



FAQ GMSplus How to Use as NTP Client

1. Introduction

- This procedure describes how to set a GMSplus as NTP client.
It will allow the GMSplus to synchronize its time with a NTP server.

2. Required Tools

- GMSplus with network connection
- Domain or IP address of a NTP server.
It can be a public server (see e.g. pool.ntp.org), a dedicated server in your network (check with your network admin) or a GMSplus with a GPS configured as NTP server
(http://www.geosig.com/files/FAQ_GMSplus_How_to_Use_as_NTP_Server.pdf)

3. Enter NTP server in GMSplus config

- The NTP server can either be entered through the webinterface (3.1) or from GMSplus serial console (3.2)





3.1 Enter NTP Server through Webinterface

- Open your webbrowser, enter the IP address of your GMSplus and login as admin (default password 123456)



- Choose tab **Configuration** and click **Miscellaneous Parameters**

Main menu

Station description	<input type="text" value="GMSplus (6ch) - GeoSIG Ltd"/>	
Station code	<input type="text" value="GSGMS"/>	
Location description	<input type="text" value="Switzerland"/>	
Seismic network code	<input type="text" value="GS"/>	
Number of Channels	<input type="text" value="3"/>	
Number of Output Streams	<input type="text" value="1"/>	
Number of Trigger Sets	<input type="text" value="2"/>	
Number of Preset Triggers	<input type="text" value="0"/>	
Channel Parameters	<input type="button" value=">>"/>	
Stream Parameters	<input type="button" value=">>"/>	
Trigger Parameters	<input type="button" value=">>"/>	
File Storage and Policy	<input type="button" value=">>"/>	
Communication Parameters	<input type="button" value=">>"/>	
Miscellaneous Parameters	<input type="button" value=">>"/>	
Station Location	<input type="button" value=">>"/>	
GeoSIG Options	<input type="button" value=">>"/>	

- Click **Time synchronization**

Home Configuration Status and Maintenance Data Explorer Help Logout

GeoSIG
swiss made to measure

Data Acquisition Configuration Manager Network Web Interface

Main menu | Miscellaneous

Offset detection time, sec	<input type="text" value="10"/>	
Offset correction time, sec	<input type="text" value="5"/>	
Offset correction counts	<input type="text" value="1"/>	
MiniSEED record length	<input type="text" value="512"/>	
Extended MiniSEED format	<input checked="" type="checkbox"/>	
State of health	<input type="button" value=">>"/>	
Test configuration	<input type="button" value=">>"/>	
Messaging and debugging	<input type="button" value=">>"/>	
Time synchronization	<input type="button" value=">>"/>	
Instrument configuration options	<input type="button" value=">>"/>	
Time for sending daily logfile, hour	<input type="text" value="0"/>	
Time for sending daily logfile, minute	<input type="text" value="0"/>	

Device type: GMSplus Device date and time: Sun Sep 10 20:58:40 2023 Device State Summary Context Help

Serial number: 102833 Station description: GMSplus (6ch) - GeoSIG Ltd













Station code: GS.GSGMS

- Choose Time source **NTP** from the dropdown
- Enter the IP or domain of your primary NTP server
- Enter the IP or domain of your secondary NTP server (enter the primary NTP server again if you don't have a secondary)



Home Configuration Status and Maintenance Data Explorer Help Logout **GeoSIG**
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Data Acquisition Configuration Manager Network Web Interface

Main menu | Miscellaneous | Time Synchronization

Time source	NTP	
NTP server 1	192.168.100.12	
NTP server 2	1.ch.pool.ntp.org	
NTP server query interval, sec	20	
NTP requests in a row	4	
NTP query intervals per RTC update	1	
NTP synchronisation timeout warning, min	240	
NTP synchronisation timeout error, hours	12	
NTP maximum error, sec	0.2	
RTC watchdog timeout, sec	1200	
Send SOH upon RTC status change	<input type="checkbox"/>	
Offset to UTC, minutes	0	

Back Load from Device Save Changes Apply and Restart

Device type: GMSplus Device date and time: Sun Sep 10 21:07:26 2023 Device State Summary  Context Help 

Serial number: 102833 Station description: GMSplus (6ch) - GeoSIG Ltd

Station code: GS.GSGMS

- Click **Apply and Restart** and confirm the pop-up with **Yes** to apply the changes

Home Configuration Status and Maintenance Data Explorer Help Logout

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Data Acquisition Configuration Manager Network Web Interface

Main menu | Miscellaneous | Time Synchronization

Time source	NTP	i
NTP server 1	192.168.100.12	i
NTP server 2	1.ch.pool.ntp.org	i
NTP server query interval, sec	20	i
NTP requests in a row	4	i
NTP query intervals per RTC update	1	i
NTP synchronisation timeout warning, min		i
NTP synchronisation timeout error, hours		i
NTP maximum error, sec	0.2	i
RTC watchdog timeout, sec	1200	i
Send SOH upon RTC status change	<input type="checkbox"/>	i
Offset to UTC, minutes	0	i

Apply and Restart
Apply updated configuration and restart the instrument?
Yes No

Back Load from Device Save Changes Apply and Restart

Device type: GMSplus Device date and time: Sun Sep 10 21:44:19 2023 Device State Summary Context Help i
Serial number: 102833 Station description: GMSplus (6ch) - GeoSIG Ltd
Station code: GS.GSGMS

3.2 Enter NTP Server from GMSplus Serial Console

- Connect to the serial console of your GMSplus
- Press **C** to enter the configuration menu and press **C** again to edit current configuration

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--

```

GMSplus s/n 102833 version 21.12.29
Main menu:
C - Configuration
M - Messages
S - Shell command
L - List firmware images
N - List network tunnels
X - Display errors (0) and warnings (0)
W - Clear errors and warnings
F - View/reset RTC trim values
T - File statistics
G - View RTC status
A - View Alarm status
P - View GPS information
H - Set RTC time
U - User request
R - Restart
Q - Quit
c

Please select a configuration to edit: (A)ctive, (C)urrent or (F)ile ....> C
  
```

PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 192.168.100.11 ROW/COL: 24/91 XFER: Idle

- Press **O** to enter Miscellaneous Parameters

```

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--
21:14:20.786 Checking configuration...
21:14:20.792 File /media/mmcblk0p1/Logfiles/SOH_102833_20230903_041708.xml deleted after tr
ansmission
21:14:20.865 Loading and analysing configuration (takes a few moments)...
21:14:20.935 Configuration config.xml has been loaded
Main Menu
A) Station description ..... GMSplus (6ch) - GeoSIG Ltd
B) Station code ..... GSGMS
C) Location description ..... Switzerland
D) Seismic network code ..... GS
E) Number of Channels ..... 3
F) Number of Output Streams ..... 1
G) Number of Trigger Sets ..... 2
H) Number of Preset Triggers ..... 0
I) Channel Parameters ..... ->
J) Stream Parameters ..... ->
K) Trigger Parameters ..... ->
M) File Storage and Policy ..... ->
N) Communication Parameters ..... ->
O) Miscellaneous Parameters ..... ->
P) Station Location ..... ->
S) GeoSIG Options ..... ->
Select <A>...<S>. <Esc> to exit o
PLINK 192.168.100.12 TELNET SRVR OFF MYIP: 192.168.100.11 ROW/COL: 24/91 XFER: Idle

```

- Press **K** to enter Time synchronization
- Press **A** until Time source shows **NTP**
- Press **I** to enter the IP or domain of your primary NTP server
- Press **J** to enter the IP or domain of your secondary NTP server (enter the primary NTP server again if you don't have a secondary)
- Press **Esc** followed by **ENTER** and again **Esc** followed by **ENTER** to get back to the main menu
- Press **Esc** to exit the menu
- Press **C** to save the configuration as "current"
- In the main menu, press **R** followed by **Enter** to restart the instrument
- After the restart, the configuration changes are applied
- Make sure that SOH status of the time sync shows **Locked** (can take several minutes)