



Time Synchronisation Between Servers

Contents

1. Introduction.....	3
2. Setup.....	4
2.1 Setup Wizard	4
2.2 Sync Units to Local NTP Server with Access to a Reference/Public NTP Server.....	6
2.3 Sync Units to the Local NTP server Without Access to Public NTP Server.	7
3. Conclusion	10
Appendix A	11

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1. Introduction

There are many ways to synchronise between multiple windows and (or) Linux systems. The reader is referred to a number of references included in [Appendix A](#). This document covers one such approach as an example.

To accomplish time synchronisation between units, NetTime, which is a Simple Network Time Protocol (SNTP) will be used. This ensures camera review times over multiple NVR units are synchronised.

The download link is available here:

<http://www.timesynctool.com/>

Refer to the above website for NetTime's requirements, configuration notes, update history, notes for administrators and frequently asked questions.

USEFUL LINKS

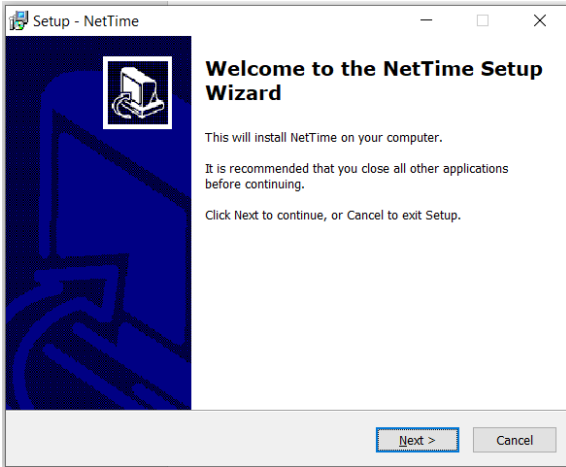
To view **tutorial videos** on CathesisVision setup, visit <https://cathesisvideo.com/resources/videos>

Find answers to Cathesis **Frequently Asked Questions**: <https://cathesis.crisp.help/en/?1557129162258>

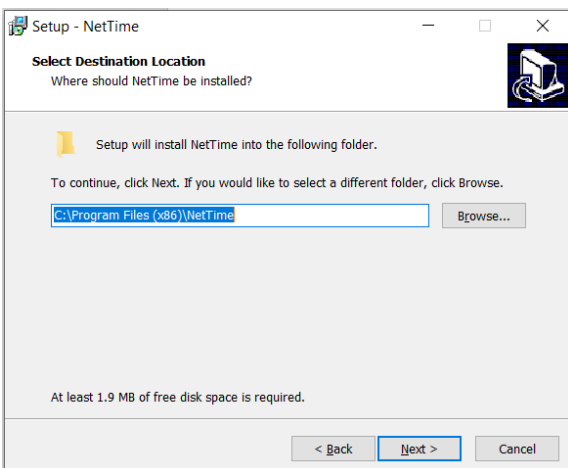
2. Setup

2.1 Setup Wizard

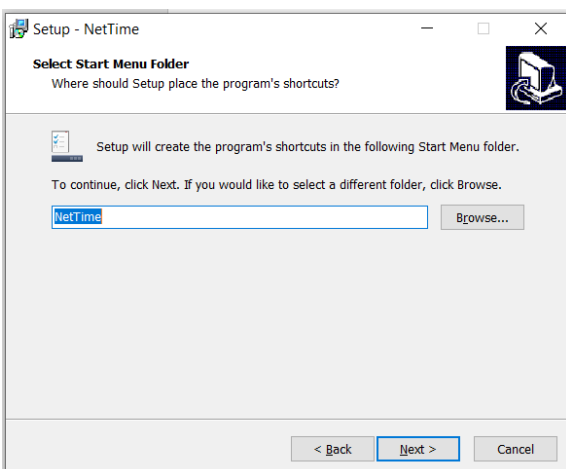
1. Enter the NetTime Setup Wizard

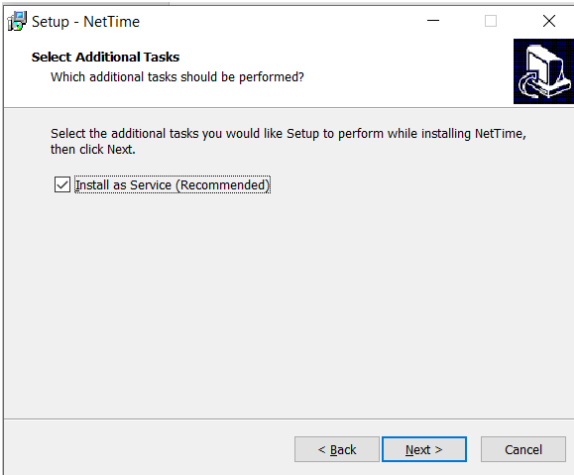


2. Select Destination Location

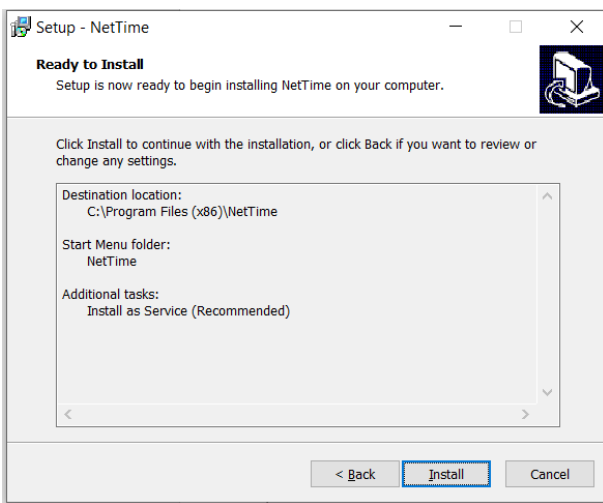


3. Select Start Menu Folder.

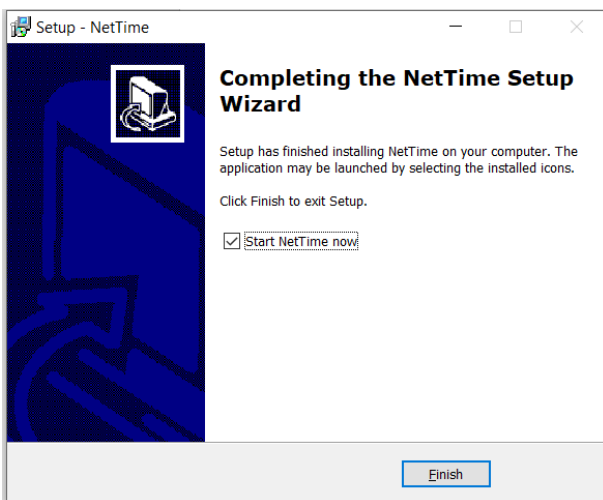




4. Select Additional Tasks.



5. Click Install.



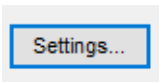
6. Finally, click Finish.

2.2 Sync Units to Local NTP Server with Access to a Reference/Public NTP Server

Step 1:

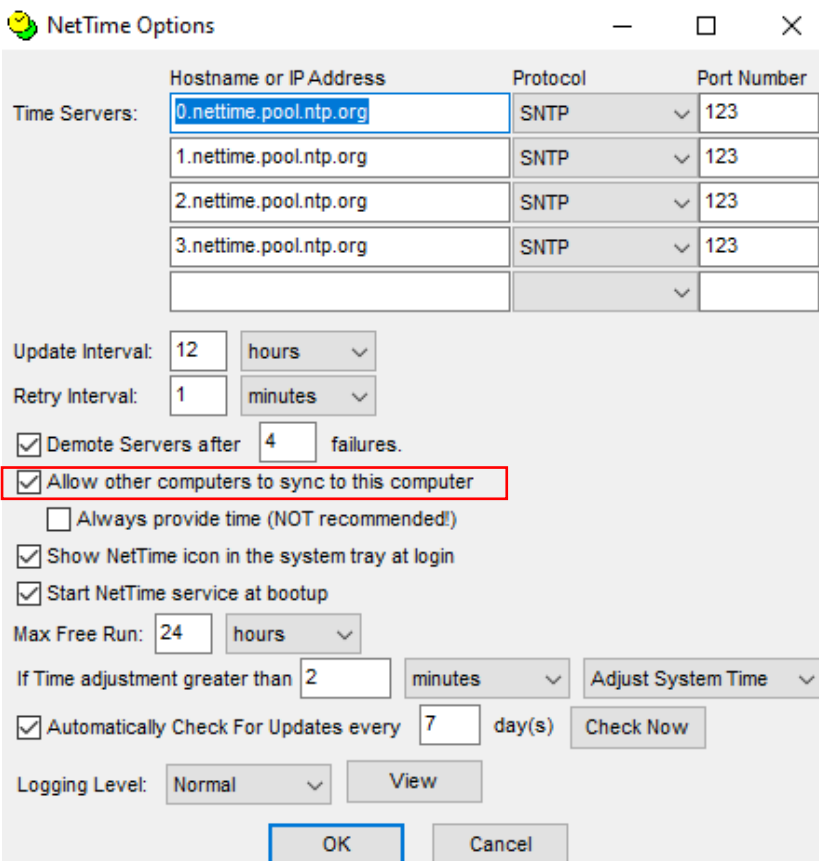
Install the software onto all units.

Step 2:



On the unit that is acting as the NTP server for the other units, click the settings button.

Here is where the setup of the NTP server is done to which a connection is require. This could be an Active directory domain controller, or the default public accessible NPT servers. Up to five connections can be set up, the top being the highest priority. If it fails, it will select a connection lower down the list until one is found to be stable with a valid connection. Set this up to the site preference.



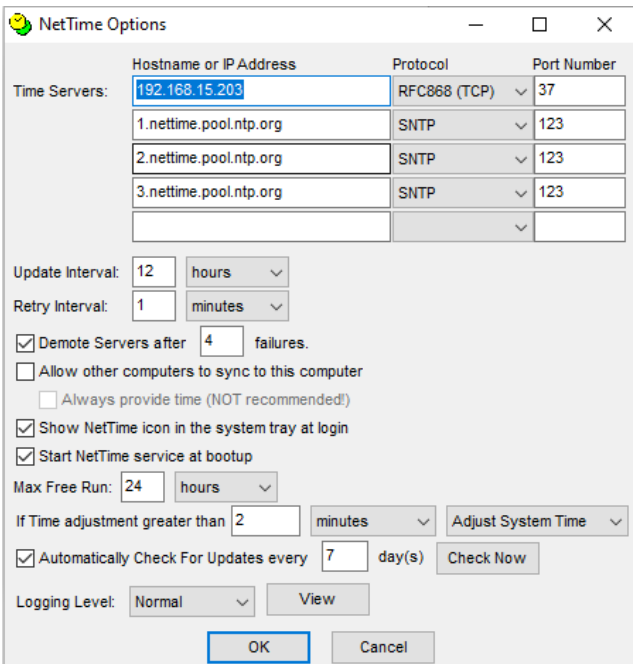
Make sure that “Allow other computer to sync to this computer” is checked (outlined in red).

Change settings to site requirements.

Note: “Always provide time” will happen if all NTP servers are not working or internet connection is lost.

Step 3:

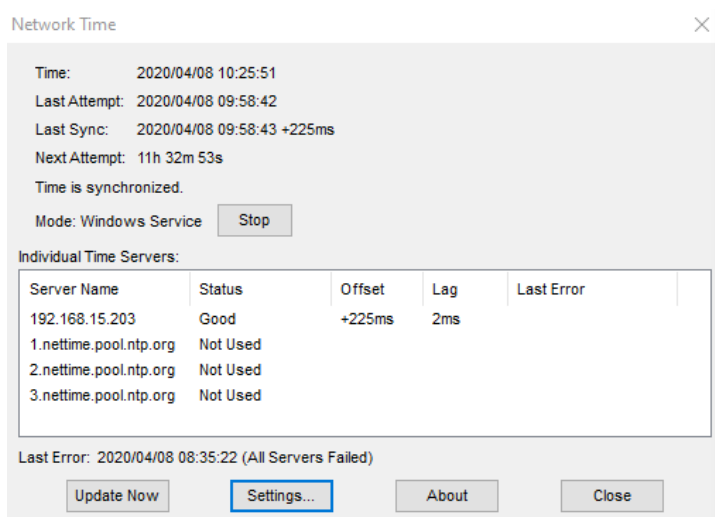
On the client unit(s), select settings.



Fill out the IP address of the local time server unit.

Change the protocol to RFC868 (TCP).

Once this is complete select "Ok". The synchronisation of the time should be visible on the required linked server:



2.3 Sync Units to the Local NTP server Without Access to Public NTP Server

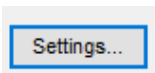
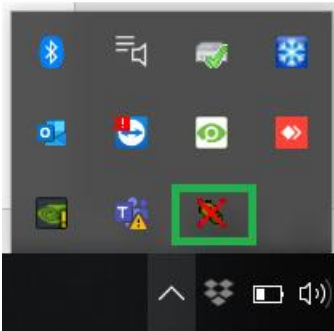
This method is not as reliable as the previous method (2.2) as it cannot reference a reference server or reliable public time server. This should only be used if no internet access is available. This method also requires scheduled checks to manually update the server's time.

Step 1:

Install the software onto all units.

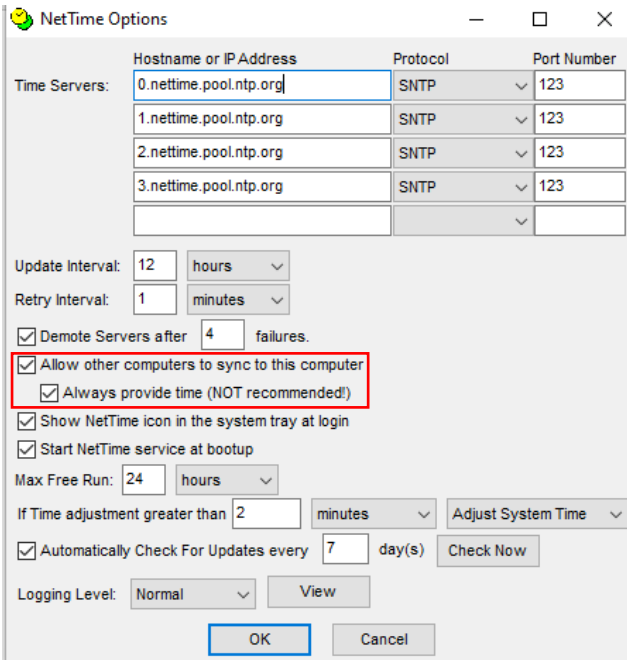
Step 2:

After the installation from the icon tray click on the NetTime icon.



On the unit that is acting as the server, click on the settings button.

In Settings, ignore changing any of the time servers as this requires an internet connection. What this will achieve is syncing the time this unit is set to and linking that to all other units.



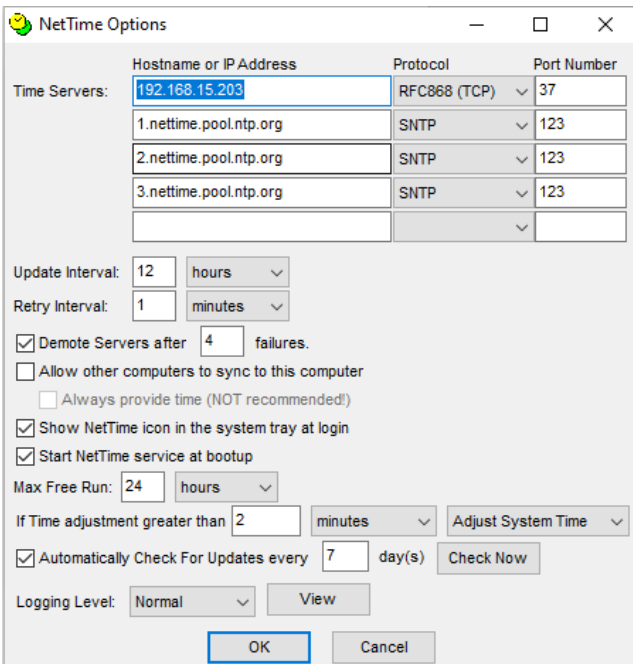
Settings here can be altered to the site preference.

It is important that the settings outlined in red are checked.

Note: There will be a warning that appears due to it using the computer time given by Windows and not from an NTP server. Selecting “No” will allow continuation of the Setting.

Step 3:

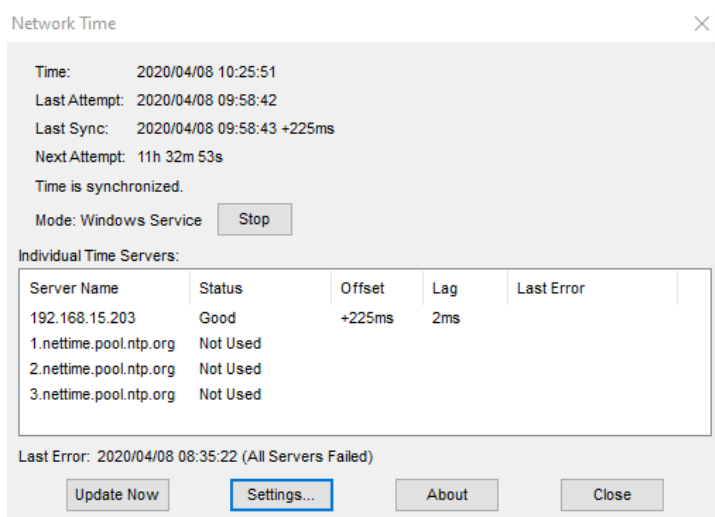
On the client unit(s), select settings.



Set the Time Server Hostname as the IP address of the server unit.

Change the protocol to RFC868 (TCP).

Once this is complete select “OK” and the unit syncing up to the server should be visible:



3. Conclusion

This appnote was designed to deal specifically with NetTime software. For further information about the CathesisVision software, consult the main manual (<http://cathesisvideo.com/>). For support, email support@cat.co.za.

Appendix A

<https://www.csoonline.com/article/3379042/how-to-time-sync-windows-systems.html>

<https://docs.microsoft.com/en-us/windows-server/networking/windows-time-service/windows-time-service-tools-and-settings>

<https://www.groovypost.com/howto/synchronize-clock-windows-10-with-internet-atomic-time/>

<https://www.timesynctool.com/>

<https://www.tecmint.com/synchronize-time-with-ntp-in-linux/>

<https://www.howtogeek.com/tips/how-to-sync-your-linux-server-time-with-network-time-servers-ntp/>

<https://vitux.com/debian-ntp-time-sync/>