DSES MEMO #3 Installing and Interfacing with the NTP Server on the Plishner Network

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Determine whether the NTP server is already installed and running.

At the command line ($) use the command:

$ ps aux | grep ntpd

If the NTP server is not running you will see a single line returned from the command.

gdavis   2743 0.0 0.0 7348   552 pts/0   S+   08:13   0:00 grep --color=auto ntp

Else wise, you will see two lines with "ntpd" located somewhere in the line.

ntp   909 0.0 0.0 111960 4544 ?   Ssl May09   0:06 /usr/sbin/ntpd -p /var/run/ntpd.pid -g -u 121:128
gdavis   4700 0.0 0.0 14428 1076 pts/1   S+   08:12   0:00 grep --color=auto ntpd

Install the NTP software

In order to install the NTP server, first update the local repositories on the system. At the command issue the following command:

$ sudo apt update

Then provide sudo password.

Now install NTP on the host system. Type the following command in Terminal and press Enter:

$ sudo apt install ntp

When asked for confirmation, press y, after which the system will start the installation of NTP.

Using a text editor (vi) edit the ntp.conf file (located in /etc) to add the Time Machine NTP server (192.168.1.15):

server 192.168.1.15

Then edited and save the **/etc/ntp.conf** file:

Use servers from the NTP Pool Project. Approved by Ubuntu Technical Board
on 2011-02-08 (LP: #104525). See http://www.pool.ntp.org/join.html for
more information.
server 192.168.1.15
pool 0.ubuntu.pool.ntp.org iburst
pool 1.ubuntu.pool.ntp.org iburst
pool 2.ubuntu.pool.ntp.org iburst
pool 3.ubuntu.pool.ntp.org iburst

There is an issue between NTP and timedateclt so issue the following command from the command line:

$ sudo timedatectl set-ntp false

At this point reboot the system and verify that the NTP server (ntpd) is running (see the beginning of the document using the ps aux command).

Checking the status of NTP with ntpq command

The ntpq utility program is used to monitor NTP daemon ntpd operations and determine performance. The program can be run either in interactive mode or controlled using command line arguments. Type the following command at the command line:
$ ntpq -pn
OR
$ ntpq -p

The output from ntpq should look something like this:

```
     remote        refid    st t when poll reach  delay  offset jitter
==============================================================================
192.168.1.15    .XFAC.      16 u  - 128  0   0.000   0.000  0.000
0.ubuntu.pool.n .POOL.      16 p  - 64   0   0.000   0.000  0.000
1.ubuntu.pool.n .POOL.      16 p  - 64   0   0.000   0.000  0.000
2.ubuntu.pool.n .POOL.      16 p  - 64   0   0.000   0.000  0.000
```

```
 3.ubuntu.pool.n .POOL.        16 p   -  64   0   0.000   0.000  0.000
 ntp.ubuntu.com  .POOL.        16 p   -  64   0   0.000   0.000  0.000
+198.251.86.68   82.64.45.50     2 u   32   64   1 249.747 391.026  8.132
*204.11.201.12   216.218.192.202 2 u   32  128   1  86.688 418.482  4.960
 91.189.94.4     140.203.204.77  2 u   40   64   1 149.766 411.031  0.000
 108.62.122.57   200.98.196.212  2 u   31   64   1  81.763 410.499  2.570
 91.189.89.198   17.253.34.253   2 u   41   64   1 146.713 411.000  0.000
 108.59.2.24     130.133.1.10    3 u   33   64   1  80.120 408.436  2.720
 91.189.89.199   17.253.34.123   2 u   41   64   1 146.372 412.021  0.000
 91.189.91.157   17.253.34.125   2 u   42   64   1  83.516 408.544  0.000
 185.17.70.106   195.176.26.204  2 u   27   64   1 176.229 409.795  2.559
 46.165.221.137  131.188.3.220   2 u   27   64   1 169.132 407.141  1.246
 212.25.15.128   131.188.3.222   2 u   25   64   1 167.169 411.192  3.116
 178.17.161.12   240.67.35.84    3 u   28   64   1 212.171 489.154  4.979
 45.79.214.107   130.207.244.240 2 u   16   64   1  73.339 412.220  3.677
```

Verify that the Time Machine NTP server is listed.