



BGP Advertisement Startup Delay

When a Border Gateway Protocol (BGP) process initializes during a router reload, or when BGP routing sessions are reset by using the **clear ip bgp*** command, a temporary period of traffic loss may occur. The BGP control plane starts advertising routes to neighbors before the hardware forwarding plane has installed all the prefixes. As a result, packets are dropped if they arrive for destinations not yet programmed in hardware.

The BGP Advertisement Startup Delay feature addresses this issue by introducing a configurable delay before BGP begins advertising routes to its neighbors. This delay allows sufficient time for routes to be installed in the hardware, ensuring traffic forwarding is ready before new routes are announced.



Note This feature is not supported for Route Target Constraint (RT Constraint) address-families.

- [Benefits, on page 1](#)
- [How BGP Advertisement Startup Delay works, on page 1](#)
- [Configure BGP Startup Delay, on page 2](#)
- [Verify BGP Startup Delay enablement, on page 3](#)

Benefits

The BGP Advertisement Startup Delay feature provides these benefits:

- **Reduction in traffic loss:** The feature prevents packet drops during BGP startup or reload events by synchronizing route advertisement with hardware installation.
- **Improved network stability:** The feature ensures a smoother transition during control plane convergence.

How BGP Advertisement Startup Delay works

Summary

The BGP Startup Delay feature is applicable for scenarios where the BGP process comes up after a router reload or after a manual **clear ip bgp*** operation is complete. When configured, this feature enables BGP to establish peering and learn routes. BGP then identifies the best path algorithm and runs these routes into the Routing Information Base (RIB).

After the delay is configured, the BGP process waits for the specified startup-delay period to expire before transitioning to Read-Write Mode and generating updates to advertise to its neighbors.

Workflow

1. Enter the global configuration mode via the command line interface.
2. Enter configuration mode and use the `bgp advertisement startup-delay <time-in-seconds>` command to configure the BGP Advertisement Startup Delay feature.

Configure BGP Startup Delay

The startup delay causes the BGP process to wait for the configured period you configure before it starts the best path algorithm to send updates to its neighbors. During this waiting period, the router establishes peering sessions and receives reachability information from peers.

By default, this feature is disabled in a device. To enable this feature, perform the steps in this task.

Procedure

Step 1 **enable**

Enters the privileged EXEC mode. Enter the password, if prompted.

Example:

```
Router > enable
```

Step 2 **configure terminal**

Enters the global configuration mode.

Example:

```
Router # configure terminal
```

Step 3 **router bgp <AS_NUMBER>**

Enters the BGP configuration mode, initiating the Border Gateway Protocol process with a specified Autonomous System number. Here, <AS_NUMBER> is the BGP Autonomous System number.

Example:

```
Router(config)# router bgp 65000
```

Step 4 **bgp advertisement startup-delay <time-in-seconds>**

Configures the BGP Startup Delay feature. Here, <time-in-seconds> indicates the duration, in seconds, that BGP will wait before advertising routes. Range: 1 to 3600 seconds.

Example:

```
Router(config)# bgp advertisement startup-delay 120
```

Note

To disable the BGP Startup Delay feature, run the **no bgp advertisement startup-delay [timer]** command in the router configuration mode.

Sample configuration

```
Router > enable
Router # configure terminal
Router (config)# router bgp 65000
Router (config)# bgp advertisement startup-delay 120
```

Verify BGP Startup Delay enablement

By default, this feature is not enabled in a router. After you enable it, you can verify whether BGP Startup Delay has been configured by running the show command described in this section.

Procedure

show running-configuration

Example:

```
Router# show running-configuration
!
!
router bgp 10
bgp advertisement startup-delay 30
!
```

The configuration output displays the startup-delay value, confirming the feature is enabled.
