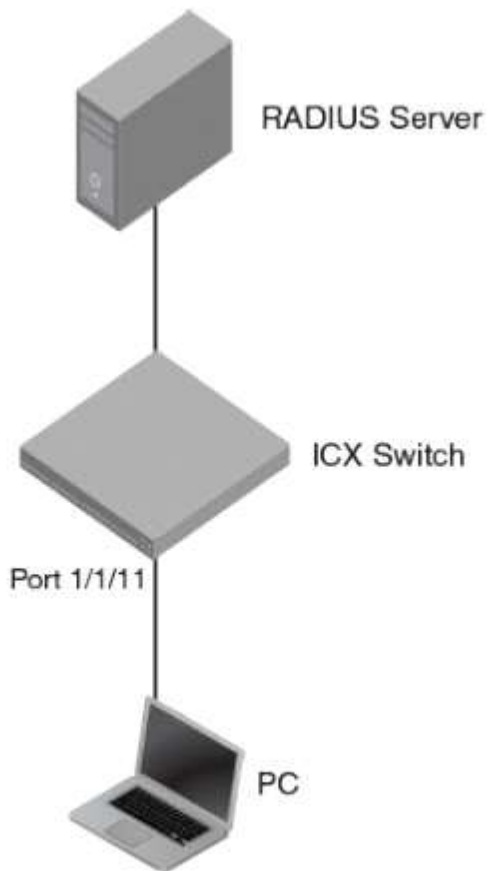# Ruckus ICX 802.1x Configuration

This document discusses the configuration of 802.1x on a Ruckus ICX (Fastiron) switch for wired authentication. For this example, we are using Ruckus Cloudpath as our Radius Server, but any Radius server will work just fine. Below is the equipment used in this example. Also, this example is on a Brocade ICX 6610 running Fastiron code. This is the same code that runs on the Ruckus ICX 7000 series switches as well.

- Brocade ICX 6610-24P – 8.0.30h code

Figure 1:

First you have to configure your Radius attributes in the Radius Server to pass to the switch. You need the following attributes as well as the VLAN to switch to when the user is authenticated.

Attribute	Value
Tunnel-Medium-Type	IEEE-802
Tunnel-Pvt-Group-ID	200
Tunnel-Type	VLAN

Configuring the ICX Switch:

First, we need to configure the communication to the Radius server:

config t
!
aaa authentication dot1x default radius
!
radius-server host 10.10.10.25 auth-port 1812 acct-port 1813 default key *secretkey* dot1x

Note: *10.10.10.25 is the IP Address of your Radius Server and secretkey is the shared secret key on your Radius Server.*

Now we need to configure our Authentication and Restricted VLAN:

config t
!
vlan 2 name auth-default-vlan
exit
!
vlan 666 name restricted_VLAN
exit

Note: *The VLAN numbers can be whatever suits your network design and current configuration.*

Now we need to configure our Authentication process:

config t
!
authentication
auth-default-vlan 2
restricted-vlan 666
auth-fail-action restricted-vlan
dot1x enable
dot1x enable ethernet 1/1/11
dot1x timeout tx-period 10
dot1x timeout quiet-period 10
dot1x timeout supplicant 10
mac-authentication enable
mac-authentication enable ethernet 1/1/11
exit

Now we need to configure our port to authenticate a user:

config t
!
interface ethernet 1/1/11
dot1x port-control auto
exit

Now we can verify our configuration:

show dot1x configuration

```
SSH@Lab-6610-24P#show dot1x configuration
PAE Capability                 : Authenticator Only
Status                         : Enabled
Auth Order                     : dot1x mac-auth
Default VLAN                   : 2
Auth VLAN Mode                 : Single Untagged Mode
Restricted VLAN                : 666
Critical VLAN                  : Not configured
Guest VLAN                     : Not configured
Action on Auth failure         : Move to Restricted VLAN (666)
MAC Session Aging              : Enabled
Filter Strict Security         : Enabled
Re-authentication              : Disabled
Session max sw-age             : 120 seconds
Session max hw-age             : 70 seconds
Quiet-period                   : 10 seconds
TX-period                      : 10 seconds
Reauth-period                  : 3600 seconds
Supplicant-timeout             : 10 seconds
Max Reauth requests            : 2
Protocol Version               : 1
SSH@Lab-6610-24P#
SSH@Lab-6610-24P#
SSH@Lab-6610-24P#
```

show dot1x sessions brief

show dot1x statistics all