

Implement Parameter set in IICS

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Agenda

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[@] Parameter set overview

Parameter set is a list of Parameters and their associated value that is configured in a taskflow in IICS

It is used for below task in taskflow:

Subtaskflow steps

Data task

Parameter files Vs Parameter set

Parameter files

- PowerCenter supports parameter files that enables to pass values for workflow variables & session parameter
- It is through file-based process.
- Saved in the location where Data Integration job runs.

Parameter set

- Taskflow in IICS accepts input only through JSON or XML payload at runtime.
- Uploaded to Informatica managed cloud-hosted repository
- Define parameter for subtask flows and Data task steps

✓ Scenarios for Parameter set

- Assigning parameter
 - ✓ Taskflow level
 - ✓ Subtask flow used in taskflow
 - ✓ Parameter file path for data task
 - ✓ Parameter file name for data task

Pre-requisite

- Request CSM to enable parameter set feature
- Install Java Runtime environment
- Install ParamSetCli utility
- Upload Parameter set to Informatica Cloud hosted repository

The screenshot displays the Informatica Cloud interface. At the top, a workflow diagram shows a sequence of tasks: 'File Wa...', 'Start' (highlighted with a red box), 'a_Taskflow_Vari' (labeled 'ables'), and another task partially visible. Below the diagram, the 'tf_Load_EDWH_Dim_Certification Start Properties' window is open. On the left sidebar, the 'Start' tab is selected and highlighted with a red box. The main panel shows the following configuration:

- General** (selected tab)
- Binding:** REST/SOAP (dropdown menu with a help icon)
- Allowed Groups:** Administrator (text field with a clear icon)
- Allowed Users:** (empty text field)
- Parameter Set:** EDWH_NBT_Paramset.param (highlighted with a red box)

Pre-requisite

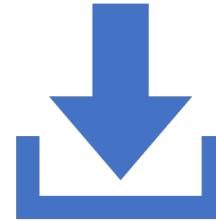
- Group parameter in different section of the parameter set.
- Each section is preceded by heading that identifies project, folder and assets you want to apply parameter

Heading	Description
#USE_SECTIONS	Use this heading as the first line of a parameter set that contains sections. Otherwise, the taskflow reads only the first global section and ignores all other sections.
[Global]	Defines parameters for all projects, folders, taskflows, Subtaskflow steps, and Data Task steps.
[project name].[folder name].[taskflow name] -or- [project name].[taskflow name]	Defines parameters for a specific taskflow. If a parameter is defined in a taskflow section and in a global section, the value in the taskflow section overrides the global value. If a parameter value is not defined in the taskflow section, the global value is considered.
[project name].[folder name].[taskflow name].[subtaskflow step name] -or- [project name].[taskflow name].[subtaskflow step name]	Defines parameters for a specific Subtaskflow step. If a parameter is defined in a Subtaskflow step section and in a global section, the value in the Subtaskflow step section overrides the global value. If a parameter is defined in a Subtaskflow step section and in a taskflow section, and the taskflow uses the Subtaskflow step, the value in the Subtaskflow step section is considered. If a parameter value is not defined in the Subtaskflow step or in the taskflow section, the global value is considered.
[project name].[folder name].[taskflow name].[data task step name] -or- [project name].[taskflow name].[data task step name] -or- [project name].[folder name].[taskflow name].[subtaskflow step name]...[data task step name] -or- [project name].[taskflow name].[subtaskflow step name]...[data task step name]	Defines parameters for a specific Data Task step. If a parameter is defined in a Data Task step section and in a global section, the value in the Data Task step section overrides the global value. If a parameter is defined in a Data Task step section and in a taskflow or Subtaskflow step section, and the taskflow or subtaskflow uses the Data Task step, the value in the Data Task step section is considered. If a parameter value is not defined in the Data Task step or in the immediate previous level taskflow or Subtaskflow step section, the global value is considered.
[project name].[mapping task name] -or- [project name].[folder name].[mapping task name]	Defines parameters for a specific mapping task. If a parameter is defined in a mapping task section and in a global section, the value in the mapping task section overrides the global value.

ParamSetCli Utility



Command line interface utility



**Perform below action on parameter set
to cloud hosted repository:**

Upload

Download

Delete

List



Configuration

Install Java Runtime environment

Download paramsetcli.zip & unzip to installation directory (no installation as such)

Specify login details in restenv.properties file which is located at <Install_dir>\paramsetcli

Plain password or encrypted password can be used

- *To create an encrypted password, use one of the following commands(based on OS):*
 - *./paramsetcli.bat encryptText -t <password>*
 - *./paramsetcli.bat encryptText -text <password>*



Configuration

Based on password used (plain or encrypted) , set use.encryption to true or false respectively

Restenv.properties file

```
restenv.properties - Notepad
File Edit Format View Help
baseUrl=https://dm-us.informaticacloud.com/ma
username=<Enter username>
password=<enter plain password or encrypted password>
ACTIVITYMONITORWAIT=2000
TOTALWAIT=5000
PROXYHOST=
PROXYPORT=
RETRYCOUNT=
use.encryption=true
paramSetBaseUrl=https://na1.dm-us.informaticacloud.com/active-bpel
```



Configuration

Define parameter set file with sections (parameter & value) to create parameter set

Use ParamsetCli utility to upload/delete/list/download parameter file as parameter set

Parameter set name uploaded in cloud hosted repository is used in taskflow

ParamSetCli Utility usage - Upload

- Upload a parameter set
 - Upload action to upload a parameter set to the cloud-hosted repository
 - Upload a file with a size up to 5 MB

Syntax:

```
paramsetcli.bat runParamSetCli -un <unique_param_set_name> -pf  
<parameter_file_name> -pd <parameter_directory> -a <action>
```

```
C:\Informatica\paramsetcli>paramsetcli.bat runParamSetCli -un EDWH_Paramset.params -pf EDWH_Paramset.params -pd C:\Informatica\Parameter -a upload -f
0 [main] INFO com.activee.rt.hub.tf.paramset.cli.plugin.AeBaseCliPlugin - Welcome to Informatica CLI tool.
1420 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - 5/2/22 9:43 AM: Running upload action on EDWH_Paramset.params
1948 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - Successfully completed upload action. {
  "paramSetName" : "EDWH_Paramset.params",
  "parameterFileName" : "EDWH_Paramset.params",
  "parameterDir" : "C:\\Informatica\\Parameter"
}
```

ParamSetCli Utility usage - Download

- Download a parameter set
 - Use the unique name of an uploaded parameter set to download it from the cloud-hosted repository.

Syntax:

```
paramsetcli.bat runParamSetCli -un <unique_param_set_name> -pf  
<parameter_file_name> -pd <parameter_directory> -a <action>
```

```
C:\Informatica\paramsetcli>paramsetcli.bat runParamSetCli -un EDWH_Paramset.params -pf EDWH_Paramset_download.params -pd C:\Informatica\Parameter\download -a download
0 [main] INFO com.activee.rt.hub.tf.paramset.cli.plugin.AeBaseCliPlugin - Welcome to Informatica CLI tool.
1521 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - 5/3/22 11:29 PM: Running download action on EDWH_Paramset.params
2237 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - Successfully completed download action. Parameter File saved at location: C:\Informatica\Parameter\download\EDWH_Paramset_download.params
C:\Informatica\paramsetcli>
```

ParamSetCli Utility usage - Delete

- Delete a parameter set
 - Use the unique name of the parameter set to delete it from the cloud-hosted repository.

Syntax:

```
paramsetcli.bat runParamSetCli -un <unique_param_set_name> -pf  
<parameter_file_name> -pd <parameter_directory> -a <action>
```

```
C:\Informatica\paramsetcli>paramsetcli.bat runParamSetCli -un EDWH_Paramset.params -a delete
0 [main] INFO com.activee.rt.hub.tf.paramset.cli.plugin.AeBaseCliPlugin - Welcome to Informatica CLI tool.
1552 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - 5/3/22 11:35 PM: Running delete action on EDWH_Paramset.params
2088 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - Successfully completed delete action. {
  "paramSetName" : "EDWH_Paramset.params"
}
C:\Informatica\paramsetcli>
```

ParamSetCli Utility usage - List

- List a parameter set
 - List the parameter that is uploaded to the cloud-hosted repository.

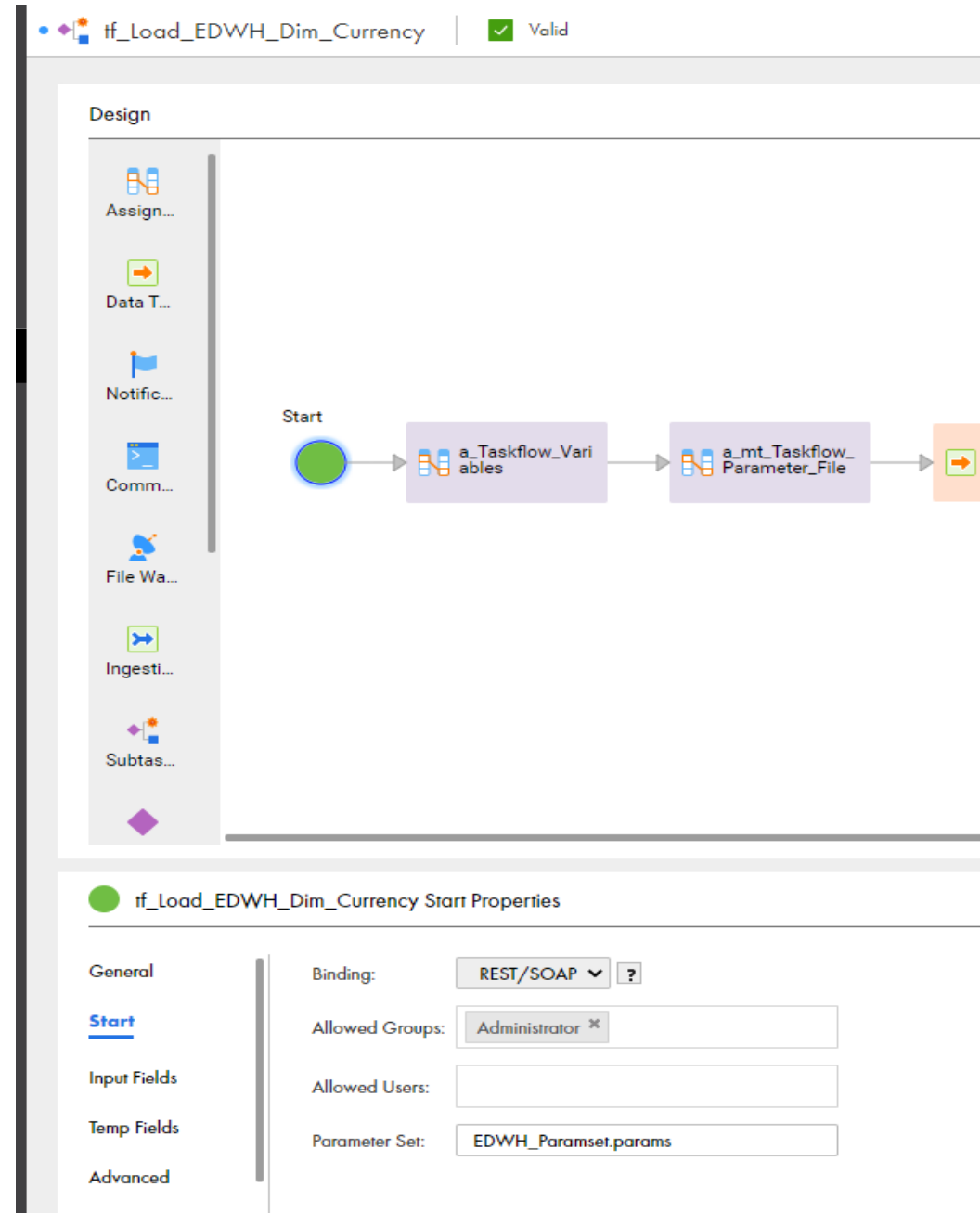
Syntax:

paramsetcli.bat runParamSetCli -un <unique_param_set_name> -a <action>

```
C:\Informatika\paramsetcli>paramsetcli.bat runParamSetCli -a list
[main] INFO com.activee.rt.hub.tf.paramset.cli.plugin.AeBaseCliPlugin - Welcome to Informatika CLI tool.
1525 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - 5/3/22 11:30 PM: Running list action on Page: 1 with PageSize: 50
2006 [main] INFO com.activee.rt.hub.tf.paramset.cli.task.AeParamSetTask - Successfully completed list action. [ {
  "modificationDate" : "2022-05-02T13:43:20.101+0000",
  "createdBy" : "pawkumar@informatika.com [REDACTED].sandbox",
  "paramSetName" : "EDWH_Paramset.params",
  "parameterFileName" : "EDWH_Paramset.params",
  "parameterDir" : "C:\\Informatika\\Parameter",
  "modifiedBy" : "pawkumar@informatika.com [REDACTED].sandbox",
  "creationDate" : "2022-05-02T13:43:20.101+0000"
}, {
  "modificationDate" : "2022-04-25T14:33:20.880+0000",
  "createdBy" : "pawkumar@informatika.com [REDACTED].sandbox",
  "paramSetName" : "MSTR_EDWH_Dim_Heat_Paramset_Demo.params",
  "parameterFileName" : "wf_MSTR_EDWH_Dim_Heat_Demo.param",
  "parameterDir" : "C:\\Informatika\\Parameter",
  "modifiedBy" : "pawkumar@informatika.com [REDACTED].sandbox",
  "creationDate" : "2022-04-25T14:33:20.880+0000"
}, {
  "modificationDate" : "2022-04-27T13:50:23.540+0000",
  "createdBy" : "pawkumar@informatika.com [REDACTED].sandbox",
  "paramSetName" : "Paramset_test.params",
  "parameterFileName" : "Paramsetfile_test.params",
  "parameterDir" : "C:\\Informatika\\Parameter",
  "modifiedBy" : "pawkumar@informatika.com [REDACTED].sandbox",
  "creationDate" : "2022-04-27T13:50:23.540+0000"
}, {
```

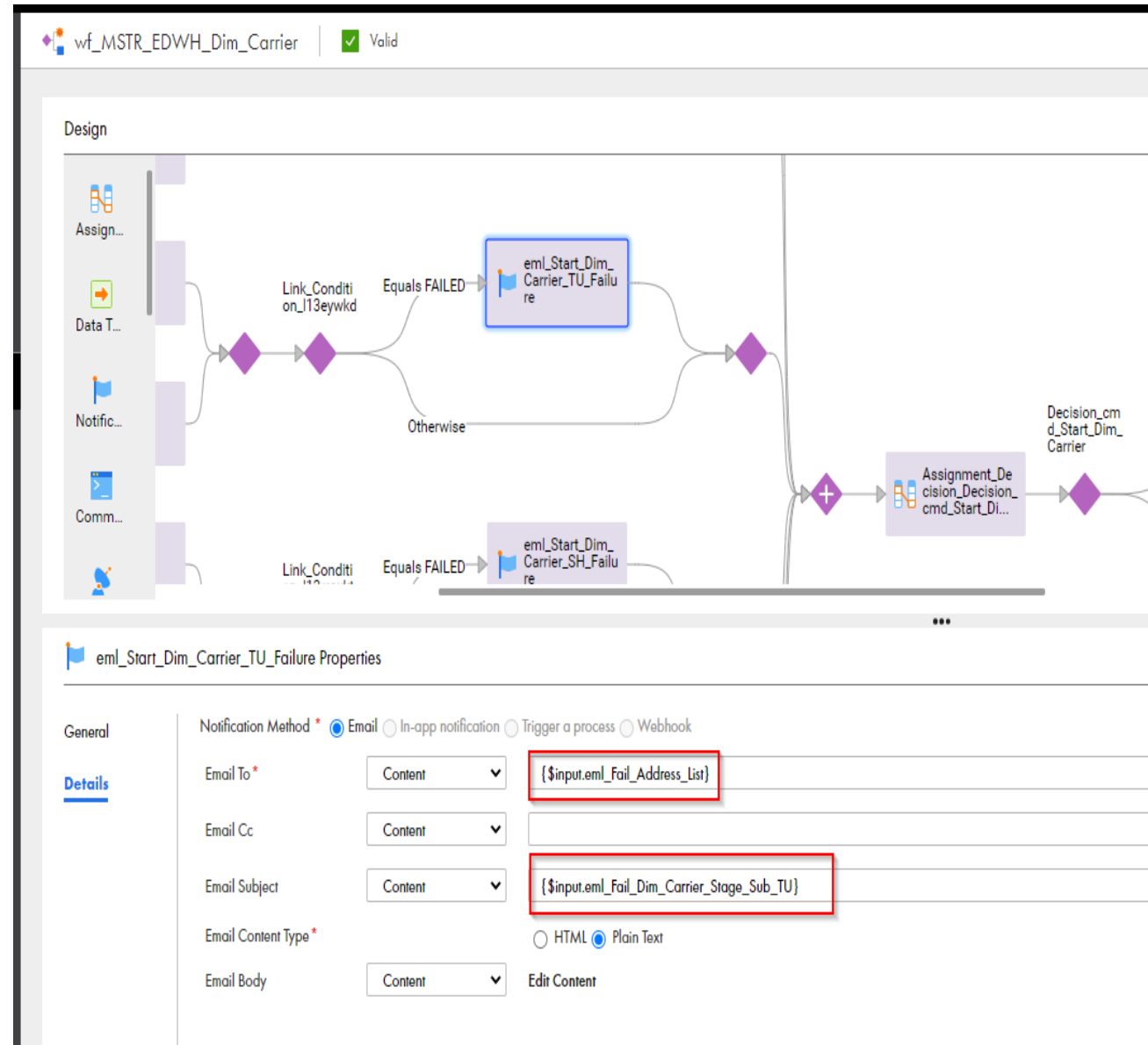
Implementation of Parameter set in Taskflow

- Adding Parameter set name to the taskflow
- Name should be same what was uploaded
- It needs to be added in 'start' task



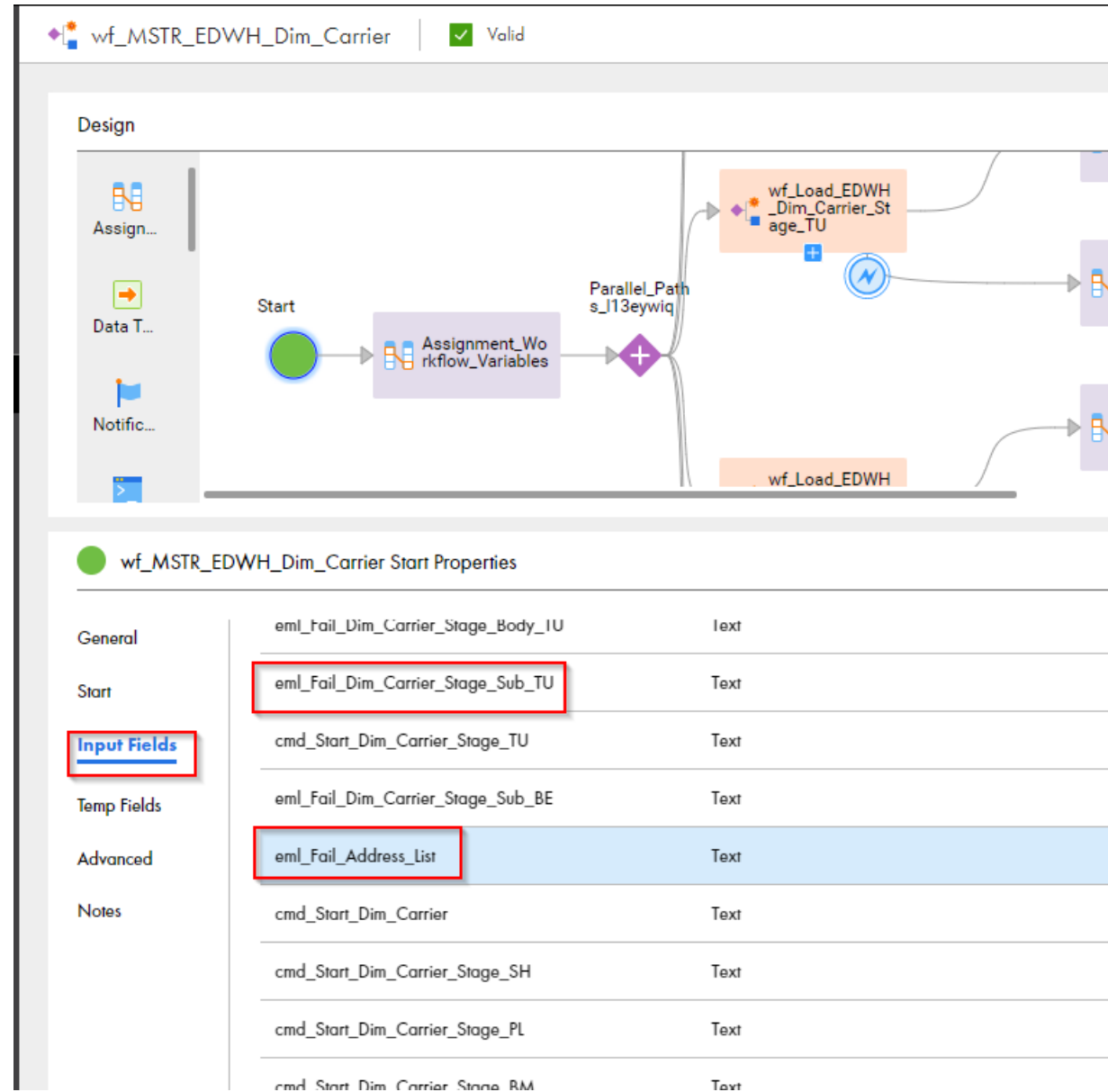
Implementation of Parameter set in Taskflow

- Taskflow level parameter needs to be assigned and used from parameter set
- Example , email task at taskflow level uses email , subject , email body which can be parametrized, and value is assigned in parameter set



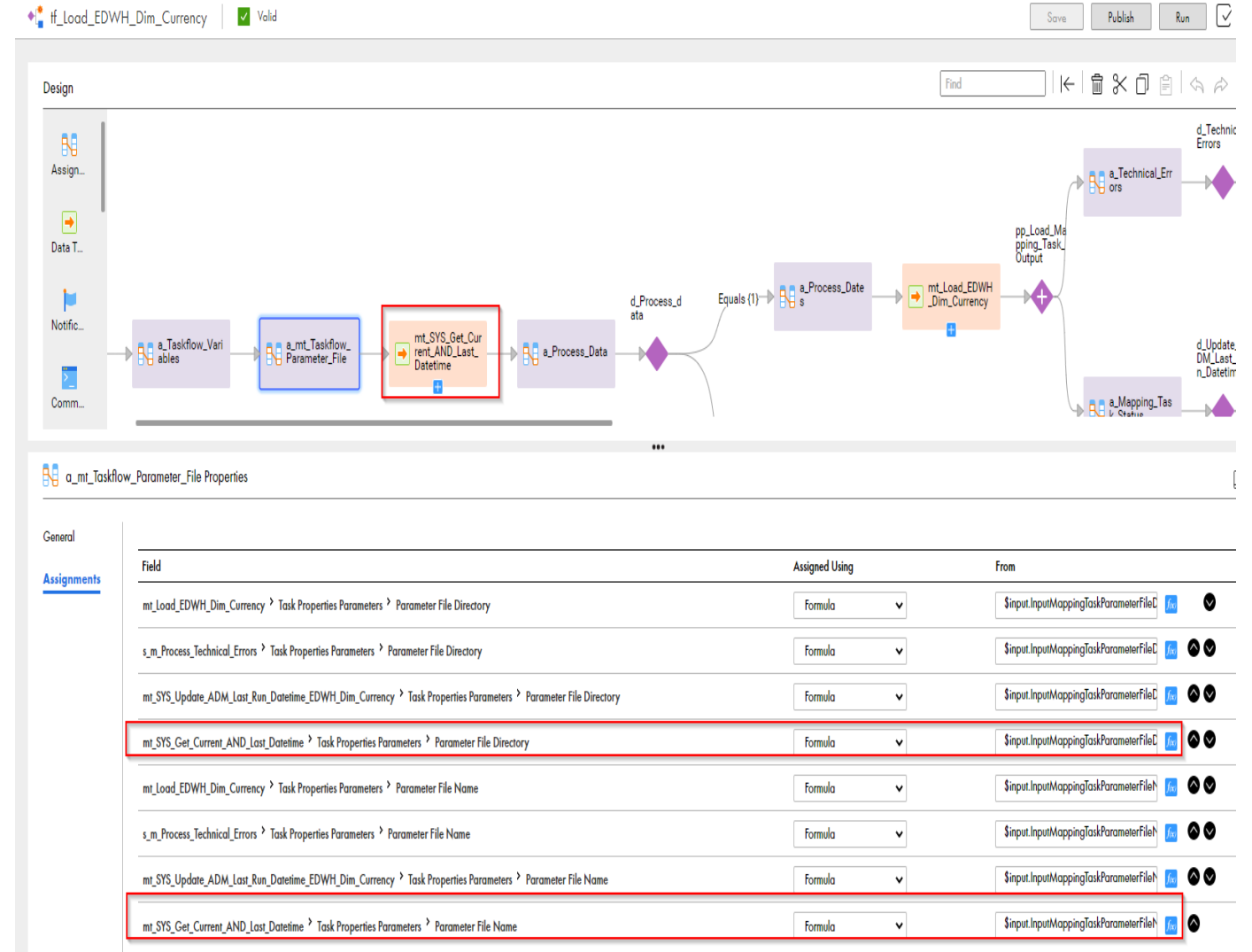
Implementation of Parameter set in Taskflow

- Parameter name that is used in taskflow should be added as input field in start task
- Example , for email task ,all parameter name used is added



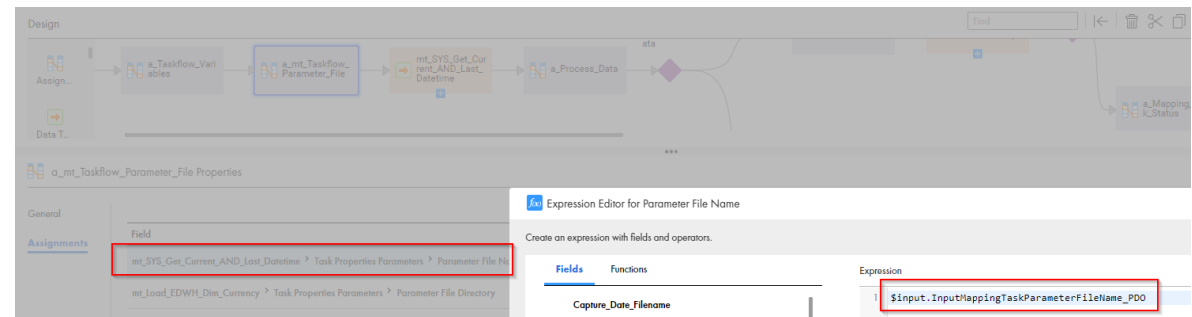
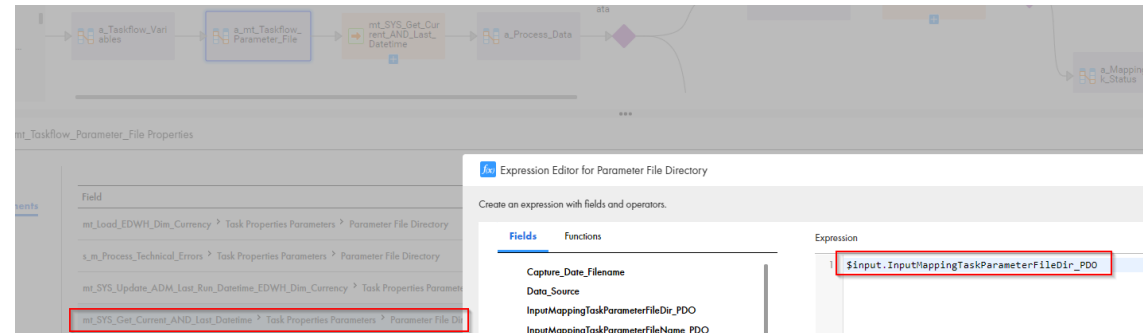
Implementation of Parameter set in Taskflow

- In use case of assigning parameter file path & file name to data task , it can be assigned using assignment task
- This helps to avoid any hardcoded parameter file name & file path to data task.



Implementation of Parameter set in Taskflow

- In use case of assigning parameter file path & file name to data task , it can be assigned using assignment task
- This helps to avoid any hardcoded parameter file name & file path to data task.



#USE_SECTIONS

```
[GLOBAL]
$$InputMappingTaskParameterFileDir_PDO=//inf-dev-fs-10_4/Informatica/IICS_shared_DEV_B/EDWH_NBT/BWParam/
$$InputMappingTaskParameterFileName_PDO=EDWH.PRM
..
```

Implementation of Parameter set in Taskflow

- The value of the parameter set can be assigned as shown in the parameter set file uploaded to cloud repository

```
#USE_SECTIONS

[GLOBAL]
$$InputMappingTaskParameterFileDir_PDO=//inf-dev-fs-10_4/Informatica/IICS_shared_DEV_B/EDWH_NBT/BWParam/
$$InputMappingTaskParameterFileName_PDO=EDWH.PRM
$$InputMappingTaskParameterFileName_NBGR_PDO=EDWH_NBGR.PRM
$$PMSFailureEmailUser=pawkumar@informatica.com
$$sem1_Fail_Address_List=pawkumar@informatica.com
$$PMSuccessEmailUser=pawkumar@informatica.com
$$Script_Dir=\\inf-dev-fs-10_4.ent.nucor.local\Informatica\IICS_shared_DEV_B\EDWH_NBT\Scripts

[EDWH_NBT].[CORP_EDWH].[wf_MSTR_EDWH_Dim_Carrier]
$$sem1_Fail_Dim_Carrier_Stage_Sub_BE=FAILED - Dim Carrier Stage - NUCOR_BE
$$sem1_Fail_Dim_Carrier_Stage_Body_BE=The EDWH Workflow for table Dimension Carrier Stage - NUCOR_BE; workflow wf_Load_EDWH_Dim_Carrier_BE has Failed. Please see logs for more detail.
$$sem1_Fail_Dim_Carrier_Stage_Sub_BM=FAILED - Dim Carrier Stage - NUCOR_BM
$$sem1_Fail_Dim_Carrier_Stage_Body_BM=The EDWH Workflow for table Dimension Carrier Stage - NUCOR_BM; workflow wf_Load_EDWH_Dim_Carrier_BM has Failed. Please see logs for more detail.
$$sem1_Fail_Dim_Carrier_Stage_Sub_PL=FAILED - Dim Carrier Stage - NUCOR_PL
$$sem1_Fail_Dim_Carrier_Stage_Body_PL=The EDWH Workflow for table Dimension Carrier Stage - NUCOR_PL; workflow wf_Load_EDWH_Dim_Carrier_PL has Failed. Please see logs for more detail.
$$sem1_Fail_Dim_Carrier_Stage_Sub_SH=FAILED - Dim Carrier Stage - NUCOR_SH
$$sem1_Fail_Dim_Carrier_Stage_Body_SH=The EDWH Workflow for table Dimension Carrier Stage - NUCOR_SH; workflow wf_Load_EDWH_Dim_Carrier_SH has Failed. Please see logs for more detail.
$$sem1_Fail_Dim_Carrier_Sub=FAILED - Dim Carrier
$$sem1_Fail_Dim_Carrier_Body=The EDWH Workflow for table Dimension Carrier; workflow wf_Load_EDWH_Dim_Carrier has Failed. Please see logs for more detail.
$$sem1_Fail_Dim_Carrier_Stage_Sub_TU=FAILED - Dim Carrier Stage - NUCOR_TU
$$sem1_Fail_Dim_Carrier_Stage_Body_TU=The EDWH Workflow for table Dimension Carrier Stage - NUCOR_TU; workflow wf_Load_EDWH_Dim_Carrier_TU has Failed. Please see logs for more detail.
$$sem1_Fail_Dim_Carrier_Stage_Sub_CF=FAILED - Dim Carrier Stage - NUCOR_CF
$$sem1_Fail_Dim_Carrier_Stage_Body_CF=The EDWH Workflow for table Dimension Carrier Stage - NUCOR_CF; workflow wf_Load_EDWH_Dim_Carrier_CF has Failed. Please see logs for more detail.
```

Rules & Guidelines

- Always use #USE_SECTIONS otherwise taskflow all parameter as global
- Any change to parameter set can be overwritten without deleting using -f in command line
- Parameter set file size cannot exceed 5MB
- If input value is missing , taskflow takes default value of data type, for example zero for integer , null for string and so on.
- Value of parameter is Global unless it's present in section.
- In case of same parameter , first section is given preference.

Reference



- KB 000183945
https://knowledge.informatica.com/s/article/How-to-implement-parameter-set-in-IICS?language=en_US
- Informatica documentation
<https://docs.informatica.com/integration-cloud/cloud-data-integration/current-version/taskflows/taskflows/parameter-set.html>