
Networkforyou
Welcome
To
Network for you
EIGRP
Authentication
Networkforyou

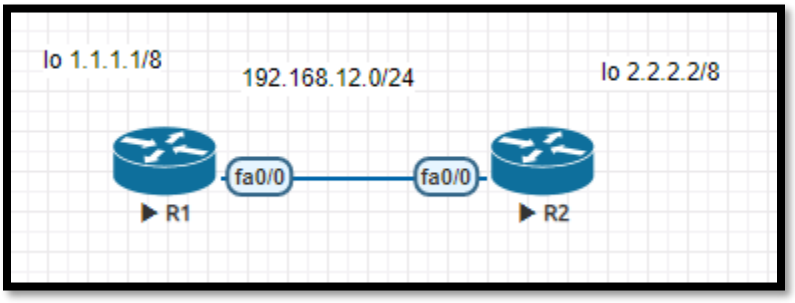
Securing Routing Protocols:

- By default, all, the routing information is visible to all interested parties.
- By default, routing information is not encrypted therefore open to an attack.
- Routing protocols can be configured to prevent receiving false routing updates.
- Routing Protocol Authentication is a security mechanism prevents such attacks.
- To prevent router from accepting unauthorized or malicious routing updates.
- Routing protocols RIP, EIGRP and OSPF can be secure by putting an authentication
- Two options for authentication are **Plain text authentication & MD5 authentication**.

EIGRP Authentication:

- EIGRP authentication is used to prevent an attacker from forming the EIGRP neighbor.
- Using the same pre-shared key on all Routers force EIGRP to authenticate every message.
- In this way the Router will ensure to accept routing updates only from trusted sources.
- To authenticate every EIGRP message, the MD5 (Message Digest 5) algorithm is used.
- Three steps are required to configure Dynamic Routing Protocol EIGRP authentication.
- Creating a keychain, configure key ID under keychain & Specify password for the key ID.
- Afterward, enable the authentication on the interface to use the keys in the keychain.
- **For authentication to work, key number and the key string must match on both routers.**
- The key chain name does not have to be the same on both Dynamic EIGRP Routers.

EIGRP Authentication Lab:



R1 Configuration	R2 Configuration
en config t hostname R1 int f0/0 ip add 192.168.12.1 255.255.255.0 no sh int lo 0 ip add 1.1.1.1 255.0.0.0 router eigrp 1 network 192.168.12.0 0.0.0.255 network 1.0.0.0 0.255.255.255 no auto-summary exit key chain cisco key 1 key-string cisco1 exit exit int f0/0 ip authentication mode eigrp 1 md5 ip authentication key-chain eigrp 1 cisco	en config t hostname R2 int f0/0 ip add 192.168.12.2 255.255.255.0 no sh int lo 0 ip add 2.2.2.2 255.0.0.0 router eigrp 1 network 192.168.12.0 0.0.0.255 network 2.0.0.0 0.255.255.255 no auto-summary exit key chain cisco key 1 key-string cisco1 exit exit int f0/0 ip authentication mode eigrp 1 md5 ip authentication key-chain eigrp 1 cisco