QTECH
МИР ДОСТУПНЕЕ

MANUAL

QSW-9000

www.qtech.ru

Contents

1. ONT MANAGEMENT CONFIGURATION

1.1 ONT Management Introduction

ONT Management is divided into embeded OAM, PLOAM and OMCI. Embeded OAM(broadband authority, security key interaction and DBA) and physical OAM（PLOAM PON management function such as test distinction, ONT active, OMCC build and alarm transition ）related commands can execute.

ONT OMCI manages service configuration issued, configuring VLAN management of ONT, controllable multicast service management, ONT upgrade Management.

1.1.1. ONT Management Configuration

1.1.1.1. ONT Management Task

Table 1-1 ONT Management Task

Configuration Task		Remark	Details
Configure ONT	Pre-configure ONT	Need	1.2.2
	Active/Re-active ONT	Optical	1.2.3
	Configure ONTuplink bandwidth	Need	1.2.4
	Configure tcont	Need	1.2.5
	Configure gemportid	Need	1.2.6
	Configure service-port	Need	1.2.7
	Configure mapping gemportid	Need	1.2.8
	Configure VLAN	Need	1.2.9
	Reboot ONT	Optical	1.2.10
ONT upgrade configuration	ONT upgrade	Optical	1.2.11
ONT Configure Show	Show ONT	Optical	1.2.12
	Show ONTuplink bandwidth	Optical	1.2.13

1.1.2 Pre-configure ONT

In ont sn assigns ont id, it makes sure specific ONT can successfully ONT register.

Table 1-2 Pre-configure ONT

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration	**ont** *ont-id*	
Pre-configure ONT SN	**ont-preconfig sn** *vendor_id specific_vendor_id* **[password** *password* **]** **[fec {disbale| enbale }** *berinterval-time_omci port_id* **]**	Optical
Delete ONT SN Pre-configuration	**no ont-preconfig**	Optical

1.1.2.1 Active/De-active ONT

Table 1-3 Active/De-active ONT

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration	**ont** *ont-id*	
Active ONT	**ont-state active**	Optical
De-active ONT	**ont-state deactive**	Optical

1.1.2.2 Configure ONT uplink bandwidth

Before configure ONT uplink bandwidth, please firstly configure DBA bandwidth.

Table 1-4 Configure ONT uplink bandwidth

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Bind DBA	**ont-tcont** *tcontid* **bind traffic** *profile-name*	Need
Unbind DBA	**no ont-tcont** *tcontid*	Optical
Show ont binding DBA	**show ont-tcont**	Optical

1.1.2.3 Configure tcont

TCONT: Transmission Container. Tcont is used to load the data stream transmission container. ONT can configure up to 3 TCONT.

Table 1-5 Configure tcont

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
TCONT	**tcont** *tcont-id*	Need
TCONT	**no tcont** *tcont-id*	Optical

1.1.2.4 Configure gemportid

Table 1-6 Configure gemportid

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Enter into ONT TCONT configuration mode	**tcont** *tcont-id*	Need
Configure gemportid	**gemportid** *gemport-id*	Need
Delete gemportid	**no gemportid** *gemport-id*	Optical

1.1.2.5 Configure service-port

Table 1-7 Configure service-port

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Choose service-port	**service-port** *serviceport-id*	Need
Delete service-port	**no service-port** *serviceport-id*	Optical

1.1.2.6 Configure mapping gemportid

In service-port mode, this is mapping for configuring gemportid and priority, no enter means 0~7 mapping.

Table 1-8 Configure mapping gemportid

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Enter into ONT service-port configuration mode	**service-port** *serviceport-id*	
Specific pri mapping gemportid	**mapping** *pri -id* **gemportid** *gemport-id*	Need
Delete specific pri mapping gemportid	**no mapping** *pri -id* **gemportid** *gemport-id*	Need
Configure mapping gemportid	**mapping gemportid** *gemport-id*	Need
Delete mapping gemportid	**no mapping gemportid** *gemport-id*	Need

1.1.2.7 Configure VLAN

VLAN transparent mode is port-based vlan action to achieve transparent transmission of uplink and downlink data stream function.

vlan trunk port vlan model is based on action to achieve upstream untag packet forwarding marked default vlan ; Downstream strips default vlan then forward, discard packets without vlan tag. Downlink packet data stream tag which is brought vlan is allowed to pass through the port forwarding, or discarded.

default vlan is not coexist with vlan list configure, but both must be at the service port vlan list in configuration too. Remove vlan trunk mode is to operation is to restore vlan transparent mode.

Table 1-9 Configure VLAN

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Enter into ONT service-port configuration mode	**service-port** *serviceport-id*	
Configure vlan list	**vlan** *vlanlist*	Optical
Delete vlan list	**no vlan** *vlanlist*	Optical
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Enter into ONT ethport port configuration mode	**interface ethernet** *interface-num*	
Configure vlan transparent mode	**vlan mode transparent**	Optical By default：transprae nt mode
Configure vlan trunk mode	**vlan mode trunk**	Optical
Delete vlan trunk mode	**no vlan mode**	Optical
Configure vlan trunk mode default vlan	**trunk default vlan** *vlan-id*	Optical
Delete vlan trunk mode default vlan	**no trunk default vlan**	Optical
Configure vlan trunk mode vlan list	**trunk vlan** *vlan-list*	Optical
Delete vlan trunk mode vlan list	**no trunk vlan [** *vlan-list* **| all]**	Optical

1.1.2.8 Reboot ONT

Table 1-10 Configure VLAN

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
RebootONT	**ont-reboot**	Optical

1.1.2.9 ONT upgrade

Load the ONT image through TFTP, FTP into the OLT, then give online ONT upgrade.

Table 1-11 ONT upgrade

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Download ONT image command from TFTP	**load ont-image tftp tftpserver-ipv4** *filename*	tftpserver-ipv4：TFTP IP address filename：will upload file
Download ONT image command from FTP	**load ont-image ftp ftpserver-ipv4** *filename username password*	tftpserver-ipv4：TFTP IP address filename：will upload file
Enter into ONT configuration mode	**ont** *ont-id*	
ONT upgrade	**ont-update**	Optical

1.1.2.10 Show ONT

Use below command to receive registration ONT, includes SN,Status,Password, Omci port,Ber, Us FEC,Deactive reason for ONT.

Table 1-12 Show ONT

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Show ONT	**show ont-status**	Optical

1.1.2.11 Show ONT uplink bandwidth

Table 1-13 Show ONT uplink bandwidth

Operation	Command	Remark
Enter into global configuration mode	**configure terminal**	
Enter into ONT configuration mode	**ont** *ont-id*	
Show ONT uplink bandwidth	**show tcont** *tcontid*	Optical

1.1.2.12 ONT vlan trunk data service application examples

1. Network requirement

In chassis OLT slot 5 pon 5/6 registered ONT5/6/1 data services. Configuration requirement：Requires ONT can forward with vlan tag equal to 200, Requires untag packets came up from the ONT, add a default packet vlan tag equal to 100, downlink with vlan100 strips vlan, untag forwards and configure to above requirements.

2. Configuration steps

#ONT 5/6/1 already register

#Add PON5/6 to vlan 100,200中

GPON(config)#vlan 100

GPON(config-if-vlan)#switchport pon 5/6

Add VLAN port successfully.

GPON(config-if-vlan)#vlan 200

GPON(config-if-vlan)#switchport pon 5/6

Add VLAN port successfully.

GPON(config-if-vlan)#exit

#Configure dba bandwidth

GPON(config)#dba-profile 1 type 3 assured 1024 max 2048

Configure tcont 1 ,service port 1 ,gemportid 500, permit vlan 100,200 from service port1

GPON(config)#ont 5/6/1

GPON(ont-5/6/1)#tcont 1

GPON(ont-5/6/1-tcont-1)#gemportid 500

GPON(ont-5/6/1-tcont-1)#exit

GPON(ont-5/6/1)#service-port 1

GPON(ont-5/6/1-service-port-1)#mapping gemportid 500

GPON(ont-5/6/1-service-port-1)#vlan 100,200

GPON(ont-5/6/1-service-port-1)#exit

GPON(ont-5/6/1)#interface ethernet 0/1

GPON(ont-5/6/1-eth-0/1)#vlan mode trunk

GPON(ont-5/6/1-eth-0/1)#trunk default vlan 100

GPON(ont-5/6/1-eth-0/1)#trunk vlan 200

GPON(ont-5/6/1-eth-0/1)#exit

#Configure ONT bind DBA bandwidth

GPON(ont-5/6/1)#ont-tcont 1 bind traffic 1

#Show ONT configuration

GPON(ont-5/6/1)#show running-config ontmnt

![ONTMNT]

ont-tcont 1 bind traffic 1

exit

ont 5/6/1

tcont 1

gemportid 500

exit

service-port 1

mapping gemportid 500

vlan 100,200

exit

interface ethernet 0/1

vlan mode trunk

trunk default vlan 100

trunk vlan 200

exit

ont-tcont 1 bind traffic 1

exit