QSW-9000

Contents

1. PON INTRODUCTION

This chapter contains: ONT registration authentication configuration, uplink bandwidth DBA configuration, PON port MAC table configuration and data channel configuration in uplink and downlink.

2. CONFIGURE PON

2.1. PON configuration task

Table 1-1   PON configuration task

Configuration Task		Description	Details
ONT registration authentication	ONT registration authentication configuration	Mandatory	1.2.2
MAC table on PON port	MAC table configuration	Optional	1.2.3
	Show MAC table	Optional	1.2.3
Uplink bandwidth DBA	Uplink DBA template configuration	Mandatory	1.2.4
	Show uplink DBA template	Optional	1.2.4
Related configuration	Show packet statistcs on PON port	Optional	1.2.5
	Configure uplink/downlink packet COS REMAP	Optional	1.2.5
	Modify traffic head of uplink/downlink packet	Optional	1.2.5

2.2. ONT Registration Authentication Configuration

Authentication configuration is for permitting ONT registration. Currently, there are 2 kinds of authentication: SN-based and SN+Password. SN-based can be auto-authentication and preserved configuration. When SN-based authentication enabled, ONT SN entry will determine the permission of ONT registration; when enabling SN+Password, SN and Password entry will determine the permission of ONT registration.

Table 1-2   ONT Registration Authentication Configuration

Configuration Task		Description
Enters the global configuration mode.	**configure terminal**	
Enable auto-find	**ont-auto-find [interval-time** *interval-time* **]**	Mandatory
Disable auto-find	**no ont-auto-find**	Optional
Enable auto-authentication	**ont-auto-auth**	Mandatory
Disable auto-authentication	**no ont-auto-auth**	Optional
Enters the global configuration mode.	**configure terminal**	
Enter PON port configuration mode	**interface pon** *interface-num*	
Enable auto-find on PON port	**ont-auto-find [interval-time** *interval-time* **]**	Mandatory
Disable auto-find on PON port	**no ont-auto-find**	Optional
Enable auto-authentication on PON port	**ont-auto-auth**	Mandatory
Disable auto-authentication on PON port	**no ont-auto-auth**	Optional
ONT authentication mode	**ont-authenticate mode { sn	sn-password }**	Not support now **sn-password**

2.3. Configure GPON MAC table

Each PON port has a 4k MAC table.

Table 1-3   Configure GPON MAC table

Configuration Task		Description
Enters the global configuration mode.	**configure terminal**	Optional
Enter PON port configuration mode	**interface pon** *interface-num*	Optional
Configure MAC aging time and learning mode under PON port	**mac-address-table gpon age-time** *age_time* **{ learning-mode-normal | learning-mode-move }**	By default, age-time：300s, learning-mode-move
Configure action for searching MAC table failed	**mac-address-table gpon dlf { drop | assign-def-gempid <gempid> | vlan-tag }**	**vlan-tag**：MAC address which is not found in MAC table, will be forwarding according to vid corresponded gempid
Configure MAC entry under PON port	**mac-address-table gpon add { dynamic | static }** *mac* **vlan** *vid* **gempid** *gempid*	Optional
	mac-address-table gpon del *mac* **vid** *vid* **[index** *index* **]**	Optional
Show MAC table under PON port	**show mac-address-table gpon info**	Optional
Show MAC entry under PON port	**show mac-address-table gpon**	Optional
Enters the global configuration mode.	**configure terminal**	
Show MAC table under PON port	**show mac-address-table gpon interface pon** *interface-num*	Optional
Show MAC entry under PON port	**show mac-address-table gpon info [interface pon** *interface-num* **]**	Optional

2.4. Uplink bandwidth DBA Configuration

Configure uplink bandwidth DBA template in global configuration mode.

Table 1-4   Uplink bandwidth DBA configuration

Configuration Task		Description
Enters the global configuration mode.	**configure terminal**	
Create /modify DBA template	**profile-dba name {name} type { 1 fixed fixed-bandwidth	2 assured** *assured-bandwidth* **| 3 assured** *assured-bandwidth* **max** *max-bandwidth* **| 4 max** *max-bandwidth* **| 5 fixed** fixed-bandwidth **assured** *assured-bandwidth* **max** *max-bandwidth* **}**	*kbits/s*
Delete DBA template	**no dba-profile {** *profile_name* **| all }**	Optional
Show DBA template	**show profile-dba**	Optional

2.5. Related Configuration

Some related configuration about PON, such as packet statistics on PON port, downlink traffic configuration.

Table 1-5   Related configuration

Configuration Task		Description
Enters the global configuration mode.	**configure terminal**	
Enter PON port configuration mode	**interface pon** *interface-num*	
Show packet statistics under PON port	**show statistic gpon**	Optional
Configure COS REMAP of uplink traffic	**us cos-remap** *priority pbits*	Optional priority：port priority bpits：traffic cos value
Configure COS REMAP of downlink traffic	**ds cos-remap** *pbits priority*	Optional priority：port priority bpits：traffic cos value
Show COS REMAP of uplink traffic	**show us cos-remap**	Optional
Show COS REMAP of downlink traffic	**show ds cos-remap**	Optional
Modify packet head of uplink traffic	**us action** *flow_id* **{ transparent | add-outer-vlan | add-outer-vlan-wit-cfi-0 | add-inner-vlan | retag-outer-vlan | remark-outer-vlan }**	Optional By default：transparent
Configure the modification mode of	**ds modify mode { vid | gempid }**	Optional

downlink traffic		
Modify packet head of downlink traffic	**ds action** *vid_gempid* **outer { transparent | remove | modify } [inner {transparent | remove | modify}]**	Optional By default：transparent
Configure gempid mapping on downlink traffic	**ds gempid-remap** *init_gempid final_gempid*	Optional
Show uplink action	**show us action**	Optional
Show downlink action	**show ds action**	Optional

2.6. Example for uplink DBA template configuration

1. Configuration Steps

Bandwidth granularity is 64Kbps.

GPON(config)#profile dba name bandwidth1 type 3 assured 1000

max 2000 Show configured DBA template

GPON(config)#show profile dba

===

name   type   fix   assured   max

bandwidth1   3   128   1024   2048

===

2.7. Example PON MAC table

1. Requirement for configuring PON MAC table

Configure MAC table aging time to be 600s. And configure MAC address learning action to be move.

2. Configuration Steps

GPON(config)#interface pon 5/1

GPON(config-if-pon-5/1)#mac-address-table gpon age-time 600 learning-mode-move

2.8. Example for configuring packet head of downlink traffic

1. Requirement

Downlink traffic whose gemportid=300, modify outer tag =gemportid

2. Configuration Steps

GPON(config)#interface pon 5/1

GPON(config-if-pon-5/1)#ds action 300 outer modify

Show modification action

GPON(config-if-pon-5/1)#show ds action

vid/gempid   outer vlan command   inner vlan command

300   modify   transparent

Total entries: 1.