Supported BAM Version: Oracle BAM 12.1.3

Supported ODI Version: ODI 11g or 12c

Objectives:

- This document explains integration form ODI to BAM.
- We are using Oracle as Source Technology and JMS Topic XML as target technology from ODI
- This document briefly explains the steps to integrate ODI with BAM using some sample tables.

Note:

We have used following versions to create above examples.

Oracle Data Integrator 11g (11.1.1) Build ODI_11.1.1.6.0_GENERIC_111219.1055

If you are using a later version of ODI, "Interface" is replaced with "Mapping", create "Mapping" accordingly.

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2. Abstract

Integration form ODI to BEAM:

We are using Oracle as Source Technology and JMS Topic XML as target technology from ODI.

We have sample tables DEPARTMENT and EMPLOYEE tables from source data store Oracle DB.

Create sample tables:

Create Table DEPARTMENT(deptid varchar2(30),dname varchar2(30),PRIMARY KEY (deptid));

CREATE TABLE Employee(id varchar2(30),name varchar2(30),address varchar2(30),deptid varchar2(30), PRIMARY KEY (id), Foreign Key (deptid) references DEPARTMENT(deptid));

XML schema should be prepared corresponding to above tables which represent JMS message. Table1 represents DEPARTMENT and Table2 represents EMPLOYEE.

ODI_DEMO.xsd :

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<xs:schema version="1.0" targetNamespace="http://xmlns.oracle.com/bam" xmlns:tns="http://xmlns.oracle.com/bam"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name='Root'>
<xs:complexType>
   <xs:choice minOccurs="0" maxOccurs="unbounded">
         <xs:element name="Table1" type="tns:Table1" minOccurs="0" maxOccurs="unbounded" />
                           <xs:element name="Table2" type="tns:Table2" minOccurs="0" maxOccurs="unbounded" />
   </xs:choice>
  </xs:complexType>
</xs:element>
<xs:complexType name='Table1'>
 <xs:sequence>
                  <xs:element name="ID" type="xs:string" minOccurs="0" maxOccurs="1"/>
                  <xs:element name="DNAME" type="xs:string" minOccurs="0" maxOccurs="1"/>
 </xs:sequence>
 <xs:attributeGroup ref="attributeGroup"/>
</xs:complexType>
<xs:complexType name='Table2'>
 <xs:sequence>
                  <xs:element name="ID" type="xs:string" minOccurs="0" maxOccurs="1"/>
                  <xs:element name="NAME" type="xs:string" minOccurs="0" maxOccurs="1"/>
                  <xs:element name="ADDRESS" type="xs:string" minOccurs="0" maxOccurs="1"/>
                  <xs:element name="DEPTID" type="xs:string" minOccurs="0" maxOccurs="1"/>
 </xs:sequence>
 <xs:attributeGroup ref="attributeGroup"/>
```

<xs:simpletype name="OperationNameType"> <xs:restriction base="xs:string"> <xs:enumeration value="INSERT"></xs:enumeration> <xs:enumeration value="DELETE"></xs:enumeration> <xs:enumeration value="UPDATE"></xs:enumeration> <xs:enumeration value="UPSERT"></xs:enumeration> </xs:restriction> </xs:simpletype>
<xs:attributegroup name="attributeGroup"> <xs:attribute name="operationType" type="tns:OperationNameType" use="required"></xs:attribute> <xs:attribute name="dataObjectName" type="xs:string" use="required"></xs:attribute> <xs:attribute name="keys" type="xs:string"></xs:attribute> </xs:attributegroup>

We will be integrating DEPARTMENT and EMPLOYEE from Source Data Store to BAM using JMS TOPIC XML technology through ODI.

Prerequisites:

- **1.** XML Schema definition should be prepared for corresponding target tables like ODI_DEMO.xsd.
- **2.** Create topic (eg: jms/odiTopic) and connection factory (eg: jms/odiFactory) on beam server.
- **3.** ODI repository should be created.

Connect to ODI repository by providing user name and password

3. Creates Target Data Store for JMS

3.1 Create Physical Architecture:

The physical architecture defines the different elements of the information system. A *technology* handles formatted data. Therefore, each technology is associated with one or more data types that allow Oracle Data Integrator to generate data handling scripts.

The physical components that store and expose structured data are defined as *data servers*. A data server is always linked to a single technology. A data server stores information according to a specific technical logic which is declared into *physical schemas* attached to this data server. Every database server, JMS message file, group of flat files, and so forth that is used in Oracle Data Integrator must be declared as a data server. Every schema, database, JMS Topic, etc., used in Oracle Data Integrator, must be declared as a physical schema.

Go to Topology \rightarrow Physical Architecture \rightarrow Technologies \rightarrow JMS Topic XML then right click and select New Data Server.



1. Provide name for Data Server

ODI_DEMO_TR	GX	
Test Connection		
Definition JNDI	🔵 Data Server	
Properties	Name:	ODI_DEMO_TRG
Data Sources Version	Technology:	JMS Topic XML 💌
Privileges	(Data Server):	
Flexfields	Connection	
	User:	
	Password:	
	JNDI Cor	nection
	Array Fetch Size	: 30 Batch Update Size: 30

- 2. Select JNDI tab
 - a. JNDI Authentication: From the list, select the authentication mode.
 - b. JNDI User: Enter the username to connect to the JNDI directory (not mandatory).
 - c. Password: This user's password (not mandatory).
 - d. JNDI Protocol: From the list, select the JNDI protocol (not mandatory).
 - e. JNDI Driver: Name of the initial context factory java class to connect to the JNDI provider

 - g. JNDI Resource: Logical name of the JNDI resource corresponding to your JMS Queue (or Topic) connection factory.

Parameter	Value	Notes
d	<dtd file<br="">location></dtd>	DTD File location (relative or absolute) in UNC format. Use slash "/" in the path name and not backslash "\" in the file path. This parameter is mandatory.
re	<root element></root 	Name of the element to take as the root table of the schema. This value is case sensitive. This parameter can be used for reverse-engineering a specific message definition from a WSDL file, or when several possible root elements exist in a XSD file.
ro	true false	If true, the XML file is opened in read only mode.
S	<schema name></schema 	Name of the relational schema where the XML file will be loaded. This value must match the one set for the physical schema attached to this data server. This parameter is mandatory.
CS	true false	Load the XML file in case sensitive or insensitive mode. For case insensitive mode, all element names in the DTD file should be distinct (Ex: Abc and abc in the same file are banned). The case sensitive parameter is a permanent parameter for the schema. It CANNOT be changed after schema creation. Please note that when opening the XML file in insensitive mode, case will be preserved for the XML file.
JMSXML_ROWSEPARATOR	5B23245D	Hexadecimal code of the string used as a line separator (line break) for different XML contents. Default value is 5B23245D which corresponds to the string [#\$].
JMS_DESTINATION	JNDI Queue name or Topic name	JNDI Name of the JMS Queue or Topic. This parameter is mandatory.
tna	boolean (true false	Transform Non Ascii. Set to false to keep non-ascii characters. Default is true. This parameter is not mandatory.

JNDI URL Properties Table:

ODI_DEMO_TF	RG X	
Test Connection		
Definition JNDI	JNDI Authentification:	Simple
Properties Data Sources	JNDI User:	weblogic
Version Privileges	JNDI Protocol:	<undefined></undefined>
Flexifields	JNDI Driver:	weblogic.jndi.WLInitialContextFactory
	JNDI On: JNDI Resource:	

Following XSD represents target tables /JMS message.

- a. JNDI Authentication: Simple.
- b. JNDI User: weblogic
- c. Password: weblogic
- d. JNDI Protocol: not mandatory.
- e. JNDI Driver: weblogic.jndi.WLInitialContextFactoryprovider
- f. JNDI URL:

t3://adc2201821.us.oracle.com:7001?d=D:\schema\ODIDEMO\ODI_DEMO.xsd&s=ODI_ DEMO_TRG&drop_on_disc=true&JMS_DESTINATION=jms.odiTopic.

- g. JNDI Resource: Logical name of the JNDI resource corresponding to your JMS Queue (or Topic) connection factory: jms/odiFactory
- 3. Test Connection

ODI_DEMO_TF	RG X	
Test Connection		
Definition		
JNDI	JNDI Authentification:	Simple
Properties	JNDI User:	weblogic
Data Sources Version	Password:	•••••
Privileges	JNDI Protocol:	<undefined></undefined>
Flexfields	JNDI Driver:	weblogic.jndi.WLInitialContextFactory
	JNDI Url:	t3://adc2201821.us.oracle.com:7001?d=D:\schema\ODIDEMO\ODI_DEMO.xsd&s=ODI_DEMO_TRG&drop_on_disc=true&JMS_DESTINATION=jms.odiTopic
	JNDI Resource:	jms/odiFactory
Test Con Select a Physica	Physical Agent to test th Agent: Local (No Agen Local (No Agen	D_TRG XX is Connection X it) all Test Cancel

- 4. Create New Physical Schema
 - 1. Select New Physical Schema

🖧 Designer 🗴 🔣 Operator 🗴 🌆 Topology 🔀 🖓 Security 🗴	_
<u></u>	- 💆 -
▽ Physical Architecture	-
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🗊 🖓 Hyperion Financial Management	
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1 Interbase	
🖽 🖳 🚺 JAX-WS	
🗄 📔 JMS Queue	
🗄 🗝 📴 JMS Queue XML	
IMS Topic XML	
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±€ Duplicate Selection	
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I New Physical Schema	
Import	
Export	
Microsoft SOL Server	
I NetRexx	
🗐 ···· 📴 Netezza	
🗈 ··· 📴 ODI Tools	

1. Select Schema which has given in the JNDI URL i.e ODI_DEMO_TRG

ODI_DEMO	_TRG × BODI_DEMO_TRO	5.0DI_DEMO_TRG ×
Definition Context	🚏 Physical Schema [Data	a Server: ODI_DEMO_TRG]
Version	Name: OI	DI_DEMO_TRG.ODI_DEMO_TRG
Privileges	Schema (Schema): OD	DI_DEMO_TRG
Tiextields	Schema (Work Schema): OI	DI_DEMO_TRG
	V Default	
	Work Tables Prefix	
	Errors: E\$_	Loading: C\$_ Integration: I\$_ Temporary Indexes: IX\$_
	Journalizing elements p	refixes
	Datastores:]\$	Views: JV\$ Triggers: T\$
	Naming Rules	
	Local Object Mask:	%SCHEMA, %OBJECT
	Remote Object Mask:	%OBJECT
	Partition Mask:	
	Sub-Partition Mask:	
	Local Sequence Mask:	
	Remote Sequence Mask:	

2. Select Context Tab and Select Logical Schema.

Note: Create Logical Architecture with undefined physical schema then link physical to logical here.

ODI_DEMO	_TRG × ODI_DEMO_TRG.ODI_DEMO_TRG ×	
Definition		
Context		+ ×
Version	Context	Logical Schema
Privileges	Global	ODI_DEMO_TRG
Flexfields		

3.2 Create Logical Architecture:

The logical architecture allows a user to identify as a single Logical Schema a group of similar physical schemas - that is containing data stores that are structurally identical - but located in different physical locations. Logical Schemas, like their physical counterpart, are attached to a technology.

Context allows resolving logical schemas into physical schemas. In a given context, one logical schema resolves in a single physical schema.

Go to Topology \rightarrow Logical Architecture \rightarrow Technologies \rightarrow JMS Topic XML then right click

1. Select New Logical Schema.

▽ Logical Architecture	
	^
🗊 🕞 In-Memory Engine	
🗄 … 🦳 Informix	
🕀 🗤 🦳 Ingres	
🗄 … 🕞 Interbase	
🗊 🕞 JAX-WS	
🗊 📲 🗍 JMS Queue	
🗊 🖓 JMS Queue XML	
🖳 🖓 JMS Topic	
🛱 ···· 📔 JMS Topic) ^{////}	1
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👜 🛄 Datatı 🛛 <u>V</u> iew	
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🗊 🗍 JavaScript 💥 Delete Delete	
Developical Schema	
Microsoft A Datatypes <u>R</u> everse-Engineering	
Microsoft E	
Import ■	~
Export	உறி –

2. Provide name for Logical Schema.

ODI_DEMO	D_TRG × 10001_DEMO_TRG.ODI_DEMO_TRG × 10001_DEMO_TRG ×	
Definition Privileges Flexfields	Iogical Schema Name: DDI_DEMO_TRG	
	Context	Physical Schemas
	Global	ODI_DEMO_TRG.ODI_DEMO_TRG

3.3 Create Model:

A Model is the description of a set of data stores. It corresponds to a group of tabular data structures stored in a data server. A model is based on a Logical Schema defined in the topology. In a given Context, this Logical Schema is mapped to a Physical Schema. The Data Schema of this Physical

Schema contains physical data structure: tables, files, JMS messages, elements from an XML file, that are represented as data stores.

Models as well as all their components are based on the relational paradigm (table, columns, keys, etc.). Models in Data Integrator only contain *Meta data*, that is the description of the data structures. They do not contain a copy of the actual data.

Go to Designer \rightarrow Models

1. Select New Folder



2. Provide name for folder



3. Select New Model

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- 4. Provide Model Information
 - a. **Name**: Name of the model used in the user interface.

 - b. Technology: Select JMS TOPIC XML.c. Logical Schema: Select the Logical Schema.

Tech Note: Oracle BAM – ODI Integration

ODI_DEMO × GODI_DEMO_1	TRG ×		(
🔞 Reverse Engineer 🖋 Check Mod			
Definition	🔁 Madal [Made	al Faldam ODT DEMO]	
Reverse Engineer	iiii nodel [node		
Selective Reverse-Engineering	Name:	ODI_DEMO_TRG	
Control	Coder	ODI DEMO TRG	
Journalizing	couc.		
Journalized Tables	Technology:	JMS Topic XML	•
Markers	Logical Schema:	ODI_DEMO_TRG	•
Services	Action Crown	Canadia Artian's	
Memo	Action Group;		
Version	Default Folder:		م 🍳
Privileges		Disolav the Metadata changes in the Model tree	
Flexfields	Description:		

5. Select Reverse Engineer

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🔞 Reverse Engineer 🛷 Check Mo	Reverse Engineer 🖋 Check Model						
Definition Reverse Engineer	Standard Customized						
Selective Reverse-Engineering	Context: Global	•					
Control	Logical Agent: Local (No Agent)	•					
Journalizing							
Journalized Tables	Types of objects to reverse-engine	eer					
Markers	✓ Table View Queue	System Table Table Alias Synonym					
Services	Maaku	94					
Memo	MdSK;	л л					
Version	Characters to Remove from Table Alias:						
Privileges Flexfields	Table Alias maximum length:	35					

6. Selective Reverse Engineering and Click on Reverse Engineer.

ODI_DEMO X GODI_DEMO_TRG X						
Reverse Engineer 🖋 Check Model						
Definition Reverse Engineer Selective Reverse-Engineering	Selective Reverse-Engineering New Datastores Existing Datastores Dijects to Reverse	Engineer				
Control						
Journalizing	Table Name	Table Type				
Journalized Tables	ROOT	Table				
Markers	TABLE1	Table				
Services	TABLE2	Table				
Memo						
Version						
Privileges						
Flexfields						

7. After Reverse Engineering Selected Data Stores shown like below



4. Create Source Data Store for Oracle

4.1 Create Physical Architecture: Go to Topology \rightarrow Physical Architecture \rightarrow Technologies \rightarrow Oracle then right click and select New Data Server.



1. Provide name for Data Server

ODI_DEMO_SRC ×					
Test Connection					
Definition IDBC	🕽 Data Server				
On Connect/Disconnect	Name: ODI_DEMO_SRC				
Properties Data Sources	Technology: Orade 💌				
Version	Instance / dbink (Data Server):				
Privileges Elexfields	Connection				
	User: demouser				
	Password:				
	Array Fetch Size: 30 Batch Update Size: 30				

2. Select JDBC tab

JDBC Driver: oracle.jdbc.OracleDriver JDBC URL: jdbc:oracle:thin:@localhost:1521:orcl

ODI_DEMO_SRC ×			
Test Connection			
Definition JDBC	JDBC Driver:	orade.jdbc.OradeDriver	Q
On Connect/Disconnect	JDBC Url:	idbc:oracle:thin:@localhost:1521:ord	Q
Properties			
Data Sources			
Version			
Privileges			
Flexfields			

3. Test Connection

ODI_DEMO_SRC	x		
Test Connection			
Definition JDBC	JDBC Driver:	oracle.jdbc.OradeDriver	Q
On Connect/Disconn	JDBC Url:	jdbc:orade:thin:@localhost:1521:ord	9
Properties Data Sources Version Privileges Flexfields	Test Connection for Select a Physical Ag Physical Agent: Lo	per: ODI_DEMO_SRC SS gent to test this Connection Conne	*

4. Create New Physical Schema

1. Select New Physical Schema



2. Select Schema i.e DEMOUSER

ODI_DEMO	_SRC × MODI_DEMO_SR	C.DEMOUSER ×				
Definition Context	😤 Physical Schema [Data Server: ODI_DEMO_SRC]					
Version	Name:	DI_DEMO_SRC.DEMOUSER				
Privileges Elexfields	Schema (Schema):	EMOUSER V				
TICKICIUS	Schema (Work Schema): D	EMOUSER 💌				
	V Default					
	Work Tables Prefix					
	Errors: E\$_ Loading: C\$_ Integration: I\$_ Temporary Indexes: IX\$_					
	Journalizing elements prefixes Datastores: J\$ Views: IV\$ Triggers: T\$					
	Naming Rules					
	Local Object Mask:	%SCHEMA, %OBJECT				
	Remote Object Mask:	%SCHEMA, %OBJECT@%DSERVER				
	Partition Mask:	%SCHEMA. %OBJECT PARTITION(%PARTITION)				
	Sub-Partition Mask:	%SCHEMA, %OBJECT SUBPARTITION(%PARTITION)				
	Local Sequence Mask:	%SCHEMA, %OBJECT.nextval				
	Remote Sequence Mask	: %SCHEMA, %OBJECT.nextval@%DSERVER				

3. Select Context Tab and Select Logical Schema.

Note: Create Logical Architecture with undefined physical schema then link physical to logical here.

	D_SRC × MODI_DEMO_SRC.DEMOUSER ×		
Definition		2 L	
Context	Context	Logical Schema	~
Privileges	Global	ODI_DEMO_SRC	
Flexfields			

4.2 Create Logical Architecture:

Go to Topology \rightarrow Logical Architecture \rightarrow Technologies \rightarrow Oracle then right click

1. Select New Logical Schema.

崎 Designer 🗴 🔣 Operator 🗴 🌆 Topology 🗴	<u>а</u> . х	-
62		<u>-</u>
म्र… 🧊 Technologies ॓ ् ् Agents		
Contexts	- 🗳 -	
▽ Logical Architecture		
JMS Queue XML JMS Topic JMS Topic XML JMS Topic XML JAva BeanShell JavaScript JavaScript Jourge JavaScript Microsoft Access Microsoft Excel Microsoft SQL Server Microsoft SQL Server Microsoft SQL Microsoft SQL Operating System Operating System Operating System Operating System		
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<u>⊎</u>		-
	Delete	
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Datatypes <u>R</u> everse-Engineering		_
I Import		1
Contraction Contraction		_

2. Provide name for Logical Schema.

4.3 Create Model:

Go to Designer \rightarrow Models

1. Create New Folder and Select New Model

Models	S		
a	DDI DEMO		
	<u>O</u> pen		
	View		
÷ 🖆	New		
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\times	<u>D</u> elete	Delete	
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	Import		•
	Export		
2	<u>E</u> dit Memo		
	<u>P</u> rint		•
	Ve <u>r</u> sion		•

2. Provide Model Information

Name: Name of the model used in the user interface.

Technology: Select ORACLE.

Logical Schema: Select the Logical Schema.

CODI_DEMO_SRC ×			
🔞 Reverse Engineer 🛷 Check Mod			
Definition	C Model Mode	STERION OF DEMO	
Reverse Engineer	m Model [Mode		
Selective Reverse-Engineering	Name:	ODI DEMO SRC	
Control	Code:	ODI_DEMO_SRC	
Journalizing			
Journalized Tables	Technology:	Orade	-
Markers	Logical Schema:	ODI_DEMO_SRC	-
Services			
Memo	Action Group:	<pre><comenc action=""></comenc></pre>	_
Version	Default Folder:	Q	<i></i>
Privileges		Display the Metadata changes in the Model tree	
Flexfields	Description:		

3. Select Reverse Engineer

GODI_DEMO_SRC ×							
🔞 Reverse Engineer 🛷 Check Mod							
Definition Reverse Engineer	 Standard 	Customized		_			
Selective Reverse-Engineering	Context:	Global		-			
Control	Logical Agent:	aent: Local (No Agent)					
Journalizing				_			
Journalized Tables	Types of ob	jects to reverse-eng	ineer				
Markers	Table	View 🔽 Queue	System Table 🖉 Table Alias 🔍 Synonym				
Services	Maralin		a				
Memo	Mdsk:		79 				
Version	Characters to F	temove from Table Alia	۶				
Privileges	Table Alias may	imum length:	35				
Flexfields							

4. Selective Reverse Engineering and Click on Reverse Engineer.

CODI DEMO ERC X				
	2-1			
(ng Reverse Engineer V Check Mod				
Definition	Selective Reverse-Engineering			
Reverse Engineer	Selective Reverse Engineering			
Selective Reverse-Engineering	 New Datastores Existing Datastores 	Objects to Reverse Engineer		
Control				Image: A state of the state
Journalizing	Table Name	÷1	1 Table Type	
Journalized Tables	DEPARTMENT		Table	
Markers	EMPLOYEE		Table	
Services				
Memo				
Version				
Privileges				
Flexfields				

5. After Reverse Engineering Selected Data Stores shown like below



5. Create Project

Now Source (ORACLE) and Target (JMS) are available. Now create Project, Interfaces and Packages.

We have two example package implementations

- 1. Single Row Per Message by using variables and filter
- 2. Batch Rows per Message by using Temp Interfaces and Filters.

5.1 Create New Project

Designer Navigator, click New Project in the toolbar of the Projects. Enter the Name of the project

CODI_TO_I	BEAMPROJ	ЕСТ ×
Definition	- Droio	A.
Markers	- Proje	
Memo	Name:	ODI_TO_BEAMPROJECT
Version	Code:	ODI_TO_BEAMPROJECT
Flexfields		
TIEXTICIUS		

5.2 Import Knowledge modules

1. Go to Global Objects in Designer then Import Knowledge Modules.



2. Import IKM SQL to JMS XML Append

🔩 Import Knowledge	e Modules (XML File)	x
Import Type:	Duplication	•
File import directory:	<pre>sre1\Oracle_ODI1\oracledi\client\\xml-reference</pre>	9
Select the file(s) to im	port:	
IKM SQL to Hyperion I	Essbase (METADATA)	^
IKM SQL to Hyperion I	Financial Management Data	
IKM SQL to Hyperion I	Financial Management Dimension	
IKM SQL to Hyperion I	Planning	<u>_</u>
IKM SQL to JMS Appe	nd	
IKM SQL to JMS XML A	Append	
IKM SQL to SQL Contr	ol Append	
IKM SQL to SQL Incre	mental Update	
IKM SQL to Teradata	(TTU)	
IKM SQL to Teradata	Control Append	~
Help	OK Cance	!

5.3 Single Row Per Message

5.3.1 Create Interfaces

1. Crete Folder then Create Interface DEPARTMENT_IN.

DEPARTM	IENT_IN ×	
Definition Markers	hterface [Folder:	ODI_TO_BEAM]
Memo	Name:	DEPARTMENT_IN
Version Privileges	Optimization Context:	Global
Flexfields	V Staging Area Differe	ent From Target
	Oracle: ODI_DEMO_SF	۲C ۲
	Description:	

2. Go to Mappings Tab then Drag and Drop Department table into target form ODI_DEMO_SRC model and Department table form Oracle to Source. Columns with same name will get automatically mapped and other columns can be mapped by drag and drop from source to target.

Assign ROOTFK, OPERATION TYPE, KEYS and DATAOBJECT NAME to 0, 'INSERT', 'ID' and 'DEPARTMENT' respectively..

DEPARTMENT_IN X	ROOTFK - Property Inspector ×
🍭 🔍 100% 👻 🔀 🗎 🔍 🛕 🔤 🔤	
Target Datastore - TABLE1 Position Indicators Name Mapping TopPartment (DEPARTMENT) Comparison of the second s	Mapping Properties Active Mapping: Implementation Technical Description Business Rule 0 Execute on: 0 % Source Toget Source Datastore: Toget Staging Area O • • • • • • • • • • • • • • • • • • •

2. Assign OPERATIONTYPE to 'INSERT'

DEPARTMENT_IN ×			(OPERATIONTYPE - Property Inspector	x
🍳 🔍 100% 👻 💢 📄 🔍 🔺 🗐 📃			() 🔣 I 📌 🗟 I 🥒	(🎁 Find 🕹 🖓 😮
^	📰 Target Datast	ore - TABLE1		Mapping Properties	
	Position Indicators	Name	Mapping	Active Mapping:	
	1 🚺 🐴	*DATAOBJECTNAME	'DEPARTMENT'		
	2 🕐 🛂	DNAME	DEPARTMENT.DNAME	Implementation Technical Desc	ription Business Rule
	30	DNAMEORDER			I I I I I I I I I I I I I I I I I I I
	4 0004	ID	DEPARTMENT.DEPTID	'INSERT'	
1 - DEPARTMENT (DEPARTMENT)	50	IDORDER	Incl	inderer .	
V 🕞 *DEPTID		RETS	ID Incent		
UNAME	8 4	ROOTEK	DISERT		
	90	TABLE 1ORDER			
				Execute on:	C Tarnet
				Source Datastore: DEPARTMENT	(DEPARTMENT)
				Insert:	
				Update:	
				Name:	OPERATIONTYPE
				Datatype:	VARCHAR
				Length:	255
				Scale:	0
-				Key:	
				Check Not Null (Flow control only):	✓
				UD1:	UD2:
				UD3:	UD4:
				UD5:	UD6:
				UD7:	UD8:
				000.	

3. Go to Overview tab and Select check box 'Staging area different form Target' and then select Oracle Source from Drop Down.

DEPARTM	IENT_IN ×	
Definition Markers	hterface [Folder:	ODI_TO_BEAM]
Memo	Name:	DEPARTMENT_IN
Version Privileges Elexfields	Optimization Context:	Global ent From Target
TICXIICIUS	Orade: ODI_DEMO_SF	v
	Description:	

 Go to Flow tab select target then it will show Property Inspector Select IKM – IKM SQL to JMS XML APPEND Options: SYNCHRO_XM_TO_JMS to true INITIALIZE_XML_SCHEMA to true ROOT_TABLE to ROOT.

P DEPARTMENT_IN ×	-	Target Area - Property Inspect	tor ×			_
Q Q 100% - 1 💢 🔲 🖉	^	🖳 📌 🔄 🥒			💏 Find 🕹 🏠)?
Staging Area (ODL DEMO_SR Default - 0 KM SOL to JMS XML Append TABLE1 TABLE1		Target Properties Distinct Rows: IRM Selector: IRM SQL to Options: Name SYNCHRO_XML_TO_JMS SYNCHRO_XML_TO_JMS DINTTALIZE_XML_SCHEMA ROOT_TABLE JMSSPLIVERYMODE JMSSPLIVERYMODE JMSSPRIORITY SENDMESSAGETYPE JMSTYPE	Value Value true true ROOT <default>:2 <default>:9 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default>:2 <default :2<br=""><default :2<br=""><default :2<br=""><default :2<br=""><default :2<br=""><default :2<br=""><default :2<br=""><default :2<="" th=""><th>•</th><th>COMPONENT NAME: IKM SQL to JMS XML Append AUTHOR: Oracle Description : - Integration Knowledge Module - Inserts data in a JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITTALIZE_XML_SCHEMA option should be set to VSSE for the ford interface loadion data in the XML</th><th></th></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default></default>	•	COMPONENT NAME: IKM SQL to JMS XML Append AUTHOR: Oracle Description : - Integration Knowledge Module - Inserts data in a JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITTALIZE_XML_SCHEMA option should be set to VSSE for the ford interface loadion data in the XML	

5. Create Interface EMPLOYEE_IN

EMPLOYE	E_IN ×											(
Definition Markers	hterface [Folder]	: ODI_TO_BEAM]										
Memo	Name:	EMPLOYEE_IN										
Version Privilegen	Optimization Context:	Global										•
Flexfields	V Staging Area Differ	ent From Target										
	Orade: ODI_DEMO_S	RC										•
	Description:											
EMPLOY	EE_IN ×								ROOTFK - Property In	spector ×		
<u>.</u>	0% ▼ 22 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	LOYEE (EMPLOYEE) E RESS ID	~	Positon In 1 2 3 4 5 6 7 8 9 10 11 12 13 13 13 13 13 13 13 13 13 13	t Datast	Name ADDRESSORDER "DATADBLECTNAME DEPTIDARDER ID DORDER KEYS NAME NAMEORDER "OPERATIONTYPE ROOTEK TABLE2ORDER	Mapping EMPLOYEE.ADDRESS EMPLOYEE.ID TO' EMPLOYEE.ID TO' EMPLOYEE.NAME EMPLOYEE.NAME TASERT' D	•	Active Mapping: Implementation 0 Execute on: Source Datastore: Insert: Update: Target Column Pro Name: Datatype: Length: Scale: Key: Check Not Null (Fic User Defined Fage UD1: UD2: UD2: UD2: UD3: UD5: UD9:	(a) a source (b) a source (c) a source (c) Target	· · ·

EMPLOYEE_IN ×	▼	Target Area - Property Inspec	tor X	
🔍 🔍 100% 🔍 🔀 🔜 📰	^	强 l 📌 🖹 l 🥒	(*	Find 🖓 👔 🕄
Image: Staging Area (ODI_DEMO_SR Image: Default - 0 Image: Staging Area (ODI_DEMO_TR) Image: Staging Area (ODI_DEMO_TR)		Target Properties Distinct Rows: Distinct Rows: IRM Selector: Dotions: Name SYNCHRO_XML_TO_JMS INTTIALZE_XML_SCHEMA ROOT_TABLE JMSELIVERYMODE JMSPELIVERYMODE JMSPRIORITY SENDMESSAGETYPE JMSTYPE	value Value true ROOT «default>:0 «default>:2 «default):2 «default>:2 «default>:2 «default>:2 «def	COMPONENT NAME: IKM SQL to JMS XML Apper AUTHOR: Oracle Description : - Integration Knowledge Module - Inserts data in a JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITIALIZE_XML_SCHEMA option should b cet to VES for the first interface loading data in J

6. Create Folder as ODI_TO_BEAM and Package as SINGLE_ROW_PER_MESSAGE

Now we are implementing this package which delivers one row per JMS message. Following steps needs to be performed.

- 1. Create required variables
- 2. Update Interface with filters
- 3. Create Package flow with variables and filters

SINGLE_R	ROW_PER_MESSAGE ×
Definition	Package [Folder: ODI TO BEAM]
Execution	
Scenarios	Name: SINGLE_ROW_PER_MESSAGE
Markers	Description:
Memo	
Version	
Privileges	
Flexfields	

5.3.2 Create Variables

1. Create count variable

Definition	Definition							
Refreshing	valiame[hi0]err_0n7_10_prelihk/01er1]							
History	Name:	count						
Markers Memo	Datatype:	Numeric						
Version	Keep History:	All Values						
Privileges	Secure Value:							
	Default Value:							
	Description:							

2. Create deptid variable

Definition	💡 Variable [Pi	roject: ODI TO REAMPROJECT]	
Refreshing			_
History	Name:	depüd	
Markers Memo	Datatype:	Numeric	•
Version	Keep History:	All Values	•
Privileges	Secure Value:		
	Default Value:		7
	Description:		

Go to refreshing tab and provide the following query.

SELECT DEPTID FROM (SELECT DEPTID, ROWNUM RN FROM DEPARTMENT) WHERE RN=#ODI_TO_BEAMPROJECT.count

💡 deptid 🗡		
Definition		
Refreshing	Schema: ODI_DEMO_SRC	
History	Select Query:	R 🗸 🖉
Markers	SELECT DEPTID FROM (SELECT DEPTID,ROWNUM RN FROM DEPARTMENT) WHERE RN=#ODI_TO_BEAMPROJECT.count	
Memo		
Version		
Privileges		

3. Create total_departments

Definition	A								
Refreshing	vanable [Project: Obi_10_BEAPPROJECT]								
History	Name:	total_departments							
Markers	Datatype:	Numeric V							
Memo	buturype.								
Version	Keep History:	All Values 🗸							
Privileges	Secure Value:								
	Default Value:								
	Description:								

Go to refreshing tab and provide the following query.

select count(*) from DEPARTMENT

otal_departments ×						
R 🗸 🆉						

4. Create variable empid

Tech Note: Oracle BAM – ODI Integration

Definition Refreshing	💡 Variable [P	roject: ODI_TO_BEAMPROJECT]
History	Name:	empid
Markers	Datatype:	Numeric
Version	Keep History:	All Values
Privileges	Secure Value:	
	Default Value:	
	Description:	

💡 empid 🗴		(
Definition		
Refreshing	Schema: ODI_DEMO_SKC	
History	Select Query:	🐏 🖌 🥖
Markers	SELECT ID FROM (SELECT ID, ROWNUM RN FROM EMPLOYEE) WHERE RN=#ODI_TO_BEAMPROJECT.count	
Memo		
Version		
Privileges		

5. Create variable total_employees

Definition	1									
Refreshing	Variable [P	§ Vanable [Project: UD_10_BEAMPROJECT]								
History	Name:	total_employees								
Markers	Datatype:	Numeric								
Version	Keep History:	All Values								
Privileges	Secure Value:									
	Default Value:									
	Description:									

💡 total_emp	ployees ×						
Definition Refreshing	Schema: ODI_DEMO_SRC						
History	Select Query:	• 🥒					
Markers	select count(") from EMPLOYEE						
Memo							
Version							
Privileges							

Define Filter on interfaces:

Update Interfaces with filters: Drag DEPTID from Source to blank area then filter shows up like below. Update the expression with above created variable.

DEPARTMENT_IN ×		F	Filter - Property Inspec	ctor ×		_				
🍭 🔍 100% 🔍 💢 📄 🔍 🔬 🗐 📓			i		🗟 i 📌 🗟 i 🥒		(🎁 Find	400		
	Target Datast	ore - TABLE1		T	Filter Properties					
	Position Indicators	Name	Mapping		Active Filter:					
	1 🔰 🐴	*DATAOBJECTNAME	'DEPARTMENT'							
	2 🖓 🐴	DNAME	DEPARTMENT.DNAME		Implementation	Technical Description	Business Rule			
	3	DNAMEORDER						I I I I I I I I I I I I I I I I I I I		
	4 🖉 🕬	ID	DEPARTMENT.DEPTID					•••		
1 - DEPARTMENT (DEPARTMENT)	5 🕥	IDORDER			DEPARTMENT.DEP	JEPARTMENT.DEPTID = #deptid				
V m- DEPTID	6 🕥 🛂	KEYS	'ID'							
V DNAME	7 🕐 🐴	*OPERATIONTYPE	'INSERT'							
	8 🕥 🐴	ROOTFK	0							
	9 🕜	TABLE 1ORDER								
					Execute on:	Source	🔿 👕 Staging Area			
DEPARTMENT.DEPTID = #deptid					Create Temporary	Indexes: <none></none>		•		

Drag ID from Source to blank area then filter shows up like below. Update the expression with above created variable.

DEPARTMENT_IN × P EMPLOYEE_IN ×	F	Filter - Property Inspecto	or X		_				
🍭 🔍 100% 🔍 💢 🗎 🔍 🛦 🗐 💹				i		🕄 📌 🔮 🥒 -		(🎁 Find	₽ (?)
^	🔲 Ta	rget Datas	tore - TABLE2			Filter Properties			
	Position	Indicators	Name	Mapping		Active Filter:			
		1 🕐 🐴	ADDRESS	EMPLOYEE.ADDRESS					
		20	ADDRESSORDER			Implementation	Technical Description	Business Rule	
		3 🕥 🐴	*DATAOBJECTNAME	'EMPLOYEE'					I / R
1 - EMPLOYEE (EMPLOYEE)		4 🕐 🦓	DEPTID	EMPLOYEE.DEPTID		5101 OVEF TO			
V e MD		5 🕜	DEPTIDORDER			EMPLOTEE.ID = #em	1pia		
V NAME		6 🕐 🐴	ID	EMPLOYEE.ID					
		70	IDORDER						
ADDRESS		8 🕐 🐴	KEYS	'ID'					
V DEPID		9 🕥 🐴	NAME	EMPLOYEE.NAME					
	1	0 🕜	NAMEORDER			-	- 0.0		
	1	1 🕐 🐴	*OPERATIONTYPE	'INSERT'		Execute on:	Image: Source	e 🔘 👕 Staging Area	
	1	2 🕥 🐴	ROOTFK	0		Create Temporary In	dexes: <none></none>		-
	1	3 🕜	TABLE2ORDER						

5.3.3 Create Flow in package using variables and interfaces:

- 1. Assign count value to 1
- 2. Refresh the total_departments.
- 3. Refresh deptid which gets deptid
- 4. Add interface
- 5. Increment count by 1
- 6. Repeat step 3 if count <= total_departments
- 7. Refresh total_employees
- 8. Assign count value to 1
- 9. Refresh empid which gets id
- 10. Add interface
- 11. Increment count by 1
- 12. Repeat step 9 if count <= total_employees



13. Execute Package: Execute package by clicking on local and review the results in Session List of the Operator tab.

5.4 Batch Rows per Message

Now we are implementing this package which delivers defined number of rows per JMS message. Following steps needs to be performed.

- 1. Create required variables
- 2. Create Temp Interface with rownum
- 3. Create Interface which holds Temp Interface and add filter on rownum
- 4. Create Package flow with variables and interfaces

Create Project ODI_DEMO and Package INITIAL_END_TO_END

	ID_TO_END ×
Definition	
Execution	
Scenarios	Name: INITIAL_END_TO_END
Markers	Description:
Memo	
Version	
Privileges	
Flexfields	

5.4.1 Create Variables

1. Create variable min

💡 min 🗴		
Definition Refreshing	💡 Variable [P	roject: ODI_DEMO]
History	Name:	
Markers Memo	Datatype:	Numeric 🗸 🗸
Version	Keep History:	All Values 🗸
Privileges	Secure Value:	
	Default Value:	1
	Description:	

2. Create variable max

💡 max 🗴		
Definition Refreshing	💡 Variable [Pi	oject: ODI_DEMO]
History	Name:	max
Markers Memo	Datatype:	Numeric
Version	Keep History:	All Values -
Privileges	Secure Value:	
	Default Value:	5
	Description:	

3. Create Variable total_departments

💡 total_depa	artments ×	
Definition Refreshing	💡 Variable [P	roject: ODI_DEMO]
History	Name:	total_departments
Markers Memo	Datatype:	Numeric •
Version	Keep History:	Latest Value
Privileges	Secure Value:	
	Default Value:	
	Description:	

💡 total_dep	artments X		
Definition Refreshing	Schema: ODI_DEMO_SRC		
History	Select Query:	2	1
Markers	select count(*) from DEPARTMENT		
Memo			
Version			
Privileges			

4. Create variable total_employees

💡 total_emp	loyees ×	
Definition	💡 Variable [P	roject: ODI DEMO)
Refreshing		
History	Name:	total_employees
Markers Memo	Datatype:	Numeric
Version	Keep History:	All Values 🗸
Privileges	Secure Value:	
	Default Value:	
	Description:	

💡 total_emp	ployees X	
Definition Refreshing	Schema: ODI_DEMO_SRC	
History	Select Query:	2 🗸 🥖
Markers	select count(*) from EMPLOYEE	
Memo		
Version		
Privileges		

5.4.2 Create Interfaces:

Department Interface:

 Create Temp Interface for DEPARTMENT Name: 'DEMO_TMP_DEPT' Schema: Select source

PEMO_TE	MP_DEPT ×		
Definition Markers	hterface [Folder:	DEMO_INITIAL]	
Memo	Name:	THROUGH AND	
Version Privileges	Optimization Context:	(doba) •	
Flexfields	Staging Area Differe	ent From Target	
	Oracle: ODI_DEMO_SF	RC ·	
	Description:		

2. Go To mapping page Drag DEPARTMENT into source then select all the columns from source then drop them into target.

🔍 🔍 100% 🔍 🎇 🗐 🔍 🛦 🖃 📰	•	🖳 📌 🗟 🥒		🛞 Find	₽₽ 00
	Indextors Name Mapping OC DEPARTMENT.Department.Depart	Source Properties Journalized Data only: Use Temporary Interfac Alias: Order: Context: Partition/Sub-Partition: Datastore OSub-Interfi Resource: DEPA Datastore: DEPA Datastore: DEPA Logical Schema: DOI_ Logical Schema: DOI_ Context: Globs Physical Schema: DOI_ Catalog: Data Server: DOI_	ace as Derived Table (Sub-Select): rface Details PARTMENT PARTMENT LOEMO_SRC LOEMO_SR	DEPARTMENT	

3. Select Target Data Store and Right Click then click on add column

🍭 🔍 100% 🔍 💢 📄 🔍 🛕 🥅 💹	i	🖳 📌 🗟 🥒 🛛 🤇	🖥 Find 🕹 🖓
EE1 - DEPARTMENT (DEPARTMENT) V ⊕~ 'DEPTID V DNAME	dicato Add Column Co	Temporary Target Properties Name: Context: Temporary Datastore Location:	CExecution Context> Data schema

4. Select the new column then set name, type and assign value ROWNUM to it

🍳 🔍 100% 🔻 🎇 🗎 🔍 🛕 🔤 📰				i		📌 🔮 I 🥒	#	Find	₽ ₽
^ ^ [<tem< th=""><th>porary Tar</th><th>get Datastore></th><th></th><th>Ma</th><th>nning Properties</th><th></th><th></th><th></th></tem<>	porary Tar	get Datastore>		Ma	nning Properties			
I	Indicators	Name	Mapping		Ac	tive Manning:			
	0 %	DEPTID	DEPARTMENT.DEPTID		_				
		DNAME	DEPARTMENT.DNAME		In	npiementation	Technical Desc	ription Business Rule	
•		KNOM	KOWNOM						🗸 🍆 E
					RO	OWNUM			
1 - DEPARTMENT (DEPARTMENT)					Ex	ecute on:	Source	🔿 👕 Staging Area	🔿 🗿 Target
V *DEPTID					So	urce Datastore:	DEPARTMENT ((DEPARTMENT)	
V DNAME					Ins	sert:			
					Up	date:	 Image: A start of the start of		
					··· Tar	rget Column Prop	perties		
					Na	ime:		RNUM	
					Da	itatype:		NUMBER	
					Ler	ngth:		50	
					Sci	ale:		50	
-					Ke	y:			
					Ch	ieck Not Null (Flo	w control only):		
					···· Use	er Defined Flags			
					UD	01:		UD2:	
					UD	03:		UD4:	
					UD	5:		UD6:	
					UD	07:		UD8:	
					UD	9:		UD 10:	

5. Select Target Data Store and set name DEMO_TMP_ DEPT_TRG for it



6. Go to flow tab and select IKM

BEMO_TEMP_DEPT ×	Target Area - Property Insp	pector ×		
🍳 🔍 100% 🔻 💢 🔲 📰	🔁 🕄 I 📌 📴 I 🥒 👘		👘 Find	- JA)(
	···· Target Properties ······			
	Distinct Rows:		- when working with journalized data. If the	synchronize
	IKM Selector: IKM SQ	L Control Append.GLOBAL	deletions from journal" is executed, the delete	ed rows on
T Staging Area (ODI_DEMO_SR	Options:		the target are committed regardless of the CO	JMMIT option
Default - 0 🚽 SQ	Name	Value	- The TRUNCATE option cannot work if the ta	rget table is
DEMO_TMP_DEPT_TRG	INSERT	<default>:true</default>	 referenced by another table (foreign key) 	· · · ·
	COMMIT	<default>:true</default>	- When using the RECYCLE_ERRORS option, '	/ou have to
	FLOW_CONTROL	<default>:true</default>	- When using this module with a journalized so	ource table.
DEPARTMENT	RECYCLE_ERRORS	<default>:false</default>	data are automatically filtered to not include s	source
	STATIC_CONTROL	<default>:false</default>	deletions.	
	TRUNCATE	<default>:false</default>	- The FLOW_CONTROL and STATIC_CONTRO	JL options
	DELETE_ALL	<default>:false</default>	call the Check Knowledge Module to isolate in	valid data (if
	CREATE_TARG_TABLE	<default>:false</default>	Ino CKM is set, an error occurs). Both options	must be set 🔍

7. Create interface DEMO_DEPT

DEMO_DE	PT X	
Definition Markers	hterface [Folder:	DEMO_INITIAL]
Memo	Name:	JEMO DET
Version	Optimization Context:	Global 🗸
Flexfields	🕑 Staging Area Differe	ent From Target
	Oracle: ODI_DEMO_SR	xc
	Description:	

8. Go to mappings tab then drag the temp interface DEMO_TEMP_DEPT into source



9. Select ROOTFK, OPERATION TYPE, KEYS and DATAOBJECT NAME on target and assign 0 and 'INSERT', 'ID' and 'DEPARTMENT' respectively.

				ROOTFK - Property In	spector ×		_
			i	🖳 i 📌 📴 i 🥒		(Find	
Target Datas	tore - TABLE1			···· Mapping Propertie	s		
Position Indicators Position Indicators 2 0 9 3 0 5 0 6 0 9 7 0 8 7 4 9 0	tore - TABLE1 Name "DATAOBJECTNAME DNAME DNAMEORDER ID IDORDER KEYS "OPERATIONTYPE ROOTFK TABLE1ORDER	Mapping DEPARTMENT' DEMO_TMP_DEPT_TRG.DNAME DEMO_TMP_DEPT_TRG.DEPTID TD' "INSERT" 0	9	Mapping Propertie Active Mapping: Implementation D Execute on: Source Datastore Insert: Update: Target Column Pro Name: Datatype: Length: Scale: Key: Check Not Null (Fi User Defined Flag UD1: UD3: UD3: UD3:	Image: source Image: source	scription Business Rule : • •	
				Check Not Null (Fil User Defined Flag UD1: UD3: UD5: UD7: UD9:	ow control only)	:UD2: UD4: UD6: UD8: UD10:	

10. Create Filter on ROWNUM and update expression as DEMO_TMP_DEPT_TRG.RNUM > 0 and DEMO_TMP_DEPT_TRG.RNUM between #min and #max

DEMO_TEMP_DEPT × P DEMO_DEPT ×			Filter - Property Inspe	ector ×		_				
🍳 🔍 100% 🔍 🐹 🗎 🔍 🔬 🗐 📰				i	🖳 📌 🗟 🥒		(💏 Find	₽ ₽)0		
	🔢 Target Datas	tore - TABLE1			···· Filter Properties ···					
Po	osition Indicators	Name	Mapping		Active Filter:					
	1 🕥 🐴	*DATAOBJECTNAME	'DEPARTMENT'							
	2 🕥 🐴	DNAME	DEMO_TMP_DEPT_TRG.DNAME		Implementation	Technical Description	Business Rule			
	3 🕜	DNAMEORDER						V / 🖃		
	4 🕐 🐴	ID	DEMO_TMP_DEPT_TRG.DEPTID		DEMO TWO DEDT TRC DNUM	TDC DNUM > 0 and DEM	A and DEMO, THE DEET THE DIST MALER Have their and three			
- DEMO_TEMP_DEPT (DEMO_TMP_)	50	IDORDER				DEMO_IMP_DEPI_IRG.RNUM > 0 and DEMO_IMP_DEPI_IRG.RNUM Detween #min and #max				
V DEPTID	6 🕐 🐴	KEYS	'ID'							
V DNAME	70 %	*OPERATIONTYPE	'INSERT'							
O RNUM	80 %	ROOTEK	0							
	a (D)	TABLE TORDER								
					Execute on:	Source	Staging Area			
					Create Temporary	y Indexes: <none></none>		•		

11. Select TEMP_DEPARTMENT from source then check option use temp interface as Derived Table

DEMO_TEMP_DEPT × P DEMO_DEPT ×						9	DEMO_TEMP_DEPT - P	Property Inspector ×		-
🍳 🔍 100% 🔍 🔀 📄 🔍 🛆 🖻 💹					i	5	🔜 📌 🞯 🥒		💏 Find	⇒☆) 3
^	📰 Target D	atasto	ore - TABLE1				··· Source Properties			
	Position India	ators	Name	Mapping			Journalized Data	only:	· · · · · · · · · · · · · · · · · · ·	
	1 🕥	×.	*DATAOBJECTNAME	'DEPARTMENT'			Une Terrerow In	tenform on Desired Table (Sub Salast).		
	2 🕥	×.	DNAME	DEMO_TMP_DEPT_TRG.DNAME			use reliporary in	nerrace as berived rable (Sub-Select):		
	3 🕜		DNAMEORDER				Alias:		DEMO_TMP_DEPT_TRG	
	400	a	ID	DEMO_TMP_DEPT_TRG.DEPTID			Order:		1	
4 1 - DEMO_TEMP_DEPT (DEMO_TMP_I	500	1	IDORDER	1701			Contexts		-Evention Contents	
V DEPTID	7	2	PODED ATTOMITYDE	'INCEPT'			Contexts		CEXECUTION CONTExt>	
V DNAME	800	R .	ROOTEK	0			Partition/Sub-Part	tition:	<none></none>	-
n RNUM	90		TABLE LORDER	0			Datastore or Sub-	Interface Details		
							Recourse:			
							l lesource.			
							Datastore:			
							Model:			
							Logical Schema:	ODI_DEMO_SRC		
							Context:	Global		
							Physical Schema:	ODI_DEMO_SRC.DEMOUSER		
							Catalog:			
							Data Server:	ODI_DEMO_SRC		

12. Go To Flow tab then Select IKM, update SYNCHRO_XML_TO_JMS,INITIALIZE_XML_SCHEMA to true and ROOT_TABLE to ROOT.

² ª DEMO_TEMP_DEPT × ¹ ª DEMO_DEPT ×	•	Target Area - Property Inspector	r X	(# Find) ()
IKM SOL to JMS XML Append Transet (ODL DEMO_TR)		Target Properties Distinct Rows: IVM Selector: IVM SQL to J Options: Name SYNORRO_XML_TO_JMS INITIALIZE_XML_SOHEMA ROOT_TABLE JMSEDLIVERYMODE JMSEDLIVERYMODE JMSEDLIVERYMODE JMSEDLIVERYMODE JMSEDLIVERYMODE JMSTPE	Value	COMPONENT NAME: INM SQL to JMS XML Append AUTHOR: Oracle Description : - Integration Kiton is 246 Module - Insert data na JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITIALIZE; XML_SOHEMA option should be set to YES for the first interface loadion data in the XML ochema. For

EMPLOYEE interface:

1. Create Temp interface for EMPLOYEE Name: DEMO_TMP_EMP

PEMO_TN	1P_EMP ×	
Definition Markers	hiterface [Folder:	DEMO_INITIAL]
Memo	Name:	DEMO_TR9_1349
Version	Optimization Context:	Global -
Flexfields	Staging Area Differe	ent From Target
	Orade: ODI_DEMO_SF	ac
	Description:	

2. Go to mappings tab drag EMPLOYEE to source then select all the columns from source then drop them into target.



3. Select Target Data Store and Right Click then click on add column

🍳 🔍 100% 👻 💢 📄 🔍 🛆 🖻 🧱	1	🔣 l 📌 📴 l 🥒 🤅 🕻 🕅 🕅	₽ ₽) ?
TI - EMPLOYEE (EMPLOYEE) V g= "D V NAME V ADVESS V DEPTID	Indicators Name Main Name Name Name Name Number Of Rows Sort Redo Auto Mapping Name	Source Properties Journalized Data only: Use Temporary Interface as Derived Table (Sub-Selec Alias: Order: Context: Partition/Sub-Partition: Datastore or Sub-Interface Details Resource: EMPLOYEE Datastore: EMPLOYEE Model: ODILSER_SRC_CDC Logical Schema: ODI_SRC Context: Global Physical Schema: Catalog: Data Server: ODI_SRC	t): PMPLOYEE 1 (Execution Context) (Alone>

4. Select Target Data Store and set name DEMO_TMP_DEPT_TRG for it

					DEMO_TMP_EMP_TRG - Property Inspector ×					
Γ				i	🖳 I 🏓 📴 I 🥒	(🎁 Find 🕹 🖓 🗿				
	🔢 Targe	t Datasto	re - DEMO_TMP_EMF	P_TRG	···· Temporary Target Properties ····					
I	ndicators	Name	Mapping		Name:	DEMO TMP EMP TRG				
1	/ 🐴	NAME	EMPLOYEE.NAME		inc.					
1	/ 14	ADDRESS	EMPLOYEE.ADDRESS		Context:	<execution context=""></execution>				
1	/ 🐴	DEPTID	EMPLOYEE.DEPTID		Temporary Datastore Location:	Data schema				
1	/ 3	ID	EMPLOYEE.ID		remporary batastore cocation.					
1	1 🐴	RNUM	ROWNUM							
Т										
L										
L										

5. Select the new column then set name, type and assign value ROWNUM to it

THE DEMO_TMP_EMP X	RNUM - Property Inspector X
	🔣 I 📌 😰 I 🥒 🥼 Find 🔍 🟠 🥘
Image: The second se	ROWALM Active Mapping: Prind Prind

6. Go to Flow tab and Select IKM

Pademo_tmp_emp ×	Target Area - Property Inspector	X	_
R R 100% V 💢 🔲 🖉	🗟 I 🏓 🔮 I 🥒		(🎁 Find 🕹 🕼 3
Target (ODL_DEMO_SRC) Target (ODL_DEMO_SR Default - 0 EMPLOYEE DEMO_TMP_EMP_TRG	Target Properties Distinct Rows: IM Selector: IM Orade In Options: Name INSERT UPDATE COMMIT SYNC_IRN_DELETE FLOW_CONTROL RECYCLE_ERRORS STATIC_CONTROL TRUNCATE	remental Update.GLOBAL Value <default>:true <default>:true <default>:true <default>:true <default>:true <default>:false <default>:false <default>:false</default></default></default></default></default></default></default></default>	Bour opion's must be set to nor in the case when an Integration Interface populates a TEMPORARY target datastore. - The option FLOW_TABLE_OPTION is set by default to NOLOGGING. Set it to whitespace if the interface runs on an Orade 7 database -Deletes are commited regardless of the COMMIT option -The ANALYZE_TARGET option will evaluate correct statistics based on old data. -Default UPDATE option is TRUE, which means by default it's assumed that there is at least one non-key column v

7. Create Interface DEMP_EMP

DEMO_TMP	_EMP × P DEMO_EMI	
Definition Markers	Tinterface [Folder:	DEMO_INITIAL]
Memo	Name:	DEMO_BMP
Version	Optimization Context:	Global 🗸
Flexfields	Staging Area Differe	ent From Target
	Oracle: ODI_DEMO_SR	xc -
	Description:	

8. Go to mappings tab drag DEMO_TMP_EMP in to source

DEMO_TMP_EMP × DEMO_EMP ×		DEMO_TMP_EMP - Property Inspector ×	_
🍳 🔍 100% 🔍 🔀 📄 🔍 🔬 🖻 📰		🕕 🔅 🕈 🖉 l 🥒	(it Find 4) (2)
^	Target Datastore - TABLE2	Source Properties	
	Position Indicators Name Mapping	Journalized Data only:	
	1 ADDRESS DEMO_TMP_EMP_TRG.AD	RESS	
	2 ADDRESSORDER	use reliporary interface as perived rable (Sub-Select).	
	3 🕔 🌯 *DATAOBJECTNAME 'EMPLOYEE'	Alias:	DEMO_TMP_EMP_TRG
	4 DEPTID DEMO_TMP_EMP_TRG.DE	TID Order:	1
	5 DEPTIDORDER		
	6 DEMO_TMP_EMP_TRG.ID	Context:	<execution context=""></execution>
	7 DORDER	Partition/Sub-Partition:	<none></none>
	8 KEYS ID		
	9 MAME DEMO_IMP_EMP_IRG.NA	Latastore or Sub-Interface Details	
	10 NAMEORDER	Resource:	
	11 Sector	Datastore:	
- DEMO TWP EMP (DEMO TWP EM	12 TABLE2ODDED		
V ADDRESS	15 U HALLZONDEN	Model:	
V DEDTO		Logical Schema: ODI_DEMO_SRC	
V D		Context: Global	
V NAME			
D PNIM		Physical Schema: ODI_DEMO_SRC.DEMOUSER	
		Catalog:	
		Data Server: ODI_DEMO_SRC	
	411		

9. Select ROOTFK, OPERATION TYPE, DATAOBJECT NAME and KEYS on target and assign 0 and 'INSERT', 'EMPLOYEE' and 'ID' respectively

PEMO_TMP_EMP × P DEMO_EMP ×						ROOTFK - Property	Inspector ×		-
🍳 🔍 100% 👻 🔀 🗐 🔍 🖄 🗐 📰					i	🖳 i 📌 🗟 i 🏑	1	(Find	400
^	Targe	t Datas	tore - TABLE2			Mapping Propert	ies		
	Position In	dicators	Name	Mapping		Active Mapping:			
	1	-	ADDRESS	DEMO_TMP_EMP_TRG.ADDRESS					
	2 (ADDRESSORDER			Implementation	Technical Des	cription Business Rule	
	3	- 4	*DATAOBJECTNAME	'EMPLOYEE'					🖌 🥖 📄
	4) Ma	DEPTID	DEMO_TMP_EMP_TRG.DEPTID					
	50		DEPTIDORDER			U U			
	6	- M a	ID	DEMO_TMP_EMP_TRG.ID					
	70	24	IDORDER	Ital					
	8	10	REYS	ID					
	9	- 10	NAME	DEMO_IMP_EMP_IRG.NAME					
	11	-	*OPERATIONTYPE	'INSERT'		Execute on:	Source	: 🔿 👕 Staging Area 🛛 🧿 Target	
	12	4	ROOTEK	0		Seurce Dataste			
	13		TABLE2ORDER	-		Source Datastor	e: [DEMO_IMP_E	MP (DEMO_IMP_EMP_IRG)	•
						Insert:	~		
						Update:	~		
						···· Target Column P	roperties		
						Name:		ROOTFK	
						Datatype:		NUMERIC	
SOL1 - DEMO_TMP_EMP (DEMO_TMP_EM						Length:		10	
V ADDRESS						Scale:		0	
						Key:			
V NAME						Check Not Null (low control only):	:	
n RNUM							gs		

10. Create Filter on ROWNUM and update expression as DEMO_TMP_EMP_TRG.RNUM > 0 and DEMO_TMP_EMP_TRG.RNUM between #min and #max

DEMO_TMP_EMP ×							Filter - Property Inspector X		
🍳 🔍 100% 👻 I 🔀 I 🗐 🔍 I 🛦 I 🗐 📰						()	🖪 I 📌 🖹 I 🥒 🍈 Find 🔍 🖓 🔇		
	^	🔠 Targ	Target Datastore - TABLE2				Filter Properties		
		Position 1	indicators	Name	Mapping		Active Filter:		
		1	0 🐴	ADDRESS	DEMO_TMP_EMP_TRG.ADDRESS				
		2		ADDRESSORDER	lan and a second		Implementation Technical Description Business Rule		
		3		*DATAOBJECTNAME	EMPLOYEE		🗸 🥒 🖯		
V ADDRESS			6.0	DEPTID	DEMO_IMP_EMP_IRG.DEPTID		DEMO_TMP_EMP_TRG.RNUM > 0 and DEMO_TMP_EMP_TRG.RNUM between #min		
V DEPTID		6	4	ID	DEMO TMP EMP TRG.ID		and #max		
V ID		7	5	IDORDER					
V NAME		8	0 🐴	KEYS	'ID'				
n RNUM		9	0 🐴	NAME	DEMO_TMP_EMP_TRG.NAME				
		10	D	NAMEORDER					
		11	0 🐴	*OPERATIONTYPE	'INSERT'		Execute on:		
		12	D 🐴	ROOTFK	0		Create Temporary Indexes: <none></none>		
		13		TABLE2ORDER					
1									
DEMO_TMP_EMP_TRG.RF	NUM	> 0 and DI		EMP_TRG.RNUM b	etween				
#min and #max									

11. Select TEMP_EMPLOYEE from source then check option use temp interface as Derived Table



12. Go To Flow tab then Select IKM, update SYNCHRO_XML_TO_JMS,INITIALIZE_XML_SCHEMA to true and ROOT_TABLE to ROOT.

Demo_tmp_emp x Patrice X	▼	Target Area - Property Inspector X	_
Q Q 100% V 💢 🗏 📰	^	🖳 📌 🖹 🥒	Find
Staging Area (ODL_DEMO_SRC) Defaut - 0 KM SOL to JMS XML Append TABLE2		Target Properties Distinct Rows: Distinct Rows: Distinct Rows: Distinct Rows: Distinct Rows: Distinct Rows: Name Value Name Value Nithol RoyM_TO_MS Tue Nithol Rows: Name Nithol Rows: Name Root_TABLE ROOT MSRPIGRATION	COMPONENT NAME: IXM SQL to JMS XML Append AUTHOR: Oracle Description : - Integration Knowledge Module - Inserts data in a JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITIALIZE_XML_SCHEMA option should be set to XPS. for. the Aret Interface loading data in the XML

5.4.3 Create Package flow with defined variables and interfaces

- 1. Refresh the total_departments
- 2. Assign min value to 1
- 3. Assign max value to 5 {batch size}
- 4. Add interface DEMO_DEPT
- 5. Increment min by 5 {batch size}
- 6. Increment max by 5 {batch size}
- 7. Repeat step 4 if max <= total_departments
- 8. Check if min <= total_departments then assign max = #total_departments then Repeat step 4
- 9. Refresh total_employees
- 10. Assign min value to 1
- 11. Assign max value to 5 {batch size}
- 12. Add Interface DEMO_EMP
- 13. Increment min by 5 {batch size}
- 14. Increment max by 5 {batch size}
- 15. Repeat step 4 if max <= total_employees
- 16. Check if min <= total_employees then assign max = #total_employees then Repeat step 4



Execute Package: Execute package by clicking on

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We can see the execution results in Operator tab like below

▼ Ses	sion List	
	390001 - INITIAL END TO END - May 4, 2012 6:08:37 PM	^
	A Stool And A Control And A Co	
	🖶 🦚 0 - Refresh the total departments - May 4, 2012 6:08:37 PM	
	1 - Assign min value to 1 - May 4, 2012 6:08:37 PM	
	🗈 🗠 🙆 2 - Assign max value to 5 - May 4, 2012 6:08:37 PM	
	B	
	G 5 - Increment max by 5 - May 4, 2012 6:08:41 PM	
	🗉 📲 🕜 4 - Increment min by 5 - May 4, 2012 6:08:42 PM	
	🗄 🐨 🕐 5 - Increment max by 5 - May 4, 2012 6:08:42 PM	
	🗄 🖉 6 - max <= total_departments - May 4, 2012 6:08:42 PM	
	🗄 🗝 🕐 3 - DEMO_DEPT - May 4, 2012 6:08:42 PM	
	🗄 🐨 🕙 4 - Increment min by 5 - May 4, 2012 6:08:43 PM	
	🗄 🐨 🕙 5 - Increment max by 5 - May 4, 2012 6:08:43 PM	
	🗈 🐨 🕜 6 - max <= total_departments - May 4, 2012 6:08:43 PM	
	🗈 🐨 🔇 3 - DEMO_DEPT - May 4, 2012 6:08:43 PM	
	🗄 🖓 4 - Increment min by 5 - May 4, 2012 6:08:43 PM	
	🗄 🗠 🕜 5 - Increment max by 5 - May 4, 2012 6:08:43 PM	
	🗈 🔮 6 - max <= total_departments - May 4, 2012 6:08:43 PM	
	🗄 🖤 🔮 3 - DEMO_DEPT - May 4, 2012 6:08:43 PM	
	🗄 🖓 4 - Increment min by 5 - May 4, 2012 6:08:44 PM	
	🗄 🗠 💇 5 - Increment max by 5 - May 4, 2012 6:08:44 PM	
	🗄 🖓 🖉 6 - max <= total_departments - May 4, 2012 6:08:44 PM	
	H ···· · · · · · · · · · · · · · · · ·	
	\square	
	$M = 0^{-1}$ $M =$	
	A - Increment min by 5 - May 4, 2012 6:08:46 PM	
	B. 0 5 - Increment may by 5 - May 4, 2012 6:08:46 PM	
	B	
	9 - Refresh total employees - May 4, 2012 6:08:46 PM	
	10 - Assign min value to 1 - May 4, 2012 6:08:46 PM	
	I1 - Assign max value to 5 - May 4, 2012 6:08:46 PM	
	🗑 🗠 🙆 12 - DEMO_EMP - May 4, 2012 6:08:46 PM	~

Please refer to below link for ODI Documentation for more information

http://docs.oracle.com/cd/E23943_01/integrate.1111/e12644/jms_xml.htm#CIHDCIFC

6. CDC

6.1 Customize IKM

Copy and Customize IKM to notify Target Data Source about Deletes: Go to Global Objects and then Global Knowledge Modules \rightarrow Integration KM then click on IKM SQL to JMS XML Append.

KM SQL to JMS XML	Append ×		
Definition	🔁 Knowledge Mod	lule [Global]	
루 Details	Name:	Info SQL to 1945 XML Append	
here of the second seco	Type:	The Internation Consultation Module &	
🚰 Markers	-)per	In the day load of the pair of Technologies	
🐚 Memo		V Multi-Connections	
in Version	Source Technology:	 definel> 	
🚺 Privileges	Target Technology:	<undefined></undefined>	
f Flexfields	Description:		
Lines	COMPONENT NAME:	IKM SQL to JMS XML Append	
	AUTHOR: Oracle		
	Description : - Integration Knowle - Inserts data in a JN Restrictions: - The INITIALIZE_XM	dge Module IS XML Message from any ISO-92 compliant staging area. IL_SCHEMA option should be set to YES for the first interface loading data in the XML schema. For this interface, ROOT_TABLE should also be set to the resource name of the highest table in the XML model	
	hierarchy. - The SYNCHRO_XML - Options: CLIENTID, - When using this mo	_TO_JMS option should be set to YES only for the interface finalizing the loading of the data of the XML schema. DURABLE, MESSAGEMAXMUMBER, MESSAGETIMEOUT, MESSAGESELECTOR are not used. They should be set to a null value. dule with a journalized source table, data are automatically filtered to not include source deletions	

Go to Details tab then select Insert into XML

IKM SQL to JMS XML	Append ×									
🥒 Definition										4 🗙 🔶 👃
루 Details	Order	Command	Context	Logical Schema	Transaction	Commit	Ignore Errors	Log Final Command	Log Level	Log Counter
Pa Options		31 Truncate XML Schema								5
Markere		41 Initialize root table								4
Ge Markers		51 Lock journalized table			Toopooling 1	No Commit				4
🔡 Memo		61 Insert into XML (JMS Message)			Transaction 1	No Commit				3 Insert
🙀 Version		111 Synchronize XML to JMS			Transaction 1	Commit				3
Privileges										
f(.) Flexfields										
Lines										
A Toport into VML (
W Inservinto And (

Modify the code on Source.

Remove following code from where clause and use this IKM in all the corresponding interfaces.

<% if (odiRef.getDataSet(i, "HAS_JRN").equals("1")) { %>

JRN_FLAG <> 'D'

<%} else {%>

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QL to JMS XML Append 🗴										
inition 🖂 General										
ails Name:	Name: Insert into XML (JMS Message)									
ions Log Counter:	Log Counter: Insert V Log Level: 3									
kers	Log Counter: Insert ▼ Log Level: 3									
no 🖃 Journali	lizing									
sion	nalized Table in the Staging Area									
ileges Journ	nalized Table in the current Interface									
fields	d Table statement									
ert into XML (a-rable statement									
	current command for Derived-Table sub-select statement									
Create	Temporary Indexes									
 None 	e 🔿 On Source									
Command	on Target Command on Source									
Technology	y: Undefined> Transaction Isola 	ion:								
Context:	<execution context=""></execution>	 								
Transaction	n: Autocommit Commit:	<undefined></undefined>								
Command	4									
<pre> *%efor (m <%w=odR select */n1t*, =*, from where <%w=odR <%w=odR <%w=odR <%w=odR <%w=odR <%w=odR <%w=odR</pre>	<pre>c*fs((nti-0) < odRef.getDataSet(0, 'Vperator)%></pre>									

6.2 Modify Source Data Store for CDC

We Have Source Oracle (ODI_DEMO_SRC) and JMS Target (ODI_DEMO_TRG)

6.2.1 Model Updates

Open the Models accordion in the Designer navigator by clicking on the label



6.2.2 Right-click on the ODI_DEMO_SRC model and select Changed Data Capture > Add to CDC. Click yes to add all the tables to the CDC.



6.2.3 Double-click on the Oracle CDC Source model. The editor for this model opens

GODI_DEMO_SRC ×			(
Reverse Engineer 🖋 Check Mod			
Definition			
Reverse Engineer	🛅 Model [Mode	I Folder: ODI_DEMO]	
Selective Reverse-Engineering	Name:	ODI_DEMO_SRC	
Control	Code:	ODI DEMO SRC	
Journalizing			
Journalized Tables	Technology:	Orade 🗸	
Markers	Logical Schema:	ODL DEMO_SRC 🗸	
Services	1-1		
Memo	Action Group:	 	
Version	Default Folder:	Q 4	
Privileges		Display the Metadata changes in the Model tree	
Flexfields	Description:		

6.2.4 Go to the Journalizing tab.

Select the **Consistent Set** journalizing mode, click **OK** to close the popup window then the **JKM Oracle Consistent** knowledge module

ODI_DEMO_SRC ×			E
🔞 Reverse Engineer 🛷 Check Moo			
Definition Reverse Engineer Selective Reverse-Engineering	Journalizing Mode: Consistent Set Simple Journalizing KM		
Journalizing	Knowledge Module: JKM Oracle Consistent.GLOBAL		
Journalizeng Journalized Tables Markers Services Memo Version Privileges Flexfields	Option COMPATIBLE VALIDATE	Value Opefault>:9 Opefault>:false	

6.2.5 Go to the Journalized Tables tab, select the tables and click on the Remove from CDC button if we want to exclude some of the tables from CDC.

GODI_DEMO_SRC ×			3
🔞 Reverse Engineer 🛷 Check Mor			
Definition Reverse Engineer Selective Reverse-Engineering Control Journalizing	Order 100	Table Name 01 DEPARTMENT 02 EMPLOYEE	습 🕹 🗶 📴 🔂
Journalized Tables Markers Services Memo Version Privileges Flexfields			

6.2.6 Click on the Reorganize button to order the tables according to their foreign-keys. Press yes on all confirmation dialogs. The data stores are automatically organized as shown below

ODI_DEMO_SRC × Reverse Engineer Check Mo	del		
Definition Reverse Engineer Selective Reverse-Engineering Control Journalizing Journalized Tables Markers Services Memo Version Privileges Flexfields	Order	Table Name 10001 DEPARTMENT 10002 EMPLOYEE	🔐 🖟 💥 🕎 🐏 Reorgani

- 6.2.6 Click Save(🗐) on the toolbar to save the Model
- 6.3 Creating a Package to Set Up CDC
 - 6.3.1 We will create a package that sets up the CDC infrastructure in a given context. In the Designer navigator, Click on the Projects accordion.



6.3.2 Expand the CDC project and then expand the First Folder folder Select Package and Create New Package with name CDC SETUP

Definition	W Designers (Feddam Gart feddam)
Execution	
Scenarios	Name: CDC_SETUP
Markers	Description:
Memo	
Version	
Privileges	
Flexfields	

6.3.3 Go to the Diagram tab. Drag and drop into the diagram the ODI_DEMO_SRC data model from the Designer's Models tree view. A new step appears in the diagram, named after your data model

CDC_SETUP ×		-
Toolbox		<u>^</u>
🗁 All		
🗁 Changed Data Capture		
Content Count Count		
CodRetrieveJournalData		
ColiWaitForData		
Regional Contract Con		
OdiWaitForTable		
	ODI_DEMO_SRC	
🗁 Event Detection		
🗁 Files		
🗁 Internet		
🗁 Metadata		
🗁 Oracle Data Integrator Objects		
🗁 Plugins		
🗁 SAP		
🗁 Utilities		~

6.3.4 Click on this step. In the Properties panel: • Select Journalizing Model in the Type drop-down list

Туре
Journalizing Model

- Click the Start and Add Subscribers checkboxes.
- Enter CONSUMER1 in the Subscribers field, and then click Add.
- Enter CONSUMER2 in the Subscribers field, and then click Add.

2 Event Detection	
2 Files	
Contract Con	
😂 Metadata	
Concerning Determine Concerning C	
Plugins	
⇒ SAP	
Contraction of the second seco	~
Properties	
General Advanced Ontions Menn Version Privalence	
	Tuna
Step name ODI DEMO SRC DOI DEMO SRC	lournalizing Model
liked object	Sour realizing moder
ODL DEMO_SRC	
- Journalizing	
V Start V Add Subscribers	
Stop Remove Subscribers	
Consumption	
Extend Window Lock Subscribers	
Purge Journal Unlock Subscribers	
Subscribers	
	Add
CONSUMER 1	Delete
CONSUMER2	

- 6.3.5 Click Save(\Box) on the toolbar to save the package.
- 6.3.6 Click on the Execute (\triangleright) button on the toolbar.

Execution	X
Context:	Global 👻
Logical Agent:	Local (No Agent) 💌
Log Level:	5
Simulation	
Help	OK Cancel

- 6.3.7 Press OK when the Session Started window appears.
- 6.3.8 Open the Operator navigator. In the Operator, select the Session List tab, and expand the All Executions node.
- 6.3.9 Check that the last session ran correctly. You can review the steps and tasks that have activated the CDC process.

6.4 Creating the Integration Flows to Consume the Changes

In this exercise you will create the integration flows that will consume the changes captured using CDC.

- 1. In the Designer navigator, open the Projects accordion.
- 2. Expand the ODI_DEMO_CDC project and then expand the First Folder then Create Interfaces.
- 1. Create Interface DEMO_CDC_DEPARTMENT

C_DEPARTMENT ×	
Tinterface [Folder:	CDC]
Name:	DEMO_CDC_DEPARTMENT
Optimization Context:	Global
📝 Staging Area Differ	int From Target
Oracle: ODI_DEMO_S	c
Description:	
	DEPARTHENT × Interface [Folder: Name: Optimization Context: Staging Area Differe Orade: ODI_DEMO_SR Description:

2. Go To mappings tab the Drag ODI_DEMO_SRC.DEPARTMENT to source and JMS.Table1 to target



3. Select ROOTFK and update its value to 0

EMO_CDC_DEPARTMENT ×	ROOTFK - Property Inspector X
🔍 100% 🔍 💢 🗐 🔍 🛆 🗐 🔄	🚺 🖪 I 🖈 😰 I 🥒 🍈 🔞 Find 🛛 🕹 🏠 3
A Target Datastore - TABLE1	Mapping Properties
Position Indicators Name Mapping	Active Manning:
1 1 * TATAOBJECTNAME 'DEPARTMENT'	Reave Hopping.
2 NAME DEPARTMENT.DNAME	Implementation Technical Description Business Rule
3 DNAMEORDER	🗸 🦉 🖓 📄
Propertio 4 Provide Topponer	0
DNAME 5 LOOKDER	
7 7 PPERATIONTYPE Case when JRN FLAG='I' then 'UPSERT'	RT'when JRN_FLAG='D
S 🕥 🐐 ROOTFK 🛛	
9 TABLE 10RDER	
	Execute on: 💿 🔐 Source 🔿 👕 Staging Area 🔿 💿 Target
	Source Datastore: DEPARTMENT (DEPARTMENT)
	Insert:
	Update:
	Target Column Properties
	Name: ROOTFK
	Datatype: NUMERIC
	Length: 10
	Scale: 0
	Key:
	Check Not Null (Flow control only):
	··· User Defined Flags
	UD1: UD2: UD2:
	UD3: UD4: UD4:
	UD5: UD6: UD6:
	UD9: UD 10: UD 1
hNote ODI BAM Integration doc	

4. Select OPERATION TYPE and update its value with following code

Case
when JRN_FLAG='I' then 'UPSERT'
when JRN_FLAG='D' then 'DELETE'
else
'INSERT'
End

And Assign KEYS and DATAOBJECT NAME to 'ID' and 'DEPARTMENT' respectively..

DEMO_CDC_DEPARTMENT ×		OPERATIONTYPE - Property Inspecto	r × _
🍳 🔍 100% 👻 💢 📄 🔍 🔬 🥅 📰	0	🖳 📌 🗟 🥒	(# Find 4) 3
C C C C C C C C C C C C C C C C C C C	Target Datastore - TABLE1 Mapping JECTNAME DEPARTMENT DEPARTMENT DEPARTMENT DEPARTMENT DEPARTMENT DEPTID R T0 T0 T0 T0 T0 T0 T0 Common JRN_FLAG=3" then UPSERT when JRN_FLAG=D' then DELETE else INSERTENT O RDER	Implementation Technical Deriver Active Mapping: Implementation Technical Deriver Case when RN, PLAG=11 then 'UPSER' End TNSERT End Execute on: Source Datastore: DePARTMENT Insert: V Target Column Properties Name: Datatype: Length: Scale: Key: Check Not Null (Flow control only) USer Defined Flags UD1: UD2: UD2: UD2:	Scription Business Rule Image: Staging Area Image: Staging Area Image: Department Image: Department Image: Department Image: Depar

5. Select DEPARTMENT form Source and go to properties then check Journalized Data Only.



6. Select filter and update it's with appropriate subscriber

Tech Note: Oracle BAM – ODI Integration

DEMO_CDC_DEPARTMENT ×		•) F	ilter - Property Inspector X	_
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^	📰 Targe	t Datastore - TABLE1	I	Filter Properties	
		Mapping		Active Filter:	
	BJECTNAME	'DEPARTMENT'			
		DEPARTMENT.DNAME		Implementation Technical Description Business Rule	
III - DEPARTMENT (DEPARTMENT)	RDER				/ / 🗔
V O- *DEPTID		DEPARTMENT.DEPTID		IDN CURCOTRED - 'CONCLIMED 1' /* AND IDN DATE < suprime */	
V DNAME ./.	R			JKN_JOBJCKIER - CONJONERT / AND JKN_DATE < Sysuate /	
		'ID'			
	IONTYPE	Case when JRN_FLAG='I' then 'UPSERT'when JRN_FLAG='D' then 'DELETE'else'INSERT'End			
		0			
	PRDER				
				Execute on: 💿 🔐 Source 🔿 👕 Staging Area	
				Crosta Temperany Indovers	-
				create relipoid y Indexes. (None>	•

7. Go to Flow tab and Select target then update IKM properties SYNCHRO_XM_TO_JMS to false {It should be true when we want send separate JMS message for this data source} INITIALIZE_XML_SCHEMA to true

ROOT_TABLE to ROOT.

* DEMO_CDC_DEPARTMENT *	Tar	rget Area - Property Inspec	tor ×	
🔍 🔍 100% 🔻 💢 🔲 🖉	5	3 📌 📴 🥒	6	Find U 🖓 🏠 🍞
Image: Contract of the second seco		Target Properties Distinct Rows: Distinct Rows: Distinct Rows: Distinct Rows: Distinct Rows: Distinct Rows: Name SYNCHRO, OML, TO_JMS SYNCHRO, OML, TO_JMS SYNCHRO, OML, TO_JMS UNSTRAILED JMSERVIPENTION JMSERVIPENTION JMSERVIPENTION DISTING	Value false Activity of Control o	COMPONENT NAME: IKM SQL to JMS XML Appen AUTHOR: Oracle Description : - Integration Knowledge Module - Jinsets data in a JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITIALIZE_XML_SCHEMA option should by

- 3. Create Interface For Employee
 - 1. Create with name DEMO_CDC_EMPLOYEE



2. Go To mappings tab the Drag ODI_DEMO_SRC.EMPLOYEE to source and JMS.Table2 to target

BEMO_CDC_EMPLOYEE ×				ID - Property Inspector X		_
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^	Target Data	store - TABLE2		Manning Properties		
	Position Indicato	s Name	Mapping	Active Manning:		
	1 2	ADDRESS	EMPLOYEE.ADDRE	Acave Happing.		
	20	ADDRESSORDER		Implementation Technical De	scription Business Rule	
	3 🛛 🐴	*DATAOBJECTNAME	'EMPLOYEE'			all
	4 🗸 🖓	DEPTID	EMPLOYEE.DEPTI			
	5 🕦	DEPTIDORDER		EMPLOYEE.ID		- 11
	6 🕥 💷 🖓	ID	EMPLOYEE.ID			- 11
	70	IDORDER				
1 - EMPLOYEE (EMPLOYEE)	8 8	KEYS	'ID'			
V ADDRESS	9 🗸 🐴	NAME	EMPLOYEE.NAME			
V DEPTID	10 0	NAMEORDER		Evenute and		
V*D	11 4	*OPERATIONTYPE	Case when JRN_F	Execute on:		
V NAME	120 %	ROOTEK	0	Source Datastore: EMPLOYEE (E	MPLOYEE)	
	13 (1)	TABLE 20RDER		Insert:		
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				rarget Column Properties		
				Name:	ID	
				Datatype:	VARCHAR	
				Length:	255	
				Scale:	0	
-				Key:		
				Check Not Null (Flow control only)):	
				User Defined Flags		
				UD1:	UD2:	
				UD3:	UD4:	
				UD5:	UD6:	
				UD7:	UD8:	
				UD9:	UD 10:	

3. Select ROOTFK and update its value to 0

DEMO_CDC_EMPLOYEE ×			T	ROOTFK - Property In:	spector X
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^	🔢 Target Dat	astore - TABLE2		Mapping Properties	5
	sition Indicators	Name	Mapping	Active Manning:	
	1	ADDRESS	EMPLOYEE.ADDRESS	Heave Happing.	· · · · · · · · · · · · · · · · · · ·
	20	ADDRESSORDER		Implementation	Technical Description Business Rule
	3 🕥 🐴	*DATAOBJECTNAME	'EMPLOYEE'		A / E
	4 🕐 🐴	DEPTID	EMPLOYEE.DEPTID		
	5 0	DEPTIDORDER		0	
	6	ID	EMPLOYEE.ID		
	70	IDORDER			
1 - EMPLOYEE (EMPLOYEE)	80 %	KEYS	'ID'		
V ADDRESS	90 %	NAME	EMPLOYEE.NAME		
V DEPTID	10 0	NAMEORDER		Execute on:	- BB Staging
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V NAME	12 0 3	TARLEGODDED	U	Source Datastore:	EMPLOYEE (EMPLOYEE)
	13 (1)	TABLEZORDER		Insert:	
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				Check Not Null (Flo	ow control only):
				···· User Defined Flags	
				UD1:	UD2:
				UD3:	UD4:
				UD5:	UD6:
				UD7:	UD8:
				UD9:	UD 10:

4. Select OPERATION NAME and update its value with following code

Case when JRN_FLAG='I' then 'UPSERT' when JRN_FLAG='D' then 'DELETE' else 'INSERT' End

and Assign KEYS and DATAOBJECT NAME to 'ID' and 'EMPLOYEE' respectively..



5. Select EMPLOYEE form Source and go to properties then check Journalized Data Only.



DEMO_CDC_EMPLOYEE ×						-	Filter - Prope	rty Ins	spector	x		_
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^		🛛 Tai	rget D	atastore - TABLE2			Filter Pro	perties	s			
	h	Indica	ators	Name	Mapping		Active E	ter				
	1	0	4	ADDRESS	EMPLOYEE.ADDRESS							
	2			ADDRESSORDER			Implem	entatio	n Tec	hnical Description	Business Rule	
	3	0	2	*DATAOBJECTNAME	'EMPLOYEE'							V / 🗖
	4	0	4	DEPTID	EMPLOYEE.DEPTID		2011 01 0		FD 100		DN DATE A sudday \$1	
	5			DEPTIDORDER			JRN_SU	SCRIB	ER = CO	INSUMER 1 /* AND .	JRIN_DATE < sysoate */	
	6		4	ID	EMPLOYEE.ID	_						
	7	0		IDORDER		_						
1 - EMPLOYEE (EMPLOYEE)	8	0	49	KEYS	'ID'	_						
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/ 💙 🖕 1D	11	0	-	*OPERATIONTYPE	Case when JRN_FLAG='I' then 'UPSERT'when JRN_FLAG	G	Execute	on:		Source	Staging Area	
/ 💟 NAME	12	<u>0</u> '	4	ROOTFK	0	_	Create 1	empora	ary Index	kes: <none></none>		-
	13			TABLE2ORDER		_						
·												
IRN_SUBSCRIBER = 'CONSUMER1' /* AND IR		ATE ·	< svsd	ate */								
hat_bobbenable = consomera / And ha	T											

6. Select filter and update it's with appropriate subscriber

7. Go to Flow tab and Select target then update IKM properties

SYNCHRO_XM_TO_JMS to true INITIALIZE_XML_SCHEMA to false ROOT_TABLE to ROOT.

B DEMO_CDC_EMPLOYEE ×	-	T	Target Area - Property Inspector	×	_
🔍 🔍 100% 🔍 💢 🥅 📰	^		🖳 📌 📴 🥒		(# Find 4) (?
Target (ODL/DEMO_SRO) Defaut - 0 IMM S(L to JMS XML Apaget EMPLOYEE TABLE2			Target Properties Distinct Rows: If M Selector: If	WS XML Append, GLOBAL	COMPONENT NAME: IKM SQL to JMS XML Append AUTHOR: Crade Description : - Integration Knowledge Module - Inserts data in a JMS XML Message from any ISO-92 compliant staging area. Restrictions: - The INITTALIZE_XML_SCHEMA option should be set to YES for the first interface loadoo data in the XML ochema. Eoc thic

6.5 Construct Package For CDC with Interfaces

Expand the CDC project and then expand the First Folder folder. Select the Packages node, right-click and select New Package.

1. Enter the following package name: CDC_DEMO_WAITFORDATA



1. Go to the **Diagram** tab and Go to Tool box and select ODIWaitForLogData. This step helps us to wait for defined number of changes happened to Data Source. We have defined Global Row Count to 5.

<u><u></u></u>CDC_DEMO_WAITFORDATA ×	
	多藤 昌 🖓 🛦
Toolbox	
🔁 All	
🗁 Changed Data Capture	
📴 OdiRefreshJournalCount 🔗	
😭 OdiRetrieveJournalData 🛛 🚽	
🛐 OdiWaitForData	
🙀 OdiWaitForLogData 🗸 🗸	
🔁 Event Detection	Odi Wait For Log Data
🗁 Files	
🗁 Internet	
🗁 Metadata	
🗁 Oracle Data Integrator Objects	
🔁 Plugins	
🗁 SAP	
🗁 Utilities	
Properties	
General Command Advanced	Memo Version Privileges
OdiWaitForLogData	
Select a parameter for more informatio	n about it.
Step name	
OdiWaitForLogData	
Parameter	Value
Parameter Context	Value Global
Parameter Context Global Row Count	Value Global 5
Parameter Context Global Row Count Logical Schema	Value Global 5 ODI_DEMO_SRC
Parameter Context Global Row Count Logical Schema Optimized Wait	Value Global 5 ODI_DEMO_SRC AUTO
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Parameter Context Global Row Count Logical Schema Optimized Wait Polling Interval Subscriber Table Name	Value Global 5 ODI_DEMO_SRC AUTO 60000 CONSUMER 1 D
Parameter Context Global Row Count Logical Schema Optimized Wait Polling Interval Subscriber Table Name CDC Set	Value Global 5 ODI_DEMO_SRC AUTO 60000 CONSUMER1] <pre>sec: "D106</pre>
Parameter Context Global Row Count Logical Schema Optimized Wait Polling Interval Subscriber Table Name CDC Set Timeout	Value Global 5 ODI_DEMO_SRC AUTO 60000 CONSUMER 1] (%=odiRef.getObjectName("L", "ODI_DEMO_SRC", "ODI_DEMO_SRC", "D")%> 0
Parameter Context Global Row Count Logical Schema Optimized Wait Polling Interval Subscriber Table Name CDC Set Timeout Timeout	Value Global 5 ODI_DEMO_SRC AUTO 60000 CONSUMER 1 I

2. Drag and drop into the diagram the **ODI_DEMO_SRC** data model from the Designer's Models tree view. A new step appears in the diagram, named after your data model.

Select **Journalizing Model** in the **Type** drop-down list Click the **Extend Window** and **Lock Subscribers** checkboxes. Enter CONSUMER1 in the **Subscribers** field, and then click **Add**.

Tech Note: Oracle BAM – ODI Integration

	<u> </u>
Changed Data Cashing	
CodRetrieveJournalData	
CdiWaitForData OdiWaitForLogData ODLDEN Name ODLDEN Name	
R OdWaitForLogData V Action Journalizing Model	
Event Detection Model: ODL DEMO_SRC	
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Properties General Advanced Options Memo Version Privileges Step name COD_DEMO_SRC Unled object OOL_DEMO_SRC ->Durnaling	Type Dournalizing Model Add Delete

- 3. Drag and drop the **DEMO_CDC_DEPARTMENT** and **DEMO_CDC_EMPLOYEE** interfaces from the Designer's Projects tree view.
- 4. Drag and drop into the diagram the **Oracle CDC Source** data model from the Designer's Models tree view. A new step appears in the diagram, named after your data model.

Click this step. In the Properties panel:

- Select Journalizing Model in the Type drop-down list.
- Click the Purge Journal and Unlock Subscribers checkboxes
- Enter CONSUMER1 in the Subscribers field, and then click Add.

T CDC_DEMO_WAITFORDATA ×		T
Toolbox		^
Changed Data Capture		
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📽 OdretnieveJournalData 🚽 🔩 🖏 🔛		
ColiWaitForData ODL_DEMO_SRC DEMO_CDC_DEP DEMO_CDC_CC_EMP ODL_DEMO_SRC		
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➢ Files		
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🗁 Orade Data Integrator Objects		
C Plugins		
le SAP		
Control Contro		~
Properties		
General Advanced Options Memo Version Privileges		
Sten name	Type	
ODL_DEMO_SRC	Journalizing Model	-
Linked object		-
ODT_DEMO_SRC		
Journalizing		
Start Add subscribers		
Extend Window Lock Subscribers		
V Purge Journal V Unlock Subscribers		
Subscribers		
	Add	
CONSUMER 1	Delete	

5. Link the package steps together using green arrows.

1	CDC_ODI_TO_BEAM ×	
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6. Click **Save(d)** on the toolbar to save the package.

7. Click on the **Execute**(**>**) button on the toolbar.

Execution	×
Context:	Global
Logical Agent:	Local (No Agent) 👻
Log Level:	5 🗸
Simulation	
Help	OK Cancel

- 8. Press OK when the **Session Started** window appears.
- 9. Open the **Operator** navigator. In the Operator, select the **Session List** tab, and expand the **All Executions** node.
- 10. Check that the last session ran correctly. You can review the steps and tasks that have Activated the CDC process

Please refer to below link for ODI Documentation for more information

http://docs.oracle.com/cd/E14571 01/integrate.1111/e12643/data capture.htm

7. BEAM Configuration

7.1 Create Data Objects

Create DO's corresponding to Source tables

Create DEPARTMENT DO with following columns

DEPARTMENT								
Data objects co measures can l	ontain business data, or ca pe specified in data objects	n be linked to a databa	se table containing the	e data. Additionally, us	sing star schei	ma , measures and dim	iensionscan be indicat	ited for us
Type SIMPLE_ Archived V Columns Calc	DO ulated Fields Indexe	s Hierarchies	Retention	Row Security A	CL Dat	а		
View 🗸 📫 Add	Column 🛃 Detach							
Column Name	Column Type	Data Type	Size	Nullable	Unique	Comment	Action	
BEAM_ID	ATTRIBUTE	INT	10	~				
ID	ATTRIBUTE	VARCHAR	10				×	
DNAME	ATTRIBUTE	VARCHAR	10				×	
Let at a the	AT REBUTE	the set this		V		1	~	

Create EMPLOYEE DO with following columns

UEPARTME	ENT EMPLOYEE						
EMPLOYEE							
Data objects co measures can b	ntain business data, or can e specified in data objects.	be linked to a databa	se table containing the	e data. Additionally, u	sing star sche	ma , measures and dim	nensionscan be indicated
Type SIMPLE_D	00						
Columns Calcu View - Add C	ulated Fields Indexes	Hierarchies	Retention	Row Security A	ICL Dat	ta	
Columns Calcu View - Add C Column Name	Jated Fields Indexes	B Hierarchies	Retention F	Row Security A	Unique	ta Comment	Action
Columns Calcu View - Add C Column Name BEAM_ID	Ilated Fields Indexes Column Detach Column Type ATTRIBUTE	B Hierarchies	Retention F Size 10	Row Security A	Unique	ta Comment	Action
Columns Calc. View - Column Name BEAM_ID ID	Idated Fields Indexes	B Hierarchies Data Type INT VARCHAR	Retention F Size 10 10	Row Security A Nullable	Unique	Comment	Action
Columns Calc. View - Change Add C Column Name BEAM_ID ID NAME	Column Column Detach Column Type ATTRIBUTE ATTRIBUTE ATTRIBUTE	Bata Type INT VARCHAR VARCHAR	Size 10 10 10	Nullable	Unique	Comment	Action
Columns Calc. View Column Name BEAM_ID ID NAME ADDRESS	Idated Fields Indexes Column Column Type ATTRIBUTE ATTRIBUTE ATTRIBUTE ATTRIBUTE ATTRIBUTE ATTRIBUTE	Bata Type INT VARCHAR VARCHAR VARCHAR	Retention F Size 10 10 10 10 50	Nullable V V V V	Unique	Comment	Action

7.2 Configure EMS in BEAM

1. Go to Administrator tab in BEAM Home page click on Enterprise Message Sources

ORACLE' BAM Composer	Horne Administrator Designer	Preferences	weblogic +	ç
→ / X	EMS2 EMS: EMS2		Save	X
Comections ▼	✓ Connection Information Outbound Connection JUDI es/wls/Topic * Topic/Queue Name * Topic/Queue Name /* Topic/Queue Name			1
	Yessage Configuration Source Value Formatting □ Use DateTime Specification * JMS Message Type TextMessage MapMessage Error Handing □ Log faulted messages Message Selector ☑ Include payloads Write faulted messages			Ĩ
	XHL Message Formatting * Message Element Name Message XSL Formatting Use pre-processing Message Element Namespace XSL Formatting Use pre-processing Mul. Column Value			
	'⊻ Source To Data Object Field Mapping I Use self-described payload			

2. Select following options then save it. Connection Information:

Outbound Connection JNDI: eis/wls/Topic Topic /Queue name : jms/odiTopic

✓ Connection Information	
Outbound Connection JNDI eis/wls/Topic	Durable Subscriber Name
* Topic/Queue Name jms/odiTopic	Auto-Start 🔘 Yes 🔘 No

Message Configuration:

Error Handling \rightarrow select log faulted messages and include payloads

✓ Message Configuration	
Source Value Formatting 📃 Use DateTime Specification	* JMS Message Type 🔘 TextMessage 🔘 MapMessage
Error Handling 🕢 Log faulted messages 🕼 Indude payloads 💭 Write faulted messages	Message Selector

XMI Message Formatting

XML Message Processing:

Message Element Name: Message

Batch Messages: checked

Batch Element Name: Root

Batch Element Name Space: http://xmlns.oracle.com/bam

⊻ XML Message Formatting			
* Message Element Name	Message	XSL Formatting 📝 Use pre-processing	
Message Element Namespace		XML Column Value 🍭 Element Tag 🔘 Attribute	
	🛿 Batch Messages		
* Batch Element Name	Root		
Batch Element Namespace	http://xmlns.oracle.com/bam		

XSL Formatting \rightarrow select use preprocessing and add following code in the

popup

<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0" xmlns:xs="http://xmlns.oracle.com/bam"> <!-- Copy all nodes that we dont want to handle specificly -->

- <xsl:template match="@*|node()"> <xsl:copy> <xsl:apply-templates select="@*|node()"/>
- </xsl:copy>
- </xsl:template>

<xsl:template match="xs:Root/*">

- <xsl:element name="Message">
- <xsl:attribute name="operationType"><xsl:value-of select="@operationType" /></xsl:attribute>
- <xsl:attribute name="keys"><xsl:value-of select="@keys"/></xsl:attribute>
- <xsl:attribute name="dataObjectName"><xsl:value-of select="@dataObjectName"/></xsl:attribute>
- <xsl:apply-templates />
- </xsl:element>
- </xsl:template>
- </xsl:stylesheet>

XSL Transformation	\times
Enter XSL Transformation Code to be applied to XML in this field in each received message	
<pre><xsl:stylesheet version="1.0" xmlns:xs="http://xmlns.oracle.com/bam" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"> <!-- Copy all nodes that we dont want to handle specificly--> <xsl:template match="@* node()"> <xsl:template match="@* node()"> <xsl:template select="@* node()"> <td>* III</td></xsl:template></xsl:template></xsl:template></xsl:stylesheet></pre>	* III
<xs:element name='TMessage"'></xs:element>	-
Verify XSL Syntax Test Transformation on Sample XML Results	
OK Can	icel

Source to Data Object Field Mapping:

Use self described payload: checked

Source To Data Object Field Mapping		
Use self-described payload		

3. Start EMS

EM52						
EMS: EMS2		Edit	Start	Stop	Metrics	Сору
✓ Connection Information						
Outbound Connection JNDI eis/wls/Topic	Durable Subscriber Name					
Topic/Queue Name jms/odiTopic	Auto-Start Ves No					
✓ Message Configuration						
Source Value Formatting Use DateTime Specification	JMS Message Type 🔘 TextMessage 🔵 MapMessage					
Error Handling 🕖 Log faulted messages	Message Selector					
✓ Include payloads						
Write faulted messages						
✓ XML Message Formatting						
Message Element Name Message	XSL Formatting					
Message Element Namespace	XML Column Value 🔘 Element Tag 🔵 Attribute					
Batch Messages						
Batch Element Name Root						
Batch Element Namespace http://xmlns.oracle.com/bam						
✓ Source To Data Object Field Mapping						
✓ Use self-described payload						