

EPON OLT Products User Manual

FD1104S/FD1104SN/FD1104B/FD1104Y/ FD1108S

---Quick Configuration Guide

Version: V1.3



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About This Manual

This manual is applicable to C-Data company FD1104B、FD1104S、FD1104SN、FD1104Y、FD1108S EPON OLT products quickly installation configuration guide, Is the user to quickly and easily manage EPON OLT equipment should read the information before guidelines.

The related documents for EPON OLT device are:

&FD1104S/FD1104B/FD1104SN/FD1104Y/FD1108S EPON OLT User Manual-D evice Installation Guide》

&FD1104S/FD1104B/FD1104SN/FD1104Y/FD1108S EPON OLT User Manual-C LI Operation Guide》

&FD1104S/FD1104B/FD1104SN/FD1104Y/FD1108S EPON OLT User Manual-E MS Software Part》



Content

1 Read Instruction1
Document Scope1
Revision History1
Proper Noun1
Note2
2 OLT Login Manage2
2.1 OLT Login Manage Explanation2
2.2 OLT Login By Console2
2.3 OLT Login By Telnet3
3 OLT Upgrade Method4
4 OLT WEB Access Management Installation Method7
5 OLT Service ConfigurationCLI Command Method9
5.1 FTTH Service Topology9
5.2 Data Plan10
5.3 Configuration Guide10
5.4 Configure OLT Service11
5.4.1 Enable switch based on vlan11
5.4.2 Configure OLT Global Vlan11
5.4.3 Configure OLT GE Port Service Vlan11
5.4.4 Configure OLT PON Port Service Vlan14
5.4.5 Configure OLT Multicast Service14
5.5 Check ONU Register Status15
5.6 Configure Bridge ONU(SFU) Service15
5.6.1 Configure Bridge Onu(SFU) Internet Service15
5.6.2 Configure Bridge Onu(SFU) Multicast Service19
5.7 Configure Gateway ONU (HGU) Service19
5.7.1 Configure Gateway ONU (HGU) Internet ServiceRTK Solution ONU19
5.7.2 Configure Gateway ONU (HGU) Multicast ServiceRTK Solution ONU21
5.7.3 Configure Gateway ONU (HGU) Internet ServiceZTE Solution ONU22
5.7.4 Configure Gateway ONU (HGU) Multicast ServiceZTE Solution ONU
5.7.5 Configure Gateway ONU (HGU) VOIP ServiceZTE Solution ONU
6 Configure OLT QinQ Service29
6.1 Data Plan29
6.2 Configure Processes29
6.3 Configure OLT
7 Common Command Description 30
8 OLT Service ConfigurationEMS Method
8.1 Data Plan
8.2 Configuration Guide31
8.3 Configure OLT Service
8.3.1 Configure OLT Global Vlan31
8.3.2 Configure OLT GE Port Service Vlan32



8.3.3 Configure Ol	T PON Port Service Vlan	
8.4 Configure Brid	ge ONU(SFU) Service	
8.4.1 Configure Br	idge Onu(SFU) Internet Service	35
8.4.2 Configure Br	idge Onu(SFU) Multicast Service	
9 Configure Service In	OLTWEB Method	
9.1 Data Plan		
9.2 Configuration	Guide	
9.3 Configure OLT	Service	
9.3.1 Configure O	T Global Vlan	
9.3.2 Configure Ol	T GE Port Service Vlan	41
9.3.3 Configure Ol	T PON Port Service Vlan	
9.4 Configure Brid	ge ONU(SFU) Service	45
9.4.1 Configure Br	idge Onu(SFU) Internet Service	45
9.4.2 Configure Br	idge Onu(SFU) Multicast Service	
Concluding Remarks		



1 Read Instruction

Document Scope

Reading Object	Product	Products Software Version		
C-Data company Employees				
FTTX	C-Data EPON OLT			
Operation&Maintenance	(FD1104S/FD1104B/FD1104SN/	V2.X.X		
Engineer,	FD1104Y/FD1108S)			
Customer's Technical				
Engineer				
Compiling Department	Technical Center Technical	Document		
Compuning Department	Support Department Version		v 1.3	

Revision History

Date	Version	Description	Author
2016-02-28	V1.1	OLT version switch to V2.2.X, cli command line have been changed.,update config guide fully	Technical Support Department
2017-05-04	V1.2	OLT version switch to V2.4.X, cli command line have been changed.,update config guide fully	Technical Support Department
2019-03-29	V1.3	 Add how to access the OLT web management Add trunk, hybrid port mode Add configure OLT QinQ service Add OLT EMS and WEB management type config guide 	Technical Support Department

Proper Noun

Acronym	Full name	Instructions
EPON	Ethernet Passive Optical Network	Ethernet Passive Optical Network
OLT	Optical Line Terminal	Optical Line Terminal
ONU	Optical Network Unit	Optical Network Unit
OMCI	ONU Management and Control	GPON OLT&ONU Management and
OMCI	Interface	Control Interface(protocol)



OAM	Operation Administration and	EPON OLT&ONU Operation
UAM	Maintenance	Administration and Maintenance Protocol
DBA	Dynamic Bandwidth Allocation	Dynamic Bandwidth Allocation
VLAN	Virtual Local Area Network	Virtual Local Area Network
VoIP	Voice over IP	Voice over IP
WLAN	Wireless Local Area Networks	Wireless Local Area Networks
FTTH	Fiber To The Home	Fiber To The Home
FTTB	Fiber To The Building	Fiber To The Building

Note

- > The command line described in the document is case sensitive in OLT.
- If we meet a command that cannot be inputed or is prompted for error, we can input "?" to see the latter command format.
- > Input incomplete commands can be completed by pressing the **"Tab"** key.

2 OLT Login Manage

2.1 OLT Login Manage Explanation

FD1104S、FD1104B、FD1104SN、FD1104Y、FD1108S EPON OLT support CLI,EMS and WEB management;CLI manege type divided into telnet remote manage and console local manage, please check #2.2 and #2.3 chapter to see concrete operations;please check EMS user manual to see EMS manage way;please check #4 to see WEB manage way.

2.2 OLT Login By Console

First,find console port on OLT front surface (which is a RJ45 port have been mark "CONSOLE") .if want to login OLT by Console port,we need do prepare as follows:

- Need RJ-45-to-DB-9 serial line
- Connect PC to OLT concole port, find COM number in "computer management"
- Software for logining OLT by console port(Putty,SecureCRT)
- parameter for console login software

Baud Rate:9600

Parity Check:None

Databit:8



Stopbit:1

Flow Control:None

Login OLT by console login software, then input username:admin, password:admin

(OLT Console Connection Diagram **)**



(OLT Console Connection Device **)**



RJ-45 to DB-9 Console Cable



USB to RS-232 compatible serial port adapter

Port on Computer	Required Cable	Port on OLT
Serial Port	RJ-45 to DB-9 Console Cable	
USB Type-A Port	 USB to RS-232 compatible serial port adapter (Adapter may require a software driver) RJ-45 to DB-9 Console Cable 	RJ-45 Console Port

2.3 OLT Login By Telnet

There are two way to telnet, one is outband management, another is inband management.:

#1: Outband management(connect OLT MGMT port)

Set PC ip as 192.168.1.X(except 192.168.1.100),PC connect to OLT MGMT port, login the

OLT with OLT default manage IP (default IP : 192.168.1.100). then input username and



password,default login username and password is:**admin/admin Use command as follow can modify the outband management IP:** epon# system ipconfig outband 192.168.5.88 255.255.255.0

#2: Inband management(connect OLT ge port)

First we login olt via console port or mgmt port, and configure a management-vlan,add the ge port to the vlan(ge port vlan mode can be access or trunk,which depends on your network environment), then configure the inband-ip, pc connect to OLT ge port(gel-ge8) and telnet to the OLT. (Example)The way to set inband mangement ip as follows: epon# vlan 50 epon# system ipconfig mgmt-vlan 50 epon# swport ge7 epon(GE-7)# vlan add 50 epon(GE-7)# pvid 50

epon(GE-7)# exit

epon# system ipconfig inband 192.168.6.100 255.255.255.0

3 OLT Upgrade Method

Attention Before Upgrade:

The new version(OLT V2.3.X) is different from the olt version(before OLT V2.3.X). There are two management IP in the new version, such as in-band management IP and out-of-band management IP. But There is only one management IP in the old version.

So we adjust something about the in-band and out-of-band management IP. As follows:

1. Before the OLT is default ip address 192.168.1.100,after upgrade to V2.3.1 version:

OLT uplink port manage ip address is:192.168.8.100

OLT AUX/MGMT port manage ip address is:192.168.1.100

2. Before the OLT manage ip address have been change to 192.168.1.X not is 192.168.1.100 ,after upgrade to V2.3.1 version:

OLT uplink port manage ip address is:192.168.1.X

OLT AUX/MGMT port manage ip address is:192.168.2.100

3. Before the OLT manage ip address have been change to other not is 192.168.1.X ,after upgrade to V2.3.1 version:



OLT uplink port manage ip address is: It is before you are changed ip address.

OLT AUX/MGMT port manage ip address is:192.168.1.100

Upgrade Process Guidance:

1. Set up OLT update topology:

Use a PC as FTP server(run wftpd32.exe or Wftpd.exe in this pc),and connect to OLT mgmt port or ge port to transmit firmware.



Note: This tutorial will take the PC as a server, and the IP of PC is 192.168.1.11, management IP of the OLT is 192.168.1.100.

2.Test network connectivity

a.Connnect PC to OLT console port, used for updating OLT in boot mode.

b.Connect pc to OLT MGMT port or ge port,configure PC ip and OLT ip(inband ip or outband ip) are in same segment.

c.PC can ping OLT manegemnet IP,if pc can ping OLT manegemnet ip,means OLT can connect to FTP server.

d.Close PC firewall, prevent firewall intercept FTP software.



就绪	Serial: COM29 28		
📦 start 🛛 eboot 🎱 fw.bi 🎯 fw.bin 🎯 dpass 🎯	00	Ψ.	
<pre>epon# epon# ping 192.168.1.11 PING 192.168.1.11 (192.168.1.11): 56 data b 64 bytes from 192.168.1.11: seq=0 tt]=64 ti 64 bytes from 192.168.1.11: seq=1 tt]=64 ti 64 bytes from 192.168.1.11: seq=2 tt]=64 ti 64 bytes from 192.168.1.11: seq=2 tt]=64 ti 192.168.1.11 ping statistics 4 packets transmitted, 4 packets received, (round-trip min/avg/max = 1.434/253.021/1007. epon#</pre>	/tes ne=1007.521 ms ne=1.663 ms ne=1.434 ms ne=1.468 ms % packet loss 521 ms		
epon# show system ipconfig ip : 192.168.1.100 netmask : 255.255.255.0 gateway : 192.168.1.1 MNGMT-VID : 1 epon#		往返谷程的估计时间(以毫秒为单位): 最短 = Øms,最长 = Øms, 平均 = Øms C:\Users\Administrator.PC-20131223VEFH>	
System Temperature : 41.0C FAN[1] : Normal FAN[2] : Normal FAN[3] : Normal		☆ 1921.168.1.100 的 Ping 统计信息: 数据句: 已发送 = 4. 已接收 = 4. 夭失 = 0 (6% 夭失).	
Software version : 2.2.07_000(May 20 201(Hardware version Mac : V3.1 serial Number : e0-67-b3-00-57-41 System Time : 2000/01/02 06:10:25 +1	5)	正在 Ping 192.168.1.100 具有 32 字节的数据: 来有 192.168.1.100 的回复: 字节-32 时间(ing TL=64 来有 192.168.1.100 的回复: 字节-32 时间(ing TL=64 来有 192.168.1.100 的回复: 字节-32 时间(ing TL=64 来百 192.168.1.100 的回复: 字节-32 时间(ing TL=64	
150 150 150 150 150 150 150 150 150 150	o 23 -	C:\Users\Administrator.PC-20131223UEFH>ping 192.168.1.100	
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S)]	_具(L) 帮助(H)	Microsoft Windows [版本 6.1.7601] 版权所有 <c> 2009 Microsoft Corporation。保留所有权利。</c>	
Serial-COM29 - SecureCRT	Managers (1977)	圖 管理员: C:\Windows\system32\cmd.exe	

3. TFTP server configuration

- (1)Open the TFTP software;
- (2)Specifies the path to the firmware to be upgraded;
- (3)Specifies the IP address of the server (ie PC);

🏘 Tftpd32 by Ph.	Jounin					
Current Directory	Current Directory C:\Users\Administrator.PC-20131223VEFF					
Server interface 1	92.168.1.11	-	Show Dir			
Tftp Server Tftp C	lient DHCP server Syslog s	erver (2)			
, Current Action	Listening on port 69					
About	Settings		Help			

4. OLT update command

OLT the common upgrade method please see below:

a. Input command as follows to update OLT

epon# system update firmware FD1108S_V2.4.05_180517_X000.img tftp-server 192.168.1.11

Transfering the Image file, please wait...

Upgrading begins, please wait and notice the rate of progress

Any operation such as reboot or switchover will cause failure and

unpredictable result

The upgrading starts

The percentage of erasing flash is: 01%

- The percentage of erasing flash is: 40%
- The percentage of erasing flash is: 100%



The percentage of writing flash is: 01%

The percentage of writing flash is: 38%

The percentage of writing flash is: 100%

The upgrade is successful, you must reboot system to make file take effect

b. After update OLT,we need reboot OLT(Note:only reboot OLT,OLT can use new version) epon# system reboot

Reboot the system now<y/n>?y

4 OLT WEB Access Management Installation Method

1.First, update the WEB firmware via the #3 OLT upgrade way,(firmware name include Web word ,such as FD1108S_WEB_V1.2.0_X000_180517_1326.img)

epon# system update web-server FD1108S_WEB_V1.2.0_X000_180517_1326.img tftp-ser ver 192.168.1.11

Transfering the Web Server file, please wait...

Upgrading Web Server ... Restarting Web Server ...

OK!

2.PC connect to OLT mgmt port or inband management port,make sure PC can ping OLT inband management ip or outband management ip

3.Before accessing OLT's web management from a PC, you need to enable OLT's SNMP and web access functionality by the OLT command line.The configuration command is as follows:

epon# system web enable
epon# system web default-port
epon# system snmp community read-only public
epon# system snmp community read-write private

4.After the OLT WEB firmware upgrade, can use below method check the OLT if have the web firmware version informaton, if see the information on the OLT, this mean the OLT have the web firmware version:



epon# show system :	infor
System Description Software Version Hardware Version MAC Serial Number System Time Location Contact	: 123 : 2.4.05_000(May 17 2018) : 3.00 : e0-67-b3-00-57-41 : AF1101-16080032 : 2019/03/21 14:41:12 +08:00 : shenzhen : 109
Web Server Version BuildTime Administrator Password	: V1.2.0 : 18-05-17 13:26:25 : admin : admin
System Temperature FAN[1] FAN[2] FAN[3]	: 48.5C : Normal : Normal : Normal : Normal
epon#	

5.Open PC browser input OLT management ip(recommend using Firefox web browser),then we can see web login interface,web login username and password is:admin/admin

← → C ☆ ③ 192.168.5.80	
🚻 应用 峰 Google 翻译 🎦 密钥 💠 公司主页 🙆 开普云 🎯 禅道 😤	百度
XPON OLT	
	Login
	Languag English
	User please enter user name
	Please enter administrator passw
	Login

6. Customized web management information configure. PC access to OLT web via http://X.X.X.X/cgi/customer.php And enter parameter. Click "OK" . Restart the OLT web in browser then can view the customized informations.
Language:Support Chinese and English. The default is Chinese.
Customer:Customer ID. Provided by CDATA. The default is neutral.
SecretKey :Customer ID secretkey. Provided by CDATA. The default is neutral.
Version :Customized web management system version.



Cust	omer Settings	×								
⊢ →	C 192.16	8.5.55/cg	i/customer.php							
应用	1 打开新的标签页	🕌 Login	🗋 收藏到有道云笔记	🔏 【新提醒】	三星Galax	🕍 中国电	ele GPON上行。	道中国电信EPON选	型测 📸 中国电信EPON选型测	馆
					Cus	tomer	Settings			
					Langi	uage English	h	•		
					Gusto	omer X000		•		
					Secre	tKey 5857b	0845			
					Vers	ion V1.8.8	3			
							OK			

7. Other instructions

a. Web management system's username and password is independent, default is admin/admin. This username and password can modify in web interface and would not affect other access mode.

b.Web management system need to work in V2.4.02 OLT basic firmware. In old OLT basic version can't not support the web function. So if you need to use web function. Please upgrade OLT basic firmware to V2.4.02 or newer at first.

5 OLT Service Configuration --- CLI Command Method

This section mainly introduct 4Port/8Port OLT internet service, voice service and multicast service in FTTH environment.Mainly introduce the bridge ONU(SFU) and Home Gateway ONU (HGU),The following will introduce the service configuration way for OLT and ONU according to two types ONU.

5.1 FTTH Service Topology





5.2 Data Plan

Main Data Plan List			
Configuration Item	Data		
	VLAN 100: Internet Service		
VLAN Data	VLAN 200: IPTV Service		
	VLAN 300: VOIP Service		
	Ge1: VLAN 100 access mode		
OI T Don't Softing	Ge2: VLAN 200 access mode		
OL1 Fort Setting	Ge3: VLAN 300 access mode		
	PON1: VLAN 100, VLAN 200, VLAN 300 trunk mode		
ONU Degister ID	Bridge ONU ID: 1		
ONU Register ID	Gateway ONU ID: 2		
	LAN 1: VLAN 100		
Bridge ONU Port config	LAN 2: VLAN 200		
	LAN3: VLAN 300connect to VOIP phone		
	Internet WAN: VLAN 100		
Gateway ONU Port config	IGMP WAN: VLAN 200		
_	VOICE WAN: VLAN 300		

5.3 Configuration Guide





5.4 Configure OLT Service

5.4.1 Enable switch based on vlan

epon#swmode vlan enable //If on the OLT need support the vlan, this function is must enable

5.4.2 Configure OLT Global Vlan

We can use **epon# show vlan all** to show the created vlan.

If the created vlan can't meet the need, we can according below mehtod created new vlan on the OLT, According to the data plan, we create vlan100, vlan200, vlan300 firstly:

5.4.3 Configure OLT GE Port Service Vlan

We can config GE port vlan mode as access, hybrid and trunk, we can configure different mode according to our network plan, configure way of three mode as follows.

Configure GE 1,2,3 port vlan mode is access(in this document,GE port connect to PC,so we configure ge port vlan mode as access):

Note:

If the port has only one vlan untag mode and the same as the pvid, then the port is access mode. As follows:

epon# swport ge1	<pre>// Enter ge1 configuration view</pre>	
epon(GE-1)# pvid 100	//Config PVID 100, give to ingress untag packet used	
epon(GE-1)# vlan add 100	//Config vlan 100 untag, give to egress packet strip vlan tag 100	



epon(GE-1)# exit	
epon# swport ge2	// Enter ge2 configuration view
epon(GE-2)# pvid 200	<pre>// Config PVID 200, give to ingress untag packet used</pre>
epon(GE-2)# vlan add 200	// Config vlan 200 untag, give to egress packet strip vlan tag 100
epon(GE-2)# exit	
epon# swport ge3	// Enter ge3 configuration view
epon(GE-3)# pvid 300	<pre>// Config PVID 300, give to ingress untag packet used</pre>
epon(GE-3)# vlan add 300	// Config vlan 300 untag, give to egress packet strip vlan tag 100
epon(GE-3)# exit	

Configure GE 1,2,3 port vlan mode is trunk, default pvid is 1.(If the port is configured with multiple vlan and tag mode, the port is in trunk mode):

Note:

If the port is configured with multiple vlan and tag mode, the port is in trunk mode. As follows:

epon# swport ge1	// Enter ge1 configuration view
epon(GE-1)# vlan add 100 tag	//Take the port add to vlan 100,vlan 100 is tag mode
epon(GE-1)# exit	
epon# swport ge2	// Enter ge1 configuration view
epon(GE-2)# vlan add 200 tag	<pre>// Take the port add to vlan 200,vlan 200 is tag mode</pre>
epon(GE-2)# exit	
epon# swport ge3	// Enter ge3 configuration view
epon(GE-3)# vlan add 300 tag	<pre>// Take the port add to vlan 300,vlan 300 is tag mode</pre>
epon(GE-3)# exit	

Configure GE 1,2,3 port vlan mode is hybrid(If the port is configured with multiple vlan and some of which are tagged and the others are untag mode, the port is in hybrid mode):

Den Note:

If the port is configured with multiple vlan and some of which are tagged and the others are untag mode, the port is in hybrid mode. As follows:

// Enter ge1 configuration view
//Config PVID 100, give to ingress untag packet used
//Config vlan 100 untag, give to egress packet strip vlan tag 100
//Config vlan 110 untag, give to egress packet strip vlan tag 110
// Take the port add to vlan 120,vlan 120 is tag mode



epon# swport ge3

epon(GE-3)# pvid 300

epon(GE-3)# vlan add 300

epon(GE-3)# vlan add 310

epon(GE-3)# vlan add 320 tag

D NOTE:

The OLT vlan every mode handle process as follows:

Vlan mode	Direction	Message have vlan tag or not	Handling method	
	In	vlan tag	Discard	
		untag	Add port configured vlan in access mode for message (main parameter is VID), and forword	
Access mode	Out	vlan tag	Forward message to the corresponding port according to VID and remove vlan tag; If the VLAN ID of the Tagged message is not same to the port VID, it is discard.	
		untag	Discard	
	In	vlan tag	If the VLAN in the message is permit to pass port, it will be forwarded directly; If the VLAN in the message doesn't permit to pass port, it is discarded.	
		untag	Add default vlan(native-vlan) for untagged message and forward.	
Trunk mode		vlan tag	If the VLAN in the message is permit to pass port, it will be forwarded directly; If the VLAN ID of the message is the default (native- VLAN)VLAN, then the VLAN tag is discard and forward;If the VLAN in the message doesn't permit to pass port, it is discarded.	
		untag	Discard	
Hybrid mode	In	vlan tag	If the VLAN in the message is permit to pass port, it will be forwarded directly; If the VLAN in the message doesn't permit to pass port, it is discarded.	
		untag	Add default vlan(native-vlan) for untagged message and forward.	



Out	vlan tag	If the VLAN in the message is permit to pass port,according vlan tag or vlan untag of message to discard or no discard vlan tag,then forward message,If the VLAN ID of the message is the default (native-VLAN) VLAN, then the VLAN tag is discard and forward; If the VLAN in the message doesn't permit to pass port, it is discarded.
	untag	Discard

5.4.4 Configure OLT PON Port Service Vlan

We can config PON port vlan mode as access, hybrid and trunk, according to our network plan configure different mode, if message from ONU is untag, we can configure PON port vlan mode is access or hybrid untag mode; if message from ONU is tag, we can configure PON port vlan mode is trunk or hybrid tag mode; configure way as follows.

Config PON1 port vlan mode is access:

epon# swport ge9
epon(GE-9)# pvid 100
epon(GE-9)# vlan add 100
epon(GE-9)# exit

Config PON1 port vlan mode is trunk: (PON port is trunk mode in this document) :

epon# swport ge9 epon(GE-9)# vlan add 100,200,300 tag epon(GE-9)# exit

Config PON1 port vlan mode is hybrid:

epon# swport ge9 epon(GE-9)# pvid 200 epon(GE-9)# vlan add 100 tag epon(GE-9)# vlan add 200 epon(GE-9)# exit

Dote:

In the 4 port OLT CLI, PON port 1 is GE5, and so on (PON1-PON4 is GE5-GE8); In the 8 port OLT CLI, PON port 1 is GE9, and so on (PON1-PON8 is GE9-GE16);

5.4.5 Configure OLT Multicast Service

Accroding the data play the OLT multicast vlan is use vlan 200, the uplink port is ge2, configure IGMP and multicast-vlan 200:

epon# igmp mode proxy // IGMP is proxy mode



epon# multicast-vlan	200 //Cr	eate and enter	multicast vlan200 view	
epon(multicast-vlan-2	200)# igmp router-port	ge2 // Con	figure the multicast routing port as ge2	
OLT(config-multicast-vlan-200)# igmp match group ip 224.1.1.1 to-ip 224.5.5.5				
// Configure mul	ticast vlan200 to match	the multicast	address segment 224.1.1.1-224.5.5.5	
OLT(config-multicast-	vlan-200)# exit	//Exit the mu	lticast vlan 200 view	
epon# btv	//Enter the btv view			
epon(btv)# igmp user	add user-index 1 pon 1	Lont 1 vlan 20	D	
	//	Add btv user b	inding specified ONU and vlan	
epon(btv)# exit	//Exit the btv view			
epon# multicast-vlan	200			
epon(multicast-vlan-2	200)# i gmp member use	er-index 1		
	//	' Add multicas	t users to multicast vlan200	
OLT(config-multicast-	vlan-200)# exit			

5.5 Check ONU Register Status.

ONU is automatically registered by default on the OLT, use below command can check the ONU if registered and online success on the OLT :

e 	pon# sl	how ol	t 1 online-onu			
	Port	ONU	MAC	Туре	CTC Dist(m) Software-Ver
	1	12	00-01-62-45-99-0b	ONU4GE1P1TV	3.0 6	V1.1.3
	1	13	e0-fa-07-f5-03-fd	ONU1GERW	3.0 24	V2.1.4

Total: 2 online.

5.6 Configure Bridge ONU(SFU) Service

SFU type ONU need enter OLT to config ONU one by one, config way as follows:

5.6.1 Configure Bridge Onu(SFU) Internet Service

Premise condition of ONU to open internet service:

- OLT connect to uplink device and open internet service
- OLT have created vlan for internet service
- OLT have configured GE port vlan
- OLT have configured PON port vlan
- ONU have registered

SFU ethernet port vlan mode have transparent,tag(access),trunk mode and so on,we can according to our network plan configure different mode.All onu vlan is configured by OLT,configure way as



follows:

Configure ONU1 eth1 vlan mode is tag(access) (ONU eth port vlan mode is tag in this document):

epon# olt 1	//Enter the PON po	ort
epon(olt-1)# onu 1	//Enter the ONU	
epon(olt-1/onu-1)# uni 1	//Enter the uni o	of ONU
epon(olt-1/onu-1/uni-1)# ctc vlan-mode tag	g 0x8100 0 100	//Config ONU port vlan
epon(olt-1/onu-1/uni-1)# exit		

Configure ONU1 eth1 vlan mode is transparent:

epon# olt 1
epon(olt-1)# onu 1
epon(olt-1/onu-1)# uni 1
epon(olt-1/onu-1/uni-1)# ctc vlan-mode ctc vlan-mode transparent
epon(olt-1/onu-1/uni-1)# exit

Config ONU1 eth1 vlan mode is trunk:

epon# olt 1 epon(olt-1)# onu 1 epon(olt-1/onu-1)# uni 1 epon(olt-1/onu-1/uni-1)# ctc vlan-mode trunk 0x8100 0 100 vlan-list 200,300 epon(olt-1/onu-1/uni-1)#exit

Dote:

The port vlan mode of ONU is as follows:

Transparent Mode

Direction	Туре	Processing method
	Untag frame	Untag frame does not make any change, forwarding
Upstream	Tag framo	Tag frame does not make any changes (original VLAN
	lag fraine	TAG), forwarding
	Untag frame	Untag frame does not make any change, forwarding.
	Tag framo	Tag frame does not make any changes (original VLAN
	lag frame	TAG), forwarding.
Downstroom		Tag frame VLAN ID belongs to the port "allowed by
Downstream		VLAN", forwarding; Tag frame VLAN ID belongs to the
	Tag frame	port "allowed by VLAN", forwarding; If the Tag frame
		VLAN does not belong to the port of the "permitted by
		VLAN," is discarded.

Command is as follow:

epon(olt-1/onu-4/uni-1)# ctc vlan-mode transparent



【Tag Mode (access Mode)】

Direction	Туре	Processing method			
Unstroom	Untag frame	Switch frames on port's default VLAN(VPID), forwarding.			
Opstream	Tag frame	Discard the frame			
	Untag frame	Discard the frame			
		If the Downstream Tag frame VLAN ID equal to the			
		configuration of the VID, According to VID forwarded to			
	Tag frame	the appropriate UNI port, and stripping the tag; If the			
		downstream Tag frame VLAN ID is not equal to the			
Downstream		configuration of the VID, then the frame is discarded			
		Tag frame VLAN ID belongs to the port "allowed by			
		VLAN", forwarding; Tag frame VLAN ID belongs to the			
	Tag frame	port "allowed by VLAN", forwarding; If the Tag frame			
		VLAN does not belong to the port of the "permitted by			
		VLAN," is discarded.			

Command is as follow:

epon(olt-7/onu-1/uni-1)# ctc vlan-mode tag <tpid> <cos> <vlan>

Trunk Mode

Direction	Туре	Processing method
	Untag frame	Switch frames on port's default VLAN(VPID), forwarding.
Unstroom		Tag frame VLAN ID belongs to the port "allowed by
Opstream	Tag frame	VLAN", forwarding; Tag frame VLAN ID does not belong to
		the port of the "permitted by VLAN," is discarded
	Untag frame	Discard the frame
		Tag frame VLAN ID belongs to the port "allowed by
Downstroom		VLAN", forwarding; Tag frame VLAN ID belongs to the
Downstream	Tag frame	port "allowed by VLAN", forwarding; If the Tag frame
		VLAN does not belong to the port of the "permitted by
		VLAN," is discarded.

Command is as follow:

epon(olt-7/onu-1/uni-1)# ctc vlan-mode trunk <tpid> <cos> <default-vlan> vlan-list

Translation Mode

Direction	Туре	Processing method
	Untag frame	Switch frames on port's default VLAN(VPID), forwarding.
		Tag frame VLAN ID in the configuration of the VID
Upstream	Tag frame	conversion list, forwarding; Tag frame VLAN ID is not in
		the configuration of the VID conversion list, frame
		discarding.
	Untag frame	Discard the frame
Downstream	Tag frame	Tag frame VLAN ID corresponds to the entry in the
		corresponding port of the VLAN Translation list (equal to



	the input VID configuration), According to the table to
	convert the VID to a corresponding VID (VID output),
	forwarding; If the VLAN ID in the corresponding port of
	the VLAN Translation list without a corresponding entry,
	discarding; If the TAG frame with VLAN ID as the "default
	VLAN", after the VLAN label forwarding is stripped down;
	Tag frame VLAN ID belongs to the port "allowed by
	VLAN", forwarding; Tag frame VLAN ID belongs to the
Tag frame	port "allowed by VLAN", forwarding; If the Tag frame
	VLAN does not belong to the port of the "permitted by
	VLAN," is discarded.

Command is as follow :

epon(olt-7/onu-1/uni-1)# ctc vlan-mode translation <tpid> <cos> <default-vlan> translate-list

[Aggregation Mode]

Direction	Туре	Processing method
	Untag frame	Switch frames on port's default VLAN(VPID), forwarding.
		If the VLAN ID of the packet is equal to one of the "aggregated VLANs" in the VLAN aggregation table, the VID of the packet is converted to the corresponding VLAN to be aggr. The source of the service flow is also recorded. MAC address value, and forward;
Upstream	Tag frame	If the VLAN ID of the packet is not equal to any one of the "aggregated VLANs" in the VLAN aggregation table of the port, it is discarded. Currently, only the ONU is required to convert the VID. The conversion of other fields (such as TPID, CFI, and Pri) is not required. The ONU treats the TPID and Pri fields in the VLANConfig Parameters field of the received VLAN VariableContainer, After the TPID set to the default value (TPID = 0x8100), Pri to maintain the original value
	Untag frame	Discard the frame
Downstream	Tag frame	If the VLAN ID of the packet is equal to "VLAN to be aggr." In the VLAN aggregation table of the port, the VID is converted to the corresponding "aggregated VLAN" according to the MAC address value and forwarded. If the VID of the original tag is the default VID, the tag is forwarded and forwarded. If the VLAN ID is not equal to "VLAN to be aggr." Or the default VLAN ID is not equal, the ONU is only required VID conversion, other fields (such as TPID, CFI and Pri) conversion is not required. The ONU treats the TPID and Pri fields in the VLANConfig Parameters parameter field in the received VLAN



VariableContainer and sets the TPID of the converted
VLAN tag to the default value (TPID = 0x8100). Pri
remains the original value.

Command is as follow:

epon(olt-7/onu-1/uni-1)# ctc vlan-mode aggregation <*tpid*> <*cos> <default-vlan>* aggregation-list

5.6.2 Configure Bridge Onu(SFU) Multicast Service

Premise Condition

- OLT connect to uplink device and open service
- OLT have created vlan for multicast service
- OLT have configured GE port vlan
- OLT have configured PON port vlan
- ONU have registered

We need enter OLT to config ONU multicast service, configure way as follows:

Configure ONU1 multicast vlan mode is snooping,ONU1 eth2 vlan is 200,and multicast vlan mode is untag:

epon(olt-1)# onu 1 epon(olt-1/onu-1)# ctc igmp mode igmp-mld-snooping //Config ONU igmp mode to snooping epon(olt-1/onu-1)# ctc igmp fast-leave enable epon(olt-1/onu-1)# uni 2 epon(olt-1/onu-1/uni-2)# ctc igmp vlan add 200 //Config ONU multicast vlan to 200 epon(olt-1/onu-1/uni-2)# ctc igmp tag-handle strip-vlan-tag //Config ONU multicast vlan handle mode to strip,used for IPTV box

5.7 Configure Gateway ONU(HGU)Service

Gateway ONU (HGU) can provide internet,VOIP,IPTV service for FTTH,support PPPOE/DHCP dial-up,NAT, IGMP.Because HGU have route function, ONU service need to be configured with the local web or tr069,include wan and vlan configuration,don't need configure vlan in olt,only make sure ONU can register to OLT.OLT don't support configure ONU route wan,specific configure as follows:

5.7.1 Configure Gateway ONU (HGU) Internet Service--RTK Solution ONU

premise condition

- OLT connect to uplink device and open service
- OLT have created vlan for internet
- OLT have configured GE port vlan
- OLT have configured PON port vlan
- ONU have registered



1. Create route wan and bind LAN1 in onu web

Click Internet \rightarrow Internet Config \rightarrow WAN Config

Status	Internet	Security	Applicati
ernet Config Po	ort Binding DHCP Server	WLAN Config	Remote Mgmt QoS
WAN Config			
WAN Connection name	Add WAN connection \checkmark		
Mode :	Route 🗸		
Connection Mode::	Ipv4/Ipv6 🗸		
● DHCP	Obtain an IP address automatically		
OStatic	Use Static IP address		
○ ppp₀e	PPP over Ethernet (PPPoE)		
NAT:	\checkmark		
Enable Vlan:	\checkmark		
Vlan ID:	100		
802.1p:	(NULL) V		
MTU:	1500		
Request DNS:	Enable		
	ODisable		
Primary DNS:			
Secondary DNS:			
Service Mode:	INTERNET 🗸		
Bind port:			
✓ Port_1	Port_2		
Port_3	Port_4		
🗹 wireless(SSID)			

NOTE:

Mode select **Route**. Check **Enable VLAN** and Vlan ID input 100. Service Mode select **INTERNET**. Bind port check **Port_1** and **wireless(SSID)**.

Internet service take DHCP mode as an example in this document. The service type please select suitable type according to the user's actual environment. ONT detail usage please refer to ONT user manual.

2. Check ONU internet wan status

Click Status→Internet Info



Status	Internet	Security	Applie	Application		Diagnosis	
	nternet Info LAN & WLAN T	R-069 Status					
WAN Info							
	Interface	VLAN ID	Protocol	IGMP	Status	IP address	
	1_TR069_R_VID_46	46	IPoE	Enable	down		
	1_TR069_R_VID_46 2_INTERNET_R_VID_100	46	IPoE IPoE	Enable	down up	192. 168. 5. 129	
Network Informs Default Gatewa	1_TR069_R_VID_46 2_INTERNET_R_VID_100 ation y 192.168.5.254	46	IPoE IPoE	Enable Enable	down up	192. 168. 5. 129	
Network Informs Default Gatewa Subnet Mask	1_TR009_R_VID_46 2_INTERNET_R_VID_100 *tion 192.188.5.254 255.255.255.0	46	IPoE IPoE	Enable Enable	down up	192. 168. 5. 129	
Network Informs Default Gatewa Subnet Mask Primary DNS	1_TR069_R_VID_46 2_INTERNET_R_VID_100 *tion y192.168.5.254 255.255.05 192.168.5.254	46	IPoE IPoE	Enable Enable	down up	192. 168. 5. 129	

5.7.2 Configure Gateway ONU (HGU) Multicast Service--RTK Solution ONU

premise condition

- OLT connect to uplink device and open multicast service
- OLT have created vlan for multicast
- OLT have configured GE port multicast vlan
- OLT have configured PON port multicast vlan
- ONU have registered
- 1. Create bridge wan and bind LAN2 in onu web Click Internet→Internet Config→ WAN Config

Status	Internet	Security	Application	Management	Diagnosis
Internet Config Port		WLAN Config Remote M	gmt QoS Time Config	Routing	
WAN Config					
WAN Connection name	Add WAN connection 🗸				
Mode :	Bridge 🗸				
Connection Mode::	Ipv4/Ipv6 🗸				
Enable Vlan:	\checkmark				
Vlan ID:	200				
802.1p:	(NULL) V				
Service Mode:	Other 🗸				
Bind port:					
Port_1	Port_2				
Port_3	Port_4				
wireless (SSID)					
NOTE: Can not bind the s	ame port to different WAN co	onnection. If the same port has	been binded to different WAN of	connection, the last config	guration will flush your
previous configurations	on this port.				
When the Bridge mode is	set to Other, the PC on the	port does not dynamically obta	in the IP address through the g	gateway. When the service :	ode is Other, please be



Mode select to Bridge. Check Enable Vlan, Vlan ID input 200. Service Mode select Other. Bind port click Port_2.

2. Config IGMP mode in ONU web

Click Application \rightarrow IGMP Config \rightarrow IGMP Snooping. Enable IGMP Snooping.



Application	Status	Status In		Security	Application
	DDNS Config	Advanced NAT	UPNP Config	IGMP Config MLD Con	fig Multicast Vlan
	IGMP Snooping				
IGMP Snooping	This page allows you	to config IGMP Sr	nooping function.		
IGMP Proxy	IGMP Snooping:	ODisable	● Enable		
	Save/Apply				

3. Configure multicast vlan on ONU web

Click Application \rightarrow Multicast Vlan \rightarrow 3_Other_B_VID_200 \rightarrow Modify. Input 200 behind VLAN multicast(blank said set).

								Gateway Name: Home
Application	Status	Internet	Security		Application	Mana	agement	Diagnosis
	DDNS Config Adv							
IPTV	VLAN multicast (blank said s	et)						
	Interface				Multicast VLAN		Modif	fу
		1_TR069_R_VID_46					ø	
		2_INTERNET_R_VID_100					ø	
		3_Other_B_VID_200			200		/	

4. Check ONU multicast wan status

Click Status→Internet Info

	Status Internet		Security Applic		cation Management		c Diagnosis	
Device Info Internet Info LAN & WLAN TR-			-069 Status					
	WAN Info							
		Interface	VLAN ID	Protocol	IGMP	Status	IP address	
	1	_TR069_R_VID_46	46	IPoE	Enable	down		
	2_INTERNET_R_VID_100		100	IPoE	Enable	up	192. 168. 5. 129	
	3_Other_B_VID_200		200	br1483	Disable	up		

letwork Information	tion
Default Gateway	192. 168. 5. 254
Subnet Mask	255. 255. 255. 0
Primary DNS	192. 168. 5. 254
Secondary DNS	

----end

5.7.3 Configure Gateway ONU (HGU) Internet Service--ZTE Solution ONU

premise condition

- OLT connect to uplink device and open internet service
- OLT have created vlan for internet
- OLT have configured GE port vlan
- OLT have configured PON port vlan
- ONU have registered

1. Create route wan and bind LAN1 in ont web

Click Network \rightarrow WAN \rightarrow WAN Connection. Type select to DHCP. Connection Name select to Create WAN Connection. Port Binding check LAN1 and SSID1. Service List select to INTERNET. VLAN Mode select to Used. VLAN ID enter 100. finally click Create.



Contraction of the second s			and the second se
			1GE3FE2P1UW
Status Net	vork Security	App Administration Diag	gnosis Help
WAN WAN Connection 4in6 Tunnel Connection ARP Detect DHCP Release First	IP Version Type Connection Name Port Binding	IPv4 v DHCP v Create WAN Connection	English v Help
Bonding configuration	Enable DHCP Enable NAT	⊻SSID1 _SSID2 _SSID3 _SSID4	Logoul
PON information settings	Service List VLAN Mode	INTERNET V	
Prefix Management WLAN	VLAN ID 802.1p Enable DSCP		
Port Settings TR-069	DSCP MTU	1492	
QoS			

D NOTE:

Type select to **DHCP**. Connection Name select to **Create WAN Connection**. Port Binding check **LAN1** and **SSID1**. Service List select to **INTERNET**. VLAN Mode select to **Used**. VLAN ID enter **100**. Enable DHCP and Enable NAT keep default checked status.

In this document, Internet service take DHCP mode as an example.please selected suitable service type according to the user's actual need. ONT detail use way please refer to ONT user manual.

			1GE3FE2P1UW
Status Network	Security	App Administration	Diagnosis Help
Device Information			
	Type	DHCP	English ~
Network Interface	Connection Name	3_INTERNET_R_VID_100	English
WAN Connection(IPv4)	NAT	Enabled	Help
WAN Connection(IPv6)	IP	192. 168. 5. 194/255. 255. 255. 0	
4in6 Tunnel Connection	DNS1	192. 168. 5. 1	Logout
PON Alarm	DNS2	0. 0. 0. 0	
	DNS3	0. 0. 0. 0	
User Interface	WAN MAC	E0:67:B3:00:00:BC	
VoIP Status	Gateway	192. 168. 5. 1	
Remote ManageMent Status	Connection Status	Connected	
	Remaining Lease Time	85544sec	

2. Check ONT internet wan status

---end

5.7.4 Configure Gateway ONU (HGU) Multicast Service--ZTE Solution ONU



premise condition

- OLT connect to uplink device and open multicast service
- OLT have created vlan for multicast
- OLT have configured GE port multicast vlan
- OLT have configured PON port multicast vlan
- ONU have registered

1. Create bridge wan in ont web

Click Network \rightarrow WAN \rightarrow WAN Connection. Type select to Bridge. Connection Name select to Create WAN Connection. Port Binding check LAN2. Service List select to OTHER. VLAN Mode select to Used. VLAN ID enter 200. Finally click Create.

			1GE3FE2P1UW
Status Networ	rk Security	App Administration Diag	nosis Help
WAN WAN Connection 4in6 Tunnel Connection ARP Detect DHCP Release First	IP Version Type Connection Name Port Binding	IPv4 v Bridge v Create WAN Connection LAN1 VLAN2 LAN1 VLAN2 SSID1 SSID2 SSID3 SSID4	English v Help Logout
Bonding configuration	Enable DHCP		
LAN Configuration	Service List VLAN Mode	OTHER V	
PON information settings	VLAN ID	200	
Prefix Management	802.1p	0 ~	
WLAN	Enable DSCP		
Port Settings	DSCP		
TR-069			

DOTE:

Type select to **Bridge**. Connection Name select to **Create WAN Connection**. Port Binding check **LAN2**. Service List select to **OTHER**. VLAN Mode select to **Used**. VLAN ID enter **200**. Enable DHCP keep default unchecked status.

2. Check ONT Bridge wan status

Click Status \rightarrow Network Interface \rightarrow WAN Connection(IPv4).



			1GE3FE2P1UW
Status Network	Security	App Administration Di	agnosis Help
Device Information	Tuno	חוות	
Network Interface	Connection Name	3_INTERNET_R_VID_100	English ~
WAN Connection(IPv4)	NAT	Enabled	Help
WAN Connection (IPv6)	IP	192. 168. 5. 194/255. 255. 255. 0	
PON Inform	DNS1	192. 168. 5. 1	Logout
PON Alarm	DNS2	0. 0. 0. 0	
liser Interface	DNS3	0. 0. 0. 0	
	WAN MAC	E0:67:B3:00:00:BC	
VoIP Status	Gateway	192. 168. 5. 1	
Remote ManageMent Status	Status	Connected	
	Remaining Lease Time	85544sec	
	Туре	Bridge Connection	
	Connection Name	2_Other_B_VID_200	

3. Configure multicast vlan on ONT web

Click App \rightarrow Normal App \rightarrow IPTV. Modify the Bridge WAN 2_Other_B_VID_200

-		~/	1	GE3FE2P1UW
Status Networl	k Security Ap	p Administrati	ion Diagn	osis Help
Advance NAT Configuration Voip configuration	Connection Name Multicast VLAN]	English ~
IGMP		Modify	1	Help
Normal App Home storage IPTV	Connection Name 3_INTERNET_R_VID_100 2_Other_B_VID_200	Multicast VLAN	DNS2 server	Logout
MLD Configuration				
DNS Service				
Port Filter				
Multicast				

Multicast VLAN enter 200. Then click Modify.



					1GE3FE2P1UW	
Status Network	: Security	Арр	Administrat:	ion Dia _ł	gnosis Help	
Advance NAT Configuration	Connection Ne	ime		1		_
Voip configuration	Multicast VI	AN			English	~
IGMP		М	odify		Help	
Normal App	Connection Name		Multicast VLAN	DNS2 server	Logout	
Home storage	3_INTERNET_R_VID_100			2		
IPTV	2_Other_B_VID_200		200	2		
MLD Configuration						
DNS Service						
Port Filter						
Multicast						

---end

5.7.5 Configure Gateway ONU (HGU) VOIP Service--ZTE Solution ONU premise condition

- OLT connect to uplink device and open multicast service
- OLT have created vlan for VOIP
- OLT have configured GE port VOIP vlan
- OLT have configured PON port VOIP vlan
- ONU have registered

1. Configure Voice in ONT web

Click Network→WAN→WAN Connection. Type Select to DHCP. Connection Name Select to Create WAN Connection. Service List select to VOICE. VLAN Mode select to Used. VLAN ID enter 300. Finally click Create.



			1GE3FI	E2P1UW
Status Netwo	rk Security	App Administration	Diagnosis	Help
WAN WAN Connection 4in6 Tunnel Connection ARP Detect DHCP Release First	IP Version Type Connection Name Service List	IPv4 v DHCP v Create WAN Connection VOICE v	×	English 🗸 Help
Bonding configuration	VLAN Mode VLAN ID	Used ~ 300		Logout
LAN Configuration	802. 1p MTU	1492		
Prefix Management				

2. Configure ONT VOIP

Click App \rightarrow Voip configuration \rightarrow SIP. Enther Sip server ip address.

				1GE3FE2	P1UW
Status Networ	rk Security	Арр	Administration D	iagnosis	Help
Advance NAT Configuration		Enable 💽	2		F aralisk
Voip configuration	Sip Pr	rotocol	Soft Switching S 🗸		English
SIP account information	Loca	al Port 8	5060 (0 ~ 65535)		Help
Call control	Primary Register	Server 1	192. 168. 2. 201		Logout
Additional Setting	Primary Proxy	Server 1	192. 168. 2. 201		
Digital Map	Primary Outbound Proxy	Server 1	192. 168. 2. 201		
VOIP QoS	Primary Pro:	cy Port B	5060 (0 ~ 65535)		
Agreement cancellation					
Media	Secondary Register	Server 0	0. 0. 0. 0		
Advanced	Secondary Proxy	Server 0	0. 0. 0. 0		
Call Display	Secondary Outbound Proxy	Server (0. 0. 0. 0		
SLIC Configuration	Secondary Pro:	ty Port	5060 (0 ~ 65535)		
IGMP					
	Register 1	Sxpires S	3600 sec		
Normal App	Unregister On	Reboot	2		
MLD Configuration	Enable Lin	nk Test [
DNS Service	Link Test I	nterval 6	60 sec		
Port Filter	Enable # Register Retry In	escape nterval 6	GO sec		

3. Configure ONT VOIP Account

Click App \rightarrow Voip Configuration \rightarrow account information. Enther Sip account information.



						1GE3F	E2P1UW
Status Networ	rk ∣ Se	ecurity	Арр	Administra	tion	Diagnosis	Help
Advance NAT Configuration							
Voip configuration		Sip	Enable Account				English ~
SIP		P	assword				Help
account information	Au	thentication us	er name				
Call control							Logout
Additional Setting	Enable	Sip Accou	nt	Authentication	user name	Modefy	
Digital Map	Yes	895		895		2	
VOIP QoS	Yes	896		896		2	
Agreement cancellation							
Media							
Advanced							
Call Display							
SLIC Configuration							

D NOTE:

Sip Account, Password, Authentication user name please modify according to the user's actual need.

4. Check Sip account register status

Click Status \rightarrow VoIP Status \rightarrow Register Status.

Status Network	Security	Арр	Administration	Diagnosis	I	Help
Device Information						
		Line Phone	Line Phone1			English ~
Network Interface		Register Status	Registered			2.19.011
User Interface		Line Phone	Line Phone2			Help
VoIP Status		Register Status	Registered			Logout
Register Status						Logoul
Sip Account						
Remote ManageMent Status						
						Refresh
~						
NOTE:						
The Register Status is Reg	istered mear	n sip accoun	t register succes	sfully.		

----end



6 Configure OLT QinQ Service

6.1 Data Plan

Main Data Plan List						
Configure Iteam	Data					
VLAN	SVLAN 500 : QinQ service outer vlan CVLAN 100-200: QinQ service outer vlan					
OLT Port Configure	Ge8: VLAN 500 Hybrid mode PON8: VLAN 500 Hybrid mode					
Bridge ONT Port Configure	LAN 3: VLAN 100					

6.2 Configure Processes



6.3 Configure OLT

Create outer vlan:

Company Address: Room 601, Floor 6, Building F, Songbai Road 1008, Sunshine Community, Xili Street, Nanshan District, Shenzhen(518108) Factory Address: Fl1, Bldg B, Wentao Industrial zone, Yingrenshiyongxin Village, Shiyan Street, Baoan district, Shenzhen, Guangdong, China (518055) Tel: +86-755-26014509/4710/4711 Fax:+86-755-26014506 Website: www.cdatatec.com



Oprate **show vlan all** command can query the existing vlan, If the existing vlan does not meet the need, we can use vlan command to create outer vlan.

epon# vlan 500

epon(vlan-500)# exit

Configure GE port QinQ outer vlan:

epon# swport ge8 epon(GE-8)# vlan add 500 tag epon(GE-8)# exit

Configure PON port QinQ outer vlan and PON port QinQ:

epon# swport ge16 epon(GE-16)# vlan add 500 tag epon(GE-16)# exit epon# olt 8 epon(olt-8)# qinq enable 500 raw-vlan-id-inbound 100-200 ge8

7 Common Command Description

command	description								
show vlan all	View OLT vlan summary								
show system infor	View OLT information of version,MAC,sequence number,model								
show igmp group all	View the list of multicast groups that the OLT joins								
show running-config all	View the running configuration of the OLT								
show startup-config all	View the saved configuration of the OLT								
show system ipconfig	View the in-band, out-of-band management IP address information of the OLT								
show olt < oltId > onu < onuId > ctc sn	View the version information for the ONU								
show olt < oltId > online-onu	View the online ONU on the PON port								
show olt < oltId > optical-online-onu	View all the online ONU information of optical power, voltage, current, temperature and so on								

8 OLT Service Configuration --- EMS Method

This section mainly introduct 4Port/8Port OLT internet service and multicast service in FTTH environment. The following will introduce the service configuration way for OLT and ONU according to the bridge ONU(SFU).

8.1 Data Plan



Main Data Plan List							
Configuration Item Data							
	VLAN 110: Internet Service						
VLAN Data	VLAN 120: IPTV Service						
	Ge5: VLAN 110 access mode						
OLT Port Setting	Ge6: VLAN 120 access mode						
	PON8: VLAN 110, VLAN 120 trunk mode						
ONU Register ID	Bridge ONU ID: 1						
Pridge ONUL Port config	LAN 1: VLAN 110						
Bridge ONO Port config	LAN 2: VLAN 120						

8.2 Configuration Guide



8.3 Configure OLT Service

8.3.1 Configure OLT Global Vlan

Click "Switch Control Card --> VLAN Manaement" to query the created Vlan.

If the created vlan cannot meet the requirements, vlan can be created by clicking the **Vlan Management**. According to the data planning, we create vlan110 and vlan120 firstly:



- 192.168.5.80	Control Modulo Managomo			×
Switch Control Card	Control Module Manageme			
Port-1			GEZ GE3 GE4 GE5 GE6 GE7 GE8	
Port-2 Port-2				GET GER GER GEV AUX RST
Port-4		an ID Egress Ports Unta	agged Ports	
🗈 📻 Port-5	OLI Device 192.168.5.80	{ge1;ge2;ge3;ge4;ge5;ge6;ge7;ge8;pon1;p {ge1	;ge2;ge3;ge4;ge5;ge6;ge7;ge8;pon1;p	able 3 4 Set
Port-6		{ge1;ge3;ge5;pon1;pon4;pon5;pon6} {ge1 {ge1;pon1} {ge1	I,geo) I} Vian ID	1 Refresh
e Port-8	Net Interface Manage	{pon1} {}	- Earess Po	rts
[19:DA:63]ONI	— User Manage — MacAddress Management	{ge1;ge5;pon1;pon4;pon8} {ge1	[;pon4} ge1	ae2 ae3 ae4
	- Trunk Managment	00 {ge8;pon8} {ge8	3}	
2::: •••• [1A:01:44]ONU	VLAN Management 2	00 {ge7;pon8} {ge7	/} [965	yeoyeo
[00:00:BB]ON	Encrypt Config		_ pon:	pon2 pon3 pon4
[3B:07:32]ONU	ONI LAuthority		pons	5 🔄 pon6 🔄 pon7 🔄 pon8
	- Port Mirror		Untergred	Dorto
2::: •••• [09:F0:21]ONU	IGMP Snooping Config			
45:99:0BIONU	SysLog		ge i	ge2ge3ge4
	Port		ge5	🗌 ge6 🔛 ge7 🔛 ge8
	Port Property Port Status		pon*	pon2 pon3 pon4
lear Severity Han			pon!	5 pon6 pon7 pon8
		Pafrach Eiret Prior	Nort Last Add	Delete Set
		rist filt	Luor	



🛒 Control Module Managemer	t	×
	P2 P3 P4 P5 P5 P1 P8 GEI GEZ GE3 GE4 GE5 GE6 GE Internet internet internet internet internet internet	
OLT Device 192.168.5.80	Vian ID Egress Ports Untagged Ports 1 (ge1:ge2:ge3:ge4:ge5:ge6:ge7:ge8:pon1:p 10 (ge1:ge2:ge3:ge4:ge5:ge6:ge7:ge8:pon1:p (ge1:ge2:ge3:ge4:ge5:ge6:ge7:ge8:pon1:p	VLAN Enable Set
Net Interface Manage User Manage	11 (get;pon1) (get) 14 (pon1) () 50 (ge?,pon8)	Egress Ports
VLAN Management	55 (ge1:ge5:pon1:pon1:pon4:por 1000 (ge8:pon8) 2500 (ge6:pon8)	ge5ge6ge7ge8
- Encrypt Config RSTP	3500 (ger;pon8)	pon1pon2pon3pon4pon5pon6pon7pon8
ONU Authority Port Mirror IGMP Snooping Config		Untagged Ports
SysAutoBackUp SysLog		ge1 ge2 ge3 ge4
Port Property Port Status		geo geo geo geo
		pon5 pon6 pon7 pon8
	Refresh First Prior Next Last	Add Delete Set

8.3.2 Configure OLT GE Port Service Vlan



1. Click "Switch Control Card --> Port Property", and then configure GE 5 port pvid is 110:

🚅 Control Module Managemer	nt																	\times
	P2 P3	P4	P5	P6	P7		GEI G	62 GE	3 GE4	GES	GEE 66	GET	GEN	GES GEG GEI GE2	GET GEN GET GEN GET GEN		5T	
OLT Device 192.168.5.80	Port Pr	operties				Broa	dcasting	Inhibitio	n Rate U	nit		-						
Basic Information - Net Interface Manage - User Manage	Port ID	Mode C onfig	Speed Config	Duplex Config	Flow Co ntrol Co nfig	Port Pri ority	Port VID	Port En able	Permit Frame Type	Nest VL AN Ena ble	Protoco VLAN	l Broadc st Rate Control	a Multicas t Rate C ontrol	Unknow n Unica st Rate Control	Inhibitio n Rate	Ingress Rate	Egress Rate	
MacAddress Management Trunk Management VLAN Management Gind Config Encrypt Config RSTP ONU Authority Port Mirror IGMP Snooping Config SysAutoBackUp SysAutoBackUp SysAutoBackUp Sport	ge1 ge2 ge3 ge4 ge5 ge6 ge7 ge8 ge9 ge10	fiber fiber fiber fiber fiber fiber fiber fiber fiber	mbps mbps mbps mbps mbps mbps mbps mbps	full full full full full full full full	disable disable disable disable disable disable disa disa disa disa disa	0 0 0 0 2 0 mpt	11 1 1 1 1 1 1 1 1 1 1 1	enable enable enable enable enable sfully!	allType allType allType allType allType allType	0 0 0 0 0 0 X	0 0 0 0 0 0 0 0 0 0 0	enable enable enable enable enable enable enable enable enable enable	disable disable disable disable disable disable disable disable disable	disable disable disable disable disable disable disable disable disable disable	500 500 500 500 500 500 500 500 500 500	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	
Port Property Port Status	ge11 ge12 ge13 ge14	fiber fiber fiber fiber	mbps mbps mbps mbps	full full full full	disa disable disable	0	35 1 1	enable enable Refrest	allType allType allType allType	0 0 0 Set	0	enable enable enable enable	disable disable disable disable	disable disable disable disable	500 500 500 500	0	0	

2. Click "Switch Control Card --> Port Property", and then configure GE 6 port pvid is 120:

🛒 Control Module Manageme	nt																		\times
PI CONSTRUCTION	P2 •	P3	РЧ • • • •	P5	P6	P7	P8	iei g 100	2 GE	3 GE4 5 6 6	GES	GE 6	GET	GE I	GES GEG GEI GEZ	GET GEN GET GEN		51	
OLT Device 192.168.5.80 💌	P	ort Pro	perties			1	Broa	dcasting	Inhibitior	n Rate Ui	nit	1	-			1	1		
Basic Information Net Interface Manage	P	ort ID	Mode C onfig	Speed Config	Duplex Config	Flow Co ntrol Co nfig	Port Pri ority	Port VID	Port En able	Permit Frame Type	Nest VL AN Ena ble	Protoco VLAN	Broadc st Rate Control	a Multicas t Rate C ontrol	Unknow n Unica st Rate Control	Inhibitio n Rate	Ingress Rate	Egress Rate	
MacAddress Management Trunk Managment VLAN Management	ge	e1 e2	fiber fiber fiber	mbps mbps	full full	disable disable disable	0	11 1	enable enable	allType allType allType	0	0	enable enable	disable disable disable	disable disable disable	500 500	0	0	
QinQ Config Encrypt Config RSTP	ge	95 94 95	fiber fiber	mbps mbps	full full	disable disable	0	1 110	enable enable	allType allType	0	0	enable enable	disable disable disable	disable disable	500 500	0	0	
ONU Authority Port Mirror IGMP Snooping Config	ge	e6 e7 e8	fiber fiber fiber	mbps mbps mbps	full full full	disable disable Prompt	0 <u>2</u> 0	120 50	enable enable	allType allType	0 0 X	0 0 0	enable enable enable	disable disable disable	disable disable disable	500 500 500	0 0 0	0 0 0	=
SysAutoBackUp SysLog Port	ge	e9 e10	fiber fiber	mbps mbps	full full	i	Set suc	cessfully	1			0	enable enable	disable disable	disable disable	500 500	0	0	
Port Property 1 Port Status	ge ge	e11 e12 e13	fiber fiber fiber	mbps mbps mbps	full full full			ОК]			0 0 0	enable enable enable	disable disable disable	disable disable disable	500 500 500	0 0 0 0	0 0 0 0	
	ge	e14	fiber	mbps	full 6.0	disable	0	1	enable	allType	0	0	enable	disable	disable	500	0	0	-
									Refresh	3	Set								

3. Click **"Switch Control Card --> VLAN Management"**, and then add the vlan 110 to GE 5 port as untag mode ,which is access :



🗐 Control Module Managemen	it	×
	P2 P3 P4 P5 P6 P1 P8 GEI GE2 GE3 GE4 GE5 GE6 G	
OLT Device 192.168.5.80	Vlan ID Egress Ports Untagged Ports 1 (ge1:ge2:ge3:ge4:ge5;ge6;ge7;ge8;pon1;p (ge1:ge2:ge3:ge4:ge5;ge6;ge7;ge8;pon1;p 10 (ge1:ge2:ge5;ge6;ge7;ge8;pon5;pon6) (ge1:ge2;ge3;ge4:ge5;ge6;ge7;ge8;pon1;p 11 (ge1:ge2:ge5;ge6;ge7;ge8;pon5;pon6) (ge1:ge5) 11 (ge1:ge6;ge6;ge7;ge8;pon5;pon6) (ge1:ge6;ge6;ge7;ge8;pon5;pon6)	VLAN Enable Set
- Net Interface Manage - User Manage - MacAddress Management	14 (pon1) () 50 (ge7;pon8) (ge7) 55 (ge1;ge5;pon1;pon4;pon8) (ge1,pon4) 110 () ()	Egress Ports
Trunk Managment VLAN Management 1 QinQ Config Encrypt Config	120 0 00 1000 {ge8;pon8} Prompt X 2500 [ge7;pon8] [] Set successfully	3 12 ge5 ge6 ge7 ge8
- RSTP - ONU Authority - Port Mirror - IGMP Spooping Config	OK	pon5 pon6 pon7 pon8
SysAutoBackUp SysLog		ge1ge2ge3ge4 4 [v] ge5ge6ge7ge8
Port Property Port Status		pon1pon2pon3pon4 pon5pon6pon7pon8
	Refresh First Prior Next Last	Add Delete 5 Set

4. Click **"Switch Control Card --> VLAN Management"**, and then add the vlan 110 to GE 6 port as untag mode ,which is access :

🛒 Control Module Managemer	t	×
	P2 P3 P4 P5 P5 P1 P8 GEI GEZ GE3 GE4 GE5 GE6 G B10 B10 B10 B10 B10 B10 B10 B10 B10 B10 	
OLT Device 192.168.5.80	Vian ID Egress Ports Untagged Ports 1 (ge1;ge2;ge3;ge4;ge5;ge6;ge7;ge8;pon1;p] (ge1;ge2;ge3;ge4;ge5;ge6;ge7;ge8;pon1;p 10 (ge1;ge2;ge6;pon1;pon4;pon5;pon6) (ge1;ge5) 11 (re1;non1) (re1)	✓ VLAN Enable Set Vlan ID 120
- Basic Information - Net Interface Manage - User Manage - MacAddress Management	11 (ge1; join1) (ge1) 50 (ge7; join8) (ge7) 55 (ge1; ge5; join1; join4; join8) (ge1) 56 (ge1; ge5; join1; join4; join8) (ge1)	Egress Ports
VLAN Managment QinQ Config	110 (ges) (ges) 120 () () 1000 {ge8;pon8} {ge8} 2500 (ge8;pon8) {ge8}	ge5 3 ≥ ge6 ge7 ge8
Encrypt Config RSTP ONU Authority Part Mirror	3500 [ge7;pon8] Prompt X i Set successfully!	pon5pon6pon7pon8
- IGMP Snooping Config - SysAutoBackUp - SysLog	OK	Untagged Ports
Port Property Port Status		_ ge5 4
	Refresh First Prior Next Last	Add Delete 5 Set

8.3.3 Configure OLT PON Port Service Vlan

 Click "Switch Control Card --> VLAN Management", and then add the vlan 110 to PON 8 port as tag mode ,which is trunk :



🗐 Control Module Managemer	nt									×
	P2 P3	: P4 ••••	P5 P6	P7 P8 G	EI GEZ GE3 GE4	GE5 GE6 GE	-1 GEB	GES GEG GET		RST
OLT Device 192.168.5.80	Vian ID	Egress Po	rts		Untagged Ports		VLAN Ena	ible		Set
Basic Information	1 10 11	{ge1;ge2;g {ge1;ge3;g	e3;ge4;ge5;ge6;g e5;pon1;pon4;po	ge7;ge8;pon1;p n5;pon6}	{ge1;ge2;ge3;ge4;ge5;ge {ge1;ge5} {ge1}	e6;ge7;ge8;pon1;p	Vlan ID	1	10 -	Refresh
Wet Interface Manage User Manage	14	{pon1} {ge7:pon8	r }		{ge7}		Egress Port	s		
MacAddress Management	55 110	{ge1;ge5;p {ge5}	on1;pon4;pon8}		{ge1;pon4} {ge5}		ge1	ge2	ge3	ge4
VLAN Management 1 QinQ Config	120 1000	{ge6} {ge8;pon8	}		{ge6} {ge8}		pon1	pon2	pon3	pon4
RSTP	2500 3500	{ge8;pon8 {ge7;pon8	}		{ge8} {ge7}		pon5	pon6	pon73	₽ pon8
Port Mirror			Pron	npt	×		Untagged P	orts		
SysAutoBackUp			ĺ	Set success	sfully!		🗌 ge1	🗌 ge2	ge3	ge4
Port Port Port					OK		⊮ ge5	🗌 ge6	ge7	ge8
Port Status							pon1	pon2	pon3	pon4
							pon5	pon6	pon7	pon8
		Refresh	First	Prior	Next	ast	Add	De	lete 4	1 Set

2. Click **"Switch Control Card --> VLAN Management"**, and then add the vlan 120 to PON 8 port as tag mode ,which is trunk :

📑 Control Module Manageme		×
	12 P3 P4 P5 P5 P1 P8 GE1 GE2 GE3 GE4 GE5 G 	
OLT Device 192.168.5.80	Vian ID Egress Ports Untagged Ports 1 (ge1;ge2;ge3;ge4;ge5;ge6;ge7;ge8;pon1;p) (ge1;ge2;ge3;ge4;ge5;ge6;ge7;ge8;pon1;p)	VLAN Enable
Basic Information Net Interface Manage User Manage	10 (ge1;ge3;ge5;pon1;pon4;pon5;pon6) (ge1;ge5) 11 (ge1;pon1) (ge1) 14 (pon1) (j	Egress Ports
MacAddress Management	50 {ge7;pon8} {ge7; 55 {ge1;gor04} {ge1;pon4} 110 {ge5;pon8} {ge5}	ge1ge2ge3ge4
QinQ Config Encrypt Config	120 {ge6} 1000 {ge8,pon8} {ge8} 2500 {ge8,pon8} {ge8}	pon1pon2pon3pon4
	3500 (ge7;pon8) (ge7)	pon5 pon6 pon73 pon8
- IGMP Snooping Config - SysAutoBackUp - SysLog	i Set successfully!	Untagged Ports
Port Property Port Status	OK	_ ge5 ≥ ge6 _ ge7 _ ge8
	a la martina de la constante de	pon5 pon6 pon7 pon8
	Refresh First Prior Next Last	Add Delete 4 Set

8.4 Configure Bridge ONU(SFU) Service

We need enter OLT to config ONU one by one, config way as follows:

8.4.1 Configure Bridge Onu(SFU) Internet Service

Premise condition of ONU to open internet service:

- OLT connect to uplink device and open internet service
- OLT have created vlan for internet service
- OLT have configured GE port vlan
- OLT have configured PON port vlan



• ONU have registered

SFU ethernet port vlan mode have transparent,tag(access),trunk mode and so on,we can according to our network plan configure different mode.all onu vlan is configured by OLT,configure way as follows:

1. Click "**Pon Module --> Port-8 --> ONU-1 --> ONU VLAN**", and then configure ONU1 eth1 vlan mode is tag(access):

6 🕸 🖪 🗎	ONU Management([OLT:192.168.5.80]>Pon Module >Port-8>[19:DA:63]ONU-1)	<
192.185.50 Port.1 Port.2 Port.3 Port.4 Port.5 Port.6 Port.7 Port.8 Port.9 Port.3 Port.7 Port.8 Port.9 Port.3 Port.3 Port.4 Port.7 Port.3 Port.4 Port.7 Port.3 Port.4 Port.4 Port.7 Port.3 Port.4 Port.3 Port.4 Port.3 Port.4 Port.3 Port.4 Port.3 Port.4 Port.3 Port.4 Port.4 Port.2 Port.3 Port.2 Port.3 Port.3 Port.2 Port.3 Port.2 Port.2 <t< td=""><td>Basic Configure Advanced Configure Network Configure ONU Pot Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Deformance Statistic - UniPot Performance Logic Link - Link SLA VLAN Mode Tag 6 Utage Tag 6 Default TPID[0-FFFF] 0x 8100 7 Default Vian: Cos[0-7] 8 0 VUD[1-4094] 9 110 Prompt X I Set successfully CK</td><td></td></t<>	Basic Configure Advanced Configure Network Configure ONU Pot Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Queue Manage ONU Deformance Statistic - UniPot Performance Logic Link - Link SLA VLAN Mode Tag 6 Utage Tag 6 Default TPID[0-FFFF] 0x 8100 7 Default Vian: Cos[0-7] 8 0 VUD[1-4094] 9 110 Prompt X I Set successfully CK	
-	Refresh 10 Set	

8.4.2 Configure Bridge Onu(SFU) Multicast Service

Premise Condition

- OLT connect to uplink device and open service
- OLT have created vlan for multicast service
- OLT have configured GE port vlan
- OLT have configured PON port vlan
- ONU have registered

We need enter OLT to config ONU multicast service, configure way as follows:

1. Click **"Pon Module --> Port-8 --> ONU-1 --> IGMP Global Parameter"**, and then config ONU1 multicast vlan mode is snooping and enable the fast leave:



▲ 🖗 🗵	ONU Management([OLT:192	.168.5.80]>Pon Module >Port-8>[19:DA:63]ONU-1)
192 186 5.80 Switch Control Card Pon Module 1 Pont-2 Pont-2 Pont-3 Pont-4 Pont-5 Pont-5 Pont-5 Pont-6 Pont-7 Pont-8 Pont-7 Pont-8 Pont-7 Pont-8 Pont-7 Pont-8 Pont-7 Pont-8 Pont-8 Pont-8 Pont-9 Pont-8 Pont-9 Po	Basic Configure Advanced Configure Advanced Configure Network Configure ONU VLAN ONU VLAN ONU VLAN ONU Queue Manage ONU Qos Mac Address Management GMP Snooping GMP For Config ONU Performance Statistic ONU Performance UniPort Performance Logic Link Link SLA	ONU IGMP Global Parameter Config Multicast Switching Mode [GMP/MLD Snooping 5 Fast Leave Enable Enable 6 Refresh 7 Set Prompt X i Set successfully!

2. Click **"Pon Module --> Port-8 --> ONU-1 --> IGMP Port Config"**, and then config ONU1 eth2 multicast mode is strip vlan tag:

🗐 ONU Management([OLT:192	.168.5.80]>Pon Module >Port-8>[19:DA:63]ONU-1)	×
Basic Configure		
Advanced Configure		
ONLI Dert Menage		
ONUVIAN		
	Multicast Strip Mode Config	
ONU Oos	malacast strip mode coming	
Mac Address Management	Multicast VLANs	
IGMP Snooping		
IGMP Global Parameter		
1-IGMP Port Config		
ONU Performance Statistic		
Pon Performance		
UniPort Performance		
E- Logic Link		
Link SLA		
	Multicast Strip Mode Strip VLAN Tag 3	
	Prompt X	
	Set successfully!	
	Add Delete	
	Refresh 4 Set	

3. Click **"Pon Module --> Port-8 --> ONU-1 --> IGMP Port Config"**, and then config ONU1 eth2 multicast vlan is 120:



🗊 ONU Management([OLT:19	2.168.5.80]>Pon Module >Port-8>[19:DA:63]ONU-1)	×
Basic Configure Advanced Configure Network Configure ONU Port Manage ONU VLAN ONU Queue Manage ONU Qos Mac Address Management	Port ID uniPort2 IGMP Groups[0-255] 0 + Multicast Strip Mode Config	Multicast VLAN Config Multicast VLANs
IGMP Snooping IGMP Slobal Parameter IGMP Port Config ONU Performance Statistic On Performance UniPort Performance Logic Link Link SLA	Add IGMP Multicast VLANs × Multicast VLAN: VID[1-4094] 6 120	
	7 QK Cancel	
	Refresh Set	5 Add Delete
🗐 ONU Management([OLT:19	2.168.5.80]>Pon Module >Port-8>[19:DA:63]ONU-1)	×
Basic Configure Advanced Configure Network Configure ONU Port Manage ONU VLAN	Port ID uniPort2	
ONU Queue Manage ONU Qos Mac Address Management IGMP Snooping IGMP Global Parameter IGMP Port Config ONU Performance Statistic Pon Performance UniPort Performance UniPort Performance Link SI A	Multicast Strip Mode Config	Multicast VLAN Config
	Multicast Strip Mode Strip VLAN Tag	
	Add successfully!	Add Delete

9 Configure Service In OLT ---WEB Method

This section mainly introduct 4Port/8Port OLT internet service and multicast service in FTTH environment. The following will introduce the service configuration way for OLT and ONU



according to the bridge ONU(SFU).

9.1 Data Plan

Main Data Plan List						
Configuration Item Data						
	VLAN 110: Internet Service					
VLAN Data	VLAN 120: IPTV Service					
	Ge5: VLAN 110 access mode					
OLT Port Setting	Ge6: VLAN 120 access mode					
	PON8: VLAN 110, VLAN 120 trunk mode					
ONU Register ID	Bridge ONU ID: 1					
Bridge ONUL Bort config	LAN 1: VLAN 110					
Bridge Ono Fort comig	LAN 2: VLAN 120					

9.2 Configuration Guide



9.3 Configure OLT Service

9.3.1 Configure OLT Global Vlan

Click the **"Switching Board --> Vlan Manage"** to enable the Vlan.

If the created vlan cannot meet the requirements, vlan can be created by clicking the "VLAN

Manage ". According to the data planning, we create vlan110 and vlan120 firstly:



xPON OLT	Version: V1.2.0	Login-Mode: Administrator	Language: English 🔻 🕐 Exit
Main Board Switching Board PON Board	 PATH-test1 > Switching Board Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK RSTP Port Mirror IGMP Snooping 	Ugin=wode. Administrator vrd>VLAN Manage VLAN manage VLAN manage VLAN manage VALNID Tagged Port 1 ge1;ge2;ge3;ge4;ge 10 ge3;pon1;pon4;pon5;pon6; 11 pon1; 14 pon1; 50 pon8; 55 ge5;pon1;pon8; 1000 pon8; 3500 pon8; 3500 pon8;	Untagged Port Sige6:ge7:ge8:pon1:pon2:pon3:pon4:pon5:pon6:pon7:pon8: e ge1:ge5: ge1: ge7: ge8: ge8: ge7: set First Next
xPON OLT	Version: V1.2.0 PATH:test1>Switching Board Switch-Config Net Interface Port Staus Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage 2 TRUNK STP Port Mirror IGMP Snooping	Login-Mode: Administrator ard>VLAN Manage VLAN Manage VLANEnable: enable • VLANEnable: enable • VLANID Tagged Port 1 ge1;ge2;ge3;ge4; 10 ge3;pon1;pon4;pon5;pon6; 11 pon1; 14 pon1; 15 ge5;pon1;pon8; 100 pon8; 100 pon8;	Language: English
xPON OLLT	Version: V1.2.0 PATH:test1 > Switching Board Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK STP Port Mirror IGMP Snooping	Login-Mode: Administrator	Language: English



xPON OLT	Version: V1.2.0	Login-Mode: Administrator					Language: English • 🔱 Exit			
Topology	PATH:test1>Switching Board>VLAN Manage									
	 Switching Board Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK RSTP Port Mirror IGMP Snooping 	VLAN Manage VLANEnable: enable VLANEnable: e				Untagge ge1;g ge7 ge1;pc ge8 ge8 ge8 ge7 et First	d Port	vlan-edit edit edit edit edit edit edit edit	vlan-clear delete delete delete delete delete delete	
xPON OLT	Version: V1.2.0	Login-	Mode: Ad	Iministrato	r		Langua	ge: English	• 🖒 Exit	
Topology	PATH:test1>Switching Bo	ard>VLAN Mai	nage							
test1 Main Board Switching Board PON Board PON Board PON Board PON1 PON2 PON3 PON4 PON5 PON6 PON6 PON7 ONU-12 ONU-23 ONU-3 ONU-3 ONU-4 ONU-5 ONU-5	- Switching Board - Switch-Config - Net Interface - Port Status - Port Properity - Mac AddressList - Packet Suppress - Performance Statistics - VLAN Manage - TRUNK - RSTP - Port Mirror - IGMP Snooping	VLAN Mar vlanindex 120 GE1 GE5 PON1 PON5	ender Egres GE2 GE6 PON2 PON6	s port GE3 GE7 PON3 PON7 3	GE4 GE8 PON4 PON8 set re	GE1 GE5 PON1 PON5 fresh retu	unta GE2 GE6 PON2 PON6	igged port GE3 GE7 PON3 PON7	GE4 GE8 PON4 PON8	

9.3.2 Configure OLT GE Port Service Vlan

1. Click "Switching Board --> Port Property", and then config GE 5 port pvid is 110:

xPON OLT	Version: V1.2.0	Login-Mode: Administrator						La	anguage: E	nglish 🔻	ው Exit	
XPON OLT	Version: V1.2.0 PATH:test1 > Switching Board Switch-Config Net Interface Port Status Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK RSTP	Por Por portId 1 2 3 4	t Properity t Properity speed(mbps) 1000 1000 1000	e: Ac dup full full full	flowCtl disable disable disable	pri 0 0	PVID 11 1 1	portEnable enable enable enable enable	Lé perframtype allType allType allType allType	ingressRate 0 0 0 0	egressRate 0 0 0 0 0 0	Operation edit edit edit
PON PON PON PON PON ONU-1 ONU-3 ONU-3 ONU-3 ONU-4 ONU-6 ONU-6 ONU-6 ONU-7 ONU-7 ONU-7 ONU-7 ONU-101 ONU-101 ONU-13 ONU-13	GMP Snooping	5 6 7 8	1000 1000 100 1000	full full full	disable disable disable disable	0 0 0	1 1 50 2500	enable enable enable enable	allType allType allType allType	0 0 0 0 0	0 0 0 0 0	3 edit edit edit edit refresh



xPON OLT	Version: V1.2.0	Login-Mode: Administrator	Language: English 🔹 🔱 Exit
Topology	PATH:test1>Switching Boa	ard>Port Properity	
Main Board Switching Board PON1 PON1 PON2 PON3 PON3 PON4 PON5 PON4 PON5 PON8 PON8		Port Properity Port Enable: enable Port Enable: enable Speed: mbps1G Duplex: full Flow Control: disable Port Priority: 0 Port VID: 110 4 Permit Frame Type: allType Ingress Rate: 0 Egress Rate: 0 Egress Rate: 0	(kps) (kps) efresh return

2. Click "Switching Board --> VLAN Manage", and then add vlan 110 to GE 5 port untag :



3. Click "Switching Board --> Port Property", and then config GE 6 port pvid is 120:



xPON OLT	Version: V1.2.0	Login-Mode: Administrator	Language: English 🔹 🕛 Exit								
Topology	PATH:test1>Switching Boa	rd>Port Properity									
- Main Board - Switching Board	⊡- Switching Board Switch-Config Net Interface	Port Properity									
PON Board PON Board PON 2 PON2 PON3 PON4 PON5 PON5 PON6 PON7 PON8 ONU-11 ONU-2 ONU-2 ONU-3 ONU-3 ONU-3 ONU-4 ONU-6	PON Board Port Status PON1 Port Properity PON3 Packet Suppress PON4 Performance Statistics PON5 VLAN Manage PON6 TRUNK PON8 Port Properity PON6 TRUNK PON8 Port Mirror PON8 Port Mirror PON8 Port Mirror PON9 UNU-11 PON9 IGMP Snooping PON9 Port Mirror PON9 Port Mirror PON8 Port Mirror PON9 IGMP Snooping	portid speed(mbps) dup flowCtl pri PVID portEnable p 1 1000 full disable 0 11 enable 1 2 1000 full disable 0 1 enable 1 3 1000 full disable 0 1 enable 1 4 1000 full disable 0 1 enable 1 5 1000 full disable 0 1 enable 1 6 1000 full disable 0 1 enable 1 7 100 full disable 0 1 enable 1	perframtype ingressRate egressRate Operation allType 0 0 edit allType 0 3 edit allType 0 0 edit								
	Version: V1 2 0	8 1000 full disable 0 2500 enable	allType 0 0 edit refresh								
Topology	PATH:test1>Switching Board	rd>Port Properity									
 Main Board Switching Board PON Board PON Board PON3 PON4 PON5 PON6 PON7 PON8 ONU-11 ONU-21 ONU-31 ONU-51 ONU-61 ONU-71 ONU-61 ONU-61 ONU-61 ONU-61 ONU-61 ONU-61 ONU-61 ONU-61 ONU-61 ONU-12 ONU-13 ONU-14 ONU-15 	Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK RSTP Port Mirror IGMP Snooping	Port Properity Port Enable: enable Speed: mbps1G Duplex: full Flow Control: disable Port Priority: 0 Port VID: 120 4 Permit Frame Type: allType Ingress Rate: 0 Egress Rate: 0 S set refresh	¢ (kps) (kps)								

4. Click "Switching Board --> VLAN Manage", and then add vlan 120 to GE 6 port untag :

xPON OLT	Version: V1.2.0	Login	-Mode: Administrator	Langua	ge: English	😃 Exit					
Тороlоду	PATH:test1>Switching Board>VLAN Manage										
	Switching Board Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage 2 TRUNK RSTP Port Mirror IGMP Snooping	VLAN Mar VLANEnable: VALNID 10 50 55 110 120 1000 2500 3500	nage enable Tagged Port ge3;pon1;pon4;pon5;pon6; pon8; ge5;pon1;pon8; pon8; pon8; pon8; pon8; pon8; pon8;	Untagged Port ge1;ge5; ge7; ge1;pon4; ge5; ge8; ge8; ge8; ge7; t First Ne	vlan-edit edit edit edit dit edit edit edit e	vlan-clear delete delete delete delete delete delete delete delete delete					



xPON OLT	Version: V1.2.0	Login-	lministrato		Languag	e: English 🔻	😃 Exit		
Topology	PATH:test1>Switching Bo	ard>VLAN Man	age						
Main Board Switching Board Switching Board PON8 Board PON8 Board PON8 PON8 PON3 PON3 PON4 PON5 PON5 PON6 PON7 PON8 ONU-1 ONU-1 ONU-3 ONU-3 ONU-4 ONU-4 ONU-5 ONU-5 ONU-6 ONU-6 ONU-7 ONU-6 ONU-7 ONU-6 ONU-7 ONU-6 ONU-7 ONU-6 ONU-7 ONU-6 ONU-7 ONU-7 ONU-6 ONU-7 ONU-7	 Switching Board Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics 'VLAN Manage TRUNK RSTP Port Mirror IGMP Snooping 	VLAN Man Vlan ID 120 GE1 GE5 4 PON1 PON5	age Egress GE2 ØGE6 PON2 PON6	s port GE3 GE7 PON3 PON7	GE4 GE8 PON4 PON8	GE1 GE5 PON1 PONS	untag GE2 GE5 PON2 PON6	ged port GE3 GE7 PON3 PON7	GE4 GE8 PON4 PON8

9.3.3 Configure OLT PON Port Service Vlan

1. Click "Switching Board --> VLAN Manage", and then add vlan 110 to PON port 8 tag :



2. Click "Switching Board --> VLAN Manage", and then add vlan 120 to PON port 8 tag :



xPON OLT	Version: V1.2.0	Login-Mode: Administrator				Lá	anguage:	English 🔻	😃 Exit	
Topology	PATH:test1>Switching Boa	ard>VLAN Mana	ge							
Main Board Switching Board PON Board PON Board PON3 PON3 PON4 PON5 PON5 PON7 PON8 PON8 ONU-1 ONU-2 ONU-3 ONU-3 ONU-3 ONU-3 ONU-3 ONU-3 ONU-1 ONU-3 ONU-1 ONU-3 ONU-1 ONU-1	 Switching Board Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK RSTP Port Mirror IGMP Snooping 	VLAN Manage VLANEnable: enable VALNID Tagged Port 10 ge3;pon1;pon4;pon5;pon6; 50 pon8; 55 ge5;pon1;pon8; 110 pon8; 120				Untagged P ge1;ge5; ge7; ge1;pon4 ge5; ge6; ge8; ge8; ge7; t First	ort v ; ; 3	lan-edit edit edit edit edit edit edit edit	vlan-clear delete delete delete delete delete delete delete	
xPON OLT	Version: V1.2.0	Login-	Mode: Ad	ministrato	r		Languag	ge: Englist	n ▼ Ů Exit	:
Topology → Main Board → PON Board → PON Board → PON3 → PON3 → PON4 → PON5 → PON5 → PON6 → PON7 → PON8 → PON8 → PON9	PATH:test1>Switching Bo Switch-Config Net Interface Port Status Port Properity Mac AddressList Packet Suppress Performance Statistics VLAN Manage TRUNK RSTP Port Mirror IGMP Snooping	VLAN Mar VLAN Mar Vlan ID GE1 GE5 PON1 PON5	age Egress GGE2 ♥GE6 ●PON2 ●PON6	s port GE3 GE7 PON3 PON7 4 5	GE4 GE8 PON4 ØPON8	GE1 GE5 PON1 PON5 fresh Retur	untas GE2 ØGE6 PON2 PON6	gged port GE3 GE7 PON3 PON7	GE4 GE8 PON4 PON8	

9.4 Configure Bridge ONU(SFU) Service

We need enter OLT to config ONU one by one, config way as follows:

9.4.1 Configure Bridge Onu(SFU) Internet Service

Premise condition of ONU to open internet service:

- OLT connect to uplink device and open internet service
- OLT have created vlan for internet service
- OLT have configured GE port vlan
- OLT have configured PON port vlan
- ONU have registered

SFU ethernet port vlan mode have transparent,tag(access),trunk mode and so on,we can according to our network plan configure different mode.all onu vlan is configured by OLT,configure way as follows:

1. Click "PON Board --> PON8 --> ONU-1 --> VLAN Manage", Config ONU1 eth1 vlan



mode is tag(access):

xPON OLT	Version: V1.2.0	Login-Mode: Administrator	Language: English 🔻 😃 Exit
Topology	PATH:test1>PON Board>F	PON8>ONU1>VLAN Manage	
Main Board Switching Board PON Board PON1 PON2 PON3 PON4 PON5 PON5 PON6 PON7 PON8 PON	PON8>ONU1 BaseInfo Advanced IP Manage Port Manage ONU Qos Storm Control Mac AddressList GMP Fort Config VLAN Manage Link SLA	VLAN Manage Port ID Port I 5 Port ID Port Vlan Mode: Tag Mode 1 Default TDID[0-FFFF]: 0 Default Vlan: Cos[0-7]: 0 refresh	de Operation v x 8100 VID [1-4094]; 50
xPON OLT	Version: V1.2.0	Login-Mode: Administrator	Language: English • 🕐 Exit
Topology ▲ Main Board ▲ > Switching Board ▲ → PON Board	PATH:test1>PON Board>I	VON8>ONU1>VLAN Manage VLAN Manage Port ID:1 Vlan Mode Tag 7 ▼ Default TPID[0-FFFF]: 0x 8100 8 Default Vlan: Cos[0-7] 0 9 VID[1-4094] 110 €]10

11 Set Refresh Return

9.4.2 Configure Bridge Onu(SFU) Multicast Service

Premise Condition

- OLT connect to uplink device and open service
- OLT have created vlan for multicast service
- OLT have configured GE port vlan
- OLT have configured PON port vlan

Link SLA

• ONU have registered

We need enter OLT to config ONU multicast service, configure way as follows:

1. Click "PON Board--> PON8 --> ONU-1 --> IGMP Global", Configure ONU1 multicast vlan mode is snooping and enable the fast leave:



xPON OLT	Version: V1.2.0	Login-Mode: Administrator	Language: English v	ပံ Exit		
Topology	PATH:test1>PON Board>PON8>ONU1>IGMP Global Parameter					
Main Board Main Board PON Board PON Board PON 2 PON3 PON4 PON5	PON8>ONU1 BaseInfo Advanced IP Manage Port Manage ONU Qos Storm Control Mac AddressList IF Performance Statistic IGMP Global 4 IGMP Port Config VLAN Manage Link SLA	IGMP Global Parameter Multicast Switching Mode igmp/mld-snooping 5 ▼ Fast Leave Enable enable ♥ 6 refresh 7 set				

2. Click **"PON Board--> PON8 --> ONU-1 --> IGMP Port Config"**, Configure ONU1 eth2 vlan is 120, and multicast vlan mode is untag:

xPON OLT	Version: V1.2.0	Login-Mode: Administrator	L	anguage: English 🔻	😃 Exit
Topology Main Board Main Board PON Board PON Board PON Board PON B PON3 PON3 PON4 PON5	PATH:test1>PON Board>P PONB>ONU1 BaseInfo Advanced IP Manage ONU Qos Storm Control Mac AddressList Performance Statistic IGMP Global ULAN Manage Link SLA Link SLA	ON8>ONU1>IGMP Port Config IGMP Port Config Port ID JGMP Groups[0-255] 2 0	Multicast Strip Mode Not Strip Vlan Tag refresh	Multicast Vlan	Operation 6 Edit
XPON ULI	Version: V1.2.0	Login-Mode: Administrator		Language: English	U Exit
Main Board Switching Board PON Board PONS PONS PON7 PON8 PON8 ONU-11 ONU-61 ONU-61 ONU-61 ONU-61 ONU-111 ONU-13 ONU-15	PATH:test1>PON Board> PON8>ONU1 BaseInfo Advanced Port Manage ONU Qos Storm Control Mac AddressList Performance Statistic IGMP Port Config ULAN Manage Link SLA	PON8>ONU1>IGMP Port Config IGMP Port Config Port Id:2 IGMP Groups[0-255]: 0 Multicast Strip Mode: Strip Vlan Tag 7 Multicast Vlan Config: VID[1-40 Multicast Vl	▼ 941 <mark>120 8 9</mark> LANs	(Add) Operation	



Concluding Remarks

Thanks for using products of Shenzhen C-Data Technology Co. Ltd.

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