

# **Scenarios and Requirements for a Layer 2 Autonomic Control Plane**

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**Brian Carpenter  
Bing Liu**

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# Topics

- Reminder of Scenarios and Requirements
- Updates
- Next steps

# Scenarios for a Layer 2 ACP

- The regular ACP constructed at Layer 3 is complex and aimed at large networks.
- A simpler Layer 2 solution may be used for:
  1. A small enterprise
  2. An enterprise that prefers to segment its network
- Some pre-configuration of ACP nodes is acceptable.

# Requirements for a Layer 2 Technology

1. Support IPv6 packets.
2. Support L2 multicast.
3. Minimum MTU of 1500.
4. Isolation of a set of nodes (ACP VLAN).
5. Secure authorization for VLAN access
6. Dataplane VLAN and ACP VLAN on the same physical sockets.
7. Line speed encryption of the ACP VLAN.
8. Wired/wireless bridging if relevant.

# Recent Updates

- Added discussion of MACsec:
  - IEEE Standard 802.1AE-2018
  - Supports multicast (including group authentication)
  - MACsec applies across all VLANs, but the ACP VLAN can be isolated from the data plane VLAN independently of MACsec.
- Noted that WPA2 can be used for WiFi segments, with a dedicated BSS

# Discussion + next steps

- Comments? Questions?
- Are people interested in this work?

