Cisco CCNA (200-301)

Configuring and Verifying NTP

Learning Objective: Configure and verify Network Time Protocol

Description: NTP is a very useful time protocol the help insure devices on the network are synchronized to a single clock. You will learn how to configure a device to that NTP server or to be a client of of it.

Q: Why is the clock accuracy important to network devices?

- Logging Information

Q: Why is NTP important to a network?

NTP (Network Time Protocol) is service used to synchronized the clocks on our devices within a network

- Network devices should be syncronized for security reasons and logging reasons too.
    - e.g. authentication services such as kerberos will not sync with devices that are more than 5 minutes off.
    - e.g. if logs do not show proper time stamps, then the logs cannot tell you when things actually occured.
- `we can use NTP to serve the time to our network.`
    - The service is normally synchronized with a time server out on the internet
    - When synchronizing with time servers on an untrusted network, it is recommended to use authentication whenever possible and is allowed.
- **Configuring and Verifying NTP**
    - Verify current time on NYEDGE1 device
    - ```
      NYEDGE1#show clock [note the time and information]
      ```
    - Configure NYEDGE1 with the timezone as GMT 0
    - ```
      NYEDGE1#configure terminal
      NYEDGE1(config)#clock timezone GMT 0
      NYEDGE1(config)#clock summer-time DST recurring last Sun Mar 0:00 last Sun Oct 0:00
      NYEDGE1(config)# [note the log message; note time has not changed]
      ```
    - Configure NYEDGE1 as NTP server
    - ```
      NYEDGE1(config)#ntp master 1
      NYEDGE1(config)#ntp source gigabitethernet0/0
      NYEDGE1(config)#exit
      NYEDGE1#
      ```
    - Configure NYCORE1 as NTP client
    - ```
      NYCORE1#show time
      NYCORE1#configure terminal
      NYCORE1(config)#ntp server 192.168.16.1
      NYCORE1(config)#exit
      NYCORE1#
      ```
    - Verify time on NYCORE1
    - ```
      NYCORE1#show clock
      NYCORE1#show ntp associations
      ```

Endnotes, External and Etc.

- 4.2 Configure and verify NTP operating in a client and server mode
      ```