

Guest VLAN

Ethernet Switch

ZyNOS 4.00

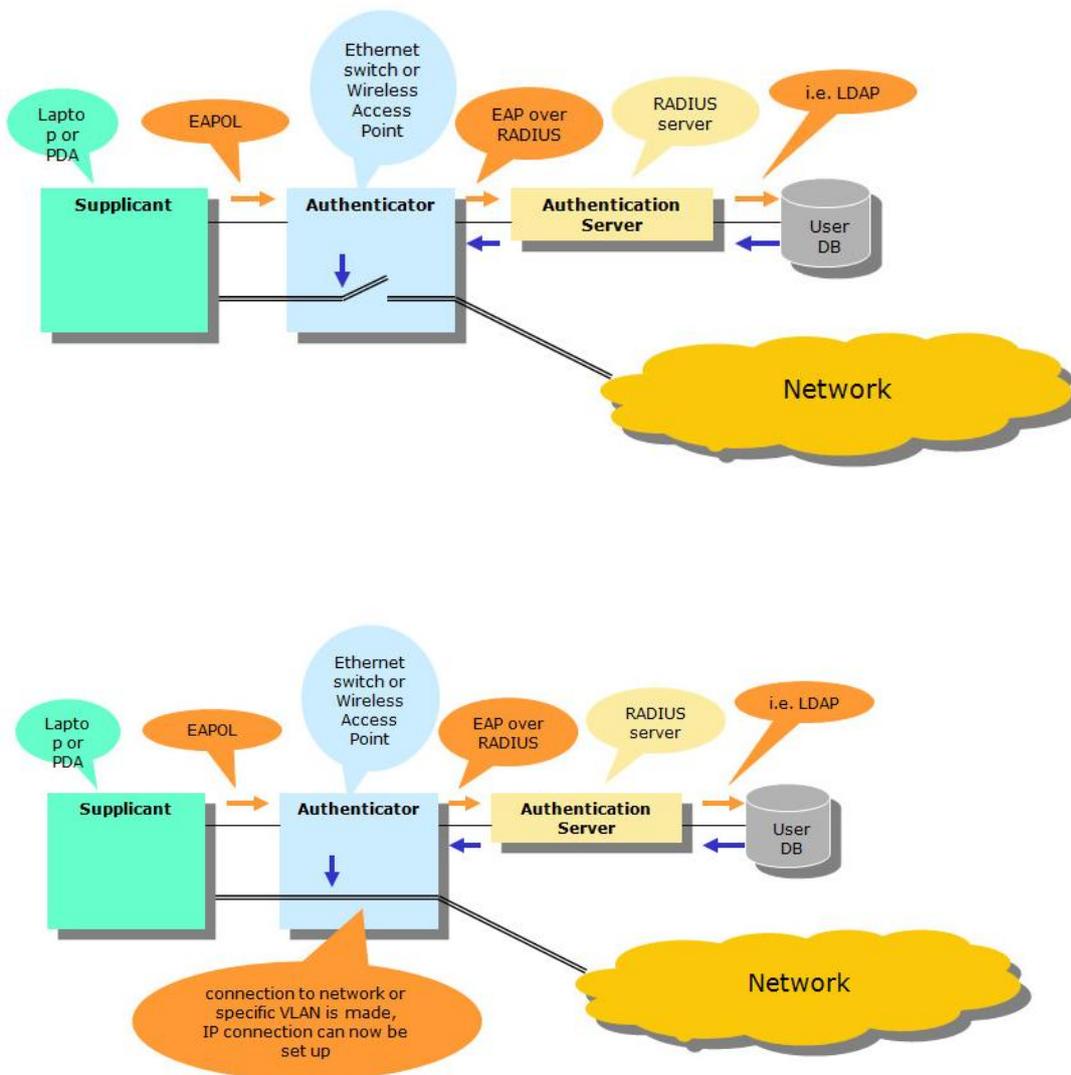
Support Notes
Version 4.00 July 2011



Overview of Guest VLAN

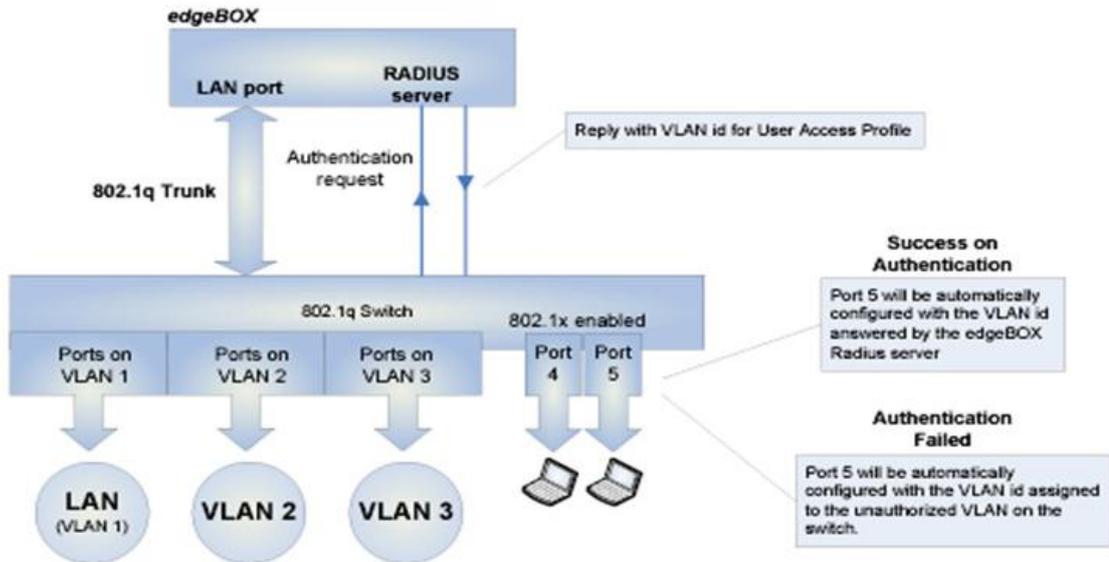
Guest VLAN is a feature that combines the function of 802.1x & VLAN. If a user doesn't pass the authentication while accessing network, then his network is restricted, and he will be added into Guest VLAN which only provides limited access to network resources.

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.

Port	Name	Link	State	PD	LACP	TxPkts	RxPkts	Errors	Tx KB/s	Rx KB/s	Up Time
1	1000M/F		FORWARDING	Off	Disabled	1116	1476	0	29.787	8.825	1:17:32
2	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
3	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
4	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
5	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
6	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
7	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
8	Down		STOP	Off	Disabled	0	0	0	0.0	0.0	0:00:00
9	Down		STOP	-	Disabled	819	10239	0	0.0	0.0	0:00:00
10	Down		STOP	-	Disabled	0	0	0	0.0	0.0	0:00:00

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

Port	Active	Max-Req	Reauth	Reauth-period secs	Quiet-period secs	Tx-period secs	Supp-Timeout secs
*	<input checked="" type="checkbox"/>		On				
1	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
2	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
3	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
4	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
5	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
6	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
7	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
8	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
9	<input checked="" type="checkbox"/>	2	On	3600	60	30	30
10	<input checked="" type="checkbox"/>	2	On	3600	60	30	30

The screenshot shows the ZyXEL web management interface for a Dimensional XGS-4528F switch. The 'Guest Vlan' configuration page is active, displaying a table for configuring guest VLANs on various ports. The table includes columns for Port, Active status, Guest Vlan ID, Host-mode, and Multi-Secure Num. The configuration is set for ports 1 through 10, with all 'Active' checkboxes selected and 'Guest Vlan' set to 1. The 'Host-mode' is set to 'Multi-Host' and 'Multi-Secure Num' is set to 1 for all ports. A 'Save' button and a 'Status' icon are visible in the top right corner of the interface.

Port	Active	Guest Vlan	Host-mode	Multi-Secure Num
*	<input type="checkbox"/>		Multi-Host	
1	<input checked="" type="checkbox"/>	1	Multi-Host	1
2	<input checked="" type="checkbox"/>	1	Multi-Host	1
3	<input checked="" type="checkbox"/>	1	Multi-Host	1
4	<input checked="" type="checkbox"/>	1	Multi-Host	1
5	<input checked="" type="checkbox"/>	1	Multi-Host	1
6	<input checked="" type="checkbox"/>	1	Multi-Host	1
7	<input checked="" type="checkbox"/>	1	Multi-Host	1
8	<input checked="" type="checkbox"/>	1	Multi-Host	1
9	<input checked="" type="checkbox"/>	1	Multi-Host	1
10	<input checked="" type="checkbox"/>	1	Multi-Host	1

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

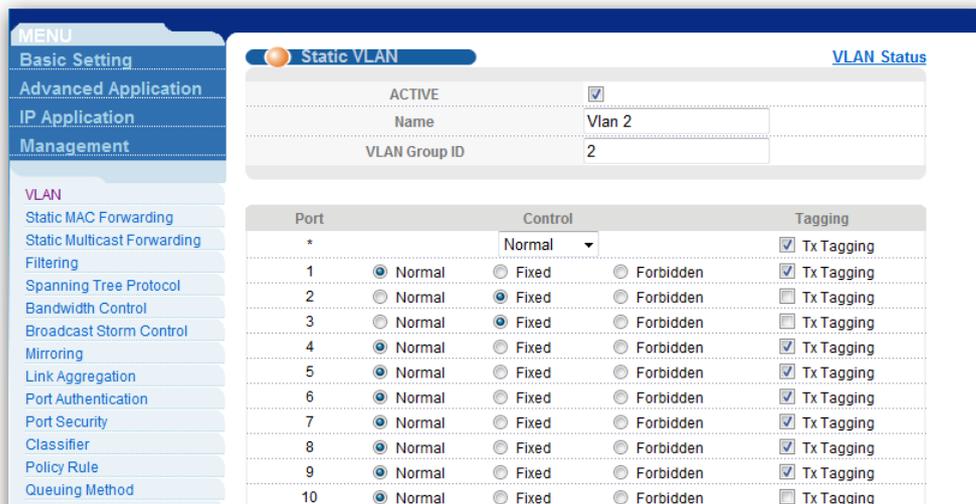
- **(config) Port-access-authenticator**
- **(config) Port-access-authenticator 5**
- **(config) Port-access-authenticator 5 guest vlan**
- **(config) Port-access-authenticator 5 guest vlan 100**
- **(config) Port-access-authenticator 5 guest vlan 100 host-mode multi-host**
- **(config) Port-access-authenticator 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:



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.

Static VLAN VLAN Status

ACTIVE

Name: Guest

VLAN Group ID: 200

Port	Control			Tagging
*	Normal	Fixed	Forbidden	Tx Tagging
1	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
2	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
3	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
4	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
5	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
6	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
7	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
8	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
9	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="checkbox"/>
10	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

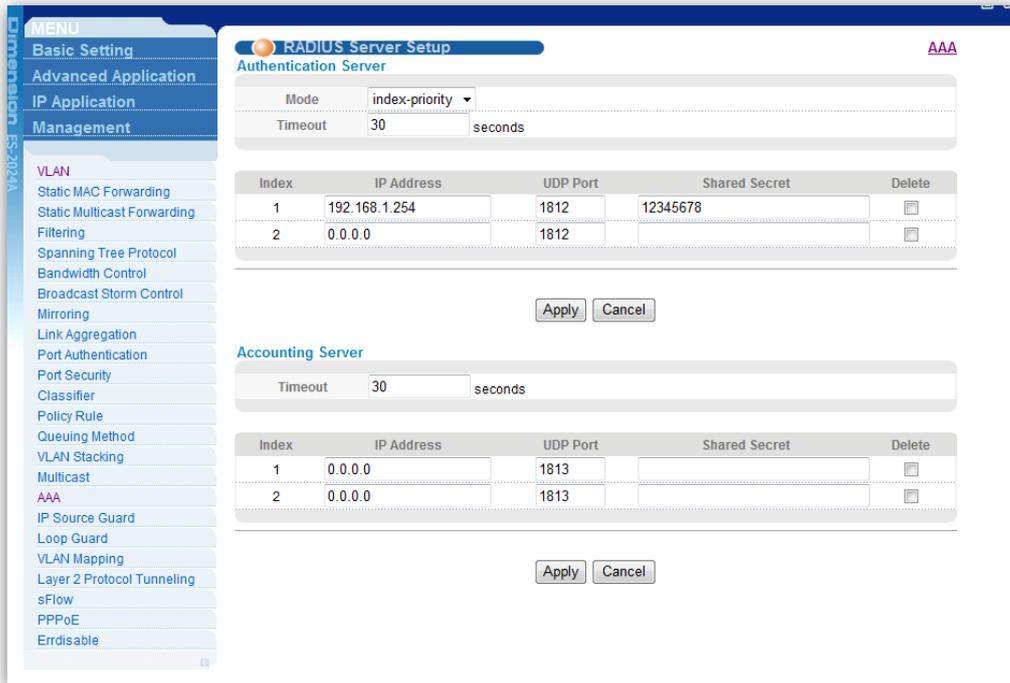
2. Configure PVID.

VLAN Port Setting Subnet Based Vlan Protocol Based Vlan VLAN Status

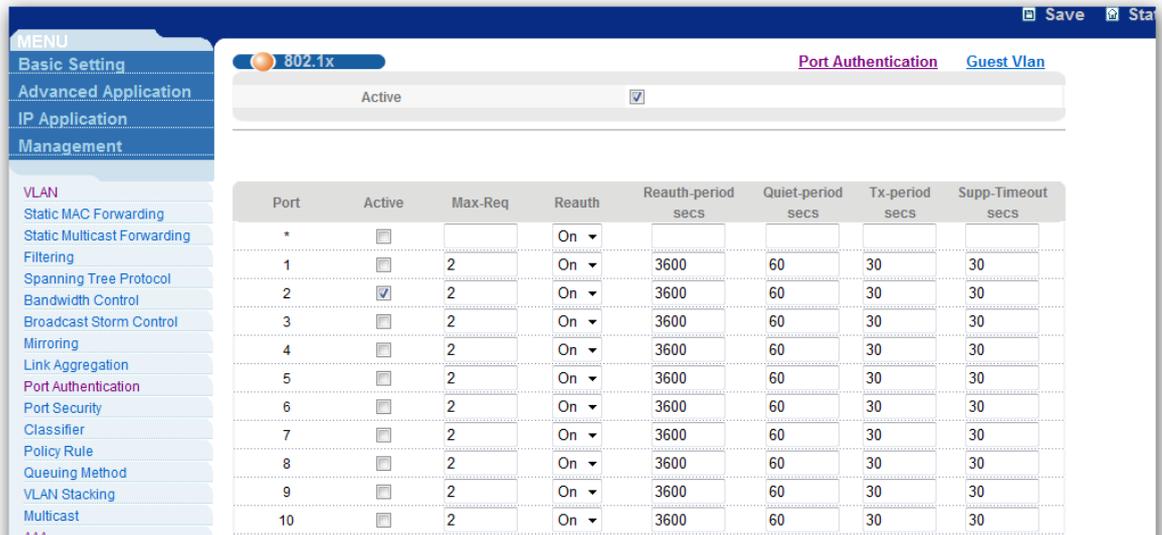
GVRP

Port	Ingress Check	PVID	GVRP	Acceptable Frame Type	VLAN Trunking	Isolation
*	<input type="checkbox"/>		<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
1	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	2	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	2	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
6	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
7	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
8	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
9	<input type="checkbox"/>	1	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>
10	<input type="checkbox"/>	200	<input type="checkbox"/>	All	<input type="checkbox"/>	<input type="checkbox"/>

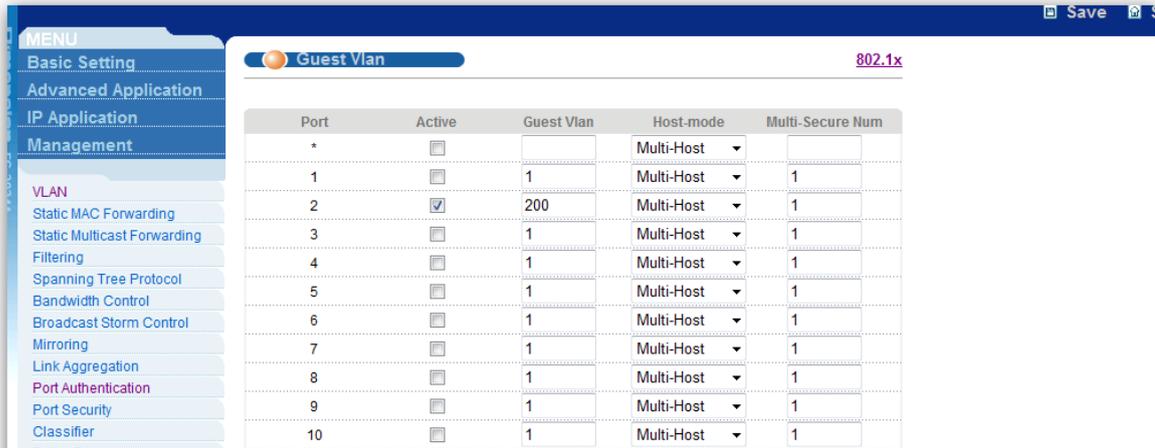
3. Configure RADIUS Server.



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

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.
```