

Supported Features on MCT:

- LACP on the CCEP.
- VRRP on the CCEP.
- MRP and MRP II, with the restriction that the ICL port cannot be the secondary port of the MRP ring.
- Flooding features (VLAN CPU protection, multicast flooding, and so on) on MCT VLANs.
- Unidirectional Link Detection (UDLD) as independent boxes (configured independently).
- ARP as independent boxes (configured independently).
- STP and RSTP.
- Ingress ACLs on all MCT ports. Egress ACLs are supported only on MCT CCEPs or ICL ports.
- Egress ACLs are not supported on MCT CCEPs.
- QoS and MAC filters and profiles with the same configuration on both cluster devices.
- IPv4 ACLs and rate limits. If the rules are applied on the CCEPs, the same rules must be applied to the CCEP ports on both cluster devices.
- Layer 3 Routing. VE with IP address assignment is supported on CCEPs for VRRP. However, routing protocols are not enabled on CCEPs.
- Static multi-port MAC.
- Port MAC security, multi-port authentication, and 802.1X, only on CCEPs.
- Static MAC address configuration. Static MAC addresses are programmed on both local and remote peers as static entries.
- DAI and DHCP snooping for clients connected through CCEPs. They must be configured independently on both cluster devices.

Non-supported Features on MCT:

- LACP on ICL.
- MSTP, VSRP, RIP, OSPF, IS-IS, and BGP.
- IPv6, VRRP-E (IPv6), and VRRPv3.
- GRE on the ICL VE interfaces.
- DAI on the CCEPs.
- Host security features (port MAC security, multi-port authentication, 802.1X, DAI, DHCP snooping) on CCEPs.
- Multi-port ARP on ICL or CCEPs.
- Web authentication on MCT VLANs.
- Hitless failover. If the failover operation is performed with a cluster configuration, the TCP session is reestablished. The MAC addresses from the cluster peer devices will be revalidated and programmed accordingly.
- Hitless upgrade. If the upgrade operation is performed with a cluster configuration, the TCP session is reestablished. The MAC addresses from the cluster peer devices will be revalidated and programmed accordingly.

*****Configure MCT_SW1 and MCT_SW2*****

1. Login to the switch and enter enable mode.
2. Enter Global Configuration mode:

```
config t
```

3. Create the MCT Session VLAN

```
vlan 3000 name session-vlan  
tagged ethe 1/1/47 to 1/1/48  
router-interface ve 3000  
exit
```

4. Create the MCT Keep alive VLAN

```
vlan 3001 name mct-keep-alive  
tagged ethe 1/1/46  
exit
```

5. Configure the MCT LAG:

```
lag "mct" static id 1  
ports ethernet 1/1/47 to 1/1/48  
primary-port 1/1/47  
deploy  
exit
```

6. Configure virtual Ethernet interface 3000 with an IP Address:

```
interface ve 3000  
ip address 10.0.0.1/30  
exit
```

7. Configure the LAG for Client_SW1:

```
lag "client_sw1" dynamic id 2  
ports ethernet 1/1/1  
primary-port 1/1/1  
deploy  
exit
```

8. Configure the vLAG for Client_SW2:

```
lag "client_sw2" dynamic id 3  
ports ethernet 1/1/2
```

```
primary-port 1/1/2
deploy
exit
```

9. Configure the MCT Cluster:

```
cluster MCT 1
rbridge-id 1
session-vlan 3000
keep-alive-vlan 3001
icl MCT ethernet 1/1/47
peer 10.0.0.2 rbridge-id 2 icl MCT
deploy
```

10. Configure the clients for the MCT Cluster:

```
client client_sw1
rbridge-id 100
client-interface ethernet 1/1/1
deploy
!
client client_sw2
rbridge-id 110
client-interface ethernet 1/1/2
deploy
exit
```

11. Complete the above steps on MCT_SW2:

- a. **Note:** The rbridge-id for each switch and the IP Address on VE 3000 must be unique.
- b. **Note:** When the MCT Session ports are tagged in other VLANs, those VLANs become member VLANs for the MCT Cluster.

12. Configure the vLAG on Client_SW1:

```
lag "client_sw1" dynamic id 1
ports ethernet 1/3/1 to 1/3/2
primary-port 1/3/1
deploy
exit
```

13. Configure the vLAG on Client_SW2:

```
lag "client_sw2" dynamic id 1
ports ethernet 1/3/1 to 1/3/2
primary-port 1/3/1
```

```
deploy
exit
```

14. Verify all LAGs are operational:

```
show lag
```

15. Verify the MCT Cluster is operational:

```
show cluster
```

16. Below is the configuration the MCT Cluster switches:

```
-----MCT_SW1:-----
```

```
hostname MCT_SW1
default-vlan-id 499
router vrrp-extended
!
lag "mct" static id 1
ports ethernet 1/1/47 to 1/1/48
primary-port 1/1/47
deploy
!
lag "client_sw1" dynamic id 2
ports ethernet 1/1/1
primary-port 1/1/1
deploy
!
lag "client_sw2" dynamic id 3
ports ethernet 1/1/2
primary-port 1/1/2
deploy
!
!
vlan 10 name Data by port
tagged e 1/1/1 to 1/1/2 e 1/1/47 to 1/1/48
router-interface ve 10
!
vlan 20 name Voice by port
tagged e 1/1/1 to 1/1/2 e 1/1/47 to 1/1/48
router-interface ve 20
!
vlan 30 name Servers by port
tagged e 1/1/1 to 1/1/2 e 1/1/47 to 1/1/48
router-interface ve 30
!
```

```
vlan 3000 name session-vlan
  tagged ethe 1/1/47 to 1/1/48
  router-interface ve 3000
!
vlan 3001 name mct-keep-alive
  tagged ethe 1/1/46
!
!
interface ve 10
  port-name Data
  ip address 10.10.10.2/24
  ip vrrp-extended vrid 1
    backup
    ip-address 10.10.10.1
    advertise backup
    short-path-forwarding
    activate
!
interface ve 20
  port-name Voice
  ip address 10.10.20.2/24
  ip vrrp-extended vrid 1
    backup
    ip-address 10.10.20.1
    advertise backup
    short-path-forwarding
    activate
!
interface ve 30
  port-name Servers
  ip address 10.10.30.2/24
  ip vrrp-extended vrid 1
    backup
    ip-address 10.10.30.1
    advertise backup
    short-path-forwarding
    activate
!
interface ve 3000
  ip address 10.0.0.1/30
!
cluster MCT 1
  rbridge-id 1
  session-vlan 3000
  keep-alive-vlan 3001
  member-vlan 10 to 30
  icl MCT ethernet 1/1/47
  peer 10.0.0.2 rbridge-id 2 icl MCT
  deploy
  client client_sw1
  rbridge-id 100
```

```
client-interface ethernet 1/1/1
deploy
client client_sw2
rbridge-id 110
client-interface ethernet 1/1/2
deploy
```

-----MCT_SW2:-----

```
hostname MCT_SW2
default-vlan-id 499
router vrrp-extended
!
lag "mct" static id 1
ports ethernet 1/1/47 to 1/1/48
primary-port 1/1/47
deploy
!
lag "client_sw1" dynamic id 2
ports ethernet 1/1/1
primary-port 1/1/1
deploy
!
lag "client_sw2" dynamic id 3
ports ethernet 1/1/2
primary-port 1/1/2
deploy
!
!
vlan 10 name Data by port
tagged e 1/1/1 to 1/1/2 e 1/1/47 to 1/1/48
router-interface ve 10
!
vlan 20 name Voice by port
tagged e 1/1/1 to 1/1/2 e 1/1/47 to 1/1/48
router-interface ve 20
!
vlan 30 name Servers by port
tagged e 1/1/1 to 1/1/2 e 1/1/47 to 1/1/48
router-interface ve 30
!
vlan 3000 name session-vlan
tagged ethe 1/1/47 to 1/1/48
router-interface ve 3000
!
vlan 3001 name mct-keep-alive
tagged ethe 1/1/46
!
!
```

```
interface ve 10
port-name Data
ip address 10.10.10.3/24
ip vrrp-extended vrid 1
  backup
  ip-address 10.10.10.1
  advertise backup
  short-path-forwarding
  activate
!
interface ve 20
port-name Voice
ip address 10.10.20.3/24
ip vrrp-extended vrid 1
  backup
  ip-address 10.10.20.1
  advertise backup
  short-path-forwarding
  activate
!
interface ve 30
port-name Servers
ip address 10.10.30.3/24
ip vrrp-extended vrid 1
  backup
  ip-address 10.10.30.1
  advertise backup
  short-path-forwarding
  activate
!
interface ve 3000
ip address 10.0.0.2/30
!
cluster MCT 1
rbridge-id 2
session-vlan 3000
keep-alive-vlan 3001
member-vlan 10 to 30
icl MCT ethernet 1/1/47
peer 10.0.0.1 rbridge-id 1 icl MCT
deploy
client client_sw1
rbridge-id 100
client-interface ethernet 1/1/1
deploy
client client_sw2
rbridge-id 110
client-interface ethernet 1/1/2
deploy
```