

# Data Center Automation using Juniper Apstra Freeform (APSTRAFF)

ID APSTRAFF Prix US\$ 5 000,- (Hors Taxe) Durée 5 jours

## A qui s'adresse cette formation

The primary audiences for this course are the following:

- Networking architects and operators, system engineers, DevOps and IT professionals
- Individuals responsible for configuring, monitoring, and troubleshooting modern networks of any size leveraging Junos hardware or operating systems

## Pré-requis

- Basic knowledge of Apstra, including :
  - Navigating the global UI
  - Using device profiles
  - Agent installation
  - Device management
  - Navigating a blueprint's UI
  - Using the REST API
- Basic knowledge of networking and data center designs
- Understanding of Clos IP fabric
- Basic routing protocol design, configuration, and performance
- Overlay and underlay routing designs knowledge
- Basic automation design and workflows
- An understanding of Junos device configuration via CLI
- Strong background in Jinja templating
- Basic automation tools like Python and Ansible
- Border Gateway Protocol (BGP) knowledge is recommended, but not required

## Objectifs

After successfully completing this course, you should be able to:

- Describe the benefits of the Freeform reference design
- Discuss how templates are used for Junos automation
- Create Jinja2 templates
- Describe how Jinja2 can be used to create Junos configurations
- Describe how to create a config template
- Perform the steps to create a running Freeform blueprint

- Describe the usage of device context and property sets
- Explain the behavior of a central routing and bridging (CRB) DC
- Describe the configuration of a CRB-based DC
- Describe how to define intent for the CRB use case
- Describe how to use the default config templates for the CRB use case
- Describe how to enable basic routing in the CRB use case
- Describe how to enable VXLAN networks in the CRB use case
- Describe how to route between overlay VXLAN networks in the CRB use case
- Perform Day 2 operations by modifying device context
- Perform Day 2 operations by modifying config templates
- Use the Graph Explorer to traverse the graph datastore
- Describe the function of an IBA probe
- Create an IBA probe

## Contenu

- Course Introduction
- Freeform Overview
- Jinja Review
- Config Templates
- Deploy a Freeform Blueprint
- Device Context and Property Sets
- CRB Use Case — Overview
- CRB Intent and Default Config Templates
- Basic Routing for CRB
- L2 Overlay Networking for CRB
- L3 Overlay Networking for CRB
- Day 2 Operations
- Graph Explorer
- Intent-Based Analytics Overview
- Creating an IBA Probe

## Labs

- Lab 1: Jinja Review
- Lab 2: Deploying a Freeform Blueprint
- Lab 3: Device Context and Property Sets
- Lab 4: Creating Intent, Context, and Root Templates for CRB

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- Lab 5: Basic Routing for CRB
- Lab 6: Layer 2 Overlay Networking for CRB
- Lab 7: Layer 3 Overlay Networking for CRB
- Lab 8: Day 2 Operations
- Lab 9: Creating IBA Probes

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## Centres de formation dans le monde entier



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