

Main concepts

There are two available tools:

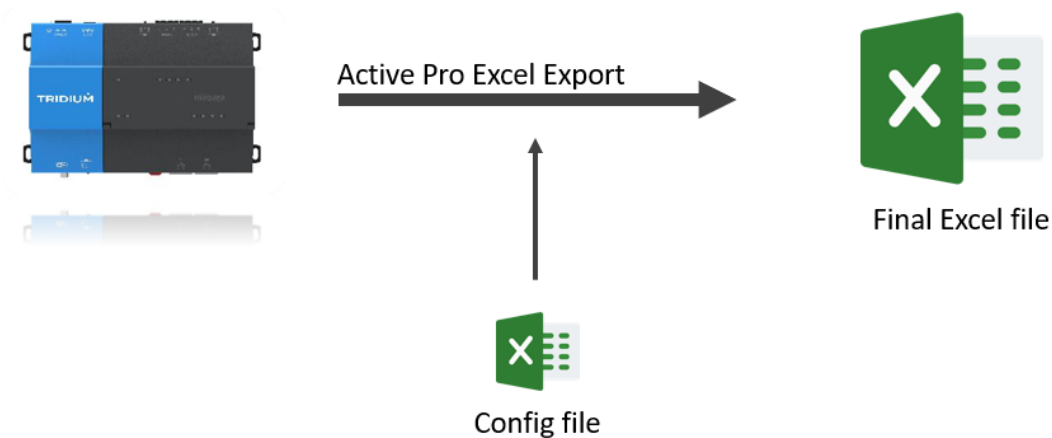
- The Export tool to export the content of any station to Excel
- The Import Tool to import an Excel file into a Niagara station to create content.

Make sure first to read the [Get Started tutorial](#).

Export Tool

This is how the Export tool works:

- It reads the content of a station
- It uses an Excel config file as a model
- It creates an Excel file with the content of the station.



The tool is highly configurable. You can configure 3 things:

- **The components** you want to export per sheet. *Example: one sheet for the networks, the devices and the points. And another sheet with the schedules.*
- **The base** where to look for the content in the station. *Example, only what's inside the drivers.*
- **The information** to export. *Example: the tags, the history and alarm extensions parameters, the facets...*

The configuration of the components and the information to export are specified in the Config file you specify in the tool. The Config files is described below.

The tool has a few available options:

Export Configuration

License: OK 50.0.55.0 Update default files

Destination File: C:/Users/cholc/Niagara4.9/tridium/shared/excel/MyFirstExport.xlsx

Bases: + station:|slot:/Services

Default Config: C:/Users/cholc/Niagara4.9/tridium/shared/excel/export/advancedConfig.xl

☐ Handle implied tags ☐ Process Model

☐ Use Variables

OK Cancel

- **Update default config:** Overrides the Excel file templates with the latest version of the files (see below what those files mean).
- **Destination file:** Path to the file you want to create. You can select an existing one or create a new one. (You will be warned if you try to override an existing file).
- **Bases:** Bases used to resolve the neql query in the "Structure" sheet. **Example: If you select station:|slot:/Drivers, only the content inside the drivers will be exported.** An option to select multiple bases has been added since problems with some neql returning too many responses have been observed.
- **Default Config:** Config Excel file used as a model if the destination file doesn't exist or if it's incomplete (if the destination file is missing a helper sheet, it will be taken from the Default Config) . You can change it to personalize the information exported in the sheets and the columns. Use the excel template files located in the shared/excel/export folder for your first exports.
- **Handle implied tags:** Refresh all the tags in the station. Needed for the export of implied tags. The option is not selected by the default as the operation is time consuming.
- **Process Model:** Fills the Model Sheet and adds dropdowns in the Assignment columns cells with all the paths leading to all the Nodes in the station. The option is not selected by the default as the operation is time consuming.
- **Use Variables:** Uses the variables defined in the ~Variables sheet to shorten the base in the Base column. By default it's off.

No host, port or credentials are asked in the tool, **you need to have an active tab in your Workbench** which targets the connected station you want to export.

! Since the 50.0.15.0 only .xlsx files are supported

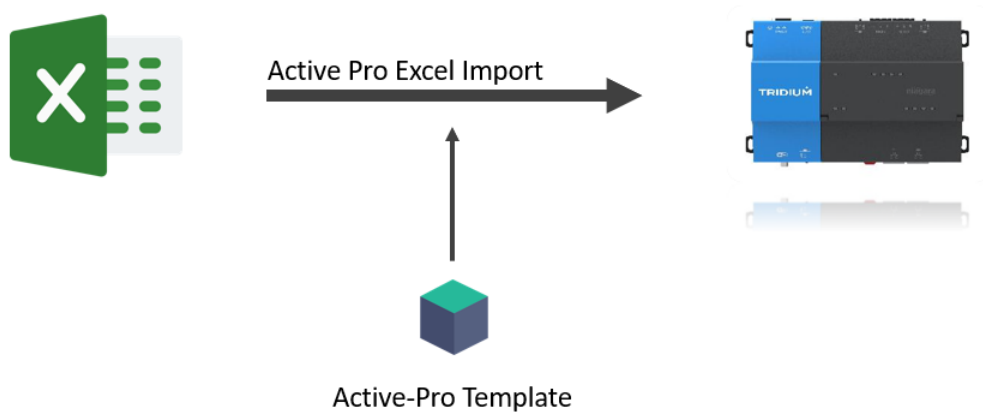
! It's required for the export to work: the destination file must be closed, it cannot write in an opened file.

The tool will also display the status of your license in the upper left corner and the version of your tool in the upper right corner.

Import Tool

This is how the Import tool works:

- It reads the content of the Excel file you fill-in.
- It look for templates if you defined some in the Excel file.
- It updates/creates the content in the station.

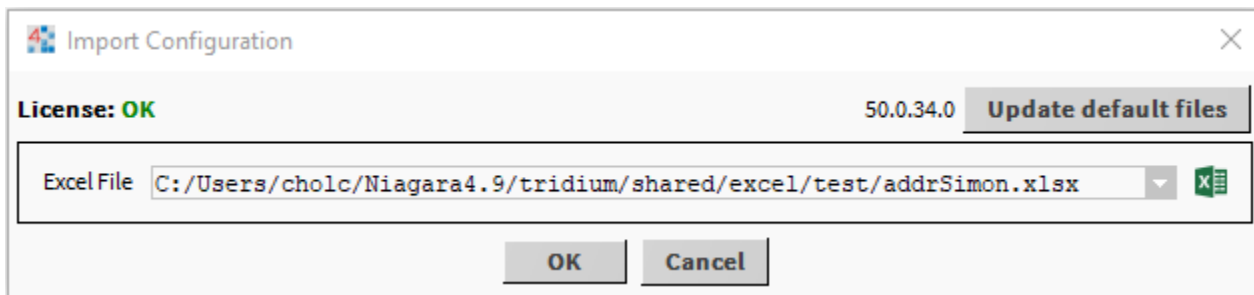


The Import tool doesn't delete content (only on very specific cases), it creates new content or update existing one (with some limits).

To create content, you can use in the Excel

- **TypeSpec** to create raw components. [Example: control:NumericPoint for a Numeric Point.](#)
- **Templates** to create more complex components (with content inside, logic, views...). You can create Active-Pro templates or use Niagara's templates. See the part on templates for more information.

The Import tool is quite simple:



- **Update default config:** Will override the excel file templates with the latest version of the files (see below what those files mean).
- **Excel file:** Path to the excel file you want to import. The drop down will allow you to select previously selected files, the excel button on the right will allow you to select a new one.

No host, port or credentials are asked in the tool, **your need to have an active tab in your Wokbench** which targets the connected station you want to export.







⚠ Since the 50.0.15.0 only .xlsx files are supported

Excel Config files

The excel Config files are used for the export to define the model of Excel file to create and the content to put in it:

- networks, devices, points...
- history & alarm extensions
- Tagging
- Facets...

hey are located in the shared/excel/export folder (in your user home). Example:

> Christophe HOLC > Niagara4.6 > tridium > shared > excel > export >				
Name	Date modified	Type	Size	
 advancedConfig.xls	05/02/2020 18:40	Microsoft Excel 97...	68 KB	
 advancedConfig.xlsx	05/02/2020 18:40	Microsoft Excel W...	30 KB	
 defaultActive.xls	05/02/2020 18:40	Microsoft Excel 97...	64 KB	
 defaultActive.xlsx	05/02/2020 18:40	Microsoft Excel W...	28 KB	
 defaultConfig.xls	05/02/2020 18:40	Microsoft Excel 97...	64 KB	
 defaultConfig.xlsx	05/02/2020 18:40	Microsoft Excel W...	27 KB	


In this folder, three .xlsx are present. Those files will all have the same sheets, but will differ in the number of columns in the ~DefaultSheet:

- defaultConfig: The ~DefaultSheet will contain all the basic columns.
- defaultModelConfig: The ~DefaultSheet will contain basic columns as well as the isIn column for outgoing isIn relations.
- defaultActive: The ~DefaultSheet will contain all the basic columns and those which work with the Active-Framework.
- defaultImport: Similar to the defaultConfig but already contains a Default Data Sheet that you can fill and import.
- advancedConfig: The ~DefaultSheet will contain all the available columns (including some which works only with the Active-Framework).

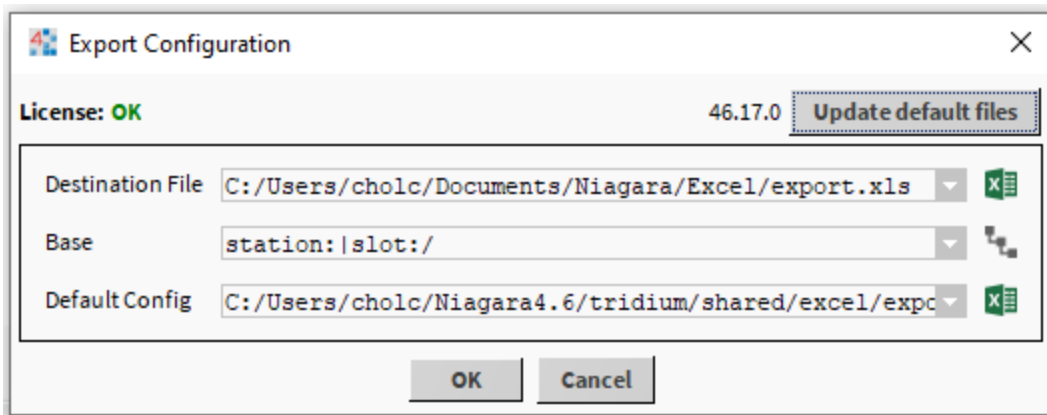
You can personalize those files or create your own file. See the page [Composition of an Excel File](#) for more information.

Update the default files

We advise you to update your default files at each new version of this tool. There might be changes in the default files linked to new features or corrections.


 The update will only target those three files and the defaultImports files, your personal config files are safe.


To update simply hit the "update default files" button in the import or export tool:




Export Configuration

License: **OK** 46.17.0 **Update default files**

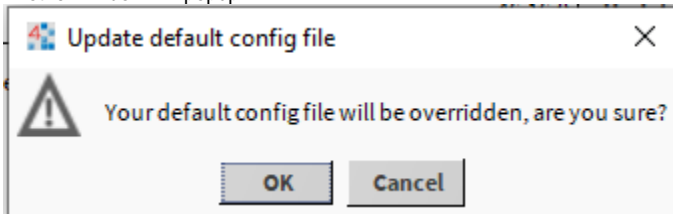
Destination File: C:/Users/cholc/Documents/Niagara/Excel/export.xls 

Base: station:|slot:/ 


Default Config: C:/Users/cholc/Niagara4.6/tridium/shared/excel/expc 

OK **Cancel**

Another window will popup:



Update default config file

 Your default config file will be overridden, are you sure?

OK **Cancel**

Hit OK to confirm, and your files will be updated

 Since the 50.0.15.0 this button will delete your xls default files

Active-Pro templates

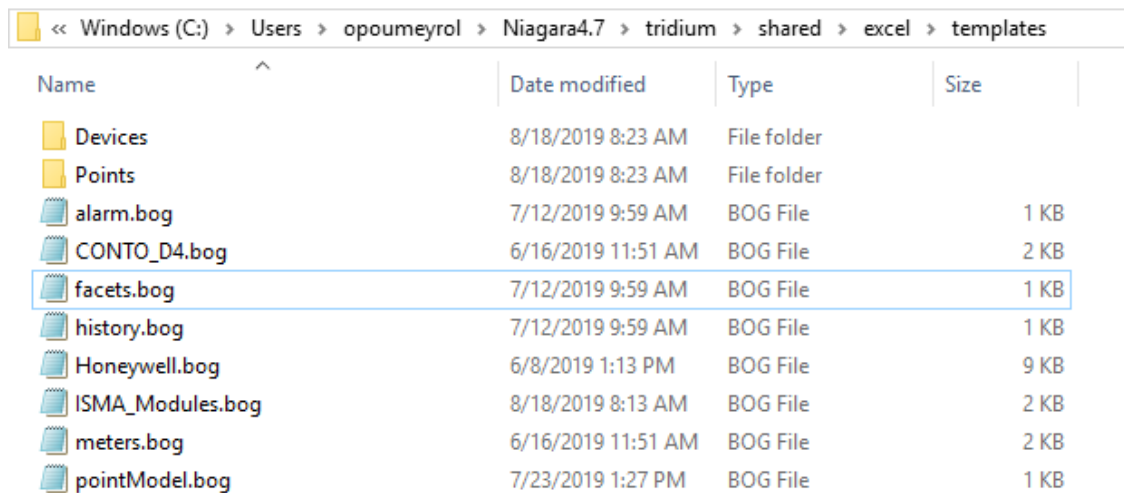
The import tool uses some models to create new content in the station. In the Get started we saw how to create a basic Modbus network or a modbus device, but if you want to create advanced logic, pre-defined devices, you will need to provide the system a model, a template. You can provide the Excel a Niagara template or create a simpler Active-Pro template.

Active-Pro templates differ from the Niagara classic templates because they are much simpler. It's just a bog file.

The Active-Pro templates are located in the shared/excel/templates folder (in your user home. [Example: C:/Users/xxx/Niagara4.6/tridium/shared/excel/templates](#)). Feel free to organise them as you wish.

In this folder, three bog files are already here by default:

- alarm.bog: This file will allow you to store your alarm extensions
- facets.bog: This file will give you access to a Facet manager allowing you to easily create facets to reuse in your file
- history.bog: This file will allow you to store your history extensions



Name	Date modified	Type	Size
Devices	8/18/2019 8:23 AM	File folder	
Points	8/18/2019 8:23 AM	File folder	
alarm.bog	7/12/2019 9:59 AM	BOG File	1 KB
CONTO_D4.bog	6/16/2019 11:51 AM	BOG File	2 KB
facets.bog	7/12/2019 9:59 AM	BOG File	1 KB
history.bog	7/12/2019 9:59 AM	BOG File	1 KB
Honeywell.bog	6/8/2019 1:13 PM	BOG File	9 KB
ISMA_Modules.bog	8/18/2019 8:13 AM	BOG File	2 KB
meters.bog	6/16/2019 11:51 AM	BOG File	2 KB
pointModel.bog	7/23/2019 1:27 PM	BOG File	1 KB

Variables concept

Variables are used as shortcuts to avoid repeating long text. [Example: \\$Drivers stands for slot:/Drivers and \\$Bool stands for control:BooleanPoint.](#)

Variables are defined in the Variables sheet.

- They always use the \$ prefix.
- You can define in a variable a path. Example: [slot:/Drivers/](#)
- A typespec: moduleName:JAVAClass [Example: control:NumericPoint](#)
- Or a facet. [Example: min=-inf;max=+inf;precision=1;units=null](#)

General	
Artifact	Value
\$ModbusAsyncNetwork	modbusAsync:ModbusAsyncNetwork
\$ModbusAsyncDevice	modbusAsync:ModbusAsyncDevice
\$Station	slot:/
\$Drivers	slot:/Drivers
\$Num	control:NumericPoint
\$Bool	control:BooleanPoint
\$Enum	control:EnumPoint
\$String	control:StringPoint
\$BooleanSchedule	schedule:BooleanSchedule

They are used for general purpose, history and alarm extensions and conversions.

You can reuse the variables like this, usually in the base column and the template column

Internal id	Base	Template
Id to reuse the component. Use #	Reference where the component will be created	Template name with subpath
#ModbusTcp	#ModbusTcp	\$ModbusTcpNetwork
#Device1	\$Drivers	bog:ISMA_Modules/ISMA_4O

Id concept

Id are used to reference a component (the current component defined in the line) somewhere else in the Excel file. They are defined in the first column. You can use an id:

- to put another component inside (in another row)
- to link another component to it
- to relate another component to it
- to inherit from another component

Example below

Internal id	Base
Id to reuse the component. Use #	Reference where the component will be created
#ModbusTcp	\$Drivers
#Device1	#ModbusTcp
	#Device1/points

- A ModbusTcp network is created on the first line and an id is given to this network: #ModbusTcp
- At the second line, a device is created inside the ModbusTcp. Instead of writing "slot:Drivers/ModbusTcp", we can just write #ModbusTcp
- For the third line, a point is created inside the device, not exactly in the device but in the points container. So instead of writing "slot:Drivers/ModbusTcp/Device1/points", we can just write #Device1/points.