



# Cisco ACI and ServiceNow Innovations in IT Operations Management

**“The Cisco ACI app for ServiceNow enabled us seamlessly integrate the two products to address our service management challenges. We were able to quickly deploy, operationalize, and easily upgrade this out-of-box solution, certified by Cisco and ServiceNow.”**

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**Benny Van De Voorde**

Principal Engineer  
Cisco IT

## Cisco IT

**Size:**

Supports 70,000 employees

**Industry:**

IT

**Location:**

Worldwide



## Solutions

IT operations management innovation with software-defined automated network operations built on Cisco® Application Centric Infrastructure (Cisco ACI™) and ServiceNow



## Results

- Operationalized Cisco ACI and ServiceNow integrated solution in minutes
- Increased IT performance with improved mean time to resolution
- Improved operations management and incident resolution at lower total cost of ownership

## Challenge

Make sure of service levels for critical business services by integrating Cisco ACI data centers into the ServiceNow platform.

The Cisco IT deployment of Cisco ACI enables its global data center network to deliver the enhanced business value it must have: compelling total cost of ownership, near 100 percent availability, and agility that includes letting business applications developers directly provision the infrastructure resources they need in a self-service fashion.

The Cisco IT organization operates more than 30 business application and engineering development data centers distributed throughout the world. The infrastructure for each data center is big. For example, the Allen, Texas data center has 856 network devices that support 2300 traditional and private cloud applications, run 8000 virtual machines, and include 1700 Cisco Unified Computing System™ (Cisco UCS®) blades and 710 bare-metal servers with 14.5 PB of NAS storage and 12 PB of SAN storage.

Cisco IT saw an opportunity to use its ServiceNow enterprisewide service management solution with its Cisco ACI data centers to improve service mapping, tightly correlate infrastructure changes with business services, and adopt a unified approach to infrastructure change management and incident resolution.

## The solution

Cisco's Data Center Networking group developed the Cisco ACI app, which integrates Cisco ACI with ServiceNow, in the ServiceNow app store. The rich Cisco ACI information about physical and logical network entities, endpoints, and applications is discovered through RESTful interfaces supported by Cisco ACI to populate the ServiceNow Configuration Management Database (CMDB).

Cisco IT used the solution to import devices discovered by Cisco ACI into ServiceNow. The app populates configuration items and identifies relationships between devices. Discovered inventory in the Cisco IT environment consisted of physical and application topologies:

- Physical topology includes fabric switches, line cards, power supplies, fans, and system images.
- Application topologies include tenants, application profiles, endpoint groups, security policies (contracts), VRFs, bridge domains, and subnets.

The app also imports Cisco ACI configuration archives and archive diffs that help the IT organizations accelerate root-cause analysis and troubleshooting.

Cisco IT also used the solution to understand how its IT infrastructure relates to business services. The app deployed in the production environment runs multifabric discovery processes through the Management, Instrumentation, and Discovery (MID) server. The MID server has access to the Cisco Application Policy Infrastructure Controller (APIC) and Cisco Nexus® 9000 Series Switches. Scheduled jobs automatically update the ServiceNow CMDB. The app enables change management.

In the future, Cisco IT will be able to use advanced capabilities of the app to automate operations. Current features of the app support component configuration and the ability to create custom workflows using ServiceNow activity packs. Cisco IT can use these functions to configure different components on the APIC, which in turn will keep track of these components in the ServiceNow CMDB and automate their operations all the way from IT service requests to infrastructure management.

## Outcome

Cisco IT successfully used the solution to enrich the ServiceNow CMDB with Cisco ACI physical inventory as well as configuration tracking, configuration drift analysis, and configuration rollback and rollforward. As a result, the IT organization was able to eliminate irrelevant data points and create an accurate service-aware view that is easily kept up-to-date with full automation and compliance. It also enabled IT staff to quickly resolve incidents and drastically reduce Mean Time to Recovery (MTTR), thereby meeting service-level agreements.

## For more information

To learn more about the Cisco solutions featured in this case study, visit [www.cisco.com/c/en/us/solutions/data-center/data-center-partners/ecosystem-partner-collateral.html](https://www.cisco.com/c/en/us/solutions/data-center/data-center-partners/ecosystem-partner-collateral.html).

## Products and services

### Data center

- Cisco ACI
- Cisco APIC
- Cisco Nexus 9000 Series Switches
- ServiceNow
- Cisco ACI application in the ServiceNow store

### Services

- Cisco Data Center Advanced Service for Cisco ACI

The joint Cisco and ServiceNow solution helped Cisco IT:

- Accelerate and derisk the integration project
- Deploy applications faster with greater reliability and security
- Meet new user needs and improve their experience