



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

1 Course Introduction 2 Introduction to DevOps <ul style="list-style-type: none"> • Explain DevOps principles • Describe infrastructure as code 3 Using Docker for DevOps <ul style="list-style-type: none"> • Describe the benefits of container applications • Create container images • Configure Docker networking • Deploy multi-container applications using Docker Compose 	
DAY 1 Lab 1: Using Docker for DevOps	DAY 2
4 Using Git <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Describe Ansible fundamentals • Create an Ansible DevOps environment Lab 3: Ansible Fundamentals 6 Automating Junos OS Devices Using Ansible <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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 Lab 7: Automating Junos OS Devices Using Jenkins	
	10 Automating Junos OS Devices Using NITA <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Explain the benefits of CI/CD • Create a CI/CD environment Lab 9: Continuous Integration and Continuous Delivery A Appendix: Kubernetes Overview <ul style="list-style-type: none"> • Describe Kubernetes fundamentals • Describe the Kubernetes Objects • Describe Kubernetes networking
DAY 4	• Explore connecting applications with services

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
26 May 2025	Virtual Training Class - TP	BST	English	Classroom		£3,195.00
18 Aug 2025	Virtual Training Class - TP	BST	English	Classroom		£3,195.00

Additional Information

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