Configuring MAC Move Policy

This chapter describes how to configure the MAC move policy on Cisco NX-OS devices.

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MAC move policy

The MAC move policy feature is used to monitor the movement of MAC addresses across the fabric.

This feature provides the option to modify the MAC move parameters in order to enhance network stability and prevent the accumulation of Messaging and Transaction Service (MTS) in the Layer 2 Forwarder Manipulator (L2FM).

By default, the MAC move policy is disabled. For more information on configuring the MAC move policy and enabling the MTS buildup check, see Configuring MAC Move Policy, on page 2 section.

The advantages of MAC move policy are:

- Enables tracking of MAC address movement at the MAC level to avoid loops.
- Checks periodically for MTS buildup to prevent crashes in the L2FM.
- Disables VLAN learning if the MAC move count surpasses the specified threshold.

Guidelines and Limitations for MAC Move Policy

MAC move Policy has the following configuration guidelines and limitations:

- Beginning with Cisco NX-OS Release 10.3(1)F, the MAC move policy is supported on Cisco Nexus 9300-X Cloud Scale switches.
- When the MAC move policy is enabled using the **mac-move policy** command, the default parameters (6 MAC moves in 30 seconds with a hold interval of 120 seconds) are set. You can modify the default set parameters. For more information, see Configuring MAC Move Policy, on page 2.

- MAC move policy and the L2RIB detection cannot coexist with their default values. Both these mechanisms have a different approach to handle duplicate detection.
- If the MAC move policy is not required in a VXLAN environment, do not enable it. If it's required, make sure to modify either the L2RIB policy or the MAC move policy default value.
- L2RIB detection can be changed using the **l2rib dup-host-mac-detection <mac moves threshold> <detect-interval>** command.
- The following behavior is observed when both MAC move policy and L2RIB detection are configured:
  - When L2RIB detection is less than L2 policy, only L2RIB detection will be triggered. However, the L2 policy is not triggered.
  - When L2RIB detection is equal to L2 policy, either L2 policy or L2RIB detection will be triggered. However, there is no guarantee of the order in which these policies will be triggered.
  - When L2RIB detection is greater than L2 policy, only L2 policy will be triggered. However, the L2RIB detection is not triggered.

Configuring MAC Move Policy

This procedure enables/disables the MAC move policy on the switch:

SUMMARY STEPS

1. **configure terminal**
2. **[no] mac-move policy {[move-threshold**<*thresh*>]} {[**detect-intvl**<*d_intvl*>]} {[**hold-intvl** <*h_intvl*>]}
3. **[no] mts-buildup check** {[**mts-percent**<*percent*>]} {[**detect-intvl**<*d_intvl*>]}

DETAILED STEPS

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**[no] mac-move policy {[move-threshold**<*thresh*>]} {[**detect-intvl**<*d_intvl*>]} {[**hold-intvl** <*h_intvl*>]} **Example:** `switch(config)# mac-move policy move-threshold 6 detect-intvl 30 hold-intvl 120`	Enables the MAC move policy. The option **no** disables the MAC move policy. • *thresh*: Maximum allowed moves. The range is 2–4096 and the default value is value 6. • *d_intvl*: Interval to track moves. The range is 30–3600 and the default value is 30.

	Command or Action	Purpose
		h_intvl: Interval to disable learning. The range is 120–360 and the default value is 120.
Step 3	**[no] mts-buildup check** {[**mts-percent**<*percent*>]} {[**detect-intvl**<*d_intvl*>]} **Example:** `switch(config)# mts-buildup check mts-percent 40 detect-intvl 60`	Enables the mts-buildup check. The option **no** disables the mts-buildup check. • *percent*: MTS buildup percent value. The range is 10–50 and the default value is 40. • *d_intvl*: Interval to check MTS buildup. The range is 60-600 and the default value is 60.

Verifying the MAC Move Policy Configuration

To display mac-move policy configuration information, perform one of the following tasks:

Command	Purpose
show mac-move policy	Displays information about the mac-move policy.
show mts-buildup check	Displays information about the mts-buildup check.

The following example shows sample output for the **show mac-move policy** command:

```
switch(config)# show mac-move policy
MAC move policy enabled = TRUE
MAC move policy threshold = 6
MAC move policy detect interval = 30
MAC move policy hold interval =120
switch(config)#
```

The following example shows sample output for the **show mts-buildup check** command when check is enabled:

```
switch(config)# show mts-buildup check
MTS buildup check enabled =TRUE
MTS check percent =40
MTS check interval =60
switch(config)#
```

The following example shows sample output for the **show mts-buildup check** command when check is disabled:

```
switch(config)# show mts-buildup check
MTS buildup check enabled =FALSE
ppwrks5(config)# show mac-move policy
MAC move policy enabled = FALSE
switch(config)#
```