

#ANSIBLEFEST2019

Do I choose Ansible, DNA Center or both?

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Technical Solutions Architect



ANSIBLE

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Experience



Contact



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Share your automation story

#ANSIBLEFEST2019

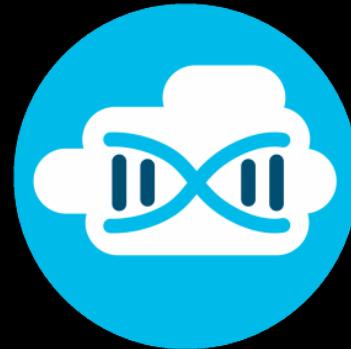
1. How did you get started with Ansible?
2. How long have you been using it?
3. What's your favorite thing to do when you Ansible?



ANSIBLE

Agenda

- The Challenge
- Why DNA Center?
- Why Ansible?
- Ansible + DNA Center
- Demo





The Challenge

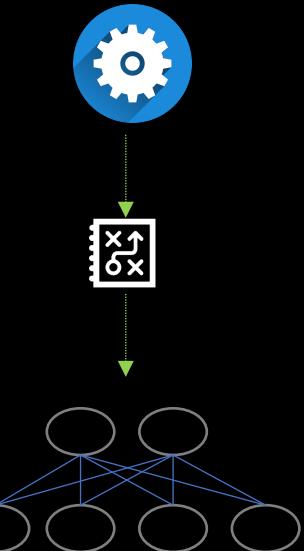
#SILICONVALLEYINSTL



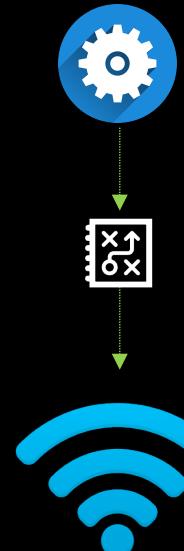
Controllers, Controllers Everywhere...

Technical Domains

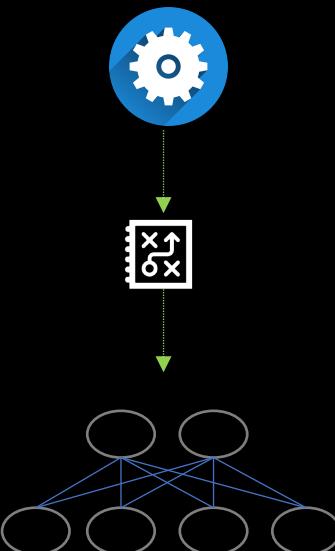
Campus



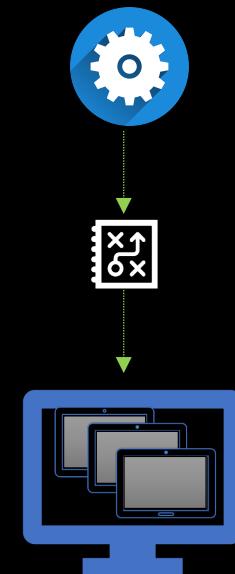
Wireless



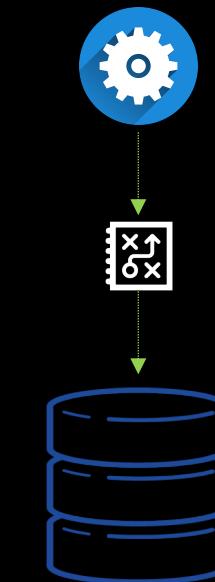
Data Center



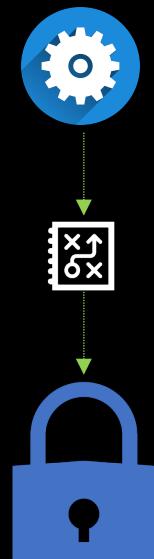
Virtualization

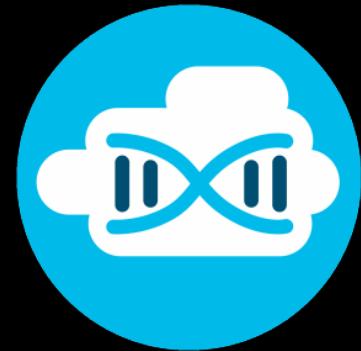


Storage



Security





Key Points

- Many Controllers
- Narrow Focus
- Binary Mindset
- Lost at Sea



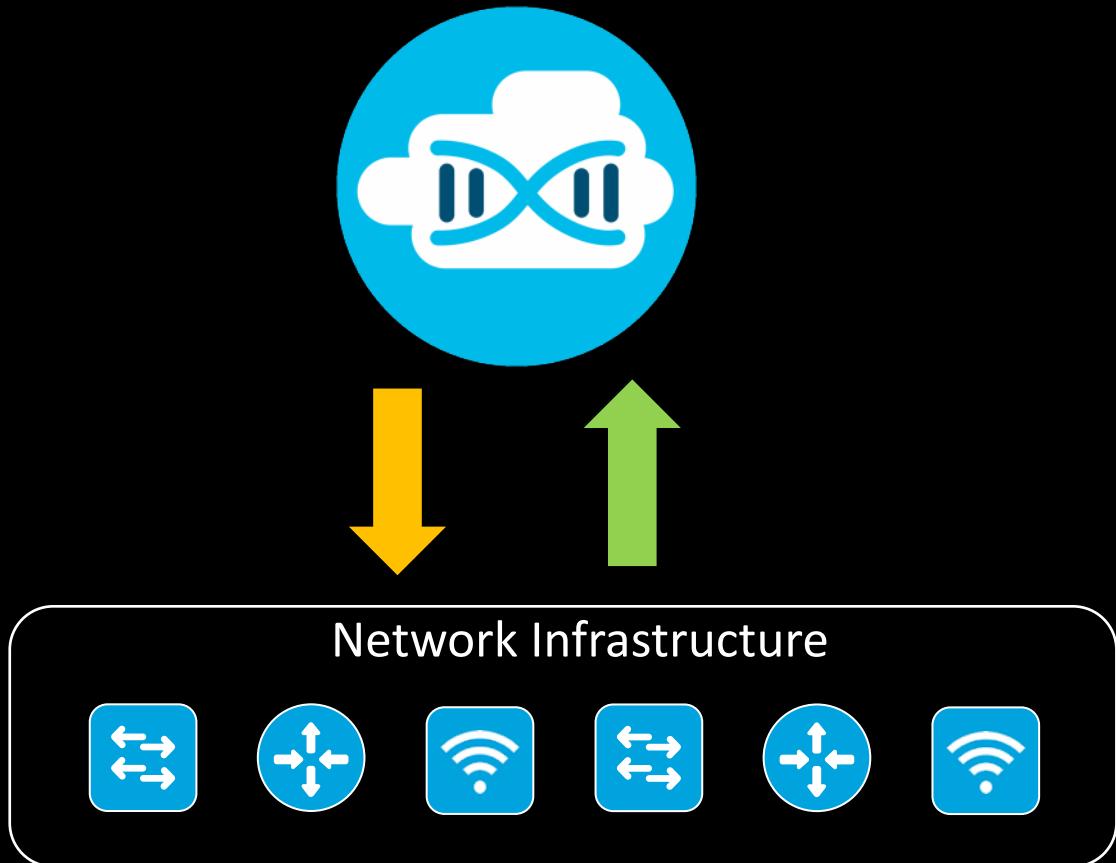


Why DNA Center?

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What is DNA Center?



Automation

- Simplify
- Abstract
- Intent Defined

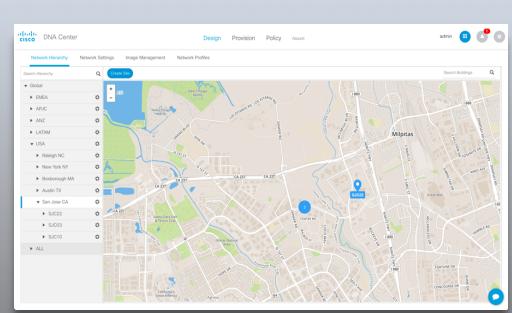
Assurance

- Ingest Telemetry
- Correlate to draw conclusions
- Actionable Insights



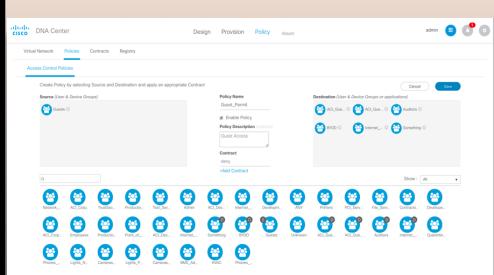
Workflow based Configuration

Design



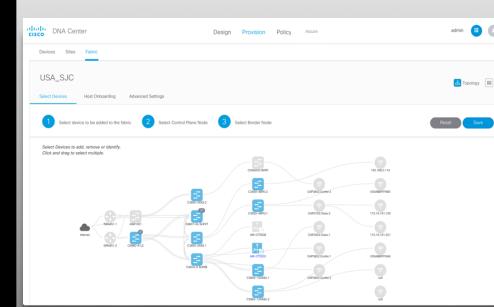
What does the network look like?

Policy



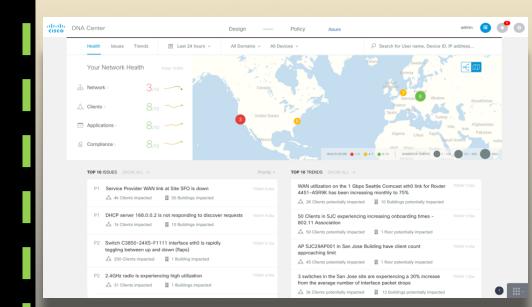
How should the network behave?

Provision



Configure the network.

Assurance

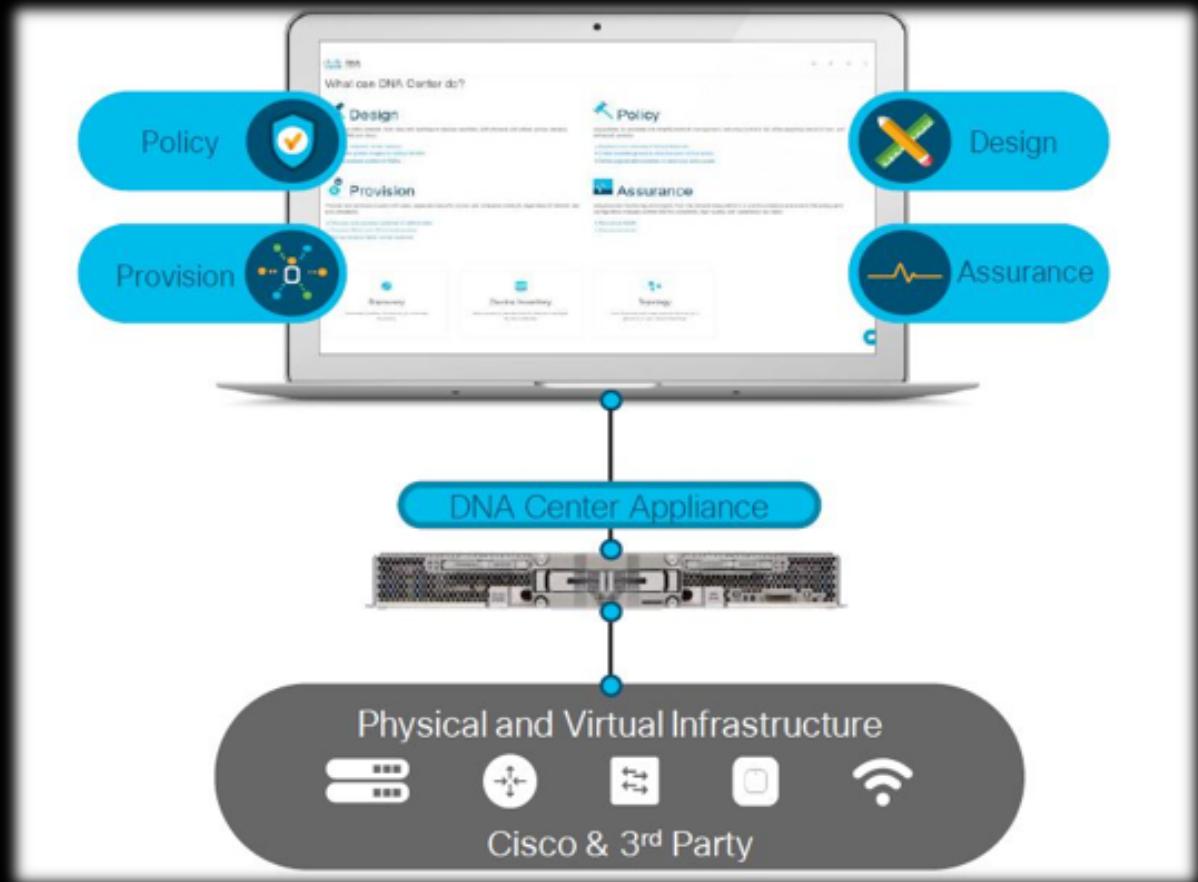


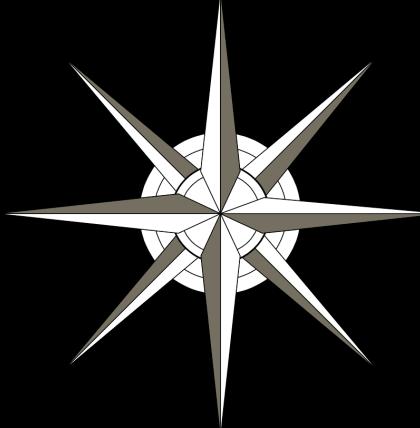
Maintain and Troubleshoot



DNAC Automation Strengths

- Abstracted from CLI
- Global Settings
- Network Discovery
- Software Image Management
- Network Plug-n-Play
- Application Policy (QoS)
- Wireless Automation
- SD Access Fabric





Why Ansible?

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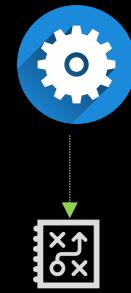


Building bridges

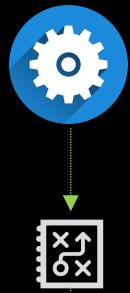
Technical Domains

Ansible/Ansible Tower

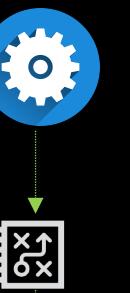
Campus



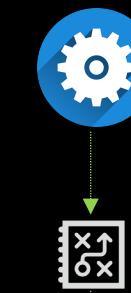
Wireless



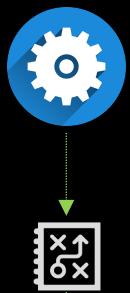
Data Center



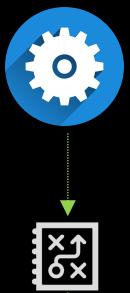
Virtualization



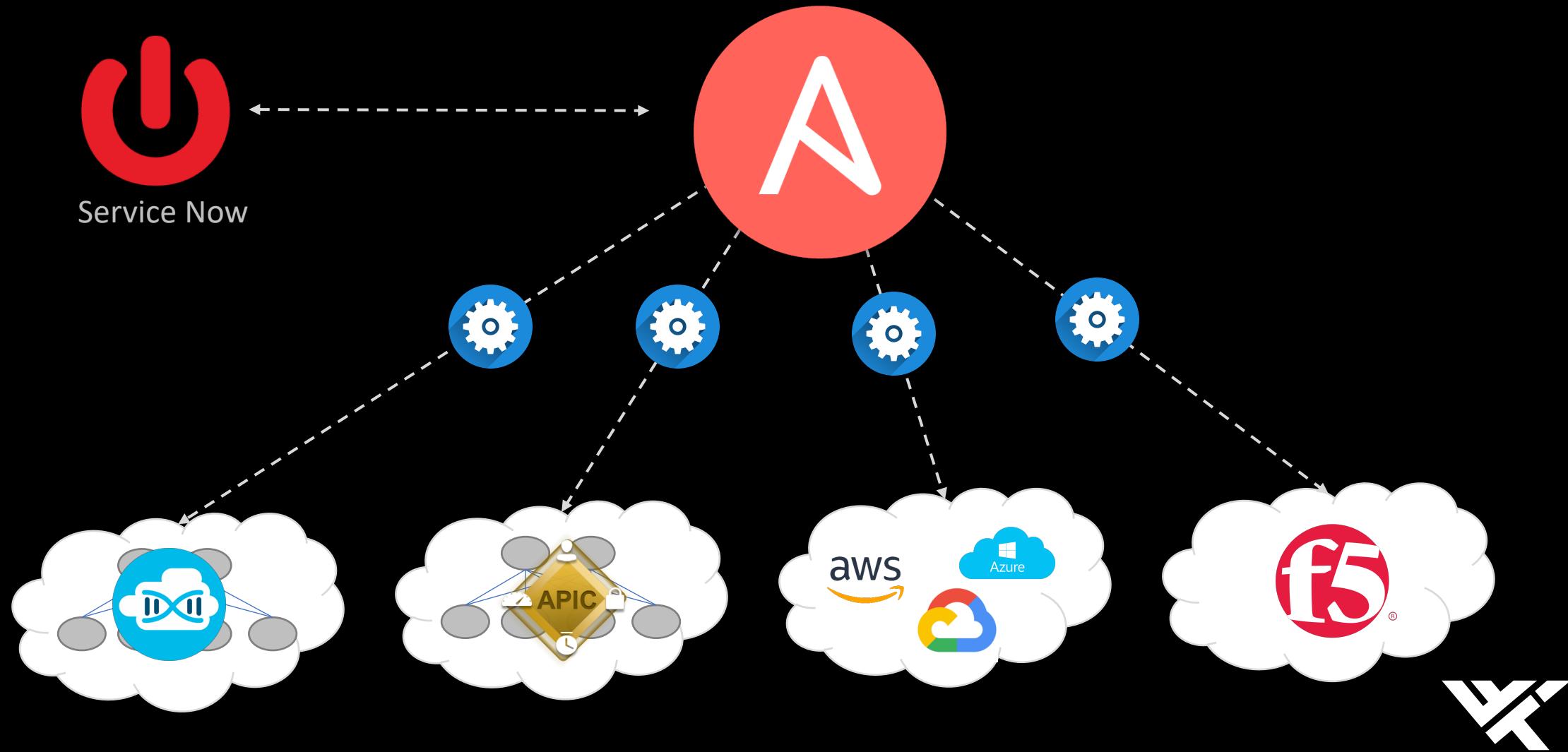
Storage



Security



Ansible as the Glue



Key Points

- Normalize Automation Approach Across Domains
- Shared / Common Skillset
- Fill the gaps
- Tower for API



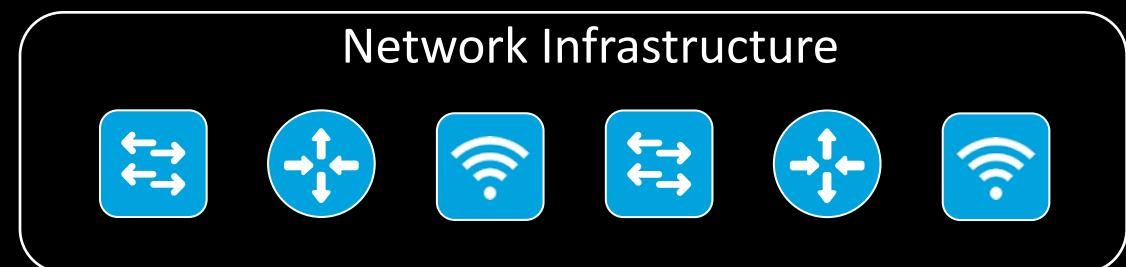
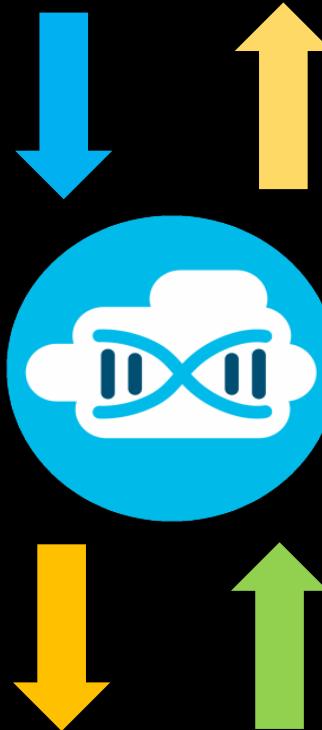
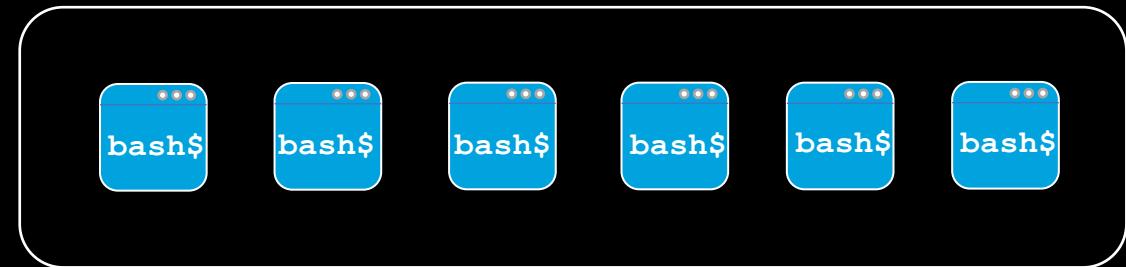
Ansible + DNA Center

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DNA Center as a Platform

- Intent APIs
- RESTful
- Released in 1.2.5 Late 2018
- Curated/Well-Documented
- Headless Automation Capability*



Ansible Modules for DNA Center



cisco DEVNET

published

DNA-C Modules

Site Hierarchy
Common Settings
Global Credentials
Credential Assignments
*Wireless SSID



Discovery
IP Pools
Role Assignments
Site Assignments
*Wireless Profile
*Provision Wireless

DNA Center as a Platform



Network Infrastructure



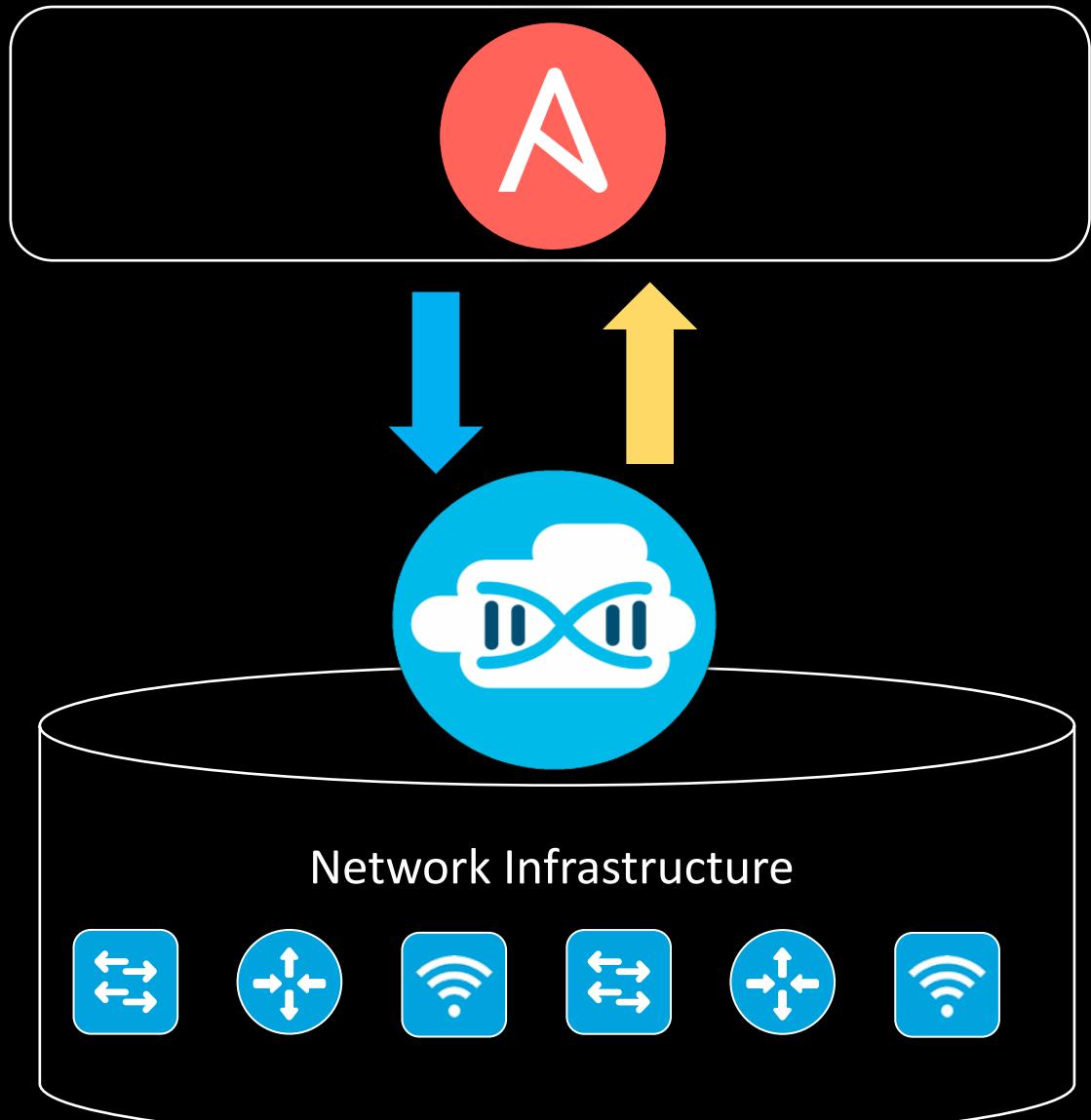
DNA Center Inventory Plugin

- DNAC Network Discovery
- DNAC as a Source of Truth
- Extend Automation Capability



cisco DEVNET

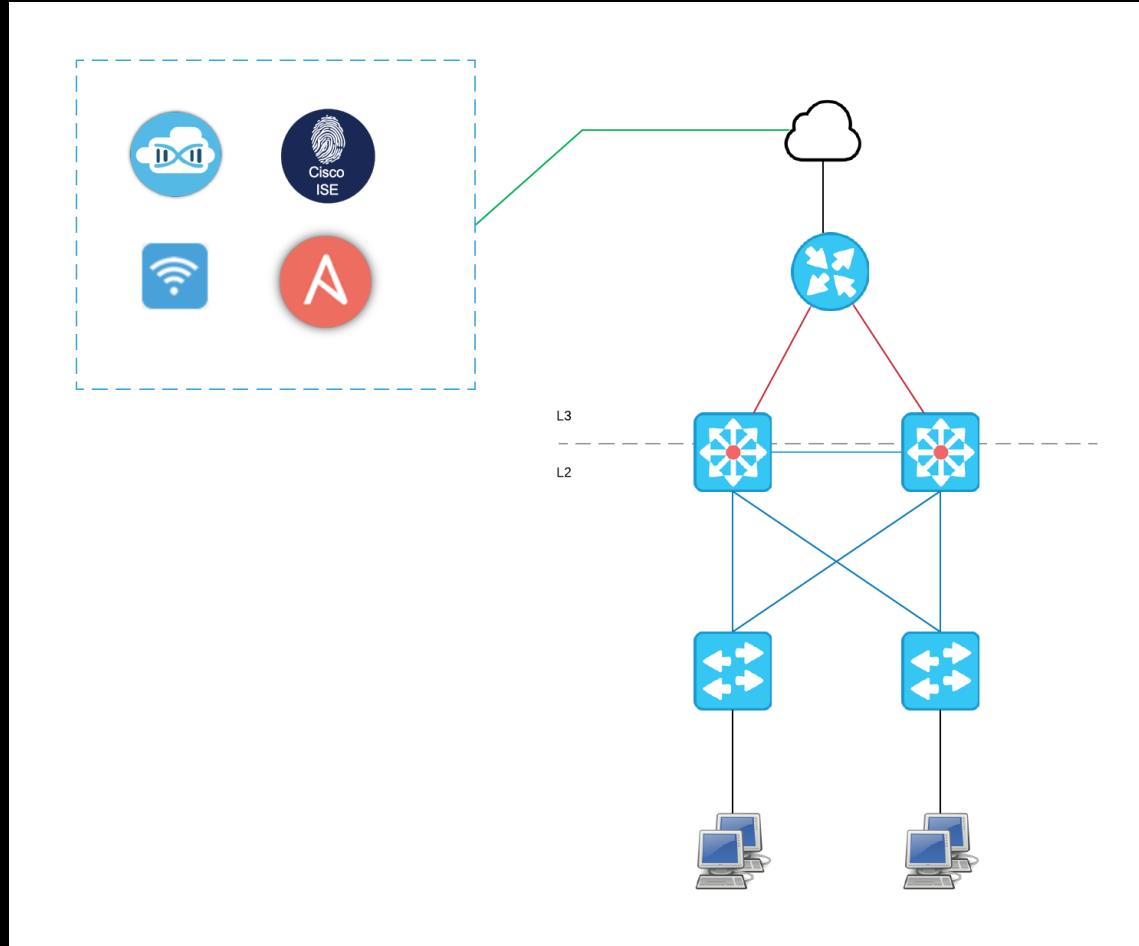
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Key Points

- DNACaaP Provides RESTful API
- DNAC Functions Exposed as Modules
- Extend with Ansible and Inventory Plugin





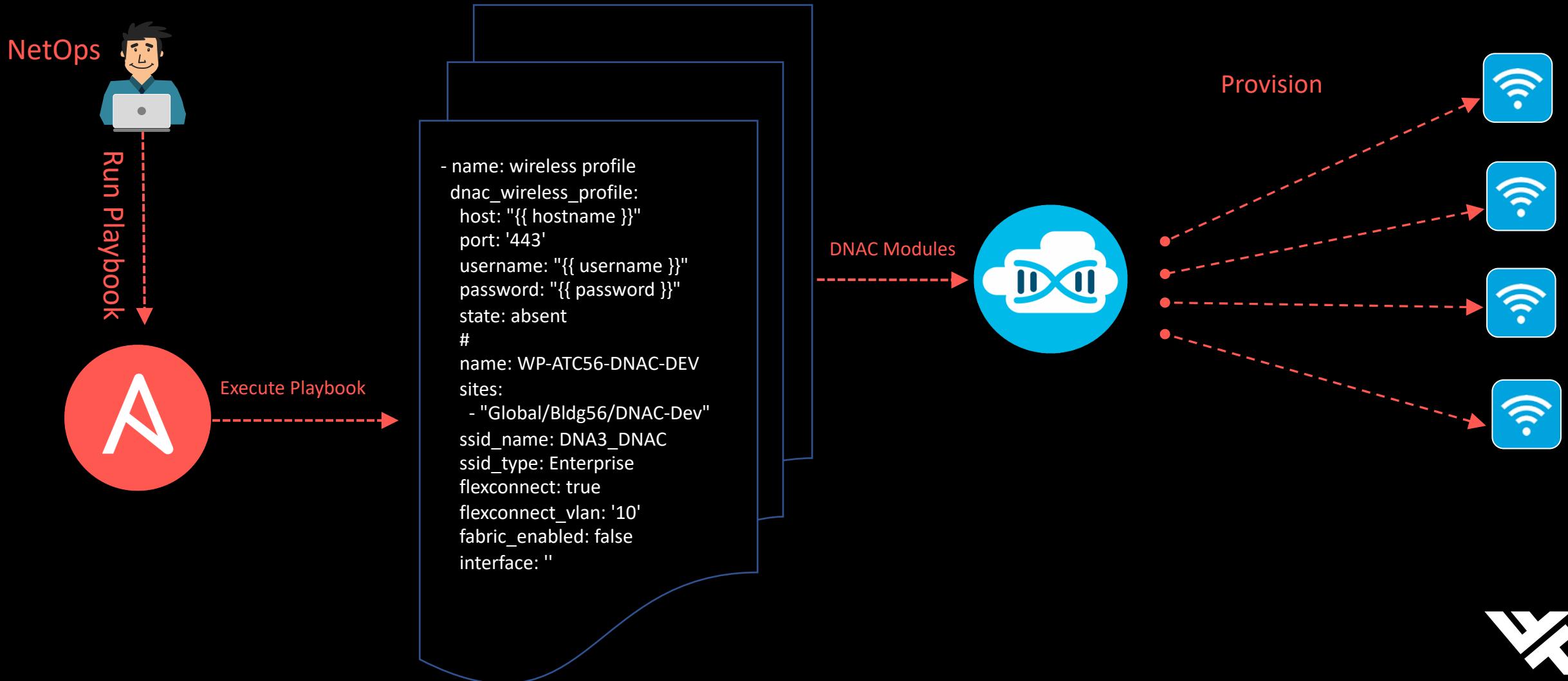
Demo

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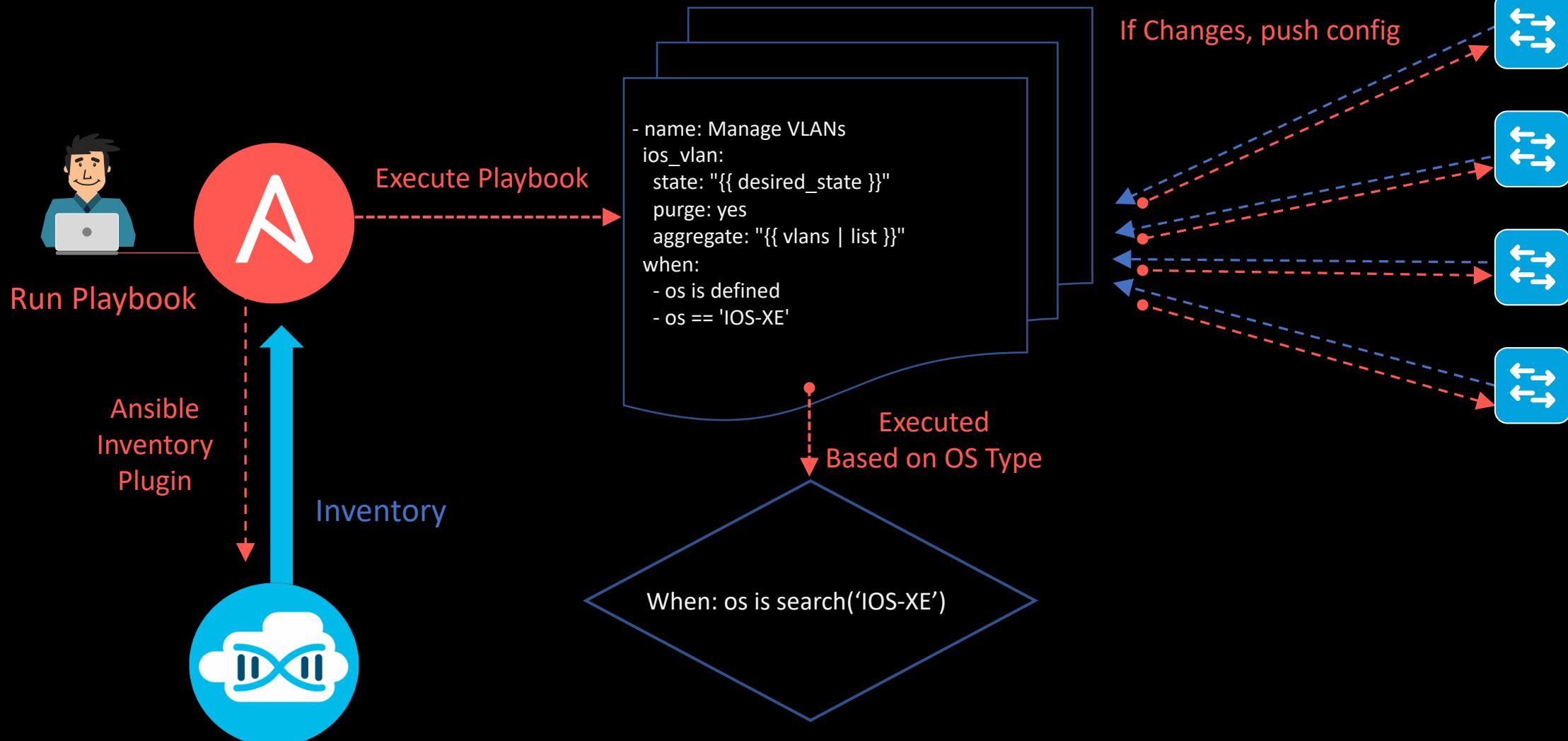
Automate Through DNA Center

Using DNAC Modules



Automate Devices Using DNAC Inventory

DNAC as an Inventory Source

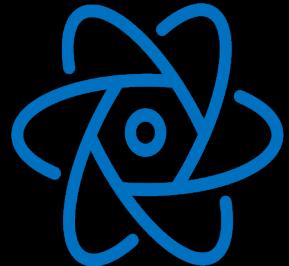


Demo Steps

1. Create Site Hierarchy -----> DNA Center Modules
2. Discover Network Devices -----> DNA Center Modules
3. Configure Network Settings -----> DNA Center Modules
4. Site Role Assignments -----> DNA Center Modules
5. Add VLANs to Switches -----> Inventory Plugin
6. Add SVIs to Switches -----> Inventory Plugin
7. Configure AP Port -----> Inventory Plugin
8. Create Dummy Wireless Profile -----> DNA Center Modules
9. Provision WLC -----> DNA Center Modules
10. Provision AP -----> --- Manual --- No API Yet
11. Create SSID -----> DNA Center Modules
12. Create New Wireless Profile -----> DNA Center Modules
13. Add Wireless Interface -----> --- Manual --- No API Yet
14. Provision WLC -----> DNA Center Modules



Where do I get the content?



WWT ATC Lab



<https://www.wwt.com/lab/network-automation-with-ansible-dna-center>



Github Repo



https://github.com/jandiorio/ansiblefest_2019

Stop by the WWT Lounge to Meet the team!

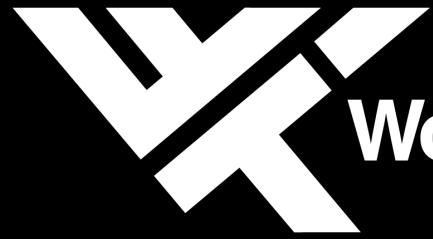
Wrapping it Up

DNA Center

- ✓ Day Zero (Plug and Play)
- ✓ Network Discovery
- ✓ Software Defined Access
- ✓ Software Image Management
- ✓ Application Policy

Ansible/Ansible Tower

- ✓ Multi-Vendor
- ✓ Multi-Domain
- ✓ Glue it all together
- ✓ Anything Not to the Left



World Wide Technology