



## SAP BusinessObjects Xcelsius Portlet User Guide

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# Overview

An Xcelsius Portlet enables the integration of an Xcelsius model exported to Shockwave Flash Object (SWF) files into a portal server, making default values configurable and enabling one Xcelsius Portlet to communicate with another.

This document describes how to create and configure an Xcelsius Portlet from any Xcelsius model.



# Introduction

For each Xcelsius model published on a portal, a new Xcelsius Portlet is created. The Xcelsius Portlet discussed in this document is a template used to build each of these specific Xcelsius portlets.

While the Xcelsius Portlet complies with the JSR 168 standard, and can be deployed on any portal server, inter-portlet communication is currently only supported on IBM WebSphere Portals.

The Xcelsius Portlet was tested on IBM WebSphere Portal 5.1. All portlet management instructions in this guide are based on WebSphere Portal 5.1. All portal screenshots are taken from a WebSphere Portal 5.1 installation.



# Xcelsius Portlet Generation Utility

The Xcelsius Portlet Generation Utility creates an Xcelsius Portlet for a given Xcelsius model.

The Xcelsius Portlet Generation Utility's output is an Xcelsius portlet contained in a web application archive (`.war`), which can be installed on a portal server.

## Installation

The Xcelsius Portlet Generation Utility does not require an installation. It only needs to be extracted to a convenient location. The only software needed is Java Runtime Environment version 1.4.2 or higher.

## Using the Portlet Generation Utility

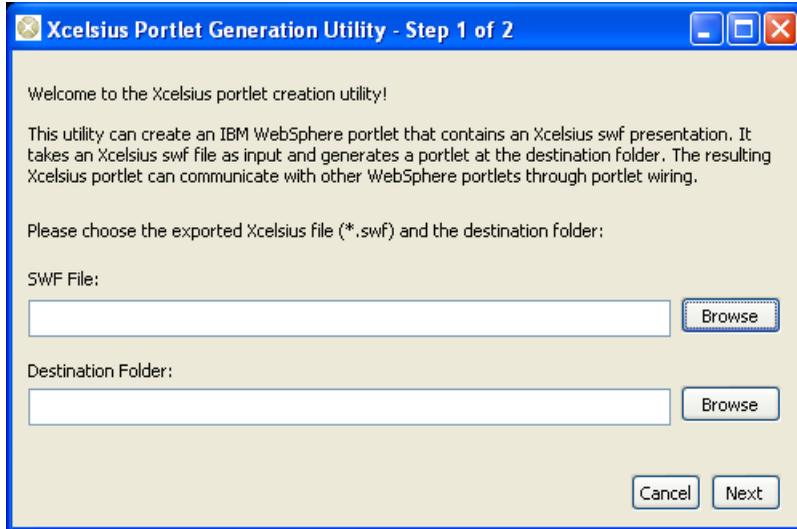
### Starting the application

The Xcelsius Portlet Generation Utility is started by double-clicking `XcelsiusPortletGenerationUtility.bat` (`.sh` on Linux platforms).

### Selecting a file and a destination

The first screen dialog is used to select the Xcelsius model for which the Xcelsius Portlet is created, and to decide where the resulting web application archive (`.war`) file should be stored.

Be sure that the file you select contains Portal Data connection(s). For details about the Xcelsius data connections that have special functionality in the Xcelsius portlets, see [Relevant Xcelsius Data Connections](#).



### Inserting portlet specific data

Based on the model SWF file, suggested values are generated for each field. The second dialog allows modifying these values. The following table explains what these values are in the portlet context.

The swf file was successfully parsed.  
Based on the swf file, the following values are suggested:

Portlet Id:

Portlet Name:

Display Name:

Portlet Title:

Portlet Short Title:

Portlet Description:

Portlet Keywords:

Buttons: Cancel, Back, Finish

Field	Description
Portlet Id	Internal identification used by WebSphere Portal. The Portlet Id must be unique. Allowed characters are letters, digits, dot (".") and underscore ("_").
Portlet Name	The portlet's name, which also determines the name of the web application the utility generates. Allowed characters are letters, digits, dot (".") and underscore ("_").
Display Name	Appears when portlet is displayed.
Portlet Title	The portlet title is usually displayed in the title bar of the portlet's skin. Locale dependent.

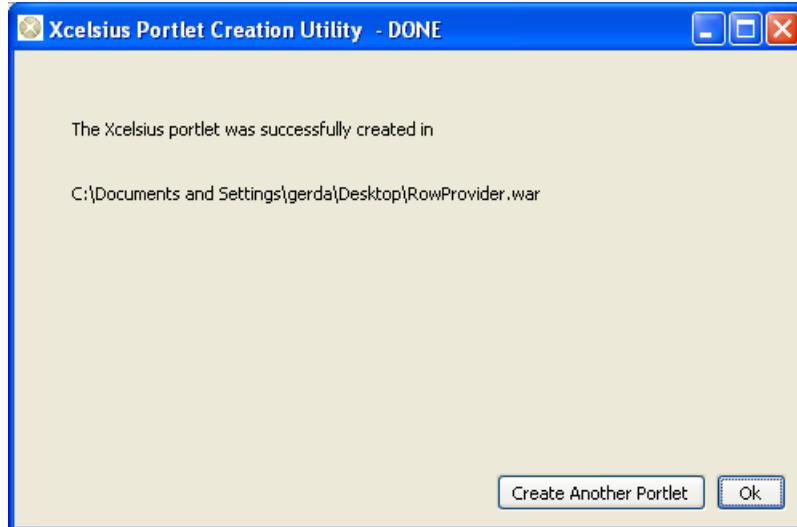
Field	Description
Portlet Short Title	May be used instead of the portlet title. Locale dependent.
Portlet Description	The portlet description is displayed in the portal administration. (Keep it short; there's not too much room in there.)
Portlet Keywords	The portlet's keywords. Locale dependent.

Until the **Finish** button is pressed, nothing is written to the file system. Only then, the Portlet Generation Process is invoked.

#### Final screen

After the portlet has been created, the final dialog gives the absolute location of the generated web application.

To create another Portlet, click **Create Another Portlet**; otherwise click **OK** to close the application.



## Configuring the Portlet Generation Utility

Both the template web application and its default settings can be configured.

**Note:**

The name of the utility's JAR file may vary, depending on the platform.

### The properties file

The Xcelsius Generation Utility's property file name is `XcelsiusPortletCreationUtility.properties`. To modify it, you need to unpack the utility's JAR file, edit it, and preferably put it back into the JAR file. Alternatively, it can be kept in the same folder as the JAR file.

The properties file contains default values used for Xcelsius Portlet parameters. These default values are used to generate the suggested values displayed in dialog "Step 2 of 2".

It also contains values that are not expected to change frequently, such as which template web application file to use.

### The template web application

The files in the template application contain placeholders for special values, which are replaced by the utility. Make sure you keep all of the files and placeholders. When the utility does not find files or placeholders in the files, it assumes that the template web application has been corrupted and will not create any Xcelsius Portlets.

If for some reason (For example, different texts or layout on the Xcelsius Portlet's JSPs, adding special supported languages, and so on) you need a different template web application, modify the original WAR file from the utility ( `template.war`).

# Relevant Xcelsius Data Connections

When creating an Xcelsius model, there are two connection types that have special functionality if used in an Xcelsius Portlet: Portal Data Connection and Web Service Connection. These connections are in the Data Manager. Portal Data connections can be of the following types: None (parameter), Consumer, or Provider.

Each Xcelsius model can contain either one provider connection or one consumer connection. It can also contain neither.

Portal Data Type: None (Parameter) and Web Service Connections are independent from consumers and providers. Their numbers are not limited.

## Portal Data Connections

### Connection Type: Consumer

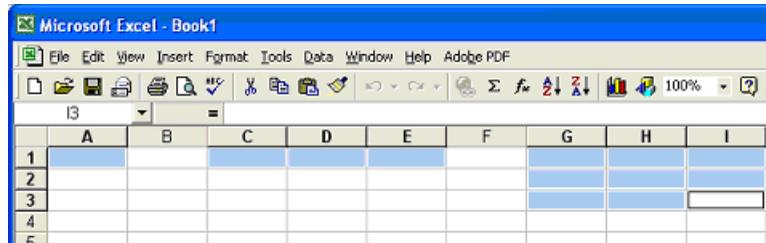
There are three different kinds of consumer, distinguished by the range they cover:

- Cell: consumes data and maps it to a single cell.
- Row: consumes data and maps it to a one dimensional group of cells.
- Table: consumes data and maps it to a two dimensional group of cells.

The image below illustrates how ranges for a Cell Consumer, a Row Consumer, and a Table Consumer may be selected.

**Note:**

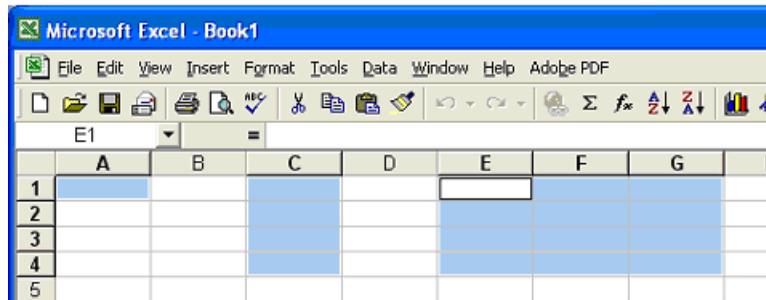
For Row Consumers, the selected range may be vertical (row) or horizontal (column).



(a)

(b)

(c)



(a)

(b)

(c)

## Connection Type: Provider

As with the consumers, there are three different types of providers:

- Cell: transmits values of a single cell
- Row: transmits values of a one dimensional group of cells
- Table: transmits values of a two dimensional group of cells

## Connection Type: None (Parameter)

Parameters enable you to modify values from outside the Xcelsius SWF model.

Their values can be modified in the Xcelsius Portlet's edit mode.

To be able to use them in the Xcelsius model, the parameters must be linked to a cell in the spreadsheet.

When linked to a cell, the parameter is given a default value. If the cell is empty, the default value will be zero (0) .

There are different types of parameters. The type indicates which values are expected. It does not limit you in what you might do with these parameters.

- Text parameters allow you to enter any text.
- Number parameters allow you to enter numbers.
- Check Box parameters allow you to enter exactly two values: checked, represented by (-1), and unchecked, represented by (null).
- Date parameters represent a date.
- List Box parameters allow you to specify a number of options among which the user may later choose.

For details on how these values can be modified in the portal, see [Xcelsius Portlet User Interface](#).

### User Information

Text parameters with special names will be translated to information about the portal user using the portlet. This functionality can be used to personalize the Xcelsius model. (For example, using the user's name in a welcome message.)

Parameters whose name starts with USER\_INFO will not show up in the Xcelsius Portlet's edit mode. Be sure not to let your Parameters' names start with USER\_INFO if they are not intended to pick up user data.

The following table shows supported values for USER\_INFO names. Note that not all fields will contain values on every portal. Check with your portal administrator which values are supported by the portal's user registry.

Special Values
USER_INFO.user.name.given
USER_INFO.user.name.family
USER_INFO.user.name.prefix
USER_INFO.user.name.middle
USER_INFO.user.name.employer
USER_INFO.user.name.department

## Web Service Connections

The Xcelsius model can receive data from web services.

If the web service is a Query As A Web Service Connection, it will connect to the BusinessObjects Enterprise server specified in the URL of the QAAWS connection.

# Xcelsius Portlet

Once an Xcelsius Portlet is created, it is bound to its underlying Xcelsius model, and its portlet properties, such as name, title, and so on are set. It is ready to be installed on a portal server.

The only thing left to do is modifying any Xcelsius Portal Data Parameters, set up its collaborations with other portlets, and some administrative tasks.

This section covers the administrative tasks needed to get a portlet up and running, the Xcelsius Portlet from a user's perspective, and how collaboration in a running portlet works - everything you will need to know if the Xcelsius Portlet should collaborate with other, non-Xcelsius portlets.

## Xcelsius Portlet Administration

Before an Xcelsius Portlet can be used on a portal page, a user with administrator privileges has to install it.

Configuration is only needed for inter-portlet communication and, in most scenarios, access rights settings.

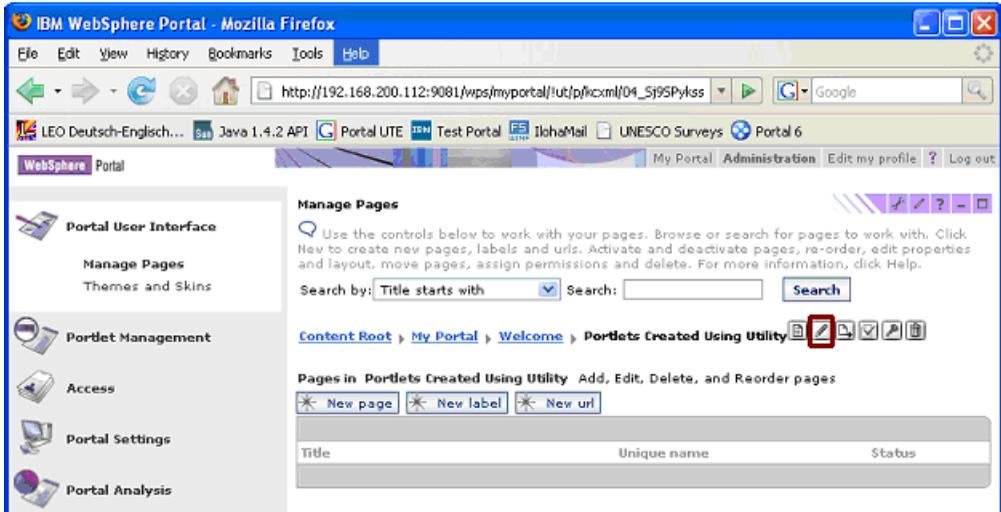
### Installing an Xcelsius Portlet

Each Xcelsius portlet is packaged in its own web application. It does not require any special settings or additional libraries.

### Configuring Inter-Portlet Communication

Xcelsius Portlets may transmit data to other portlets. This is set up in the portal's administration, under the "Manage Pages" section. Every portal user who has the right to edit the page can configure inter-portlet communication.

Choose the page where the portlets that will communicate are published, and select the Edit icon.

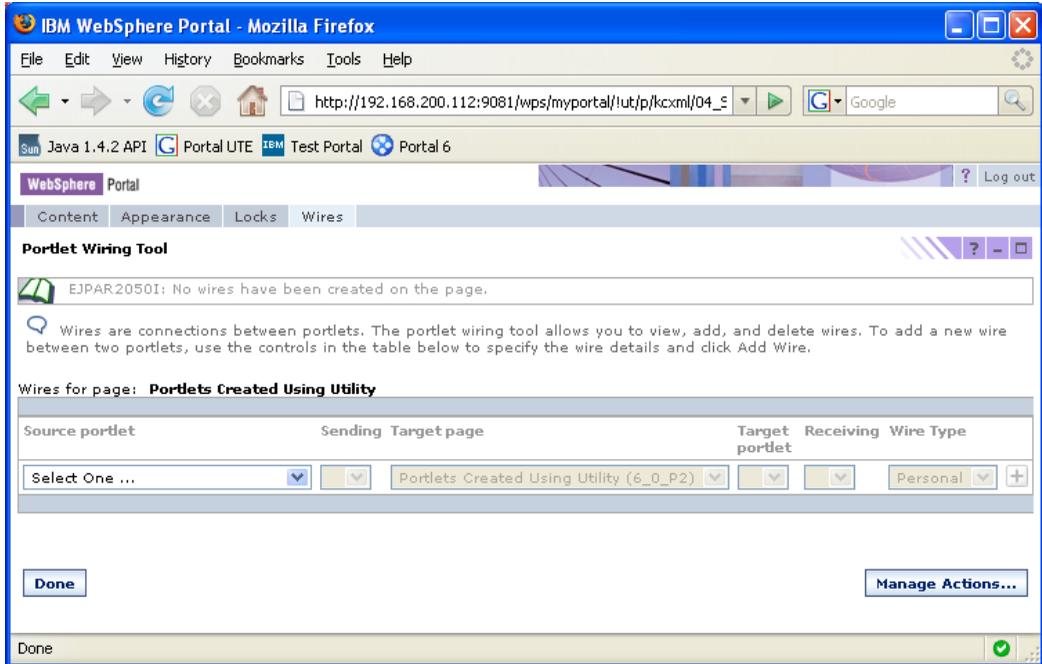


In the edit page section, select the rightmost section titled "Wires". In the "Source portlet" list, select the portlet that holds the provider.

Under "Sending", select the field that should be sent. For Xcelsius Portlets, there will be only one option in the list.

Select the "Target page" on which your consumer portlet is published. Select your consumer portlet as "Target portlet". In the "Receiving" list, for Xcelsius portlets, there will be only one option.

Choose the "Wire Type" and click the add + button to finalize the wire creation. Your portlets are now able to communicate.



**Caution:**

Be aware Portlets that contain only consumers also show up as potential source portlets, and portlets containing only a provider also show up as possible target portlets. This is because a portlet either is wiring-enabled or not. For WebSphere Portal, there is no distinction between provider and consumer portlets. If you choose a consumer portlet as the provider, this wire will never be used, because the consumer will never send any data.

**Caution:**

Be sure that the mapping of providers and consumers is compatible with your intent. Generally, let Cell Providers communicate with Cell Consumers, Row Providers with Row Consumers, and Table Providers with Table Consumers. Otherwise, you might not see the intended results.

## Xcelsius Portlet User Interface

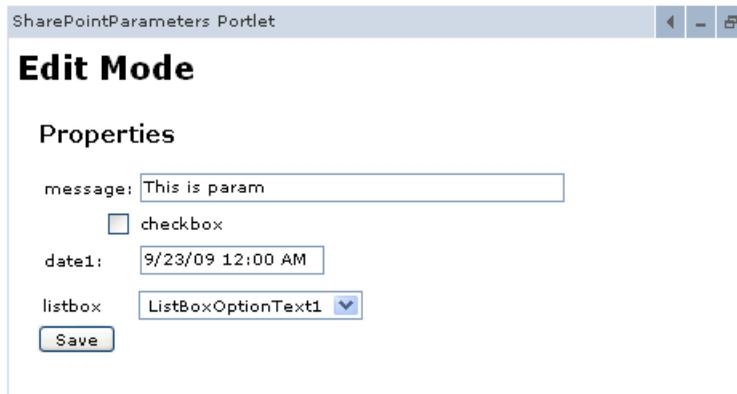
The Xcelsius Portlet will have the default height and width of the Xcelsius model it integrates. It displays the SWF file using the web browser's Adobe Flash Player plug-in.

### Modifying Xcelsius Portal Data Parameters

Different types of Portal Data Parameters render to different input fields in the Xcelsius Portlet's edit mode. The following table contains the HTML control for each parameter type.

Parameter Type	Edit Mode Control
Text	Input Field
Number	Input Field
Date	Input Field
Check Box	Check Box
List Box	Drop-Down Box

This image shows the edit mode of an Xcelsius Portlet with a Text parameter named "message," a Check Box parameter named "checkbox," a Date parameter named "date1," and a List Box parameter named "listbox".



## Xcelsius Data in the Xcelsius Portlet

Data from the Xcelsius model comes in contact with the Xcelsius Portlet in two ways:

- Data transmitted between Xcelsius Portlets connected through wires.
- Data for parameters set by the user in the portlet's edit mode.

Portal Data Providers and Portal Data Consumers exchange data in XML format. The Xcelsius Portlet does not modify the data that is transmitted. This table shows the different values.

<pre> &lt;data&gt;   &lt;row&gt;     &lt;column&gt;       DATA     &lt;/column&gt;   &lt;/row&gt; &lt;/data&gt; </pre>	<pre> &lt;data&gt;   &lt;row&gt;     &lt;column&gt;       DATA     &lt;/column&gt;     &lt;column&gt;       DATA     &lt;/column&gt;     &lt;column&gt;       DATA     &lt;/column&gt;   &lt;/row&gt; &lt;/data&gt; </pre>	<pre> &lt;data&gt;   &lt;row&gt;     &lt;column&gt;       DATA     &lt;/column&gt;     &lt;column&gt;       DATA     &lt;/column&gt;   &lt;/row&gt;   &lt;row&gt;     &lt;column&gt;       DATA     &lt;/column&gt;   &lt;/row&gt; &lt;/data&gt; </pre>
------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Data that goes into the Xcelsius model – data received by a consumer and data set for a parameter – is set as a Flash variable.

For consumers, the Xcelsius Portlet does not impose any restrictions on the sender of the data, meaning the sending entity does not have to be another Xcelsius Portlet. If you need to transmit data from another, non-Xcelsius portlet, be sure to wrap the data as described in the table and set up the wires similar to how wires are set up between Xcelsius Portlets. It is equally possible to send data from an Xcelsius Portlet to a non-Xcelsius portlet.

**Note:**

If data transmitted between a non-Xcelsius Portlet provider and an Xcelsius Portlet consumer is received but not correctly formatted in the Xcelsius Portlet, check if your data is enclosed in XML as described by the table.



# Finding more information

For more information, visit the following web sites:

- WebSphere Portal information and product documentation  
<http://www.ibm.com/software/genservers/portal/support/>
- Background Information on the Java Authentication and Authorization Service (JAAS)  
<http://java.sun.com/j2se/1.4.2/docs/guide/security/jaas/JAASRefGuide.html>
- The BusinessObjects Enterprise Portal Integration Kits:  
<http://www.sdn.sap.com/irj/boc/index?rid=/webcontent/uuid/503988db-58c5-2b10-f79d-cb96700417f9>
- BusinessObjects product documentation:  
<http://help.sap.com/>



# More Information

Information Resource	Location
SAP BusinessObjects product information	<a href="http://www.sap.com">http://www.sap.com</a>
SAP Help Portal	<p>Select <a href="http://help.sap.com">http://help.sap.com</a> &gt; SAP BusinessObjects.</p> <p>You can access the most up-to-date documentation covering all SAP BusinessObjects products and their deployment at the SAP Help Portal. You can download PDF versions or installable HTML libraries.</p> <p>Certain guides are stored on the SAP Service Marketplace and are not available from the SAP Help Portal. These guides are listed on the Help Portal accompanied by a link to the SAP Service Marketplace. Customers with a maintenance agreement have an authorized user ID to access this site. To obtain an ID, contact your customer support representative.</p>

Information Resource	Location
<p>SAP Service Marketplace</p>	<p><a href="http://service.sap.com/bosap-support">http://service.sap.com/bosap-support</a> &gt; Documentation</p> <ul style="list-style-type: none"> <li>• Installation guides: <a href="https://service.sap.com/bosap-instguides">https://service.sap.com/bosap-instguides</a></li> <li>• Release notes: <a href="http://service.sap.com/releasenotes">http://service.sap.com/releasenotes</a></li> </ul> <p>The SAP Service Marketplace stores certain installation guides, upgrade and migration guides, deployment guides, release notes and Supported Platforms documents. Customers with a maintenance agreement have an authorized user ID to access this site. Contact your customer support representative to obtain an ID. If you are redirected to the SAP Service Marketplace from the SAP Help Portal, use the menu in the navigation pane on the left to locate the category containing the documentation you want to access.</p>
<p>Developer resources</p>	<p><a href="https://boc.sdn.sap.com/">https://boc.sdn.sap.com/</a></p> <p><a href="https://www.sdn.sap.com/irj/sdn/businessobjects-sdklibrary">https://www.sdn.sap.com/irj/sdn/businessobjects-sdklibrary</a></p>
<p>SAP BusinessObjects articles on the SAP Community Network</p>	<p><a href="https://www.sdn.sap.com/irj/boc/businessobjects-articles">https://www.sdn.sap.com/irj/boc/businessobjects-articles</a></p> <p>These articles were formerly known as technical papers.</p>
<p>Notes</p>	<p><a href="https://service.sap.com/notes">https://service.sap.com/notes</a></p> <p>These notes were formerly known as Knowledge Base articles.</p>
<p>Forums on the SAP Community Network</p>	<p><a href="https://www.sdn.sap.com/irj/scn/forums">https://www.sdn.sap.com/irj/scn/forums</a></p>

Information Resource	Location
<p>Training</p>	<p><a href="http://www.sap.com/services/education">http://www.sap.com/services/education</a></p> <p>From traditional classroom learning to targeted e-learning seminars, we can offer a training package to suit your learning needs and preferred learning style.</p>
<p>Online customer support</p>	<p><a href="http://service.sap.com/bosap-support">http://service.sap.com/bosap-support</a></p> <p>The SAP Support Portal contains information about Customer Support programs and services. It also has links to a wide range of technical information and downloads. Customers with a maintenance agreement have an authorized user ID to access this site. To obtain an ID, contact your customer support representative.</p>
<p>Consulting</p>	<p><a href="http://www.sap.com/services/bysubject/businessobjectscounseling">http://www.sap.com/services/bysubject/businessobjectscounseling</a></p> <p>Consultants can accompany you from the initial analysis stage to the delivery of your deployment project. Expertise is available in topics such as relational and multidimensional databases, connectivity, database design tools, and customized embedding technology.</p>



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