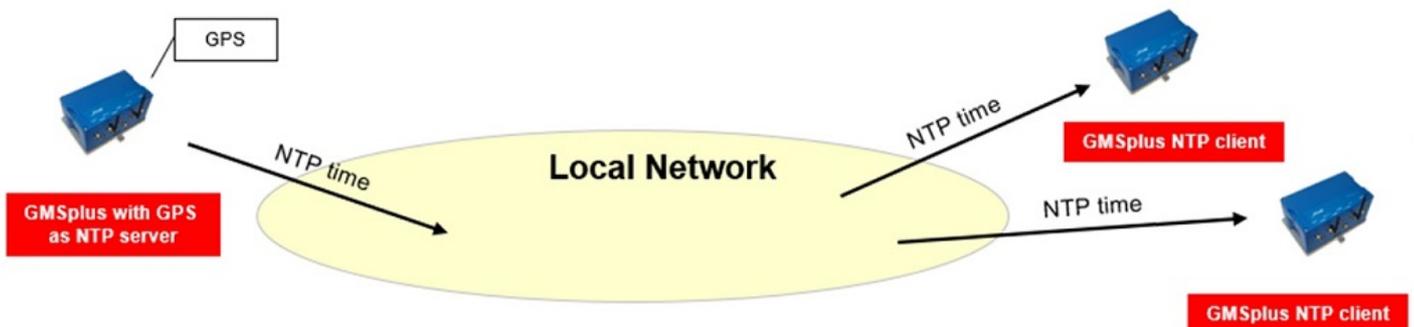


FAQ GMSplus How to Use as NTP Server

1. Introduction

- This procedure describes how to set a GMSplus as NTP server. Other instruments in the network (NTP clients) can then synchronize their time to the NTP server.



2. Required Tools

- GMSplus to serve as NTP server (it is recommended to have a GPS attached for time synchronization)
- Serial connection to console of GMSplus
http://www.geosig.com/files/FAQ_GMSplus_How_to_Connect_Serial_Console_with_uCon.pdf
- Other instruments as NTP clients, synchronizing their time to GMSplus

3. Set GMSplus as NTP server

- If the GMSplus is running, turn it off
- Connect the serial console of the GMSplus to your computer
- Turn on GMSplus
- Press **Ctrl+Z** as soon the below message appears on the console to enter the test mode.

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-----
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-- B1 -- -- B3 -- -- B5 -- -- B7 -- -- B9 -- -- B11 -- -- B13 -- -- B15 --
-- B2 -- -- B4 -- -- B6 -- -- B8 -- -- B10 -- -- B12 -- -- B14 -- -- B16 --
##### Test and Initial Configuration Mode #####
Press Ctrl+Z to enter the test mode...
Instrument serial number: 102833
Instrument MAC address: 8C:8E:76:00:55:3A
-----
PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 127.56.49.53 ROW/COL: 20/81 XFER: Idle
  
```

- By default no passwords are set, select **U** to enter the User Mode

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
--F2-- --F3-- --F4-- --F5-- --F6-- --F7-- --F8-- --F9--
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
Instrument MAC address: 8C:8E:76:00:55:3A
-----
Level          Shortcut  Password  Description
-----
User           Ctrl+U   None      Basic operations only
Powerful User  Ctrl+W   None      Also hardware options and pre-selecte
d tests
Administrator  Ctrl+A   None      Also manual tests and altering the FL
ASH memory content
-----
Your level U W/A] or press B to boot now: U
PLINK 192.168.100.12  TELNET SRVR OFF  MYIP: 127.56.49.53  ROW/COL: 15/81  XFER: Idle

```

- Select **N** to enter the menu Network settings

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
--F2-- --F3-- --F4-- --F5-- --F6-- --F7-- --F8-- --F9--
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
Bootloader Menu of the GMSplus s/n 102833
Access level: User

--- Flash Images and Boot Options ---
L - List flash images
Q - Reset instrument configuration to the user default
U - Reset instrument configuration to the factory default
5 - Boot now
X - Reboot the instrument
Y - Power off

--- Hardware Setup and Monitor ---
N - Network settings

--- Security ---
0 - Set password

-->
PLINK 192.168.100.12  TELNET SRVR OFF  MYIP: 127.56.49.53  ROW/COL: 19/81  XFER: Idle

```

- Confirm with **Y** to configure Network interface

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
--F2-- --F3-- --F4-- --F5-- --F6-- --F7-- --F8-- --F9--
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====

---- Primary network interface ----
Configure network interface (Y/N)? y

PLINK 192.168.100.12  TELNET SRVR OFF  MYIP: 192.168.100.11  ROW/COL: 11/78  XFER: Idle

```

- Enter **1** to set a static IP address

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====
---- Primary network interface ----
Configure network interface (Y/N)? y
Static IP address (1=YES, 0=AUTO)? (1 = 0x1): 1

```

- Enter the IP address of the GMSplus and make sure to choose an IP that is not within the range of dynamically assigned IP's (DHCP) of your router!
Please see DHCP settings on your router or ask your network admin if you are unsure

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====
---- Primary network interface ----
Configure network interface (Y/N)? y
Static IP address (1=YES, 0=AUTO)? (1 = 0x1): 1
Instrument IP address (192.168.100.12): 192.168.100.12

```

- Remember the IP, it will be needed again in step 4
- Enter the subnet mask (usually 255.255.255.0)

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====
---- Primary network interface ----
Configure network interface (Y/N)? y
Static IP address (1=YES, 0=AUTO)? (1 = 0x1): 1
Instrument IP address (192.168.100.12): 192.168.100.12
Instrument network mask (255.255.255.0): 255.255.255.0

```

- Enter the gateway IP (usually the IP of your router)

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====
---- Primary network interface ----
Configure network interface (Y/N)? y
Static IP address (1=YES, 0=AUTO)? (1 = 0x1): 1
Instrument IP address (192.168.100.12): 192.168.100.12
Instrument network mask (255.255.255.0): 255.255.255.0
Instrument gateway IP (192.168.100.1): 192.168.100.1

```

- Enter the DNS IP (usually the IP of your router)

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====
---- Primary network interface ----
Configure network interface (Y/N)? y
Static IP address (1=YES, 0=AUTO)? (1 = 0x1): 1
Instrument IP address (192.168.100.12): 192.168.100.12
Instrument network mask (255.255.255.0): 255.255.255.0
Instrument gateway IP (192.168.100.1): 192.168.100.1
DNS Server 1 IP (192.168.100.1): 192.168.100.1
PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 192.168.100.11 ROW/COL: 11/78 XFER: Idle

```

- Enter a alternate DNS IP (e.g. 8.8.8.8)

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
==== Network Settings ====
---- Primary network interface ----
Configure network interface (Y/N)? y
Static IP address (1=YES, 0=AUTO)? (1 = 0x1): 1
Instrument IP address (192.168.100.12): 192.168.100.12
Instrument network mask (255.255.255.0): 255.255.255.0
Instrument gateway IP (192.168.100.1): 192.168.100.1
DNS Server 1 IP (192.168.100.1): 192.168.100.1
DNS Server 2 IP (8.8.8.8): 8.8.8.8
PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 192.168.100.11 ROW/COL: 11/78 XFER: Idle

```

- Confirm the below entries with **Enter** to keep the default settings

```

uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
---- Miscellaneous parameters ----
Disable remote login over ssh (1=Yes, 0=Enable)? (0 = 0x0): unchanged
Recovery server IP address (84.253.42.164): unchanged
Recovery server port (19675 = 0x4CDB): unchanged
Recovery server contact interval, hours (24 = 0x18): unchanged
PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 192.168.100.11 ROW/COL: 7/78 XFER: Idle

```

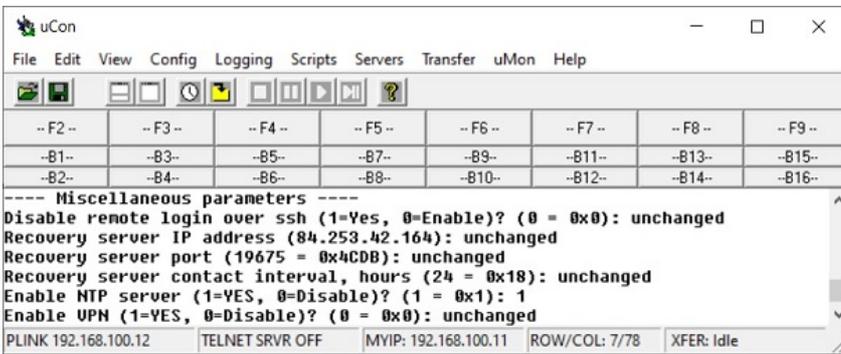
- Enter **1** to enable the NTP server

```

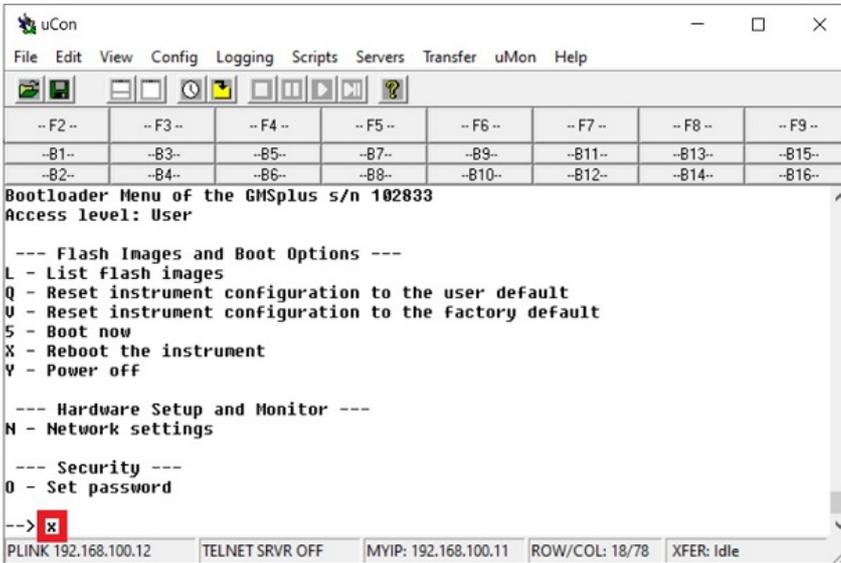
uCon
File Edit View Config Logging Scripts Servers Transfer uMon Help
-- F2 -- -- F3 -- -- F4 -- -- F5 -- -- F6 -- -- F7 -- -- F8 -- -- F9 --
-B1-- -B3-- -B5-- -B7-- -B9-- -B11-- -B13-- -B15--
-B2-- -B4-- -B6-- -B8-- -B10-- -B12-- -B14-- -B16--
---- Miscellaneous parameters ----
Disable remote login over ssh (1=Yes, 0=Enable)? (0 = 0x0): unchanged
Recovery server IP address (84.253.42.164): unchanged
Recovery server port (19675 = 0x4CDB): unchanged
Recovery server contact interval, hours (24 = 0x18): unchanged
Enable NTP server (1=YES, 0=Disable)? (1 = 0x1): 1
PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 192.168.100.11 ROW/COL: 7/78 XFER: Idle

```

- Confirm with **Enter** to keep the default settings



- Choose **X** and press **Enter** to initiate a reboot that will apply the changes



4. Setup other instruments in the Network as NTP clients

- Enter the IP of the GMSplus setup as NTP server in the config of other instruments:
http://www.geosig.com/files/FAQ_FAQ_GMSplus_How_to_Use_as_NTP_Client.pdf