



Workflow

Introduction to Workflow

- Is used to define a set of instructions called a workflow to execute mappings
- Workflow contains a session and any other task you need to execute when a session is run
- Tasks can include a session, email notification, or scheduling information
- Worklet can be created in Workflow Manager
- A worklet is an object that groups a set of tasks. It is similar to a workflow, but without scheduling information

Workflow Manager

Workflow Manager Windows

The Workflow Manager displays the following windows to help you create and organize workflows:

Navigator. You can connect to and work in multiple repositories and folders. In the Navigator, the Workflow Manager displays a red icon over invalid objects.

Workspace. You can create, edit, and view tasks, workflows, and worklets.

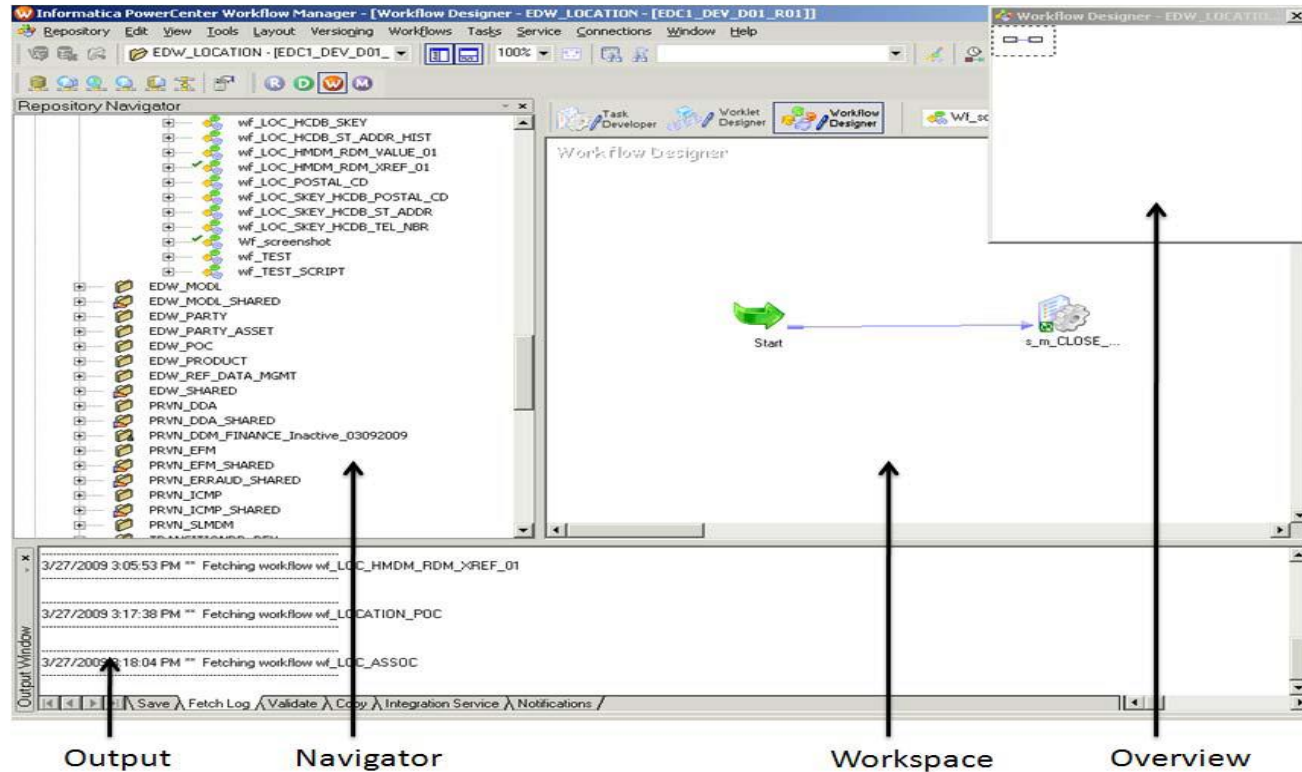
Output. Contains tabs to display different types of output messages. The Output window contains the following tabs:

- » **Save.** Displays messages when you save a workflow, worklet, or task. The Save tab displays a validation summary when you save a workflow or a worklet.
- » **Fetch Log.** Displays messages when the Workflow Manager fetches objects from the repository.
- » **Validate.** Displays messages when you validate a workflow, worklet, or task.
- » **Copy.** Displays messages when you copy repository objects.
- » **Server.** Displays messages from the Integration Service.
- » **Notifications.** Displays messages from the Repository Service.

Workflow Manager (Contd.).

- A process called the workflow is created in the Workflow Manager
- A workflow is a set of instructions on how to execute tasks such as sessions, emails, and shell commands
- Workflow Manager provides other tasks such as Assignment, Decision, and Events. Branches with conditional links can also be created. In addition, Workflows can be batched by creating worklets in the Workflow Manager

Workflow Manager: Screen Shot



Types of Connections : Workflow Manager

Relational database connections. Connections for each source, target, Lookup transformation, and Stored Procedure transformation database. You must create connections to a database before you can create a session that accesses the database.

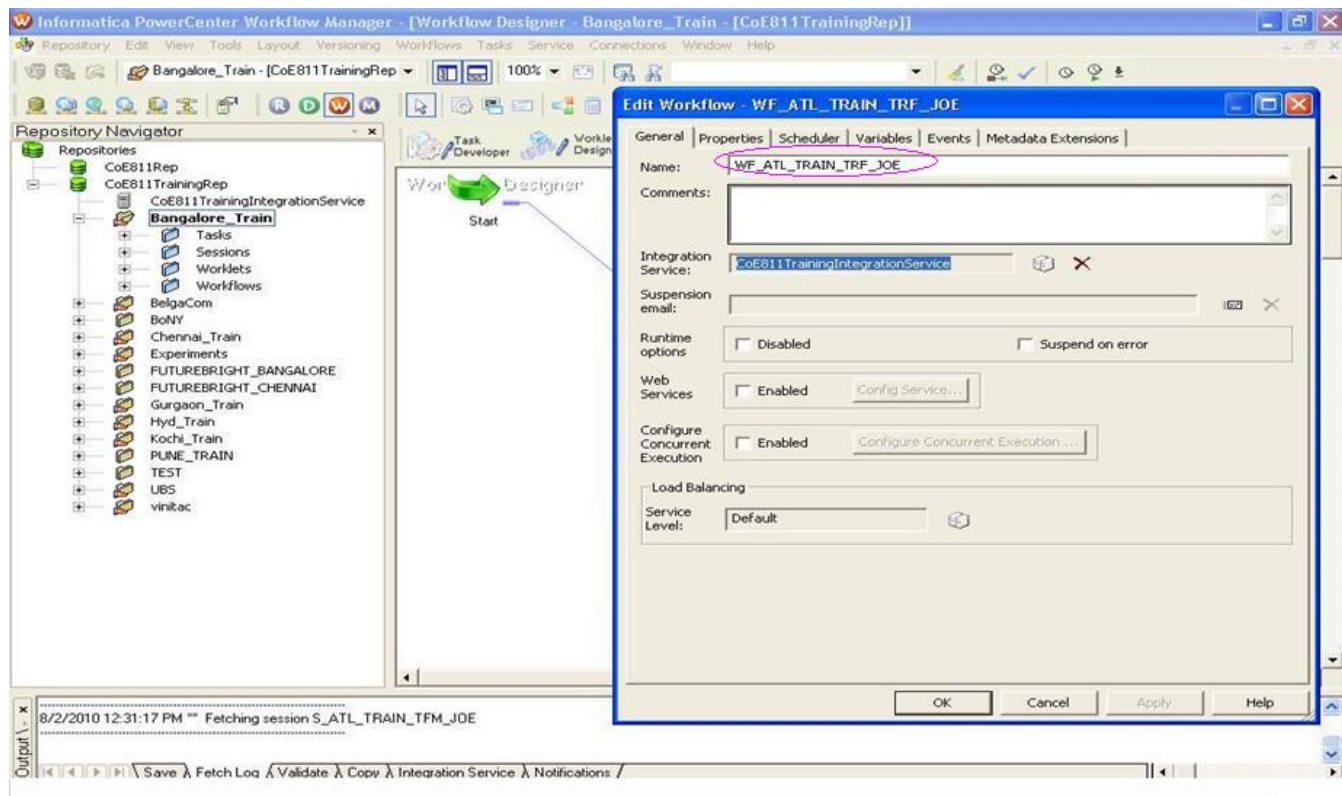
FTP connections. File Transfer Protocol (FTP) connections object to read files from a FTP host.

External loader connections. An external loader connection to load information directly from a file or pipe rather than running the SQL commands to insert the same data into the database.

Queue connections. Database connections for message queues.

Source and target application connections. Connections to source and target applications.

Workflow Manager – Properties



Workflow Manager Tools

- Task Developer



- Workflow Designer

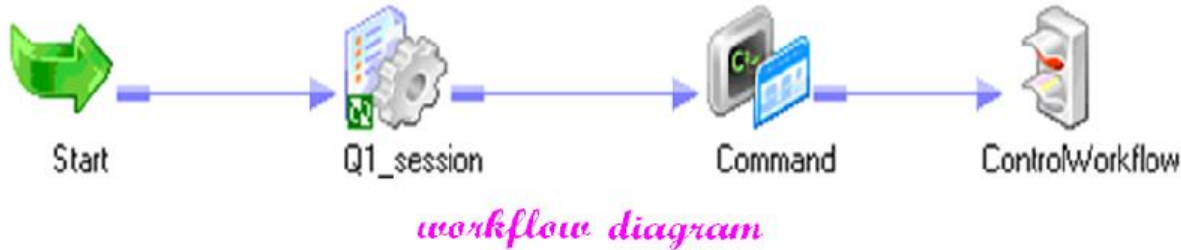


- Worklet Designer



Workflows

Tells integration service how to run a session
After the task is creates, it should be linked
Can be scheduled to run manually or automatically



Creating Connections

Connection Object Definition

Relational Connection Editor

Name: Oracle1 OK

Type: Oracle Cancel

User Name: Help

Password:

Connect String:

Code Page: MS Windows Latin 1 (ANSI), supe

Attributes:

| Attribute | Value |
|----------------------------|-------------------------------------|
| Connection Environment ... | |
| Transaction Environment... | |
| Enable Parallel Mode | <input checked="" type="checkbox"/> |
| Connection Retry Period | 0 |

Connection Object Definition

Loader Connection Editor

Name: Oracle_External_Loader1 OK

Type: Oracle External Loader Cancel

User Name: Help

Password:

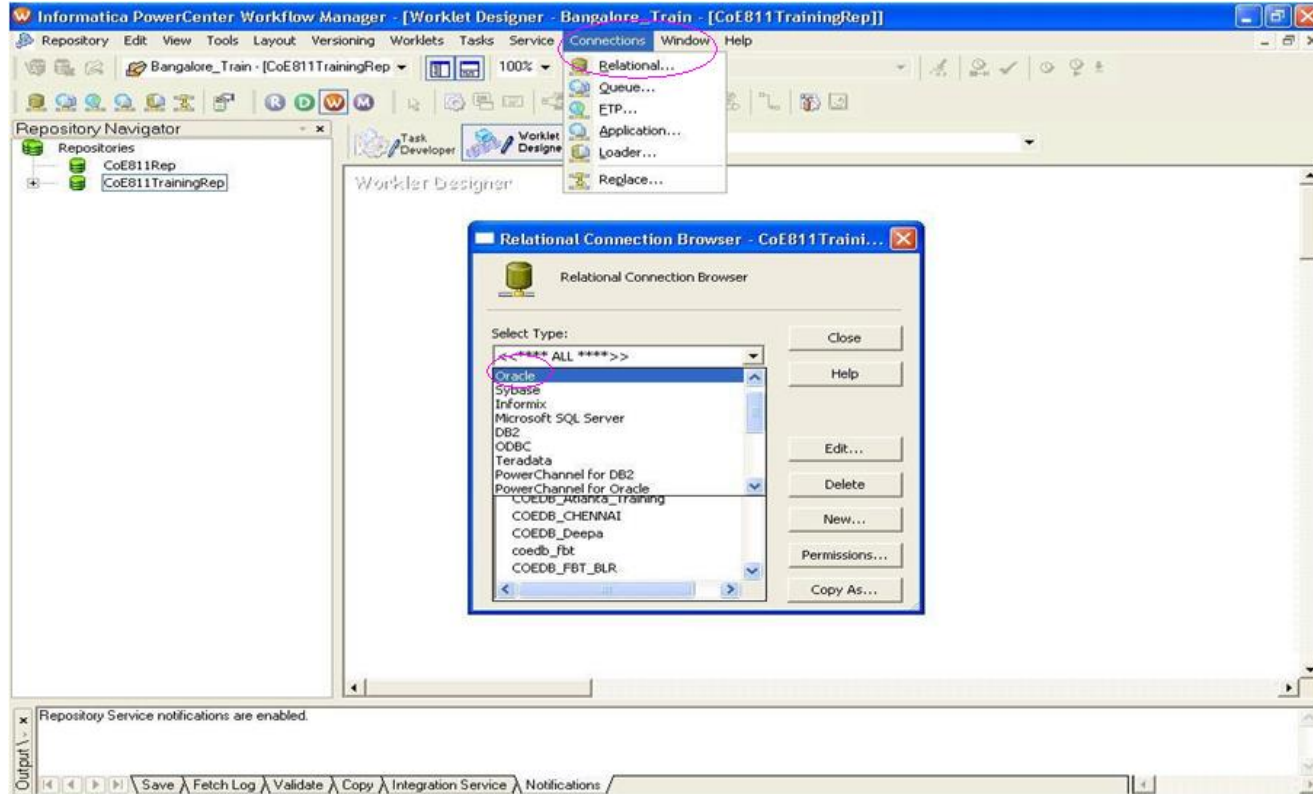
Connect String:

Code Page: MS Windows Latin 1 (ANSI), supe

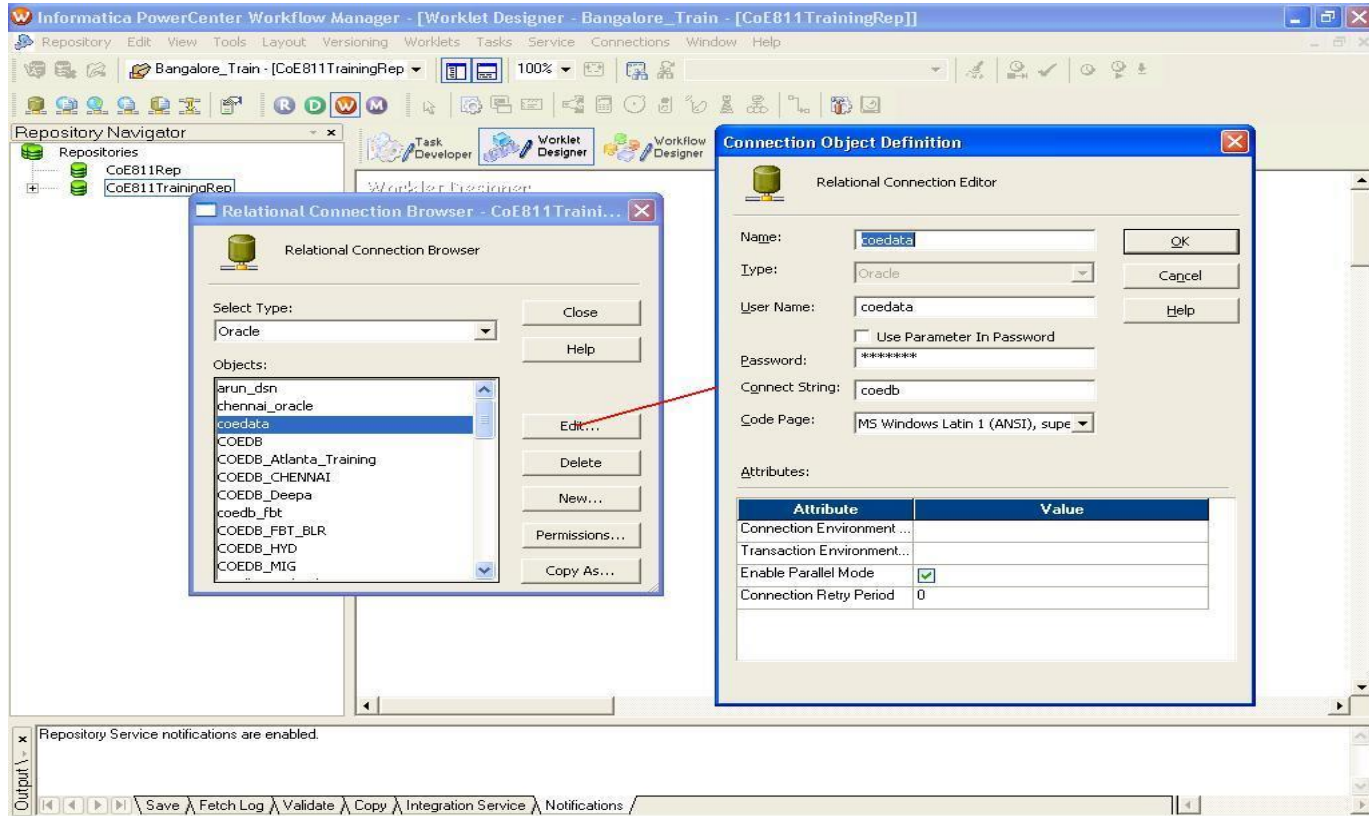
Attributes:

| Attribute | Value |
|----------------------------|-----------------------|
| Error Limit | 0 |
| Load Mode | Append |
| Load Method | Use Conventional Path |
| Enable Parallel Load | Enable Parallel Load |
| Rows Per Commit | 10000 |
| External Loader Executa... | sqlload |

Workflow Connections



Workflow Connections (Contd.).



Workflow Tasks

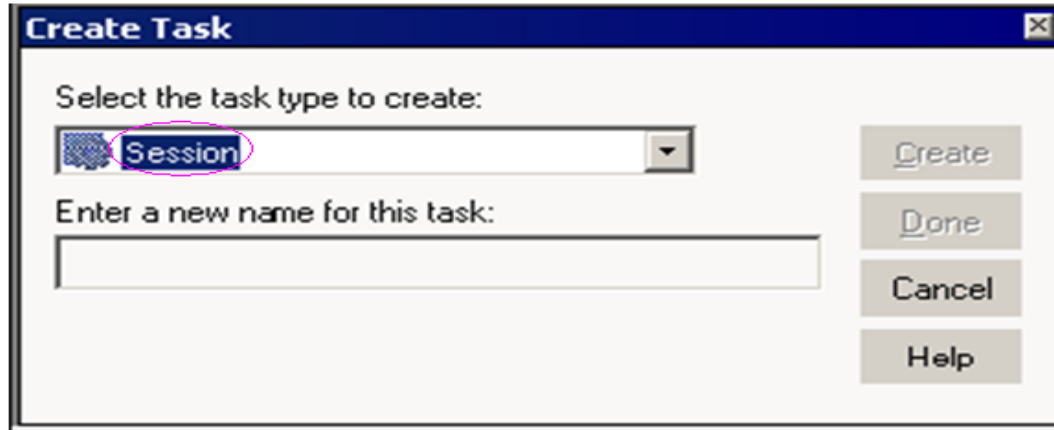
- Command
- Control
- Decision
- Email
- Event-Raise
- Event-Wait
- Session
- Assignment
- Timer

Tasks

Workflow Manager contains many types of tasks to help build workflows

Workflow Manager validates tasks attributes and links

Create tasks in the Task Developer, Workflow Designer or Worklet Designer



Tasks (Contd.).

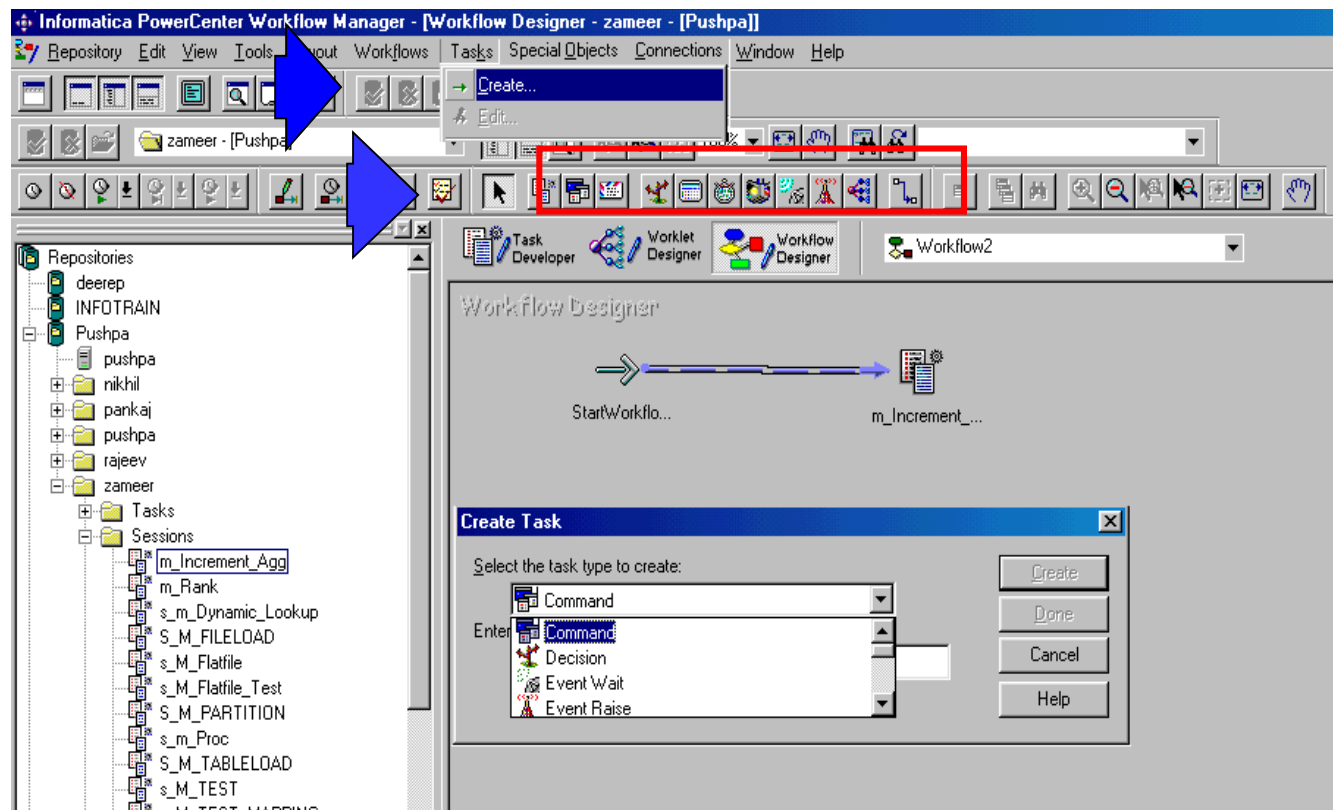
To create a task in Task Developer:

1. In the Task Developer, click Tasks > Create. The Create Task dialog box appears.
2. Select the task type you want to create, Command, Session, or Email. Other type or tasks can't be created here.
3. Enter a name for the task.
4. For session tasks, select the mapping you want to associate with the session.
5. Click Create. The Task Developer creates the workflow task.
6. Click Done to close the Create Task dialog box.

To create tasks in the Workflow Designer or Worklet Designer:

1. In the Workflow Designer or Worklet Designer, open a workflow or worklet.
2. Click Tasks > Create. Select the type of task you want to create
3. Enter a name for the task. Click Create. The Workflow Designer or Worklet Designer creates the task and adds it to the workspace.
4. Click Done.

Create Task



Sessions

A session is a set of instructions that tells the Integration Service how and when to move data from sources to targets

A session is a type of task, similar to other tasks available in the Workflow Manager

To run a session, first create a workflow to contain the Session task
Session tasks can be run sequentially or concurrently

Session Properties

The screenshot displays the Informatica PowerCenter Workflow Manager interface. The 'Repository Navigator' on the left lists various workflow objects, including 'wf_dee_s', 'wf_dee_shi', 'wf_dept', 'wf_dept1', 'wf_dept10', 'wf_dept11', 'wf_dept_gopal', 'wf_dept_tab', 'wf_dept_v', 'wf_dept_v1', 'wf_dfd', 'wf_direct', 'wf_directlink', 'wf_dm_runtime', 'wf_DP_AP_DEPARTMENT', 'wf_DP_AP_EMP_SAMPLE', 'wf_DP_AP_EMP_SAMPLE1', 'wf_DP_AP_EMP_SAMPLE2', 'wf_DP_AP_FIXINC', 'wf_DP_AP_RAM_SCD_CHECK', 'wf_DP_Emp_Test1', 'wf_DP_ForAllNonFIXINC', 'wf_DP_NEWPROFILE154', 'wf_DP_NEWPROFILE_abc', 'wf_DP_SampleProfileFIXINC', 'wf_emp', 'wf_emp1', 'wf_emp10', and 'wf_emp1000f'. The 'Workflow Designer' in the center shows a workflow diagram with a 'Start' node and a task named 'EMP_SESSION_RANK_VIC'. The 'Edit Tasks' pane on the right is open, showing the 'Properties' tab for the selected task. The 'General Options' section includes settings for session log files, test load, and recovery strategy. The 'Performance' section includes settings for DTM buffer size, performance data collection, and incremental aggregation. The 'Output' pane at the bottom shows the session name 'EMP_SESSION_RANK_VIC' and the timestamp '8/2/2010 9:28:55 AM'.

Informatica PowerCenter Workflow Manager - [Workflow Designer - Bangalore_Train - [CoE811TrainingRep]]

Repository Navigator

Workflow Designer

Edit Tasks

General Properties Config Object Mapping Components Metadata Extensions

Select task: EMP_SESSION_RANK_VIC

Task type: Session

| Attribute | Value |
|--|-------------------------------------|
| General Options | |
| Write Backward Compatible Session Log File | <input type="checkbox"/> |
| Session Log File Name | EMP_SESSION_RANK_VIC.log |
| Session Log File directory | \$PMSessionLogDir\ |
| Parameter Filename | |
| Enable Test Load | <input type="checkbox"/> |
| Number of rows to test | 1 |
| \$Source connection value | |
| \$Target connection value | |
| Treat source rows as | Insert |
| Commit Type | Target |
| Commit Interval | 10000 |
| Commit On End Of File | <input checked="" type="checkbox"/> |
| Rollback Transactions on Errors | <input type="checkbox"/> |
| Recovery Strategy | Fail task and continue workflow |
| Java Classpath | |
| Performance | |
| DTM buffer size | Auto |
| Collect performance data | <input type="checkbox"/> |
| Write performance data to repository | <input type="checkbox"/> |
| Incremental Aggregation | <input type="checkbox"/> |
| Reinitialize aggregate cache | <input type="checkbox"/> |
| Enable high precision | <input type="checkbox"/> |
| Session retry on deadlock | <input type="checkbox"/> |
| Distribution Optimization | None |

General Options

General

OK Cancel Apply

Output

8/2/2010 9:28:55 AM *** Fetching session EMP_SESSION_RANK_VIC

Save Fetch Log Validate Copy Integration Service

Session Properties (Contd.).

The screenshot displays the Informatica PowerCenter Workflow Manager interface. On the left, the 'Repository Navigator' lists various workflow objects, including 'wf_dee_s', 'wf_dee_shi', 'wf_dept', 'wf_dept1', 'wf_dept10', 'wf_dept11', 'wf_dept_gopal', 'wf_dept_tab', 'wf_dept_v', 'wf_dept_v1', 'wf_dfd', 'wf_direct', 'wf_directlink', 'wf_dm_runtime', 'wf_DP_AP_DEPARTMENT', 'wf_DP_AP_EMP_SAMPLE', 'wf_DP_AP_EMP_SAMPLE1', 'wf_DP_AP_EMP_SAMPLE2', 'wf_DP_AP_FIXINC', 'wf_DP_AP_RAM_SCD_CHECK', 'wf_DP_Emp_Test1', 'wf_DP_ForAllNonFIXINC', 'wf_DP_NEWPROFILE154', 'wf_DP_NEWPROFILE_abc', 'wf_DP_SampleProfileFIXINC', 'wf_emp', 'wf_emp1', 'wf_emp10', and 'wf_emp1000f'. The 'Workflow Designer' pane shows a workflow diagram with a 'Start' node and a task node labeled 'EMP_SESSION_RANK_VIC'. The 'Edit Tasks' dialog is open, showing the 'General' tab. The 'Select task:' field is set to 'EMP_SESSION_RANK_VIC'. The 'Task type:' is 'Session'. The dialog contains a table with session tasks and their properties.

| Task | Type | Value |
|---|--------------|---|
| Pre-Session Command | None | |
| Post-Session Success Command | None | |
| Post-Session Failure Command | None | |
| On Success E-Mail | None | |
| On Failure E-Mail | None | |
| Pre-session variable assignment | Non-reusable | presession_variable_assignment |
| Post-session on success variable assignment | Non-reusable | postsession_success_variable_assignment |
| Post-session on failure variable assignment | Non-reusable | postsession_failure_variable_assignment |

At the bottom of the dialog, there are buttons for 'OK', 'Cancel', and 'Apply'. The 'Output' pane at the bottom left shows the message: '8/2/2010 9:28:55 AM *** Fetching session EMP_SESSION_RANK_VIC'.

Activity: Fill the blanks

1. _____tells how one of the many tasks that can be executed in the Workflow Manager
- 2.Task can be created in _____, _____ and _____
3. A reusable workflow is called _____
4. Workflow manager _____ the tasks when you save it

Workflow Parameters & Variables

The screenshot displays the Informatica PowerCenter Workflow Manager interface. The main window shows a workflow diagram with three tasks: 'Start', 's_I2SG_PARAM...', and 's_I2SG_CTRL_GEN_MAP_X...'. The 'Edit Tasks' dialog box is open, showing the 'Properties' tab for the task 's_I2SG_CTRL_GEN_MAP_XML'. The dialog box has tabs for 'General', 'Properties', 'Config Object', 'Mapping', 'Components', and 'Metadata Extensions'. The 'Properties' tab is selected, and it shows a table of attributes and their values.

Edit Tasks Dialog Box - Properties Tab

| Attribute | Value |
|--|--|
| General Options | |
| Write Backward Compatible Session Log File | <input type="checkbox"/> |
| Session Log File Name | s_I2SG_CTRL_GEN_MAP_XML.log |
| Session Log File directory | \$PMSessionLogDir\ |
| Parameter Filename | \$PMSourceFileDir\PARAM\I2sg_infa_parameters.prm |
| Enable Test Load | <input type="checkbox"/> |
| Number of rows to test | 1 |
| \$Source connection value | \$DBConnection_I2SG |
| \$Target connection value | \$DBConnection_I2SG |
| Treat source rows as | Insert |
| Commit Type | Target |
| Commit Interval | 10000 |
| Commit On End Of File | <input checked="" type="checkbox"/> |
| Rollback Transactions on Errors | <input type="checkbox"/> |
| Recovery Strategy | Fail task and continue workflow |
| Java Classpath | |

Workflow Parameters & Variables (Contd.).

The screenshot displays the Informatica 'Edit Tasks' window for the task 's_I2SG_CTRL_GEN_MAP_XML'. The 'Properties' tab is active, showing a table of attributes and their values. The 'Parameter Filename' attribute is highlighted with a red circle, showing the value '\$PMSourceFileDir\PARAM\I2sg_infa_parameters.prm'. Overlaid on this is a Notepad window titled 'i2sg_infa_parameters - Notepad', which contains the following text:

```
[global]
$DBConnection_I2SG=TEST_BID
$DBConnection_I2SG_DP=I2SG_DATA_PROFILING
$DBConnection_INFAREPO=CoE811Rep_ETLDB
$$AUTO_SCHED=NO
$$AUTO_SCHED_RECON=NO
$$CHECKIN_AFTER_IMPORT=NO
$$CODEPAGE_SRC=US-ASCII
$$CODEPAGE_TGT=US-ASCII
$$DELIMITER_SRC=|
$$DELIMITER_TGT=|
$$DOMAIN_NAME=CoEUniverse
$$FF_DATETIME_FORMAT_SRC=A 10 mm/dd/yyyy
$$FF_DATETIME_FORMAT_TGT=A 10 mm/dd/yyyy
$$FLAT_FILE_TYPE_SRC=DELIMITED
$$FLAT_FILE_TYPE_TGT=DELIMITED
```

Workflow Parameters & Variables (Contd.).

Edit Workflow - wf_m_emp

General | Properties | Scheduler | **Variables** | Events | Metadata Extensions

Declare the variables you want to use in workflow/worklet. A variable represents a value that can be changed during the workflow run.

| Name | Datatype | Persistent |
|----------------------|----------|--------------------------|
| <u>\$\$VARIABLE1</u> | integer | <input type="checkbox"/> |

Default Value: ☒ Is NULL

Description:

OK Cancel Apply Help

Workflow Properties

Edit Workflow - wf_m_emp

General **Properties** Scheduler Variables Events Metadata Extensions

Set the properties of the workflow/worklet in the grid below:

| Attribute | Value |
|---|--------------------------|
| Parameter Filename | |
| Write Backward Compatible Workfl... | <input type="checkbox"/> |
| Workflow Log File Name | wf_m_emp.log |
| Workflow Log File Directory | \$PMWorkflowLogDir\ |
| Save Workflow log by | By runs |
| Save workflow log for these runs | 0 |
| Enable HA recovery | <input type="checkbox"/> |
| Automatically recover terminated tas... | <input type="checkbox"/> |
| Maximum automatic recovery attempts | 5 |

Parameter Filename

Parameter filename

OK Cancel Apply Help

Workflow Properties (Contd.).

Edit Workflow wf_m_emp

General **Properties** Scheduler Variables Events Metadata Extensions

Set the properties of the workflow/worklet in the grid below:

| Attribute | Value |
|---|--------------------------|
| Parameter Filename | |
| Write Backward Compatible Workfl... | <input type="checkbox"/> |
| Workflow Log File Name | wf_m_emp.log |
| Workflow Log File Directory | \$PM\WorkflowLogDir\ |
| Save Workflow log by | By runs |
| Save workflow log for these runs | 0 |
| Enable HA recovery | <input type="checkbox"/> |
| Automatically recover terminated tas... | <input type="checkbox"/> |
| Maximum automatic recovery attempts | 5 |

Parameter Filename

Parameter filename

OK Cancel Apply Help

Quick Recap

The tools in Workflow Manager are Task Developer, Workflow Designer, Worklet Designer

A session is a set of instructions that tells the PowerCenter Server how and when to move data from sources to targets

A workflow is a set of instructions that describes how and when to run tasks related to extracting, transforming, and loading data

Summary

In this session, we learnt to :

- Illustrate Workflow Manager
- Classify Source and Target Connection
- Design Tasks
- Design Sessions
- Construct Workflows

Review: Q&A

What is the job of workflow Manager?

What is meant by session?

What is a task?

What is a workflow?

Glossary

- Workflow
- Task
- Session
- Connections



Thank You