

IBGP configuration example

The information on this page is updated in accordance with the [00.07.06.10](#) firmware version .



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Introduction

BGP, or Border Gateway Protocol, is a fundamental routing protocol used in large-scale networks, particularly the internet, to exchange routing and reachability information among autonomous systems (ASes). This article provides a guide on how to configure iBGP or internal Border Gateway routing which uses one autonomous system on our two routers.

Configuration overview and prerequisites

Prerequisites:

- Routers must be connected through WAN-WAN connection
- At least two end devices (PCs, Laptops) to configure the routers and test the set up
- Both routers must be on "**Advanced mode**"



Topology



iBGP Configuration

RUT1 BGP Configuration

Navigate to **Network -> Routing -> Dynamic routes -> BGP**. Enable "**BGP - Global Settings**" and "**vty**".



Configure **BGP Instance** tab like this:



1. **Enable** - on
2. **AS** - 65000 (it must be the same on both routers)
3. **BGP router ID** - 10.10.10.10 (RUT1 WAN IP)
4. **Network** - 192.168.1.0/24 (RUT1 LAN subnet)
5. **Redistribution options** - Connected routes

Go to **BGP peers** tab and add new instance. For **Name** write any name you desire and press **Add**.



On popped up window select these options:



1. **Enable** - on
2. **AS** - 65000 (it must be the same on both routers)
3. **Remote address** - 10.10.10.20 (RUT2 WAN IP)

RUT2 BGP Configuration

For RUT2, the configuration is very similar, all we need to do is just change the **BGP router ID** to **10.10.10.20**, **Network** to **192.168.2.0/24** on the **BGP Instance**, and the **Remote address** to **10.10.10.10** on the **Peer Configuration**.

BGP Instance should look like this:



And **Peer Configuration** like this:



Firewall Zones

Now we can reach only routers by them self to reach their whole network we need to edit Firewalls **WAN Zone** to add **lan** on **forward to destination zones** field.

On both routers navigate to **Network -> Firewall -> General Settings -> Zones** and press edit on **wan** zone.



On popped up window add **lan** on **Allow forward to destination zones** field and press **Save & Apply**.



Testing the setup

If you have followed the steps correctly, the configuration should be complete. Here are the results you can expect to receive:

PC1 to PC2:

```
Pinging 192.168.2.10 from 192.168.1.10 with 32 bytes of data:
Reply from 192.168.2.10: bytes=32 time=3ms TTL=62
Reply from 192.168.2.10: bytes=32 time=5ms TTL=62
Reply from 192.168.2.10: bytes=32 time=5ms TTL=62
Reply from 192.168.2.10: bytes=32 time=3ms TTL=62
```

PC2 to PC1:

```
Pinging 192.168.1.10 from 192.168.2.10 with 32 bytes of data:
Reply from 192.168.1.10: bytes=32 time=9ms TTL=124
Reply from 192.168.1.10: bytes=32 time=3ms TTL=124
Reply from 192.168.1.10: bytes=32 time=5ms TTL=124
Reply from 192.168.1.10: bytes=32 time=5ms TTL=124
```

See also

- [Routing](#)
- [Firewall traffic rules](#)

External links

<https://frrouting.org/> - additional information about FRRouting that our device routing is based on.