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Introduction to Cisco DNA Center

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cisco Live!

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Questions?

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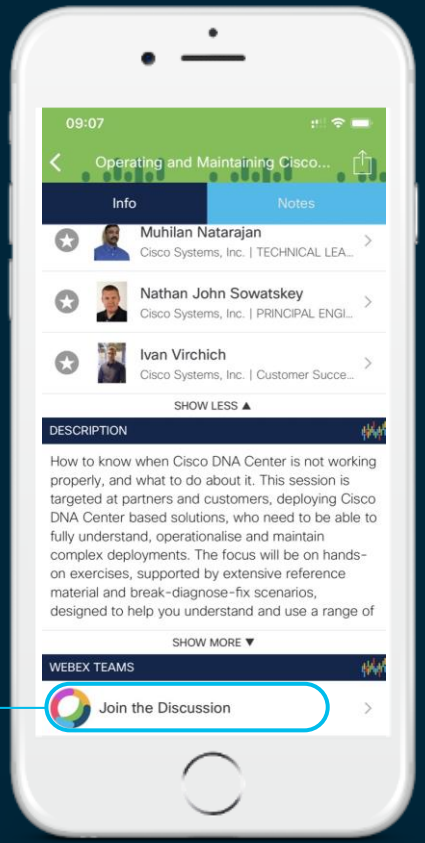

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Agenda

- What is Cisco DNA Center?
- What is a REST API?
- Anatomy of a REST Request
- REST API Example With DNA Center
- REST API Tools
- Postman API Demo

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What is Cisco DNA Center?

Cisco DNA Center (DNA-C)

- “Cisco DNA Center is the network management and command center for Cisco DNA, your intent-based network for the enterprise.”

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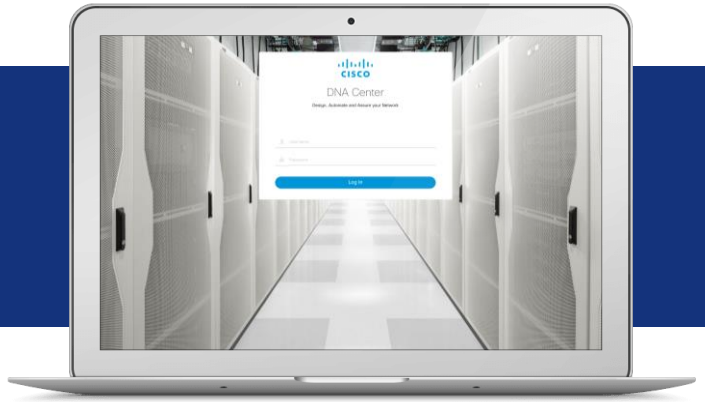
Cisco DNA Center

Logical workflow to design, provision, set policy
Respond to changes faster

Monitor end-to-end network performance
Predict and act on problems before they happen

Pinpoint problems faster
Reduce downtime with an end-to-end view instead of hop by hop

Manage hardware and software lifecycles
Keep up to date, meet compliance and plan for refresh



Cisco DNA Center: Design, provision, automate policy and assure services from one place

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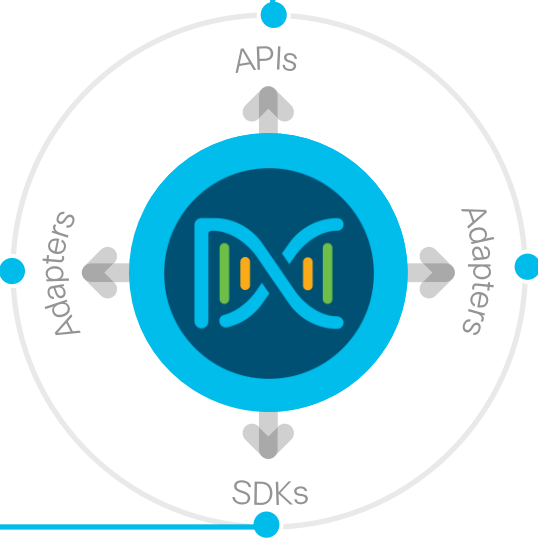
What is Cisco DNA Center Platform?

Platform Capabilities – APIs, Adapters & SDKs

IT and Network System Process

- ServiceNow | ITSM
- Infoblox / BLUECAT | IPAM
- Tableau | Reporting



Intent APIs

- Assurance
- Path Trace
- Command Runner
- Template Programmer
- NFV Provisioning
- Wireless Provisioning
- Network Inventory / Discovery /Tagging
- SDA
- Topology
- Plug-n-Play
- Software Image Management (SWIM)

X-Domain Integration

Networking — Cisco Meraki

3rd Party SDKs

Map 3rd Party Network Devices to Data Model

Level 1 Operations support:
Discovery, Inventory, Topology, Availability, Command Runner

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Intent APIs

Network APIs

- Network Level - Features based API
- Consistent model for feature across all devices types
- All UI capabilities of Cisco DNA Center available via the API
- Example: SWIM workflow
  - Create Sites and Network Profiles
  - Create sub-pool for sites
  - Assign site to network profiles
  - Assign Claim device to site
  - Trigger Provision request for ENCS device

Business APIs

- Intent Based API for network operations
- Network capabilities abstraction
- API's aligned with business constructs
- Custom Business API from an aggregation of network APIs

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Example of Business Intent API: SSID Creation

- Create Dynamic Interface
- Create SSID
- Create Wireless Network Profile
- Associate device physical location
- Associate managed AP locations
- Provision WLC

- **Create and Provision SSID**

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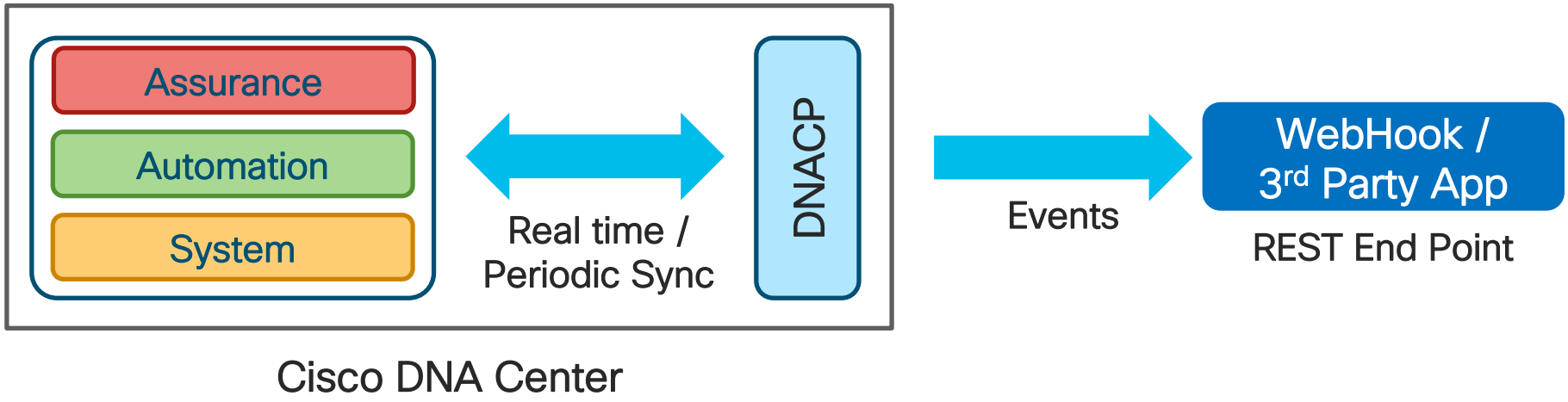
Cisco DNA Center Platform

Events & Notifications



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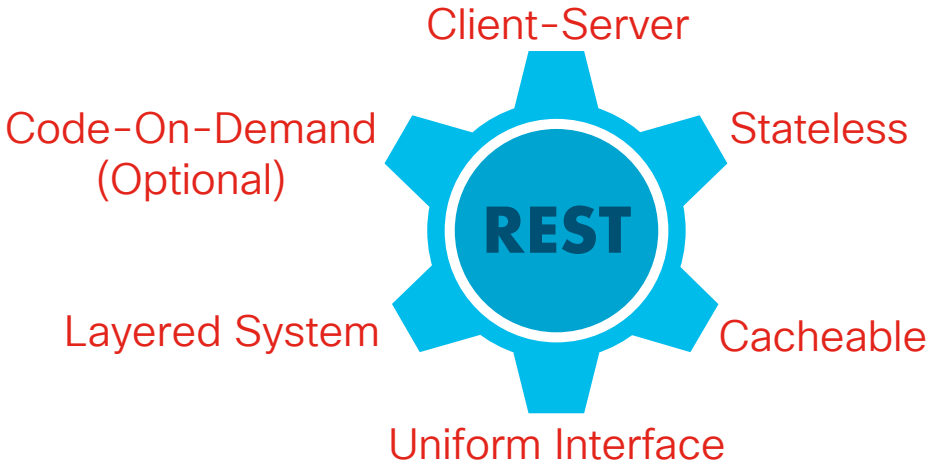
What is a REST API?

What is REST?

- REpresentational State Transfer (REST) is an **API architectural style**
- 6 Principles of REST:



- Can be applied for any protocol, but HTTP is the most common

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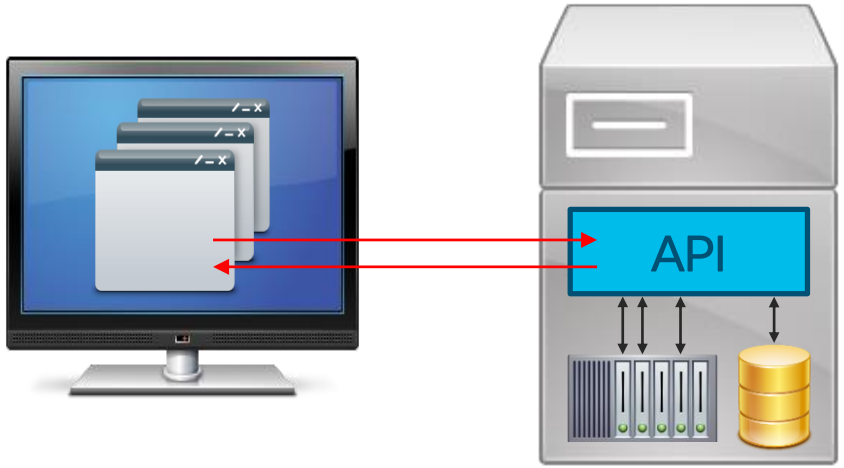
What is an API?

- An interface that exposes selected data, services, and functionality of an application
- Set of requirements that govern how one application can talk to another
- Built to be consumed by another application that uses them programmatically



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What can you do with APIs?

- Automate tasks
  - Write a script for your manual tasks
- Build applications
  - Dashboards
  - Client applications
    - Mobile apps
    - Web applications
- Extend product functionality

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Why are APIs now popular?

Simpler API & Language Maturity

- RESTful APIs
- Expressive Modern Languages

Reliable

- APIs are designed into products and not an afterthought
- Tested as a component of the product

Online Communities

- Social Code Sharing (GitHub, Code Example)
- Public Package Repositories

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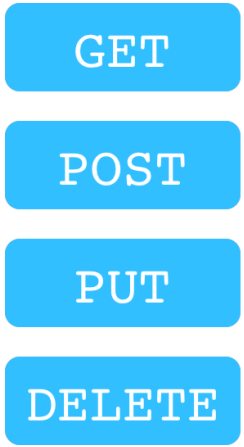
What is a REST Web Services API?

- Adheres to the principles of the REST architectural style
- Communicate over HTTP protocol
- An interface for applications to send and receive data between each other
- Commonly known as REST API



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Cisco DNA Center Walk Through and Hands on API

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