

SAP BW

Lesson 05: Extractors – Content & Generic



Purpose

This course demonstrates the various data extraction methods.

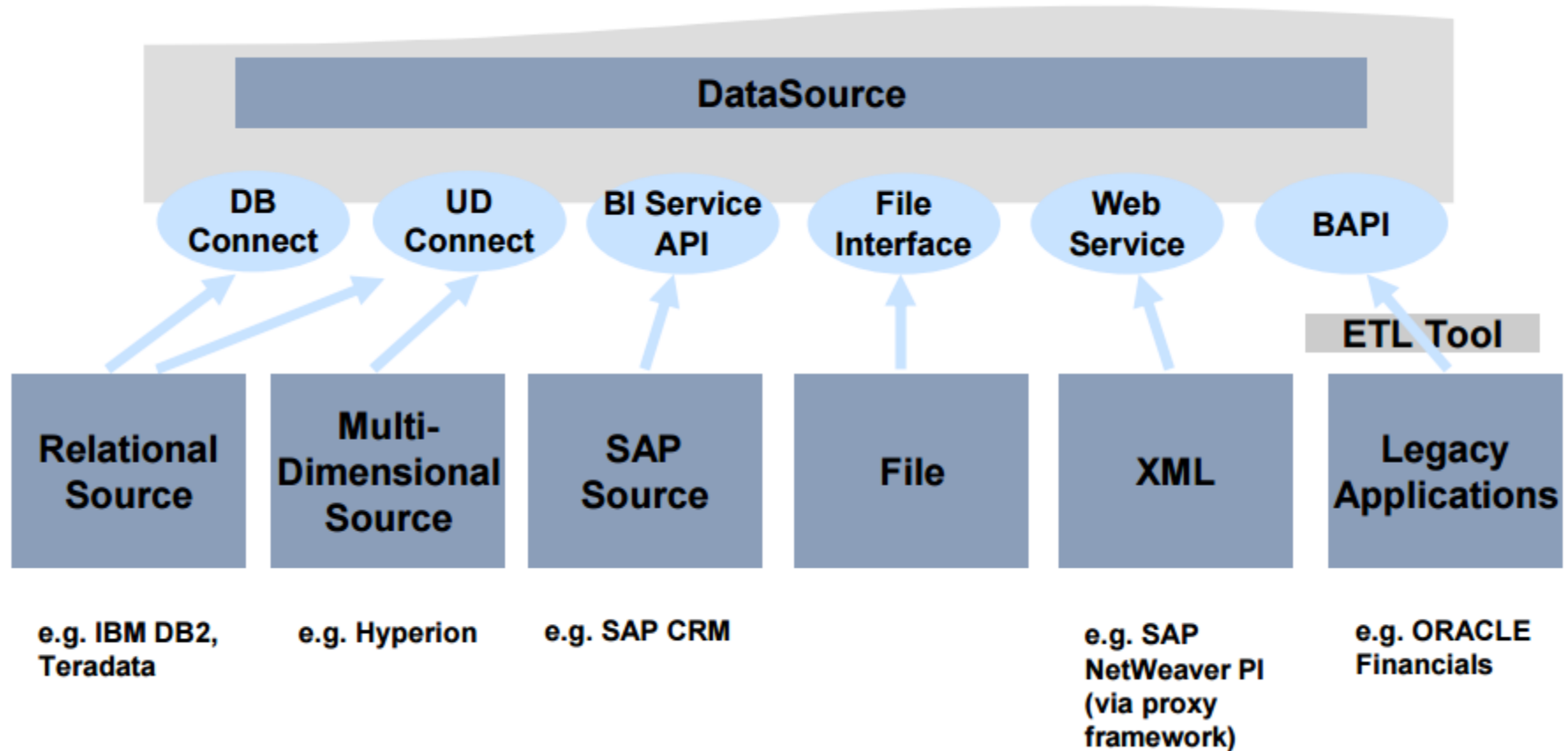
- Extraction Methods covered
 - Business Content
 - Generic Extractors
- DataSource Enhancement



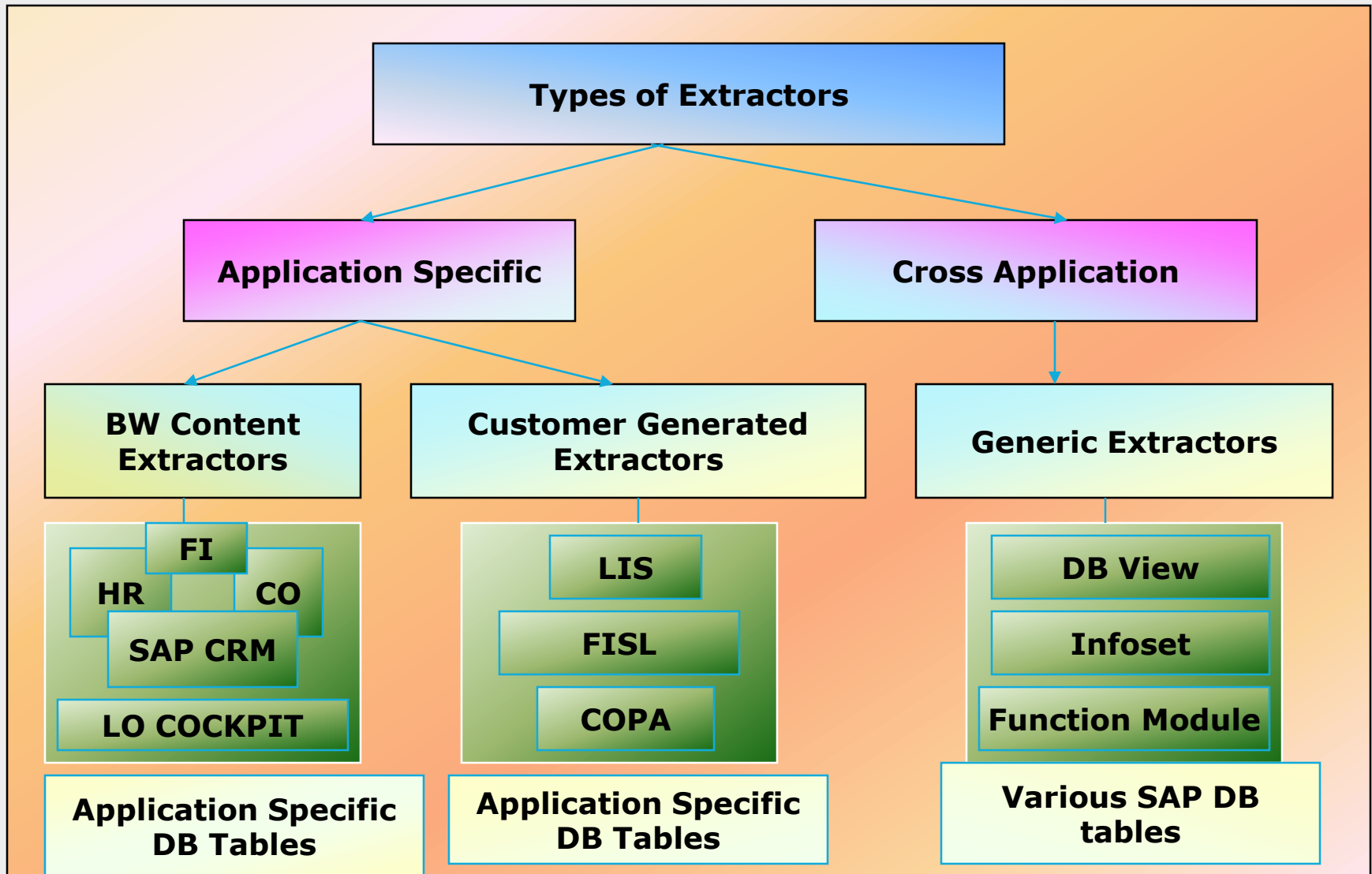
Extraction

- In many organizations, data is fragmented and spread across many databases and applications.
- To be useful, data must be integrated, standardized, synchronized, and enriched – typically through ETL (extraction, transformation, and loading) processes.
- SAP BI provides a broad set of ETL capabilities that support data extraction.
- With the open interfaces of SAP BI, data can be loaded from virtually any source and can handle the huge amounts of transactional data typical of the enterprise landscape.
- Thus extraction deals with extracting the data into the BW system for analyzing and reporting.

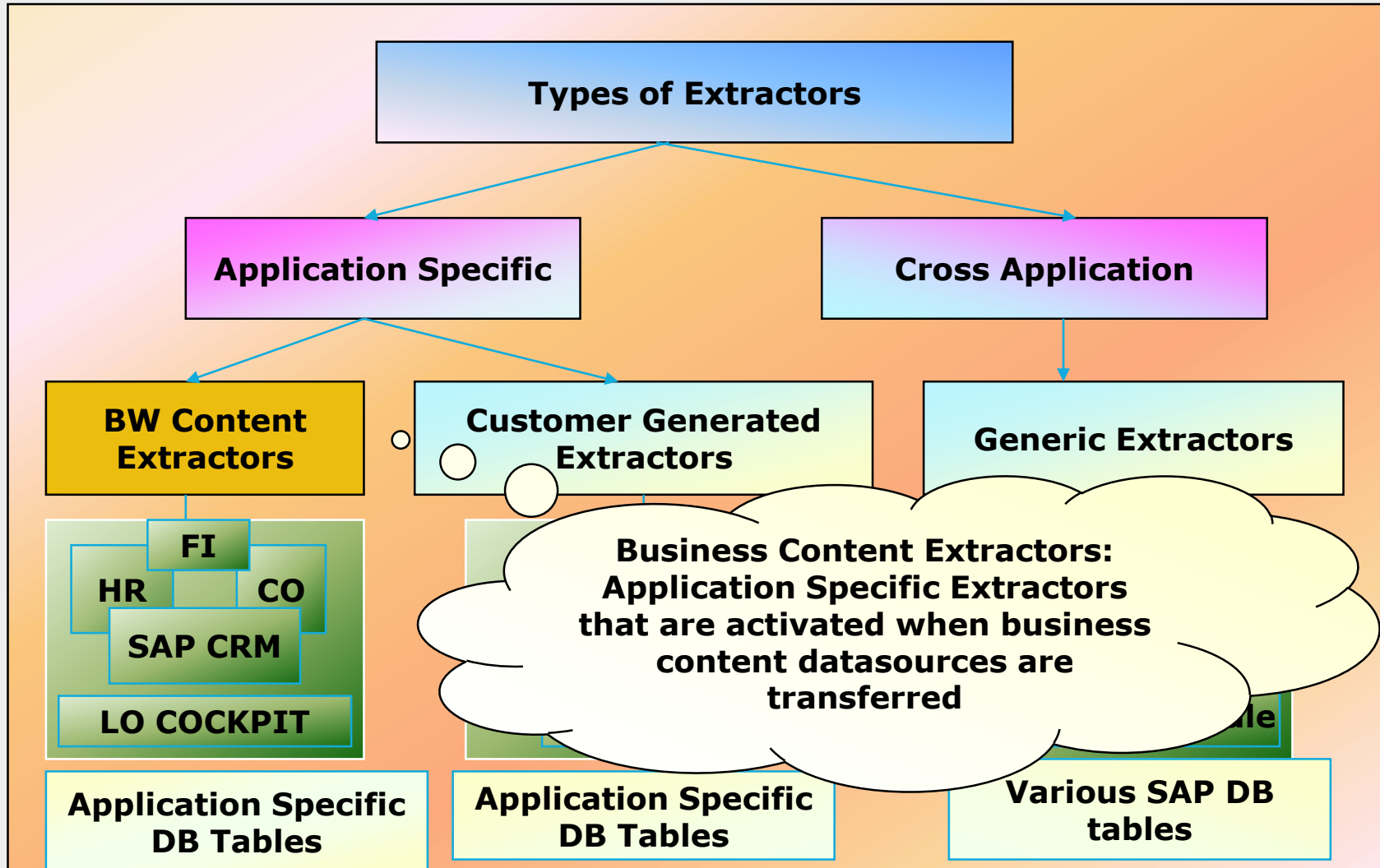
Multiple Source Systems



Types of Extractors



Business Content Extraction





Business Content Extractors

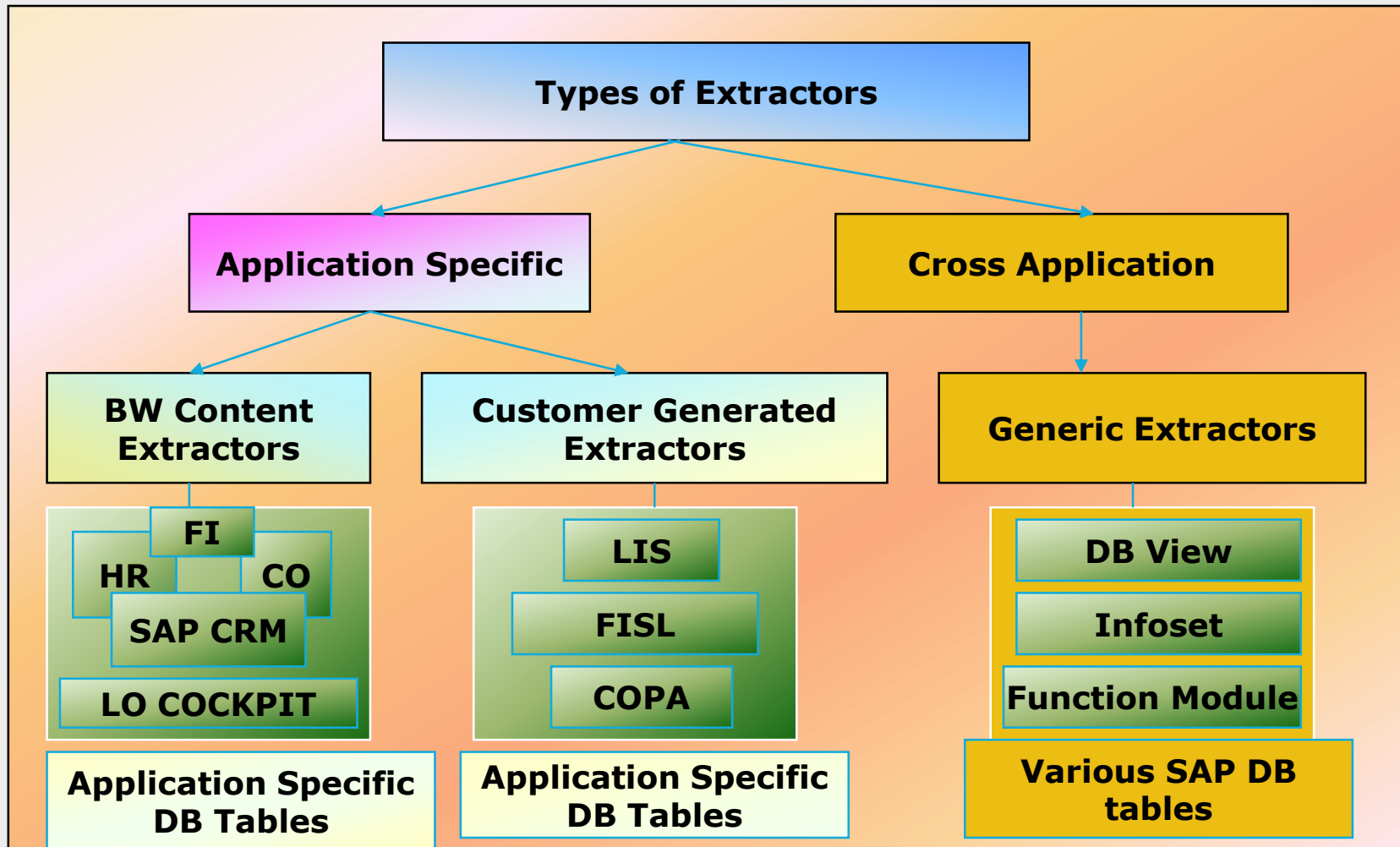
- SAP provides extractors for almost all applications. They are provided as an add on with the Business Content.
- For each application like FI,CO and HR there are specific tables in the OLTP system.
- BI Content extractors consist of extract structures which are based upon these tables and thus can be used to fetch the data in BW.
- Hence when any company implements application like FI, CO it can directly use the already available BI Content Extractors without the need to create their own.
- Business content DataSources from a Source System are available in BW for transferring data only after you have converted them from Delivered (D) version to Active (A) version in the source system and replicated them.



Uses of BI Content Extractors

- Built in Extractors
- High coverage (Applications and Industries)
- Available for both Transaction and Master data
- Ready to use
- Reduce implementation Costs and efforts
- Delta capable

Generic Extractors





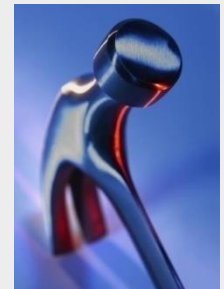
Generic Extractors

- Generic Extractors are Cross Application Extractors used in scenarios where the other type of extractors are unavailable.
- Tcode to create generic Datasource – RSO2
- Generic extractors are of three types:
 - Based on Database view/Table
 - Based on InfoSet
 - Based on Function Module



Tips & Tricks

- Before starting an SAP BW project, analyze the reporting requirements against the standard DataSources available.
- Zero-in on the standard DataSources satisfying the requirement.
- If data that cannot be supplied by the standard sources, we can:
 - Create a generic Datasource.
 - Enhance the standard DataSource.





Generic Extractors

- When should you use generic extractors?
- Business Content does not contain a DataSource for your application.
- The application does not feature its own generic delta extraction method
- You are using your own programs in SAP R/3 to populate the tables
- The tools for generic data extraction can be used to generate an extractor for all applications.



DataSource Enhancement

Need for DataSource enhancement

- When we require an additional field from a database table and it is not directly available from the Datasource, then we can append the field in the extract structure of the Datasource.
- Then the logic to populate that field can be written in the customer exit.

Update Modes

Full

- Initialization
- With Data Transfer

Without data transfer

- delta

Update Modes



InfoPackage	TD 2LIS_02_ACC -> 0SRPO_D1(ZPAK_4CYT06AQVH8PT23BQS5NA3TY5)				
DataSource	Purchasing Data (Account Level)(2LIS_02_ACC)				
Data Type	Transaction Dat				
Source System	R3Q Client 100(R3QCLNT100)				
Last Changed By	EXTREME	Date	15.12.2010	Time	02:19:05

Data Selection

Targets

Update

Schedule

Update Mode

☐ Full Update

☒ Delta Update

☐ Initialize Delta Process

- ☒ Initialization with Data Transfer
- ☐ Initialize Without Data Transfer
- ☐ Early Delta Initialization

Request will be processed at once in the source system

Only the data since last upload is requested



Delta Capable Datasource

Tcode : RSA6

DataSource: Customer version Display

Header Data

DataSource

2LIS_02_ITM

Package

Description

Purchasing Data (Item Level)

Extraction

ExtractStruct.

MO

Direct Access

D

Delta Update

☒

DataSource for Reconcili

Datasource supports delta

Field Name	Short text	Selection	Hide field	In
AFNAM	Name of Requisitioner/Requester	<input type="checkbox"/>	<input type="checkbox"/>	
AKTNR	Promotion	<input type="checkbox"/>	<input type="checkbox"/>	
AKTWE	Current goods receipt quantity in order uni	<input type="checkbox"/>	<input type="checkbox"/>	
ALAV	Points score: Shipping notif. GR date - not	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
AI TFF	Number of deliveries	<input type="checkbox"/>	<input type="checkbox"/>	



Delta Capable Datasource

Tcode : RSA6

DataSource: Customer version Display

Header Data

DataSource

ØEMPLOYEE_ATTR

Package

Description

Employee

Extraction

ExtractStruct.

HRMS

Direct Access

D

Delta Update

☐

DataSource for Reconciliati

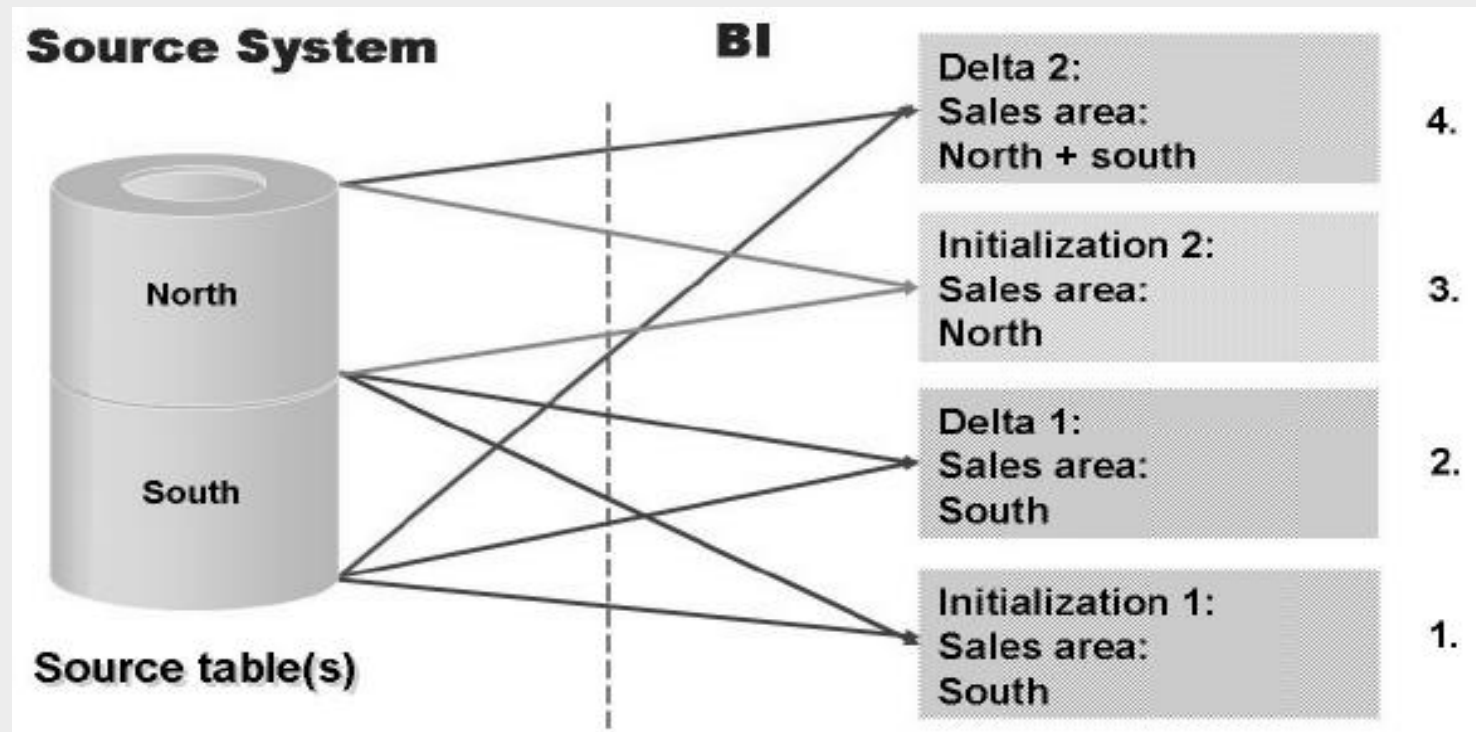
DataSource does not support delta

Field Name	Short text	Selection	Hide field	Inver
ABKRS	Payroll Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ANCUR	Currency Key for Annual Salary	<input type="checkbox"/>	<input type="checkbox"/>	
ANSAL	Annual salary	<input type="checkbox"/>	<input type="checkbox"/>	
ANSVH	Work Contract	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
BEGDA	Start Date	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

0000	2LIS_02_ITM	BQ1CLNT100	36
0000	2LIS_02_ACC	BQ1CLNT100	33

You can see that the delta queue has been successfully filled.

Initialisation





Delta Update -Selections(Scheduler)

Initialization for this Source

Initial Selections

Ac	Stat	InfoPackage	Selection d	Selections
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR <=50	15.10.2010	0EMPLOYEE=00000001 - 00004999
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR >49	15.10.2010	0EMPLOYEE=00005000 - 00009999
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR >99	15.10.2010	0EMPLOYEE=00010000 - 00014999
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR >14	15.10.2010	0EMPLOYEE=00015000 - 00019999
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR >19	15.10.2010	0EMPLOYEE=00020000 - 00100999
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR >10	15.10.2010	0EMPLOYEE=00101000 - 00109999
✓	○○●	TI 0HR_PT_1 > 0PT_C01 (PERNR >10	15.10.2010	0EMPLOYEE=00110000 - 00119999

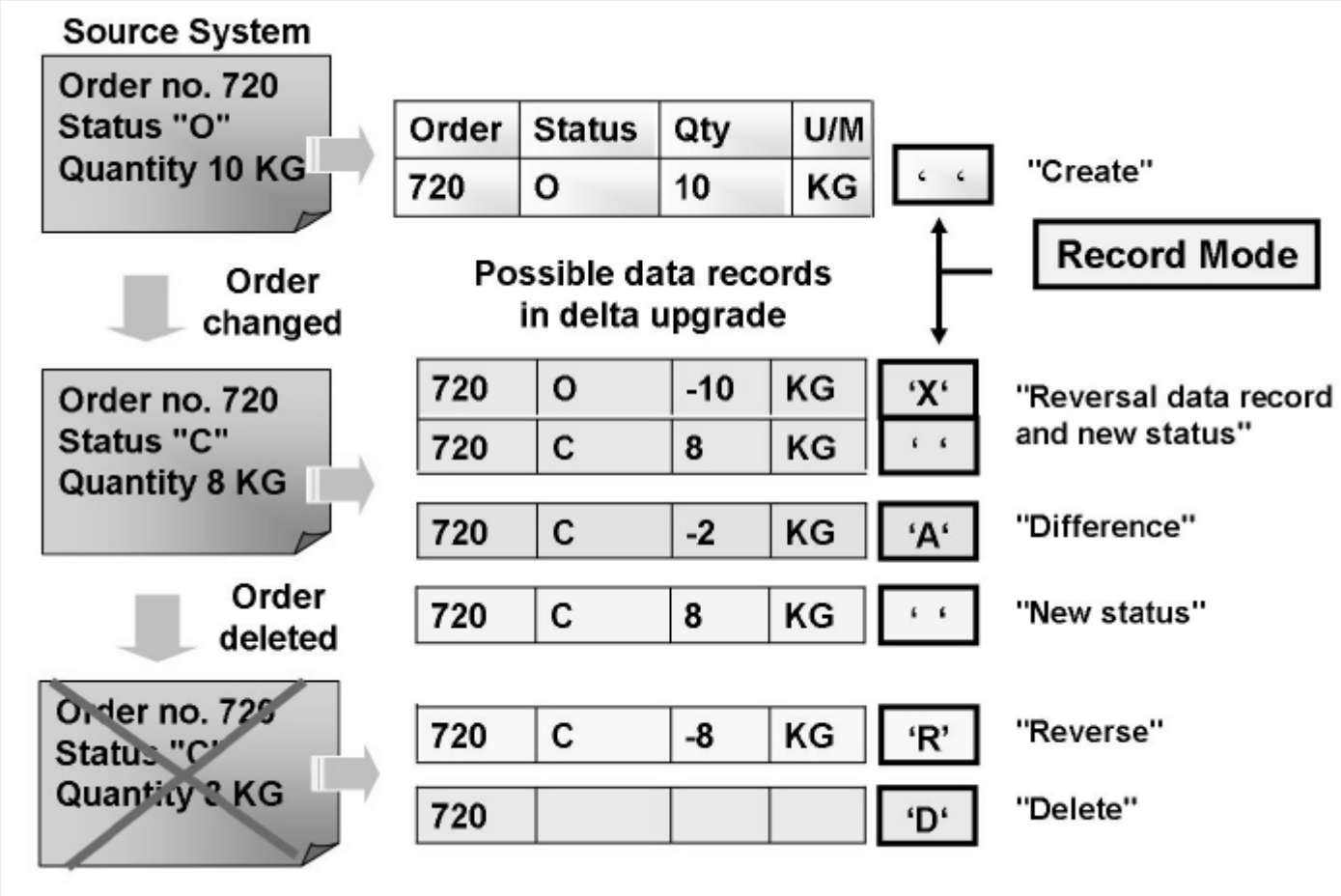
Navigation icons: back, forward, search, delete, save, print, close



Recordmode

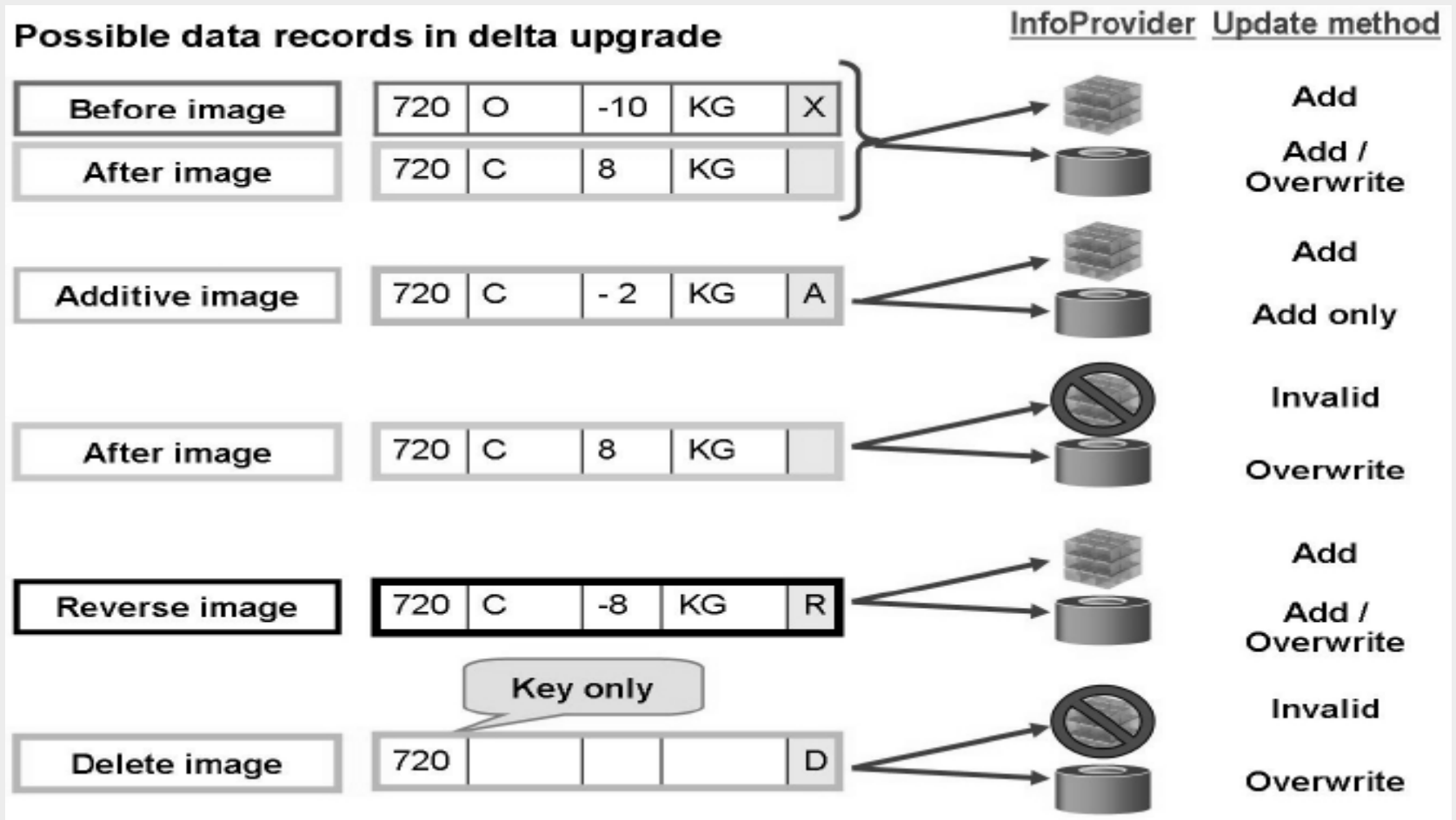
- ' ': The record provides an after image.
- 'X': The record provides a before image.
- 'A': The record provides an additive image.
- 'D': The record must be deleted.
- 'R': The record provides a reverse image.
- 'N': The record provides a new image.

Record Mode





Possible Data Targets





Delta Tables

ROOSOURCE

Data Browser: Table ROOSOURCE Select Entries 2									
<div><div> Check Table...</div><div></div></div>									
	OLTPSOURCE	OBJVERS	TYPE	APPLNM	BASOSOURCE	DELTA	EXMETHOD	EXTRACTOR	EXSTRUCT
	2LIS_02_ITM	A	TRAN	MM		ABR	F1	MCEX_BW_LO_API	MC02M_OITM
	2LIS_02_ITM	D	TRAN	MM		ABR	F1	MCEX_BW_LO_API	MC02M_OITM



Delta Tables

RODELTAM

Data Browser: Table RODELTAM Select Entries

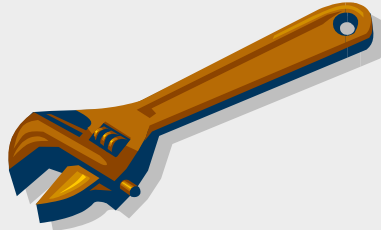
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	DELTA	ONLYFULL	UPDM_NIM	UPDM_BIM	UPDM_AIM	UPDM_ADD	UPDM_DEL	UPDM_RIM	DREQSER	DELTATYPE
		X							1	
	A				X				2	A
	ABR		X	X	X			X	2	D
	ABR1		X	X	X			X	1	D
	ADD					X			1	E
	ADDD					X			1	D
	AIE				X				2	E
	AIED				X		X		2	E
	AIM				X				2	D
	AIMD				X		X		2	D



Some Useful sites

- www.sdn.sap.com
- www.help.sap.com
- www.service.sap.com





Thank You.