

# Post Configurator Enablement Training Templates & Reuse

# Templates & Reuse

## Topic

Philosophy

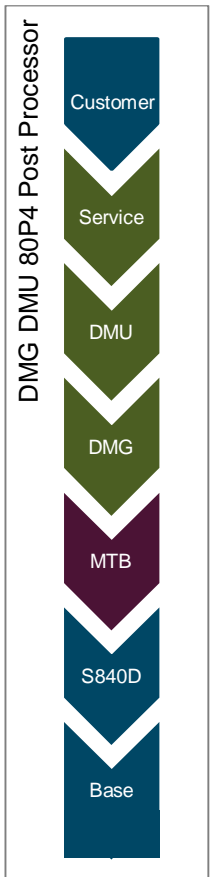
Templates & Reuse

- Add new Levels to the Library

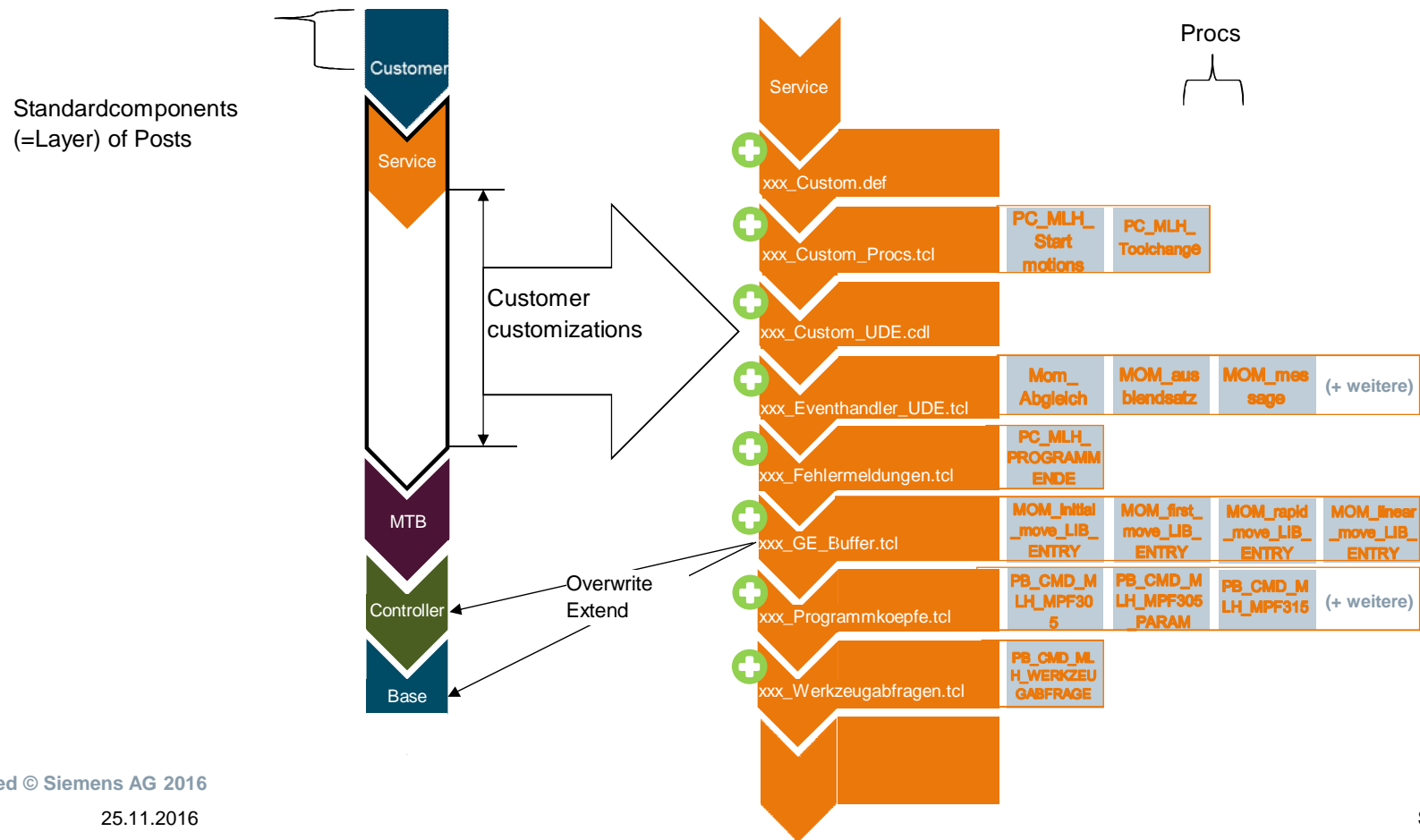
Q&A

## Philosophy

- Post Processor is more than one monolithic file now, it is split up in **levels**
- Multiple layers with different functionality, not every level is always required
- **A level...**
  - ... can add new functionality.
  - ... can overwrite existing functionality.
  - ... can be Tcl code.
  - ... can be encrypted.
  - ... can be protected.



# Example Multicomplex machining Post



# Add new Levels to the Library General Information

## Add new Machine Level to the library

- Post Processor template library is stored under:

```
NX\mach\resource\post_configurator\post_template\post_registry.xml
```

- XML based, and can be extended
- Any PCE or Tcl file can be added as a new standard template level

### Syntax for new Machine Level:

```
<MACHINE>
  <Name>*name*</Name>
  <Path>${UGII_CAM_RESOURCE_DIR}post_configurator\post_template\controller\*controller*\machine\*new_machine_level_file_name.pce*</Path>
  <Base_CTRL>*controller*</Base_CTRL>
</MACHINE>
```

<i>name</i>	The name for the new Machine Level.	Fanuc Sample Machine Level
<i>controller</i>	The name of the Controller it fits to.	Fanuc
<i>new_machine_level_file_name</i>	The file name of the new Machine level.	machine_ootb_5ax_fanuc.pce

## Add new Manufacturer Level to the library

### Syntax for new Manufacturer Level:

```
<MANUFACTURER>
  <Name>*name* </Name>
  <Path>${UGII_CAM_RESOURCE_DIR}post_configurator\post_template\controller\*controller*\manufacturer\new_file_name_1.pce</Path>
  <Path>${UGII_CAM_RESOURCE_DIR}post_configurator\post_template\controller\*controller*\manufacturer\new_file_name_1.def</Path>
  <Path>${UGII_CAM_RESOURCE_DIR}post_configurator\post_template\controller\*controller*\manufacturer\new_file_name_1.cdl</Path>
  <Base_CTRL>controller</Base_CTRL>
</MANUFACTURER>
```

<i>name</i>	The name for the new Machine Level.	Fanuc Sample Machine Level
<i>controller</i>	The name of the Controller it fits to.	Fanuc
<i>new_file_name_1</i>	The file name of the new Manufacturer level.	oem_ootb_5ax_sinumerik

# Add new Level based on extending ToolUI Sim08 Post



## Create a new Layer and use it for new Posts 1/3

- Create a new .tcl file and add the Group Customization from first post into that file
- Create a folder (e.g. „CustomLevel“) in:  
.....\NX11.0\MACH\resource\post\_configurator\post\_template
- Copy the file to source in that directory
- Open the post\_registry.xml and extend for example the Sinumerik 840D Machine level with this file

```

1  LIB_GE_CREATE_obj CustomTree {UI_TREE} {
2      LIB_GE_property_ui_name      "CustomThings"
3      LIB_GE_property_ui_tooltip   "UITooltip"
4
5      set id "ToolSettingsGroup"
6      set $id "0"
7      set datatype($id)           "GROUP"
8      set access($id)             222
9      set dialog($id)             {{Custom Tool settings}}
10     set descr($id)               {{Settings for Tool output}}
11     set group_status($id)        0
12     set ui_parent($id)           "@CUI_ToolChange"
13     set ui_sequence($id)         -1
14
15 }
16
17
18
19 LIB_GE_CREATE_obj CUSTOM_TOOLSETTINGS {} {
20     LIB_GE_property_ui_name      "Define different Tooloptions"
21     LIB_GE_property_ui_tooltip   "Tooltiptext"
22
23     set id "output_tool_dimension"
24     set $id 0
25     set options($id)             {NO|YES}
26     set options_ids($id)         {0|1}
27     set datatype($id)            "INT"
28     set access($id)              222
29     set dialog($id)              {{Output Tool Dimension}}
30     set descr($id)               {{Turns off or on the tool dimension output}}
31     set ui_parent($id)           "ToolSettingsGroup"
32     set ui_sequence($id)         -1

```

The screenshot shows a Notepad++ window with the following content:

File Edit Search View Encoding Language Settings Macro Run Plugins Window ?

H:\Workshops\2016-11-Enablement\_EMEA\Session02\PC\_EMEA\_Level.tcl - Notepad++ [Administrator]

H:\Workshops\2016-11-Enablement\_EMEA\PC\_EMEA\_Level.tcl

PC\_EMEA\_Level.tcl

PC\_Session07\_S840D\_service\_s840d.tcl [2]

length:1058 lines:35 Ln:35 Col:2 Sel:0|0 Dos:Windows ANSI INS

new folder

Name	Date
PC_EMEA_Level.tcl	20.11.2016 15:39

20.11.2016 15:39 Date created: 20.11.2016 15:37  
1,03 KB

## Create a new Layer and use it for new Posts 2/3

- Copy existing „Machine“ item and refer this to the new file

```

</MACHINE>
<MACHINE>
  <Name>Sinumerik Sample Machine Level</Name>
  <Path>${UGII_CAM_RESOURCE_DIR}post_configurator\post_template\controller\sinumerik\machine\machine_ootb_5ax_sinumerik.pce</Path>
  <Base_CTRL>Sinumerik 828D</Base_CTRL>
</MACHINE>

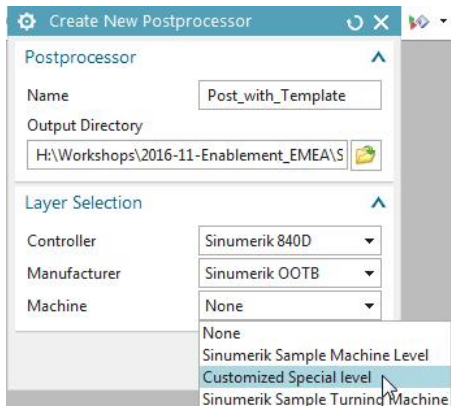
```



```

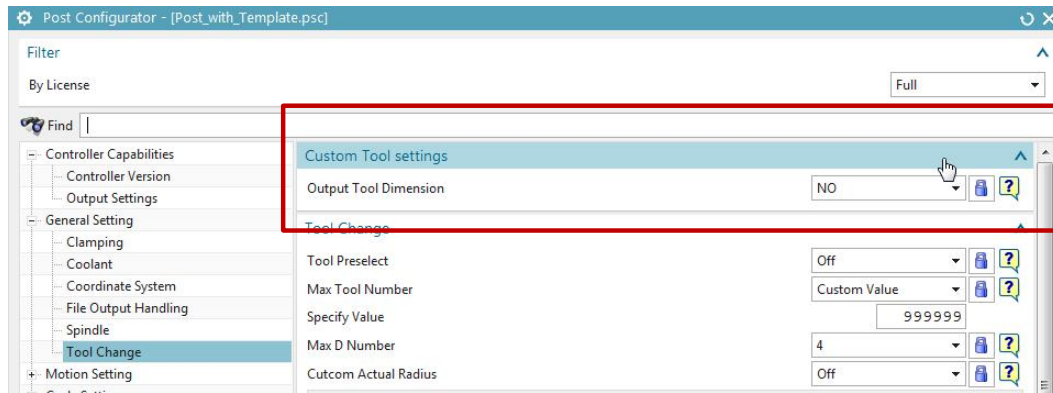
<MACHINE>
  <Name>Customized Special level</Name>
  <Path>${UGII_CAM_RESOURCE_DIR}post_configurator\post_template\CustomLevel\PC_EMEA_Level.tcl</Path>
  <Base_CTRL>Sinumerik 840D</Base_CTRL>
</MACHINE>

```



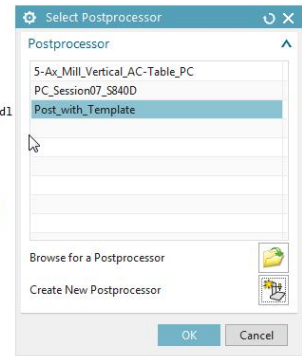
- When creating a new Post this Layer is now in the Machine List
- The keywords in the post\_registry.xml assign the layer to the correct controller and level
- e.g. Base\_CTRL refers this level to the selected controller

## Create a new Layer and use it for new Posts 3/3



```

Postprocessor created successfully at: H:\Workshops\2016-11-Enablement_EMEA\Session02\PostTemplate\
Successfully created layer: Machine Tool Builder
Successfully created folder: Libraries
Successfully added file to folder "Libraries": lib_document.pce
Successfully added file to folder "Libraries": lib_file_handling.pce
Successfully added file to folder "Libraries": lib_general.pce
Successfully added file to folder "Libraries": lib_msg.pce
Successfully added file to folder "Libraries": lib_pretreatment.def
Successfully added file to folder "Libraries": lib_pretreatment.tcl
Successfully added file to folder "Libraries": lib_pretreatment_post.pce
Successfully added file to folder "Libraries": lib_sourcing.tcl
Successfully added file to folder "Libraries": lib_standard_post_func.pce
Successfully added file to folder "Libraries": lib_xml_handling.pce
Successfully created folder: Bin
Successfully added file to folder "Bin": lib_execute_nx85_64bit_84.dll
Successfully added file to folder "Bin": loader.dll
Successfully added file to folder "Bin": utility.pce
Successfully created folder: Controller
Successfully added file to folder "Controller": ctrl_s840d_base.cd1
Successfully added file to folder "Controller": ctrl_s840d_base.def
Successfully added file to folder "Controller": ctrl_s840d_base_cycle.cd1
Successfully added file to folder "Controller": ctrl_s840d_base_cycle_NX85.cd1
Successfully added file to folder "Controller": ctrl_s840d_base.pce
Successfully added file to folder "Controller": ctrl_sinumerik_base.pce
Successfully created layer: Machine
Successfully added file for layer "Machine": PC_EMEA_level.tcl
Successfully created layer: Manufacturer
Successfully added file for layer "Manufacturer": oem_ootb_5ax_sinumerik.pce
Successfully added file for layer "Manufacturer": oem_ootb_5ax_sinumerik.def
Successfully added file for layer "Manufacturer": oem_ootb_5ax_sinumerik.cd1
Successfully created layer: Service
Successfully created postprocessor files
Successfully added postprocessor file: Post_with_Template.cd1
Successfully added postprocessor file: Post_with_Template.def
Successfully added postprocessor file: Post_with_Template.psc
Successfully added postprocessor file: Post_with_Template.pui
Successfully added postprocessor file: Post_with_Template.tcl
Successfully added postprocessor file: Post_with_Template.tcl
Successfully added postprocessor file: Post_with_Template_custom.pce
    
```



### Limitations:

- Only one Layer can be selected in the UI for Post creation
- If need more add manual to the .psc file or build a custom Controller with the included files

