SAP BusinessObjects Business Intelligence Platform
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Business Intelligence Platform User Guide

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1 Document history

The following table provides an overview of the most important document changes.

Version	Date	Description
SAP BusinessObjects Business Intelligence Platform 4.1	May, 2013	• Support for SAP Jam was added. When integrated, SAP Jam adds social media and collaboration features to the BI launch pad. • Additional collaboration access rights were added for users and groups. The collaboration feed panel includes a drop-down list of instances and times and a button for following or unfollowing a feed. Automatically follow all related instances when you follow a template document in SAP Jam or SAP StreamWork. Comments on instances are posted only for the instance. • You can open OpenDocument links to documents and instances on a tab or via the link. When viewing a document or instance via an OpenDocument link, open the SAP StreamWork feed panel to monitor or reply to a document feed. • An **Add File Extension** check box was added to the *Destinations* dialog box.
SAP BusinessObjects Business Intelligence Platform 4.1 Support Package 1	August, 2013	This guide was updated to include the following information: **Note** You can run one session of the BI launch pad at a time. Use tabs (or windows, depending on your configuration) to view multiple objects and applications.
SAP BusinessObjects Business Intelligence Platform 4.1 Support Package 2	November, 2013	Information about subscribing to scheduled publications and publication instances was added.

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Version	Date	Description
SAP BusinessObjects Business Intelligence Platform 4.1 Support Package 3	March, 2014	• A **Folder Link** option was added to the context menu for public folders and categories. It generates a URL link for the folder or category that you can send to recipients. • Information was added about using the DHTML web viewer for online access to Crystal reports via the Central Management Console (CMC) in the BI platform. • Instructions were added about designing publications for dynamic recipients and for Enterprise recipients. • A reminder was added that the BI launch pad displays preferences configured for only one user group, regardless of the number of user groups a user belongs to in the platform.

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2 Getting Started

2.1 About this documentation

This documentation contains information about working with and managing objects in the BI platform and about accomplishing tasks in the Central Management Console (CMC). Procedures are provided for common tasks. Conceptual information and technical details are provided for all advanced tasks.

For information about system administration tasks, such as planning your deployment, managing servers, setting rights, setting up authentication, or managing users and groups, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

For information about installing the platform, see the *SAP BusinessObjects Business Intelligence Platform Installation Guide*. Both guides are available on the SAP Help Portal at *http://help.sap.com*.

Who should use this documentation

This information is intended for content administrators and power users who manage content in the repository and distribute updated content to recipients.

2.1.1 Terminology

The following terms are used throughout the BI platform documentation:

Term	Definition
add-on products	Products that work with the BI platform but have their own installation program, such as SAP BusinessObjects Explorer
Auditing Data Store (ADS)	The database used to store auditing data
BI platform	An abbreviation for the SAP BusinessObjects Business Intelligence platform
bundled database; bundled web application server	The database or web application server shipped with the BI platform
cluster (noun)	Two or more Central Management Servers (CMSs) working together and using a single CMS database
cluster (verb)	To create a cluster For example, to create a cluster:

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Term	Definition
	1. Install a CMS and CMS database on machine. 2. Install a CMS on machine B. 3. Point the CMS on machine B to the CMS database on machine A.
cluster key	Used to decrypt the keys in the CMS database You can change the cluster key in the CCM, but you cannot reset the key like a password. It contains encrypted content and is important not to lose.
CMS	An abbreviation for the Central Management Server
CMS database	The database used by the CMS to store information about the BI platform
deployment	The BI platform software installed, configured, and running on one or more machines
installation	An instance of BI platform files created by the installation program on a machine
machine	The computer on which the BI platform software is installed
major release	A full release of the software, such as 4.0
migration	The process of transferring BI content from a previous major release (for example, from XI 3.1), using the upgrade management tool. This term does not apply to deployments with the same major release. See *promotion*.
minor release	A release of some components of the software, such as 4.1
node	A group of BI platform servers that run on the same machine and are managed by the same Server Intelligence Agent (SIA)
patch	A small update for a specific Support Package version
promotion	The process of transferring BI content between deployments with the same major release (for example, 4.0 to 4.0), using the promotion management application
server	A BI platform process. A server hosts one or more services.

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Term	Definition
Server Intelligence Agent (SIA)	A process that manages a group of servers, including stopping, starting, and restarting servers
support package	A software update for a minor or major release
web application server	A server that processes dynamic content. For example, the bundled web application server for 4.1 is Tomcat 7.
upgrade	The planning, preparation, migration, and post-processes required to complete a migration process

2.2 About the Business Intelligence platform

The Business Intelligence (BI) platform is a flexible and scalable solution for delivering information to end users, in multiple forms including dashboards and interactive reports, via any web application—intranet, extranet, Internet, or corporate portal.

An integrated suite for reporting, analysis, and information delivery, the platform provides a solution for increasing end-user productivity and reducing administrative efforts. Whether it is used to distribute weekly sales reports, to provide customers with personalized service offerings, or to integrate critical information in corporate portals, the platform delivers tangible benefits that extend across and beyond the organization.

2.3 Licensing

Each type of user license in the BI platform grants or restricts access to particular tasks and applications. Depending on which license you have, you may be unable to access some applications or to perform some tasks in the BI repository.

The platform supports the following types of user licenses:

- BI Viewer
- BI Analyst
- Concurrent user
- Named user

To determine which license you have, contact your system administrator.

For more information about licensing, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* on the SAP Help Portal at *http://help.sap.com*.

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2.4 Key concepts

Familiarize yourself with key concepts in the BI launch pad. Depending on which tasks you perform, some concepts may not apply to you.

Term	Definition
Objects	An object is a document or file created in the BI platform or other software that is stored and managed in the platform repository.
Categories	A category is an organizational alternative to a folder. Use categories to label objects.
Scheduling	Scheduling is the process of automatically running an object at a specified time. Scheduling refreshes dynamic content or data in an object, creates instances, and distributes the instances to users or stores them locally.
Events	An event is an object that represents an occurrence in the BI platform system. Events can be used for the following purposes: • As scheduling dependencies that trigger actions after a scheduled job runs • To trigger alert notifications • To monitor the performance of the platform
Calendars	A calendar is a customized list of run dates for scheduling jobs.
Instances	An instance is a snapshot of an object that contains data from the time an object was run.
Publishing	Publishing is the process of making personalized dynamic content publicly available for mass consumption.
Profiles	A profile is an object that associates users and groups with personalization values. Profiles are used with publishing to create personalized content and distribute it to recipients.
Alerting	Alerting is the process of notifying users and administrators when events occur in the BI platform.

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2.5 Key tasks

Task	Where to find information
Adding objects to the repository	See “Adding objects”.
Modifying and managing objects after they have been added to the Business Intelligence (BI) repository	See the information about working with objects in “General object management”.
Organizing objects	See the information about organizing objects in “Folders” and “Categories”.
Distributing content to users	You can distribute content to users through scheduling, publishing, and alerting. Scheduling lets you refresh data in dynamic content documents and distribute the refreshed data to users at regular intervals; see “Scheduling”. Publishing lets you personalize and refresh content in dynamic content documents for specific users and groups; see “About publishing”. Alerting sends alert notifications to subscribers when an event has occurred in the BI platform; see “Alerting”.

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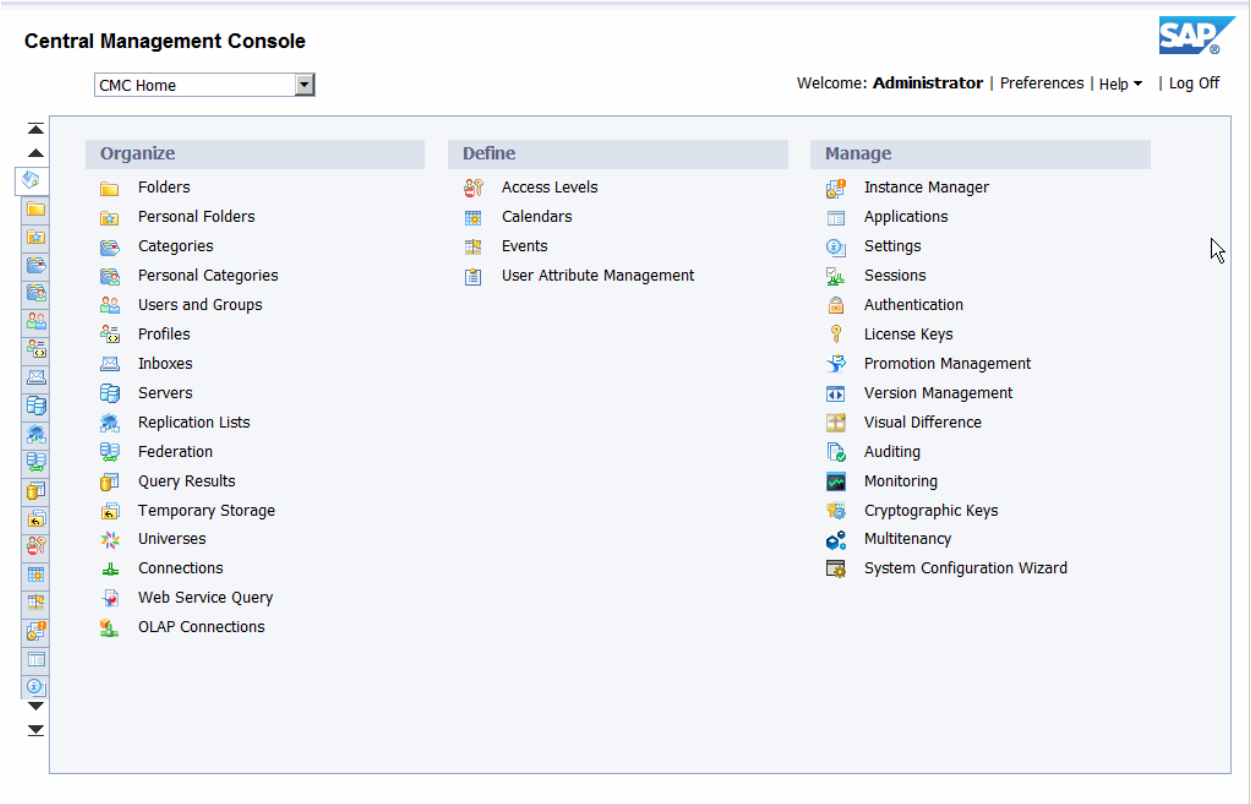
3 Working With the Central Management Console (CMC)

3.1 About the Central Management Console

The Central Management Console (CMC) is a web-based tool that you use to perform most day-to-day administrative tasks, including user management, content management, and server management.

Any user with valid credentials for the Business Intelligence (BI) platform can log on to the CMC and set preferences. Users who are not members of the Administrators group cannot perform management tasks, unless they have been granted access rights for a task.



There are two ways to access the CMC—from your browser or by selecting **Programs** > **SAP Business Intelligence** > **SAP BusinessObjects BI platform 4** > **SAP BusinessObjects BI platform Central Management Console** in Windows.

3.2 Logging on to the CMC

You can log on to only one session of the Central Management Console (CMC). (You cannot run multiple sessions of the CMC on separate browser tabs or windows.)

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1. In a browser, enter the URL to the CMC.

   The default URL is `http://<WebServer>:8080/BOE/CMC/`. However, your deployment may have a custom URL configured.

   Replace `<WebServer>` with the name of the web server machine. If the default virtual directory on the web server was changed, enter that URL. If necessary, change the default port number to the number provided during installation.
2. In the **System** box, enter the name of your Central Management Server (CMS).
3. If this is the first time an administrator in your organization is accessing the CMC, enter `Administrator` as the user name and enter the default password that was created during installation.

   After the first time, enter your user name and password.

   If you are using LDAP authentication, you can log on using an account that has been mapped to the Administrator group.
4. In the **Authentication** list, select **Enterprise**.

   Windows AD, LDAP, and other authentication methods appear in the list. However, third-party user accounts and groups must be mapped to the BI platform before you can use them.
5. Click **Log On**.

The CMC starts and the *CMC Home* window appears.

In the future, on Windows, select **Start** > **All Programs** > **SAP Business Intelligence** > **SAP BusinessObjects BI platform 4** > **SAP BusinessObjects BI platform Central Management Console** to start the CMC. If your CMC is hosted on a Web Application Container Server (WACS), select **Start** > **All Programs** > **SAP Business Intelligence** > **SAP BusinessObjects BI platform 4** > **SAP BusinessObjects BI platform WACS Central Management Console**.

3.3 Navigating the CMC

You can navigate the Central Management Console (CMC) in two ways.

- Click icons on the left side of the window, or click links under **Organize**, **Define**, or **Manage**.
- Select options in the **CMC Home** list in the upper-left corner of the window.

In the **tree** view, when you navigate to selections that have many child objects, not all child objects may appear. Use the paginated object listing to locate child objects.

3.4 Setting CMC preferences

Use the **Preferences** area of Central Management Console (CMC) to customize the administrative view of the BI platform. Preferences set in the CMC affect the behavior of objects in both the CMC and the BI launch pad.

CMC preferences are applied to the platform and to the launch pad by default. However, users can set personal preferences in the launch pad that override CMC preferences, until the BI platform is updated with a new software version or patch. Any platform updates reset all preferences to the default CMC settings.

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If a user belongs to two or more user groups in the BI platform, the launch pad displays the preferences configured for only one group.

1. Log on to the CMC, and click **Preferences** in the upper-right corner of the CMC window.
2. In the *Preferences* dialog box, set preference options as required, and click **Save & Close**.

3.4.1 CMC preference options

The following options are available when you click **CMC Preferences** in the *Preferences* dialog box in the Central Management Console (CMC).

CMC preference option	Description
Product Locale list	Select the default language for the BI platform. For more information, see the *SAP BusinessObjects Business Intelligence Platform Installation Guide*.
Preferred Viewing Locale list	Select the default formatting option for dates, times, and numbers in the CMC.
Maximum number of objects per page box	Type the maximum number of objects to display in a window or tab in the CMC. This value limits the number of object displayed, not limit the total number of objects.
Time Zone list	Select your time zone if you are remotely managing the platform. The platform synchronizes scheduling patterns and events to your time zone. For example, if you select **Eastern Time (US & Canada)** and you schedule a report to run at 5:00 a.m. every day on a server in San Francisco, the server will run the report at 2:00 a.m. Pacific time.
Prompt for Unsaved Data list	Indicate whether to prompt users for confirmation when they cancel a dialog box or close the CMC without saving: • Select **On** to enable the prompt. • Select **Off** to disable the prompt. • Select **Default** to determine prompt behavior with settings configured in the `CmcApp.properties` file, located in the `custom` folder or `default` folder at `C:\Program Files (x86)\SAP BusinessObjects\tomcat\webapps\BOE\WEB-INF\config\`.

3.4.2 Preferred viewing locales

The preferred viewing locale (PVL) determines how dates, times, and numbers are formatted in the BI launch pad.

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For multilingual objects, the PVL also sets the language used to display an object's name and description. If an object has multiple translated names and descriptions, the display language is determined as follows:

1. The system displays the name and description that correspond to the user's PVL. The BI platform may use a default fallback locale, but it is typically a variation of the user's PVL. For example, if the PVL is French (Canada) and the object does not have a translated name and description in Canadian French, the platform will use French (France).
2. If no PVL is set, the platform displays the name and description in the same language as the product locale.
3. If option 1 or 2 is not feasible, the platform displays the name and description in the object's source language.

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4 Adding Objects to the Repository

4.1 Managing objects

All documents and files in the BI platform— hyperlinks, shortcuts, Crystal reports, and Web Intelligence documents—are considered objects.

The platform uses folders and categories to organize objects. Objects must belong to one folder, but they can be assigned to no or several categories. Folders and categories can be either public (corporate) or personal.

4.2 Adding objects

You must add objects to the Business Intelligence (BI) environment and then make the objects available to authorized users.

You add objects to the BI platform in the CMC or by saving objects to the Central Management Server (CMS). You can add many types of objects to the platform—for example:

- SAP Crystal reports
- Web Intelligence documents
- Flash objects
- Programs
- Microsoft Excel, Word, and PowerPoint files
- Adobe PDF files
- Text files
- Rich text format files

> **Note**
>
> Depending on your user license, you may not have access rights to add objects. To determine which license type you have, contact your system administrator. For more information about licensing, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* on the SAP Help Portal at *http://help.sap.com*.

4.2.1 Object properties in the CMC

If necessary, you can modify properties such as title, description, database logon information, scheduling information, user rights, and so on for the object after it is published to the CMC.

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Object type	Property	Notes
General objects	**Filename**	Enter the name of the object you want to add, or click **Browse** to find the object.
	Title	Enter the name of the object.
	Description	Enter a description for the object.
	Keywords	Enter keywords for the object.
Program files only	**Browse for an existing Program object**	Enter the name of the program object to add, or click **Browse** to find the object.
	Program type	Select the type of program you are adding: • **Executable (binary, batch, shell script)** • **Java** • **Script (VBScript, JavaScript)**
Other object types	**MIME**	Specify the MIME extension for the object if needed.

4.2.1.1 Object property options

Object type	Property	Description
Crystal reports and other object types	**Filename**	Enter the name of the object to add, or click **Browse** to locate the object.
	Title	Enter the name of the object.
	Description	Enter a description for the object.
	Keywords	Enter keywords for the object.
Crystal reports only	**Keep saved data**	Select this option to preserve the report's saved data.
	Use description from report	Select this option to preserve the report's summary information.

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Object type	Property	Description
Program files only	**Browse for an existing Program object**	Enter the name of the program object to add, or click **Browse** to locate the object.
	Program type	Select the type of program to add: • **Executable (binary, batch, shell script)** • **Java** • **Script (VBScript, JavaScript)**
Other object types	**MIME**	Enter the MIME extension for the object, if needed.

4.2.2 Adding an object in the CMC

You must have administrative rights before you can add an object in the CMC.

1. Go to the **Folders** management area of the CMC.
2. Locate and select the folder to which to add an object.
3. Select **Manage** > **Add**, and select one of the following options:

Option	Description
Program File	Adds a program object
Local Document	Adds other types of objects

   A dialog box appears, where you can specify the properties of the object.
4. Specify the properties of the object.

   The properties fields that appear vary according to the type of object that you chose to publish. The properties fields are summarized in the table "Object properties in the CMC".
5. To assign the object to a category, select the category in the list.
6. Click **OK**.

   The dialog box closes, and the CMC refreshes to display the object and the other contents of the folder.

4.2.3 Saving objects to the CMS

If you installed a BI platform designer component, such as SAP Crystal Reports for Enterprise or SAP BusinessObjects Web Intelligence, you can use the **Save As** command to add objects directly to the platform from the designer.

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For example, after you design a report in Crystal Reports, you can save the report to the CMS. Select **File** > **Save As** >, click **Enterprise** in the *Save As* dialog box, log on to the CMS when prompted, select the folder where you want to save the report, and click **Save**.

You can add SAP BusinessObjects Analysis, edition for OLAP workspaces to the platform. However, you cannot set the workspaces to run on a recurring schedule.

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5 Organizing Objects

5.1 Folders

Folders are objects used to group and organize other objects so that content is separated into logical groups. Each object in the BI platform must reside in a folder.

By default, new objects that you add to a folder inherit the object rights of the folder. Because you can set security at the folder level, you can use folders to control access to information.

It is a good practice to set up folders in a structure that already exists in your organization (such as departments, regions, or your database table) and then use categories to set up an alternate system of organization.

5.1.1 Creating a folder

Before creating a new top-level (parent) folder, confirm that you are viewing **All Folders**.

To quickly edit the name, description, or keywords for a folder, select the folder, and select **Manage** > **Properties**.

1. Go to the **Folders** management area of the CMC.
2. Go the location where you want to create a folder.

   If you are creating a subfolder, locate the target folder in which to put the new folder.
3. Select **Manage** > **New** > **Folder**.
4. In the *Create Folder* dialog box, enter a name for the new folder, and click **OK**.

The new folder appears in the list of folders and objects.

You can add objects to the folder or edit the folder properties.

5.1.2 Deleting a folder

1. Go to the **Folders** management area of the CMC.
2. Locate and select the folder to delete.

   To simultaneously delete several folders, hold down the *CTRL* key or the *SHIFT* key, and click each folder to delete.
3. Select **Manage** > **Delete**.
4. In the *Delete* message box that appears, click **OK** to confirm the deletion.

The folder, all subfolders, reports, and other objects in the folder are removed from the BI platform.

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5.1.3 Copying and moving folders

When you copy or move a folder, the objects in it are copied or moved. The BI platform treats a folder's object rights differently, depending on whether you are copying or moving the folder.

When you copy a folder, the copy does not retain the original folder's object rights. Instead, the copy inherits object rights from its new parent folder. For example, if you copy a private `Sales` folder to a `Public` folder, the new `Sales` folder has the object rights of the `Public` folder and is accessible to all users who have access rights to the `Public` folder.

When you move a folder, the folder retains its object rights. For example, if you move a private `Sales` folder to a publicly accessible folder, the `Sales` folder will remain private and will be inaccessible to most users.

5.1.3.1 Copying or moving a folder

1. Go to the **Folders** management area of the CMC.
2. Select the folder to copy or to move.

   If a folder is not at the top level, locate its parent folder, and select the parent folder's contents. To simultaneously copy or move several folders, hold down the *CTRL* key or the *SHIFT* key, and click each folder to copy or to move.
3. Select **Organize** > **Copy To** or **Organize** > **Move To**.
4. In the *Copy To* or *Move To* dialog box, select the destination folder.
5. Click **Copy** or **Move**.

The folder you selected is copied or is moved to the new destination.

5.1.4 Specifying folder rights

You can change the object rights for new folders you create.

By default, new objects that you add to a folder inherit the object rights of the parent folder. For more information about rights, see the information about setting rights in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* on the SAP Help Portal at *http://help.sap.com*.

5.1.5 Limiting report instances at the folder level

Setting limits enables you to automatically delete report instances in the BI platform.

The limits you set on a folder affect all objects in the folder. At the folder level, you can set limits for:

- The number of instances for each object, user, or user group
- The number of days that instances are retained for a user or a group

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1. Go to the **Folders** management area of the CMC.
2. Locate and select the folder for which to set limits, and select **Actions** > **Limits**.
3. In the *Limits* dialog box, select the **Delete excess instances when there are more than N instances of an object** check box, and enter the maximum number of instances per object the folder can contain before instances are deleted in the box.

   The default value is 100.
4. Click **Update**.
5. To limit the number of instances per user or group, beside **Delete excess instances for the following users/groups**, click **Add**.
6. Select a user or a group, click **>** to add the user or group to the **Selected users/groups** list, and click **OK**.
7. For each user or group you added in step 6, in the **Maximum instance count per object per user** box, type the maximum number of instances you want to appear in the BI platform.

   The default value is 100.
8. To limit the age of instances per user or group, beside **Delete instances after N days for the following users/groups**, click **Add**.
9. Select a user or a group, click **>** to add the user or group to the **Selected users/groups** list, and click **OK**.
10. For each user or group you added in step 9, in the **Maximum instance age in days** box, type the maximum age for instances before they are removed from the BI platform.

    The default value is 100.
11. Click **Update**.

Related Information

Setting limits for instances [page 107]
You set limits, at the object or folder level, to automate the regular cleanup of old instances.

5.1.6 Viewing personal folders

The BI platform creates a folder for each user on the system.

You must have at least the View access right for a folder before you can view it.

Folders are organized in the CMC as personal folders, and by default, the Administrator and each Guest account has a personal folder. When you log on to the CMC and view the list of personal folders, you see only folders to which you have at least the View access right.

In the BI launch pad, personal folders are called the `Favorites` folders.

1. Go to the **Folders** management area of the CMC.
2. Click **Personal Folders**.

A list of folders appears. Each folder corresponds to a user account on the system.

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5.2 Categories

Categories organize objects so that users can more quickly locate the objects. There are two types of categories—corporate and personal.

You can assign rights to a category as an object (that is, grant groups and users rights to it). However, an object in a category inherits the rights of the folder it resides in, not the rights of the category. For example, you can organize content in departmental folders and then use categories to create an alternate filing system that divides content by roles in your organization, such as managers or VPs. This organizational model allows you set security on groups of documents based on department or job role.

You can associate documents with multiple categories, and you can create subcategories within categories. Corporate categories are created and managed by administrators or other users with access rights to categories. Corporate categories are visible only to groups and users with rights to view them. Personal categories are created and managed by individual users to organize personal documents. All objects must reside in folders, but category assignment is optional. An object can reside in multiple categories. Personal categories are visible only to the creator.

5.2.1 Creating a category

1. In the CMC, select the **Categories** area.
2. Select **Manage** > **New** > **Category**.
3. In the *Create Category* dialog box, enter a name for the category in the **Enter a new category name** box.
4. Click **OK**.

The category is added to the BI platform.

5.2.2 Deleting a category

When you delete a category, all subcategories in it are deleted. However, reports and other objects in the category are not deleted from the BI platform.

1. In the CMC, select the **Categories** area.
2. Select the category to delete.

   If a category is not at the top level, locate the parent category and then the subcategory. To simultaneously delete several categories, hold down the *CTRL* key or the *SHIFT* key, and click each category to delete.
3. Select **Manage** > **Delete**.
4. In the *Delete* message box that appears, click **OK** to confirm the deletion.

The category is deleted from the BI platform.

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5.2.3 Moving a category

When you move a category, the category retains the objects associated with it and its object rights.

For example, you have a South American Sales category that is accessible only to people in that region and a World Sales category containing worldwide sales reports that is accessible to all people. You move the region categories to the World Sales category. The South American Sales category retains its rights and associated objects, even though it is a subcategory of the World Sales category.

1. In the CMC, select the **Categories** area.
2. Select the category to move.

   If a category is not at the top level, locate its parent category and then the subcategory. To simultaneously move several categories, hold down the *CTRL* key or the *SHIFT* key, and click each category to move.
3. Select **Organize** > **Move To**.

   If there are many categories in the BI platform, enter the category name in the **Search title** box—or click **Previous**, **Next**, or **+** (plus sign) to browse the category list.
4. In the *Move To* dialog box, select the destination category, and click **Move**.

The category is moved to the new destination.

5.2.4 Adding an object to a category

1. In the CMC, select the **Folders** area.
2. Locate and select the object to add to a category.
3. Select **Manage** > **Categories**.
4. In the *Categories* dialog box, select the category to which to add the object.
5. Click **Save & Close**.

The object is added to the category.

5.2.5 Removing or deleting objects from a category

When you remove an object, you remove it from the category but the object remains in the BI platform. When you delete an object, you remove it from the category and delete it from the platform.

1. In the CMC, select the **Categories** or **Personal Categories** area.
2. Double-click the category from which to remove or to delete an object.
3. Select the object(s) to remove or to delete.
4. Perform one of the following actions:
   - Select **Actions** > **Remove From Category** to remove the object from the category but not from the platform.
   - Select **Manage** > **Delete** to remove the object from the category and delete it from the platform.

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5. In the *Remove from Category* or *Delete* dialog box, click **OK** to confirm the removal or deletion.

The object is removed or deleted.

5.2.6 Specifying category rights

You can assign rights to a category as an object (that is, grant groups and users rights to it). However, an object in a category inherit rights from the folder where it is located, not from the category's rights.

See information about setting rights in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* on the SAP Help Portal at *http://help.sap.com*.

5.2.7 Viewing a user's personal categories

If you have the appropriate access rights, you can view, edit, and delete personal categories for users.

1. In the CMC, select the **Categories** area.
2. Select the user account for which to view personal categories.

A list of the user's personal categories appears.

5.2.8 Adding multiple objects to a category

1. Go to the **Categories** or **Personal Categories** management area of the CMC.
2. Locate and select the category to which to add objects.
3. Select **Actions** > **Add to Category**.
4. In the *Add to Category* dialog box, under **Available Objects**, locate the objects to add, and click > to move the objects to the **Selected Objects** list.
5. Click **OK**.

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6 Working With Content Objects

6.1 General object management

Many types of objects can exist in the BI platform.

You can add the following types of objects to the platform:

- SAP Crystal Reports
- Web Intelligence documents
- Programs
- Microsoft Excel, Word, and PowerPoint files
- Adobe PDF files
- RTF files
- Text files
- Hyperlinks
- Object packages
- Actions

After adding objects, you manage them in the **Folders** area of the CMC.

6.1.1 Copying an object

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object to copy.
3. Select **Organize** > **Copy To**.
4. In the *Copy* dialog box, in the **Select destination(s)** area, browse for the destination folder to which to copy the object, and click **>** to move it to the **Destinations** list.

   In order to move the destination folder, you must select that folder in the details pane on the right. To simultaneously select several folders, hold down the *SHIFT* or *CTRL* key and click each folder.
5. When you are finished, click **Copy**.

The object you selected is copied to the destination.

6.1.2 Moving an object

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object to move.
3. Select **Organize** > **Move To**.
4. In the *Move* dialog box, select the destination folder.

   In order to move the destination folder, you must select that folder in the details pane on the right. To simultaneously select several folders, hold down the *SHIFT* or *CTRL* key and click each folder.

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5. Click **Move**.

The object is moved from its original; folder to the destination folder.

6.1.3 Creating an object shortcut

Shortcuts are useful for granting a user access to an object, without giving that user access to the entire folder in which the object is located.

After you create the shortcut, users who have access to the folder where the shortcut is located can access this object and its instances.

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object for which to create a shortcut.
3. Select **Organize** > **Create Shortcut In**.
4. In the *Create Shortcut In* dialog box, in the *Select destination(s)* area, browse for the folder in which to create a shortcut, and click **>** to move the folder to the **Destinations** list.

   In order to move the destination folder, you must select that folder in the details pane on the right.
5. Click **Create Shortcut**.

A shortcut to the object appears in the folder you specified.

6.1.4 Deleting an object

You can delete one or more objects, a folder (which deletes all objects and instances in that folder), or object instances (rather than the object itself).

When you delete an object, all of its existing instances and scheduled instances will be deleted.

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object to delete.
3. Select **Manage** > **Delete**.
4. When a confirmation message appears, click **OK**.

Related Information

Managing instances [page 102]
The BI platform creates two types of instances from objects.

6.1.5 Searching for an object or objects

Use the search to find specific text in object titles and descriptions.

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The search looks for text, based on the search type. Choose from the following search types:

- **Search all fields** to look in the file names, keywords, and descriptions associated with objects
- (Default) **Search title** to look in file names
- **Search keyword** to look in the keywords that are associated with objects
- **Search description** to look in the descriptions that are associated with objects

1. Go to the *Folders* management area of the CMC.

   The **Search** box is located in the upper-right corner of the *Folders* management area. The search type is set to **Search title** by default.
2. To search by something other than the file name, click **Search title** and select a different search type.
3. Enter the text to find in the **Search** box, and click **Search**.

When the search finishes, a list of results that match your search criteria appears.

6.1.6 Creating a new hyperlink

1. Go to the **Folders** or **Personal Folders** management area of the CMC.
2. Locate the folder in which to create a hyperlink.
3. Select **Manage** > **New** > **Hyperlink**.
4. In the *Hyperlink* dialog box, enter a title, description, and keywords for the hyperlink.
5. In the navigation pane, click **URL**.
6. Enter the URL in the **URL** box, and click **OK**.

6.1.7 Sending an object or an instance to a destination

You can send either a copy of or a shortcut to an object or instance to a destination. You can send only instances with a status of Success or Failed. Instances with a status of Recurring or Pending are scheduled but do not contain data yet.

Not all types of objects can be sent to all destinations.

You can use **Organize** > **Send** to send existing objects or instances of an object to different destinations. The **Send** command handles existing objects or instances only. It does not cause the system to run the object and create new instances, nor does it refresh the data for a report instance.

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object to send:
   - To send an object, select it, select **Organize** > **Send**, and choose a destination.
   - To send an instance, select the object, select **Actions** > **History**, select an instance in the *History* dialog box, click **Send**, and choose a destination.

   You can send Interactive Analysis documents only to a BI Inbox or to an email destination configured within Information platform services. To simultaneously select several objects, hold down the *SHIFT* or *CTRL* key and click each object.

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3. Configure the destination option, using the Adaptive Job Server's default settings or entering your own settings.

   You can specify the following destination options:

   - Users and user groups who should receive the object, if sent to a BI Inbox or an email destination
   - Whether to send a copy of the object or a shortcut that links to the object
   - The name of the object that is sent
   - Whether to clean up instances after objects have been sent
   - Settings specific to the destination type (for example, a directory for the file location or the host name and connection port for the FTP server)
4. Click **Send**.

6.1.7.1 Destinations

Objects and publications can be scheduled, sent, and published to the following destination locations:

Destination location	Description
BI Inbox	Select to send the object to a user's BI Inbox in BI launch pad. You must send Web Intelligence documents to **BI Inbox** or to **Email** (to a destination configured in the BI platform).
Email	Select to send the object to a user's email address. You must send Web Intelligence documents to **BI Inbox** or to **Email** (to a destination configured in the platform).
FTP Location	Select to send the object to an FTP server.
File Location	Select to send the object to a local disk.
SAP StreamWork (if available)	Select to send the object to an activity for collaboration in SAP StreamWork. SAP StreamWork features and capabilities are available if collaboration is configured and enabled in BI platform.

6.1.7.2 Destinations by object type

Most destinations can be used for most types of objects, but there are exceptions. In some cases, recipients must have access to the BI platform to be able to open an object.

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Object type	Unmanaged Disk	FTP	Email (SMTP)		BI Inbox		SAP StreamWork
			File	Link	File	Link	
Crystal report	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Object package	N/A	N/A	N/A	N/A	Yes	Yes	Yes
Program	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Web Intelligence document	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SAP BusinessObjects Analysis, edition for OLAP workspace	N/A	N/A	N/A	Yes	Yes	Yes	N/A
Excel file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Word file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PDF file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Text file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RTF file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PowerPoint file	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hyperlink	N/A	N/A	N/A	Yes	Yes	Yes	N/A

Related Information

Enabling or disabling destinations for a job server [page 90]

By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

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6.1.8 Editing the properties of an object

You can change the object name, keywords, and description properties for an object.

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object for which to change the properties.
3. Select **Manage** > **Properties**.
4. In the *Properties* dialog box, edit the properties as needed.
5. Click **Save & Close**.

6.1.9 Relationships

In the BI platform, objects are related in several ways. For example, folders are related to their subfolder children, connections are related to the universes that use them, and reports and documents are related to universes.

It can be challenging to modify object relationships in the platform because the changes may break links to the object. To find out which objects are directly related, perform a relationship query in the following areas of the CMC:

- **Folders**
- **Personal Folders**
- **Categories**
- **Personal Categories**
- **Users and Groups**
- **Profiles**
- **Universes**
- **Access Levels**
- **Servers**
- **Replication Lists**

After performing a relationship query, the *Query Results* dialog box appears, showing the results of the query. From the *Query Results* dialog box, you can perform basic object management tasks on result objects.

Example

Relationship queries

In this example, a company database will be replaced by a new database in a different location. The administrator needs to know which objects depend on the current connection so that the objects can be edited and the database connection can be deleted, without disrupting the content of objects. The administrator runs a relationship query on the connection, which returns a list of universes that use the connection. All universes can then be updated. At a later date, the company decides to delete all objects that depend on the connection. The administrator can run then a relationship query on each universe returned in the first query results to determine which objects use the universes.

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6.1.9.1 Checking the relationships of an object

1. Locate and select the object for which to run a relationship query.
2. Select **Manage** > **Tools** > **Check Relationships**.
   The *Query Results* area displays the results of the query.
3. To return to your original query, select the name of the object in the tree panel.

As required, you can perform further checks on the relationships of result objects by selecting an object and choosing **Manage** > **Tools** > **Check Relationships**.

6.2 Report object management

Managing report objects includes applying processing extensions, specifying alert notification, changing database information, updating parameters, using filters, and working with hyperlinked reports.

This section explains report objects and instances and how to manage them in the Central Management Console (CMC). Except for noted exceptions, most information in this section applies to Web Intelligence document objects.

6.2.1 Report objects and instances

A report object is created in SAP Crystal Reports, and a Web Intelligence document object is created in the BI platform.

Both types of objects contain report information (such as database fields) and may contain saved data. Report objects and Web Intelligence document objects can be made available to all users or to individual users in selected groups.

Type of instance	Description
Scheduled instance	You can schedule objects in the CMC, in the BI launch pad, or in a custom web application. When you schedule an object, the platform creates a scheduled instance for the object, which contains object and schedule information but no data. The scheduled instance appears in the *History* window for an object and has a status of Recurring or Pending. Typically, report objects are designed to create several instances with varying characteristics. For example, if you run a report object with parameters, you can schedule one instance that contains report data for one department and another instance that contains data

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Type of instance	Description
	for another department, even though both instances originate from the same report object.
Object instance	At the specified time, the platform runs the object and creates an object instance containing data. The instance appears in the *History* window for the object and has a status of Success or Failed.

When you edit the default settings for an object, the changes affect the default values for that object but do not affect scheduled instances or object instances. The next time you schedule the object in the CMC or in an application such as the launch pad, the new default values appear. You can then change the default values as needed for the scheduled instance.

The platform supports reports created in SAP Crystal Reports versions 6 to 2011. Once added to the platform, reports are saved, processed, and appear in version 2011 format. However, reports created in the platform remain in SAP Crystal Reports for Enterprise format.

Related Information

Scheduling process and options [page 68]
Scheduling is the process of configuring an object to automatically run at specified times.

6.2.2 Report refresh options in Crystal reports

Refresh options determine which settings of a Crystal report object are updated when you refresh the report in the BI platform.

When a report object is refreshed, the platform compares the report object in the CMC with the original `.rpt` file on the Input File Repository Server.

- If report elements are different in the source report `.rpt` file and the report object, the platform deletes or adds elements to the report object so that it matches the `.rpt` file, overwriting any changes made in the CMC.
- If report elements are the same in the source report `.rpt` file and the report object, you can use refresh options to determine which report object elements are updated with source `.rpt` file values.

If a prompt appears in the source `.rpt` file and in the report object—and the **Current and default parameter values** check box is selected—the platform updates the default value of the prompt in the report object, overwriting any changes made in the CMC. For example, when a prompt is in the source report `.rpt` file, refreshing the report adds that prompt to the report object, regardless of the report refresh options selected.

To preserve changes to report elements when refreshing a report, clear the appropriate check box. Clear the **Current and default parameter values** check box to preserve the current or default values of prompts in a report object when the report is refreshed. Clear the **Use Object Repository when refreshing report** check box to avoid refreshing repository objects in a report object against the original `.rpt` file on the Input File Repository Server.

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6.2.2.1 Selecting refresh options for a report

You can select refresh options only in Crystal reports.

> **Tip**
>
> You can click **Refresh report** to immediately refresh the report.

1. Go to the **Folders** management area of the CMC.
2. Select a report, and select **Actions** > **Refresh Options**.
3. In the *Refresh Options* dialog box, select the report elements to refresh from the source `.rpt` file.
4. Click **Update**.

6.2.3 Report viewing options for Crystal reports

Report viewing options balance the need for up-to-date information with optimized data retrieval times and overall system performance.

Data sharing allows multiple users accessing the same report object to use the same data when viewing or refreshing the report. Data sharing can reduce the number of database calls, which reduces the time needed to generate an instance of the same report for subsequent users and improves overall system performance.

You can set data sharing options on a per-report or a per-server basis:

- If you specify which servers a report uses for viewing, set per-server options to standardize data sharing for groups of reports and centrally administer the settings.
- If some reports should not share data, set per-report options that enable you to decide on a report-by-report basis whether to allow database access when refreshing reports. For example, you can set the data sharing interval for each report.

Data sharing may not be useful for all organizations or for all reports. To get the maximum value from data sharing, you must permit data to be reused for a period of time. This means that some users may see older data when viewing a report on demand or when refreshing a report instance.

The default report viewing options for the BI platform emphasize data freshness and integrity. By default, when you add a report to the platform, the report is configured to use per-server options for report sharing. This enables users to see up-to-date information when refreshing a report and guarantees that the oldest data displayed is zero minutes old. If you configure per-report options, the default settings allow data sharing, allow viewer refreshes to retrieve fresh data from the database, and ensure that the data displayed is no more than five minutes old.

Disabling the sharing of report data is not the same as setting the **Oldest on-demand data given to a client** option to zero minutes. Under high load volumes, the platform may receive more than one request for the same report instance at the same time. In this case, if the data sharing interval is set to zero minutes, but the **Share report data between clients** option is selected, the platform shares data between the client requests. If it is important that data not be shared between clients—for example, because a report uses a User Function Library (UFL) that is personalized for each user—you must disable data sharing for the report.

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6.2.3.1 Selecting report viewing options for a Crystal report

1. Go to the **Folders** management area of the CMC.
2. Locate and select the report for which to set viewing options.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Viewing Server Group** in the navigation list.
5. Under **Data refresh for viewing**, select **Use report specific viewing settings**, and select options for the report.
6. Click **Save & Close**.

6.2.4 Default job servers

Specify the default job server that the BI platform uses to run a report object and to schedule and process instances.

For report objects and Web Intelligence documents, you can specify the default server that the platform will use when a user views or modifies a report or a Web Intelligence document. Processing report objects on specific job servers or server groups can balance the load on your system. Use one of the following options to specify default job servers:

- **Use the first available server** to use the server with the most available resources. The Central Management Server (CMS) checks the percentage of the maximum load on each job server to see which server has the lowest load. If all job servers have the same load percentage, the CMS randomly picks a job server.
- **Give preference to servers belonging to the selected group**, and select a server group in the list. The platform attempts to process the object on a server in the selected server group. If no servers in the selected group are available, the object is processed on the next available server. If no servers in that group are available, the platform uses any available server.
- **Only use servers belonging to the selected group** to use only servers in the selected server group. If no servers in the group are available, the object is not processed.

Depending on the type of object, the platform uses the following job servers to process objects:

- Crystal reports run on the Adaptive Job Server, the Crystal Reports 2011 Server or Crystal Reports Processing Server (depending on the designer used to create the report), and the Crystal Reports Cache Server.
- Web Intelligence documents run on the Web Intelligence Processing Server. You must create server groups before users can select a group.

You can set the maximum number of jobs that a server will accept. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

6.2.4.1 Selecting default servers for processing an object

1. Go to the **Folders** management area of the CMC.
2. Select the report object for which to specify default servers.

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3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, perform one of the following actions:
   - To specify the default servers for scheduling a report object, click **Scheduling Server Group** in the navigation list.
   - To specify the default servers for processing an object when you view it, click **Viewing Server Group** in the navigation list if the object is a Crystal report or **Web Intelligence Process Settings** if the object is a Web Intelligence document.
5. Click **Save & Close**.

Related Information

Default job servers [page 37]
Specify the default job server that the BI platform uses to run a report object and to schedule and process instances.

6.2.5 Changing database settings in Crystal reports

You can select the database type, set default database logon information, view the data source or data sources for a Crystal report object and its instances, and optionally prompt users for a logon name and password when viewing a Crystal report instance.

If you selected multiple report objects for which to change database settings, only report objects with the same data source connection are updated. For information about supported databases and drivers, see the supported platforms documents on the SAP Service Marketplace.

1. Go to the **Folders** management area of the CMC.
2. Select the report object for which to change the database settings.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Database Configuration** in the navigation list.
5. Perform one of the following actions:
   - Select **Use original database logon information from the report**, and enter a user name and password for the original report database.
   - Select **Use custom database logon information specified here**, and enter a server name (or a DSN for an ODBC data source), database name, user name, and password for predefined database drivers or for a custom database driver. If you changed the default table prefix in your database, specify a custom table prefix.
6. Perform one of the following actions:
   - To prompt users for a password when they refresh a report, select **Prompt the user for database logon**. The BI platform prompts users the first time they refresh a report. When users refresh the report again, they are not prompted. This option does not effect scheduled instances.
   - To use the user's logon and password to log on to the database, select **Use SSO context for database logon**.

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The BI platform must be configured for end-to-end single sign-on or for single sign-on to the database. For more information, see the *SAP BusinessObjects Business Intelligence Platform Web Application Deployment Guide*.

- To use the same database logon information that was used when the report ran on the job server, select **Use same database logon as when report is run**.
- To use the database credentials specified for the user account, select **Use user database credentials for database logon**.

7. Click **Save & Close**.

6.2.6 Updating default parameter values for a Crystal report

When a Crystal report contains parameters, you can set the default value for each parameter. The default values are used when a report instance is generated.

Parameter fields (with preset values) enable users to view and to specify which data appears in the BI platform. Using a BI platform application such as the BI launch pad, your users can open a report with the default value(s) or choose other value(s). If you do not specify a default value, users are prompted for a value when scheduling a report.

1. Go to the **Folders** management area of the CMC.
2. Select a Crystal report object for which to update the default prompt values.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Prompts** in the navigation list.

   This option is available only if a report object contains parameters. If it does not contain parameters, this option is not available; skip this step.
5. In the **Default Value** column, type or select a default value for the parameter.

   Options appear for changing the default value. Depending on the parameter value type, you can type a value in the box or choose a value in a list.
6. Click the **Clear Value** button to clear the current value set for the parameter.
7. Select the **Prompt when viewing** check box to prompt users before they can view a report instance in a BI platform application.
8. Click **Save & Close**.

6.2.7 Updating prompts for a Web Intelligence document

When a report contains parameters, you can set the default prompt value for each parameter. The default value is used when a report instance is generated.

Prompt fields (with preset values) enable users to specify which data they see. Through an application in the BI platform, such as the BI launch pad, users can either use the report with the preset default value(s) or choose other value(s). If you do not specify a default value, users are prompted for a value when scheduling a report.

1. Go to the **Folders** management area of the CMC.
2. Select a Web Intelligence document for which to update prompts.

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3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Prompts** in the navigation list.

   This option appears only if the Web Intelligence document object contains prompts. If it does not contain prompts, this option is not available.
5. Click **Modify**.
6. Select a prompt, and enter a value for it.

   If the available values do not appear, click the **Refresh Values** button.
7. Repeat steps 5 and 6 for each prompt value you want to change.
8. Click **Apply**, and click **Save & Close**.

Related Information

Updating default parameter values for a Crystal report [page 39]

When a Crystal report contains parameters, you can set the default value for each parameter. The default values are used when a report instance is generated.

6.2.8 Filtering reports

Selection formulas are similar to parameter fields—they filter results so that only required information appears. You can set the default selection formulas for reports.

Users are not prompted for selection formula values when viewing or refreshing a report. When users schedule reports in a web-based client application, such as the BI launch pad, they can optionally modify selection formulas for the reports. By default, the web-based client application uses the formulas defined in the Central Management Console (CMC). For more information about selection formulas, see the *SAP Crystal Reports for Enterprise User's Guide*.

In addition to changing selection formulas, if you created processing extensions, you can select which extensions to apply to a report. When you use filters with processing extensions, a subset of the processed data is returned. Selection formulas and processing extensions act as filters for a report.

Selection formulas and processing extensions do not apply to Web Intelligence documents, SAP Crystal reports in `.rptr` format, or reports created in SAP Crystal Reports for Enterprise.

6.2.8.1 Using filters

You can use filters for only some types of reports. For example, you cannot use them with Web Intelligence documents, SAP Crystal reports in `.rptr` format, or reports created in SAP Crystal Reports for Enterprise.

1. Go to the **Folders** management area of the CMC.
2. Select the report object for which to add filters.
3. Select **Manage** > **Default Settings**.

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4. In the *Default Settings* dialog box, click **Filters** in the navigation list.
5. To update or add new selection formulas, perform one of the following actions:
   - In the **Record selection** box, create or edit one or more record selection formulas that limit the records used when a report is scheduled.
   - In the **Group selection** box, create or edit one or more group selection formulas that limit the groups used when a report is scheduled.
6. Click **Save & Close**.

6.2.9 Setting printer and page layout options for Crystal reports

You can choose the page layout and the printer for Crystal reports.

You can optionally print Crystal report instances when scheduling a report or each time a report runs. Report instances always print in the Crystal report format.

When viewing or scheduling a report instance to any format, you can choose page layout criteria, such as page orientation and page size. A report instance's page layout determines the overall look of the report and affects how the instance prints. The overall look is also affected by properties of the device displaying the report—for example, font metrics and other layout settings of the viewer and/or the printer.

Before you can choose a printer, the Crystal Reports Job Server must be running under an account that has access rights to the printer. You can print report instances to the Crystal Reports Job Server's default printer or a different printer and select typical printing options.

6.2.9.1 Selecting a printer for Crystal reports

1. Go to the **Folders** management area of the CMC.
2. Select the report object to assign a printer to.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Print Settings** in the navigation list.
5. Under **Print Settings**, select the **Print Crystal reports when scheduling** check box.

   Crystal reports will be sent to the printer in SAP Crystal Reports format, which does not interfere with the page layout you selected when scheduling the report.
6. In the **Number of Copies** box, enter the number of copies to print.
7. Under **Page Range**, select **All** to print all report pages, or select **Pages** and enter the first and last pages to print in the boxes.
8. In the **Set collate option to** list, perform one of the following actions:
   - Select **Collate** to collate the report.
   - Select **Do not collate** if you do not want to collate the report.
   - Select **Use printer defaults** to use the default collation setting of the printer.
9. In the **Page Scaling** list, perform one of the following actions:

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- Select **Scale to fit** to proportionately scale the report page to fit the printed page.
- Select **Only shrink to fit** to shrink the report page to fit the printed page.
- Select **Do not scale** if you do not want to scale the report.

10. Select the **Center the page** check box to center the report on the printed page.
11. Select the **Fit horizontal pages into one page** check box to fit horizontal pages on one printed page.
12. Under **Specify page layout**, perform one of the following actions:
    - Select **Default printer** to print to the Crystal Reports Job Server's default printer.
    - Select **Specify a printer**, and enter the printer's path and name in the box.
      If your job server is on Windows, enter **\\<PrintServer>\<PrinterName>**, where **<PrintServer>** is the name of the printer server and **<PrinterName>** is the name of the printer.
      If your job server is on Unix, confirm that the Unix printer is shown (not hidden), and enter the print command you normally use, such as `lp -d` **<PrinterName>**.
13. Click **Save & Close**.

6.2.9.2 Selecting page layout options for Crystal report and PDF objects

1. Go to the **Folders** management area of the CMC.
2. Select the report object for which to set the page layout.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Print Settings** in the navigation list.
5. Under **Print Settings**, to select the default print mode, perform one of the following actions:
    - Select **Always print to PDF (Preview)** to use PDF print settings when printing the report from a web viewer.
    - Select **Follow Crystal Reports preference setting** to use the default Crystal report print settings defined in the CMC preferences.
6. Under **Specify page layout**, in the **Set layout to** list, perform one of the following actions:
    - Select **Report file default** to use the page layout defined in Crystal Reports.
    - Select **Specify printer settings** to use the printer's default page layout, and select the Crystal Reports Job Server default printer or a different printer.
      You can print scheduled report instances only to the printer specified under **Print when scheduling**. That is, you cannot set a report to use the default page layout of one printer and then print to a different printer.
    - Select **Custom settings** to customize all page layout settings, and select the page orientation and page size.
7. Click **Save & Close**.

Related Information

Setting printer and page layout options for Crystal reports [page 41]

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You can choose the page layout and the printer for Crystal reports.

6.2.10 Processing extensions

A processing extension is a dynamically loaded library of code that applies your business logic to particular view or schedule requests before they are processed by the BI platform. You use customized processing extensions to add security to your reporting environment.

Through processing extensions, the BI platform administration SDK exposes a handle that enables developers to intercept a view or schedule request and then append selection formulas to the request, before a report is processed. Included in the SDK is a fully documented API that developers can use to write processing extensions. For more information, see the developer documentation on the product CD.

Processing extensions do not apply to Web Intelligence documents, Crystal reports in `.rptr` format, or reports created in SAP Crystal Reports for Enterprise.

Example

Report-processing extension to enforce row-level security

This type of security restricts data access by row, in one or more database tables. A developer writes a dynamically loaded library that intercepts view or schedule requests for a report, before the requests are processed by the Adaptive Job Server, Crystal Reports Processing Server, or Report Application Server. The developer's code determines which user owns the processing job and then looks up the user's data-access privileges in a third-party system. The code generates and appends a record selection formula to the report to limit the data returned from the database. In this example, the processing extension adds customized row-level security to the BI platform.

Applying processing extensions to reports

You must register a processing extension in the CMC before you can apply it to a report object. You can apply more than one processing extension to a report object. BI platform server components dynamically load the processing extensions at run-time.

On Windows, dynamically loaded libraries are referred to as dynamic-link libraries (`.dll`). On Unix, dynamically loaded libraries are often referred to as shared libraries (`.so`). Processing extension names must include the file extension but cannot include a backward slash (`\`) or a forward slash (`/`).

6.2.10.1 Assigning a processing extension to a report

You can apply more than one processing extension to a report object.

Before you can apply a processing extension to a report object, the processing extension must be registered in the CMC.

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Processing extensions do not apply to Web Intelligence documents, Crystal reports in `.rptr` format, or reports created in SAP Crystal Reports for Enterprise.

1. Go to the **Folders** management area of the CMC.
2. Select the report object to apply a processing extension to.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Extensions** in the navigation list.
5. In the **Available processing extensions** list, select a processing extension, and click > to move it to the **Use these processing extensions (in the order listed)** list.

   The **Available processing extensions** list contains only registered processing extensions.
6. Use the **Move Up** and **Move Down** buttons to set the order in which to use processing extensions.
7. Click **Save & Close**.

The processing extension(s) are assigned to the report object.

6.2.11 Working with hyperlinked reports

In SAP Crystal Reports, you use hyperlinks to navigate between report objects—a Report Part in a report, other report objects or their parts, or specific instances of reports or Report Parts.

By linking directly from one report object to another, the required data context is passed automatically so that data is relevant when you navigate to an object.

The BI platform includes script-based DHTML viewers (zero-client, server-side) for Crystal report navigation. For online access to Crystal reports through the Central Management Console (CMC), use the default DHTML web viewer. Do not use using the legacy Java viewer, which does not provide the same functionality as the DHTML viewer.

Initially, when you add hyperlinks between reports in SAP Crystal Reports, you create a link from one file directly to another. However, when you simultaneously add linked report files to the same object package, the links are updated to point to managed report objects. (Each link is modified to reference the appropriate destination report by Enterprise ID, rather than by file path.) The modified links become relative inside the object package. When you schedule the object package, the platform processes the reports and again modifies the hyperlinks in each report instance. In a specific instance of the object package, hyperlinks between report objects are converted to hyperlinks between report instances.

To view hyperlinked reports, you must add both the home report and the destination report to the platform. (A home report is one that contains a hyperlink to the destination report.) For information about creating hyperlinks between report objects, see the SAP Crystal Reports Help.

You cannot view hyperlinks in Web Intelligence documents or in reports created in SAP Crystal Reports for Enterprise.

Related Information

Scheduling objects using object packages [page 101]

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You can schedule objects in batches using object packages.

6.2.11.1 Adding Crystal reports with existing hyperlinks

The best practice for creating hyperlinked reports is to publish individual reports and then create hyperlinks between them.

Use the Report Upload Wizard in the SAP Crystal Reports 2011 designer to add linked reports to the same object package. When you publish reports this way, hyperlinks are converted to relative links.

If you individually add hyperlinked reports to the BI repository (instead of simultaneously adding them to the same object package), the hyperlinks between reports will break. You must re-establish the links using SAP Crystal Reports and then save the report to the BI platform. For more information, see the SAP Crystal Reports Help.

You cannot add hyperlinked reports to Web Intelligence documents.

Related Information

Adding reports to the BI repository and adding hyperlinks [page 46]
To avoid breaking hyperlinks between reports, add the reports first and then create hyperlinks.

6.2.11.2 Viewing hyperlinked reports

The BI platform supports navigation between hyperlinked reports only for script-based viewers, specifically the DHTML and Advanced DHTML viewers in the BI launch pad.

To change the viewing format, in the Central Management Console (CMC), click **Preferences** in the upper-right corner of the window, click **CMC Preferences**, and select your preferred viewing locale (PVL). For more information about changing your PVL, see the *SAP BusinessObjects Business Intelligence Launch Pad User Guide*.

Parameter information is not transferred from the home report to destination reports. That is, when you view a destination report by clicking a hyperlink in a home report, you are prompted to enter parameters that the destination report requires.

For online access to Crystal reports through the CMC, use the default DHTML web viewer. Do not use using the legacy Java viewer, which does not provide the same functionality as the DHTML viewer.

You cannot view hyperlinks in Web Intelligence documents or in reports created in SAP Crystal Reports for Enterprise.

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Security considerations

To view hyperlinked reports in the BI platform, you must have appropriate access rights both in the platform and at the database level.

In the platform, to be able to view a destination report via a hyperlink in a home report, you must have View rights for the destination report. When the hyperlink points to a report object, you must have View On Demand rights to be able to refresh data in the report object against its source.

Database logon information is carried over between hyperlinked reports. If the credentials you entered to view the home report are not valid for the destination report, you are prompted to enter valid database logon credentials for the destination report.

6.2.11.3 Adding reports to the BI repository and adding hyperlinks

To avoid breaking hyperlinks between reports, add the reports first and then create hyperlinks.

This feature does not apply to Web Intelligence documents or to reports created in Crystal Reports for Enterprise. For more information about tasks in SAP Crystal Reports, see the SAP Crystal Reports Help.

1. In Crystal Reports, create the reports without hyperlinks.
2. Add the reports to the BI platform repository.
3. Use Crystal Reports to log on to the platform.
4. Create hyperlinks between the home report and the destination report.

Crystal Reports automatically determines whether to establish a relative or absolute link between the reports. In the platform, relative links are assigned to reports in the same object package, and absolute links are assigned to individual report objects or instances.

6.2.12 Showing a thumbnail image of a Crystal report's first page

1. Go to the **Folders** management area of the CMC.
2. Locate and select the report for which to show a thumbnail image of the first page.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Thumbnail** in the navigation list.
5. Select the **Show report thumbnail** check box.
6. Click **Save & Close**.

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6.2.13 Viewing alerts in a Crystal report

You can view alerts for a Crystal report in the Central Management Console (CMC).

1. Go to the **Folders** management area of the CMC.
2. Locate the folder or category that contains the Crystal report to view, and select the report.
3. Select **More Actions** > **Alerts**.

   The *Alerts* dialog box appears, displaying the instances that triggered the alert.
4. Double-click an instance title to open an instance.

6.2.14 Viewing the universes for a Web Intelligence document

In the CMC, you can view which universes are used by a Web Intelligence document.

A universe is a representation of the information available in a database. You build queries for Web Intelligence documents using objects in a universe.

1. Go to the **Folders** management area of the CMC.
2. Select the Web Intelligence document object for which to view universes.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Report Universes** in the navigation list.

A list of the universes used by the document appears.

6.3 Working with reports in an integrated environment

You add and view reports in SAP NetWeaver Business Warehouse (BW) and in the BI platform.

6.3.1 Adding reports from BW to the BI platform

You can add reports from SAP NetWeaver Business Warehouse (BW) to the BI platform in the following ways:

- After creating reports from BW queries, immediately add the reports to the platform
- In batches, add reports from BW to the platform.

If you have Crystal Reports installed on your machine, you can design a report based on a BW query and then simultaneously save the report to BW and add it to the platform from Crystal Reports. To enable this feature, in Crystal Reports, select **SAP** > **Settings**, and select **Automatically publish to SAP BusinessObjects Enterprise**.

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6.3.1.1 Adding Crystal reports to the BI platform

You can add Crystal reports to the BI platform in the following ways:

- Add reports to the platform in batches. Use this method if you have already added a number of reports to SAP NetWeaver Business Warehouse (BW).
- Use the Report Upload Wizard in SAP Crystal Reports 2011 or in the Central Management Console (CMC) in the platform.

6.3.1.2 Adding reports in batches from BW

You can use Content Administration Workbench to add large numbers of Crystal reports to the BI platform.

For information about publishing in Content Administration Workbench, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

6.3.2 Migrating development content to a production BW system

If the BI platform is deployed in a development SAP NetWeaver Business Warehouse (BW) environment, you can import report content that is configured for use with a production BW environment to the platform. Before importing content, consider the following information:

- BW treats Crystal reports (`.rpt` files) as native objects. If Crystal reports are stored in the repository of your development BW system, you can transport the BW content and then add the reports in batches to the platform. This process ensures that database information for each report is updated by NetWeaver BW Report Publisher. For information about transporting content between BW systems, search for "SAP Library" on the SAP Help Portal at *help.sap.com*.
- If you deleted some or all Crystal reports from the repository of the development BW system, you can use Life Cycle Manager to import report objects from one BI platform installation to another platform installation. When using Life Cycle Manager, you must set the correct database information on each report file you import.
- If are migrating a small number of report files, it may be easier to change each report's database information in the CMC. (In the **Folders** area, locate the report, and select **Actions** > **Database Configuration**.)

After migrating content, use Content Administration Workbench to perform maintenance tasks on the reports. Report maintenance tasks include synchronizing information about reports between the platform and BW (updating the status), deleting unwanted reports, and updating reports migrated from earlier versions of the platform (post-migration).

6.3.3 Viewing reports

You can view Crystal reports in a number of applications, depending on how the BI platform is integrated with SAP NetWeaver Business Warehouse (BW).

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For example, you can log on to the BI launch pad with your SAP credentials and view reports, or you can open reports in a web browser in SAP Logon.

6.3.3.1 Viewing a report in the BI launch pad

For information about using the BI launch pad, see the BI Launch Pad Help.

1. In a web browser, enter the URL for the BI launch pad: `http://<WebServer>:<PortNumber>/BOE/BI`

   Replace `<WebServer>` with the name of the web server and `<PortNumber>` with the port number for the BI platform.

   If the platform is installed, select **Start** > **Programs** > **SAP Business Intelligence** > **SAP BusinessObjects BI platform 4** > **SAP BusinessObjects BI platform Java BI launch pad**.
2. In the *Log On to BI launch pad* dialog box, in the **Authentication** list, select the **SAP** check box.
3. In the **SAP System ID** box, enter the three-character ID (SID) for your SAP system.

   If you are unsure of the SID, contact your system administrator.
4. In the **SAP Client** box, enter your three-digit SAP client number.
5. In the **User Name** box and **Password** box, enter your SAP logon credentials.
6. Click **Log On**.
   You are logged on to the launch pad.
7. Click the `My Groups` folder to quickly access all objects saved under your SAP roles and published to the platform.

6.3.3.2 Viewing a published report in SAP Easy Access

1. Log on to SAP Easy Access.
2. Browsing your roles, locate the reports saved to SAP NetWeaver Business Warehouse (BW).

   Look for the Crystal report icon in BW.
3. Double-click the report to open it.

The report appears in the web browser. If you are prompted to log on to the SAP Web Application Server and/or to the BI platform, enter your usual credentials.

6.3.4 Personalizing reports generated from BW queries

The BI platform supports personalized variables in reports generated from SAP NetWeaver Business Warehouse (BW) queries.

Reports based on BW queries can include variables that contain values used by the queries to limit or specify returned data. Typically, to run a report, you enter a value or select from a list of predefined values.

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Using personalization in SAP Business Explorer (BEx), you can enter a value for a variable and save it as your personal default value. When the report runs, data is generated based on the variable value. If you run the same report again, you can use the saved default values.

Personalized values are user-specific. You can set personalized values for yourself, not for other users. Each user can set personalized values instead of using the preset values for a variable. For more information about personalization, see the BW system documentation or contact your system administrator.

6.3.4.1 Parameters

Report variables are called parameters in the BI launch pad.

Before viewing or scheduling a report, you must choose a value for each parameter from a dynamic picklist. The values available for parameters have been assigned to each variable in the SAP environment and filtered based on your SAP access rights.

In the *Enter Prompt Values* dialog box, you can perform the following tasks:

- Run a report with the default parameter values
- Select parameter values in dynamic picklists and run a report
- Enter a value for each parameter and run a report
- Personalize a value for each parameter and run a report
- Run a report with null values for all parameters

Some options are available only when they are enabled in a report's referenced SAP NetWeaver Business Warehouse (BW) query or in the BI platform.

6.3.4.1.1 Viewing a report with default parameter values

The default values for a report's parameters are set in the SAP environment when a SAP NetWeaver Business Warehouse (BW) query is designed.

Because a BI platform report is based on a BW query, the default values for query variables automatically become the default values for report parameters.

1. Log on to the BI launch pad.
2. Double-click the report object for which to view default parameter values.
3. In the *Enter Prompt Values* dialog box, click **OK**.
   The report appears in a Crystal report viewer. Its data is based on the default values assigned to the parameter.

6.3.4.1.2 Viewing a report using parameter values from a dynamic picklist

The choices in a parameter's dynamic picklist are based on values assigned to the variable in the SAP environment .

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The values you see in the BI launch pad correspond to your access rights—only values for which you have rights are available.

You can view reports using values from a dynamic picklist only for SAP NetWeaver Business Warehouse (BW) query-based parameters.

1. Log on to the BI launch pad.
2. Double-click the report object for which to set parameter values.
3. In the *Enter Prompt Values* dialog box, beside the first parameter to define, click the **browse** (**...**) button.
4. In the *Picklist* dialog box, click the hyperlink for the parameter value in the list.
   The *Enter Prompt Values* dialog box appears again, with the value you selected displayed in the edit field for the parameter.
5. Repeat steps 3 and 4 for the remaining parameters, and click **Execute**.

The report appears in a Crystal report viewer. Its data is based on the parameter values you selected.

6.3.4.1.3 Null parameter values in scheduled reports

When you schedule a report to run with a null parameter value, no value is passed to the SAP NetWeaver Business Warehouse (BW) query when the report is executed. Instead, the report uses the default value or a personalized value for variables. Personalized values override default values.

To change the parameter value used to run a report, click the report in the BI platform and reschedule it with a new parameter. Because the report was initially scheduled to run with a null parameter value, no value is saved with the report. The next time you run the report, the new parameter value will be used to generate data.

If a variable does not have a default value or a personalized value, the report attempts to run without a value for the variable. Depending on the query, an error message may appear if the variable requires a value before the report can run.

6.3.4.1.3.1 Viewing a report with null parameter values

This feature is primarily used when scheduling reports.

You can view reports with null values only for SAP NetWeaver Business Warehouse (BW) query-based parameters.

1. Log on to the BI launch pad.
2. Double-click the report object for which to set parameter values.
3. In the *Enter Prompt Values* dialog box, for each parameter, select **Set to null**.
4. Click **OK**.

The report appears in a Crystal report viewer. Its data is based on the default or personalized values assigned to the variables in the SAP environment.

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6.3.4.1.4 Personalized parameter values in scheduled reports

When you set a recurring schedule for a report that contains a personalized parameter value, the BI platform uses the personalized value in the report each time it runs.

After you personalize a value, the platform saves the value and sets it as the permanent user-specific parameter value for the report. Even if you change the personalized value of a parameter, scheduled reports continue to display data based on the original personalized value.

After changing the personalized value of a parameter, perform the following actions to use the new value in scheduled reports:

- Reschedule reports with the new parameter value.
- Schedule reports to run with null values for the parameter. The platform will evaluate the personalization values when the report runs.

6.3.4.1.4.1 Viewing a report with personalized parameter values

Personalization enables you to set the default value for a parameter and save the value for future use. When you set a personalized value for a parameter, the personalized value becomes the default.

You can view reports with personalized values only for SAP NetWeaver Business Warehouse (BW) query-based parameters. In addition, the reports must be based on the SAP NetWeaver MDX driver.

Personalized values are user-specific; you cannot define them for other users. Other users who work with the same report can set their own personalized values or use a preset value for a parameter. For more information about personalization, see the BW system documentation or contact your system administrator.

1. Log on to the BI launch pad.
2. Double-click the report object for which to set parameter values.
   The *Enter Prompt Values* dialog box appears, listing the default values for report parameters beside **Current value**.
3. To personalize a value for a parameter, perform one of the following actions:
   - Select a value in the list, and click the **personalize** icon ( ) to set it as your personalized value.
   - Enter a value in the parameter's **edit** box, and click the **personalize** icon to set it as your personalized value.

You can view the report with data that is based on the personalized value. In the future, if you view the same report, the personalized value is used to run the report, unless otherwise specified.

6.4 Program object management

This section explains program objects and instances, how to manage objects and instances in the Central Management Console (CMC), type-specific program object configuration, and security considerations for program objects.

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6.4.1 What are program objects and instances

A program object is an object in the BI platform that represents an application. After adding a program object, you can schedule and run the object and manage access rights to it.

When you add a program object or its associated files to the platform, the object or files are stored on the Input File Repository Server (FRS). Each time a program runs, the program and files are passed to the Program Job Server, and the platform creates a program instance.

Unlike report instances, which you can view in the completed format, program instances exist as records in the object history. The platform stores each program's standard output and standard error in a text output file that appears when you click a program instance in an object's history.

To successfully schedule and run a program object, log on to the account that the program object will use when it runs.

Related Information

What are program objects and instances [page 53]

A program object is an object in the BI platform that represents an application. After adding a program object, you can schedule and run the object and manage access rights to it.

6.4.1.1 Types of program objects

You can add the following types of applications to the BI repository as program objects:

Program object	Description
Executable	Executable programs are binary files, batch files, or shell scripts with file extensions such as `.com`, `.exe`, `.bat`, or `.sh`. You can add any executable program that can be run from the command line to the machine that runs the Program Job Server.
Java	You can add any Java program to the BI repository as a Java program object.
script	Script program objects are JScript and VBScript scripts. They run on Windows using an embedded COM object and can—once published—reference BI platform SDK objects. Script program objects are not supported on Unix.

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Use program objects to write, publish, and schedule scripts or Java programs that run on the BI platform and to perform maintenance tasks such as deleting instances from the history. You can design the scripts and Java programs to access platform session information. This ensures that scheduled program objects retain the security rights or restrictions of the user who scheduled the job. (Your scripts and Java programs require access to the BI platform SDK. For more information, see the platform SDK documentation, such as the *SAP Business Intelligence Platform Java SDK Developer Guide*.)

As the administrator, you can enable or disable any type of program object. After you add a program object to the repository, you can configure it in the **Folders** area of the CMC. For each type of program object (**Executable**, **Java**, or **Script**), you can specify command-line arguments and a working directory. For executable and Java programs, there are additional ways (both required and optional) to configure program objects and provide them with access to other files.

6.4.2 Setting program processing options

6.4.2.1 Specifying command-line arguments

For each program object, you can specify command-line arguments with the **Default Settings** command on the **Manage** menu.

You can specify any argument that is supported by the command-line interface for your program. Arguments are passed directly to the command-line interface, without parsing.

1. In the *Folders* management area of the CMC, select the program object.
2. Select **Manage** > **Default Settings**.
3. In the *Default Settings* dialog box, click **Program Parameters** on the navigation list.
4. In the **Arguments** box, enter the command-line arguments for your program, using the same format as at the command line.

   For example, if your program has a loops option, to set the loops value to 100, you might type `-loops 100`
5. Click **Save & Close**.

6.4.2.2 Working directory for program objects

You can specify an alternative working directory for a program object by selecting **Manage** > **Default Settings**, or you can changes the default working directory for the Adaptive Job Server.

By default, when a program object runs, the BI platform creates a temporary subdirectory in the Adaptive Job Server's working directory and uses the subdirectory as the working directory for the program. The subdirectory is automatically deleted when the program stops running.

The account under which a program object runs must have appropriate access rights to the folder that you select as the working directory. A program's account generally needs read, write, and execute permissions to a working directory. The level of file permissions required depends on what the program does.

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6.4.2.2.1 Setting the working directory for a program object

1. In the *Folders* management area of the CMC, select the program object.
2. Select **Manage** > **Default Settings**.
3. In the *Default Settings* dialog box, click **Program Parameters** on the navigation list.
4. In the **Working Directory** box, enter the full path to the directory that you want to set as the program object's working directory.

   For example, on Windows, if you created a working directory named `working_directory`, enter `C:\working_directory`. On Unix, enter `/working_directory`.
5. Click **Save & Close**.

6.4.2.2.2 Modifying the default working directory for a program object

1. Go to the **Servers** management area of the CMC.
2. Select the Adaptive Job Server that hosts the Program Scheduling Service.

   To check whether an Adaptive Job Server hosts the Program Scheduling Service, select the server and select **Manage** > **Properties**.
3. Select **Manage** > **Properties**.
4. In the *Properties* dialog box, in the **Temporary Directory** box, enter the full path to the directory to set as the working directory.
5. Click **Save & Close**.

6.4.3 Configuring executable program objects

After you add an executable program object to the CMC, you can perform the following actions:

- Configure the object to access external or auxiliary files
  In addition to setting the working directory for program objects, you must provide access to external or auxiliary files. There are two ways to specify the location of external or auxiliary files:
  - If the file is on the same machine as the Adaptive Job Server that hosts the Program Scheduling Service, specify the full path to the external or auxiliary file.
  - If the file is located elsewhere, upload the external or auxiliary file to the File Repository Server, which passes the file to the Program Scheduling Service as needed.
- Customize environment variables for the shell in which the BI platform runs the program

Related Information

Configuring Java programs [page 57]

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To successfully schedule and run Java programs in the BI platform, you must specify required parameters for the program object. You can provide the Java program with access to files located on the Adaptive Job Server and specify Java Virtual Machine options.

6.4.3.1 Specifying the path to external or auxiliary files

You must specify the location of external or auxiliary files to some binary files, batch files, and shell scripts.

1. Go to the **Folders** management area of the CMC.
2. Select the executable program object for which to specify the path.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Program Parameters**.
5. In the **External Dependencies** box, enter the full path to the file, and click **Add**.
6. To edit or remove external dependencies, select the path under **External Dependencies**, and click **Edit** or **Remove**.
7. Repeat step 5 for each external or auxiliary file for which to specify the path.
8. Click **Save & Close**.

6.4.3.1.1 Removing an external or auxiliary file

You can remove auxiliary files that you have specified.

1. Go to the **Folders** management area of the CMC.
2. Select the file(s) in the **Current auxiliary files** list, and click **Remove File(s)**.

6.4.3.2 Uploading external or auxiliary files to the File Repository Server

1. Go to the **Folders** management area of the CMC.
2. Select the executable program object for which to upload files.
3. Select **Actions** > **Associated Files**.
4. Click **Browse** and locate the required file, and click **Add File**.
5. Repeat step 4 for each file to upload.
6. Click **Save & Close**.

6.4.3.3 Adding an environment variable

In the CMC, you can configure a executable program object by adding or modifying environment variables.

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Modifications to an existing environment variable override the default variable (that is, changes are not appended to it). However, the changes you make to environment variables exist only in the temporary shell in which Information platform services runs the program. Thus, when the program exits, the environment variables are destroyed.

For example, to set the path variable to append a user's `bin` directory to the existing path:

- On Windows, enter: **`path=%path%;c:\usr\bin`**
- On Unix, enter: **`PATH=$PATH:/usr/bin`**

1. Go to the **Folders** management area of the CMC.
2. Select the executable program object for which to add an environment variable.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Program Parameters**.
5. In the **Environment Variables** box, enter the environment variable as **`<name>=<value>`**, and click **Add**.

   `<name>` is the environment variable name, and **`<value>`** is the value for the environment variable. Information platform services sets your environment variables using the syntax that is appropriate for your operating system. However, on Unix, you must follow convention and use the appropriate case. For example, all name values on Unix must be in uppercase.
6. Click **Save & Close**.

6.4.3.3.1 Editing or removing an environment variable

1. Go to the **Folders** management area of the CMC.
2. Select the program object for which to edit or to remove an environment variable.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Program Parameters**.
5. In the **Environment Variables** list, select the variable to edit or to remove, and click **Edit** or **Remove**.

6.4.4 Configuring Java programs

To successfully schedule and run Java programs in the BI platform, you must specify required parameters for the program object. You can provide the Java program with access to files located on the Adaptive Job Server and specify Java Virtual Machine options.

6.4.4.1 Specifying required parameters for Java programs

To successfully schedule and run a Java program, you must provide Information platform services with the base name of the `.class` file that implements the IProgramBase interface from the SAP BusinessObjects Enterprise Java SDK.

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The Java Runtime Environment must be installed on each machine that is running an Adaptive Job Server.

1. Go to the **Folders** management area of the CMC.
2. Select the Java program object for which to specify required parameters.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Program Parameters** in the navigation list.
5. In the **Class to run** box, enter the base name of the `.class` file that implements the *IProgramBase* from the SAP BusinessObjects Enterprise Java SDK (*com.businessobjects.sdk.plugin.desktop.program.IProgramBase*). For example, if the file name is `Arius.class`, enter **`Arius`**.
6. Click **Save & Close**.

6.4.4.2 Providing Java programs with access to other files

You can provide Java programs with access to files, such as Java libraries, on the Program Scheduling Service machine.

The Java Runtime Environment must be installed on each machine that is running an Adaptive Job Server.

1. Go to the **Folders** management area of the CMC.
2. Select the Java program object for which to provide access to files on the Adaptive Job Server that hosts the Program Scheduling Service.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Program Parameters** on the navigation list.
5. In the **Classpath** box, enter the full path to each required Java library file that is stored on the Adaptive Job Server hosting the Program Scheduling Service.

   Separate paths with the classpath separator for your operating system. For example, use a semicolon to separate paths in Windows, and use a colon to separate paths in Unix.
6. Click **Save & Close**.

6.4.5 Specifying a user account for a program object

The Java Runtime Environment must be installed on each machine that is running an Adaptive Job Server.

1. Go to the **Folders** management area of the CMC.
2. Select the executable program object for which to specify a user account.
3. Select **Manage** > **Default Settings**.
4. In the *Default Settings* dialog box, click **Program Logon** on the navigation list.
5. In the **User Name** box and the **Password** box, enter the credentials for the user account under which the program should run.
6. Click **Save & Close**.

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6.5 Object package management

6.5.1 Object packages

Object packages function as distinct objects in the BI platform (like folders you can schedule) and can be composed of any combination of report and program objects in the platform. For reports, object packages enable users to view synchronized data across reports.

Object packages can be comprised of the multiple component objects. Placing multiple (component) objects in a single object package enables you to simultaneously schedule the objects. However, configuration options are more limited for component objects than other objects, and component objects do not appear in the object list in the **Folders** area of the CMC. To see component objects, you must open their object package.

The BI platform creates an object package instance each time it runs an object package. An object package instance contains individual instances of each component object in the package. Individual instances are tied to object package instances, rather than to component objects. For hyperlinked report instances in object package instances, the hyperlinks point to other report instances in the same object package instance.

For example, if you run an object package and create an instance—and then remove a report object from the object package—the existing object package instance will not change. It still contains the instance for the report object you removed. The next time you run the object package and create an object package instance, no instance will be created for the report object you removed.

You cannot add non-platform objects to object packages—for example, Microsoft Excel, Microsoft Word, Adobe Acrobat, text, rich text, Microsoft PowerPoint, and hyperlinked objects.

Related Information

Working with hyperlinked reports [page 44]

In SAP Crystal Reports, you use hyperlinks to navigate between report objects—a Report Part in a report, other report objects or their parts, or specific instances of reports or Report Parts.

6.5.2 Creating an object package

1. Go to the **Folders** management area of the CMC.
2. Locate and select the folder in which to create the object package.
3. Select **Manage** > **New** > **Object Package**.
4. In the *Object Package* dialog box, enter a title, description, and keywords for the object package.
5. Click **OK**.

You can add component objects to the package..

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6.5.3 Adding component objects to an object package

In CMC, after you create an object package, you must add report and/or program component objects to it and then you can add new or copy existing objects to it and move copies of objects (not actual objects) to it or between object packages.

When you copy an object to an object package, the component object retains the settings of the original object. When you create a copy of an object inside an object package, the component object and the original object are separate entities. Changes to one object do not affect the other object.

6.5.3.1 Adding component objects to an object package

You must have the Schedule right for each object component in the object package, before you can schedule the package..

1. Go to the **Folders** management area of the CMC.
2. Double-click the object package to which to add a component object.
   The object package's contents appear in the details panel.
3. Select **Manage** > **Add** > **Local Document** or **Program File**, depending on the object you want to add.
4. Click **Browse**, and locate and select the component object to add.
5. Set the properties as needed.

   For example, if you are adding a program object, set the program type by selecting **Executable**, **Java**, or **Script**.
6. Click **OK**.

6.5.4 Configuring object packages and their objects

Object packages save time because they enable you to simultaneously schedule multiple objects that have similar scheduling requirements. As a result, you configure some parameters at the object package level and some at the object level (that is, for individual objects in the package).

Because objects in an object package are copies of objects that exist outside the package, changes you make do not affect objects outside the package.

For example, you must specify a destination for an object package, but you cannot specify a destination for individual objects in the package. When BI platform runs the object package, it will save output instances to the destination specified for the object package.

6.5.4.1 Setting component failure options for an object package

You can specify how component failure affects an object package at run time.

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1. Go to the **Folders** management area of the CMC.
2. Locate and select the object package for which to set component failure options.
3. Select **Manage** > **Default Settings**.
4. Click **Component Failure** on the navigation list.
5. Select or clear the **Scheduled package fails upon individual component failure** check box.
6. Click **Save & Close**.

6.5.5 Authentication and object packages

Object packages simplify both Enterprise and database authentication.

You enter your Enterprise authentication only once to schedule an object package, including its component objects. You must have the Schedule right for each object in the object package. If you attempt to schedule an object package containing a component object that you do not have the Schedule right for, the component instances fail.

For database authentication, you must specify database logon information for each report component object in an object package. (If you copied the report to the object package, it initially inherited database logon information from the original report.)

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7 Scheduling Objects

7.1 Calendars

A calendar is a customized list of run dates for a scheduled job. When a calendar is applied to a job, the BI platform runs the job per the dates specified in the calendar.

Calendars enable users to create more complex processing schedules than standard scheduling options allow. They may be applied to any object that can be scheduled—including report objects, program objects, and object packages—and there is no limit to the number of calendars that can be defined in the platform.

Calendars are useful for setting an irregular schedule and for providing a set of regular scheduling dates to choose from. For these kinds of complicated recurring jobs, calendars enable creation of more complex processing schedules, combining unique scheduling dates with recurring ones. For example, to run a report object every business day except for your country's statutory holidays, you could create a calendar with holidays marked as do-not-run days. The platform would generate the report only on run days (not on holidays).

7.1.1 Calendar formats

Calendar format option	Description
Yearly	Displays a calendar's run dates for the year To change the year displayed, click **Previous year** or **Next year**. To add a date using the **Yearly** format, click the day, weekday header, or week row header in which to add it.
Quarterly	Displays a calendar's run dates for the current calendar quarter To change the quarter displayed, click **Previous quarter** or **Next quarter**. To add a date using the **Quarterly** format, click the day, weekday header, or week row header in which to add it.
Monthly	Displays a calendar's run dates for the current month To change the month displayed, click **Previous month** or **Next month**. To add a date using the **Monthly** format, click the day, weekday header, or week row header in which to add it.

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7.1.2 Calendar rights

By default, calendars are based on current security settings and inherit rights from a user's parent folder, but you can grant or deny calendar access rights to users and user groups.

Common uses of calendar rights are as follows:

- To hide calendars that do not apply to a particular group—users see only calendars to which they have viewing rights.
- To make specific sets of dates available to particular employees or departments. For example, your finance team may use a series of financial tracking dates that aren't useful to other departments.

For more information about setting rights, see the "Setting Rights" chapter in the *SAP BusinessObjects Business Intelligence Platform Administrator's Guide*, on the SAP Help Portal at *http://help.sap.com*.

7.1.3 Creating a calendar

It is good practice to create a calendar for users to use as a template for creating new calendars. They can copy this template calendar and modify it as necessary. For example, you can create a default Weekdays calendar that includes all days as run dates except weekends and company holidays.

1. Go to the **Calendars** management area of the CMC.
2. Select **Manage** > **New** > **New Calendar**.
3. Enter a name and description for the calendar, and click **OK**

The calendar is added to the system, and you can add run dates to it on the **Dates** tab.

Related Information

Adding dates to a calendar [page 63]
After creating a calendar, you can view dates in a yearly, quarterly, or monthly format before adding them to the calendar, and you can choose recurring dates based on the day of month or week.

7.1.3.1 Adding dates to a calendar

After creating a calendar, you can view dates in a yearly, quarterly, or monthly format before adding them to the calendar, and you can choose recurring dates based on the day of month or week.

When changing an existing calendar, the BI platform checks all currently scheduled instances on your system, and updates all objects that use the calendar are automatically updated to run on the revised date schedule.

1. Go to the **Calendars** management area of CMC.
2. Select the calendar to which to add dates.
3. Select **Actions** > **Select Dates**.

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4. Select the **Yearly**, **Quarterly**, or **Monthly** calendar format.
5. To create a calendar with recurring dates, select **By day of month** or **By day of week**.
6. Select the days of the month when the calendar should run.

   To remove a run day, click the day. To select a week or all weekdays in a month as run days, click the row or column header.
7. When you are finished, click **Save**.

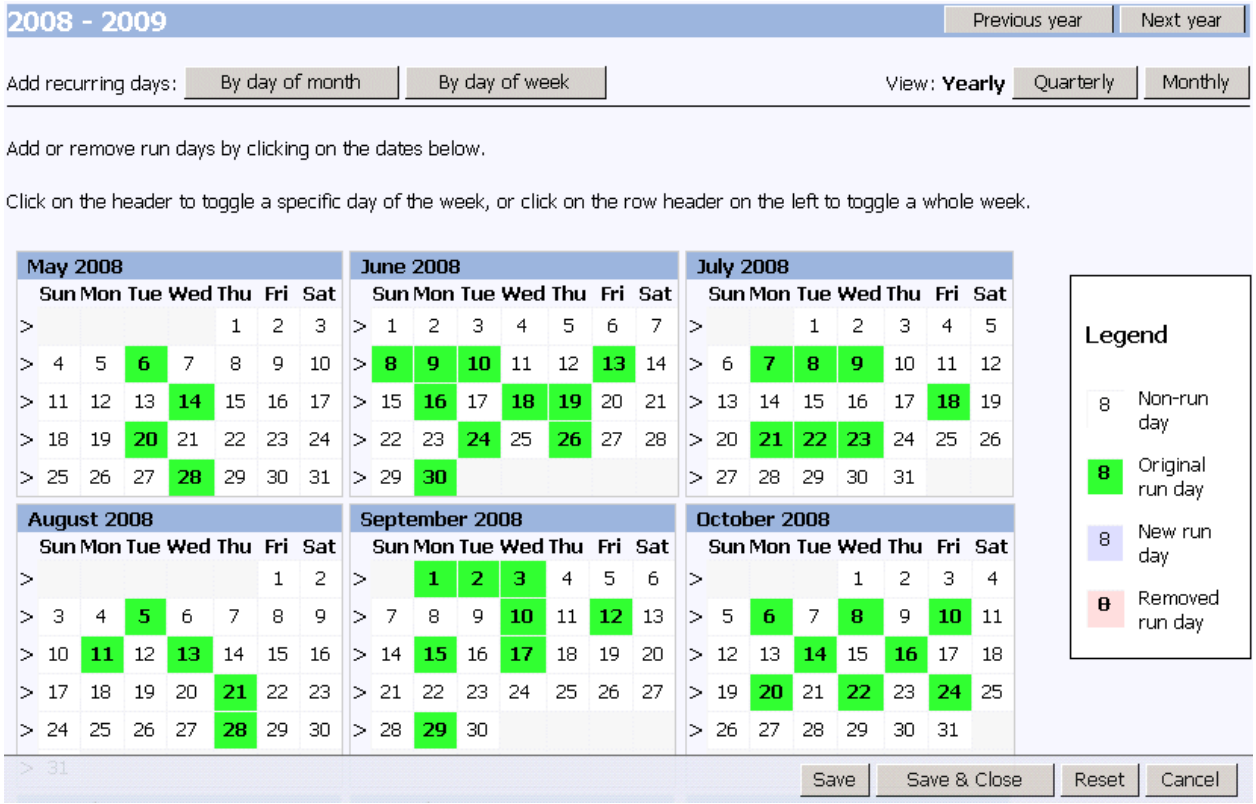
7.1.3.1.1 Specific run dates

Choose from the following formats when adding specific dates to a calendar:

Date format	Description
Yearly	Displays the run schedule for the entire year
Quarterly	Displays the run dates for the current quarter
Monthly	Displays run dates for the current month

In all three formats, you can change the displayed time range by clicking the **Previous...** and **Next...** buttons.

You can add specific dates in any calendar format by clicking the day to add. To add an entire week, click **>** in the row header for that week. To add a particular day of the week in a month, click the day of the week.



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For example, if a company ships products on an irregular schedule that cannot be defined using daily or weekly settings, you could create a shipping-dates calendar for the required dates. The shipping department could check the inventory after each shipment by scheduling a report that runs at the end of each shipping day.

Related Information

Recurring run dates [page 65]

Calendars can combine different recurring run patterns in one job and can be set to run instances on dates that do not follow the recurrence pattern.

7.1.3.1.2 Recurring run dates

Calendars can combine different recurring run patterns in one job and can be set to run instances on dates that do not follow the recurrence pattern.

Yearly, **Quarterly**, and **Monthly** are the default formats for adding recurring dates to a calendar. To display existing run dates for a format, select the format.

To add recurring days to a calendar, use the **By day of month** or **By day of week** option and enter the days to add. For example, to schedule a report object to run on the first four days of every month and on the second and fourth Friday of every month, first create and name a new calendar object, and then choose **By day of month** and add the first four days of the month to the calendar. When you update the calendar, the **Yearly** format appears with the new run dates.

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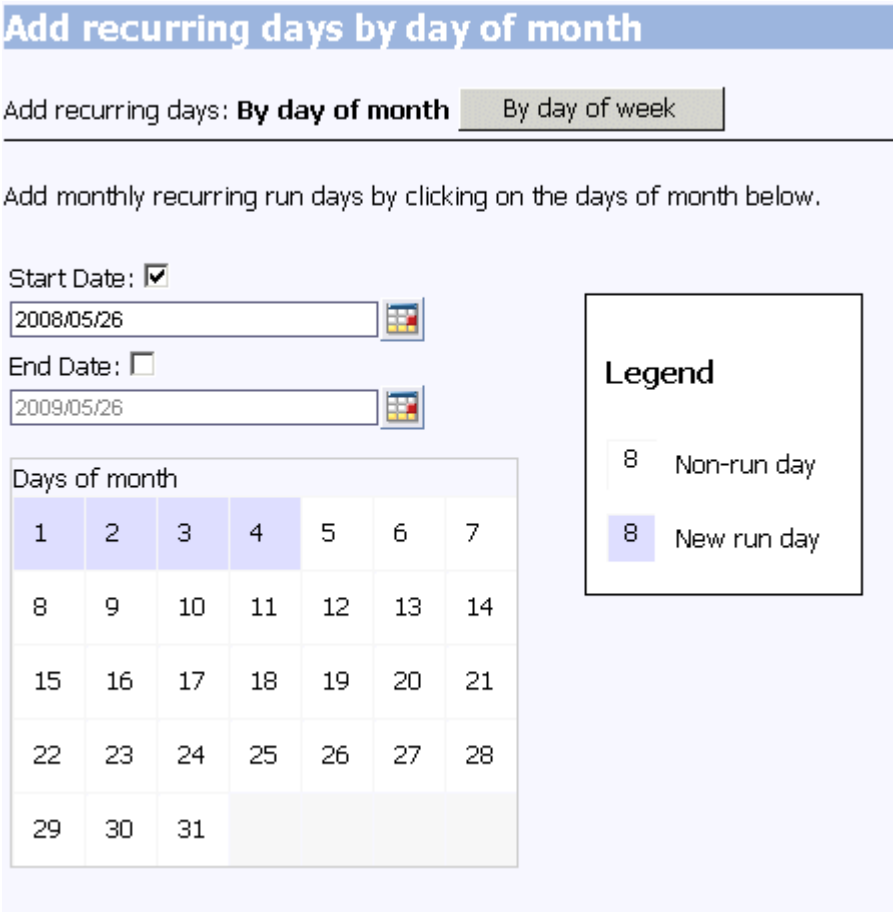

To add every second and fourth Friday to the calendar, choose to add recurring days **By day of week** and select the second and fourth Friday.

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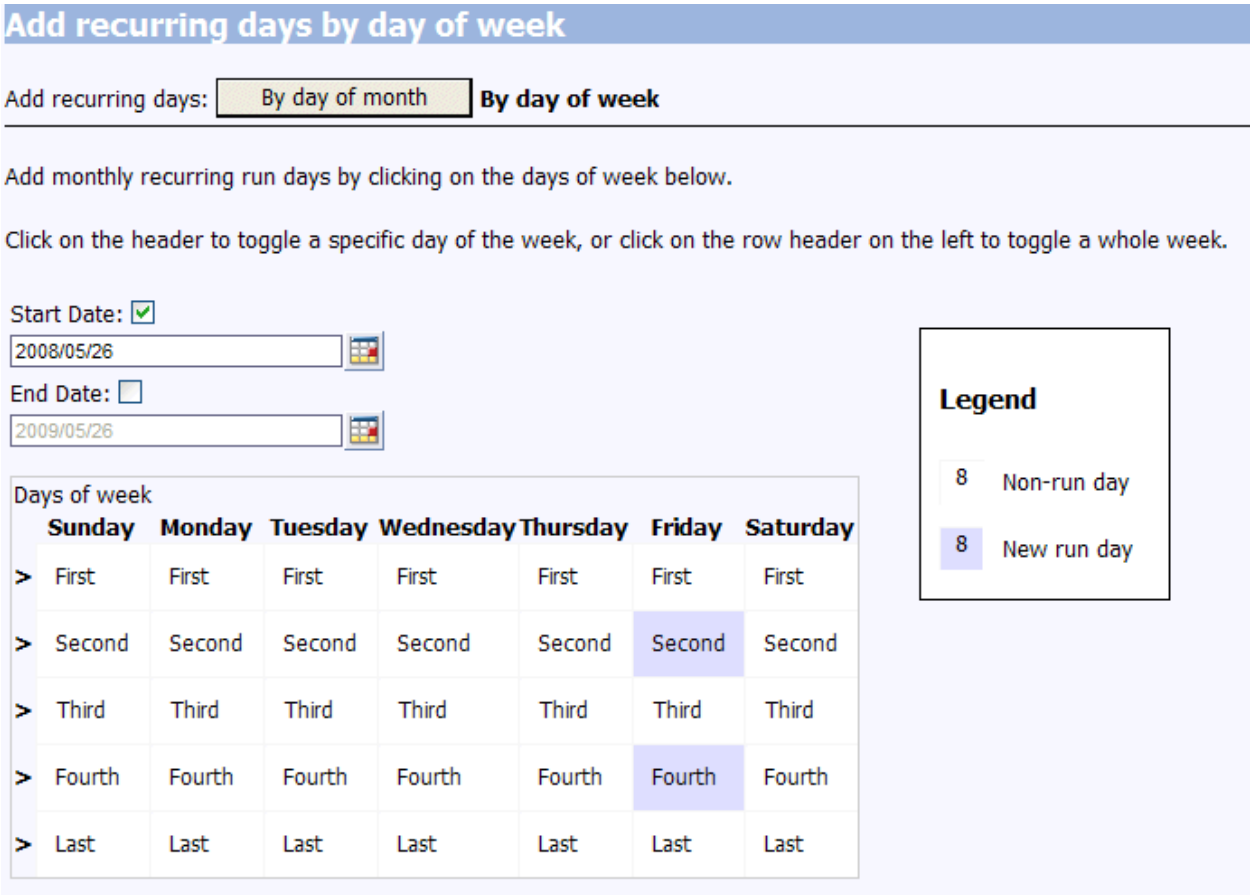

7.1.4 Deleting a calendar

When a calendar is deleted, the BI platform will run objects scheduled by the deleted calendar one more time.

Before deleting a calendar, check the scheduling information for objects to which the calendar was applied. You will want to ensure that required objects continue to run. If necessary, you can select a different calendar or a different recurrence pattern for the objects.

1. Go to the *Calendars* management area of the CMC.
2. Select the calendar to delete.

   To select multiple calendars, hold down the *CTRL* or *SHIFT* key and click each calendar.
3. Select **Manage** > **Delete**, and click **OK**.

Related Information

Scheduling an object [page 68]

To quickly change the default schedule settings for an object, click **Default Settings** in the *Schedule* dialog box, set the scheduling options, and click **Save**.

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7.2 Scheduling process and options

Scheduling is the process of configuring an object to automatically run at specified times.

When scheduling an object, you choose the recurrence pattern and other parameters that determine when and how often the object will run. At the time you schedule an object, the BI platform creates a scheduled instance. The scheduled instance appears in the *History* dialog box for the object (with a status of Recurring or Pending) but contains only object and schedule information (no data).

When the platform runs the object, it creates an output instance for the object—for example, a report or program instance. A report instance contains actual data from the database. A program instance is a text file that contains the standard output and the standard error produced when the program object ran. Output instances also appear in the *History* dialog box for an object (with a status of Success or Failed).

Users schedule and run objects and view reports in web-based client software, such as the BI launch pad, or a custom web application. Administrators and users with appropriate access rights use the CMC to manage, administer, and schedule objects and to view reports.

Related Information

Selecting a recurrence pattern [page 162]
The recurrence pattern determines how often a publication runs.

7.2.1 Setting options for scheduling

7.2.1.1 Scheduling an object

To quickly change the default schedule settings for an object, click **Default Settings** in the *Schedule* dialog box, set the scheduling options, and click **Save**.

1. Go to the *Folders* management area of the CMC.
2. Select the object to schedule.
3. Select **Actions** > **Schedule**.
   The *Schedule* dialog box appears, showing the default settings for the object.
4. Enter a title for the instance.
5. Click **Recurrence**, and select a recurrence pattern.
   For example, select **Weekly** to run the object one time per week.
6. Specify run options and scheduling parameters.
   For example, select **Monday**, **Wednesday**, and **Friday**.
7. Click **Schedule**.

The BI platform creates a scheduled instance and runs it according to the schedule you specified. You can view scheduled instance in the *History* dialog box for the object.

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Related Information

Recurrence patterns [page 70]
First select a recurrence pattern and then select run options for the recurrence pattern.

Run options for recurrence patterns [page 71]
First select a recurrence pattern and select run options for the pattern. Not all run options are available for all objects. When you select a run option that contains a variable, the BI platform displays the variable's default value. You can change default values as needed.

Viewing instance information [page 103]
You can manage instances with the Instance Manager or in the *History* dialog box for individual objects.

7.2.1.2 Scheduling objects for individual users

Use the **Schedule For** option to schedule a report object and generate reports with data tailored for individual users.

You can schedule the following types of objects for individual users:

- Crystal reports that are based on Business Views, universes, or SAP BEx queries
- Web Intelligence documents that use universes

The BI platform runs the object and generates multiple instances of the report or document. Each instance contains data relevant only to an individual user.

Example

Scheduling sales information for individual sales representatives

When scheduling a sales report, in the *Schedule For* dialog box, enter the user name of each sales representative. At the scheduled time, the platform runs the report object and generates individual report instances. Each instance contains sales information for one sales representative.

7.2.1.2.1 Scheduling a report object for individual users

1. Go to the *Folders* management area of the CMC.
2. Select a report object to schedule.
3. Select **Actions** > **Schedule** .
4. Click **Schedule For**.
5. Select **Schedule only for myself** or **Schedule for specified users and user groups**.
6. If you selected **Schedule for specified users and user groups**, locate and select the users or user groups for which to generate a report instance, and click **>** to add them to the **Selected** list.

   To remove a user or group from the **Selected** list, select the user or group, and click **<**.
7. Specify the remaining scheduling options, and click **Schedule**.

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Related Information

Recurrence patterns [page 70]
First select a recurrence pattern and then select run options for the recurrence pattern.

Run options for recurrence patterns [page 71]
First select a recurrence pattern and select run options for the pattern. Not all run options are available for all objects. When you select a run option that contains a variable, the BI platform displays the variable's default value. You can change default values as needed.

7.2.1.3 Recurrence patterns

First select a recurrence pattern and then select run options for the recurrence pattern.

Recurrence pattern	Description
Now	The object runs when a user clicks **Schedule**.
Once	The object runs once. You specify at which time it will run and the start and end dates.
Hourly	The object runs hourly. You specify how often the object runs, at which time it will run, and the start and end dates.
Daily	The object runs once every **<N>** days. You specify how often the object runs, at which time it will run, and the start and end dates.
Weekly	The object runs every week. You specify on which days and at which time it will run and a start and end date.
Monthly	The object runs every **<N>** months. You specify how often the object runs, at which time it will run, and the start and end dates.
Nth Day of Month	The object runs on the **<N>** day of every month. You specify the day of the month, at which time it will run, and a start and end date.
1st Monday of Month	The object runs on the first Monday of every month. You specify at which time it will run and a start and end date.
Last Day of Month	The object runs on the last day of every month. You specify a start and end date.
X Day of Nth Week of the Month	The object runs on a particular day of a particular week each month. You specify the week and day it will run, at which time it will run, and the start and end date.
Calendar	The object runs on the dates specified in a calendar.

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Related Information

Run options for recurrence patterns [page 71]

First select a recurrence pattern and select run options for the pattern. Not all run options are available for all objects. When you select a run option that contains a variable, the BI platform displays the variable's default value. You can change default values as needed.

Calendars [page 62]

A calendar is a customized list of run dates for a scheduled job. When a calendar is applied to a job, the BI platform runs the job per the dates specified in the calendar.

7.2.1.3.1 Run options for recurrence patterns

First select a recurrence pattern and select run options for the pattern. Not all run options are available for all objects. When you select a run option that contains a variable, the BI platform displays the variable's default value. You can change default values as needed.

Run option for recurrence patterns	Description
Start Date/Time	These lists appear for all recurrence patterns, except **Now** and **Calendar**. Select the time (hours, minutes, and A.M. or P.M.) and the date on which to start running the object. The platform runs the object according to the specified schedule, as soon as it can after the start time has passed. The default is the current date and time. For example, if you specify a start time that is three months in the future, the platform waits to run the object until the start date has passed, even if all other criteria are met. After the start date, the platform runs the report at the specified time.
End Date/Time	These lists appear for all recurrence patterns, except **Now** and **Calendar**. Select the time (hours, minutes, and AM or PM) and the date on which to stop running the object. After the end time has passed, the platform no longer runs an object. The default is the current time and a date in the distant future, to ensure an object will run indefinitely.
Hour(N) and **Minute(X)**	These lists appear when you select the **Hourly** recurrence pattern.

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Run option for recurrence patterns	Description
	Select the interval (in hours and minutes) at which to run the object. If you do not enter a value for **<N>** or **<X>**, the platform runs the report every hour.
Days(N)	This box appears when you select the **Daily** recurrence pattern. Enter the interval (in days) at which to run the object. If you do not enter a value for **<N>**, the platform runs the report every day
Monday, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, **Saturday**, and **Sunday**	These check boxes appear when you select the **Weekly** recurrence pattern. Select the check box beside each day of the week on which to run the job.
Month(N)	This list appears when you select the **Monthly** recurrence pattern. Enter the interval (in months) at which to run the object. If you do not enter a value for **<N>**, the platform runs the report every month.
Day(N)	This box appears when you select the **Nth Day of Month** recurrence pattern. Select the day of the month on which to run the object. If you do not select a value for **<N>**, the platform runs the report every day.
Week(N) and **Day(X)**	These lists appear when you select the **X Day of Nth Week of the Month** recurrence pattern. Select the week in the month and the day of the week on which to run the object. If you do not enter a value for **<N>** or **<X>**, the platform runs the report every day.

7.2.1.4 Notification of success or failure of scheduled jobs

The BI platform can notify administrators, users, and user groups when a scheduled object instance succeeds or fails.

You can send audit or email notification, combine multiple notification methods, and select different notification options for successful and failed instances.

For example, you have a large number of reports that run every day. You need to check each instance to make sure it ran properly, and then send email to users who need to know that a new report is available. With thousands of reports, it would take too long to manually check reports and contact users. You can set platform options for

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each object to automatically notify you when a report fails to run and to automatically inform users when new report instances run successfully.

7.2.1.4.1 Determining the success or failure of a scheduled instance

When you schedule an object, the scheduled instance either succeeds or fails. The conditions required for an instance's success or failure depend on the type of object.

For report objects and Web Intelligence documents, a report instance or document object instance runs successfully if it does not encounter errors while processing an object or accessing the database. An instance may fail if a user does not provide the correct logon information.

For program objects, the BI platform must run in order to succeed. If the platform does not run, the instance is considered a failure. If the platform runs but does not perform all tasks it is supposed to, it is still considered a successful instance because the program object ran. The platform does not monitor problems with the program object code.

For object packages, the whole package may fail if one of its components fails. You can set scheduling options for individual objects in an object package, including notification, database logon, filter, format, printing, parameter, server group, and alert options for each object.

To prevent an object package from failing if an object in the package fails, select the object, and select **Manage** > **Default Settings**, click **Component Failure**, and clear the **Scheduled package fails upon individual component failure** check box.

You cannot set audit or email notification for object packages, but you can schedule object packages with events and set notification for individual objects in an object package.

Related Information

Schedule-based events [page 111]

Schedule-based events depend on scheduled objects. When a particular object has been processed, an event is triggered based on a job being completed or on the success or failure of a scheduled object.

7.2.1.4.2 Notification options

Set notification options for each object, and send a different notification for different conditions.

For object packages, you can set only event notification, which triggers an event based on the success or failure of the object package. To monitor object successes and failures from a more general perspective, use auditing in the BI platform.

If notification fails, the object instance fails. For example, if an email notification sends a message to an invalid email address, the notification fails and the object instance is recorded as failed in the object history.

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The following notification options are available:

Notification option	Description
Audit notification	To use audit notification, you must configure the auditing database and enable auditing on the servers. If you use auditing to monitor the BI platform system, you can use audit notification. For information about configuring the auditing database and enabling auditing, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* available on the SAP Help Portal at *http://help.sap.com*. When you select audit notification, information about the scheduled object is written to the auditing database. You can send a notification to the auditing database when a job runs successfully, when it fails to run, or at both times.
Email notification	You can send an email notification about an object instance's success or failure. You choose the sender and recipients of the email and whether to send notification when an instance fails or succeeds. For example, when a report fails, you can send an email to your administrator. When a report succeeds, you can automatically send an email to users to let them know a report is available. To enable email notification, you must have the **Email SMTP** destination enabled and configured on the job servers. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

Notification of a scheduled object's success or failure is not the same as alert notification. Alert notification must be built into the design of a report. For example, alert notification can send an email to you when a specific value in a report exceeds $1,000,000. In this case, the notification has nothing to do with the content of the report—it is just about whether the report object instance failed or succeeded.

7.2.1.4.3 Configuring success or failure notification for an instance

If a notification option is available but not selected, it is labeled "Not in use." If a notification type is in use, it is labeled "Enabled."

1. Go to the *Folders* management area of the CMC.
2. Select an object for which to set notification.
3. Select **Actions** > **Schedule** >.

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4. On the navigation list, click **Notification**.
5. To use audit notification, click **Audit Notification**, and perform the following actions:
   - To send a record to the auditing database when a job succeeds, select the **A job has been run successfully** check box.
   - To send a record to the auditing database when a job fails, select the **A job has failed to run** check box.
6. To use email notification, click **Email Notification**, and perform the following actions:
   - To send an email when a job succeeds, select the **A job has been run successfully** check box.
     To specify the content and recipients of the email, select **Set the values to be used here**, and enter email addresses in the **From** and **To** boxes, enter a subject, and enter the message. Separate multiple addresses or distribution lists with semicolons.
   - To send an email when a job fails, select the **A job has failed to run** check box.
     To specify the content and recipients of the email, select **Set the values to be used here**, and enter email addresses in the **From** and **To** boxes, enter a subject, and enter the subject, and enter the message. Separate multiple addresses or distribution lists with semicolons.

   By default, the notification is sent to the server's default email destination.

7.2.1.5 Selecting a destination

When the BI platform runs an object, it stores the output instance by default on the Output File Repository Server (FRS). You can configure an object or instance to send output to a different destination.

For example, you can configure an object to automatically deliver its output by email to specific users. Choosing an additional destination gives you the flexibility to deliver instances across your Enterprise system and to destinations outside of your system.

When you select a destination other than the default Output FRS destination, BI platform generates a unique file name for the output file(s). The file name includes a combination of ID, object name or title, owner, and date and time information.

You can select a destination for an object or instance in the Central Management Console (CMC) or the BI launch pad. When you use the CMC, the values you select become the default scheduling values in the launch pad.

You can configure object instances to print after running.

Related Information

Scheduling an object to Default Enterprise Location [page 85]
To save instances only to the Output File Repository Server (FRS)—not to any other destination—use the **Default Enterprise Location** destination.

Scheduling an object to user BI Inboxes [page 85]
When scheduling objects, you can configure an object to send its instances to one or more user BI Inboxes. The BI platform stores the instance on the Output File Repository Server (FRS) and sends a copy of the instance to the BI Inboxes you specify.

Scheduling an object to email [page 86]

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When you select the **Email** destination, the BI platform saves the output instance to the Output File Repository Server and sends a copy of the instance as an attachment to the email addresses you specify.

Scheduling an object to a file location [page 88]
When scheduling objects, you can configure objects for output to an unmanaged disk. In this case, the BI platform saves an output instance to the Output File Repository Server (FRS) and to the specified destination.

Scheduling an object to an FTP server [page 87]
When scheduling objects, you can configure the objects for output to a File Transfer Protocol (FTP) server. To connect to the FTP server, you must specify a user who has the necessary rights to upload files to the server. If you specify an FTP destination, the system will save an output instance to both the Output File Repository Server and the specified destination.

Enabling or disabling destinations for a job server [page 90]
By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

7.2.1.5.1 Publication destinations

The following destinations are available for scheduled publications:

- **Default Enterprise Location**
- **BI Inbox**
- **Email**
- **FTP Server**
- **File System**
- **SAP StreamWork** (if enabled and configured)

Table 1: Default Enterprise Location destination

Description	Instance is saved to
The publication is accessible from the folder it was created in. You can perform the following actions: • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file If you send a publication to this location, choose a folder that is accessible to all recipients.	Output File Repository Server Historical instances are saved to the default Enterprise server but not to any other destination.

Table 2: BI Inbox destination

Description	Instance is saved to
The publication is sent to each recipient's BI Inbox. You can perform the following actions:	• Output File Repository Server • Specified BI Inboxes

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Description	Instance is saved to
• Use the default settings for the destination • Deliver objects to individual users To quickly locate a user, you can search for a recipient's user name, full name, or email address in the **Find title** box. • Use the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder in the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Send the publication as a shortcut or a copy If you send a publication to a recipient's BI Inbox shortcut, choose a folder that is accessible to all recipients. To send a publication shortcut to a BI Inbox, select both **BI Inbox** and **Default Enterprise Location** as the destination. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 3: Email destination

Description	Instance is saved to
Note Before you select this destination, confirm that your email settings are configured properly on the Adaptive Job Server. The publication is sent to recipients in an email. You can perform the following actions: • Use the default settings for the destination • Deliver objects to individual users • (Required) Enter your email address in the **From** box If you do not enter your email address, the BI platform uses the email address associated with the publisher's account. If the publisher's account has no email address, the platform uses the email address for the Adaptive Job Server. If there is no	Before you can schedule or send a report instance to this destination, you must enable and configure the email (SMTP) destination on the Adaptive Job Server. • Output File Repository Server • Specified email recipients

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Description	Instance is saved to
email address in the **From** box, the publisher's account, or the Adaptive Job Server, the publication will fail. • Enter recipient email addresses or add the `<Email Address>` placeholder to the **To** box • Enter recipient email addresses or add the `<Email Address>` placeholder to the **Cc** box • Enter recipient email addresses or add the `<Email Address>` placeholder to the **Bcc** box • Enter a subject or add placeholders to the **Subject** box • Enter information to deliver with the publication or add placeholders and embed a dynamic content document in the body of the email in the **Message** box • Attach source document instances to an email • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 4: FTP Server destination

Description	Instance is saved to
The publication is sent to an FTP server. You must enter the FTP server location in the **Host** box. (If you do not, the platform uses the FTP server configured for the Adaptive Job Server.) You can perform the following actions: • Use the default settings for the destination • Enter the port number, user name and password, and account • Enter a directory name • Accept the default file name, enter a file name, or add placeholders	• Output File Repository Server • Selected FTP server

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Description	Instance is saved to
If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 5: File System destination

Description	Instance is saved to
The publication is sent to a directory on a file system. You must enter the directory for the publication. You can perform the following actions: • Use the default settings for the destination • Enter a user name and password to access the file location • Deliver objects to individual users • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	• Output File Repository Server • Selected file location

Table 6: SAP StreamWork destination

Description	Instance is saved to
The publication is sent for collaboration with other users. This destination is available if SAP StreamWork is configured and enabled in the platform.	SAP StreamWork

The **Deliver objects to each user** check box is selected by default for all destinations. However, in some cases, you may not want to deliver objects to each user. For example, three recipients have identical personalization

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values so they receive the same data in publication instances. If you clear the **Deliver objects to each user** check box, one publication instance is generated and delivered to all three recipients. If you select the **Deliver objects to each user** check box, the same publication instance is delivered three times (once for each recipient).

If you are sending the publication to the **FTP Server** or **File System** destination and some recipients share identical personalization values, you can clear the **Deliver objects to each user** check box to decrease overall processing time. When you clear **Deliver objects to each user**, placeholders used when configuring destinations will contain the publisher's (not the recipient's) information.

7.2.1.5.2 Destination options

You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

Table 7: Default Enterprise Location destination options

Option	Description
Destination	**Default Enterprise Location** The scheduled job will run on the Output File Repository Server (FRS). You do not need to set additional options for this destination. Historical instances are saved to the default Enterprise server but not to any other destination.

Table 8: BI Inbox destination options

Option	Description
Destination	**BI Inbox**
Keep an instance in the history	Select this check box to retain a copy of this instance in the object's history. This check box is selected by default. Clear this check box if you want the BI platform to automatically delete the instance from the Output FRS to minimize the number of instances on the server.
Use default settings	Select this check box to use the default Adaptive Job Server values for BI Inboxes. If you do not want to use the default Adaptive Job Server values, clear this check box, and set the destination recipient options that appear.
Available Recipients and **Selected Recipients**	In the **Available Recipients** list, select users or user groups to send the instance to, and click **>** to add the users or groups to the **Selected Recipients** list.
Find title (if available)	Enter a recipient's user name, full name, or email address in the **Find title** box to quickly locate the user in the **Available Recipients** list.

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Option	Description
Target Name	• To use a system-generated file name for the instance, select **Use Automatically Generated Name**. • To choose a file name for the instance, select **Use Specific Name**, and enter a name or select variables for the file name from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, (your) `<User Full Name>`, and `<File Extension>`. Select the **Add File Extension** check box to automatically add the file extension to the instance file name. If you do not add a file extension, you may be unable to open the document.
Send As	• To send a shortcut to the instance to recipients, select **Shortcut**. • To send a copy of the instance to recipients, select **Copy**.

Table 9: Email destination options

Option	Description
Destination	**Email**
Keep an instance in the history	Select this check box to retain a copy of this instance in the object's history. This check box is selected by default. Clear this check box if you want the BI platform to automatically delete the instance from the Output FRS to minimize the number of instances on the server.
Use default settings	Select this check box to use the default Adaptive Job Server values for email. If you do not want to use the default Adaptive Job Server values, clear this check box, and set the destination recipient options that appear.
From	Enter a return email address, or select variables for the email address from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, and (your) `<User Full Name>`. Click a variable to add it. Separate email addresses with a semicolon (;). This option may be unavailable, depending on your system configuration.
To	Enter each email address that you want to send the instance to, or select variables for the email address from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, and (your) `<User Full Name>`. Click a variable to add it. Separate email addresses with a semicolon (;).
Cc	Enter each email address that you want to send a copy of the email and instance to, or select variables for the email address from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, and (your) `<User Full Name>`. Click a variable to add it. Separate email addresses with a semicolon (;).

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Option	Description
Bcc	Enter the email address of each undisclosed recipient, or select variables for the email address from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, and (your) `<User Full Name>`. Click a variable to add it. Separate email addresses with a semicolon (;).
Subject	Enter the subject of the email, or select variables for the subject from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, and (your) `<User Full Name>`. Click a variable to add it.
Message	Enter the message for the body of the email, or select variables for the message from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, (your) `<User Full Name>`, `<Viewer>`, and `<Document Name>`. Click a variable to add it.
Add Attachment	Select this check box if you want to add an attachment to the email message containing the instance.
File Name	• To use a system-generated file name for the instance, select **Use Automatically Generated Name**. • To choose the file name for the instance, select **Use Specific Name**, and enter a name or select variables for the file name from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, (your) `<User Full Name>`, and `<File Extension>`. Select the **Add File Extension** check box to automatically add the file extension to the instance file name. If you do not add a file extension, you may be unable to open the document.

Table 10: FTP Server destination options

Option	Description
Destination	**FTP Server**
Keep an instance in the history	Select this check box to retain a copy of this instance in the object's history. This check box is selected by default. Clear this check box if you want the BI platform to automatically delete the instance from the Output FRS to minimize the number of instances on the server.
Use default settings	Select this check box to use the default Adaptive Job Server values for FTP servers. If you do not want to use the default Adaptive Job Server values, clear this check box, and set the destination recipient options that appear. You can change the values in the **Servers** area of the CMC. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.
Host	Enter the IP address of the FTP server host computer where you want to send the instance.

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Option	Description
Port	Enter the port of the FTP server where you want to send the instance. The default is `21`.
User Name	Enter a user name with access rights to upload the object to the FTP server.
Password	Enter the password required to access the FTP server.
Account	Enter the account required to access the FTP server. Account is part of the standard FTP protocol but is rarely implemented. Enter an account only if your FTP server requires it.
Directory	Enter the path to the FTP directory where you want to send the instance.
File Name	• To use a system-generated file name for the instance, select **Use Automatically Generated Name**. • To choose the file name for the instance, select **Use Specific Name**, and enter a name or select variables for the file name from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, (your) `<User Full Name>`, `<Document Name>`, and `<File Extension>`. Select the **Add File Extension** check box to automatically add the file extension to the instance file name. If you do not add a file extension, you may be unable to open the document.

Table 11: File System destination options

Option	Description
Destination	**File System**
Keep an instance in the history	Select this check box to retain a copy of this instance in the object's history. This check box is selected by default. Clear this check box if you want the BI platform to automatically delete the instance from the Output FRS to minimize the number of instances on the server. Instances are required for auditing events. This check box is overruled if auditing is enabled for a scheduled object.
Use default settings	Select this check box to use the default Adaptive Job Server values for the file system. If you do not want to use the default Adaptive Job Server values, clear this check box, and set the destination recipient options that appear.
User Name	Enter a user name with access rights to save files to the destination directory. You can specify a user name and password only for servers on Windows.
Password	Enter the user password that is required to access the destination directory. You can specify a user name and password only for servers on Windows.

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Option	Description
Directory	Enter the path to a local hard disk location or mapped location or a UNC path to the directory where you want to send the instance. If you are scheduling a Web Intelligence document and want to create folders based on variables (such as the title of the instance, owner, date and time, or user names), use a placeholder. The placeholder is inserted after the text in the box.
File Name	• To use a system-generated file name for the instance, select **Use Automatically Generated Name**. • To choose the file name for the instance, select **Use Specific Name**, and enter a name or select variables for the file name from the **Add placeholder** list. The available variables are `<Title>`, `<ID>`, `<Owner>`, `<DateTime>`, (your) `<Email Address>`, (your) `<User Full Name>`, `<Document Name>`, and `<File Extension>`. Select the **Add File Extension** check box to automatically add the file extension to the instance file name. If you do not add a file extension, you may be unable to open the document.

The **SAP StreamWork** destination is available if SAP StreamWork is enabled and configured in the BI platform.

Table 12: SAP StreamWork destination options

Option	Description
Destination	**SAP StreamWork**
Keep an instance in the history	Select this check box to retain a copy of this instance in the object's history. This check box is selected by default. Clear this check box if you want the BI platform to automatically delete the instance from the Output FRS to minimize the number of instances on the server.
Use default settings	Select this check box to use the default Adaptive Job Server values for SAP StreamWork. If you do not want to use the default Adaptive Job Server values, clear this check box, and set the destination options that appear.
File	This box displays the file name. You cannot change the name here.
Select Destination	Select an existing or new activity as the destination of the report. Use the first list to filter activities by worklist.
Select Worklist	Enter the name of the worklist, or select it in the list.
Select Activity	Enter the name of the activity, or select it in the list.
Activity Name	If the object will publish to a new activity, this box displays the name of the activity.
Activity Objectives	This box displays the activity's objectives, if available.

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Option	Description
Item Description	(Optional) Enter a description of the object's content to help participants understand what the object is and how to use it.
Select Activity Type	(Optional) Select the type of activity you are scheduling.
Add Participants	(Optional) If you are creating a new SAP StreamWork activity, enter the email address of each participant (user) to invite to the activity. Separate email addresses with a comma.

7.2.1.5.3 Scheduling an object to Default Enterprise Location

To save instances only to the Output File Repository Server (FRS)—not to any other destination—use the **Default Enterprise Location** destination.

1. Go to the *Folders* management area of the CMC.
2. Select the object for which to set the default destination.
3. Select **Actions** > **Schedule**.
4. Click **Destinations**.
5. In the **Destination** list, select **Default Enterprise Location**.
6. Click **Schedule**.

Related Information

Destination options [page 80]

You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

7.2.1.5.4 Scheduling an object to user BI Inboxes

When scheduling objects, you can configure an object to send its instances to one or more user BI Inboxes. The BI platform stores the instance on the Output File Repository Server (FRS) and sends a copy of the instance to the BI Inboxes you specify.

By default, the BI Inbox destination is enabled and configured on the Adaptive Job Servers.

1. Go to the *Folders* management area of the CMC.
2. Select an object to schedule.
3. Select **Actions** > **Schedule**.
4. Click **Destinations**.
5. In the **Destination** list, select **BI Inbox**.
6. Select or clear the **Keep an instance in the history** check box.

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7. Select or clear the **Use default settings** check box.

   If you selected the **Use default settings** check box, go to step 9.
8. If you cleared the **Use default settings** check box, perform the following actions:
   a) Under **Available Recipients**, select users to send the instance to.
   b) Under **Target Name**, select **Use Automatically Generated Name** or **Use Specific Name**.
   c) Under **Send As**, select **Shortcut** or **Copy**.
9. Click **Schedule**.

Related Information

Destination options [page 80]
You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

Enabling or disabling destinations for a job server [page 90]
By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

7.2.1.5.5 Scheduling an object to email

When you select the **Email** destination, the BI platform saves the output instance to the Output File Repository Server and sends a copy of the instance as an attachment to the email addresses you specify.

Before you can use this destination, the **Email** (SMTP) destination must be enabled and configured on the Adaptive Job Servers.

Crystal report and other object instances are sent to email destinations via Simple Mail Transfer Protocol (SMTP) mail support.

The BI platform supports Multipurpose Internet Mail Extensions (MIME) encoding.

1. In the CMC, select the **Folders** area.
2. Select an object to schedule.
3. Select **Actions** > **Schedule**.
4. Click **Destinations**.
5. In the **Destination** list, select **Email**.
6. Select or clear the **Keep an instance in the history** check box.
7. Select or clear the **Use default settings** check box.

   If you selected the **Use default settings** check box, go to step 9.
8. If you cleared the **Use default settings** check box, perform the following actions:
   a) In the **From** box, enter the return email address.
   b) In the **To** box, enter the email address of each recipient to send the instance to.
   c) In the **Cc** box, enter the email address of each recipient to send a copy of the email and instance to.

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d) In the **Bcc** box, enter the email address of each undisclosed recipient to send a copy of the email and instance to.
e) In the **Subject** box, enter the subject of the email.
f) In the **Message** box, enter a message for the body of the email.
g) Select or clear the **Add Attachment** check box.
h) Under **File Name**, select **Use Automatically Generated Name** or **Use Specific Name**.

9. Click **Schedule**.

Related Information

Destination options [page 80]
You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

Enabling or disabling destinations for a job server [page 90]
By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

7.2.1.5.6 Scheduling an object to an FTP server

When scheduling objects, you can configure the objects for output to a File Transfer Protocol (FTP) server. To connect to the FTP server, you must specify a user who has the necessary rights to upload files to the server. If you specify an FTP destination, the system will save an output instance to both the Output File Repository Server and the specified destination.

Before you can use this destination, it must be enabled and configured on the Adaptive Job Servers.

1. Go to the *Folders* management area of the CMC.
2. Select an object to schedule.
3. Select **Actions** > **Schedule**.
4. Click **Destinations**.
5. In the **Destination** list, select **FTP Server**.
6. Select or clear the **Keep an instance in the history** check box.
7. Select or clear the **Use default settings** check box.

   If you selected the check box, go to step 9.
8. If you cleared the **Use default settings** check box, perform the following actions:
   a) In the **Host** box, enter the IP address of the FTP server host computer to send the instance to.
   b) In the **Port** box, enter the port of the FTP server to send the instance to.
   c) In the **User Name** box, enter a user name with access rights to upload the object to the FTP server.
   d) In the **Password** box, enter the user password that is required to access the FTP server.
   e) In the **Account** box, enter the account that is required to access the FTP server.
   f) In the **Directory** box, enter the path to the FTP directory where you want to send the instance.

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g) Under **File Name**, select **Use Automatically Generated Name** or **Use Specific Name**.

9. Click **Schedule**.

Related Information

Destination options [page 80]

You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

Enabling or disabling destinations for a job server [page 90]

By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

7.2.1.5.7 Scheduling an object to a file location

When scheduling objects, you can configure objects for output to an unmanaged disk. In this case, the BI platform saves an output instance to the Output File Repository Server (FRS) and to the specified destination.

Before scheduling an object to a file location:

- The file location must be a local directory on the processing server. For servers on Windows, the location can be a Universal Naming Convention (UNC) path or a local directory.
- The file location must be enabled and configured on the Adaptive Job Server.
- The processing server must have sufficient access rights to the file location.

If the object is a Web Intelligence document or an object package, you cannot choose an unmanaged disk as a destination. However, for an object package, you can configure individual objects in the object package for output to an unmanaged disk.

1. Go to the *Folders* management area of the CMC.
2. Select an object to schedule.
3. Select **Actions** > **Schedule** >.
4. Click **Destinations**.
5. In the **Destination** list, select **File System**.
6. Select or clear the **Keep an instance in the history** check box.
7. Select or clear the **Use default settings** check box.

   If you selected the **Use default settings** check box, go to step 9.
8. If you cleared the **Use default settings** check box, perform the following actions:
   a) In the **User Name** box, enter a user name with access rights to save files to the destination directory.
   b) In the **Password** box, enter the user password that is required to access the destination directory.
   c) In the **Directory** box, enter a local hard disk location, mapped location, or UNC path to the directory where you want to send the instance.
   d) Under **File Name**, select **Use Automatically Generated Name** or **Use Specific Name**.

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9. Click **Schedule**.

Related Information

Destination options [page 80]
You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

Enabling or disabling destinations for a job server [page 90]
By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

7.2.1.5.8 Scheduling an object for collaboration

- Before you can use this destination, it must be enabled and configured on the Adaptive Job Servers.
- Before you can schedule an object for collaboration, you must have an active SAP StreamWork account.

1. Go to the *Folders* management area of the CMC.
2. Select an object to schedule.
3. Select **Actions** > **Schedule**.
4. Click **Destinations**.
5. In the **Destination** list, select **Collaboration**.

   If you do not have an SAP StreamWork account associated with your user name, you are prompted to log on to SAP StreamWork.
6. Select or clear the **Keep an instance in the history** check box.
7. Select or clear the **Use default settings** check box.

   If you selected the **Use default settings** check box, go to step 9.
8. If you cleared the check box, perform the following actions:
   a) In the **Select Destination** list, select an existing or new activity as the destination of the report.
   b) In the **Select Worklist** list, type the name of the worklist to schedule or select a name in the list.
   c) In the **Select Activity** list, type the name of the activity to schedule or select a name in the list. The activity name appears in the **Activity Name** box, and the activity objectives, if defined, appear in the **Activity Objectives** box.
   d) In the **Item Description** box, enter a description of the object.
   e) In the **Select Activity Type** list, select an activity type.
   f) In the **Add Participants** box, if you are creating a new activity, enter the participant email addresses to invite to the activity, separating addresses with a comma.
9. Click **Schedule**.

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Related Information

Destination options [page 80]
You can change options for the default Adaptive Job Server in the **Servers** area of the CMC.

Enabling or disabling destinations for a job server [page 90]
By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

7.2.1.5.9 Enabling or disabling destinations for a job server

By default, when the BI platform runs a scheduled report or program object, it stores the output instance it creates on the Output File Repository Server (FRS). When you choose a destination (other than Default Enterprise Location) to schedule or send an object to, the BI platform stores the output instance on the Output FRS and saves a copy at the destination you specify.

Before choosing a destination, the destination must be enabled and configured on the Adaptive Job Servers.

By default, the BI Inbox destination is enabled and configured on the Adaptive Job Servers so that you can distribute reports and documents. You can enable and configure additional destinations on the Adaptive Job Server.

1. Go to the *Servers* management area of the CMC.
2. Select the Adaptive Job Server for which to enable or disable a destination.
3. Select **Manage** > **Properties**.
4. In the *Properties* dialog box, click **Destinations**.
5. Perform one of the following actions:
   - To enable a destination, select it in the **Destination** list, click **Add**, and configure it.
   - To disable a destination, select it in the **Destination** list, and click **Remove**.
6. Click **Save** or **Save & Close**.

7.2.1.6 Crystal report alert notification

Alert notification applies only to Crystal reports. It does not apply to Web Intelligence documents.

Crystal report alert notifications are different from alerting in the BI launch pad. Alert notifications are custom messages, created in SAP Crystal Reports, that appear when conditions are met by data in a report. When an alert condition (defined in SAP Crystal Reports) is met, an alert is triggered and its message appears, indicating actions a user should take or containing information about report data.

In the BI platform, you can optionally send alert notification when scheduling a Crystal report. When alert notification is enabled, messages are sent through an SMTP server. You can configure email delivery options, enter email addresses, a subject, and message, enter the URL of the viewer you want recipients to use, and set the maximum number of alert records to send.

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The **Alert Notification** link is available only if a Crystal report object contains alerts. To enable alert notification, you must have the Email (SMTP) destination enabled and configured on Adaptive Job Servers. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

Alerts are triggered in Crystal report objects, even when alert notification is disabled. However, no notification is sent.

Related Information

Differences between alerting and Crystal report alert notifications [page 116]

In earlier versions of the BI platform, you could configure Crystal report alert notifications when you scheduled reports. The platform still supports this functionality for reports created in SAP Crystal Reports.

7.2.1.6.1 Setting an alert notification

1. Go to the *Folders* management area of the CMC.
2. Select a report object for which to set alerts.
3. Select **Actions** > **Schedule**.
4. In the *Schedule* window, click **Notification**.
5. Select the **Enable alert notification** check box.
6. Select **Use default settings** to deliver alert notification using the default Adaptive Job Server settings, or select **Custom settings** and specify the email settings.

   You can change the default Adaptive Job Server settings in the **Servers** area of the CMC. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.
7. Enter the URL of the viewer that you want recipients to use for the report, or select the default viewer.

   You must use World Wide Web Consortium (W3C) encoding for the viewer URL. For example, replace spaces in the path with `%20`. For more information, see *http://www.w3.org/* .

   To set a viewer URL as the default, select **Central Management Console** in the **Applications** area of the CMC, select **Actions** > **Processing Settings**, and enter the URL in the **URL (must be URL encoded)** box.

   The viewer URL will appear as a hyperlink in the alert notification email.
8. Enter the maximum number of alert records to include in an alert notification.

   A hyperlink in the alert notification will go to a report page containing the records that triggered the alert.

   You enter the alert name and status in SAP Crystal Reports.
9. Click **Schedule**.

7.2.1.7 Output file formats for instances

You can send or schedule objects to different formats for each type of instance.

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Crystal report file formats

The **Crystal Reports** option preserves more formatting than other file formats. When you select other file formats, the BI platform preserves as much formatting as the format allows. However, reports may lose some or all formatting. If you choose to print a report when it is scheduled, the report instance is automatically sent to the printer in **Crystal Reports** format. This file format does not conflict with the file format you select when scheduling the report.

For information about scheduling a Crystal report to a specific format, see exporting information in the *SAP Crystal Reports 2011 User's Guide*.

Format	Description
Crystal Reports	This `.rpt` format preserves the most formatting of all output format options. It produces a normal, editable report.
Crystal Reports (RPTR)	This `.rptr` format produces a read-only Crystal report.
Microsoft Excel (97-2003)	This `.xls` format attempts to preserve the look and feel of the original report. It preserves data and does not merge cells. You must specify some formatting properties for the report.
Microsoft Excel (97-2003) (Data Only)	This `.xls` format saves only data, and each cell represents a field.
Microsoft Excel Workbook Data-only	
Microsoft Word (97-2003)	This `.doc` format preserves as much formatting as possible, including graphics. Each object appears in an individual text field.
PDF	`.pdf` format
Rich Text Format (RTF)	This `.rtf` format preserves as much formatting as possible, including graphics. Each object appears in an individual text field. This option is available only from a web viewer.
Microsoft Word - Editable (RTF)	This `.doc` format preserves less formatting than the **Microsoft Word (97-2003)** option. Text appears in lines, and images are placed inline with text.
Plain Text	
Paginated Text	You must specify some formatting properties for the report.
Tab Separated Text (TTX)	This format places a tab character between values. You must specify some formatting properties for the report.

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Format	Description
Separated Values (CSV)	This `.csv` format places a specified character between values. You must specify some formatting properties for the report. For example, if you select this option, you must enter characters for the separator and delimiter.
XML	`.xml` format

Web Intelligence file formats

Format	Notes
Web Intelligence	
Microsoft Excel	
Adobe Acrobat	`.pdf` format
Comma Separated Values (CSV)	`.csv` format

7.2.1.7.1 Crystal report instance formatting options

When you schedule a Crystal report instance to some output formats, you may need to set additional options.

Table 13: Microsoft Excel (97-2003) format

Option	Description
Page Range	• To include all pages in a report, select **All**. • To include a page range, select **Pages from**, enter the first page number to include, and enter the last page number to include in the **to** box.
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
Set Column Width	• To set the width of Excel columns based on objects in a report, select **Column width based on objects in the**, and choose a report area from which to take the column width in the list. • To set a constant column width, select **Constant column width (in points)**, and enter the width in the box.
Export page header and page footer	• To choose when to export page headers and footers in an instance, select **Once Per Report** or **On Each Page**.

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Option	Description
	• To exclude page headers and footers from an instance, select **None**.
Create page breaks for each page	Select this check box to create a page break after each page in a report
Convert date values to strings	Select this check box to export date values in a report as text strings
Show gridlines	Select this check box to view grid lines in exported documents

Table 14: Microsoft Excel (97-2003) (Data Only) and Microsoft Excel Workbook Data-only formats

Option	Description
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
Set Column Width	• To set the width of Excel columns based on objects in a report, select **Column width based on objects in the**, and choose a report area from which to take the column width in the list. • To set a constant column width, select **Constant column width (in points)**, and enter the width in the box.
Export object formatting	Select this check box to preserve the object formatting.
Export images	Select this check box to export the images in a report.
Use worksheet functions for summaries	Select this check box to use summaries in a report to create worksheet functions in Excel.
Maintain relative object position	Select this check box to maintain the position of objects, relative to one another.
Maintain column alignment	Select this check box to preserve the alignment of text in columns in a report.
Export page header and page footer	Select this check box to include the header and footer in an instance.
Simplify page headers	Select this check box to use simple page headers.
Show group outlines	Select this check box to show group outlines.

Table 15: Microsoft Word (97-2003) format

Option	Description
Page Range	• To include all pages in a report, select **All**. • To include a page range, select **Pages from**, enter the first page number to include, and enter the last page number to include in the **to** box.

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Table 16: PDF format

Option	Description
Page Range	• To include all pages in a report, select **All**. • To include a page range, select **Pages from**, enter the first page number to include, and enter the last page number to include in the **to** box.
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
Create bookmarks from group tree	Select this check box to create bookmarks in a PDF file based on the tree structure of a report. This makes reports easier to navigate.

Table 17: Rich Text Format (RTF) format

Option	Description
Page Range	• To include all pages in a report, select **All**. • To include a page range, select **Pages from**, enter the first page number to include, and enter the last page number to include in the **to** box.

Table 18: Microsoft Word—Editable (RTF) format

Option	Description
Page Range	• To include all pages in a report, select **All**. • To include a page range, select **from**, enter the first page you want to include, and enter the last page you want to include in the **to** box.
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
Insert page break after each report page	Select this check box to insert page breaks after each page in a report.

Table 19: Plain Text format

Option	Description
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
Number of Characters per Inch	Enter a value between 8 and 16 to indicate the number of characters to include per inch. This setting determines how text files appear and are formatted.

Table 20: Paginated Text format

Option	Description
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.

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Option	Description
Number of Lines per Page	Enter the number of lines of text to include between page breaks.
Number of Characters per Inch	Enter a value between 8 and 16 to indicate the number of characters to include per inch. This setting determines how text files appear and are formatted.

Table 21: Separated Values (CSV) format

Option	Description
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
Delimiter	Enter the character to use as the delimiter.
Separator	Enter the character to use to separate values, or select the *Tab* check box.
Mode	Select **Standard Mode** or **Legacy Mode**. When you select **Standard Mode**, you can choose report, page, and group sections to include in an instance. When you select **Legacy Mode** mode, you cannot choose report, page, or group section options.
Report and page sections	If you chose **Standard Mode**, select **Export** or **Do not export** to indicate whether to export report and page sections. If you selected **Export**, select the **Isolate report/page sections** check box if you want to isolate the report and page sections.
Group sections	If you chose **Standard Mode**, select **Export** or **Do not export** to indicate whether to export group sections. If you selected **Export**, select the **Isolate group sections** check box if you want to isolate the group sections.

Table 22: XML

Option	Description
Use the export options defined in the report	Select this check box to use the export options defined in a report. You cannot set any other formatting options.
XML Exporting Formats	Choose an XML export format, such as **Crystal Reports XML**.

7.2.1.7.2 Selecting an output file format

1. Go to the *Folders* management area of the CMC.
2. Select a report object for which to choose an output file format.
3. Select **Actions** > **Schedule** >.

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4. Click **Formats**.
5. Select an output format.
   For example, for a Crystal report, select a format under **Format Options for Selected Document**, and for a Web Intelligence document, select a format under **Output Format**.
6. Set the remaining scheduling options as needed.
7. Click **Schedule**.

Related Information

Crystal report instance formatting options [page 93]
When you schedule a Crystal report instance to some output formats, you may need to set additional options.

7.2.1.8 Selecting a cache format for Web Intelligence documents

When the BI platform runs a scheduled Web Intelligence document, it stores the generated instance on the Output File Repository Server (FRS). When you select a cache format, the platform caches the instance on the appropriate report server. If you do not select a cache format, the system cannot cache the instance.

Selecting a cache format applies only to Web Intelligence documents, not to Crystal reports.

1. Go to the *Folders* management area of the CMC.
2. Select a Web Intelligence document object for which to select a cache format.
3. Select **Actions** > **Schedule** >.
4. Click **Caching**.
5. Under **Available Formats to Cache**, select **Microsoft Excel**, **Standard HTML**, and/or **Adobe Acrobat**.
   You can select more than one format.
   The cache is preloaded with the format(s) you selected.
6. Under **Available locales**, select the locale(s) to preload the cache with, and click > to move the locale(s) to the **Selected locales** list.
   You can select more than one locale. When you schedule this Web Intelligence document, the platform generates cached versions of the document in these locale(s).
   The cache is preloaded with the locale(s) you selected.
7. Set the remaining scheduling options as needed.
8. Click **Schedule**.

7.2.1.9 Scheduling an object with events

When you schedule an object with events, the object runs only when the event occurs. You can schedule objects to wait for the following event types:

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- File-based: Triggered by the existence of a specified file
- Custom: Manually triggered
- Schedule-based: Triggered by another object running

If you want a scheduled object to trigger an event, you must choose a schedule-based event.

Scheduling objects based on an event

When you schedule an object based on an event, the object will run only when the event is triggered and the remaining schedule conditions are met.

If an event is triggered before the start date of the object, the object will not run. If you specified an end date for the object and the event is not triggered before the end date occurs, the object will not run because not all conditions were met.

If you choose a weekly, monthly, or calendar schedule, the object has a specified time period when it can run. The event must be triggered within that time frame for the object to run. For example, if you schedule a weekly report object that runs on Tuesdays, the event must be triggered before the end date of the instance—the end of Monday.

Scheduling objects to trigger an event

To schedule an object with an event, you must first create the event.

When you schedule an object to trigger a schedule-based event, after the object runs, BI platform triggers the event. For example, if a schedule-based event is based on an instance running successfully, the event is not triggered if the instance fails.

Related Information

General object management [page 28]
Many types of objects can exist in the BI platform.

Scheduling an object with events [page 97]
When you schedule an object with events, the object runs only when the event occurs. You can schedule objects to wait for the following event types:

7.2.1.9.1 Scheduling an object based on an event

Perform this task to run a scheduled job after an event has occurred.

1. Go to the *Folders* management area of the CMC.

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2. Select the object to run based on an event.
3. Select **Actions** > **Schedule**.
4. Click **Recurrence** in the navigation list.
5. In the **Run object** list, select a run option.
6. Set the remaining recurrence options for the object (start date, end date, and so on) as needed.
7. Click **Events** in the navigation list.
8. Under **Available Events**, select one or more events, and click > to add the event(s) to the **Events to wait for** list.
9. Click **Schedule**.

Related Information

Recurrence patterns [page 70]
First select a recurrence pattern and then select run options for the recurrence pattern.

Run options for recurrence patterns [page 71]
First select a recurrence pattern and select run options for the pattern. Not all run options are available for all objects. When you select a run option that contains a variable, the BI platform displays the variable's default value. You can change default values as needed.

Events [page 108]
Events are objects that represent occurrences in the system.

7.2.1.9.2 Scheduling an object to trigger an event

Perform this task to trigger an event when a scheduled job runs.

1. Go to the *Folders* management area of the CMC.
2. Select the object that should trigger the event.
3. Select **Actions** > **Schedule**.
4. Click **Recurrence** in the navigation list.
5. In the **Run object** list, select a run option.
6. Set the remaining recurrence options for the object (start date, end date, and so on) as needed.
7. Click **Events** in the navigation list.
8. Under **Available Schedule Events**, select one or more events, and click > to add the event(s) to the **Events to trigger on completion** list.

   You can select only schedule-based events.
9. Click **Schedule**.

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Related Information

Recurrence patterns [page 70]
First select a recurrence pattern and then select run options for the recurrence pattern.

Run options for recurrence patterns [page 71]
First select a recurrence pattern and select run options for the pattern. Not all run options are available for all objects. When you select a run option that contains a variable, the BI platform displays the variable's default value. You can change default values as needed.

Schedule-based events [page 111]
Schedule-based events depend on scheduled objects. When a particular object has been processed, an event is triggered based on a job being completed or on the success or failure of a scheduled object.

7.2.1.10 Selecting a server or server group for a scheduled object

You can choose the server or server group on which a scheduled object will run, which gives you more control over load balancing.

You can choose the server group that the BI platform uses when a user refreshes a Crystal report or Web Intelligence document instance while viewing it. In addition, you can run program jobs on a specific server group so they do not monopolize system resources.

The options in this task are available when you select **Manage** > **Default Settings**, and **Viewing Server Group** (Crystal reports) or **Web Intelligence Process Settings** (Web Intelligence documents).

1. Go to the *Folders* management area of the CMC.
2. Select the object to schedule.
3. Select **Actions** > **Schedule**.
4. Click **Scheduling Server Group** in the navigation list.
5. Choose the type of server to use:
   - Select **Use the first available server** to run the object as quickly as possible, regardless of the server group used.
   - Select **Give preference to servers belonging to selected group** to use a specific server in a server group, if more than one server is available.
   - Select **Only use servers belonging to the selected group** to use the specified server group, and enter the server group.

   If you are scheduling a program object that requires access to files stored locally on the Adaptive Job Server that hosts the Program Scheduling Service, but you have multiple Adaptive Job Servers, you must specify which server to use to run the program.
6. Select the **Run at origin site** check box to run the object at the site where it is located.
7. Set the remaining scheduling options as required, and click **Schedule**.

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7.2.1.11 Selecting the language(s) for Crystal Report instances

Perform this task to generate report instances in multiple languages.

1. Go to the *Folders* management area of the CMC.
2. Select the object to schedule.
3. Click **Actions** > **Schedule** .
4. In the navigation list, click **Languages**.
5. Select one of the following language options:
   - To schedule the report according to the preferred viewing locale (PVL) set in your preferences and create instances using only that locale, select **Schedule the report in Preferred Viewing Locale**.
   - To schedule the report in multiple languages, select **Schedule the report in Multiple Locales**, select multiple PVLs by moving a locale from the **All Locales** list to the **Selected Instance Locales** list.
6. Set other scheduling parameters as required, and click **Schedule**.

7.2.2 Running multiple objects now

Instead of scheduling individual objects, you can run multiple objects from the CMC using **Run Now**. When you run objects now, they are run instantly using their default scheduling settings.

1. Go to the **Folders** management area of the CMC.
2. Locate and select the object(s) to run.
3. Select **Actions** > **Run Now** .

7.2.3 Scheduling objects using object packages

You can schedule objects in batches using object packages.

Object packages are distinct objects in the BI platform and can contain any combination of objects that can be scheduled (such as reports, program objects, and Web Intelligence documents). Using object packages simplifies authentication and allows users to view synchronized data across instances for different objects.

To schedule objects using object packages, create an object package, copy existing objects to the object package, and schedule the object package. You must individually configure processing information for each component in an object package.

For example, to print a report object in an object package when scheduled, click **Components** in the *Schedule* dialog box, click the title of the component to print, expand **Print Settings** for the component, and set it to print as you would when scheduling a component on its own.

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Related Information

Configuring object packages and their objects [page 60]

Object packages save time because they enable you to simultaneously schedule multiple objects that have similar scheduling requirements. As a result, you configure some parameters at the object package level and some at the object level (that is, for individual objects in the package).

Working with hyperlinked reports [page 44]

In SAP Crystal Reports, you use hyperlinks to navigate between report objects—a Report Part in a report, other report objects or their parts, or specific instances of reports or Report Parts.

7.3 Managing instances

The BI platform creates two types of instances from objects.

Instance type	Description
Report instance	Created when a report object is scheduled and run by the Job Server Essentially, a report instance is a report object containing report data that is retrieved from one or more databases. Each instance captures data that is current at the time of report processing. Report instances can be viewed in their completed format.
Program instance	Created each time a program object is scheduled and run by the Job Server Program instances exist as records in the object history. The platform stores the program's standard output and standard errors in a text file.

There are two ways to view and to manage instances:

- In the *History* dialog box for an object
- In the Instance Manager

Related Information

Viewing instance information [page 103]

You can manage instances with the Instance Manager or in the *History* dialog box for individual objects.

Setting limits for instances [page 107]

You set limits, at the object or folder level, to automate the regular cleanup of old instances.

Instance Manager [page 104]

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Use the Instance Manager to view and to manage all instances in your BI platform deployment from one location.

7.3.1 Viewing instance information

You can manage instances with the Instance Manager or in the *History* dialog box for individual objects.

The following tables identify the columns in each interface and describe the instance information that is displayed.

Table 23: Information displayed in the Instance Manager

Column	Description
Title	The title of the instance.
Type	The object type.
Status	The status of each instance.
Location	The location of the object in the repository.
Owner	The user who scheduled the instance.
Completion Time	The date and time when the instance completed its run.
Next Run Time	The next time the object will be run if it is on a recurring schedule and has a status of pending.
Submission Time	The date and time at which the user scheduled the object.
Start Time	The date and time at which the object began running.
Duration (seconds)	The duration of the scheduled job.
Recurrence	The frequency of the scheduled job.
Expiry	The date and time when the instance finished running or failed.
Server	The server on which the instance was run.
Error	The errors, if any, that occurred and caused the object to fail.

Table 24: Instance information displayed in the History dialog box

Column	Information displayed
Instance Time	The time and the date of the last update for each instance.
Title	The title of the instances.
Status	The status of each instance.
Run By	The user who scheduled the instance.
Format	The format in which report instances are stored. Applies to report objects only.
Parameters	The parameters that were or will be used for each instance. Applies to report objects only.

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Column	Information displayed
Arguments	The command-line options that were or will be passed to the command line interface for each instance. Applies to program objects only.

Depending on the object type, additional columns may appear that are not described in the table.

Related Information

Viewing an instance [page 105]
You can also use the Instance Manager to view a list of instances by status or by user.

Deleting an instance [page 107]
You can delete instances from an object as needed. You can delete both scheduled instances, which have a status of recurring or pending, and report or program instances, which have a status of success of failed

7.3.1.1 Instance Manager

Use the Instance Manager to view and to manage all instances in your BI platform deployment from one location.

You can use the Instance Manager to perform the following tasks:

- Find specific instances
- Select multiple instances and perform batch operations on them (for example, pause, resume, or delete)
- View detailed information for a single instance
- Diagnose and resolve system problems that cause instances to fail

The default view of the Instance Manager shows all pending instances, sorted by title. To view detailed information about an instance, select the instance and click the **Instance details** icon on the toolbar.

Example

Using the Instance Manager for troubleshooting

An administrator logs on to the CMC, checks the Instance Manager, and notices that several jobs have failed. The administrator filters the list to show only failed jobs from the last two days, and notices that they all seem to have run on the same server. The administrator sorts the list by server and verifies that all failed jobs ran on the same server. The error code for each failure is the same. The administrator views detailed information for an instance and discovers that a database connection has been reconfigured improperly. The administrator reconfigures the database connection correctly and returns to the Instance Manager to rerun all of the failed jobs.

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7.3.2 Finding instances in the Instance Manager

You can find specific instances in the Instance Manager, using options under *Find instances meeting the following criteria*.

The following table describes the options available:

Option	How to enable
Parent Folder	Select the **Parent Folder** check box, and browse for a repository folder. The BI platform lists all instances in the folder.
Owner	Select the **Owner** check box, and enter a user name. The platform finds all instances scheduled by that user.
Status	Select the **Status** check box, and then one of the following status options in the list: • **Success** • **Failed** • **Running** • **Paused** • **Pending** • **Recurring**
Object Type	Select the **Object Type** check box, and choose an object type from the list.
Completion Time	Select the **Completion Time** check box, and set the start and stop times. For completed publication instances, select **Object Type**, set it to **Publication**, and set the completion time.
Next Run Time	Select the **Next Run Time** check box, and set the start and stop times.

You can use more than one option at a time to find instances, and only instances that meet all of the criteria you set are displayed.

When you schedule an object to a BI Inbox, the documents that users receive in their BI Inbox are not considered instances. Therefore, these BI Inbox documents do not appear in the Instance Manager.

7.3.3 Viewing an instance

You can also use the Instance Manager to view a list of instances by status or by user.

1. Go to the **Folders** management area of CMC.
2. Select the object for which to view an instance.

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3. Select **Actions** > **History**.
4. In the **Instance Time** column, click the instance to view.

Scroll to the right in order to view all columns in the default width. You cannot sort instances using the submission time, start time, duration, recurrence, or expiry columns.

Related Information

Instance Manager [page 104]
Use the Instance Manager to view and to manage all instances in your BI platform deployment from one location.

7.3.4 Managing instances for an object

Perform this task to view and manage instances for a specific object. To view and manage instances for all objects, use the Instance Manager instead.

1. Go to the **Folders** management area of CMC.
2. Select the object for which to manage instances.
3. Select **Actions** > **History**.
4. Select an instance or instances.

   To refresh the list, click **Refresh**. In this case, you do not need to select an instance first.
5. Select **Run Now**, **Pause**, **Resume**, **Send to**, **Reschedule**, or **Delete**.

   If you select **Run Now**, the BI platform schedules the object to run immediately. The scheduled job has a status of Pending.

Related Information

Instance Manager [page 104]
Use the Instance Manager to view and to manage all instances in your BI platform deployment from one location.

7.3.5 Pausing or resuming an instance

For objects with a status of Pending or Recurring, you can pause and then resume the object's scheduled instances.

For example, if a job server is down for maintenance, you can pause a scheduled instance to prevent the BI platform from running the object. Scheduled jobs fail when the job server is not running. When the job server is running again, you can resume the scheduled instance.

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7.3.5.1 Pausing an instance

1. Open the *History* dialog box for an object.
2. Select the scheduled instance to pause, and click **Pause**.

7.3.5.2 Resuming a paused instance

1. Open the *History* dialog box for an object.
2. Select the scheduled instance to resume, and click **Resume**.

7.3.6 Deleting an instance

You can delete instances from an object as needed. You can delete both scheduled instances, which have a status of recurring or pending, and report or program instances, which have a status of success of failed

1. Open the *History* dialog box for an object.
2. Select the instance(s) to delete, and click **Delete**.

7.3.7 Setting limits for instances

You set limits, at the object or folder level, to automate the regular cleanup of old instances.

At the object level, you can limit the number of instances that remain in the BI platform for an object, user, or user group, or limit the number of days that an instance remains in the platform for a user or group. When you set limits at the object level, the limits override any limits set for folders. (That is, the object does not inherit the limits of the folder.)

At the folder level, when you set limits, the limits affect all objects in the folder, including its subfolders.

1. Go to the **Folders** management area of CMC, and select an object.
2. Select **Actions** > **Limits**.
3. In the *Limits* dialog box, perform one of the following actions:
   - To limit the number of instances per object, select the **Delete excess instances when there are more than N instances of an object** check box, and enter the maximum number of instances that should remain on the system.
     The default value is 100.
   - To limit the number of instances for users or groups, select the **Delete excess instances for the following users/groups** check box, click **Add**, select users or groups and click **>** to move them to the list, click **OK**, and enter the maximum number of instances in the **Instance Limit** column.
     The default value is 100.
   - To limit the number of days that instances are saved for users or groups, select the **Delete instances after N days for the following users/groups** check box, click **Add**, select users or groups and click **>** to move them to the list, click **OK**, and enter the maximum age of instances in the **Maximum Days** column.

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The default value is 100.

4. Click **Update**.

Related Information

Limiting report instances at the folder level [page 23]
Setting limits enables you to automatically delete report instances in the BI platform.

7.4 Events

Events are objects that represent occurrences in the system.

Depending on the event type, they can be used for scheduling, alerting, or monitoring system health. The *Events* management area of CMC organizes all events into folders according to event type. Within each event type folder, you can create subfolders to better store and manage events.

Events and scheduling

Event-based scheduling provides you with additional control over scheduling objects: you can set up events so that objects are processed only after a specified event occurs. Working with events consists of two steps: creating an event and scheduling an object with events. That is, once you create an event, you can select it as a dependency when you schedule an object. The scheduled job is then processed only when the event occurs.

You can create the following types of events to be used in conjunction with scheduling:

Type of event	Description
File events	When you define a file-based event, you specify a file name that the **Event Server** monitors for a particular file. When the file appears, the **Event Server** triggers the event. For instance, you might want to make some reports dependent upon the regular file output of other programs or scripts. File events are stored in the **System Events** folder.
Schedule events	When you define a schedule-based event, you select an object whose existing recurrence schedule will serve as the trigger for your event. In this way, schedule-based events allow you to set up contingencies or conditions between scheduled objects. For instance, you might want certain large reports to run sequentially, or you might want a particular sales summary report to run

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Type of event	Description
	only when a detailed sales report runs successfully. Schedule events are stored in the **System Events** folder.
Custom events	When you create a custom event, you create a shortcut for triggering an event manually. Custom events are stored in the **Custom Events** folder.

When scheduling with events, keep in mind that an object's recurrence schedule determines how frequently the object runs. For instance, a daily report that is dependent upon a file-based event will run once a day (as long as the file that you specify appears every day). In addition, the event must occur within the time frame established when you actually schedule the event-based report.

Use file-based events for alerting.

Automatically created events

The system automatically creates corresponding events when certain types of objects (for example, Crystal reports) are added to the repository.

> **Note**
>
> You can view these types of events in the *Events* area. However, to manage or modify these types of events, you must have access to the corresponding event source or the relevant application.

Monitoring events

To monitor the overall health of the system, the BI platform offers Monitoring events. These events correspond to the Monitoring probes that are created and managed in the *Monitoring* area.

Related Information

Alerting concepts [page 114]
Alerts notify you about changes and notify users and administrators when events are triggered. Use alerting to manage objects and events on the basis of exception.

Scheduling an object with events [page 97]
When you schedule an object with events, the object runs only when the event occurs. You can schedule objects to wait for the following event types:

File-based events [page 110]
File-based events wait for a particular file (the trigger) to appear before the event occurs.

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Schedule-based events [page 111]
Schedule-based events depend on scheduled objects. When a particular object has been processed, an event is triggered based on a job being completed or on the success or failure of a scheduled object.

Custom events [page 112]
A custom event occurs only when you explicitly trigger it.

7.4.1 File-based events

File-based events wait for a particular file (the trigger) to appear before the event occurs.

Before scheduling an object that waits for a file-based event to occur, you must first create the file-based event in the *Events* management area of the CMC. Then, you can schedule the object and select this event.

File-based events are monitored by the **Event Server**. When the file that you specify appears, the **Event Server** triggers the event. CMC then releases any schedule requests that depend on the event.

For example, you want daily reports to run after your database analysis program has finished and written its automatic log file. To do this, you specify the log file in your file-based event, and then schedule your daily reports with this event as a dependency. When the log file appears, the event is triggered and the reports are processed.

If the file already exists prior to the creation of the event, the event is not triggered. In this case, the event is triggered only when the file is removed and then recreated. If you want an event to be triggered multiple times, you must remove and recreate the file each time.

Related Information

Scheduling an object with events [page 97]
When you schedule an object with events, the object runs only when the event occurs. You can schedule objects to wait for the following event types:

7.4.1.1 Creating a file-based event

File-based events are stored and managed in the **System Events** folder.

1. Go to the **Events** management area of CMC.
2. Locate and open the `System Events` folder.
3. Select **Manage** > **New** > **New Event**.
4. In the **Type** list, select **File**.
5. Enter a name for the event in the **Event Name** box.
6. Enter a description in the **Description** box.
7. In the **Server** list, select the event server that should monitor the specified file.
8. Enter a file name in the **Filename** box.

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Enter the absolute path to the file that the event server should look for (for example, `C:\<folder>\<FileName>`, or `/home/<folder>/<FileName>`). The drive and directory that you specify must be visible to the event server. Ideally, the directory should be on a local drive.

9. To enable alerting for the event, select **Alerting Enabled**, and enter a message in the **Alert Message** box.

   When the event is triggered, this message will be included in the alert notification that is sent.

10. Click **OK**.

7.4.2 Schedule-based events

Schedule-based events depend on scheduled objects. When a particular object has been processed, an event is triggered based on a job being completed or on the success or failure of a scheduled object.

You must associate a schedule-based event with at least two scheduled objects. The first object serves as the trigger for the event: when the object is processed, the event occurs. The second object is dependent upon the event: when the event occurs, this second object runs.

For example, assume that you want report objects R1 and R2 to run after program object P1 runs. To do this, first create a schedule-based event in the **Events** management area: specify the **Success** option for the event (this means the event is triggered only when program P1 runs successfully). Next, you schedule reports R1 and R2 with events; select your new schedule-based event as the dependency. Schedule program P1 with events, and set program P1 to trigger the schedule-based event upon successful completion. When program P1 runs successfully, the schedule-based event is triggered, and reports R1 and R2 are subsequently processed.

Related Information

Scheduling an object with events [page 97]

When you schedule an object with events, the object runs only when the event occurs. You can schedule objects to wait for the following event types:

7.4.2.1 Creating a schedule-based event

Schedule-based events are stored and managed in **System Events**.

1. Go to the *Events* management area of CMC.
2. Locate and open the `System Events` folder.
3. Select **Manage** > **New** > **New Event**.
4. In the *New Event* dialog box, select **Schedule** in the **Type** list.
5. Enter an event name in the **Event Name** box.
6. Enter a description of the event in the **Description** box.
7. Select one of the following event status options:

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Event status	Description
Success	The event is triggered only on successful completion of a specified object.
Failure	The event is triggered only on non-successful completion of a specified object.
Success or Failure	The event is triggered on completion of a specified object.

8. To enable alerting for the event, select **Alerting Enabled**.

   When the event is triggered, an alert notification will be sent to users.
9. Click **OK**.

7.4.3 Custom events

A custom event occurs only when you explicitly trigger it.

As with all other events, an object based on a custom event runs only when the event is triggered within the time frame established by the object's schedule parameters. Custom events are useful because they allow you to set up a shortcut that, when clicked, triggers any dependent schedule requests.

For instance, assume you want to schedule a number of reports to run them after you have updated information in your database. To do this, create a new custom event, and schedule the reports with that event. When you update the data in the database and you need to run the reports, return to the event in the CMC and trigger it manually. The BI platform then runs the reports.

You can trigger a custom event multiple times. For example, you might schedule two sets of event-based program objects to run daily—one set runs in the morning, and one set runs in the afternoon. When you first trigger the related custom event in the morning, one set of programs is run; when you trigger the event again in the afternoon, the remaining set of programs is run. If you neglect to trigger the event in the morning and trigger it only in the afternoon, both sets of programs run at that time.

Related Information

Scheduling an object with events [page 97]

When you schedule an object with events, the object runs only when the event occurs. You can schedule objects to wait for the following event types:

7.4.3.1 Creating a custom event

First create a custom event, then schedule an object that depends on the event, and then trigger the event.

1. Go to the *Events* management area of the CMC.
2. Locate and open the `Custom Events` folder.
3. Select **Manage** > **New** > **New Event**.

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4. Enter a name for the event in the **Event Name** box.
5. Enter a description of the event in the **Description** box.
6. To enable alerting for the event, select **Alerting Enabled**, and enter a message in the **Alert Message** box.

   When the event is triggered, this message will be included in the alert notification.
7. Click **OK**.

Related Information

Scheduling an object [page 68]

To quickly change the default schedule settings for an object, click **Default Settings** in the *Schedule* dialog box, set the scheduling options, and click **Save**.

Enabling alerting for an event [page 119]

Alerting is automatically enabled for Crystal reports that contain alerts—that is, users can subscribe to report alerts as soon as a report is added to the repository.

7.4.3.2 Triggering a custom event

1. Go to the **Events** management area of CMC.
2. Locate and open the `Custom Events` folder.
3. Select a custom event.
4. Select **Actions** > **Trigger Event**.

7.4.4 Event rights

You can grant or deny users and groups access to events and event folders, and you can specify events to be available only for certain employees or departments—for example, designating certain events for management or IT.

Users can only see events their rights allow them to see. Rights can be used to hide events that aren't applicable to a particular group. For example, by granting only the ITadmin group access to IT-related events, those events won't appear for a user from the HRadmin group; this makes the event list easier for the HRadmin group to navigate.

By default, events are based on current security settings. Rights are inherited from the users' parent folders.

Events are sorted into folders based on event type. Within each event type folder, you can create subfolders to provide more granular sorting for events. For more information about rights, see the “Setting Rights” chapter in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* available on the SAP Help Portal at *http://help.sap.com*.

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8 Alerting

8.1 Alerting concepts

Alerts notify you about changes and notify users and administrators when events are triggered. Use alerting to manage objects and events on the basis of exception.

Subscribing to alerts

In the BI platform, users and administrators can subscribe to alerts in the BI launch pad or in the Central Management Console (CMC).

Enabling alerts

When new reports are created, report designers enable alerts. As events are triggered, notifications are sent to subscriber email addresses or to a BI system destination (for example, a launch pad account).

Viewing alert notifications

In the platform, users and administrators view notifications in the launch pad or in an email.

Right-click an alert and select **See More** to display alert information, including the alert's title, message, and trigger time.

Managing alerts

Content administrators and power users manage alerts in the launch pad or in the CMC.

System administrators manage alerts in the CMC and control user access by assigning access rights.

Example

Alerting and Crystal reports

For example, Julie works at an auto insurance company and tracks the number of claims filed using a Crystal report. Julie subscribes to the daily Claim Number alert and chooses to receive her alert notification by email. After a week, the number of auto insurance claims reaches 10,000, meeting the alert's condition and triggering the alert. Julie receives an email notification and realizes that auto insurance claims have increased dramatically. She informs her manager and recommends launching a campaign to promote safer driving habits.

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8.1.1 Alert sources

Monitoring uses alerting to notify system administrators of changes in the overall health of the BI platform.

Alerts based on monitoring probes are located in the `Monitoring Events` folder, in the **Events** area of the CMC. For more information about monitoring, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

Objects created in applications such as Information Steward and Event Insight also use alerting. For more information, see the application's documentation.

Object that supports alerting	Description
Crystal reports	Crystal reports can contain multiple alerts. When you add a report containing alerts to the repository, the BI platform automatically creates event objects that correspond to each alert in the report. Event objects are located in the `Crystal Reports Events` folder, under **Events**, in the Central Management Console (CMC). You can search for alerts using **Content Search**. Only reports created in the platform support alerting and allow users to subscribe to alert notifications when the reports are added. To subscribe, locate the report, and perform the subscription task on the report object.
Events (file-based, schedule-based, and custom)	You can enable alerting for any event.

8.1.2 Alerting workflow

Alerting workflow for Crystal reports

1. The report creator designs a report that contains alerts in SAP Crystal Reports for Enterprise.
2. The report creator or a content administrator adds the Crystal report to a folder in the *Folders* or *Personal Folders* area of the Central Management Console (CMC). When the report is added, the BI platform automatically creates report event objects, based on the alerts in the report.
3. A user logs on to the CMC or to the BI launch pad, locates the Crystal report, and subscribes to the alert.
4. The report creator or a content administrator schedules the Crystal report to run.
   If the alert condition is met, the alert is triggered and the user receives notification according to the subscription settings.

Alerting workflow for events

1. The content administrator creates an event in the CMC and enables alerting on the new event.

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2. The user sees the alert in the *Events* area of the CMC or searches for the alert in the launch pad, and subscribes to it.
3. The event occurs, triggering the alert.
4. The user receives notification that the event occurred according to the subscription settings.

8.1.3 Differences between alerting and Crystal report alert notifications

In earlier versions of the BI platform, you could configure Crystal report alert notifications when you scheduled reports. The platform still supports this functionality for reports created in SAP Crystal Reports.

Key difference	Alert notifications in Crystal reports	Alerting in BI launch pad
Supported objects	Reports created in Crystal Reports	• Reports created only in Crystal Reports • Events • Monitoring probes • Information Steward alerts • Event Insight alerts
Supported destinations	Email	• **My Alerts** in BI launch pad • Email
Usage	You configure alerts when you schedule a Crystal report. Recipients can include Enterprise users or dynamic users. You must manually enter all recipient email addresses.	You subscribe to alert notifications from the alert source and can change a subscription as needed. Recipients can be Enterprise users or dynamic users. You must manually enter email addresses for dynamic recipients.

8.1.4 Locating alert source objects in the CMC

Alert sources are stored in different locations according to their object type. The following table summarizes how to locate different alert sources.

Object (alert source)	Location in the CMC
Crystal reports	**Folders** or **Personal Folders** area A list of all Crystal report alerts in the system that support alerting is available in the `Crystal Reports Events` folder in the **Events** area of the CMC. To subscribe to an alert, locate the Crystal report in the **Folders** or **Personal Folders** area.

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Object (alert source)	Location in the CMC
Events (file-based, schedule-based, and custom)	**Events** area Events are organized by event type. Alerting-enabled events are indicated by a icon.

8.1.5 Access rights required for alerting

Depending on your role in the alerting workflow and your responsibilities, the access rights you need may vary.

Table 25: Document alert rights

Role	Task	Rights required
User	Subscribe to a document alert	• View rights on the document • View rights on the corresponding event • Subscribe rights on the user's own account To view an instance via a document link in an alert notification, you must also have View Instance rights on the document.
User	Unsubscribe from a document alert	• View rights on the corresponding event • Subscribe rights on the user's own account
User	Receive notification about a document alert	• View rights on the corresponding event • View rights on the document
Content administrator	Manage destination and parameter settings for a document alert	• Edit rights on the document • Edit rights on the event
Content administrator	Manage alerting settings for a document	• View rights and Edit rights on the document • View rights and Edit rights on the corresponding event • View rights and Subscribe rights on the users or groups to add as subscribers To add a user group to the list of subscribers, you must also have View rights and Subscribe rights on the user group object. Having View rights and Subscribe rights on individual users in a group is not sufficient.
Content administrator	Unsubscribe a user from a document alert	• View rights on the document • View rights on the corresponding event • View rights and Subscribe rights on the user

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Role	Task	Rights required
Content administrator	Trigger a document alert	• View rights and Schedule rights on the document • View rights and Trigger rights on the corresponding event

Table 26: Event alert rights

Role	Task	Rights required
User	Subscribe to an event alert	• View rights on the event • Subscribe rights on the user's own account. By default, each user has Subscribe rights on her or his own account.
User	Unsubscribe from an event alert	• View rights on the event • Subscribe rights on the user's own account. By default, each user has Subscribe rights on her or his own account.
Content administrator	Manage alerting settings for an event	• View rights and Edit rights on the event • View rights and Subscribe rights on users or groups to add as subscribers To add a user group to the list of subscribers, you must also have View rights and Subscribe rights on the user group object. Having View rights and Subscribe rights on individual users in a group is not sufficient.
Content administrator	Trigger an event	View rights and Trigger rights on the event

Table 27: Alert notification rights

Role	Task	Rights required
User	Receive an alert notification	View rights on the corresponding event
User	Mark an alert notification as read or unread	• View rights on the alert notification • Subscribe rights on the user account
User	Reread an alert notification	View rights on the alert notification
User	Delete an alert notification in BI launch pad	• View rights on the alert notification • Subscribe rights on the user account

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8.1.6 Resolving subscription conflicts

As a result of group membership, users can have subscription settings that cause conflicts.

When subscription setting conflicts occur, alerting resolves them in the following ways:

- A setting made on a user overrides any settings inherited from group membership.
- A setting made on a subgroup overrides any settings inherited from a group.

A user can inherit different subscription settings from two hierarchically equal groups. In this situation, the user receives alert notifications according to each setting.

The **Excluded** list overrides all other subscription settings. If a user is subscribed to alerts but is on the **Excluded** list, the user does not receive alert notifications.

Example

Subscription settings from two hierarchically equal groups

Julie belongs to the North America Sales group and the South America Sales group, neither of which is a subgroup of the other. The North America Sales group receives Revenue alert notifications in their email and BI Inboxes, while the South America Sales group receives Revenue alert notifications in their email only. As a result of her membership in both groups, Julie receives Revenue alert notifications in her email and her BI Inbox. If the report has defined parameters (for example, regional parameter values of "North America" and "South America"), Julie receives separate email alert notifications; otherwise, the alerts are combined into one email.

8.1.7 Best practices for alerting

- Do not rename Crystal report alerts. The BI platform interprets a renamed Crystal report alert as a new object. If you rename an alert, subscription settings for the alert are lost.
- Subscribe to specific groups instead of to the Everyone group.
- For high-volume alerts, use email as a destination instead of the BI launch pad. Alert messages sent to the launch pad are stored in the system and, once accumulated, can interfere with system performance.

8.2 Alerting tasks

8.2.1 Enabling alerting for an event

Alerting is automatically enabled for Crystal reports that contain alerts—that is, users can subscribe to report alerts as soon as a report is added to the repository.

Enabling alerting for events requires additional steps, such as enabling an alert when a new event is created.

1. Go to the *Events* management area of CMC.

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2. Locate and select the event for which to enable alerting.
3. Select **Manage** > **Properties**.
4. In the *Properties* dialog box, click **Event Settings** in the navigation pane.
5. Select the **Alerting Enabled** check box, and enter a message in the **Alert Message** box to send to subscribers when the alert is triggered.

   You cannot enter messages for schedule-based events.
6. Click **Save & Close**.

8.2.2 Subscribing to an alert

1. Go to the *Events* management area of CMC.
2. Locate and select the alert source.
3. Select **Actions** > **Subscribe**.
4. In the *Subscribe to Publication* dialog box, under **Destinations**, select a destination for the alert:

Option	Description
My Alerts	Select this check box to send the alert notification to a destination in the Business Intelligence system (for example, BI launch pad).
Email	Select this check box to send the alert notification to the email address specified for your user account in the BI platform. This destination is available only if an email address was specified for your user account. Ensure that your email address is valid and entered correctly; otherwise, you will not receive the alert notification.

5. If multiple documents are listed under **Alert**, select the check box for each alert that you want to receive.
6. To specify a parameter for the alert, under **Parameters**, click **Edit**, and modify the parameter value.

   If a document is personalized, personalization details appear when you hover the mouse over an alert check box.
7. Configure the remaining alert subscription options as needed.

   Depending on the alert source, additional subscription options may appear. For example, for Crystal reports that contain multiple alerts, you must select which alert to subscribe to.
8. Click **OK**.

The next time the alert is triggered, a notification is sent to the destination you selected. To send the alert notification to a different destination, select the alert source, and select **Actions** > **Modify Subscription**. You can also use this option to select the Crystal report that an alert is subscribed to.

Notifications are sent using the destination defaults set for the alerting application, unless you specify custom settings for the alert source.

Related Information

Managing alerting settings for an alert source [page 123]

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Unless you change the alerting settings for an alert source, notifications are sent using the default destination settings for the Alerting application.

Locating alert source objects in the CMC [page 116]

Alert sources are stored in different locations according to their object type. The following table summarizes how to locate different alert sources.

8.2.3 Unsubscribing from an alert

1. Go to the *Events* management area of CMC.
2. Locate and select the alert source.
3. Select **Actions** > **Unsubscribe**.
4. In the *Unsubscribe from Alert(s)* dialog box, when prompted for confirmation, click **Unsubscribe**.

8.2.4 Unsubscribing other users from an alert

1. Go to the *Events* management area of CMC.
2. Locate and select the alert source.
3. Select **Actions** > **Manage Subscribers**.
4. In the *Manage Subscribers* dialog box, click **Subscriber List** in the navigation pane.
5. Select a user or user group you want to stop subscribing alerts to, and click **Unsubscribe**.

8.2.5 Subscribing other users to an alert

1. Go to the *Events* management area of CMC.
2. Locate and select the alert source.
3. Select **Actions** > **Manage Subscribers**.
4. In the *Manage Subscribers* dialog box, click **Subscriber List** in the navigation pane.
5. To add new subscribers:
   a) Click **Add**.
   b) In the *Add Subscribers* dialog box, use the **>** button to move users and groups from the **Available** list to the **Subscribed** list, and click **Add Default Subscription(s)**.
   c) In the *Edit Subscriptions* dialog box, configure the alert and destination options as needed.

      For example, you can modify which alerts to subscribe to (if the alert source contains multiple alerts). Depending on the alert source, other settings may be available.
   d) Click **Save & Close**.
6. To edit settings for a subscriber:
   a) Select a user in the **Subscriber** column, and click **Edit**.

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b) To edit which alerts the user will receive, in the *Edit Subscriptions* dialog box, click **Alerts** in the navigation list, and select the check box for each alert you want to subscribe the user to.

   If the alert source contains multiple alerts, each alert is listed. Otherwise, only one alert appears.

c) To edit which destinations an alert will be sent to, click **Destinations** in the navigation list, and select the check box for each destination you want to sent the alert to.

   Only email destinations that are enabled and configured on the Adaptive Job Server are available. If no email destination is configured, only the **My Alerts** check box appears.

d) If available, configure other alerting options as needed.

   Depending on the alert source, additional options may be available.

e) Click **Save & Close**.

7. In the *Manage Subscribers* dialog box, click **Save & Close**.

8.2.6 Forwarding an alert notification to another user's BI Inbox

You can forward alert notifications from **My Alerts** to another user's BI Inbox.

1. On the **Documents** tab in the BI launch pad, expand the **My Documents** drawer, and click **My Alerts**.
2. Right-click the alert notification that you want to forward and select **Organize** > **Forward**.
3. Enter the user BI Inbox to forward the alert to, and click **OK**.

8.2.7 Excluding users from an alert

Excluding users is useful when you want to subscribe only a handful of users in a group. You first subscribe the entire group and then exclude users who do not need to receive alert notifications.

The **Excluded** list overrides all other subscription settings for a user.

1. Go to the *Events* management area of CMC.
2. Locate and select the alert source.
3. Select **Actions** > **Manage Subscribers**.
4. In the *Manage Subscribers* dialog box, select **Excluded List** on the navigation panel.
5. Use the **>** button to move users or groups from the **Available** list to the **Excluded** list.
6. Click **Save & Close**.

Related Information

Locating alert source objects in the CMC [page 116]

Alert sources are stored in different locations according to their object type. The following table summarizes how to locate different alert sources.

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8.2.8 Managing alerting settings for an alert source

Unless you change the alerting settings for an alert source, notifications are sent using the default destination settings for the Alerting application.

1. Go to the *Events* management area of CMC.
2. Locate and select the alert source.
3. Select **Actions** > **Manage Alerting Settings**.
4. In the *Manage Alerting Settings* dialog box, to enable the BI launch pad as a destination, select the **Enable My Alerts** check box.

   This option sends alert notifications to subscriber BI launch pad accounts, and subscribers can view them under **My Alerts** in the launch pad.
5. To enable email as a destination, select the **Enable Email** check box, and then select **Use default email settings** or **Use custom email settings**.

   If you selected **Use default email settings**, the default settings are derived from alerting values set in the **Applications** area.
6. If you selected **Use custom email settings**, perform the following actions as needed:
   a) In the **From** box, enter a return email address, or select variables for the email address from the **Add placeholder** list.
   b) In the **To** box, enter each email address that you want to send alert notifications to, or select variables for the email address from the **Add placeholder** list.
   c) In the **Cc** box, enter each email address that you want to send alert notifications to, or select variables for the email address from the **Add placeholder** list.
   d) In the **Bcc** box, enter the email address of each undisclosed recipient that you want to send alert notifications to, or select variables for the email address from the **Add placeholder** list.
   e) In the **Subject** box, enter the subject of the alert notification, or select variables for the subject from the **Add placeholder** list.
   f) In the **Message** box, enter the message for the body of the alert notification, or select variables for the message from the **Add placeholder** list.
   g) Select the **Add Attachment** check box to add an attachment to the alert notification.
   h) Under **File Name**, select **Use Automatically Generated Name** or **Use Specific Name**. If you select **Use Specific Name**, enter a file name or select a placeholder in the list.
   i) Select the **Add File Extension** check box to automatically a file extension to file names.

      If you do not add a file extension to a file name, the document cannot be opened.
7. Click **Save & Close**.

Related Information

Locating alert source objects in the CMC [page 116]

Alert sources are stored in different locations according to their object type. The following table summarizes how to locate different alert sources.

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9 Managing Profiles

9.1 How profiles work

Profiles work with publications to personalize content.

Profiles as objects

Profiles are also objects in the BI platform that let you classify users and groups. Profiles link users and groups to profile values, which are used to personalize data within a report. Profiles also use profile targets, which describe how a profile is applied to a report. By assigning different profile values, the data within a report can be tailored to specific users or groups. Many different personalized versions of the report are then delivered to your users.

Profiles and roles

Often profiles reflect the roles of users and groups in an organizational structure. For example, you could have a Department profile that includes all employees in an organization. The users and groups each have profile values that reflect their roles in the organization (for example, "Finance," "Sales," and "Marketing"). When a publisher applies the Department profile to a publication, the employees receive data that is relevant to their department.

Profiles and document content

Profiles are used to refine or filter a document's content; profiles do not control access to data. When you use profiles to display a subset of the data to a user, it is not the same as restricting the user from seeing that data. If users have the appropriate rights and access to the document in its original format, they may still see the complete data for the document by viewing it in the BI launch pad or the CMC. Profiles filter data views without changing or securing the data being queried from the data source.

9.1.1 Profiles and the publishing workflow

Using a profile to personalize a publication is a two-part process. First,define the profile in the *Profiles* area of CMC, and then create a publication and associate the profile with it.

To define a profile, perform the following tasks:

1. Create a profile.
2. Add users and groups to the profile.
3. Assign profile values to each user and group for that profile.

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4. Specify a global profile target if necessary.

After you create a publication, perform these tasks:

1. Add users and groups as recipients.
2. Specify a local profile target for the profile to filter (for example, a field in a Crystal report).
3. Specify the profile(s) to use for personalization.

Related Information

Personalization [page 143]
Personalization is the process of filtering data in source documents so that only relevant data appears to publication recipients.

9.1.2 Creating a profile

1. Go to the **Profiles** management area of the CMC.
2. Select **Manage** > **New** > **New Profile**.
3. In the *Create New Profiles* dialog box, enter a name for the profile in the **Title** box.
4. Enter a description of the profile in the **Description** box, and click **OK**.

Related Information

Profile targets and profile values [page 125]
o use a profile to personalize a publication, you must set profile values and profile targets for the profile.

Specifying a profile value for a user or group [page 127]
You can achieve the same result by starting with the profile for which specify a value

Specifying profile rights [page 131]
You can grant or deny users and groups access to profiles. Depending on how you organize your profiles, you may have specific profiles that you want to be available only for certain employees or departments.

9.2 Profile targets and profile values

o use a profile to personalize a publication, you must set profile values and profile targets for the profile.

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Profile targets

Profile targets are data sources that profile values filter and interact with to provide personalized publications. There are two types of profile targets:

Type of profile target	Description
Local	A local profile target can be a variable in a Web Intelligence document, or a field or parameter in a Crystal report. When you use a local profile target, the source document that contains the local profile target is filtered for the publication recipients.
Global	A global profile target can be a universe. You must also specify an object within that universe. This type of profile target can filter all source documents that use the universe. You can use global profile targets for publications that contain Web Intelligence documents, but not Crystal reports.

Profile values

Profile values are attributes detailed to specific users or groups when you assign these users and groups to a profile. When a profile is applied to a publication, the users and groups assigned to that profile receive versions of the publication that are filtered according to the profile values set for them.

If you assign profile values to both users and groups, note that inheritance works the same way for profiles as it does for security settings. For more information, see the "Setting Rights" chapter in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* available on the SAP Help Portal at *http://help.sap.com*.

Using profile targets and profile values

Profile targets and profile values enable a profile to personalize a publication for recipients. The users and groups specified for a profile receive filtered versions of the same publication that only display the data most relevant to them.

Consider a situation where a global sales report is distributed to a company's regional sales teams in North America, South America, Europe, and Asia. Each regional sales team only wants to view the data that is specific to their region. The administrator creates a Regional Sales profile and adds each regional sales team to the profile as a group. The administrator assigns each regional sales team a corresponding profile value (for example, the North America Sales group is assigned "North America"). During Publishing, the publisher uses the Region field in the global sales report as a local profile target, and applies the profile to the report. The global sales report is filtered according to the profile values set for each regional sales team. When the global sales report is distributed, each regional sales team receives a personalized version that only displays regional sales data.

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9.2.1 Specifying a global profile target for a profile

Local profile targets are specified during the publishing process.

1. Go to the **Profiles** management area of CMC.
2. Locate and select the profile to which to specify a profile target.
3. Select **Actions** > **Profile Targets**.
4. In the *Profile Targets* dialog box, click **Add**.
5. Select a universe in the **Universe Name** list.
6. Enter a class name in the **Class Name** box, or click **Select object from the universe**.
7. Enter a variable name in the **Variable Name** box, or click **Select object from the universe**.
8. Click **OK**.

9.2.2 Specifying profile values

You can use static values, expressions, or variables as profile values.

Static values are the most common profile value type and can be used to filter any source document type. You can also enter multiple static values for a user or group for one profile. For example, a manager interested in receiving data from several departments can have “Production”, “Design”, and “Marketing” as static profile values for a Department profile.

Expressions use syntax that is specific to certain source document types. You can use SAP Crystal Reports and Web Intelligence expressions to perform more complex personalization and filtering. Expressions are useful if you want to filter a range of values, or a range of values greater than or less than a given value, for a user.

If you want to use user information as profile values, you can use variables for user names, full names, and email addresses. These variables are mapped to user information and act as placeholders. When you apply the profile to a publication, the system retrieves the most recent information for users.

Profile value variables are useful because they decrease administrative costs and possible errors associated with entering information manually. Consider a situation where an administrator maps an AD user to the system and adds the user to two profiles. Instead of entering the information manually for each profile value and possibly making typographical errors, the administrator can specify which variables to use for the user's data.

For third-party users, if the user's information changes in an external system, the data in the BI platform can be updated to reflect those changes when a publication is run. For example, for a third-party user account with data that should not be overwritten by user attributes in an external directory, in the *Properties* dialog box for the user object, you can clear the **Import full name and email address** check box to avoid overwriting the data.

Static-value profile values can filter string fields in source documents only. If you map the incorrect type of field to the profile, personalization will fail.

9.2.2.1 Specifying a profile value for a user or group

You can achieve the same result by starting with the profile for which specify a value

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You can use different types of profile values—for example, a static profile value or expression or variable profile values for third-party users and groups that are mapped to the system.

1. Go to the **Profiles** or the **Users and Groups** management area of CMC.
2. Select the profile for which specify a value, or select the user or user group for which to specify a profile value.
3. Select **Actions** > **Profile Values**.
4. In the *Profile Values* dialog box, click **Add**.
5. Click **Choose**.
6. Select a user or group or multiple users or groups, and click **>** to move them into the list on the right side.
7. Click **OK**.
8. Enter a profile value for the selected user or group or multiple users or groups.
   - To add a value, click **Value**, enter a value in the **New Value** box, and click **Add**.
     You can add multiple static values for a user or group and use `%NULL%` as a static profile value if a user or group does not have values that the profile can filter for personalization.
   - To use a filter expression, click **Filter Expression**, and enter an expression in the **Web Intelligence formula expression** box or the **Crystal reports expression** box. To apply the profile to multiple document types, enter filter expressions in all three boxes.
     To use a Web Intelligence expression, first specify a global profile target for the profile.
9. Click **OK**.

Related Information

Using variables as profile values [page 128]
When adding a user or user group to a profile, you can specify a variable profile value for a user's full name, account name, or email address.

9.2.2.2 Using variables as profile values

When adding a user or user group to a profile, you can specify a variable profile value for a user's full name, account name, or email address.

The following table describes the placeholder variables that you can use to externalize profiles:

Variable	Description
Title	Associated with the account name of a user or user group
User's full name	Associated with the full name of a user or user group
E-mail address	Associated with the email address of a user or user group. When you map the **E-mail address** variable to a common email address for a user group, the BI platform resolves the

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Variable	Description
	variable and retrieves individual email addresses for each member of the group.

1. Go to the **Profiles** management area of CMC.
2. Locate and select the profile to which to add the user or user group.
3. Select **Actions** > **Profile Values**.
4. In the *Profile Values* dialog box, click **Add**.
5. Click **Choose**.
6. Select a user or user group from the list on the left, and click **>** to move the user or group to the list on the right.
7. Click **OK**.
8. Click **Value**.
9. Select a placeholder variable in the **Add placeholder** list, and click **Add**.
   The placeholder appears in the **Existing values** box.
10. Click **OK**.

When you use the profile to personalize a publication, the profile value for the third-party user will update itself with the most recent user information. For example, if the user's email address has changed since the last time the publication was run, the email address used for the profile value will change the next time the publication runs.

9.3 Resolving conflicts between profiles

Conflicts between profiles can arise when users and groups are assigned to multiple profiles. If a document is delivered to a user that has two profiles that conflict, the conflict must be resolved.

For example, Tony is a product manager in the Mexico office. He is assigned a profile called Region that personalizes his documents to show only data from Mexico. He is also assigned a profile called Management that personalizes his documents to show data for product managers.

If a document uses both of these profiles, which data will Tony see? According to one profile, he'll see data for Mexico. According to the other profile, he should see only data for product managers.

To resolve this conflict, use one of the following options in the BI platform:

- **Do not merge**: The BI platform determines all possible views of a publication and produces a unique view for each one. In the example, Tony would receive one publication personalized to show data for Mexico, and another publication that shows product manager data.
- **Merge**: The platform determines the different possible data views and merges non-conflicting profiles. This type of profile resolution is designed for role-based security. In the example, Tony would receive a single publication personalized to show data for Mexican product managers.

The do not merge/merge scenario applies to inherited profile values only. If a user is assigned two profile values explicitly, the publication instances are always merged.

You specify profile resolution settings when you define publications.

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Related Information

Selecting a profile resolution method [page 181]

Select a profile resolution method so that, when a profile conflict occurs, the profile resolution determines whether instances will be merged or delivered as separate documents in a publication.

9.3.1 Conflicts between profile values

Conflicts between profile values can arise when a user inherits two contradictory profile values as a result of group membership.

In general, explicitly assigned profile values override profile values inherited from group membership. A profile value assigned to a user or a subgroup overrides the profile value inherited from group membership.

For example, David belongs to the North America Sales and Canada Sales groups. The Canada Sales group is a subgroup of the North America Sales group. These groups are both added to the Region profile. From the North America Sales group, David inherits a Region profile value of "North America", and from the Canada Sales group, David inherits a Region profile value of "Canada". In this case, the profile value that is assigned to the subgroup overrides the profile value that is assigned to the group, and David receives a publication with data for Canada.

Conflicts between profile values can also arise when a user is explicitly assigned a profile value that contradicts a profile value inherited from group membership. For example, Paula belongs to the North America Sales group, which has a Region profile value of "North America". The administrator also assigns Paula a Region profile value of "Spain". In this case, the profile value that is assigned to the member overrides the profile value that is inherited from the group, and Paula receives a publication with data for Spain.

However, sometimes a user can inherit different profile values from two different groups for one profile. Both groups are hierarchically equal; one group is not a subgroup of the other group, so one profile value does not override the other. In this case, both profile values are valid and the user receives a publication instance for each profile value.

As a result of this profile value conflict, sometimes duplicate report instances are included in different publication instances and sent to the same user. For example, Sandra is a manager in two North America offices and receives a publication via email that contains two reports. Report 1 is personalized using the Region profile, for which Sandra inherits the conflicting profile values "USA" and "Canada" from group membership. Report 2 is personalized using the Role profile, for which Sandra inherits the profile value "Manager". If there is no profile value conflict, after personalization, Sandra receives one email with a merged Report 1 instance (USA and Canada data) and a Report 2 instance (Manager data). Instead, Sandra receives two emails: one email includes a Report 1 USA instance, the other email includes a Report 1 Canada instance, and both emails have the same Report 2 Manager instance.

To avoid profile value conflicts that result in duplicate publication instances being sent, when possible, explicitly assign profile values to users instead of allowing users to inherit profile values from group membership.

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9.4 Specifying profile rights

You can grant or deny users and groups access to profiles. Depending on how you organize your profiles, you may have specific profiles that you want to be available only for certain employees or departments.

Users with access to CMC will only be able to see profiles they have the rights to see, so you can use rights to hide profiles that aren't applicable to a particular group. For example, by granting only the ITadmin group access to IT-related profiles, those profiles won't appear for a user from the HRadmin group; this makes the profile list easier for the HRadmin group to navigate.

For information about the rights model in the BI platform, see the "Setting Rights" chapter in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide* available on the SAP Help Portal at *http://help.sap.com*.

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10 Publishing

10.1 About publishing

Publishing makes documents (such as Crystal reports and Web Intelligence documents) automatically available via email or FTP server, saved to disk, and managed through the BI platform (for web viewing, archiving, retrieval, and scheduling).

In the BI launch pad or in the Central Management Console (CMC) in the platform, you can tailor documents to different users or recipients, schedule documents to run at intervals, and send the documents to multiple destinations, including BI Inboxes and email addresses.

10.2 What is a publication

A publication is a collection of documents intended for distribution to a mass audience. Before the documents are distributed, the publisher defines the publication using a collection of metadata. The metadata includes the publication source, its recipients, and the personalization applied.

Publications can help send information through your organization more efficiently. For example:

- They enable you to easily distribute information to users or groups of users and to personalize the information each user or group receives.
- They deliver targeted business information to users or groups of users through a password-protected portal or across an intranet, an extranet, or the Internet.
- They minimize database access by eliminating the need for users to send process requests.

You can create different types of publications based on Crystal reports or Web Intelligence documents.

10.3 Publishing concepts

10.3.1 Report bursting

During publishing, data in documents is refreshed against data sources and personalized before a publication is delivered to recipients—this combined process is known as report bursting.

Depending on the size of a publication and how many recipients it is intended for, you can use the following report bursting methods:

- **One database fetch for all recipients**: All documents in a publication are refreshed once, personalized, and delivered to each recipient. This report bursting method uses the data source logon credentials of the publisher to refresh data.
  This is the default option for Web Intelligence document publications and the recommended option to minimize the impact of publishing on your database. The performance of this option depends on the number of recipients.

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This option is secure only when source documents are delivered as static documents. For example, a recipient who receives a Web Intelligence document in its original format can modify the document and view data associated with other recipients. However, if the document is delivered as a PDF file, data is secure. This option is secure for most Crystal reports, regardless of whether reports are delivered in their original format.

- **One database fetch for each batch of recipients**: A publication is refreshed, personalized, and delivered to recipients in batches, based on the personalization values specified for the recipients. The batch size depends on the specified personalization value and is non-configurable. This report bursting method uses the data source logon credentials of the publisher to refresh data.
  This is the default option for Crystal report publications and the recommended option for high-volume scenarios. With this option, you can process batches concurrently on different servers, which can greatly decrease the processing load and time required for large publications.
  This option is not available for Web Intelligence documents.
- **One database fetch per recipient**: Data in a document is refreshed for every recipient. This report bursting method uses the data source logon credentials of the recipient to refresh data. For example, if there are five recipients for a publication, the publication is refreshed five times.
  This option is recommended to maximize security for delivered publications.
  For Crystal reports based on universes or on Business Views support, select this option to maximize security.

Related Information

Selecting a report bursting method [page 181]
Select a report bursting method to determine how source documents are personalized, processed, and delivered in a publication.

10.3.2 Delivery rules

Delivery rules affect how documents in publications are processed and distributed. When you set delivery rules on documents, the publication is delivered to recipients only if the content in the documents meets certain conditions.

> **Note**
>
> This feature is not available for Web Intelligence documents.

There are two types of delivery rules:

Delivery rule	Description
Global delivery rule	If the data in a designated document meets the delivery rule, the publication is delivered to all recipients. The designated document for a global delivery rule can be different from the document or documents used in a publication. For example, you can set a global delivery

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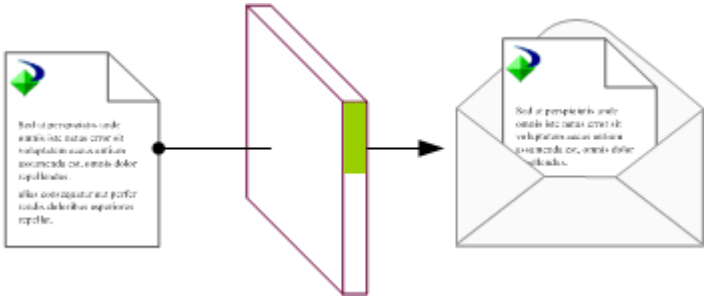
Delivery rule	Description
	rule on a document that is used as a dynamic recipient source, instead of on a document in the publication.
Recipient delivery rule	If the data in the recipient's instance meets the delivery rule, the instance is delivered to all recipients.

If a publication has both a global delivery rule and recipient delivery rules, the global delivery rule is evaluated first to determine whether the publication will be processed. If the publication meets the global delivery rule, the BI platform evaluates the recipient delivery rules to determine which instances to process and distribute for each recipient.

How you set delivery rules depends on the document type that you want to publish. For Crystal reports, you specify a delivery rule based on a named alert that the report designer creates in the Crystal report. You can also set a delivery rule based on whether a personalized publication contains any data.

The following diagram illustrates how an alert-based global delivery rule works. The global delivery rule is set on a document in the publication. The Crystal report has a Revenue alert for values greater than 100,000. The publisher creates a global delivery rule based on the Revenue alert. The Crystal report will be delivered to recipients only if revenue exceeds 100,000. In this case, the delivery rule is met so the Crystal report is delivered.

Figure 1: Global delivery rule is met



The following diagram illustrates how a recipient delivery rule works. The publisher creates a recipient delivery rule in which a Crystal report will be delivered only to recipients for whom the report contains data. When the report is personalized for each recipient, Green Recipient has no data in the Crystal report and does not receive

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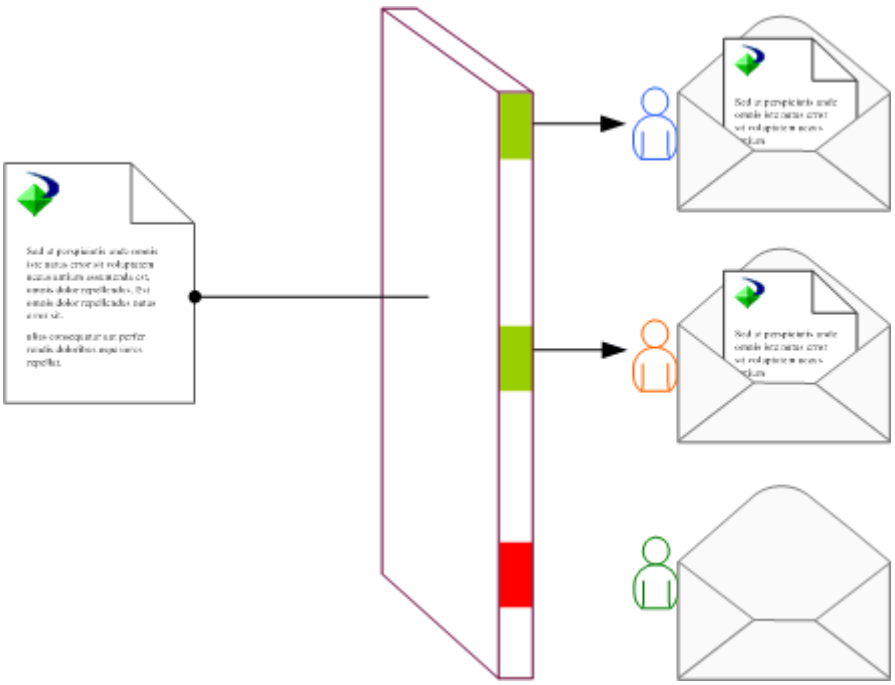
the publication. Blue Recipient and Orange Recipient have data in the report and, therefore, receive the publication.

Figure 2: Recipient delivery rule is not met



In publications that contain multiple documents and objects, each document can have its own recipient delivery rule. The following options are available for processing and delivery:

- If a document in a publication fails to meet its recipient delivery rule for a recipient, the entire publication is not delivered for that recipient.
- If a document in the publication fails to meet its recipient delivery rule for a recipient, that document is not delivered, but all other documents in the publication are delivered for that recipient.

Delivery rules are useful because they more efficiently process and distribute publications intended for many recipients. For example, a publisher at an insurance company creates a publication for its clients that contains the following objects:

An insurance bill (personalized Crystal report)
A monthly statement (personalized Crystal report)
A payment methods brochure (PDF file)

In the insurance bill, there is an Amount Due alert for values greater than zero. The publisher creates an Amount Due recipient delivery rule for the insurance bill in which the insurance bill is published and distributed only if a client owes a payment. The publisher also specifies that the entire publication should not publish if the insurance bill fails to meet the delivery rule; he does not want clients to receive a monthly statement and a brochure when they do not owe a payment. When the publication runs, the publication is processed and distributed only to clients who owe payments.

Note

If a Crystal reports publication is scheduled to print when the publication runs, the print job occurs, regardless of whether a document in the publication fails to meet a delivery rule and is not delivered to a recipient. This is

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because print jobs are processed during personalization, and delivery rules are applied to publications after personalization.

Related Information

(Optional) Setting a global delivery rule on a Crystal report [page 174]
Global delivery rules determine whether a publication will be processed and delivered to all recipients. You can set a global delivery rule on any Crystal report in the BI platform.

(Optional) Setting a recipient delivery rule on a Crystal report [page 173]
Recipient delivery rules determine whether a publication is delivered to a particular recipient after processing and personalization. After creating a publication, you can open the publication and change the delivery rules for it.

10.3.3 Dynamic recipients

Dynamic recipients are publication recipients who do not have user accounts in the BI platform but do have user information in an external data source, such as a database or an LDAP or AD directory.

To distribute a publication to dynamic recipients, use a dynamic recipient source—a document or custom data provider that provides information about publication recipients outside of the platform. You can use one dynamic recipient source per publication to link directly to an external data source and retrieve the latest data for dynamic recipients. Dynamic recipient sources decrease administrative costs because you do not have to create BI platform user accounts for dynamic recipients before distributing publications to them.

For example, when a billing company distributes bills to customers who are not BI platform users, the customer information exists in an external database. The publisher creates a document based on the external database and uses the document as a dynamic recipient source for a publication. Customers receive the billing publication, and the dynamic recipient source allows the publisher and the system administrator to maintain up-to-date contact information.

You can perform the following actions with a dynamic recipient source:

- Simultaneously deliver a single publication to dynamic recipients and to BI platform users
  Dynamic recipients cannot unsubscribe themselves automatically from a publication.
- Preview dynamic recipients list when you create a publication
- Specify whether to deliver a publication to all dynamic recipients or to exclude some dynamic recipients
- Deliver publications to external destinations, such as email or an FTP server
  BI Inbox is not a valid destination for dynamic recipients because they do not have a user account in the BI platform.

To use a dynamic recipient source, specify a column for each of the following values:

- Recipient ID (required)
- Full name of recipient
- Email address

The **Recipient ID** column determines the number of dynamic recipients who will receive the publication. Sort dynamic recipient sources by recipient ID.

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For general information about creating reports, see the *SAP Crystal Reports User Guide*. For information about creating a custom-coded dynamic recipient source, see the *SAP BusinessObjects Business Intelligence Platform Java SDK Developer Guide*.

10.3.4 Publication delivery destinations

Destinations are the locations to which publications are delivered.

A destination can be the BI platform location in which a publication in stored, a BI Inbox, an email address, an FTP server, or a directory in the file system. You can specify multiple destinations for a publication. If you publish multiple Crystal reports, you can merge them, on a per-destination basis, into a single PDF file. If you publish a publication as a compressed (`.zip`) file, you can compress or extract instances on a per-destination basis. For example, you can compress instances for email recipients and extract instances for BI Inboxes.

10.3.4.1 Publication destinations

The following destinations are available for scheduled publications:

- **Default Enterprise Location**
- **BI Inbox**
- **Email**
- **FTP Server**
- **File System**
- **SAP StreamWork** (if enabled and configured)

Table 28: Default Enterprise Location destination

Description	Instance is saved to
The publication is accessible from the folder it was created in. You can perform the following actions: • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file If you send a publication to this location, choose a folder that is accessible to all recipients.	Output File Repository Server Historical instances are saved to the default Enterprise server but not to any other destination.

Table 29: BI Inbox destination

Description	Instance is saved to
The publication is sent to each recipient's BI Inbox. You can perform the following actions:	• Output File Repository Server • Specified BI Inboxes

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Description	Instance is saved to
• Use the default settings for the destination • Deliver objects to individual users To quickly locate a user, you can search for a recipient's user name, full name, or email address in the **Find title** box. • Use the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder in the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Send the publication as a shortcut or a copy If you send a publication to a recipient's BI Inbox shortcut, choose a folder that is accessible to all recipients. To send a publication shortcut to a BI Inbox, select both **BI Inbox** and **Default Enterprise Location** as the destination. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 30: Email destination

Description	Instance is saved to
Note Before you select this destination, confirm that your email settings are configured properly on the Adaptive Job Server. The publication is sent to recipients in an email. You can perform the following actions: • Use the default settings for the destination • Deliver objects to individual users • (Required) Enter your email address in the **From** box If you do not enter your email address, the BI platform uses the email address associated with the publisher's account. If the publisher's account has no email address, the platform uses the email address for the Adaptive Job Server. If there is no	Before you can schedule or send a report instance to this destination, you must enable and configure the email (SMTP) destination on the Adaptive Job Server. • Output File Repository Server • Specified email recipients

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Description	Instance is saved to
email address in the **From** box, the publisher's account, or the Adaptive Job Server, the publication will fail. • Enter recipient email addresses or add the `<Email Address>` placeholder to the **To** box • Enter recipient email addresses or add the `<Email Address>` placeholder to the **Cc** box • Enter recipient email addresses or add the `<Email Address>` placeholder to the **Bcc** box • Enter a subject or add placeholders to the **Subject** box • Enter information to deliver with the publication or add placeholders and embed a dynamic content document in the body of the email in the **Message** box • Attach source document instances to an email • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 31: FTP Server destination

Description	Instance is saved to
The publication is sent to an FTP server. You must enter the FTP server location in the **Host** box. (If you do not, the platform uses the FTP server configured for the Adaptive Job Server.) You can perform the following actions: • Use the default settings for the destination • Enter the port number, user name and password, and account • Enter a directory name • Accept the default file name, enter a file name, or add placeholders	• Output File Repository Server • Selected FTP server

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Description	Instance is saved to
If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 32: File System destination

Description	Instance is saved to
The publication is sent to a directory on a file system. You must enter the directory for the publication. You can perform the following actions: • Use the default settings for the destination • Enter a user name and password to access the file location • Deliver objects to individual users • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	• Output File Repository Server • Selected file location

Table 33: SAP StreamWork destination

Description	Instance is saved to
The publication is sent for collaboration with other users. This destination is available if SAP StreamWork is configured and enabled in the platform.	SAP StreamWork

The **Deliver objects to each user** check box is selected by default for all destinations. However, in some cases, you may not want to deliver objects to each user. For example, three recipients have identical personalization

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values so they receive the same data in publication instances. If you clear the **Deliver objects to each user** check box, one publication instance is generated and delivered to all three recipients. If you select the **Deliver objects to each user** check box, the same publication instance is delivered three times (once for each recipient).

If you are sending the publication to the **FTP Server** or **File System** destination and some recipients share identical personalization values, you can clear the **Deliver objects to each user** check box to decrease overall processing time. When you clear **Deliver objects to each user**, placeholders used when configuring destinations will contain the publisher's (not the recipient's) information.

10.3.5 Publication formats

A format defines the file type for a document in a publication.

You can publish a single document in multiple formats; each format you choose will result in an instance of the document. Each instance can be delivered to multiple destinations. For publications with multiple documents, you can specify a different format for each document. For publications that contain Web Intelligence documents, you can publish a whole document or a report tab in a document to multiple formats.

The formats you choose for a document apply to all recipients of the publication. For example, you cannot publish a document as a Microsoft Excel file for one recipient and a PDF file for another recipient. If you want recipients to receive instances in both formats, each recipient must receive an Excel file and a PDF file.

Related Information

Specifying publication formats for a Crystal report [page 167]
You can select and configure more than one publication format for a Crystal report.

Specifying a publication format for a Web Intelligence document [page 176]
You must specify a publication format for each dynamic content source Web Intelligence document in a publication.

10.3.5.1 Publication format options

Document type	Format	Description
All document types	**mHTML**	This option publishes a document in mHTML format. You can embed the document's content as mHTML in an email. • For Crystal reports, you can embed the content of one report in an email. • For Web Intelligence documents, you can embed the content of one report tab in an email.

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Document type	Format	Description
		Documents are output in the order that source documents are listed in the *New Publication* dialog box. For example, documents at the top of the dialog box appear at the top of the email.
	PDF	This option publishes a document as a static PDF file. When this option is used with PDF merging, documents are output in the order that source documents are listed in the *New Publication* dialog box. For example, documents at the top of the dialog box appear at the top of the merged PDF file.
	Microsoft Excel (97-2003)	This option publishes a document as a Microsoft Excel (`.xls`) file and preserves as much of the original formatting as possible.
Crystal reports	**Microsoft Excel (97-2003) (Data Only)** **Microsoft Excel Workbook Data-only**	These options publish a Crystal report as an Excel (`.xls`) file that contains only data.
	XML	This option publishes a Crystal report in XML (`.xml`) format.
	Crystal Reports	This option publishes a Crystal report in its original (`.rpt`) format.
	Crystal Reports (RPTR)	This option publishes a Crystal report in read-only (`.rptr`) format.
	Microsoft Word (97-2003)	This option publishes a Crystal report as a Microsoft Word (`.doc`) file and preserves the original formatting of the Crystal report. Use this option when you expect recipients to view a publication without making changes to it.
	Microsoft Word - Editable (RTF)	This option publishes a Crystal report as a Word (`.rtf`) file that recipients can edit. Use this option when you expect recipients to view a publication and edit its content.
	Rich Text Format (RTF)	This option publishes a Crystal report in Rich Text Format (`.rtf`).
	Plain Text	This option publishes a Crystal report in plain text (`.txt`) format.

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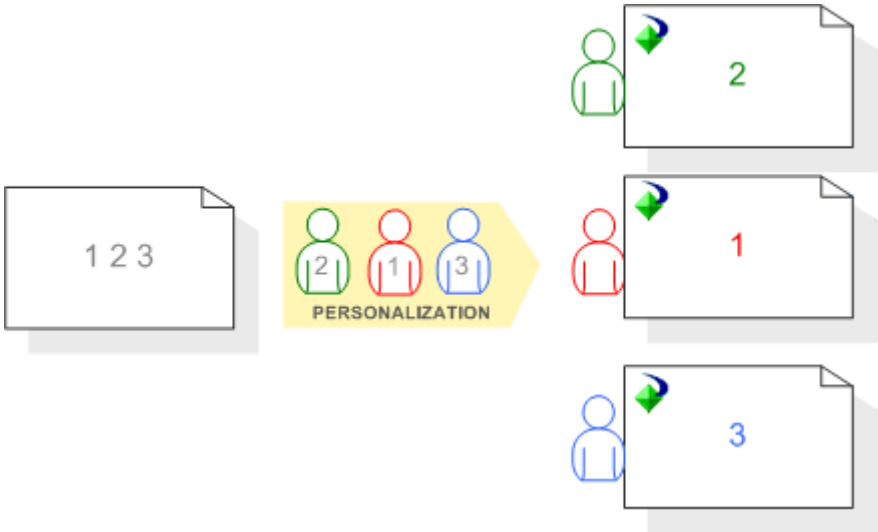
Document type	Format	Description
	Paginated Text	This option publishes a Crystal report in plain text (`.txt`) format and paginates the content of the publication.
	Tab Separated Text (TTX)	This option publishes a Crystal report in plain text (`.ttx`) format and separates the content in columns with tabs.
	Separated Values (CSV)	This option publishes a Crystal report as a character-separated values (`.csv`) file.
Web Intelligence documents	**Web Intelligence**	This option publishes a Web Intelligence document in its original (`.wid`) format.

10.3.6 Personalization

Personalization is the process of filtering data in source documents so that only relevant data appears to publication recipients.

Personalization alters the view of data but does not change or secure the data being queried from the data source.

The following diagram illustrates how personalization works. For example, an unpersonalized report contains data types 1, 2, and 3. When personalization is applied to the report, users receive only data that is relevant to them. User 2 receives only data type 2, User 1 receives only data type 1, and User 3 receives only data type 3.



To personalize source documents:

- For Enterprise recipients, you must apply a profile when you design a publication. Before you can use profiles to personalize data for Enterprise recipients, the profiles must be configured in the BI platform. If you need profiles added to the platform, contact your system administrator.
- For dynamic recipients, you can map a data field or column in the source document to data in the dynamic recipient source. For example, you can map a Customer ID field in a source document to the Recipient ID field in the dynamic recipient source.

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To view a list of recipients who will receive unpersonalized publication instances after personalization, select **Additional Options** > **Advanced** in the *New Publication* dialog box, and select the **Display users who have no personalization applied** check box.

Related Information

Personalizing a Crystal report using parameter values [page 166]

Personalizing a Crystal report by filtering fields [page 167]

When you use filters, a ViewTime selection formula is added to a report to filter data. The formula is applied when the publication runs and is not saved in the report.

Personalizing a Web Intelligence document with a global profile target [page 177]

You can personalize a Web Intelligence document for Enterprise recipients by filtering with a global profile target.

Personalizing a Web Intelligence document by filtering fields [page 177]

Personalized placeholders for publication source document names [page 144]

A placeholder is a container for variable data. Adding personalized placeholders to source file names can help recipients identify filtered data.

10.3.6.1 Personalized placeholders for publication source document names

A placeholder is a container for variable data. Adding personalized placeholders to source file names can help recipients identify filtered data.

Recipients who belong to multiple user groups with different personalization values can distinguish between multiple versions of the same source document, without viewing its contents. If a publication contains more than one source document, the **Add placeholder** list for **Use Specific Name** contains personalized placeholders only if all source documents were filtered on the same field.

The following personalized placeholders are available for reports:

- **%fieldname_VALUE%**
  For example, when you select the **Email Address** placeholder, **%SI_EMAIL_ADDRESS%** appears in the **Use Specific Name** box. At run-time, the placeholder is replaced by the value of the field used to filter the report. This placeholder is unique for each recipient.
- **%fieldname_NAME%**
  For example, when you select the **Title** placeholder, **%SI_Name%** appears in the **Use Specific Name** box. At run-time, the placeholder is replaced by the actual name of the field. This placeholder is the same for all recipients.

Related Information

Selecting personalized placeholders for publication source documents [page 164]

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When scheduling a publication instance, you can use placeholders in the **Use Specific Name** field for source documents.

10.3.6.2 Personalized placeholders for email fields

A placeholder is a container for variable data. You can use personalized placeholders in the **Subject** box and the **Message** box when sending a publication via email.

For each filter used in a report during personalization, the following placeholders appear in the **Add placeholder** list:

- **%Field - Query 1-VALUE%**
  At run-time, the placeholder is replaced by the personalized value used to filter the report. This placeholder is unique for each recipient.
- **%Field - Query 1-NAME%**
  At run-time, the placeholder is replaced by the name of the field. This placeholder is the same for all recipients.

Before you can use personalized placeholders in the **Subject** or **Message** box, all source documents for the publication must be personalized on the same field. If a publication contains several source documents, the **Add placeholder** list for the **Subject** and **Message** boxes displays personalization parameters only when all source documents are filtered on the same field(s).

10.3.7 Publication extensions

A publication extension is a library of code that applies business logic to publications.

Use a publication extension when you need automated customization of publications after processing or delivery. You can use publication extensions to perform the following tasks after processing:

- Merge documents of the same type (for example, merge multiple Excel spreadsheets into a single Excel workbook)
- Add password protection to or encrypt a document
- Convert a document to a different format
- Create custom log files for a publication job

You can specify publication extensions only in the Central Management Console (CMC) in the BI platform. You cannot use publication extensions if you are designing a publication in the BI launch pad. For more information about publication extensions, see the *SAP BusinessObjects Business Intelligence Platform Java SDK Developer Guide*.

Related Information

Adding a publication extension [page 178]
You must add a publication extension before you can use it in a publication.

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10.3.8 Subscriptions

A subscription enables users who are not publication recipients to view the latest instance.

Enterprise recipients can unsubscribe from a publication at any time. Dynamic recipients can neither subscribe to or unsubscribe from a publication.

Users with the appropriate access rights can subscribe and unsubscribe other users. To subscribe to or unsubscribe from a publication, the following items are required:

- A BI platform account
- Access to the BI launch pad or to the Central Management Console (CMC) in the platform
- View rights to see the publication
- Subscriber rights for the user account (Enterprise recipients)

Related Information

Subscribing to or unsubscribing from a publication [page 185]

To subscribe to a publication after it is scheduled, subscribe to its recurring instance—or reschedule the publication.

10.3.9 PDF-file merging for Crystal reports

You can merge PDF instances of Crystal reports and static PDF documents into a single PDF file and then perform the following tasks on the merged PDF file:

- Add and format a table of contents
- Insert running page numbers
- Add user and owner passwords to view and edit the PDF file
- Set restrictions on what recipients can do with the PDF file

All static PDF source documents are included in the merged PDF file. Static source documents that are not PDF files are excluded.

10.4 Access rights required for publishing

Role	Task	Rights required
Document designer	Create a document on which a publication is based	None

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Role	Task	Rights required
Document designer	Add a document to the BI platform	View rights and Add rights on the folder or category to which the document will be added
Document designer	Create a document to be used as a dynamic recipient source	View rights and Add rights on the folder or category to which the document will be added
Publisher	Create a publication	• Add rights on the folder where the publication is saved • View rights on the users and the groups intended as recipients • View rights on the profile that is used for personalization • View rights on documents on the publication • Schedule rights on documents on the publication • Schedule rights on Enterprise recipients
Publisher	Schedule a publication	Only the publisher should have Schedule a publication rights. • View rights, Schedule rights, Add rights, and Modify Security rights on the publication • Delete Instance rights on the publication • View rights on the users and the groups intended as recipients • View rights on the profile that is used for personalization • View rights and Schedule rights on documents on the publication • View rights and Refresh rights on the dynamic recipient source • View rights and Refresh rights on the document for which a delivery rule is set • Data Access rights on universes used by publication objects • Data Access rights on universe connections used

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Role	Task	Rights required
		• When scheduling to a BI Inbox, Add rights and View rights on each recipient's BI Inbox • On the folder containing the publication, Modify the rights users have to objects rights • Subscribe rights on recipients • When a publisher wants to print publication instances, Print rights on Crystal report source documents • If you selected **One database fetch per recipient**, Schedule on behalf of other users rights on Enterprise recipients
Publisher	Retry a failed publication instance	• Edit rights on the publication instance • View rights, Subscribe rights, Add rights, and Modify Security rights on the publication • Delete Instance rights on the publication • View rights on the users and groups intended as recipients • View rights on the profile used for personalization • View rights and Schedule rights on documents in the publication • View rights and Refresh rights on the dynamic recipient source • View rights and Refresh rights on the document for which a delivery rule is set • Data Access rights on universes used by publication objects • Data Access rights on universe connections used • When scheduling to a BI Inbox, Add rights and View rights on each recipient's BI Inbox • On the folder containing the publication, Modify the rights users have to objects rights • Subscribe rights on recipients

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Role	Task	Rights required
		• When a publisher wants to print publication instances, Print rights on Crystal report source documents • If you selected **One database fetch per recipient**, Schedule on behalf of other users rights on Enterprise recipients
Publisher	Redistribute a publication instance	• View rights, Schedule rights, Add rights, and Modify Security rights on the publication • Add rights and View rights on each recipient BI Inbox • View Instance rights and Edit rights on the publication instance
Recipient	View a publication	• View rights on the publication • View Instance rights on the publication These rights enable you to see a publication object in the BI platform. You do not need these rights to see content sent to a BI Inbox.
Recipient	Subscribe to or unsubscribe from a publication	• View rights on the publication • Subscribe rights on Enterprise recipients

10.4.1 Publishers and recipients: Who has rights to view what

A publisher (the person who owns and schedules a publication) can view all publication instances for all recipients. Recipients can view only their own personalized publication instances.

These viewing rights ensure maximum security for publication data because only the publisher has rights to schedule publications and to view all publication instances.

If you are a publisher and want to add yourself to a publication as a recipient, create two user accounts for yourself: a Publisher account and a Recipient account. The Publisher account grants you access rights to design and to schedule publications, and the Recipient account grants you the access rights of a typical recipient.

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11 Working With Publications

11.1 Designing publications

To design a new publication, use the publishing feature in the BI platform.

You can access publishing in the Central Management Console (CMC) in the platform or in the BI launch pad, depending on your access rights and on your access to BI platform web-based applications.

At any point during publication design, you can save changes made to a publication, close it, reopen it, and make further changes.

11.1.1 Designing publications for Live Office

When you design publications for use with SAP BusinessObjects Live Office, consider this information.

- Dynamic content documents can consist only of Crystal reports or Web Intelligence documents in the original format.
- Dynamic recipients are not supported.
- The only destination option available is **Default Enterprise Location**.
- If recipients receive multiple publication instances after personalization, they can view only the first publication instance in the Live Office Client. Recipients who inherit multiple profile values from group membership may receive multiple instances. To avoid sending multiple instances, assign only necessary profile values to recipients.

Related Information

Personalization [page 143]
Personalization is the process of filtering data in source documents so that only relevant data appears to publication recipients.

11.1.2 Designing publications for SAP recipients

A publication intended for SAP recipients works the same way as a publication intended for Enterprise or dynamic recipients.

However, SAP recipients have the following differences in a publishing workflow:

- You do not use personalization to design source documents for SAP recipients. Each SAP recipient has a profile value mapped to a user account outside of the BI platform, and the profile value serves as built-in personalization. You do not need to create profiles and profile values for SAP recipients in the platform or to map profiles to source document fields.

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- The only report bursting method that works for a publication intended for SAP recipients is **One database fetch per recipient**. It maximizes security and individually processes the database logon credentials of each publication recipient.

For information about single sign-on configuration and authentication, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

11.1.3 Designing publications for dynamic or Enterprise recipients

You can send publications to dynamic recipients via email or to Enterprise recipients via a BI Inbox, email, FTP, the file system, or collaboration.

Dynamic recipients are non-Enterprise users, either outside of your network or not configured with users, groups, profiles, security, and so on. For example, dynamic recipients might be suppliers of your company's monthly office supplies and inventory. A BI Inbox is not a valid destination for dynamic recipients because they do not have a BusinessObjects Enterprise user account.

Enterprise recipients are users who are part of the BI platform system. You can send reports for these users to their BI Inbox or via email, FTP, the file system, or collaboration.

Dynamic recipients are different from Enterprise recipients in the following ways:

- Publications can be sent to dynamic recipients only via email.
- Dynamic recipients can be used only with local profiles.

To create publications, you create a source file and a recipient file, set up the publication in the BI launch pad, and then schedule the publication.

The source file contains raw data for the publication; a publication can include more than one source file. For example, for a monthly report on suppliers, the source file might list inventory SKU numbers and categories and include a unique ID/supplier defined in a "Supplier ID" field. The recipient file must contain the same unique ID/supplier as the source file as well as recipient email addresses to map to the source file. In the example, the recipient file should include the same ID in a "Supplier ID" field, supplier names, and supplier email addresses.

11.1.3.1 Creating a publication for dynamic recipients

Dynamic recipients are non-Enterprise users, either outside of your network or not configured with users, groups, profiles, security, and so on.

The source file and dynamic-recipient file must be created.

1. On the **Documents** tab in the BI launch pad, expand the **Folders** drawer, and locate the folder in which to create a publication.
2. Right-click the folder and select **New** > **Publication**.
   The **New Publication** dialog box appears, with general property options displayed.
3. In the **Title** box, enter the title of the publication.
4. Click **Source Documents** in the navigation list, and click the **Add** button.

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5. In the **Select Source Documents** dialog box, select the source file(s) for the publication, and click **OK**.
6. Click **Dynamic Recipients** in the navigation list.
7. In the **Choose the source for the dynamic recipients** list, select **Web Intelligence Report Dynamic Recipient Provider** or **Crystal Reports Dynamic Recipient Provider**.
8. Under **Select the source document for the dynamic recipients**, click **Browse**, and locate and select the recipient file.
9. Map fields from the recipient file to the publication:
   a) In the **Recipient Identifier (required)** list, select a field from the recipient file to map to the publication.
   b) In the **Full name** list, select a field from the recipient file to map to the recipient.
   c) In the **Email** list, select **Email ID** to map email addresses from the recipient file to the publication.

      Select the **User entire list** check box to send the publication to all recipients defined in the dynamic-recipient file.
10. Click **Personalization** in the navigation list, and configure personalization for recipients:
    a) Under **Local Profiles**, in the supplier row, in the **Report Field** column, select a report field to personalize.
    b) In the **Dynamic Recipient Mapping** column, select a field in the recipient file to map to the report field you selected.
    c) Repeat steps 10a and 10b for each field that should be sent to specific recipients.
11. Click **Formats** in the navigation list, and select a delivery format for the publication.
12. Click **Destinations** in the navigation list, and select a destination:
    a) Under **Select Destinations**, select the **Email** check box.
    b) (Optional) Select the **Package as ZIP File** check box.
    c) Select the **Deliver objects to each user** check box.
    d) In the **From** box, enter the sender's email address or select a placeholder in the list.
    e) In the **To** box, select **%SI_EMAIL_ADDRESS%** in the list.
    f) In the **Subject** box, enter the subject or select a placeholder.
    g) (Optional) In the **Message** box, enter a message to recipients about the publication or select a placeholder.
13. Click **Save & Close**.

Schedule the publication to run.

11.1.3.2 Creating a publication for Enterprise recipients in BI launch pad

Enterprise recipients are users who are part of the BI platform system. For Enterprise recipients, you must create prompts to define filtering in the source file.

1. In the Central Management Console (CMC) in the BI platform, click **Profiles**.
2. Create users and add them to user groups as needed.
3. Select **Manage** > **New** > **New Profile**.
4. In the **Create New Profile** dialog box, enter a title and description for the profile, and click **OK**.
5. Double-click the profile you created to configure its properties.
6. Click **User Security** in the navigation list, and assign access rights to users or user groups.

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7. Click **Profile Targets** in the navigation list, and define targets to filter source files:
   a) Locate the profile target to use in the **Object** column, select the check box beside it, and click **Edit**.
      The local profile is derived from the source file, and the global profile comes from the universe.
   b) Select **Filter Expression**, and click **Edit**.
      A dialog box appears, displaying the profile options.
   c) In the **User/Group** column, locate the user or user group for which to define profile targets, and select the check box beside it.
      Prompts are defined. You can create the publication in BI launch pad.
8. In the BI launch pad, on the **Documents** tab, expand the **Folders** drawer, and locate the folder in which to create a publication.
   a) Right-click the folder and select **New** > **Publication**.
      The **New Publication** dialog box appears, with general property options displayed.
   b) In the **Title** box, enter the title of the publication.
   c) Click **Source Documents** in the navigation list, and click the **Add** button.
   d) In the **Select Source Documents** dialog box, select the source file(s) for the publication, and click **OK**.
9. Click **Enterprise Recipients** in the navigation list.
10. For each user or group who should receive the publication, under **Available**, select the user or user group, and click **>** to move the user or group to the **Selected** area.
11. Click **Personalization** in the navigation list.
12. Under **Global Profiles**, for each source document for the publication, select the profile you created from the list in the **Enterprise Recipient Mapping** column.
13. Click **Formats** in the navigation list, and perform the following actions:
    a) Under **Documents**, select a report.
    b) Under **Output Format**, select the check box beside the delivery format for publication.
    c) Under **Output Format Details**, select **All reports** to use the same format for all reports in the publication, or choose **Select one report** and select a report in the list.
14. Click **Destinations** in the navigation list, and select a destination:
    a) Under **Select Destinations**, select the **Email** check box.
    b) (Optional) Select the **Package as ZIP File** check box.
    c) Select the **Deliver objects to each user** check box.
    d) In the **From** box, enter the sender's email address or select a placeholder in the list.
    e) In the **To** box, select **%SI_EMAIL_ADDRESS%** in the list.
    f) In the **Subject** box, enter the subject or select a placeholder.
    g) (Optional) In the **Message** box, enter a message to recipients about the publication or select a placeholder.
15. Click **Prompts** in the navigation list, and click **Modify**.
    The users or user groups you defined are listed in the **User/Group** column, and the prompt values you defined in steps 1-6 are listed in the **Profile Value(s)** column.
16. Select the check box beside each user or group who should receive the publication.
17. Click **Save & Close**.

Schedule the publication to run.

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11.1.4 Creating a new publication in the CMC

1. Under **Folders** in the Central Management Console (CMC) in the BI platform, click the *group tree*, and locate the folder in which to create a publication.
2. Right-click the folder and select **New** > **Publication**.
   The *New Publication* dialog box appears, with general property options displayed.
3. (Required) In the **Title** box, enter the title of the publication.
4. (Optional) In the **Description** box, enter a description of the publication.
5. (Optional) In the **Keywords** box, enter keywords that are associated with the publication's content.
6. Click **Source Documents** in the navigation list, and then click the **Add** button.
7. In the *Select Source Documents* dialog box, select one or more source documents to add to the publication, and click **OK**.
   The **Refresh At Runtime** check box is selected by default for each source document. It refreshes the document against its data source when the publication runs.
8. If you do not want to refresh a source document when the publication runs, clear the **Refresh At Runtime** check box for the document.
9. Click **Save & Close**.

11.1.5 Creating a new publication in the BI launch pad

1. On the **Documents** tab, expand the **Folders** drawer, and locate the folder in which to create a publication.
2. Right-click the folder and select **New** > **Publication**.
   The *New Publication* dialog box appears, with general property options displayed.
3. (Required) In the **Title** box, enter the title of the publication.
4. (Optional) In the **Description** box, enter a description of the publication.
5. (Optional) In the **Keywords** box, enter keywords that are associated with the publication's content.
6. Click **Source Documents** in the navigation list, and click the **Add** button.
7. In the *Select Source Documents* dialog box, select one or more source documents to add to the publication, and click **OK**.
   The **Refresh At Runtime** check box is selected by default for each source document. It refreshes the document against its data source when the publication runs.
8. If you do not want to refresh source documents at runtime, clear the **Refresh At Runtime** check box.
9. Click **Save & Close**.

You must specify other information required for the publication—recipients, delivery formats and destinations, and how documents are personalized.

11.1.6 Opening a publication

1. Locate the publication:

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- In the BI launch pad, on the **Documents** tab, expand the **Folders** drawer.
- In the Central Management Console (CMC) in the BI platform, go to the **Folders** management area.

2. Right-click the publication and select **View**.

The publication opens in a new window.

11.1.7 Defining general properties for a publication

1. Right-click the publication for which to enter general properties and select **Properties**.
   The *Properties* dialog box appears, displaying the publication's general properties and title.
2. (Optional) In the **Description** box, enter a description of the publication.
3. (Optional) In the **Keywords** box, enter keywords that are associated with the publication's content.
4. Click **Save & Close**.

11.1.8 Selecting source documents

When choosing the source documents to include in a publication, the dynamic content document type determines which options are available.

When sending source documents as an attachment or a merged PDF file, you can set the order in which documents appear. In the *New Publication* dialog box, in the **Source Documents** area, select a document in the **Selected** list, and click **Move Up** or **Move Down** to move the document to a different place in the order.

1. Right-click the publication for which to select source documents and select **Schedule**.
   The *Properties* dialog box appears, displaying the publication's general properties and title.
2. In the *New Publication* dialog box, click **Source Documents**.
3. Click **Add**.
4. In the *Select Source Documents* dialog box, locate and select dynamic content documents of the same document type to include in the publication, and click **OK**.

   Double-click a source document to select it. To simultaneously select several source documents, hold down the *SHIFT* or *CTRL* key and click each folder.

   The source documents you selected appear in the **Selected** list in the *New Publication* dialog box. The check box in the **Refresh At Runtime** column is selected by default for the source document. When this check box is selected, the document is refreshed against its data source when the publication runs.
5. If you do not want to refresh a source document against its data source when the publication runs, clear the check box for that document in the **Refresh At Runtime** column.

   To improve system performance, clear the check box in the **Refresh At Runtime** column for each document you do not need to refresh.
6. Click **Save & Close**.

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11.1.9 Selecting Enterprise recipients

1. Right-click the publication for which to select Enterprise recipients and select **Schedule**.
   The *Schedule* dialog box appears.
2. Click **Destinations** in the navigation list, and click **Enterprise Recipients**.
3. Choose recipients for the publication:
   a) Under **Available**, click **User List** to display a list of all users in the BI platform or **Group List** to display a list of all user groups in the BI platform.
   b) Select users or user groups, and move the users or groups to the **Selected** list.

   Enter a recipient's user name, full name, or email address in the **Find title** box to quickly locate the user in the **Available Recipients** list. To simultaneously select several users or user groups, hold down the *SHIFT* or *CTRL* key and click each user or group. To exclude recipients, select a user or user group in the **Selected** list, and move the user or group to the **Excluded** list.
4. Click **OK**.

11.1.10 Selecting dynamic recipients

Dynamic recipients are recipients who are not BI platform users.

Before you can specify dynamic recipients, you must have a dynamic recipient source designed and ready for use.

The dynamic recipient source contains recipient data; it can be a Crystal report, a Web Intelligence document, or a custom-coded data provider. For information about creating a custom-coded dynamic recipient source, see the *SAP BusinessObjects Business Intelligence Platform Java SDK Developer Guide*.

Dynamic recipient data comes from the query and may not match data that appears when you view a document. Depending on how a query is built, dynamic recipient sources created in the Web Intelligence component may contain values that do not correspond to data in the publication's source documents. For example, a filter in a report may exclude relevant values, or duplicate records may appear because a query was set to retrieve duplicate rows. Review the full list of dynamic recipients during the publication design process.

To more efficiently process publications, use the **Recipient Identifier** list to sort recipient data by the recipient ID.

1. Double-click the publication for which to select dynamic recipients.
2. In the *Properties* dialog box, click **Dynamic Recipients** in the navigation list.

   Crystal report dynamic recipient sources cannot be in `.rptr` format.
3. Under **Choose the source for the dynamic recipients**, select either **Web Intelligence Report Dynamic Recipient Provider** or **Crystal Reports Dynamic Recipient Provider**.
4. Locate and select the object to use as a dynamic recipient source, and click **OK**.
5. If you chose a Web Intelligence document as a dynamic recipient source, in the **Select the datasource name for the document** list, select a query that appears in the document.
6. In the **Recipient Identifier (required)** list, select a field that contains the recipient identity values.
7. (Optional) In the **Full Name** list, select a field that contains the full names of recipients.
8. If you intend to deliver the publication to email addresses, in the **Email** list, select a field that contains the recipient email addresses.

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9. Decide which recipients in the dynamic recipient source to distribute the publication to:
   - To send the publication to all dynamic recipients, select the **Use entire list** check box.
   - To send the publication to particular dynamic recipients, clear the **Use entire list** check box, and then, under **Available**, select the check box for a recipient, and move the recipient to the **Selected** list.

   Enter a recipient's user name, full name, or email address in the **Find title** box to quickly locate the user in the **Available Recipients** list. To exclude a recipient, select the check box for the recipient, and move the recipient to the **Excluded** list.
10. Click **OK**.

After specifying dynamic recipients for the publication, you can personalize the publication for dynamic recipients. To do this, map a field in the source document to a column in the dynamic recipient source.

11.1.11 Selecting a destination for a publication

Dynamic recipients do not have a BI account and cannot access the publication instance.

Enterprise recipients must have *View* rights on a publication to view publication instances.

1. Double-click the publication for which to select a destination.
   The *Properties* dialog box appears.
2. Click **Destinations**.
3. (Optional) To avoid storing publication instances on your system, clear the **Default Enterprise Location** check box under **Select Destinations**.
4. Set a low instance limit on the publication object.

   For instructions, see the *SAP BusinessObjects Business Intelligence Platform User Guide*.
5. Under **Select Destinations**, select the check box beside each destination that you want to send the publication to.

   If you want to create a shortcut to the publication, select both **BI Inbox** and **Default Enterprise Location** as destinations.

   If the publication will be sent to email recipients and you want to embed a link to the Enterprise location in the email body, select both **Email** and **Default Enterprise Location** as destinations.

   The destination you chose appears in the **Show options for selected destinations** list. If you selected multiple destinations, options appear for the last check box you selected.
6. If necessary, select a destination to configure in the **Show options for selected destinations** list.
   Options for the destination appear.
7. (Optional) To choose a name for the publication, select **Use Specific Name**, and enter a name or select a placeholder in the **Add placeholder** list.

   If you do not choose a name, a system-generated name is assigned to a publication. When the publication runs, a value will be inserted in each placeholder.
8. (Optional) If you selected **Use Specific Name** and the publication contains multiple documents to which you want to assign individual names, select the **Specific Name per Document** check box, and enter a name or select a placeholder in the **Add placeholder** list for each document.

   If you do not choose a name, the same system-generated name is assigned to each document.
9. (**Email** only) To embed a link to the Enterprise location in the email body, position the cursor in the **Message** box, and select `<Viewer>` in the **Add placeholder** list under the box.

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The placeholder `<%SI_VIEWER_URL%>` is inserted in the email body. It will be replaced by a link when the publication runs. If you are unable to embed a link, confirm that you selected both **Email** and **Default Enterprise Location** as the destination.

10. (**BI Inbox** only) Under **Send As**, click **Shortcut** to create a shortcut to the publication or **Copy** to create a copy of the publication.

    If you are unable to create a shortcut, confirm that you selected both **BI Inbox** and **Default Enterprise Location** as the destination.

11. If you selected multiple destinations, repeat steps 5 to 10 for each destination to select and configure the destination.
12. Click **OK**.

11.1.11.1 Publication destinations

The following destinations are available for scheduled publications:

- **Default Enterprise Location**
- **BI Inbox**
- **Email**
- **FTP Server**
- **File System**
- **SAP StreamWork** (if enabled and configured)

Table 34: Default Enterprise Location destination

Description	Instance is saved to
The publication is accessible from the folder it was created in. You can perform the following actions: • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file If you send a publication to this location, choose a folder that is accessible to all recipients.	Output File Repository Server Historical instances are saved to the default Enterprise server but not to any other destination.

Table 35: BI Inbox destination

Description	Instance is saved to
The publication is sent to each recipient's BI Inbox. You can perform the following actions: • Use the default settings for the destination • Deliver objects to individual users	• Output File Repository Server • Specified BI Inboxes

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Description	Instance is saved to
To quickly locate a user, you can search for a recipient's user name, full name, or email address in the **Find title** box. • Use the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder in the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Send the publication as a shortcut or a copy If you send a publication to a recipient's BI Inbox shortcut, choose a folder that is accessible to all recipients. To send a publication shortcut to a BI Inbox, select both **BI Inbox** and **Default Enterprise Location** as the destination. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 36: Email destination

Description	Instance is saved to
Note Before you select this destination, confirm that your email settings are configured properly on the Adaptive Job Server. The publication is sent to recipients in an email. You can perform the following actions: • Use the default settings for the destination • Deliver objects to individual users • (Required) Enter your email address in the **From** box If you do not enter your email address, the BI platform uses the email address associated with the publisher's account. If the publisher's account has no email address, the platform uses the email address for the Adaptive Job Server. If there is no email address in the **From** box, the publisher's account, or the Adaptive Job Server, the publication will fail.	Before you can schedule or send a report instance to this destination, you must enable and configure the email (SMTP) destination on the Adaptive Job Server. • Output File Repository Server • Specified email recipients

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Description	Instance is saved to
• Enter recipient email addresses or add the `<Email Address>` placeholder to the **To** box • Enter recipient email addresses or add the `<Email Address>` placeholder to the **Cc** box • Enter recipient email addresses or add the `<Email Address>` placeholder to the **Bcc** box • Enter a subject or add placeholders to the **Subject** box • Enter information to deliver with the publication or add placeholders and embed a dynamic content document in the body of the email in the **Message** box • Attach source document instances to an email • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 37: FTP Server destination

Description	Instance is saved to
The publication is sent to an FTP server. You must enter the FTP server location in the **Host** box. (If you do not, the platform uses the FTP server configured for the Adaptive Job Server.) You can perform the following actions: • Use the default settings for the destination • Enter the port number, user name and password, and account • Enter a directory name • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box.	• Output File Repository Server • Selected FTP server

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Description	Instance is saved to
• Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	

Table 38: File System destination

Description	Instance is saved to
The publication is sent to a directory on a file system. You must enter the directory for the publication. You can perform the following actions: • Use the default settings for the destination • Enter a user name and password to access the file location • Deliver objects to individual users • Accept the default file name, enter a file name, or add placeholders If you select **Use Specific Name**, enter a file extension or add the `<File Extension>` placeholder to the box. • Automatically add the extension to file name If you do not add a file extension to a file name, you may be unable to open the document. • Merge all exported PDF documents (Crystal reports only) • Package the publication as a compressed (`.zip`) file	• Output File Repository Server • Selected file location

Table 39: SAP StreamWork destination

Description	Instance is saved to
The publication is sent for collaboration with other users. This destination is available if SAP StreamWork is configured and enabled in the platform.	SAP StreamWork

The **Deliver objects to each user** check box is selected by default for all destinations. However, in some cases, you may not want to deliver objects to each user. For example, three recipients have identical personalization values so they receive the same data in publication instances. If you clear the **Deliver objects to each user** check box, one publication instance is generated and delivered to all three recipients. If you select the **Deliver objects to each user** check box, the same publication instance is delivered three times (once for each recipient).

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If you are sending the publication to the **FTP Server** or **File System** destination and some recipients share identical personalization values, you can clear the **Deliver objects to each user** check box to decrease overall processing time. When you clear **Deliver objects to each user**, placeholders used when configuring destinations will contain the publisher's (not the recipient's) information.

11.1.12 Selecting a recurrence pattern

The recurrence pattern determines how often a publication runs.

1. Right-click the publication for which to set a recurrence pattern and select **Schedule**.
2. In the *Schedule* dialog box, click **Recurrence**.
3. In the **Run object** list, select a recurrence pattern.
4. In the **Number of retries allowed** box, enter the number of times the server should attempt to rerun a failed job.
5. In the **Retry interval in seconds** box, enter how long the server should wait before attempting to rerun a job.
6. Click **Schedule**.

The publication runs at the scheduled times.

11.1.12.1 Recurrence patterns

Option	Description
Now	Runs the object one time, starting immediately
Once	Runs the object once, at the specified start time. If you schedule an object with events, the object will run once, if the event is triggered between the start and end times. Select when to start and to stop running the object in the **Start Date/Time** and **End Date/Time** lists, and enter the date of the start and the stop times.
Hourly	Creates an instance every hour, at the specified time. The first instance will be created at the specified start time, and instances will be created hourly at that time, until the object stops running at the specified end time. Select the frequency at which to run the object in the **Hour(N)** and **Minute(X)** lists, select when to start and to stop running the object in the **Start Date/Time** and **End Date/Time** lists, and enter the date of the start and the stop times.

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Option	Description
Daily	Runs the object once daily, at the specified start time. The first instance will be created at the specified start time, and instances will be created daily at that time, until the object stops running at the specified end time. Enter the interval at which to run the object in the **Days(N)** box, select when to start and to stop running the object in the **Start Date/Time** and **End Date/Time** lists, and enter the date of the start and the stop times.
Weekly	Runs the object each week on the selected days, at the specified start time. The first instance will be created at the specified start time, and instances will be created each week on those days at that time, until the object stops running at the specified end time. Select a check box for each day that you want to run the object, select when to start and to stop running the object in the **Start Date/Time** and **End Date/Time** lists, and enter the date of the start and the stop times.
Monthly	Runs the object on the specified date, at the specified start time, and at the specified monthly intervals. The first instance will be created at the specified start time, and instances will be created in monthly intervals at that time, until the object stops running at the specified end time. Select the interval at which to run the object in the **Month(N)** box, select when to start and to stop running the object in the **Start Date/Time** and **End Date/Time** lists, and enter the date of the start and the stop times.
Nth Day of Month	Creates an instance each month on the specified day, at the specified start time. The first instance will be created at the specified start time, and instances will be created on the specified day of each month at that time, until the object stops running at the specified end time. Enter the time to start and to stop running the object and the day of the month on which to run the object.
1st Monday of Month	Creates an instance on the first Monday of each month, at the specified start time. Enter the time to start and to stop running the object.
Last Day of Month	Creates an instance on the last day of each month, at the specified start time.

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Option	Description
	Enter the time to start and to stop running the object.
X Day of Nth Week of the Month	Creates an instance each month on the specified day and week, at the specified start time. Enter the time to start and to stop running the object, the day of the week, and the week in the month to run the object.
Calendar	Creates an instance on each calendar date you specify, at the specified start time. Enter the time to start and to stop running the object, and select the calendar dates when you want to run the object.

11.1.13 Selecting personalized placeholders for publication source documents

When scheduling a publication instance, you can use placeholders in the **Use Specific Name** field for source documents.

Before you can use personalized placeholders in publication instance names, you must have used personalization to filter data in source documents.

You can combine text and placeholders—and use multiple placeholders—in a publication name.

1. Double-click the publication for which to select placeholders.
2. In the *Properties* dialog box, click **Destinations** in the navigation list.
3. Under **Show options for selected destinations**, select **Use Specific Name** and choose a placeholder for the publication name from the **Add placeholder** list.
   The placeholders you select appear in the **Specific Name** box for the document title.
4. To add individual documents:
   a) Under **Target Name**, select **Specific Name per Document**.
   b) For each document title, select a placeholder from the **Add placeholder** list.

   The placeholders you select appear in the **Specific Name** box for each document title.
5. Click **OK**.

After personalization is set up for a publication, personalized placeholders appear in the **Add placeholder** list in the *Destinations* dialog box.

11.1.14 Selecting personalized placeholders for email fields

When scheduling a publication to an email destination, you can use placeholders in the **From**, **To**, **Cc**, **Bcc**, **Subject**, **Message**, and **Use Specific Name** fields.

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You can combine text and placeholders—and use multiple placeholders—in any email field.

1. Double-click the publication for which to select placeholders.
2. In the *Properties* dialog box , click **Destinations** in the navigation list.
3. In the **Destination** list, select **Email**.
4. Set the destination options, including placeholders, as needed.
5. Click **OK**.

11.1.15 Embedding content from a dynamic source document in an email

You can embed content from dynamic content documents in the body of an email.

For Crystal reports, you can embed content from a report. For Web Intelligence documents, you can embed an entire document or a single report tab.

1. Right-click the publication for which to embed content and select **Properties**.
2. In the *Properties* dialog box, click **Formats** in the navigation list.
3. Under **Documents**, select the dynamic content document to embed in the email.
4. For Crystal reports, under **Format Options for Selected Document**, select the **mHTML** check box.
5. For Web Intelligence documents, choose whether to publish the entire document or one report tab in the document:
   a) Under **Output Format**, select the **mHTML** check box.
   b) Under **Output Format Details**, select **All reports** to publish the entire document or **Select one report** and choose a report tab in the list.
6. Click **Destinations** in the navigation list.
7. In the *Destinations* dialog box, under **Select Destinations**, select the **Email** check box.

   The email configuration options appear.
8. In the **From** box, enter a name or email address or select `<Email Address>` from the **Add placeholder** list.

   For example, you can enter `Robert`, `Publisher`, or `publisher@sap.com`. If you enter a name, the name is appended to your email server—for example, `Publisher@<emailserver>`.
9. In the **Subject** box, enter a subject or select a placeholder.

   If you personalized the report, personalized placeholders are available in the **Add placeholder** list.
10. In the **Message** box, enter the message that you want to appear in the body of the mail.
11. To embed dynamic content in the **Message** box, position the cursor in the **Message** box where you want to embed content, and select `<Report HTML Content>` in the **Add placeholder** list.

    `<%SI_DOCUMENT_HTML_CONTENT%>` appears in the **Message** box. When the publication runs, the placeholder is replaced by personalized content from the dynamic content document.
12. If the publication contains other source documents, select the **Add Attachment** check box.

    Other source documents in the publication will be added to the email as attachments when the publication runs.
13. Click **OK**.

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11.1.16 Crystal report design tasks

11.1.16.1 Personalizing Crystal reports with parameter values

You can personalize a Crystal report for recipients based on predefined parameter values for each recipient. Personalization that is based on parameter values may be overridden by other personalization methods.

For example, if a profile is mapped to a parameter and the profile value for an Enterprise recipient conflicts with the parameter value, the profile value will override the parameter value when the publication runs. Similarly, if a personalization value in the dynamic recipient source conflicts with a parameter value for a dynamic recipient, the parameter value will be overridden when the publication runs.

Personalize Crystal reports with local profile targets when possible. Parameter-based personalization requires one database fetch per recipient when the parameter is used in a record selection formula, command, table, or stored procedure, which can increase publication processing time.

11.1.16.2 Personalizing a Crystal report using parameter values

- Before you can use profiles to personalize data for Enterprise recipients, the profiles must be configured in the BI platform.
- Before you can perform this task, the Crystal report must contain parameters.

1. Double-click the publication to personalize.
2. In the *Properties* dialog box, click **Personalization** in the navigation list.
3. Review the parameter values under **Parameters** and note any values that need to be changed.
4. To change a default value, click the **Edit Values** button beside the default parameter value, select or enter the parameter value, and click **OK**.
5. Perform one of the following actions:
   - To override the default parameter personalization with Enterprise-recipient profile values, in the **Enterprise Recipient Mapping** column, select a profile in the list.
     If this profile is not configured in the BI platform, personalization will fail. If you need profiles added to the BI platform, contact your system administrator.
   - If you are using only default parameter values to personalize a report, select **Default value for all recipients** in the **Enterprise Recipient Mapping** column.

   The **Enterprise Recipient Mapping** column appears only if the publication is intended for Enterprise recipients.
6. To override the default parameter personalization with dynamic recipient personalization values, in the **Dynamic Recipient Mapping** column, select a dynamic recipient source in the list.

   The **Dynamic Recipient Mapping** column appears only if the publication is intended for dynamic recipients.

   If you are using default parameter values to personalize a report, select **Not Specified** in the **Dynamic Recipient Mapping** column.
7. Click **OK**.

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11.1.16.3 Personalizing a Crystal report by filtering fields

When you use filters, a ViewTime selection formula is added to a report to filter data. The formula is applied when the publication runs and is not saved in the report.

Before you can use profiles to personalize data for Enterprise recipients, the profiles must be configured in the BI platform.

You can filter multiple fields in Crystal reports. Static-value profiles can filter only string fields in Crystal reports. To filter other types of fields, use expression profile values. If you map the incorrect type of field to the profile, personalization will fail.

This feature is not available for Crystal reports in `.rptr` format.

1. Double-click the publication to personalize.
2. In the *Properties* dialog box, click **Personalization** in the navigation list.
3. Under **Local Profiles**, in the **Report Field** column, select a Crystal report field in the list.

   The list of available fields includes all database fields and recurring formulas in the main report and in not-on-demand subreports.
4. In the **Enterprise Recipient Mapping** column, select a profile in the list.

   This profile maps the report to profile values defined for Enterprise recipients. If the profile is not configured in the BI platform, personalization will fail. If you need profiles added, contact your system administrator.

   The **Enterprise Recipient Mapping** column appears only for publications intended for Enterprise recipients.
5. In the **Dynamic Recipient Mapping** column, select a dynamic recipient source in the list.

   The report field is mapped to a column in the dynamic recipient source that contains corresponding values.

   The **Dynamic Recipient Mapping** column appears only for publications intended for dynamic recipients.
6. Repeat steps 2 to 5 for each report field you want to filter.
7. Click **OK**.

11.1.16.4 Specifying publication formats for a Crystal report

You can select and configure more than one publication format for a Crystal report.

When you select a format, the available formatting options appear. For some options, such as **Crystal Reports** and **Crystal Reports (RPTR)**, no formatting options appear and the default source document formatting is applied.

1. Double-click the publication for which to specify a publication format.
2. In the *Properties* dialog box, click **Formats** in the navigation list.
3. Under **Format Options for Selected Document**, select a format to publish the Crystal report in.

   The options for the selected format appear.
4. Configure the formatting options as needed.
5. When the **Use the export options defined in the report** check box is available, perform one of the following actions:
   - Select the check box to use the default export options defined in the source document.

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- Clear the check box to configure export options for the format you selected, and then configure the options that appear.

6. Repeat steps 3 to 5 for each format in which you want to publish this Crystal report.
7. Click **OK**.

Repeat this task for each Crystal report in the publication.

11.1.16.4.1 Crystal report formatting options

No additional options appear when you choose **Tab Separated Text (TTX)** as the formatting option.

PDF options apply to source documents published as PDF files.

Table 40: Microsoft Excel (97-2003)

Option	Description
Page Range	• To publish the entire report as an Excel file, select **All**. • To publish specific report pages, select **Pages**, enter the first page number in the **from** box, and enter the last page in the **to** box.
If you clear the **Use the export options defined in the report** check box, the following options are available:	
Set Column Width	• To define column widths relative to objects in the report, select **Column width based on objects in the**, and select an option in the list—**Whole report**, **Report Header**, **Page Header**, **Group Header #**, **Details**, **Group Footer #**, **Page Footer**, or **Report Footer**. • To define a constant width for all columns, select **Constant column width (in points)**, and enter a number in the box.
Export page header and page footer	Select this check box to choose how frequently headers and footers appear in the Excel file, and select an option in the list—**None**, **Once Per Report**, or **On Each Page**.
Create page breaks for each page	Select this check box to create page breaks that reflect the page breaks in the report.
Convert date values to strings	Select this check box to convert date values to text strings.
Show gridlines	Select this check box to include gridlines in the Excel file.

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Table 41: Microsoft Excel (97-2003) (Data Only)

Option	Description
If you clear the **Use the export options defined in the report** check box, the following options are available:	
Set Column Width	• To define column widths relative to objects in the report, select **Column width based on objects in the**, and select an option in the list—**Whole report**, **Report Header**, **Page Header**, **Group Header #**, **Details**, **Group Footer #**, **Page Footer**, or **Report Footer**. • To define a constant width for all columns, select **Constant column width (in points)**, and enter a number in the box.
Export object formatting	Select this check box to preserve object formatting.
Export images	Select this check box to publish report images in the Excel file.
Use worksheet functions for summaries	Select this check box to use the report summaries to create worksheet functions for the Excel file.
Maintain relative object position	Select this check box to preserve the relative position of report objects.
Maintain column alignment	Select this check box to preserve the column alignment from the report.
Export page header and page footer	Select this check box to choose how frequently headers and footers appear in the Excel file, and select an option in the list—**None**, **Once Per Report**, or **On Each Page**.
Simplify page headers	Select this check box to simplify page headers.
Show group outlines	Select this check box to show group outlines from the report.

Table 42: Microsoft Excel Workbook Data-only

Option	Description
If you clear the **Use the export options defined in the report** check box, the following options are available:	
Set Column Width	• To define column widths relative to objects in the report, select **Column width based on objects in the**, and select an option in the list—**Whole report**, **Report Header**, **Page Header**, **Group Header #**,

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Option	Description
	Details, **Group Footer #**, **Page Footer**, or **Report Footer**. • To define a constant width for all columns, select **Constant column width (in points)**, and enter a number in the box.
Export object formatting	Select this check box to preserve object formatting.
Export images	Select this check box to publish report images in the Excel file.
Use worksheet functions for summaries	Select this check box to use report summaries to create worksheet functions for the Excel file.
Maintain relative object position	Select this check box to preserve the relative position of report objects.
Maintain column alignment	Select this check box to preserve the column alignment from the report.
Export page header and page footer	Select this check box to choose how frequently headers and footers appear in the Excel file, and select an option in the list—**None**, **Once Per Report**, or **On Each Page**.
Simplify page headers	Select this check box to simplify page headers.
Show group outlines	Select this check box to show group outlines from the report.

Table 43: Microsoft Word (97-2003)

Option	Description
Page Range	• To publish the entire report as a Word file, select **All**. • To publish specific report pages, select **Pages**, enter the first page number in the **from** box, and enter the last page in the **to** box.

Table 44: PDF

Option	Description
Page Range	• To publish the entire report as a PDF file, select **All**. • To publish specific report pages, select **Pages**, enter the first page number in the **from** box, and enter the last page in the **to** box.

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Option	Description
If you clear the **Use the export options defined in the report** check box, the following option is available:	
Create bookmarks from group tree	Select this check box to publish a Crystal reports publication as a merged PDF file with a table of contents.

Table 45: Rich Text Format (RTF)

Option	Description
Page Range	• To publish the entire report as an RTF file, select **All**. • To publish specific report pages, select **Pages**, enter the first page number in the **from** box, and enter the last page in the **to** box.

Table 46: Microsoft Word - Editable (RTF)

Option	Description
Page Range	• To publish the entire report as a Word file, select **All**. • To publish specific report pages, select **Pages**, enter the first page number in the **from** box, and enter the last page in the **to** box.
If you clear the **Use the export options defined in the report** check box, the following option is available:	
Insert page break after each report page	Select this check box to create page breaks that reflect the page breaks in the report.

Table 47: Plain Text

Option	Description
If you clear the **Use the export options defined in the report** check box, the following option is available:	
Number of Characters per Inch	Enter the number of characters that should appear per inch in the plain text file. The recommended range is between 8 and 16.

Table 48: Paginated Text

Option	Description
If you clear the **Use the export options defined in the report** check box, the following options are available:	
Number of Lines per Page	Enter a value to indicate how many lines are allowed on each page of the paginated text file.

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Option	Description
Number of Characters per Inch	Enter the number of characters that should appear per inch in the paginated text file. The recommended range is between 8 and 16.

Table 49: Separated Values (CSV)

Option	Description
If you clear the **Use the export options defined in the report** check box, the following options are available:	
Delimiter	Enter the character to use as a delimiter.
Separator	Enter the character to use to separate values, or select the *Tab* check box to separate values with tabs.
Mode	Select **Standard Mode** (the default) or **Legacy Mode**. In standard mode, you can control how report pages and group headers and footers appear in CSV output.
Report and page sections	• Select **Export** to export report and page sections. • Select **Do not export** if you do not want to export report or page sections. • Select the **Isolate report/page sections** check box to isolate report and page sections.
Group sections	• Select **Export** to export group sections. • Select **Do not export** if you do not want to export group sections. • Select the **Isolate report/page sections** check box to isolate group sections.

Table 50: XML

Option	Description
If you clear the **Use the export options defined in the report** check box, the following option is available:	
XML Exporting Formats	To specify the XML format, select an option in the list.

11.1.16.5 (Optional) Setting print options for a Crystal report in a publication

You can print instances in Crystal reports format each time a publication runs, using the Crystal Reports Job Server's default printer or a different printer. The BI platform prints instances after the publication is personalized but before delivery.

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Before you can set print options for the default printer, the printer must be installed and configured properly.

This task is optional (not required to design or schedule a publication) but can improve publication performance.

The Crystal Reports Job Server must run on an account that has sufficient privileges to access the printer you specify. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

1. Right-click the publication for which to set print options and select **Schedule**.
2. In the *Schedule* dialog box, click **Print Settings**.
3. Under **Documents**, select the Crystal report that you want to print when the publication runs.
4. Select the **Print Crystal reports when scheduling** check box.
   The Crystal report print options appear.
5. Select **Default printer** to print to the Job Server's default printer, or select **Specify the printer** and select the printer's path and name:
   - If the job server runs on Windows, in the **Specify the printer** box, enter `\\<PrintServer>\<PrinterName>`
     Replace `<PrintServer>` with the name of your printer server and `<PrinterName>` with the name of your printer.
   - If the job server runs on Unix, confirm that the Unix is shown (not hidden), and enter the print command that you usually use in the **Specify a printer** box.
     For example, enter `lp -d <PrinterName>`
6. In the **Number of Copies** box, enter the number of copies to print.
7. Under **Page Range**, select **All** to print all pages in the publication or **Pages** and enter the page range to print.
8. (Optional) In the **Set collate option to** list, select **Collate**, **Do not collate**, or **Use printer defaults**.
9. (Optional) In the **Page Scaling** list, select **Scale to fit**, **Only shrink to fit**, or **Do not scale**.
10. (Optional) To center report content on the page, select the **Center the page** check box.
11. (Optional) If the Crystal report is wide and you want it to print on one page, select the **Fit horizontal pages into one page** check box.
12. Click **Schedule**.

11.1.16.6 (Optional) Setting a recipient delivery rule on a Crystal report

Recipient delivery rules determine whether a publication is delivered to a particular recipient after processing and personalization. After creating a publication, you can open the publication and change the delivery rules for it.

This task is optional (not required to design or schedule a publication) but can improve publication performance.

1. Double-click the publication for which to set a recipient delivery rule.
2. In the *New Publication* dialog box, expand **Additional Options**, and click **Delivery Rules**.
3. Under **Recipient Delivery Rule**, select **Deliver individual document when condition is met** or **Deliver all documents only when all conditions are met**.
4. In the **Condition** column beside each document, select the condition that must be met before the publication will be delivered.
5. Click **Save & Close**.

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11.1.16.7 (Optional) Setting a global delivery rule on a Crystal report

Global delivery rules determine whether a publication will be processed and delivered to all recipients. You can set a global delivery rule on any Crystal report in the BI platform.

The Crystal report must contain an alert before you can set a global delivery rule.

This task is optional (not required to design or schedule a publication) but can improve publication performance.

1. Right-click a publication and select **Schedule**.
2. In the *Schedule* dialog box, click **Delivery Rules**.
3. Under **Global Delivery Rule**, click **Browse**.
   The *Select a report that contains an alert* window appears, where you can select the Crystal report on which to set the global delivery rule.
4. Locate and select the Crystal report, and click **OK**.
5. In the **Condition** list, select the alert value that the report must include in order to meet the global delivery rule.
6. Click **Schedule**.

11.1.16.8 Formatting merged PDF files

Formatting merged PDF files is optional (not required to design or schedule a publication) but can improve publication performance.

Before you can format a merged PDF file:

- Crystal reports must have titles in order to be included in a merged PDF file. To set the title for a report, open the report in SAP Crystal Reports, select **File** > **Summary Info**, and enter a title for the report in the **Title** box on the **Summary** tab. Save the report and re-export it to the repository.
- In the BI launch pad, in the *Schedule* dialog box, under **Source Documents**, the Crystal reports and PDF files that you want to merge must appear in the correct order.
- In the launch pad, in the *Schedule* dialog box, under **Formats**, the **PDF** check box must be selected as a format for each Crystal report that you want to include in the merged PDF file.
- In the launch pad, in the *Schedule* dialog box, under **Destinations**, the **Merge Exported PDF** check box must be selected for each destination that you want to send the merged PDF file to.

To ensure that Crystal reports will appear in the table of contents of the merged PDF file, for each Crystal report listed, select the report in the **Documents** list in the **Formats** area, clear the **Use the export options defined in the report** check box, and select the **Create bookmarks from group tree** check box.

11.1.16.8.1 (Optional) Formatting a merged PDF file

This task is optional (not required to design or schedule a publication) but can improve publication performance.

1. Double-click the publication for which to format a merged PDF file.

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2. In the *Properties* dialog box, click **Merged PDF Options**.
3. Create a table of contents for the merged PDF file:
   a) Select the **Create Table of Contents** check box.
      The format options for the table of contents appear.
   b) In the **Title** box, enter a title for the table of contents.
   c) In the **Title Font** list, select the font, font size (in points), and font color for the title of the table of contents.
   d) In the **Item Font** list, select the font, font size (in points), and font color for items in the table of contents.
4. Set the page number format for the merged PDF file:
   a) Select the **Apply Running Page Numbers** check box .
      The format options for page numbers appear.
   b) In the **Number Format** box, enter a format for page numbers.

      By default, the format is set to `Page &p of &P`. You can change the format, but you must use `&p` as a placeholder for the current page number and `&P` as a placeholder for the total number of pages.
   c) In the **Number Location** list, select the page number orientation for the merged PDF file.
   d) In the **Number Font** list, select the font, font size (in points), and font color for the page numbers.
   e) If you want the table of contents to have page numbers, select the **Apply page numbers to Table of Contents pages** check box.
5. Set recipient logon credentials and permissions for recipient actions:
   a) Select the **Set Restrictions** check box.
   b) In the **User Password** box, enter the password that recipients must enter to view the merged PDF file.
   c) In the **Owner Password** box, enter the password that recipients must enter to edit the merged PDF file.
   d) To allow recipients to print the PDF file, select the **Allow Printing** check box.
   e) To allow recipients to modify the PDF file, select the **Allow Modification of Contents** check box.
   f) To allow recipients to copy and paste PDF contents, select the **Allow Copy and Paste (Required for Embedded Flash Objects to Run)** check box.
   g) To allow recipients to modify annotations in the PDF file, select the **Allow Modification of Annotations** check box.
6. Click **OK**.

11.1.16.9 (Optional) Configuring database logon information for a Crystal report

You can modify the database logon information that recipients use to log on to the database and refresh the data in the Crystal report.

Before you begin, confirm that database settings for the Crystal report are correct. Under **Folders** in the CMC, select the Crystal report, and select **Manage** > **Default Settings** > **Database Configuration** to check the database information or to enter new information.

This task is optional (not required to design or schedule a publication) but can improve publication performance.

You may need to modify the data source information that a Crystal report references, in the report itself. Open the Crystal report in SAP Crystal Reports, and select **Database** > **Set Datasource Location**. In the *Set Datasource Location* dialog box, select a connection or create a new connection.

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1. Double-click a publication to open it.
2. Click **Database Logon**.
3. In the **Title** list, select a Crystal report.
   The database information for the Crystal report appears below the **Title** list.
4. Confirm that the information in the **Database Server** box and the **Database** box is correct.
5. In the **User** box, enter the user name that recipients must use to log on.
6. In the **Password** box, enter a password that recipients must use to log on.
7. Click **OK**.

11.1.17 Web Intelligence document design tasks

11.1.17.1 Specifying a publication format for a Web Intelligence document

You must specify a publication format for each dynamic content source Web Intelligence document in a publication.

1. Double-click the publication for which to specify a publication format.
2. In the *Properties* dialog box, click **Formats** in the navigation list.
3. Under **Output Format**, select the check box beside the format in which to publish the Web Intelligence document:
   - **Web Intelligence**
   - **Microsoft Excel**
   - **Adobe Acrobat**
   - **mHTML**
4. If you selected **Comma Separated Values (CSV)**, under **Format Options and Settings**, perform the following actions:
   a) In the **Text qualifier** list, select a text qualifier.
   b) In the **Column delimiter** list, select a column delimiter.
   c) In the **Charset** list, select the character set.
   d) If you want to enter a new character set, select the **Enter a new charset** check box, and enter the character set in the box.
   e) If you want to use the settings configured as the default, select the **Set as default values** check box.
   f) If you want to generate a comma-separated value for each data source, select the **Generate separate CSV per Data Provider** check box.
5. Repeat steps 3 to 4 for each format in which to publish the document.
6. Click **OK**.

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11.1.17.2 Personalizing a Web Intelligence document with a global profile target

You can personalize a Web Intelligence document for Enterprise recipients by filtering with a global profile target.

- Before you can use a profile to personalize data for Enterprise recipients, the profile must be configured in the BI platform. If a profile is not configured in the platform, personalization will fail.
- Before personalizing a Web Intelligence document, ensure that the profile has a global profile target.

When you define personalization under **Global Profiles**, you do not need to set personalization options under **Filters**. If you need profiles added to the BI platform, contact your system administrator.

1. Double-click the publication to personalize.
2. In the *Properties* dialog box, click **Personalization**.
3. Under **Global Profiles**, in the **Enterprise Recipient Mapping** column, select a profile in the list.

   This profile maps the document to the universe field (global profile target) that is filtered for Enterprise recipients.
4. Click **OK**.

11.1.17.3 Personalizing a Web Intelligence document by filtering fields

Before you can use a profile to personalize data, the profile must be configured in the BI platform. If a profile is not configured in the platform, personalization will fail.

Static-value profiles can filter only string fields in source documents. To filter other types of fields, use expression profile values. If you map an incorrect type of field to the profile, personalization will fail.

If you need profiles added to the platform, contact your system administrator.

1. Double-click the publication to personalize.
2. In the *Properties* dialog box, click **Personalization**.
3. Under **Local Profiles**, for each profile listed in the **Title** column, select a profile from the list in the **Report Field** column.

   This profile maps the report field to profile values for Enterprise recipients.
4. Under **Local Profiles**, in the **Enterprise Recipient Mapping** column, select a profile the list.

   This profile maps the document to the universe field (global profile target) that is filtered for Enterprise recipients.
5. In the **Dynamic Recipient Mapping** column, select a profile in the list.

   The field in the source document is mapped to the column that contains corresponding values in the dynamic recipient source.
6. Repeat steps 3 to 5 for each field that you want to filter.
7. Click **OK**.

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11.1.17.4 (Optional) Editing prompt values in a Web Intelligence document

If you do not want to use the default prompt values in a Web Intelligence document, you can edit the values.

Before editing prompt values, confirm that the document contains prompts.

This task is not required to design or schedule a publication, but it can improve publication performance.

1. Right-click the publication for which to edit prompt values and select **Schedule**.
2. In the *Schedule* dialog box, expand **Additional Options**, and click **Prompts**.
   Web Intelligence documents that contain prompts appear.
3. Click **Modify**.
4. In the *Prompts* dialog box, click **Refresh Values**.
   A list of possible prompt values appears.
5. Move the desired prompt value or values from the left list to the right list, and click **Apply**.

The list of prompt values is updated.

11.1.18 Optional publication tasks

The tasks in this section are optional (not required to design and schedule a publication) but can improve publication performance.

11.1.18.1 Adding a publication extension

You must add a publication extension before you can use it in a publication.

Before you can use a publication extension, the extension must be deployed on all computers that run the Adaptive Processing Server. The location varies of the server, depending on the operating system:

- In Windows, the server is located at `<InstallDir>\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\java\lib\`
- In Unix, the server is located at `<InstallDir>/sap_bobj/enterprise_xi40/java/lib/`

After a publication extension is deployed, you must restart the Adaptive Processing Server and any server that hosts a Publishing Service. For more information about publication extensions, see the *SAP BusinessObjects Business Intelligence Platform Java SDK Developer Guide*.

> **Tip**
>
> To define the order in which to execute publication extensions, click **Move Up** or **Move Down** under the **Before Publication Delivery** list or the **After Publication Delivery** list.

1. Double-click the publication for which to select a publication extension.
2. In the *Properties* dialog box, expand **Additional Options**, and click **Publication Extension**.

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3. In the **Publication Extension Name** box, enter a name for the extension.
4. In the **Class Name** box, enter the fully qualified class name for the extension.
5. (Optional) In the **Parameter** box, enter a parameter name.
6. To use the extension after processing but before delivery, above the **Before Publication Delivery** list, click the **Add** button.
   The extension is added to the **Before Publication Delivery** list.
7. To use the extension after delivery, above the **After Publication Delivery** list, click the **Add** button.
   The extension is added to the **After Publication Delivery** list.
8. Click **Save**.

11.1.18.2 Configuring email notification for a publication job

Configure email notification when you want to receive an email message after a publication job runs.

Before configuring email notification, confirm that the Adaptive Job Server is properly configured.

1. Double-click the publication for which to configure email notification.
2. In the *Properties* dialog box, click **Notification**, and expand **Email Notification: Not in use**.
3. For successful publication jobs, to receive email notification at default recipient email addresses, select **A job has been run successfully**, and select **Use the Job Server's defaults** to use the default addresses on the Adaptive Job Server.
4. For successful publication jobs, to receive email notification at specified recipient mail addresses, select **A job has been run successfully**, select **Set the values to be used here**, and perform the following actions:
   a) In the **From** box, enter an email address or a name from whom the notification will be sent.
   b) In the **To** box, enter the email address of each recipient who should receive the notification.
   c) In the **Cc** box, enter the email address of each additional recipient who should be copied on the notification.
   d) In the **Subject** box, enter the subject of the notification.
   e) In the **Message** box, enter a message to accompany the notification.
5. For failed publication jobs, to receive email notification at default recipient email addresses, select **A job has failed to run**, and select **Use the Job Server's defaults** to use the default addresses on the Adaptive Job Server.
6. For failed publication jobs, to receive email notification at specified recipient mail addresses, select **A job has failed to run**, select **Set the values to be used here**, and perform the following actions:
   a) In the **From** box, enter an email address or a name from whom the notification will be sent.
   b) In the **To** box, enter the email address of each recipient who should receive the notification.
   c) In the **Cc** box, enter the email address of each additional recipient who should be copied on the notification.
   d) In the **Subject** box, enter the subject of the notification.
   e) In the **Message** box, enter a message to accompany the notification.
7. Click **OK**.

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11.1.18.3 Enabling auditing notification for a publication job

You must enable audition notification if you want to audit successful or failed publications.

For more information about auditing, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

1. Double-click the publication for which to enable auditing notification.
2. In the *Properties* dialog box, expand **Additional Options**, click **Notification**, and expand **Audit Notification: Not in use**.
3. To audit successful publication jobs, select **A job has been run successfully**.
4. To audit failed publication jobs, select **A job has failed to run**.

11.1.18.4 Selecting events to trigger a publication

Perform this task to schedule a publication to run after a particular event occurs or when a publication job should trigger an event when it stops running.

Event-based scheduling gives you additional control over when a publication runs. For information about events, see the *SAP BusinessObjects Business Intelligence Platform User Guide*.

1. Double-click the publication for which to select events.
2. In the *Properties* dialog box, expand **Additional Options**, and click **Events**.
3. To specify file-based and custom events for a publication, click the **>** button to move events from the **Available Events** list to the **Events to wait for** list.

   The events trigger the publication job to run.
4. To specify schedule events for a publication, click the **>** button to move events from the **Available Schedule Events** list to the **Events to trigger on completion** list.

   The events occur after the publication job runs.
5. Click **OK**.

11.1.18.5 Selecting a server group for a publication

Select a particular server group to process a publication.

You cannot schedule publications across sites in a federation. For information about server groups, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

1. Double-click the publication for which to select a server group.
2. In the *Properties* dialog box, expand **Additional Options**, and click **Scheduling Server Group**.
3. If you want the publication job to run at its site of origin, select the **Run at origin site** check box.
4. Select a server group option, and click **OK**

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11.1.18.6 Selecting a profile resolution method

Select a profile resolution method so that, when a profile conflict occurs, the profile resolution determines whether instances will be merged or delivered as separate documents in a publication.

1. Double-click the publication for which to select a profile resolution method.
2. In the *Properties* dialog box, expand **Additional Options**, and click **Advanced**.
3. Under **Profile Resolution Method**, perform either 9of the following actions:
   - Select **Do not merge** if you want profiles from multiple user groups to result in separate documents.
   - Select **Merge** if you want to apply profiles from multiple user groups to the same document.
4. Click **OK**.

11.1.18.7 Selecting a report bursting method

Select a report bursting method to determine how source documents are personalized, processed, and delivered in a publication.

Before selecting a report bursting method, ensure that the publication contains Web Intelligence documents intended for Enterprise recipients and that profiles used for personalization have filter expressions.

Report bursting methods use different filter types to personalize and process documents. For example, the **One database fetch for all recipients** option uses a report filter and the **One database fetch per recipient** option uses a query filter. Each filter type supports a different set of operators. If a filter expression uses an operator that the report bursting method does not support, the publication may fail.

1. Double-click the publication for which to select a report bursting method.
2. In the *Properties* dialog box, expand **Additional Options**, and click **Advanced**.
3. Under **Report Bursting Method**, select a report bursting method.
4. Click **OK**.

11.2 Optional post-design publication tasks

Tasks in this section are optional and can be performed after publication design.

11.2.1 Finalizing a publication

At any point during or after publication design, you can view a publication's properties in the *Summary* dialog box —including the publication's title, location, description, source documents, the number of recipients who will receive the publication (sorted by recipient type, Enterprise or dynamic), how the publication is personalized, the distribution format, and the destination.

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To open the *Summary* dialog box, click **Summary**. You can use other options on the navigation panel to change the properties of and to save or schedule a publication.

11.2.2 Testing a publication

Use test mode in the BI launch pad to send a publication to yourself before sending it to recipients.

You receive the same information that recipients will receive. Destinations are automatically updated so that your BI Inbox or your email address is used instead of publication recipients' BI Inbox or email address. If necessary, you can exclude selected recipients from the original group of recipients in test mode.

1. Right-click the publication to test and select **Test Mode**.
2. (Optional) In the *Test Mode* dialog box, modify the list of Enterprise recipients:
   a) Click **Enterprise Recipients**.
   b) Under **Available**, select users or groups, and click the **>** button to move the users or groups to the **Selected** list or the **Excluded** list.
3. (Optional) Modify the list of dynamic recipients:
   a) Click **Dynamic Recipients**.
   b) Under **Choose the source for the dynamic recipients**, select **Web Intelligence Report Dynamic Recipient Provider** or **Crystal Reports Dynamic Recipient Provider** in the list.
4. Click **Test**.

The publication runs in test mode and, once done, is sent to intended "test" recipients.

11.2.3 Scheduling a publication to run

When scheduling a publication, you can use the default recurrence pattern or enter new values, and you can change the recipients each time you schedule a publication.

A publication must be designed and saved before it can be scheduled to run.

1. Right-click the publication to schedule and perform one of the following actions:
   - In the BI launch pad, select **Schedule**.
   - In the Central Management Console (CMC), select **Actions** > **Schedule**.
2. In the *Schedule* dialog box, click **Recurrence**, and confirm that the option selected in the **Run object** list is correct.
3. Click **Schedule**.

11.2.3.1 Viewing the progress or history of a publication job

1. Right-click the publication job and perform one of the following actions:
   - In the BI launch pad, select **More Actions** > **History**.

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- In the Central Management Console (CMC), select **Actions** > **History**.

2. In the **Status** column, click the status (Success, Failed, or Running), and click **View Log File** at the bottom of the *Publication History* dialog box.

11.2.3.2 Viewing publication results

Publication results can be viewed by the publisher, by recipients, or in a log file for the publication job.

Viewing results as a publisher

You can view the results of a publication in various ways. After a publication runs, the publication history appears, listing publication instances, the times when the publication ran, and whether the publication succeeded or failed. In the **Instance Time** column, you can click a link to a publication instance to view instances generated for all recipients when the publication ran.

Viewing log files for publication jobs

Log files are useful for troubleshooting a publication and for identifying which recipients did not receive a publication instance. The BI platform logs publication job information as each batch of personalized publication instances is processed and then consolidates the details into one or more log files. The maximum log file size is 10 MB and is non-configurable. If you run a high-volume publication with many details, the publication instance may have several log files.

You can view log files for a publication instance in the following ways in the *History* dialog box:

- To view the last log file in a series, in the **Status** column, click the status (Success, Failed, or Running), and click **View Log File** at the bottom of the *Instance Details* dialog box. You can view the last log file while a publication is running.
- To view all log files, in the **Instance Time** column, click the link for a publication instance. Log files are listed after the personalized instances.

Log files are updated with new information every two minutes. If a publication job has been running less than two minutes, the log file may have a status of Pending.

Viewing results as a recipient

The following table summarizes the ways you can view a publication:

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Destination	How to view the publication result
Default Enterprise Location	Dynamic recipients cannot log on to the BI platform to view publication results. As a recipient, you can view only your own personalized publication instances in the platform. You cannot view publication instances that are personalized for other recipients.
1. Perform either of the following actions to start the Central Management Console (CMC): ○ In Windows, select **Start** > **Programs** > **SAP Business Intelligence** > **SAP BusinessObjects BI platform 4** > **SAP BusinessObjects BI platform Central Management Console**. ○ In a web browser, enter `http://<ServerName>:<ConnectionPort>/CMC`, replacing `<ServerName>` with your CMS name and `<ConnectionPort>` with your connection port number (specified during installation). The default connection port number is 8080. 2. Enter your logon credentials: ○ In the **System** box, confirm that the CMS name and CMS port are correct. ○ Enter your user name and password. ○ In the **Authentication** list, select the authentication type. 3. Click **Log On**. 4. Under **Folders**, right-click the publication and select **History**. 5. In the *History* dialog box, click the link in the **Instance Time** column. 6. Double-click the instance to view.	
BI Inbox	Dynamic recipients cannot log on to the BI launch pad to view publication results.
1. Perform either of the following actions to start the launch pad: ○ In Windows, select **Start** > **Programs** > **SAP Business Intelligence** > **SAP BusinessObjects BI platform 4** > **SAP BusinessObjects BI platform Java BI Launch Pad**. ○ In a web browser, enter `http://<ServerName>:<ConnectionPort>/BOE/BI`, replacing `<ServerName>` with your CMS name and `<ConnectionPort>` with your connection port number (specified during installation). The default connection port number is 8080. 2. Enter your logon credentials: ○ In the **System** box, confirm that the CMS name is correct. ○ Enter your user name and password. ○ In the **Authentication** list, select the authentication type. 3. Click **Log On**. 4. Click **My Inbox**. 5. Double-click the instance to view.	
Email	Log on to your email to view embedded publication content or to download the attachment or attachments.

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Destination	How to view the publication result
FTP server	Log on to your FTP host.
Local disk	Go to the location specified when the publication was designed.

11.2.4 Subscribing to or unsubscribing from a publication

To subscribe to a publication after it is scheduled, subscribe to its recurring instance—or reschedule the publication.

You must have appropriate access rights to a publication before you can subscribe to it.

Only Enterprise recipients can subscribe to or unsubscribe from a publication. Dynamic recipients cannot subscribe to or from publications.

1. In the **Folders** drawer on the **Documents** tab, locate and select the publication to subscribe to or unsubscribe from.
2. Perform one of the following actions:
   - In the BI launch pad, right-click the publication and select **Subscribe** or **Unsubscribe**.
   - In the Central Management Console (CMC), select **Actions** > **Subscribe** or **Unsubscribe**.

11.2.5 Subscribing to or unsubscribing from a publication instance

After a recurring publication has been scheduled, Enterprise recipients can subscribe to its first recurring instance. For example, when a publication is scheduled to run twice a week, you can subscribe to the first publication instance but not the second one.

You must have appropriate access rights to a publication before you can subscribe to its instances.

Only Enterprise recipients can subscribe to or unsubscribe from a publication instance. Dynamic recipients cannot subscribe to or from publication instances.

1. Perform one of the following actions:
   - In the BI launch pad, right-click a publication and select **History**.
   - In the Central Management Console (CMC), select **Actions** > **History**.
2. In the *History* dialog box, perform one of the following actions:
   - In the launch pad, right-click the instance and select **Subscribe** or **Unsubscribe**.
   - In the CMC, right-click the instance and select **Actions** > **Subscribe** or **Unsubscribe**.

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11.2.6 Redistributing a publication instance

When you want to resend an instance to a recipient but do not want to rerun an entire publication, you can redistribute successful publication instances to all or some of the original recipients.

Only recipients specified when the publication was originally run can receive redistributed instances.

1. Perform one of the following actions:
   - In the BI launch pad, right-click a publication and select **History**.
   - In the Central Management Console (CMC), right-click a publication and select **Actions** > **History**.
2. In the *History* dialog box, select a successful publication instance.
3. Perform one of the following actions:
   - In the launch pad, select **More Actions** > **Reschedule**.
   - In the CMC, select **Actions** > **Reschedule**.
4. Choose which recipients will receive redistributed instances:
   - To redistribute an instance to Enterprise recipients, click **Enterprise Recipients**, and click the **>** button to move recipients from the **Available** list to the **Selected** list.
   - To redistribute an instance to dynamic recipients:

   a) Click **Dynamic Recipients**, and confirm that columns mapped to recipient IDs, full names, and email addresses are correct.
   b) To redistribute the publication to all dynamic recipients, select **Use entire list**.
   c) To redistribute the publication to selected dynamic recipients, click the **>** button to move recipients from the **Available** list to the **Selected** list.
5. Click **Redistribute**.
   The publication history appears, and the redistributed instance has a status of Running. The date in the **Instance Time** column is updated to reflect the redistribution time.

11.2.7 Retrying a failed publication

Before retrying a failed publication, view the log file for the publication instance, address any errors, and reschedule the publication.

1. Select the failed publication instance.
2. Perform either of the following actions:
   - In the BI launch pad, select **More Actions** > **History**.
   - In the Central Management Console (CMC), select **Actions** > **History**.

   The instance status changes to Running.

If the publication fails again, review the new log file and fix any errors that occurred.

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11.3 Improving publication performance

You can improve publication performance by modifying the Adaptive Processing Server, the Publishing Service, and the Publishing Post Processing Service.

Adaptive Processing Server

Area	Consideration
CPU and memory	Move the Adaptive Processing Server to a faster machine that has more available CPUs and BI platform Feature Pack 3 or later installed. The server will automatically scale to use more CPUs.
	Isolate the Publishing Service and the Publication Post Processing Service on dedicated Adaptive Processing Servers and remove unused services hosted on those servers. Each service will consume more shared resources (requests to thread pool, memory, and CPU consumption) on an Adaptive Processing Server, and publishing performance may improve.

Publishing Service

Because publishing is a hard-drive-intensive process, the Publishing Service should be installed on a machine with fast I/O or SAN disks for the FRS.

Area	Consideration
Many publication instances that execute concurrently	If the underlying CMS, FRS, Adaptive Job Server, and report processing servers have been scaled appropriately, horizontally scale out the Publishing Service across multiple Adaptive Processing Servers, on one or more machines, to concurrently process more publication instances. A single publication job (for example, with one million recipients) is not shared across Publishing Services hosted on different Adaptive Processing Servers. Horizontally scaling out the Publishing Service will not improve processing time for a single publication, regardless of the number of recipients.

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Area	Consideration
Publications with many recipients	Vertically scale the Adaptive Processing Server on machines with more CPUs and RAM to concurrently process more recipients and to generate more jobs on the Adaptive Processing Server. You may need to scale the Adaptive Job Server and report processing servers accordingly to increase throughput. You may need to increase the Adaptive Processing Server's heap size (that is, set `-Xmx` to 2 GB or more) when the server runs on a machine with more than eight CPU cores. The larger number of CPU cores enables the Adaptive Processing Server to spawn more threads and increase throughput. Note that more threads require more RAM.
Publishing cleanup option	For a large publication that does not need redistribution or to view artifacts in the report, do not select the default destination.
Crystal report publications	If you do not need to apply unique security for each recipient, select **One database fetch for each batch of recipients**. Database access will be batched in multiple, smaller, concurrent queries.
Web Intelligence publications	Select **One database fetch for all recipients** or **One database fetch per recipient**. When you select **One database fetch for all recipients** for a large publication, to break the database query into multiple, smaller queries, add the following command line option to speed disk delivery to all Adaptive Processing Servers that host the Publishing Service: `-Dcom.businessobjects.publisher.scope-batch.max.recipients=<integer>`
Large publications with slow disk delivery to a single folder on Windows	Search for "disable short file name generation" (article ID 210638) or for "NtfsDisable8dot3NameCreation" on Microsoft TechNet at *http://technet.microsoft.com* and follow the instructions.
Large publications with slow disk delivery to a single folder that contains more than 300,000 files on Windows	Search for "how NTFS works" at *http://technet.microsoft.com* and follow the instructions.

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Publishing Post Processing Service

The Publishing Post Processing Service is called when the **Package as ZIP File** check box (in the *Schedule* dialog box) and/or the **Merge Exported PDF** check box (in the *Destinations* dialog box) is selected or when custom post-processing plugins are enabled on a publication.

Area	Consideration
Publications with both **Package as ZIP File** and **Merge Exported PDF** selected	Horizontally scale out the Publishing Post Processing Service to spread the ZIP- and PDF-merging workloads across multiple Publishing Post Processing Services hosted on different Adaptive Processing Servers.

11.3.1 Recommendations for adding source documents

This section contains recommendations for adding dynamic content documents to publications.

Use publication log files to troubleshoot errors in failed publications

When you schedule publications to run, log files are generated to record errors that may occur when the publications are processed. To view all log files for a publication instance, select **More Actions** > **History**. In the *History* dialog box, click the link for the instance in the **Instance Time** column. The instance details appear in a new window.

If using parameter-based personalization for Crystal reports, set parameters to default

Parameter-based personalization may lead to slower publication performance. To significantly speed performance, personalize Crystal report publications by mapping fields to Enterprise recipient profiles or to dynamic recipient personalization values.

If you must personalize Crystal reports using parameters, in the *Personalization* section, set parameters to their default value.

> **Note**
>
> Before you can use Enterprise recipient profiles in publications, the profiles must be configured in BI platform.

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View and schedule individual dynamic content documents before adding them to a publication

If you can view and schedule dynamic content documents successfully, the data source connection is working properly and the source document data can be refreshed when the publication is scheduled. If you cannot view and schedule dynamic content documents, confirm that the data source connection settings are correct. The following table summarizes how to check the settings:

Document type	How to check data source connection settings
Crystal report	In the CMC, select the Crystal report, and select **Manage** > **Default Settings**. In the *Default Settings* dialog box, click **Database Configuration** on the navigation panel.
Web Intelligence document	In the CMC, select the Web Intelligence document, and select **Manage** > **Default Settings**. In the *Default Settings* dialog box, click **Report Universes** on the navigation panel.

In some cases, you may have to open a dynamic content document in the designer to configure the data source connection and to re-export the file to the CMS repository and overwrite the previous copy. For more information about configuring data source connections for dynamic content documents, see the designer documentation.

Avoid unnecessary data refreshes

If a data refresh is unnecessary for a dynamic content document, in the *Source Documents* section, clear the **Refresh At Runtime** check box for that document to improve overall publication performance.

11.3.2 Recommendations for using dynamic recipient sources

Sort dynamic recipient sources according to the recipient ID column

In general, you should sort dynamic recipient sources by the **Recipient ID** column. This is especially important when you are running a high-volume publication or when you selected **One database fetch for each batch of recipients** because it can reduce the number of deliveries to recipients with multiple personalization values.

For Crystal report dynamic recipient sources, confirm that database configuration information is correct

In the CMC, select the dynamic recipient source, select **Manage** > **Default Settings**, and confirm the following settings:

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- Under **Database Configuration**, confirm the database logon information is correct and **Use same database logon as when report is run** is selected.
- Under **Parameters**, confirm that all parameters have values and all **Prompt when viewing** check boxes for parameters are cleared.

If using Crystal report dynamic recipient sources, contact your administrator and confirm that the RAS is configured correctly

The Report Application Server (RAS) must be configured to read at least the same number of database records as the number of recipients in the dynamic recipient source. For example, to process a dynamic recipient source with data for 100,000 recipients, the RAS must be set to read more than 100,000 database records.

11.3.3 Recommendations for sending and receiving email publication instances

If possible, view embedded-content email-publication instances in Outlook 2003

View embedded content in email publication instances in Outlook 2003 whenever possible. Embedded content in email publication instances may have formatting issues when viewed in Outlook 2007 or in web email accounts, such as Hotmail or Gmail.

Contact your administrator to confirm that the email settings are configured properly for the Destination Job Server

You must ensure that email settings are properly configured for the Destination Job Server. Publications intended for email destinations may fail because email has not been configured properly as a destination for the Adaptive Job Server. For more information, see the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

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