

Cisco DNA CENTER

Network Device Onboarding with Plug and Play (PnP)



About the Author



Paula Wong

CEO and Founder, CCIE#13062,
Trainer, Senior Security
Architect/Engineer, C-7#1086962,
PNCSE10, NIST-171 Certified

An IT veteran with over 27+ years,
worked previously for Cisco Security TAC,
Cisco Advanced Services, Webex,
Salesforce, Expedia/Hotwire, and other
fortune 500 companies.



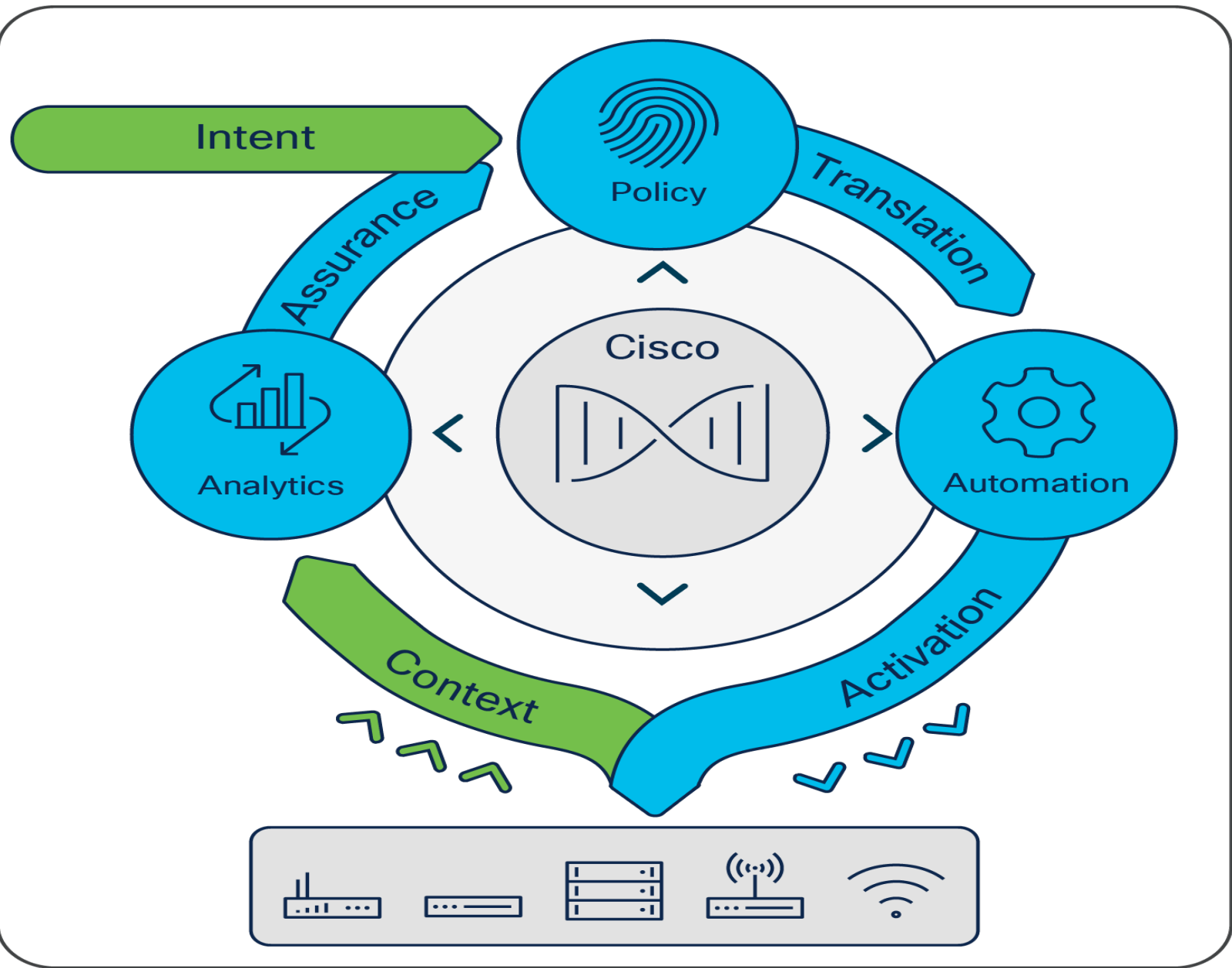
@accendnetworks



@paulawong

Table of Contents

| | | | |
|-----------|--|-------|---------|
| 01 | Introduction | _____ | Page 4 |
| 02 | Automate Onboarding of a Switch with PnP | _____ | Page 6 |
| 03 | Create Onboarding Templates | _____ | Page 7 |
| 04 | Create Network Profiles for Switching | _____ | Page 12 |
| 05 | Assign Network Profile to Site | _____ | Page 14 |
| 06 | Provisioning of Switch Onboarded with PnP | _____ | Page 18 |
| 07 | Conclusion | _____ | Page 22 |



1

Cisco DNA Center

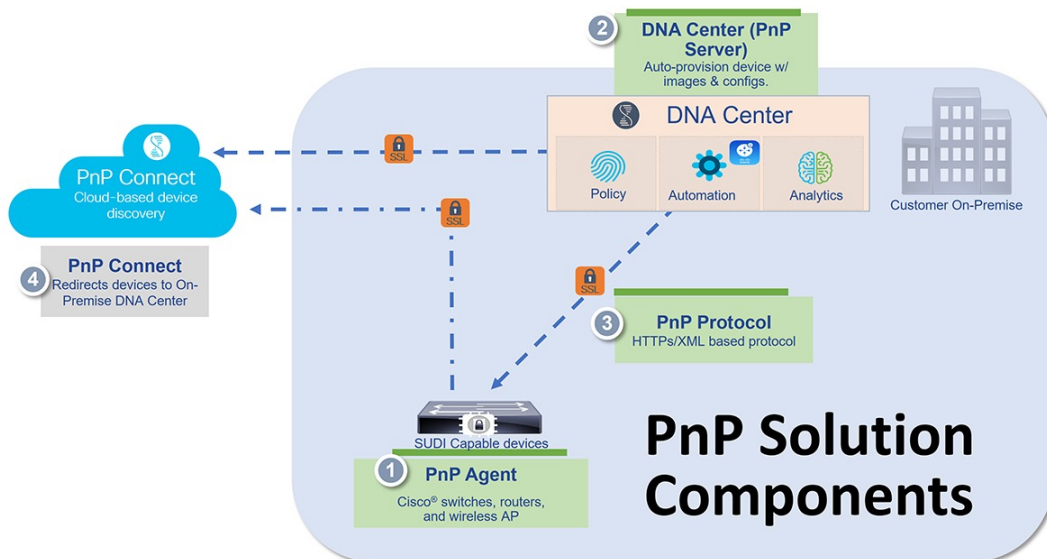
Introduction

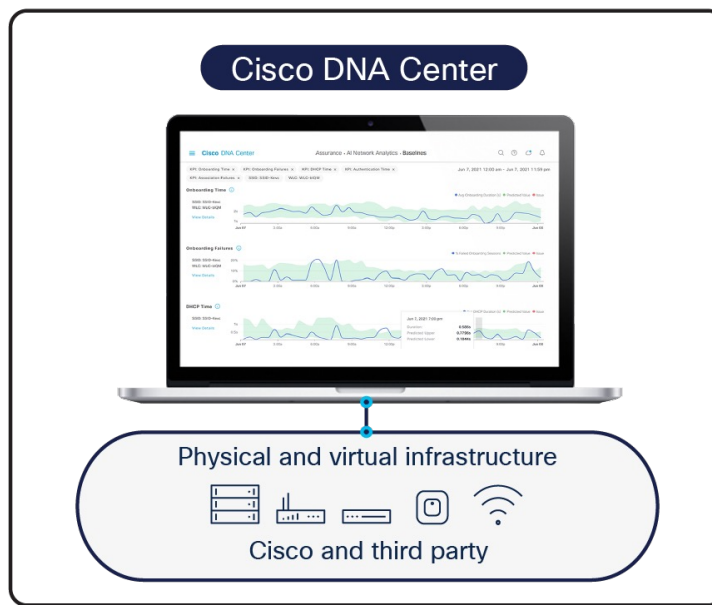
Introduction

Cisco DNA Center can help automate with built-in Plug-and-Play (PnP) functionality and allow switches, routers, and wireless access points to be onboarded to the network. An agent in the device, call-home Cisco DNA Center and downloads the required software and device configuration.

Cisco DNA Center is used to automate the deployment of the wired profile created in the Design section of this document.

- **Automate Onboarding of a Switch with Plug and Play (PnP)**
- **Create Onboarding Templates**
- **Create Network Profiles for Switching**
- **Assign Network Profile to Site**
- **Provisioning of Switch Onboarded with PnP**



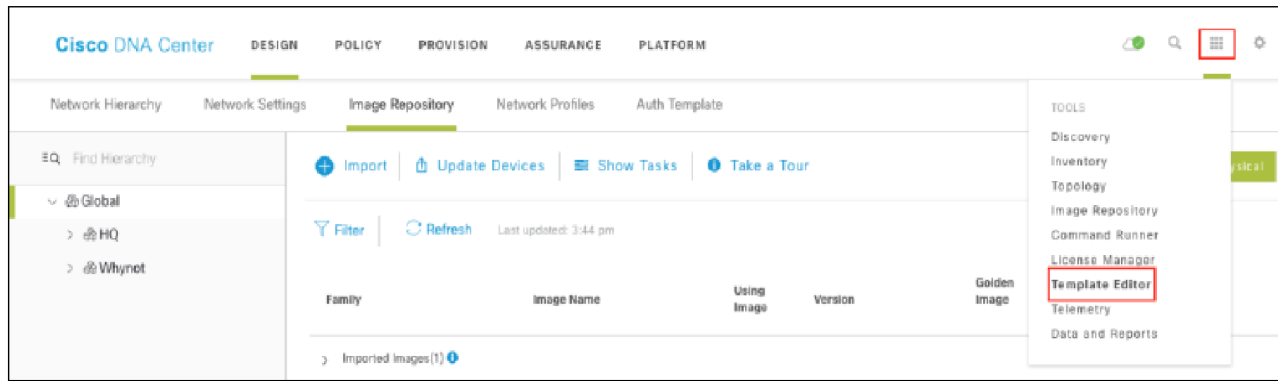


Cisco DNA Center PnP

Automate Onboarding of a Switch with PnP

For PnP Automation deployments, CLI and SNMP credentials are supplied to access and prepare one or more supported PnP seed devices. Plug-and-Play auto discovers switches directly connected to chosen seed device interfaces and their immediate neighbour switches using Cisco Discovery Protocol, all of which must be running the PnP agent and have no previous configuration. The credentials supplied allow Cisco DNA Center and seed devices to work together to configure the discovered devices and add them into managed inventory.

By default, PnP uses VLAN 1 as a management VLAN. If management VLAN is other than VLAN 1, needs to add “pnp startup-vlan x” command on upstream switch, any PnP switch will have VLAN X created and the uplink converted to a trunk with VLAN X enabled.



Cisco DNA Center PnP

Create Onboarding Templates

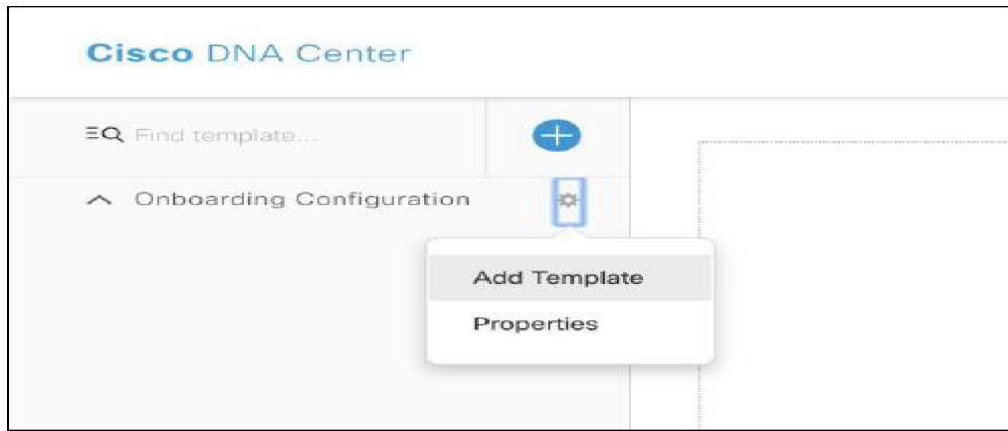
By default, the on boarding Configuration project is available for creating Day-0 templates. You can create your own custom projects. Templates created in custom projects are categorized as Day-N templates.

Step 1. Login to Cisco DNA Center

Step 2. From the home page, choose **Tools > Template Editor**

Step 3. From the left pane, next to **Onboarding Configuration**, click the gear icon and select **Add Templates**.

Create Onboarding Templates (contd)



Step 4. In the Add New Template window, select **Regular Template** and fill in the following details:

| Field | Value |
|------------------|---|
| Name | switch-pnp |
| Project Name | Onboarding Configuration (default) |
| Tags | branch-sw-pnp |
| Device Type(s) | Switches and Hubs > Cisco Cat 9300 Series |
| Software Type | IOS-XE |
| Software Version | (Optional) |



Contact Us!

We provided a steps guide for :

- Network Device Onboarding with Plug and Play (PnP)

We offer efficient and advanced network security training, workshops, and custom services with easy to follow guide.

Contact Us Today!



www.accendnetworks.com



Contact Us Today!

For any questions, customer training or workshops, or if you need assistance with your Cisco DNA Center, reach out to us by one of the methods below:

Paula Wong, CEO/Founder, CCIE #13062, PNCSE, C-7#1086962

Email: paula@accendnetworks.com

Phone: 408-784-2345 Local / 855-8ACCEND (822-8363) Toll Free

We love helping our customers!
Reach out today!