Setup guide for OLT and ONU

Bridge Configuration

Port VLAN mode & WAN mode

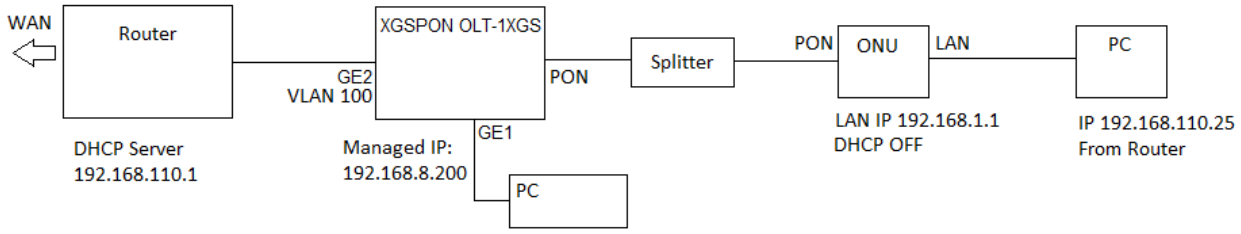
AirLive XGSPON OLT-1XGS

and GPON, XGPON, XGSPON ONU

airlive®

How to set up the OLT and ONU in Bridge mode in combination with a Router.

For the setup an AirLive XGSPON OLT-1XGS and an Airlive ONU-10XG(S)-1004-10G was used.
Note: The XGSPON OLT-1XGS is a Triple OLT, it can work with XGSPON, XGPON and GPON ONU's simultaneous.
The setup is following the diagram below, please do **not** use VLAN: 0, 1, 2, 9, 8, 10, 4000, 4005, 4012-4017, 4095.



Do **not** use vlan ：0、1、2、9、8、10、4000、4005、4012-4017、4095

Setup Steps: NOTE there are 2 different ways to set up Bridge mode. Both will be shown in this guide. As **Setup 1** and **Setup 2,** Setup 1 uses WAN port, Setup 2 uses Port VLAN.

SETUP 1 Bridge via WAN.

1: Login to the OLT management web interface. The default IP is 192.168.8.200

2: If we want to configure the ONU to access the Internet, we need to create a VLAN in OLT first.

3: Create a VLAN, VLAN 100 (for this example) for Internet.

4: VLAN bindings for uplink GE port

please note: If the uplink port is in the untag mode, PVID (default vlan id) needs to be configured (100 in this example).

5: Open ONU list page, Select the PON port where ONU is located. Find out what ONU you want to configure. Check the ONU status and ensure the ONU is in Online state.

6: Click on the ONU configuration page to configure ''Tcont'', ''Gemport'',''Service'', ''Service Port'' and other parameters.

7: On the ''port vlan'' page, for ONU, the Mode needs to be configured for ''transparent'', Port Type needs to be configured for ''veip'' and Port Id needs to be configured for ''1''.

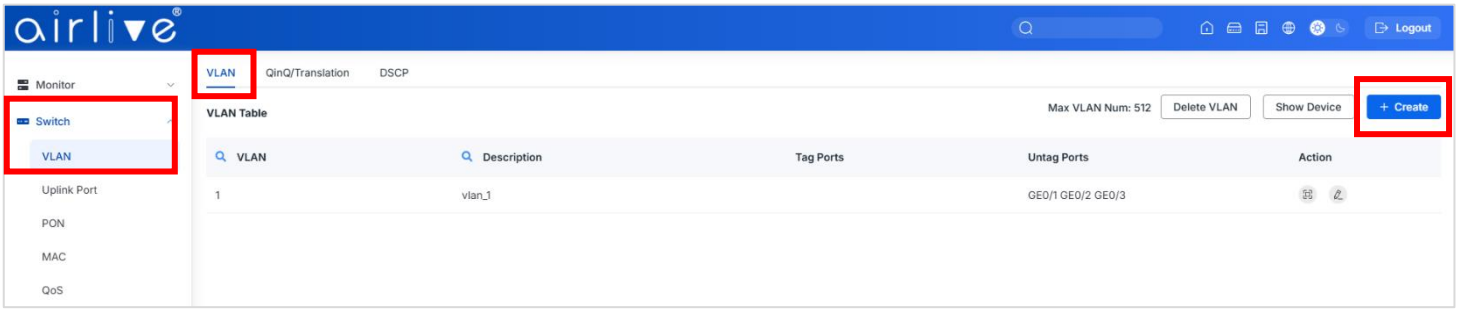
8: Then we need to create an Internet WAN connection for it, click on ''WAN'' page. Mode is Bridge, you can also choose three modes for Internet WAN connection. Here we use the DHCP mode. Then select the VLAN mode Tag and fill in the VLAN information (100 in this example) VLAN Cos should be 0. And choose service mode is "Internet". Please note: When the configuration is complete, you need to click "Submit" button. At this point, the configuration is added to running-config list. Finally click the "submit" button.

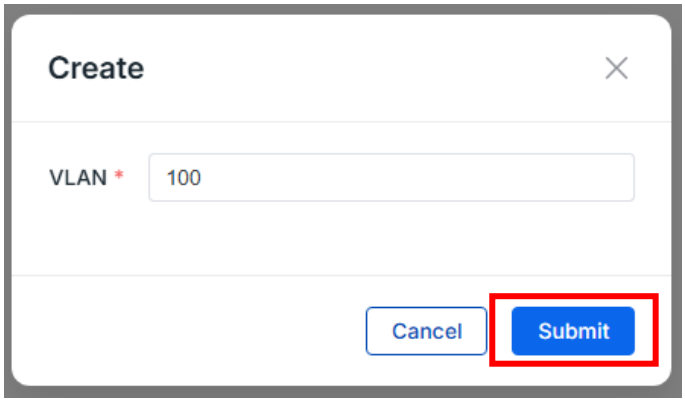
9: You can configure ONU DHCP Server on the "DHCP server" page, this should be disabled.

10: Press "SAVE" in the top bar of the OLT so save the complete configuration.

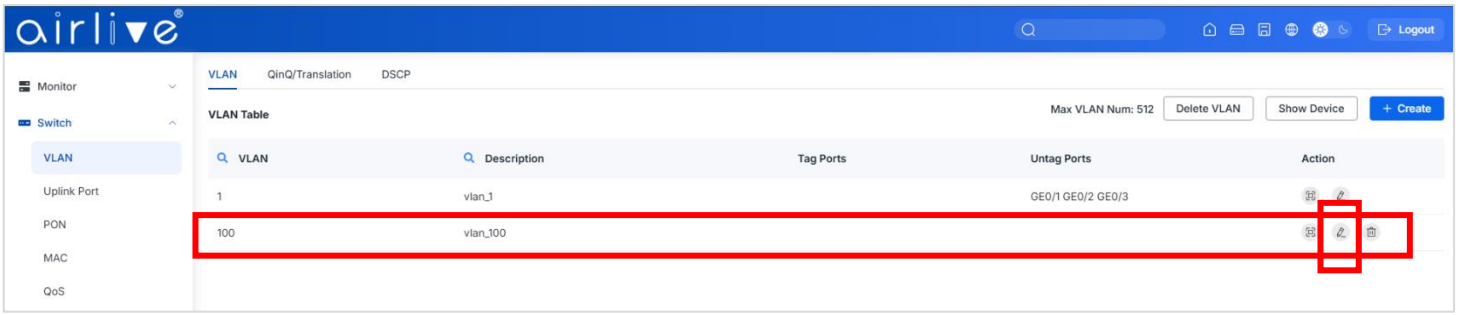
Start Setup 1

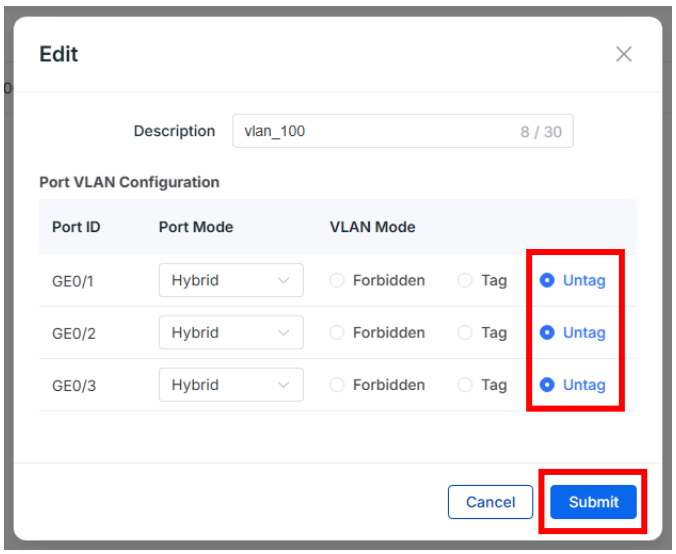
1: In the “Switch” Configuration select “VLAN” and click on “Create” to make a VLAN ID, in this example we make VLAN 100. Enter 100 and click Submit.



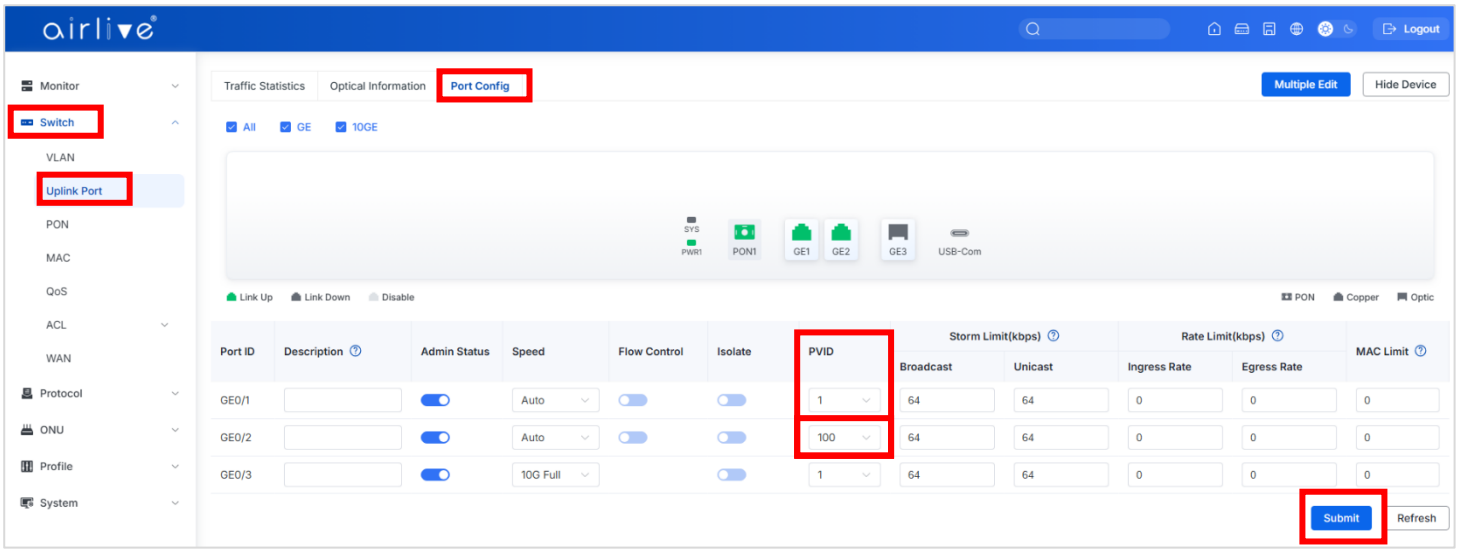


2: Bind the Uplink GE port go the “Modify” for VLAN 100, in this example all ports were binded to the VLAN 100. Make sure the Uplink is in “Untag” mode.





3: When the Uplink port is in “Untag" mode, the PVID (default VLAN id) needs to be configured. Go to “Switch” >> “Uplink Port” >> “ Port Config”. Change the PVID for the uplink to 100 (in this example) and press Submit.



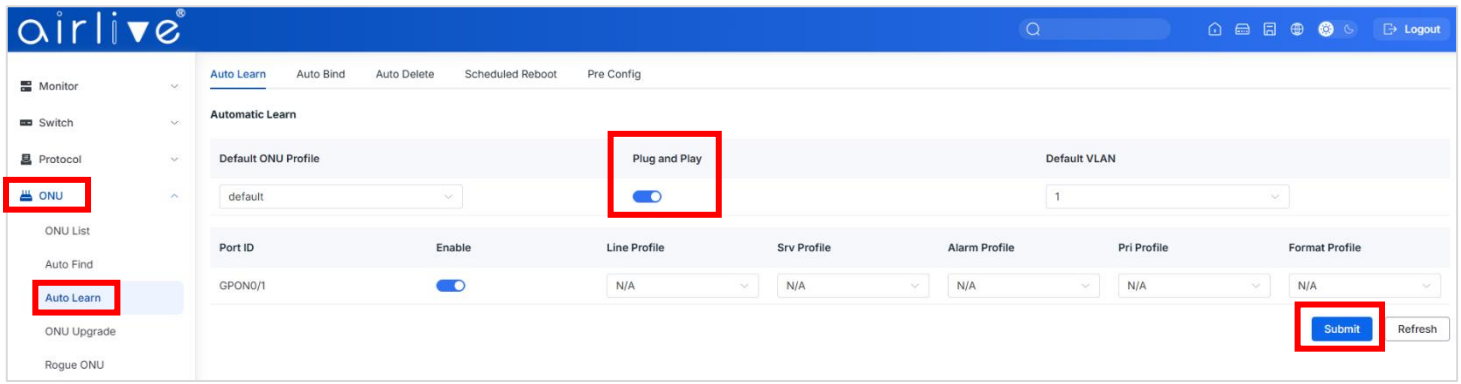
4: Adding the ONU to the OLT.

Make sure to read the full text of point 4 first, before the ONU has been connected to the OLT via its PON port and a Splitter.

Click on “ONU” and select “ONU List” when your ONU has been connected correctly. It will show up here.

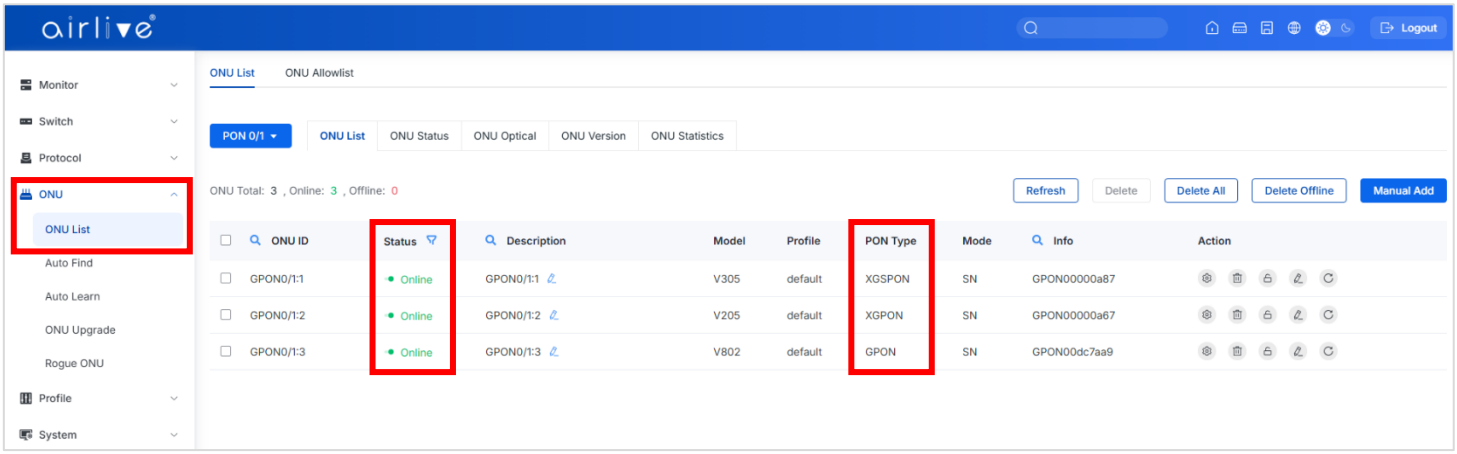
4.1 Note: By default the, “ AutoLearn” Plug and Play function is enabled. This function will automatically add the default Profile to the ONU. If these are not the setting you want to use for your ONU. Then first either make your own Profile and select your profile in “Auto Learn” or Disable the Plug and Play function in Auto Learn before you add connect the ONU to the OLT.

4.2 If you prefer to add the ONU’s manually or when the ONU cannot be found, then please also disable Plug and Play in Auto Learn. And select Manual Add from the ONU List.



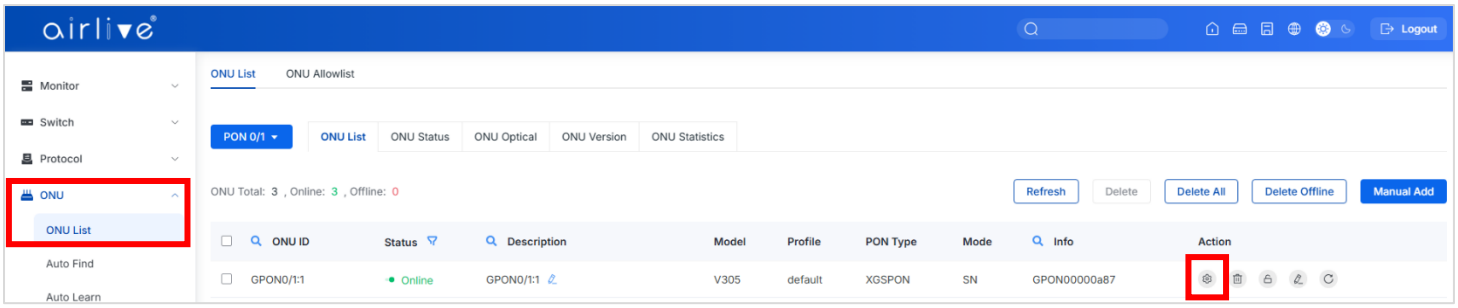
The above image is for turning the Plug and Play option off when needed. Slide the blue bar to the left to turn the function off. Click “Submit “ to save the settings.

The ONU will now be shown in the ONU List and when connected correctly it will display “Online” in green at Status. The XGSPON OLT-1XGS Supports Triple play PON, GPON/XGPON/ XGSPON all at the same time.



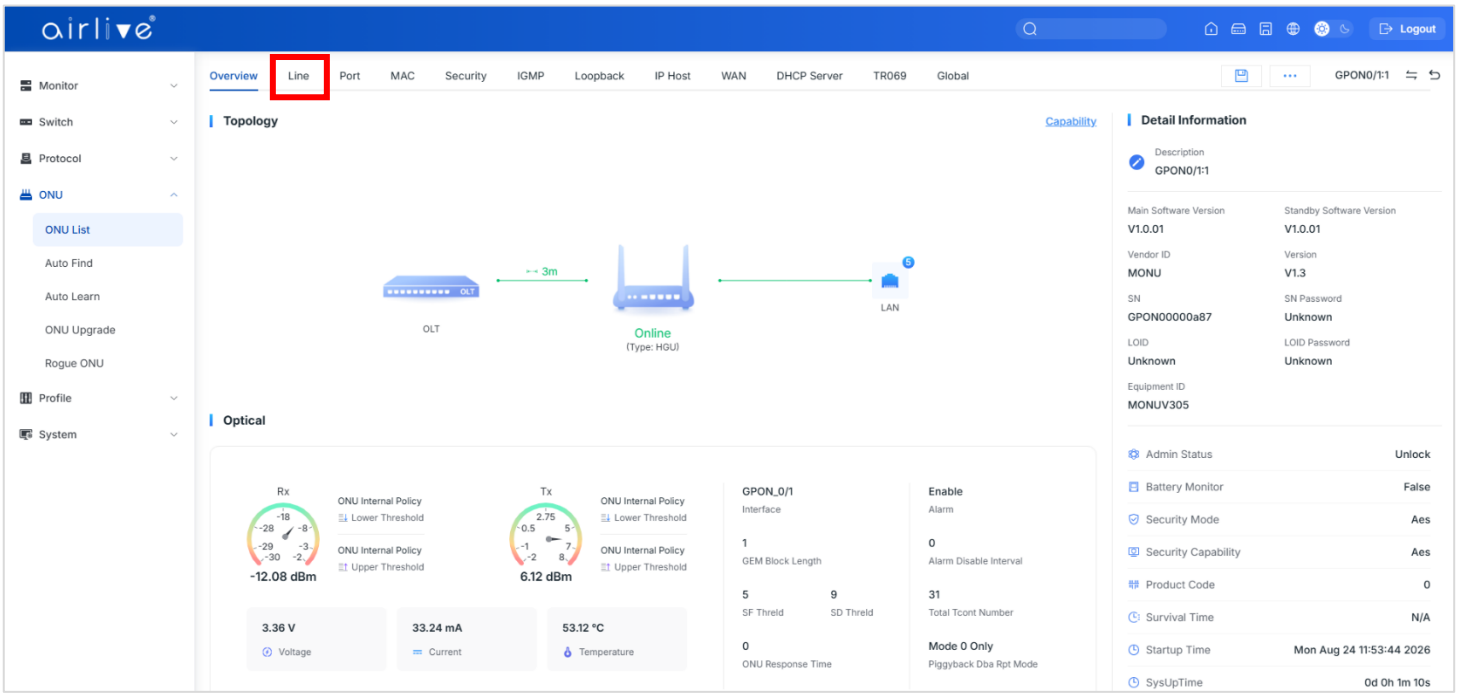
5: Configure the ONU, Click on the “ONU List” in the OLT menu.

The active ONU’s will now be shown, select the ONU you want to configure (make sure the status is “Online”) and click on the “Configuration” button.



6: Setup the ''Tcont'', ''gemport'', ''Service'', ''Service Port'' and other parameters.

On the main Overview page select “Line”.

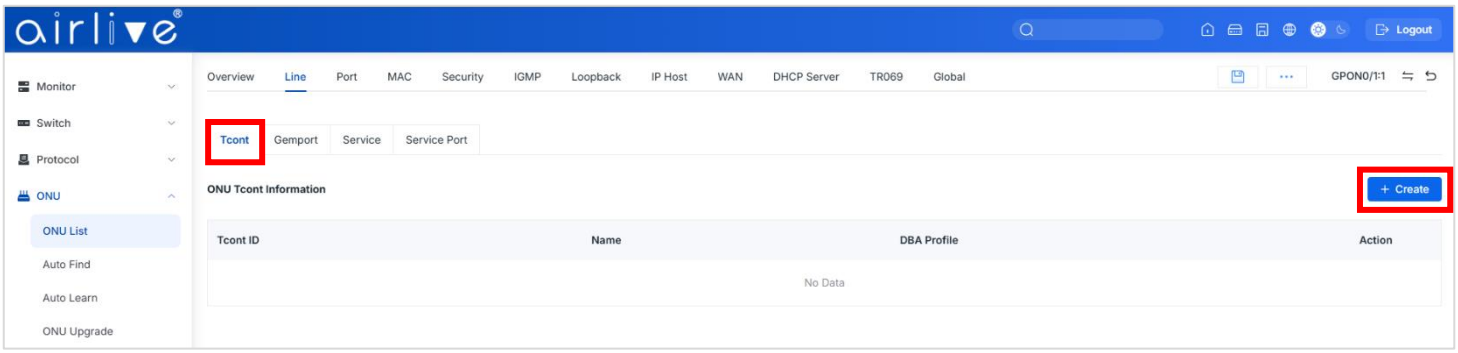


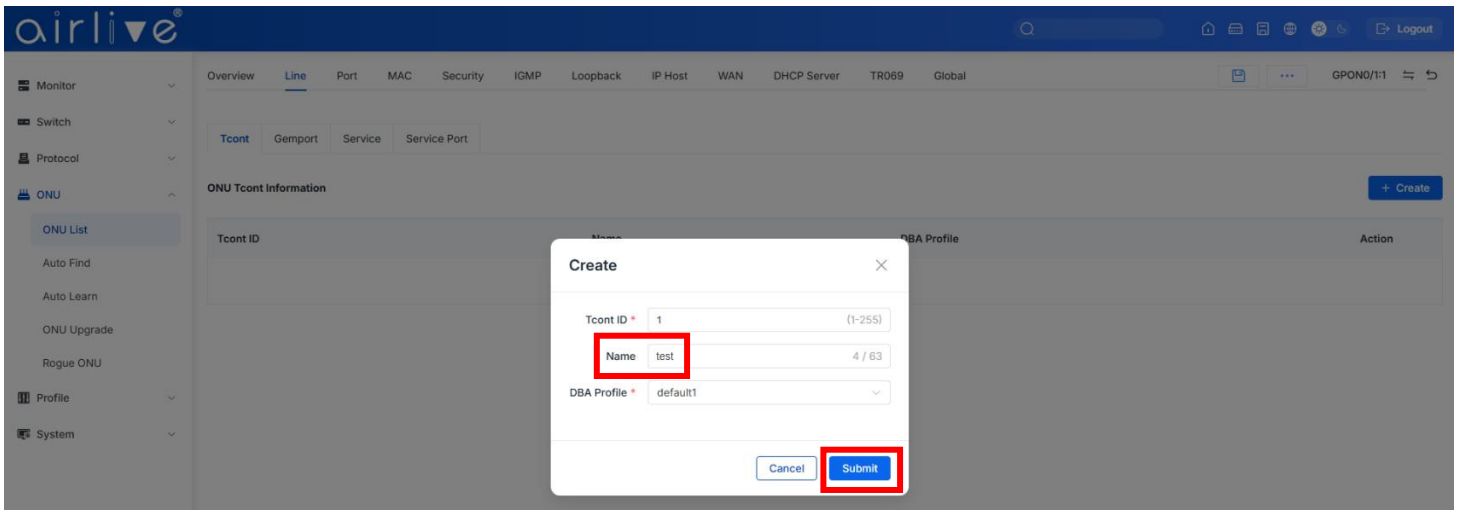
Note: If you do not see the WAN option in the top bar it could be that the ONU is in SFU mode, to get the WAN option in the top bar, change the mode from SFU to HGU. To change the mode first got to Global and change the mode.

Select “Tcont”

Setup the “Tcon” default value is 1, in this example for name, the name test was used.

Click “Create” to add the “Tcon”. After entering the information Click “Submit”

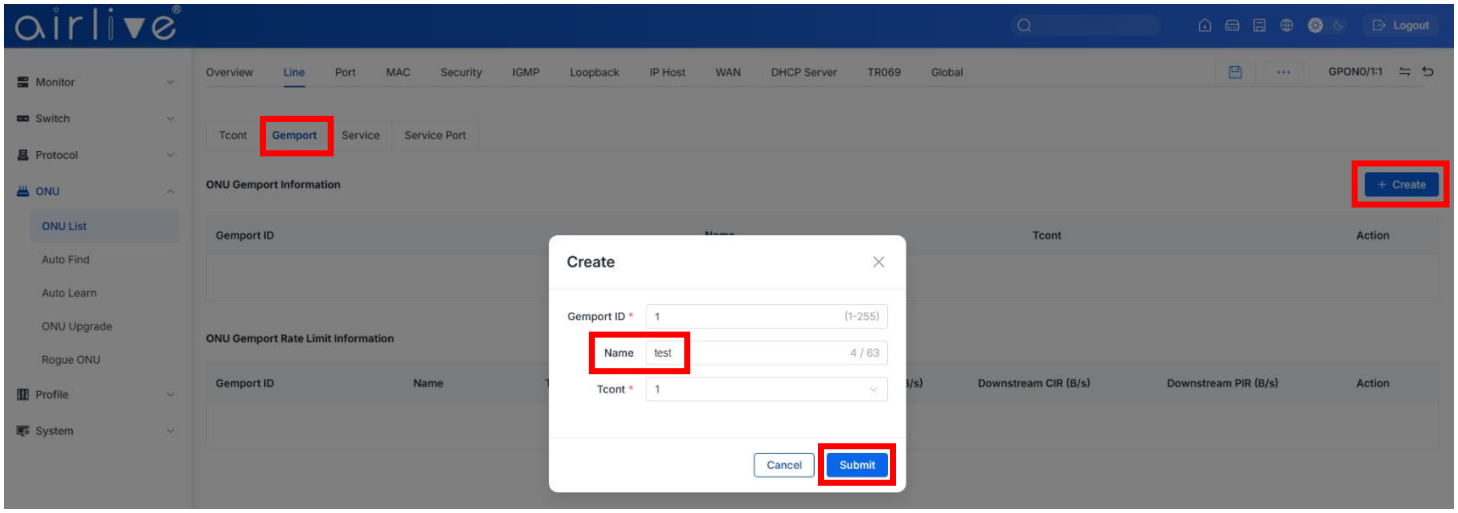




Select “Gemport”

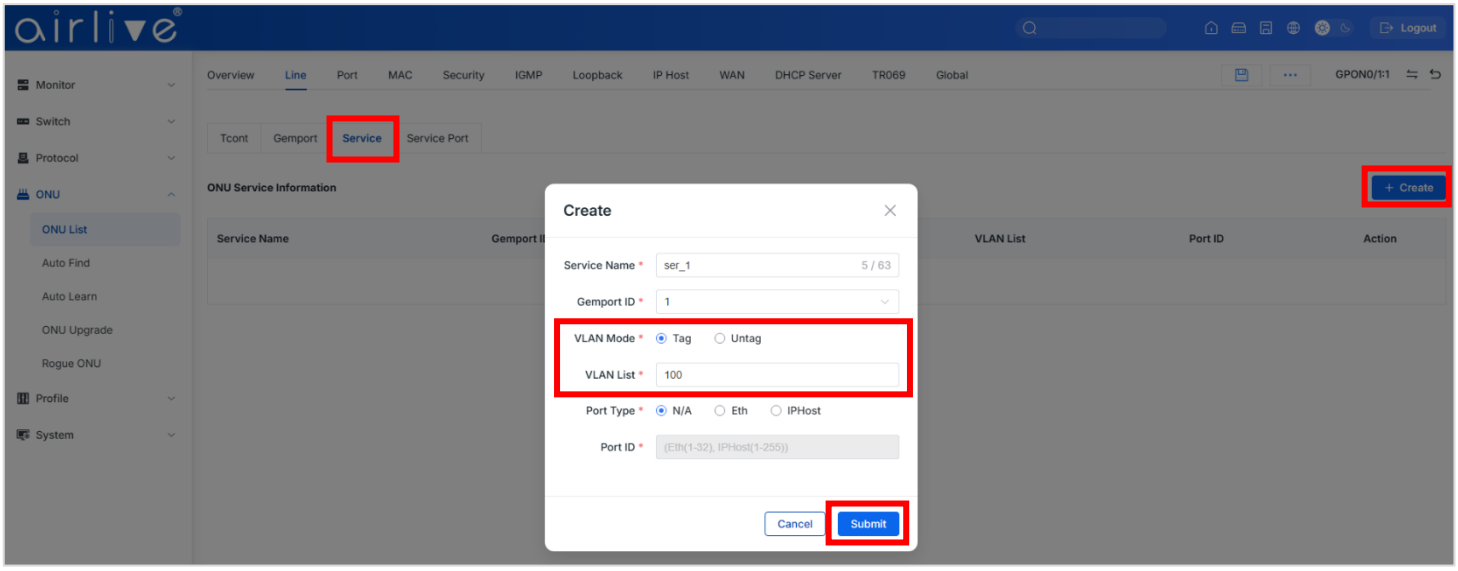
Setup the “Gemport” the default value is 1, make sure the TcontID select is 1 (the one previously made. The name used in this example is test.

Click “Create” to add the “Gemport”. After entering the information Click “Submit”



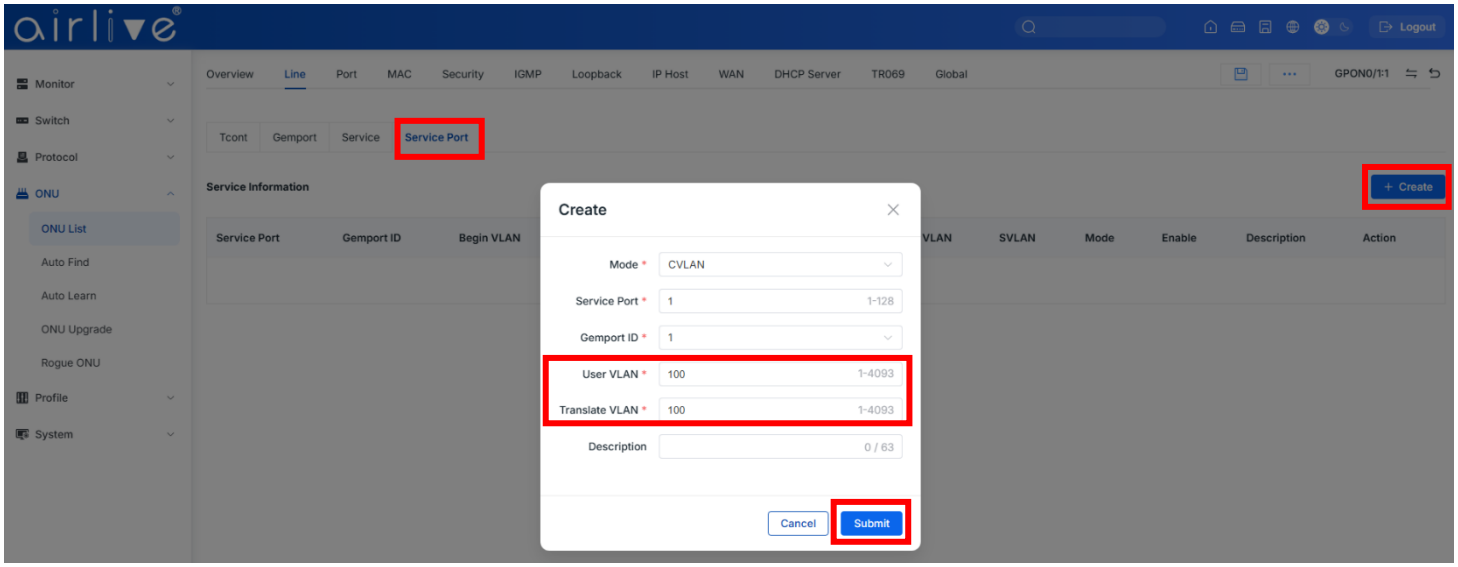
Setup the “Service”, make sure to select Gemport ID 1 (the one just made) and for VLAN mode select “Tag” for “VLAN List” enter the value 100, this is the VLAN id made in the OLT previously.

Click “Create” to add the “Service”. After entering the information Click “Submit”



Setup the “Service Port” enter the User VLAN and Translate VLAN in this example both are 100. (as this example is using VLAN 100).

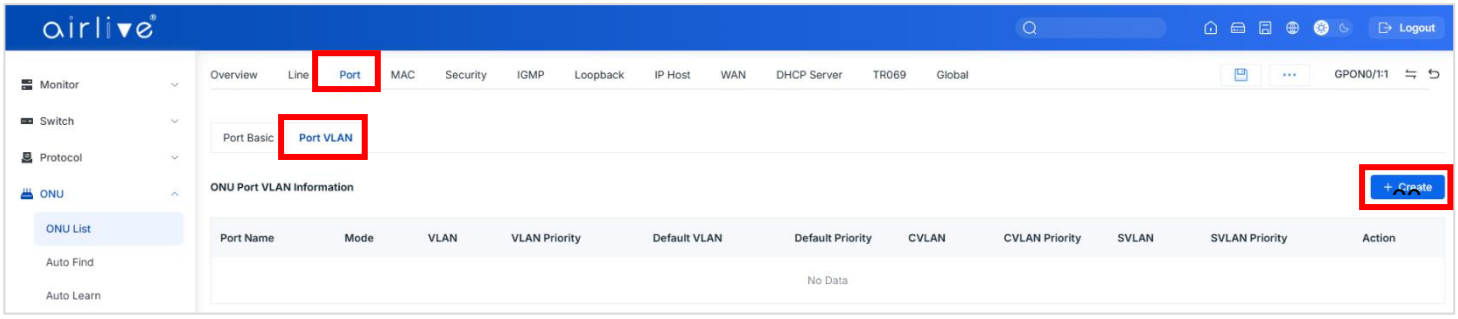
Click “Create” to add the “Service”. After entering the information Click “Submit”

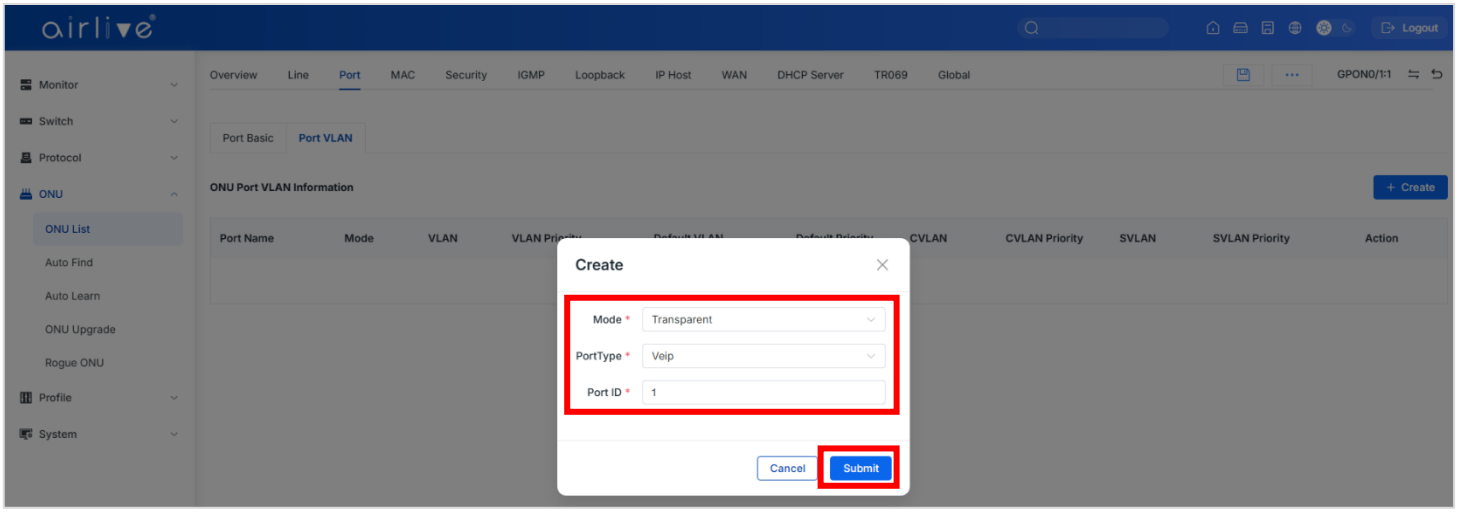


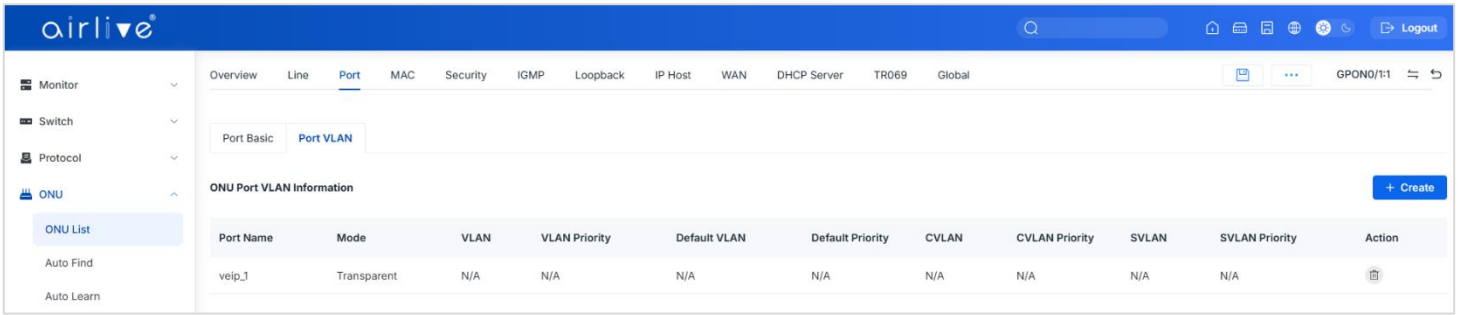
Setup the “Port VLAN” On the ''Port VLAN'' page, for HGU the mode needs to be configured to ''transparent'', the Port Type needs to be configured as ''veip'' and Port Id needs to be configured as ''1''.

From the Top menu Click on “Port”, Then select “Port VLAN” and Click Create.

When using Setup 2 these Port VLAN settings will be different. If you would like to use Port VLAN as your Bridge setup please go to page 11 of this guide.

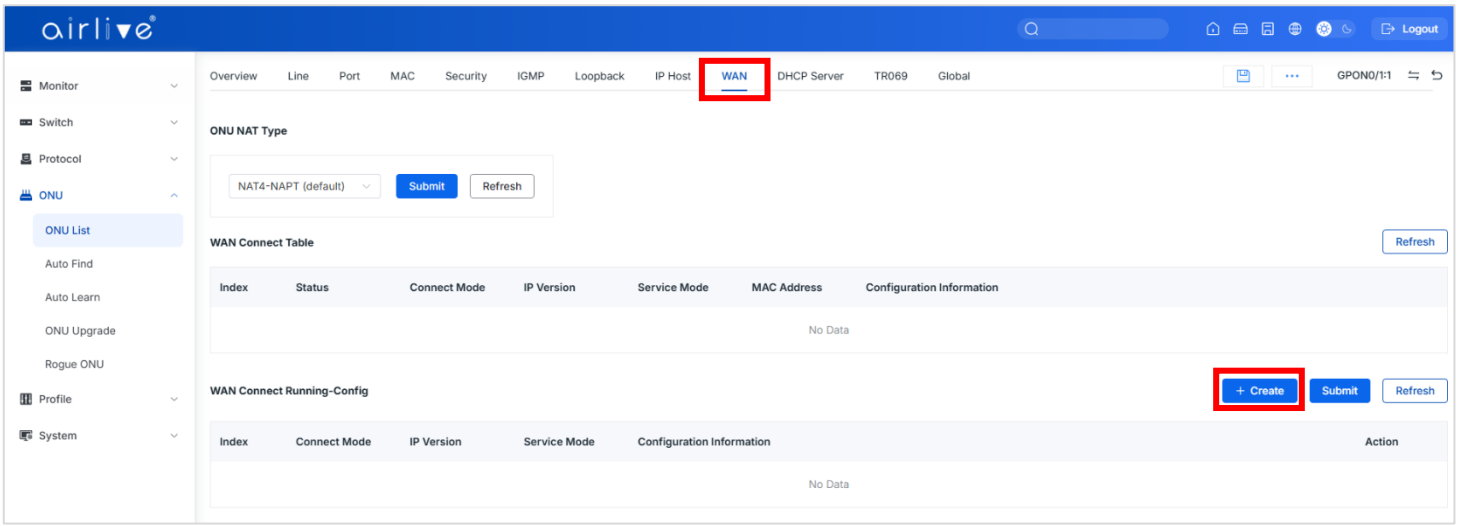


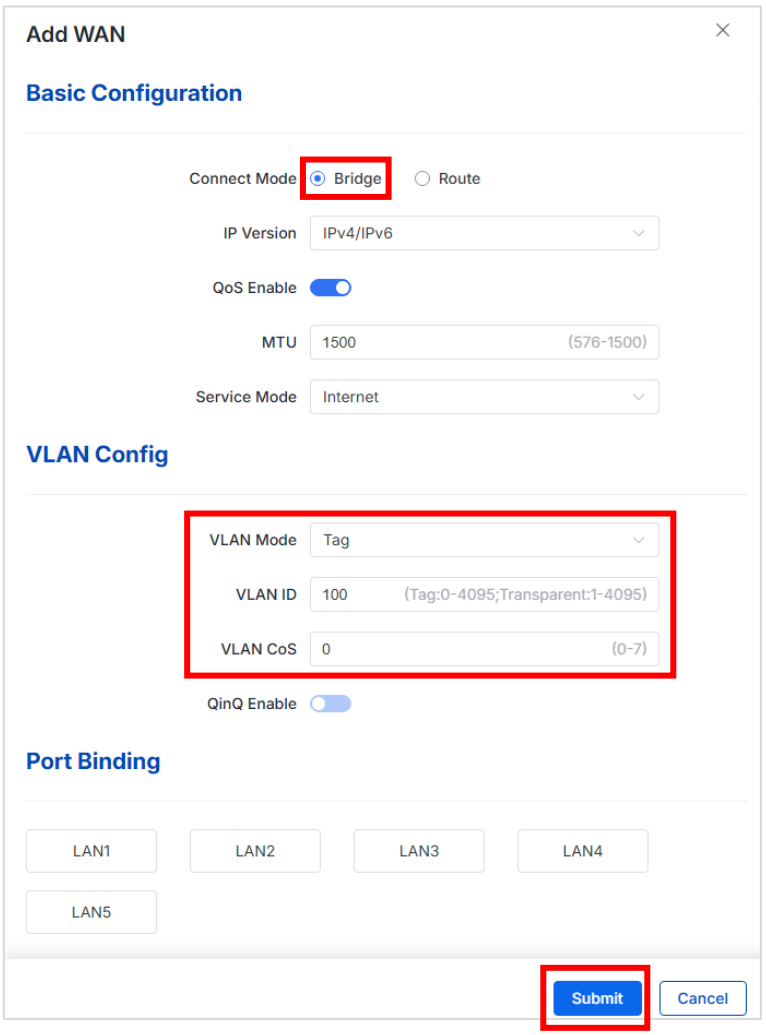




7: Setting up the WAN port information, click on ''WAN'' in the top menu bar. In the WAN menu, Click on “Create” to add WAN. Select the Mode Bridge, Select the IP version you would like to use IPv4, IPv6 or IPv4/IPv6. Then select the VLAN mode “Tag” in this example and fill in the VLAN information in this example 100, VLAN Cos should be 0. And choose service mode is "Internet". and Click “Submit”

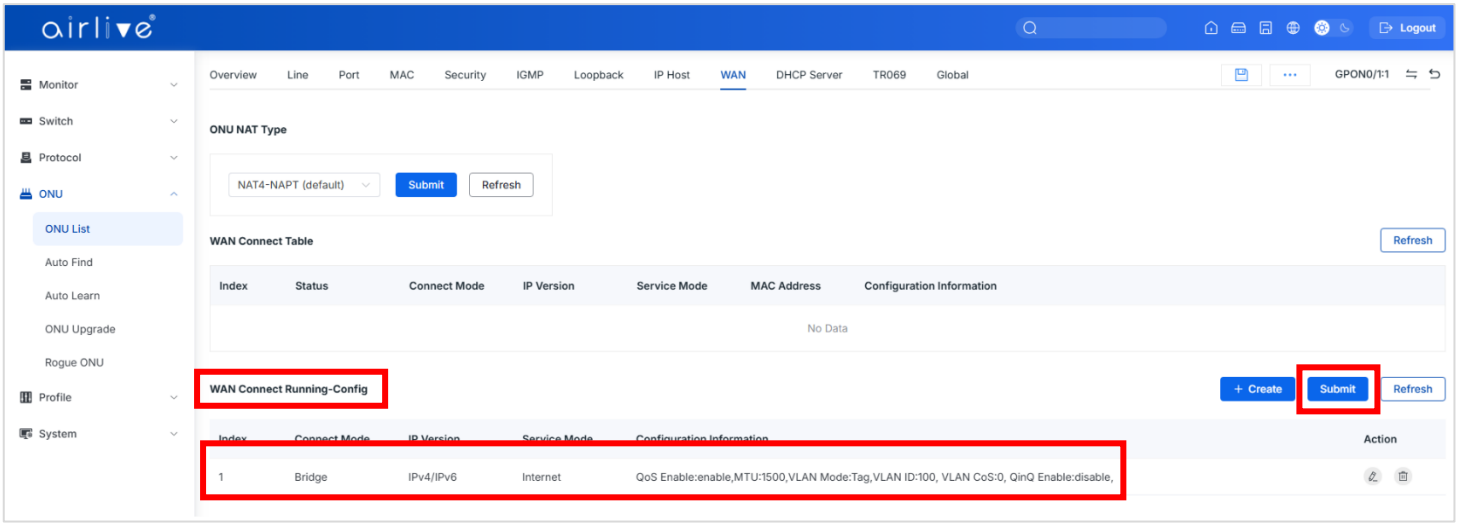
Please note: When the configuration is complete, you need to click “Submit” button. At this point, the configuration is added to running-config list. Finally click the "Submit" button to send the configuration to the ONU. Refresh the OLT page and in a few seconds the configuration will be shown it can take 1 min before it will show “Connected” when the configuration has been setup up correctly.





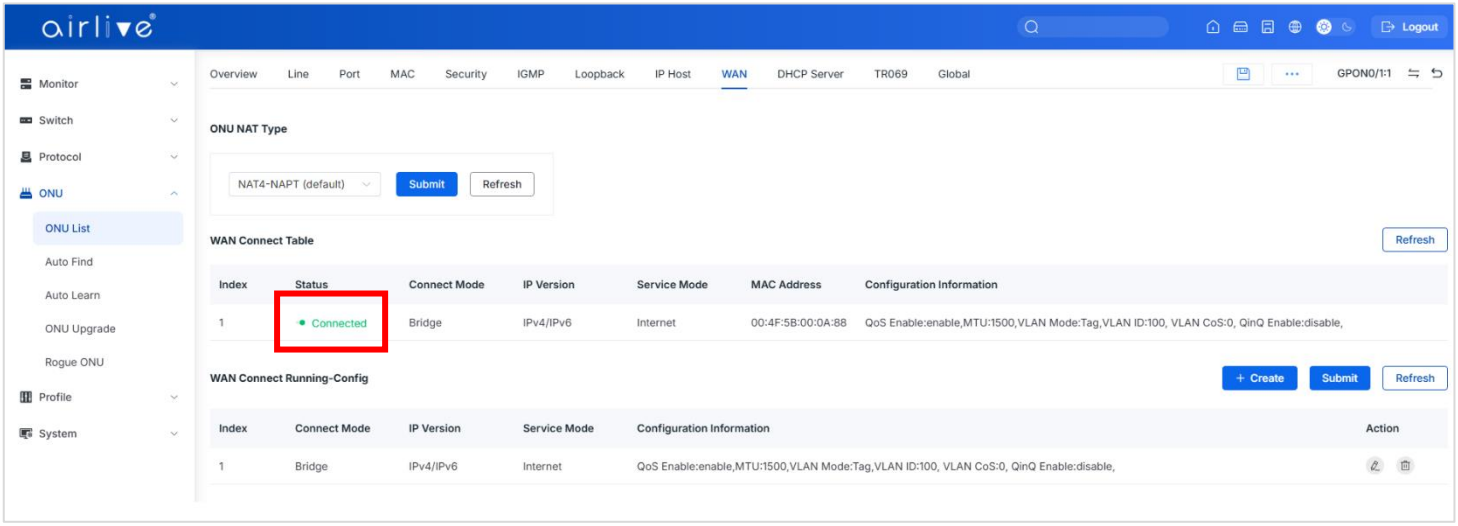
Important after pressing “Submit” your configuration is made but not yet sent to the ONU.

After pressing “Submit” the configuration will be shown as in the below example. Click “Submit” again on the second “Submit” button and the configuration will be sent to the ONU.



The configuration will now be sent to the ONU and the ONU will make an Internet connection. When the setup was done correctly the words “Connected” will be shown.

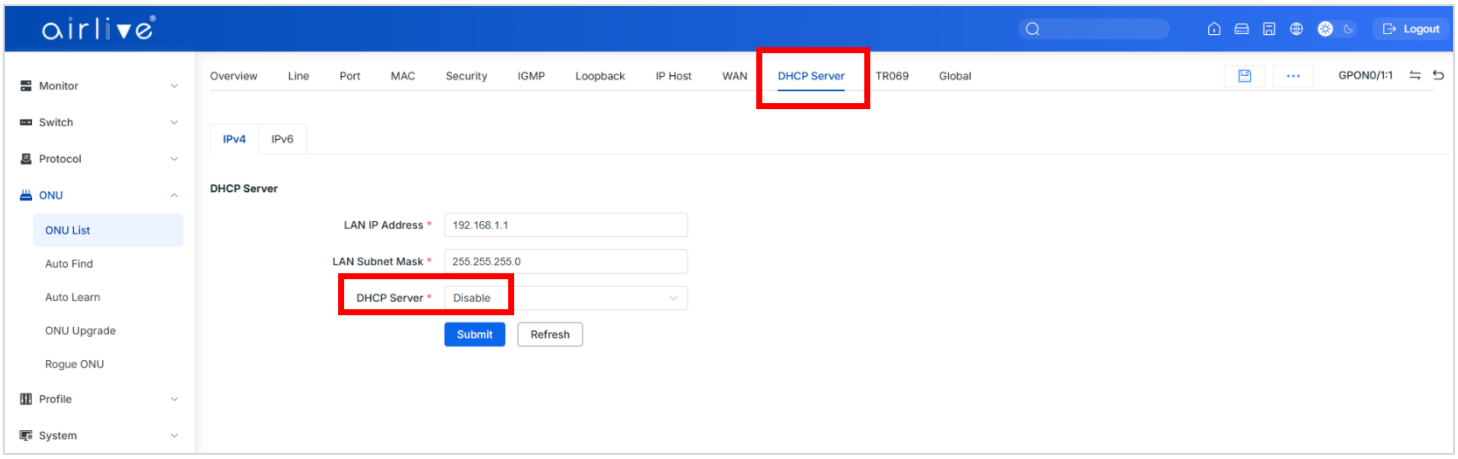
Note it can take 1 or 2 minutes before the correct information is shown, please refresh the page.



To receive the IP address from the Router on the computer, which is connected to the ONU, please make sure the DHCP server on the ONU is turned off. If this is not the case, the computer will get an IP address from the ONU and Internet will not work correctly.

In the top menu select “DHCP Server”, at DHCP Server select “Disable” from the pull-down menu and press Submit. After 1 to 2 mins the computer connected to the ONU will receive an IP address from the Router. If this is not the case, then please unplug the RJ-45 cable from the computer and plug it back in.

When the DHCP Server is already disabled no settings need to be changed.



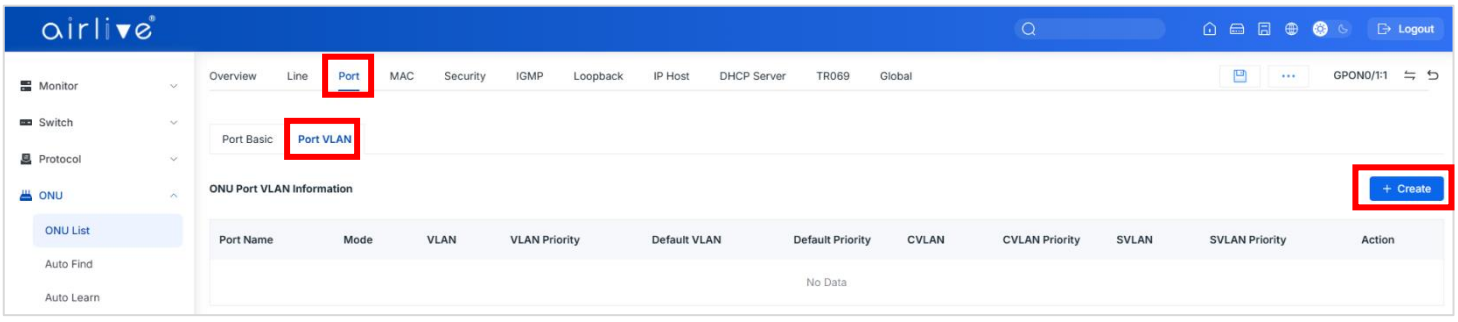
The Setup is now complete, and the ONU is connected to Internet.

To see the settings of the ONU (which the OLT sent to the ONU), please connect to the ONU with a PC, and enter the default IP address of the ONU in a browser. The default IP address is 192.168.1.1. Note you need to set up your computer to a fixed IP address in the range of 192.168.1.x By default the computer will get an IP address from the router in the 192.192.110.x range (as per example).

SETUP 2.

For Setup 2, follow steps 1 to 6 until the Port VLAN settings, these will be different from Setup 1.

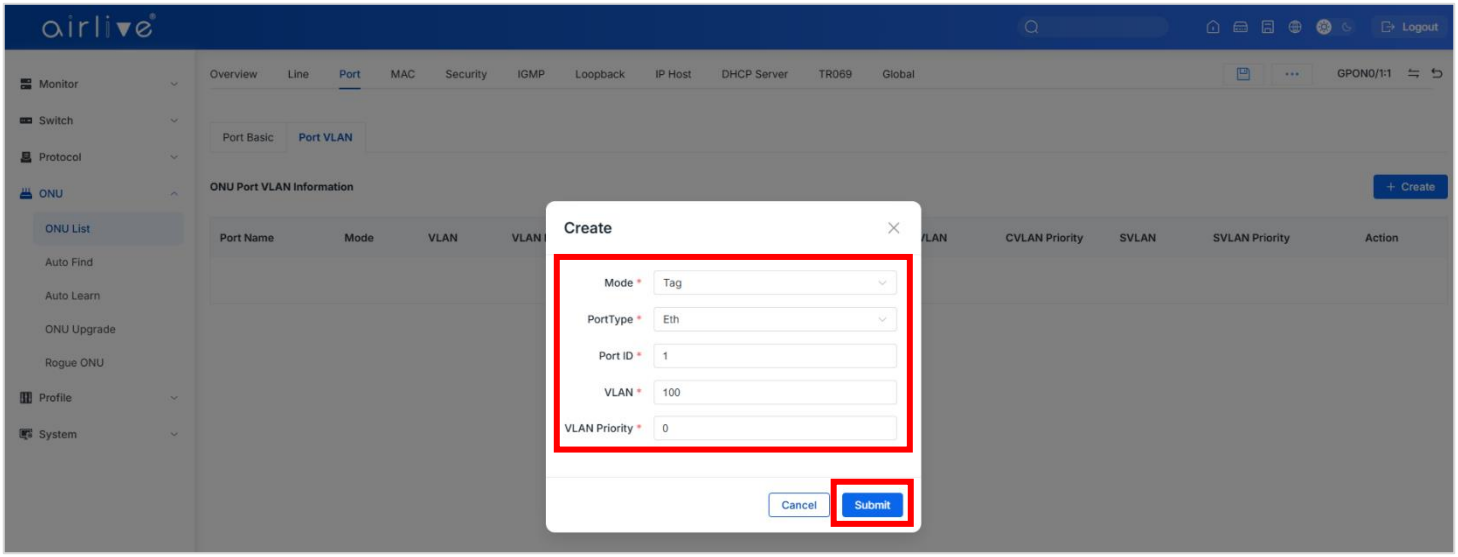
From the Top menu Click on “Port”, Then select “Port VLAN” and Click Create.



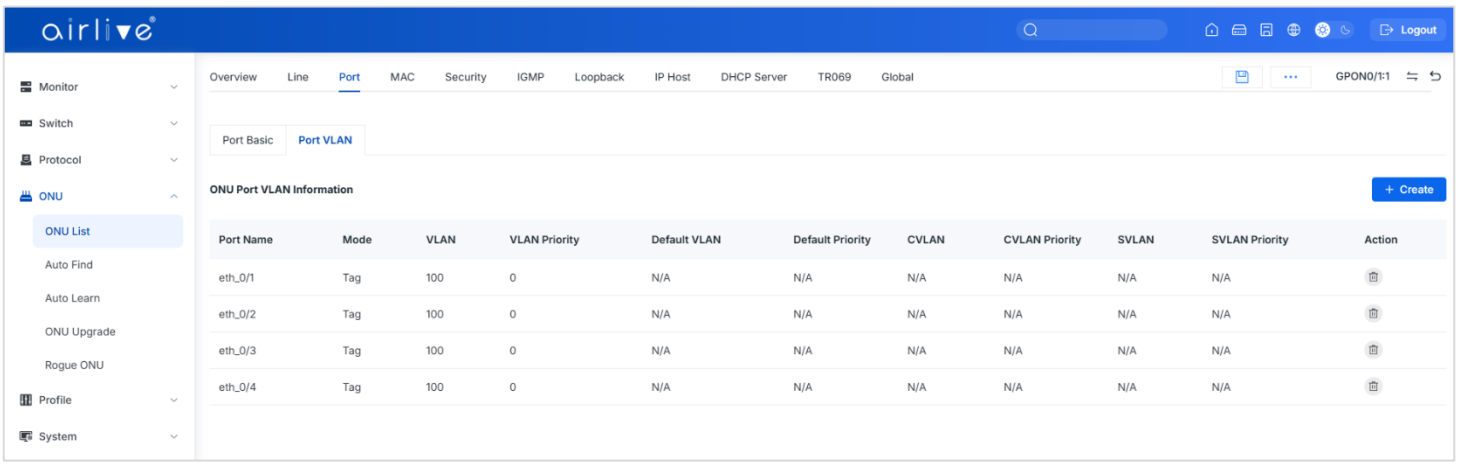
As the ONU is in SFU mode the Ethernet port(s) needs to be set up directly.

Note to change the SFU/HGU mode please see page 14.

On the ''Port VLAN'' page, for the ONU, the Mode needs to be configured as ''Tag'', PortType needs to be configured for ''Eth'' and Port Id needs to be configured for each of the ethernet port of the ONU in this case the ONU has 5 LAN ports all need to be setup here. First Enter “1” for LAN port 1, then enter the VLAN ID which in this example is 100, VLAN Priority can be set to 0. press “Submit”. Now the same thing needs to be set up for LAN port 2. Follow the same steps but now enter “2” at Port Id and press “Submit” again. When an ONU with more ethernet ports is connected it would be 3, 4, 5, ect. Now the added ports are linked to the Router.



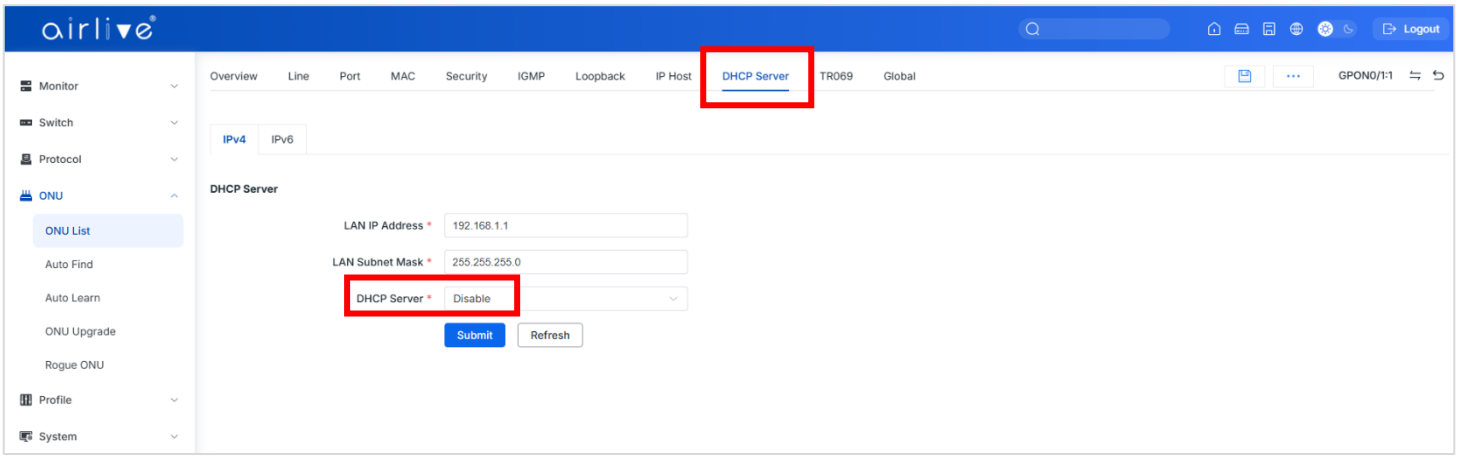
In the below example LAN port 1 to 4 were added.



3: To receive the IP address from the Router on the computer, which is connected to the ONU, please make sure the DHCP server on the ONU is turned off. If this is not the case, the computer will get an IP address from the ONU and Internet will not work correctly.

In the top menu select “DHCP Server”, at DHCP Server select “Disable” from the pull-down menu and press Submit. After 1 to 2 mins the computer connected to the ONU will receive an IP address from the Router. If this is not the case, then please unplug the RJ-45 cable from the computer and plug it back in.

When the DHCP Server is already disabled no settings need to be changed.



The Setup 2 is now complete, and the ONU is connected to Internet.

To see the settings of the ONU (which the OLT sent to the ONU), please connect to the ONU with a PC, and enter the default IP address of the ONU in a browser. The default IP address is 192.168.1.1. Note you need to set up your computer to a fixed IP address in the range of 192.168.1.x By default the computer will get an IP address from the router in the 192.192.110.x range (as per example).

Additional Information:

When using the WAN port option, the ONU is normally in HGU mode, for Port VLAN the ONU would be in SFU mode.

The mode depends on the ONU, some like the GPON models will have auto switching.

For other models like the XGPON and XGPON, the model can change in the OLT.

Go to Global >> ONU Mode select and from the pull-down menu select HGU or SFU.