

Operational Analytics with ODP

Defining an Operational Data Provider

September 2011



Welcome to the Learning Objekt Operational Analytics with Operational Data Providers.

This unit will focus on defining an Operational Data Provider

Objectives



At the end of this module, you will be able to:

- Define Operational Data Provider

At the end of this module, you will be able to define a Operational Data Provider

Defining an Operational Data Provider

- System display model's nodes in defined hierarchical structures

Structure of 'ZCUSTOMER'
Here you can define operational data providers. They contain analytical settings and are used for local analytics and for data replication to a BW system.

Node	Node Description	ODP
0CUSTOMER_ATTR	Customer Number	<input checked="" type="checkbox"/>
• 0CUSTOMER_TEXT	Customer number	<input checked="" type="checkbox"/>

- Associated nodes are not displayed
- ODPs for various use cases can be created:
 - Node for data types: Transaction data, Master data attributes, Texts
 - ODP views: Data extraction, Projection
- Example for a certain use case (Master data attributes / Extraction):
 - All properties of the reference characteristic are derived from this ODP
 - The field descriptions for ODP are used in the query for the display attributes of the reference characteristic and the referencing characteristics.

In this step of the roadmap, you create the model's operational data provider (ODP).

- 1) The system displays the model's nodes in the hierarchical structure that you defined in the *Node Relationships*
- 2) Associated nodes are not displayed.
- 3) Depending on the type of data ODPs for various uses can be created in a search and analysis model
 - 3.1) Node can be defined for certain data types: Transaction data, Master data attributes, Texts
 - 3.2) There are two types of ODP views: Data extraction, Projection
- 4) Example for a certain use case (Master data attributes / Extraction):
 - 4.1) The master data ODP with ODP view *data extraction* provides the reference characteristic. All properties of the reference characteristic are derived from this ODP. The field descriptions for this ODP are used in the query for the display attributes of the reference characteristic and the referencing characteristics.

Defining an Operational Data Provider

Setting the Properties of the Operational Data Provider

- To create an ODP:
 1. Under “Structure” select the node to create an ODP for
 2. Under “Operational Data Provider”, press “Create”

The screenshot displays the SAP BW Structure Editor interface. The top section, titled "Structure of 'ZCUSTOMER'", shows a tree view of nodes. The node "0CUSTOMER_ATTR" is expanded, and its child node "0CUSTOMER_TEXT" is selected. The "Customer Number" node is highlighted in yellow. The "ODP" column for this node contains a checkbox that is currently unchecked. Below this, the "Operational Data Provider" section is visible. A blue arrow points to the "Create" button. The table below shows the properties of the newly created ODP:

Operational Data Provider	Description	Semantics	View	Direct Access ...	Switched
0ZCUSTOMER	Customer Number	Master Data Attributes	Data Extraction	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- To create an ODP:
 1. Under “Structure” select the node to create an ODP for
 2. Under “Operational Data Provider”, press “Create”

Defining an Operational Data Provider

Setting the Properties of the Operational Data Provider

- Under “Operational Data Provider” the system displays:
 - A proposal for the ODP and the ODP’s analytic properties
 - The ODP name with following naming conventions
 1. The ODP name must be unique across models and for a node within a model
 2. The ODP Name to be in a valid namespace
 3. An ODP name can only occur once in a model for transaction data
 4. In a model with non-time dependent master data attributes, time-dependent attributes and texts, the name can also be reused for the various master data types.
 5. A unique ODP name is a prerequisite for ODP maintenance

Operational Data Provider	Description	Semantics	View	Direct Access ...	Switched
OZCUSTOMER	Customer Number	Master Data Attributes	Data Extraction	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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- Under “Operational Data Provider” the system displays:
 - A proposal for the ODP and the ODP’s analytic properties
 - The ODP name with following naming conventions
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 3. An ODP name can only occur once in a model for transaction data
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 5. A unique ODP name is a prerequisite for ODP maintenance

Description

The proposal for the description of the ODP corresponds to the node name.

Semantics

The *Semantics* field shows whether an ODP contains transaction data, master data attributes, time-dependent attributes or texts.

Note

The ODP semantics are derived from the semantic settings in the *model node* step and from other technical properties. The DataSource type is ignored when determining the ODP semantics. You should therefore check the system proposal and change the semantics if necessary.

End of the note.

ODP View

In the default setting, the view for the first ODP for a node is set to *Data Extraction*. Other ODP views are only allowed for attribute nodes. In the default setting, further ODPs on a node are created with ODP view *Projection*.

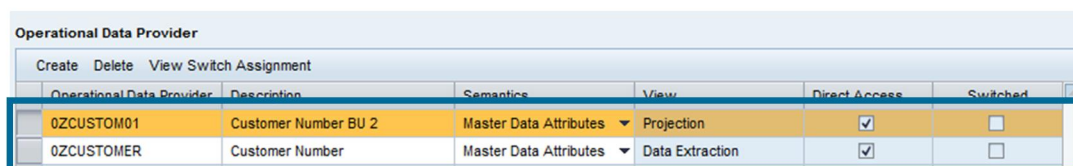
Direct Access Enabled

In the default setting, the ODP is direct access enabled.

Defining an Operational Data Provider

Setting the Properties of the Operational Data Provider

- ODP's analytic properties:
 - Description
 - Semantics
 - ODP View
 - Direct Access Enabled
- For attribute ODPs with ODP view Projection: Change the ODP name and description depending on how the ODP is used.



The screenshot shows a table titled 'Operational Data Provider' with columns: Operational Data Provider, Description, Semantics, View, Direct Access, and Switched. Two rows are visible: one for '0ZCUSTOM01' with 'Customer Number BU 2' description, 'Master Data Attributes' semantics, 'Projection' view, and 'Direct Access' checked; and another for '0ZCUSTOMER' with 'Customer Number' description, 'Master Data Attributes' semantics, 'Data Extraction' view, and 'Direct Access' checked.

Operational Data Provider	Description	Semantics	View	Direct Access	Switched
0ZCUSTOM01	Customer Number BU 2	Master Data Attributes	Projection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0ZCUSTOMER	Customer Number	Master Data Attributes	Data Extraction	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ODP's analytic properties:

1) Description

The proposal for the description of the ODP corresponds to the node name.

2) Semantics

The *Semantics* field shows whether an ODP contains transaction data, master data attributes, time-dependent attributes or texts.

3) ODP View

In the default setting, the view for the first ODP for a node is set to *Data Extraction*. Other ODP views are only allowed for attribute nodes. In the default setting, further ODPs on a node are created with ODP view *Projection*.

3) Direct Access Enabled

In the default setting, the ODP is direct access enabled.

Defining an Operational Data Provider

Editing the Fields in the Operational Data Provider

- The field list of the selected ODP is displayed under “Details”
- Proposal is generated from model node
- Contains as fields all node attributes selected in the “Model Node”-step
- Depending on the role during analysis and on how the field is used in its search and analysis model, the definition of the InfoObject can be influenced
 - Representing key field
 - Fields that are used in the foreign key relationship of an association and are not representative key fields
 - Fields that are not used in the foreign key relationship of an association and are not representative key fields either

Details: Attributes of ODP '0ZCUSTOMER'

Attribute Name	Description	Redefine	Nav. Attr.	Role	Select Path	Aggr. Mode	Reference Node	Ref. Attribute Description	Type	Selection obligati...
KUNNR	Customer N...	<input type="checkbox"/>	<input type="checkbox"/>	Ch...	Select Path		0CUSTOMER_ATTR	Customer Number	CHAR...	Selection Fac...

Editing the Fields in the Operational Data Provider

- The field list of the selected ODP is displayed under “Details”
- Proposal is generated from model node
- Contains as fields all node attributes selected in the “Model Node”-step
- Depending on the role during analysis and on how the field is used in its search and analysis model, the definition of the InfoObject can be influenced

Representing key field:

Fields that are used in the foreign key relationship of an association and are not representative key fields

Fields that are not used in the foreign key relationship of an association and are not representative key fields either

Defining an Operational Data Provider

Editing the Fields in the Operational Data Provider

- Role column (Characteristic or key figure)
- Aggregation Mode
- To enable navigation attributes:
 - Select the “Navigation Attribute”-column
 - For “Data Extraction” ODPs, set the upper limit of the navigation attributes for all of the node's ODPs
 - If a *Navigation Attribute* column in an ODP with ODP view *Projection*, this applies for just this ODP
 - For a transaction data ODP with an association to a master data ODP that provides navigation attributes, the navigation attributes can be added to the required field

Details: Attributes of ODP '0ZCUSTOMER'

Attribute Name	Description	Redefine	Nav. Attr.	Role	Select Path	Aggr. Mode	Reference Node	Ref. Attribute Description	Type	Selection obligati...
KUNNR	Customer N...	<input type="checkbox"/>	<input type="checkbox"/>	Ch...	Select Path		0CUSTOMER_ATTR	Customer Number	CHAR...	Selection Fac...

1) Role column (Characteristic or key figure)

In the *Role* column, the system proposes the InfoObject type (characteristic or key figure) for an ODP field.

2) Aggregation Mode

In the *Aggregation Mode* column, the system proposes aggregation mode *SUM* for key figures.

3) To enable navigation attributes:

- Select the “Navigation Attribute”-column
- For “Data Extraction” ODPs, set the upper limit of the navigation attributes for all of the node's ODPs
- If a *Navigation Attribute* column in an ODP with ODP view *Projection*, this applies for just this ODP
- For a transaction data ODP with an association to a master data ODP that provides navigation attributes, the navigation attributes can be added to the required field

Summary



You should now be able to

- Define Operational Data Provider

You should now be able to define an Operational Data Provider

Further Information

You can find further information on [Operational Data Provisioning](#) in the SAP Library for SAP NetWeaver 7.0 including Enhancement Package 3 under <http://help.sap.com>.

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