DHCP Configuration Example

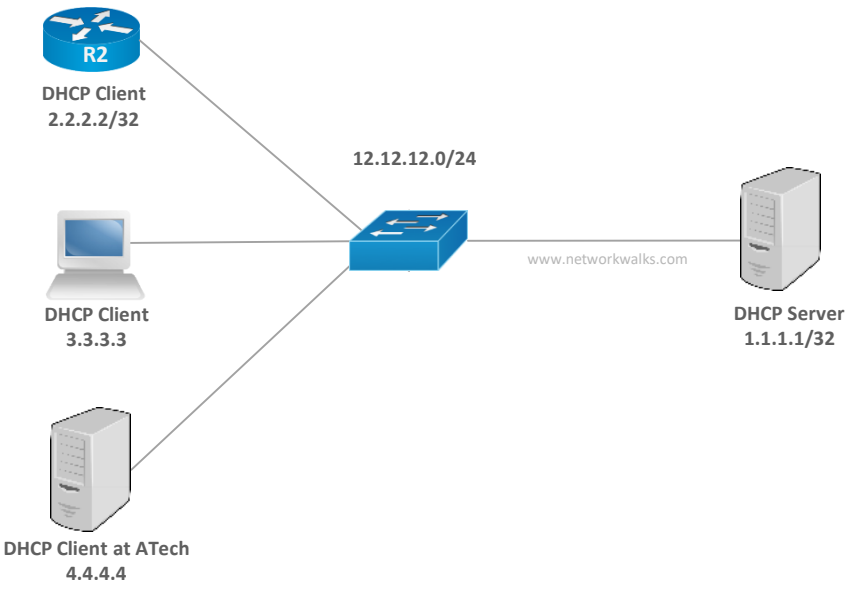
METHOD-1 Using a Cisco Routers as DHCP Server

Server

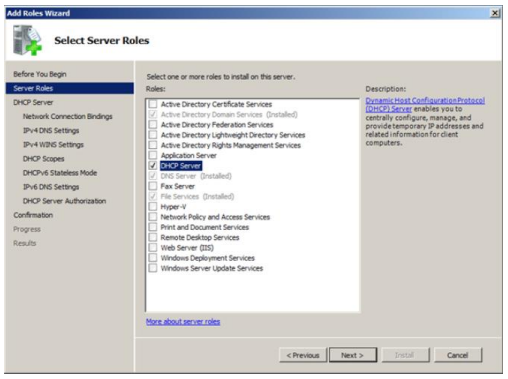
```
R1(config)# service dhcp
R1(config)# ip dhcp pool atech123
R1(dhcp-config)# network 192.168.1.0 255.255.255.0
R1(dhcp-config)# default-router 192.168.1.1
R1(dhcp-config)# dns-server 192.168.1.1
R1(config)# ip dhcp excluded-address 192.168.1.100
```

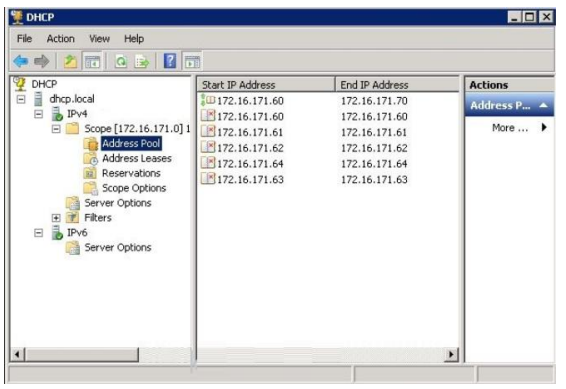
Client

```
R2# interface fa0/0
R2# ip address dhcp
```



METHOD-2 Using a Server as DHCP Server





DHCP Security Threats

Recon Attacks: Expose important data for next level attacks planning

DHCP MiTM Attacks: Corrupt DHCP Server makes the DHCP Clients set their Default GW as Attacker device

DHCP DoS Attacks: Attacker floods the DHCP Server with DHCP Queries from Bots & make it un-available for legitimate users

DHCP starvation Attacks: DHCP requests are broadcasted with Spoofed MAC addresses causing the DHCP Pool to exhaust

DHCP Security Mitigations

- ✓ Configure DHCP Snooping on L2 Switches to stop Corrupt DHCP Server to offering DHCPOFFER
- ✓ Use the DHCP Relay (Option82) for extra security in distributed DHCP server/relay environments
- ✓ Implement strict Network Admission Control Policies for users
- ✓ Always place DHCP Server inside Firewall
- ✓ Always keep a secured back-up copy of the DHCP Database & cache file to restore in case of failure attacks
- ✓ Filter Layer3 IP Traffic to restrict illegitimate requests from specific visitor devices and certain IP addresses (use IP whitelists and blacklists) to avoid DHCP DoS Attacks
- ✓ Implement strict Firewall rules at Layer7 (e.g. Protocol violations, Request Limit violations,…) to avoid DHCP DoS Attacks
- ✓ Continuously monitor, log & audit security events and pay attention to attack alerts to avoid DHCP DoS Attacks

www.networkwalks.com

/Network Walks /NetworkWalks /company/networkwalks

New batch of online Cisco CCNA is starting.
Enrol today with us for quality training: info@networkwalks.com

Visit our website & YouTube Channel for more FREE resources like Cheatsheets, Workbooks, Labs, Interview Questions, Quiz, VCE exams

Network Walks Training Academy www.networkwalks.com

Your Feedback, Comments are always Welcomed: info@networkwalks.com