

ITU-T G.8032v2 (ERPS) MES23xx/33xx/35xx/5324

ERPS (Ethernet Ring Protection Switching) , , . 1 , spanning tree.

:

- RPL (Ring Protection Link) - , ERPS (IDLE);
- RPL Owner - , RPL, RPL Link ;
- RPL Neighbor - , RPL Owner RPL Link. RPL Link ;
- R-APS (Ring - Automatic Protection Switching) - , Y.1731 G.8032. ;
- RAPS VLAN (A-RPS Channel) - VLAN, R-APS PDUs;
- Protected VLAN - VLANs DATA . RPL Link Protected VLAN.

:

- Hold-Off Timer - . , , Hold-Off Timer, R-APS PDU Signal Fail. 0 ;
- Guard Timer - , (/). R-APS PDU Guard Timer, , R-APS pdu . 500 ;
- WTR Timer - RPL Owner RPL . . 5 ;
- Periodic Timer - R-APS PDUs.

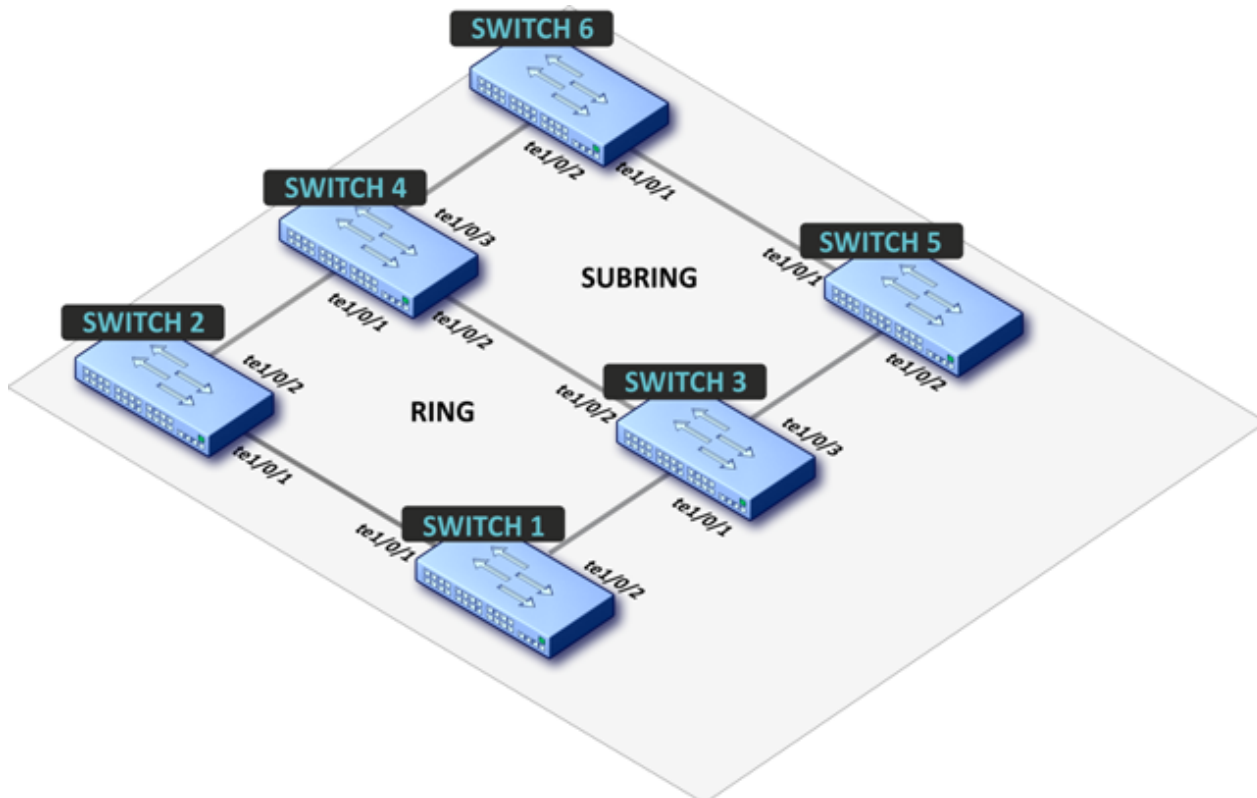
R-APS:

- Signal Fail (SF) - ;
- No Request (NR) - ;
- RPL Blocked (RB) - RPL Owner Neighbor, No Request. RPL .

:

- IDLE - , RPL Owner RPL Neighbor ERPS.
- PROTECTED - , /, RPL Owner RPL Neighbor .
- PENDING - , , WTR .

!!! ERPS , .



, . ERPS VLAN 10 (R-APS VLAN), VLAN 20, 30, 40, 200, 300, 400. ERPS VLAN 100, VLAN 200, 300, 400. , , (1 2), VLAN .

RPL 1 2. RPL 5 6. RPL — , , .

3 4 vlan 100 virtual link.

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- rpl-link.
- trunk 1 VLAN. VLAN protected,
- RPL link protected VLAN. xSTP STP bpdu

1:

```
console(config)# no spanning-tree
console(config)# erps
console(config)# erps vlan 10
console(config-erps)# ring enable
console(config-erps)# port west te1/0/1
console(config-erps)# port east te1/0/2
console(config-erps)# protected vlan add 20,30,40,100,200,300,400
console(config-erps)# rpl west owner
console(config-erps)# exit
console(config)#
console(config)# interface range TengigabitEthernet1/0/1-2
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 10,20,30,40,100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# spanning-tree bpdu filtering
```

2:

```
console(config)# no spanning-tree
console(config)# erps
console(config)# erps vlan 10
console(config-erps)# ring enable
console(config-erps)# port west te1/0/1
console(config-erps)# port east te1/0/2
console(config-erps)# protected vlan add 20,30,40,100,200,300,400
console(config-erps)# rpl west neighbor
console(config-erps)# exit
console(config)#
console(config)# interface range TengigabitEthernet1/0/1-2
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 10,20,30,40,100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# spanning-tree bpdu filtering
```

3, 4:

```

console(config)# no spanning-tree
console(config)# erps
console(config)# erps vlan 10
console(config-erps)# ring enable
console(config-erps)# port west tengigabitethernet1/0/1
console(config-erps)# port east tengigabitethernet1/0/2
console(config-erps)# protected vlan add 20,30,40
console(config-erps)# sub-ring vlan 100
console(config-erps)# exit
console(config)# erps vlan 100
console(config-erps)# ring enable
console(config-erps)# port west tengigabitethernet1/0/3
console(config-erps)# protected vlan add 200,300,400
console(config-erps)# exit
console(config)#
console(config)# interfaceTengigabitEthernet1/0/1
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 10,20,30,40,100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# interfaceTengigabitEthernet1/0/2
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 10,20,30,40,100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# interfaceTengigabitEthernet1/0/3
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# spanning-tree bpdu filtering

```

5

```

console(config)#no spanning-tree
console(config)# erps
console(config)# erps vlan 100
console(config-erps)# ring enable
console(config-erps)# port west te1/0/1
console(config-erps)# port east te1/0/2
console(config-erps)# protected vlan add 200,300,400

```

```
console(config-erps)# rpl west owner
console(config-erps)# exit
console(config)#
console(config)# interface range TengigabitEthernet1/0/1-2
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# spanning-tree bpdu filtering
6:
console(config)# no spanning-tree
console(config)# erps
console(config)# erps vlan 100
console(config-erps)# ring enable
console(config-erps)# port west te1/0/1
console(config-erps)# port east te1/0/2
console(config-erps)# protected vlan add 200,300,400
console(config-erps)# rpl west neighbor
console(config-erps) #exit
console(config)# interface range TengigabitEthernet1/0/1-2
console(config-if)# switchport mode trunk
console(config-if)# switchport trunk allowed vlan add 100,200,300,400
console(config-if)# switchport forbidden default-vlan
console(config-if)# exit
console(config)# spanning-tree bpdu filtering

console# show erps
console# show erps vlan 10
console# show erps vlan 100
```