

iKnowBase Meta Modelling Reference

Copyright © Acando AS

Table of Contents

I. iKnowBase Meta Modelling Reference	1
1. Attribute Types	2
1.1. Attribute Type Properties	2
2. Dimensions	5
2.1. Dimension Properties	5
Label and description	5
2.2. Tasks	6
Moving a Dimension	6
Assigning an Access Control List to a Dimension	6
Associating a Dimension with a Dimension Type	6
3. Dimension Types	7
3.1. Dimension Types Properties	7
Label and description	7
3.2. Tasks	7
4. Document Types	8
4.1. Document Type Properties	8
4.2. Generator	10
4.3. Tasks	11
Associating an Document Type with an Attribute Type	11
5. Searchcode	12
5.1. Search condition properties	12
Label and description	12
6. Site	13
6.1. Site Properties	13
Label and description	13
7. Value Lists	14
7.1. Value List Properties	14
Label and description	14

Part I. iKnowBase Meta Modelling Reference

Welcome to iKnowBase! This is the on-line documentation for iKnowBase. Please enjoy!

1. Attribute Types

You can use attribute types to categorize and retrieve content. Attribute types enable you to define the metadata that can be associated with the content. You can create your own attribute types or use attribute types that are available by default. You can associate various attribute types with an document type.

You must associate every attribute type with a data type that defines the type of metadata that the attribute type can store.

1.1 Attribute Type Properties

This section describes the properties of an attribute type, as shown on the corresponding **Edit** pane.

The screenshot shows the 'Attribute: Avsender' edit pane. It includes the following sections:

- Label and description:** A table with two columns: 'Label' and 'Description'. It contains three rows of data for the language 'in' and 'us'.
- Identity:** Fields for 'Name' (Avsender), 'External key' (FORM2MAIL_SENDER), and 'Subsystem' (a dropdown menu).
- Attribute information - rules:** A table with two columns: 'Property' and 'Value'. It contains five rows of data for 'Indexed', 'Searchable', 'Viewable', 'Insertable', and 'Inheritance'.
- Type:** A dropdown menu for 'Select datatype' with the value 'Alphanumeric (CHAR)'.

Label (language)	Type a label and description for this attribute type. One entry per supported language.
Name	Type a name for this attribute type.
External key	Type an additional identifier for this attribute type. An external key is used in code that integrates external services with this iKnowBase attribute type.
Subsystem	Choose a subsystem in which this attribute type is used.
Indexed	Select this check box to make this attribute type indexed and thereby searchable using free text search.
Searchable	Select this check box to make this attribute type searchable for advanced searches.
Viewable	Select this check box to make this attribute available in the list of attributes while creating a presentation style.
Insertable	Select this check box to make this attribute type available in the list of attribute types while creating a form.
Inheritance	Select this check box to enable subdocuments to inherit the attribute from the master information object.
Datatype	Click the appropriate data type for the value of this attribute type. Available options are:

	<ul style="list-style-type: none"> • Access control list: Stores access control list information. • Alphanumeric (CHAR): Stores characters. • Large text (CLOB): Stores character set data. • Date values: Stores point-in-time values (date and time). • Dimensional values: Stores references to dimensions. • Links to documents: Stores references to related information objects. • External datasource: Stores references to data in a source that is external to iKnowBase. The purpose of external attribute types is to be able to tag iKnowBase information objects with metadata which are defined outside of iKnowBase, ie. in another system. These attributes can be used as ordinary iKnowBase attributes in Viewers, Forms and Search Sources. They require an external source, which contains procedures to support lookups and value lists. See <i>iKnowBase Development Guide</i> for information on how to implement this. • Files: Stores binary data. • Numeric values: Stores fixed and floating-point numbers. • Link to images: Stores references to information objects containing images. • Value list: Stores values from predefined value lists. • Link to users: Stores user identification. • XML data: Stores XML data. • Document type: Stores document type. • Object reference: Locator for system attributes defines as an object. e.g IKB \$FORM.
Length	<p>This property is available when you select the Char data types.</p> <p>Type the maximum number of characters that the user can store for the Char data type.</p>
Value list	<p>This property is available when you select the Value list data type.</p> <p>Select the value list for this attribute type.</p>
Document reference	<p>This property is available when datatype is set to DOCUMENT_FIELD. It contains a reference to the column in the DOCUMENT table in which attributes for information objects will be stored.</p> <p>Note: You cannot update the information of this property.</p>
Max number of values	<p>This property is available when you select the Dimension data type.</p>

	<p>Type the maximum number of values that can be selected for this attribute type.</p> <p>You can override this value while creating a form.</p>
Dimensions	<p>This property is available when you select the DIMENSION, PICTURE_LINK, and DOCUMENT_LINK data types.</p> <p>Displays a list of dimensions which can be used for this attribute type. This limits which dimensions are selectable for an attribute in a form. The selected dimension(s) and their sub dimensions will be available.</p>
Dimension types	<p>This property is available when you select the DIMENSION data type.</p> <p>Displays a list of dimension types which this attribute type is associated with. This limits which dimensions are selectable for an attribute in a form. Dimensions with the selected dimension type(s) will be available. If no dimension type is selected, all dimensions for the given dimension structure are available for this attribute type.</p>
External source	<p>This property is available when you select the EXTERNAL data type.</p> <p>Type the external API source; @<schema>.<api-package>@. The API needs to contain procedures to support lookups and value lists. See <i>Development Guide</i> for further information.</p>

2. Dimensions

Dimensions enable you to categorize, group, label, and filter content. Dimensions provide structured context information to otherwise unstructured content. You can associate dimensions with information objects by using attribute types.

2.1 Dimension Properties

This section describes the properties of a dimension, as shown on the corresponding **Edit** pane.

The screenshot shows the 'edit' pane for a dimension. The left sidebar contains a tree view of the knowledge base structure. The main area is titled 'DIMENSIONS: London, Jack' and contains several sections:

- Label and description:** Fields for 'Label' (London, Jack), 'Language' (n), 'Description' (London, Jack), 'Unit' (us), and 'Access control list'.
- Identity:** Fields for 'External key' and 'Subsystem'.
- Structure, privilege and order:** Fields for 'Parent dimension' (Innholdsbase), 'Sort key' (0), and 'Access control list'.
- Dimension types are used to filter in combination with an attribute:** A list of dimension types including 'iKB Org-Avdeling' and 'iKB Prosess-steg'.
- List of all child dimensions one level below:** A table with columns 'Id', 'Label', 'External key', 'Access control list', and 'Last changed'.
- Database information:** Fields for 'Guid', 'Id', 'Created', 'Updated', 'Master table', and 'Detail tables'.
- Patch sets:** A table with columns 'Action', 'Id', 'Name', and 'Last built'.

Label and description

Label (language)	Type a label and description for this dimension. One entry per supported language. This is the display name for the dimension.
External key	Type an additional identifier for this dimension. An external key is used in code that integrates external services with this iKnowBase dimension.
Subsystem	Choose a subsystem in which this dimension is used.
Parent dimension	This property is set when creating a dimension, and contains a reference to this dimension's parent dimension.
Sort key	Type a key to set the order in which the dimensions are displayed.
Access control list	Select the appropriate access control list (ACL) to assign that access control list to this dimension. The access control list is used to authorize users for viewing and tagging with this dimension.
Dimension types	Displays a list of dimension types for this dimension. Supported actions are add and removal of dimension types

Child dimensions	<p>Displays all subdimensions on the level below this one. Supported actions are add, reorder and edit.</p> <p>Add new sub dimensions by clicking "Add child dimension", then enter a label (and external key if needed). To set other properties for the sub dimension, select the dimension from the tree viewer on the left hand side.</p>
------------------	---

2.2 Tasks

See earlier chapter for information about common tasks like create, view, copy, update, and delete. This chapter describes specific tasks for dimensions.

Note: Actions for performing tasks related to dimensions are available on the **Edit** pane for a dimension.

Note: It is not possible to copy a dimension.

Moving a Dimension

You might need to move a dimension if it is not created at the correct level within the dimension structure. You can move a dimension to another level in the same dimension tree or to a different dimension tree.

To move a dimension, perform the following steps: . On the **List** pane for dimensions, click the dimension that you want to move. . On the **Edit** pane, click the **Change** link next to the **parent dimension** field. #* The dimension navigator opens. . Click the new parent dimension in the dimension navigator to select it. #* The **Edit** pane is updated with the selected parent dimension, and the dimension navigator closes. . Click **Save**. #* iKnowBase moves this dimension to the selected dimension level in the dimension tree.

Note: To change the display order of dimensions at the same level, use the property Sort key.

Assigning an Access Control List to a Dimension

To assign an access control list to a dimension, perform the following steps: . On the **Edit** pane for the dimension, click the **Change** link next to the **Access control list** field. #* A window containing a list of existing access control lists appears. . Click on the **select** action for the access control list you want to add to the attribute type. #* The **Edit** pane is updated with the selected access control list, and the window containing the list of existing access control lists closes. . Click **Save**.

Note: Click the **Clear** link to remove the access control list from the dimension.

Associating a Dimension with a Dimension Type

To add a dimension type to a dimension, perform the following steps: . On the **Edit** pane for the dimension, click on the select box next to the **Dimension type** label. #* A window containing a list of existing dimension types appears. . Click on the **select** action for the dimension type you want to add to the dimension. #* The selected dimension type is added to the list of dimension types in the **Edit** pane, and the window containing the list of existing dimension types closes. . Click **Save**.

To remove a dimension type from an a dimension, perform the following steps: . On the **Edit** pane for the dimension, click on the **remove** action for the dimension type you want to remove. #* The dimension type is removed from the list. . Click **Save**.

3. Dimension Types

A dimension is a tree structure with various levels. For example an organization tree, with people, departments, and sections. You can create dimension types to group together multiple dimensions with similar characteristics.

3.1 Dimension Types Properties

This section describes the properties of a dimension type, as shown on the corresponding **Edit** pane.

The screenshot shows the 'Edit' pane for a dimension type. At the top, there is a navigation bar with tabs: 'attribute', 'dimension', 'dimension type' (selected), 'document type', 'site', and 'value list'. Below the navigation bar, the title is 'Dimension type: IKB Customer'. To the right of the title are buttons: 'Save (s)', 'Save and close (x)', 'Copy', 'Delete', and 'Cancel'. The main area is divided into three sections: 'Label and description', 'Identity', and 'Database information'. The 'Label and description' section has a table with two rows: 'Label' with value 'IKB Kunde' and language 'n', and 'Label' with value 'IKB Customer' and language 'us'. The 'Identity' section has fields for 'External key' and 'Subsystem'. The 'Database information' section shows details like 'Guid', 'Id', 'Created', 'Updated', and 'Master table'. To the right of the 'Database information' section is a 'Patch sets' table with columns 'Action', 'Id', 'Name', and 'Last built'.

Label and description	
Label	IKB Kunde n
Label	IKB Customer us

Identity	
External key	
Subsystem	

Database information	
Guid	DBC2EE3342114AB2B2A405033BF81E2
Id	9425
Created	22.03.2006 16:42 by ORCLADMIN
Updated	22.05.2014 00:46 by ORCLADMIN
Master table	DIMENSION_TYPE (Dimension type)

Patch sets			
Add to patch set			
Action	Id	Name	Last built

Label and description

Label (language)	Type a label and description for this dimension type. One entry per supported language. This is the display name for the dimension type.
External key	Type an additional identifier for this dimension type. An external key is used in code that integrates external services with this iKnowBase dimension type.
Subsystem	Choose a subsystem in which this dimension type is used.

3.2 Tasks

See earlier chapter for information about common tasks like create, view, copy, update, and delete.

4. Document Types

Document types are used to define various types of content that can be stored in the iKnowBase portal. Creating an document type is the first step in categorizing content.

4.1 Document Type Properties

This section describes the properties of an document type, as shown on the corresponding **Edit** pane.

Document type: Activity

Label and description

Label: Activity

Description: Activities like appointments, meetings etc..

Identity

External key: iKB_ACTIVITY

Subsystem: [Link]

Document type information

☒ Keep deleted documents in trash bin

30 Number of days to keep the documents

☐ Activate check-in/check-out

☐ Set timestamp only when changing document content

Store read statistics (per user/document) Create a aggregated log (user/document)

Number of days to store statistics

Master and sub documents

☐ Update timestamp on master document

☐ Copy valid from/to from master document

☐ Copy document status from master document

☐ Copy ACL from master document

Versioning

☒ No versioning. Completely remove the old version of the item and keep no copy.

☐ Simple. Offers the contributor a choice of whether to keep a copy or not.

☐ Prompt. The user gets prompted to decide if a new version is wanted.

☐ Audit. Always keep a copy of the old version.

☐ Automatic. Automatically create a new version on changes.

Define the default attribute list for a document type

[Add attribute](#)

Actions	Id	Name	External key	Required
---------	----	------	--------------	----------

Label (language)	Type a label and description for this document type. One entry per supported language.
External key	Type an additional identifier for this document type. An external key is used in code that integrates external services with this iKnowBase metadata object.
Subsystem	Choose a subsystem in which this document type is used.
Keep deleted documents in trashbin	If checked, you need to enter the number of days the deleted documents should be kept in the trash bin. Documents will be copied to the trash bin before the physical deleted from the document tables. This gives the user an option later to restore the document. An automatic job will remove the expired documents from the trash bin.
Activate Check in/out	Select this check box to enable the check in and check out functionality for the information objects of this document type. If this functionality is enabled, when the user needs to update an information object, the user must check out the information object before updating it. If an information object is checked out by another user, the information object is locked until it is checked in. This functionality ensures that only one user can update an information object at a given time.
Set timestamp only when changing document content	Select this check box if you want the timestamp of an information object to be updated only when the content of the information object is updated. If not selected both content and metadata update to an information object will cause the timestamp to be updated.

Store read statistics (per user/document)	<p>iKnowBase maintains a log of information objects read. The log data is written to the LOG_DOCUMENTS database table. There are four options: No logging, log each time a user reads a document (one log entry for each occurrence), Aggregated log (one log entry for user/document with a counter how many times the user has read the same document) and log once pr user/document.</p> <p>If this check box is selected an input field for number of days to store statistics will appear. Type the number of days for which you want iKnowBase to maintain user statistics for information objects of this document type. If you want to maintain the log data permanently, type 0.</p>
Update timestamp on master document	Select this check box to update the timestamp of the master information object when one of its subdocuments is updated.
Copy valid from/to from master document	Select this check box if you want the validity period of the document's subdocuments to be the same as the validity period of the document itself. If the validity period of the document is changed, the validity period of its subdocuments will be updated.
Copy document status from master document	Select this check box if you want the status of the document's subdocument to be the same as the status of the document itself. If the status of the document is changed, the status of its subdocuments will be updated.
Copy ACL from master document	Select this check box to if you want the Access Control List of the document's subdocuments to be the same as the Access Control List of the document itself. If the Access Control List of the document is changed, the Access Control List of its subdocuments will be updated.
No versioning	Click this version type if you do not want iKnowBase to maintain copies of an information object.
Simple	<p>Click this version type if you want the capability to decide whether you want iKnowBase to keep copies of the information object, while saving changes to this information object.</p> <p>When a user selects Simple version control for an information object, the user can choose from the following options: * Update the active version without maintaining a copy of the information object. * Create a copy of the new version of the information object and set it as the active version.</p> <p>Create a copy of the new version of the information object without setting it as the active version.</p>
Prompt	<p>Click this version type if you want iKnowBase to prompt you whether you want iKnowBase to keep copies of the information object, while creating the information object.</p> <p>When a user selects Prompt version control for an information object, the user can select to use Simple version control while creating an information object.</p>
Audit	Click this version type if you want iKnowBase to maintain each copy of an information object.

	When a user selects Audit version control for an information object, the user can set the new version of the information object as the active version.
Automatic	<p>Click this version type if you want iKnowBase to automatically create a copy when changes are made to the information object.</p> <p>The latest copy of an information object is automatically set as the active version.</p>
Number of versions to keep	<p>This property appears after you select a Version type other than No versioning.</p> <p>Type the maximum number of versions that iKnowBase must maintain for each information object of this document type.</p> <p>For example, if you set Number of versions to keep to 10, iKnowBase saves ten versions of the information object. When the 11th version is saved, iKnowBase deletes the oldest version.</p>
Allow switch of active version	<p>This property appears after you select a Version type other than No versioning.</p> <p>Select this check box to allow the user to choose a different version as the active version of the information object.</p>
Allow editing of non-active versioned document	<p>This property appears after you select a Version type other than No versioning.</p> <p>Select this check box to allow users to edit any inactive version of the information object.</p>
Attributes	<p>Displays a list of attribute types which this document type is associated with.</p> <p>You can associate multiple attribute types with an document type. You can also make an attribute type required.</p> <p>When you create a form for this document type, the attribute types that you associated with the document type are automatically selected. When you use dynamic attribute types in a form, you can select only those attribute types that you associated with the document type.</p>

4.2 Generator

Create a template bean for this document type by pressing the Generator button. Remember to give the document type an external key before you generate the bean.

The screenshot shows a software interface window titled "View information for 'Customer Card' of type 'Document type'". It has three tabs: "edit", "generator" (which is active), and "usage". In the "generator" tab, there is a "Code generator for Spring form" section. This section contains two input fields: "Class name" with the value "MyClass" and "Package name" with the value "MyPackage". At the top right of the window, there are "Generate" and "Cancel" buttons.

Class name	Enter a class name (Optional). The generator will autogenerate a class name if not supplied.
------------	--

Package name	Enter a package name (Optional). The generator will autogenerate a package name if not supplied.
--------------	--

4.3 Tasks

See earlier chapter for information about common tasks like create, view, copy, update, and delete. This chapter describes specific tasks for document types.

Associating an Document Type with an Attribute Type

To add an attribute type to an document type, perform the following steps: . On the **Edit** pane for the document type, click on the action **Add attribute**. #* A window containing a list of existing attribute types appears. . Click on the **select** action for the attribute type you want to add to the document type. #* The selected attribute type is added to the list of attribute types in the **Edit** pane, and the window containing the list of existing attribute types closes. . Click Save.

Note: Click on the **Add multiple attributes** action if you want to add more than one attribute type. The window containing the list of existing attribute types will remain open until you explicitly close it by clicking on the **Close** button. Each time you click on the **select** action for an attribute type, this attribute type will be added to the list of attribute types in the **Edit** pane.

To remove an attribute type from an document type, perform the following steps: . On the Edit pane for the document type, click on the remove action for the attribute type you want to remove. #* The attribute type is removed from the list. . Click Save.

To reorder the attribute type list for an document type, perform the following steps: . On the Edit pane for the document type, drag the mostleft icon action for the attribute types you want to move until the order of the attribute types is as you like. . Click Save.

5. Searchcode

Searchcodes are the valid conditions used in search portlets. iKnowBase use a few searchcode definition, each designed for a certain datatype (e.g Numeric search). The administrator can update the labels for a searchcode.

edit usage help

Search conditions: Alphanumeric search

Save (s) Save and close (x) Cancel

Label and description

Label Tekst søk n

Alphanumeric search us

Search condition

Id	Internal key	Label
1	CONTAINS	Inneholder n
2	STARTWITH	Starter med n
3	ENDWITH	Slutter med n
4	IS	Lik n
5	ISNOT	Ulik n

5.1 Search condition properties

This section describes the properties of searchcode, as shown on the corresponding **Edit** pane.

Label and description

Label (language)	Type a label and description for this set of search codes. One entry per supported language. This is the display name for the collection of condition.
Search conditions	Contains all valid conditions for this set. You can sort the list with a drag and drop action.
Label (language)	Type a label and description for the specific condition, one entry per supported language.

6. Site

Site provide information about the current iKnowBase portal instance. An iKnowBase portal instance is called a **site**. Each customer has a separate iKnowBase site and each site's settings might be different, depending on the customer's requirements. The administrator of the iKnowBase portal can update the settings for a site.

6.1 Site Properties

This section describes the properties of site, as shown on the corresponding **Edit** pane.

Label and description

Label (language)	Type a label and description for this site. One entry per supported language. This is the display name for the site.
Image archive	Contains the root level of the image archive in the dimension tree.
Image document type	Click the appropriate document type for all images that are added to the iKnowBase image archive.
Template document type	Click the appropriate document type for templates that are created in iKnowBase. All information objects of this document type are available as a template in the publishing desktop.
Default status	Decides the default document status if not given during the creation of the document

7. Value Lists

Value lists enable you to create a predefined set of values. A value list attribute type is associated with a value list. When categorizing and searching content for this attribute type, only the values that are defined in value lists are available.

7.1 Value List Properties

This section describes the properties of a value list, as shown on the corresponding **Edit** pane.

edit

usage

Value list: Changetype

Save (s)

Save and close (x)

Copy

Delete

Cancel

Label and description

Label

Changetype

us

Endingstype

in

Identity

External key

PAT_CHANGETYPE

Subsystem

Define how the elements should be ordered. A checked value will sort alphabetically, while a unchecked value will sort by the order in the list

Alphabetically ordered?

☐

Add, edit or delete entries in the value list

Add value

	Id	Label		External key	Created date	Last changed
<input checked="" type="checkbox"/>	327064	Designer	us	PAT_DESIGNER	14.09.2015 14:37:52	04.12.2015 13:33:43
<input checked="" type="checkbox"/>	327065	Fullmektig	us	PAT_FULLMEKTIG	14.09.2015 14:37:52	04.12.2015 13:33:43
<input checked="" type="checkbox"/>	327066	Lisenshaver	us	PAT_LISENSHAVER	14.09.2015 14:37:52	04.12.2015 13:33:43
<input checked="" type="checkbox"/>	327067	Oppfinner	us	PAT_OPPFINNER	14.09.2015 14:37:52	04.12.2015 13:33:43
<input checked="" type="checkbox"/>	327068	Soker/innehaver	us	PAT_SOKER	14.09.2015 14:37:52	04.12.2015 13:33:43

Database information

Guid

1FB544D6FC20C371E050000A18003849

Id

327063

Created

14.09.2015 14:37 by ORCLADMIN

Updated

04.12.2015 13:33 by ORCLADMIN

Master table

GENERIC_CODE_DEF (Value list)

Detail tables

GENERIC_CODES

Patch sets

Add to patch set

Action	Id	Name	Last built
--------	----	------	------------

Label and description

Label (language)	Type a label and description for this value list. One entry per supported language. This is the display name for the value list.
External key	Type an additional identifier for this value list. An external key is used in code that integrates external services with this iKnowBase dimension type.
Subsystem	Choose a subsystem in which this value list is used.
Alphabetically ordered?	A checked value will sort alphabetically, while a unchecked value will sort by the order in the list (use drag/drop to manually order the list)
Entries in the value list	Displays the list of values for the value list. To add new values, use the Add value link. Other permitted actions are reorder and removal of an entry.
Label (language)	Type a label and description for this value. One entry per supported language. This is the display name for the value.
External key	Type an additional identifier for this value. An external key is used in code that integrates external services with this iKnowBase value.