

Informatica PC Training

Day-2

Agenda:

- Basic Components for Mapping
 - Building a simple ETL process
 - Demo
- Build a Sample ETL Process

Debadatta Mohanty

Housekeeping Tips

- **Please mute your phone during the presentation.**
- **If there is too much noise, participants will be put on auto-mute.**
- **We shall open up the table for Q&A at the end of the session.**
- **Please feel free to post your questions over Chat as well.**
- **This session will be recorded and an email will be sent with links to the recordings after the session.**
- **At the end of the course, TEX will request you to provide feedback on the training.**

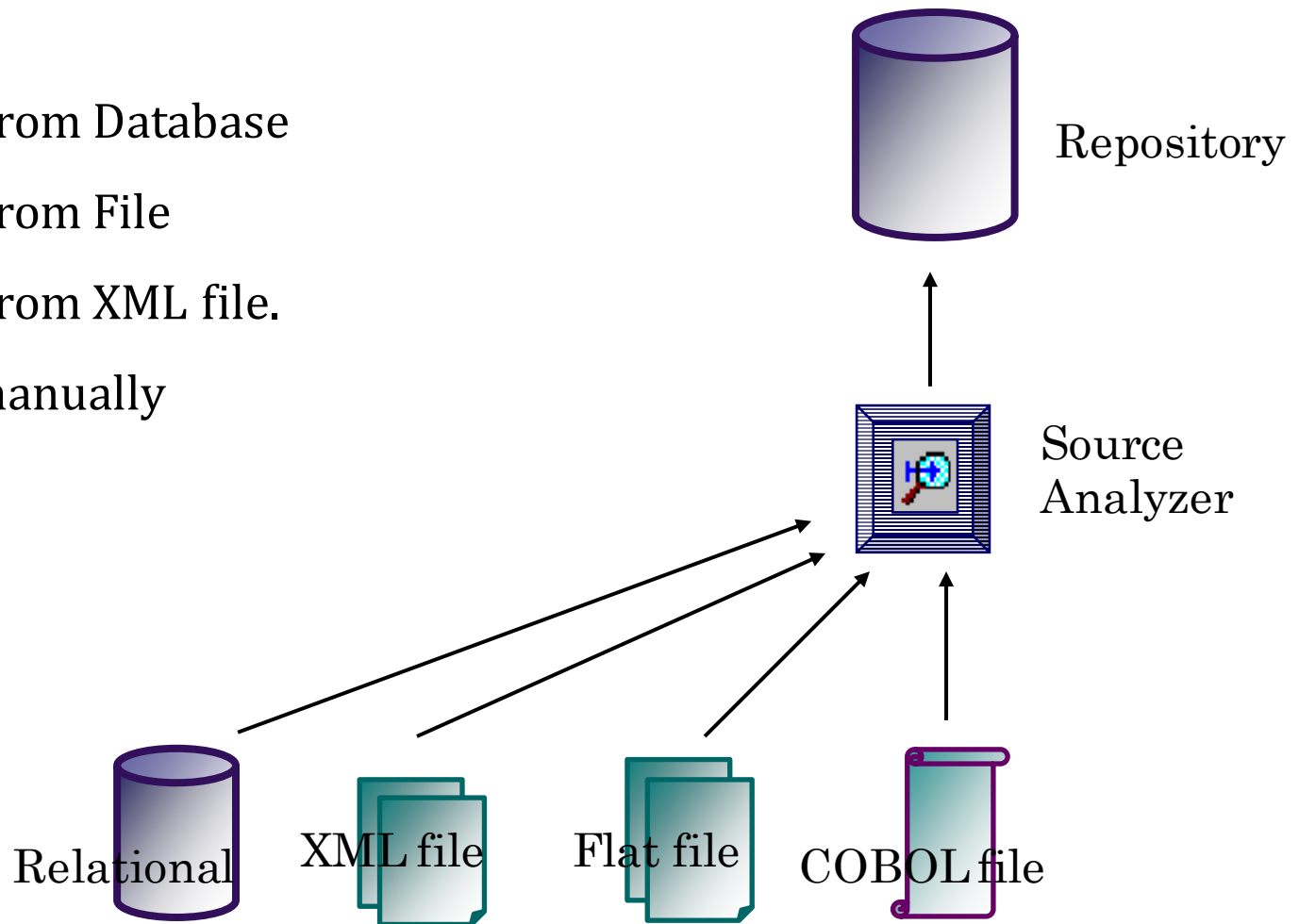
Design Process

Design Process

- Create Source definition(s)
- Create Target definition(s)
- Create a Mapping
- Create a Session Task
- Create a Workflow from Task components
- Run the Workflow and verify the results

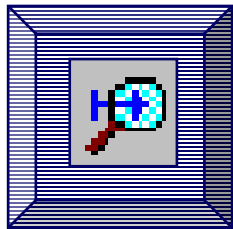
Methods of Analyzing Sources

- Import from Database
- Import from File
- Import from XML file.
- Create manually



Analyzing Relational Sources

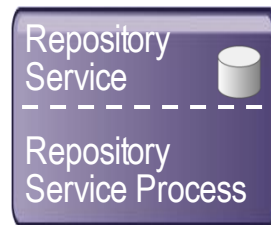
Source Analyzer



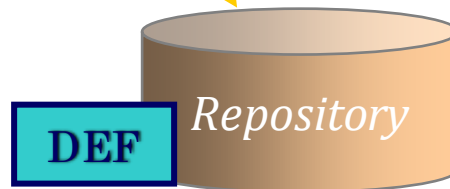
ODBC



TCP/IP



Native



Relational Source



Table
View
Synonym

Analyzing Relational Sources

Editing Source Definition Properties

Edit Tables

Table Columns Metadata Extensions

Select table: APPS.EMPLOYEES Rename

Business name:

Owner name: SDBU

Description: This source comes from the CRM system and includes Representatives from the Sales Department. The employee numbers will be associated with their

Database type: Oracle

OK Cancel

Edit Tables

Table Columns Metadata Extensions

Select table: APPS.EMPLOYEES

	Column Name	Datatype	Prec	Scale	Not Null	Key Type
1	EMPLOYEE_ID	number(p,s)	28	0	<input checked="" type="checkbox"/>	PRIMARY KEY
2	JOB_ID	number(p,s)	28	0	<input checked="" type="checkbox"/>	NOT A KEY
3	FIRST_NAME	varchar2	30	0	<input checked="" type="checkbox"/>	NOT A KEY
4	LAST_NAME	varchar2	30	0	<input checked="" type="checkbox"/>	NOT A KEY
5	ADDRESS1	varchar2	72	0	<input checked="" type="checkbox"/>	NOT A KEY
6	ADDRESS2	varchar2	72	0	<input type="checkbox"/>	NOT A KEY
7	CITY	varchar2	32	0	<input checked="" type="checkbox"/>	NOT A KEY
8	STATE	varchar2	2	0	<input checked="" type="checkbox"/>	NOT A KEY

Primary table:

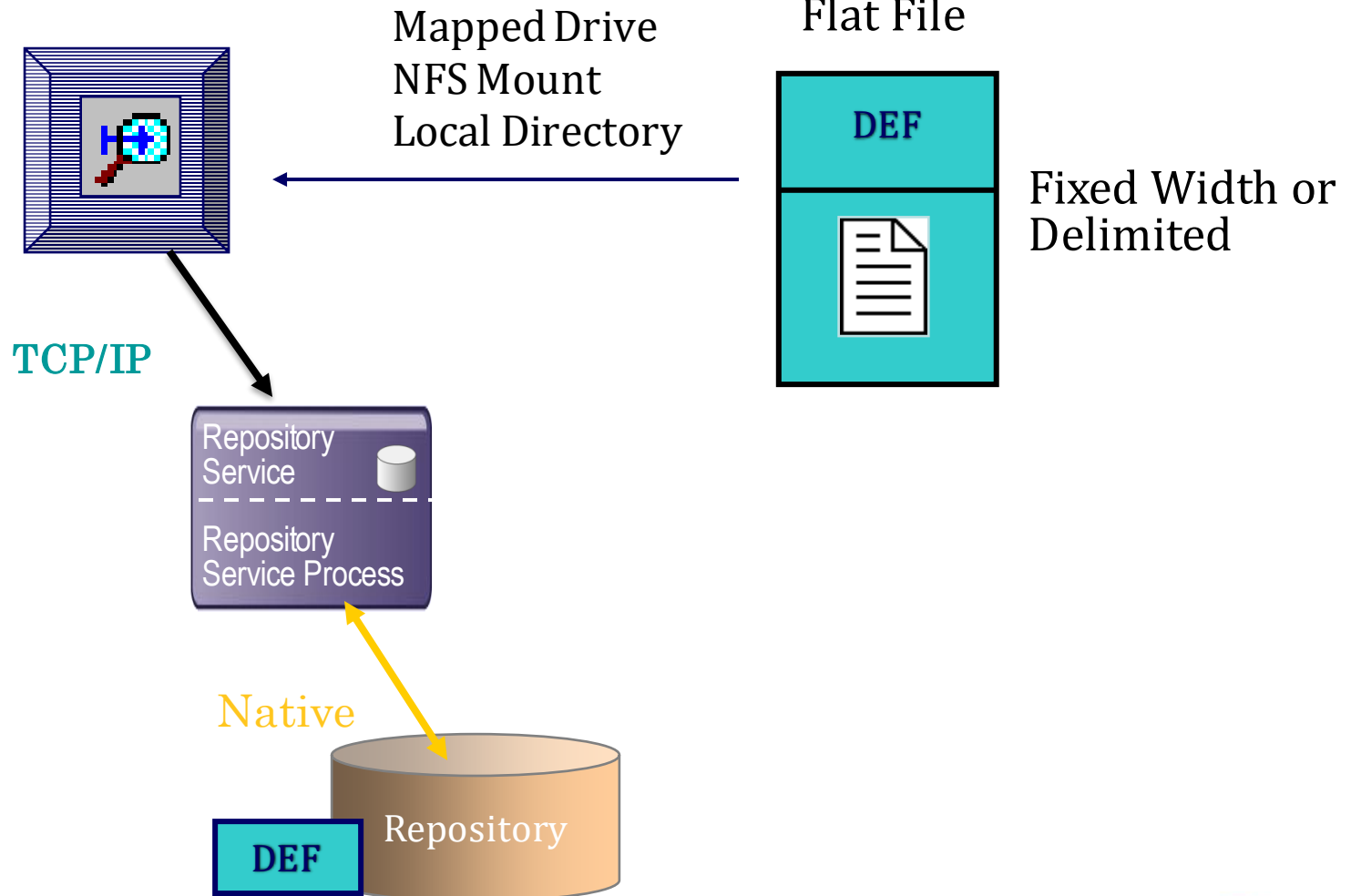
Primary column:

Description:

OK Cancel Apply Help

Analyzing Flat File Sources

Source Analyzer



Flat File Wizard

- Three-step wizard
- Columns can be renamed within wizard
- Text, Numeric and Datetime datatypes are supported
- Wizard 'guesses' datatype

The Flat File Import Wizard - Step 1 of 3

The Flat File Import Wizard will guide you through importing your flat file sources.

Flat File Type

Choose the file type that best describes your data:

☒ Delimited ☐ Fixed Width

Enter a name for this source:

Start Import at Row:

Preview of the file C:\NF

	Order_Date	Pr
1	19-Jan-2001	1
2	8-Jan-2001	11
3	16-May-1997	5
4	8-Aug-1999	67
5	8-May-1997	11
6		

The Flat File Import Wizard - Step 2 of 3

Next, indicate the delimiters used in the flat file.

☒ Tab ☐ Semicolon ☐ Comma ☐ Space

☐ Treat

Escape c

Use default text length: 256

Text Qualifier

☐ No quotes

The Flat File Import Wizard - Step 3 of 3

Next, select the name and datatype for each column.

Column Information

Name: Order_Date

Datatype:

☒ Text Length/Prec. 11

☐ Numeric Scale

☐ Datetime Width

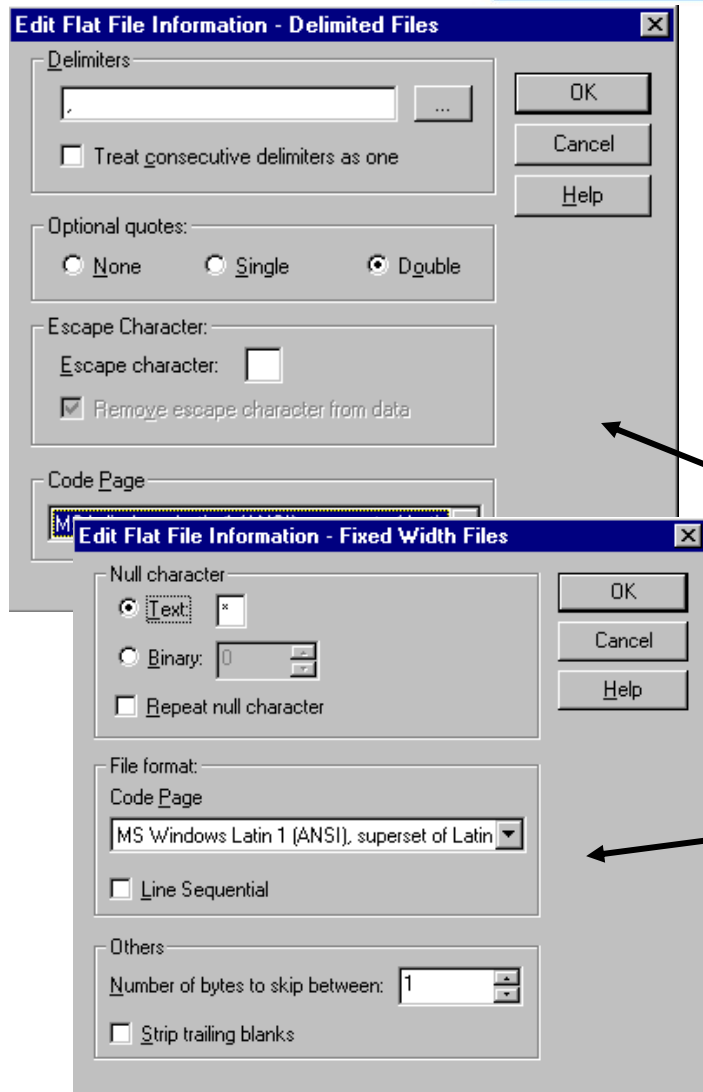
Source definition:

Name	Type	Len...	Scale	W
Order_Date	Text	11	-	-
Product	Numer...	3	0	3
Quantity	Numer...	1	0	1

	Order_Date	Pr
1	19-Jan-2001	1442
2	8-Jan-2001	1132
3	16-May-1997	53 4
4	8-Aug-1999	67 4
5	8-May-1997	1153
6	4-Jun-1999	70 4

< Back Finish Cancel Help

Flat File Source Properties



The image shows two overlapping dialog boxes. The top one is titled "Edit Flat File Information - Delimited Files" and the bottom one is titled "Edit Flat File Information - Fixed Width Files".

Edit Flat File Information - Delimited Files

Delimiters: [Text field with comma] ...

☐ Treat consecutive delimiters as one

Optional quotes: ☐ None ☐ Single ☒ Double

Escape Character: [Text field]

☒ Remove escape character from data

Code Page: [Text field]

Edit Flat File Information - Fixed Width Files

Null character: ☒ Text [Text field] ☐ Binary [Text field]

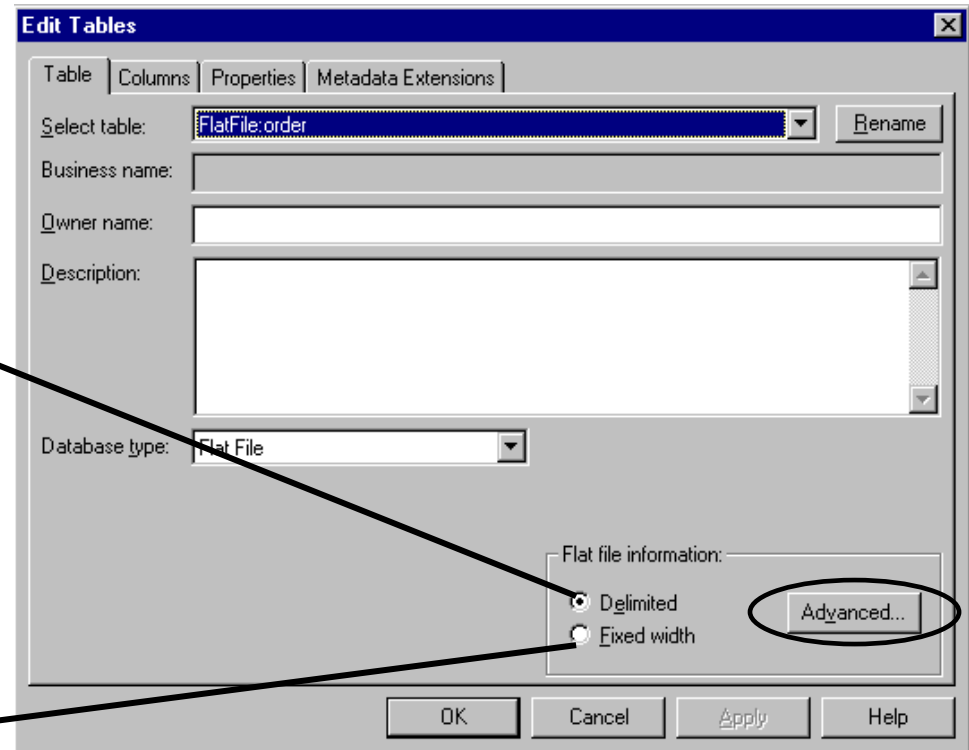
☐ Repeat null character

File format: Code Page [Text field]

☐ Line Sequential

Others: Number of bytes to skip between: [Text field]

☐ Strip trailing blanks



The "Edit Tables" dialog box has tabs for Table, Columns, Properties, and Metadata Extensions. The "Table" tab is selected, showing a table named "FlatFile:order".

Table: [Text field]

Columns: [Text field]

Properties: [Text field]

Metadata Extensions: [Text field]

Select table: [Text field]

Business name: [Text field]

Owner name: [Text field]

Description: [Text field]

Database type: [Text field]

Flat file information: ☒ Delimited ☐ Fixed width

Advanced...

OK Cancel Apply Help

Data Previewer

☐ Preview data in

- Relational Sources
- Flat File Sources
- Relational Targets
- Flat File Targets

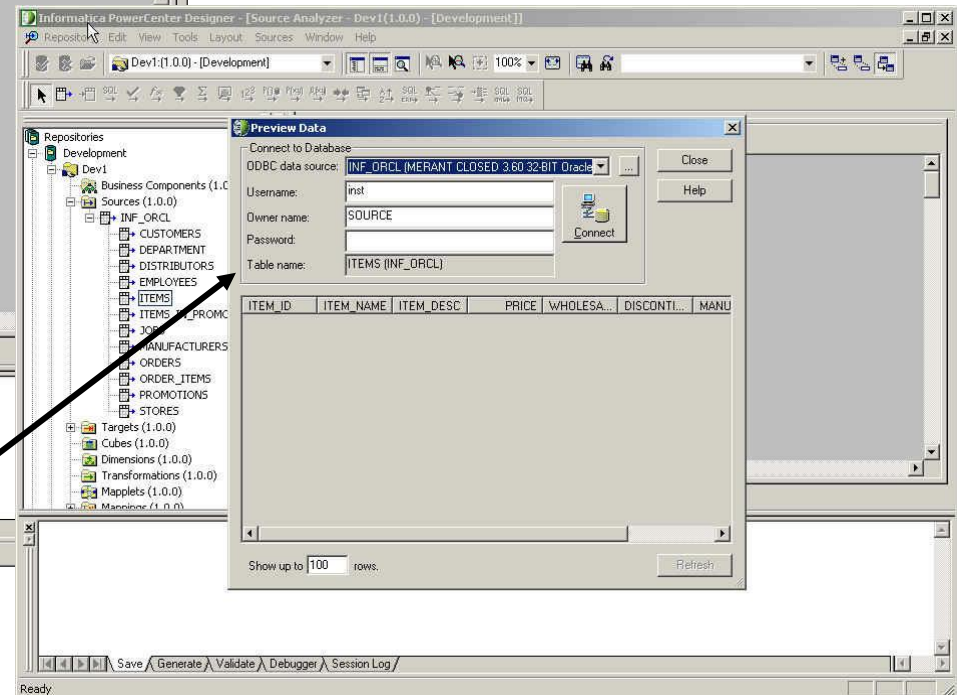
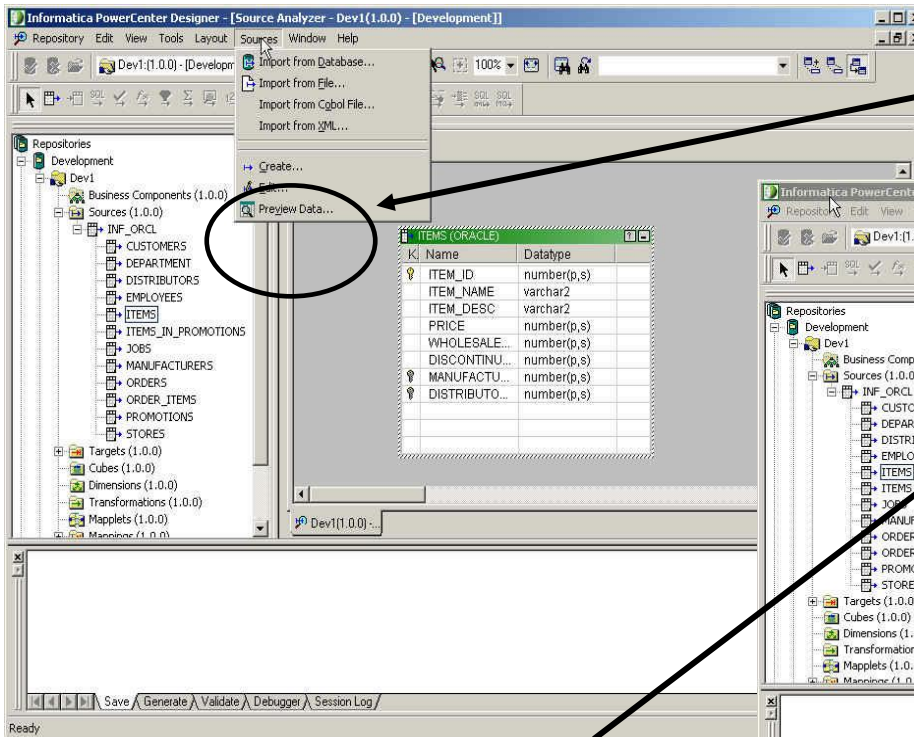
☐ Data Preview Option is available in

- Source Analyzer
- Target Designer
- Mapping Designer
- Mapplet Designer

Data Previewer - Source Analyzer

Data Preview Example

From Source Analyzer,
select Source drop down
menu, then “Preview Data”



Enter connection information
in the dialog box

A right mouse click on the object can also be used to preview data

Data Preview Results

Informatica PowerCenter Designer - [Source Analyzer - Dev1(1.0.0) - [Development]]

Repository Edit View Tools Layout Sources Window Help

Dev1(1.0.0) - [Development]

100%

SQL: SQL (TOG)

SQL: SQL (TOG)

Repositories

- Development
 - Dev1
 - Business Components (1.0.0)
 - Sources (1.0.0)
 - INF_ORCL
 - CUSTOMERS
 - DEPARTMENT
 - DISTRIBUTORS
 - EMPLOYEES
 - ITEMS
 - ITEMS_IN_PROMC
 - JOBS
 - MANUFACTURERS
 - ORDERS
 - ORDER_ITEMS
 - PROMOTIONS
 - STORES

Targets (1.0.0)

Cubes (1.0.0)

Dimensions (1.0.0)

Transformations (1.0.0)

Mapplets (1.0.0)

Mappings (1.0.0)

Preview Data

Connect to Database

ODBC data source: INF_ORCL (MERANT CLOSED 3.60 32-BIT Oracle)

Username: source

Owner name: SOURCE

Password: SOURCE

Table name: ITEMS (INF_ORCL)

Re-connect

Close

Help

ITEM_ID	ITEM_NAME	ITEM_DESC	PRICE	WHOLESA	DISC
1313	Regulator ...	Air Regulat...	250.00	150.00	
1314	Second St...	Air Regulat...	365.00	265.00	
1330	Alternate In...	Air Regulat...	260.00	160.00	
1390	First Stage ...	Air Regulat...	170.00	70.00	
1986	Depth/Pre...	Small Instru...	188.00	88.00	
2314	Electronic ...	Small Instru...	390.00	290.00	
2341	Depth/Pre...	Small Instru...	105.00	5.00	
2343	Personal Di...	Small Instru...	235.00	135.00	
2350	Compass C...	Small Instru...	29.00	17.00	
2367	Compass (...	Small Instru...	52.00	48.00	
2612	Direct Sigh...	Small Instru...	34.95	15.05	
2613	Dive Comp...	Small Instru...	179.00	79.00	
2619	Navigation ...	Small Instru...	19.95	8.05	
2630	Wrist Band...	Small Instru...	18.00	8.00	
3316	Stabilizing ...	Buoyancy ...	430.00	330.00	

Show up to 100 rows.

Refresh

Save / Generate / Validate / Debugger / Session Log

Ready

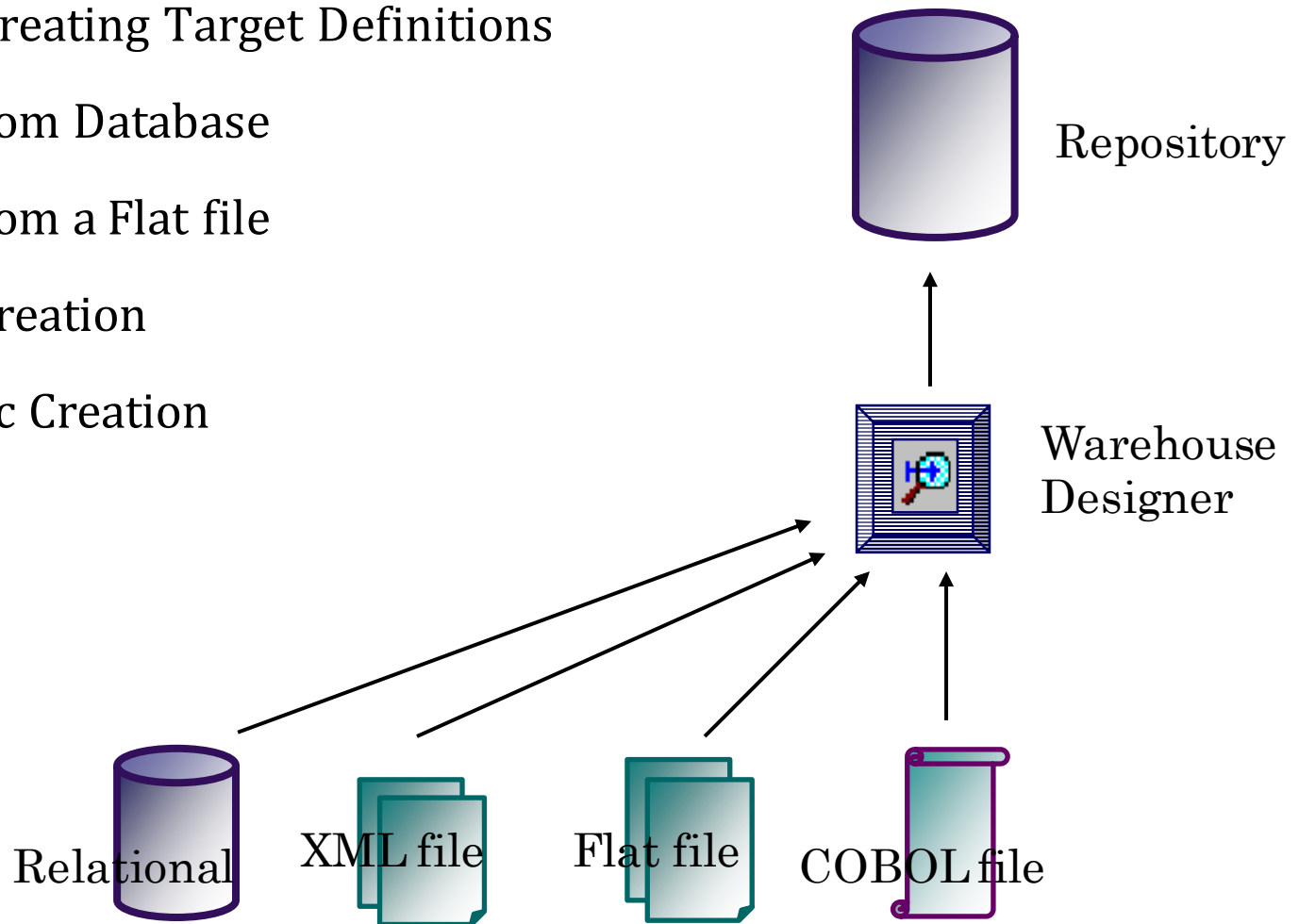
Data
Display

View up to
500 rows

Creating Target Definition

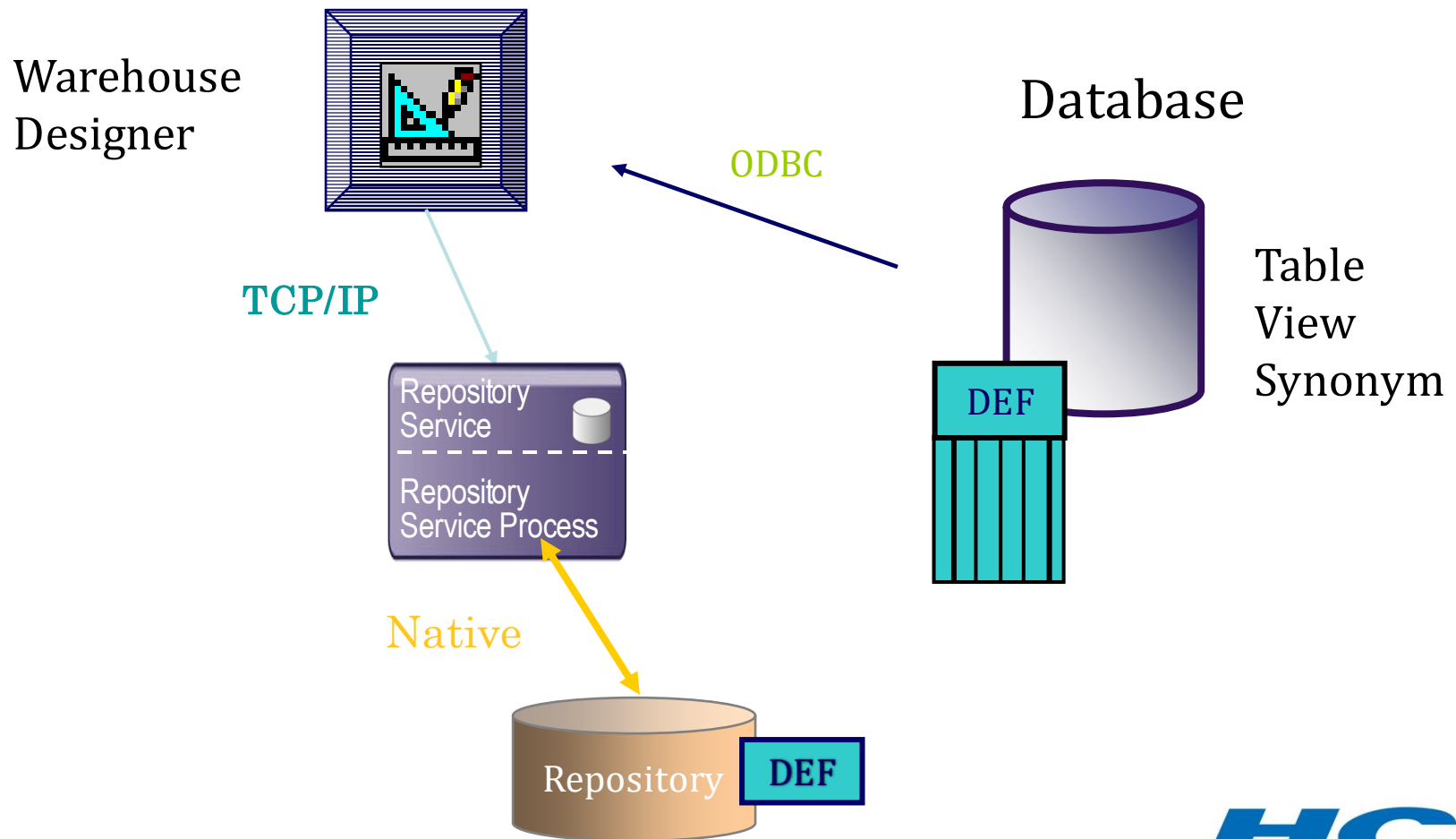
Methods of creating Target Definitions

- Import from Database
- Import from a Flat file
- Manual Creation
- Automatic Creation



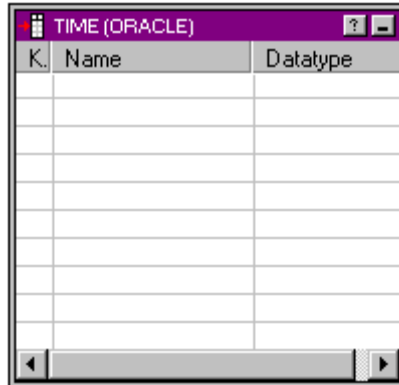
Import Definition from Database

Can “*Reverse engineer*” existing object definitions from a database system catalog or data dictionary



Manual Target Creation

1. Create empty definition



K.	Name	Datatype

2. Add desired columns

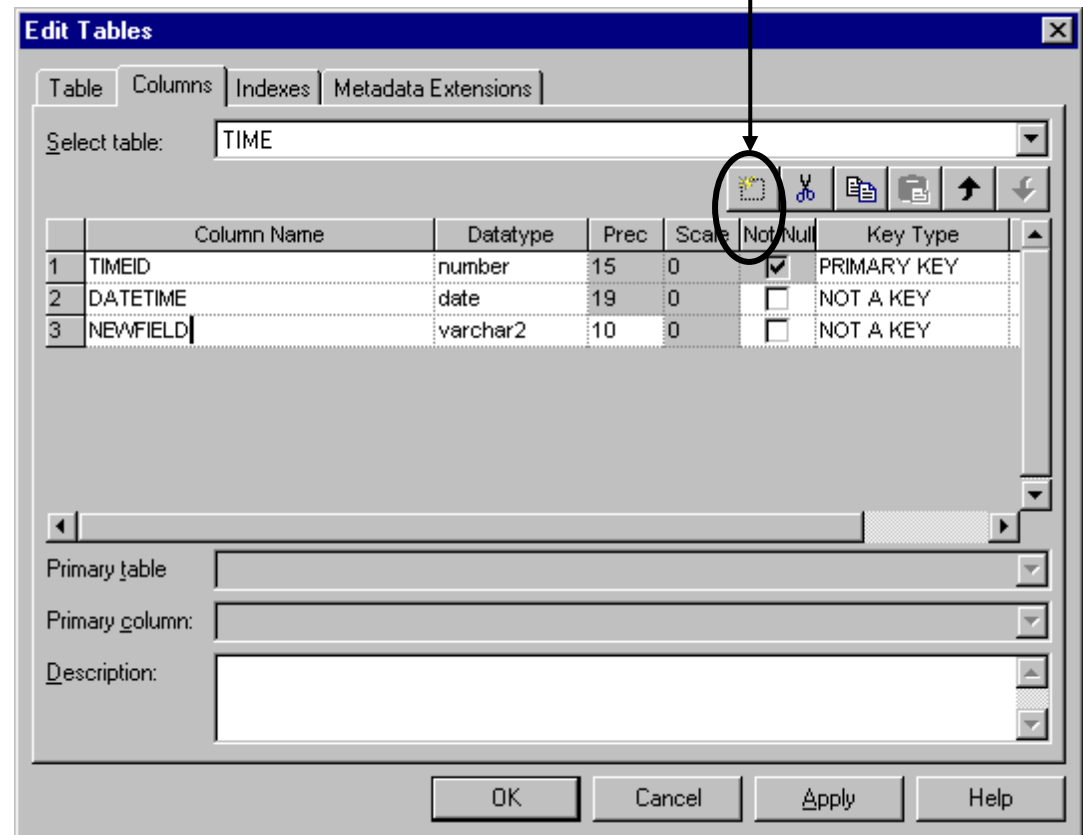


Table Columns Indexes Metadata Extensions

Select table: TIME

	Column Name	Datatype	Prec	Scale	Not Null	Key Type
1	TIMEID	number	15	0	<input checked="" type="checkbox"/>	PRIMARY KEY
2	DATETIME	date	19	0	<input type="checkbox"/>	NOT A KEY
3	NEWFIELD	varchar2	10	0	<input type="checkbox"/>	NOT A KEY

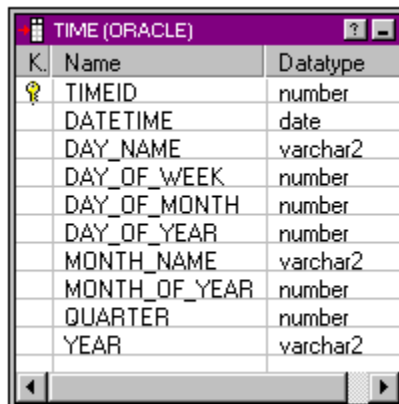
Primary table:

Primary column:

Description:

OK Cancel Apply Help

3. Finished target definition



K.	Name	Datatype
	TIMEID	number
	DATETIME	date
	DAY_NAME	varchar2
	DAY_OF_WEEK	number
	DAY_OF_MONTH	number
	DAY_OF_YEAR	number
	MONTH_NAME	varchar2
	MONTH_OF_YEAR	number
	QUARTER	number
	YEAR	varchar2

ALT-F can also be used to create a new column

Target Definition Properties

Edit Tables

Table Columns Indexes Metadata Extensions

Select table: ODS_EMPLOYEE Rename

Business name:

Constraints:

Creation options:

Description:

Database type: Oracle

OK Cancel

Edit Tables

Table Columns Indexes Metadata Extensions

Select table: ODS_EMPLOYEE

	Column Name	Datatype	Prec	Scale	Not Null	Key Type
1	EMPLOYEE_ID	number(p,s)	10	0	<input checked="" type="checkbox"/>	PRIMARY KEY
2	DATE_HIRED	date	19	0	<input type="checkbox"/>	NOT A KEY
3	NAME	varchar2	50	0	<input type="checkbox"/>	NOT A KEY
4	TYPE_CODE	varchar2	10	0	<input type="checkbox"/>	NOT A KEY

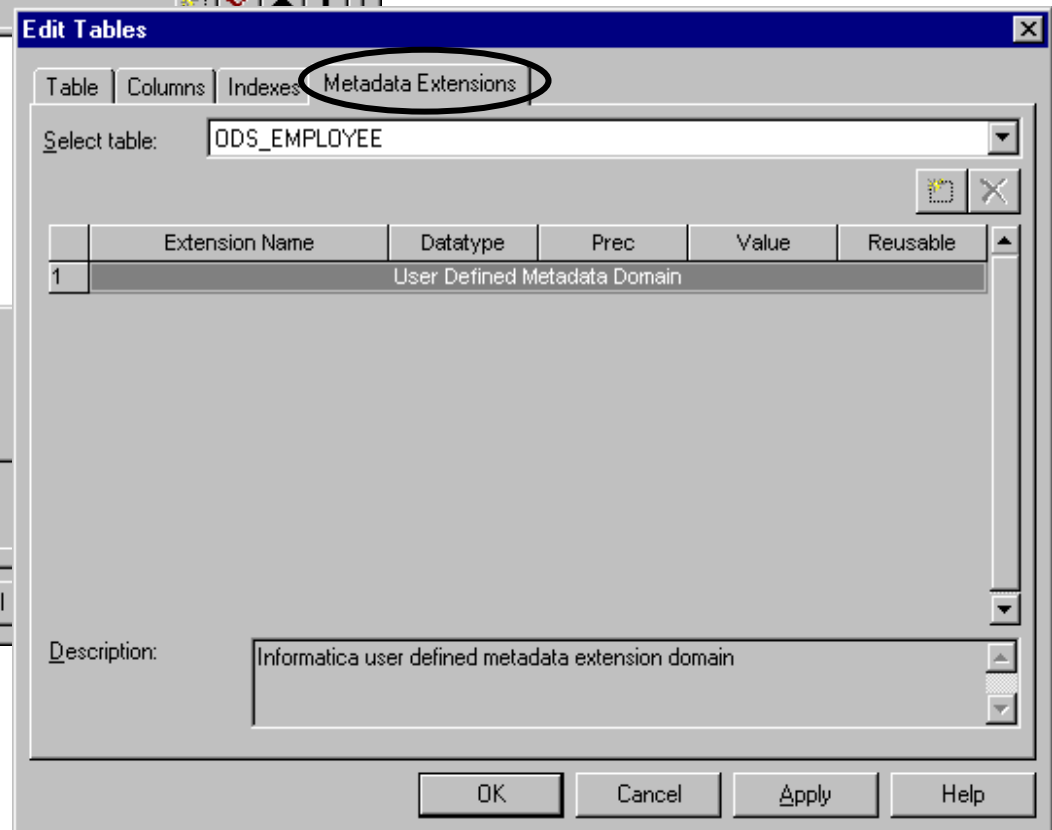
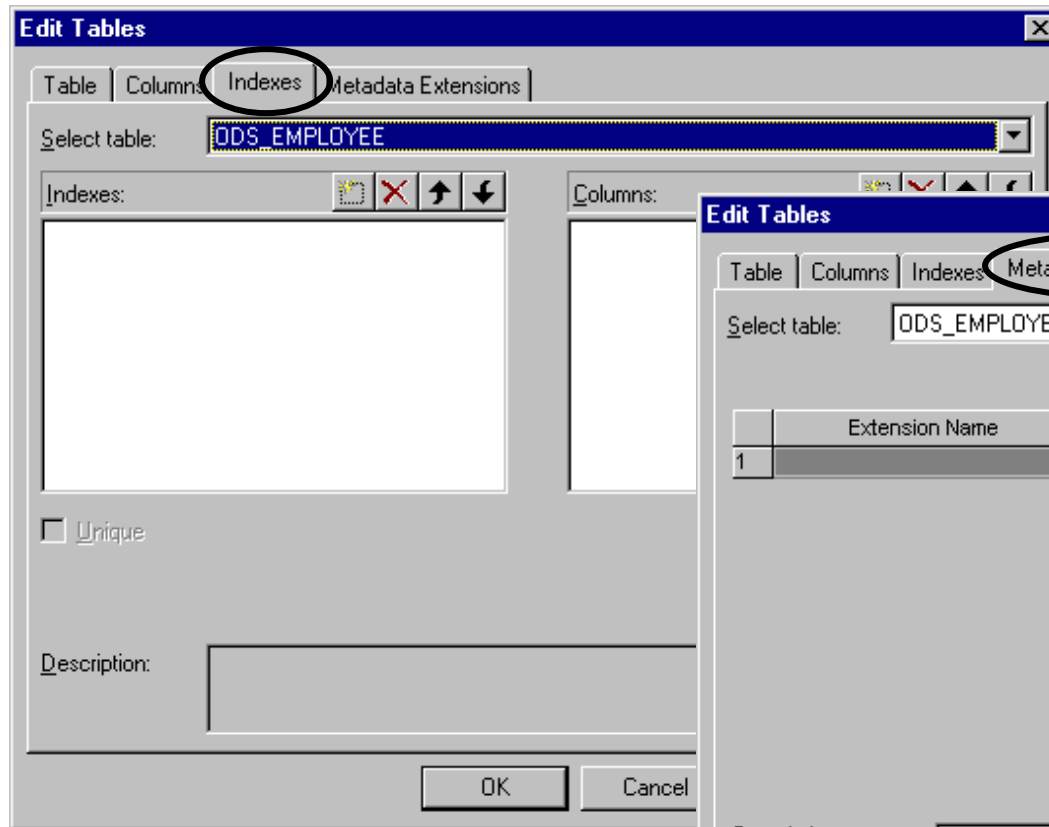
Primary table:

Primary column:

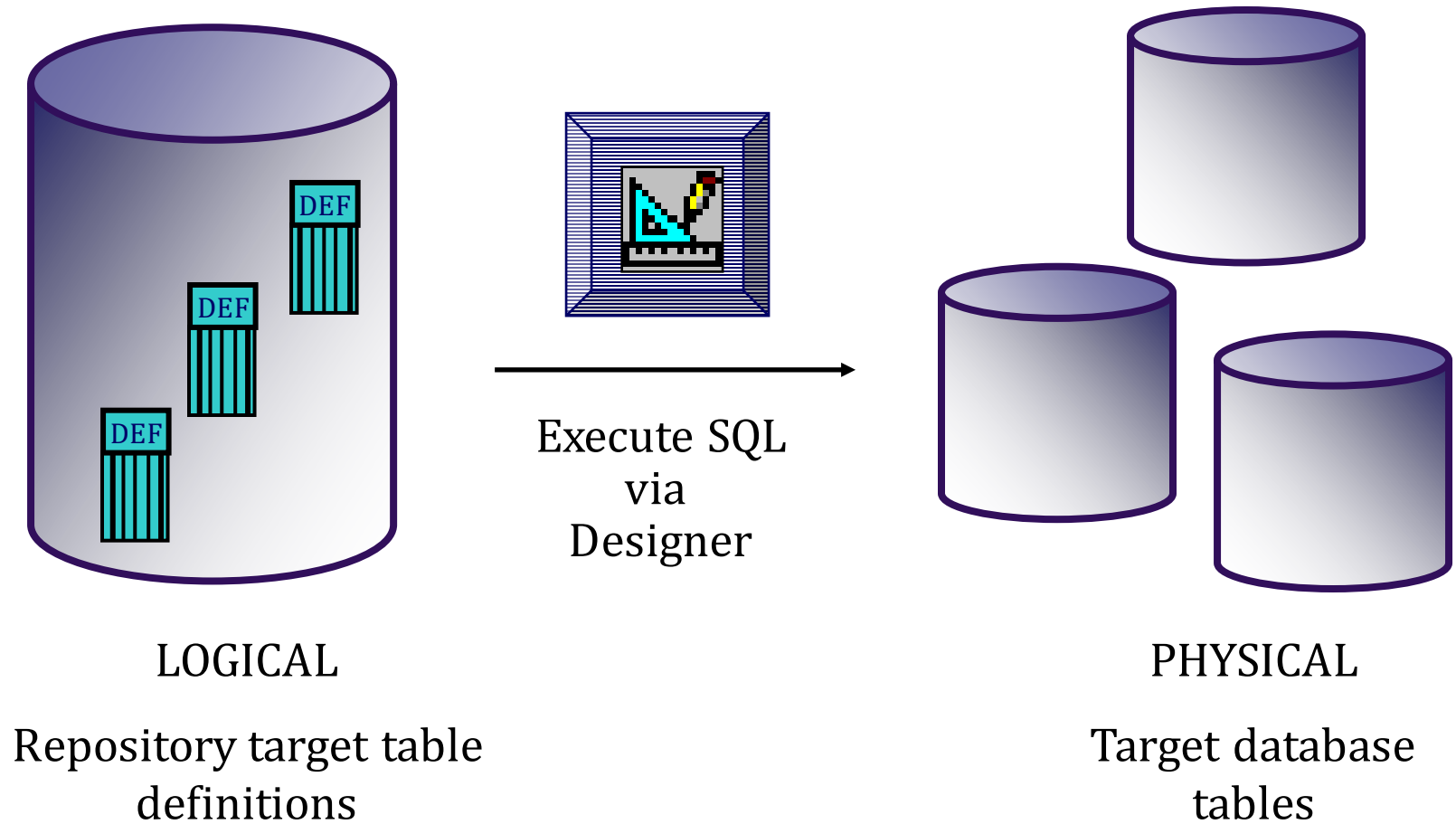
Description:

OK Cancel Apply Help

Target Definition Properties



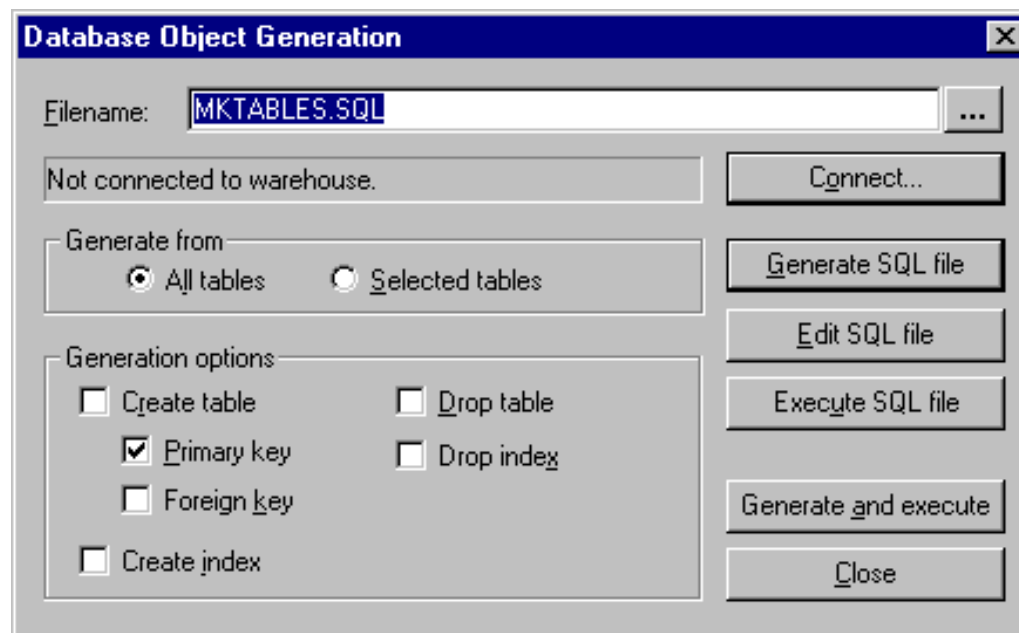
Creating Physical Tables



Creating Physical Tables

Create tables that *do not* already exist in target database

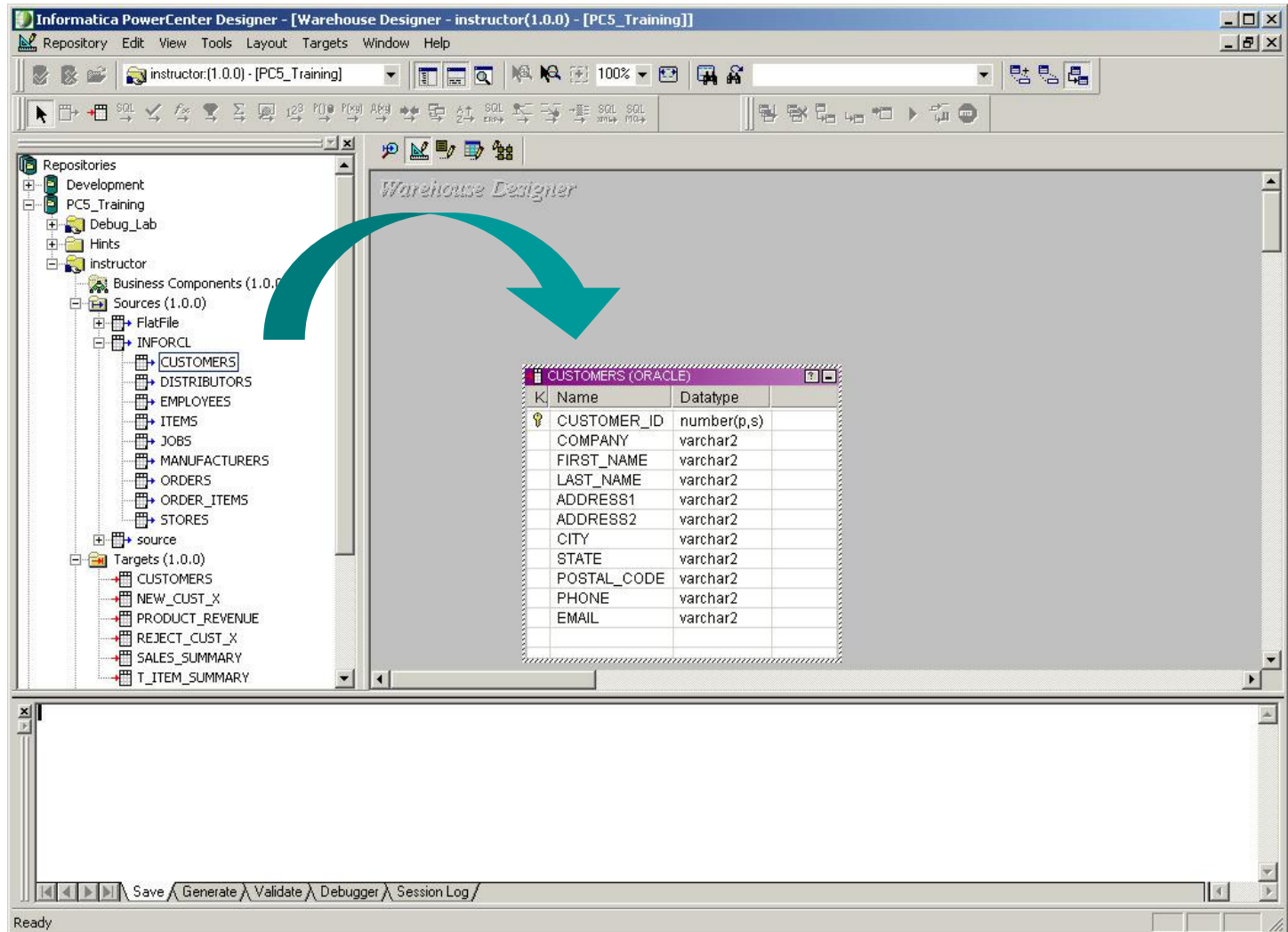
- **Connect** - connect to the target database
- **Generate SQL file** - create DDL in a script file
- **Edit SQL file** - modify DDL script as needed
- **Execute SQL file** - create physical tables in target database



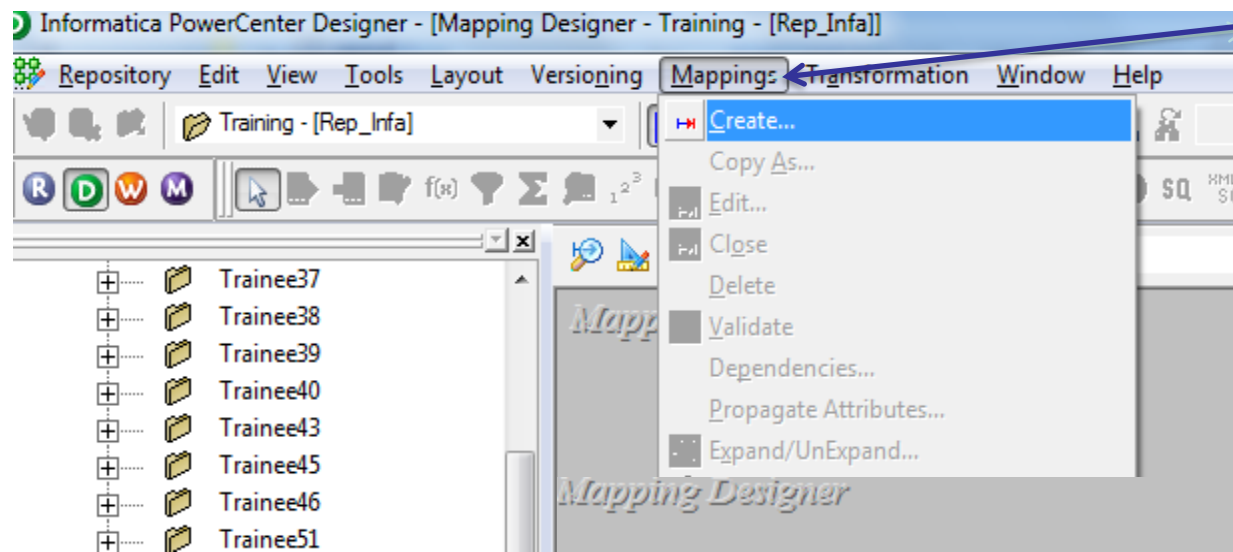
Use Preview Data to verify the results (right mouse click on object)

Automatic Target Creation

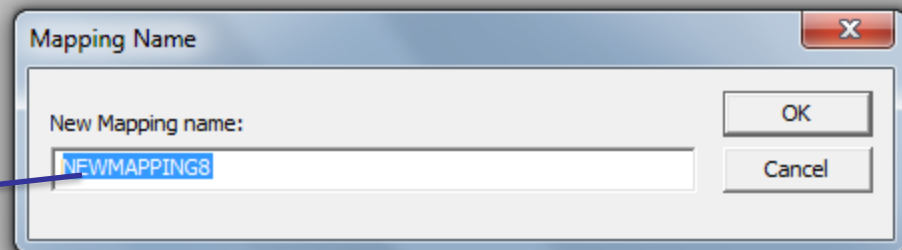
Drag-and-drop a Source Definition into the Warehouse Designer Workspace



Mapping Creation

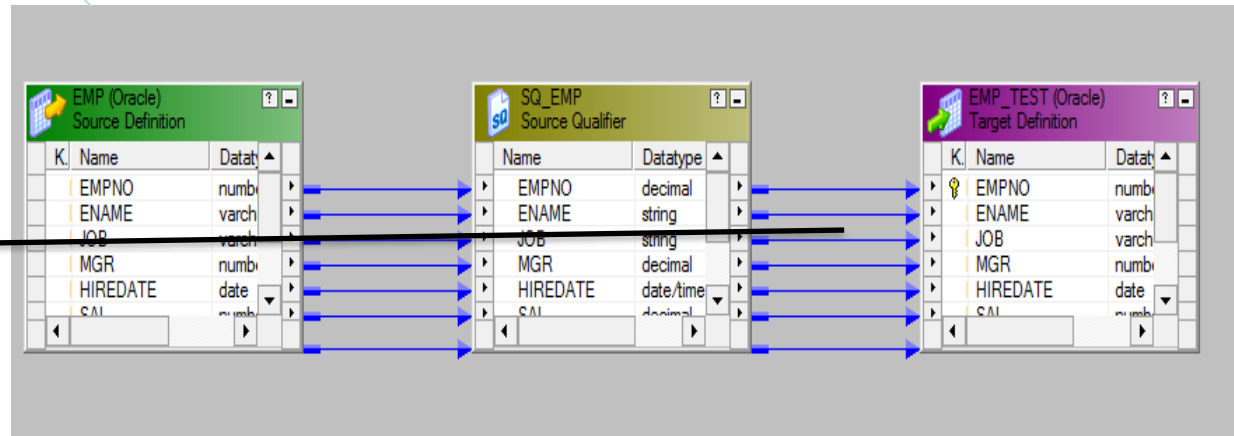
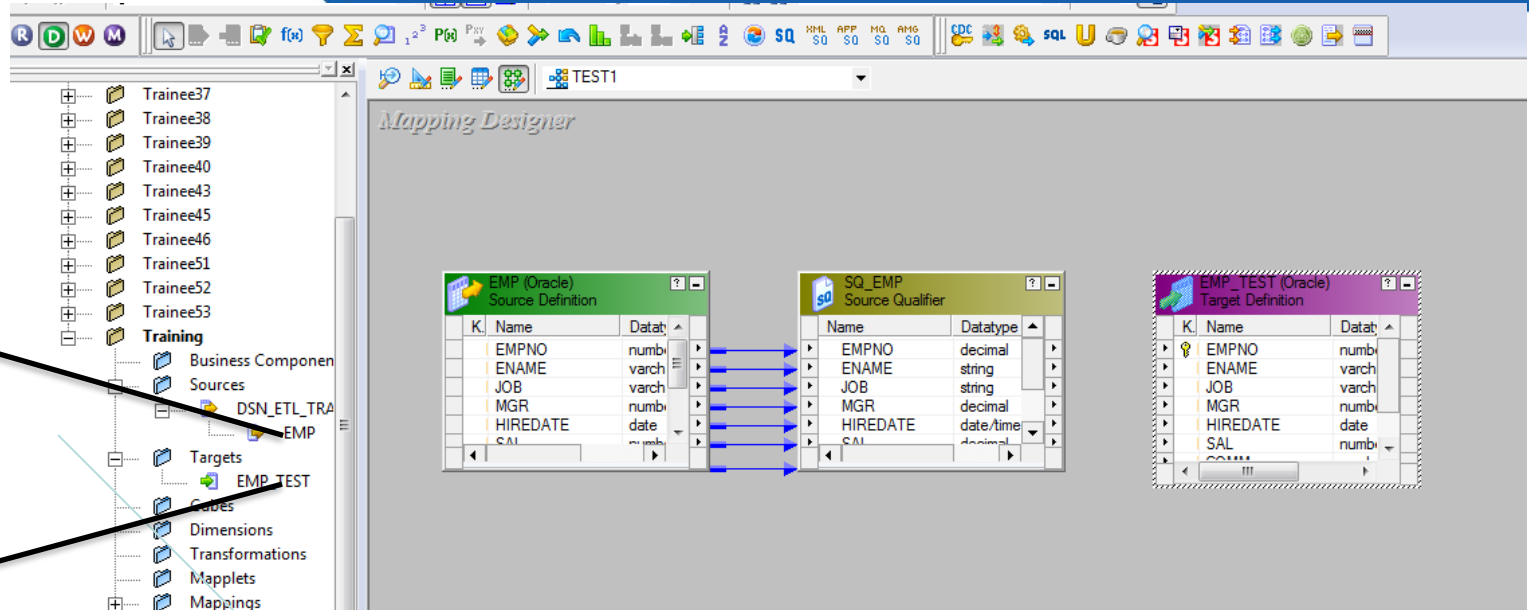


Mapping Create

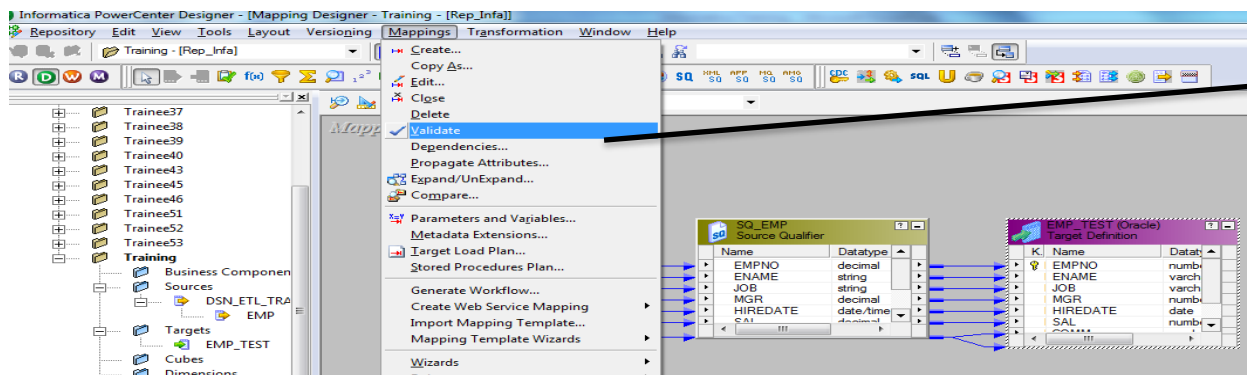


Mapping Name

Mapping Creation



Mapping Validation



Validate the Mapping
in Mapping Designer

- The Designer marks a mapping valid for the following reasons:
 - ✓ Connection validation - Required ports are connected and that all connections are valid
 - ✓ Expression validation - All expressions are valid
 - ✓ Object validation - The independent object definition matches the instance in the mapping
- The Designer performs connection validation each time you connect ports in a mapping and each time you validate or save a mapping
- You can validate an expression in a transformation while you are developing a mapping

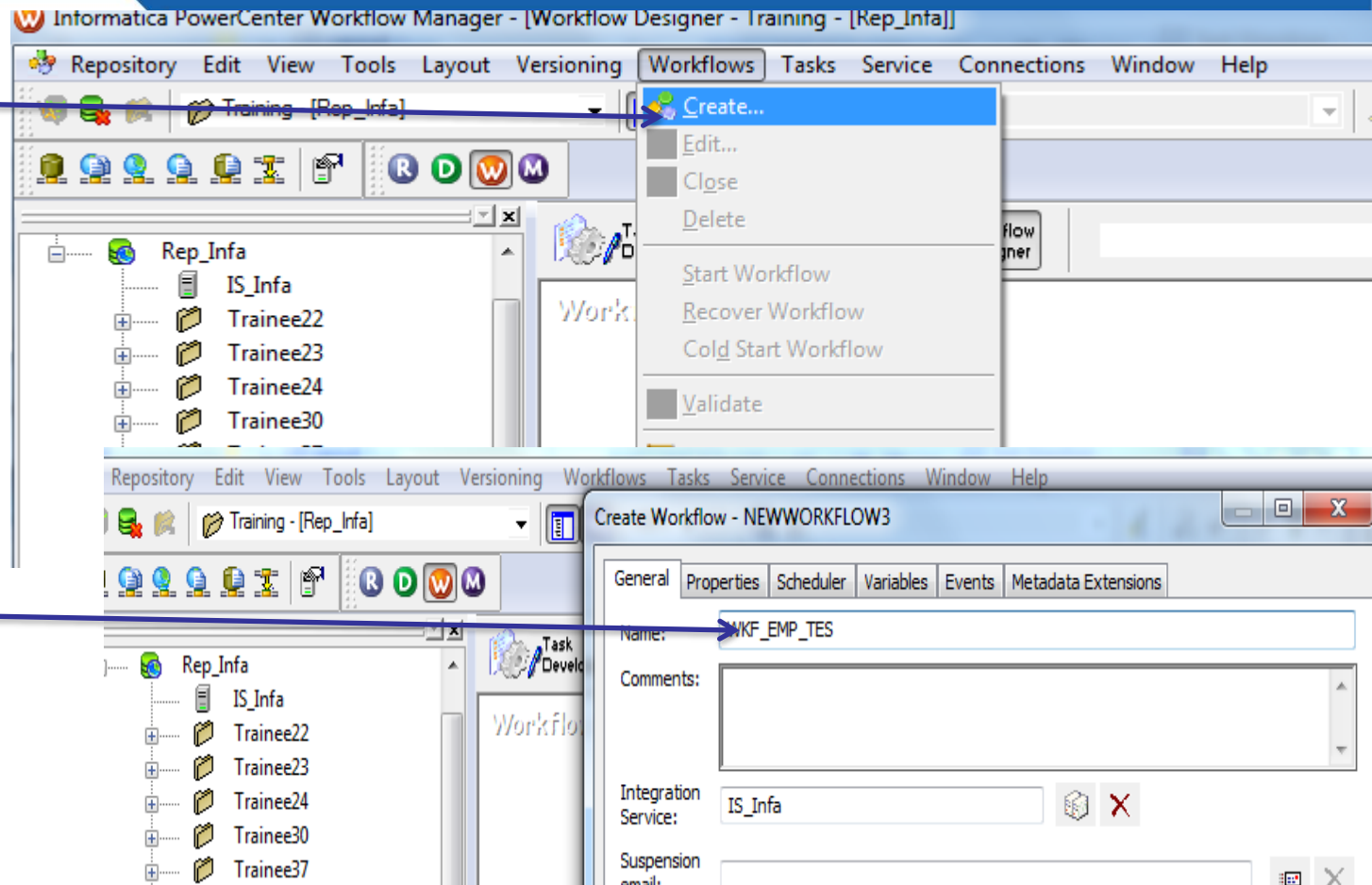
Mapping Invalidation

❑ On editing a mapping, the Designer invalidates sessions under the following circumstances:

- Add or remove sources or targets
- Remove Mapplets or transformations
- Replace a source, target, Mapplet, or transformation while importing or copying objects
- Add or remove Source Qualifiers or COBOL Normalizers, or change the list of associated sources for these transformations
- Add or remove a Joiner or Update Strategy transformation.
- Add or remove transformations from a Mapplet in the mapping
- Change the database type for a source

Workflow Creation

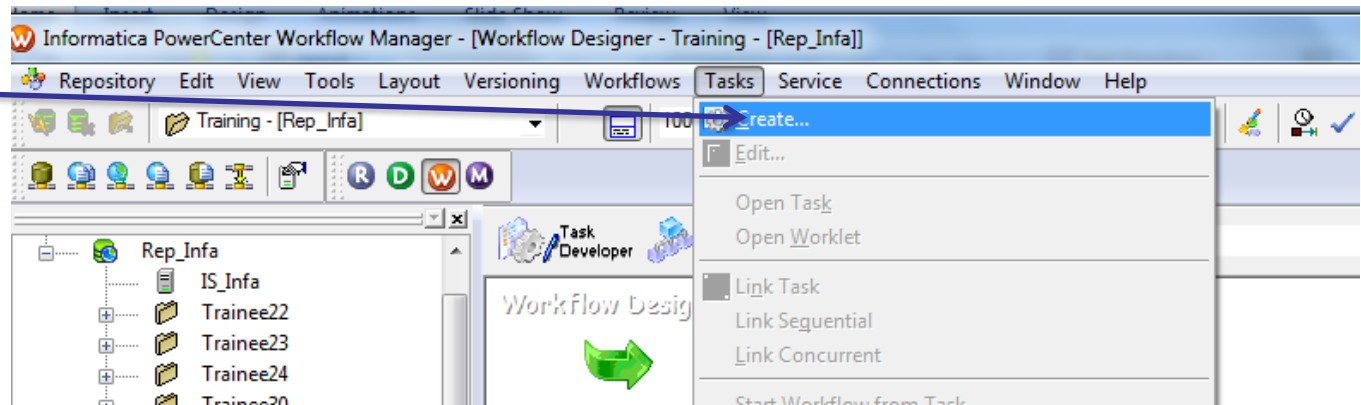
Click on
Workflow
Create



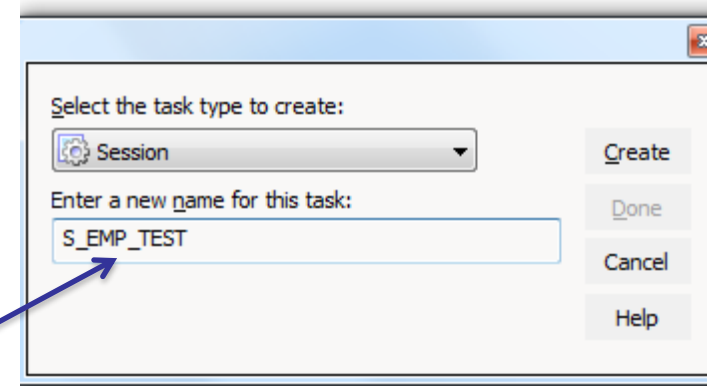
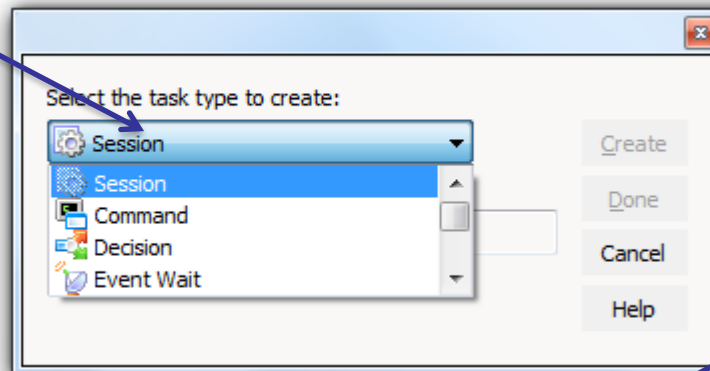
Mention Workflow
Name

Create Session Task for Mapping

Click on Create under Tasks.



Select Session in Pop Up window



Give Session Name

Demo and Q&A

Overview of

- Building a sample ETL process
- Source and Target
- Create Mapping, Workflow
- Run Workflow

Thank You