

## BGP Step 2.1 Redistribute routes to BGP process

Procedure: Enter Vty shell and BGP ASN

```
sonic# configure terminal
sonic(config)# router bgp 65101
sonic(config-router)# address-family ipv4 unicast // Enter address-family ipv4
sonic(config-router-af)# redistribute connected
sonic(config-router-af)# redistribute kernel
sonic(config-router-af)# redistribute static
sonic(config-router)# end
```

Note: This configuration example says that redistribute connected route, kernel route and static route to BGP process

Address-family: Multiprotocol extensions enable BGP to carry routing information for multiple network layer protocols. BGP supports an Address Family Identifier (AFI) for IPv4 and IPv6.

```
sonic(config-router)# address-family
  ipv4 Address Family
  ipv6 Address Family
  l2vpn Address Family
```

Note: Route redistribution is used to learn from one routing protocol (static, connected route, and OSPF ....) available to a different routing protocol.

```
sonic(config-router-af)# redistribute
  babel Babel routing protocol (Babel) [TBD]
  connected Connected routes (directly attached subnet or host)
  eigrp Enhanced Interior Gateway Routing Protocol (EIGRP) [TBD]
  isis Intermediate System to Intermediate System (IS-IS)
  kernel Kernel routes (not installed via the zebra RIB)
  nhrrp Next Hop Resolution Protocol (NHRP) [TBD]
  openfabric OpenFabric Routing Protocol [TBD]
  ospf Open Shortest Path First (OSPFv2)
  rip Routing Information Protocol (RIP) [TBD]
  static Statically configured routes
  table Non-main Kernel Routing Table [TBD]
  vnc Virtual Network Control (VNC) [TBD]
  vnc-direct VNC direct (not via zebra) routes [TBD]
```

Note: Currently, SONiC FRRouting supports redistribute connected, isis, kernel, OSPF, and static only.

Note: Kernel routes and static routes are different, Kernel routes are configured by Linux command, and static routes are configured by FRR.  
For example:

FRR:

```
sonic# configure terminal
sonic(config)# ip route 0.0.0.0/0 192.168.1.254
```

```
sonic# show ip route
Codes: K - kernel route, C - connected, S - static, R - RIP,
O - OSPF, I - IS-IS, B - BGP, E - EIGRP, N - NHRP,
T - Table, v - VNC, V - VNC-Direct, A - Babel, D - SHARP,
F - PBR, f - OpenFabric,
> - selected route, * - FIB route
```

```
S>* 0.0.0.0/0 [1/0] via 192.168.1.254, Ethernet48, 00:02:19
```

Linux command:

Caution: this setting will restore to the default after rebooting the switch.

```
admin@sonic:~$ sudo ip route add 0.0.0.0/0 via 192.168.1.254
admin@sonic:~$ show ip route
```

Codes: K - kernel route, C - connected, S - static, R - RIP,  
O - OSPF, I - IS-IS, B - BGP, E - EIGRP, N - NHRP,  
T - Table, v - VNC, V - VNC-Direct, A - Babel, D - SHARP,  
F - PBR, f - OpenFabric,  
> - selected route, \* - FIB route

K>\* 0.0.0.0/0 [0/0] via 192.168.1.254, Ethernet48, 00:00:08