

# ***SmartImport for Smart 3D***

***Setup and User Guide***

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Before you start:

This is a Smart 3D Custom Command built on Smart 3D 2016 and Excel 2013.

.NET Version used is 4.5.

This application has to be setup on project by Administrator before use. No individual can randomly use it.

If you have something to discuss/inform/complain, please contact me on <https://www.linkedin.com/in/bhaskarsrivatsa/>.

Let's get started now.

### Step 1: Prepare the Spreadsheet

Open a new Spreadsheet. The first column is reserved for Item Name. This Column identifies the object where the properties have to be populated to. Fill in all other columns with any attribute needs to be populated.

The Values have to be filled keeping the Datatype in mind. For Codelist, you can pick the value stored in Smart 3D Codelist Table.

#### Important Note:

The Application has been built with Excel 2013 (Excel 15). If the application fails to read your data from a higher version, please contact me on <https://www.linkedin.com/in/bhaskarsrivatsa/>. I will definitely help you :)

Following are some sample of Import Spreadsheet

	A	B	C	D	E	F	G	H	I
1	Name	Is Insulated	Insulation Thickness	Requirement	Insulation Type	Insulation Purpose	Material	Operating Temperature	Insulation Surface Area
2	P-30106	TRUE	100	Internal	Pre-insulated	PREINSEHT	CS	100	100
3									
4									
5									

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Design Max Tem	Design Min Tem	Design Max Pres	Operating Max T	Operating Min Ten	Operating Max Pre	Testing Max Temp	Testing Min Temp	Testing Max Press	Design Min Press	Operating Min Pre	Testing Min Pressure
2	U02-8-P-0003-1C	100	10	100	100	10	100	100	10	100	10	10	10
3													
4													
5													

### Step 2: Prepare the Rule File

The Rule file consists of important nodes. Following is a snapshot of Nodes.

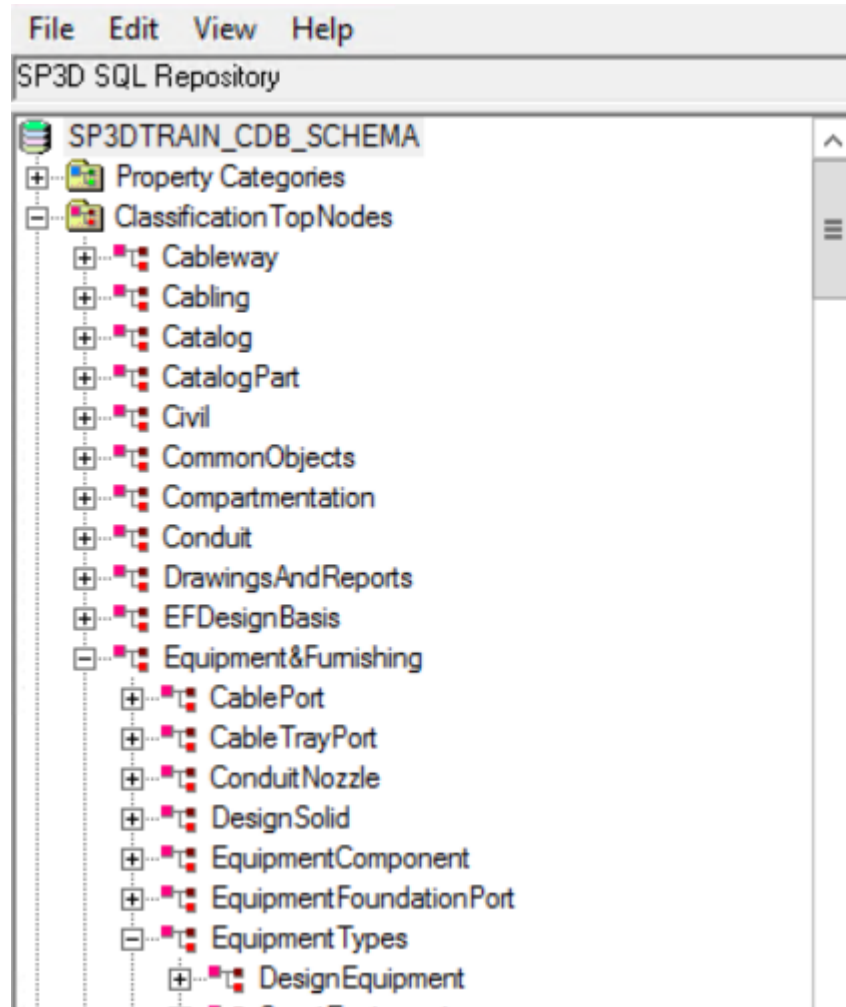


- Root is the root node of XML. It contains all the child nodes.
- ObjectInfo: This will have all the information about Business Object type the command will run on. This is a mandatory information.
- Attribute: This node is the place where Information of Property to be filled in along with its position in Import Spreadsheet.
- InterfaceName: This Node will have Interface Information of Property from Smart 3D. This is a mandatory information.
- PropertyName: This Node will have Property Name from Smart 3D. This is a mandatory information.
- CodeList: This Node will have Codelist Name from Smart 3D. This is an optional information.
- DataType: This has to be filled in accordance with Datatype in Smart 3D. Values can be 'Integer', 'Double', 'Bool', 'Codelist', or 'String'. This is a mandatory information.
- Column: This is the Column Name from Import Spreadsheet. This is a mandatory information.
- Relations: This is the collection of Relationship information, if required by any particular attribute. Remember to keep the order of Relationship Information same as in S3D. This is an optional information.

- Relationship: This Node will have Relationship Name from Smart 3D. This is an optional information.
- Role: This Node will have Role Name from Smart 3D. This is an optional information.

#### Import Note:

ObjectInfo has to be taken from Schema Browser 'Classification TopNodes'



XML has limitations of certain characters. Remember to replace these characters with following Escape Characters in the value

Characters	Escape Character
&	&amp;
<	&lt;
>	&gt;
"	&quot;
'	&apos;

## Some Sample Rule File

```
<?xml version="1.0" encoding="utf-8"?>
<Root>
  <ObjectInfo>Equipment&Furnishing\EquipmentTypes\SmartEquipment</ObjectInfo>
  <Attribute>
    <InterfaceName>IJOccInsulation</InterfaceName>
    <PropertyName>IsInsulated</PropertyName>
    <CodeList></CodeList>
    <DataType>Bool</DataType>
    <Column>B</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJOccInsulation</InterfaceName>
    <PropertyName>Thickness</PropertyName>
    <CodeList></CodeList>
    <DataType>Double</DataType>
    <Column>C</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJOccInsulation</InterfaceName>
    <PropertyName>Requirement</PropertyName>
    <CodeList>InsulationRequirement</CodeList>
    <DataType>Codelist</DataType>
    <Column>D</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJOccInsulation</InterfaceName>
    <PropertyName>Type</PropertyName>
    <CodeList>InsulationType</CodeList>
    <DataType>Codelist</DataType>
    <Column>E</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJOccInsulation</InterfaceName>
    <PropertyName>Purpose</PropertyName>
    <CodeList>InsulationPurpose</CodeList>
    <DataType>Codelist</DataType>
    <Column>F</Column>
  </Attribute>

```

```
<?xml version="1.0" encoding="utf-8"?>
<Root>
  <ObjectInfo>Piping\PipingRuns</ObjectInfo>
  <Attribute>
    <InterfaceName>IJProcessDataInfo</InterfaceName>
    <PropertyName>DesignMaxTemp</PropertyName>
    <CodeList></CodeList>
    <DataType>Double</DataType>
    <Column>B</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJProcessDataInfo</InterfaceName>
    <PropertyName>DesignMintemp</PropertyName>
    <CodeList></CodeList>
    <DataType>Double</DataType>
    <Column>C</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJProcessDataInfo</InterfaceName>
    <PropertyName>DesignMaxPressure</PropertyName>
    <CodeList></CodeList>
    <DataType>Double</DataType>
    <Column>D</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJProcessDataInfo</InterfaceName>
    <PropertyName>OperatingMaxTemp</PropertyName>
    <CodeList></CodeList>
    <DataType>Double</DataType>
    <Column>E</Column>
  </Attribute>
  <Attribute>
    <InterfaceName>IJProcessDataInfo</InterfaceName>
    <PropertyName>OperatingMinTemp</PropertyName>
    <CodeList></CodeList>
    <DataType>Double</DataType>
    <Column>F</Column>
  </Attribute>

```

### Step 3: Placing the Rule File

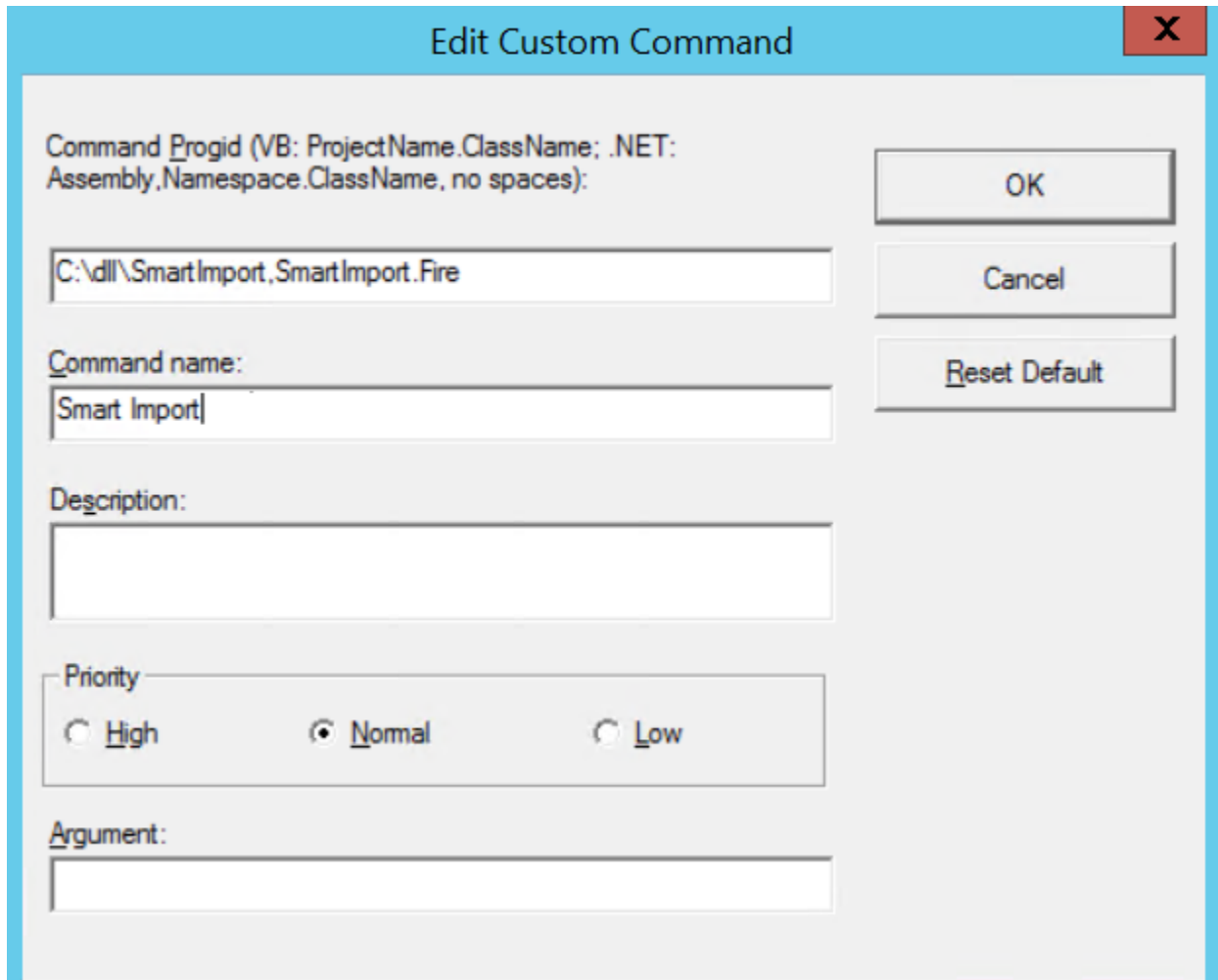
Create a Directory in Shared Content and save these Rule XML file in 'Smart Import'. The Custom Command will automatically pickup these xml files and display to the users.

#### Step 4: Using the Custom Command

Distribute the Command dll with your preferred distribution.

Add a new Custom Command with following information

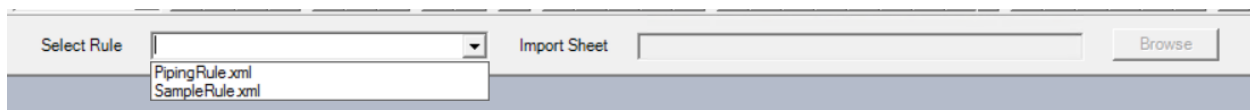
<dll path>\SmartImport,SmartImport.Fire



The 'Edit Custom Command' dialog box has a light blue title bar with a close button (X) in the top right corner. The main area is light gray and contains the following fields and controls:

- Command ProgId (VB: ProjectName.ClassName; .NET: Assembly.Namespace.ClassName, no spaces):** A text box containing 'C:\dll\SmartImport,SmartImport.Fire'.
- Command name:** A text box containing 'Smart Import'.
- Description:** An empty text box.
- Priority:** A group box containing three radio buttons: 'High' (unselected), 'Normal' (selected), and 'Low' (unselected).
- Argument:** An empty text box.
- Buttons:** On the right side, there are three buttons: 'OK', 'Cancel', and 'Reset Default'.

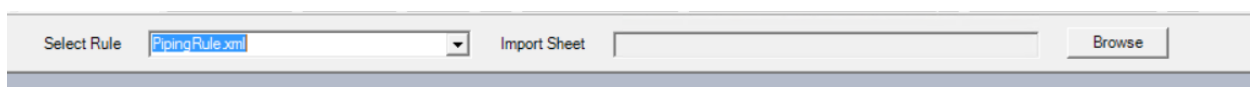
Fire up the Command, and user will see following Control Bar. Select the appropriate Rule file



The Control Bar has a light gray background. It contains:

- Select Rule:** A dropdown menu with 'PipingRule.xml' and 'SampleRule.xml' as options.
- Import Sheet:** A text box.
- Browse:** A disabled button (grayed out).

Once Selected, 'Browse' button will enable. Select the button and then select the import sheet.

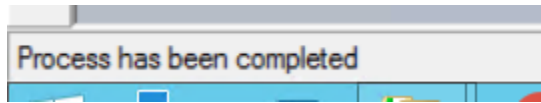


The Control Bar is shown in its active state:

- Select Rule:** The dropdown menu now shows 'PipingRule.xml' as the selected item.
- Import Sheet:** The text box is empty.
- Browse:** The button is now enabled (not grayed out).

Once the file is selected, Filter Selection Dialog will appear, select the filter where you wish to run the command.

Once done, on the Message bar, following message will appear.



Go ahead and check the imported information.

**Important Note:**

If some information is missed to import, it can be one of the following reasons:

- User may not have enough access to modify the attribute(s).
- Interface/Property information in Rule file isn't correct.
- Datatype isn't correct in Rule file or Import Spreadsheet.
- Relationship information isn't correct.
- Codelist value isn't correctly mentioned in Spreadsheet

In case you still have trouble, contact me on <https://www.linkedin.com/in/bhaskarsrivatsa/>

Hope this helps you. Please do share your experience at <https://www.linkedin.com/in/bhaskarsrivatsa/>