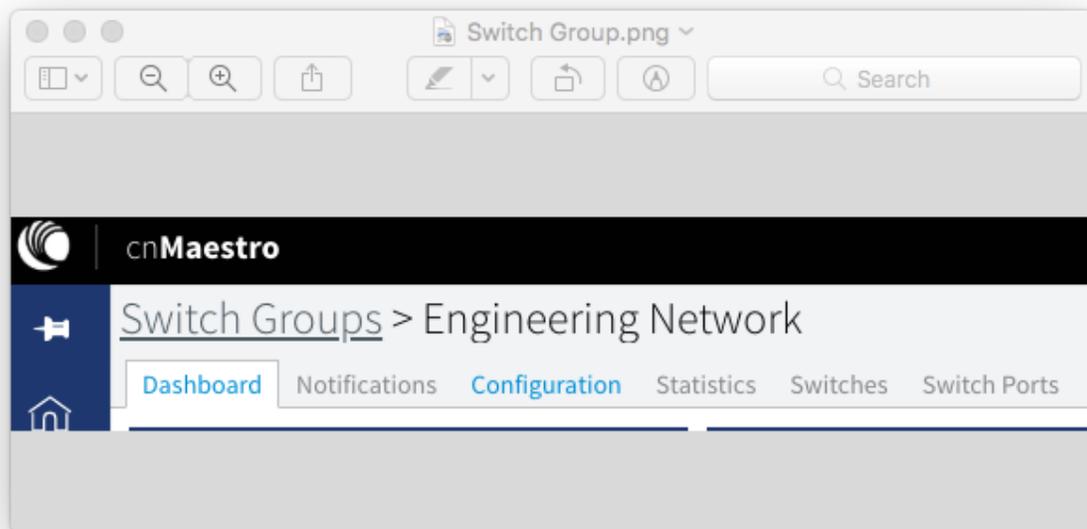


Note: For GUI configuration, a switch must belong to a Switch Group. Switch Group is available for all account types: Enterprise (new in **cnMaestro 2.4**), Access and Backhaul, and Industrial Internet.

Configuration is common to all switches belonging to a Switch Group:

- Configuration changes are synchronized and applied to all of the switches in a Switch Group.
- A subset of configuration attributes can be overruled for an individual switch.
- Switch ports across all physical switches are associated with a Switch Group and can be simultaneously bulk edited

From the **Switch Groups** tab, the administrator can navigate to the **Switches** and the **Switch Ports** tabs for configuration. The **Dashboard** tab is used to monitor the health condition of the virtual stack.



## Configuring a Switch Group

1. Create a new switch group.
2. Establish common configuration for the newly created switch group through the **Switch Groups > Configuration** tab.
3. Onboard a new switch and assign it to the switch group.
4. Access the **Switches** and **Switch Ports** tabs to configure per-switch overrides and individual port settings.

5. Apply the configuration

## Switches Tab Description

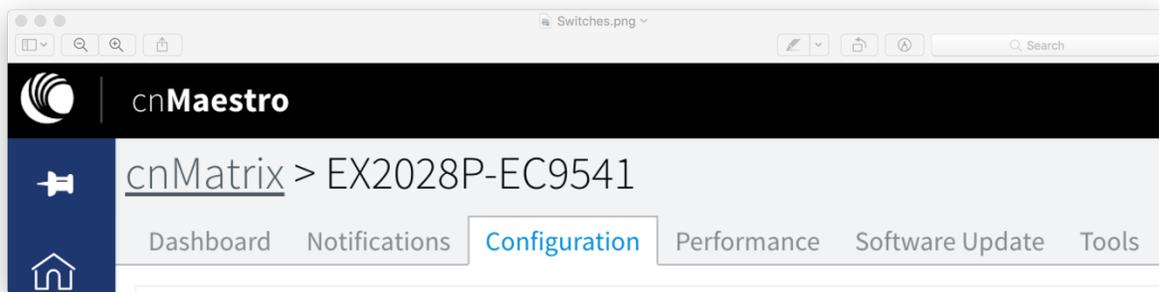
The **Switches** tab provides access to the switch overrides and the switch **Dashboard**.

Switch overrides allows certain attributes for each switch to be configured individually.

The switch **Dashboard** displays the current switch health and status. Per port health and status is accessible as well.

### Configuring Switch Overrides

1. Assign a switch to a switch group.
2. Access **Configuration > Advanced Settings**
3. Configure the per-switch settings.
4. Apply configuration to the switch



## Switch Ports Tab Description

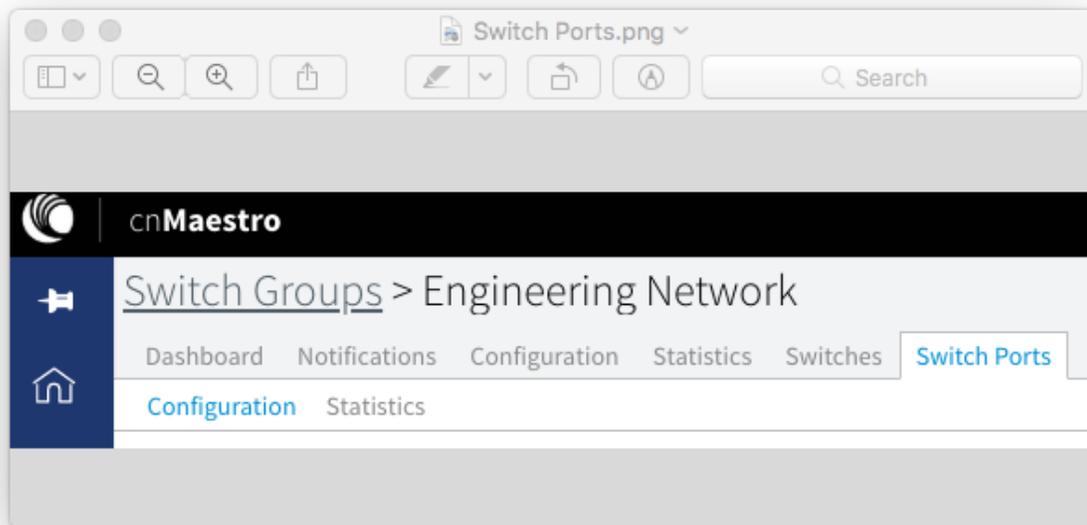
The **Switch Ports** tab allows the administrators to configure per port settings by port ID for all ports within the switch group. By default, a port ID identifies the switch (by switch name) and port number, e.g., EX2028P-EC9541: 1.

Supports bulk editing of switch port settings across all physical switches.



Note: Port channels are configured and managed from within the Switch Ports tab.

Per port statistics can be viewed using the **Statistics** tab.



## PBA Description

Policy Based Automation (PBA) configuration is common to all switches within a switch group.

PBA Configuration is accessed through **Switch Groups > Configuration > Network** under **advanced settings**.



Note: On the EX 1K, PBA will require a license. This requirement will be implemented in a future release. PBA will not require a license on other cnMatrix switches.



Note: PBA dynamic port updates are indicated by \* in the Port Dashboard and the Switch Ports tab.

## Onboarding and Zero-Touch Configuration

1. Claim the switches by using the serial number.
2. Assign a switch to the switch group prior to connecting the switch to cloud.
3. Preconfigure the switch and the switch ports prior to connecting the switch to cloud.
4. Approve the switch after it connects to cloud. Configuration belonging to the switch group, switch overrides and the switch ports are synchronized with the onboarded switch.

## Configuration Synchronization

1. Synchronizing a cnMaestro configuration with a switch (i.e., pushing the cnMaestro configuration to a device) overwrites the switch configuration. The new configuration is committed to memory and the previous configuration details are lost. Only the attributes that can be configured through cnMaestro are overwritten. Attributes that can't currently be updated using cnMaestro are left unchanged and retain their current values.
2. IP address, DNS and IP gateway network settings may be configured statically when a switch is first brought up. To retain these values following synchronization with cnMaestro, the network settings must be configured through cnMaestro. Failing to configure these same values in cnMaestro will result in them being overwritten with default settings potentially isolating the switch from the network for a period of time.
3. Following a configuration sync event, cnMatrix attempts to communicate with cnMaestro using the current network settings (IP address, DNS, IP gateway). If communication is unsuccessful, cnMatrix will automatically reset after a period of time without committing the updated configuration data to memory. The previously valid network settings will be restored and the switch returned to its previous state.