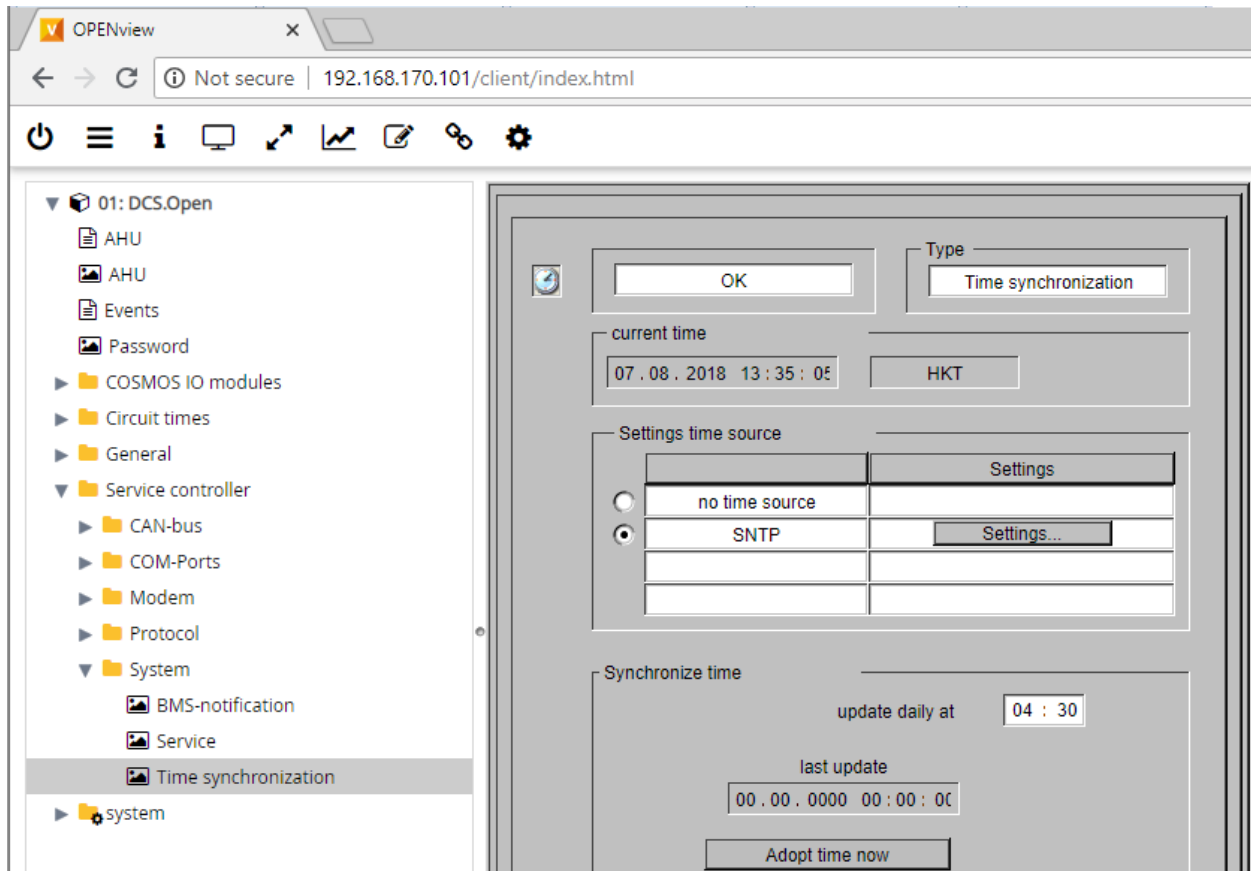

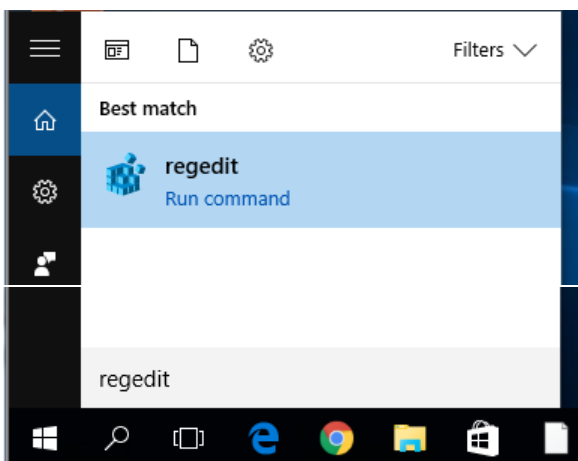


## TT180807 – OPENview - Time Synchronization

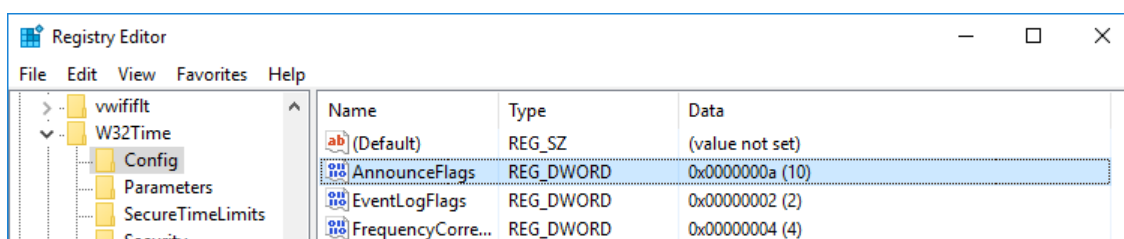
1. OPEN controller use SNTP to synchronize the clock with SNTP server.



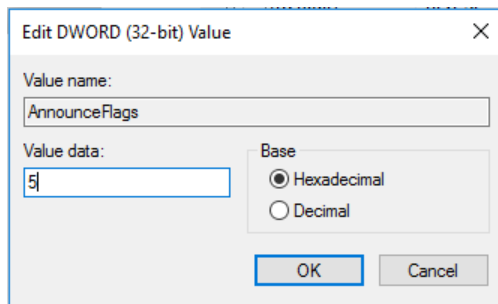
2. You can use SNTP server on the Internet, or you can setup SNTP server on your PC. To setup, click  and type “regedit”, press “Enter”



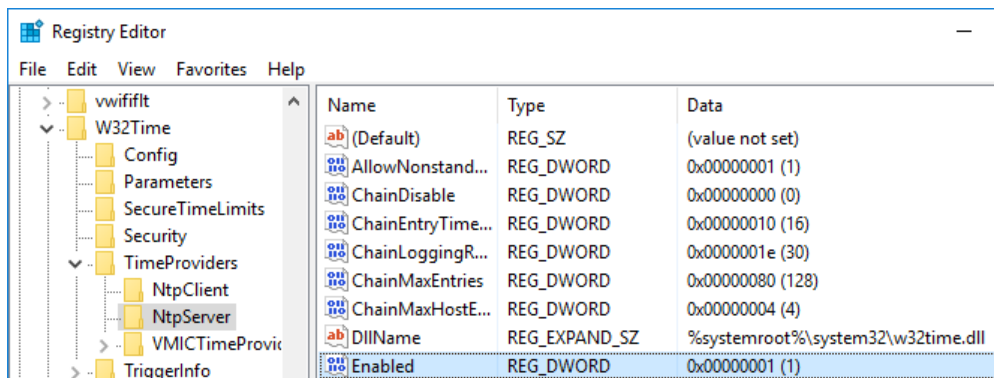
3. Go to “HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services\W32Time\Config”. Double click on it



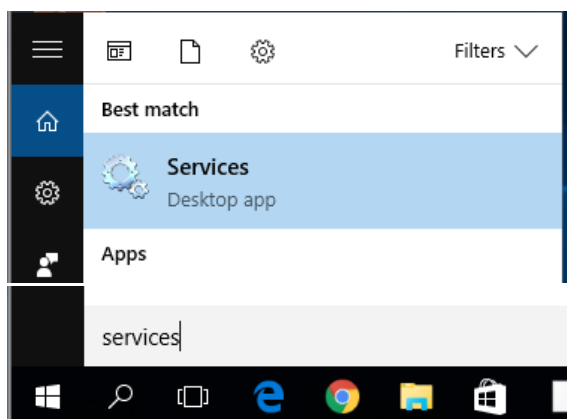
4. Type “5” in “Value Data” and click OK



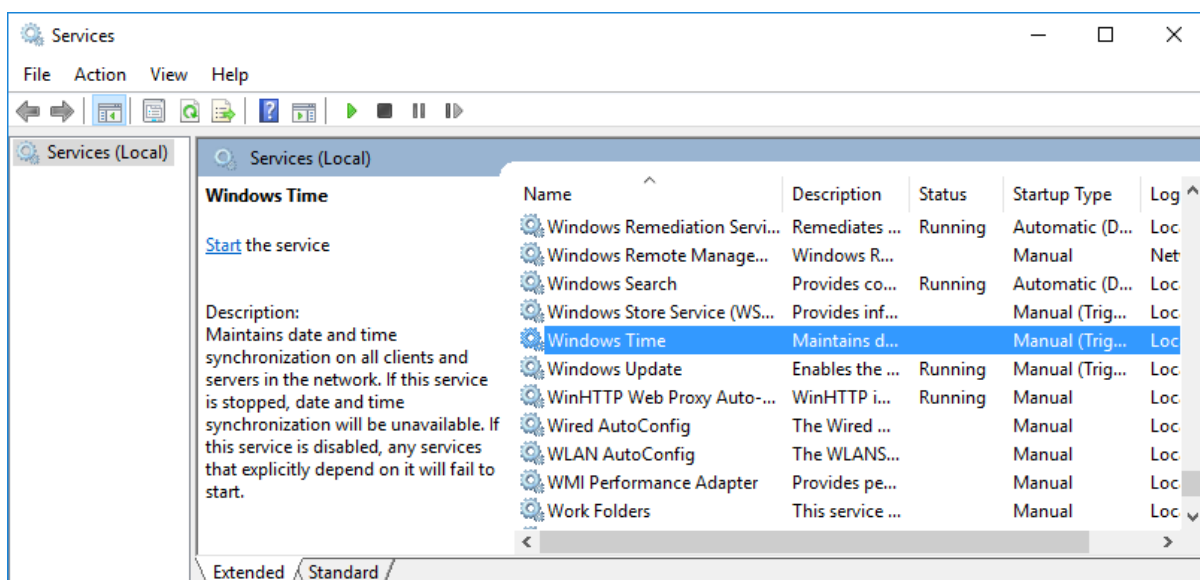
5. Go to “HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services\W32Time\TimeProviders\NtpServer”. Double click on “Enabled” and change the value to 1



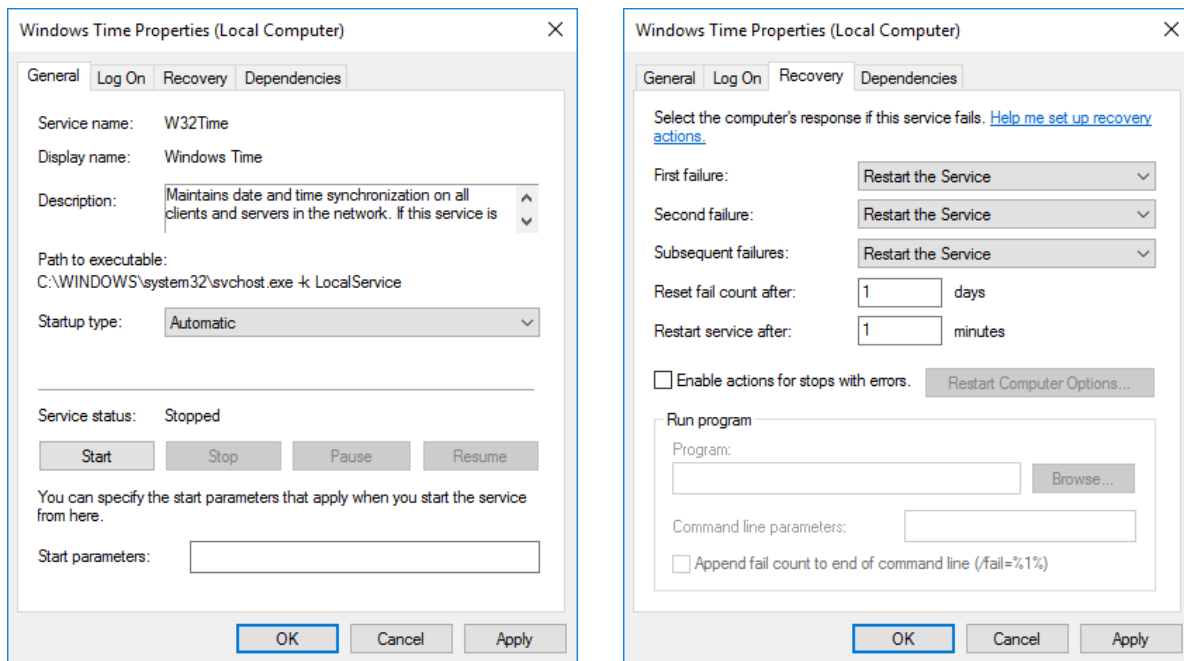
6. Now go to “Services” to setup the “Windows Time” service



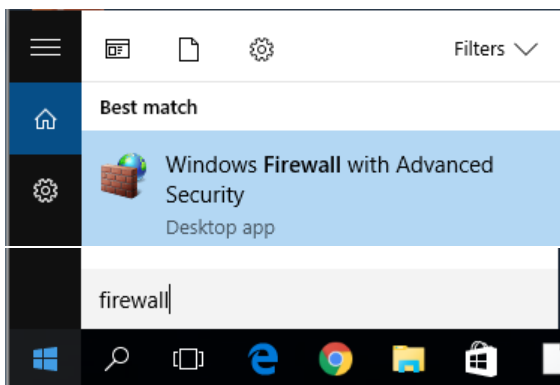
7. Scroll down the list to find “Windows Time”, double click on it



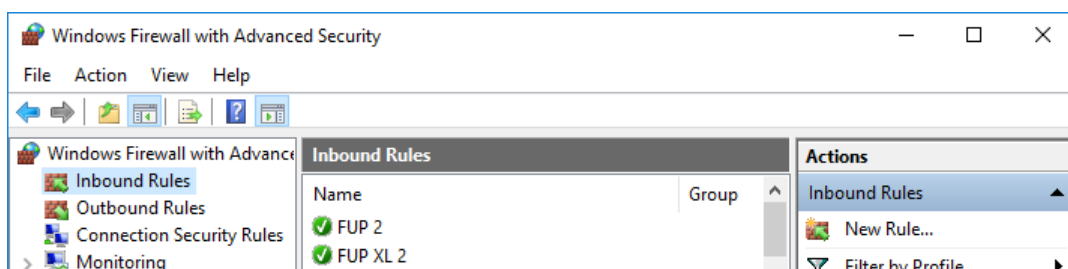
8. Change the “Startup Type” to “Automatic”, and click “Start”. Click on “Recovery” TAB, change “Subsequent failures” to “Restart the Service”, and click OK



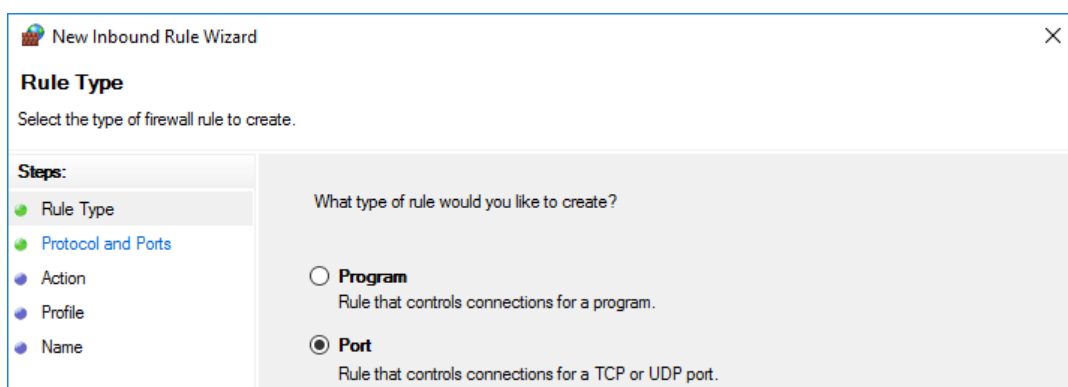
9. Finally we need to setup firewall for inbound UDP port 123, run “firewall”



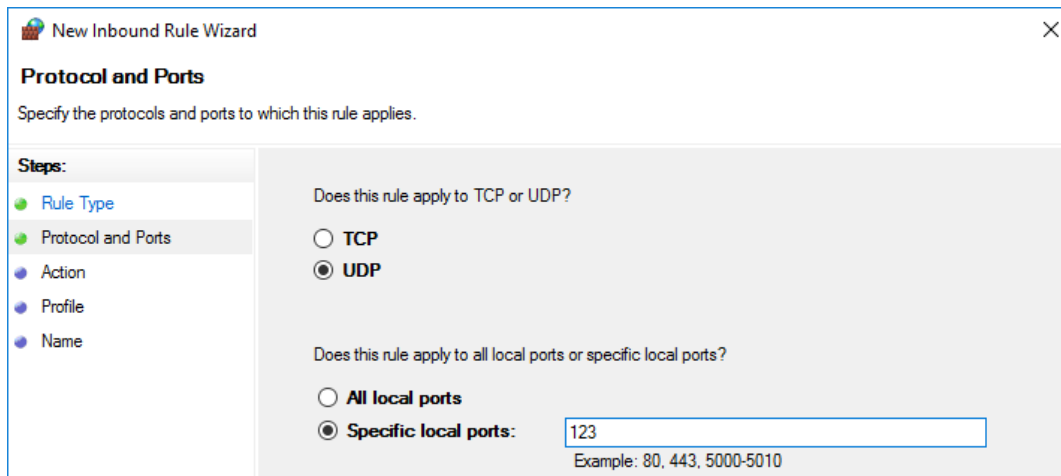
10. Click “Inbound Rules”, and click “New Rule...”



11. Select “Port”, and click “Next”



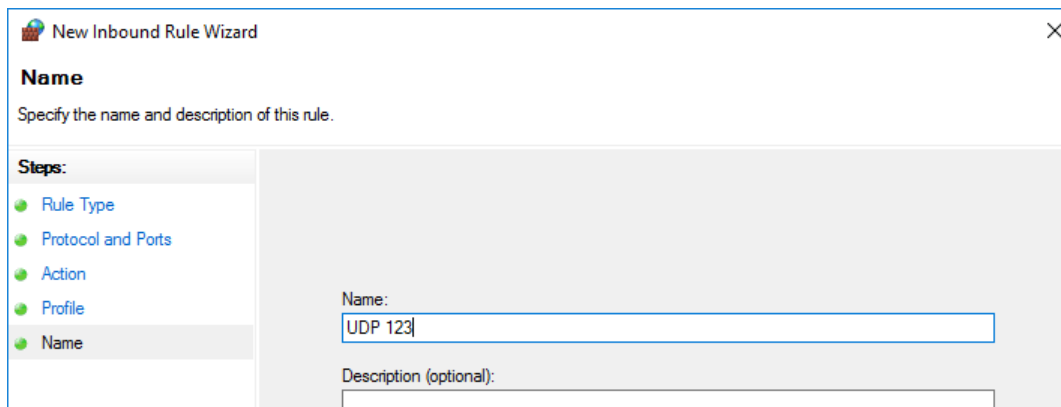
12. Select “UDP”, Type “123” for “Specific local ports”. Click “Next”



The screenshot shows the 'New Inbound Rule Wizard' window, specifically the 'Protocol and Ports' step. The 'Steps' pane on the left lists 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The main area contains two questions: 'Does this rule apply to TCP or UDP?' with 'UDP' selected, and 'Does this rule apply to all local ports or specific local ports?' with 'Specific local ports' selected. A text box for 'Specific local ports' contains the value '123'. An example '80, 443, 5000-5010' is shown below the text box.

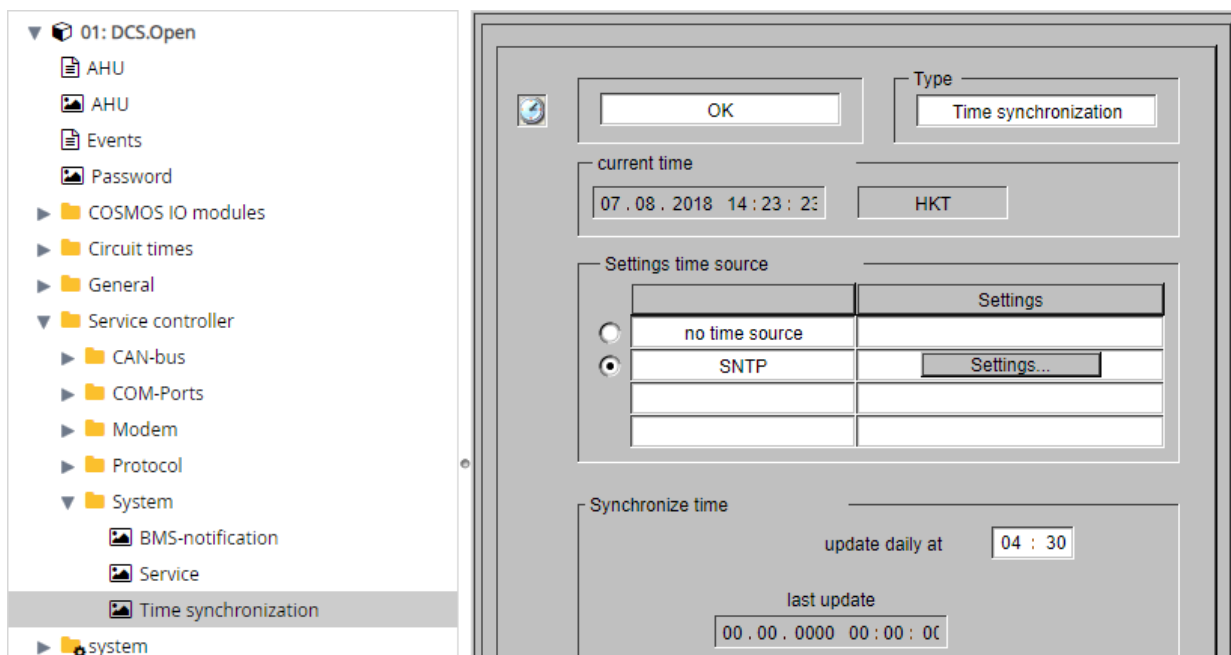
13. Click “Next” 2 times

14. Type “UDP 123” for the “Name”, and click “Finish”



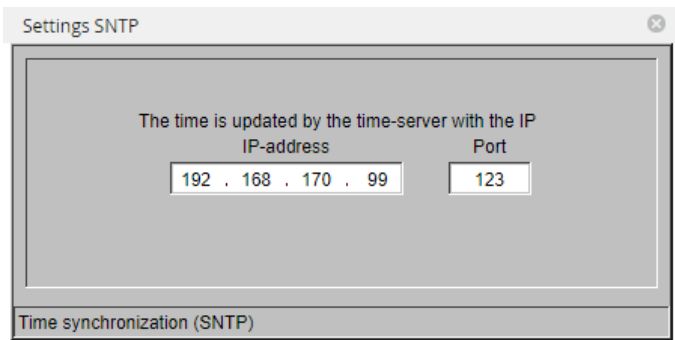
The screenshot shows the 'New Inbound Rule Wizard' window, specifically the 'Name' step. The 'Steps' pane on the left lists 'Rule Type', 'Protocol and Ports', 'Action', 'Profile', and 'Name'. The main area contains a 'Name' field with the value 'UDP 123' and a 'Description (optional)' field.

15. Now we setup the controller to synchronize the clock using SNTP. Use Chrome to connect to the controller, click “Service Controller”, “System”, “Time Synchronization”. Select “SNTP” and click “Settings”



The screenshot shows the 'Service Controller' window, specifically the 'System' > 'Time Synchronization' settings. The left pane shows the tree structure: '01: DCS.Open' > 'System' > 'Time synchronization'. The main area has a 'Type' dropdown set to 'Time synchronization'. Below it, the 'current time' is displayed as '07.08.2018 14:23:23'. The 'Settings time source' section has a table with 'no time source' and 'SNTP' (selected). The 'SNTP' row has a 'Settings...' button. The 'Synchronize time' section has an 'update daily at' field set to '04:30' and a 'last update' field set to '00.00.0000 00:00:00'.

16. Type your PC IP address, and port 123. Close the window



17. If the status shows OK, then we've finished the setup. Tick the checkbox for "Update Daily" and it will automatically synchronize the clock at 04:30 (configurable). If you want to synchronize now, click the "Adopt Time Now" button. The "Current Time" will now change, and the "Last Update" will show the last update date/time

