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**VSOLUTION PON APPLICATION WHITE PAPER—EPON APP NOTE/EXAMPLE**

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**Guangzhou V-SOLUTION Technology Co., Ltd**

Contents

[Case 1 SFU Bridge Without VLAN 4](#_Toc453575383)

[Network Diagram 4](#_Toc453575384)

[Planning Data 4](#_Toc453575385)

[Configuring the OLT 5](#_Toc453575386)

[Configuring the ONU 5](#_Toc453575387)

[Case 2 SFU Bridge With VLAN 6](#_Toc453575388)

[Network Diagram 6](#_Toc453575389)

[Planning Data 6](#_Toc453575390)

[Configuring the OLT 7](#_Toc453575391)

[Configuring the ONU 9](#_Toc453575392)

[Case 3 SFU Bridge With VLAN--IPTV 11](#_Toc453575393)

[Network Diagram 11](#_Toc453575394)

[Planning Data 11](#_Toc453575395)

[Configuring the OLT 12](#_Toc453575396)

[Configuring the ONU 15](#_Toc453575397)

[Case 4 SFU Route Without VLAN 18](#_Toc453575398)

[Network Diagram 18](#_Toc453575399)

[Planning Data 18](#_Toc453575400)

[Configuring the OLT 20](#_Toc453575401)

[Configuring the ONU 20](#_Toc453575402)

[Case 5 SFU Router With VLAN 25](#_Toc453575403)

[Network Diagram 25](#_Toc453575404)

[Planning Data 25](#_Toc453575405)

[Configuring the OLT 27](#_Toc453575406)

[Configuring the ONU 29](#_Toc453575407)

[Case 6 HGU Router With VLAN--Internet 34](#_Toc453575408)

[Network Diagram 34](#_Toc453575409)

[Planning Data 34](#_Toc453575410)

[Configuring the OLT 36](#_Toc453575411)

[Configuring the ONU 37](#_Toc453575412)

[Case 7 HGU Router With VLAN--VoIP 42](#_Toc453575413)

[Network Diagram 42](#_Toc453575414)

[Planning Data 42](#_Toc453575415)

[Configuring the OLT 43](#_Toc453575416)

[Configuring the ONU 45](#_Toc453575417)

[Case 8 HGU Bridge With VLAN--IPTV 50](#_Toc453575418)

[Network Diagram 50](#_Toc453575419)

[Planning Data 50](#_Toc453575420)

[Configuring the OLT 51](#_Toc453575421)

[Configuring the ONU 55](#_Toc453575422)

[Case 9 HGU Router/Bridge With VLAN Internet--VoIP--IPTV 57](#_Toc453575423)

[Network Diagram 57](#_Toc453575424)

[Planning Data 57](#_Toc453575425)

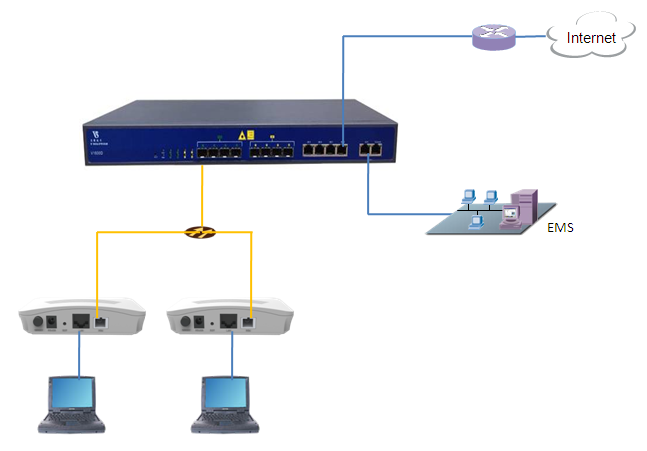
[Configuring the OLT 60](#_Toc453575426)

[Configuring the ONU 60](#_Toc453575427)

# Case 1 SFU Bridge Without VLAN

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.1.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | 2801HE |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | Default  (VLAN = 1 UNTAG  PVID = 1) |
| Service Uplink port | Configure according to the number of the actually  used uplink port. | GE8 |
| Service PON VLAN | The VLAN ID of the PON port service. | Default  (VLAN = 1 UNTAG  PVID = 1) |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service  LAN  VLAN | The VLAN ID of the LAN port service. | Default  (VLAN mode = TRANSPARENT) |
| Service LAN port | The number of the actually used ONU port. | LAN1 |
| PC | If DHCP mode | The router use DHCP assign ip to PC. | Gateway = 10.1.1.1  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If PPPoE  mode | The router use PPPoE assign ip to PC. | IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  User name = test  Password = test |
| If Static  mode | The router use Static assign ip to PC. | Gateway = 10.1.1.1  IP = 10.1.1.100  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |

## Configuring the OLT

Default Configuration

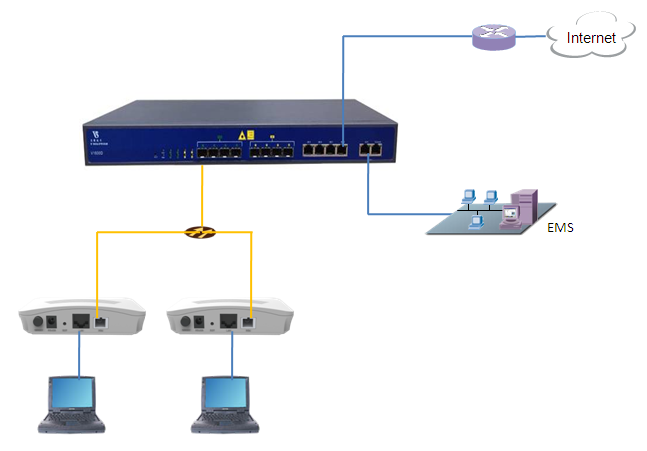
## Configuring the ONU

Default Configuration

# Case 2 SFU Bridge With VLAN

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.1.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | 2801HE |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  PVID = 100 |
| Service Uplink port | Configure according to the number of the actually  used uplink port. | GE8 |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 100 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service LAN VLAN | The VLAN ID of the LAN port service.(CTC VLAN mode) | VLAN mode = TAG  PVID = 100 |
| Service LAN port | The number of the actually used ONU port. | LAN1 |
| PC | If DHCP mode | The router use DHCP assign ip to PC. | Gateway = 10.1.1.1  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If PPPoE  mode | The router use PPPoE assign ip to PC. | IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  User name = test  Password = test |
| If Static  mode | The router use Static assign ip to PC. | Gateway = 10.1.1.1  IP = 10.1.1.100  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |

## Configuring the OLT

CLI

epon-olt(config)# vlan 100

epon-olt(config-vlan-100)# exit

epon-olt(config)# interface gigabitethernet 0/8

epon-olt(config-if-ge0/8)# switchport hybrid vlan 100 untagged

epon-olt(config-if-ge0/8)# switchport hybrid pvid vlan 100

epon-olt(config-if-ge0/8)# exit

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# switchport hybrid vlan 100 tagged

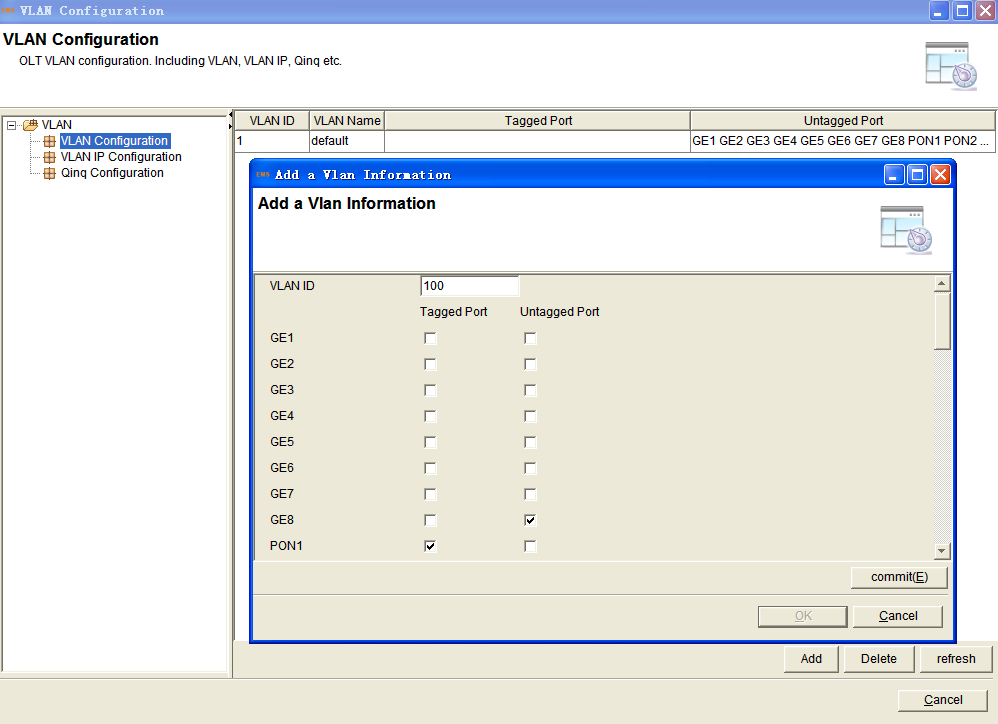
epon-olt(config-pon-0/1)# exit

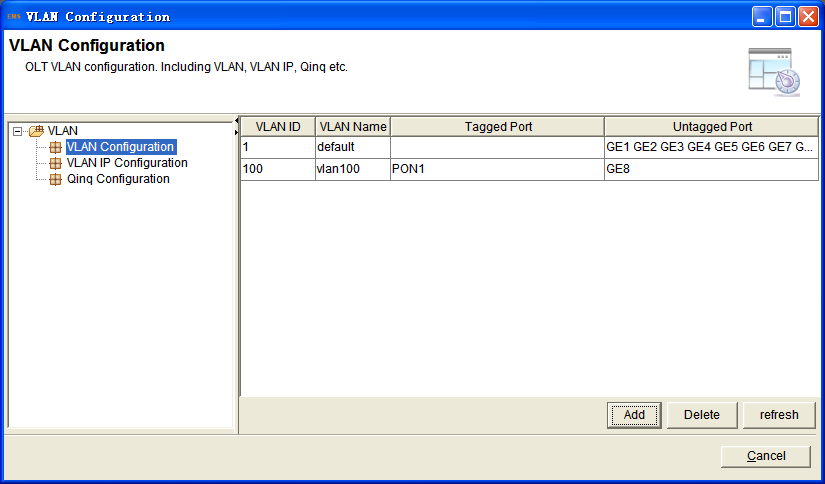
EMS

1. Right-click the OLT icon and select **Configuration->VLAN Configuration**

2. Click the **Add** button, configure according to the planning data.

3. Click the **commit** button to complete the configuration.

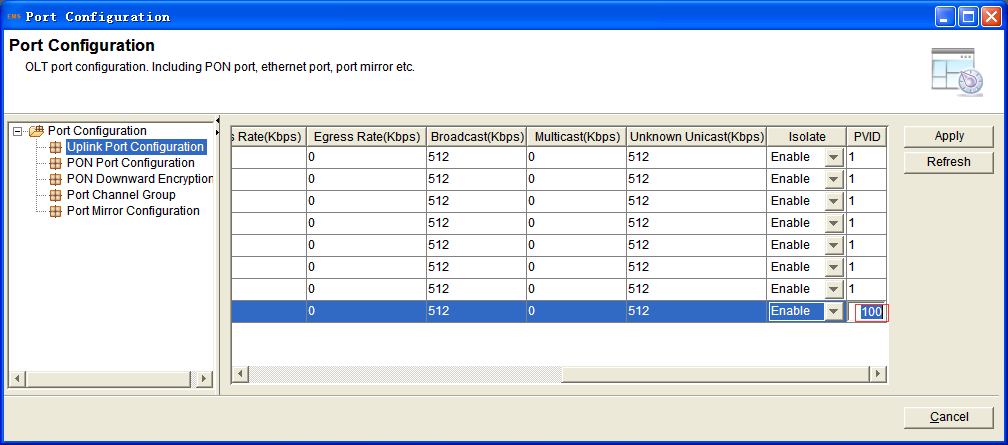




4. Right-click the OLT icon and select **Configuration->Port Configuration**

Configure according to the planning data.

5. Click the **Apply** button to complete the configuration.



## Configuring the ONU

CLI

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# onu 1 ctc eth 1 vlan mode tag

epon-olt(config-pon-0/1)# onu 1 ctc eth 1 vlan pvid 100 pri 3

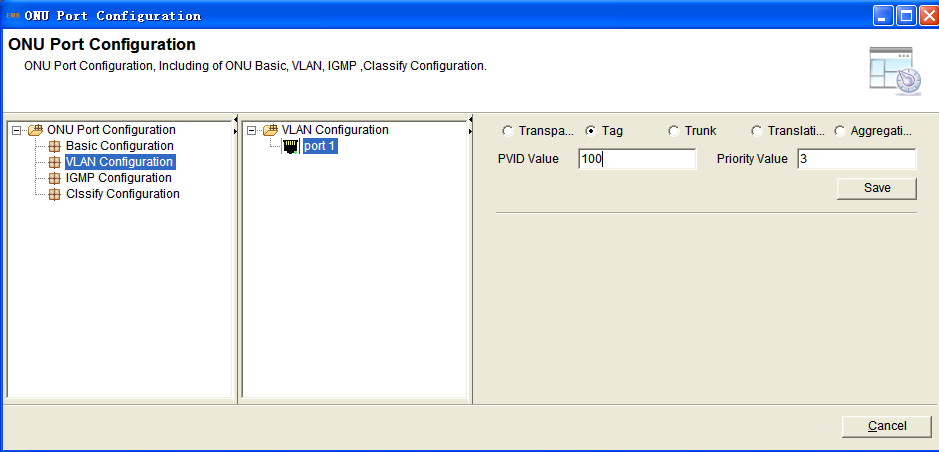
epon-olt(config-pon-0/1)# exit

EMS

1. Right-click the ONU icon and select **Configuration->ONU Port Configuration**

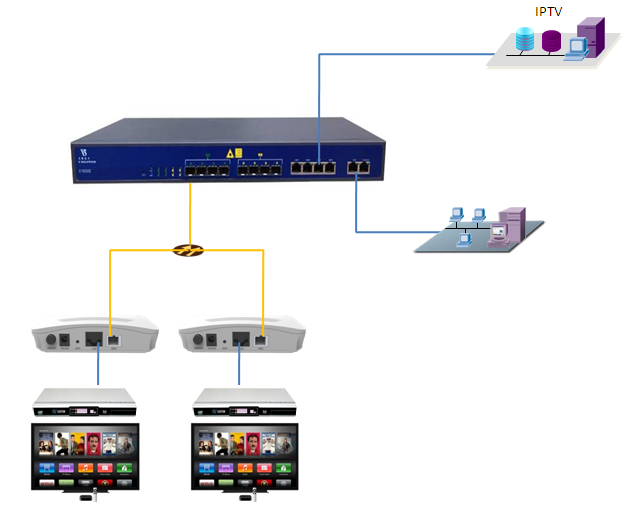
2. Choose **VLAN Configuration->port 1**, configure according to the planning data.

3. Click the **Save** button to complete the configuration.



# Case 3 SFU Bridge With VLAN--IPTV

## Network Diagram



**10.1.3.1/24**

**DHCP/PPPoE/Static**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | 2801HE |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  PVID = 100 |
| Service Uplink port | Configure according to the number of the actually  used uplink port. | GE8 |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 100 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service LAN VLAN | The VLAN ID of the LAN port service.(CTC VLAN mode) | VLAN mode = TAG  PVID = 100 |
| Service LAN port | The number of the actually used ONU port. | LAN1 |
| STB | Management IP | The IP for STB. | Gateway = 10.1.3.1  IP = 10.1.3.100  IP Mask = 255.255.255.0 |

## Configuring the OLT

CLI

epon-olt(config)# vlan 100

epon-olt(config-vlan-100)# exit

epon-olt(config)# interface gigabitethernet 0/8

epon-olt(config-if-ge0/8)# switchport hybrid vlan 100 untagged

epon-olt(config-if-ge0/8)# switchport hybrid pvid vlan 100

epon-olt(config-if-ge0/8)# exit

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# switchport hybrid vlan 100 tagged

epon-olt(config-pon-0/1)# exit

epon-olt(config)# ip igmp snooping enable

epon-olt(config)# ip igmp snooping general-query-packet enable

epon-olt(config)# ip igmp snooping mrouter vlan 100 interface gigabitethernet 0/8

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# ip igmp snooping user-vlan 100 group-vlan 100 tagged

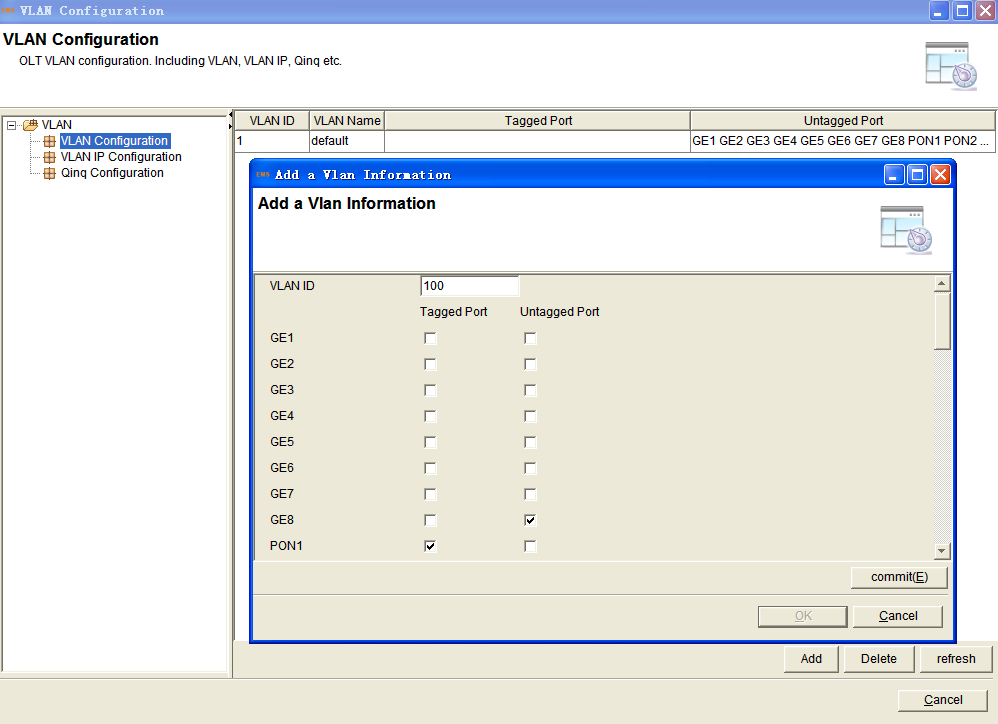
epon-olt(config-pon-0/1)# exit

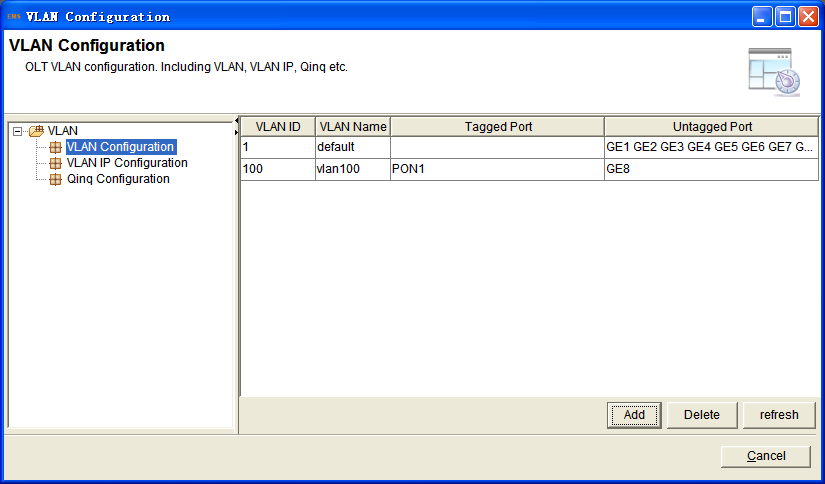
EMS

1. Right-click the OLT icon and select **Configuration->VLAN Configuration**

2. Click the **Add** button, configure according to the planning data.

3. Click the **commit** button to complete the configuration.

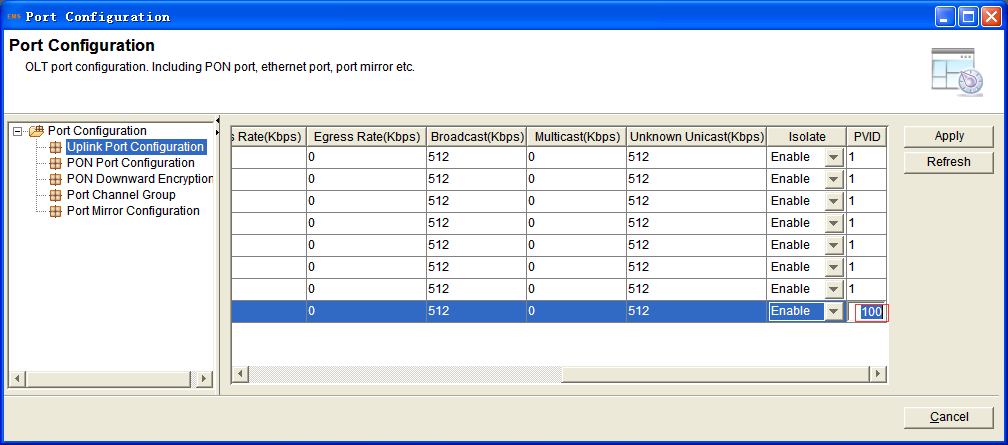




4. Right-click the OLT icon and select **Configuration->Port Configuration**

Configure according to the planning data.

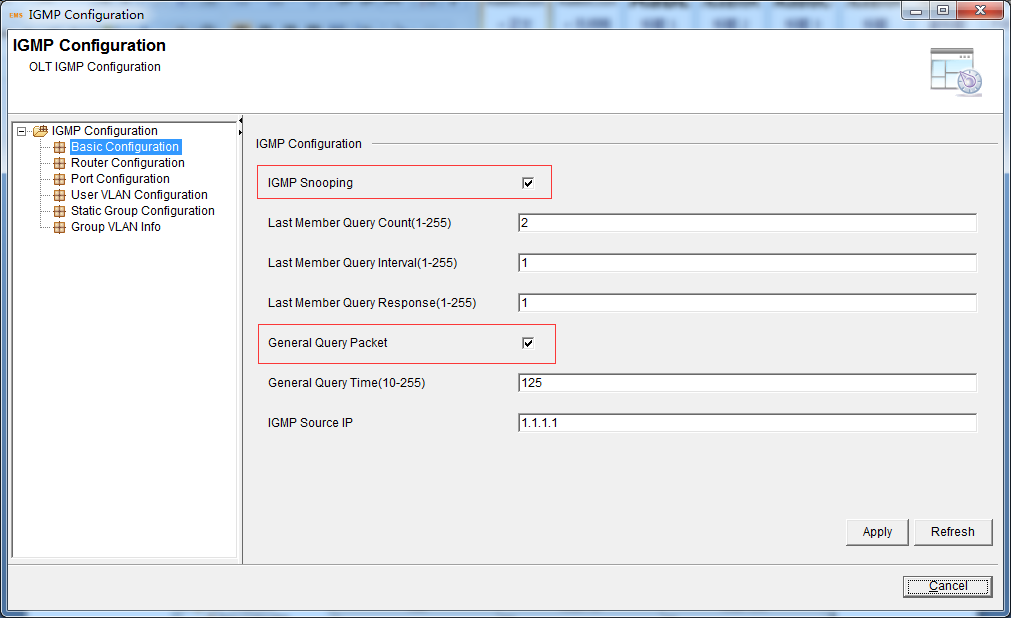
5. Click the **Apply** button to complete the configuration.



6. Right-click the OLT icon and select **Configuration->IGMP Configuration**

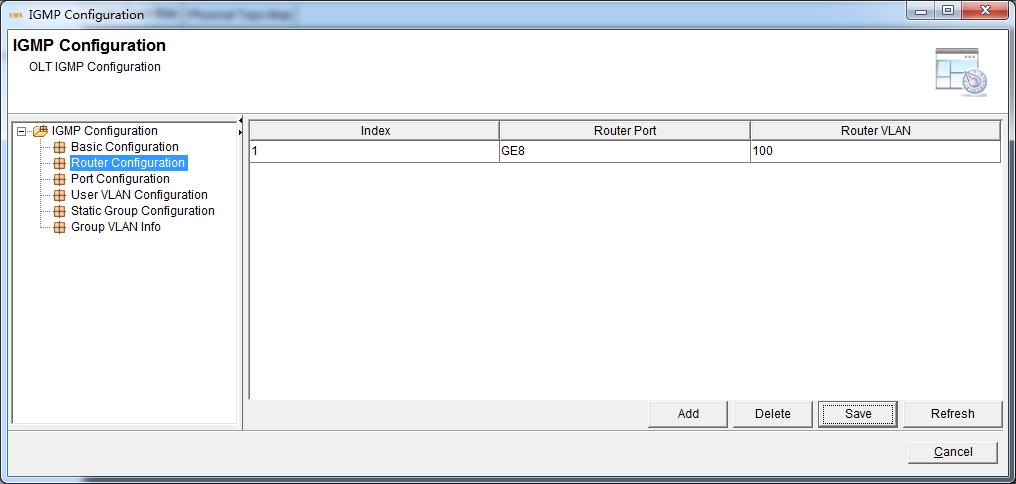
configure according to the planning data.

7. Choose **Basic Configuration**, tick the **IGMP Snooping** and **General Query Packet** , click the **Apply** button to complete the configuration.



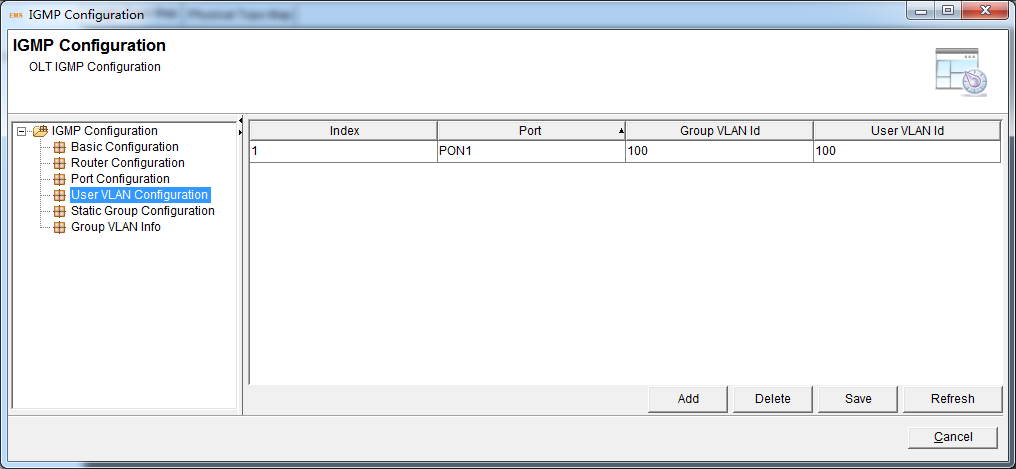
8. Choose **Router Configuration**, click the **Add** button to create a item, then modify the parameters according to the planning data.

Click the **Save** button to complete the configuration.



9. Choose **User Vlan Configuration**, click the **Add** button to create a item, then modify the parameters according to the planning data.

Click the **Save** button to complete the configuration.



## Configuring the ONU

CLI

epon-olt (config)# inter epon 0/1

epon-olt (config-pon-0/1)# onu 1 ctc eth 1 vlan mode tag

epon-olt (config-pon-0/1)# onu 1 ctc eth 1 vlan pvid 100 pri 0

epon-olt (config-pon-0/1)# onu 1 ctc eth 1 mc\_vlan add 100

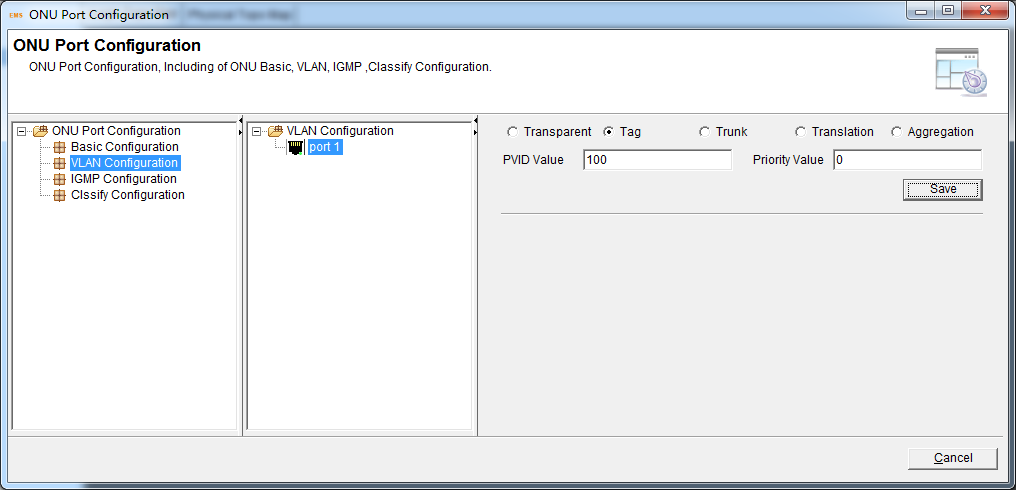
epon-olt (config-pon-0/1)# onu 1 ctc eth 1 mc­\_tagstrip enable

EMS

1. Right-click the ONU icon and select **Configuration->ONU Port Configuration**

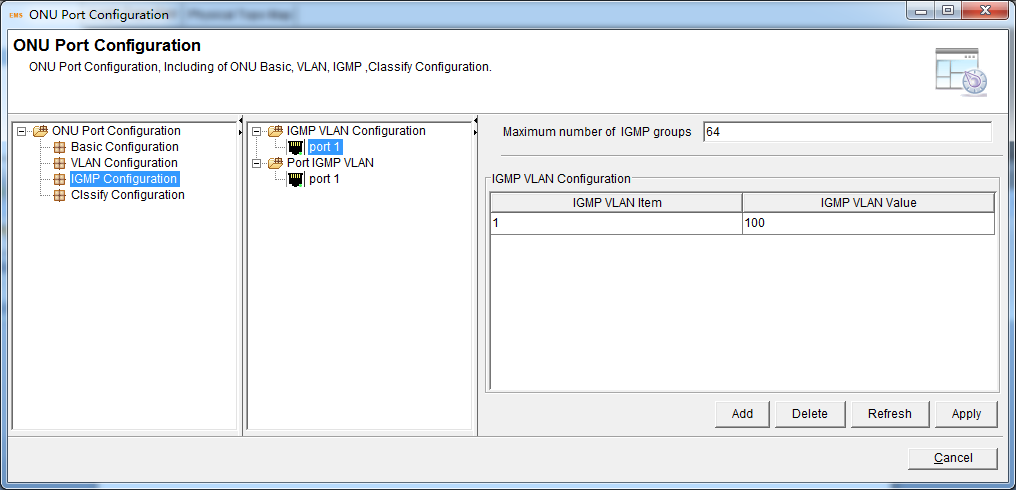
2. Choose **VLAN Configuration->port 1**, configure according to the planning data.

3. Click the **Save** button to complete the configuration.

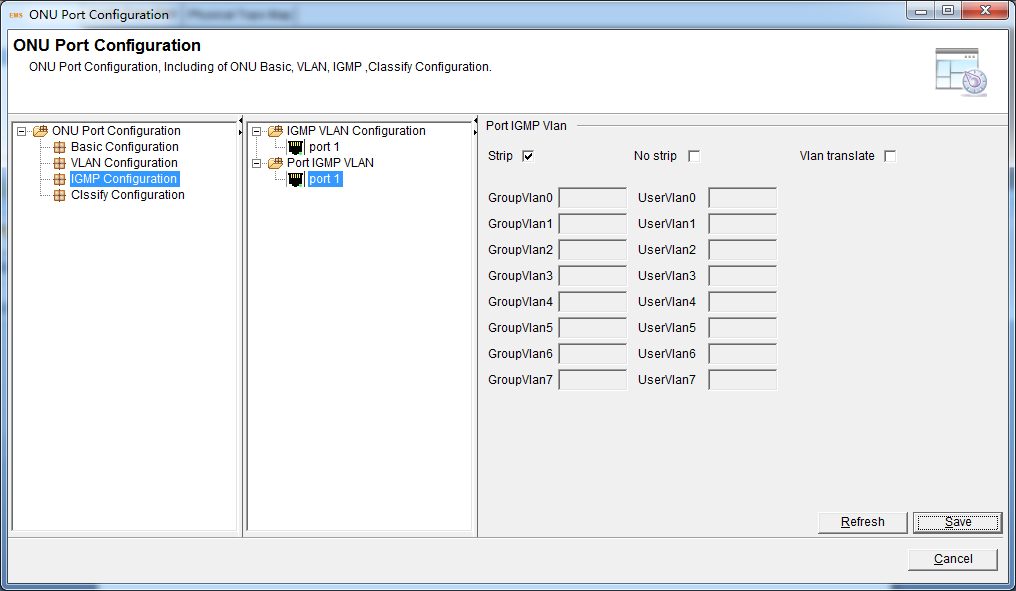


4. Choose **IGMP Configuration****->IGMP VLAN Configuration->port 1**,click **Add,** configure according to the planning data.

5. Click the **Save** button to complete the configuration.



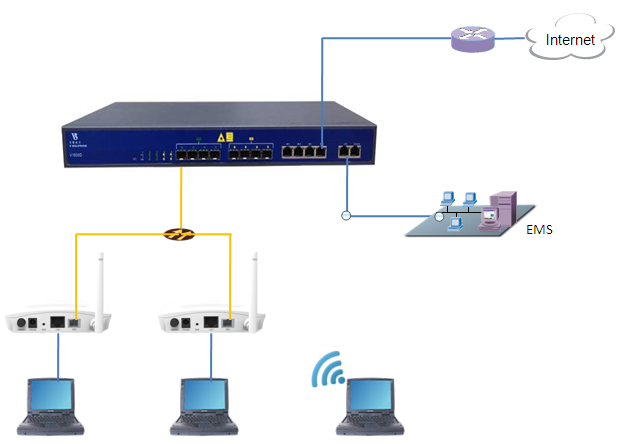
6.Choose **Port** **IGMP VLAN ->port 1**,click **Add,** configure according to the planning data.



# Case 4 SFU Route Without VLAN

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.1.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | 2801HW |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | Default  (VLAN = 1 UNTAG  PVID = 1) |
| Service Uplink port | Configure according to the number of the actually used uplink port. | GE8 |
| Service PON VLAN | The VLAN ID of the PON port service. | Default  (VLAN = 1 UNTAG  PVID = 1) |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service LAN VLAN | The VLAN ID of the LAN port service. | Default  No VLAN |
| Service LAN port | The number of the actually used ONU port. | LAN1 |
| WiFi | Wireless’s SSID name,Security. | SSID1 name = SSID-1  Security method = WAP2 Mixed  WPA Encryption = TKIP  WPA2 Encryption = AES  KEY = 12345678 |
| Service WAN  VLAN | The VLAN ID of the PON(WAN) port service. | Default  No VLAN |
| If WAN use DHCP mode | The router use DHCP assign ip to ONU. | Gateway = 10.1.1.1  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If WAN use PPPoE  mode | The router use PPPoE assign ip to ONU. | IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  User name = test  Password = test |
| If WAN use Static  mode | The router use Static assign ip to ONU. | Gateway = 10.1.1.1  IP = 10.1.1.100  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| PC | DHCP mode | The ONU use DHCP assign ip to PC. | Gateway = 192.168.1.1  IP = 192.168.1.40  IP Mask = 255.255.255.0  DNS = 192.168.1.1 |

## Configuring the OLT

Default Configuration

## Configuring the ONU

ONU WEB

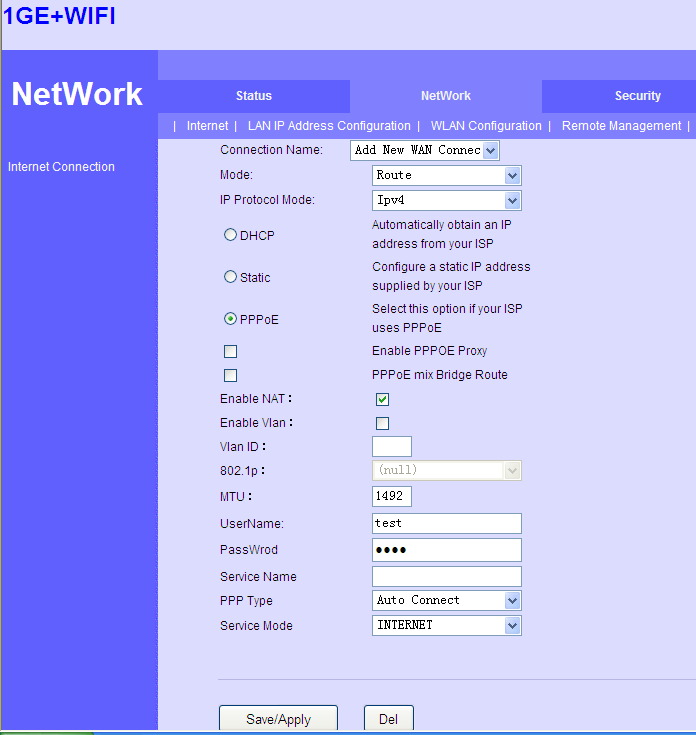
If DHCP mode



The connection status



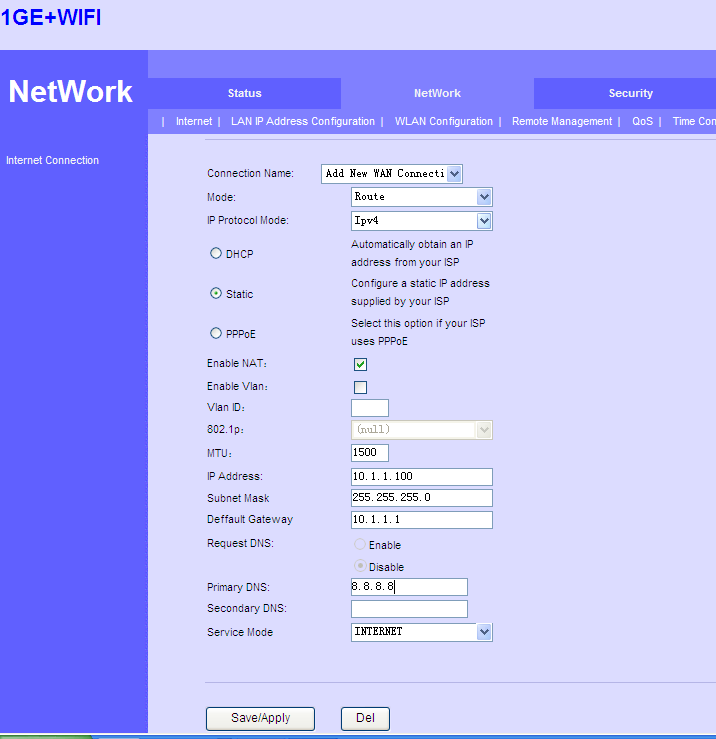
If PPPoE mode



The connection status



If Static mode

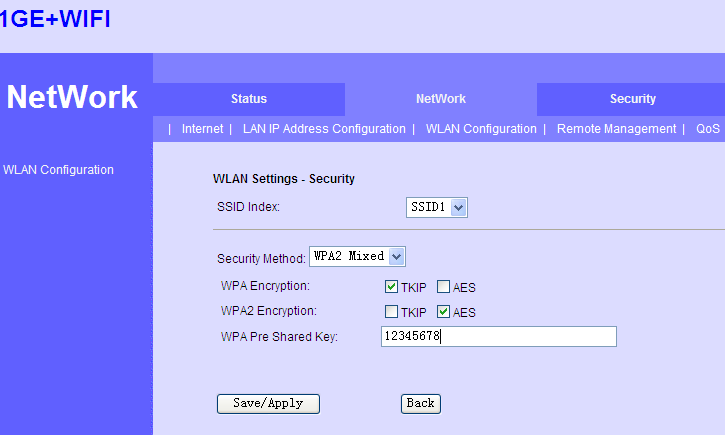


The connection status



WiFi

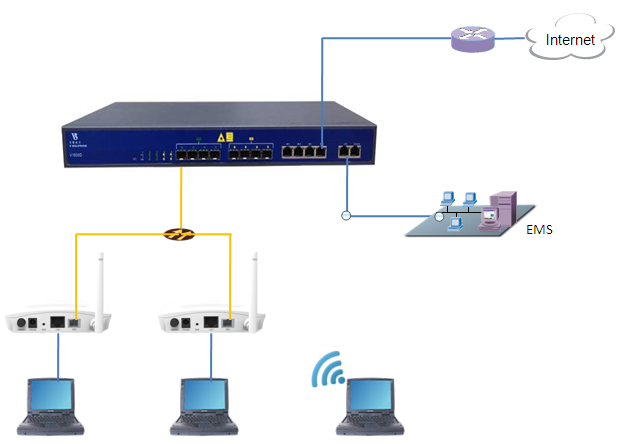




# Case 5 SFU Router With VLAN

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.1.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | 2801HW |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  PVID = 100 |
| Service Uplink port | Configure according to the number of the actually  used uplink port. | GE8 |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 100 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service LAN  VLAN | The VLAN ID of the LAN port service. | Default  No VLAN |
| Service LAN port | The number of the actually used ONU port. | LAN1 |
| WiFi | Wireless’s SSID name,Security. | SSID1 name = SSID-1  Security method = WAP2 Mixed  WPA Encryption = TKIP  WPA2 Encryption = AES  KEY = 12345678 |
| Service WAN  VLAN | The VLAN ID of the PON(WAN) port service. | VLAN ID = 100 |
| If WAN use DHCP mode | The router use DHCP assign ip to ONU. | Gateway = 10.1.1.1  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If WAN use PPPoE  mode | The router use PPPoE assign ip to ONU. | IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  User name = test  Password = test |
| If WAN use Static  mode | The router use Static assign ip to ONU. | Gateway = 10.1.1.1  IP = 10.1.1.100  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| PC | DHCP mode | The ONU use DHCP assign ip to PC. | Gateway = 192.168.1.1  IP = 192.168.1.40  IP Mask = 255.255.255.0  DNS = 192.168.1.1 |

## Configuring the OLT

CLI

epon-olt(config)# vlan 100

epon-olt(config-vlan-100)# exit

epon-olt(config)# interface gigabitethernet 0/8

epon-olt(config-if-ge0/8)# switchport hybrid vlan 100 untagged

epon-olt(config-if-ge0/8)# switchport hybrid pvid vlan 100

epon-olt(config-if-ge0/8)# exit

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# switchport hybrid vlan 100 tagged

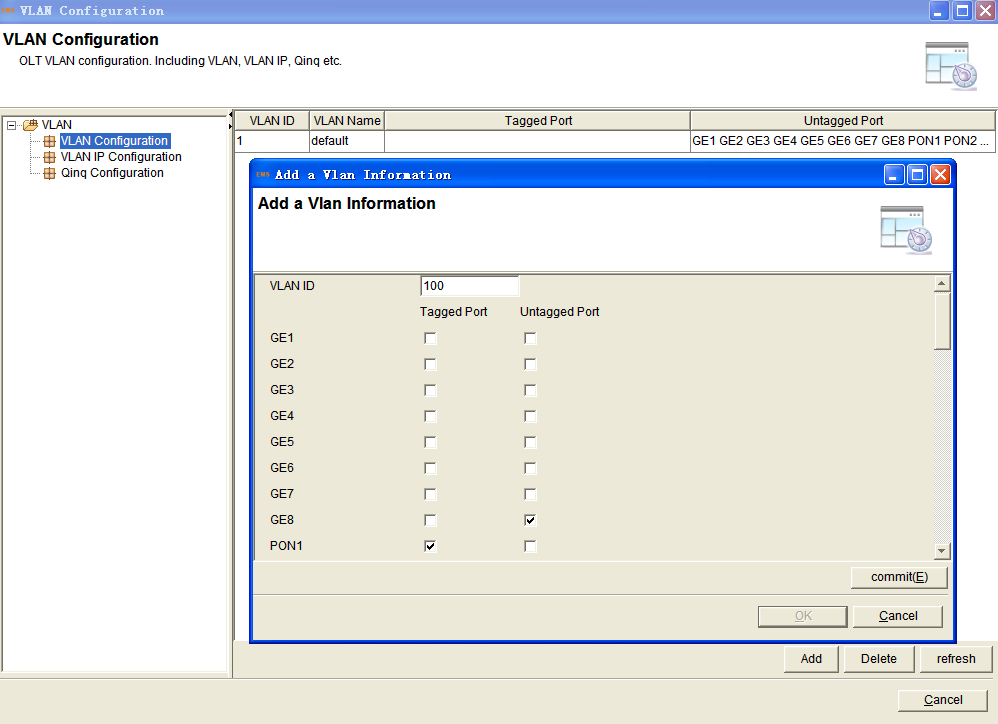
epon-olt(config-pon-0/1)# exit

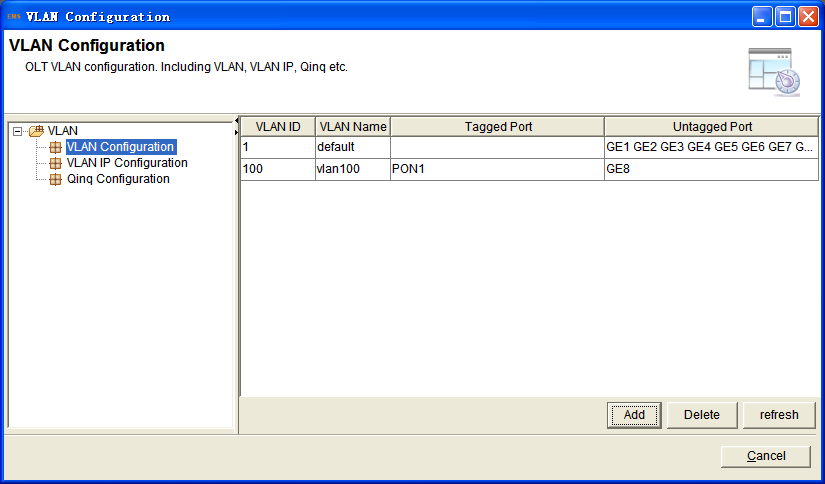
EMS

1. Right-click the OLT icon and select **Configuration->VLAN Configuration**

2. Click the **Add** button, configure according to the planning data.

3. Click the **commit** button to complete the configuration.

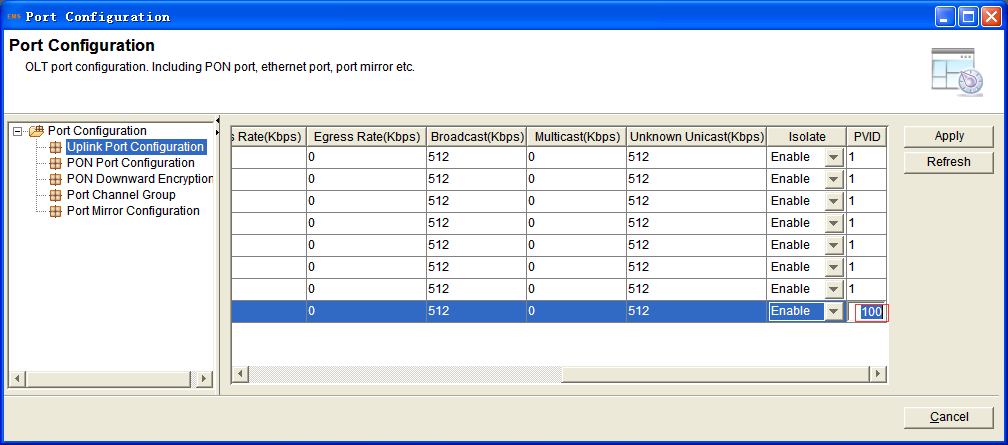




4. Right-click the OLT icon and select **Configuration->Port Configuration**

configure according to the planning data.

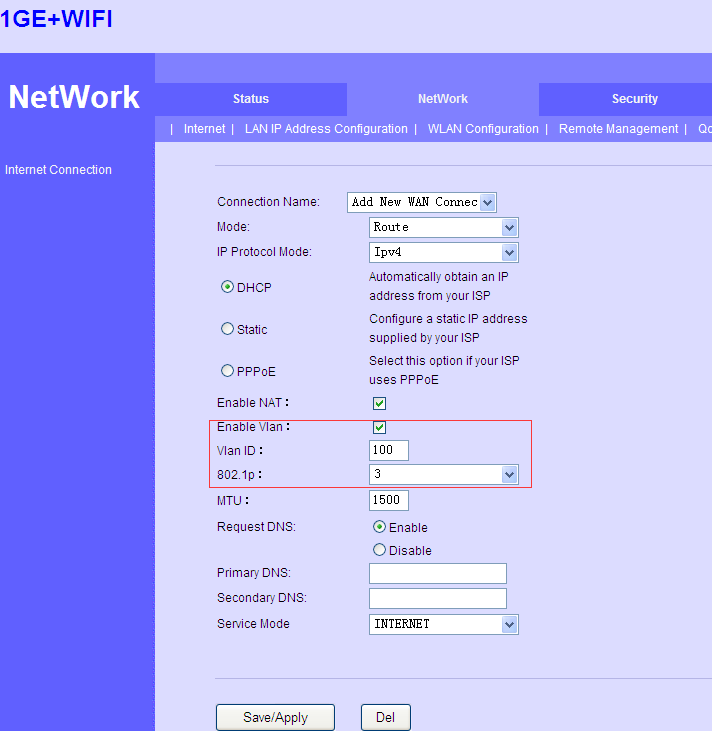
5. Click the **Apply** button to complete the configuration.



## Configuring the ONU

ONU WEB

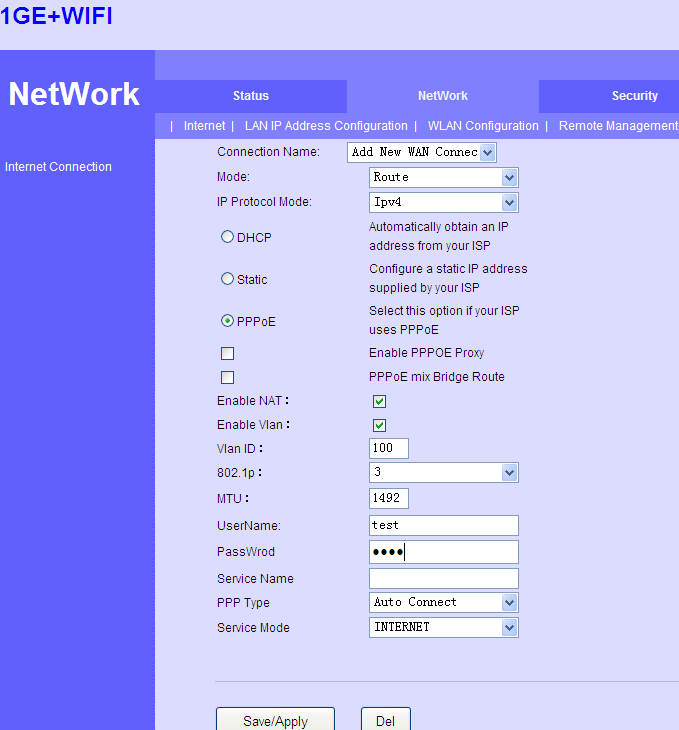
If DHCP mode



The connection status



If PPPoE mode



The connection status



If Static mode

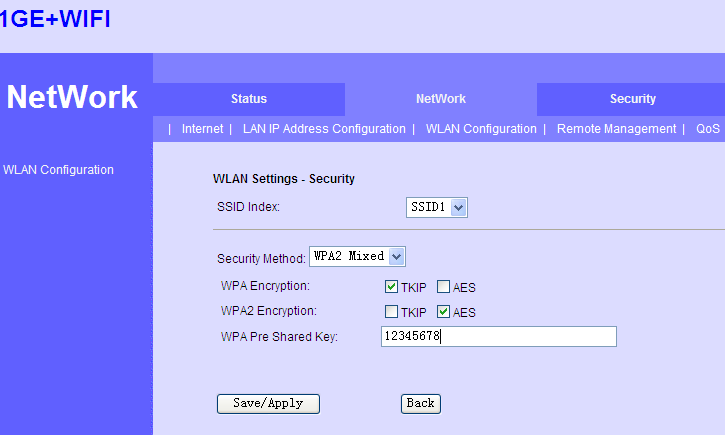


The connection status



WiFi

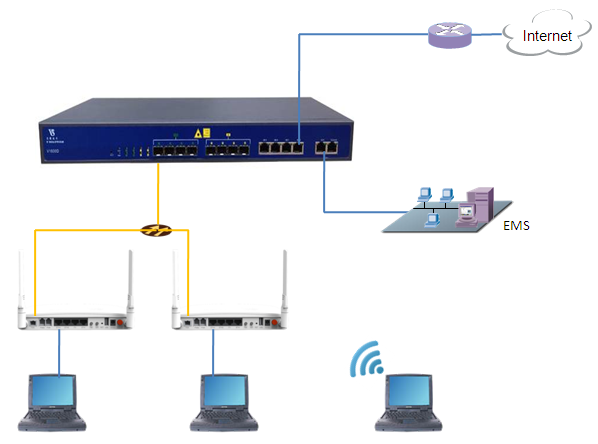




# Case 6 HGU Router With VLAN--Internet

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.1.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | HG326UEG |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  PVID = 100 |
| Service Uplink port | Configure according to the number of the actually used uplink port. | GE8 |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 100 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service LAN  VLAN | The VLAN ID of the LAN port service. | Default  No VLAN |
| Service LAN port | The number of the actually used ONU port. | LAN1 |
| WiFi | Wireless’s SSID name,Security. | SSID1 name = SSID-1  Security method = WAP2 Mixed  WPA Encryption = TKIP  WPA2 Encryption = AES  KEY = 12345678 |
| Service WAN  VLAN | The VLAN ID of the PON(WAN) port service. | VLAN ID = 100 |
| If WAN use DHCP mode | The router use DHCP assign ip to terminal user. | Gateway = 10.1.1.1  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If WAN use PPPoE  mode | The router use PPPoE assign ip to terminal user. | IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  User name = test  Password = test |
| If WAN use Static  mode | The router use Static assign ip to terminal user. | Gateway = 10.1.1.1  IP = 10.1.1.100  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| PC | DHCP mode | The ONU use DHCP assign ip to PC. | Gateway = 192.168.1.1  IP = 192.168.1.2  IP Mask = 255.255.255.0  DNS = 192.168.1.1 |

## Configuring the OLT

CLI

epon-olt(config)# vlan 100

epon-olt(config-vlan-100)# exit

epon-olt(config)# interface gigabitethernet 0/8

epon-olt(config-if-ge0/8)# switchport hybrid vlan 100 untagged

epon-olt(config-if-ge0/8)# switchport hybrid pvid vlan 100

epon-olt(config-if-ge0/8)# exit

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# switchport hybrid vlan 100 tagged

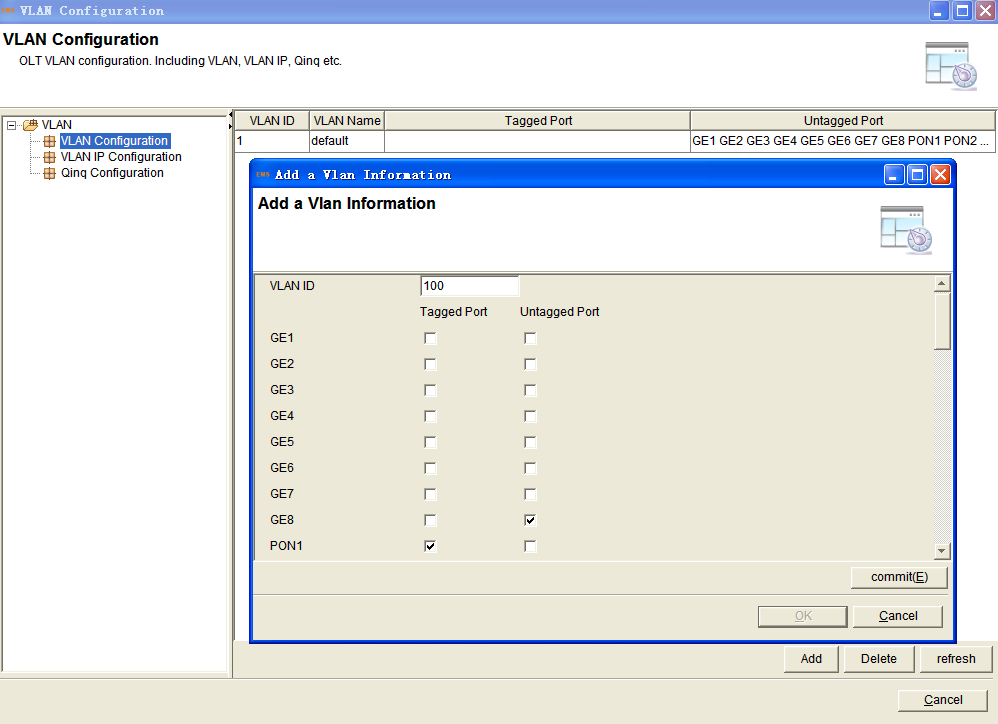
epon-olt(config-pon-0/1)# exit

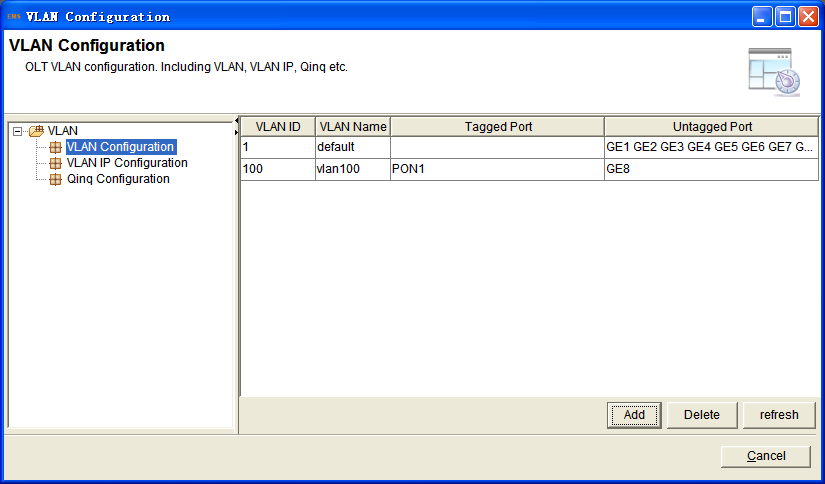
EMS

1. Right-click the OLT icon and select **Configuration->VLAN Configuration**

2. Click the **Add** button, configure according to the planning data.

3. Click the **commit** button to complete the configuration.

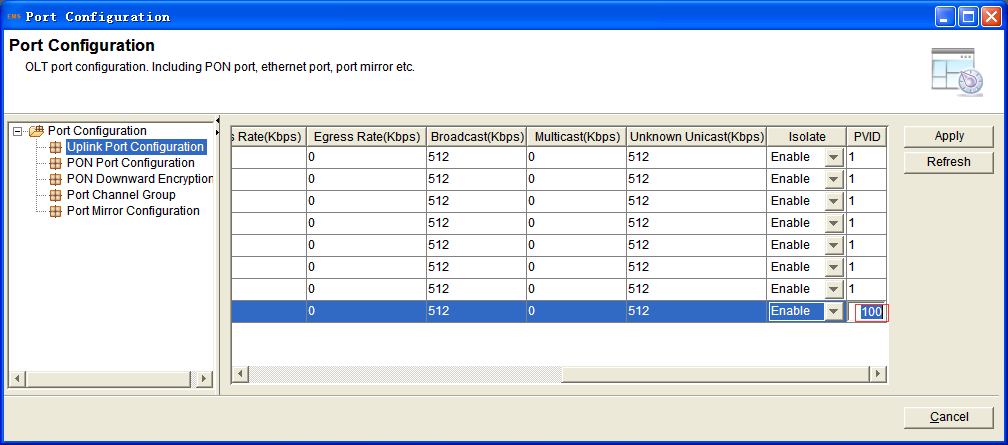




4. Right-click the OLT icon and select **Configuration->Port Configuration**

configure according to the planning data.

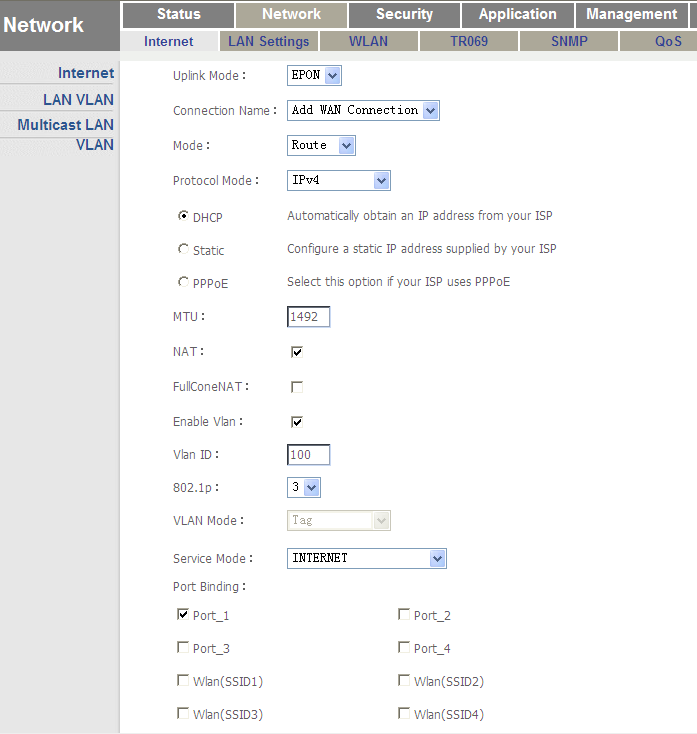
5. Click the **Apply** button to complete the configuration.



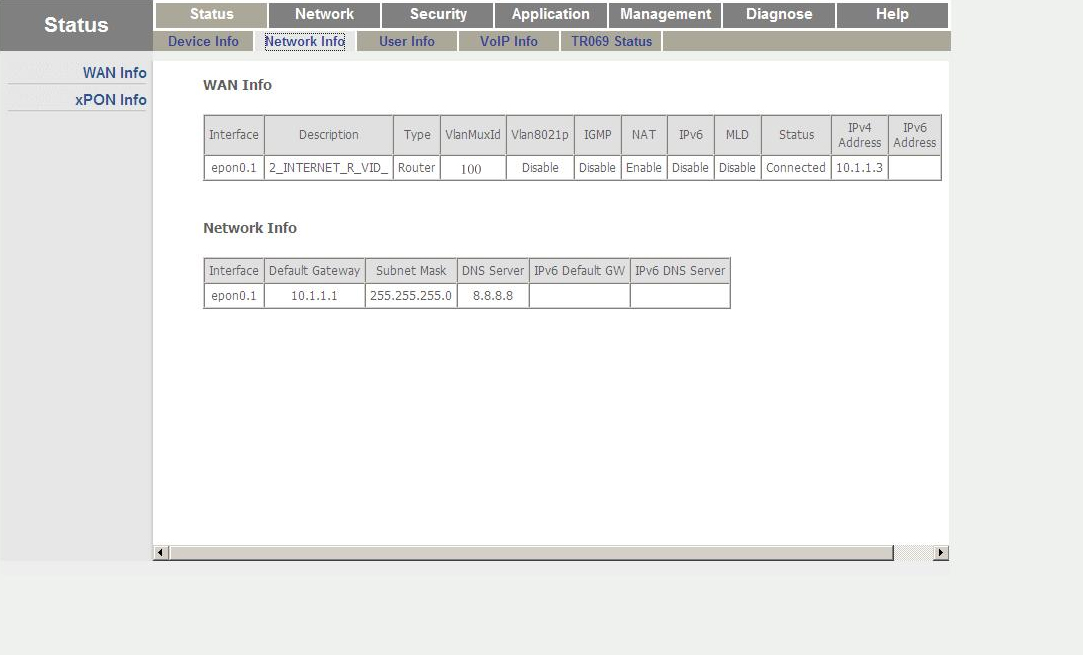
## Configuring the ONU

ONU WEB

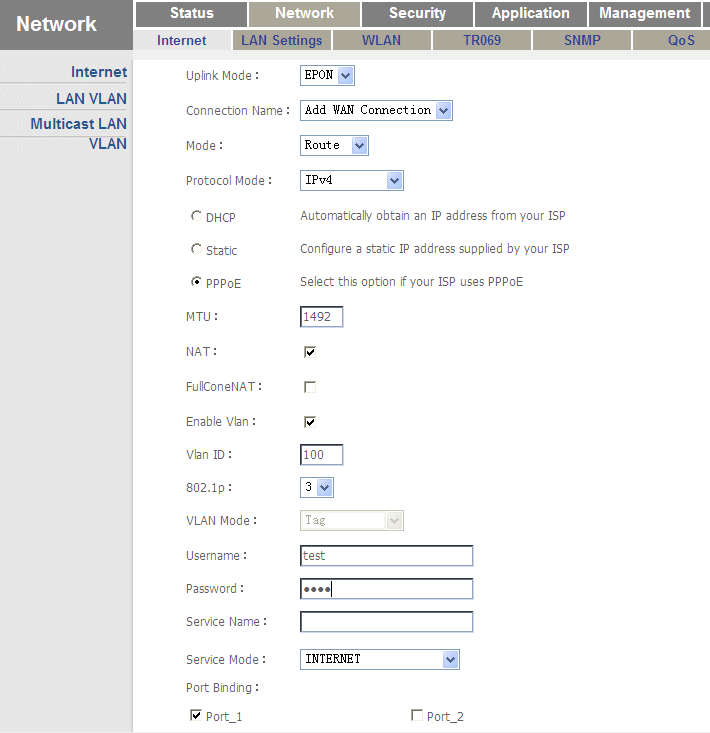
If DHCP mode



The connection status



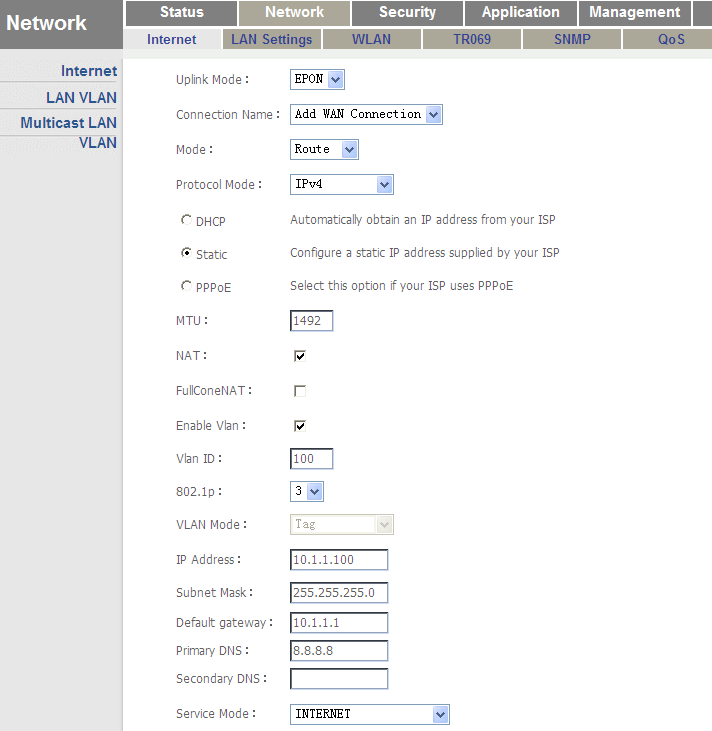
If PPPoE mode



The connection status



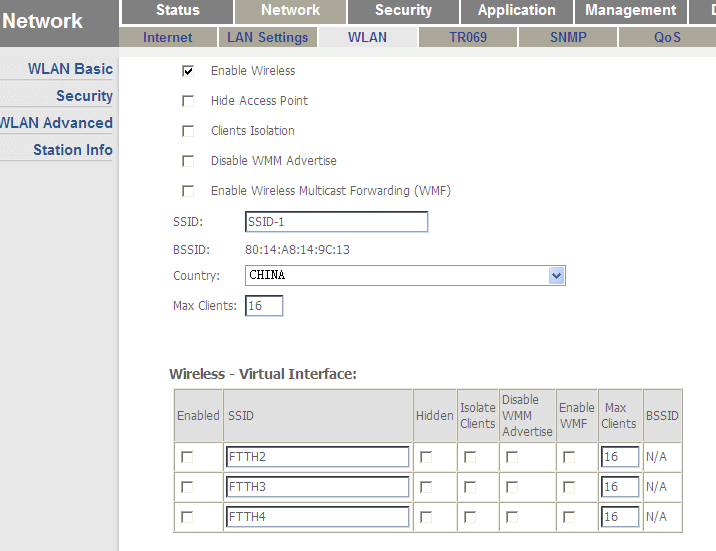
If Static mode

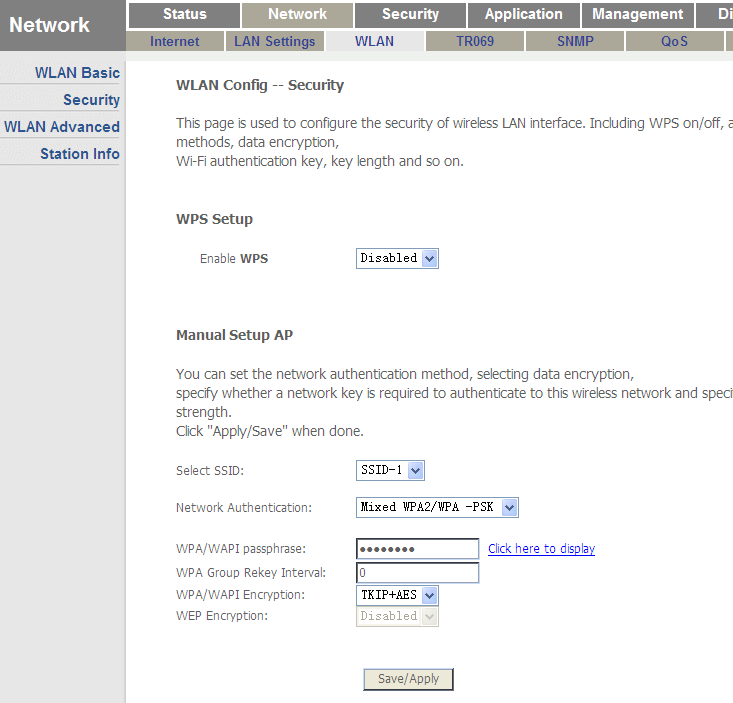


The connection status



WiFi

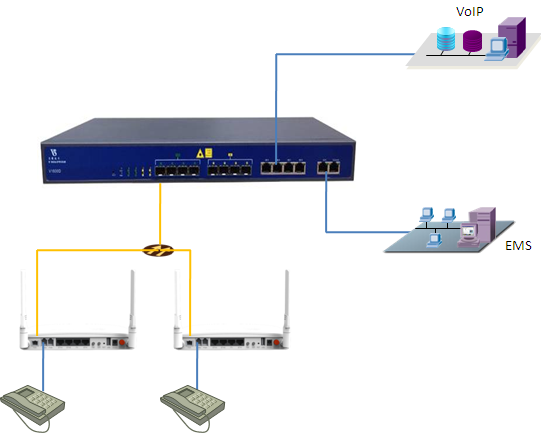




# Case 7 HGU Router With VLAN--VoIP

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.2.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | HG326UEG |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  PVID = 200 |
| Service Uplink port | Configure according to the number of the actually used uplink port. | GE6 |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 200 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service WAN  VLAN | The VLAN ID of the PON(WAN) port service. | VLAN ID = 200 |
| Service POTS port | The number of the actually used ONU port. | POTS1 |
| If WAN use DHCP mode | The router use DHCP assign ip to ONU. | Gateway = 10.1.2.1  IP Range 10.1.2.2-10.1.2.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If WAN use PPPoE  mode | The router use PPPoE assign ip to ONU. | IP Range 10.1.2.2-10.1.2.254  IP Mask = 255.255.255.0  User name = test1  Password = test1 |
| If WAN use Static  mode | The router use Static assign ip to ONU. | Gateway = 10.1.2.1  IP = 10.1.2.100  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |

## Configuring the OLT

CLI

epon-olt(config)# vlan 200

epon-olt(config-vlan-200)# exit

epon-olt(config)# interface gigabitethernet 0/6

epon-olt(config-if-ge0/6)# switchport hybrid vlan 200 untagged

epon-olt(config-if-ge0/6)# switchport hybrid pvid vlan 200

epon-olt(config-if-ge0/6)# exit

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# switchport hybrid vlan 200 tagged

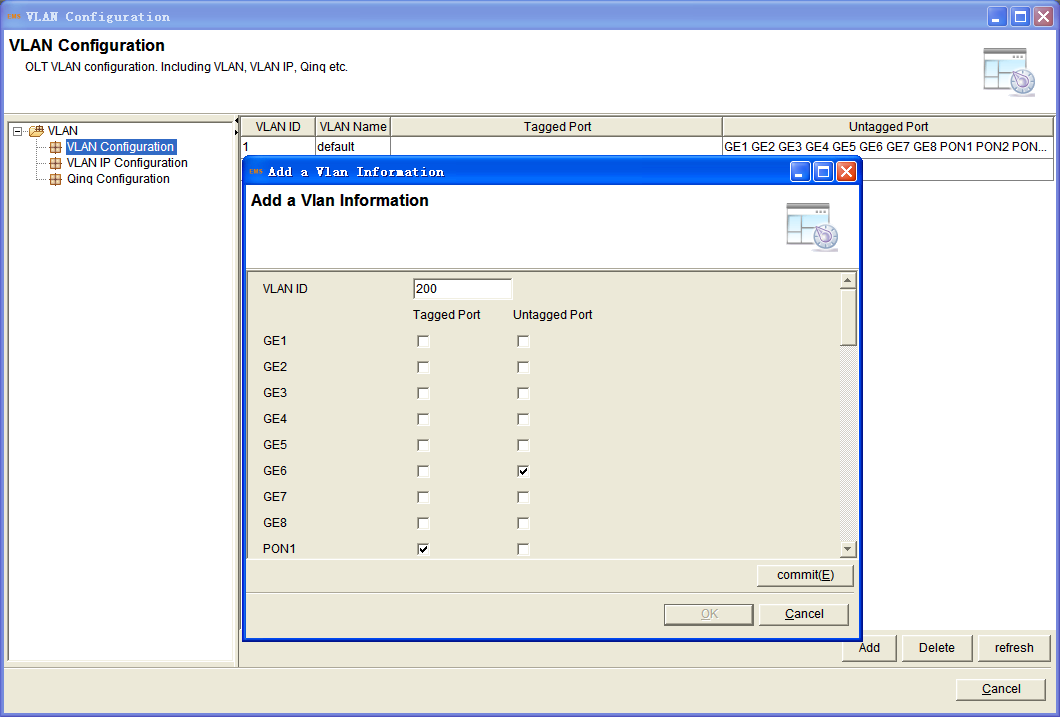
epon-olt(config-pon-0/1)# exit

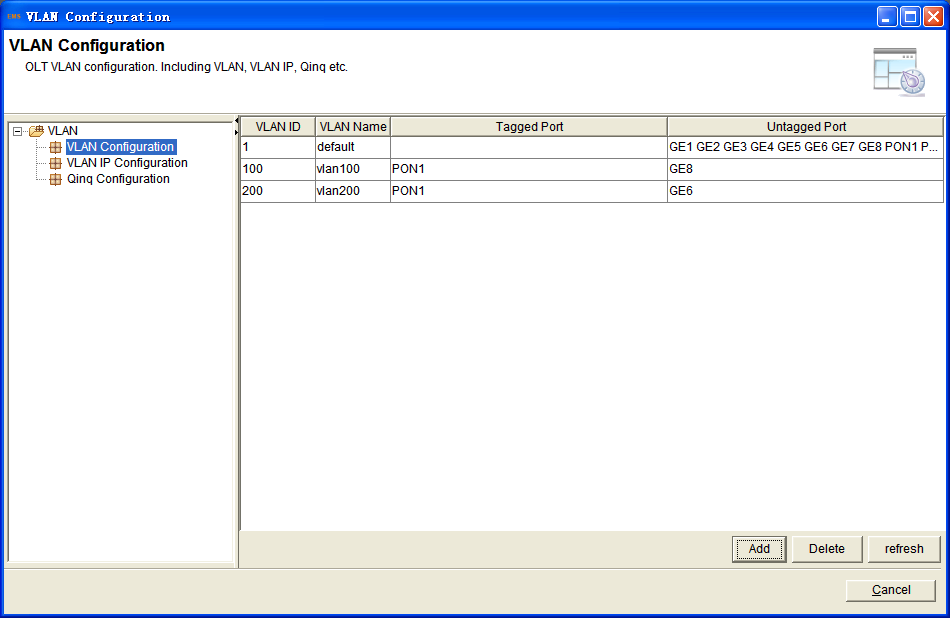
EMS

1. Right-click the OLT icon and select **Configuration->VLAN Configuration**

2. Click the **Add** button, configure according to the planning data.

3. Click the **commit** button to complete the configuration.

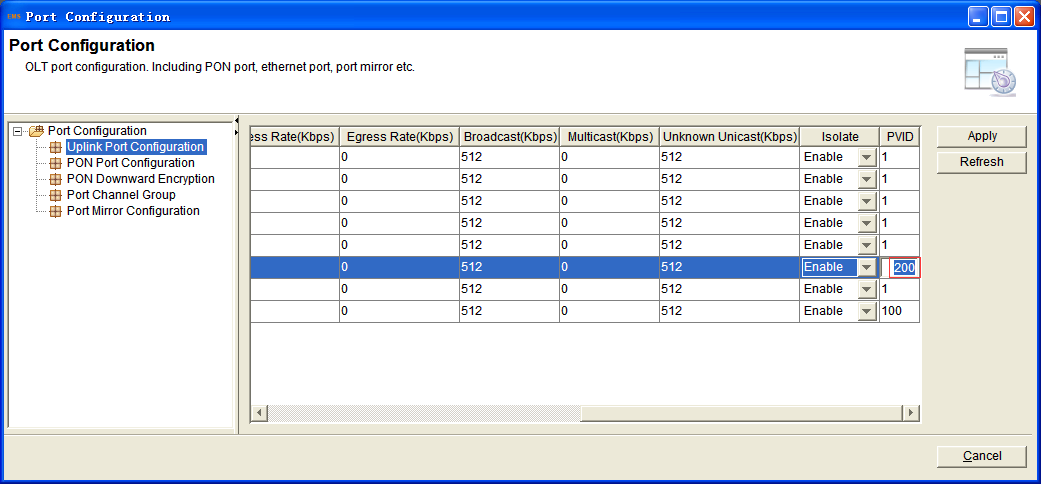




4. Right-click the OLT icon and select **Configuration->Port Configuration**

configure according to the planning data.

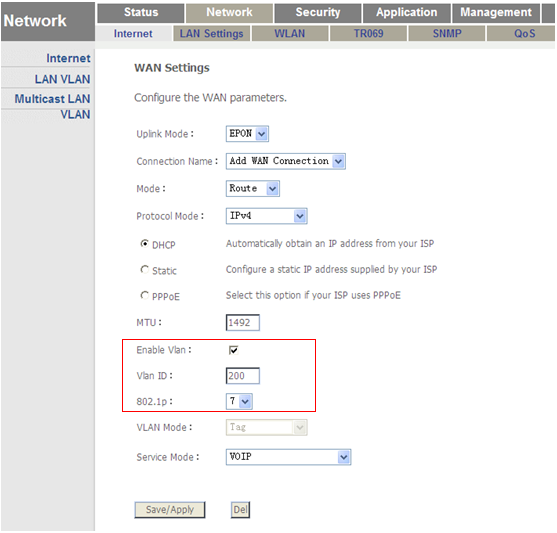
5. Click the **Apply** button to complete the configuration.



## Configuring the ONU

ONU WEB

If DHCP mode

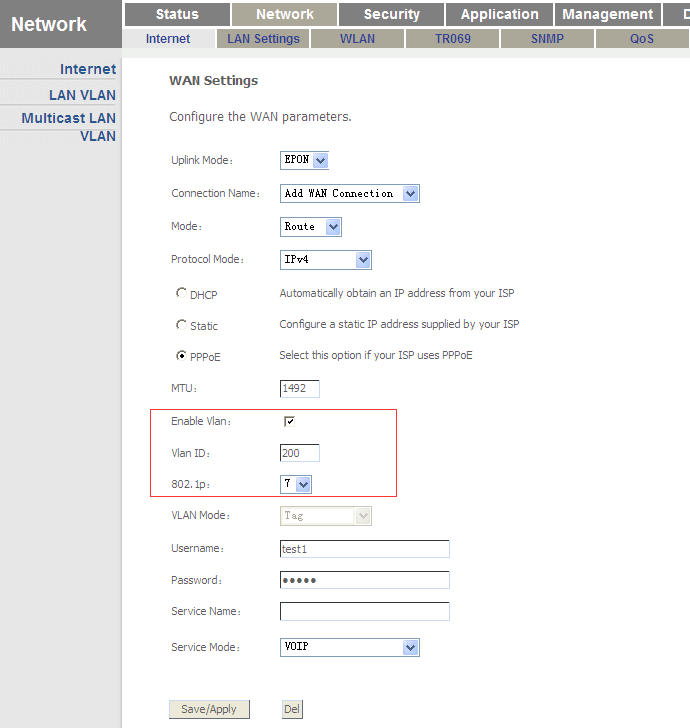


The connection status

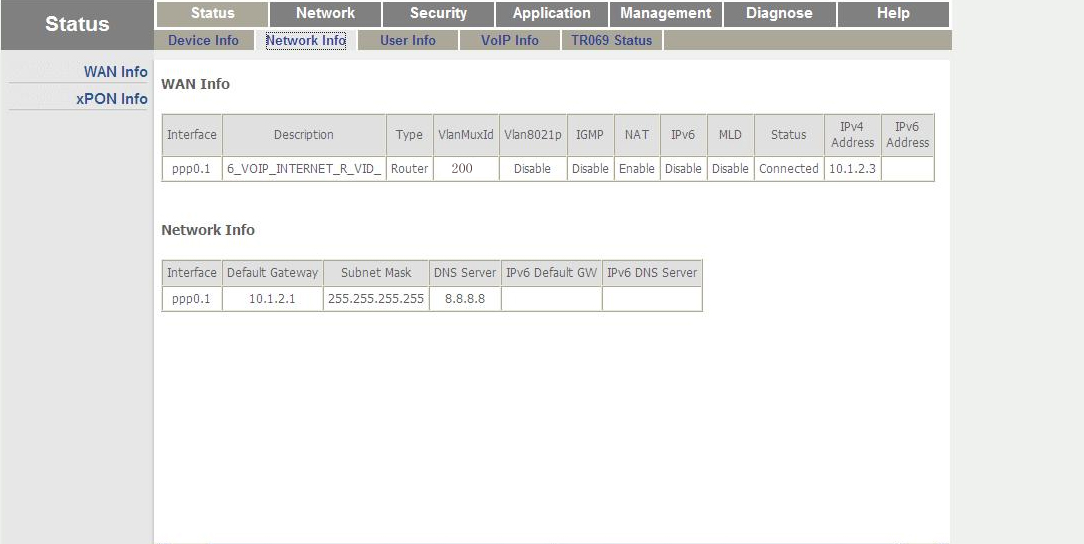




If PPPoE mode

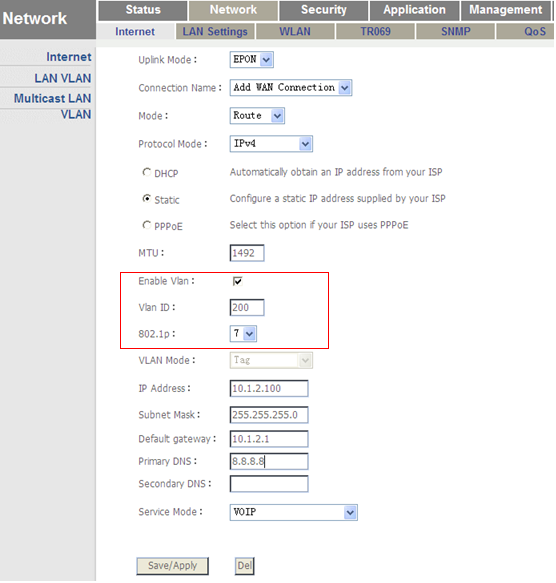


The connection status

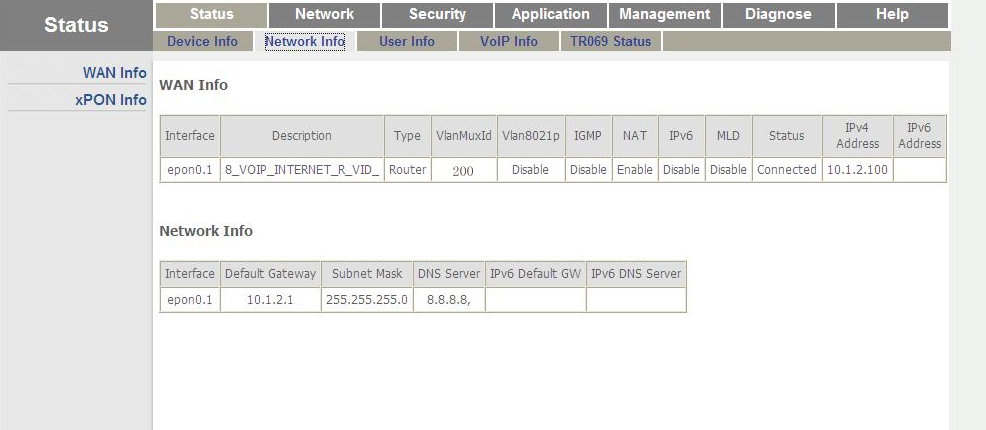




If Static mode

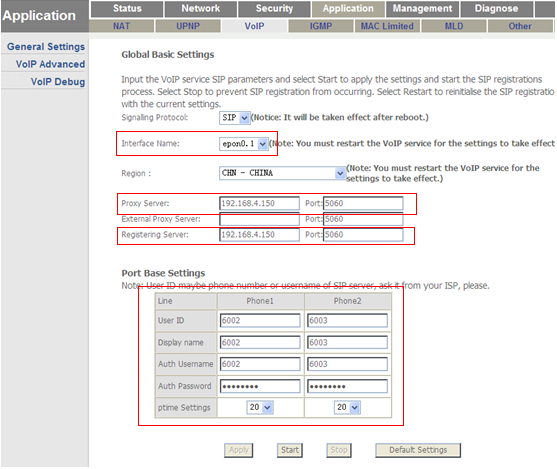


The connection status





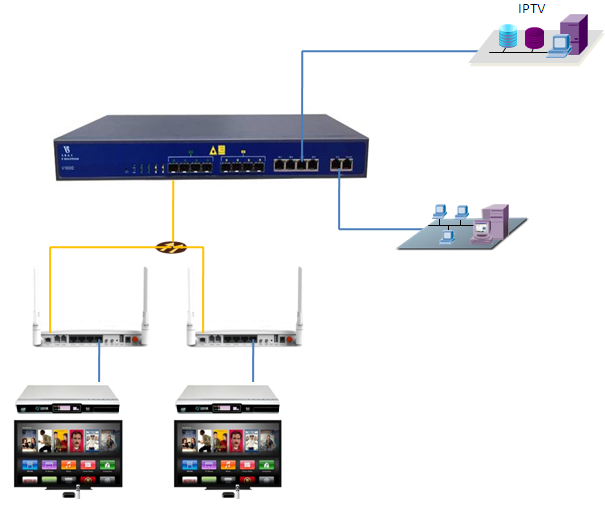
VoIP



# Case 8 HGU Bridge With VLAN--IPTV

## Network Diagram

**DHCP/PPPoE/Static**



**10.1.3.1/24**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | HG326UEG |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  PVID = 300 |
| Service Uplink port | Configure according to the number of the actually used uplink port. | GE7 |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 300 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service  WAN  VLAN | The VLAN ID of the PON(WAN) port service. | VLAN mode= Transparent |
| Service  LAN  VLAN | The VLAN ID of the LAN port service. | VLAN mode = UNTAG  LAN VLAN ID = 300  Multicast VLAN ID = 300 |
| Service LAN port | The number of the actually used ONU port. | LAN4 |
| STB | Management IP | The IP for STB. | Gateway = 10.1.3.1  IP = 10.1.3.100  IP Mask = 255.255.255.0 |

## Configuring the OLT

CLI

epon-olt(config)# vlan 300

epon-olt(config-vlan-300)# exit

epon-olt(config)# interface gigabitethernet 0/7

epon-olt(config-if-ge0/7)# switchport hybrid vlan 300 untagged

epon-olt(config-if-ge0/7)# switchport hybrid pvid vlan 300

epon-olt(config-if-ge0/7)# exit

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# switchport hybrid vlan 300 tagged

epon-olt(config-pon-0/1)# exit

epon-olt(config)# ip igmp snooping enable

epon-olt(config)# ip igmp snooping general-query-packet enable

epon-olt(config)# ip igmp snooping mrouter vlan 300 interface gigabitethernet 0/7

epon-olt(config)# interface epon 0/1

epon-olt(config-pon-0/1)# ip igmp snooping user-vlan 300 group-vlan 300 tagged

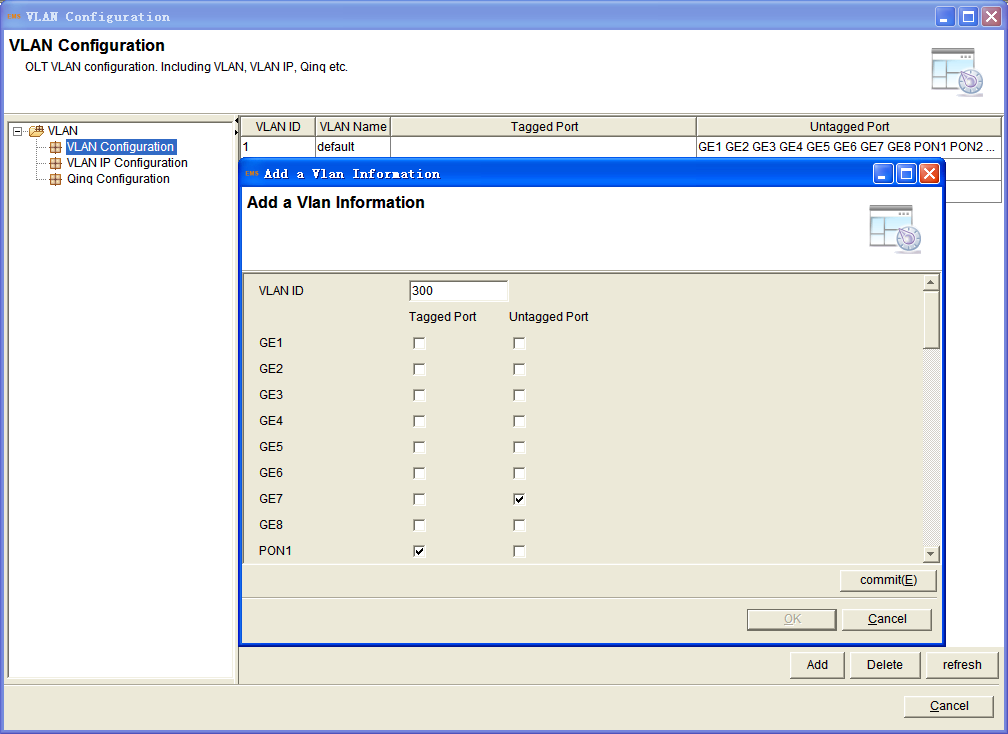
epon-olt(config-pon-0/1)# exit

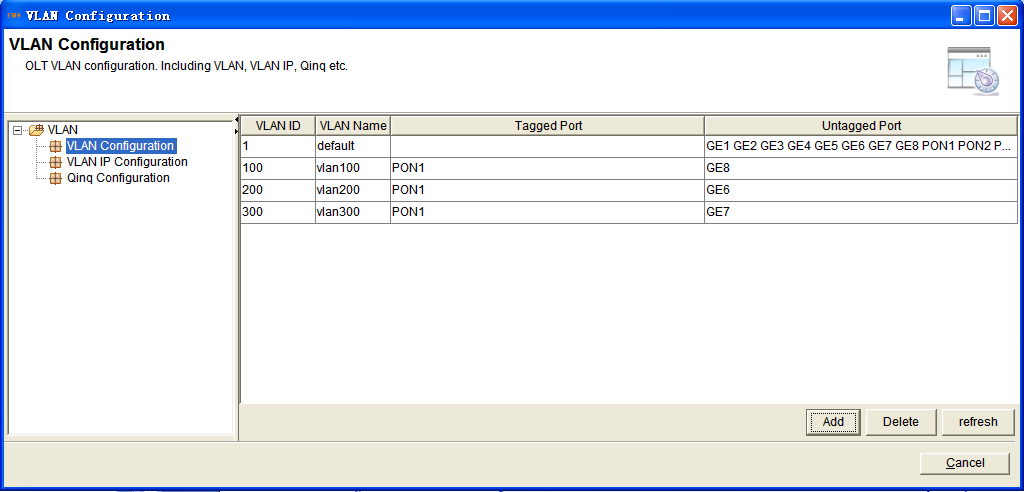
EMS

1. Right-click the OLT icon and select **Configuration->VLAN Configuration**

2. Click the **Add** button, configure according to the planning data.

3. Click the **commit** button to complete the configuration.

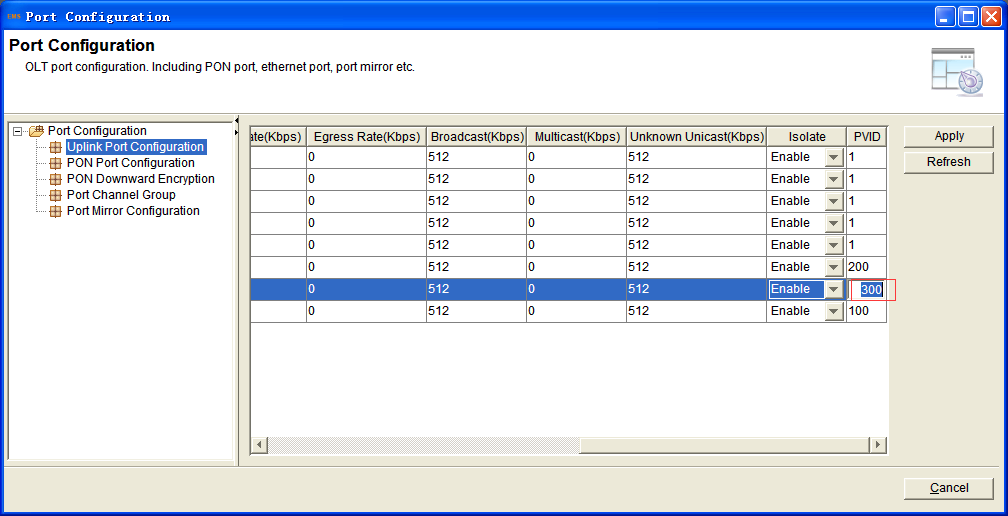




4. Right-click the OLT icon and select **Configuration->Port Configuration**

configure according to the planning data.

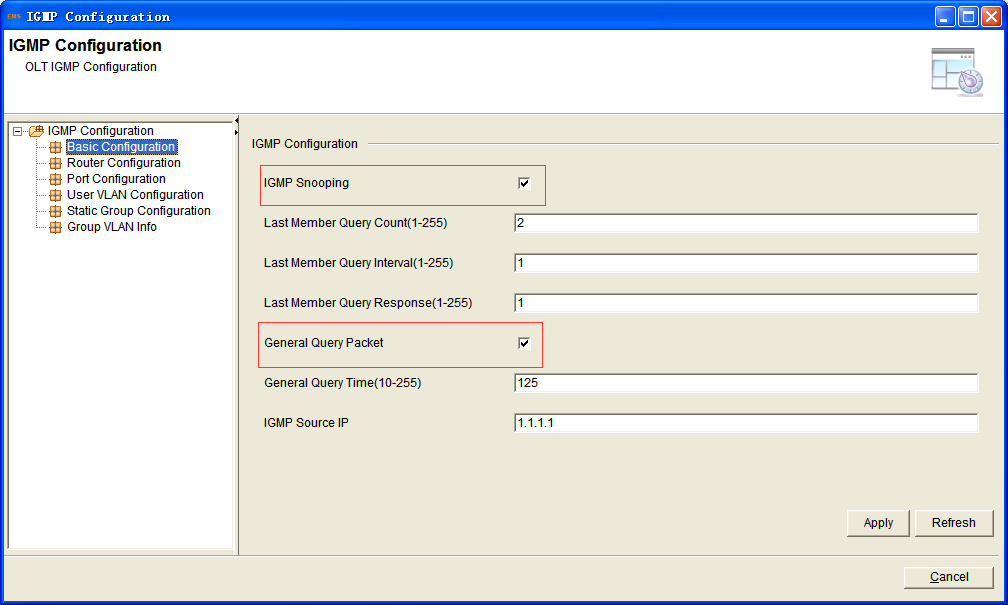
5. Click the **Apply** button to complete the configuration.



6. Right-click the OLT icon and select **Configuration->IGMP Configuration**

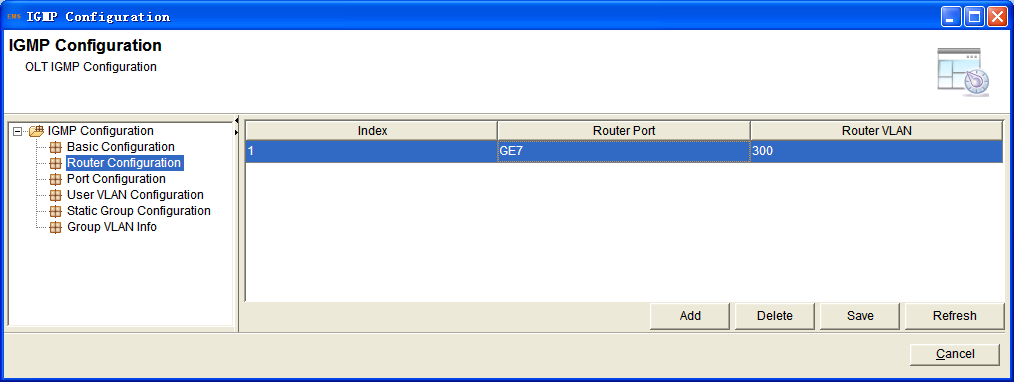
configure according to the planning data.

7. Choose **Basic Configuration**, tick the **IGMP Snooping** and **General Query Packet** , click the **Apply** button to complete the configuration.



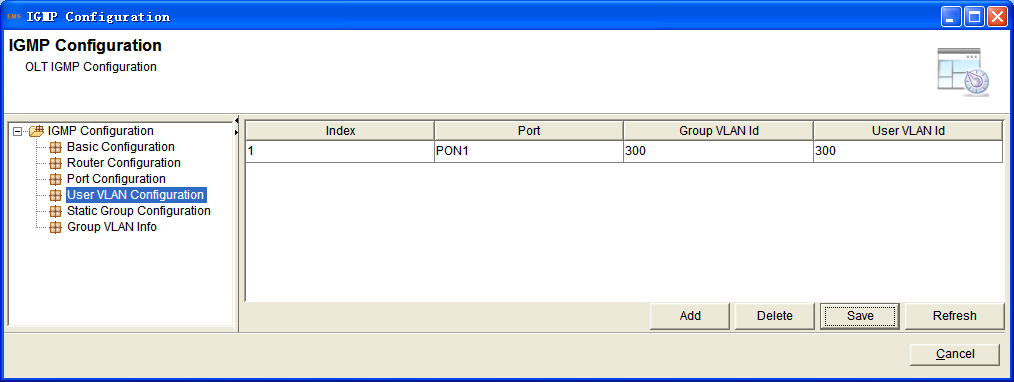
8. Choose **Router Configuration**, click the **Add** button to create a item, then modify the parameters according to the planning data.

Click the **Save** button to complete the configuration.



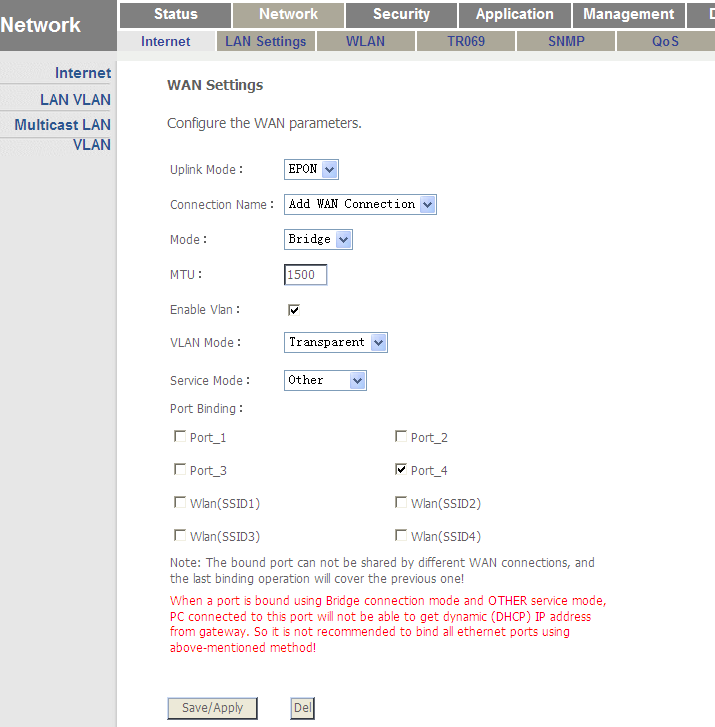
9. Choose **User Vlan Configuration**, click the **Add** button to create a item, then modify the parameters according to the planning data.

Click the **Save** button to complete the configuration.

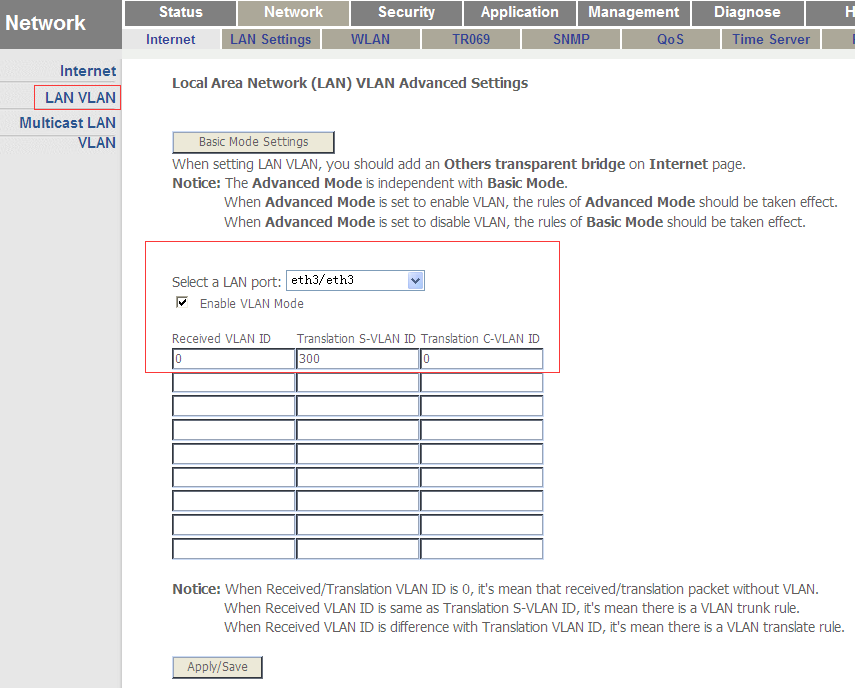


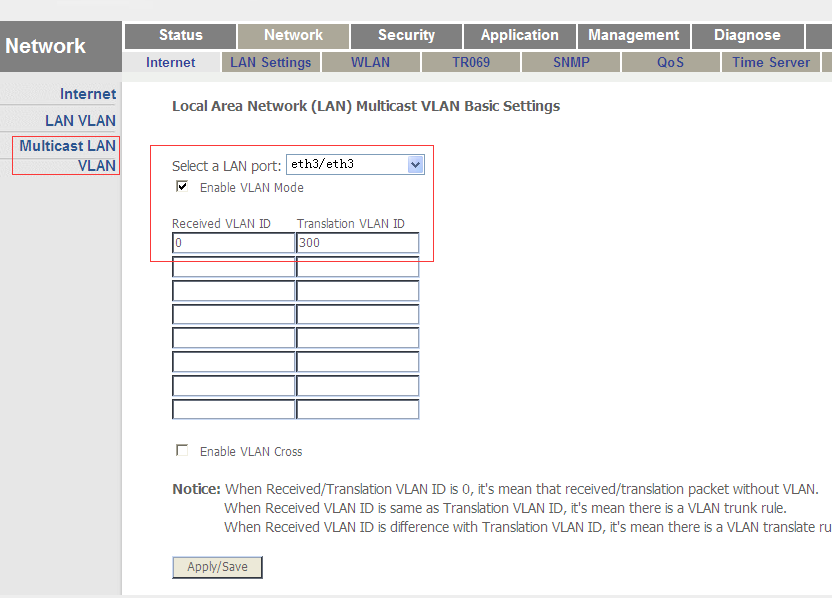
## Configuring the ONU

ONU WEB



IPTV(LAN and Multicast VLAN)

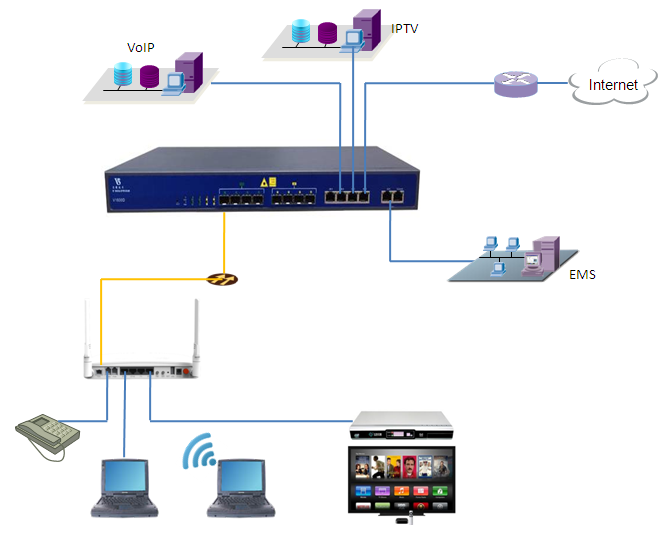




# Case 9 HGU Router/Bridge With VLAN Internet--VoIP--IPTV

## Network Diagram

**10.1.3.1/24**



**10.1.2.1/24**

**10.1.1.1/24**

**DHCP/PPPoE/Static**

**DHCP/PPPoE/Static**

## Planning Data

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | | **Description** | **Example** |
| ONU Information | Slot No. | The number of the slot actually used. | 0 |
| PON No. | The number of the actually used PON port. | 1 |
| ONU Auth No. | Configure according to the network planning of the operator. | 1 |
| ONU Type | The type of the ONU. | HG326UEG |
| OLT | Service Uplink VLAN | The VLAN ID of the uplink port service. | VLAN mode = UNTAG  GE7,PVID = 300 for IPTV  GE5,PVID = 200 for VoIP  GE8,PVID = 100 for Internet |
| Service Uplink port | Configure according to the number of the actually used uplink port. | GE7, for IPTV  GE5, for VoIP  GE8, for Internet |
| Service PON VLAN | The VLAN ID of the PON port service. | VLAN mode = TAG  VLAN ID = 300,200,100 |
| Service PON port | Configure according to the number of the actually used PON port. | PON1 |
| ONU | Service  WAN  VLAN | The VLAN ID of the PON(WAN) port service. | WAN1(for IPTV):  VLAN mode=  Transparent;  WAN2(for VoIP):  VLAN ID = 200;  WAN3(for Internet):  VLAN ID = 100; |
| Service  LAN  VLAN | The VLAN ID of the LAN port service. | LAN4(for IPTV):  VLAN mode = UNTAG  LAN VLAN ID = 300  Multicast VLAN ID = 300;  LAN1(for Internet):  Default |
| WiFi | Wireless’s SSID name,Security. | SSID1 name = SSID-1  Security method = WAP2 Mixed  WPA Encryption = TKIP  WPA2 Encryption = AES  KEY = 12345678 |
| Service POTS port | The number of the actually used ONU port. | POTS1 |
| If WAN use DHCP mode | The router use DHCP assign ip to ONU. | Internet:  Gateway = 10.1.1.1  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8  VoIP:  Gateway = 10.1.2.1  IP Range 10.1.2.2-10.1.1.254  IP Mask = 255.255.255.0  DNS = 8.8.8.8 |
| If WAN use PPPoE  mode | The router use PPPoE assign ip to ONU. | Internet:  IP Range 10.1.1.2-10.1.1.254  IP Mask = 255.255.255.0  User name = test  Password = test  VoIP:  IP Range 10.1.2.2-10.1.2.254  IP Mask = 255.255.255.0  User name = test1  Password = test1 |
| If WAN use Static  mode | The router use Static assign ip to ONU. | Internet:  Gateway = 10.1.1.1  IP Mask = 255.255.255.0  VoIP:  Gateway = 10.1.2.1  IP Mask = 255.255.255.0 |
| PC | DHCP mode | The ONU use DHCP assign ip to PC. | Gateway = 192.168.1.1  IP = 192.168.1.2  IP Mask = 255.255.255.0  DNS = 192.168.1.1 |
| STB | Management IP | The IP for STB. | Gateway = 10.1.3.1  IP = 10.1.3.100  IP Mask = 255.255.255.0 |

## Configuring the OLT

CLI

As show in Case 5 to 7.

EMS

As show in Case 5 to 7.

## Configuring the ONU

ONU WEB

As show in Case 5 to 7.