



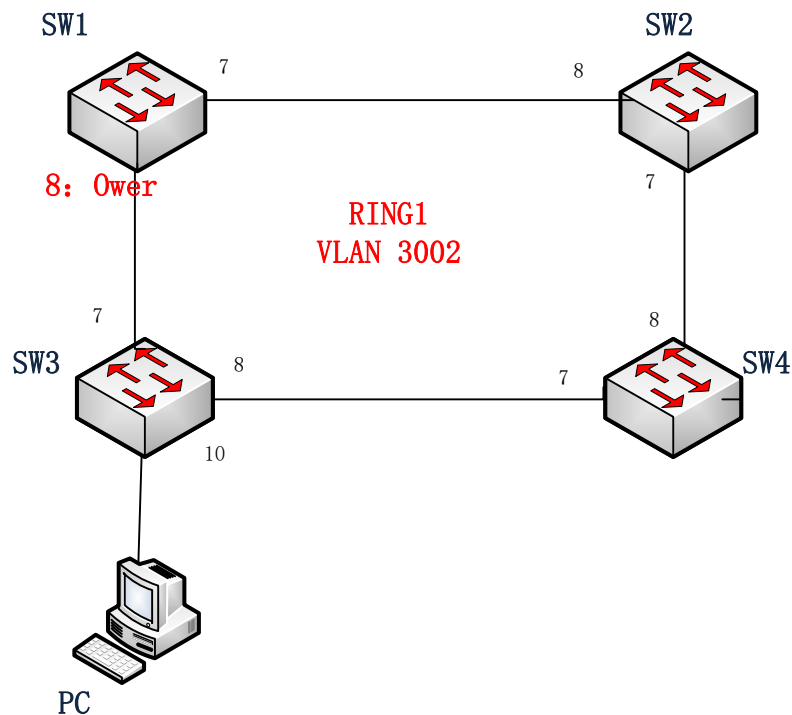
Content

A.	Single-Ring Configuration	2
B.	Coupling-ring Configuration	5
C.	Intersecting-ring Configuration	15



A. Single-Ring Configuration

1. Form SW1 - SW4 to a single ring through ERPS, Users can ping SW1-SW4 in PC, also can ping them if Ring is disconnected.



2. Set the IP of SW1-SW4 as (192.168.2.1) - (192.168.2.4), and set the port to trunk port, which is used to connect with the ring.

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
 - IP
 - NTP
 - Timezone
 - SNMP
 - SysLog
- Port Configure
- PoE
- Advanced Configure
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

IP Configuration

Mode	Host
DNS Server 0	No DNS server
DNS Server 1	No DNS server
DNS Server 2	No DNS server
DNS Server 3	No DNS server
DNS Proxy	<input type="checkbox"/>

IP Interfaces

Delete	VLAN	DHCPv4			IPv4		DHCPv6			IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length	Enable	Rapid Commit	Current Lease	Address	Mask Length
<input type="checkbox"/>	1	<input type="checkbox"/>	0		192.168.2.2	24	<input type="checkbox"/>	<input type="checkbox"/>			

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN
<input type="checkbox"/>				

Add Route

Save Reset



Global VLAN Configuration

Allowed Access VLANs: 1
Ethertype for Custom S-ports: 88A8

Port VLAN Configuration

Port	Mode	Port VLAN	Port Type	Ingress Filtering	Ingress Acceptance	Egress Tagging	Allowed VLANs	Forbidden VLANs
1	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
2	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
3	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
4	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
5	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
6	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
7	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
8	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
9	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
10	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	

3. Set SW1 as Ring1, the type is Major, and set control VLAN as 3002. Enable APS Protocol in MEP, the type is R-APS. And set Port 7 as the East port, Port 8 as the West port. Port 8 is as the owner.

Maintenance Entity Point

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged VID	This MAC	Alarm
<input type="checkbox"/>	7	Port	Mep	Down	7	0		3002	9A-86-03-3B-69-08	<input checked="" type="checkbox"/>
<input type="checkbox"/>	8	Port	Mep	Down	8	0		3002	9A-86-03-3B-69-09	<input checked="" type="checkbox"/>

Add New MEP Save Reset

vlan

MEP Configuration

Instance Data

Instance	Domain	Mode	Direction	Residence Port	Flow Instance	Tagged VID	EPS Instance	This MAC
9	Port	Mep	Down	9		3003	2	9A-86-03-3B-58-0A

Instance Configuration

Level	Format	Domain Name	MEG id	MEP id	Tagged VID	Syslog	cLevel	cMEG	cMEP	cAIS	cLCK	cLoop	cConfig
0	ITU ICC		ICCD000MEG0000	1	3003	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Peer MEP Configuration

Delete	Peer MEP ID	Unicast Peer MAC	cLOC	cRDI	cPeriod	cPriority	cDEG
No Peer MEP Added							

Add New Peer MEP

Functional Configuration

Continuity Check				APS Protocol			
Enable	Priority	Frame rate	TLV	Enable	Priority	Cast	Type
<input type="checkbox"/>	0	1 f/sec	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	Multi	R-APS

Functional Configuration

TLV Configuration

Organization Specific TLV (Global)				
OUI First	OUI Second	OUI Third	Sub-Type	Value
0	0	12	1	2

TLV Status

Peer MEP ID	CC Organization Specific				CC Port Status		CC Interface Status	
	OUI First	OUI Second	OUI Third	Sub-Type	Value	Last RX	Value	Last RX
No Peer MEP Added								

Link State Tracking

Enable ☐

Save Reset



Information & Status
 MLD Snooping
 DHCP
 Security
 QoS
 Network Admin
 Port Configure
 PoE
 Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
ERPS
 IGMP Snooping
 IPv6 MLD Snooping
 LLDP
 Security Configure
 QoS Configure
 Diagnostics
 Maintenance

Ethernet Rapid Ring Protection Switching

Delete	Ring ID	East Port	West Port	Ring Type	Interconnected Node	Major RRing ID	Alarm
<input type="checkbox"/>	1	7	8	Major	No	1	●

Information & Status
 MLD Snooping
 DHCP
 Security
 QoS
 Network Admin
 Port Configure
 PoE
 Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
ERPS
 IGMP Snooping
 IPv6 MLD Snooping
 LLDP
 Security Configure
 QoS Configure
 Diagnostics
 Maintenance

Rapid Ring Configuration 1

Auto-refresh ☐

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
1	7	8	7	8	7	8	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
●	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
RPL_Owner	West Port	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK	NR RB BPR1	NR RB BPR1 9A-86-03-3B-69-08	NR RB BPR1 9A-86-03-3B-69-08	0	●	●	Unblocked	Blocked	●

4. Set SW2-SW4 as Ring1, the type is Major, and set control VLAN as 3002. Enable APS Protocol in MEP, the type is R-APS. And set Port 7 as the East port, Port 8 as the West port. Different in the configuration of Port 8 in SW1, **no need to set the port 8 of SW2-SW4 as the Owner**.

Information & Status
 MLD Snooping
 DHCP
 Security
 QoS
 Network Admin
 Port Configure
 PoE
 Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
ERPS

Rapid Ring Configuration 1

Auto-refre

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring
1	7	8	7	8	7	8	Major

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
●	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
None	None	<input type="checkbox"/>

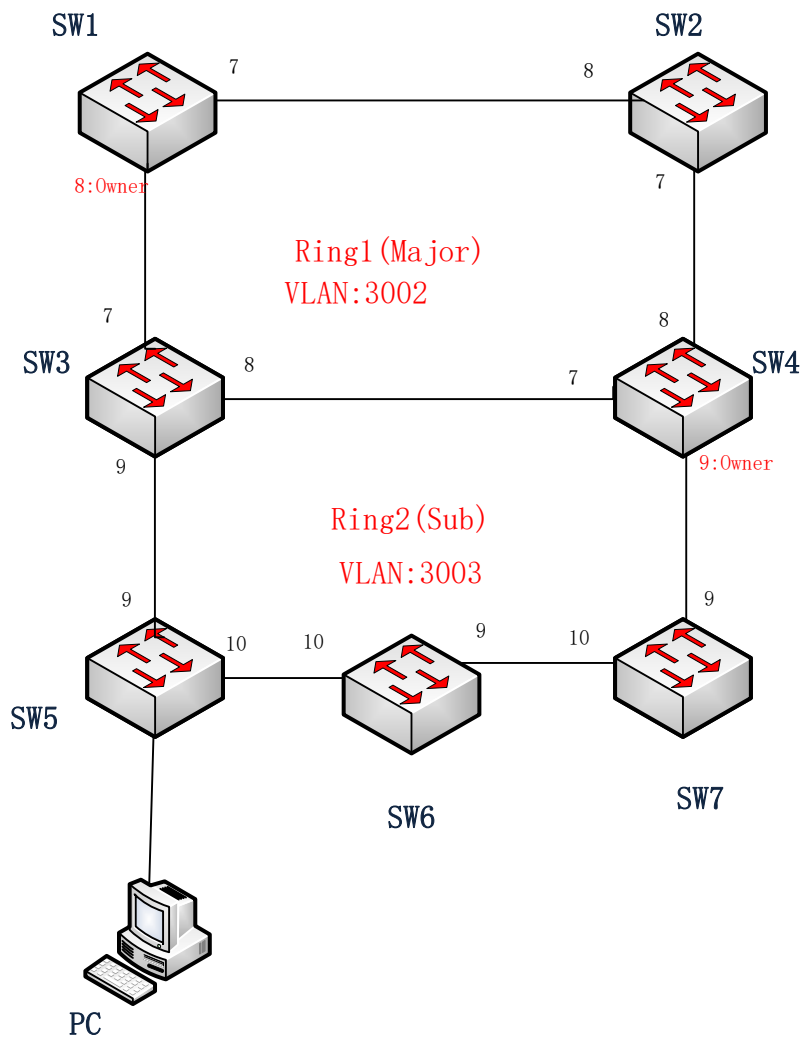
Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm



B. Coupling-ring Configuration

1. Form SW1 - SW7 to a coupling ring through ERPS, Users can ping SW1-SW7 in PC, also can ping them if Ring is disconnected.



2. Set the IP of SW1-SW7 as (192.168.2.1) - (192.168.2.7), and set the port to trunk port, which is used to connect with the ring.



Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
 - IP**
 - NTP
 - Timezone
 - SNMP
 - SysLog
- Port Configure
- PoE
- Advanced Configure
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

IP Configuration

Mode	Host
DNS Server 0	No DNS server
DNS Server 1	No DNS server
DNS Server 2	No DNS server
DNS Server 3	No DNS server
DNS Proxy	<input type="checkbox"/>

IP Interfaces

Delete	VLAN	DHCPv4			IPv4		DHCPv6			IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length	Enable	Rapid Commit	Current Lease	Address	Mask Length
<input type="checkbox"/>	1	<input type="checkbox"/>	0		192.168.2.2	24	<input type="checkbox"/>				

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop	VLAN
--------	---------	-------------	---------	----------	------

Add Route

Save Reset

Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs**
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure

Global VLAN Configuration

Allowed Access VLANs	1
Ethertype for Custom S-ports	88A8

Port VLAN Configuration

Port	Mode	Port VLAN	Port Type	Ingress Filtering	Ingress Acceptance	Egress Tagging	Allowed VLANs	Forbidden VLANs
*	<>	1	<>	<input checked="" type="checkbox"/>	<>	<>	1	
1	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
2	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
3	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
4	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
5	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
6	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
7	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
8	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
9	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
10	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	

Save Reset

3. Set SW1 as Ring1, the type is Major, and set control VLAN as 3002. Enable APS Protocol in MEP, the type is R-APS. And set Port 7 as the East port, Port 8 as the West port. Port 8 is as the owner. New added VLAN 3003 to protect Ring1 from message in Ring2.

Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP**
 - ERPS
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

Maintenance Entity Point

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged VID	This MAC	Alarm
<input type="checkbox"/>	Z	Port	Mep	Down	7	0		3002	9A-86-03-3B-69-08	<input checked="" type="checkbox"/>
<input type="checkbox"/>	g	Port	Mep	Down	8	0		3002	9A-86-03-3B-69-09	<input checked="" type="checkbox"/>

Add New MEP Save Reset

vlan



MEP Configuration Refresh

Instance Data

Instance	Domain	Mode	Direction	Residence Port	Flow Instance	Tagged VID	EPS Instance	This MAC
9	Port	Mep	Down	9		3003	2	9A-86-03-3B-58-0A

Instance Configuration

Level	Format	Domain Name	MEG id	MEP id	Tagged VID	Syslog	cLevel	cMEG	cMEP	cAIS	cLCK	cLoop	cConfig
0	ITU ICC		IC0000MEG0000	1	3003	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Peer MEP Configuration

Delete	Peer MEP ID	Unicast Peer MAC	cLOC	cRDI	cPeriod	cPriority	cDEG
No Peer MEP Added							

Add New Peer MEP

Functional Configuration

Continuity Check				APS Protocol				
Enable	Priority	Frame rate	TLV	Enable	Priority	Cast	Type	Last Octet
<input type="checkbox"/>	0	1 f/sec	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	Multi	R-APS	1

Fault Management Performance Monitoring

TLV Configuration

Organization Specific TLV (Global)					
OUI First	OUI Second	OUI Third	Sub-Type	Value	
0	0	12	1	2	

TLV Status

Peer MEP ID	CC Organization Specific						CC Port Status		CC Interface Status	
	OUI First	OUI Second	OUI Third	Sub-Type	Value	Last RX	Value	Last RX	Value	Last RX
No Peer MEP Added										

Link State Tracking

☒ Enable

Save Reset

Ethernet Rapid Ring Protection Switching

Delete	Ring ID	East Port	West Port	Ring Type	Interconnected Node	Major RRR ID	Alarm
<input type="checkbox"/>	1	7	8	Major	No	1	<input checked="" type="checkbox"/>

Add New Ring Group Save Reset

Rapid Ring Configuration 1 Auto-refresh Refresh

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
1	7	8	7	8	7	8	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
<input checked="" type="checkbox"/>	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
RPL_Owner	West Port	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK	NR RB BPR1	NR RB BPR1 9A-86-03-3B-69-08	NR RB BPR1 9A-86-03-3B-69-08	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Unblocked	Blocked	<input checked="" type="checkbox"/>

Save Reset



Rapid Ring VLAN Configuration 1

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="checkbox"/>	3003

Left Navigation Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

4. Set SW2 as Ring1, the type is Major, and set control VLAN as 3002. And set Port 7 as the East port, Port 8 as the West port. New added VLAN 3003 to protect Ring1 from message in Ring2. The configuration of MEP is same with step 3.

Maintenance Entity Point

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged V ID	This MAC	Alarm
<input type="checkbox"/>	Z	Port	Mep	Down	7	0		3002	9A-86-03-3C-79-08	●
<input type="checkbox"/>	8	Port	Mep	Down	8	0		3002	9A-86-03-3C-79-09	●

Left Navigation Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP**
 - ERPS
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance



Information & Status
 MLD Snooping
 DHCP
 Security
 QoS
 Network Admin
 Port Configure
 PoE
 Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
ERPS
 IGMP Snooping
 IPv6 MLD Snooping
 LLDP
 Security Configure
 QoS Configure
 Diagnostics
 Maintenance

Ethernet Rapid Ring Protection Switching

Delete	Ring ID	East Port	West Port	Ring Type	Interconnected Node	Major RRing ID	Alarm
<input type="checkbox"/>	1	7	8	Major	No	1	●

Information & Status
 MLD Snooping
 DHCP
 Security
 QoS
 Network Admin
 Port Configure
 PoE
 Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
ERPS
 IGMP Snooping
 IPv6 MLD Snooping
 LLDP
 Security Configure
 QoS Configure
 Diagnostics
 Maintenance

Rapid Ring Configuration 1

Auto-refresh ☐

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
1	7	8	7	8	7	8	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
●	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
None	None	<input type="button" value="Clear"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK		NR RB BPR1 9A-86-03-3B-69-08	NR RB BPR1 9A-86-03-3B-69-08	0	●	●	Unblocked	Unblocked	●



Rapid Ring VLAN Configuration 1

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="checkbox"/>	3003

Left Sidebar Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
 - QoS Configure
 - Diagnostics
 - Maintenance

5. Set port 7-8 of SW3 as Ring1, the type is Major, and set control VLAN as 3002. And set Port 7 as the East port, Port 8 as the West port. New added VLAN 3003 to protect Ring1 from message in Ring2.

Set port 9-10 of SW3 as Ring2, the type is Major, and set control VLAN as 3003. And set Port 9 as the East port, Port 10 as the West port. New added VLAN 3002 to protect Ring2 from message in Ring1. Click Interconnected Node for RING1 and RING2.

RING1:

Maintenance Entity Point

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged VID	This MAC	Alarm
<input type="checkbox"/>	1	Port	Mep	Down	7	0		3002	9A-86-03-3B-58-08	●
<input type="checkbox"/>	2	Port	Mep	Down	8	0		3002	9A-86-03-3B-58-09	●
<input type="checkbox"/>	3	Port	Mep	Down	9	0		3003	9A-86-03-3B-58-0A	●

Left Sidebar Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
 - QoS Configure
 - Diagnostics
 - Maintenance



Ethernet Rapid Ring Protection Switching

Delete	Ring ID	East Port	West Port	Ring Type	Interconnected Node	Major RRing ID	Alarm
<input type="checkbox"/>	1	7	8	Major	Yes	1	●
<input type="checkbox"/>	2	9	-	Sub	Yes	1	●

Navigation Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP

Rapid Ring Configuration 1 Auto-refresh ☐

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
1	7	8	7	8	7	8	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
●	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
None	None	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK		NR RB BPR1 9A-86-03-3B-69-08	NR RB BPR1 9A-86-03-3B-69-08	0	●	●	Unblocked	Unblocked	●

Navigation Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

Rapid Ring VLAN Configuration 1

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="checkbox"/>	3003

Navigation Menu:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP



RING2:

Rapid Ring Configuration 2 Auto-refresh ☐ Refresh

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
2	9	0	9	0	9	0	Sub Ring

Instance Configuration

Configured **WTR(Wait to Restore) Time** **Revertive** **VLAN config**

☒ 1min ☒ ☒ VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
None	None	<input type="checkbox"/>

Sub-Ring Configuration

Ring Type	Topology Change
Sub Ring	<input checked="" type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Unblocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK		NR RB BPR0 9A-86-03-3B-3F-0A		0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Unblocked	Unblocked	<input checked="" type="checkbox"/>

Rapid Ring VLAN Configuration 2

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="checkbox"/>	3002

6. Same configuration with SW3 for SW4. The different is need to set port 9 as the owner.



Rapid Ring Configuration 2 Auto-refresh ☐ Refresh

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
2	9	0	9	0	9	0	Sub Ring

Instance Configuration

Configured ☒ WTR(Wait to Restore) Time Revertive ☒ VLAN config ☒

RPL Configuration

RPL Role RPL Port Clear

Sub-Ring Configuration

Ring Type Topology Change ☒

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK	NR RB BPR0			0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Blocked	Unblocked	<input checked="" type="checkbox"/>

7. Set SW5 as Ring2, the type is Sub, and set control VLAN as 3003. And set Port 9 as the East port, Port 10 as the West port. New added VLAN 3002 to protect Ring2 from message in Ring1. Configuration of MEP is same with Step 3.

Maintenance Entity Point Re

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged VID	This MAC	Alarm
<input type="checkbox"/>	9	Port	Mep	Down	9	0		3003	9A-86-03-3A-3C-0A	<input checked="" type="checkbox"/>
<input type="checkbox"/>	10	Port	Mep	Down	10	0		3003	9A-86-03-3A-3C-0B	<input checked="" type="checkbox"/>

Rapid Ring Configuration 2 Auto-refresh ☐ Refresh

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
2	9	10	9	10	9	10	Sub Ring

Instance Configuration

Configured ☒ WTR(Wait to Restore) Time Revertive ☒ VLAN config ☒

RPL Configuration

RPL Role RPL Port Clear

Sub-Ring Configuration

Ring Type Topology Change ☒

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK		NR RB BPR0 9A-86-03-3B-3F-0A		0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Unblocked	Unblocked	<input checked="" type="checkbox"/>



Information & Status
MLD Snooping
DHCP
Security
QoS
Network Admin
Port Configure
PoE
Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
 ERPS
 IGMP Snooping
 IPv6 MLD Snooping
 LLDP
Security Configure
QoS Configure
Diagnostics
Maintenance

Rapid Ring VLAN Configuration 2

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="checkbox"/>	3002

Add New Entry Back

Save Reset

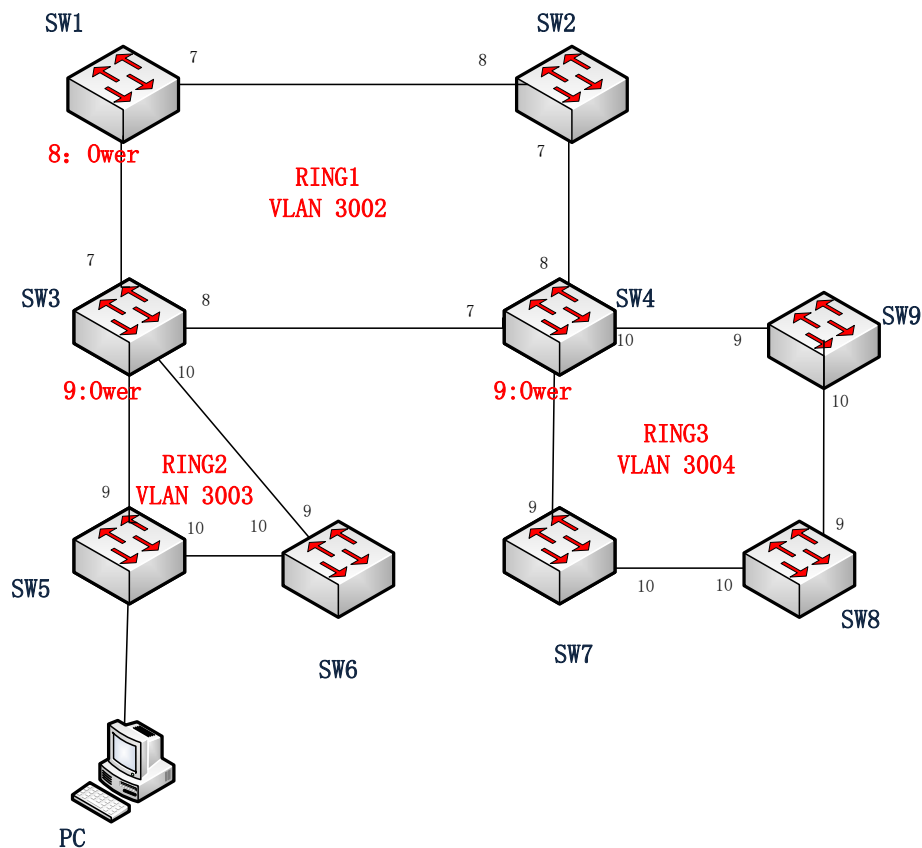
8. Configuration of SW6 & SW7 is same with SW5.

9. Test the configuration result. Users can ping SW1-SW7 in PC, also can ping them if the ring is connected.



C. Intersecting-ring Configuration

1. Form SW1 - SW9 to a intersecting ring through ERPS, Users can ping SW1-SW9 in PC, also can ping them if Ring is disconnected.



2. Set the IP of SW1-SW9 as (192.168.2.1) - (192.168.2.9), and set the port to trunk port, which is used to connect with the ring.

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
 - IP**
 - NTP
 - Timezone
 - SNMP
 - SysLog
- Port Configure
- PoE
- Advanced Configure
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

IP Configuration

Mode

Host

DNS Server 0

No DNS server

DNS Server 1

No DNS server

DNS Server 2

No DNS server

DNS Server 3

No DNS server

DNS Proxy

IP Interfaces

Delete	VLAN	DHCPv4			IPv4		Enable	DHCPv6		IPv6	
		Enable	Fallback	Current Lease	Address	Mask Length		Rapid Commit	Current Lease	Address	Mask Length
<input type="checkbox"/>	1	<input type="checkbox"/>	0		192.168.2.2	24	<input type="checkbox"/>	<input type="checkbox"/>			

Add Interface

IP Routes

Delete	Network	Mask Length	Gateway	Next Hop VLAN
<input type="checkbox"/>				

Add Route

Save

Reset



Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs**
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure

Global VLAN Configuration

Allowed Access VLANs: 1

Ethertype for Custom S-ports: 88A8

Port VLAN Configuration

Port	Mode	Port VLAN	Port Type	Ingress Filtering	Ingress Acceptance	Egress Tagging	Allowed VLANs	Forbidden VLANs
1	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
2	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
3	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
4	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
5	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
6	Access	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag All	1	
7	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
8	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
9	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	
10	Trunk	1	C-Port	<input checked="" type="checkbox"/>	Tagged and Untagged	Untag Port VLAN	1-4095	

Save Reset

3. Set SW1 as Ring1, the type is Major, and set control VLAN as 3002. Enable APS Protocol in MEP, the type is R-APS. And set Port 7 as the East port, Port 8 as the West port. Port 8 is as the owner. New added VLAN 3003 & 3004 to protect Ring1 from message in Ring2 & Ring3.

Maintenance Entity Point

Refresh

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged VID	This MAC	Alarm
<input type="checkbox"/>	Z	Port	Mep	Down	7	0		3002	9A-86-03-3B-69-08	<input checked="" type="checkbox"/>
<input type="checkbox"/>	8	Port	Mep	Down	8	0		3002	9A-86-03-3B-69-09	<input checked="" type="checkbox"/>

Add New MEP Save Reset

vlan



MEP Configuration Refresh

Instance Data

Instance	Domain	Mode	Direction	Residence Port	Flow Instance	Tagged VID	EPS Instance	This MAC
9	Port	Mep	Down	9		3003	2	9A-86-03-3B-58-0A

Instance Configuration

Level	Format	Domain Name	MEG id	MEP id	Tagged VID	Syslog	cLevel	cMEG	cMEP	cAIS	cLCK	cLoop	cConfig
0	ITU ICC		IC0000MEG0000	1	3003	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Peer MEP Configuration

Delete	Peer MEP ID	Unicast Peer MAC	cLOC	cRDI	cPeriod	cPriority	cDEG
No Peer MEP Added							

Add New Peer MEP

Functional Configuration

Continuity Check				APS Protocol				
Enable	Priority	Frame rate	TLV	Enable	Priority	Cast	Type	Last Octet
<input type="checkbox"/>	0	1 f/sec	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	Multi	R-APS	1

Fault Management Performance Monitoring

TLV Configuration

Organization Specific TLV (Global)					
OUI First	OUI Second	OUI Third	Sub-Type	Value	
0	0	12	1	2	

TLV Status

Peer MEP ID	CC Organization Specific						CC Port Status		CC Interface Status	
	OUI First	OUI Second	OUI Third	Sub-Type	Value	Last RX	Value	Last RX	Value	Last RX
No Peer MEP Added										

Link State Tracking

☒ **Enable**

Save Reset

Ethernet Rapid Ring Protection Switching

Delete	Ring ID	East Port	West Port	Ring Type	Interconnected Node	Major RRR ID	Alarm
<input type="checkbox"/>	1	7	8	Major	No	1	<input checked="" type="checkbox"/>

Add New Ring Group Save Reset

Rapid Ring Configuration 1 Auto-refresh Refresh

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
1	7	8	7	8	7	8	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
<input checked="" type="checkbox"/>	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
RPL_Owner	West Port	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block Status	West Port Block Status	FOP Alarm
Idle	OK	OK	NR RB BPR1	NR RB BPR1 9A-86-03-3B-69-08	NR RB BPR1 9A-86-03-3B-69-08	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Unblocked	Blocked	<input checked="" type="checkbox"/>

Save Reset



Navigation menu on the left:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**
 - IGMP Snooping
 - IPv6 MLD Snooping
 - LLDP
- Security Configure
- QoS Configure
- Diagnostics
- Maintenance

Rapid Ring VLAN Configuration 1

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="checkbox"/>	3003
<input type="checkbox"/>	3004

Buttons: Add New Entry, Back, Save, Reset

4. Configuration of SW2 is same with SW1.

5. Set port 7-8 of SW3 as Ring1, the type is Major, and set control VLAN as 3002. And set Port 7 as the East port. New added VLAN 3003 & 3004 to protect Ring1 from message in Ring2 & Ring3.

Set port 9-10 of SW3 as Ring2, the type is Major, and set control VLAN as 3003. And set Port 9 as the East port, Port 10 as the West port. New added VLAN 3002 & 3004 to protect Ring2 from message in Ring1 & Ring3.

Navigation menu on the left:

- Information & Status
- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS
 - IGMP Snooping

Maintenance Entity Point

Delete	Instance	Domain	Mode	Direction	Residence Port	Level	Flow Instance	Tagged VID	This MAC	Alarm
<input type="checkbox"/>	7	Port	Mep	Down	7	0		3002	9A-86-03-3B-58-08	●
<input type="checkbox"/>	8	Port	Mep	Down	8	0		3002	9A-86-03-3B-58-09	●
<input type="checkbox"/>	9	Port	Mep	Down	9	0		3003	9A-86-03-3B-58-0A	●
<input type="checkbox"/>	10	Port	Mep	Down	10	0		3003	9A-86-03-3B-58-0B	●

Buttons: Add New MEP, Save, Reset, Refresh



Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**

Ethernet Rapid Ring Protection Switching

Delete	Ring ID	East Port	West Port	Ring Type	Interconnected Node	Major RRing ID	Alarm
<input type="checkbox"/>	1	7	8	Major	No	1	●
<input type="checkbox"/>	2	9	10	Major	No	2	●

RING1:

Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**

Rapid Ring Configuration 1

Auto-refresh ☐

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
1	7	8	7	8	7	8	Major Ring

Instance Configuration

☒ Configured
 ☐ WTR(Wait to Restore) Time
 ☐ Revertive
 ☐ VLAN config

☒ VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
None	None	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive APS	West Port Receive APS	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block	West Port Block	FOP Alarm

Information & Status

- MLD Snooping
- DHCP
- Security
- QoS
- Network Admin
- Port Configure
- PoE
- Advanced Configure
 - MAC Table
 - Ethernet Services
 - VLANs
 - Port Isolation
 - Loop Protection
 - Spanning Tree
 - IPMC Profile
 - MEP
 - ERPS**

Rapid Ring VLAN Configuration 1

Delete	VLAN ID
<input type="checkbox"/>	1
<input type="button" value="Delete"/>	3003
<input type="button" value="Delete"/>	3004

RING2:



Rapid Ring Configuration 2 Auto-refresh ☐ Refresh

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
2	9	10	9	10	9	10	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
<input checked="" type="checkbox"/>	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
RPL_Owner	East Port	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive	West Port Receive	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block	West Port Block	FOP Alarm

Rapid Ring VLAN Configuration 2

Delete	VLAN ID
<input type="checkbox"/>	1
Delete	3002
Delete	3004

Add New Entry Back

Save Reset

6. Set Port 9-10 of SW5 as Ring2, the type is Major, and set control VLAN as 3003. And set Port 9 as the East port, Port 10 as the West port. New added VLAN 3002 & 3004 to protect Ring2 from message in Ring1 & Ring3.

Rapid Ring Configuration 2 Auto-refresh ☐

Instance Data

Ring ID	East Port	West Port	East Port SF MEP	West Port SF MEP	East Port APS MEP	West Port APS MEP	Ring Type
2	9	10	9	10	9	10	Major Ring

Instance Configuration

Configured	WTR(Wait to Restore) Time	Revertive	VLAN config
<input checked="" type="checkbox"/>	1min	<input checked="" type="checkbox"/>	VLAN Config

RPL Configuration

RPL Role	RPL Port	Clear
None	None	<input type="checkbox"/>

Instance State

Protection State	East Port	West Port	Transmit APS	East Port Receive	West Port Receive	WTR Remaining	RPL Un-blocked	No APS Received	East Port Block	West Port Block	We Po Rin



Information & Status
MLD Snooping
DHCP
Security
QoS
Network Admin
Port Configure
PoE
Advanced Configure
 MAC Table
 Ethernet Services
 VLANs
 Port Isolation
 Loop Protection
 Spanning Tree
 IPMC Profile
 MEP
 ERPS
 IGMP Snooping

Rapid Ring VLAN Configuration 2

Delete	VLAN ID
<input type="checkbox"/>	1
Delete	3002
Delete	3004

Add New Entry Back

Save Reset

7. Configuration of SW4 is same with SW3.

8. Configuration of SW6-9 is same with SW5.