

Leading the **Integration** Revolution

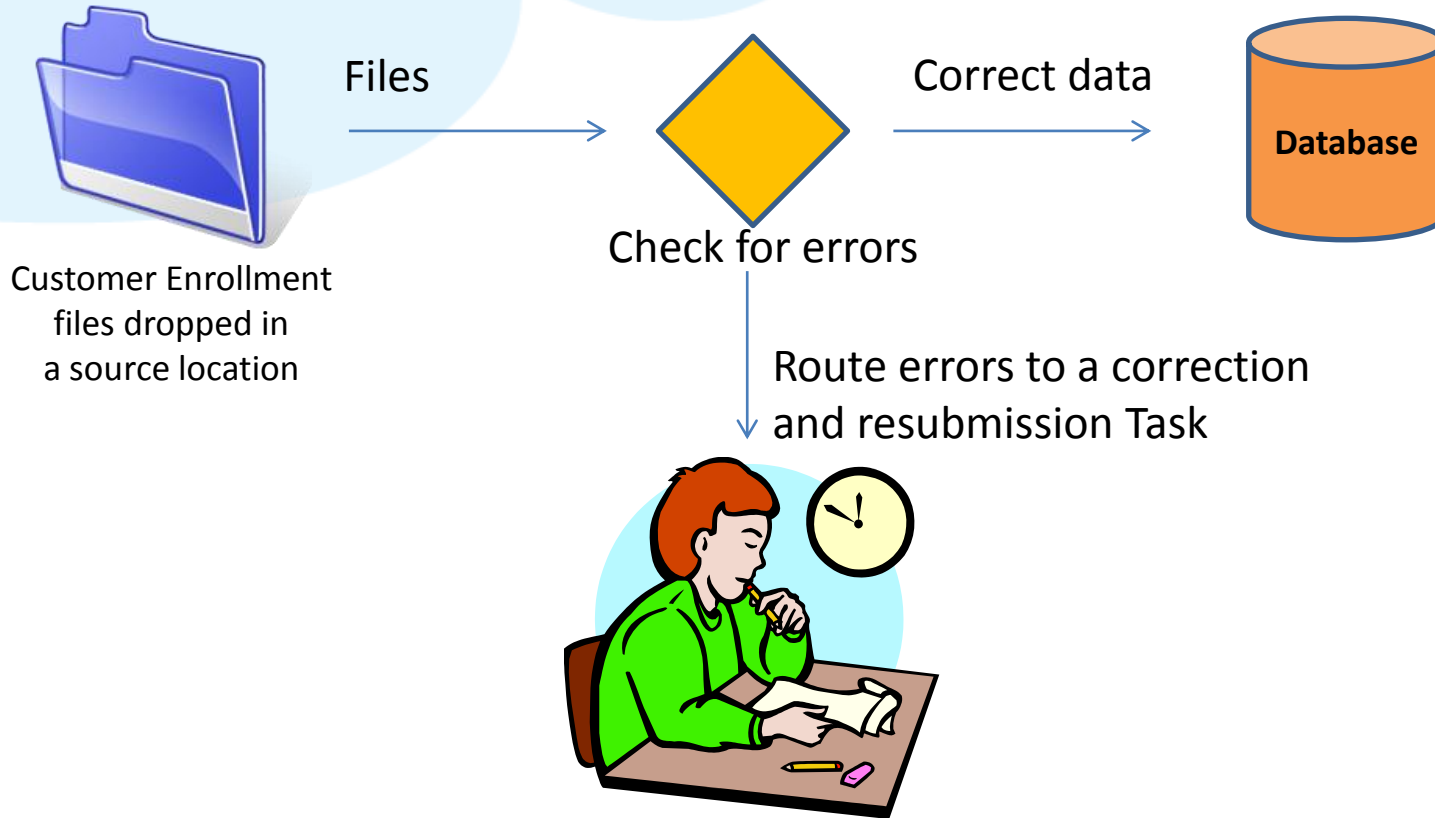
Your business problems have changed.
Why hasn't your integration solution?



ADEPTIA

Use Case: Customer Enrollment

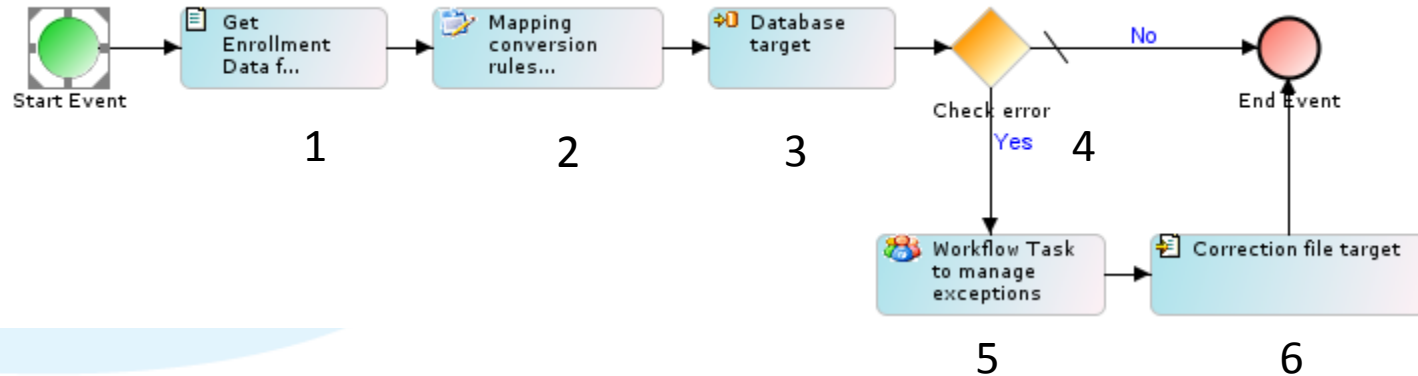
High-level scenario



High-level Description

In this example we will take Customer Enrollment data files arriving in a folder and map them to a backend database. As part of the data in-take we will apply transformation rules to map the incoming data to the desired output of the expected by the database. If there are any errors with the data, those errors will be routed to a workflow task for a user to correct and resubmit.

Technical description



Description of the process design:

File event triggers the process flow on arrival of new or modified file.

1. “Get Enrollment data from source” is a File Source activity which receives new or modified files from the File event
2. “Mapping conversion rules” is a mapping activity that does the following
 - Maps valid records to the database
 - Maps errors to a Human Workflow task
3. “Database target” inserts the valid data into a MySQL database table.
4. “Check error” is a gateway condition that checks for errors
 - If True it routes the errors to Workflow task
 - Else if False it ends the process
5. “Workflow Task to manage exceptions” is a Workflow task to correct errors through a web form
6. “Correction file target” is the location for placing corrected records so that they can be picked up by the file event

Design approach

For this use case we have chosen File Event option to poll for new files and deliver them to the process for execution. Once the file is picked up it will be mapped to a database. If the record has a missing value for Coverage Code field then that record is filtered out as an error record and sent to a workflow task for correction and resubmission. User can modify the source location to FTP, HTTP, Email etc. Here the target is a MySQL Database but you can change it to any other protocol.

For exception handling we have chosen a web form to present the errors to a user so that they can be corrected through a form and then resubmitted back into the process flow. For resubmission we are going to place the corrected form data into the same folder where the polling event is looking for new or modified files.

In this example we can execute the process manually or through a File Event.

So let's first begin with the data file:

- Source file is an XML that contains Enrollment data
- File can have multiple records
- This file is placed in folder c:\UseCase\enrollment

```
<EnrollmentRecord>
  <FirstName>Kevin</FirstName>
  <LastName>Donaldson</LastName>
  <Division>Division20</Division>
  <MemberTitle>Business Analyst</MemberTitle>
  <OccupationCode>Accounting</OccupationCode>
  <EnrollmentAccount>90A890</EnrollmentAccount>
  <PatientID>53143</PatientID>
  <CoverageCode>Dental</CoverageCode>
  <EffectiveDate>11/1/2013</EffectiveDate>
  <Amount>1800</Amount>
</EnrollmentRecord>
<EnrollmentRecord>
  <FirstName>Todd</FirstName>
  <LastName>Johnson</LastName>
  <Division>Division22</Division>
  <MemberTitle>Sales Rep</MemberTitle>
  <OccupationCode>Sales</OccupationCode>
  <EnrollmentAccount>90A866</EnrollmentAccount>
  <PatientID>5355</PatientID>
  <CoverageCode>General</CoverageCode>
  <EffectiveDate>11/2/2013</EffectiveDate>
  <Amount>900</Amount>
```

Let's run the process flow
(login in as demouser/indigo1)

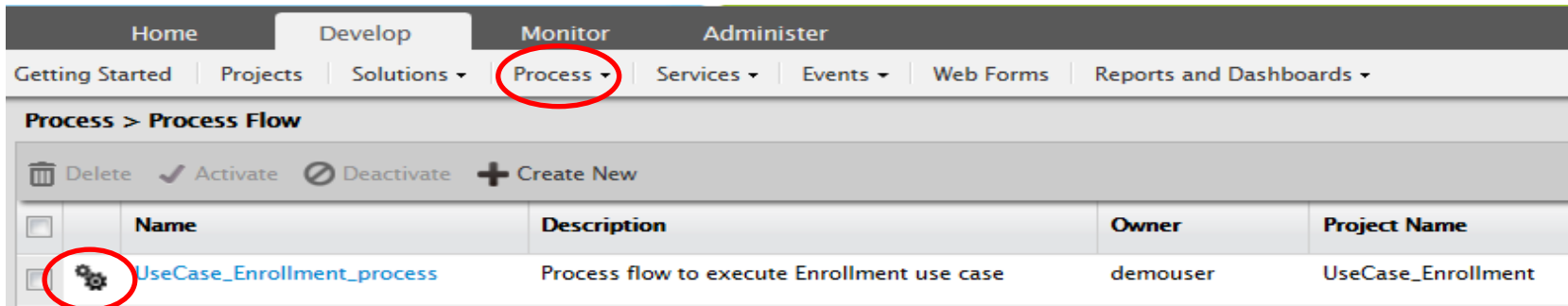
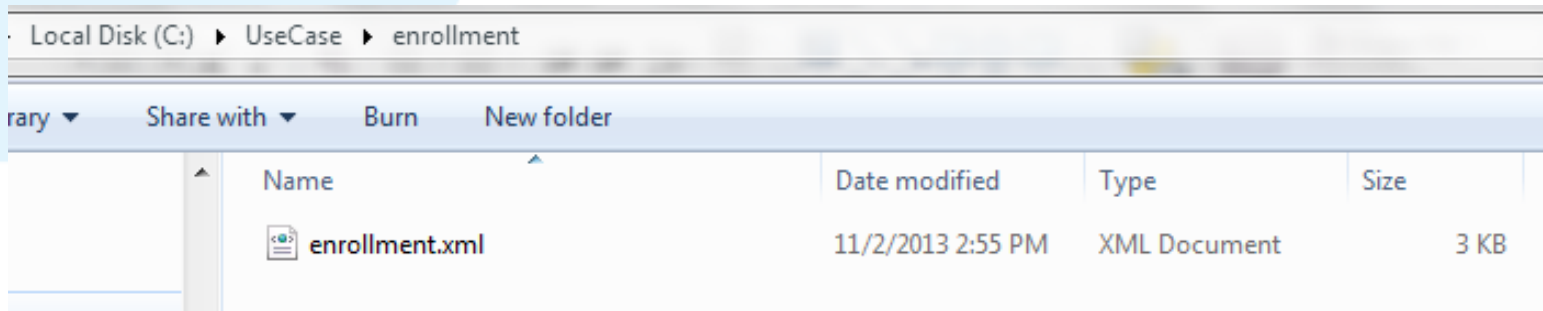
Run-time: Drop the file in the folder and the process starts automatically

Place the attached XML file into the File Event folder



XML Document

- You can get this file from the use case download section in the developer forum
- Place the file in the folder specified in the File Base Location of the File Event (see slide 19)
- Process will be triggered automatically if the File Event is Active
- Process can be also manually executed from the Process Flow manage page (as shown below)





Run-time: Now work with Workflow Task to correct erroneous records



Once a new or modified file is placed, the flow begins and inserts valid data in the target database

- Erroneous records are sent for correction to the Task Manager Monitor > My Tasks > Task Manager
- Open the task by going to Action > Open Task
- Enter coverage code and click on Finish Task
- Now see the Database Target table and you would see all the records inserted into the database

My Tasks > My Documents > Dashboard > Reports > History > My Solutions >

My Tasks > Task Manager

Quick Search  

Task Name	Task Subject	Instance Name	Status	Assignee	Priority	Due Date	Expiry Date	Action
UseCase_Enrollmen...	Correction...	Process flo...	New			11/03/2013 13:32	11/03/2013 13:32	



▼ EnrollmentRecord

FirstName <input type="text" value="Karen"/>	LastName <input type="text" value="Steel"/>	Division <input type="text" value="Division15"/>	MemberTitle <input type="text" value="Engineer"/>	OccupationCode <input type="text" value="Networking"/>
EnrollmentAccount <input type="text" value="90A211"/>	PatientID <input type="text" value="53654"/>	CoverageCode <input type="text"/>	EffectiveDate <input type="text" value="11/01/2013"/>	Amount <input type="text" value="800"/>

Enter CoverageCode here such as Dental

Save Task

Finish Task

Run-time: Monitor the progress and status of the Enrollment workflow

Run time can be monitored by going to Monitor > Dashboard > User Performance

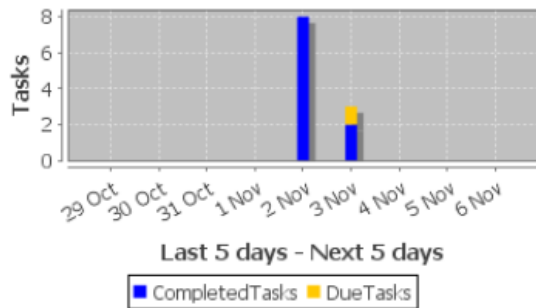
This dashboard shows all the tasks listed for each user responsible for working on the workflow tasks. Once the Task is completed and submitted, view the database table and see all the data including the corrected record inserted successfully in the database target table.

Dashboard > User Performance

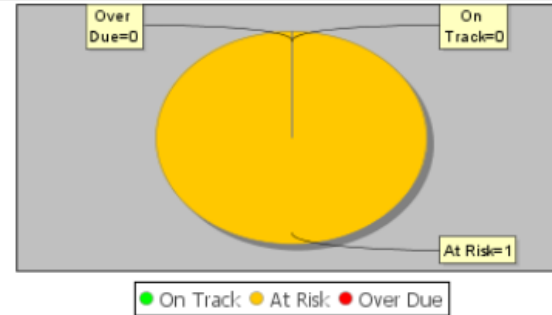
#	Name	Type	Description	Completed	OverDue(Expired)	Open Now (Shared)	DueToday	OverDue
1	demouser	User	Demo User	2	0(0)	1(0)	1	0
2	demo_supervisor	User	demo supervisor	0	0(0)	0(0)	0	0
3	demo_manager	User	demo manager	0	0(0)	0(0)	0	0

Task Queue Details : demouser

Task Completion Trend



Current Tasks Status



firstname	lastname	division	membertitle	occupationcode	enrollmentaccount	patientid	coveragecode	effectivedate	amount
David	Smith	Division28	Engineer	Networking	90A889	53112	Dental	11/2/2013	2400
Kevin	Donaldson	Division20	Business Analyst	Accounting	90A890	53143	Dental	11/1/2013	1800
Todd	Johnson	Division22	Sales Rep	Sales	90A866	5355	General	11/2/2013	900
Karen	Steel	Division15	Engineer	Networking	90A211	53654	dental	2013-11-01	800

Let's build the process flow

Design methodology



Design a high level process flow



Configure all the activities in the process flow



Attach the process flow to an Event to trigger the process automatically.



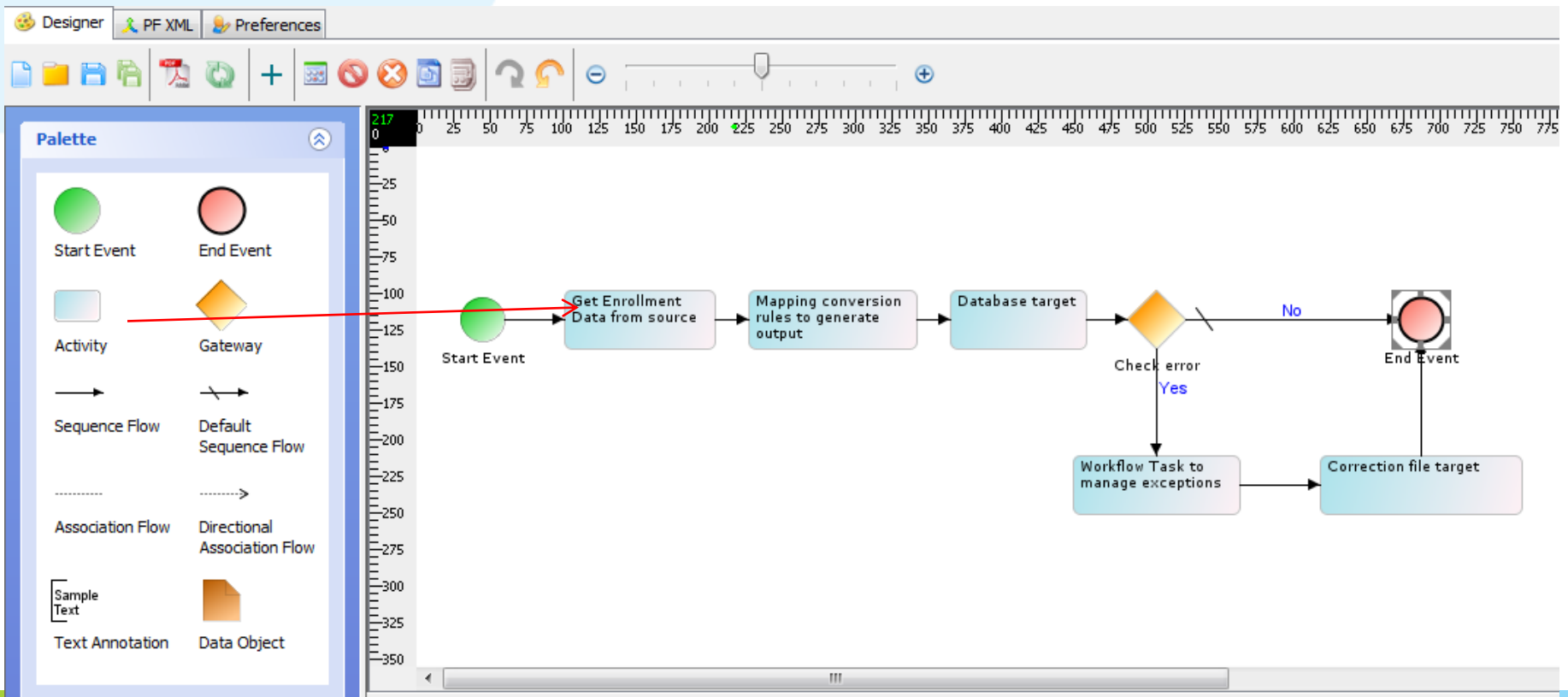
Design: First let's create a Top level design of the solution using the Process Designer

Go to Develop > Process > Process Flow

Create new and in the designer design a top-level flow by pulling the icons from the palette area.

Refer to the demo and tutorial videos on how to design a process flow.

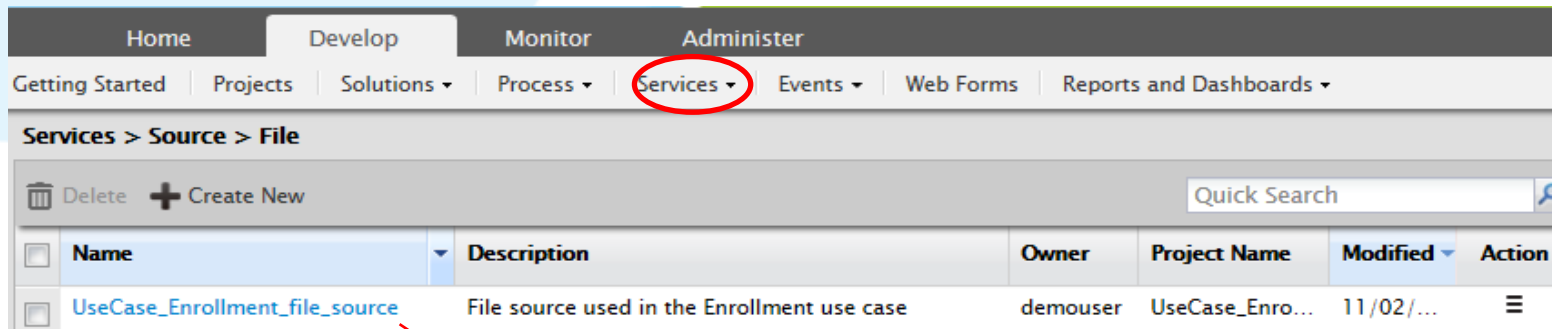
Each activity performs a discreet function such as getting data files, mapping, loading into target and routing the errors into a workflow task.



Configure: File Source activity

2. Create File Source activity by going to Develop > Services > Source > File

Even though we have created a File Event in the previous step, this source activity exist as the first step in the process flow which at run-time would receive the file from the event and would generate a data stream for the subsequent process activities to consume. Refer to the activity created for this use case as shown below.



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Services > Source > File

Delete + Create New Quick Search

Name	Description	Owner	Project Name	Modified	Action
UseCase_Enrollment_file_source	File source used in the Enrollment use case	demouser	UseCase_Enro...	11/02/...	⋮

Standard Properties

Name* UseCase_Enrollment_file_source X

Description* File source used in the Enrollment use case

File Path* C:\UseCase\enrollment

File Name* enrollment.xml

Configure: Schema, Source, and Target activities

3. Create Schema activities for XML and Database by going to Develop > Services > Schema > XML and Database. Also create the related Source and Target activities under Develop > Services > File Source and Database Target

Defining the meta-data definition is important so that the Mapping activity would be able to read the source data and convert it into the output format. Please note that a Database Info activity (under Develop > Connector > Database Info) is required prior to creating Database Schema activity. Refer to the activities created for this use case as shown below. We have used the Web Form for the XML source schema.

The screenshot shows the Adeptia web interface with the 'Services' menu circled in red. The 'Database Schema' configuration panel is open, showing the following details:

- Name:** UseCase_Enrollment_XML_schema
- Description:** Schema of the workflow form used in the Enrollment use case
- Validate XML:**
- Definition Mode:** Import File Web Service Consumer Web Service Provider Web Form
- Consumer ID:** [Dropdown menu]
- Description:** Database schema for target table in Enrollment use case
- Select Database Info:** UseCase_Enrollment_db_connection
- Definition Mode:** Import XSD File Table Name
- XSD File:** [Browse...]
- Table Name:** enrollmentdata
- SQL Query:** SELECT * FROM enrollmentdata



Configure: Web Form and Workflow activity

4. Create Web Form & link it to Human Workflow

Go to Develop > Web Forms and edit the existing Form created for this use case.

This form can display dynamic number of records depending upon the error records filtered out by the mapping.

To assign this form to a workflow go to Develop > Services > Human Workflow and view the activity for this use case.

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Web Forms

Delete + Create New Quick Search

Name	Description	Owner	Project Name
UseCase_Enrollment_task_form	This form is used in the correction workflow step...	demo...	UseCase_En...

Name* UseCase_Enrollment_task_form

Description* This form is used in the correction workflow step... Use Case

Application Type* Form

Form Type Rich Form

Create Form

PALETTE

- Dropdown
- Radio
- Checkbox
- Section
- Repeat
- Tabs
- Panel
- Message
- Link
- Trigger
- Upload
- Text
- TextArea
- Date
- EMail
- Money
- Phone
- Quantity
- Number
- Image
- Video
- Submit

CUSTOM

PROPERTIES

Settings Style Form Info

Name UC_Enrollment_Correction_FormForm

Description Edit the form to change this description.

Visibility Private

Task Info

Tracking Id

Deployment Production

Click to setup Key/Saved fields

Save Save PDF

UC_Enrollment_Correction_FormForm

Preview Controls Rules Form Action Doc Action Finish Cancel

print

Data Table

EnrollmentRecord				
Panel 17	Panel 17	Panel 17	Panel 17	Panel 17
FirstName	LastName	Division	MemberTitle	OccupationCode
Panel 17	Panel 17	Panel 17	Panel 17	Panel 17
EnrollmentAccount	PatientID	CoverageCode	EffectiveDate	Amount

Drop Submit buttons from the palette to add to the form.

Configure: Mapping activity

5. Create Mapping activity

Go to Develop > Services > Data Transformation

Source is mapped to 2 Targets; Database and Web Form.

Database gets the valid data if all fields of the source record are populated. If not then the error records are mapped to second output which is the Web Form schema. Refer to the Filter conditions applied on the Record node of both target schemas for more details. Setup a demo with our team to learn more about the mapping rules.

The screenshot displays the ADEPTIA Data Mapper interface for a mapping activity named 'UseCase_Enrollment_Map'. The interface is divided into several panes:

- Left Pane (Services > Data Transformation > Data Mapping):** Shows a list of mapping activities. 'UseCase_Enrollment_Map' is selected, with a description: 'Mapping used in the Enrollment...'. A red arrow points from this activity to the main workspace.
- Top Pane (Structure of source_XSD):** Displays the source XML schema structure. It includes a root element 'ns:form (form) (UseCase_Enrollment_XML_schema)' with a 'name' attribute and an 'EnrollmentRecord (EnrollmentRecord) (F)' element. The 'EnrollmentRecord' element has several child elements: 'FirstName (string) (M)', 'LastName (string) (M)', 'Division (string) (M)', 'MemberTitle (string) (M)', 'OccupationCode (string) (M)', 'EnrollmentAccount (string) (M)', 'PatientID (string) (M)', 'CoverageCode (string) (M)', 'EffectiveDate (date) (M)', and 'Amount (string) (M)'. Blue lines connect these source elements to the corresponding target elements in the right pane.
- Right Pane (Current Element: Record):** Shows the target XML schema structure. It includes a root element 'Root (UseCase_Enrollment_db_schema)' with an 'Action' attribute and a 'Record (M, F, CM - Map records with Coverage Code)' element. The 'Record' element has several child elements: 'recordNumber', 'firstname (string) (M)', 'lastname (string) (M)', 'division (string) (M)', 'membertitle (string) (M)', 'occupationcode (string) (M)', 'enrollmentaccount (string) (M)', 'patientid (string) (M)', 'coveragecode (string) (M)', 'effectivedate (string) (M)', and 'amount (integer) (M)'. Below this, another 'ns:form (form) (UseCase_Enrollment_XML_schema)' element is shown with a 'name' attribute and an 'EnrollmentRecord (EnrollmentRecord) (M, F, CM - Map records with Coverage Code)' element.
- Bottom Pane (Mapping Rules):** Shows the mapping rules configuration. It includes a 'CoverageCode' node with a mapping rule '1 <S> CoverageCode' and a 'Record' node with a mapping rule '1 <T> Record..'. The 'Record' node is connected to a 'IFF COND..' node, which is connected to a 'Record..' node. The 'IFF COND..' node has a condition '1 <M> != ..' and a '2' in the bottom right corner. The 'Record..' node has a '1' in the top left corner. The 'IFF COND..' node is also connected to a 'Data Viewer' pane showing a '1 <C> true' value.
- Right Side (Parameters):** Shows a list of parameters including Global Variables, Local Variables, Custom Methods, Keys, Context Variables, Templates, Connection Info, Global Methods, and Value Map.

Configure: Process Flow

6. Configure the Process Flow based on the activities created in previous steps. You can attach the activity from the Repository and drop it on top of the placeholder activities.

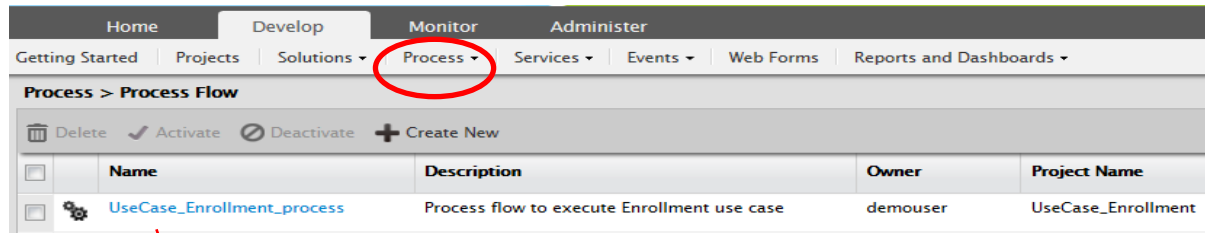
- After the process is created, in the Manage page go to Actions and Bind the Event to this Process

Go to Develop > Process > Process Flow

In the Process Designer, go to Repository view and pull in these activities

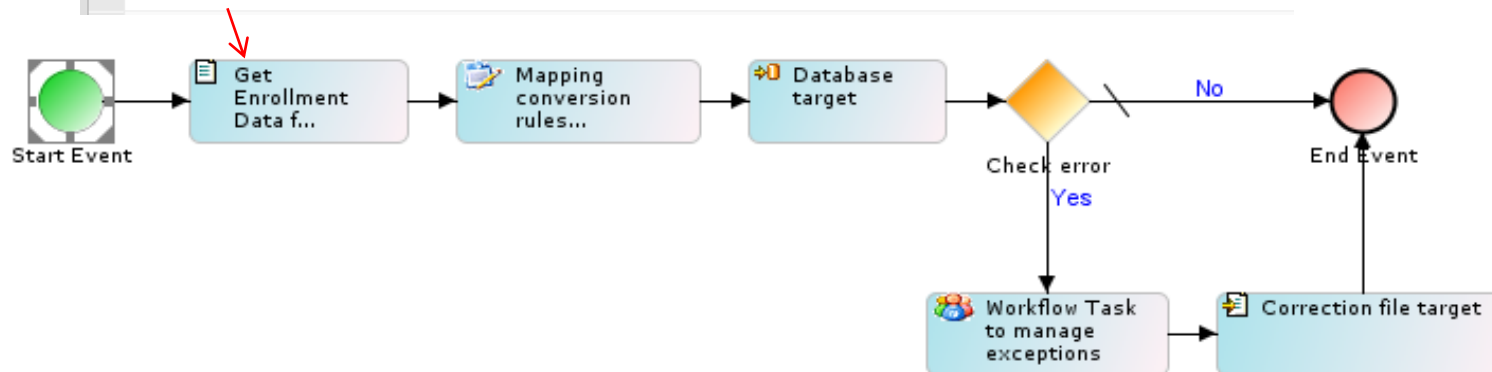
- Source > File Source (double click on it and make its Event Context property to True
- Data Transformation > Mapping activity
- Target > Database
- Gateway from the Palette
- Workflow activity
- Target > File

Double click on the arrow from the Gateway to the Workflow task and then edit the condition to see the rule defined to check for errors. Event triggers this process on new or modified file. Refer to the video for more details.



The screenshot shows the 'Process Flow' configuration for the 'UseCase_Enrollment_process'. The 'Monitor' tab is selected, and the 'Process' dropdown is circled in red. Below the navigation bar, there are buttons for 'Delete', 'Activate', 'Deactivate', and 'Create New'. A table lists the process details:

Name	Description	Owner	Project Name
UseCase_Enrollment_process	Process flow to execute Enrollment use case	demouser	UseCase_Enrollment



Deploy: File Event Rules

1. We have setup a File Event that polls the folder every few seconds.
 - File Event is available under Develop > Events > File
 - Polling frequency is set to 45 seconds
 - Polls for any new or modified file
 - Default folder is c:\usecase\enrollment (if you do not have this folder please create one)
 - You can change the default folder path and edit the File Base Location accordingly
 - Once this File Event is Activated it will look for new or modified files that are placed in that folder
 - Process flow is bound to the File Event (Right click on Process Flow Name and click on Bind Event)

The screenshot displays the Adeptia software interface. The top navigation bar includes 'Home', 'Develop', 'Monitor', and 'Administer'. The 'Events' menu item is circled in red. Below the navigation bar, the 'Events > File' section is visible. A table lists several file events, with the 'UseCase_Enrollment_event' row highlighted. The 'Activate' button is also circled in red. To the right, the 'Edit File Event: UseCase_Enrollment_event' configuration form is shown, with fields for Name, Description, Trigger Type, and File Base Location. A red arrow points from the 'CheckForPurchaseOrderFiles' row in the table to the 'Check for File Modification' checkbox in the configuration form.

Name	Description	Owner	PF	Project Name
UseCase_Enrollment_event	trigger			
CheckForPurchaseOrderFiles	check			
CheckForEmployeeBenefitFiles	check			

Edit File Event: UseCase_Enrollment_event

Name* UseCase_Enrollment_event

Description* trigger enrollment process

Trigger Type* On FileCreated

Check for File Modification

File Include Criteria* *.xml

File Exclude Criteria

File Base Location* c:\usecase\enrollment

Managing the activities created for this use case

You can manage and view all the activities of this use case by going to Develop > Projects
Click on the project named "UseCase_Enrollment" and it will show all the activities configured for this process under its related categories. You can open any category to view its activities.

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Projects

Delete + Create New Quick Search

Name	Description	Owner	Group	Modified	Action
<input type="checkbox"/> UseCase_Enrollment	Project contains activities related to Enro...	demouser	DemoGroup	11/02/13...	≡

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Projects

List of activities included in project "UseCase_Enrollment"

Back Move Quick Search

Name	Description	Owner	Modified
File Event (1)			
<input type="checkbox"/> UseCase_Enrollment_event	trigger enrollment process	demouser	11/02/13 15:42
File Source (1)			
<input type="checkbox"/> UseCase_Enrollment_file_sou...	File source used in the Enroll...	demouser	11/02/13 14:50
File Target (1)			
<input type="checkbox"/> UseCase_Enrollment_file_target	File target for corrections in...	demouser	11/02/13 14:43
Human WorkFlow (1)			
<input type="checkbox"/> UseCase_Enrollment_correction	Correction task used in Enrol...	demouser	11/02/13 12:20
Process Flow (1)			
<input type="checkbox"/> UseCase_Enrollment_process	Process flow to execute Enrol...	demouser	11/02/13 16:30
Web Forms (1)			
<input type="checkbox"/> UseCase_Enrollment_task_form	This form is used in the corre	demouser	11/02/13 11:40

Leading the **Integration** Revolution

Your business problems have changed.
Why hasn't your integration solution?

Thank You!



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