Enterprise Computing Solutions - Education Services

TRAINING OFFERING

You can reach us at:

Arrow Enterprise Computing Solutions Ltd, Part 1st Floor, Suite 1D/1, Central House, Otley Road, Harrogate, HG3 1UG

Email: educationteam.ecs.uk@arrow.com
Phone: 0870 251 1000

Advanced Junos Platform Automation and DevOps (AJAUT)

CODE:	LENGTH:	PRICE:
JUN_AJAUT	32 Hours (4 days)	£3,195.00

Description

This four-day course introduces students to popular open-source applications that are used to manage Junos OS devices in DevOps environments. Through demonstrations and hands-on labs, students will gain experience managing Junos OS devices using Ansible, AWX, Jenkins, Robot Framework, and NITA. This course combines these popular open-source tools with DevOps principles and practices to demonstrate the automation capabilities of Junos OS devices. This course is based on Junos OS Release 22.1R1.10.

Objectives

• Explain DevOps principles.
• Describe Infrastructure as Code.
• Describe the benefits of container applications.
• Create container images.
• Configure Docker networking.
• Deploy multi-container applications using Docker Compose.
• Describe Git.
• Create and manage a local Git repository.
• Create connections to remote repositories.
• Create and merge repository branches.
• Describe Ansible fundamentals.
• Create an Ansible DevOps environment.
• Use JSNAPy modules to verify the Junos OS device state.
• Create Ansible playbooks and roles for a Junos OS NOOB environment.
• Use NAPALM modules to manage Junos OS devices.
• Use Ansible to deploy Junos OS configuration.
• Navigate the AWX UI.
• Create AWX projects, inventory, and templates.
• Create an AWX workflow template.
• Use the AWX REST API.
• Describe the Robot Framework.
• Describe the Robot Framework project components.
• Create a Robot Framework test case for Junos OS devices.
• Create a custom Robot Framework library.
• Navigate the Jenkins user interface.
• Create Jenkins projects that integrate the Robot Framework plugin.
• Create Jenkins projects that integrate the Ansible plugin.
• Create Jenkins projects that integrate the Ansible Tower plugin.
• Create Jenkins pipelines using a Jenkinsfile.
• Explain NITA components.
• Perform NITA operations.
• Explain NITA customer use cases.
• Explain the benefits of CI/CD.
• Create a CI/CD environment.

Audience

• Individuals who want to use DevOps practices and principles to manage network devices
• Network engineers and operators who are responsible for managing Junos OS devices
• Network engineers and operators who are looking for open-source methods to deploy services

• Developers who support network operations
• Network integrators

Programme

DAY 1
1 Course Introduction
2 Introduction to DevOps
• Explain DevOps principles
• Describe infrastructure as code
3 Using Docker for DevOps
• Describe the benefits of container applications
• Create container images
• Configure Docker networking
• Deploy multi-container applications using Docker Compose
Lab 1: Using Docker for DevOps
DAY 2
4 Using Git
• Describe Git
• Create and manage a local Git repository
• Create connections to remote repositories
• Create and merge repository branches
Lab 2: Using Git
5 Ansible Fundamentals
• Describe Ansible fundamentals
• Create an Ansible DevOps environment
Lab 3: Ansible Fundamentals
6 Automating Junos OS Devices Using Ansible
• Use JSNAPy modules to verify the Junos OS device state
• Create Ansible playbooks and roles for a Junos OS NOOB environment
• Use NAPALM modules to manage Junos OS devices
• Use Ansible to deploy Junos OS configuration
Lab 4: Automating Junos OS Devices Using Ansible
DAY 3
7 Automating Junos OS Devices Using AWX
• Navigate the AWX UI
• Create AWX projects, inventory, and templates
• Create an AWX workflow template
• Use the AWX REST API
Lab 5: Automating Junos OS Devices Using AWX
8 Testing Junos OS Devices Using the Robot Framework
• Describe the Robot Framework
• Describe the Robot Framework project components
• Create a Robot Framework test case for Junos OS devices
• Create a custom Robot Framework library
Lab 6: Testing Junos OS Devices Using the Robot Framework
9 Automating Junos OS Devices Using Jenkins
• Navigate the Jenkins user interface
• Create Jenkins projects that integrate the Robot Framework plugin
• Create Jenkins projects that integrate the Ansible plugin
• Create Jenkins projects that integrate the Ansible Towe plugin
• Create Jenkins pipelines using a Jenkinsfile
Lab 7: Automating Junos OS Devices Using Jenkins
DAY 4
10 Automating Junos OS Devices Using NITA
• Explain NITA components
• Perform NITA operations
• Explain NITA customer use cases
Lab 8: Automating Junos OS Devices Using NITA
11 Continuous Integration and Continuous Delivery
• Explain the benefits of CI/CD
• Create a CI/CD environment
Lab 9: Continuous Integration and Continuous Delivery
A Appendix: Kubernetes Overview
• Describe Kubernetes fundamentals
• Describe the Kubernetes Objects
• Describe Kubernetes networking
• Explore connecting applications with services

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
01 Dec 2025	Virtual Training Class - TP	GMT	English	Classroom		£3,195.00

Additional Information

This training is also available as onsite training. Please contact us to find out more.