



Enterprise Computing Solutions - Education Services

## TRAINING OFFERING

---

**Du kan nå oss här**

Kronborgsgränd 7, 164 46 Kista

Email: [edu.ecs.se@arrow.com](mailto:edu.ecs.se@arrow.com)

Phone: +46 8 555 188 00

CODE:	LENGTH:	PRICE:
JUN_JIR	2 days	kr19,500.00

## Description

This two-day course provides students with intermediate routing knowledge and configuration examples. The course includes an overview of protocol-independent routing features, load balancing and filter-based forwarding, OSPF, BGP, IP tunneling, and high availability (HA) features. Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos OS and monitoring device operations. This course uses Juniper Networks vSRX Series Services Gateways for the hands-on component, but the lab environment does not preclude the course from being applicable to other Juniper hardware platforms running the Junos OS. This course is based on Junos OS Release 18.2R1.9. Junos Intermediate Routing (JIR) is an intermediate-level course.

## Objectives

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

- Describe typical uses of static, aggregate, and generated routes.
- Configure and monitor static, aggregate, and generated routes.
- Explain the purpose of Martian routes and add new entries to the default list.
- Describe typical uses of routing instances.
- Configure and share routes between routing instances.
- Describe load-balancing concepts and operations.
- Implement and monitor Layer 3 load balancing.
- Illustrate benefits of filter-based forwarding.
- Configure and monitor filter-based forwarding.
- Explain the operations of OSPF.
- Describe the role of the designated router.
- List and describe OSPF area types.
- Configure, monitor, and troubleshoot OSPF.
- Describe BGP and its basic operations.
- Name and describe common BGP attributes.
- List the steps in the BGP route selection algorithm.
- Describe BGP peering options and the default route advertisement rules.
- Configure and monitor BGP.
- Describe IP tunneling concepts and applications.
- Explain the basic operations of generic routing encapsulation (GRE) and IP over IP (IP-IP) tunnels.
- Configure and monitor GRE and IP-IP tunnels.
- Describe various high availability features supported by the Junos OS.
- Configure and monitor some of the highlighted high availability features.

## Audience

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

## Prerequisites

Students should have basic networking knowledge and an understanding of the Open Systems Interconnection (OSI) reference model and the TCP/IP protocol suite. Students should also attend the *Introduction to the Junos Operating System (IJOS)* and *Junos Routing Essentials (JRE)* courses prior to attending this class.

## Programme

Day 1 Chapter 1: Course Introduction Chapter 2: Protocol-Independent Routing Static Routes Aggregated Routes  
Generated Routes Martian Addresses Routing Instances Lab 1: Protocol-Independent Routing

Chapter 3: Load Balancing and Filter-Based Forwarding Overview of Load Balancing  
Configuring and Monitoring Load Balancing Overview of Filter-Based Forwarding  
Configuring and Monitoring Filter-Based Forwarding Lab 2: Load Balancing and Filter-Based Forwarding

Chapter 4: Open Shortest Path First Overview of OSPF Adjacency Formation and the Designated Router Election

OSPF Scalability   Configuring and Monitoring OSPF   Basic OSPF Troubleshooting   Lab 3: Open Shortest Path First   Day 2

Chapter 5: Border Gateway Protocol Overview of BGP   BGP Attributes   IBGP Versus EBGP   Configuring and Monitoring BGP

Lab 4: Border Gateway Protocol   Chapter 6: IP Tunneling Overview of IP Tunneling   GRE and IP-IP Tunnels

Implementing GRE and IP-IP Tunnels   Lab 5: IP Tunneling   Chapter 7: High Availability Overview of High Availability Networks  
Graceful Restart   Graceful RE Switchover   Nonstop Active Routing   BFD   VRRP   Lab 6: High Availability

Appendix A: IPv6 Introduction to IPv6   Routing Protocol Configuration Examples   Tunneling IPv6 over IPv4

Lab 7 (Optional): IPv6   Appendix B: IS-IS Overview of IS-IS   Overview of IS-IS PDUs   Adjacency Formation and DIS Election  
Configuring and Monitoring IS-IS   Basic IS-IS Troubleshooting   Lab 8 (Optional): IS-IS

Appendix C: Routing Information Protocol Introduction to RIP   RIP Configuration Examples   Monitoring and Troubleshooting RIP

## Options

*Junos Intermediate Routing* is an intermediate-level course.

## Further Information

This course can be purchased using Juniper Training Credits - subject to terms and conditions.  
Please note that JTCs can only be used against the normal full list price of a course and are not applicable against any discounted rates.

For more information, or to make a booking, please contact us on 0870 251 1000 or email [educationteam.ecs.uk@arrow.com](mailto:educationteam.ecs.uk@arrow.com)

## Session Dates

På begäran, [kontakta oss](#)

## Ytterligare information

[Denna utbildning finns också som utbildning på plats. Kontakta oss för mer information.](#)