

A P P L I C A T I O N N O T E

Stratum 2 Setup

EndRun Technologies Network Time Servers are designed for Stratum 1 operation. This Application Note explains how to configure your Time Server for Stratum 2 operation.



JAM-SYNC THE CLOCK

Since the Time Servers do not have batteries, the NTP Daemon needs to jam-sync the clock after a power up. The most recent firmware has this capability pre-configured. So, if you download and install the latest root file system firmware (part number 6010-0042-000) from our website then you won't need to do this.

If you have older firmware then you need to edit the `/etc/rc.d/rc.local` script and add this line before the code block that starts up the `ntpwatchdog`:

```
/usr/local/bin/ntp -g
```

Now save the edited file and copy it to the non-volatile flash partition with this command:

```
cp -p /etc/rc.d/rc.local /boot/etc/rc.d
```

EDIT NTP.CONF

You must edit the `ntp.conf` file in order to point your Stratum 2 server at a Stratum 1 server. Edit `/etc/ntp.conf` and add your server line(s). Here is an example:

```
server 192.168.1.1
```

IMPORTANT!! Do not remove the server lines for the refclock. Even if your Time Server is not connected to an antenna - the refclock server lines must remain.

Now save the edited file and copy it to the non-volatile flash partition with this command:

```
cp -p /etc/ntp.conf /boot/etc
```

MASK ALARM

In Stratum 1 operation an alarm will be indicated when there is a loss of signal (GPS/CDMA) or if the antenna is not connected (GPS only). For Stratum 2 operation you may not want to see these alarms. You can mask them (prevent them from showing) by using the console port (serial/network) commands `"setsigfltmask"` and `"setantfltmask"` (GPS only). If your unit has a front-panel keypad/display then go to the Receiver sub-menu. Look for `SigFltMask` and `AntFltMask` (GPS Only) and set them appropriately.

