Supported Topologies

This appendix provides information about the topologies supported for the Cisco ACI Virtual Edge.

Important *Topologies not included in this appendix have not been tested and are not supported.*

Note For all topologies, we recommend using LACP wherever possible and supported by your hardware. We recommend using MAC pinning only when using LACP is not possible.

- Direct Connection, on page 1
- Cisco Fabric Extender, on page 2
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- Dual-Side VPC with Cisco Nexus 5000 and MAC Pinning, on page 4
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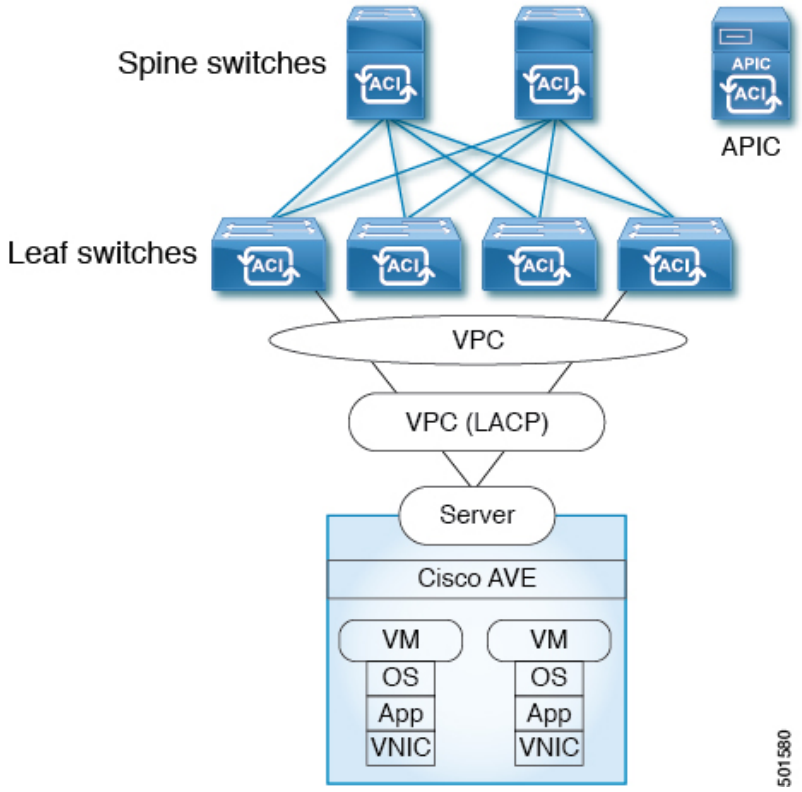
- Dual-Side VPC with Cisco Nexus 5000 and Cisco UCS Fabric Interconnects, on page 7

Direct Connection

This topology connects the ESXi hypervisor to the Cisco APIC directly.

Figure 1: Direct Connection



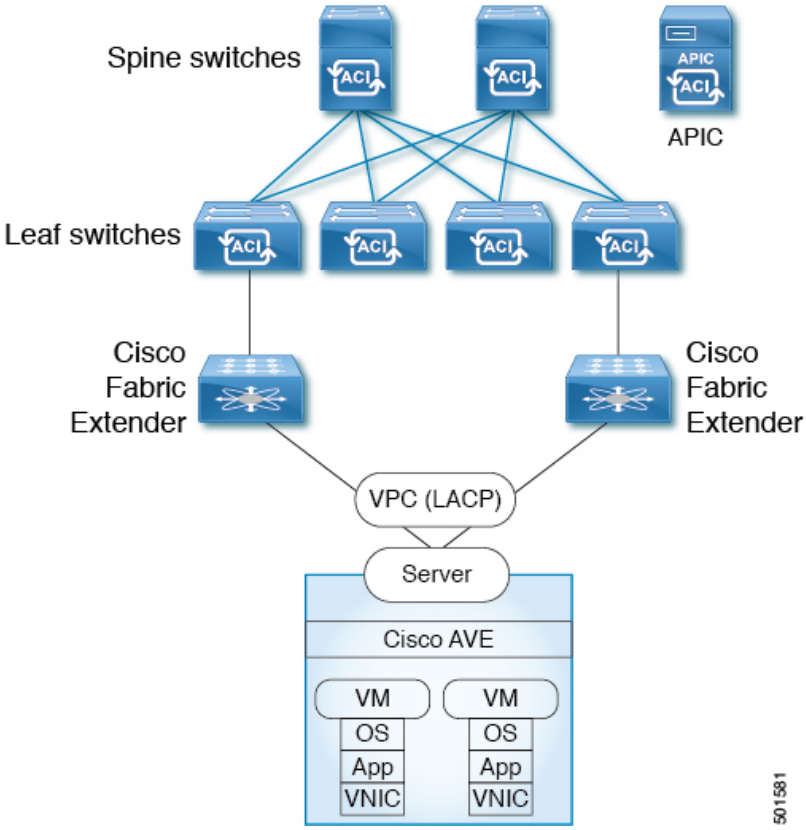
Cisco Fabric Extender

This topology connects the ESXi hypervisor to the Cisco APIC through a Fabric Extender (FEX). You can connect the ESXi to the following:

- Multiple leaf switches using a virtual port channel (VPC)
- A single leaf switch using a port channel (MAC pinning or LACP bundle)

In the following illustration, VPC is used as an example. You can use port channel instead.

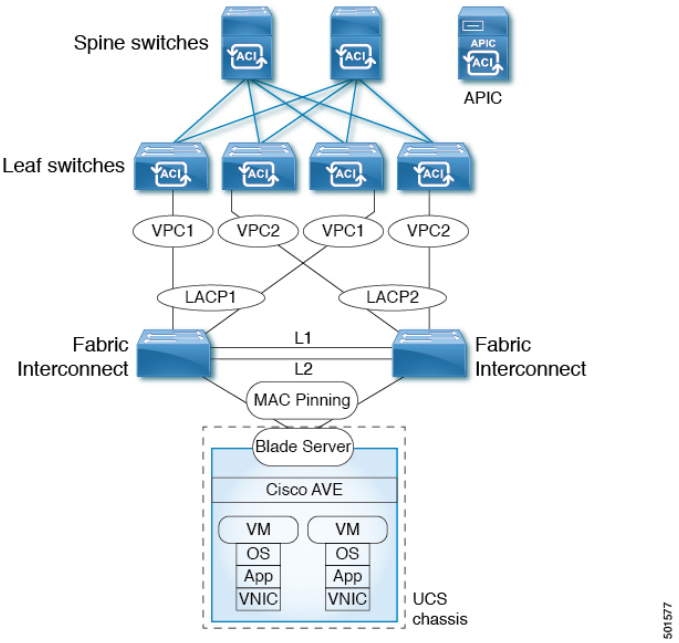
Figure 2: Cisco Fabric Extender Topology



VPC with Cisco UCS Fabric Interconnects

This topology connects the ESXi hypervisor to the Cisco APIC using Cisco UCS Fabric Interconnects, VPCs, LACP, and MAC pinning.

Figure 3: VPC with Cisco UCS Fabric Interconnects Topology

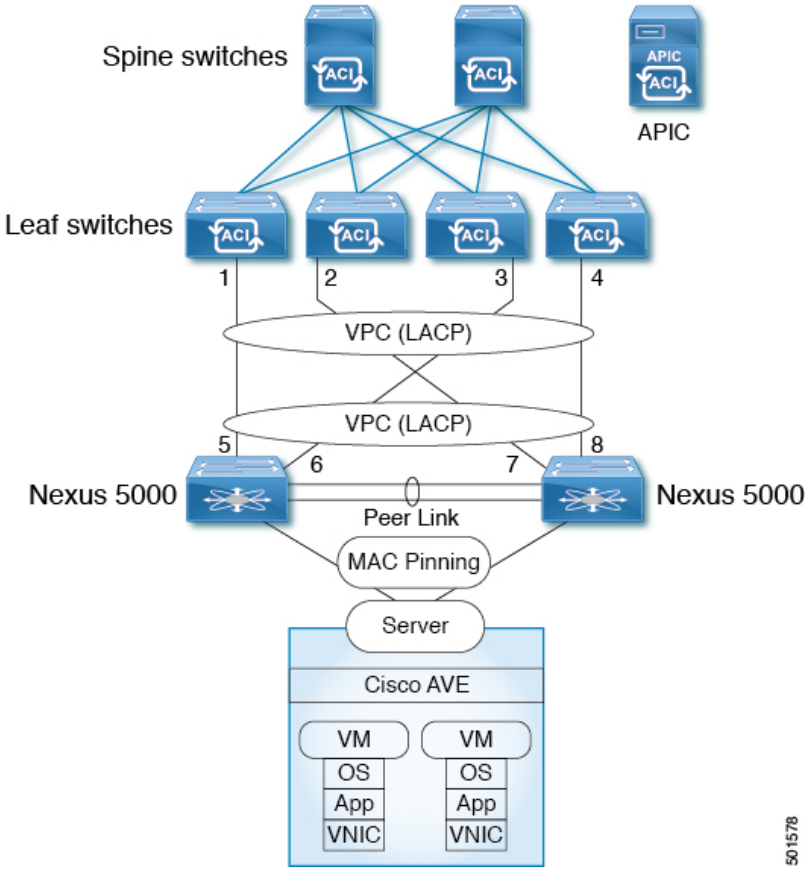


In this topology, the Cisco ACI Virtual Edge can be configured only with MAC pinning. That is because Cisco UCS Fabric Interconnects don't support LACP or vLACP on the southbound ports towards the blade server. Therefore, the illustration shows MAC pinning only on the Cisco ACI Virtual Edge side.

Dual-Side VPC with Cisco Nexus 5000 and MAC Pinning

This topology connects the ESXi hypervisor to a Cisco APIC through the Cisco Nexus 5000 switch, virtual port channels, and MAC pinning.

Figure 4: Dual-Side VPC with Cisco Nexus 5000 and MAC Pinning Topology

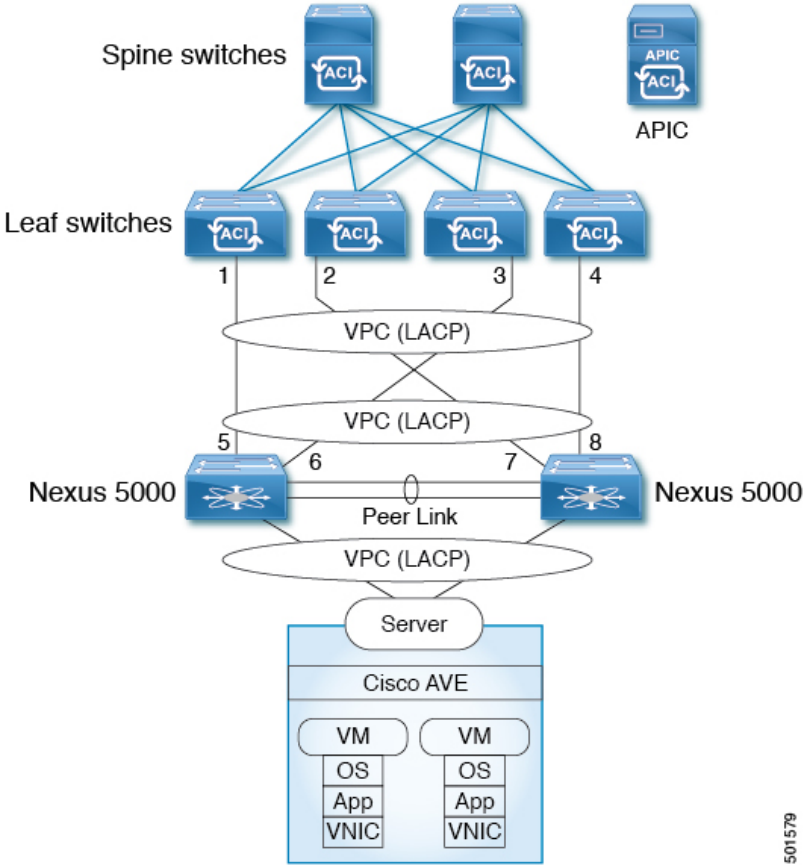


Note You also can have leaf switches and Cisco Nexus 5000 switches connected in a single-side VPC topology.

Dual-Side VPC with Cisco Nexus 5000 and VPC

This topology connects the ESXi hypervisor to a Cisco APIC through the Cisco Nexus 5000 switch and virtual port channels.

Figure 5: Dual-Side VPC with Cisco Nexus 5000 and VPC Topology

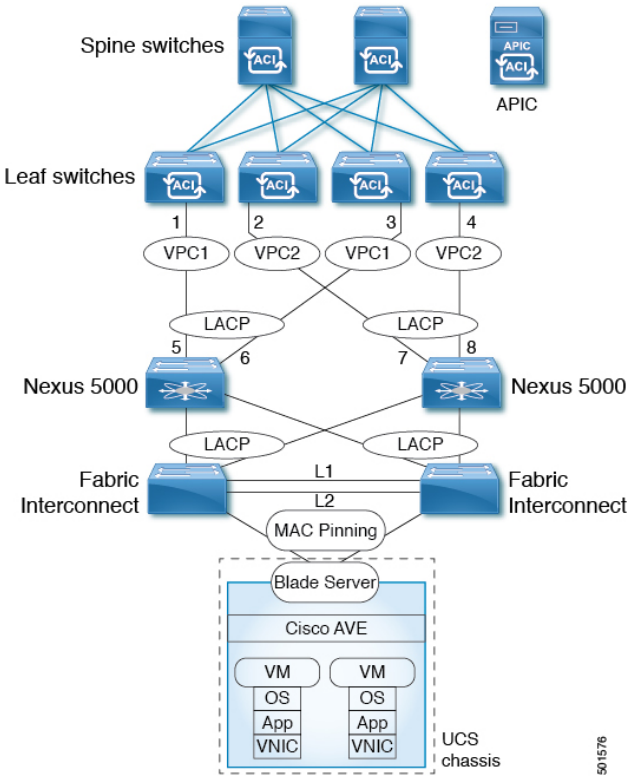


Note You also can have leaf switches and Cisco Nexus 5000 switches connected in a single-side VPC topology.

Single-Side VPC with Cisco Nexus 5000 and Cisco UCS Fabric Interconnects

This topology connects the ESXi hypervisor to the leaf switches using MAC pinning, directly or through Cisco Nexus 5000 switches and Cisco UCS Fabric Interconnects.

Figure 6: Single-Side VPC with Cisco Nexus 5000 and Cisco UCS Fabric Interconnects Topology

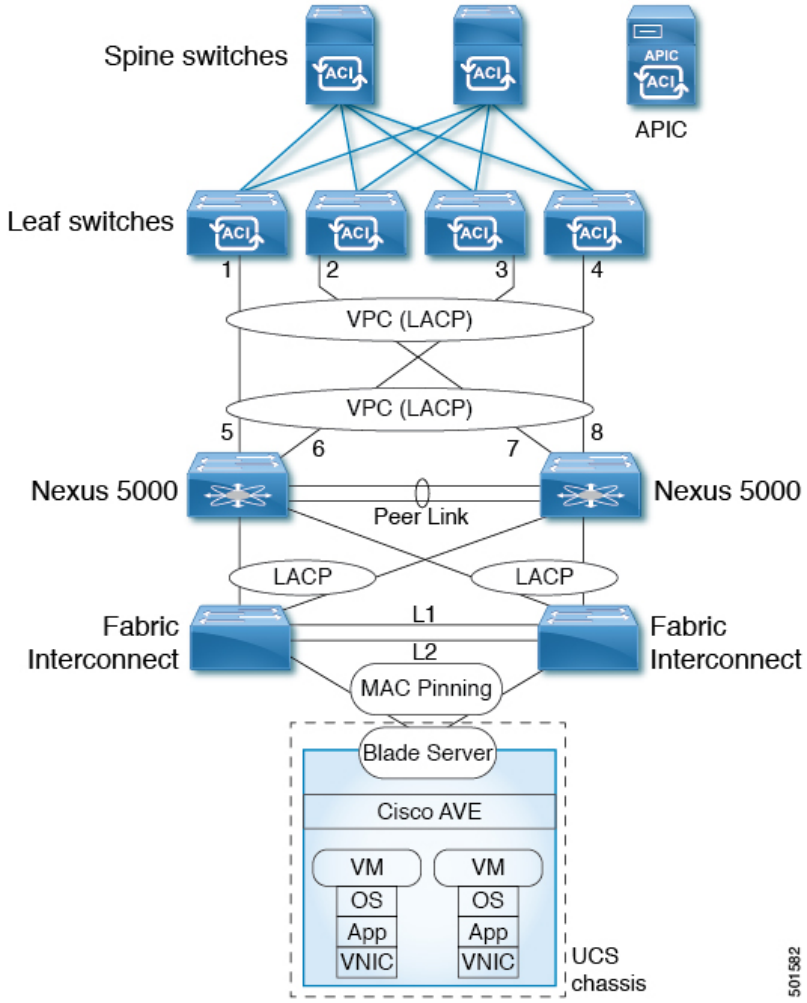


In this topology, the Cisco ACI Virtual Edge can be configured only with MAC pinning. That is because Cisco UCS Fabric Interconnects do not support LACP on the southbound ports toward the blade server. Therefore, the illustration shows MAC pinning only on the Cisco ACI Virtual Edge side.

Dual-Side VPC with Cisco Nexus 5000 and Cisco UCS Fabric Interconnects

This topology connects the ESX hypervisor to the leaf switches using MAC pinning, directly or through Cisco Nexus 5000 switches and Cisco UCS Fabric Interconnects.

Figure 7: Dual-Side VPC with Cisco Nexus 5000 and Cisco UCS Fabric Interconnects Topology



In this topology, the Cisco ACI Virtual Edge can be configured only with MAC pinning. That is because Cisco UCS Fabric Interconnects do not support LACP on the southbound ports toward the blade server. Therefore, the illustration shows MAC pinning only on the Cisco ACI Virtual Edge side.