

# Cisco Application Centric Infrastructure

## Using MCP (MisCabling Protocol) for ACI

MisCabling Protocol (MCP) detects loops from external sources (i.e., misbehaving servers, external networking equipment running STP, etc.) and will err-disable the interface on which ACI receives its own packet. Enabling this feature is a best practice, and it should be enabled globally and on all interfaces, regardless of the end device.

MCP limits the blast radius that can result when Layer-2 loops form. While a layer-2 loop will do nothing to harm the ACI Fabric itself (ACI will transmit the broadcast churn @ line-rate), the loop and resulting broadcast storm will cause issues with attached hosts and other networking equipment that reside in the broadcast domain.

### How does MCP work?

When configured properly, MCP will send Layer-2 packets on every EPG with a custom MAC address. If the ACI Fabric receives an MCP packet on any interface, it will take action (actions could be just alerting with a fault, or err-disabling the interface on which the MCP packet was received).

### Notables

- The ACI Fabric does not participate in spanning tree protocol (STP) but instead acts as hub with respect to STP.
- MCP can be enabled globally and per-interface.
- By default, MCP is disabled globally but is enabled on each port. For MCP to work, it must also be enabled globally.
- This feature (and the option to send MCP packets on a per-EPG basis), was first available starting with APIC 2.0(2) code.
- Starting with 3.2, the MCP timer can be tuned to sub-second. Previous to 3.2, the quickest MCP would react was 3 seconds; with MCP Per VLAN Aggressive Timers you can achieve failover in as little as 350 milliseconds.
- Prior to APIC 3.2, MCP supported up to 256 Vlans/EPGs. Starting with APIC 3.2, MCP will support 2000 Vlans/EPGs.

# How do I enable MCP?

For MCP to be enabled, you need to have it enabled globally and on a per-interface basis.

While MCP is enabled on all interfaces by default, it is not turned “on” until you also enable it globally. The global configuration knob for MCP can be enabled by configuring the global settings here:

**Fabric > Access Policies > Global Policies > MCP Instance Policy default**