



AN09 : NLocTE initialization

Context

Explains how optimizing initialization time of NLocTE.

Problems to avoid

- A too long init time can cause your SCADA to have problems

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We will present here different tips to improve NLopecTE init time.

Working on the settings

In NLopecTE settings (“Start => All Programs => NLSuite => NLopecTE OPC Server => NLopecTE Settings”) :

Choose to work in “Advanced” mode.



In “Tuning and options” menu :

- **Fast Add items** must be set to **Active**
- **Start polling after init** must be set to **Active**
- Increase **Initialization time** to **5000**
- **Network variable names to indexes** must be set to **Active**
- **Server for remote tcp clients** must be set to **Inactive** (if not used)

In “Advanced settings” menu :

- **Item validation** must be set to **Format (1)**
- **Node validation** must be set to **None**
- If your OPC client does not use OPC Items range, set **Supports EU range** to **Inactive**
- If your OPC client does not use OPC Items enumeration range, set **Supports EU enumerated** to **Inactive**
- **LNS Cache Active** must be set to **Active**
- Keep the default memory for the different cache sizes
- **Timeout cache (minutes)** must be set to **10** at least

(1) : Use this option only if you are sure that your OPC client uses only valid item addresses

Working on the browser

Some OPC clients completely browse the OPC server browser on start-up. This is not recommended but in most cases you cannot change your client. So the idea is to force NLopecTE to have an empty browser.

You can do as follows:

- Generate an empty NLB file, which should look like this :

```
// Version
200
// Hierarchical
1
// Memory
1
```



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In “Tuning and options” menu of NLocTE settings :

- Set the **Browser file (NLB)** to use the file that you have just created

Working with the monitoring engine

Another way to increase initialization performances is to use the internal polling engine. Use this option as a last option or if you really want to use **Fast polling** engine.

You can do as follows :

- In **Modes** menu
 - Set **Fast polling** to **Active**
- In **Fast polling** menu
 - Set **Do not use LNS monitoring engine** to **Active**

Working with NLocTE runtime

When the OPC server is launched :

- Click on **Config traces** button
- The option **Logging\Enabled** must be set to **inactive**

If initialization time remains slow

(1) Remake the test in **Simulation** mode.

=> If it is faster in simulation mode then you may have a problem with the network.

(2) Remake the test but disconnect the PC from the real network (unplug the bus wire).

=> If it is faster in simulation mode then you may have a problem with the network.

(3) Try another OPC client.

To do this follow these steps :

- In the registry go in :
 - [HKEY_LOCAL_MACHINE\SOFTWARE\Newron System\NLocTE\Settings]
- Set the key **CanExport** as a data word equals to 1
- If the key was not set you must stop/restart your OPC session

Launch the session with YOUR opc client and create all items

Click on **Export** button

In **Export format** select **Softing 4.10**

In **File** select a full text file path

Click on **Export**

Close your client and the OPC server



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Launch the program **Softing OPC Toolbox Demo Client** in the folder **Softing OPC Toolbox Demo Client V4.1x** of the **Startup** menu

If not present reinstall **NLocTE** using the custom installation mode and select the installation of the **Softing OPC Client**

In menu **File** select the option **Open**

Select the file you export in previous step

Compare the initialization time with your own client