What is BGP?

Is the only routing protocol design to communicate between autonomous systems and it is also known as an Exterior Gateway protocol.

Unlike Internal gateway protocol design to communicate within the same AS

What is an Autonomous system or AS?

Is a collection of networks under a single domain.

or

Is a number that identify an organisation.

BGP Features

1. BGP is an open standard protocol – which means it does not belong to any one and can be used on all supported devices.
2. Is an Exterior Gateway protocol – it means it is going to exchange route between two or more AS.
3. It is design for inter-AS domain routing.
4. It is design to scale huge inter-network like internet.
5. It supports classless.
6. BGP is path vector protocol - it maintains the AS path information.
7. It sends updates to manually define neighbours as unicast.
8. BGP application layer uses TCP port 179.
9. BGP uses is attributes as metric.
10. BGP administrative distance is:

20 External updates (EBGP)

200 Internal updates (IBGP)

BGP’s loop prevention mechanism

Whenever any route is getting to the AS, it will check and if it sees it own AS number inside, it is not going to accept that route.

When to use BGP?

1. If you are an Internet Service Provider or ISP – Internet is the biggest network, and it is maintained by service provider. Service provider connects to each other, and they maintain the biggest network with is internet.
2. If you are connected to multiple ISP and you want to do some path manipulation.

When not to use BGP

1. If you are connected to only one service provider.
2. If you lack resources – if you run BGP you will need to install all the route of the internet coming from your ISP and you need high end devices with lost of CPU power and big memory.
3. If you have a limited understanding of BGP