

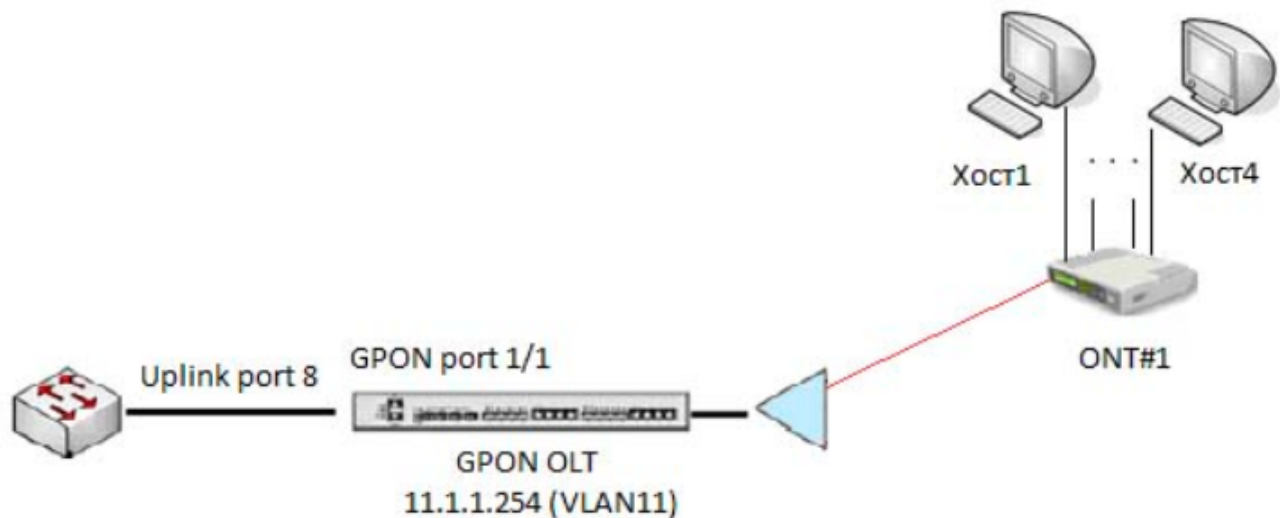
# GPON. DASAN. OLT ONT.

## DASAN OLT & ONT

(DBA profile, Traffic profile, ONU profile).

- **DBA Profile** (Dynamic Bandwidth Allocation). (DBA) . (PON) (ONU);
- **Traffic Profile** multicast-profile, voip-profile tdm-pw-profile (Time Division Multiplexing Pseudowire Information) — , . () , . , 1 1, 2 2 .. TDM , . . . ;
- **ONU Profile** Traffic-profiles pm-profile ONU. Performance Monitoring Profile (pm-profile) ANI ports, UNI Eth ports Upstream/Downstream : OversizePackets, CRCErrorPackets, UndersizePackets, Lost Packets .) ONU profile ;

:



Vlan .

```
SWITCH# conf t
SWITCH(config)# bridge
# VLAN 11
SWITCH(bridge)# vlan create 11

# 1 11 vlan. GPON 11 vlan'a
SWITCH(bridge)# vlan add 11 1 tagged

# 8 11 vlan, (, switch L3, router ..)
SWITCH(bridge)# vlan add 11 8 untagged
```

11 ip .

bridge .

```
SWITCH(config)# interface 11
SWITCH(config-if[11])# ip address 11.1.1.254/24
SWITCH(config-if[11])# no shutdown
SWITCH(config-if[11])# exit
SWITCH(config)#
```

ONU.

ONU gpon.

```
SWITCH#
SWITCH# con t
SWITCH(config)# gpon
# gpon-olt 1 ( GPON 1 4)
SWITCH(gpon)# gpon-olt 1

# ONU 10 .
SWITCH(config-gpon-olt[1])# discover-serial-number start 10

# :
SWITCH(config-gpon-olt[1])#onu add ONU-ID PASSWD [enable| disable]

#
SWITCH(config-gpon-olt[1])# show onu active

-----
OLT | ONU | STATUS | MODE | Serial No. | Password | Link uptime
-----
1 | 1 | Active | auto | CIGGb3190015 | 30306233313930303135 | 0:00:00:10
```

ONU.

```
SWITCH(config-gpon-olt[1])#
# ONU.
SWITCH(config-gpon-olt[1])# onu fix all

# ONU ID. ID show onu active. ONU_ID:
SWITCH(config-gpon-olt[1])# onu fix 1

SWITCH(config-gpon-olt[1])# show onu active

-----
OLT | ONU | STATUS | MODE | Serial No. | Password | Link uptime
-----
1 | 1 | Active | manual | CIGGb3190015 | 30306233313930303135 | 0:00:00:22
```

Status ONU manual, .

dba :

```

SWITCH# conf t
# gpon.
SWITCH(config)# gpon

# . ONU OLT.
SWITCH(gpon)# dba-profile 20M_upstream create

# (sr) State Reporting report, ONU OLT , grant , OLT ONU . DBA.
DBA, ONU OLT, , . ONU DBRu(dynamic bandwidth report upstream). (nsr) Non State Reporting-
OLT ONU TCONT.
SWITCH(config-dba-profile[20M_upstream])# mode sr

# <128-1031616> (kbps). : sla assured <0-1031616> (kbps)
SWITCH(config-dba-profile[20M_upstream])# sla fixed 128

# , , . ( 1 GPON).
SWITCH(config-dba-profile[20M_upstream])# sla maximum 20000 (128-1031616)

SWITCH(config-dba-profile[20M_upstream])# apply
SWITCH(config-dba-profile[20M_upstream])# exit

```

multicast — gpon.

```

SWITCH# conf t
# multicast .
SWITCH(gpon)# multicast-profile 229_net create

# C (robustness) .
1 255, , 1, , - 2.
SWITCH(config-mcast-profile[229_net])# igmp robustness-variable 3

# igmp ().
SWITCH(config-mcast-profile[229_net])# igmp querier query-interval 125

# ().
SWITCH(config-mcast-profile[229_net])# igmp querier max-response-time 10

# multicast 11 vlan'a. (Vlan id -11, destination-ip 229.1.1.1 229.1.1.10, gem 4094 — gem port( )).
SWITCH(config-mcast-profile[229_net])# igmp access-list vid 11 dst-ip start 229.1.1.1 end 229.1.1.10 gem 4094
SWITCH(config-mcast-profile[229_net])# apply
SWITCH(config-mcast-profile[229_net])# exit

```

traffic :

```

SWITCH# conf t
SWITCH(gpon)# traffic-profile ONT#1 create

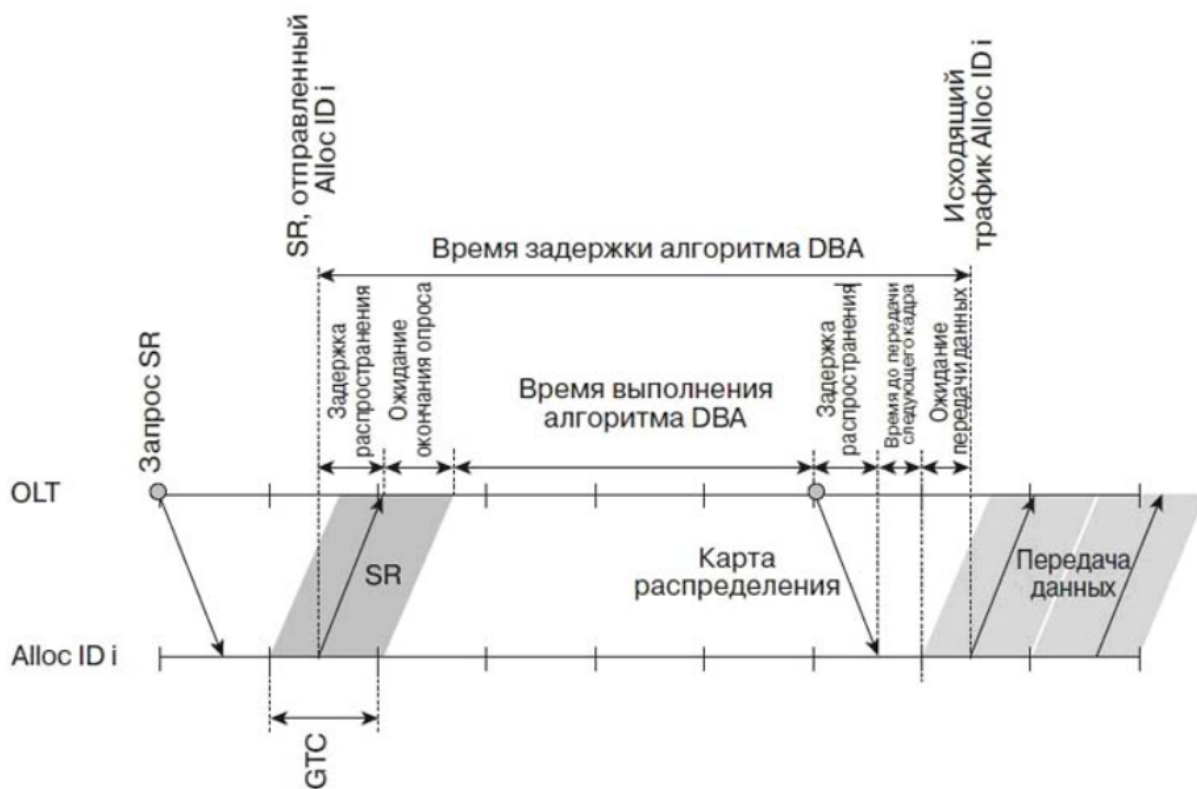
# . Gem . . (T-CONT) , . T-CONT ATM GEM . GPON , .
SWITCH(config-traffic-pf[ONT#1])# tcont 1

# GEM - gpon encapsulation method ( ) (..c 1 4 gem port TCONT1), mapper. C mapper'a gem port
(1/1- , TCONT1 1 gem port c mapper #1, 1/2= mapper#1:gem port 2, 2/1-4=mapper #2:all gem ports). 1
- ethernet, 4 , mapper#1. , mapper#N.
GPON, GEM, . : SONET/SDH, G.709ITU-T (OTN), GPON. ( IP/PPP Ethernet MAC),
.
SWITCH(config-traffic-pf[ONT#1]-tcont[1])# gempport 1/1-1/4

# dba-profile TCONT1.
SWITCH(config-traffic-pf[ONT#1]-tcont[1])# dba-profile 20M_upstream
SWITCH(config-traffic-pf[ONT#1]-tcont[1])# exit

```

## GPON



```

# Mapper - , . 802.1p traffic . Ethernet . 16 Ethernet VLAN . .
SWITCH(config-traffic-pf[ONT#1])# mapper 1

# mapper1. 1/2/4/8.
SWITCH(config-traffic-pf[ONT#1]-mapper[1])# gempport count 4

SWITCH(config-traffic-pf[ONT#1]-mapper[1])# exit

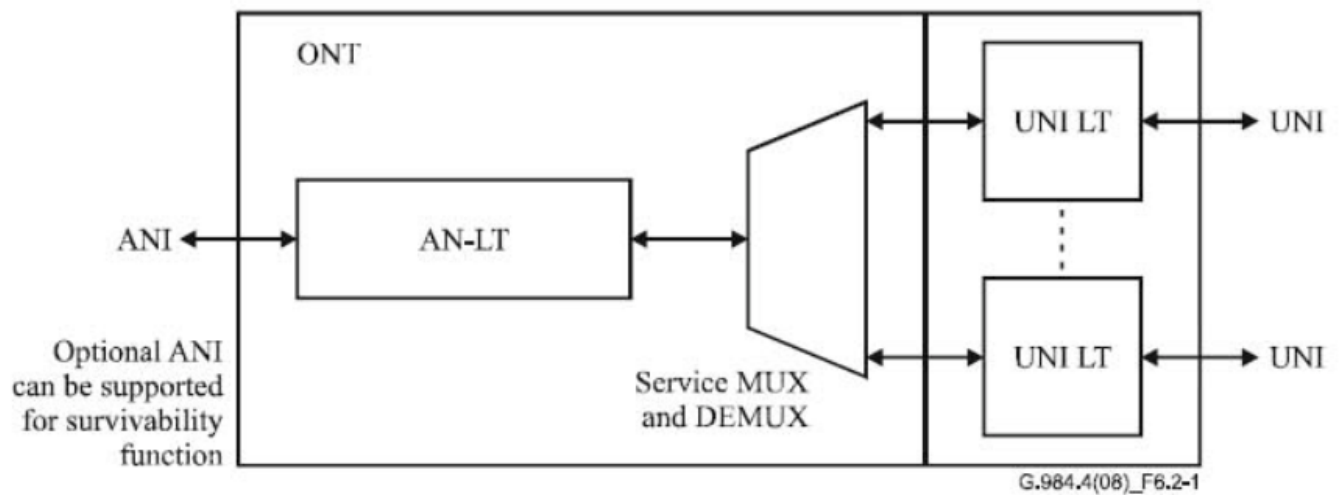
# Bridge 1 uni/ani . , 802.1d(STP, MAC Bridging).
SWITCH(config-traffic-pf[ONT#1])# bridge 1

# MAC Bridge mapper1 OLT ONU mapper 1 Bridge 1. Ani port- , ONU OLT
SWITCH(config-traffic-pf[ONT#1]-bridge[1])# ani mapper 1

SWITCH(config-traffic-pf[ONT#1]-bridge[1]-ani[mapper:1])# exit

```

#### - ONU (ITU-T G.984.4)



```

#      eth uni 1  MAC Bridge. uni- Ethernet   ONU   .
SWITCH(config-traffic-pf[ONT#1]-bridge[1])# uni eth 1

#      ,      /      VID   oS(0-7).      ONU  OLT   11 Vlan   0 (0-3   , 4-7 ).
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:1])# vlan-operation us-oper overwrite 11 0

#      ,      .
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:1])# vlan-operation ds-oper remove

#      Ethernet UNI 1      10Mbps.      : rate-limit upstream 960 960 (1Mbps)
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:1])# rate-limit downstream 10000 10000

#      ,      Ethernet UNI 1  multicast .
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:1])#multicast-profile 229_net

SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:1])# exit

#
SWITCH(config-traffic-pf[ONT#1]-bridge[1])# uni eth 2
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:2])# vlan-operation us-oper overwrite 11 0
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:2])# vlan-operation ds-oper remove
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:2])#multicast-profile 229_net
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:2])# exit

SWITCH(config-traffic-pf[ONT#1]-bridge[1])# uni eth 3
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:3])# vlan-operation us-oper overwrite 11 0
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:3])# vlan-operation ds-oper remove
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:3])#multicast-profile 229_net
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:3])# exit

SWITCH(config-traffic-pf[ONT#1]-bridge[1])# uni eth 4
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:4])# vlan-operation us-oper overwrite 11 0
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:4])# vlan-operation ds-oper remove
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:4])#multicast-profile 229_net
SWITCH(config-traffic-pf[ONT#1]-bridge[1]-uni[eth:4])# exit
SWITCH(config-traffic-pf[ONT#1]-bridge[1])# exit
SWITCH(config-traffic-pf[ONT#1])# apply

```

ONU onu-profile. (ONU) onu-profile. 1 traffic-profile onu-prifile.

```

SWITCH(gpon)#

#      .      :SWITCH(gpon)# onu-profile Ak.Vonsovskogol.st create
SWITCH(gpon)# onu-profile ONT#1 create

#      traffic-profile ONT#1
SWITCH(config-onu-profile[ONT#1])# traffic-profile ONT#1

SWITCH(config-onu-profile[ONT#1])# apply
SWITCH(config-onu-profile[ONT#1])# exit

```

```

SWITCH(gpon)# gpon-olt 1

# onu-profile 1 ONT#1
SWITCH(config-gpon-olt[1])# onu-profile 1 ONT#1

SWITCH(config-gpon-olt[1])# sh onu info

OLT | ONU | STATUS | Serial No. | Distance | Rx Power | Profile - - - - -
1 | 1 | Active | CIGGb3190015 | 7m | -9.1 dBm | ONT#11 | 2 | Active | DSNWcb7ef3b8 | 22m
| -17.1 dBm |

```

igmp ping :

```

SWITCH# ping 11.1.1.253

PING 10.10.10.2 (10.10.10.2) 56(84) bytes of data.

64 bytes from 10.10.10.2: icmp_seq=1 ttl=128 time=3.05 ms
64 bytes from 10.10.10.2: icmp_seq=2 ttl=128 time=3.92 ms
64 bytes from 10.10.10.2: icmp_seq=3 ttl=128 time=3.98 ms
64 bytes from 10.10.10.2: icmp_seq=4 ttl=128 time=3.90 ms
64 bytes from 10.10.10.2: icmp_seq=5 ttl=128 time=3.99 ms
64 bytes from 10.10.10.2: icmp_seq=6 ttl=128 time=3.92 ms

- 11.1.1.254 ping statistics -

6 packets transmitted, 6 received, 0% packet loss, time 5049ms

rtt min/avg/max/mdev = 3.059/3.800/3.996/0.338 ms

```