Enterprise Computing Solutions - Education Services

NABÍDKA ŠKOLENÍ

Prosím kontaktujte nás zde

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Advanced Junos Enterprise Switching

Kód:	DÉLKA:	CENA:
JUN_AJEX	16 Hours (2 DENNÍ)	Kč bez DPH 42,000.00

Description

Školení je vedeno virtuálně v anglickém jazyce ve školicím středisku Arrow v Anglii.
Cena školení je 1 495 GBP bez DPH - tato cena bude při fakturaci přepočtena aktuálním kurzem.
This four-day course is designed to provide students with the tools required for implementing, monitoring, and troubleshooting Layer 3 components in an enterprise network. Detailed coverage of OSPF, BGP, class of service (CoS), and multicast is strongly emphasized.

The course also exposes students to common troubleshooting commands and tools used to troubleshoot various intermediate to advanced issues. Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring the Junos operating system and in monitoring device and protocol operations.

This course uses Juniper Networks vSRX virtual firewall 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 15.1X49-D80.
Advanced Junos Enterprise Routing (AJER) is an advanced-level course.

Cíle

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

• Describe the various OSPF link-state advertisement (LSA) types.
• Explain the flooding of LSAs in an OSPF network.
• Describe the shortest-path-first (SPF) algorithm.
• Describe OSPF area types and operations.
• Configure various OSPF area types.
• List useful common commands to troubleshoot and verify OSPF.
• Isolate different OSPF issues.
• Summarize and restrict routes.
• Identify scenarios that require routing policy or specific configuration options.
• Use routing policy and specific configuration options to implement solutions for various scenarios.
• Describe basic BGP operation and common BGP attributes.
• Explain the route selection process for BGP.
• Describe how to alter the route selection process.
• Configure some advanced options for BGP peers.
• Describe various BGP attributes in detail and explain the operation of those attributes.
• Manipulate BGP attributes using routing policy.
• List common commands used to troubleshoot and verify BGP.
• Isolate different issues with BGP communication and configuration.
• Describe common routing policies used in the enterprise environment.
• Explain how attribute modifications affect routing decisions.
• Implement a routing policy for inbound and outbound traffic using BGP.
• Isolate problems relating to routing policy structure and configuration.
• Identify common commands for troubleshooting routing policy.
• Identify environments that may require a modified CoS implementation.
• Describe the various CoS components and their respective functions.
• Explain the CoS processing along with CoS defaults on SRX Series Services Gateways.
• Describe situations when some CoS features are used in the enterprise.
• Implement some CoS features in an enterprise environment.
• Verify and troubleshoot CoS.
• Describe IP multicast traffic flow.
• Identify the components of IP multicast.
• Explain how IP multicast addressing works.
• Describe the need for reverse path forwarding (RPF) in multicast.
• Explain the role of Internet Group Management Protocol (IGMP) and describe the available IGMP versions.
• Configure and monitor IGMP.
• Identify common multicast routing protocols.
• Describe rendezvous point (RP) discovery options.
• Configure and monitor Physical Interface Module (PIM) sparse modes.
• Configure and monitor RP discovery mechanisms.
• Describe the basic requirements, benefits, and caveats of source-specific multicast (SSM).
• List the address ranges used for SSM.
• Illustrate the role of Internet Group Management Protocol version 3 (IGMPv3) and PIM sparse mode (PIM-SM) in an SSM implementation.
• Configure and monitor SSM.
• Verify and troubleshoot multicast.
• List command commands used to troubleshoot and verify IS-IS.

Určeno pro

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

Vstupní znalosti

Students should have basic networking knowledge and an understanding of the Open Systems Interconnection (OSI) model and the TCP/IP protocol suite. Students should also have working experience with basic routing principles.
Students should also attend the Introduction to the Junos Operating System (IJOS) and Junos Intermediate Routing (JIR) courses prior to attending this class.

Program

Chapter 1: Course Introduction
Chapter 2: OSPF
• OSPFv2 Review
• Link-State Advertisements
• Protocol Operations
• OSPF Authentication
• OSPFv3
• Lab 1: Configuring and Monitoring OSPF
Chapter 3: OSPF Areas
• Review of OSPF Areas
• Stub Area Operation
• Stub Area Configuration
• NSSA Operation
• NSSA Configuration
• Route Summarization
• Lab 2: Configuring and Monitoring OSPF Areas and Route Summarization
Chapter 4: OSPF Case Studies and Solutions
• IGP Transition Overview
• Transition Case Study
• OSPF Multiarea Adjacencies
• External Reachability
• Virtual Links
Day 1 • Lab 3: Configuring and Monitoring Routing Policy and Advanced OSPF Policy Day 2

Chapter 5: Troubleshooting OSPF
• OSPF Troubleshooting
• >Lab: Troubleshooting OSPF
Chapter 6: BGP
• Review of BGP
• BGP Operations
• Load Balancing Options
• Path Selection and Configuration Options
• Lab: Implementing BGP
Chapter 7: BGP Attributes and Policy
• Policy and BGP
• BGP Attributes
• Details and Manipulation of Common BGP Path Attributes
• Lab: BGP Attributes
Chapter 8: Troubleshooting BGP
• BGP Troubleshooting
• BGP Case Study
• Lab: Troubleshooting BGP
Chapter 9: Enterprise Routing Policies
• Enterprise BGP Core Network Design
• Enterprise External Network Deployment
• Lab: Implementing Enterprise Routing Policies
Chapter 10: Troubleshooting Policies
• Routing Policy Overview
• Routing Policy Structure
• Using Regex
• Routing Policy Troubleshooting
• Case Study
• Lab: Troubleshooting Routing Policies
Chapter 11: Introduction to Multicast
• Overview of Multicast
• Multicast Addressing
• RPF
• IGMP
Day 3 • Lab: PIM-SM Day 4

Chapter 12: Multicast Routing Protocols and SSM
• Overview of Multicast Routing Protocols
• PIM-SM Using the ASM Model
• Lab: Implementing PIM-SM
• PIM-SM Using the SSM Model
• Lab: Implementing SSM
Chapter 13: Troubleshooting Multicast
• Multicast Troubleshooting
• Multicast Case Study
• Lab: Troubleshooting Multicast
Chapter 14: Class of Service
• CoS Components Review and Case Study
• CoS Processing and CoS Defaults on the SRX Series Device
• Policing
• Virtual Channels
• Monitoring with Resource Performance Monitoring
• Lab 9: Implementing CoS Features in the Enterprise
Chapter 15: Troubleshooting Class of Service
• CoS Troubleshooting
• CoS Case Study
• Lab: Troubleshooting Class of Service
Appendix A: BGP Route Reflection
• Route Reflection Operation
• Configuration and Routing Knowledge
• Lab: BGP Route Reflection (Optional)
Appendix B: Troubleshooting IS-IS
• IS-IS Troubleshooting
• Lab: Troubleshooting IS-IS and Mixed Environments
Appendix C: Additional Troubleshooting
• RIP Troubleshooting
• IGP Troubleshooting Case Studies
• IGP Support for IPv6
• Lab: BGP Case Study

Termíny školení

Datum	Místo konání	Časové pásmo	Jazyk	Typ	Garance termínu	CENA
30 May 2024	Virtual Classroom	CEDT	English	Instructor Led Online		Kč bez DPH 42,000.00
16 Sep 2024	Virtual Classroom	CEDT	English	Instructor Led Online		Kč bez DPH 42,000.00
09 Dec 2024	Virtual Classroom	CET	English	Instructor Led Online		Kč bez DPH 42,000.00

Dodatečné informace

Školení je možné zajistit na míru. Kontaktujte nás pro bližší informace.