



Leveraging UDC Extraction for Cisco IPCC Call Center Data and Integration with CRM Activity Data

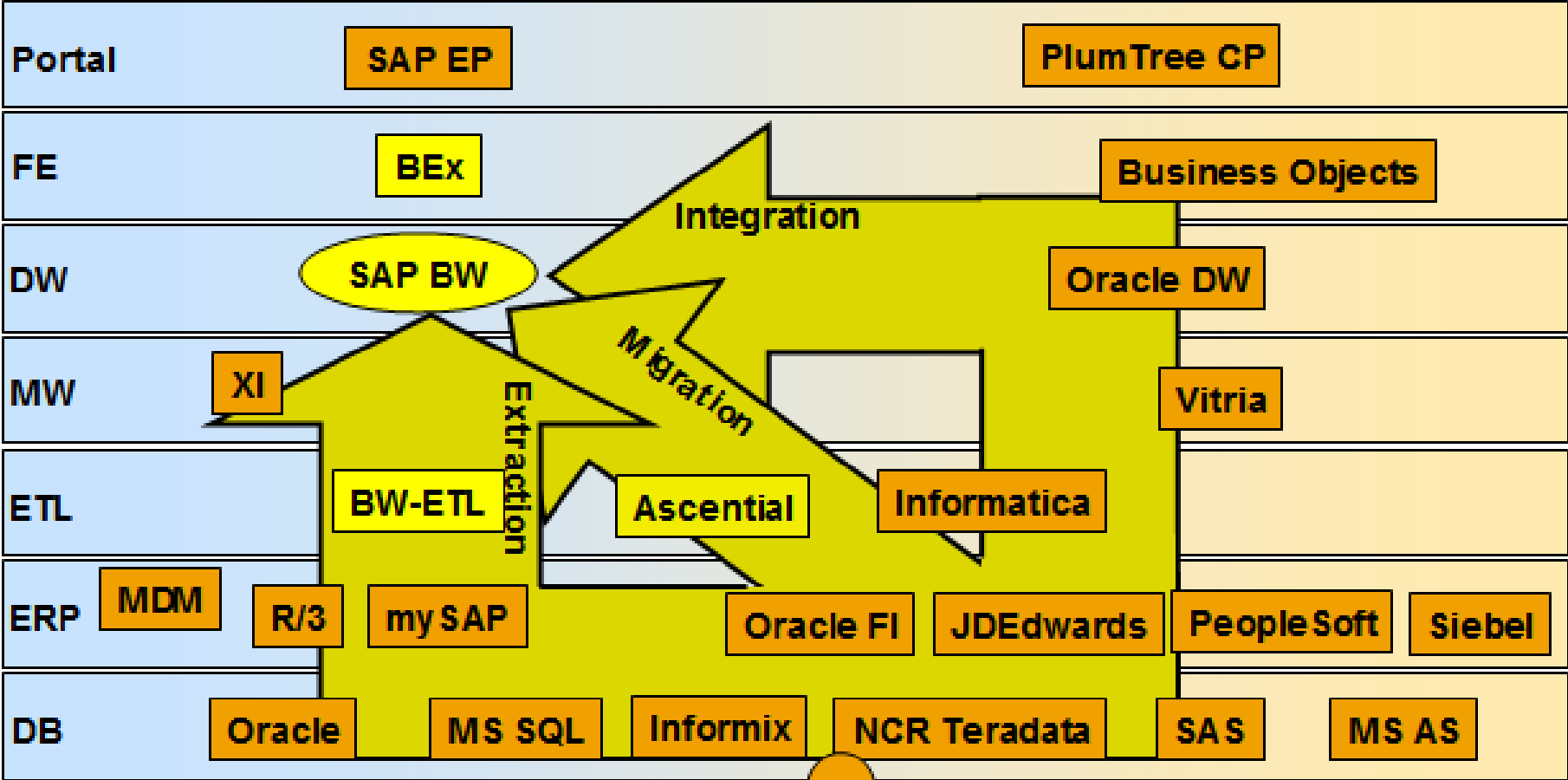
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Learning Points

- UDC Extraction Theory and Practice
- Modeling Call Center Data
- Call Center KPIs
- Integration w/CRM Activity Data

Typical System Landscape

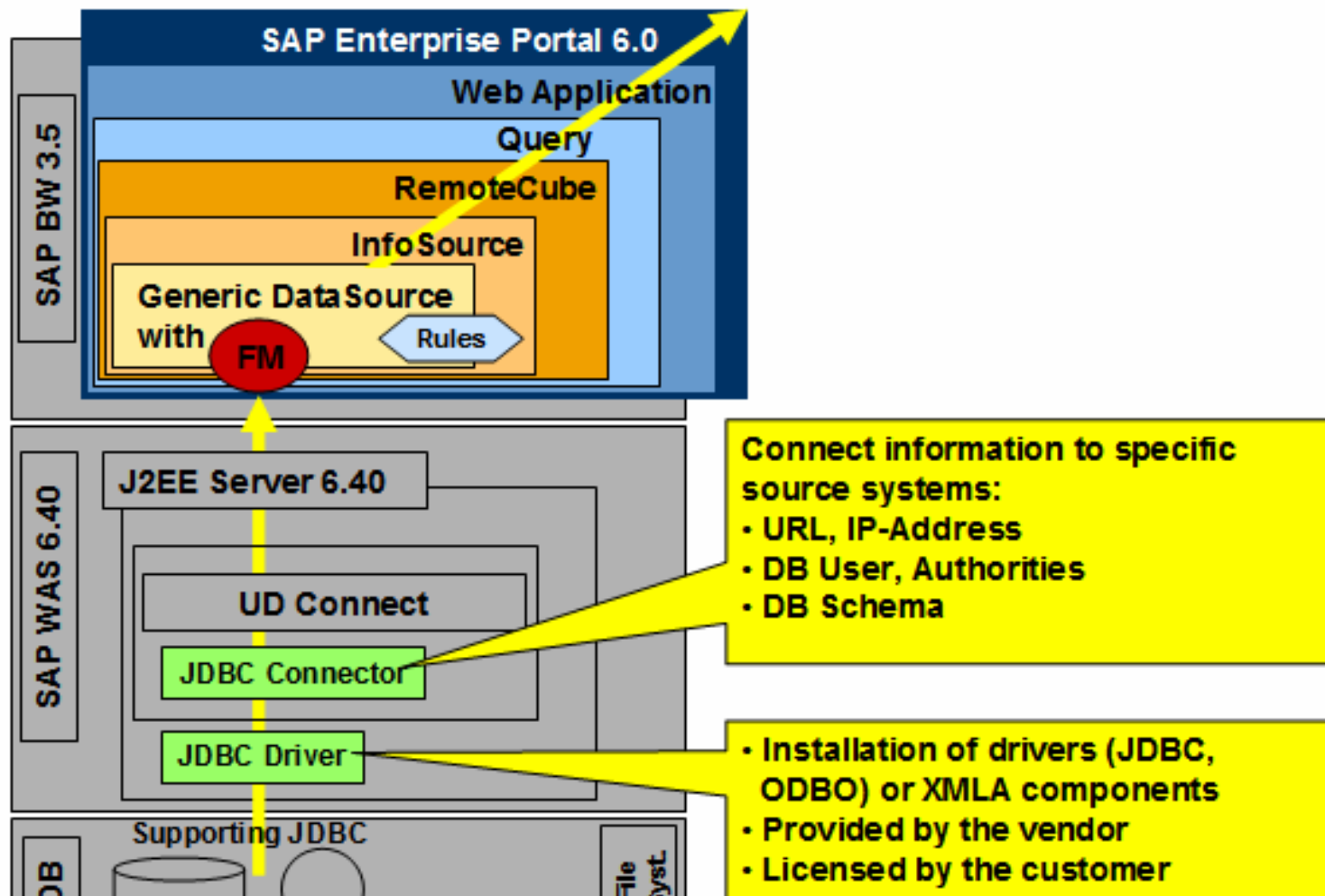


Java Connectors



	BI Java Connector	Technology based on	Provides access to
Relational	BI JDBC Connector	Sun's JDBC -- the standard Java API for RDBMS.	Connectivity to over 170 JDBC drivers, <i>Examples:</i> Teradata, Oracle, Microsoft SQL Server, Microsoft Access, DB2, Microsoft Excel, text files such as CSV
	BI SAP Query Connector	SAP Query -- a component of SAP's Web Application Server	SAP operational applications <i>Examples:</i> data in transactional systems such as R/3, Ad-Hoc, and Operational Reporting
OLAP	BI ODBO Connector	Microsoft's OLE DB for OLAP -- the established industry-standard OLAP API for Windows.	OLE DB for OLAP-compliant data sources <i>Examples:</i> Microsoft Analysis Services, SAS, Microsoft PivotTable Services
	BI XMLA Connector	Microsoft's XMLA -- Web services-based access to OLAP providers.	Platform-independent access to BW 3.x and other OLAP data sources <i>Examples:</i> BW 3.x, MS Analysis Services, Hyperion, MicroStrategy

Integration Scenario w/JDBC



Integration Scenario w/JDBC



The screenshot shows the SAP InfoSource BISKD interface. The menu is open, and the option 'Create BW DataSource with UDCConnect' is highlighted with a red oval. Below the menu, a table lists various InfoObjects.

InfoObject	Descript.	S..	R...	Check object	Length	Type	Deci...	Unit
TD_ORDERK	Order No.	▲	□	▲ TD_ORDERK	20	NUMC	0	
TD_PARTK	Patner No.	▲	□	▲ TD_PARTK	10	NUMC	0	
TD_RCDATE	RC Date	▲	□		8	DATS	0	
TD_COMMDT	Commission Da	▲	□		8	DATS	0	
TD_SHIPDT	Shipping Date	▲	□		8	DATS	0	
TD_LINEN	Lineitem No.	▲	□	▲ TD_LINEN	10	NUMC	0	

Integration Scenario w/JDBC

BW Info Source

BW InfoSource: BISDKTEST1
BW Sourcesystem: AB2CLNT000
BW Datasource: 6BITEM

Connect Info

RFC-Destination: J2EE620
UDC Sourcesystem: SQL SRV1
UDC Datasource: ITEM

Man. Mapping

BW DS Fieldname	UDC DS Fieldname
TO_ORDERK	L_ORDERKEY
TO_PARTK	L_PARTKEY
TO_RCDATE	
TO_COMMDT	
TO_SHIPDT	L_SHIPDATE
TO_LINEN	L_LINENUMBER
TO_LINEST	L_LINESTATUS
TO_SHIPIN	L_SHIPINSTRUCT
TO_SHIPM	L_SHIPMODE

Fields of table ITEM in ext. DB

UDC DS Fieldname
L_COMMENT
L_COMMITDATE
L_DISCOUNT
L_EXTENDEDPRICE
L_LINENUMBER
L_LINESTATUS
L_ORDERKEY
L_PARTKEY
L_QUANTITY

Autom. Mapping

Generate DS

Installation Overview

- BW 3.5 Installation Guide – SAP BW Java Components
- How-To Configure UD Connect on J2EE Server for UDC Access to External Databases
- Issues:
 - Fields not aligned: 857658
 - bit type fields can not be extracted 833581
 - S:RSSDK:400 error 866894
 - S:RSSDK059 : Note 723457
- Smoke Test: <http://bwdev:50000/TJdbc/servlet/TestJdbc>

Mapping

- Infoobjects creation with proper types
 - Mapping proposal does not work too well
 - Can only assign it once
 - Compatibility
 - http://help.sap.com/saphelp_nw2004s/helpdata/en/77/362040599a8f5ce10000000a155106/content.htm
 - Issues with:
 - Date/Time
 - Tiny Init
 - Bit
 - Infoobjects issues:
 - Alpha conversion not supported
 - No conversion routines
 - Upper/lower case



Bitmap Image

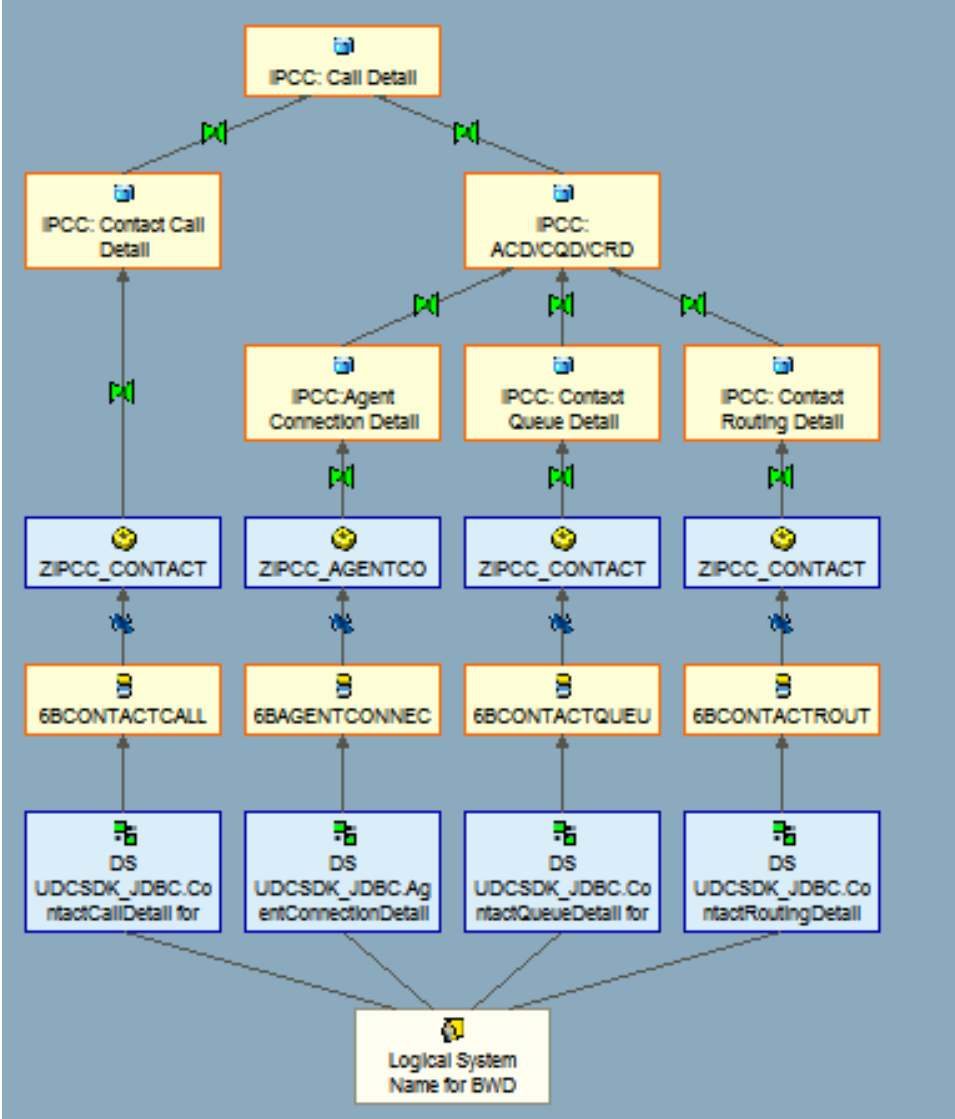
Other UDC Considerations

- Transports (note 830129, 709575, Program RSSDK_LOCALIZE_OBJECTS)
- Datapacket size
- Delta
- No Joins permitted – need a view

Data Modeling

- Text and attributes in one table
- Staging ODS
- Application ODS
- Same technical object has different names
- Need date, time, timestamp, time-slot objects
- Transitive attributes an issue
- Be very careful about compounding
- Self-feed for Agent State durations
- N:N relationships
- Reference Infobjects

Call Details



Agent State Detail

- The Agent State Detail Report shows detailed information about when the agent changed from one state to another. For each agent specified, this report shows the date and time of each state change, the name of the state changed to, the reason code, if any, for the change to Logout state or Not Ready state, and the length of time spent in each state.
 - Total Logged-in time
 - Not Ready
 - Ready
 - Talktime
 - Worktime

Agent State Detail

Agent State Summary Report (by Agent)

1/13/2006 12:00:00 AM - 1/14/2006 12:00:00 AM

<u>Agent Name</u>	<u>Extension</u>	<u>Interval Start Time</u>	<u>Interval End Time</u>	<u>Total</u>	<u>Logged-in Time</u>	<u>Not Ready Time</u>	<u>Ready Time</u>	<u>Reserved Time</u>	<u>Talk Time</u>	<u>Work Time</u>				
Bob	7048	1/13/2006 12:00:00AM	1/14/2006 12:00:00AM	07:59:42	04:25:05	55.3%	02:17:55	28.8%	0:01:08	0.2%	01:13:30	15.3%	0:02:04	
Summary:					07:59:42	04:25:05	55.3%	02:17:55	28.8%	0:01:08	0.2%	01:13:30	15.3%	0:02:04
Grand Total:					07:59:42	04:25:05	55.3%	02:17:55	28.8%	0:01:08	0.2%	01:13:30	15.3%	0:02:04

Agent State Detail

Fiscal year/period	1/13/2006	
Calendar Day	1/13/2006	
IPCC:Event Date and	1/13/2006	
IPCC:Hour	1/13/2006	
IPCC:Half Hour	1/13/2006	
IPCC: Event Type		
Key Figures		
IPCC:Resouce ID	Bob ████████	
IPCC: Reason Code		
Fiscal year/period	01/2005	
Fiscal Year Variant	Mar.- Feb., 4 special periods	
IPCC: Profile ID	1	
IPCC: Reason Code	IPCC: Event Type	IPCC:Duration
WORKING	Logged-in	00:00:00
	Ready	02:17:55
	Reserved	00:01:08
	Talking	01:13:30
	Work	00:02:04
	Result	03:34:37
LUNCH	Not Ready	01:04:23
	Result	01:04:23
END OF DAY	Logout	00:00:00
	Result	00:00:00
AGENT JUST LOGGED IN	Not Ready	00:01:04
	Result	00:01:04
AGENT RECEIVED NON-ACD CALL	Not Ready	00:06:14
	Result	00:06:14
AGENT WENT OFF-HOOK	Not Ready	00:02:43
	Result	00:02:43
RESEARCH	Not Ready	02:28:53
	Result	02:28:53
BREAK	Not Ready	00:41:48
	Result	00:41:48
Overall Result		07:59:42



Agent Detail

- The Agent Detail Report shows detailed information about talktime, holdtime, worktime by call types: inbound, outbound, transfers, conferences etc.

Agent Call Summary Report

5/15/2006 12:00:00 AM - 5/16/2006 12:00:00 AM

Inbound ACD **Inbound Non-ACD** **Outbound**

<u>Agent Name</u>	<u>Extension</u>	<u>Total Inbound</u>	<u>Inbound ACD</u>		<u>Inbound Non-ACD</u>		<u>Outbound</u>		<u>ACD Transfer-In</u>	<u>ACD Transfer-Out</u>	<u>ACD Conference</u>
			<u>Total</u>	<u>Avg Talk/ Hold/Work</u>	<u>Total</u>	<u>Avg / Max Talk Time</u>	<u>Total</u>	<u>Avg / Max Call Time</u>			
Adriana	752	17	8	0:01:54 0:00:08 0:01:45	9	0:03:21 0:09:45	18	0:00:53 0:10:02	0	5	0

Contact Service Queue

- The Contact Service Queue Activity Report shows a summary of calls presented to, handled by, abandoned from, and dequeued from each contact service queue. It also shows calls handled by workflows in other contact service queues, and average and maximum time information for calls handled, calls handled, calls abandoned, and calls dequeued.

Contact Service Queue Activity Report (by CSQ)

5/15/2006 12:00:00 AM - 5/16/2006 12:00:00 AM

- * Calls Hand < SL: calls handled within service level
- ** Calls Aband < SL: calls abandoned within service level
- 1. Service Level for Handled Call: Only : (Calls Handled Within Service Level / Calls Handled) * 100%
- 2. Service Level with Abandoned Call: Counted: (Calls Handled Within Service Level / (Calls Presented - Calls Abandoned Within Service Level)) * 100%
- 3. Service Level with Abandoned Call: Counted Positively: ((Calls Handled Within Service Level + Calls Abandoned Within Service Level) / Calls Presented) * 100%
- 4. Service Level with Abandoned Call: Counted Negatively: (Calls Handled Within Service Level / Calls Presented) * 100%

CSQ Name (Call Skills)	Interval Start Time Interval End Time	Service Level (sec)	Calls Hand < SL*	Calls Aband < SL**	Percentage of Service Level Met				Calls Presented	Calls Handled	Calls Abandoned	Calls Dequeued			
					1 Only Handled	2 Without Abandon	3 Positive Abandon	4 Negative Abandon							
Q01 (SOE_Drives)	5/15/2006 12:00:00AM 5/16/2006 12:00:00AM	30	112	1	88.29%	75.79%	75.89%	75.29%	149	127	85.29%	3	2.09%	0	0.09%
Summary:			112	1	88.29%	75.79%	75.89%	75.29%	149	127	85.29%	3	2.09%	0	0.09%
		EDUCATING				NETWORKING									INFLUENCING

CRM Integration

- Calls to CRM interaction(s)
- Calls to Complaints
 - Complaints by product
 - Complaints by customer type
- Average times
 - By product
 - By customer type
 - By agent
 - By queue
- Call analysis by customer and product

Key Learnings

- Proper support patch level for UDC
- Creating the correct infoobject types
- Applying proper EDW principles in building appropriate staging and application layers

Questions?

Contact: Manish.Umarwadia@TLI-USA.COM

Phone: 847-942-3751.

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