



Test Report TR S2510PoE-DC
Firmware Version build 71585

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1. Introduction

This document is known for problems and solutions for TECHROUTES TR S2510PoE-DC Series switch.

2. About This Test Report

This Test Report provides information for

A. To verify Passthrough support for all QoS packets and its honouring as per GR clause R5-12.

Present software version- Version 2.2.0C Build 71585;

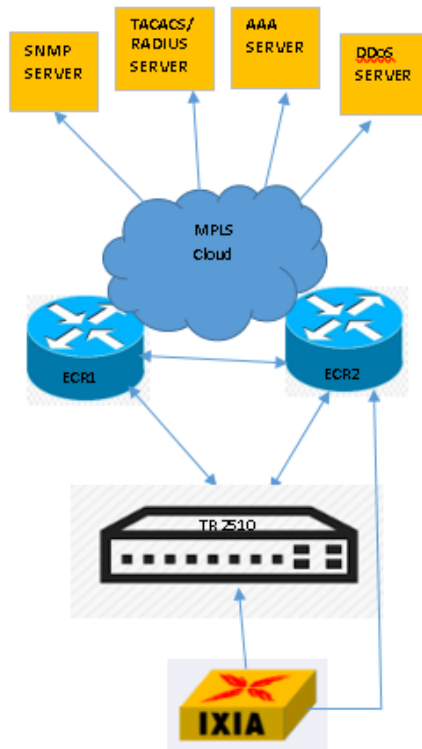
Present hardware version- V1.0;

3. Test Report

A. RJIL-IP-QA-DS-SYS-053

1. To verify Passthrough support for all QoS packets and its honouring as per GR clause R5-12.

2. Test Set up : Switch , ECR1, ECR2, IXIA



3. Procedure:

1. Connect switch to IXIA and ECR1 ECR2

4. Switch Configuration :

1. Scheduler policy "SP"

```
Switch_config#scheduler policy sp
Switch_config#
```

```
interface GigaEthernet0/3
 switchport mode trunk
!
interface GigaEthernet0/4
 switchport mode trunk
!
interface GigaEthernet0/5
 switchport mode trunk
!
interface GigaEthernet0/6
 switchport mode trunk
 switchport rate-limit 1600 egress
!
```

Name	Value
Frame	
EthernetII	
Destination MAC	00:03:00:01:00:01
Source MAC	00:10:94:00:00:01
Vlans	
Vlan	
Type (hex)	8100
Priority (bits)	000
Modifier	Count=8;Step=001
CFI (bit)	0
ID (int)	4094
EtherType (hex)	<auto> Internet IP



5. Test Result :

Send 8 traffic and limit the speed from outer port, only the highest level traffic can pass.

The screenshot shows two windows from a network analysis tool. The left window, titled 'Basic Traffic Results', displays a table of port traffic. The right window, titled 'Streams > Filtered Stream Results', displays a table of stream details for port //11/8.

Port Name	Generator Rate (bps)	Generator Rate (pps)	Generator Sig Rate (pps)	Rx Sig Rate (pps)
Port //11/8	0	0	0	0
Port //11/5	206,106,179	894,865,112	294,585	0
Port //11/6	0	0	0	0
Port //11/7	0	0	0	0
Port //11/8	0	0	0	200,002

Rx Port Name	Vlan 0 - ID (int)	Vlan 0 - Priority (bits)	Rx Stream Id	Stream Index	Rx Count (Frames)	Rx Count (bits)	Rx
Port //11/8	4094	111	327660	0	2,205,947	2,945,881,720	52
Port //11/8	4094	110	327660	1	2,280,818	2,943,852,032	51

2. WRR :

Configuration

```
scheduler policy wrr
scheduler weight bandwidth 1 2 4 8
!
!
```

```
interface GigaEthernet0/4
 switchport mode trunk
!
interface GigaEthernet0/5
 switchport mode trunk
!
interface GigaEthernet0/6
 switchport mode trunk
 switchport rate-limit 1000 egress
!
```



Name	Value
Frame	
EthernetII	
Destination MAC	00:03:00:01:00:01
Source MAC	00:10:94:00:00:01
Vlans	
Vlan	
Type (hex)	8100
Priority (bits)	000
Modifier	Count=8;Step=001
CFI (bit)	0
ID (int)	4094
EtherType (hex)	<auto> Internet IP

Test Result:

It have 4 queue in this switch, the traffic come out like: 1:2:4:8

(Each queue send 2 traffic)

The screenshot shows two panels from a network analysis tool. The left panel, titled 'Port Traffic and Counters > Basic Traffic Results', displays a table of port statistics. The right panel, titled 'Streams > Filtered Stream Results', displays a table of stream statistics.

Port Name	Errors	Triggers	Protocols	Undersize/Oversize/Jumbo	PFC Counters	User Defined
Port //1/8	0	0	0	0	0	0
Port //1/5	100,100,072	0	0	0	0	0
Port //1/6	0	0	0	0	0	0
Port //1/7	0	0	0	0	0	0
Port //1/8	0	0	0	0	0	62,502

Rx Port Name	Vlan 0 - ID (int)	Vlan 0 - Priority (bits)	Rx Stream Id	Stream Index	Rx Count (Frames)	Rx Count (bits)	Rx
Port //1/8	4094	111	327600	7	176,607	174,722,098	10
Port //1/8	4094	110	327600	6	299,652	306,893,448	22
Port //1/8	4094	101	327600	5	55,293	58,668,052	64
Port //1/8	4094	100	327600	4	183,582	187,887,868	23
Port //1/8	4094	011	327600	3	42,535	42,593,280	25
Port //1/8	4094	010	327600	2	78,837	81,445,888	84
Port //1/8	4094	001	327600	1	33,619	34,425,624	26
Port //1/8	4094	000	327600	0	25,657	28,328,768	15



3. WFQ, it is same setting like WRR, only different is change the scheduler policy wrr.

Qos for DSCP mapping and traffic shapping

Configuration:

```
ip access-list standard 1
  permit 1.1.1.1 255.255.255.255
!
ip access-list standard 2
  permit 2.1.1.1 255.255.255.255
!
ip access-list standard 3
  permit 3.1.1.1 255.255.255.255
!
!
scheduler policy wrr
scheduler weight bandwidth 1 2 4 8
!
!
!
policy-map 1
  classify ip 1
  action dscp 1 queue 1
!
policy-map 2
  classify ip 2
  action dscp 2 queue 2
!
policy-map 3
  classify ip 3
  action dscp 3 queue 3
!
```

```

interface GigaEthernet0/3
 switchport mode trunk
 qos policy 1 ingress
 qos policy 2 ingress
 qos policy 3 ingress
!
interface GigaEthernet0/4
 switchport mode trunk
!
interface GigaEthernet0/5
 switchport mode trunk
!
interface GigaEthernet0/6
 switchport mode trunk
 cos bandwidth 1 136 136
 cos bandwidth 2 512 512
 cos bandwidth 3 1024 1024
!

```

Test Result

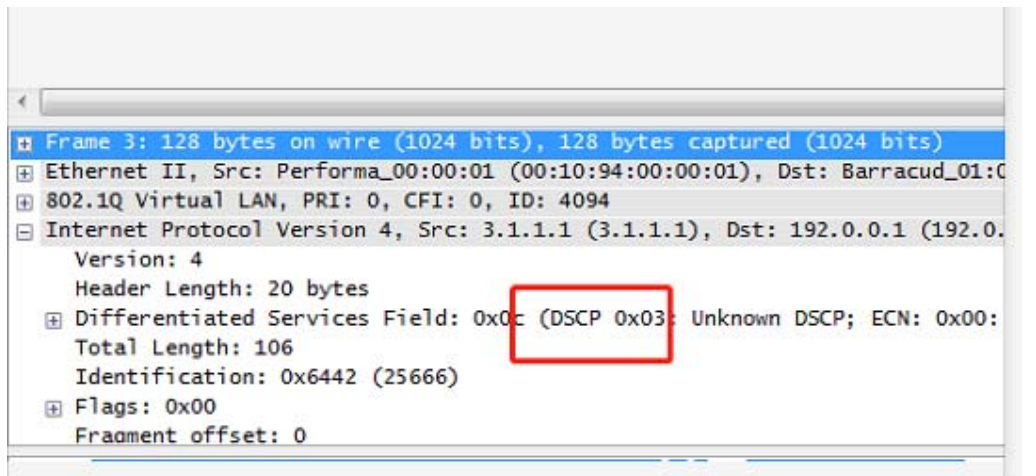
Basic Traffic:Results 1

Port Traffic and Counters > Basic Traffic Results | Change Result View | 1 of 1

Basic Counters	Errors	Triggers	Protocols	Undersize/Oversize/Jumbo	PFC Counters	User Defined
Port Name	Tx Rate (fps)	Generator Rate (Bps)	Generator Rate (bps)	Generator Sig Rate (fps)	Rx Sig Rate (fps)	
Port //11/5		108,108,110	864,864,880	844,595	0	
Port //11/6		0	0	0	0	
Port //11/7		0	0	0	0	
▶ Port //11/8		0	0	0	104,502	



Check DSCP value from capture, it add dscp value to specific packet already.



- 4 Differentiated Services Field: 0x08 (DSCP: Unknown, ECN: Not-ECT)
 - 0000 10.. = Differentiated Services Codepoint: Unknown (2)
 -00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)

