

01. MRPP

- 1.1. MRPP
 - 1.1.1.
 - 1.1.2. MRPP
 - 64.1.3. MRPP
- 1.2. MRPP
- 1.3. MRPP
- 1.4. MRPP

1.1. MRPP

MRPP (Multi-layer Ring Protection Protocol), Ethernet, .

MRPP STP, , 50-100.

1.1.1.

Control VLAN

Control VLAN - VLAN, MRPP, . VLAN MRPP VLAN, , MRPP VLAN.

MRPP Ring

MRPP ring Ethernet . MRPP ring : Health state - , ; Break state - , .

Node type

MRPP ring: Primary node Transfer node. Primary node - , MRPP . Transfer node - , Primary node. . 64.1, Switch A Primary node, - Transfer node.

Primary Secondary

2 Primary () Secondary ().
Primary Node (Hello), . , Primary Node , Hello. , Primary Node .

MRPP 2: Hello-Timer - Hello ; Fail-Timer - Secondary Hello , Hello.

1.1.2. MRPP

Hello packet - (Primary port) . Primary Node Hello-, ;

LINK-DOWN event packet - , Transfer node Down , Primary Node ;

LINK-DOWN-FLUSH-FDB packet - Primary Node MAC- , Primary Node LINK-DOWN event packet Secondary ;

LINK-UP-FLUSH-FDB packet - Primary Node MAC- , Primary Node Secondary .

64.1.3. MRPP

:
Transfer Node DOWN , LINK-DOWN Primary Node. LINK-DOWN Primary Node Secondary Block, LINK-DOWN-FLUSH-FDB MAC.
:

Primary Node Hello . , Secondary Primary Node Hello-, Primary Node . , Secondary Primary Node Hello- Block.

:
, Primary Node , Secondary Hello , , . Primary Node Secondary LINK-DOWN-FLUSH-FDB.

MRPP UP, Primary Node . , LINK-DOWN-FLUSH-FDB, MRPP VLAN.

1.2. MRPP

1. MRPP;
2. MRPP ;
3. ;
4. ;
5. .

1. MRPP:

mrpp enable	MRPP , no .
no mrpp enable	
!	

2. MRPP :

mrpp ring <ring-id>	MRPP <ring-id> . no MRPP.
no mrpp ring <ring-id>	
!	
control-vlan <vid>	VLAN MRPP, no VLAN.
no control-vlan	
! MRPP	
node-mode {master transit}	MRPP
! MRPP	
hello-timer < timer>	Hello . no - - 1 .
no hello-timer	
! MRPP	
fail-timer <timer>	, . no - - 3 .
no fail-timer	
! MRPP	
enable	MRPP, no (-)
no enable	
! MRPP	
mrpp ring <ring-id> primary-port	Primary. no .
no mrpp ring <ring-id> primary-port	
!	
mrpp ring <ring-id> secondary-port	Secondary. no .
no mrpp ring <ring-id> secondary-port	
!	

3. :

port-scan-mode {interrupt poll}	: interrupt - , poll - .
!	

mrpp poll-time <20-2000> !	MRPP ()
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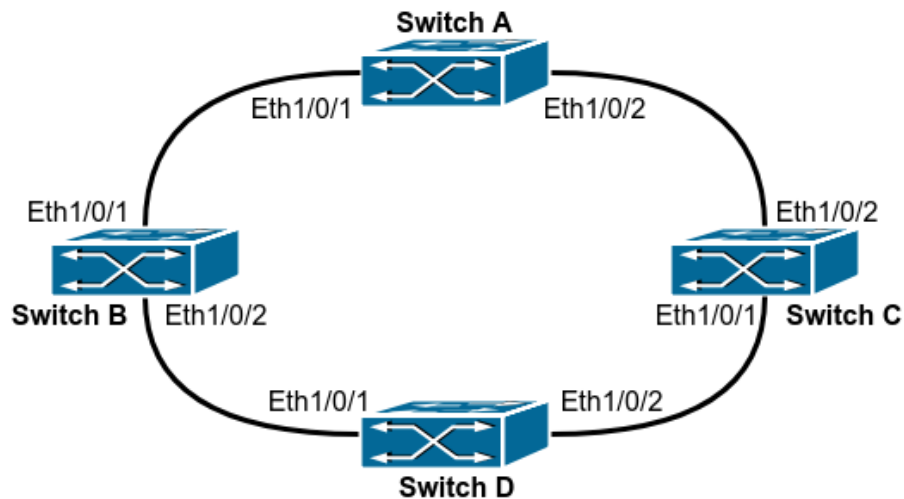
4. :

mrpp errp compatible no mrpp errp compatible !	ERPP, no .
mrpp eaps compatible no mrpp eaps compatible !	EARS, no .
errp domain <domain-id> no errp domain <domain-id> !	ERPP, no

5. :

debug mrpp no debug mrpp !	MRPP, no .
show mrpp {<ring-id>} !	MRPP
show mrpp statistics {<ring-id>} !	MRPP
clear mrpp statistics {<ring-id>} !	MRPP

1.3. MRPP



64.1 - MRPP

MRPP . **Switch A** **MRPP- 4000**, Eth 1/0/1 – **Primary** , E1/0/2 – **Secondary**. (Transfer) **MRPP- 4000** .

Switch A:

```

Switch(Config)#mrpp enable
Switch(Config)#mrpp ring 4000
Switch(mrpp-ring-4000)#control-vlan 4000
Switch(mrpp-ring-4000)#fail-timer 18
Switch(mrpp-ring-4000)#hello-timer 5
Switch(mrpp-ring-4000)#node-mode master
Switch(mrpp-ring-4000)#enable
Switch(mrpp-ring-4000)#exit
Switch(Config)#interface ethernet 1/0/1
Switch(config-If-Ethernet1/0/1)#mrpp ring 4000 primary-port
Switch(config-If-Ethernet1/0/1)#interface ethernet 1/0/2
Switch(config-If-Ethernet1/0/2)#mrpp ring 4000 secondary-port

```

Switch B, C D:

```

Switch(Config)#mrpp enable
Switch(Config)#mrpp ring 4000
Switch(mrpp-ring-4000)#control-vlan 4000
Switch(mrpp-ring-4000)#enable
Switch(mrpp-ring-4000)#exit
Switch(Config)#interface ethernet 1/0/1
Switch(config-If-Ethernet1/0/1)#mrpp ring 4000 primary-port
Switch(config-If-Ethernet1/0/1)#interface ethernet 1/0/2
Switch(config-If-Ethernet1/0/2)#mrpp ring 4000 secondary-port

```

1.4. MRPP

MRPP- **MRPP-**, :

- ;
- , **MRPP**, , ;