Introduction to Junos Platform Automation and DevOps (IJAUT)

ID IJAUT **Prix** CHF 2 800,– (Hors Taxe) **Durée** 3 jours

A qui s'adresse cette formation

This course benefits individuals responsible for configuring and monitoring devices running the Junos OS.

Cette formation prépare à la/aux certifications

Juniper Networks Certified Internet Associate Automation and DevOps (JNCIA-DEVOPS)

Pré-requis

- Basic understanding of the OSI model and the TCP/IP protocol suite;
- Basic understanding of computer networking concepts.

Objectifs

- Describe the Junos operating system and its basic design architecture.
- Explain traffic processing for transit and exception traffic.
- Describe the Junos CLI and its features.
- List and perform initial configuration tasks.
- Describe interface types and perform basic interface configuration tasks.
- Describe DevOps principles and practices.
- Explain how DevOps can benefit an IT organization.
- List and describe the various APIs Junos provides for automation.
- Discuss various frameworks, libraries and tools available to automate Junos devices.
- Read Junos XML documents.
- Use XPath to navigate a Junos XML document.
- Use NETCONF and the XML API to issue RPCs.
- Use NETCONF and the XML API to configure a Junos device.
- Understand JSON syntax.
- Understand YAML syntax.
- Create JSON and YAML documents.
- Perform Ansible installation.
- Retrieve information from Junos devices using Ansible.
- Use Ansible to configure Junos devices.
- Create and execute simple Python scripts.
- Use the Python interactive interpreter.
- Install Junos PyEZ.
- Use PyEZ to connect to Junos devices.
- Use PyEZ to issue RPCs.
- Use PyEZ to modify a Junos device configuration.
- Use PyEZ to upgrade Junos devices.
- Describe basic PyEZ exception handling.
- Describe the capabilities of the Junos REST API.
- Use the Junos REST API Explorer.
- Issue Junos REST API RPCs.

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Introduction to Junos OS

- Junos OS Basic Design Architecture
- Traffic Processing
- CLI Modes and Features
- Initial Configuration Tasks
- Interface Types and Configuration

Introduction to DevOps

- Why DevOps?
- The Benefits of DevOps
- DevOps Goals and Best Practices

The Junos Automation Stack

- The Junos Automation Stack and DevOps
- Junos XML API Overview
- Junos REST API Overview
- Junos JET API Overview
- Review of Junos Automation Tools

Introduction to XML and XPath

- Basic XML Syntax
- The Junos XML Schema
- Navigating the Junos XML Schema with XPath

The XML API and NETCONF

- NETCONF
- The Junos XML API
- Languages and Libraries Used to Automate the Junos XML API
- Case Study

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Introduction to JSON and YAML

- The Need to Structure Data
- JSON Basics
- YAML Basics
- Use of JSON and YAML in Junos Automation

Introduction to Ansible

- Ansible Architecture and Capabilities
- Ansible Playbook Basics
- Using Ansible to Retrieve Junos Status Information
- Using Ansible to Retrieve and Modify Configuration Information
- Case Study

Introduction to Python

- Basic Python Syntax
- Python 2 vs. Python 3
- Python Data Types and Variables
- Python Sequences, Tuples, Sets, and Dictionaries
- Python Libraries
- The Python Interactive Interpreter
- Case Study: Creating a Python Script to Solve a Problem

Introduction to Junos PyEZ

- Connecting to Junos Devices with PyEZ
- Retrieving Junos Device Status and Configuration Handling
- Modifying the Junos Configuration with PyEZ
- Using PyEZ utilities to upgrade Junos software
- Case Study

The Junos REST API

- Overview of the Junos REST API
- Methods of Connecting to the Junos REST API
- Configuring the Junos REST API
- Using the Junos REST API Explorer
- Using the Junos REST API to Retrieve Junos Configuration Data
- Case Study

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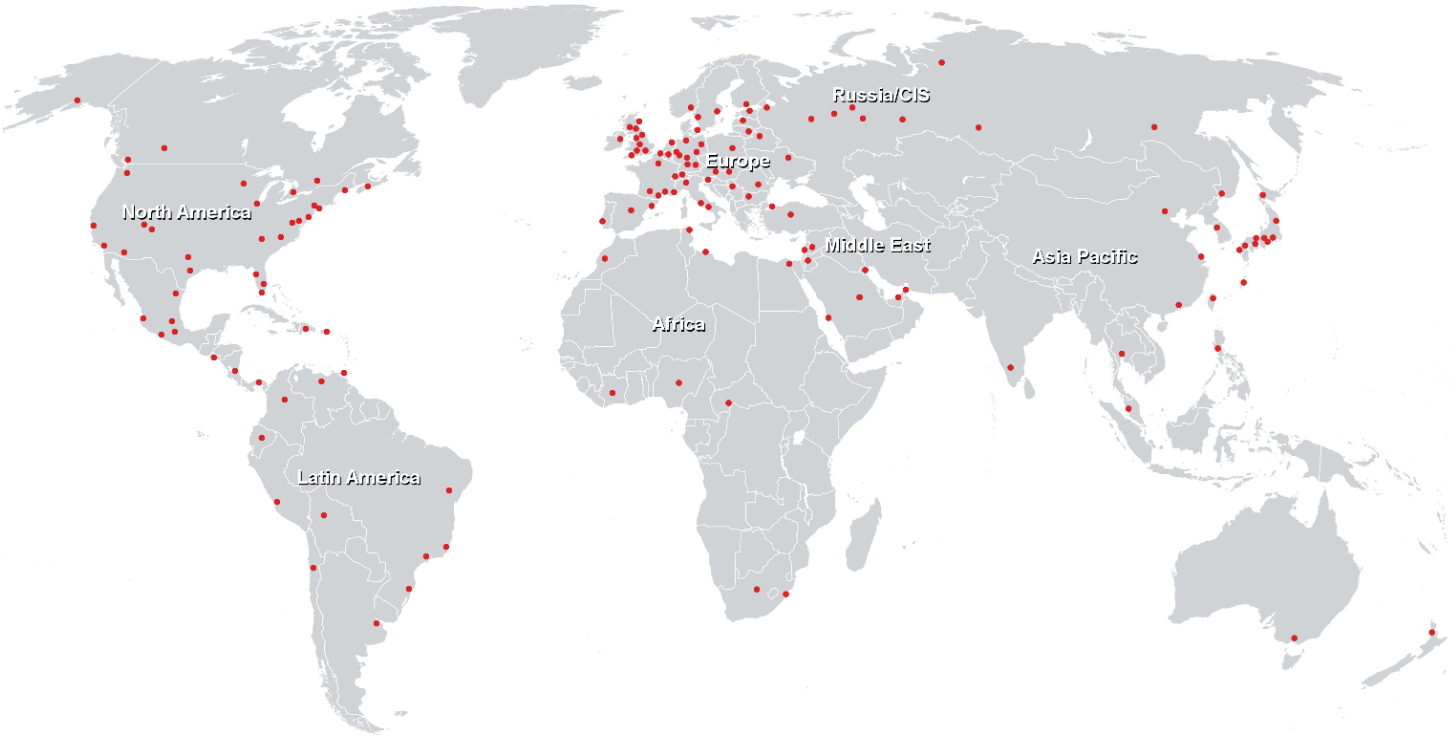

Fast Lane Institute for Knowledge Transfer (Switzerland) AG

Husacherstrasse 3
CH-8304 Wallisellen
Tel. +41 44 832 50 80

info@flane.ch, https://www.flane.ch