EMENTA DO CURSO

# Advanced Junos Service Provider Routing

Código: **EDU-JUN-AJSPR** Categoria: **Juniper**

InLearn

## PÚBLICO

This course benefits individuals responsible for implementing, monitoring, and troubleshooting Layer 3 components of a service provider's network.

## PRÉ-REQUISITOS

The prerequisites for this course include:
• Intermediate-level networking knowledge and an understanding of the OSI model and the TCP/IP protocol suite; and
• Completion of the Introduction to the Junos Operating System and Junos Intermediate Routing courses prior to attending this class

## VISÃO

This five-day course is designed to provide students with detailed coverage of OSPF, IS-IS, BGP, and routing policy. Through examples, demonstrations, and hands-on labs, students will gain experience in configuring, monitoring, and troubleshooting the Junos operating system and in monitoring device and protocol operations. This course uses Juniper Networks vMX Series Routers for the hands-on component, but the lab environment does not preclude the course from being applicable to other Juniper hardware platforms running Junos OS. This course is based on Junos OS Release 23.2.

## CONTEÚDO

DAY 1

Module 1:Introduction

Module 2: OSPF
• Review the basics of OSPFv2
• Explain how link-state advertisements work
• Describe the different protocol operations
• Explain how OSPF authentication works
Lab 1: OSPF Multiarea Networks

Module 3: OSPF Areas
• Review OSPF areas
• Explain how stub areas operate
• Review stub area configuration
• Explain how NSSA operates
• Review NSSA configuration
• Describe route summarization

Lab 2: OSPF Route Summarization
Module 4: OSPF Case Studies and Solutions
• Configure OSPF virtual links
• Configure OSPF multiarea adjacencies
• Explain OSPF external reachability
Lab 3: Advanced OSPF Options and Routing Policy

Day 2

Module 5: OSPF Troubleshooting
• Identify OSPF neighbors and routing issues
• Examine the OSPFv3 database and routers
Lab 4: Troubleshooting OSPF

Module 6:IS-IS
• Explain the concepts and operation of IS-IS
• Describe various IS-IS link-state PDU types
• List IS-IS adjacency rules and troubleshoot common adjacency issues
• Configure and monitor IS-IS
Lab 5: IS-IS Configuration and Monitoring

Module 7: Advanced IS-IS Operations and Configuration Options
• Present and interpret the IS-IS LSDB
• Identify advanced IS-IS configurations
• Implement IS-IS routing policies
Lab 6: Advanced IS-IS Configuration Options and Routing Policies

Day 3

Module 8: Multilevel IS-IS Networks
• Explain the default operation in a multilevel IS-IS network
• Describe address summarization methods used in IS-IS
• Review a route leaking and summarization case study
Lab 7: Configuring a Multilevel IS-IS Network

Module 9:IS-IS Troubleshooting

• Verify and isolate IS-IS problems
• Analyze IS-IS issues by means of a case study
Lab 8: Troubleshooting IS-IS

Module 10: Border Gateway Protocol
• Provide an overview of BGP
• Identify how BGP operates
• Explain BGP path selection and options
• Describe BGP configuration options
Lab 9: BGP and BGP Attributes

Day 4

Module 11: BGP Attributes and Policy, Part 1
• Describe BGP policy
• Explain how the BGP next hop works
• Evaluate the basics of origin and MED
• Review BGP AS path
Lab 10: BGP Attributes—Next Hop, Origin, MED, and AS Path

Module 12: BGP Attributes and Policy, Part 2
• Describe the BGP attributes local preference
• Manipulate BGP attributes using routing policy
Lab 11: BGP Attributes—Local Preference and Communities

Module 13: Route Reflection and Confederations
• Describe the BGP route reflection operation
• Examine route reflection configuration
• Configure BGP confederations
Lab 12: Scaling BGP

Day 5
Module 14: BGP Route Damping
• Explain the purpose of route flap and damping
• Identify damping parameters
• Configure and monitor route damping
Lab 13: BGP Route Damping

Module 15:BGP Troubleshooting
• Identify IBGP troubleshooting tasks
• Recognize different EBGP and BGP issues
Lab 14: Troubleshooting BGP

Module 16:Policy Troubleshooting
• Assess the basics of routing policy
• Review policy structure
• Evaluate the use of regular expressions
• Identify useful troubleshooting commands
• Review various case studies
Lab 15: Troubleshooting Routing Policy

## Próximas turmas

### 15/03/2027

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| Carga horária | 40 horas |
| Modalidade | Online |
| Horário | 09:00 às 18:00 |

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