

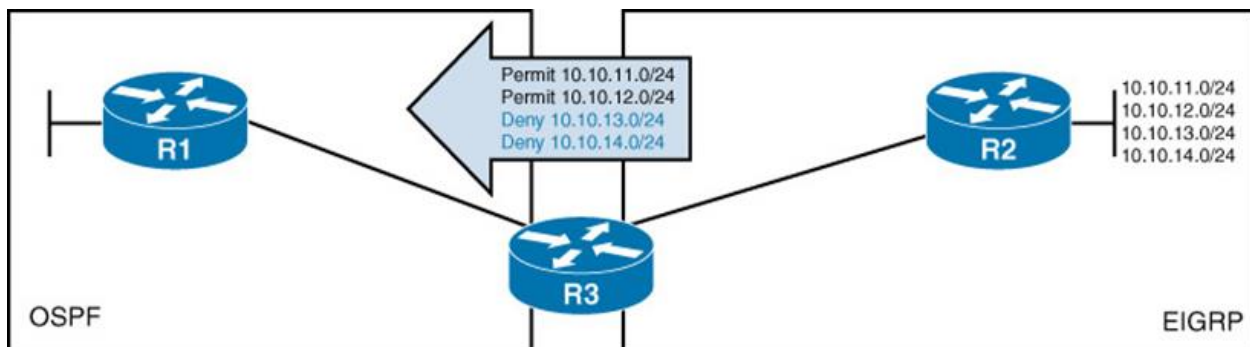
Filtering:

- o Route filters can be used when exchanging routing updates to with accept or deny update.
- o In Dynamic, routing protocols to filter routes that are sent out from one router to another.
- o It used to manipulate traffic flows, reduce memory utilization, or to improve the security.
- o Filter routes that are received into router possibilities can be configured to filter routes.
- o These are Access Control Lists (ACLs), Distribute Lists, Prefix Lists and the Route Maps.



ACLs:

- o For route, filtering Access Control Lists (ACLs) are used in a different way not like normal.
- o Access Control Lists are used to specify which routes to allow and which routes to filter.
- o The Access Control Lists (ACLs) are used differently with the different types of filtering.
- o In Filtering the ACLs are not denying or permitting traffic to/from a different network.
- o Instead, the ACLs are either allowing or denying a route from being advertised or learned.



Distribute Lists:

- o Distribute-List is used to control routing updates either coming to or leaving from router.
- o It mainly used for route filtering means to permit or block routes from being advertised.
- o The Distribute-List itself does not block or permit any route but it will call an Access-List.
- o The Distribute-List itself does not block or permit any route but it will call a Prefix-List.
- o Action will be taken based on whatever specified in that Access-List or in the Prefix-List.
- o So, Distribute-List is mainly used to control the incoming or the outgoing traffic to router.
- o The Distribute List can be configured in Cisco Router to control in two directions, in or out.
- o The Distribute List command to configure will be run in Cisco Router configuration mode.
- o With the BGP, access-lists, prefix-lists, and route-maps are all options of a distribute list.
- 1. First of all, in Cisco Router, define what routes you want to filter for in or out direction.
- 2. Create an Access Control Lists (ACL) in configuration mode to filter out that traffic.
- 3. Create a Distribute-List that references the Access Control Lists & defines the direction.
- 4. The last thing needs to verify that the route which want to filter has been removed.

Prefix List:

- o A prefix list is similar to an Access List in that it will be used to match a route prefix.
- o However, processing is much faster than an ACL and provides flexibility for filtering.
- o Just like Access Control Lists, there is a default “deny any” at the end of a prefix-list.
- o Prefix-list is mainly used to filter the Routes, it used in routing protocols only to filter.
- o Main difference in Access-List and Prefix-List is that Access-List only matches the bits.
- o Which specified by wildcard mask, but Prefix-List also match the subnet mask as well.
- o Can specify range of Subnetmask, which need to be matched to be permitted or denied.