###### TDM PWE – OC3/STM1

***Objective:***

* Validate OC3 TDM PWE for pluggable **XCVR-GES101.** The PWE is between 10.5.1 and 6.20.

Letter

Description automatically generated with medium confidence

***Procedure:***

* On the SAOS 6.20 node, 3926\_0060, port 6 is connected to OC3 fiber loopback.
* On the SAOS 10.5.1 node, 5144-009, port 1 is connected to a TDM OC3 testset.
* TDM pluggable used in both 5144 and 3926 is XCVR-GES101.
* Find the mac address of the SAOS 6.20 port 6 by doing a port show. Keep this mac address handy.

CN3926\_0060> port show port 6

+

PORT 1.6 INFO +

| Field | Admin | Oper |

+ + + +

| Type | CSOP OC3/STM1 |

| Description | |

| Spanning Tree State | Forwarding |

**| MAC Address | 74:87:bb:6f:70:87** |

| Phy Loopback | Off |

| Facility Loopback | Off |

| Link Flap Detection | Off |

| Link Flap Count | 5 |

| Link Flap Detect Time | 10 |

| Link Flap Hold Time | 300 |

| Hold-Off | Disabled |

| Hold-Off Time (ds) | 10 |

| Flow Loop Detect State | Off |

| Flow Loop Detection | Off | Off |

| Y-Protection state | none |

| L2CFT Status | Disabled | Disabled |

| L2CFT Profile | | |

| Link State | Enabled | Enabled |

| VLLI State | | Enabled |

| Rx Low Power Detection | | |

| State Group Link State | | |

| Degrade Detection Mode | off | off |

| Degrade State | | None |

| Mode | sfp | sfp |

| Speed | 155.52 Mbits/s | 1 Gbps |

| Duplex | full | full |

| Flow Control | off | off |

| Auto Negotiation | Enabled | Enabled |

| Flow Control Advertised | off | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| |  | | Speed Advertised  Duplex Advertised | |  | | |  | | |  | |
| | | PVID | | 1 | | 1 | | |
| | | Untag Ingress Data Vid | | 0 | | 0 | | |
| | | Fixed Resolved CoS | | 0 | | 0 | | |
| | | Fixed Resolved Color | | green | | green | | |
| | | Ingress VLAN Filter | | Enabled | | Enabled | | |
| | | Ingress VS Filter | | Off | | Off | | |
| | | Egress VS Filter | | Off | | Off | | |
| | | Acceptable Frame Type | | VLAN tagged only | | VLAN tagged only | | |
| | | Egress Untag VLAN | | 1 | | 1 | | |
| | | Max Frame Size | | 1526 | | 1526 | | |
| | | Inter-Packet Gap Size | | 12 | | 12 | | |
| |  |  |  | | Egress Frame Cos Policy Untagged Data VS Untagged Ctrl VS  VS L2 Transform Mode | | ignore  |  |  | i-push,e-pop | | ignore  |  | | |  |  |  | |
| | | Resolved CoS Policy | | dot1d-tag1-cos | | dot1d-tag1-cos | | |
| | | Service Port Type | | Subscriber | | Subscriber | | |
| | | Eth VC EtherType | | 8100 | | 8100 | | |
| | | Eth VC EtherType Policy | | all | | all | | |
| | | Mirror-port | | Off | | Off | | |
| | | Mirroring Encapsulation | | none | | | | |
| | | Mirror Encap VID | | 1 | | | | |
| |  |  |  | | Mirror Encap TPID Ingress-mirror Egress-mirror  Ingress to Egress QMap | | 8100  |  |  | Default-RCOS | |  |  |  | Default-RCOS | |  |  |  | |
| |  | | XCVR caps mismatch  Ingress FCOS->RCOS Map | | [NONE]  | DefaultFcosRcos | | DefaultFcosRcos | |  | |
| | | Ingress RCOS Remark L2 | | False | | False | | |
| | | Egress RCOS->FCOS Map | | DefaultRcosFcos | | DefaultRcosFcos | | |
| |  |  |  |  |  +  |  | | Benchmark State Ingress ACL Egress Capture Ingress Capture  System-Rsvd-Port Status  Aggregation Membership VLAN Membership | | Disabled  |  |  |  | Disabled  +  |  | 1,127 | | Disabled  |  |  |  +  |  | 1,127 | |  |  |  |  |  +  |  | |
| + |  | + | + | + |

* Disable all ethernet protocols on port 6 on 3926-0060.

lldp set port 6 mode disable rstp disable port 6

mstp disable port 6

* Provision the pluggable on the SAOS 10.5.1 device 5144-009.

config

tdm-global mode ansi ctpid 0x8100 tdm-global sfp-auto-upgrade true

no fps fp remote-fp2 no fps fp remote-fp1 no fps fp remote-fp26

xcvrs xcvr 1 properties mode OC3-STM1

tdm-ports tdm-port 1 clock-mode internal tdm-ports tdm-port 1 ettp-id 1

tdm-ports tdm-port 1 type smart-sfp

tdm-ports tdm-port 1 port-mode oc3-stm1 tdm-ports tdm-port 1 src-address port

* Find the SAOS 10x pluggable mac address by displaying the tdm port. Keep this mac address handy.

5144-009> show tdm ports port 1

+----------------- TDM PORT 1 CONFIGURATION AND STATUS INFORMATION +

| Parameter | Value |

+ + +

| TDM-Port-Name | 1 |

| Type | Smart-Sfp |

| Port-Mode | Oc3-Stm1 |

| Parent-Id | 1 |

| Ettp-Id | 1 |

| Src-Address | Port |

| Clock-Mode | Internal |

| Loopback-Mode | None |

| Loopback-Type | None |

| Loopback-Channel | None |

| Prbs-Insert | None |

| Prbs-Insert-Channel | None |

| Prbs-Monitor | None |

| Prbs-Monitor-Channel | None |

| Section-Trace | Not Set - Using Default Pattern |

| Signal-Fail | None |

| Signal-Degrade | None |

+ + +

| Operational Information | |

+ + +

| Oper-State | Down |

| Oper-Category | Oc3 |

| Source-Mac | 18:92:A4:96:E6:89 |

| Firmware-Oper-State | Upgrade-Complete |

| Packet-Processor-Oper-State | Upgrade-Complete |

| Active-Alarms | Los Ais Lof |

| Channels-Assigned | None |

| Code-Violations-line | 0 |

| Errored-Seconds-Line | 0 |

| Severely-Errored-Seconds-Line | 0 |

| Unavailable-Seconds-Line | 5767 |

| Ais-Seconds-Line | 0 |

| Los-Seconds-Section | 5741 |

| Code-Violations-Section | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| | | Errored-Seconds-Section | | | 5759 | | |
| | | Severely-Errored-Seconds-Section | | | 5759 | | |
| | | Severely-Errored-Frame-Seconds-Section | | | 5741 | | |
| | | Loopback-Code-Violations-Line | | | 0 | | |
| | | Loopback-Errored-Seconds-Line | | | 0 | | |
| | | Loopback-Severely-Errored-Seconds-Line | | | 0 | | |
| | | Loopback-Unavailable-Seconds-Line | | | 0 | | |
| | | Loopback-Ais-Seconds-Line | | | 0 | | |
| | | Loopback-Los-Seconds-Section | | | 0 | | |
| | | Loopback-Code-Violations-Section | | | 0 | | |
| | | Loopback-Errored-Seconds-Section | | | 0 | | |
| | | Loopback-Severely-Errored-Seconds-Section | | | 0 | | |
| | | Loopback-Severely-Errored-Frame-Seconds-Section | | | 0 | | |
| + |  | + |  | + |

5144-009>

* Config the following on SAOS 6.20 OC3 TDM port 6.

vlan add vlan 2200 port 1.4  **add NNI Port 1.4 into VLAN**

virtual-circuit ethernet create vc vcEth2 vlan 2200

port tdm oc3-stm1 create oc3-stm1 oc3P6 port 6 mac port-mac 

Create tdm OC3 SFP port

port tdm enable port oc3P6

attachment-circuit satop create ac ac-oc3P6 port oc3P6 rtp off channel 0 channel-type ds1-e1  **satop encapsulation supported, rtp should be set to off**

virtual-circuit tdm-mef8 create vc vc-oc3P6 ac ac-oc3P6 peer- mac **18:92:A4:96:E6:89** in-ecn 2201 out-ecn 2200  **peer mac is the 10x TDM port mac**

virtual-switch cross-connect create xc xc-10x-oc3test tdm-vc vc-oc3P6 eth-vc vcEth2

* Config the following on SAOS 10.5.1. TDM OC3 pluggable is inserted into port 1.

classifiers classifier v2200 filter-entry vtag-stack vtags 1 vlan-id 2200

fds fd v2200 mode **tdm-vpws**

fps fp fp26-v2200 logical-port 26 fd-name v2200 classifier-list v2200

fps fp fp1-v2200 logical-port 1 fd-name v2200 classifier-list v2200

# TDM pseudowires ECID must match with remote node, mac address is the SAOS 6x tdm01 mac displayed previously

tdm-pseudowires tdm-pseudowire tdm2200 emulation-type satop encapsulation mef8 in-ecid 2200 out-ecid 2201 tdm-vid 2200 peer-mac **74:87:bb:6f:70:87** parent-tdm-port 1 channel-type ds1- e1 rtp off channel 0

tdm-pseudowires tdm-pseudowire tdm2200 jitter-buffer 3000 tdm-pseudowires tdm-pseudowire tdm2200 admin-state enabled

* Verify OC3 traffic on the testset connected to the 10x port 2 and 6.20 TDM port 6 with fiber loopback.

Graphical user interface, application, table, Excel

Description automatically generated

* With TDM traffic, ensure that synchronization is provisioned and that both 10x and 6x devices are synced to a singled timing source.

Test Case Results:

Passed: Yes No Verified by Date/Time Comments