



INTEGRATION GUIDE

How to Configure Brocade Switch to Secure your Wired Network with Portnox CLEAR

Introduction

This document guides you step by step how to configure your Brocade wired switch environment using Portnox CLEAR to ensure secure and trusted user access.

Enabling CLEAR RADIUS Service

The first step is to enable the CLEAR RADIUS service:

- 1) Verify your organization is registered on Portnox CLEAR Cloud Services:
<https://clear.portnox.com/>.
- 2) In the CLEAR portal, go to **Settings > Services** and expand **CLEAR RADIUS Service**. Then:
 - a. If the **Enable Cloud RADIUS** checkbox is not checked, click **Edit** and check the **Enable Cloud RADIUS** checkbox.
 - b. Note the RADIUS server details which you will need when configuring the WatchGuard switch:
 - **Cloud RADIUS IP** - this is the IP address of the CLEAR RADIUS server
 - **Authentication port**
 - **Accounting port** - needed for the RADIUS accounting server
 - **Shared Secret** - this is the RADIUS client shared secret

Allow Access to Wired Networks in CLEAR

The second step is to allow, in the CLEAR portal, access to wired networks you will be securing.

- 1) Navigate in the portal to **Settings > Groups**.
- 2) Edit the default “Unassigned” group or create a new security group.
- 3) Whether you are creating or editing a group, in **Group Settings** check the **Enable wired access using 802.1x authentication for devices in this group** check box.

ACCESS TO WIRED NETWORKS

Manage 802.1X authenticated access to wired networks for all devices in this group.

Enable wired access using 802.1x authentication for devices in this group.

[Edit](#)

Configuring the Brocade Wired Switch

In the final step, we configure the Brocade wired switch to be secured and protected based on CLEAR RADIUS authentication.

For 802.1X, In the Brocade CLI:

- 1) Configure an authentication method list for 802.1X and specify RADIUS as an authentication server.

```
SSH@ICX6450-C12PD Router(config)#aaa authentication dot1x default radius
```

- 2) Configure a Radius server.

Enter the following CLEAR RADIUS server details, which you noted in [Enabling CLEAR RADIUS Service](#), step (2)b:

- In **host**, enter the Cloud RADIUS IP.
- In **auth-port**, enter the Authentication port number.
- In **acct-port**, enter the Accounting port number.
- In **key**, enter the Shared Secret.

```
SSH@ICX6450-C12PD Router(config)#radius-server host 1.1.1.1 auth-port 1002 acct-port 1003  
default key secret
```

- 3) Create a VLAN to be used as auth-default-vlan.

```
SSH@ICX6450-C12PD Router(config)#vlan 2 name auth-default-vlan
```

- 4) Specify which VLAN ID to use as auth-default-vlan under authentication mode.

```
SSH@ICX6450-C12PD Router(config)#authentication  
SSH@ICX6450-C12PD Router(config-authen)#auth-default-vlan 2
```

- 5) Enable 802.1X on the switch and enable 802.1X on the port/s. Configure port-control mode as "auto" under interface configuration.

```
SSH@ICX6450-C12PD Router(config-authen)#dot1x enable
SSH@ICX6450-C12PD Router(config-authen)#dot1x enable ethernet 1/1/3
SSH@ICX6450-C12PD Router(config-authen)#exit
SSH@ICX6450-C12PD Router(config)#interface ethernet 1/1/3
SSH@ICX6450-C12PD Router(config-if-e1000-1/1/4)#dot1x port-control auto
SSH@ICX6450-C12PD Router(config-if-e1000-1/1/4)#exit
```

- 6) To verify authentication configuration on the switch, use CLI "show running-configuration | begin authentication".

```
SSH@ICX6450-C12PD Router(config)#show running-config | begin authentication
authentication
auth-default-vlan 2
dot1x enable
dot1x enable ethe 1/1/3
!
```

For MAC authentication, In the Brocade CLI:

- 1) Repeat steps (1) - (4) from the 802.1X configuration listed above.
- 2) Enable MAC authentication on the switch under authentication mode and enable MAC authentication on the port/s.

```
SSH@ICX6450-C12PD Router(config-authen)#mac-authentication enable
SSH@ICX6450-C12PD Router(config-authen)#mac-authentication enable ethernet 1/1/3
SSH@ICX6450-C12PD Router(config-authen)#exit
```

- 3) To verify authentication configuration on the switch, use CLI "show running-configuration | begin authentication".

```
SSH@ICX6450-C12PD Router(config)#show running-config | begin authentication
authentication
auth-default-vlan 2
mac-authentication enable
mac-authentication enable ethe 1/1/3
!
```