

2015-12-03

# Omni Channel Intelligence Setup Guide

---

# Content

1	<b>Introduction</b> .....	<b>3</b>
2	<b>Prerequisites</b> .....	<b>4</b>
3	<b>Roles and Authorizations</b> .....	<b>5</b>
4	<b>Setting Up SAP HANA Enterprise Information Management</b> .....	<b>6</b>
5	<b>Creating a Remote Source</b> .....	<b>8</b>
6	<b>Executing a Pre-Installation Script</b> .....	<b>9</b>
7	<b>Importing Delivery Units</b> .....	<b>13</b>
8	<b>Executing a Post-Installation Script</b> .....	<b>14</b>
9	<b>Executing a Correlation Procedure</b> .....	<b>19</b>
10	<b>(Optional) Enabling Real-Time Data Replication</b> .....	<b>20</b>
11	<b>References</b> .....	<b>25</b>

---

# 1 Introduction

Omni Channel Intelligence is a smart process application that helps B2C customers in the retail industry to gain visibility on the order-to-cash scenarios. This application uses the capabilities of SAP Operational Process Intelligence. Additionally, this application includes the SAP HANA EIM Smart Data Integration artifacts, which perform replication of sales order data from SAP ERP Central Component (ECC) system into the target SAP HANA system.

This guide contains information on how you can set up the Omni Channel Intelligence smart process application.

---

## 2 Prerequisites

You must have:

- SAP Operational Process Intelligence 1.0 SPS 11 or a higher version
- SAP HANA Enterprise Information Management
- SAP ERP Central Component (ECC) system (version 6.0 or higher) running on ORACLE, DB2 or SAP HANA databases

### **i** Note

You must verify the Product Availability Matrix (PAM) of SAP HANA SDI, if the database version on which the SAP ECC system is installed is compatible with the database version mentioned in PAM. For more information, see [Product Availability Matrix](#).

---

## 3 Roles and Authorizations

You must have the following role and privilege to set up and work with the OCI smart process application.

Required Role	Description
<i>sap.hana.ide.roles::CatalogDeveloper</i>	Enables you to create, edit, execute and manage SQL catalog artifacts in SAP HANA database

Required System Privilege	Description
<i>CREATE SCHEMA</i>	Enables you to create schema in the current database

---

## 4 Setting Up SAP HANA Enterprise Information Management

You use this procedure to replicate data from a source system to the SAP HANA system, which is needed for Omni Channel Intelligence. This set up includes performing only a few tasks out of the overall set up of the SAP HANA EIM, as needed for Omni Channel Intelligence.

### Context

Perform the following tasks in the SAP HANA EIM by referring to the relevant sections of [SAP HANA Enterprise Information Management Administration Guide](#).

### Procedure

1. Enable the data provisioning server to use smart data integration.
2. Set up EIM data provisioning monitoring to monitor the status of replication.
3. Assign roles and privileges required to perform the specific tasks as given below:
  - Register a DP Agent
  - Register an adapter
  - Import a delivery unit using SAP HANA Application Lifecycle Management
  - Import a delivery unit using SAP HANA studio
  - Monitoring
  - Create a remote source
  - Execute a task
4. Set up remote database, which enables Log Reader adapters to function correctly.

#### Note

Configurations related to real-time are not required for the installation of smart process application.

5. Install the data provisioning agent.
6. Start and connect the configuration tool.
7. Register the data provisioning agent with SAP HANA to use the adapters deployed on the DP Agent.
8. Register adapters with SAP HANA to use them to connect to remote sources.

#### Note

You should register one of the following adapters depending on the database on which ECC system is running:

- 
- DB2ECCAdapter
  - OracleECCAdapter
  - HANAAdapter

9. Loading metadata for cluster and pooled tables to work with cluster and pooled tables.

## Results

By performing the setup of SAP HANA EIM, you have installed and started DP agent, registered the agent and adapters with SAP HANA, and configured the ECC system.


## 5 Creating a Remote Source

You use this procedure to create a connection to the ECC system.

### Procedure

1. Launch the *SAP HANA web-based development workbench* by using a URL similar to `http://<host>:<port>/sap/hana/ide/catalog`.
2. Provide the credentials.
3. Choose **► Provisioning ► Remote Sources ▾**.
4. In the context menu of the *Remote Sources* node, choose *New Remote Source*.
5. In the *New Remote Source* tab page, provide a *Source Name*.
6. In the *Adapter Name* dropdown list, choose the adapter that you register while setting up SAP HANA EIM.
7. In the *Agent Name* dropdown list, choose the agent that you create while setting up SAP HANA EIM.
8. Provide *Values* for the *Properties* field.

For more information on the properties relevant to different database, see [Creating a Log Reader Adapter Remote Source](#) section as described in the [SAP HANA Enterprise Information Management Administration Guide](#).

9. Choose .

### Results

By performing the above procedure, you create a remote source and are able to view ECC tables by expanding the remote source.

## 6 Executing a Pre-Installation Script

You use this procedure to create schemas and virtual tables that you require before installing the delivery units.

### Procedure

1. Download the pre-installation script from SAP Content Hub to your local system.
2. Open the script in Notepad++.
3. In the following part of the pre-installation script, enter the name of the remote source that you have created for the SAP ECC system in place of <<RemoteSourceName>>.

#### Sample Code

```
CREATE VIRTUAL TABLE OCI.VT_VBAK AT <<RemoteSourceName>>."NULL"."NULL".VBAK;
CREATE VIRTUAL TABLE OCI.VT_VBUK AT <<RemoteSourceName>>."NULL"."NULL".VBUK;
CREATE VIRTUAL TABLE OCI.VT_VBFA AT <<RemoteSourceName>>."NULL"."NULL".VBFA;
CREATE VIRTUAL TABLE OCI.VT_VBKD AT <<RemoteSourceName>>."NULL"."NULL".VBKD;
CREATE VIRTUAL TABLE OCI.VT_KNA1 AT <<RemoteSourceName>>."NULL"."NULL".KNA1;
CREATE VIRTUAL TABLE OCI.VT_TSPAT AT <<RemoteSourceName>>."NULL"."NULL".TSPAT;
CREATE VIRTUAL TABLE OCI.VT_TVKOT AT <<RemoteSourceName>>."NULL"."NULL".TVKOT;
CREATE VIRTUAL TABLE OCI.VT_TVTWT AT <<RemoteSourceName>>."NULL"."NULL".TVTWT;
CREATE VIRTUAL TABLE OCI.VT_T052 AT <<RemoteSourceName>>."NULL"."NULL".T052;
CREATE VIRTUAL TABLE OCI.VT_T005U AT <<RemoteSourceName>>."NULL"."NULL".T005U;
CREATE VIRTUAL TABLE OCI.VT_TVAUT AT <<RemoteSourceName>>."NULL"."NULL".TVAUT;
CREATE VIRTUAL TABLE OCI.VT_BSAD AT <<RemoteSourceName>>."NULL"."NULL".BSAD;
CREATE VIRTUAL TABLE OCI.VT_CDHDR AT <<RemoteSourceName>>."NULL"."NULL".CDHDR;
CREATE VIRTUAL TABLE OCI.VT_CDPOS AT <<RemoteSourceName>>."NULL"."NULL".CDPOS;
CREATE VIRTUAL TABLE TCUR.VT_TCURR AT <<RemoteSourceName>>."NULL"."NULL".TCURR;
CREATE VIRTUAL TABLE TCUR.VT_TCURC AT <<RemoteSourceName>>."NULL"."NULL".TCURC;
CREATE VIRTUAL TABLE TCUR.VT_TCURN AT <<RemoteSourceName>>."NULL"."NULL".TCURN;
CREATE VIRTUAL TABLE TCUR.VT_TCURV AT <<RemoteSourceName>>."NULL"."NULL".TCURV;
CREATE VIRTUAL TABLE TCUR.VT_TCURX AT <<RemoteSourceName>>."NULL"."NULL".TCURX;
CREATE VIRTUAL TABLE TCUR.VT_TCURF AT <<RemoteSourceName>>."NULL"."NULL".TCURF;
```

4. Uncomment the required section of the pre-installation script based on the database on which your SAP ECC system is running.

Database	Instructions
<b>SAP HANA or DB2</b>	In the pre-installation script, uncomment the portion between <code>START DB2</code> and <code>HANA</code> and <code>END DB2</code> and <code>HANA</code> of the script respectively.
<b>ORACLE</b>	In the pre-installation script, uncomment the portion between <code>START ORACLE</code> and <code>END ORACLE</code> of the script respectively.

## Sample Code

```
-- !!!!!!!!!!!!!!! *****IMPORTANT ***** !!!!!!!
-- Please uncomment the respective portion according to the database of the
ECC system
-- START DB2 and HANA
/*CREATE COLUMN TABLE "TCUR"."TCURF" ("MANDT" VARCHAR(9) ,
    "KURST" VARCHAR(12) ,          "FCURR" VARCHAR(15) ,
    "TCURR" VARCHAR(15) ,
    "GDATU" VARCHAR(24) ,
    "FFACT" DECIMAL(9,
0) CS_FIXED ,
    "TFACT" DECIMAL(9,
0) CS_FIXED ,
    "ABWCT" VARCHAR(12) ,
    "ABWGA" VARCHAR(24) ,
    PRIMARY KEY ("MANDT", "GDATU", "KURST", "FCURR", "TCURR"));
CREATE COLUMN TABLE "TCUR"."TCURR" ("MANDT" VARCHAR(9) ,
    "KURST" VARCHAR(12) ,
    "FCURR" VARCHAR(15) ,
    "TCURR" VARCHAR(15) ,
    "GDATU" VARCHAR(24) ,
    "UKURS" DECIMAL(9,
5) CS_FIXED ,
    "FFACT" DECIMAL(9,
0) CS_FIXED ,
    "TFACT" DECIMAL(9,
0) CS_FIXED ,
    PRIMARY KEY ("MANDT", "GDATU", "KURST", "FCURR", "TCURR"));

*
*END DB2 and HANA
*
*/

/*
* START ORACLE
*
*/
/*CREATE COLUMN TABLE "TCUR"."TCURF" ( "MANDT" VARCHAR(9) CS_STRING NOT NULL,
    "KURST" VARCHAR(12) CS_STRING NOT NULL,
    "FCURR" VARCHAR(15) CS_STRING NOT NULL,
    "TCURR" VARCHAR(15) CS_STRING NOT NULL,
    "GDATU" VARCHAR(24) CS_STRING NOT NULL,
    "FFACT" INT CS_INT NOT NULL,
    "TFACT" INT CS_INT NOT NULL,
    "ABWCT" VARCHAR(12) CS_STRING NOT NULL,
    "ABWGA" VARCHAR(24) CS_STRING NOT NULL,
    PRIMARY KEY ( "MANDT",
    "GDATU",
    "KURST",
    "FCURR",
    "TCURR" ) );




CREATE COLUMN TABLE "TCUR"."TCURR" ( "MANDT" VARCHAR(9) CS_STRING,
    "KURST" VARCHAR(12) CS_STRING,
    "FCURR" VARCHAR(15) CS_STRING,
    "TCURR" VARCHAR(15) CS_STRING,
    "GDATU" VARCHAR(24) CS_STRING,
    "UKURS" DECIMAL(9,
5) CS_FIXED,
    "FFACT" INT CS_INT,
    "TFACT" INT CS_INT,
```

```

PRIMARY KEY ( "MANDT",
"GDATU",
"KURST",
"FCURR",
"TCURR" ) )

*
*END ORACLE
*
*/

```

5. Launch the *SAP HANA web-based development workbench* by using a URL similar to `http://<host>:<port>/sap/hana/ide/catalog`.
6. In the *Catalog* view of *SAP HANA Web-based Development Workbench*, choose the  icon.
7. Copy the modified pre-installation script to the SQL console.
8. Choose the  icon.
9. Choose the  icon to execute the copied SQL script.

## Results

Once the application executes the SQL script successfully without errors, you can view the following virtual tables under OCI schema and TCUR schema, which are under the *Catalog* node:

OCI Schema	TCUR Schema
CONFIG	TCURC
VT_BSAD	TCURF
VT_CDHDR	TCURN
VT_KNA1	TCURR
VT_T005U	TCURV
VT_T052	TCURX
VT_TSPAT	VT_TCURC
VT_TVAUT	VT_TCURF
VT_TVKOT	VT_TCURN
VT_TVTWT	VT_TCURR
VT_VBAK	VT_TCURV

OCI Schema	TCUR Schema
VT_VBFA	VT_TCURX
VT_VBKD	
VT_VBUK	
VT_CDPOS	

# 7 Importing Delivery Units

You use this procedure to import the business scenario and the flowgraphs, which defines how the transformation and replication happens from SAP ECC system to SAP HANA system.

## Prerequisites

You have the following roles assigned:

- `sap.opi.pv.roles::OPINTDEVELOPER`
- `MODELING`

For more information on roles, see the **Authorizations and Roles** section in the SAP Operational Process Intelligence Security Guide at <https://help.sap.com/hana-opint>.

## Procedure

1. Download the required delivery unit from SAP Content Hub as provided below.

The following are the delivery units:

1. `RETAIL_OMNI_CHANNEL_INTELLIGENCE_SPA` (Mandatory)
  2. `OCI_DB2_HANA_REPLICATION_ARTIFACTS` (for SAP HANA and DB2 database only)
  3. `OCI_ORACLE_REPLICATION_ARTIFACTS` (for ORACLE database only)
2. Import the delivery units. For more information, see the *Import a Delivery Unit* section in [SAP HANA Developer Guide](#).

### **i** Note

Follow the above procedure to import all the required delivery units.

# 8 Executing a Post-Installation Script

You use this procedure to trigger replication of data.

## Context

You have the `opint.retail.oci.roles::OCIOperator` role.

## Procedure

1. Download the post-installation script from SAP Content Hub.
2. Open the script in Notepad++.
3. Modify the post-installation script to provide values for the following parameters:

### Sample Code

```
insert into "OCI"."CONFIG" values('CLIENT_ID','');
insert into "OCI"."CONFIG" values('TARGET_CURRENCY','USD');
insert into "OCI"."CONFIG" values('EXCHANGE_TYPE','M');
insert into "OCI"."CONFIG" values('RETURN_ORDER_TYPE','');
insert into "OCI"."CONFIG" values('STANDARD_ORDER_TYPE','');
insert into "OCI"."CONFIG" values('REPLICATE_SINCE','');
insert into "OCI"."CONFIG" values('TIMESTAMP_FORMAT','');
```

### Note

Field Name	Description	Example
<code>CLIENT_ID</code>	Client ID from which the orders in SAP ECC system should be replicated	<code>('CLIENT_ID','800');</code>
<code>TARGET_CURRENCY</code>	Currency in which the sales revenue should be shown in space.me  <b>Note</b> The default target currency is USD.	<code>('TARGET_CURRENCY','USD');</code>
<code>EXCHANGE_TYPE</code>	Rate exchange type to be applied for currency conversion. You can refer to	<code>('EXCHANGE_TYPE','M');</code>

Field Name	Description	Example
	<p>the "KURST" column value in the TCURR table.</p> <p><b>i Note</b></p> <p>The default exchange type is M, which is the standard translation at average rate.</p>	
<i>RETURN_ORDER_TYPE</i>	Sales document type configured in the SAP ECC system for the returned orders. You can refer to the "AUART" column value in the VBAK table for these orders.	('RETURN_ORDER_TYPE','RE');
<i>STANDARD_ORDER_TYPE</i>	Sales document type configured in the SAP ECC system for the standard sales orders. You can refer to the "AUART" column value in the VBAK table for these orders.	('STANDARD_ORDER_TYPE','TA');
<i>REPLICATE_SINCE</i>	Sales orders created from the timestamp mentioned gets replicated.	('REPLICATE_SINCE','20150728000000');
<i>TIMESTAMP_FORMAT</i>	<p>Format of the timestamp in the ECC system. You can compute this by combining the ERDAT and ERZET column values in the VBAK table.</p> <p><b>i Note</b></p> <p>The format of 'REPLICATE_SINCE' should match this format.</p>	('TIMESTAMP_FORMAT','YYYYMMDD HH24MISS');

4. Modify the following post-installation script, enter the time zone of the SAP ECC system in place of *<<TimeZone of the ECC system>>*.

For example, you can set *<<TimeZone of the ECC system>>* to 'CET'.

#### Sample Code

```
update
"SYS_PROCESS_VISIBILITY"."sap.opi.pv::SPVR_SCENARIO_DEFINITION_SCHEDULER"
set START_TIME_WINDOW=(SELECT TO_TIMESTAMP("VALUE", (SELECT "VALUE" FROM
"OCI"."CONFIG" WHERE KEY='TIMESTAMP_FORMAT')) FROM "OCI"."CONFIG" WHERE
KEY='REPLICATE_SINCE') , OPER_TIME_ZONE='<<TimeZone of the ECC system>>'
WHERE SCENARIO_DEFINITION_ID='SCN75f4c37f1d31495ba91b93a6484c231f'
```

5. Uncomment the required section of the post-installation script based on the database on which your SAP ECC system is running.

Database	Instructions
<b>SAP HANA or DB2</b>	In the post-installation script, uncomment the portion between <code>START DB2</code> and <code>HANA</code> and <code>END DB2</code> and <code>HANA</code> of the script respectively.
<b>ORACLE</b>	In the post-installation script, uncomment the portion between <code>START ORACLE</code> and <code>END ORACLE</code> of the script respectively.

### Sample Code

```

/*
 * !!!!!!!!!!!!!!! *****IMPORTANT ***** !!!!!!!
 * Please uncomment the respective portion according to the database of the
ECC system
 *
 *   START DB2 and HANA
 *   The following commands will start the data replication
 *
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateCustomerD
ata";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateCustomerR
egionText";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateDistribut
ionChannels";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateOrderReas
onText";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateSalesDivi
sion";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateSalesOrga
nisations";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::Replicate
TCURC";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::Replicate
TCURF";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::Replicate
TCURN";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::Replicate
TCURR";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::Replicate
TCURV";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::Replicate
TCURX";




```

```

START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::SalesOrderCreat
ion";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::OutboundDeliver
y";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::PickPackAndPGI"
;
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::Invoice";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::Payment";
START TASK
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::CancelledAndRej
ectedOrders";
*
* END DB2 and HANA
*
*/
/*
* START ORACLE
* The following commands will start the data replication
*
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateCustomerData";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateCustomerRegionT
ext";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateDistributionCha
nnels";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateOrderReasonText
";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateSalesDivision";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateSalesOrganisati
ons";
START TASK
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::ReplicateTCURC"
;
START TASK
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::ReplicateTCURF"
;
START TASK
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::ReplicateTCURN"
;
START TASK
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::ReplicateTCURR"
;
START TASK
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::ReplicateTCURV"
;
START TASK
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::ReplicateTCURX"
;
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::SalesOrderCreation";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::OutboundDelivery";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::PickPackAndPGI";
START TASK "OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::Invoice";

```

```
START TASK "OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::Payment";
START TASK
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::CancelledAndRejectedO
rders";
*
*END ORACLE
*
*/
```

6. Launch the *SAP HANA web-based development workbench* by using a URL similar to `http://<host>:<port>/sap/hana/ide/catalog`.
7. In the *Catalog* view of *SAP HANA Web-based Development Workbench*, choose the  icon.
8. Copy the modified post-installation script to the SQL console.
9. Choose the  icon.
10. Choose the  icon to execute the copied SQL script.

#### **i** Note

- Executing the post-installation script may consume time depending on the how much data you have on the ECC system as it triggers data replication.
- To monitor the status of replication, see Monitoring section in [SAP HANA Enterprise Information Management Administration Guide](#).

---

## 9 Executing a Correlation Procedure

You use this procedure to view the replicated data in space.me.

### Context

You have the *opint.retail.oci.roles::OCIOperator* role.

### Procedure

1. Schedule a correlation job. For more information, see the **Scheduling the Correlation Job** section in SAP Operational Process Intelligence Installation and Upgrade guide at <https://help.sap.com/hana-opint>.
2. Launch the space.me workspace by using a URL similar to `http://<server>:<port>/sap/opi/pv/workspace`.
3. Log on to the workspace to gain visibility on the replicated orders.

# 10 (Optional) Enabling Real-Time Data Replication

You use this procedure to update or sync any modified or new data from a source system to the SAP HANA system.

## Context

The execution of post-installation script replicates the data from ECC to SAP HANA system and execution of correlation procedure sets up the smart process application. It enables you to view the data in space.me. Once you are able to view the sales orders in space.me, you can achieve real-time visibility on any new or modified sales orders by enabling real-time replication.

### **i** Note

Before enabling the real-time data replication, ensure that you perform the configurations related to real-time while setting up remote database. For more information, see the **Remote Database Setup** section in [SAP HANA Enterprise Information Management Administration Guide](#).



## Procedure

1. Launch the *SAP HANA web-based development workbench* by using a URL similar to `http://<host>:<port>/sap/hana/ide/editor`.
2. Provide the credentials.
3. Navigate to the following location depending on the database that you are using:
  - For SAP HANA or DB2 database: In the left pane of editor, expand **opint > retail > oci > flowgraphs > DB2\_And\_HANA**.
  - For ORACLE database: In the left pane of editor, expand **opint > retail > oci > flowgraphs > ORACLE**.You can view *capture\_events*, *currency\_conversion*, and *master\_data* packages listed under the respective database.
4. Perform the following substeps for each of the flowgraphs in each package.
  - a. Choose a flowgraph.
  - b. In the graphical editor of the flowgraph, double-click the data source node that you have to configure in each flowgraph.

Refer to the following table to know the flowgraphs and data source nodes:

Table 1:

Package Name	Flowgraph Name	Data Source Node
capture_events	SalesOrderCreation	VT_VBAK
	OutboundDelivery	VT_VBFA
	PickPackAndPGI	VT_VBFA
	Invoice	VT_VBFA
	Payment	VT_VBFA
	CancelledAndRejectedOrders	VT_VBAK
currency_conversion	ReplicateTCURC	VT_TCURC
	ReplicateTCURF	VT_TCURF
	ReplicateTCURN	VT_TCURN
	ReplicateTCURR	VT_TCURR
	ReplicateTCURV	VT_TCURV
	ReplicateTCURX	VT_TCURX
master_data	ReplicateCustomerData	VT_KNA1
	ReplicateCustomerRegionText	VT_T005U
	ReplicateDistributionChannels	VT_TVTWT
	ReplicateOrderReasonText	VT_TVAUT
	ReplicateSalesDivision	VT_TS PAT
	ReplicateSalesOrganisations	VT_TVKOT

- c. In the *Node Details* section, select the *Real-time Behavior* checkbox.
- d. Choose *Back*.
- e. Choose the entire flowgraph in the graphical editor.
- f. Choose the  icon.
- g. In the *Properties* window, select the *Real-time Behavior* checkbox.
- h. Choose *OK*.
- i. Choose .

## **i** Note

- Perform the above-mentioned steps for all the flowgraphs and their respective data source nodes.
- Ensure that system saves and activates all the flowgraphs successfully.

j. Choose the  icon.

k. Copy the following script to the SQL console:

- If you are using DB2 or SAP HANA database, then execute the following script:

### Sample Code

```
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateCustomerData_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateCustomerRegionText_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateDistributionChannels_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateOrderReasonText_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateSalesDivision_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.master_data::ReplicateSalesOrganisations_SP"();
CALL
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::ReplicateTCURC_SP"();
CALL
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::ReplicateTCURF_SP"();
CALL
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::ReplicateTCURN_SP"();
CALL
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::ReplicateTCURR_SP"();
CALL
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::ReplicateTCURV_SP"();
CALL
"TCUR"."opint.retail.oci.flowgraphs.DB2_And_HANA.currency_conversion::ReplicateTCURX_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::SalesOrderCreation_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::OutboundDelivery_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::PickPackAndPGI_SP"();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::Invoice_SP"();
```

```

CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::Payment_
SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.DB2_And_HANA.capture_events::Cancele
dAndRejectedOrders_SP" ();

```

- If you are using ORACLE database, then execute the following script:


### Sample Code


```

CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateCustomer
Data_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateCustomer
RegionText_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateDistribu
tionChannels_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateOrderRea
sonText_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateSalesDiv
ision_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.master_data::ReplicateSalesOrg
anisations_SP" ();
CALL
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::Replicat
eTCURC_SP" ();
CALL
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::Replicat
eTCURF_SP" ();
CALL
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::Replicat
eTCURN_SP" ();
CALL
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::Replicat
eTCURR_SP" ();
CALL
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::Replicat
eTCURV_SP" ();
CALL
"TCUR"."opint.retail.oci.flowgraphs.Oracle.currency_conversion::Replicat
eTCURX_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::SalesOrderCrea
tion_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::OutboundDelive
ry_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::PickPackAndPGI
_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::Invoice_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::Payment_SP" ();
CALL
"OCI"."opint.retail.oci.flowgraphs.Oracle.capture_events::CancelledAndRe
jectedOrders_SP" ();

```

---

l. Choose the  icon.

m. Choose the  icon to execute the copied SQL script.

---

# 11 References

For any additional information, refer to the below links.

## Related Information

[SAP Operational Process Intelligence](#)

[SAP HANA Enterprise Information Management](#)

---

# Important Disclaimers and Legal Information

## Coding Samples

Any software coding and/or code lines / strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, unless damages were caused by SAP intentionally or by SAP's gross negligence.

## Accessibility

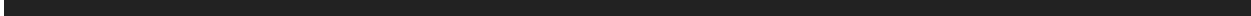
The information contained in the SAP documentation represents SAP's current view of accessibility criteria as of the date of publication; it is in no way intended to be a binding guideline on how to ensure accessibility of software products. SAP in particular disclaims any liability in relation to this document. This disclaimer, however, does not apply in cases of wilful misconduct or gross negligence of SAP. Furthermore, this document does not result in any direct or indirect contractual obligations of SAP.

## Gender-Neutral Language

As far as possible, SAP documentation is gender neutral. Depending on the context, the reader is addressed directly with "you", or a gender-neutral noun (such as "sales person" or "working days") is used. If when referring to members of both sexes, however, the third-person singular cannot be avoided or a gender-neutral noun does not exist, SAP reserves the right to use the masculine form of the noun and pronoun. This is to ensure that the documentation remains comprehensible.

## Internet Hyperlinks

The SAP documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. SAP does not warrant the availability and correctness of this related information or the ability of this information to serve a particular purpose. SAP shall not be liable for any damages caused by the use of related information unless damages have been caused by SAP's gross negligence or wilful misconduct. All links are categorized for transparency (see: <http://help.sap.com/disclaimer>).





[www.sap.com/contactsap](http://www.sap.com/contactsap)

© 2015 SAP SE or an SAP affiliate company. All rights reserved.  
No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company. The information contained herein may be changed without prior notice.  
Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.  
These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.  
SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.  
Please see <http://www.sap.com/corporate-en/legal/copyright/index.epx> for additional trademark information and notices.

