Guest VLAN

Ethernet Switch

ZyNOS 4.00

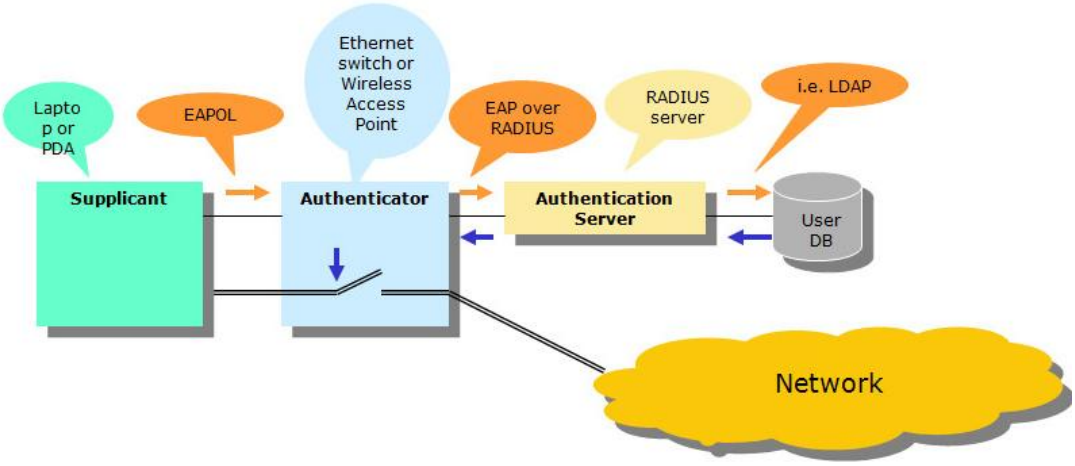
Support Notes
Version 4.00 July 2011

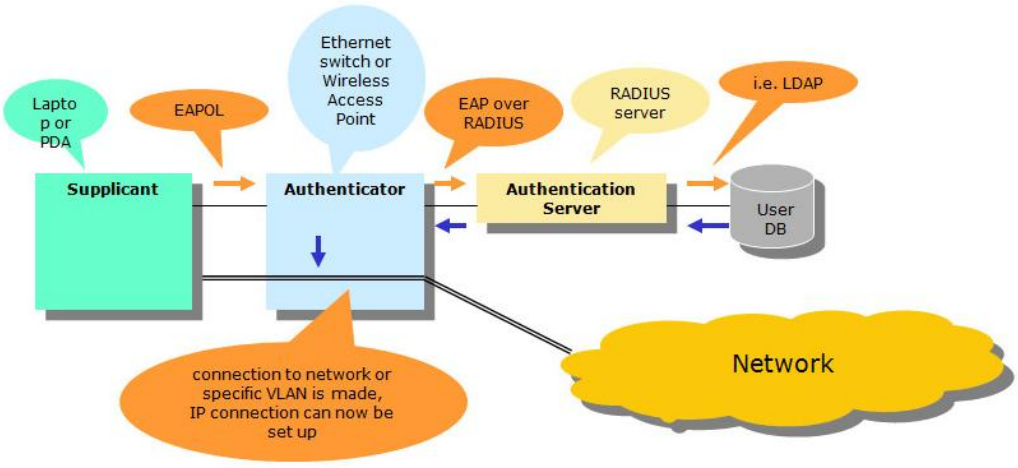
ZyXEL
Unleash Networking Power

Overview of Guest VLAN

Guest VLAN is a feature that combines the function of 802.1x & VLAN. If a user doesn't pass the authentication while accessing network, then his network is restricted, and he will be added into Guest VLAN which only provides limited access to network resources.

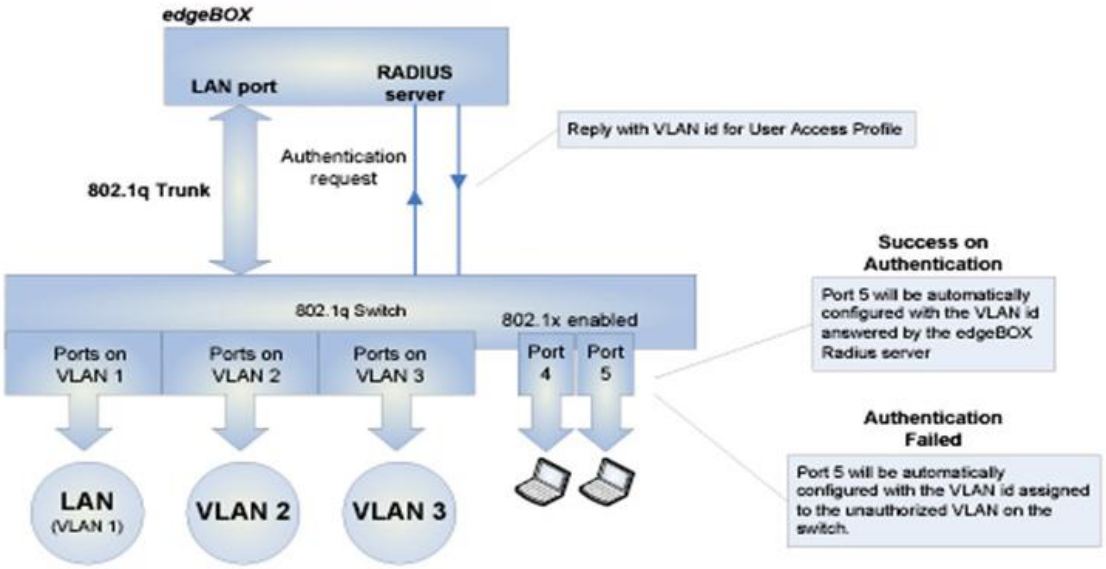
How does Guest VLAN work





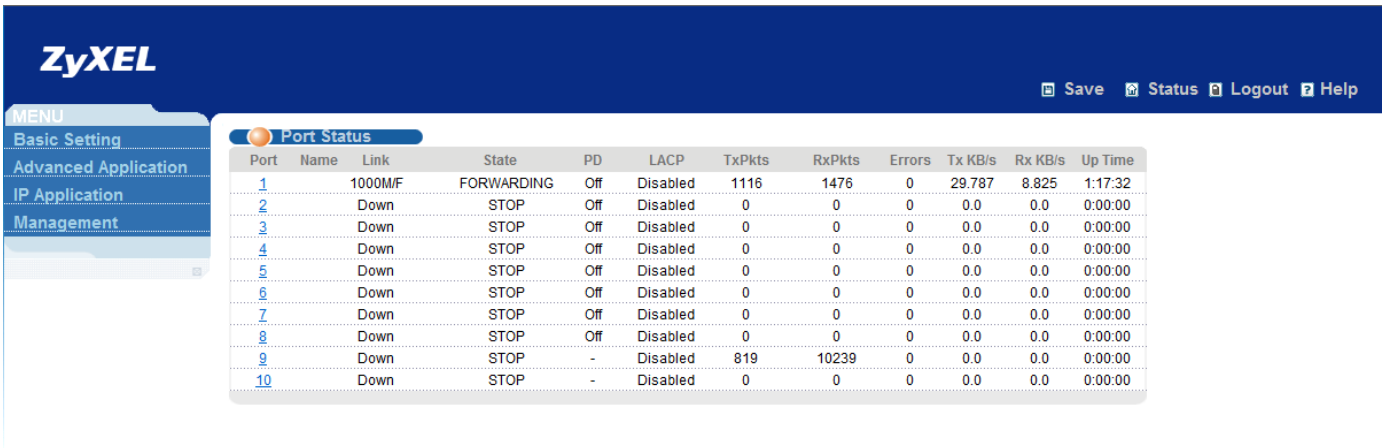
Example

In a network, such as campus or business network, clients which haven't passed authentication belong to the Guest VLAN. The clients accessing the resources in the Guest VLAN don't need to be authenticated, but they only have limited access to network resources.

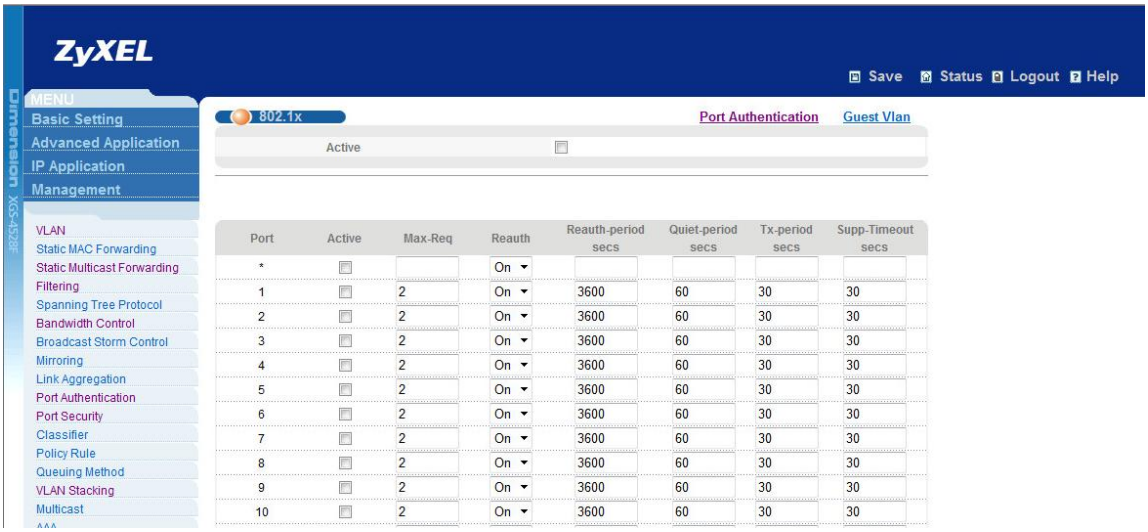


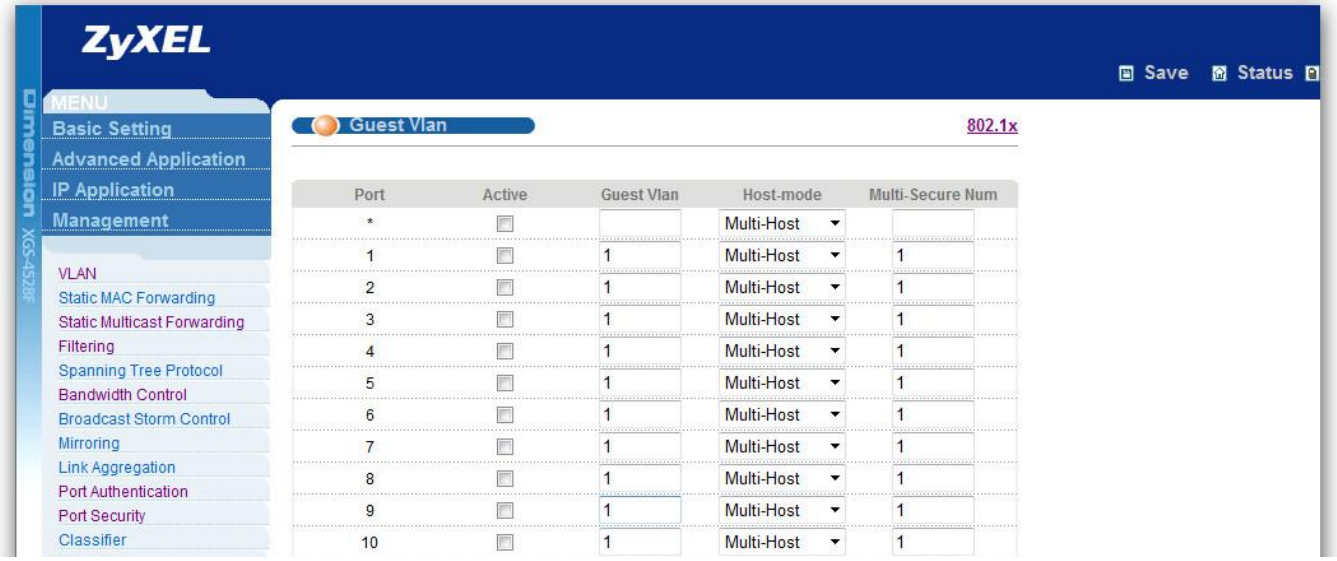
Configuration using the Web GUI

1. Connect the MGMT port to a PC or Notebook with the RJ45 Cable.
2. By default, the MGMT IP address of the out-band port is 192.168.0.1/24.
3. Set your NIC to 192.168.0.100/24.
4. Open an Internet browser (e.g. IE) and enter http://192.168.0.1 into the URL field.
5. By default, the username for the administrator is “admin” and the password is 1234.
6. After successfully logging in, you will see a screen similar to the one below.



7. Click “**Advanced Application**” → “**Port Authentication**”→“**Guest VLAN**” for the setup page.





Configuration using the CLI

1. Connect the MGMT port to a PC or Notebook with the RJ45 Cable.
2. By default, the MGMT IP address of the out-band port is 192.168.0.1/24.
3. Set your NIC to 192.168.0.100/24.
4. Open command line and type: telnet 192.168.0.1
5. By default, the username for the administrator is “admin” and the password is 1234.

Alternatively, connect the CONSOLE port to a PC’s serial port
Use a terminal program with the following settings:
Baud rate: 9600/115200
Data: 8 bit
Parity: none
Stopbits: 1 bit
Flow Control: none

- **(config) Port-access-authenticator**
- **(config) Port-access-authenticator 5**
- **(config) Port-access-authenticator 5 guest vlan**
- **(config) Port-access-authenticator 5 guest vlan 100**
- **(config) Port-access-authenticator 5 guest vlan 100 host-mode multi-host**
- **(config) Port-access-authenticator 5 guest vlan 100 host-mode multi-secure 5**
- **(config) Port-access-authenticator 5 max-req 2**
- **(config) Port-access-authenticator 5 quiet-period 3600**
- **(config) Port-access-authenticator 5 tx-period 30**
- **(config) Port-access-authenticator 5 supp-timeout 30**

Scenario:

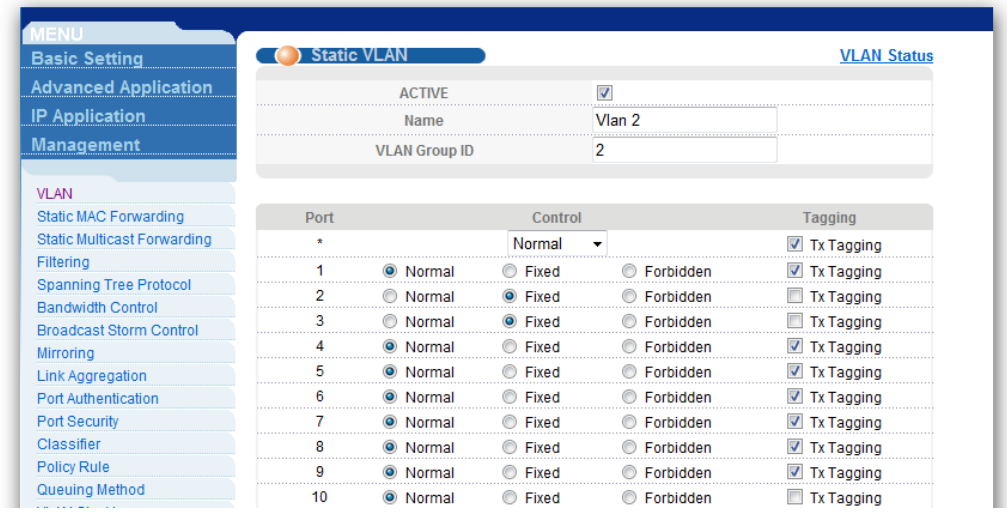
Port 1 : Vlan 1: PC1-Radius Server 192.168.1.254

Port 2: Vlan 2 :PC-2-Client 192.168.2.20
Guest Vlan 200
Port 3: Vlan 2 : PC-3-Client2 192.168.2.5

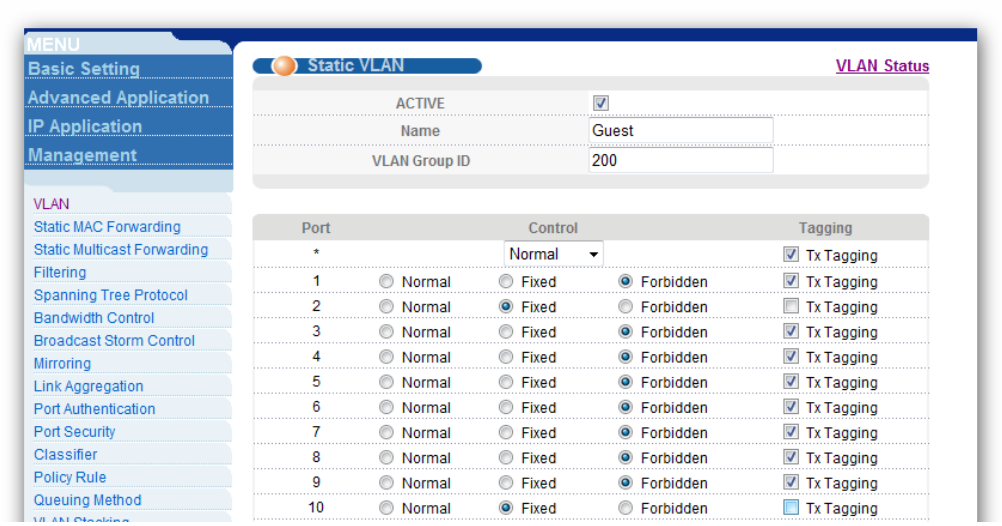
Port 10: Vlan 200 : PC-4-Client3 192.168.2.200

In this scenario, PC 2 will be authenticated. If the authentication succeeds, it will join VLAN 2 and should be able to communicate with PC 3. When it fails to authenticate, it will join guest VLAN and will only be able to communicate with PC 4.

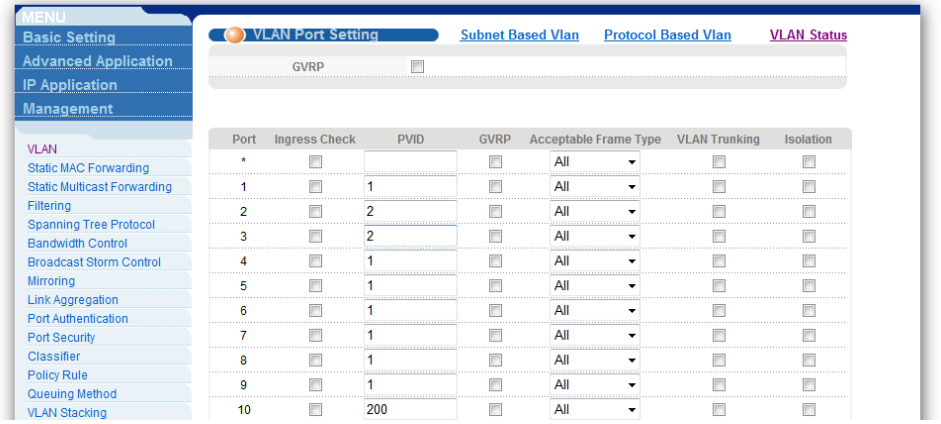
Configure VLAN 2



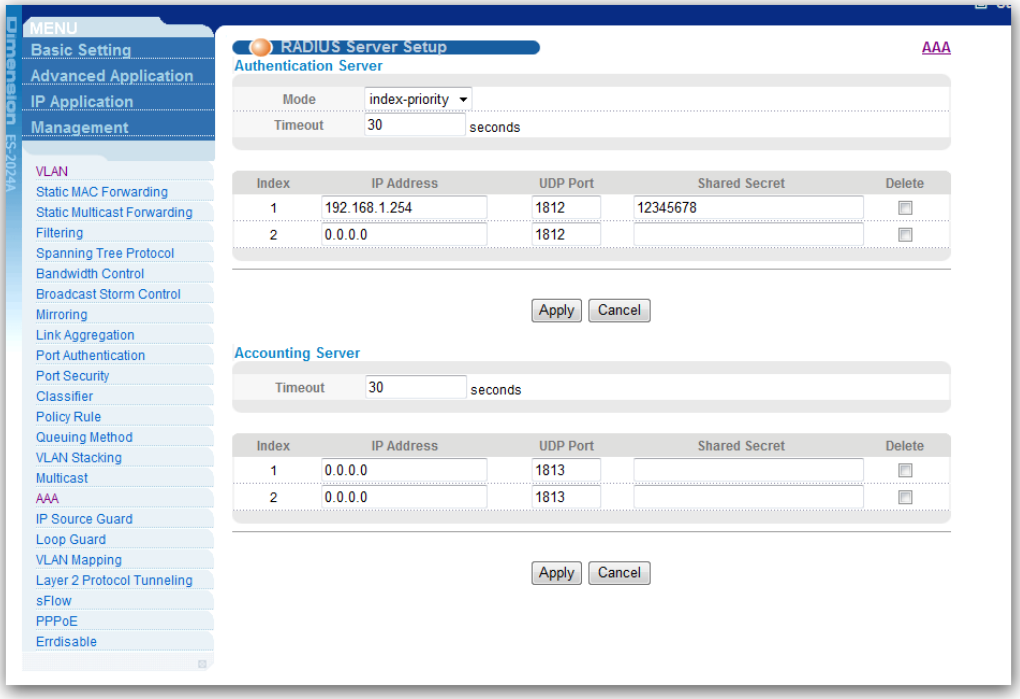
1. Configure VLAN 200.



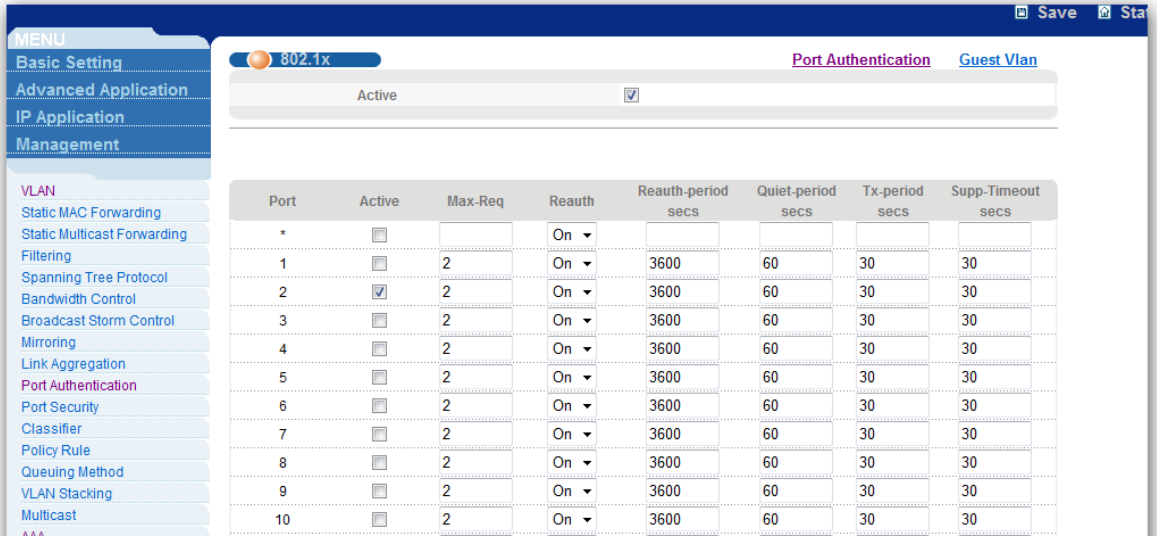
2. Configure PVID.



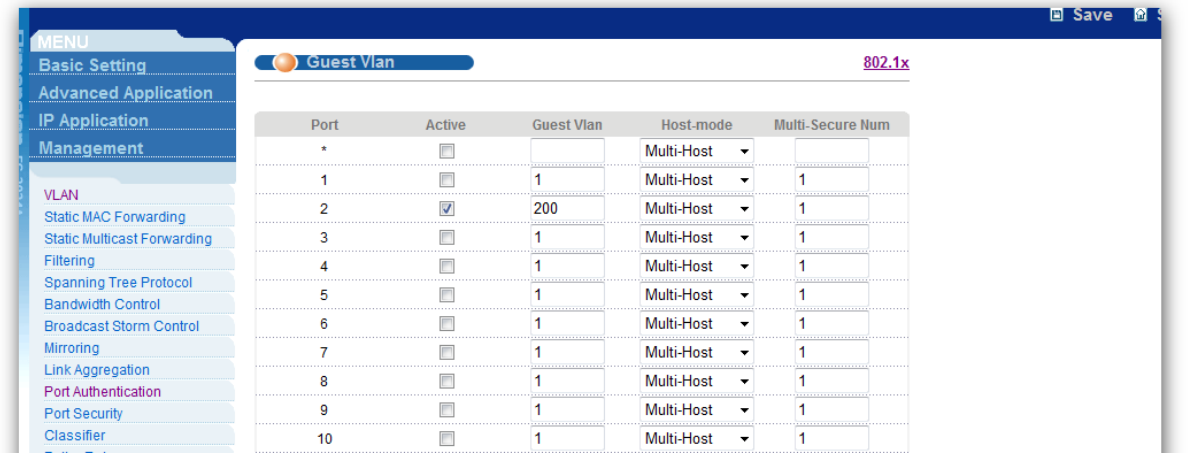
3. Configure RADIUS Server.



4. Enable Port Authentication.



5. Set Guest VLAN.



If PC 2 passes the authentication, it will be able to communicate with PC 3 but not PC 4.

```
Pinging 192.168.2.5 with 32 bytes of data:
Reply from 192.168.2.5: bytes=32 time=1ms TTL=64
Reply from 192.168.2.5: bytes=32 time<1ms TTL=64
Reply from 192.168.2.5: bytes=32 time<1ms TTL=64
Reply from 192.168.2.5: bytes=32 time=3ms TTL=64

Ping statistics for 192.168.2.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\Users\David>ping 192.168.2.200

Pinging 192.168.2.200 with 32 bytes of data:
Reply from 192.168.2.20: Destination host unreachable.
Request timed out.
```

If PC 2 fails the authentication, it will only be able to communicate with PC 4 but not PC 3.

```
Pinging 192.168.2.200 with 32 bytes of data:
Reply from 192.168.2.200: bytes=32 time<1ms TTL=64
Reply from 192.168.2.200: bytes=32 time<1ms TTL=64
Reply from 192.168.2.200: bytes=32 time<1ms TTL=64
Reply from 192.168.2.200: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.2.200:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\David>ping 192.168.2.5

Pinging 192.168.2.5 with 32 bytes of data:
Reply from 192.168.2.20: Destination host unreachable.
Reply from 192.168.2.20: Destination host unreachable.
Reply from 192.168.2.20: Destination host unreachable.
Reply from 192.168.2.20: Destination host unreachable.
```