



Cisco® Application Centric Infrastructure (Cisco® ACI) QuickStart

Why Skyline Advanced Technology Services?

Skyline Advanced Technology Services (ATS) offers Professional Services for a variety of Cisco® centric solutions. From inception to realization, our senior staff of engineers are available for any size project or duration for the following services:

- Consulting Services
- Installation Services
- Network Design
- Staff Augmentation

For an in-depth discussion regarding your technical and staffing needs, our team is with you every step of the way.

Are you deploying Cisco ACI™?

Contact your Skyline-ATS Account Manager today for more information on how we can help.

**800-375-9546
info@skyline-ats.com**

Cisco® Application Centric Infrastructure Implementation (Cisco ACI™):

Cisco® Application Centric Infrastructure (Cisco ACI™) helps partners/customers manage and excel in complex environments by increasing operational efficiencies, delivering network automation, and improving security for any combination of on-premise data centers, private, and public clouds. With ACI, partners/customers can increase business agility through network optimization, business protection, and cloud enablement. The benefits of ACI include:

- Automation and agility
- Open and programmable architecture
- Security and analytics
- Workload mobility at scale

Skyline Advanced Technology Services (ATS) has teams of expert ACI Engineers that can help you deploy your ACI in any size network.

Description

The ACI QuickStart Implementation is a five (5) day, on-site implementation designed to assist partners/customers with rapid deployment and integration of ACI. The engagement combines training in conjunction with initial design, review and preparation of the partner's/customer's existing infrastructure, installation, and deployment of an operational ACI solution in network centric mode.

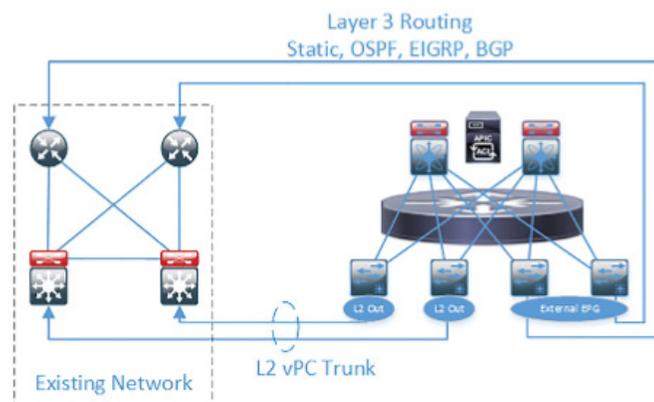
The intended audience is IT personnel who need deployment services and a well-defined knowledge transfer.



Overall Objectives

- Collaborate with key personnel to determine functionality goals.
- High-level discovery of existing network, servers, and applications.
- Interactive training, design, and implementation sessions.
- Implementation of ACI in network centric mode as follows ¹:
 - Fabric build with APIC cluster, Spine and Leaf Switches.
 - Build out one (1) user tenant within the ACI fabric.
 - External Layer 2 and Layer 3 connectivity to existing network.
 - Implement/Migrate and test non-production nodes.
 - Migration strategy and planning.

¹ Restrictions apply. See the Implementation section for specifics.



Prerequisites

The knowledge and skills that a learner must have prior to the engagement is as follows:

- Must have a familiarity with the server environment(s) which will be built on the UCS.

Who Should Purchase this Quickstart?

Companies that are new to Cisco ACI and require deployment services and a well-defined knowledge transfer.

The primary audience for this workshop is as follows:

- Network Engineers
- Server Administrators
- Systems/Storage Engineers

The secondary audience for this workshop is as follows:

- Network Administrators
- Storage/SAN Administrators

Training Objectives

- Describe the:
 - ACI fabric.
 - ACI SDN architecture, components, and options.
 - Cisco Nexus® 9000 Series Switch and ACI fabric.
 - Cisco Nexus 9000 Series Switch hardware.
- Discuss ACI connectivity to outside networks.
- Implement ACI management.
- Learn to:
 - Configure the ACI controller (APIC).
 - Integrate a VM hypervisor into the APIC.
- Understand the programmability of the ACI network.



Implementation

The ACI QuickStart involves establishing the requirements and preparing the fabric for partner/customer integration and migration as follows:

1. Discovery of the existing network, planning, migration strategy and design.
2. Connectivity setup service will ensure there is connectivity between the new fabric and the partner's/customer's existing network. Hardware support for the ACI QuickStart shall not exceed:
 - a. Two (2) x Nexus 9000 spine switches.
 - b. Four (4) x Nexus 9300 leaf switches.
 - c. One (1) x APIC cluster of up to three (3) APICs.
3. L2/L3 Connectivity
 - a. L2/L3 connectivity is restricted to a pair of devices in the existing network for L2, and a pair of devices for L3 connectivity.
 - b. A single instance shall be created within the fabric for each L2 and L3 connection.
 - c. The connections may be configured as a vPC/PortChannel for redundancy.
 - d. L3 connectivity will be restricted to IPv4 only as follows:
 - i. Routing protocols are limited to OSPF, BGP and EIGRP.
 - ii. Bridge Domains/VLANs/Subnets will be limited to 100 or less.
 - iii. No more than two (2) border leaf switches with two (2) physical/Port channel/Virtual Port channel interfaces can be configured for these L3 outs.
 - iv. Does not include transit routing.
4. Migration/Integration
 - a. Includes up to twenty (20) non-production physical nodes.
 - b. The nodes should be representative of production connectivity.
 - c. May be connected via vPC/PortChannel to the fabric. The number of members of a port channel and virtual port channels for nodes/EPGs is restricted to the scalability guidelines for ACI for the release deployed.

- d. Migration of production nodes is not recommended as a part of this QuickStart service.
- e. Hypervisor Integration
 - vi. VMware® only – not exceeding one (1) vCenter with one (1) Data Center.
 - vii. Restricted to the VMware virtual distributed switch (vDS) and does not include any other kind of supported distributed switches (e.g., Cisco Application Virtual Switch (AVS)).

Disclaimer

This service is intended to assist partners/customers with a basic implementation and understanding of Cisco ACI Network Centric mode. The following services are *Out of Scope* and are NOT INCLUDED in this service:

- ACI as a First-Hop Routing Protocol.
- ACI Stretched Fabric Implementation.
- ACI Transit Routing.
- Configuration of L4-L7 Services.
- Deploying the ACI solution in ACI Application Centric mode.
- Implementation of any equipment other than the equipment detailed above.
- Migration of customer network/infrastructure.

NOTE: Skyline can provide these services after scoping the specific requirements. *Additional costs may apply.*

Partner/Customer Responsibilities:

This information includes, but is not limited to:

- Configuration information
- Existing and proposed network infrastructure.
- Functional and/or technical documentation relating to such requirements, including connectivity requirements (e.g., protocol and port identification).
- Information relating to partner/customer's network, design, business and other applicable requirements.
- Topology maps



Partner/Customer will:

- Coordinate with any external third parties (e.g., Carrier/Telco activities, deliverables and schedules).
- Ensure partner/customer network engineers and application engineers are available throughout the entire scheduled mentored implementation period.
- Ensure that Skyline-ATS' request for information and/or documentation needed for the project is provided promptly.
- Identify primary and back-up partner/customer authorized site contacts that shall provide necessary information, obtain access clearances and coordinate with other organizations/third party.
- Participate in a Bill of Materials (BOM) and High Level Design (HLD) review before Skyline-ATS arrives on-site.
- Participate in scheduled project review meetings or conference calls, as required.
- Parties with respect to Services at that site.
- Provide all hardware, software and licensing to support the project.
- Rack, stack and power equipment prior to Skyline-ATS' arrival on-site. (Note: Please do not interconnect the Nexus 9k switches.)

Statement of Work

After a Skyline-ATS' ACI Engineer thoroughly qualifies the partner's/customer's requirements, a detailed Statement of Work (SOW) will be submitted for partner/customer approval.