Enterprises are increasingly embracing a multi-cloud strategy to deliver applications with the intent to accelerate innovation and reduce costs. However, this strategy brings in its wake inherent challenges in application agility and security. Enterprises demand business services to be up and running rapidly to serve their end users. End users often demand that IT departments quickly and flexibly offer services that can help them get their jobs done. This goal leaves many IT teams struggling to maintain the business services needed to help ensure that end users remain productive. Some of the challenges they face in helping ensure the uptime of critical business services include:

- A manual service mapping process that can take weeks or months, depending on service complexity.
- Lack of correlation between infrastructure changes and the business services they support.
- Disconnected infrastructure tools and portals for change management and troubleshooting.
- Inefficient root-cause analysis for service outages as a result of inaccurate service maps.

Cisco® Application Centric Infrastructure (Cisco ACI™) integration with ServiceNow automates the discovery, application to business service mapping, firmware management, and provisioning of the Cisco ACI fabric from the ServiceNow instance.
Solution benefits

The integrated solution delivers visibility and automation from the application tier all the way down to the physical infrastructure, improving the speed and efficiency of IT provisioning, management, and troubleshooting.

- Faster troubleshooting and root-cause analysis - The solution provides real-time visibility across scale-out cloud, virtual, and physical infrastructure. If problems or outages occur, IT teams can quickly identify the root cause and determine the best way to remediate the issue, leading to dramatically reduced Mean Time To Recovery (MTTR).

- Improved operational efficiency - The solution helps monitor and maintain the correlation between applications and infrastructure components as well as their related policies and SLAs. It also allows Cisco ACI components and policies to be configured and provisioned from within the ServiceNow instance. As a result, IT operations teams become faster and more efficient with service deployments, infrastructure changes, and problem resolution.

How it works

Cisco Application Centric Infrastructure (Cisco ACI) provides an application-level policy model that abstracts the infrastructure details all the way up to business service requirements, so that the underlying infrastructure can be automatically configured based on service requirements. ServiceNow offers applications for IT Service Management (ITSM) and IT Operations Management (ITOM).

Cisco ACI and ServiceNow have worked together to create a fully automated policy-based solution (Figure 1) that provides an advanced service-aware enterprise operations management platform. Using this solution, IT organizations can achieve accurate service mapping and extremely fast service provisioning with automated coordination between the infrastructure and the business service that it supports. Benefits include:

- Improved service quality.
- Simplified change management.
- Increased IT efficiency.

How it works
• Reduced TCO – With Cisco ACI and ServiceNow integrated solution, IT organizations can significantly reduce the time required to map new services and detect changes for existing ones. The solution automatically enriches the ServiceNow Configuration Management Database (CMDB) with Cisco ACI physical inventory and configuration details. The solution enables fast and accurate service mapping and helps reclaim or retire applications, servers, storage, and networking resources when they are no longer needed, leading to reduced TCO of their data center management.

Cisco ACI integration with ServiceNow is delivered as an Application published on the ServiceNow store. The Application unlocks additional capabilities that allow ServiceNow IT admin to build automated workflows to automate commonly occurring configurations and tasks in their data center.

Together, Cisco ACI and ServiceNow provide IT organizations with an outstanding solution for achieving a scalable, service-aware IT operations management environment.

Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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</table>
| Population and enrichment of the ServiceNow CMDB | • The Cisco ACI Application for ServiceNow automatically discovers the Cisco ACI physical and logical inventory.  
   • It creates a Cisco ACI table within the ServiceNow CMDB and populates the table with the inventory.  
   • Within the table, each Cisco ACI component can be selected to view additional details. |
| Infrastructure visibility and mapping        | • The application provides a summary of the application and fabric topology of Cisco ACI.  
   • It creates service maps that show the relationships between applications, configuration items, and infrastructure components.  
   • When problems or outages occur, IT teams can quickly identify the root cause and determine the best way to remediate the issue, leading to dramatically reduced MTTR. |
| Component configuration                      | • Cisco ACI components and policies can be defined, deployed, and managed from the ServiceNow console.  
   • New components can be easily registered to the ServiceNow CMDB and automatically provisioned within Cisco ACI.  
   • Existing configurations and components can be easily replicated or modified. |
Solution overview - Data sheet
Cisco public

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident management</td>
<td>• The application can automatically create an incident report when Cisco ACI components fail or when their health score drops.</td>
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<td></td>
<td>• Users can define three levels of faults—critical, major, and minor—as well as health score thresholds.</td>
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<td>• Users can also view the categories of faults and health scores in the ServiceNow console, and see details for each incident.</td>
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<tr>
<td>Policy archiving and drift analysis</td>
<td>• The application extracts configuration and policy details from Cisco ACI and exports them to ServiceNow, supporting configuration drift analysis, rollback, and roll forward.</td>
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<td></td>
<td>• This improves the management and tracking of infrastructure changes, and speeds up troubleshooting and remediation efforts if something goes wrong.</td>
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<tr>
<td>Workflow automation (component config)</td>
<td>• Multistep configuration workflows can be automated via custom activity packs.</td>
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<td>• Over 150 standard operations are currently supported by more than 40 activity packs.</td>
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</table>

Plugin dependencies
The Cisco ACI App for ServiceNow requires the plugins below. If you don’t have the plugins, you can obtain them by purchasing one of the products listed next to each plugin. Please contact ServiceNow Sales for more information.

<table>
<thead>
<tr>
<th>Plugin</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration Management Database (CMDB)</td>
<td>Configuration Management Database (CMDB)</td>
</tr>
<tr>
<td>Incident</td>
<td>• IT Service Automation Suite.</td>
</tr>
<tr>
<td>Orchestration</td>
<td>• Service Management Suite.</td>
</tr>
</tbody>
</table>

System plugin dependencies
The Cisco ACI App for ServiceNow is dependent on the following system plugins, which should be installed separately.

<table>
<thead>
<tr>
<th>Plugin ID</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>com.snc.core.automation</td>
<td>Core Automation</td>
</tr>
<tr>
<td>com.glide.system_import_set</td>
<td>System Import Sets</td>
</tr>
</tbody>
</table>
Summary

It can be difficult to maintain operational efficiency and avoid costly outages without a unified view of business services and underlying infrastructure resources. The Cisco ACI App for ServiceNow automates infrastructure discovery and service mapping, improving IT visibility, management, and troubleshooting.

If you are interested in a joint Cisco ACI and ServiceNow solution, please contact:

- Deaddin Edris at ServiceNow
- Adam Ozkan at Cisco

For additional solution and partner details, please visit:

- ServiceNow
- Cisco ACI
- Cisco data center ecosystem partners

Platform licenses

Free applications require platform entitlement, either bundled in applications or through separate platform licenses. Contact your ServiceNow account manager to determine subscription requirements.

Installation and configuration

The Cisco ACI Application for ServiceNow and a detailed installation and configuration guide are available for download at the ServiceNow Store:

- Cisco ACI Application for ServiceNow
- Cisco ACI Application for ServiceNow Installation and Configuration Guide