

JNCIE-ENT Blueprint /w Resources

(click on topic to view list of resources)

(NOTE: Entries marked with an '**' were added by me)

Resource Key

System Services and Security

System Services & Network Management

*** Base System Services & Network Management Resources**

NTP

Syslog

*** SNMP**

Authentication and Authorization

Configuring Archival

RPM

Securing The Control Plane

Stateless Firewall Configuration

Interfaces

Implementation of Interfaces

*** Base Implementation of Interfaces Resources**

Aggregated Ethernet

VRRP

Ethernet OAM

GRE & IP-IP tunnels

Logical Tunnel Interface

BFD

Ethernet Switching

*** Base Ethernet Switching Resources**

Spanning Tree Protocol

Multiple CIST

MSTP

VSTP

RSTP

xSTP Interoperability

Multiple Topologies (MSTP instances??)

Optimization (MSTP/VSTP load balancing??)

Vlans

- [* Base VLAN Resources](#)
 - [Vlan Switching & Trunking](#)
 - [Q-in-Q](#)
 - [IP Telephony](#)
 - [Private Vlans](#)

Virtual Chassis

- [* Base Virtual Chassis Resources](#)
 - [Master determination](#)
 - [Add/remove members](#)
 - [VCP and VCEP interfaces](#)
 - [Split detection](#)

Security Features

- [* Base Security Feature Resources](#)
 - [Port Security features](#)
 - [Dynamic ARP inspection with DHCP snooping](#)
 - [* Port-based Authentication / Network Access Control](#)
 - [* EX Device Security - Storm Control](#)
 - [Layer 2 firewall filters](#)
 - [MAC table filtering \(??????\)](#)

IGPs

OSPF

- [* Base OSPF Resources](#)
 - [Multi-area OSPF topologies](#)
 - [Filter and Summarize Routes](#)
 - [Network and Link Types](#)
 - [Multi-topology Routing \(MTR\) - REMOVED from blueprint](#)
 - [Route Selection Process](#)
 - [BFD](#)
 - [Redistribution](#)
 - [IPv6](#)

BGP

Implementation and Troubleshooting

- [* Base BGP Resources](#)
 - [Routing Policy](#)
 - [Route Selection](#)
 - [2-byte and 4-byte AS](#)
 - [Multi-homed stub-AS](#)

BFD

Protocol Independent Routing

* Base PIR Resources

Load Balancing

* Base Load Balancing Resources

Hash key

Per flow

Filter-based forwarding

Based on Layer 4

Based on IFL (?? Interface match criteria? all inbound traffic on a specific interface?)

Configuring Routes

* Base Configuring Route Resources

Aggregate

Static

Generated

Policies

* Sharing Routes Between Routing Tables (RIB groups)

Multicast

*Base Multicast Resources

Implementation of Multicast

Shared Tree and Source Tree

Designated Router

RPF table manipulation

SSM

Extend the group range

SSM mapping

RP Redundancy

Anycast RP (PIM and MSDP)

Class of Service

Implementation

* Base Class of Service Resources

Loss Priority

Rewrite Rules

Shaping and policing

Scheduling

BA and MF classification

[Drop profiles](#)

Beginning of Index

Resource Key:

JES 1st Ed (O'Reilly) = Junos Enterprise Switching (1st Edition) Reynods & Marchke

JER 2nd Ed. (O'Reilly) = Junos Enterprise Routing (2nd Edition) Southwick, Marschke & Reynolds

JNCIA-Junos—Part 1 (Juniper Study Guide) = Free JNCIA Study Guide - [Fast Track Program](#)

JNCIS-ENT Switching (Juniper Study Guide) = Free JNCIS Study Guide - [Fast Track Program](#)

AJER (rev-11.a) = Advanced Junos Enterprise Routing courseware - [Courseware Store](#)

AJEX (rev-10.b) = Advanced Junos Enterprise Routing courseware - [Courseware Store](#)

System Services and Security

System Services & Network Management

* **Base System Service & Network Management Resources**

- [Junipers System Basics Configuration guide](#)
- [Network Management Configuration Guide \(SNMP & RMON\)](#)
- [System Basics](#)

[Back to Top](#)

NTP

- JES 1st ed (O'Reilly) - ch. 3 p. 179
- JNCIA-Junos—Part 1 (Juniper Study Guide) ch. 4 p. 12-13
- [Time Management \(NTP\) Home](#)
- [Juniper Day One - Configuring System Basics](#)

[Back to Top](#)

Syslog

- JES 1st ed (O'Reilly) - ch. 3 p. 170
- JNCIA-Junos—Part 1 (Juniper Study Guide) ch. 4 p. 6-8
- [System Log Messages Configuration Guide](#)
- [Juniper Day One - Configuring System Basics](#)

[Back to Top](#)

* **SNMP**

- JES 1st ed (O'Reilly) - ch. 3 p. 176
- JNCIA-Junos—Part 1 (Juniper Study Guide) ch. 4 p. 14-16
- [Juniper SNMP Best practices](#) (PDF)
- [Juniper Day One - Configuring System Basics](#)

[Back to Top](#)

Authentication and Authorization

- JNCIA-Junos—Part 1 (Juniper Study Guide) Chapter 4 p. 1-6
- JES 1st ed (O'Reilly) - ch. 3 p. 124

- [User Access and Authentication Configuration Guide](#)

[Back to Top](#)

Configuring Archival

- JNCIA-Junos—Part 1 (Juniper Study Guide) Ch. 4 p. 4-13
- [Configuring Archival](#)
- [Day One Guide - Configuring Junos Basics](#)
- [Juniper Learning Bytes - Configuration Archival](#)
- [My Archival Notes](#)

[Back to Top](#)

RPM

- AJER (rev-11.a) ch. 10 (Class of Service) p. 45-50
- JER 2nd Ed. (O'Reilly) ch. 9 p. 412 (I think this incorrectly explains “probe-interval”)
- [Understanding Real-Time Performance Monitoring](#)
- [Junos Learning Byte - Real-time Performance Monitoring \(RPM\)](#)

[Back to Top](#)

Securing the Control Plane

Stateless Firewall Configuration

- JER 2nd Ed. (O'Reilly) ch. 6 p. 364-365
- [Junos firewall Filter Documentation Home](#)
- [Configuring a Firewall Filter to Protect Against TCP and ICMP Floods](#)
- [Configuring a Firewall Filter to Allow Trusted Sources](#)
- [rfc6192 Protecting the Router Control Plane](#)
- [Protecting Juniper routers from DoS attacks](#) (PDF)

[Back to Top](#)

Interfaces

Implementation of Interfaces

*** Base ‘Implementation of Interfaces’ Resources**

- [Juniper Main Interfaces Page](#)
- [Junos High Availability Resources Home](#)
- [Tunnel Services Home \(gre, lt, etc\)](#)

[Back to Top](#)

Aggregated Ethernet

- JER 2nd Ed. (O'Reilly) ch 4 & 9 p. 101-102, 409-410
- JES 1st ed (O'Reilly) - ch. 11 p. 615-629
- JNCIS-ENT Switching (Juniper Study Guide) - ch. 6 p. 3-9

- JNCIA-Junos—Part 1 (Juniper Study Guide) Appendix A: Interface Configuration Examples p. A-4
- [Aggregated Ethernet Interfaces](#)
- [Configuring LACP on Standalone Devices](#)

[Back to Top](#)

VRRP

- JER 2nd Ed. (O'Reilly) - Ch. 4 p. 104-108
- JNCIS-ENT Routing Study Guide - Chapter 6 p. 19-24
- [Understanding VRRP](#)
- [VRRP and VRRP for IPv6](#)

[Back to Top](#)

Ethernet OAM

- **NOTE:** for the JNCIE-ENT, since the OAM topic falls under “Interfaces” on the blue-print, my guess is that only LFM will be a testable feature.
- JES 1st ed (O'Reilly) - ch. 3 p. 158 -160
- [Network Management and Monitoring Home](#) (OAM, RPM, Port Mirroring, & sFlow)
- [Understanding Ethernet OAM Link Fault Management](#)
- [Understanding Ethernet OAM Connectivity Fault Management](#)
- [OAM LFM: Part 1 - The theory \(David Roy blog\)](#)
- [OAM LFM: Part 2 - Junos implementation \(David Roy blog\)](#)

[Back to Top](#)

GRE & IP-IP tunnels

- JNCIS-ENT Routing (Juniper Study Guide) - ch. 5 - IP Tunneling p. 1
- JNCIS-ENT Routing (Juniper Study Guide) - ch. Appendix A IPv6 p. A-16
- JER 2nd Ed. (O'Reilly) - Ch. 9 p. 407
- [Configuring unicast tunnels](#) (GRE & IP-IP)
- [Example: Configuring Unicast Tunnels](#)
- [GRE Wiki page](#)

[Back to Top](#)

Logical Tunnel Interface

- JNCIS-ENT-Routing Study Guide / Ch. 1 - PIR p. 1-19
- JES 1st ed (O'Reilly) - ch. 9 p. 417 (limited coverage)
- [Configuring Logical Tunnel Interfaces](#)

[Back to Top](#)

BFD

- JES 1st ed (O'Reilly) - ch. 3 p. 75
- JNCIS-ENT Routing Study Guide - Ch 6. p. 15
- [IETF RFC 5881](#)
- [Whats the BFD with BFD - by Stefan Fouant](#)
- [Cloudshark BFD control packet pcap](#)

[Back to Top](#)

Ethernet Switching

Base Ethernet Switching Resources

[All Important EX topics -- Junos 11.4](#)

[Learning Byte - Configuring L3 routed VLAN interfaces](#)

[Day One Guide - Configuring EX Series Ethernet Switches](#)

[Junos Ethernet Switching Topics](#)

[Back to Top](#)

Spanning Tree Protocol

* **Base Spanning-Tree Resources**

- [Spanning-tree for EX Home](#)
- [STP/RSTP/MSTP/VSTP EX deployment guide](#)

[Back to Top](#)

BPDU Protection

- JES 1st ed (O'Reilly) - ch. 6 p. 368
- JNCIS-ENT Switching (Juniper Study Guide) - ch. 3 p. 21-24
- [Understanding BPDU Protection for STP, RSTP, and MSTP on EX Series Switches](#)
- [Configuring BPDU Protection on Edge Interfaces to Prevent STP Miscalculations on EX Series Switches](#)
- [Configuring BPDU Protection on Interfaces to Prevent STP Miscalculations on EX Series Switches](#)

[Back to Top](#)

Root Protection

- JES 1st ed (O'Reilly) - ch. 6 p. 368
- JNCIS-ENT Switching (Juniper Study Guide) - ch. 3 p. 26-28
- [Understanding Root Protection for xSTP on EX Series Switches](#)
- [Configuring Root Protection to Enforce Root Bridge Placement in Spanning Trees on EX Series Switches](#)

[Back to Top](#)

Loop Protection

- JNCIS-ENT Switching (Juniper Study Guide) - ch. 3 p. 24-26
- [Understanding Loop Protection for xSTP on EX Series Switches](#)
- [Configuring Loop Protection to Prevent Interfaces from Transitioning from Blocking to Forwarding in a Spanning Tree on EX Series Switches](#)

[Back to Top](#)

Multiple CIST

- AJEX (rev-10.b) - ch. 3 p. 13
- JES 1st ed (O'Reilly) - ch. 6 p. 370-372
- [Multiple Spanning Tree Protocol \(Covers CST\)](#)

[Back to Top](#)

MSTP

- AJEX (rev-10.b) - ch. 3 p. 10
- JES 1st ed. (O'Reilly) - ch. 6 p. 369-377
- [Understanding MSTP](#)
- [Configuring Network Regions for VLANs with MSTP](#)

[Back to Top](#)

VSTP

- AJEX (rev-10.b) - ch.3 p. 23
- [Understanding VSTP](#)
- [Configuring VSTP](#)

[Back to Top](#)

RSTP

- JNCIS-ENT Switching (Juniper Study Guide) - ch. 3 p. 11
- JES (O'Reilly) - ch. 6 p. 338-350 & 361-368
- [Understanding RSTP](#)
- [Configuring Faster Convergence and Improving Network Stability with RSTP](#)

[Back to Top](#)

xSTP Interoperability

- AJEX (rev-10.b) - ch.3 p. 13 MSTP to STP via CST
- AJEX (rev-10.b) - ch.3 p. 25 VSTP and RSTP on same switch to extend VLAN range

[Back to Top](#)

Multiple Topologies (MSTP instances??)

- MSTI's

[Back to Top](#)

Optimization (MSTP/VSTP load balancing??)

[Back to Top](#)

Vlans

Base VLAN Resources

- JES 1st ed. (O'Reilly) Ch. 5 - Virtual LANs and Trunking
- JNCIS-ENT Switching (Juniper Study Guide) ch. 2 - Virtual Local Area Networks
- AJEX (rev-10.b) - ch. 2 Advanced Ethernet Switching
- [Ethernet Switching on EX Series Switches Home](#)

[Back to Top](#)

Vlan Switching & Trunking

- [EX Ethernet Switching Home](#)
- [Understanding Bridging and VLANs on EX Series Switches](#)

[Back to Top](#)

*** MVRP**

- AJEX (rev-10.b) - ch.3 p. 28

- [Understanding Multiple VLAN Registration Protocol \(MVRP\)](#)
- [Configuring Automatic VLAN Administration Using MVRP](#)
- [Configuring Multiple VLAN Registration Protocol \(MVRP\)](#)

[Back to Top](#)

* Redundant Trunk Links/Group

- JES 1st ed (O'Reilly) - ch. 6 p. 377-381
- JNCIS-ENT Switching (Juniper Study Guide) ch. 6 p. 10-13
- [Redundant Trunk Links on EX Series Switches](#)
- [Configuring Redundant Trunk Links for Faster Recovery](#)

[Back to Top](#)

Q-in-Q

- JES 1st ed. (O'Reilly) Ch. 5 pg 271-272
- AJEX (rev-10.b) - Ch. 2 p 40-54
- [Configuring Q-in-Q Tunneling \(CLI Procedure\)](#)
- [Example: Setting Up Q-in-Q Tunneling on EX Series Switches](#)
- [Verifying That Q-in-Q Tunneling Is Working](#)

[Back to Top](#)

* L2PT

- JES 1st ed. (O'Reilly) No Reference Found
- AJEX (rev-10.b) - Ch. 2 p. 55-60
- [Understanding Layer 2 Protocol Tunneling on EX Series Switches](#)
- [Configuring Layer 2 Protocol Tunneling on EX Series Switches](#)

[Back to Top](#)

IP Telephony

- AJEX (rev-10.b) - Ch. 5 p. all
- JES 1st ed (O'Reilly) - ch. 10 p. 559-590
- [Deploying IP Telephony with EX switches \(complete coverage\)](#)
- [Voice Over IP EX Switch Learning Byte](#)

[Back to Top](#)

* Power Over Ethernet

- JES 1st ed (O'Reilly) - ch. 10 p. 564-567
- AJEX (rev-10.b) - ch. 5 p. 6-14
- [PoE and EX Series Switches Overview](#)
- [Configuring PoE Interfaces on an EX Series Switch](#)

[Back to Top](#)

* LLDP/LLDP-MED

- JES 1st ed (O'Reilly) - ch. 10 p. 568-577
- AJEX (rev-10.b) - ch. 5 p. 15-27
- [Understanding LLDP and LLDP-MED on EX Series Switches](#)
- [Setting Up VoIP with LLDP-MED on an EX Series Switch](#)
- [Configuring LLDP](#)

[Back to Top](#)

*** Voice VLAN**

- JES 1st ed (O'Reilly) - ch. 10 p. 577
- AJEX (rev-10.b) - ch. 5 p. 528-529
- [Configuring VoIP on an EX Series Switch Without Including LLDP-MED Support](#)

[Back to Top](#)

Private Vlans

- AJEX (rev-10.b) - ch. 2 p. 15
- JES 1st ed (O'Reilly) - No Reference Found
- [PVLAN multiple switches \(requires vlan tag\)](#)
- [PVLAN single switch \(no vlan tag required\)](#)
- [Understanding PVLAN across Multiple Switches](#)

[Back to Top](#)

Virtual Chassis

Base Virtual Chassis Resources

- JES 1st ed (O'Reilly) - ch. 4 - EX Virtual Chassis
- JNCIS-ENT Switching (Juniper Study Guide) ch. 6 p. 13 - High Availability
- [EX4200 Virtual Chassis Documentation Home](#)

[Back to Top](#)

Master determination

- JES 1st ed (O'Reilly) - ch. 4 p. 198
- JNCIS-ENT Switching (Juniper Study Guide) Ch. 6 p. 18
- [Understanding How the Master in a Virtual Chassis is Elected](#)
- [Configuring an EX4200 or EX4500 Virtual Chassis](#)

[Back to Top](#)

Add/remove members

- JES 1st ed (O'Reilly) - ch. 4 p. 237-238
- JNCIS-ENT Switching (Juniper Study Guide) Ch. 6 p. 19
- [Configuring an EX4200 or EX4500 Virtual Chassis](#)

[Back to Top](#)

VCP and VCEP interfaces

- JES 1st ed (O'Reilly) - ch. 4 p. 191, 199-205, 259-263
- [VCP - High-Speed Interconnection of EX Virtual Chassis Members](#)
- [VCEP - VC Extension over SFP ports](#)

Split detection

- [Understanding Split and Merge in an EX4200](#)
- [Configuring an EX4200 or EX4500 Virtual Chassis](#)

[Back to Top](#)

Security Features

*** Base Security Feature Resources**

- JES 1st ed (O'Reilly) - ch. 9 (Port Security & Access Control)
- JNCIS-ENT Switching (Juniper Study Guide) Ch 4 Port Security

- AJEX (rev-10.b) - Ch. 4 Authentication and Access Control
- [EX Port Security Home Page](#)
- [EX Network Authentication Home Page \(802.1x, MAC RADIUS, etc...\)](#)
- [Protecting Access Ports on EX-series Switches from Common Attacks](#)

[Back to Top](#)

Port Security features

DHCP Snooping Only - Rogue DHCP Server Protection

- JES 1st ed (O'Reilly) - ch. - Ch. 9 p. 524
- JNCIS-ENT Switching (Juniper Study Guide) Ch. 4 p. 7-12
- [Protect the Switch from Rogue DHCP Server Attacks](#)

[Back to Top](#)

DHCP Snooping w/ DAI - ARP Spoofing Protection

- JES 1st ed (O'Reilly) - ch. 9 p. 524-530
- JNCIS-ENT Switching (Juniper Study Guide) Ch. 4 p. 13-15
- [Understanding DAI for Port Security on EX-series Switches](#)
- [Protect the Switch from ARP Spoofing Attacks](#)
- [Enabling Dynamic ARP Inspection \(CLI Procedure\)](#)

[Back to Top](#)

MAC Limiting (2 kinds “allowed-mac” & “mac-limit”) - MAC Flooding/DHCP Exhaustion Protection (i.e. macof tool)

- JES 1st ed (O'Reilly) - ch. 9 p. 515-522
- JNCIS-ENT Switching (Juniper Study Guide) Ch. 4 p. 2
- [Protect the Switch from Ethernet Switching Table Overflow Attacks](#)
- [Protect the Switch from DHCP Starvation Attacks](#)

[Back to Top](#)

MAC Move Limiting - L2 Loop and MAC Spoofing Protection

- JES 1st ed (O'Reilly) - ch. 9 p. 516
- JNCIS-ENT Switching (Juniper Study Guide) Ch. 4 p. 4
- [Configuring MAC Move Limiting](#)

[Back to Top](#)

DHCP Snooping w/ DAI, MAC Limiting, and MAC Move Limiting

- [Configuring DHCP Snooping, DAI , and MAC Limiting on an EX-series Switch with Access to a DHCP Server Through a Second Switch](#)
- [Configuring Port Security, with DHCP Snooping, DAI, MAC Limiting, and MAC Move Limiting, on an EX-series Switch](#)

IP Source Guard - IP Spoofing protection

- JNCIS-ENT Switching (Juniper Study Guide) Ch. 4 p. 416-419
- JES 1st ed (O'Reilly) - ch. 9 p. 524
- [Mitigate Address-Spoofing Attacks on Untrusted Access Interfaces](#)
- [Configuring IP Source Guard](#)
- [Configuring IP Source Guard on a Data VLAN That Shares an Interface with a Voice VLAN](#)

[Back to Top](#)

Port-based Authentication / Network Access Control (IEEE 802.1x, MAC radius, etc)

- JES 1st ed (O'Reilly) - ch. 9
 - 802.1x p. 530-550
 - MAC RADIUS ch. 9 p. 550-555
- AJEX (rev-10.b) - ch. 4 - Authentication and Access Control
 - 802.1x p. 10-28 (802.1x)
 - MAC RADIUS p. 28-33
 - Captive Portal p. 35-44
- [EX Network Authentication Home Page \(802.1x, MAC RADIUS, etc...\)](#)
- [Understanding Authentication on EX Series Switches](#)
- [Understanding Guest VLANs for 802.1X on EX Series Switches](#)
- [Setting Up Captive Portal Authentication on an EX Series Switch](#)

[Back to Top](#)

EX Device Security - Storm Control

- JES 1st ed (O'Reilly) - ch. 8 p. 502
- JNCIS-ENT Switching (Juniper Study Guide) ch. 5 p. 1-4
- [EX Device Security Home Page](#)
- [Understanding Storm Control on EX Series Switches](#)
- [Understanding Unknown Unicast Forwarding on EX Series Switches](#)

[Back to Top](#)

Layer 2 firewall filters

- JES 1st ed (O'Reilly) - ch. 8 p. 478
- JNCIS-ENT Switching (Juniper Study Guide) ch. 5 p. 5-14
- [EX Filtering/Routing Policy Home](#)
- [Firewall Filters for EX Series Switches Overview](#)
- [Configuring Firewall Filters for Port, VLAN, and Router Traffic on EX Series Switches](#)

[Back to Top](#)

MAC table filtering

- ??????????

IGP

OSPF

Base OSPF Resources

- JNCIS-ENT Routing (Juniper Study Guide) ch. 3
- AJER (rev-11.a) ch. 2,3 & 4
- [OSPF Resource Home](#)

[Back to Top](#)

Multi-area OSPF topologies

- JNCIS-ENT Routing (Juniper Study Guide) ch. 3 p. 11-13
- AJER (rev-11.a) ch. 3 p. 1-26
- [OSPF Areas and Router Functionality Overview](#)
- [Examples: Configuring OSPF Areas](#)

* Stub

- AJER (rev-11.a) ch. 3 p. 8-16
- [Configuring OSPF Stub and Not-So-Stubby Areas](#)

* NSSA

- AJER (rev-11.a) ch. 3 p. 17-26
- [Configuring OSPF Stub and Not-So-Stubby Areas](#)

* Multi-area Adjacency

- AJER (rev-11.a) ch. 4 p. 20-28
- [Configuring OSPF Multi-area Adjacency](#)

Virtual Links

- AJER (rev-11.a) ch. 4 p. 45-60
- [Configuring OSPF virtual links](#)

[Back to Top](#)

Filter and Summarize Routes

- JER 2nd Ed. (O'Reilly) ch. 6 p. 227
- AJER (rev-11.a) ch. 3 p. 27-31
- [Configuring OSPF Route Summarization](#)
- [Configuring Routing Policy for Network Summaries](#)
- [JNCIE Tips from the Field :: Summarization Made Easy Written by Stefan Fouant](#)

[Back to Top](#)

Network and Link Types

- [Configuring OSPF Interfaces](#) (point-to-point, passive, etc..)
- [Configuring OSPF Authentication](#)

Multi-topology Routing (MTR) - REMOVED from blueprint

Route Selection Process

- JNCIS-ENT Routing (Juniper Study Guide) ch. 3 p. 16
- [Configuring OSPF Traffic Control](#) (metric, reference-bandwidth, & OSPF Preference)
- [Configuring OSPF Overload Mode](#)

[Back to Top](#)

BFD

- JNCIS-ENT Routing (Juniper Study Guide) ch. 6 p. 15-18
- [Configuring BFD for OSPF](#)
- [Configuring BFD Authentication for OSPF](#)

Redistribution

- JNCIS-ENT Routing (Juniper Study Guide) ch. 3 p. 17
- [Configuring OSPF Routing Policy](#)

IPv6

- JNCIS-ENT Routing (Juniper Study Guide) Appendix A: IPv6
- [Configuring OSPFv3 for IPv6](#)
- [Day One: Exploring IPv6](#)

[Back to Top](#)

BGP

Implementation and troubleshooting

*** Base BGP Resources**

- JNCIS-ENT Routing (Juniper Study Guide) ch. 4
- AJER (rev-11.a) ch. 5,6, & 7
- JER 2nd Ed. (O'Reilly) ch. 7
- [BGP Resource Home](#)

[Back to Top](#)

Routing Policy

- JER 2nd Ed. (O'Reilly) ch. 7 p. 292-334
- AJER (rev-11.a) ch. 6 & 7 p. all
- [Configuring BGP Route Advertisement](#)
- [Configuring BGP Local Preference](#)

[Back to Top](#)

Route Selection

- JER 2nd Ed. (O'Reilly) ch. 7 p. 253
- JNCIS-ENT Routing (Juniper Study Guide) ch. 4 p. 14
- [Understanding BGP Path Selection](#)

2-byte and 4-byte AS

- [Configuring BGP Local AS](#)
- [Configuring 4-byte Autonomous System Numbers](#)
- 'help topic bgp local-as | find 4-byte'
- [RFC 4893 - BGP Support for Four-octet AS Number Space](#)

[Back to Top](#)

Multi-homed stub-AS

- AJER (rev-11.a) ch. 7 p. 28-50
- JER 2nd Ed. (O'Reilly) ch. 7 p. 292-334

[Back to Top](#)

BFD

- JNCIS-ENT Routing (Juniper Study Guide) ch. 6 p. 15-18
- > help topic bgp bfd-liveness-detection
- [Configuring Bidirectional Forwarding Detection for BGP](#)

[Back to Top](#)

Protocol-Independent Routing

*** Base PIR Resources**

- JER 2nd Ed. (O'Reilly) ch. 5
- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 & 2
- [Protocol-Independent Routing Properties Configuration Guide](#)

[Back to Top](#)

Load Balancing

*** Base Load Balancing Resources**

- JNCIS-ENT Routing (Juniper Study Guide) ch. 2 p. 1-8
- [Configuring Per-Packet Load Balancing](#)

Hash key

- JNCIS-ENT Routing (Juniper Study Guide) ch. 2 p. 1-8
- [Configuring Per-Packet Load Balancing](#)

Per flow

- JNCIS-ENT Routing (Juniper Study Guide) ch. 2 p. 1-8
- [Configuring Per-Packet Load Balancing](#)

[Back to Top](#)

Filter-based forwarding

- JNCIS-ENT Routing (Juniper Study Guide) ch. 2 p. 9-17
- [Filter-Based Forwarding Overview](#)
- 'help topic routing-instances filter'

Based on Layer 4

- See above resources

Based on IFL (?? Interface match criteria? all inbound traffic on a specific interface?)

[Back to Top](#)

Configuring Routes

*** Base Configuring Route Resources**

- JER 2nd Ed. (O'Reilly) ch. 5 p. 122-129
- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 p. 1-11
- [Protocol-Independent Routing Properties](#)

[Back to Top](#)

Aggregate

- JER 2nd Ed. (O'Reilly) ch. 5 p. 122-129
- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 p. 5-8

- [Summarizing Static Routes Through Route Aggregation](#)

Static

- JER 2nd Ed. (O'Reilly) ch. 5 p. 122-129
- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 p. 1-4
- [Configuring Static Routes](#)

[Back to Top](#)

Generated

- JER 2nd Ed. (O'Reilly) ch. 5 p. 122-129
- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 p. 8-11
- [Conditionally Generating Static Routes](#)

Policies

- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 p. 11
- [Routing Policy Configuration Guide](#)

[Back to Top](#)

*** Sharing Routes Between Routing Tables (RIB groups)**

- JNCIS-ENT Routing (Juniper Study Guide) ch. 1 p. 17-18

Multicast

***Base Multicast Resources**

- JER 2nd Ed. (O'Reilly) ch. 11
- AJER (rev-11.a) ch. 8 & 9
- [Multicast Protocols Configuration Guide](#)

[Back to Top](#)

Implementation of Multicast

Shared Tree and Source Tree

- AJER (rev-11.a) ch. 8 p. 21-27 & ch. 9 p. 5-43
- JER 2nd Ed. (O'Reilly) ch. 11 p. 530-580
- [Configuring PIM Sparse Mode](#)
- [Configuring PIM Bootstrap Router](#)
- [Configuring Administrative Scoping](#)
- [Multicast Protocols Configuration Guide](#)

[Back to Top](#)

Designated Router

- AJER (rev-11.a) ch. 8 p. 6
- [Configuring a Designated Router for PIM](#)

RPF table manipulation

- [Configuring Reverse Path Forwarding](#)

[Back to Top](#)

SSM

*** Base SSM Resources**

- AJER (rev-11.a) ch. 9 p. 46-52
- [Configuring Source-Specific Multicast](#)

Extend the group range

- 'help reference routing-options ssm-groups'
- [Configuring Source-Specific Multicast](#) (ssm-groups)

[Back to Top](#)

SSM mapping

- AJER (rev-11.a) ch. 9 p. 52
- [Configuring SSM Maps for Different Groups to Different Sources](#)

RP Redundancy

Anycast RP (PIM and MSDP)

- JER 2nd Ed. (O'Reilly) ch. 11 p. 580-590
- [Configuring Anycast RP](#)

[Back to Top](#)

Class of Service

Base Class of Service Resources

SRX

- JER 2nd Ed. (O'Reilly) ch. 10
- AJER (rev-11.a) ch. 10
- [CoS Components](#)

[Back to Top](#)

EX

- JES 1st ed (O'Reilly) - ch. 10 p. 560-564 (light coverage)
- AJEX (rev-10.b) - ch. 6
- [Class of Service for EX](#)

Implementation

Loss Priority

SRX

- AJER (rev-11.a) ch. 10 p. 19-20
- [Configuring Behavior Aggregate Classifiers](#)

EX

- AJEX (rev-10.b) - ch. 6 p. 12

- [Defining CoS Classifiers](#)

[Back to Top](#)

Rewrite Rules

SRX

- AJER (rev-11.a) ch. 10 p. 21
- [Configuring and Applying Rewrite Rules](#)

EX

- AJEX (rev-10.b) - ch. 6 p. 31
- [Defining CoS Rewrite Rules](#)

[Back to Top](#)

Shaping and policing

- AJER (rev-11.a) ch. 10 p. 31-37
- AJEX (rev-10.b) - ch. 6 p. 12
- [Configuring a Two-Rate Three-Color Policer](#)

Scheduling

SRX

- AJER (rev-11.a) ch. 10 p. 22-29
- [Configuring Class-of-Service Schedulers](#)
- [Configuring and Applying Scheduler Maps](#)

EX

- AJEX (rev-10.b) - ch. 6 p. 23-24
- [Defining CoS Schedulers](#)

[Back to Top](#)

BA and MF classification

SRX

- AJER (rev-11.a) ch. 10 p. 18-20
- [Configuring Behavior Aggregate Classifiers](#)
- [Configuring and Applying a Firewall Filter for a Multifield Classifier](#)

EX

- AJEX (rev-10.b) - ch. 6 p. 8 & 22
- [Defining CoS Classifiers](#)

[Back to Top](#)

Drop profiles

SRX

- AJER (rev-11.a) ch. 10 p. 27
- [Configuring RED Drop Profiles](#)

EX

- AJEX (rev-10.b) - ch. 6 p. 12
- [Configuring CoS Tail Drop Profiles](#)

[Back to Top](#)

Resource Key:

JES 1st Ed (O'Reilly) = Junos Enterprise Switching (1st Edition) Reynods & Marchke

JER 2nd Ed. (O'Reilly) = Junos Enterprise Routing (2nd Edition) Southwick, Marschke & Reynolds

JNCIA-Junos—Part 1 (Juniper Study Guide) = Free JNCIA Study Guide - [Fast Track Program](#)

JNCIS-ENT Switching (Juniper Study Guide) = Free JNCIS Study Guide - [Fast Track Program](#)

AJER (rev-11.a) = Advanced Junos Enterprise Routing courseware - [Courseware Store](#)

AJEX (rev-10.b) = Advanced Junos Enterprise Routing courseware - [Courseware Store](#)

Additional Juniper online resource links:

[Juniper Learning Bytes](#)

[Juniper Day One Books:](#)

[SRX JumpStation:](#)

[EX Series Documentation Home](#)