

Juniper BGP

This BGP training covers the fundamentals of implementing Border Gateway Protocol to optimize Juniper network traffic. You'll learn how to set up Juniper devices so that they can automatically, programmatically identify their neighbors and relay traffic efficiently. The Border Gateway Protocol is the best way available for making autonomous systems work, and this course shows you how to optimize Juniper devices with BGP.

[CBT Nuggets course material](#) →

WEEK 1

Configure Basic BGP on Junos

158 min.

Introducing BGP	2
Why BGP Exists	16
Configuring Basic BGP Adjacencies (Multi-Vendor)	19
Group Types (aka, eBGP vs iBGP)	12
Advertising Prefixes	9
Next-Hop Self	5
Where MPLS Fits In	8
A Note About iBGP Scaling Problems	6
Summarizing BGP Configurations	1

Understand the BGP Best Path Selection Algorithm

Overview	1
First Things First...	4
Local Preference	6
Accumulated Interior Gateway Protocol (AIGP)	7
AS-PATH (Like a Hop Count)	12
Origin Code	5
Multi-Exit Discriminator (MED)	4
eBGP vs iBGP	5
Lowest IGP Metric (Closest Exit)	4
Oldest Path	1
Router ID	4
Cluster List	4
IP Address	2
Summarizing BGP Best Path Selection	1

Advanced BGP Foundations

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The Point of BGP (Refreshed)	15

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155 min.

BGP Messages	11
BGP Advertisement Rules	12
Next Hop Solutions in iBGP	7
A Basic BGP Config on Junos	23
BGP Best Path Selection Crash Course	8
BGP Authentication	6
Summarizing BGP Foundations	1

Understand and Configure BGP FlowSpec

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Introducing FlowSpec	2
The Point of BGP FlowSpec (and DDoS Attacks)	12
Prepare for BGP FlowSpec	12
CE: Configure Flow Specification	8
CE: Create and Export FlowSpec Policy	5
PE: Create a Community	4
PE: Create an Import Policy	8
Validate FlowSpec	6
Generating FlowSpecs Internally for Clients	14
Summarizing FlowSpec	1

Advanced BGP Configurations and Policies

Overview	1
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Introducing BGP Manipulation and Engineering	2
Configure GTSM	9

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156 min.

Dynamic Neighbor Adjacencies	6
BGP Database Protection	6
BGP Attribute Types	6
Configure Local Preference Policies	8
AS PATH: Loops	8
AS Override	5
Remove Private ASs	6
AS PATH Prepend and Expand	6
Route Aggregation	6
Summarizing BGP Attributes	1

BGP Scaling Solutions

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Introducing BGP Scaling	2
The Point of Route Reflectors	9
Configuring Route Reflectors on Junos	10
Design: Full Mesh Core	6
Design: Redundant Route Reflectors Within a Cluster	8
Design: Hierarchical Route Reflectors	5
Design: Full Mesh Cluster with Redundant Route Reflectors	6
Design: Virtual Route Reflectors	6
Optimal Route Reflection (ORR)	8
Confederations	6

Summarizing BGP Scale 1

Advanced BGP Attribute and Community Manipulation

Overview 1

Introducing (more) Attribute Configurations 2

RegEx and AS Paths 11

Origin Code 6

MED (Multi-Exit Discriminator) 8

WEEK 4

84 min.

BGP Communities Fundamentals 6

No Advertise Community 6

No Export (Subconfed) Community 7

Custom Communities for Grouping NLRIs 6

Summarizing Advanced BGP Manipulations 1

Understand and Configure BGP Route Damping

Overview 1

Introducing BGP Route Damping 1

The Impact of Flapping Routes 14

Figures of Merit 11

Enable BGP Route Damping 5

Create Custom Damping Profiles 9

Create and Apply Damping Policies 8

Validate Route Damping 6

Summarizing BGP Route Damping 1