Cisco Data Center: Open Ecosystem
Powered by Open Platforms

The ecosystem solutions are built using the open API of Cisco Application Centric Infrastructure (ACI), Cisco Network Assurance Engine (NAE), and Cisco NX-OS platforms. These solutions address a broad and diverse set of use cases that customers typically use in their data center operations and management. By deploying these readily-available solutions, customers can leverage and extend their existing data center infrastructure investments.

**Key Highlights of the Integrations**
- Focus on solutions and outcomes instead of point products
- Cover a broad set of Data Center automation, operations and management use cases
- Built on Open APIs and extensible, in many cases, by customers
Application Centric Infrastructure

AlgoSec integrates with Cisco ACI to extend ACI’s policy-based automation to IT and security devices across their data center, on its edges and in the cloud. AlgoSec Security Management Solution for ACI enables customers to ensure continuous compliance and automates the provisioning of security policies across ACI fabric and multi-vendor security devices connected to the ACI fabric, helping customers build secure data centers.

Application Centric Infrastructure

Since 2015, Vnomic has been integrated with SAP and Cisco to automate policy-driven SAP delivery, governance and auditability on Cisco ACI infrastructures. The benefits of the integration are: 1) lowering TCO for deploying SAP HANA, while 2) simplifying operation via integrated infrastructure and application automation, resulting in 3) enhanced security and governance. SAP and Cisco provide policy-driven TDI enabling enterprises that can define application requirements to deploy a fully configured TDI solution in a few hours instead of weeks or months. Furthermore, as their requirements change due to new users, SLAs, scale or regulation, the intelligent TDI system will configure these changes instantly. Even the process of achieving TDI certification can be accomplished in hours.

Application Centric Infrastructure

The NetBrain solution for Cisco ACI offers a simple approach, aiding enterprises to transition to an application-centric data center enabled by Cisco ACI. As a scalable and versatile automation platform, NetBrain integrates with Cisco ACI to provide deep visibility and automation for “Day 2” operational workflows such as monitoring, troubleshooting and visualization of the heterogeneous network. The integration also provides runbook automation, enabling teams to codify solutions to known problems and place these code routines in a monitor executable.

Application Centric Infrastructure

Puppet is an open-source software configuration management tool that allows you to build, provision and orchestrate infrastructure across on-prem and public cloud environments. Puppet’s integration with Acme’s Acme bundles a set of puppet Types, Providers and Classes to manage Day-1 to Day-N operations of your ACI infrastructure. This integration uses a Puppet Agent running as a proxy and leverages the puppet device.

Application Centric Infrastructure

Turbonomic integrates with ACI to re-define policy-driven SAP delivery and agility via ACI App Center. Driven by a declarative API approach, the app provides a single port of entry to automate application services in ACI and BIG-IP deployments – greenfield or brownfield. The stateful F5 ACI ServiceCenter App gives the administrator the flexibility to execute workflows independently: 1) Enhanced ACI-to-BIG-IP visibility, 2) Network stitching between BIG-IP and the ACI fabric, and 3) Application services for ACI workloads. Stay tuned, F5 and Cisco have many more features coming to the F5 ACI ServiceCenter App!

Application Centric Infrastructure

Splunk Enterprise enables users to collect, index, analyze operational data from various sources in the IT environment, and generate valuable insights and alerts. Cisco ACI integration offers a flexible approach to monitoring Cisco ACI, and the solution helps customers reduce costs, accelerate MTTR, meet SLAs, and improve efficiency through real-time and historical insights into ACI health and fabric analytics, and a snapshot of the state of the data center configuration.

Application Centric Infrastructure

Application of ACI for monitoring, infrastructure visibility and business performance monitoring. The Cisco Application Policy Infrastructure Controller (APIC) automates the creation of flexible models of insertion of services (such as an ASA or FP NGFW firewall) between applications, also called End Point Groups (EPGs). You use these APIs to create, delete, and modify a configuration using managed objects, in addition to a lot more.

Application Centric Infrastructure

Turbonomic is best described as a solution that continuously analyzes workload consumption, costs and compliance constraints, resulting in dynamic allocation of resources in real-time. The first use case addressed workload optimization for on-prem deployments. We are now a second use case addressing multi-site deployment. The roadmap ahead, which includes workload fluidity through ACI Anywhere architectures, will be exciting for customers.

Network Assurance Engine

In addition to what Turbonomic can do with ACI, the integration with NAE provides 1) Automated intent assurance – newly deployed workloads are placed only where the network can support its intended policies, and 2) Automated self-healing – existing workloads are automatically moved to a different leaf, switch, or host if current network components cannot assure the implementation of policies.

Application Centric Infrastructure

Ansible is an open-source IT automation engine that improves the scalability, consistency, and reliability of your IT environment. With Ansible, IT administrators can automate the deployment lifecycle of your multi-cloud network or any architecture of ACI you would like to configure. With playbooks and roles, you can create network automation workflows managed by the automation tool. Visit the Cisco ACI Guide-Ansible Documentation for more information!

NX-OS Similar to ACI, Cisco NX-OS is also supported by Ansible modules in order to automate your Nexus Devices. With Ansible, you can manage the lifecycle of your NX-OS based network. This integration allows administrators to automate Day-1 tasks such as authentication, logging, and enabling the NX-API in order to use NX-API to connect to a switch. It also handles Day-2 and Day-3 tasks, such as configuration of port channels, VLANs, and more.

Application Centric Infrastructure

The complementary nature of Avi Networks and Cisco ACI solutions comes from a common architectural approach using a single point of management and automation for data center network elements and a focus on a policy-based framework. Avi Networks has provided a new integration model in 2018 that solves customer problems and use cases using the power of API’s.

Application Centric Infrastructure

With organizations transitioning to next-generation data centers and clouds, automation of security and workload placement becomes critical. Application Centric Infrastructure with Avi Networks allows customers to define workload fluidity, address workload optimization for on-prem deployments. We are now a second use case addressing multi-site deployment. The roadmap ahead, which includes workload fluidity through ACI Anywhere architectures, will be exciting for customers.

Application Centric Infrastructure

AppDynamics is the industry’s leading Application Performance Management solution that allows you to monitor your apps and gives you the power to ensure flawless customer experiences through end user monitoring, infrastructure visibility and business performance monitoring. ACI’s integration with AppDynamics enables you to correlate application performance with network data, allowing you to troubleshoot and resolve network-related application issues faster.