

# Data Center Automation using Juniper Apstra Freeform (APSTRAFF)

**ID** APSTRAFF **Price** US\$ 5,000.—(excl. VAT) **Duration** 5 days

## Who should attend

The primary audiences for this course include:

- 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 and Junos OS

## Prerequisites

- Strong background in networking and data center designs
- Understanding of Clos IP fabric
- Routing protocol design, configuration, and performance
- Overlay/underlay routing designs
- Basic automation design and workflows
- An understanding of Junos device configuration via CLI
- Strong background in Jinja templating
- Basic automation tools like Python or Ansible
- Border Gateway Protocol (BGP) knowledge is recommended but not required

## Course Objectives

- Describe what is meant by intent-based networking.
- Describe the Juniper Apstra architecture.
- Navigate the global Apstra UI.
- Describe device profiles.
- Create and use system agents to manage devices.
- Describe the difference between the data center and freeform reference designs.
- Navigate the blueprint UI (both DC and Freeform).
- Configure role-based access control (RBAC).
- Describe basic REST API functionality.
- Create resources.
- Create tags.
- Configure logging to a remote syslog server.
- Describe the benefits of the Freeform reference design.
- Discuss how templates are used for Junos automation.
- Create Jinja2 templates.
- Describe how to create a config template.

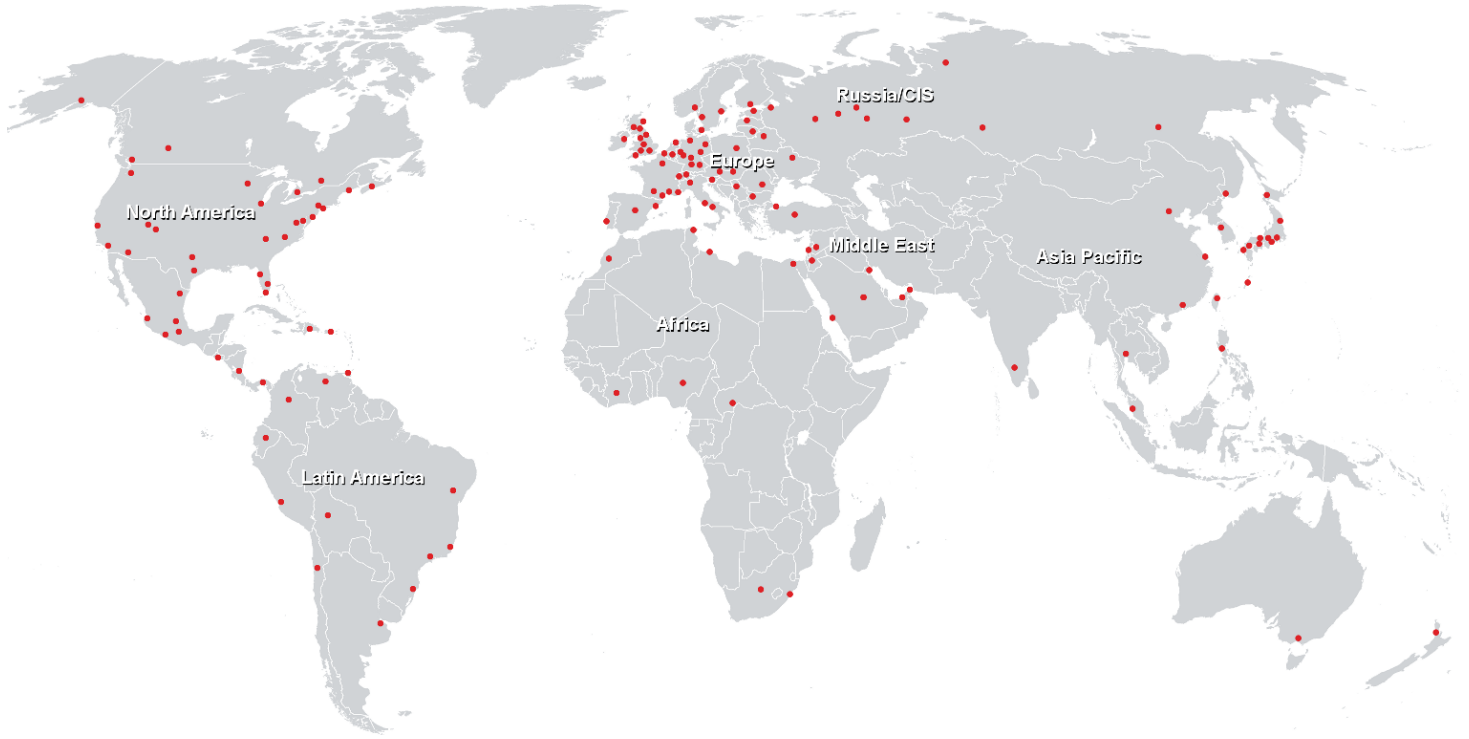
- Describe the minimum steps to deploy a Freeform blueprint.
- Perform the steps to create a running Freeform Blueprint.
- Describe the usage of device context and property sets.
- Explain the behavior of a central routing and bridging (CRB) DC.
- Describe the configuration of a CRB-based DC.
- Describe 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

## Course Content

- Course Introduction
- Intent-Based Networking
- Juniper Apstra Overview
- Apstra UI Walkthrough
- Device Profiles
- Device Management
- Data Center Reference Design Versus Freeform Reference Design
- Navigating the Blueprint UI
- Role-Based Access Control
- Introduction to the REST API
- Resources
- Tags
- Syslog
- Jinja Review
- Deploy a Freeform Blueprint
- Device Context and Property Sets
- CRB Use Case — Overview
- CRB Intent and Default Config Templates
- CRB Intent and Default Config Templates
- L2 Overlay Networking for CRB

- Layer 3 Overlay Networking for CRB
- Day 2 Operations
- Graph Explorer
- Intent-Based Analytics Overview
- Creating an IBA Probe

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