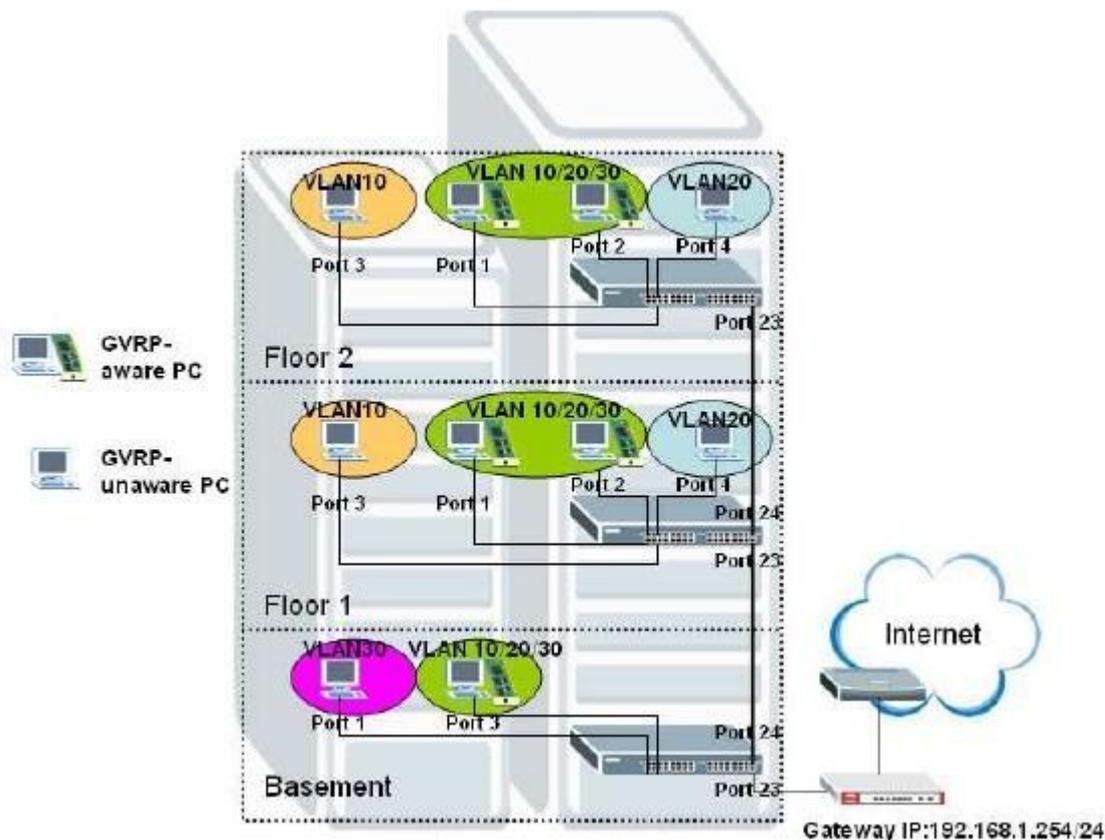# VLAN - GVRP

Ethernet Switch

ZyNOS 4.0

Support Notes

Version 4.00

Nov 2011

How to configure GVRP?

Description:

In this scenario, PCs belonging to different divisions within a single corporation cannot communicate with each other. Also, we leave some ports of switches for GVRP-aware PCs and others for VLAN-unaware PCs. Therefore the network administrator can manage and configure VLAN smartly based on what are the different devices and the requirements. For switches on floor 1

and 2, PC that is connected to port 3 joins VLAN 10 statically; PC that is connected to port 4 joins VLAN 20 statically; and PCs that are connected to port 1&2 can join VLAN 10/20/30 as determined by its configuration on GVRP-aware NIC dynamically. For switch in the basement, PC that is connected to port 1 joins VLAN 30 while the PC that is connected to port 3 can join VLAN10/20/30 dynamically. Please Note that all the clients connected to the switches in this scenario should be located in the same subnet (in this example, the subnet is 192.168.1.0/24)

How to configure this scenario:

1. For Switch A on Floor 2:

Please enter VLAN setting under Advanced Application menu and click "static VLAN" to bring up the following screen and add **VLAN 10: port 3, fixed, untag; port 9, fixed, Tx tagging".**

Add VLAN 20 to this switch, **VLAN 20: port 4, fixed, untag; port 9, fixed, Tx tagging.**

Static VLAN				VLAN Status

ACTIVE	☑	
Name	VLAN 20	
VLAN Group ID	20	

Port	Control			Tagging
*	Normal ▼			☑ Tx Tagging
1	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
2	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
3	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
4	○ Normal	◉ Fixed	○ Forbidden	☐ Tx Tagging
5	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
6	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
7	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
8	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
9	○ Normal	◉ Fixed	○ Forbidden	☑ Tx Tagging
10	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging

[Add] [Cancel] [Clear]

Click VLAN port setting to bring up the following screen, setup **PVID 10 for port 3, PVID 20 for port 4**, and enable GVRP on the top of the screen and **port 1, port 2, port 9.**

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VLAN Port Setting   Subnet Based Vlan   Protocol Based Vlan   VLAN Status

GVRP	☑
Ingress Check	☐

Port	PVID	GVRP	Acceptable Frame Type	VLAN Trunking	Isolation
*		☐	All ▼	☐	☐
1	1	☑	All ▼	☐	☐
2	1	☑	All ▼	☐	☐
3	10	☐	All ▼	☐	☐
4	20	☐	All ▼	☐	☐
5	1	☐	All ▼	☐	☐
6	1	☐	All ▼	☐	☐
7	1	☐	All ▼	☐	☐
8	1	☐	All ▼	☐	☐
9	1	☑	All ▼	☐	☐
10	1	☐	All ▼	☐	☐

Apply   Cancel

2. For Switch B on Floor 1:

Please follow the same steps and add **VLAN 10: port 3, fixed, untag; port 9, fixed, Tx tagging; port 10, fixed, Tx tagging".**

Add VLAN 20 to this switch, **VLAN 20: port 4, fixed, untag; port 9, fixed, Tx tagging; port 10, fixed, Tx tagging.**

Static VLAN	VLAN Status
ACTIVE	☑
Name	VLAN 20
VLAN Group ID	20

Port	Control			Tagging
*	Normal ▼			☑ Tx Tagging
1	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
2	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
3	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
4	○ Normal	◉ Fixed	○ Forbidden	☐ Tx Tagging
5	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
6	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
7	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
8	◉ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
9	○ Normal	◉ Fixed	○ Forbidden	☑ Tx Tagging
10	○ Normal	◉ Fixed	○ Forbidden	☑ Tx Tagging

Add Cancel Clear

Click VLAN port setting to bring up the following screen, setup **PVID 10 for port 3, PVID 20 for port 4,** and **enable GVRP on the top of the screen and port 1, port 2, port 9, port 10.**

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VLAN Port Setting	Subnet Based Vlan	Protocol Based Vlan	VLAN Status

| | GVRP | ☑ |
| | Ingress Check | ☐ |

Port	PVID	GVRP	Acceptable Frame Type	VLAN Trunking	Isolation
*		☐	All ▼	☐	☐
1	1	☑	All ▼	☐	☐
2	1	☑	All ▼	☐	☐
3	10	☐	All ▼	☐	☐
4	20	☐	All ▼	☐	☐
5	1	☐	All ▼	☐	☐
6	1	☐	All ▼	☐	☐
7	1	☐	All ▼	☐	☐
8	1	☐	All ▼	☐	☐
9	1	☑	All ▼	☐	☐
10	1	☑	All ▼	☐	☐

[Apply] [Cancel]

3. For Switch C on Basement:

Please set static **VLAN 10: port 9, fixed, untag.**

Basic Setting
Advanced Application
IP Application
Management

VLAN
Static MAC Forwarding
Static Multicast Forwarding
Filtering
Spanning Tree Protocol
Bandwidth Control
Broadcast Storm Control
Mirroring
Link Aggregation
Port Authentication
Port Security
Classifier
Policy Rule
Queuing Method
Multicast
AAA
IP Source Guard
Loop Guard

Static VLAN	VLAN Status
ACTIVE	☑
Name	VLAN 10
VLAN Group ID	10

Port	Control			Tagging
*	Normal ▼			☑ Tx Tagging
1	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
2	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
3	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
4	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
5	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
6	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
7	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
8	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging
9	○ Normal	⦿ Fixed	○ Forbidden	☐ Tx Tagging
10	⦿ Normal	○ Fixed	○ Forbidden	☑ Tx Tagging

[Add] [Cancel] [Clear]

Please set static **VLAN 20: port 23, fixed, untag**.

Add **VLAN 30: port 1, fixed, untag; port9, fixed, untag; port 10, fixed, Tx tagging.**

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Setup PVID 30 for port 1 and **enable GVRP on port 3 and port 24.**

Basic Setting
Advanced Application
IP Application
Management

VLAN
Static MAC Forwarding
Static Multicast Forwarding
Filtering
Spanning Tree Protocol
Bandwidth Control
Broadcast Storm Control
Mirroring
Link Aggregation
Port Authentication
Port Security
Classifier
Policy Rule
Queuing Method
Multicast
AAA
IP Source Guard
Loop Guard
Layer 2 Protocol Tunneling
PPPoE

VLAN Port Setting   Subnet Based Vlan   Protocol Based Vlan   VLAN Status

| | GVRP | ☑ |
| | Ingress Check | ☐ |

Port	PVID	GVRP	Acceptable Frame Type	VLAN Trunking	Isolation
*		☐	All ▼	☐	☐
1	30	☑	All ▼	☐	☐
2	1	☐	All ▼	☐	☐
3	1	☐	All ▼	☐	☐
4	1	☐	All ▼	☐	☐
5	1	☐	All ▼	☐	☐
6	1	☐	All ▼	☐	☐
7	1	☐	All ▼	☐	☐
8	1	☐	All ▼	☐	☐
9	1	☐	All ▼	☐	☐
10	1	☑	All ▼	☐	☐

Apply   Cancel

The setting of this scenario is done.