Cloud Automation Using Contrail (CAC)

ID CAC **Prix** CHF 500,– (Hors Taxe) **Durée** 5 jours

A qui s'adresse cette formation

This course benefits individuals responsible for working with software-defined networking solutions in data center, service provider, and enterprise network environments.

Pré-requis

The prerequisites for this course are as follows:

- Basic TCP/IP skills;
- General understanding of data center virtualization;
- Basic understanding of the Junos operating system;
- Completion of the Implementing Data Center Fabric with EVPN and VXLAN (ADCX) course or equivalent knowledge; and
- Completion of the Juniper Cloud Fundamentals (JCF) course; and
- Basic knowledge of object-oriented programming and Python scripting is recommended.

Objectifs

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

- Explain the role of Contrail SDN Controller.
- List available Contrail solutions.
- Describe the purpose of an orchestrator.
- Describe the basics of Kubernetes.
- Identify the function of each of the main OpenStack Projects.
- Describe the purpose of Contrail.
- Explain how the versions of Contrail differ.
- Discuss Contrail related solutions.
- Describe the functions of the Contrail vRouter and Contrail Controller.
- Explain the role of the control, configuration, and analytic nodes.
- Configure and deploy virtual DNS and IPAMs.
- Create virtual networks.
- Create policies to control the flow of traffic.
- Explain the routing behavior of an IP Fabric
- Describe the steps to onboard a Brownfield IP Fabric.
- Describe the steps to onboard a Greenfield IP Fabric.
- Describe the various commands to troubleshoot the onboarding of an IP Fabric.
- Explain the benefits of VXLAN in the data center.
- Describe EVPN signaling for VXLAN.
- Describe how CEM can bridge between a VM and a BMS.
- Implement bridging between VMs and BMSs using VXLAN and EVPN signaling.
- Describe EVPN signaling for VXLAN routing in the Spine.
- Describe how to enable central routing using CEM.
- Describe EVPN signaling for DCI.
- Describe how to enable DCI using CEM.
- Create physical gateways.
- Describe architecture and capabilities of Contrail Security.
- Configure main Contrail Security features.
- Explain the benefits of AppFormix.
- Explain the operation and use of AppFormix.
- Explain how to setup and install AppFormix in different environments.
- Explain the purpose and use of the different AppFormix features.
- Understand the purpose of the Clusters feature.
- Describe how to use the dashboard to examine the state of the network.
- Understand the purpose and use of the Charts feature.
- Explain the benefits of capacity planning.
- Explain how to setup the chargeback functionality.
- Explain how to use AppFormix charts.
- Explain how to use AppFormix heat maps.
- Describe the benefits of reports and service monitoring functionalities.
- Explain the purpose and use of AppFormix alarms.
- Explain the purpose and use of AppFormix Composite Alarms.
- Explain the purpose of JTI.
- Discuss native sensors.
- Explain OpenConfig and gRPC sensors.
- Describe best practices for JTI.
- Explain how to use JTI with AppFormix.

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Day 1

Chapter 1: Course Introduction

Chapter 2: SDN and Contrail

- Review of SDN
- Contrail Basics Contrail Advantages, Capabilities, and Features Contrail Products and Solutions Contrail Use Cases Contrail Command
- Lab 1: Contrail Command Walkthrough

Chapter 3: Orchestration Fundamentals

- Orchestrator Overview
- Kubernetes Orchestrator
- OpenStack Orchestrator
- Lab 2: Instantiating Virtual Workloads

Day 2

Chapter 4: Contrail Architecture Fundamentals

- Contrail Architecture Overview
- Contrail Management and Analytics
- Contrail Control Plane Communications
- Contrail Data Plane Communications
- Basic Contrail Troubleshooting
- Lab 3: Exploring and Troubleshooting the Contrail vRouter and SDN Controller

Chapter 5: Contrail Configuration

- Contrail Configuration Methods
- Configuring DNS and IPAM
- Configuring the Metadata Service
- Configuring Virtual Networks
- Configuring Network Policies and Security Groups
- Contrail Configuration API
- Lab 4: Configuring Virtual Networks and Policies

Chapter 6: IP Fabric Automation

- IP Fabric Review
- Greenfield Fabric Automation
- Brownfield Fabric Automation
- Troubleshooting Fabric Automation
- Lab 5: IP Fabric Automation

Day 3

Chapter 7: VM to BMS Bridging

- VXLAN Review
- EVPN Signaling for BMS to BMS VXLAN Forwarding
- Contrail VM to BMS Bridging<./li>
- Server/Instance example
- Virtual Port Groups
- Lab 6: VM to BMS Bridging

Chapter 8: VXLAN Routing

- EVPN Signaling for Central Routing
- Central Routing Example
- EVPN Signaling for Edge Routing
- Edge Routing Example
- Lab 7: VXLAN Routing

Chapter 9: Data Center Interconnect

- DCI Overview
- DCI Options for a VXLAN Overlay using Contrail Automation
- DCI Example using Contrail Automation
- Lab 8: Data Center Interconnect

Day 4

Chapter 10: Interacting with External Networks

- DC Gateway Use Case/LI>
- Implementing a DC Gateway
- Lab 9: DC Gateway

Chapter 11: Fabric Administration

- Generic Device Operations
- Hitless Fabric Upgrade
- Lab 10: Fabric Administration

Chapter 12: Contrail Security

- The Need for Contrail Security
- Contrail Security Configuration
- Monitoring and Visualization
- Lab 11: Contrail Security

Day 5

Chapter 13: AppFormix Overview

- AppFormix Overview
- AppFormix UI and General Settings AppFormix Features Overview: Clusters, Dashboard, Charts, Heat Map, Plan, Reports, Chargeback

Chapter 14: Alarms and Composite Alarms

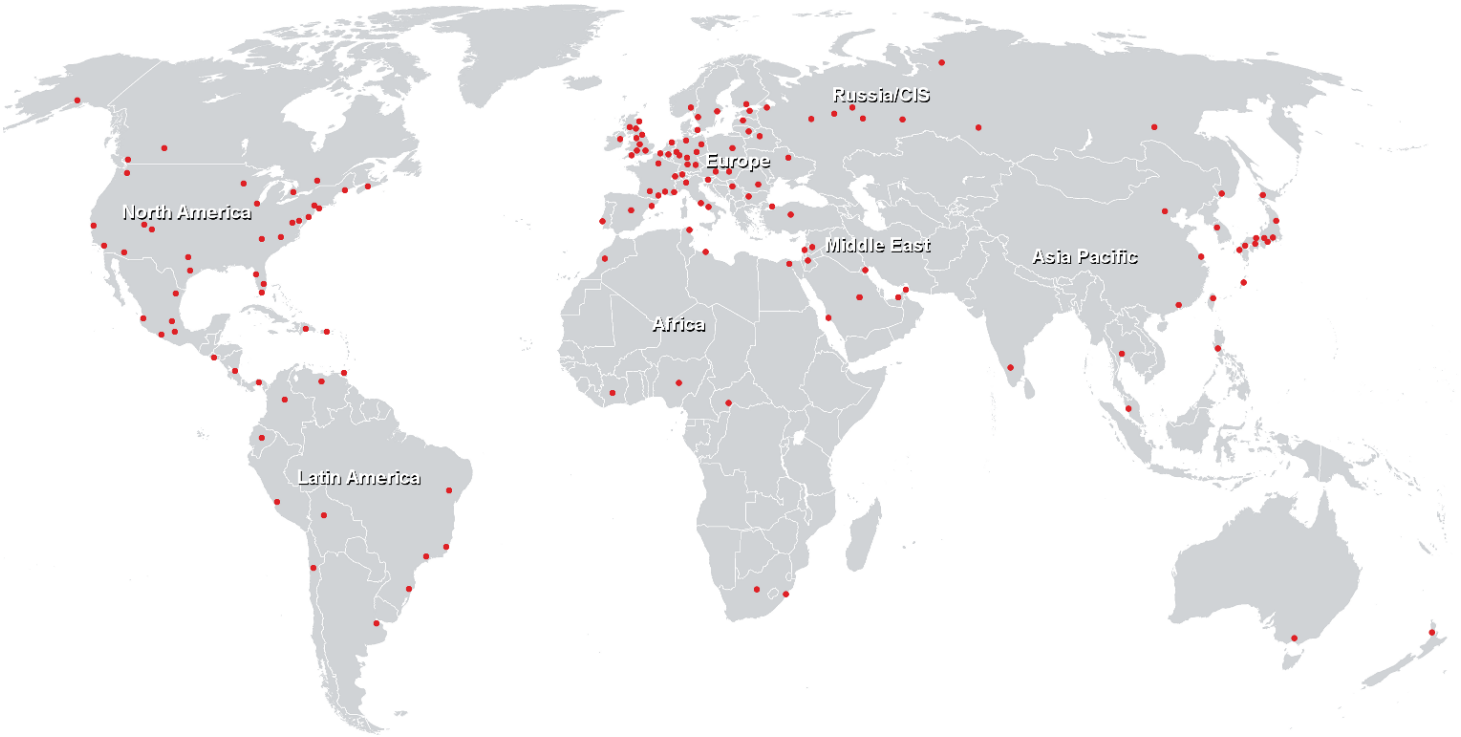
- Alarms
- Alarms Case Study
- Composite Alarms
- Lab 12: Implementing AppFormix Features

Chapter 15: Junos Telemetry Interface

- JTI Overview
- Native Sensors for JTI
- OpenConfig and gRPC Sensors for JTI
- Lab 13: Implementing JTI with AppFormix

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Centres de formation dans le monde entier





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