

ERPS MES2424/2448

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.

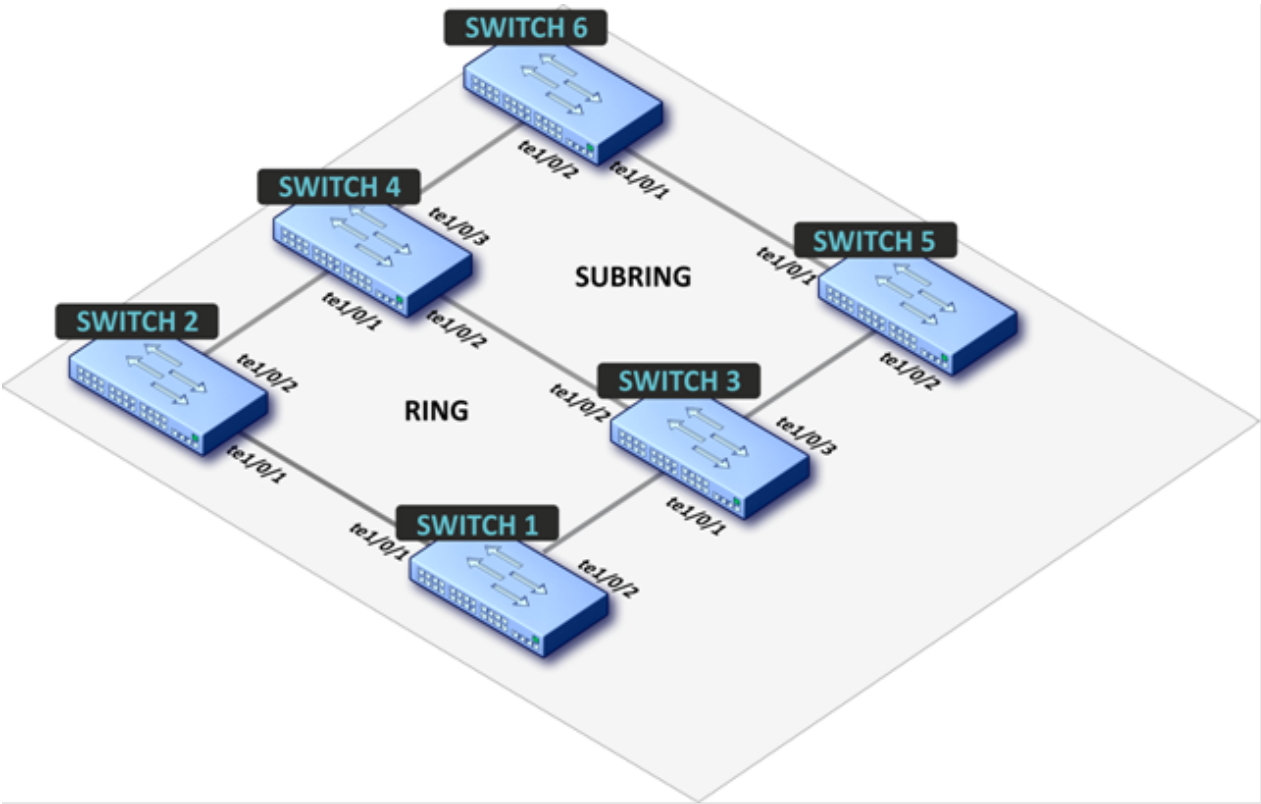
:

- 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 .

!!! ERPS , MEL .



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

RPL 1 2. RPL 5 6. 3 4 vlan 100 virtual channel.

SW1:

```

!
hostname "SW1"
!
vlan 10,20,30,40,100,200,400
vlan active
!
no spanning-tree
!
no shutdown aps ring
aps ring enable
aps ring vlan-group-manager erps
aps group name Main_ring ring group 1
aps working west tengigabitethernet 0/1 east tengigabitethernet 0/2 vlan 10
aps owner tengigabitethernet 0/1
aps working level 1
aps group active
!
interface vlan 400
ip address 192.168.0.11 255.255.255.0
!
interface tengigabitethernet 0/1
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/2
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!

```

SW2:

```

!
hostname "SW2"
!
vlan 10,20,30,40,100,200,400
vlan active
!
no spanning-tree
!
no shutdown aps ring
aps ring enable
aps ring vlan-group-manager erps
aps group name Main_ring ring group 1
aps working west tengigabitethernet 0/1 east tengigabitethernet 0/2 vlan 10
aps neighbor tengigabitethernet 0/1
aps working level 1
aps group active
!
interface vlan 400
ip address 192.168.0.12 255.255.255.0
!
interface tengigabitethernet 0/1
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/2
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!

```

SW3:

```

!
hostname "SW3"
!
vlan 10,20,30,40,100,200,400
vlan active
!
no spanning-tree
!
no shutdown aps ring
aps ring enable
aps ring vlan-group-manager erps
aps group name Main_ring ring group 1
aps working west tengigabitethernet 0/1 east tengigabitethernet 0/2 vlan 10
aps interconnection-node primary
aps multiple-failure primary
aps working level 1
aps group active
!
aps group name Sub_ring ring group 2
aps working west tengigabitethernet 0/3 vlan 100
aps main ring id 1
aps interconnection-node secondary
aps multiple-failure secondary
aps working level 1
aps propagate-tc status enable
aps propagate-tc ring-ids 1
aps group active
!
interface vlan 400
ip address 192.168.0.13 255.255.255.0
!
interface tengigabitethernet 0/1
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/2
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/3
switchport general allowed vlan add 100,200,400
switchport forbidden default-vlan
!

```

SW4:

```

!
hostname "SW4"
!
vlan 10,20,30,40,100,200,400
vlan active
!
no spanning-tree
!
no shutdown aps ring
aps ring enable
aps ring vlan-group-manager erps
aps group name Main_ring ring group 1
aps working west tengigabitethernet 0/1 east tengigabitethernet 0/2 vlan 10
aps interconnection-node primary
aps multiple-failure primary
aps working level 1
aps group active
!
aps group name Sub_ring ring group 2
aps working west tengigabitethernet 0/3 vlan 100
aps main ring id 1
aps interconnection-node secondary
aps multiple-failure secondary
aps working level 1
aps propagate-tc status enable
aps propagate-tc ring-ids 1
aps group active
!
interface vlan 400
ip address 192.168.0.14 255.255.255.0
!
interface tengigabitethernet 0/1
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/2
switchport general allowed vlan add 10,20,30,40,100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/3
switchport general allowed vlan add 100,200,400
switchport forbidden default-vlan

```

SW5:

```

!
hostname "SW5"
!
vlan 100,200,400
vlan active
!
no spanning-tree
!
no shutdown aps ring
aps ring enable
aps ring vlan-group-manager erps
aps group name Sub_ring ring group 2
aps working west tengigabitethernet 0/1 east tengigabitethernet 0/2 vlan 100
aps owner tengigabitethernet 0/1
aps working level 1
aps group active
!
interface vlan 400
ip address 192.168.0.15 255.255.255.0
!
interface tengigabitethernet 0/1
switchport general allowed vlan add 100,200,400
switchport forbidden default-vlan
!
interface tengigabitethernet 0/2
switchport general allowed vlan add 100,200,400
switchport forbidden default-vlan

```

SW6:

```
!  
hostname "SW6"  
!  
vlan 100,200,400  
vlan active  
!  
no spanning-tree  
!  
no shutdown aps ring  
aps ring enable  
aps ring vlan-group-manager erps  
aps group name Sub_ring ring group 2  
aps working west tengigabitethernet 0/1 east tengigabitethernet 0/2 vlan 100  
aps neighbor tengigabitethernet 0/1  
aps working level 1  
aps group active  
!  
interface vlan 400  
ip address 192.168.0.16 255.255.255.0  
!  
interface tengigabitethernet 0/1  
switchport general allowed vlan add 100,200,400  
switchport forbidden default-vlan  
!  
interface tengigabitethernet 0/2  
switchport general allowed vlan add 100,200,400  
switchport forbidden default-vlan  
!  
end
```

:

- show aps ring
- show aps ring statistics