Networking

NTP

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- **NTP (Network Time Protocol)** makes sure all the clocks on the same network are synchronized
  - This is very important for devices that interact with each other for logging purposes, security reasons, and to verify tasks are in the correct order
  - The NTP server makes sure all devices are running within milliseconds of each other to help avoid errors where logs may not match otherwise

NTP Terms

- A **stratum** is the level of accuracy of the clocks between systems
  - There are five different stratum levels, level 0 through 4, where 0 is the most accurate and level 4 is the least
- A **client** (or host) is any device on a network that gets the current timestamp from an NTP server
  - Typically, these clients will send a request to the NTP server around every 10 minutes to make sure their clocks are synced
- An **NTP server** is the server that clients can query for the current time on the network
  - NTP servers typically get their timestamp from a stratum 0 device to have as accurate of time as possible