

Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	1 / 11

## ● How to Create NTP Server Under No External Network Environment?

In a factory or special circumstances, the network are usually private and could not connect with external network. It is necessary to set up an NTP server to provide internal equipment time calibration to make sure that all devices have the same time.

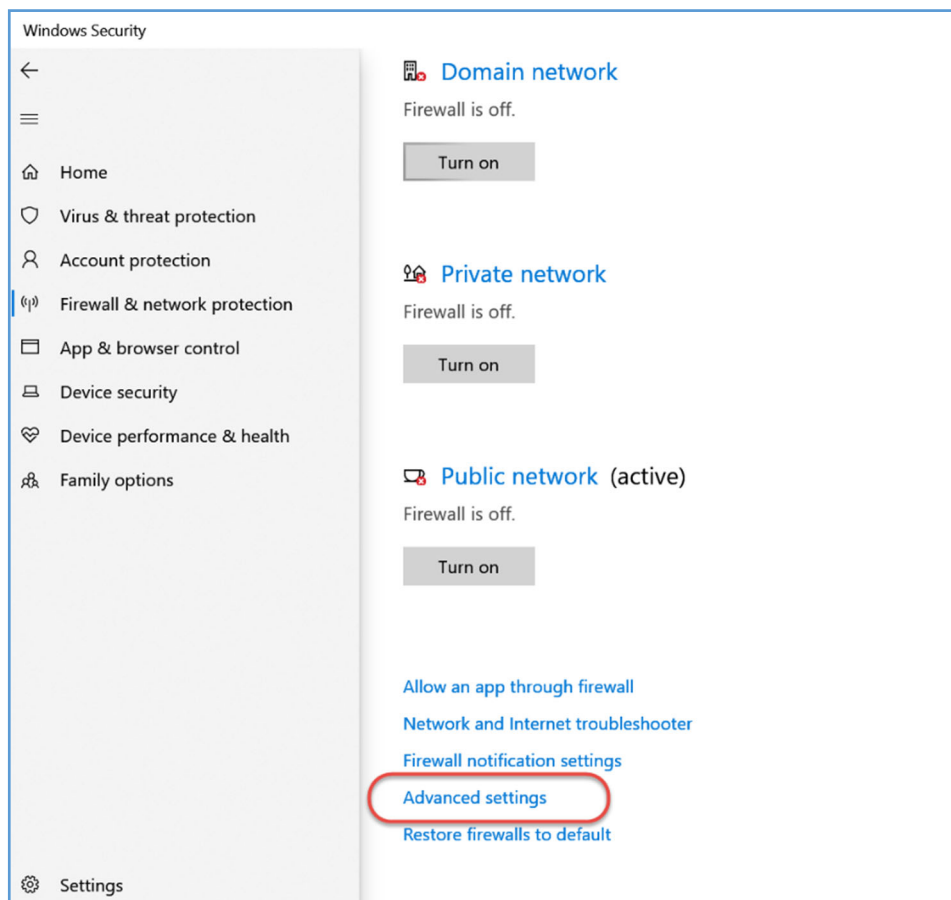
This article explains:

1. How to set up an NTP Server environment?
2. How to set the time of BRK products and NTP Server?
3. NTP stratum

[ This example operate under Windows 10 environment ]

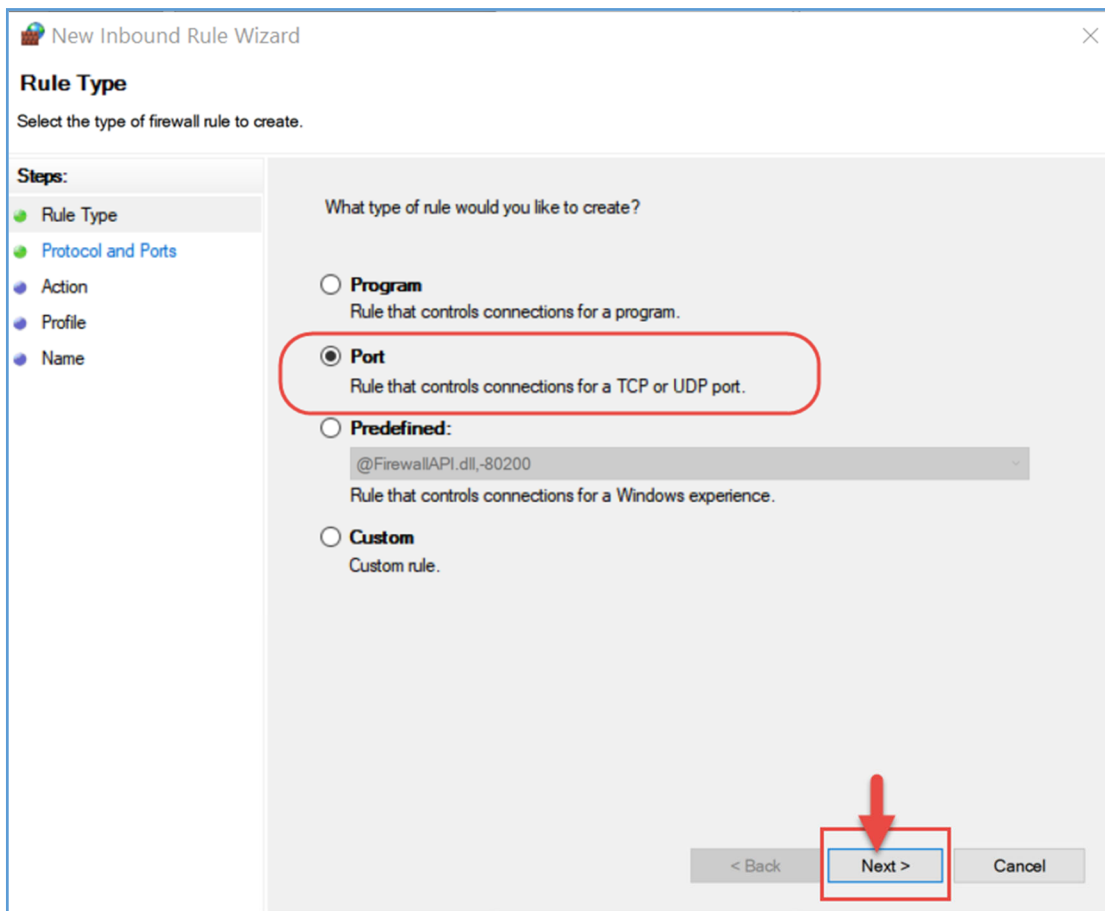
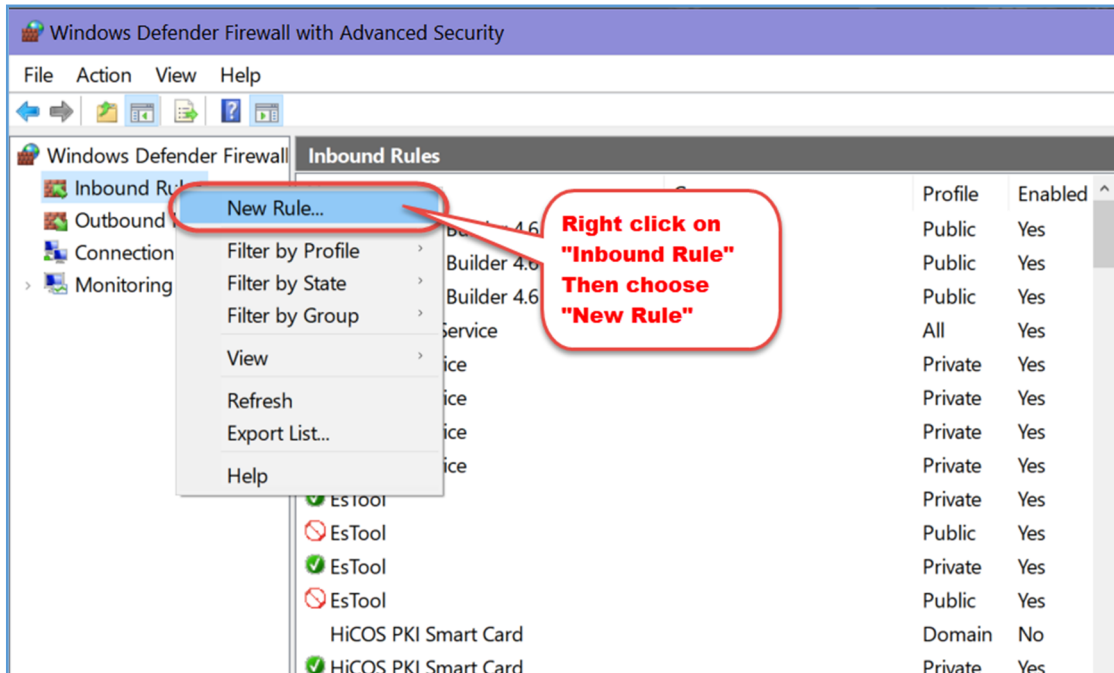
### 1. How to set up an NTP Server Environment?

Set up Firewall.



Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	2 / 11

Right click on [Inbound Rules] and then choose [New Rule]



Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	3 / 11

Choose [UDP], [Specific local ports]: 123

New Inbound Rule Wizard

**Protocol and Ports**

Specify the protocols and ports to which this rule applies.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

Does this rule apply to TCP or UDP?

TCP

UDP

Does this rule apply to all local ports or specific local ports?

All local ports

Specific local ports:

Example: 80, 443, 5000-5010

< Back **Next >** Cancel

New Inbound Rule Wizard

**Action**

Specify the action to be taken when a connection matches the conditions specified in the rule.

**Steps:**

- Rule Type
- Protocol and Ports
- Action
- Profile
- Name

What action should be taken when a connection matches the specified conditions?

**Allow the connection**  
This includes connections that are protected with IPsec as well as those are not.

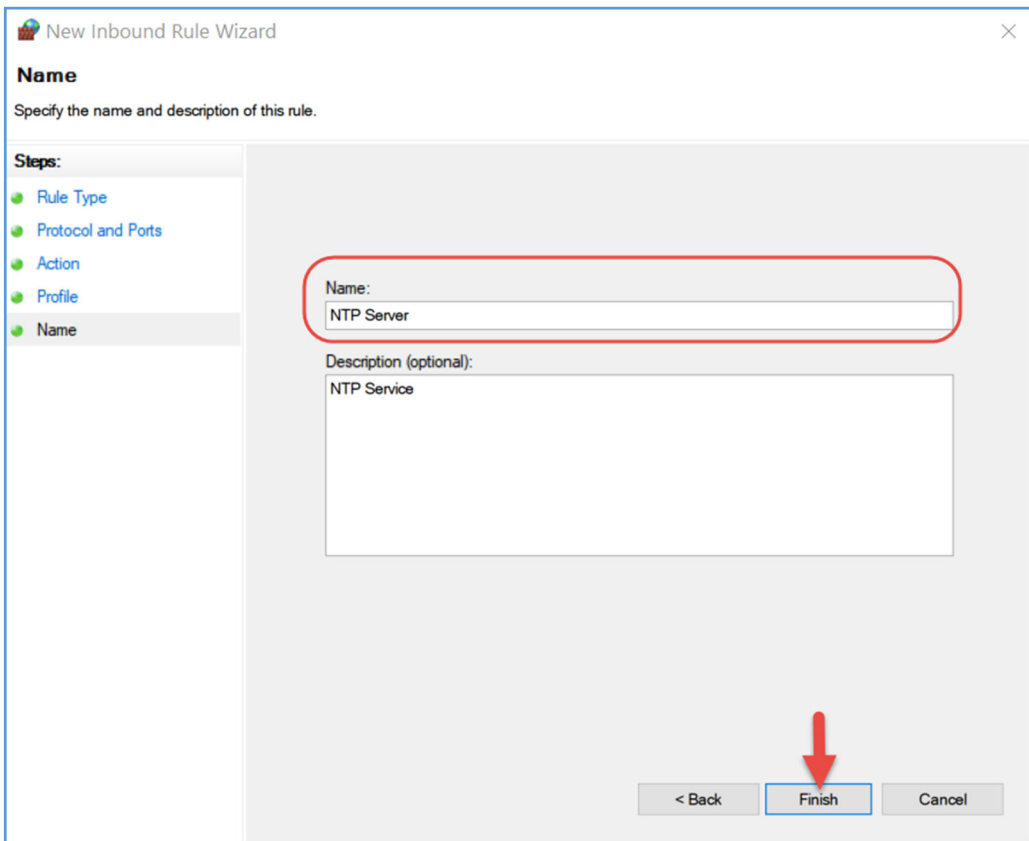
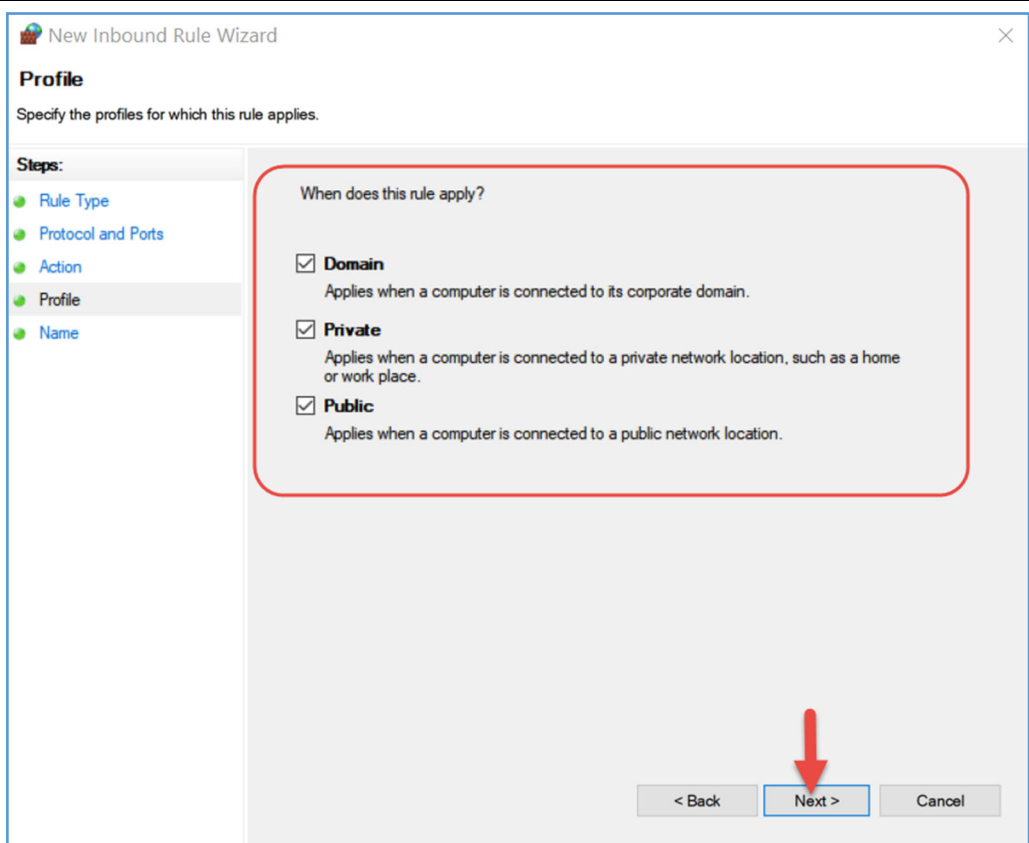
**Allow the connection if it is secure**  
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.

Customize...

**Block the connection**

< Back **Next >** Cancel

Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	4 / 11



Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	5 / 11

## Download and Install NTP Packages

Linkage: <https://www.meinbergglobal.com/english/sw/ntp.htm>

(ntp-4.2.8p15-win32-setup.exe)


NTP for Windows XP and newer, with IPv6 support

The current stable NTP version can be used with **Windows XP and newer**, on **32 bit and 64 bit** Windows versions. Beside the standard IPv4 network protocol it also supports **IPv6**. Alternatively there's an [older version](#) available which can also be used on Windows 2000 or Windows NT.

**Note:** The current stable version **ntp-4.2.8p15** provides a minor security patch and some enhancements. See the [changelog](#) for details. This package also includes the current **openssl DLL v1.1.1g**.

It is explicitly recommended to **upgrade earlier installations to this version**.

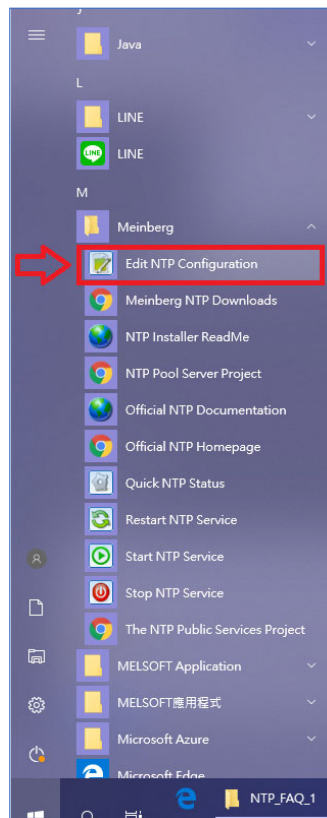
[Download this file](#)

 **ntp-4.2.8p15-win32-setup.exe** (4.29 MB)  
3 July 2020  
NTP package with IPv6 support for Windows XP and newer

SHA512 Checksum:  
[ntp-4.2.8p15-win32-setup.exe.sha512sum](#)

[How to verify integrity of the downloaded file](#)

After installation, Execute [Edit NTP Configuration]



Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	6 / 11

After deleting all the contents in the file, copy and paste the following contents and save them.

```
# NTP Network Time Protocol
# **** ATTENTION ****: *You have to restart the NTP service when you change this file to activate the changes*
# PLEASE CHECK THIS FILE CAREFULLY AND MODIFY IT IF REQUIRED
# Configuration File created by Windows Binary Distribution Installer Rev.: 1.27  mbg
# please check http://www.ntp.org for additional documentation and background information
# restrict access to avoid abuse of NTP for traffic amplification attacks
# see http://news.meinberg.de/244 for details
restrict default noquery nopeer nomodify notrap
restrict -6 default noquery nopeer nomodify notrap

# allow status queries and everything else from localhost
restrict 127.0.0.1
restrict -6 ::1

# if you need to allow access from a remote host, you can add lines like this:
# restrict <IP OF REMOTE HOST>

# Use drift file
driftfile "C:\Program Files (x86)\NTP\etc\ntp.drift"

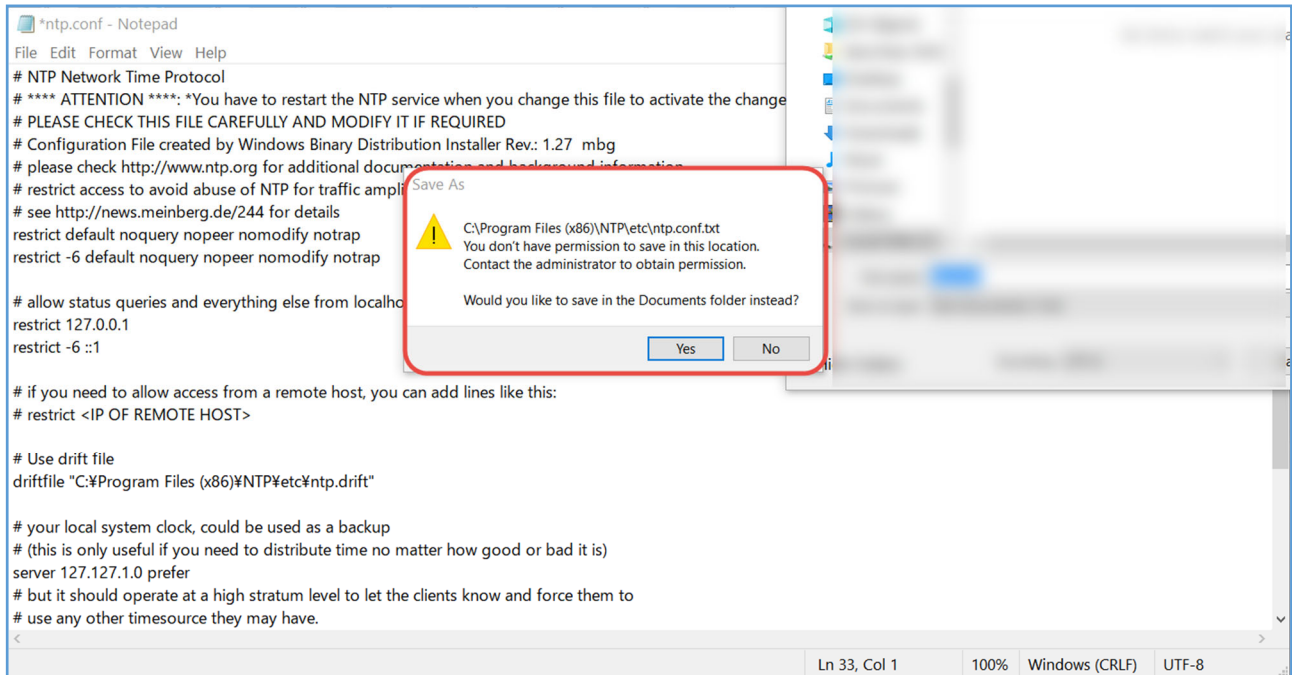
# your local system clock, could be used as a backup
# (this is only useful if you need to distribute time no matter how good or bad it is)
server 127.127.1.0 prefer
# but it should operate at a high stratum level to let the clients know and force them to
# use any other timesource they may have.
fudge 127.127.1.0 stratum 3

# Use specific NTP servers
#server tw.pool.ntp.org iburst minpoll 6 maxpoll 7
#server time.google.com iburst minpoll 6 maxpoll 7

# End of generated ntp.conf --- Please edit this to suite your needs
```

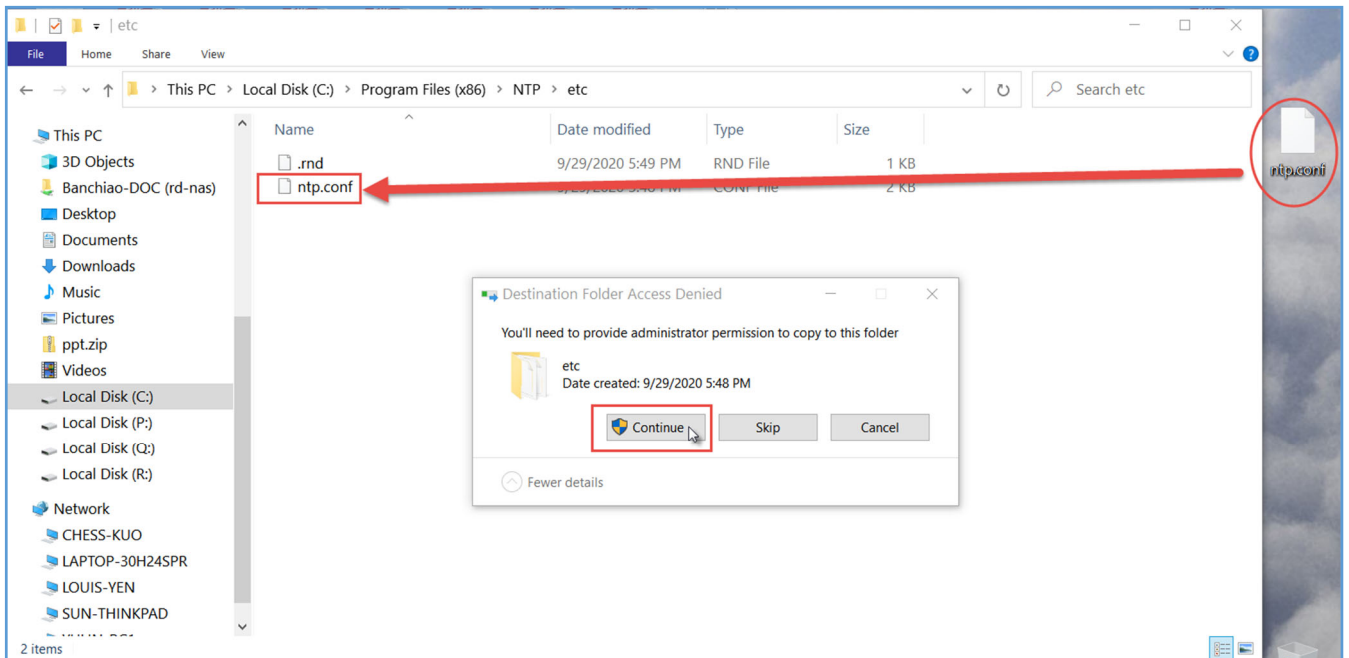
Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	7 / 11

While have no permission to save this file, please save this txt file into another location.



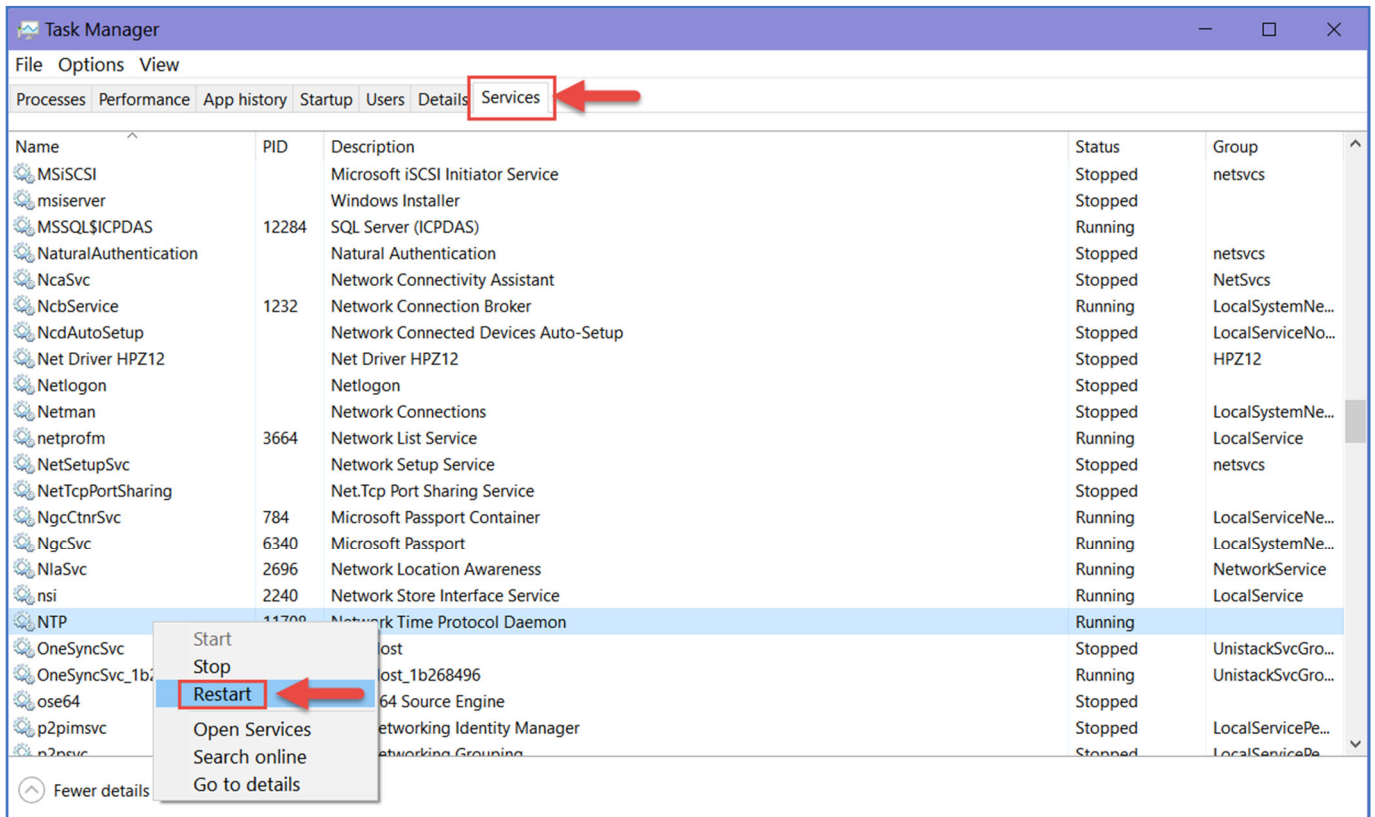
Replace the previous ntp.conf file with new saved one.

File route: C:\Program Files (x86)\NTP\etc



Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	8 / 11

Open Task Manager by press Ctrl+Alt+Del, and then choose [Services], right click to NTP and select [Restart]



Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	9 / 11

## 2. How to set the time of BRK products and NTP Server?

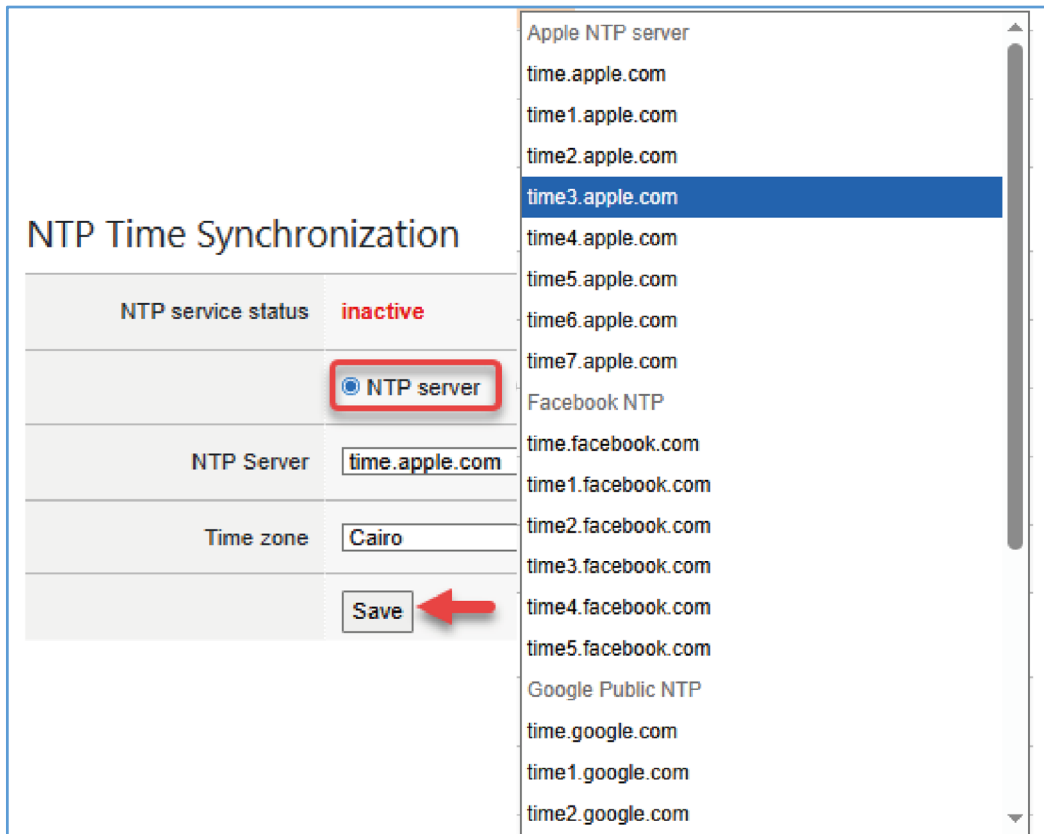
Login BRK Web UI, click [System Setting] > choose [Time Setting], click [NTP Server] and select NTP Server and Time Zone, press [Save].

The screenshot displays the 'System setting' page in the BRK Web UI. The 'Time' menu item in the left sidebar is highlighted. The main content area shows the current system time as 09:21:24 on August 1st, 2025, in the Asia/Taipei time zone. Below this, there are sections for 'Manual Time Adjustment' and 'NTP Time Synchronization'. In the 'NTP Time Synchronization' section, the 'NTP server' radio button is selected, and the 'NTP Server' dropdown is set to 'time.apple.com' and the 'Time zone' dropdown is set to 'Cairo'. A red arrow points to the 'Save' button at the bottom of this section.

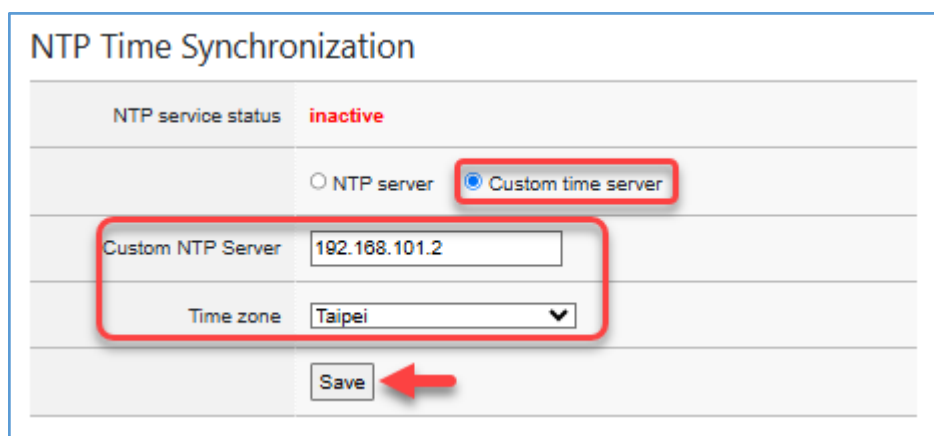
Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	10 / 11

<NOTE>

If you choose NTP Time Synchronization function, the manual Time Adjustment setting will be overwritten.



◆By default, BRK provides a list of NTP servers. You can click [NTP server], select NTP Server and time zone, and press [Save].



◆If you want to use a specific server, you can click [Custom time server], enter the Custom NTP Server IP, and select time zone, then press [Save].

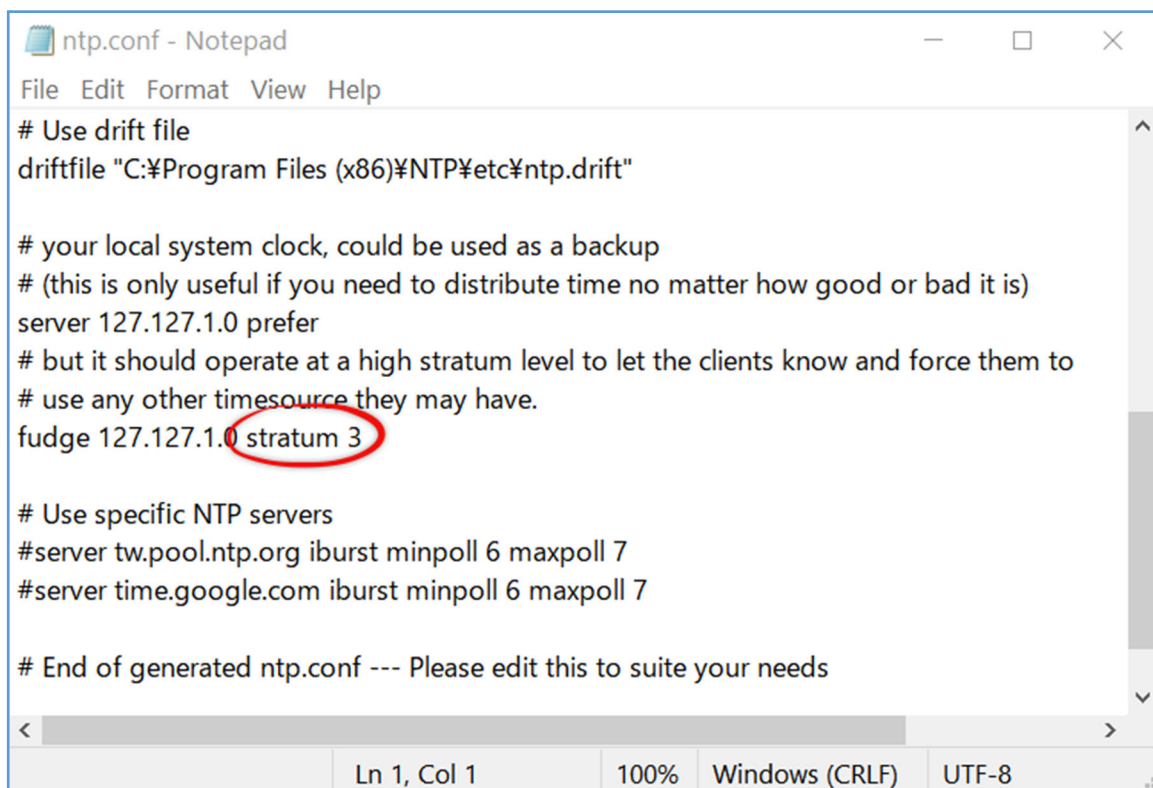
Classification	BRK-Series English FAQ-Dev-002						
Author	Carol Hsu	Version	1.0.0	Date	2025,8	Page	11 / 11

### 3. NTP stratum

The range of NTP hierarchy that can synchronize is from 0 to 15, if it exceeds the range, it cannot be synchronized.

When installing the NTP Server file < ntp-4.2.8p15-win32-setup.exe >, the value we currently set in ntp.conf is 3.

If you need to adjust the stratum value, all devices must be within this range, and then refer to Chapter 1 in this document to restart the NTP settings in [Task Manager].



```
ntp.conf - Notepad
File Edit Format View Help
# Use drift file
driftfile "C:\Program Files (x86)\NTP\etc\ntp.drift"

# your local system clock, could be used as a backup
# (this is only useful if you need to distribute time no matter how good or bad it is)
server 127.127.1.0 prefer
# but it should operate at a high stratum level to let the clients know and force them to
# use any other timesource they may have.
fudge 127.127.1.0 stratum 3

# Use specific NTP servers
#server tw.pool.ntp.org iburst minpoll 6 maxpoll 7
#server time.google.com iburst minpoll 6 maxpoll 7

# End of generated ntp.conf --- Please edit this to suite your needs

Ln 1, Col 1    100%    Windows (CRLF)    UTF-8
```