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Juniper bgp configuration commands

Junos OS does not advertise the pathways learned from an EBGp peer back to the same external BGP (EBGP) peer. In addition, the software does not advertise these routes back to any EBGp peers that are in the same autonomous system (AS) as the original peer, regardless of the routing instance. You can change this behavior by including the statement `advertise-peer-as` in the configuration. If you include the statement of `advertise-peer-as` in the configuration, BGP advertises the route regardless of this control. To reset the default behavior, include the `no-advertise-peer-as` statement in the configuration. The default route suppression behavior is disabled if the `as-override` clause is included in the configuration. If you include both `as-override` and `no-advertise-peer-as` statements in the configuration, the `no-advertise-peer-as` statement is ignored. No special configuration beyond device initialization is required before configuring this example. Overview This example shows three routing devices with external BGP (EBGP) connections. Unit R2 has an EBGp connection to Unit R1 and another EBGp connection to Unit R3. Although they are separated by Unit R2 which is in AS 64511, Device R1 and Device R3 are in the same AS (AS 64512). Device R1 and Device R3 advertise in BGP direct routes to their own loopback interface addresses. Device R2 receives these loopback ui ui paths, and the advertised peer-as statement allows Device R2 to advertise them. Specifically, Device R1 sends the 192.168.0.1 route to Device R2, and because Device R2 has the advertised peer-as configured, Device R2 can send the 192.168.0.1 route to Device R3. Similarly, Device R3 sends the 192.168.0.3 route to Device R2, and advertises peer-as enables Device R2 to forward the route to Device R1. To enable Device R1 and Drive R3 to accept routes that contain their own AS number in the AS path, the 2-statement loops on Unit R1 and Unit R3 are required. To quickly configure this example, copy the commands following, paste them into a text file, remove any line breaks, change any details necessary to match your network configuration, and then copy and paste the commands into the [edit] hierarchy level. set interfaces fe-1/2/0 unit 0 family inet address 10.0.0.1/30 set interfaces lo0 unit 0 family inet address 192.168.0.1/32 set protocols bgp family inet unicast loops 2 set protocols bgp group ext type external set protocols bgp group ext export send-direct set protocols bgp group ext peer-as 64511 10.0.0.2 set policy-options policy-statement send-direct term 1 from protocol direct set policy-options policy-statement send-direct term 1 then accept set routing-options autonomous-system 64512 set interfaces fe-1/2/0 unit 0 family inet address 10.0.0.2/30 set interfaces fe-1/2/1 unit 0 family inet address 10.1.0.1/30 set interfaces unit 0 family inet address 192.168.0.2/32 set protocols bgp group ext type external set protocols bgp group ext export send-direct set protocols bgp group ext peer-as 64511 protocols bgp group ext neighbor 10.1.0.1 policy-options policy-statement send-direct term 1 from protocol direct set policy-option policy-statement send-direct term 1 then accept set routing-options autonomous-system 64512 Configure the device interfaces. user@R1# set fe-1/2/0 unit 0 family inet address 10.0.0.1/30 user@R1# set lo0 unit 0 family inet address 192.168.0.1/32 Configure BGP. [edit protocol bgp group ext] user@R1# set type external user@R1# set peer-as 64511 user@R1# set neighbor 10.0.0.2 Prevent routes from Unit R3 from being hidden on Unit R1 by including the loops 2 statement. The 2-statement loops allow the local drive's own AS number to appear in the AS path up to once without hiding the path. The route is hidden if the local device's AS number is detected in the path two or more times. [edit protocol bgp family inet unicast] Configure the routing policy that sends direct routes. [edit policy-option policy-statement send-direct term 1] user@R1# specified from protocol directly Applicable export policy to BGP peering session with Unit R2. [edit protocol bgp group ext] user@R1# set export send-direct Configure the autonomous system (AS) number. user@R1# set autonomous-system 64512 Step-by-step procedure Configure device interfaces. user@R2# set FE-1/2/0 device 0 family inet address 10.0.0.2/30 user@R2# set fe-1/2/1 unit 0 family inet address 10.1.0.1/30 user@R2# set lo0-unit 0-family inet address 192.168.0.2/32 Configure BGP. [edit protocol bgp group ext] user@R2# set type external user@R2# set neighbor 10.0.0.1 peer-as 64512 user@R2# set neighbor 10.1.0.2 peer-as 64512 Configure Device R2 to advertise paths learned from one EBGp peer to another EBGp peer in the same AS. In other words, advertise to Device R1 routes learned from Device R3 (and the reverse), even though Device R1 and Device R3 are in the same AS. [edit protocol bgp group ext] user@R2# set advertise-peer-as Configure a routing policy that sends direct routes. [edit policy-option policy-statement send-direct term 1] user@R2# is specified from directly Apply the export policy. [editing bgp group protocol bgp group set export send-direct Configure the AS number. user@R2# set autonomous system 64512 Results From configuration mode, confirm your configuration by specifying display interface, displaying protocols, displaying policy options, and displaying routing options commands. If the output does not display the intended configuration, repeat the instructions in this example to correct the configuration. user@R1# view policy-option policy-statement send-directly {user@R1# view routing options user@R2# view policy-option policy-statement send-direct {user@R2# view routing options If you are done configuring the devices, set commit from configuration mode. Validation Confirm that the configuration is working properly. Verify BGP routes Make sure that the routing tables on Unit R1 and Unit R3 contain the expected routes. Action On Device R2, disable the advertised peer-as statement in the BGP configuration. [edit protocol bgp group ext] user@R2# disable advertise-peer-as On Device R3, disable the loops statement in the BGP configuration. [edit protocols bgp family inet unicast] user@R3# deactivate unicast loops On Device R1, check to see what routes are advertised to Device R2. user@R1# show route advertising-protocol bgp 10.0.0.2 inet.0: 5 destinations, 6 routes (5 active, 0 holddown, 0 hidden) show route receive-protocol bgp 10.0.0.1 inet.0: 7 destinations, 9 routes (7 active, 0 holddown, 0 hidden) Prefix Nexthop MED LcIpref AS path * 10.0.0.0/30 10.0.0.1 64512 | * 19 On On Device R2, check to see what routes are advertised to Device R3. user@R2# show route advertising-protocol bgp 10.1.0.1 inet.0: 7 destinations, 9 routes (7 active, 0 holddown, 0 hidden) Prefix Nexthop MED LcIpref AS path * 10.0.0.0/30 Self | * 10.1.0.0/30 Self | * 192.168.0.2/32 Self | On Device R2, enable the statement of advertise-peer-as in the BGP configuration. [edit protocol bgp group ext] user@R2# enable advertise-peer-as On Device R2, check for the routes advertised to Device R3. user@R2# show route advertising-protocol bgp 10.1.0.2 inet.0: 7 destinations, 9 routes (7 active, 0 holddown, 0 hidden) Prefix Nexthop MED LcIpref AS path * 10.0.0.0/30 Self | * 10.1.0.0/30 Self | * 192.168.0.1/32 Self 64512 | * 1 92.168.0.2/32 Self | * 192.168.0.3/32 10.1.0.2 64512 | On Device R3, check the routes received from Device R2. user@R3# show route receive-protocol bgp 10.1.0.1 inet.0: 5 destinations, 6 routes (5 active, 0 holddown, 0 hidden) Prefix Nexthop MED LcIpref AS path * 10.0.0.0/30 10.1.0.1 64511 | 1 0.1.0.0/0 30 10.1.0.1 64511 | * 192.168.0.2/32 10.1.0.1 64511 | On Device R3, activate the loop statement in the BGP configuration. [edit protocol bgp family inet unicast enabling unicast loops On drive R3, R3, the routes received from Device R2. user@R3# show route receive-protocol bgp 10.1.0.1 inet.0: 6 destinations, 8 routes (6 active, 0 holddown, 1 hidden) Prefix Nexthop MED LcIpref AS path * 10.0.0.0/30 10.1.0.1 64511 | 10.1.0.0/30 10.1.0.1 64511 | * 192.168.0.0.1 1/32 10.1.0.1 64511 64512 | * 192.168.0.2/32 10.1.0.1 64511 In Meaning First the advertise-peer-as statement and the statement of the loops are deactivated so that the default behavior can be investigated. Device R1 sends to Device R2 a route to Device R1's loopback interface address, 192.168.0.1/32. Unit R2 does not advertise this route to Unit R3. After enabling the statement on advertising peer-as, Device R2 advertises the 192.168.0.1/32 route to Device R3. Unit R3 does not accept this route until after the loop kit has been activated. Enabled.