



# Configuring BGP Graceful Restart

Avi Technical Reference (v20.1)

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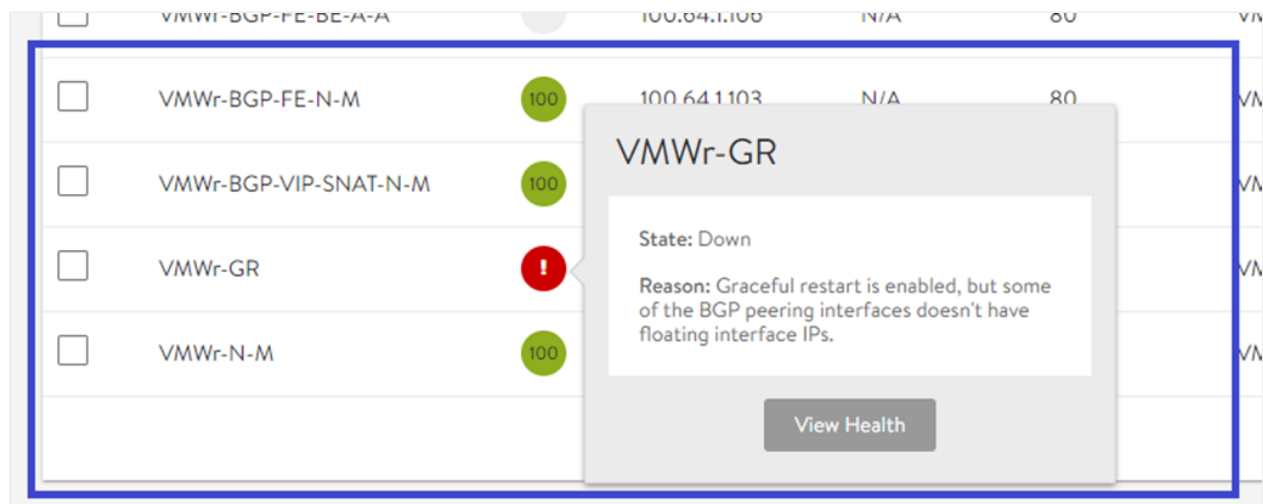
## Overview

This KB describes the steps to configure BGP graceful restart.

## Configuring BGP Graceful Restart

In Legacy HA, when the active SE goes down, there can be route flaps for the advertised VIPs on the peer router. The graceful restart feature ensures that the VIPs are available for up to 2 minutes in the peering router when active SE goes down using floating interface IP. If floating interface IP is not available, then VS will be marked down.

If graceful restart is configured and the interfaces in SE that are used for BGP does not have floating interface IPs, the VS will be marked down. It will recover when the floating interface IPs are added.



The graceful restart feature also advertises BGP graceful restart option to the BGP peer. Peer will preserve the routes from SE for 120 secs even when the connection is lost.

### Notes:

- The graceful restart timer should be less than hold timer.
- The graceful restart will be allowed only if the linked SE group is legacy HA and `distribute_load_active_standby` is not enabled.
- If you move an SE group from legacy HA mode to any other mode, and if a network service with graceful restart exists that refers to this SE group then graceful restart will fail.
- When `distribute_load_active_standby` is enabled in an SE group, and if a network service with graceful restart exists that refers to this SE group, then graceful restart will fail.

### Restrictions

The following are the restrictions of BGP graceful restart:

- You can set BGP graceful restart feature only on Legacy HA by disabling `distribute_load_active_standby`. This is so that the routes are advertised only from 1 SE. The floating interface IP will be constant and always available on the SE advertising the routes(VIPs).
- Requires a floating interface IP for the interface from where the peering happens.

## Configuration

The graceful restart configuration is as follows:

```
configure networkservice *name*
networkservice> routing_service
networkservice:routing_service> graceful_restart
networkservice:routing_service>
```

The following are the CLI details:

```
[admin:georgem-ctrlr]: > configure networkservice NS
[admin:georgem-ctrlr]: networkservice> routing_service
[admin:georgem-ctrlr]: networkservice:routing_service>
advertise_backend_networks  Advertise reachability of backend server networks via ADC through BGP for default gatew
cancel                      Exit the current submode without saving
do                          Execute a show command
enable_routing              Service Engine acts as Default Gateway for this service.
enable_vip_on_all_interfaces Enable VIP on all interfaces of this service.
enable_vmac                 Use Virtual MAC address for interfaces on which floating interface IPs are placed
floating_intf_ip            Floating Interface IPs for the RoutingService.
floating_intf_ip_se_2       If ServiceEngineGroup is configured for Legacy 1+1 Active Standby HA Mode, Floating IP
flowtable_profile           (submode)
graceful_restart            Enable graceful restart feature in routing service. For example, BGP.
nat_policy_ref              NAT policy for outbound NAT functionality. This is done in post-routing
new                          (Editor Mode) Create new object in editor mode
no                           Remove field
routing_by_linux_ipstack    For IP Routing feature, enabling this knob will fallback to routing through Linux, by c
save                         Save and exit the current submode
show_schema                 show object schema
watch                       Watch a given show command
where                        Display the in-progress object
```