

# SAP BW

Lesson 05: Acquisition Part 4 Non SAP Flat File

# Data Acquisition from Non-SAP Source Systems :

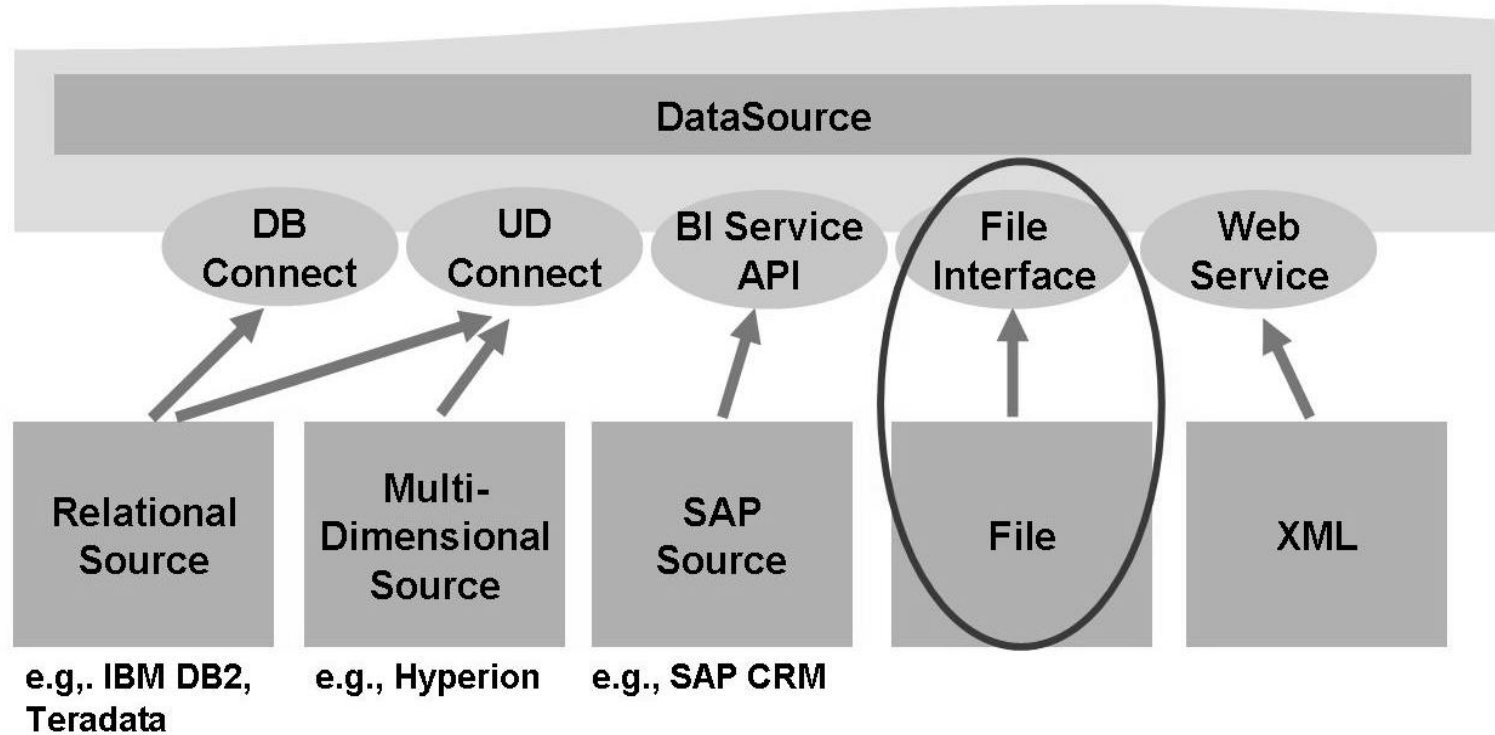


## FLAT FILES





# DataSources Based on Flat Files





# DataSources Based on Flat Files

➤ Object that contains all the settings necessary to load and parse a **file** when it is initiated by the InfoPackage:

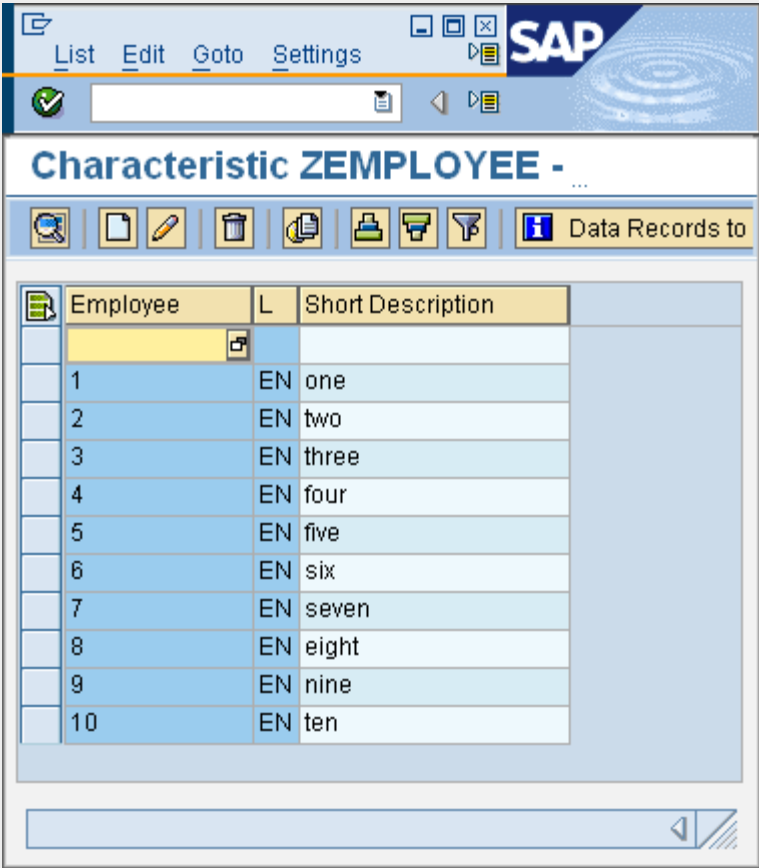
➤ **Highlights :**

- Only a few datasources should require flat files
- Automatic field proposals at design time
- Automated conversion of external data types and formats provided
- Preview option allows a double check of file parsing
- Fields can be selected as Not transferred.



# Scenario: We need to load all Employees and their Names

➤ Aim: we need to load Employee names as shown below

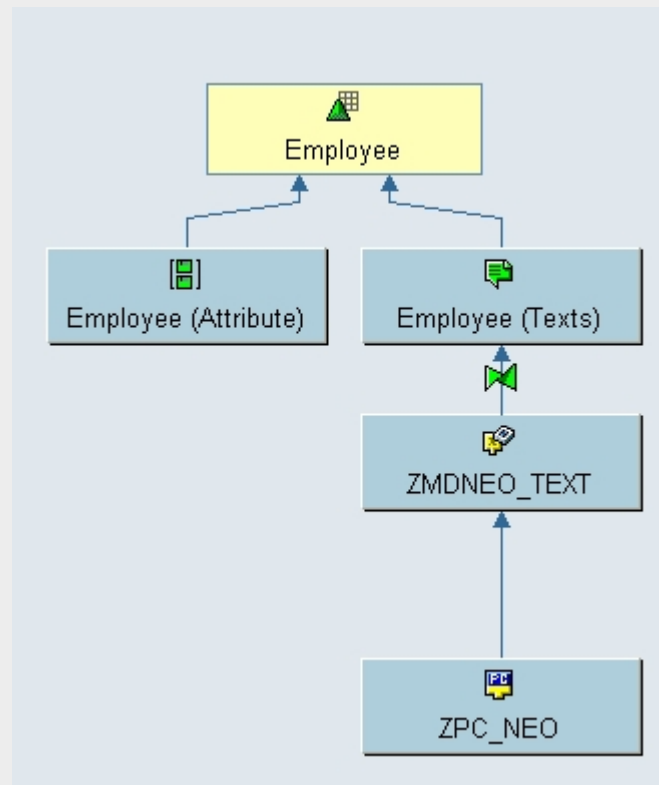


The screenshot shows the SAP interface for the ZEMPLOYEE table. The title bar includes 'List Edit Goto Settings' and the SAP logo. Below the title bar is a search bar with a green checkmark icon. The main title is 'Characteristic ZEMPLOYEE - ...'. Below the title is a toolbar with icons for search, list, edit, delete, copy, print, and filter. To the right of the toolbar is a button labeled 'Data Records to'. The table has three columns: 'Employee', 'L', and 'Short Description'. The first row is highlighted in yellow. The subsequent rows are numbered 1 through 10, with 'L' values of 'EN' and 'Short Description' values of 'one' through 'ten'.

Employee	L	Short Description
1	EN	one
2	EN	two
3	EN	three
4	EN	four
5	EN	five
6	EN	six
7	EN	seven
8	EN	eight
9	EN	nine
10	EN	ten



# Data Flow





# The building blocks: Identify

1. InfoObjects – ZEMPLOYEE and ZEMPNAME

2. Flat File Source System

3. .CSV Flat File



4. DataSource



5. InfoPackage



6. Transformation



7. DTP



InfoObjects

	A1	
	A	B
1	Employee Number	Employee Name
2	1	one
3	2	two
4	3	three
5	4	four
6	5	five
7	6	six
8	7	seven
9	8	eight
10	9	nine
11	10	ten
12		
13		
14		
15		
16		
17		

# Creating a Flat File Source System



**Data Warehousing Workbench: Modeling**

Modeling

- Favorites
- Find
- History
- Data Flows
- InfoProvider
- InfoObjects
- InfoSources
- DataSources
- **Source Systems**
- Open Hub Destination
- Planning Sequences
- Process Chains

Source Systems

File

- Create...
- Transfer Exchange Rates

	Tech. Name	Execute Function	O..	Object In
FILE	FILE	Create...		
ADEPLOYID	ADEPLOYID	Display DataSource Tree		
ANI_DATA	ANI_DATA	Display DataSource Tree		
FILEAT	FILEAT	Display DataSource Tree		
FF_EQMYO	FF_EQMYO	Display DataSource Tree		
AGE_FILE	AGE_FILE	Display DataSource Tree		
AF FILE	AF FILE	Display DataSource Tree		
FILE_MARC	FILE_MARC	Display DataSource Tree		
ZARUN	ZARUN	Display DataSource Tree		
ZAYUSVINO	ZAYUSVINO	Display DataSource Tree		
BGFFILE	BGFFILE	Display DataSource Tree		
BIM_GER_S	BIM_GER_S	Display DataSource Tree		
FILE_DEMO	FILE_DEMO	Display DataSource Tree		
ZBWFLAT12	ZBWFLAT12	Display DataSource Tree		
BW73_MAS	BW73_MAS	Display DataSource Tree		

Create Source System

Logical System Name

Source System Name ☒

Source System Type and Release

☒ ☐



# Create a DataSource



**Data Warehousing Workbench: Modeling**

Modeling

- Favorites
- Find
- History
- Data Flows
- InfoProvider
- InfoObjects
- InfoSources
- **DataSourcees**
- Source Systems
- Open Hub Destination
- Planning Sequences
- Process Chains

DataSourcees for ANI\_DATA ANI\_DATA

Unassigned

- Application
- EMP\_D
- ZARN\_
- tXT

Change  
Delete  
Create Application Component...  
**Create DataSource...**

Tech. Name	M..	Execute Func...	Display Tree	O..	Object Infor...
NOBESNOTCONNE...		Replicate Meta...	InfoSources		
RNG		Replicate Meta...	InfoSources		
TA01	=	Change			ANI_DATA
	=	Change			ANI_DATA
_TXT	=	Change			ANI_DATA

# File System DataSource: Extraction Tab



SAP Scheduler (Maintain InfoPackage)

InfoPackage: ZMDNEO\_TEXT(ZPAK\_9W0X3XW66JKDX14AGRURZ1L42)

DataSource: ZMDNEO\_TEXT(ZMDNEO\_TEXT)

Data Type: Texts

Source System: ZPC\_NEO(ZPC\_NEO)

Last Changed By: IDADMIN Date: 07.07.2011 Time: 10:13:23

Adapter: Load Text-Type File from Local Workstation

File Name: C:\Documents and Settings\smamidip\Desktop\Training

Header Rows to be Ignored: 1

Character Set Settings: Default Setting

System Codepage: 4103 UTF-16LE Unicode / ISO/IEC 10646

Data Format: Separated with Separator (for Example, CSV)

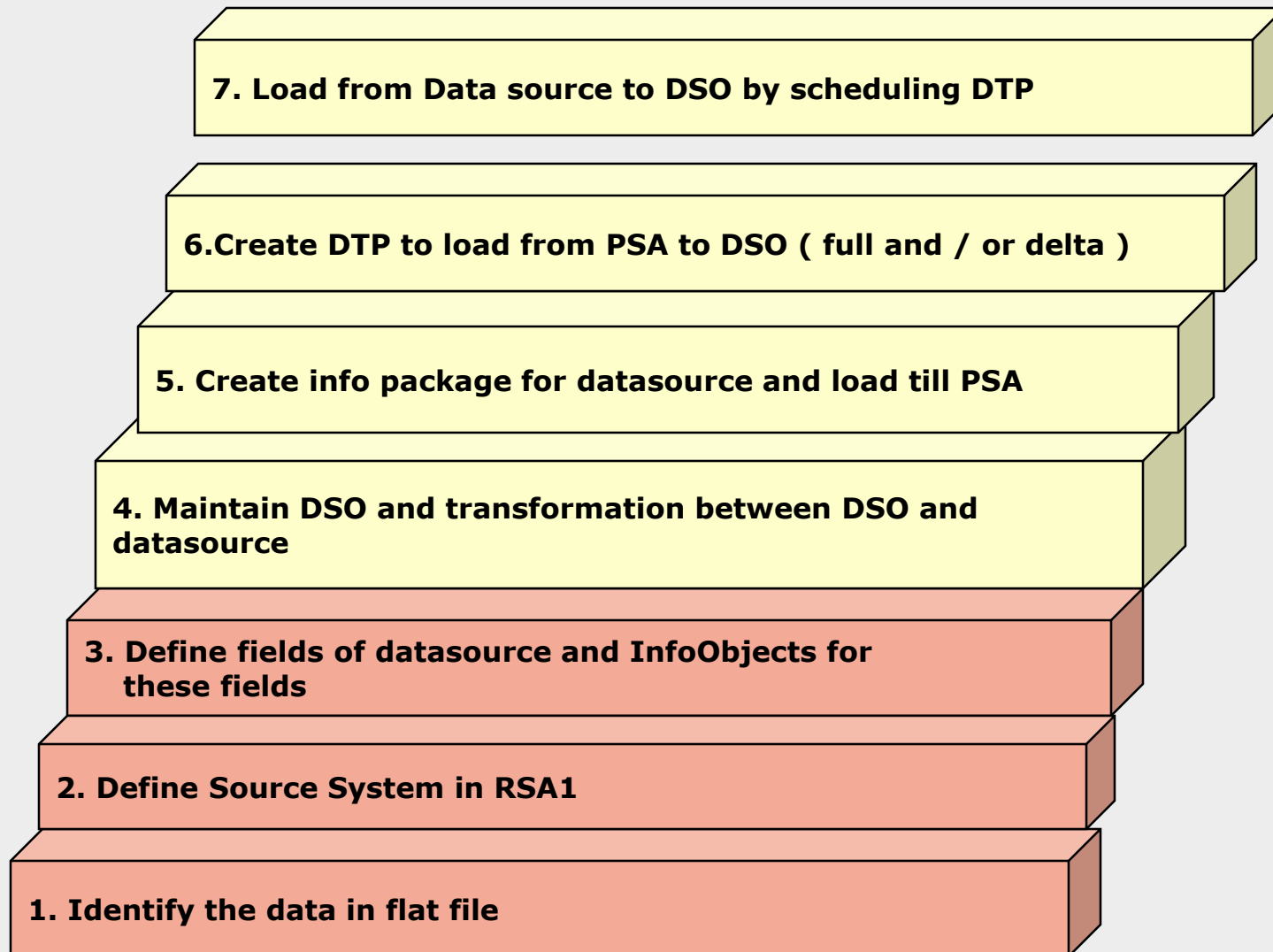
Data Separator: , ☐ Hex

Escape Sign: " ☐ Hex





# Flat File Extraction





# Demo



- [illegible]

# Create a Source System



RSA1

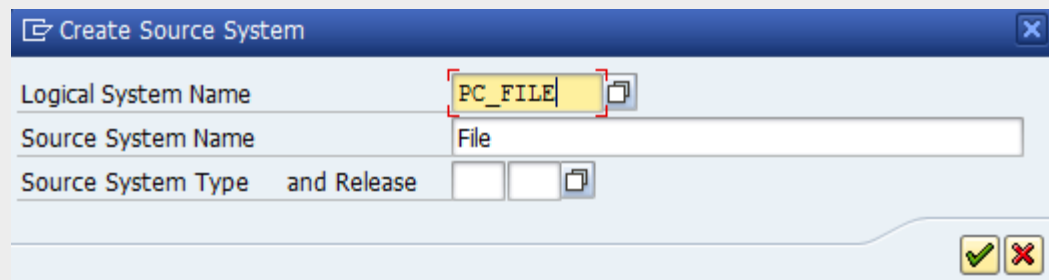
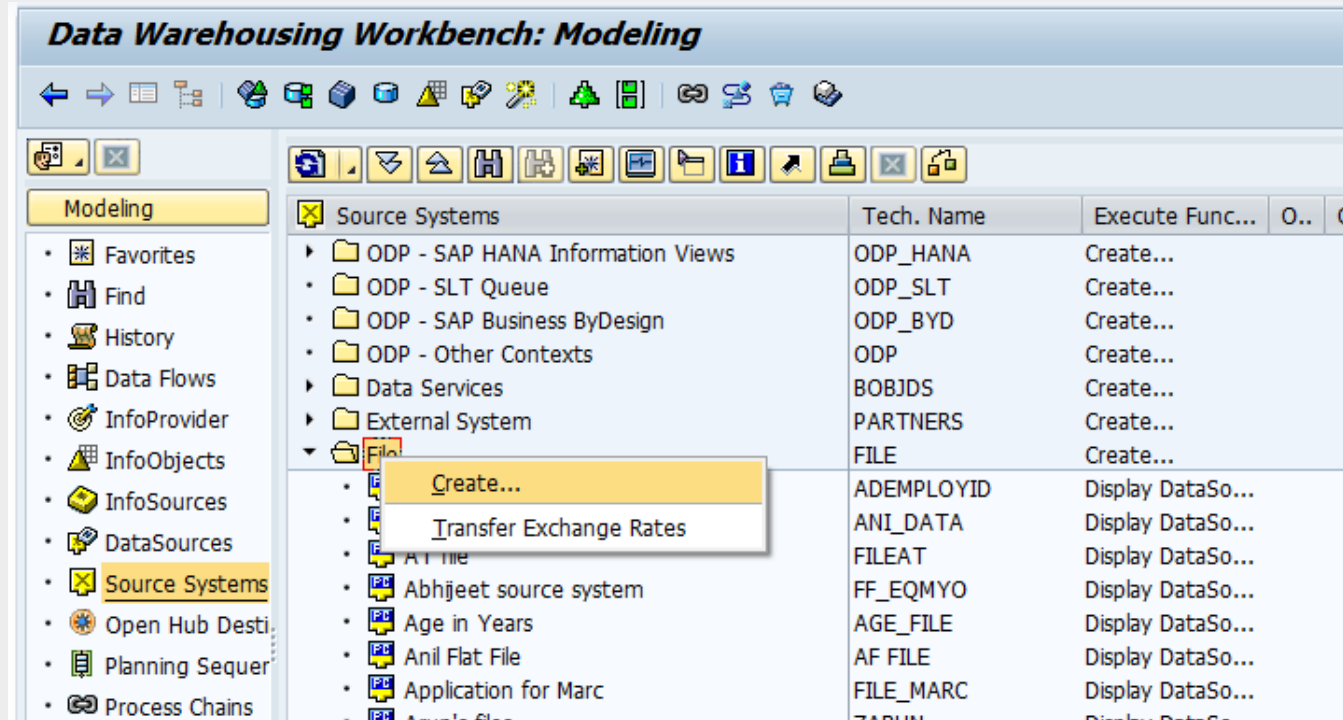
Modelling →

Source Systems→

File→Context Menu

Create→

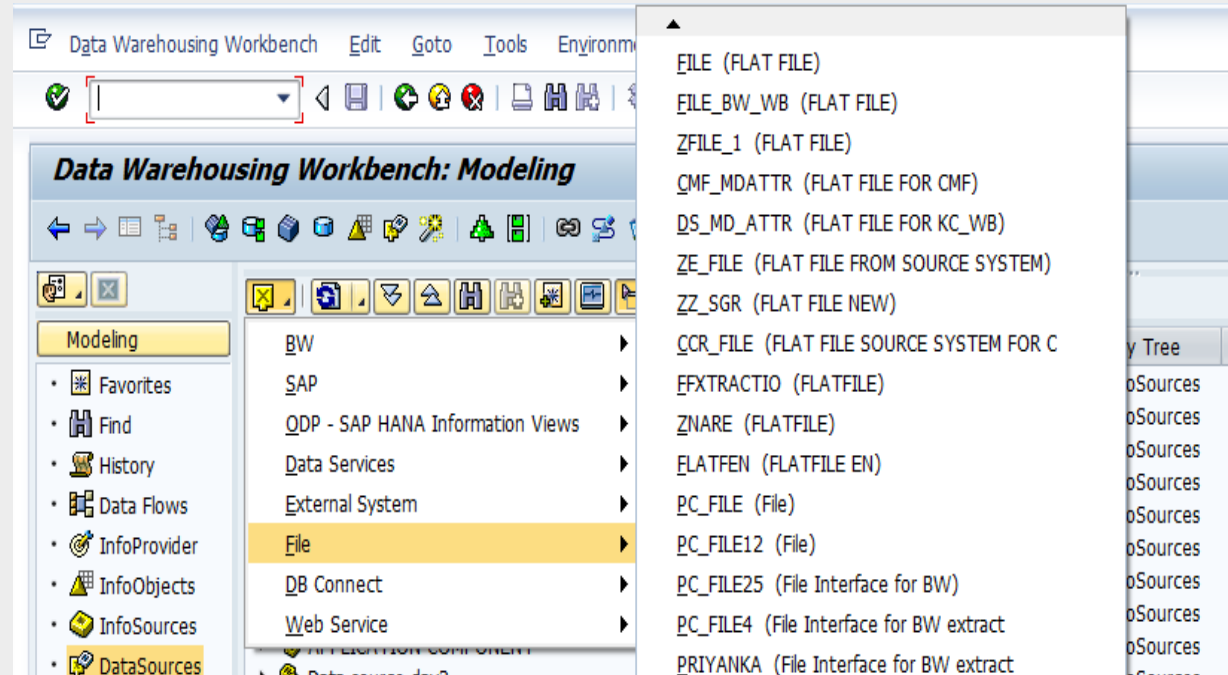
New Flat File source  
system.





# Select a Source System

RSA1  
Modelling →  
DataSources tab→  
Context Menu →  
File Source system→  
Select the Source  
System





# Create a DataSource



RSA1

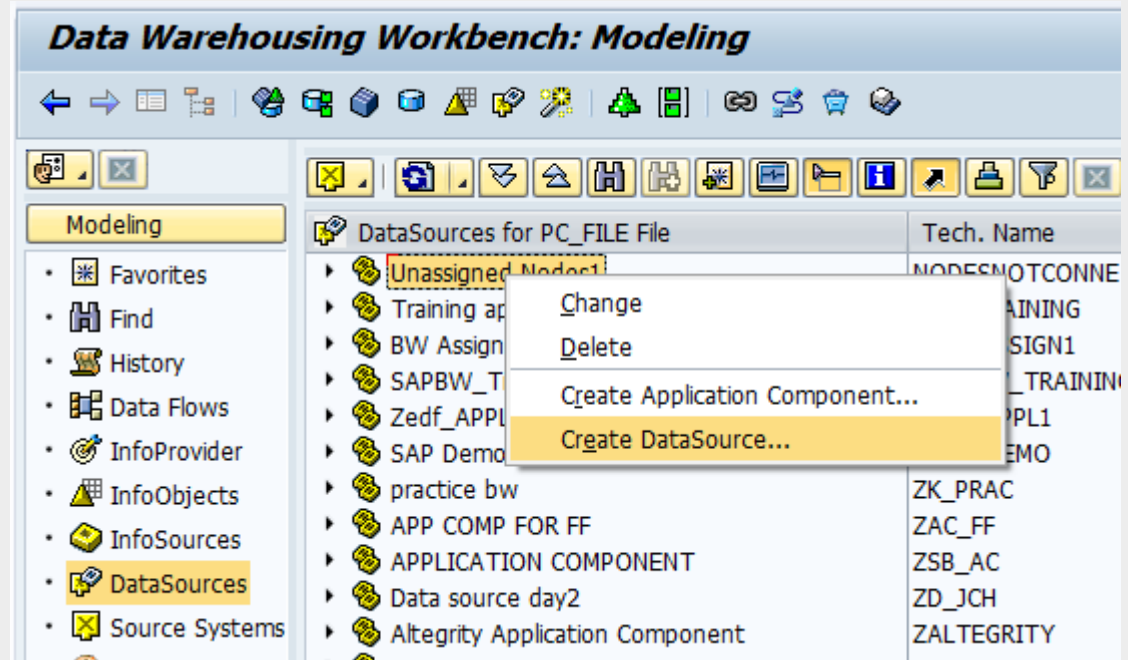
Modelling →

DataSources→

Application Component

Context Menu→

Create Datasource



Create DataSource

DataSource

ZETL\_DS

Source System

PC\_FILE

DataSource Data Type

Transaction Data

Template

Object Type

Name

✓

✗



# Maintain DataSource

Specify File Name

And file type

No. of header rows  
to be ignored

DataSource	ZETL_DS	ETL Training DS
Source System	PC_FILE	File
Version	Active	Compare with...
Active Version	Executable	= Edited Version
<div>General Info. Extraction Proposal Fields Preview</div>		
Delta Process	Full Upload (Delta from InfoPackage Selection Only)	
Direct Access	NO DTP Allowed for Direct Access	
Real Time	Real-Time Data Acquisition Is Not Supported	
Adapter	Load Text-Type File from Local Workstation	Properties
File Name	C:\Documents and Settings\tbrijwan\Desktop\Asian Pai...	
Header Rows to be Ignored	1	
Character Set Settings	Default Setting	
System Codepage	4103 UTF-16LE Unicode / ISO/IEC 10646	
Data Format	Separated with Separator (for Example, CSV)	



# Maintain DataSource

Generate Field proposal by selecting  
“Load Example Data”

Or

Maintain field list

as per the requirement

**Display DataSource ZETL\_DS(PC\_FILE)**

DataSource: ZETL\_DS ETL Training DS

Source System: PC\_FILE File

Version: Active Compare

Active Version: Executable = Edited Version

General Info. Extraction Proposal Fields Preview

Converter: Separated with Separator (for Example, CSV)

No. of Data Records: 10000 Load Example Data

File Output

SNo.	Data
------	------

**DataSource ZETL\_DS(PC\_FILE)**

DataSource: ZETL\_DS ETL Training DS

Source System: PC\_FILE File

Version: Active Compare with...

Active Version: Executable = Edited Version

General Info. Extraction Proposal Fields Preview

Field Attributes

Pos.	Field	Descript.	D...	T..	InfoObjec...	Data type	Lngh	Deci...	Exter...
1	DOC_NUM	BW: Docum...		<input checked="" type="checkbox"/>	ODOC_NUM	CHAR	10	0	10
2	/BIC/ZCUSTMER	Customer		<input checked="" type="checkbox"/>	ZCUSTMER	CHAR	10	0	10



# Maintain DataSource

“Read Preview Data” to review datasource structure.

**DataSource ZETL\_DS(PC\_FILE)**

DataSource: ZETL\_DS ETL Training DS

Source System: PC\_FILE File

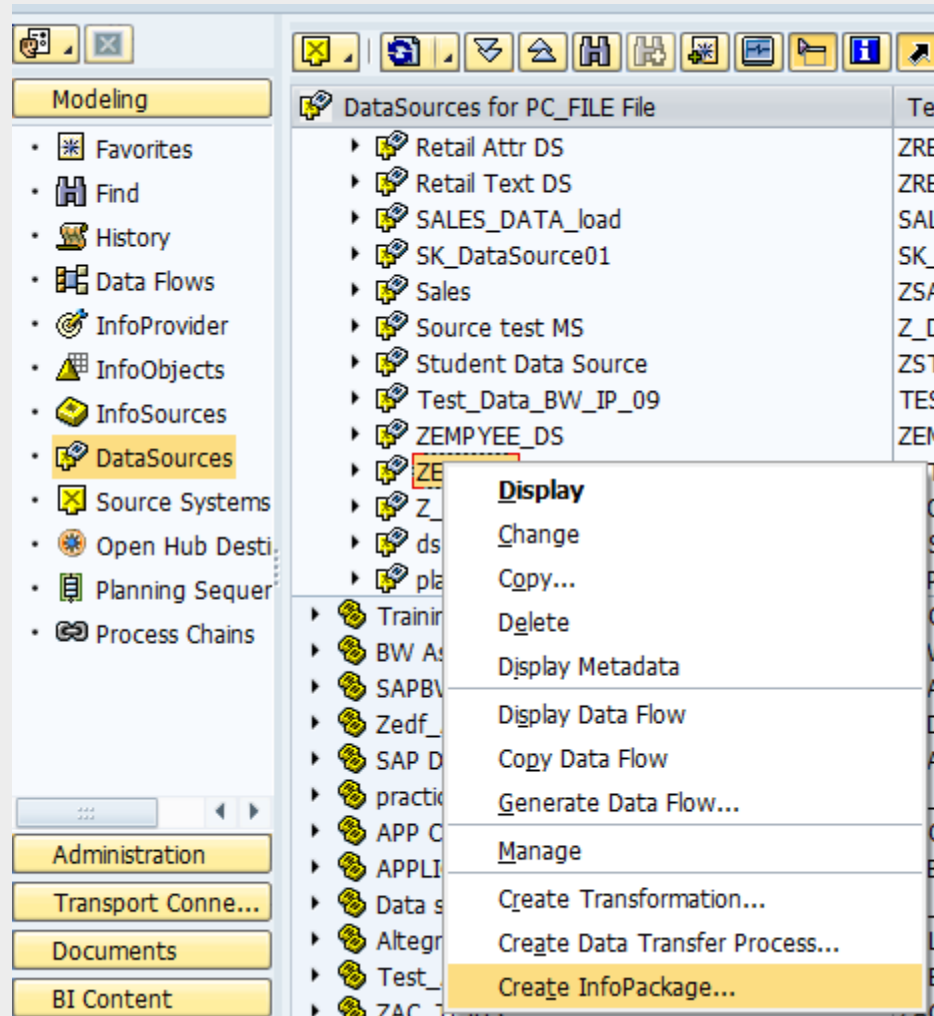
Version: Active Compare with...

Active Version Executable Edited Version

**General Info.** Extraction Proposal Fields Preview

No. of Data Records: 10000 Read Preview Data

# Create Infopackage



RSA1  
Modelling →  
DataSource →  
Context menu of datasource →  
Create Infopackage



# Maintain InfoPackage

- Give the name of the CSV file which you have created in the infopackage.
- Use the data separator as , and escape sign as ;

**Scheduler (Maintain InfoPackage)**

InfoPackage: Info package for ETL(ZPAK\_DA308X64RGKSUM0GACYKZ432G)  
DataSource: ETL Training DS(ZETL\_DS)  
Data Type: Transaction Dat  
Source System: File(PC\_FILE)  
Last Changed By: 18.03.2011 Time: 06:37:51

Process Chain Maint.

File in CSV format

Adapter: Load Text-Type File from Local Workstation

File Name: C:\Documents and Settings\user\Desktop\ETL\Sales\_Cu\_

Header Rows to be Ignored: 1

Character Set Settings: Default Setting

System Codepage: 4103 UTF-16LE Unicode / ISO/IEC 10646

Data Format: Separated with Separator (for Example, CSV)

Data Separator: ,

Escape Sign: ;

Data separator



# Maintain InfoPackage

➤ Select Processing Mode as “Only PSA”

InfoPackage	PC_IP(ZPAK_DDPZOI1Z4Q871M3SSLTX6NF6)				
DataSource	ZETL_DS(ZETL_DS)				
Data Type	Transaction Dat				
Source System	File(PC FILE)				
Last Changed by	ZTEST10	Date	24.09.2012	Time	16:45:57

Data Selection

Extraction

Processing

Update

Schedule

☐ Synchronous PSA Load

☒ Parallel Processin

Update Data...

☒ Only PSA



# Maintain InfoPackage

- Select Update mode (full / delta).
- Note : Delta mode available only for delta capable DataSources, initialisation mandatory prior to delta

The screenshot shows the 'Scheduler (Maintain InfoPackage)' window. The title bar is 'Scheduler (Maintain InfoPackage)'. Below the title bar is a toolbar with icons for navigation and actions. The main area contains several fields:

- InfoPackage: Info package for ETL(ZPAK\_DA308X64RGKSUM0GACYKZ432G)
- DataSource: ETL Training DS(ZETL\_DS)
- Data Type: Transaction Dat
- Source System: File(PC\_FILE)
- Last Changed By: 18.03.2011 Time 06:37:51

Below these fields is a tabbed interface with tabs: Data Selection, Extra, Processing, Data Targets, Update, and Schedule. The 'Update' tab is selected. In the 'Update' tab, there is a section for 'Update Mode' with two radio buttons: 'Full Update' (selected) and 'Delta Update'.

A callout box labeled 'Update Mode' points to the 'Full Update' radio button.





# Maintain InfoPackage

➤ Load data immediately or Schedule Data Load later in background

InfoPackage	PC_IP(ZPAK_DDPZOI1Z4Q871M3SSLTLX6NF6)		
DataSource	ZETL_DS(ZETL_DS)		
Data Type	Transaction Dat		
Source System	File(PC FILE)		
Last Changed by	ZTEST10	Date	24.09.2012
		Time	16:45:57

Data Selection

Extraction

Processing

Update

Schedule

☒ Start Data Load Immediately

☐ Start Later in Background

Job Name Prefix/Suffix

BI\_BTCH

Scheduling Options

Subsequent Process.

☐ Request Batch Process Runs Until All Data Has Been Updated in BW

Start

Job(s)



# Monitor Data Load

➤ Select info package and press Monitor

The screenshot shows the SAP InfoProvider list. A callout box with the text "Monitor dataload" points to the "Monitor" button in the toolbar. The list contains various InfoProviders, with the last one, "Info package for ETL", highlighted in yellow.

	Tech. Name
InfoProvider	
▶ Demo on IP	ZIA_IPDEMO
▶ NetWeaver Demo	0D_NW_DEMO
▶ ABAP Document Ref	ABAP
▶ Info Area for IBSP48	IBSP48
▶ Financial Management & Controlling	FMCO
▶ Product Info Area	ZIA_PRODUCT
▶ Teched 2010	SAP_2010
▶ GPP - Capital Budget (Do not delete)	ZGCB
▼ For BW training purpose	BW_TRAINING
▶ Infoarea for Rash Training	Z_RASH
▶ Employee Sales	ZEMPSALES
▶ Training 2011	ZTRNG_NEW
▼ ETL_Training	ETL_TRAINING
▶ Sales info cube for training	ZSALES_TR
▼ Sales Customer	ZSAL_CUS
▼ RSDS ZETL_DS PC_FILE -> ODSO ZSAL_CUS	0BWG7T27WCAM66D469ABQ0UZGD2...
▼ ETL Training DS	ZETL_DS
Info package for ETL	ZPAK_DA308X64RGKSUM0GACYKZ43...



# Monitor Data Load

▼ Monitor

▼ successful (4)

▼ PSA

▼ 18.03.2011

▼ PC\_FILE (File)

06:06:26 (9 From 9 Records)

06:10:43 (9 From 9 Records)

06:32:50 (9 From 9 Records)

06:37:50 (9 From 9 Records)

▶ incorrect (1)

HeaderStatusDetails

Total

Technical All IDocs processed successfu

Request successfully loaded to PSA; start further update

Diagnosis  
Request successfully loaded to PSA.

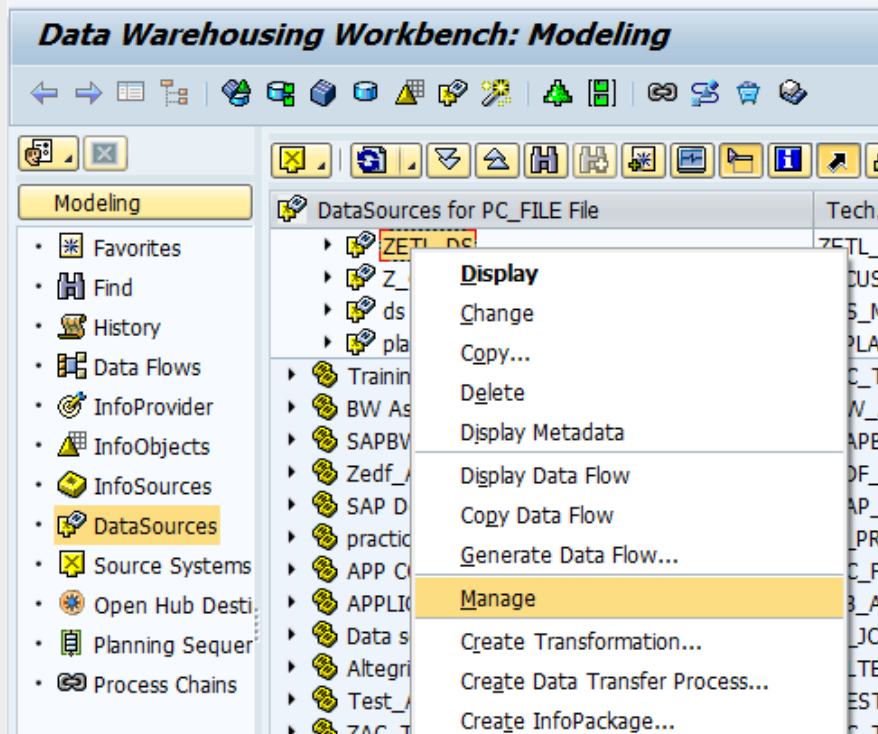
Procedure  
You can use a data transfer process to distribute data to further data targets.

**Green** : Load Successful

**Yellow:** Dataload Running

**Red:** Data Load Failed

# Manage PSA



RSA1  
Modelling →  
DataSource →  
Context menu of  
datasource →  
Manage

Requests for PSA /BIC/B0006676

Requests Newer Than 17.09.2012 Refresh Display All Requests

Requests		R...	W...	Mo...	SID of the...	Request	DDIC Name of PSA ...	V...	L	R	Loading D...	Loading...	InfoPack
					37248	REQU_DDQ0MGBM55GFXDV314LXGPYXE	/BIC/B0006676001	001			24.09.2012	16:45:56	PC_IP



RSA1  
Modelling →  
DataSource →  
Context menu  
of datasource →  
Manage

RSA1  
Modelling →  
DataSource →  
Context menu  
of datasource →  
Manage



# Maintain InfoProvider ( DSO )

**Data Warehousing Workbench: Modeling**

Modeling

- Favorites
- Find
- History
- Data Flows
- InfoProvider
- InfoObjects
- InfoSources
- DataSources
- Source Systems
- Open Hub Desti
- Planning Sequer
- Process Chains

InfoProvider	Tech. Name
Training 2013	ZTRAIN_13
▶ Demo InfoArea	ZTESTINFOAREA
▶ ZTEST01 INFO	
▶ SD INFO C	
▶ MATERIAL	
▶ SALES CUS	
▶ mutliprovid	
▶ SD TRANS	
▶ ZTEST07 INFO	
▶ ZTEST02_INF	
▶ Infoarea on T	
▶ first info area	
▶ ZTEST04 INFO	
▶ test30	

**Change**

- Delete
- Display Metadata
- Display Data Flow
- Create InfoArea...
- Create InfoCube...
- Create DataStore Object...
- Create MultiProvider...
- Create VirtualProvider...
- Create InfoSet

RSA1  
Modelling →  
InfoProvider→  
Context Menu  
Info Area→  
Create DataStore Object



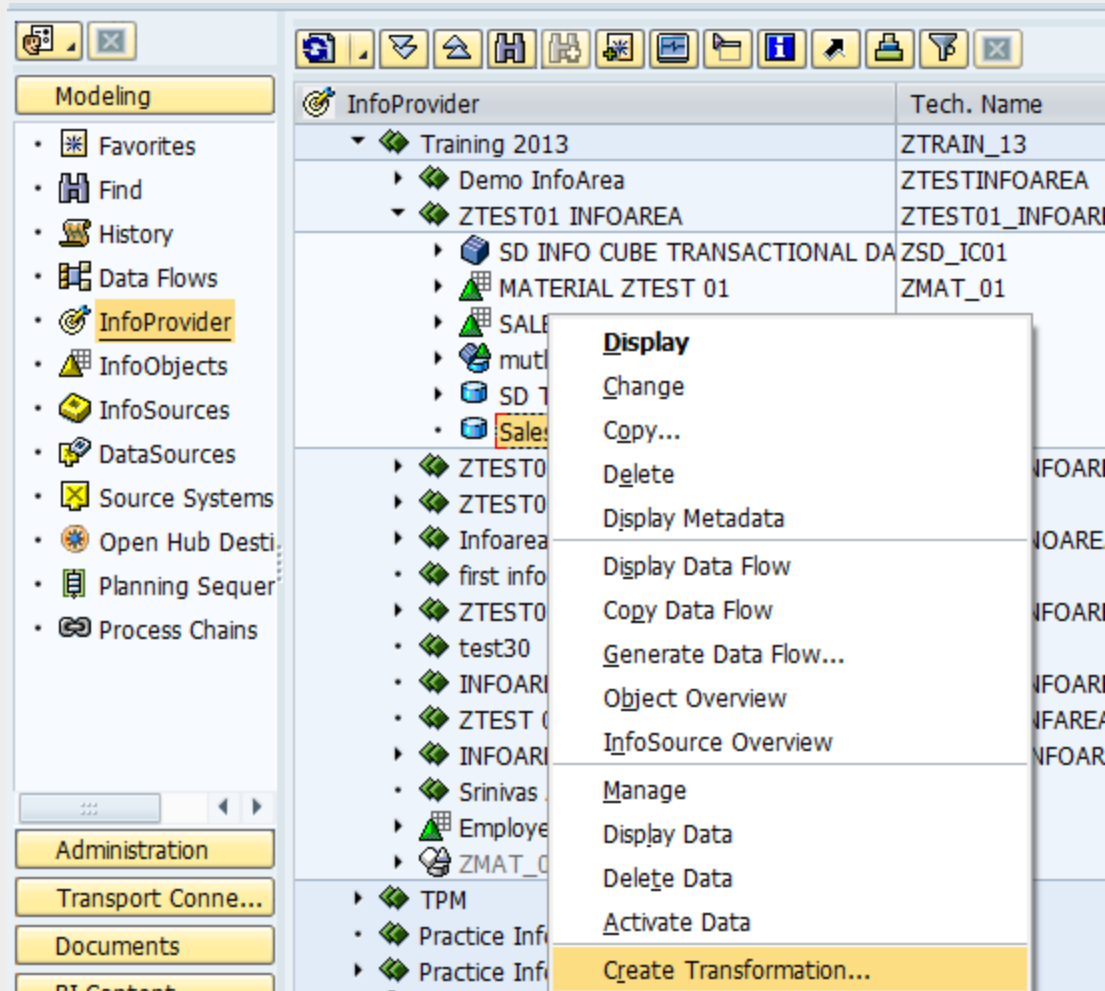
# Maintain InfoProvider ( DSO )

Version Comparison		Business Content							
DataStore Object	Techn. name / val...	F...	O.	App...	Dat...	L...	Key ...	C.	
▼ Sales Customer	ZSAL_CUS								
▶ Object Information									
▼ Settings									
• Type of DataStore Object	Standard								
• SID Generation	During Activation								
• Unique Data Records									<input type="checkbox"/>
• Set Quality Status to 'OK'									<input checked="" type="checkbox"/>
▼ Key fields									
• BW: Document Number	ODOC_NUM				CHAR	010			
▼ Data Fields									
• customer	ZCUSTMER				CHAR	005			
▶ Navigation Attributes									
▶ Indexes									

Maintain DSO :Key fields and Data fields

Save and Activate DSO definition( It is different from Activation of data requests- shown later )

# Create Transformation



The screenshot shows the SAP InfoProvider interface. On the left is a navigation pane with tabs: Modeling, Administration, Transport Connections, Documents, and BI Content. The 'Modeling' tab is active, showing a tree structure under 'InfoProvider'. The tree includes 'Training 2013', 'Demo InfoArea', 'ZTEST01 INFOAREA', 'SD INFO CUBE TRANSACTIONAL DA', 'MATERIAL ZTEST 01', 'SALE', 'mut', 'SD T', and 'Sales'. A context menu is open over the 'Sales' node, listing options under 'Display' (Change, Copy..., Delete, Display Metadata, Display Data Flow, Copy Data Flow, Generate Data Flow..., Object Overview, InfoSource Overview) and 'Manage' (Display Data, Delete Data, Activate Data, Create Transformation...). The 'Create Transformation...' option is highlighted in yellow.

InfoProvider	Tech. Name
Training 2013	ZTRAIN_13
Demo InfoArea	ZTESTINFOAREA
ZTEST01 INFOAREA	ZTEST01_INFOARI
SD INFO CUBE TRANSACTIONAL DA	ZSD_IC01
MATERIAL ZTEST 01	ZMAT_01
SALE	
mut	
SD T	
Sales	
ZTEST01	INFOARI
ZTEST01	INFOARE
Infoarea	INFOARI
first info	INFOARI
ZTEST01	INFOARI
test30	INFOARI
INFOARI	INFOARE/
ZTEST 01	INFOAR
INFOARI	
Srinivas	
Employee	
ZMAT_01	
TPM	
Practice Info	
Practice Info	

RSA1  
Modelling →  
InfoProvider→  
Context Menu  
→  
Create Transformation





The screenshot displays the SAP Data Services Transformation Designer interface. At the top, the transformation is named 'RSDS ZETL\_DS PC\_FILE -> ODSO ZSAL\_CUS'. The source is 'ZETL\_DS' and the target is 'Sales Customer (ZSAL\_CUS)'. The transformation is in 'Active' state and is 'Executable'.

The transformation is composed of three rules:

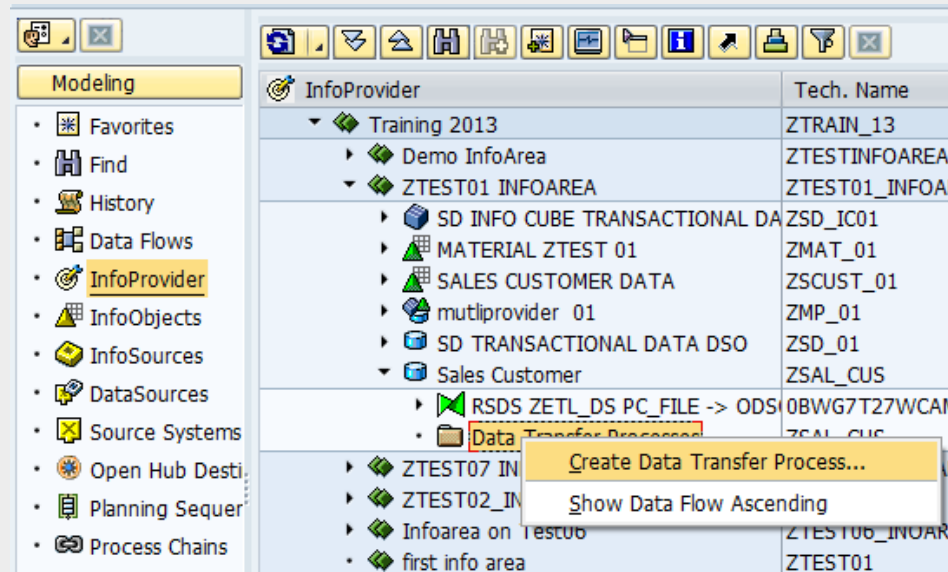
Pos	Key	Field	Descript.	Data t	Lngh
1		DOC_NUM	BW: Document Number	CHAR	000010
2		/BIC/ZCUSTOMER	Customer	CHAR	000010
3		/BIC/ZCUSTLUK	this is just an test	CHAR	000022

The 'Sales Customer (ZSAL\_CUS) Rule Group: Standard Group' is expanded, showing the following rules:

Rule	Rule Name	Pos	Key	InfoObject	Icon	Descript.	Data t	Lngh	Int
=	ODOC_NUM	1		ODOC_NUM		BW: Document Number	CHAR	000010	
=	ZCUSTOMER	3		ZCUSTOMER		customer	CHAR	000005	

The 'Rule Details' dialog is open for the 'ODOC\_NUM' rule, showing the 'Direct Assignment' rule type. The 'Source Fields of Rule' section is visible, showing the 'DOC\_NUM' field.

# Create Data Transfer Process



RSA1  
Modelling →  
InfoProvider→  
Context Menu of Data  
Transfer Process  
→  
Create Data Transfer  
Process

Creation of Data Transfer Process

Data Transfer Proc.

DTP Type

Target of DTP

Object Type

Name

Source of DTP

Object Type

DataSource

Source System

Specify Source  
for DTP



# Maintain Data Transfer Process

Data Transfer Proc. ZETL\_DS / PC\_FILE -> ZSAL\_CUS  
ID DTP\_0002TL80DLZ4H8K4E832JYVYH  
DTP Type Standard (Can Be Scheduled)  
Version ☒ Active ☐ Saved

Extraction Update Execute

Source Object DataSource  
ZETL\_DS PC\_FILE

Extraction Mode Full  
Full  
Delta

Request Selection ☐ Only retrieve last request

Parallel Extraction ☒

Package Size 50.000 records

Filter  
Semantic Groups

Specify Filter  
Condition if  
required

Extraction Mode :

**Full** : All the requests available in the source will be loaded

**Delta** : Only unloaded requests will be loaded




# Maintain Data Transfer Process


Data Transfer Proc. **ZETL\_DS / PC\_FILE -> ZSAL\_CUS**

ID **DTP\_0002TL80DLZ4H8K4E832JYVYH**

DTP Type **Standard (Can Be Scheduled)**

Version  **Active** **Saved**

**Extraction** **Update** **Execute**


Target Object  **DataStore Object (classic)**

**ZSAL\_CUS**

Sales Customer

Error Handling **Cancel Request, Do Not Track Records, No Update**

☒ **Track Records after Failed Request**

 **Create Error DTPs**

Select Error Handling Options

Create Error DTP to update Errorneous Records

**Cancel Request, Do Not Track Records, No Update**

**Cancel Request, Do Not Track Records, No Update**

Cancel Request, Track First Incorrect Record, No Update

Request Red, Write Error Stack, Update Valid Records

Request Green, Write Error Stack, Update Valid Records



# Maintain Data Transfer Process

Data Transfer Proc. ZETL\_DS / PC\_FILE -> ZSAL\_CUS

ID DTP\_0002TL80DLZ4H8K4E832JYVYH

DTP Type Standard (Can Be Scheduled)

Version ■ Active Saved

Extraction Update **Execute**

Technical Request Status Request status is set to 'green' if warnings occur

Overall Status of Request Set Overall Status Automatically

☐ Automatically Repeat Red Requests in Process Chains

Processing Mode Parallel Extraction and Processing Execute

Program Flow

- ▼ ZETL\_DS / PC\_FILE -> ZSAL\_CUS
  - ▶ Start Main Background Process
    - Prepare for Extraction
  - ▶ Data Package Loop
    - ▶ Start Parallel Background

Breakpoints

Change Breakpoints

Start Data Load from source to target

Execute: To start data load from source to target

To Debug routines : Select "Serially in the Dialog Process ( for Debugging )"

Select Option to load / simulate data load for debugging

# Monitor DTP Load



**Data Warehousing Workbench: Modeling**

Call Monitor for BW Object

InfoProvider	Object Name
Training 2013	Training 2013
▶ Demo InfoArea	ZTESTINFOAREA
▶ ZTEST01 INFOAREA	ZTEST01_INFOAREA
▶ SD INFO CUBE TRANSACTIONAL DA	ZSD_IC01
▶ MATERIAL ZTEST 01	ZMAT_01
▶ SALES CUSTOMER DATA	ZSCUST_01
▶ mutliprovider 01	ZMP_01
▶ SD TRANSACTIONAL DATA DSO	ZSD_01
▶ Sales Customer	ZSAL_CUS
▶ RSDS ZETL_DS PC_FILE -> ODS	0BWG7T27WCAM6...
▶ Data Transfer Processes	ZSAL_CUS
▶ ZETL_DS / PC_FILE -> ZSAL	DTP_0002TL8ODL...
▶ ZTEST07 INFO AREA	ZTEST07_INFOAREA
▶ ZTEST08 INFO AREA	ZTEST08_INFOAREA

Select DTP and  
press Monitor



# Monitor DTP Load

**Monitor: Data Transfer Process 391.386**

Debugging Job Overview Error Stack

Request ID: 391.386  
Start Time: 17.06.2016 15:56:59  
Finish Time: 17.06.2016 15:57:13

Header Details

Request Processing	M..	D..	Time Stamp	Duration
Request 391386			17.06.2016 15:56:59	14 Sec.
• Generate Request			17.06.2016 15:56:59	10 Sec.
• Set Status to 'Executable'			17.06.2016 15:57:09	
• Process Request			17.06.2016 15:57:09	1 Sec.
• Prepare for Extraction			17.06.2016 15:57:10	
• Data Package 1 ( 8 Data Records )			17.06.2016 15:57:10	2 Sec.
• Extraction DataSource ZETL_DS : 8 Data Records			17.06.2016 15:57:11	1 Sec.
• Filter Out New Records with the Same Key : 8 -> 8 Data			17.06.2016 15:57:12	
• RSDS ZETL_DS PC_FILE -> ODSO ZSAL_CUS : 8 -> 8 Data			17.06.2016 15:57:12	
• Update to DataStore Object ZSAL_CUS : 8 -> 8 Data Rec			17.06.2016 15:57:12	
• End of Main Process			17.06.2016 15:57:10	3 Sec.
• Set Technical Status to Green			17.06.2016 15:57:13	
• Set Overall Status to Green			17.06.2016 15:57:13	

**Green** : Load Successful

**Yellow**: Dataload Running

**Red**: Data Load Failed



# Manage DSO Requests

**Data Warehousing Workbench: Modeling**

Modeling

- Favorites
- Find
- History
- Data Flows
- InfoProvider
- InfoObjects
- InfoSources
- DataSourcees
- Source Systems
- Open Hub Desti...
- Planning Sequen...
- Process Chains

InfoProvider	Tech. Name
Training 2013	ZTRAIN_13
Demo InfoArea	ZTESTINFOAREA
ZTEST01 INFOAREA	ZTEST01_INFOA
SD INFO CUBE TRANSACTIONAL DA	ZSD_IC01
MATERIAL ZTEST 01	ZMAT_01
SAL	
mut	
SD	
Sale	
ZTEST0	
ZTEST0	
Infoarea	
first info	
ZTEST0	
test30	
INFOAR	
ZTEST	
THFOAR	

Context Menu:

- Display
- Change
- Copy...
- Delete
- Display Metadata
- Display Data Flow
- Copy Data Flow
- Generate Data Flow...
- Object Overview
- InfoSource Overview
- Manage

Select Context Menu of DSO and select Manage





# Manage DSO Requests

Name	D...	Technical Name	Table Type
Sales Customer		ZSAL_CUS	DataStore Object

Contents Requests Reconstruction

Requests from DataStore Object:Sales Customer(ZSAL\_CUS)

Request ID	R...	D...	ID of Req...	Re...	Lo...	Lo...	DTP/InfoPackage	Request D...	Update Date
391386			0				ZETL_DS / PC_FILE -> Z...	17.06.2016	17.06.2016

Request Display: Date of Update From 17.06.2016 18.06.2016

Job Name BI\_DELR Selection Subsequent Proc.

Delete Refresh Activate Stop

Select and Activate the request ( if standard DSO )



Start Activation



# Manage DSO Requests

Selectable Data Targets

Name	D...	Technical Name	Table Type
Sales Customer		ZSAL_CUS	DataStore Object

Contents Requests Reconstruction

InfoObjects for DataStore Object:Sales Customer(ZSAL\_CUS)

Description	InfoObject
BW: Document Number	ODOC_NUM
BW Delta Process: Updat...	ORECORDMODE
customer	ZCUSTMER

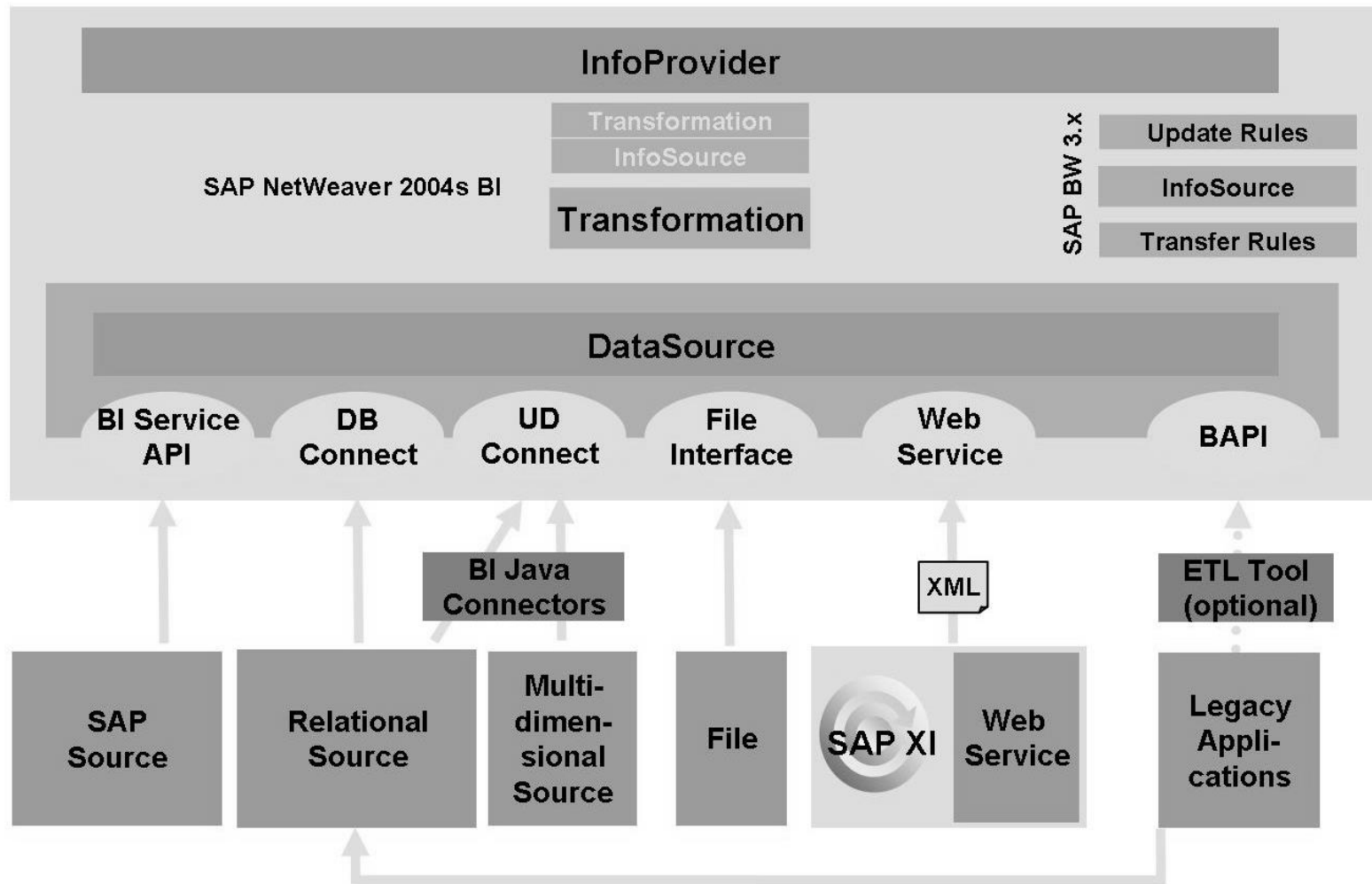
Display contents of Active Data Table

Logs New Data Active Data Change Log Selective



# Summary

# Data Acquisition with the Service API



# RSA1 □ Source Systems: Creation/Maintenance



Data Warehousing Workbench

Modeling

Source Systems

	Tech. Name	Execute Function
BW	BW	Create...
SAP	SAP	Create...
ODP - BW	ODP_BW	Create...
ODP - SAP (Extractors)	ODP_SAP	Create...
ODP - SAP HANA Information Views	ODP_HANA	Create...
ODP - SLT Queue	ODP_SLT	Create...
ODP - SAP Business ByDesign	ODP_BYD	Create...
ODP - Other Contexts	ODP	Create...
Data Services	BOBJDS	Create...
External System	PARTNERS	Create...
File	FILE	Create...
DB Connect	DB	Create...
UD Connect	UDC	Create...
Web Service	WEB	Create...

Select Source System Type

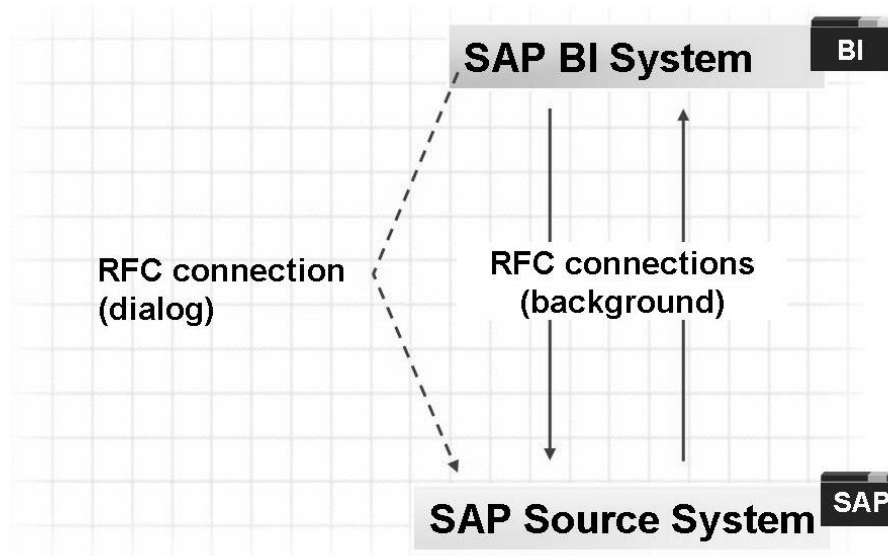
- ☒ Automatic. Create SAP System
- ☐ Manually Create SAP System
- ☐ SAP Business Information Warehouse
- ☐ Dummy for SAP System / SAP Business Information Warehouse
- ☐ ODP Data Replication
- ☐ Business Objects Data Services
- ☐ File System (Manual Metadata, Data Using File Interface)
- ☐ Database System (Data and Metadata Using SAP DB Connect)
- ☐ SAP UDC System (Data and Metadata from UDC and Portal Server)
- ☐ WebService System (Metadata Manually, Data with WebService Push)
- ☐ External System (Data and Metadata Transfer Using Staging BAPIs)

SAP

# Connecting SAP Source Systems to an BI System



## Connecting SAP Source Systems to SAP BW



**RFC (Remote Function Call) connections are created between the systems**

**A user is required in each system to enable the systems to communicate with one another**

**Based on the logical system name of the client in a SAP source system**



# Connection Configuration

➤ A connection between a source system and an BI system consists of a series of individual connections and settings that are made in both systems:

- . RFC Connections
- . ALE Settings
- . Partner Profiles
- . Ports
- . IDoc Types
- . IDoc Segments
- . BI Settings





# RFC Connections – Features

- Transaction SM59 to maintain RFC connections.
  
- RFC connections are based on ALE technology (Application Link Enabling).
  - ALE is a technology for the construction and operation of distributed applications.
  - It provides for the efficient and controlled exchange of messages and keeps data consistent in loosely connected SAP application systems.
  - The applications are integrated using synchronous and asynchronous communication, rather than a central database.
  
- RFC connections are created based on the logical system name.
  - This allows a client to be uniquely identified in an SAP system landscape.



# RFC Connections – Features

- A second RFC connection (with `_DIALOG` as the suffix to the technical name) is created to enable jump from the BI system to the SAP source system during online processing (for example, out of the monitor assistant, or to make Customizing settings in the source system).
- No user is specified in this connection.
- BI users must therefore log on their source system user names and passwords before jumping to the SAP source system.



# BI service API

➤The BI service API (Application Programming Interface) is based exclusively on SAP technology and is used at various points within the BI architecture:

- To transfer data and metadata from SAP source systems
- With XML/SOAP-based data transfer
- With data transfer using the Data Mart Interface



# SAP Service API: Scope

- Configuration of source system connections
- Delta Queue (clip board for delta records)
- Data Extraction monitored by exchanging of messages (status information) between systems ( Info -Idocs monitoring)
- Less down time initialization(system data is mirrored)
- Customizing Datasources
- Replication of Datasources (meta Data)
- control parameters for data Transfer
- Remote cube technology ( direct access)
- Test tool for extraction of data (extractor checker)



# SAP Service API (2): Tools

- The delta queue is a central temporary repository for delta records (= new and changed records) in the SAP source system.
- Reduced downtime: You can also reduce downtime by executing delta initialization runs in mirror systems.
- Customizing Datasources: Transaction SBIW
- Replication: RSA1 ☐ Datasources ☐ Choose a datasource ☐ Right-click ☐ Replicate
- Test tool for extraction: RSA3