# Synchronizing Time Using the NTP Server

If the AMD is not managed by a report server, you can configure time synchronization by using NTP client software. The NTP client software is used to restart traffic monitoring when a time continuity problem occurs. NTP client software is installed as part of the operating system and can be configured to start up automatically.

1. Configure the `ntpd` service.

   Configure the server or servers to be used for time synchronization by specifying the preferred server IP addresses in the configuration file `/etc/ntp.conf`. The following is an example of the configuration file:

   ```
    # --- GENERAL CONFIGURATION ---
   #server  aaa.bbb.ccc.ddd
   server  127.127.1.0 iburst
   fudge   127.127.1.0 stratum 10

   # Drift file.

   driftfile /var/lib/ntp/drift
   ```

   A basic `ntp.conf` file lists two time servers, a server it will synchronize with and a pseudo IP address for itself (in this case, 127.127.1.0). The pseudo IP address is used in case of network problems or if the remote NTP server goes down. NTP synchronizes with itself until it can start synchronizing with the remote server again.

   Since the local clock is not accurate, it should be *fudged* to a low *stratum* (accuracy), as shown in the example above. Set it to `10`. List at least two time servers with which to synchronize. One time server acts as a primary server and the other time server acts as a backup. Also, list a location for a drift file. Over time `ntpd` will *learn* the system clock's error rate and automatically adjust for it, using the information stored in this file.

   There is a public pool of hosts available that have agreed to be time servers. The server `pool.ntp.org` uses DNS round robin to make a random selection from a pool of time servers who have volunteered to be in the pool. When you use them, your configuration file will be similar to the following example:

   ```
    # --- GENERAL CONFIGURATION ---
   server 0.pool.ntp.org
   server 1.pool.ntp.org
   server 2.pool.ntp.org
   server pool.ntp.org
   server  127.127.1.0
   fudge   127.127.1.0 stratum 10

   # Drift file.

   driftfile /var/lib/ntp/drift
   ```

   You may also select sub-zones of the `pool.ntp.org` that are geographically closer to your location.

   The `iburst` parameter is optional and facilitates faster initial synchronization.
2. Set the `ntpd` service to start automatically.

   To set the service to start automatically at system startup, execute the following command:

   **`chkconfig ntpd        on`**

3. Start `ntpd` service manually only once, after completing the first two steps above.

   After reconfiguration, restart the service manually:

   **`service ntpd restart`**

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