

NTP and Time Zone Setting on PuTTY

```
GNU nano 2.2.6 File: /etc/ntp.conf
# pool.ntp.org maps to about 1000 low-stratum NTP servers. Your server will
# pick a different set every time it starts up. Please consider joining the
# pool: <http://www.pool.ntp.org/join.html>
#server 0.debian.pool.ntp.org iburst
#server 1.debian.pool.ntp.org iburst
#server 2.debian.pool.ntp.org iburst
#server 3.debian.pool.ntp.org iburst
server 192.72.1.2
#server 168.95.1.1 iburst prefer

# Access control configuration; see /usr/share/doc/ntp-doc/html/accopt.html for
# details. The web page <http://support.ntp.org/bin/view/Support/AccessRestrict$
# might also be helpful.
#
# Note that "restrict" applies to both servers and clients, so a configuration
# that might be intended to block requests from certain clients could also end
# up blocking replies from your own upstream servers.

# By default, exchange time with everybody, but don't allow configuration.

[ Read 56 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

- Insert “sudo nano /etc/ntp.conf” command line in terminal, it will open a NTP file for time synchronization, by this file, it will get the time from NTP server.
- Add “server IP” for NTP time server.
- Ctrl + O for Write Out, Ctrl + X for exit, then push device button for 4 seconds for manually reload.

pi@raspberrypi: ~

```
login as: pi
pi@10.0.0.167's password:
```

```
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
```

```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
```

```
Last login: Wed Sep  4 10:48:48 2019 from 10.0.0.51
```

```
pi@raspberrypi:~$ nntp -pn
```

```
-bash: nntp: command not found
```

```
pi@raspberrypi:~$ ntpq -pn
```

```
--- remote --- refid          st t when poll reach  delay  offset  jitter
=====
+173.249.41.242 17.253.54.251  2 u  56  64  377 284.325 -5.383  1.948
+183.177.72.202 119.160.254.155 2 u  19  64  377  2.193  0.468  0.388
+118.163.170.6  216.239.35.0   2 u  34  64  377  2.379  0.046  0.505
*220.133.209.243 211.22.103.157 3 u  50  64  377  2.116 -0.088  0.362
```

```
pi@raspberrypi:~$
```

- Insert “ntpq -pn”, you can check ntp is function or not, when you have NTP, you will see a “*” in front of functioning IP.

```
pi@raspberrypi: ~  
    inet6 addr: fe80::cd0a:50e7:71a4:4281/64 Scope:Link  
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
    RX packets:1807450708 errors:0 dropped:0 overruns:0 frame:0  
    TX packets:1639957894 errors:0 dropped:0 overruns:0 carrier:0  
    collisions:0 txqueuelen:1000  
    RX bytes:3992624323 (3.7 GiB)  TX bytes:1922960443 (1.7 GiB)  
  
eth0:0  Link encap:Ethernet  HWaddr b8:27:eb:f6:da:93  
    inet addr:192.168.255.118  Bcast:192.168.255.255  Mask:255.255.255.0  
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
  
lo      Link encap:Local Loopback  
    inet addr:127.0.0.1  Mask:255.0.0.0  
    inet6 addr: ::1/128 Scope:Host  
    UP LOOPBACK RUNNING  MTU:65536  Metric:1  
    RX packets:21271748 errors:0 dropped:0 overruns:0 frame:0  
    TX packets:21271748 errors:0 dropped:0 overruns:0 carrier:0  
    collisions:0 txqueuelen:0  
    RX bytes:7628778103 (7.1 GiB)  TX bytes:7628778103 (7.1 GiB)  
  
pi@raspberrypi:~ $ sudo raspi-config  
pi@raspberrypi:~ $ date  
Tue 21 Jul 12:52:17 CST 2020  
pi@raspberrypi:~ $
```

- Insert “date” command, You can check the current time.

```
pi@raspberrypi: ~  
eth0      Link encap:Ethernet  HWaddr b8:27:eb:f6:da:93  
          inet addr:10.0.0.37  Bcast:10.0.0.255  Mask:255.255.255.0  
          inet6 addr: fe80::cd0a:50e7:71a4:4281/64  Scope:Link  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
          RX packets:1807450708  errors:0  dropped:0  overruns:0  frame:0  
          TX packets:1639957894  errors:0  dropped:0  overruns:0  carrier:0  
          collisions:0  txqueuelen:1000  
          RX bytes:3992624323 (3.7 GiB)  TX bytes:1922960443 (1.7 GiB)  
  
eth0:0    Link encap:Ethernet  HWaddr b8:27:eb:f6:da:93  
          inet addr:192.168.255.118  Bcast:192.168.255.255  Mask:255.255.255.0  
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
  
lo        Link encap:Local Loopback  
          inet addr:127.0.0.1  Mask:255.0.0.0  
          inet6 addr: ::1/128  Scope:Host  
          UP LOOPBACK RUNNING  MTU:65536  Metric:1  
          RX packets:21271748  errors:0  dropped:0  overruns:0  frame:0  
          TX packets:21271748  errors:0  dropped:0  overruns:0  carrier:0  
          collisions:0  txqueuelen:0  
          RX bytes:7628778103 (7.1 GiB)  TX bytes:7628778103 (7.1 GiB)  
  
pi@raspberrypi:~ $ sudo raspi-config  
pi@raspberrypi:~ $ sudo date -s "2020/7/21 12:50:00"
```

- If you want to enforce time manually, you can typing “sudo date –s “YYYY/MM/DD hh:mm:ss”.

```
pi@raspberrypi: ~  
    inet6 addr: fe80::cd0a:50e7:71a4:4281/64 Scope:Link  
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
    RX packets:1807450708 errors:0 dropped:0 overruns:0 frame:0  
    TX packets:1639957894 errors:0 dropped:0 overruns:0 carrier:0  
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    inet6 addr: ::1/128 Scope:Host  
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    collisions:0 txqueuelen:0  
    RX bytes:7628778103 (7.1 GiB)  TX bytes:7628778103 (7.1 GiB)  
  
pi@raspberrypi:~ $ sudo raspi-config  
pi@raspberrypi:~ $ date  
Tue 21 Jul 12:52:17 CST 2020  
pi@raspberrypi:~ $
```

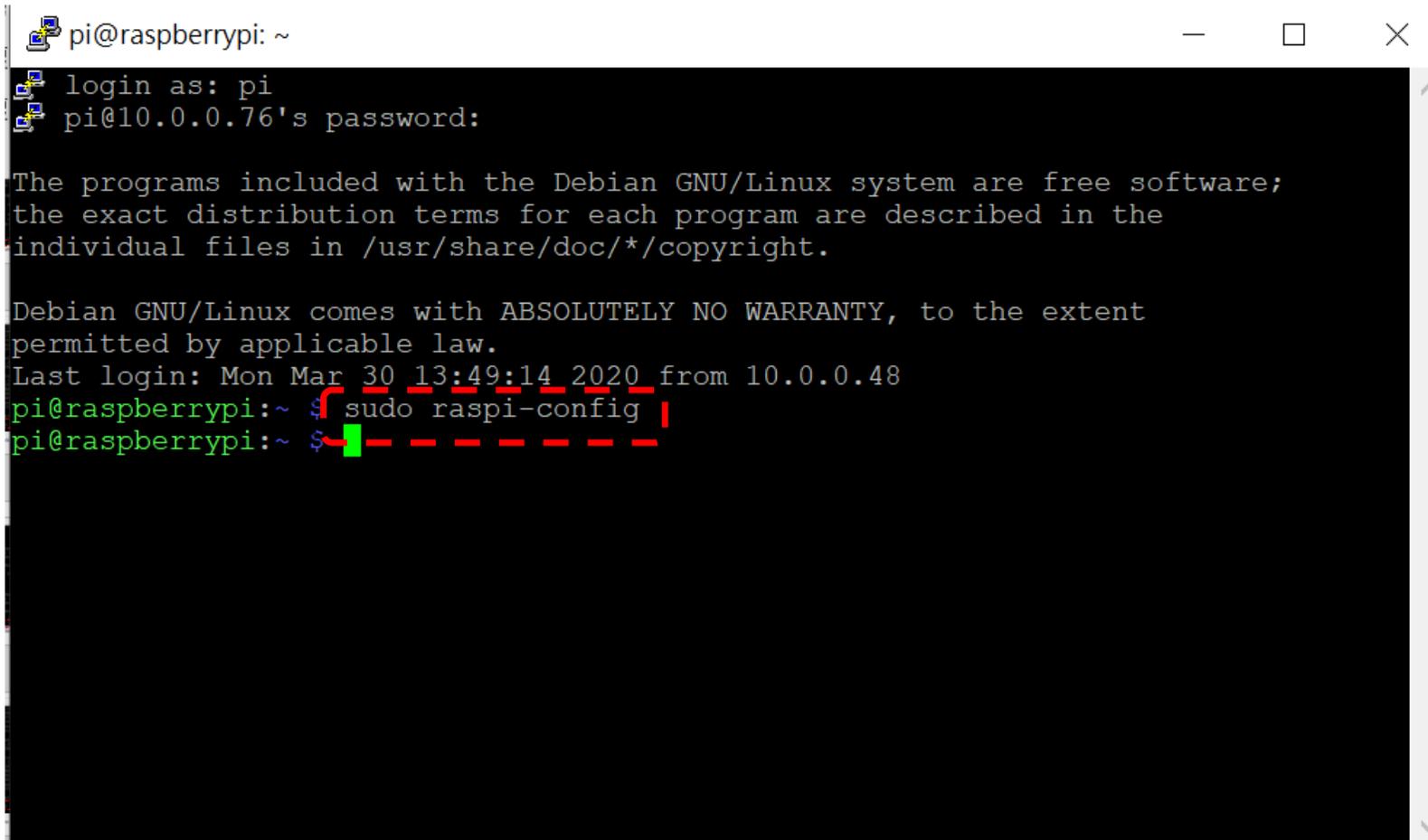
- Then type “date” again to check if it already changed or not.

```
pi@raspberrypi: ~  
Tue 21 Jul 12:52:17 CST 2020  
pi@raspberrypi:~ $  
login as: pi  
pi@10.0.0.37's password:  
The programs included with the Debian GNU/Linux system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Tue Jul 21 12:43:19 2020 from 10.0.0.58  
pi@raspberrypi:~ $ sudo hwclo  
login as: pi  
pi@10.0.0.37's password:  
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individual files in /usr/share/doc/*/copyright.  
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent  
permitted by applicable law.  
Last login: Tue Jul 21 12:04:33 2020 from 10.0.0.58  
pi@raspberrypi:~ $ sudo hwclock -w
```

- Type “sudo hwclock -w” to write down on inside hardware.

```
pi@raspberrypi: ~  
    inet6 addr: fe80::cd0a:50e7:71a4:4281/64 Scope:Link  
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
    RX packets:1807450708 errors:0 dropped:0 overruns:0 frame:0  
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    inet addr:192.168.255.118  Bcast:192.168.255.255  Mask:255.255.255.0  
    UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1  
  
lo      Link encap:Local Loopback  
    inet addr:127.0.0.1  Mask:255.0.0.0  
    inet6 addr: ::1/128 Scope:Host  
    UP LOOPBACK RUNNING  MTU:65536  Metric:1  
    RX packets:21271748 errors:0 dropped:0 overruns:0 frame:0  
    TX packets:21271748 errors:0 dropped:0 overruns:0 carrier:0  
    collisions:0 txqueuelen:0  
    RX bytes:7628778103 (7.1 GiB)  TX bytes:7628778103 (7.1 GiB)  
  
pi@raspberrypi:~ $ sudo raspi-config  
pi@raspberrypi:~ $ date  
Tue 21 Jul 12:52:17 CST 2020  
pi@raspberrypi:~ $
```

- Type “date” always to check the time is already precise.

A terminal window titled "pi@raspberrypi: ~" with standard window controls. The terminal output shows a login sequence for user 'pi' at IP 10.0.0.76. It displays the Debian GNU/Linux copyright notice and the last login time: "Mon Mar 30 13:49:14 2020 from 10.0.0.48". The user then enters the command "sudo raspi-config", which is highlighted with a red dashed box. The prompt returns to "pi@raspberrypi:~" with a green cursor.

```
pi@raspberrypi: ~
login as: pi
pi@10.0.0.76's password:

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individual files in /usr/share/doc/*/copyright.

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permitted by applicable law.
Last login: Mon Mar 30 13:49:14 2020 from 10.0.0.48
pi@raspberrypi:~$ sudo raspi-config
pi@raspberrypi:~$
```

- To check or setting Time zone, you can insert “sudo raspi-config” on putty.

pi@raspberrypi: ~

```
Raspberry Pi Software Configuration Tool (raspi-config)

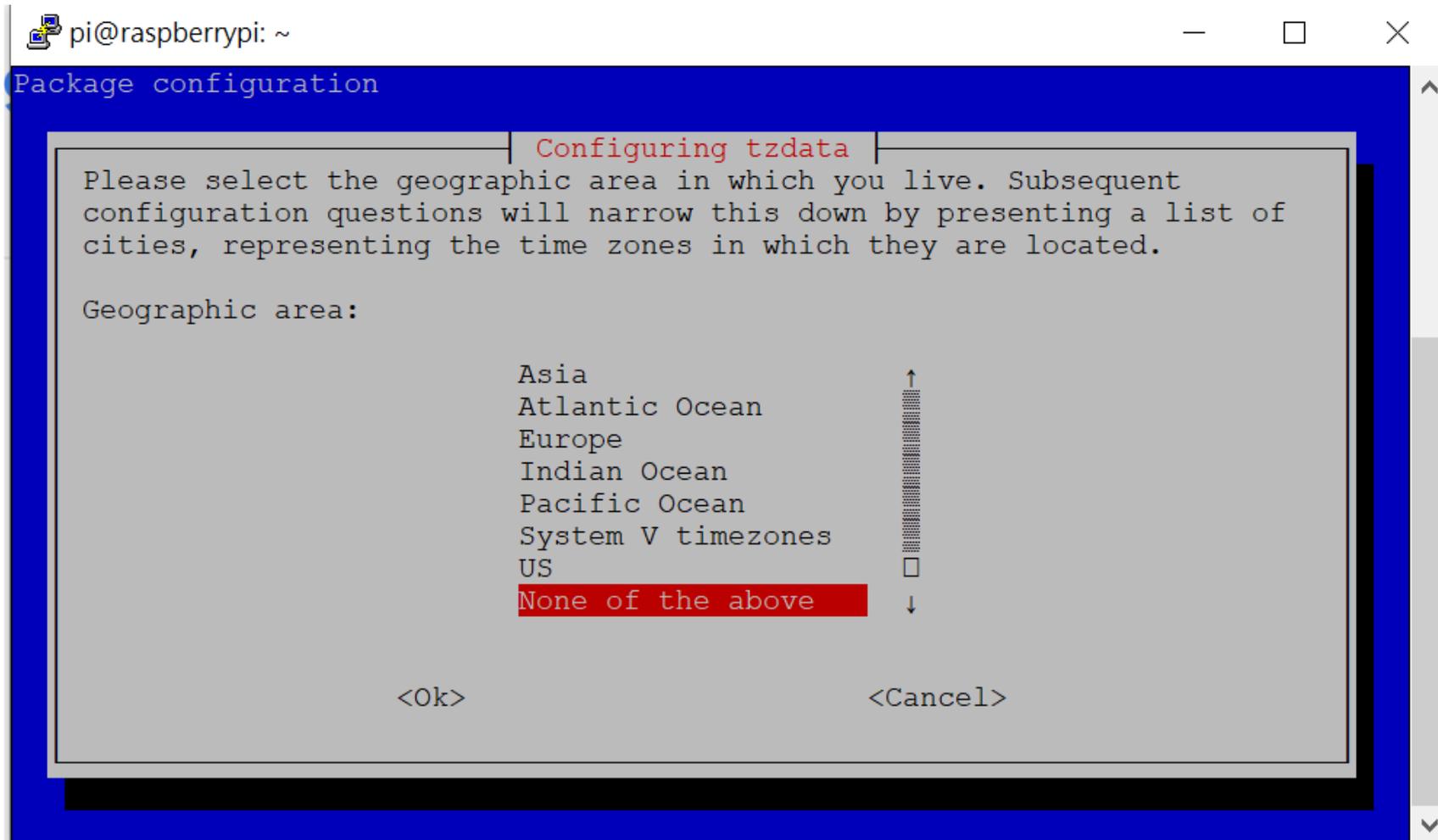
1 Change User Password      Change password for the default u
2 Hostname                  Set the visible name for this Pi
3 Boot Options              Configure options for start-up
4 Localisation Options      Set up language and regional sett
5 Interfacing Options       Configure connections to peripher
6 Overclock                 Configure overclocking for your P
7 Advanced Options          Configure advanced settings
8 Update                    Update this tool to the latest ve
9 About raspi-config        Information about this configurat

<Select>                   <Finish>
```

- Using you direction button to control the option, please select localization options.

```
pi@raspberrypi: ~  
Raspberry Pi Software Configuration Tool (raspi-config)  
I1 Change Locale          Set up language and regional sett  
I2 Change Timezone       Set up timezone to match your loc  
I4 Change Wi-fi Country  Set the legal channels used in yo  
  
<Select>                <Back>
```

- Select “Change Timezone”.



- Wait a second, you can see this screen.
- Down to “None of the above”.



- Select OK.

```
pi@raspberrypi: ~  
  
Raspberry Pi Software Configuration Tool (raspi-config)  
  
1 Change User Password      Change password for the default u  
2 Hostname                  Set the visible name for this Pi  
3 Boot Options              Configure options for start-up  
4 Localisation Options      Set up language and regional sett  
5 Interfacing Options        Configure connections to peripher  
6 Overclock                 Configure overclocking for your P  
7 Advanced Options          Configure advanced settings  
8 Update                    Update this tool to the latest ve  
9 About raspi-config         Information about this configurat  
  
      <Select>                <Finish>
```

- Select Finish, it will go back to terminal .