Population Selection – ALLIANCE 08
25202 : New in 9.0: "Population Selection" - A Deep Dive

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Agenda

- What is Population Selection?
- Examples in Student Admin 9.0
- Population Selection Components
- How to configure shipped processes
- How to enable your own processes
- How to create a Selection Tool
What is it?

- Population Selection is a framework that:
  - Feeds “Populations” to a client process
    - Emplids, Orgs, both, neither, or any other field(s)
    - Can include any number of fields the process needs
  - Enables loose integration to “Selection Tools”
    - PS Query
    - External Files (e.g. spreadsheet)
    - Equation Engine
  - Is highly configurable and extensible
  - Engineered for easy integration into existing processes

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Student Groups
PS Query

Query Name: STUDENT_GROUP_QUERY_SAMPLE
Description: Select Student Groups

Prompts Supported

PS Query
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### Service Indicators

**Equation Engine**

#### Create Service Indicators

- **Run Control ID**: MIKE
- **Report Manager**
- **Process Monitor**
- **Run**

<table>
<thead>
<tr>
<th>Population Selection</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Selection Tool</strong></td>
<td>Equation Engine</td>
</tr>
<tr>
<td><strong>Equation Name</strong></td>
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<table>
<thead>
<tr>
<th>Service Indicator Data</th>
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<tbody>
<tr>
<td><strong>Institution</strong></td>
<td>PeopleSoft University</td>
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<tr>
<td><strong>Service Indicator Code</strong></td>
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</tr>
<tr>
<td><strong>Reason</strong></td>
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</tr>
<tr>
<td></td>
<td>All Due Account Balance</td>
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<table>
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<tr>
<th>Effective Period</th>
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<tr>
<td><strong>End Term</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Begin Term - End Indicator Use</strong></td>
<td>Start Date</td>
</tr>
<tr>
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<table>
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<td><strong>Reference</strong></td>
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</tr>
<tr>
<td><strong>Amount</strong></td>
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<td><strong>Currency Code</strong></td>
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<tr>
<td><strong>Dollar</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Group Box</th>
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</tr>
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<tbody>
<tr>
<td><strong>Contact ID</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Placed Person ID</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Contact Person</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Placed By</strong></td>
<td></td>
</tr>
</tbody>
</table>

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Service Indicators

Demo

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Pop Select in 9.0

1. CC - 3C Engine
2. CC - CommGen
3. CC - Batch Service Indicators
4. CC - Student Groups
5. CC - User ID Replacement
6. CC - Population Update
7. ES - Academic Advisement Batch Reporting
8. ES - Batch Transcripts
9. FA - Mass Packaging/Re-Packaging
10. FA - Aid Year Activate
11. SF - Payment Plan Enrollment
12. SF - Third Party Contract Enrollment
13. AD - Applicant/Prospect Delete
14. CR – Audience/Initiative

15. AA – Batch Report Request
16. FA - Process and Maintain SAP
17. SF - SF External Award Feed
18. SF - Mass Contract Select
19. SF – Process Transcripts

*added after 9.0 release*

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Selection Context

- A Population Context is tied to each process that uses the utility
- Contexts are delivered as system data for SA processes that use Population Selection
- A Context tells Pop Select
  - Associated Batch Process (optional)
  - Associated PIA Components
  - Allowed Selection Tools (optionally based on PeopleTools security)
  - Required and Optional fields the process uses
  - Results record used to interface the population
  - How to map the Selection Results into the Results record

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Selection Context

Context Name: Student Group Batch
Status: Active

Pop Selection Integration

- Context varies per Application Data

Process Required Fields

- Results Record: STDNT_GRP_TRGT - PopSelect Student Group Target
- Required Fields Record: STDNT_GRP_BIND - Pop Select Student Group Bind

Validate Edit Prompt Values

Required Fields Mapping

<table>
<thead>
<tr>
<th>Required Fields</th>
<th>Mapping Action</th>
<th>Required Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPLID</td>
<td>Direct</td>
<td>EMPLID</td>
</tr>
<tr>
<td>PROCESS_INSTANCE</td>
<td>Process Instance</td>
<td></td>
</tr>
</tbody>
</table>

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Selection Context

- Advanced Features
  - Vary the “Required Fields” and “Results” records based on a user defined field
  - Automatically default “Prompt” values based on fields on the page
  - Advanced mapping actions
    - System Variables (e.g. %OperatorID, %Date,…)
    - %CommonID (uses Emplid, Org, or CommonID)
    - Sequence
    - Process Instance
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Selection Tool

- Defines a “Selection Tool”
- Delivered as System Data
- Some attributes are updatable
  - Customer can configure look and feel
- Adding new tools is a Customization
- Adding new tools requires OO knowledge
Selection Tool

- A Pop Select Tool defines
  - Tool Name
  - Application Class adapter
  - SQL View for “Selection Name” prompt
  - Various user facing labels
  - Maximum rows allowed
  - External File support and details
  - PIA navigation to tool
Configuring Selection Tool

Population Selection Tool

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Selection Tool</td>
<td>External File</td>
</tr>
<tr>
<td>Description</td>
<td>Student Administration File Parser</td>
</tr>
<tr>
<td>Status</td>
<td>Active</td>
</tr>
<tr>
<td>Application Class</td>
<td>SCC_POP_SELECT:MODEL:Adapters:File Parser/Adapter</td>
</tr>
<tr>
<td>Selection View</td>
<td>SCCPS_FILE_WN</td>
</tr>
<tr>
<td>Selection Label</td>
<td>File Mapping</td>
</tr>
<tr>
<td>Maximum Results Rows</td>
<td>10,000</td>
</tr>
<tr>
<td>Maximum Preview Rows</td>
<td>300</td>
</tr>
<tr>
<td>URL Identifier</td>
<td>SCCFF_FILE_PARSER</td>
</tr>
<tr>
<td>Max File Size (bytes)</td>
<td>1,000,000</td>
</tr>
</tbody>
</table>

Configurable Attributes

- Name
- Active/Inactive
- Selection ‘Name’ Label
- Max Results Rows
- Max Preview Rows
- File Option (path or attach)
- File URL (FTP server, table)
- Max attached file size
- Tool Edit URL label
- Tool Add URL label
Configuring Selection Context

- Add / Remove Tools
- Remove from specific Component
- Secure Tools by Role

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Enabling a Batch Process

1. Create a **Context** – tells pop select what data you need and where to put the results
   1. Required Fields record (view over base driver table)
   2. Result Record (where the results go)

2. Create a **Run Control**
   - Record – with Pop Select subrecord
   - Page – with Pop Select subpage
   - Component – with Pcode that invokes the Pop Select controller class

3. **Incorporate** Pop Select into your process as an App Engine step
Enabling a Batch Process

- Pop Select Controller does all the UE and error handling logic

```java
import SCC_POP_SELECT:PIAComponents:PopSelectController;
import SCC_POP_SELECT:UTIL:EXCEPTION:PopSelectException;

Component SCC_POP_SELECT:PIAComponents:PopSelectController &PopController;

try
   &PopController.FieldChangePrevViewResults();
catch SCC_POP_SELECT:UTIL:EXCEPTION:PopSelectException &Excpnt
   &Excpnt.LogToScreen();
end-try;
```
Enabling a Batch Process

- Code to Execute a Selection

```java
import SCC_POP_SELECT:MODEL:PopSelectFacade;

/* Instance of the Population Selection Facade Class */
Local SCC_POP_SELECT:MODEL:PopSelectFacade &PopSelectFacade;

&PopSelectFacade = create PopSelectFacade(SCC_SRV_IND_AET.SCCPS_TOOL_ID,
                                          SCC_SRV_IND_AET.SCCPS_CNTXT_ID);

&PopSelectFacade.Oprid = SCC_SRV_IND_AET.OPRID;
&PopSelectFacade.RunControlID = SCC_SRV_IND_AET.RUN_CNTL_ID;

/* Set the Query Name, Oprid, and Run Control ID 
*(needed to run selection and get parm data) */
&PopSelectFacade.QueryName = SCC_SRV_IND_AET.SCCPS_QUERY_NAME;

&PopSelectFacade.FilePath = SCC_SRV_IND_AET.SCCPS_FILE_PATH;
&PopSelectFacade.FilePath = SCC_SRV_IND_AET.ATTACHSYSFILENAME;

/* Get the parm data if there is any*/
&PopSelectFacade.GetParmData();

/* Run Pop Select to a Record (e.g. SQL table)*/
&PopSelectFacade.ExecuteToRecord();
```
Add a Selection Tool

- You must write an application class that extends/implements PopToolAbstract.

```java
import SCC_POP_SELECT:MODEL:PopSelectContext;

/**
 * class PopToolAbstract
 * @version 1.0
 * @author Campus Solutions
 * Module: Campus Community / Common
 * Description: Abstract class for a Population Selection Tool. This class declares the public interface for the Population Selection Tool. At runtime the Pop Selection Tool Factory (PopToolFactory) creates the correct subclass.
 */

class PopToolAbstract
```
Add a Selection Tool

- You must implement the following abstract methods
  1. ExecuteToRecord() – results to sql table
  2. ExecuteToRowSet() – results to rowset
  3. ExecuteToHTML() - preview
  4. OpenQuery() – open and validates the selection
  5. LaunchTool() – launches the tool
  6. LaunchToolValid() – returns boolean based on permissions
  7. Parm related methods – if you allow parameters, stubbed out in abstract class
Add a Selection Tool

- You must register your tool in the Selection Tool metadata

Your adapter

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Add a Selection Tool

- You must add your tool to the allowed tools on the Selection Context(s)

<table>
<thead>
<tr>
<th>Applicable Selection Tools</th>
<th>Description</th>
<th>Full Access</th>
<th>Exception</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  PS Query</td>
<td>PeopleSoft Query Manager</td>
<td>✔</td>
<td>Exception</td>
</tr>
<tr>
<td>2  Equation Engine</td>
<td>Student Administration Equation Engine</td>
<td>✔</td>
<td>Exception</td>
</tr>
<tr>
<td>3  Customer Tool</td>
<td></td>
<td>✔</td>
<td>Exception</td>
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