

Crystal Enterprise™ 10 User's Guide

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Welcome to Crystal Enterprise

1

This chapter briefly describes Crystal Enterprise and outlines the contents and the intended audience of this *User's Guide*. Product registration and technical support information is also included, along with a brief description of the document conventions used within this guide.

What is Crystal Enterprise?

Welcome to the *Crystal Enterprise User's Guide*. The focus of this guide is the Crystal Enterprise web desktop—what it is, what you can do with it, and the report viewers it supports.

The Crystal Enterprise web desktop is your main user interface for working with reports through Crystal Enterprise. The desktop runs within your web browser and gives you the ability to view, export, print, and schedule reports. Recognized users of Crystal Enterprise can customize a personalized version of the desktop.

Crystal Enterprise supports the viewing, printing, and exporting of reports without the need of installing Crystal Reports on your local machine. Report viewing is supported through different viewers compatible with the features of ActiveX, Java, and DHTML.

Typically, the reports you view are created using Crystal Reports. Your Crystal Enterprise administrator may also deploy other forms of reports or objects, such as analytical applications designed with Crystal Analysis, or other objects created using Crystal Enterprise plug-in components. If you have the necessary rights, you can access these reports or objects using Crystal Enterprise.

Who should use this guide?

This guide is intended for users who work with reports over the Web through Crystal Enterprise. The interface in the Crystal Enterprise web desktop is designed to facilitate intuitive navigation—you can easily schedule and view reports. Your Crystal Enterprise administrator is generally responsible for configuring, managing, and maintaining a Crystal Enterprise installation, which includes the Crystal Enterprise web desktop.

For more information about the product, consult the *Crystal Enterprise Administrator's Guide*, *Crystal Enterprise Getting Started Guide*, and the *Crystal Enterprise Installation Guide*. Online versions of these guides are included in the doc directory of your product distribution. Once you install Crystal Enterprise, they are also accessible from the Crystal Enterprise Launchpad, along with the Web Developer's Guides.

About this guide

This guide provides you with information and procedures for accessing and using Crystal Enterprise and its report viewers.

Note: The appearance of Crystal Enterprise can be customized to suit your company's needs. Even though your desktop may look different from the one in this guide, you can still apply many of the procedures described throughout.

Chapter contents

The following list provides a short description of each of the remaining chapters in this guide.

Chapter 2: Using Crystal Enterprise

This chapter describes how to access and log on to Crystal Enterprise and provides information about choosing report types, navigating through folders, and creating new folders. The chapter then shows how to work within Crystal Enterprise to schedule reports, look at report history and Alerts, and launch reports in a Report Viewer.

Chapter 3: Viewing Reports

This chapter provides you with information about the Crystal report viewers (including the Crystal Offline Viewer) and how to view reports from them. It also includes instructions for distributing reports using one of two methods: printing or exporting.

Chapter 4: Publishing Objects to Crystal Enterprise

This chapter focuses on the publishing process: it introduces the Crystal Publishing Wizard and tells you how you can use it to add Crystal reports and other objects to Crystal Enterprise or to your custom web desktop; it also describes alternative ways of adding objects to the Crystal Enterprise environment.

Online help

Access the online help in Crystal Enterprise by clicking Help. The online help contains all of the information found in this guide.

Product registration

There are several ways you can register your product:

- Fill out the Product Registration form on the Crystal Decisions web site at: <http://www.crystaldecisions.com/register/>
- Print the Product Registration form and fax it to the registration fax number closest to you. Crystal Decisions will then fax you a registration number that can be entered into the product the next time you use it.

Registration fax numbers

USA/Canada +1 (604) 681-5147

United Kingdom +44 (0) 20 8231 0601

Australia +6 2 9955 7682

Germany +49 (0) 69 9509 6182

Hong Kong +852 2893 2727

Singapore +65 777 8786

Registering the product ensures that you are kept up-to-date with product advancements.

Customer Handbook

For the latest details about product registration, maintenance, support, and services, visit our web site and download the Customer Handbook that corresponds to your region:

- North America:
<http://www.crystaldecisions.com/about/loyalty/handbook.asp> (English)
- Europe:
<http://www.crystaldecisions.com/about/loyalty/handbook.asp> (English)
<http://germany.crystaldecisions.com/about/loyalty/handbook.asp> (German)
<http://france.crystaldecisions.com/about/loyalty/handbook.asp> (French)

If a Crystal Decisions Customer Handbook is not available for your region, please refer to the rest of this Welcome chapter, or contact your sales or support representative for complete details

Crystal Care technical support

For information on accessing your Crystal Care support specialists, contact the technical support administrative team, your sales representative, or the regional office nearest you. Contact details are available at:

<http://www.crystaldecisions.com/contact/offices.asp>

To find out about the technical support programs available for Crystal Enterprise:

- Go to our support web site at:
<http://support.crystaldecisions.com/crystalcare/>
- Contact your regional office. For details, go to:
<http://www.crystaldecisions.com/contact/offices.asp>

Crystal Training

Whether you're a developer, information technology professional, or business user, we offer a wide range of Crystal Enterprise training courses designed to build or enhance your existing skills. Courses are available online, at certified training centers, or at your own site:

- For a complete list of training courses and special offers, visit:
<http://www.crystaldecisions.com/training/>
- Or contact your regional office. For details, go to:
<http://www.crystaldecisions.com/offices/>

Crystal Consulting

Our global team of certified consultants and consulting partners can guide you through a corporate-wide solution—including strategy, design, integration and deployment—for the fastest results, maximum performance, and increased productivity.

- To learn more, visit:
<http://www.crystaldecisions.com/consulting/>
- Or contact your regional office. For details, go to:
<http://www.crystaldecisions.com/offices/>

Document conventions

This guide uses the following conventions:

- **Commands and buttons**
For easy recognition within procedures, User Interface (UI) features appear in bold type. For example: On the **File** menu, click **New**.
- **Keyboard shortcuts**
Delete means the Delete key, or the Del key on your numeric keypad. Enter means the Enter, Return, or CR key, depending on which of these keys appears on your keyboard.
- **Key combinations**
CTRL+KEY, SHIFT+KEY, and ALT+KEY are examples of key combinations. Hold down the first key in the combination and, at the same time, press the second key in the combination (designated above as KEY). For example: CTRL+C means hold the Control key down and press the letter C on your keyboard (CTRL+C is the Windows Copy command).
- **Key terms are italicized when first defined.**
- **Monospaced font indicates data that you enter using your keyboard.** For example: In the Formula Editor, type `If Sales > 1000 Then crRed`
- **Monospaced, italicized font indicates variable data that you must replace with data appropriate to your current settings, environment, or task.** For example, in the following URL, you would replace *webserver*
`http://webserver/crystal/enterprise/`

This chapter describes how to access and log on to Crystal Enterprise and provides information about choosing object types, navigating through folders, and creating new folders. The chapter then shows how to work within Crystal Enterprise to schedule objects, look at report history and Alerts, and launch reports in a Report Viewer.

Crystal Enterprise overview

Crystal Enterprise comes with a web desktop that acts as a window to a broad range of useful business information around your company, including Crystal Reports, Crystal Analysis reports, spreadsheets, and other documents. With Crystal Enterprise, you can access this information and organize it to suit your preferences.

The features available in Crystal Enterprise vary by content type, but in general, you can view information in your web browser, export it to other business applications (such as Excel), and save information to your local machine.

Note: Crystal Enterprise can also provide access to a range of analytic tools to help you explore information in more detail. If you have the necessary security rights, you can use these features to modify reports, examine trends over time or look for specific patterns in your corporate data. Contact your Crystal Enterprise Administrator for more information.

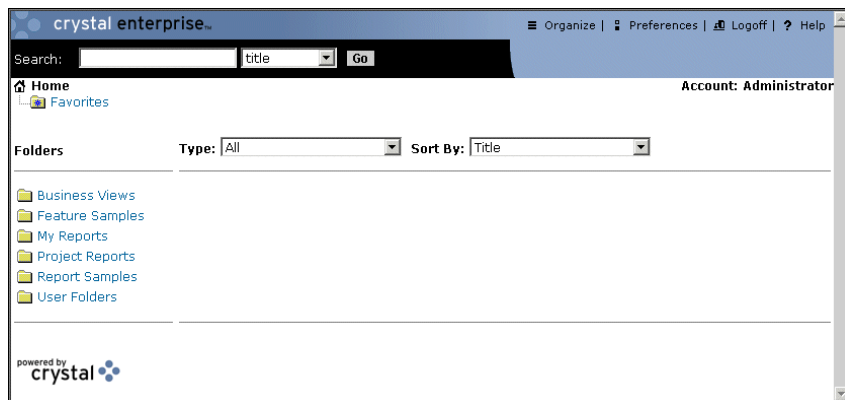
To use Crystal Enterprise, you need to have one of the following web browsers installed on your machine:

- Microsoft Internet Explorer
- Netscape

For an optimal user experience, we recommend Internet Explorer for some of the advanced analytic features in Crystal Enterprise.

Crystal Enterprise main page

With its default settings, the main page of Crystal Enterprise contains information on folders, objects, and so on.



The page is made up of a number of areas:

- **Title bar**
This area contains the desktop logo, the Search box, and functions relevant to your place in the structure of folders and objects.

- **Navigation bar**
This area displays a tree representing your place in the structure of folders and objects, and a message displaying your user account name.
- **Folders area**
This area displays the subfolders that are available in the folder you're working with.
- **Objects area**
This area displays the objects connected with a specific folder or subfolder.

The folders and objects you can see in Crystal Enterprise, the rights you have to schedule, the viewer you see, and so on, are dependent on the account you log on with. You can log on as a guest, or as yourself—once you've created an account. Users with accounts can create subfolders and organize their objects.

Note: Depending on your Preferences settings, your main page may look different.

Getting started

To give you a better idea of how a Crystal Enterprise web desktop can be used at your company, Crystal Enterprise provides a guest user account.

Crystal Enterprise logs you on as a guest without an administered account. You can use this default view, but you won't be able to customize the desktop with your personal settings. If you sign yourself up as a new user, you can create a view of Crystal Enterprise that includes your desktop settings and favorite objects.

When reading through this guide, you can use sample report objects from Crystal Enterprise to illustrate procedures.

Note: Sample objects are provided only for Windows installations.

Accessing Crystal Enterprise

To access Crystal Enterprise, type the URL for your Crystal Enterprise site in your web browser. On Windows, you can also select Crystal Enterprise User Launchpad from the program group on the Windows Start menu.

To access Crystal Enterprise

- 1 Go to the Crystal Enterprise User Launchpad:

`http://webserver/crystal/enterprise10/`

Replace *webserver* with the name of the web server that is set up for Crystal Enterprise. You may need to check with your administrator for the web server name or exact URL to enter.

Tip: If you have any Crystal Enterprise client tools installed, you can also click Start > Programs > Crystal Enterprise 10 > Crystal Enterprise User Launchpad.

- 2 On the Crystal Enterprise User Launchpad, click the **Crystal Enterprise** link. Crystal Enterprise appears. You are logged on as a guest. (If your administrator has disabled guest login, you must type a user name and password.)

Logging on to Crystal Enterprise

Since guests are offered limited access to Crystal Enterprise and its objects, you may want to log on with your own account. If you have been assigned an account by your Crystal Enterprise administrator, log on as an existing user. Otherwise, sign up as a new user and create your account.

To log on to Crystal Enterprise as an existing user

- 1 Access Crystal Enterprise, as outlined in “Accessing Crystal Enterprise” on page 9.
- 2 In the top-right section of the title bar, click **Log On**.
The Log On page appears.

- 3 In the Existing User area, type your user name and password.
- 4 Click the **Authentication** list to select Enterprise, LDAP, Windows AD, or Windows NT Authentication.
Enterprise authentication requires a user name and password that is recognized by Crystal Enterprise.
LDAP authentication requires a user name and password that is recognized by an LDAP directory server.
Windows AD authentication requires a user name and password that is recognized by Windows AD.
Windows NT authentication requires a user name and password that is recognized by Windows NT.

Note: Enterprise authentication is the default method. LDAP, AD, and NT Authentication requires special set up. For more information, see “Managing User Accounts and Groups” in the *Crystal Enterprise Administrator’s Guide*.

5 Click **Log On**.

The home page reappears and you are logged on with your own account.

To log on to Crystal Enterprise as a new user

1 Access Crystal Enterprise, as outlined in “Accessing Crystal Enterprise” on page 9.

2 On the title bar, click **Sign Up**.

Note: “Sign Up” is not available if the Crystal Enterprise administrator has disabled “Guest users can create their own Enterprise accounts” in the Crystal Management Console, or if the guest password has been changed.

The Sign Up page appears.

3 In the Profile Information area, in the **Full Name** field, type your name.

4 In the Account Information area, in the **User Name** field, type a user name.

5 In the **Password** and **Confirm Password** fields, type a password.

6 Click **Sign Up**.

The program confirms that your passwords match. It then saves your profile information and logs you on to Crystal Enterprise with your own account.

To log off Crystal Enterprise

When you log on to Crystal Enterprise using an account other than guest, the log off option is available.

1 On the title bar, click **Logoff**.

A prompt appears asking if you are sure you want to log off.

- 2 Click **OK**.

Logging on to Crystal Enterprise Mobile Desktop

Using a mobile device (such as a WAP-enabled phone, web-enabled PDA, and so on), you can access objects through Crystal Enterprise Mobile Desktop, as long as your web server is configured to support mobile devices. Contact your Crystal Enterprise administrator for more information.

To access Crystal Enterprise Mobile Desktop through the Launchpad

- 1 Go to the Crystal Enterprise User Launchpad:
`http://webserver/crystal/enterprise10/`
Replace *webserver* with the name of the web server that is set up for Crystal Enterprise. You may need to check with your administrator for the web server name or exact URL to enter.
- 2 On the Crystal Enterprise User Launchpad, click the **Mobile Desktop** link, which is located in the “Mobile Samples” area.
The mobile desktop appears.
- 3 Complete the **User Name** and **Password** fields, select your authentication method from the **Authentication** list, and click **Logon**.

To access Crystal Enterprise Mobile Desktop directly

- 1 Go to the following URL:
`http://webserver/crystal/enterprise10/websamples/en/mPortfolio/start.csp`
Replace *webserver* with the name of the web server that is set up for Crystal Enterprise. You may need to check with your administrator for the web server name or exact URL to enter.
- 2 Complete the **User Name** and **Password** fields, select your authentication method from the **Authentication** list, and select **Logon**.

Crystal Enterprise views

Crystal Enterprise views are made up of the objects and folders you can see when logged on. Views are controlled by user accounts—the views your account allows determine what you can see and do in Crystal Enterprise.

Depending on how you log on to Crystal Enterprise, you will see one of two views:

- **Guest**
- **Home**

Guest

The guest view is Crystal Enterprise's default view. When you first access Crystal Enterprise, you are automatically logged on to the guest view.

The guest view is controlled by the rights the Crystal Enterprise administrator has assigned to the Guest account. Guests can access Crystal Enterprise and perform basic tasks without logging on. The administrator remains responsible for maintaining Crystal Enterprise, including tasks such as making objects accessible to guest users and customizing the appearance of the desktop.

If the necessary rights are assigned, guest users can:

- Search for objects by specified criteria.
- Retrieve objects by type.
- Navigate between existing folders.
- View object details.
- View the latest instance of an object.
- Schedule objects to run.
- View an object on demand.
- View scheduling history of object instances.

Other activities, such as printing and exporting, are available once a report object is launched in a viewer.

Home

Depending on the rights assigned by the Crystal Enterprise administrator, the Home view can offer more options and control over objects. As a logged on (registered) user, you can create new folders, change your desktop preferences, or copy objects of interest into your Favorites folder.

Signing on to your own Crystal Enterprise account

Before you can sign on to your own view of Crystal Enterprise, you must complete the sign-up form. This information about your profile and account, along with the settings you define, is stored on the server and becomes your user account.

For information on how to access and complete the sign-up form, see [“To log on to Crystal Enterprise as a new user” on page 11.](#)

Selecting your preferences

This procedure shows how to modify your own Crystal Enterprise preferences. Preferences are divided into general preferences and Crystal Report preferences.

If you administer other users' accounts, you can set their Crystal Enterprise preferences as well. To change another user's preferences, use the Crystal Enterprise Preferences Manager, which is located in the Administrator Samples area of the Crystal Enterprise Launchpad.

Note: You must have your own account on the system in order to set your preferences.

To select general preferences

- 1 Log on to Crystal Enterprise using your new profile.
- 2 On the title bar, click **Preferences**.
The General Preferences page appears.

- 3 In the “Initial view” area, click the option corresponding to the folder level you’d like your view to begin with.
For example, if you choose Other and then select Report Samples, the next time you log on the Report Samples folder will be displayed as your initial view.
- 4 In the “Top-level folder bar” area, click **hide** or **show**.
This option displays the top-level folder names to help your navigation.
- 5 In the “On my desktop, show me” area, select how you want objects to be listed. Choose from one of the three options:
 - Thumbnail view
 - List view
 - Action view

Where applicable, click the list or type a number to select the maximum number of objects to be displayed on one page.

Note:

- Thumbnail images are available for report objects if the “Save preview picture” check box was selected when the report was created in Crystal Reports.
 - The Action view is recommended for people using assistive technologies such as screen readers.
- 6 In the “For each object, show me” area, select the summary information you want your objects to show:
 - description
 - owner
 - date
 - thumbnail (if applicable)
 - instance count
 - 7 In the “My current time-zone is” area, select the appropriate time zone.

Note: Before scheduling objects, check your time zone setting. The default time zone is local to the web server that is running Crystal Enterprise, not to the Crystal Management Server (CMS) machine(s) that each user connects to. By setting your time zone, you ensure that your scheduled objects are processed in accordance with the time zone in which you are working.
 - 8 Click **Apply**.

To select Crystal Report preferences

- 1 Click the **Crystal Report Preferences** link at the top of the General Preferences page.
- 2 In the “Display my reports” area, determine whether you want one browser or multiple browsers to display your reports.
- 3 In the “View my reports using the” area, select the report viewer you want to use when you display a report:
 - ActiveX viewer
 - DHTML viewer
 - Advanced DHTML viewer
 - Java viewer

Note: The DHTML viewer is selected by default.
- 4 In the “DHTML Viewer printing uses the” area, choose **Acrobat Reader printing control** or **ActiveX printing control**.
- 5 In the “Preferred measuring units for report page layout is” area, select **inches** or **millimeters**.
- 6 Click **Apply**.

Changing your account settings

You can change your own password on the Change Password page.

To change your password

- 1 From the title bar on the Preferences page, click **Change Password**.
- 2 On the Change Password page, type your old password.
- 3 Type your new password, confirm it, and click **Submit**.
Your new password takes effect the next time you log on to Crystal Enterprise.

Accessing your Favorites folder

The Favorites folder is your own personalized version of Crystal Enterprise. The Favorites folder contains the folders (those you selected or created) and objects you selected on the Organize Folders page.

To access your favorites

- On the navigation tree on the Home page, click **Favorites**.
To return to the Home page, click Home on the navigation tree.

Organizing your favorite objects

You can organize objects by copying or linking them to a folder of your choice. You can create new folders at the same time. You can also move, rename, or delete objects and folders from your Favorites folder.

When you copy objects to your personal folders, you can schedule and view them independently of other users. You can copy objects individually, or you can copy an entire folder to your Favorites folder. When you link objects by creating shortcuts, you share the objects with other users.

You can create new folders and subfolders, copy folders and objects, and create shortcuts to folders and objects only as long as you have the necessary rights.

To work with the contents of your Favorites folder

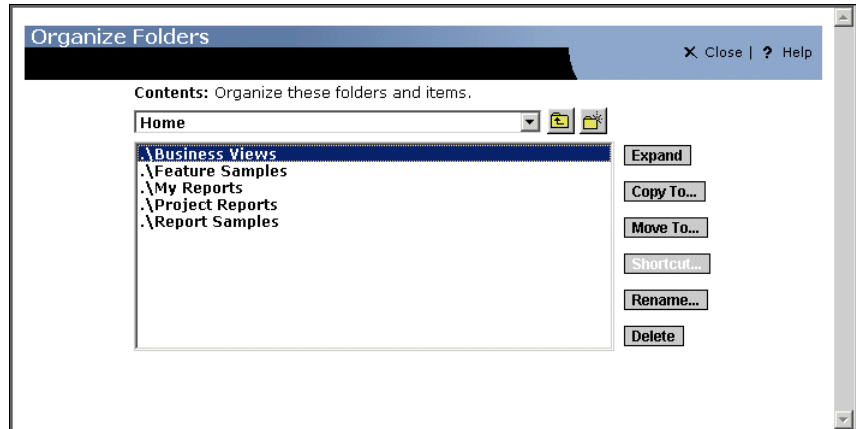
- 1 From the title bar, click **Organize**.
- 2 Click the **Contents** list and select the **Favorites** folder.
The objects that belong to the folder appear below the Contents list.

Note:

- If there are subfolders, highlight the folder you want to view objects from and click **Expand**.
- From this list, you can use the options to move, rename, or delete objects and folders from your Favorites folder. You can also create new folders in your Favorites folder. For more information on creating folders, see [“Creating folders” on page 21](#).

To copy objects to your Favorites folder

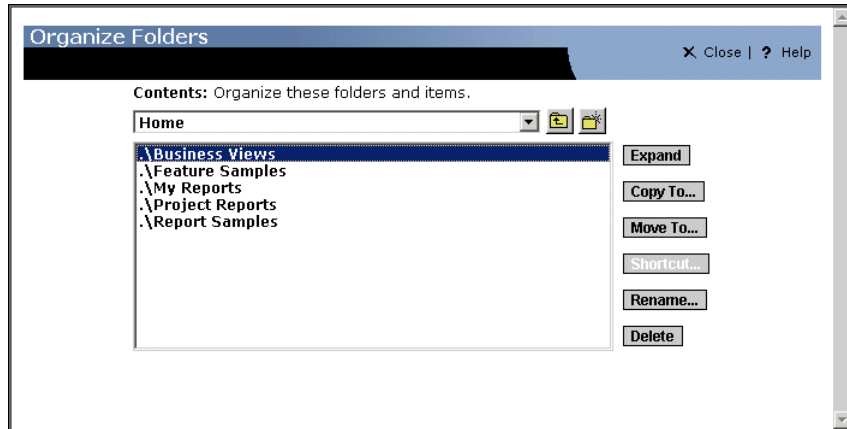
- 1 On the title bar, click **Organize**.
The Organize Folders page appears.



- 2 Click the **Contents** list and select a folder to copy an object from.
The objects in the folder appear below the Contents list.
- 3 If there are subfolders, highlight the folder you want to copy objects from and click **Expand**.
- 4 Click an object or use CTRL-click or SHIFT-click to select a number of objects.
You can either copy objects from the folder or copy the entire folder to your Favorites folder.
- 5 Click **Copy To**.
The Copy page appears.
- 6 Click the **Folders** list and select the **Favorites** folder.
If there are subfolders in your Favorites folder, highlight the folder you want to copy objects into and click **Expand**.
- 7 Click **Copy**.
A copy of the object, objects, or folder is placed in the Favorites folder.
Note: If an object can be scheduled, copying it to your Favorites folder gives you control over scheduling the object; any instances created are visible only to you through your Favorites folder. In contrast, when you create a shortcut, you share scheduling and instances with all other users who have access to the object.

To create shortcuts to objects

- 1 On the title bar, click **Organize**.
The Organize Folders page appears.



- 2 Click the **Contents** list and select the folder that contains the object you want to create a shortcut to.
The objects in the folder appear below the Contents list.
- 3 If there are subfolders, highlight the folder you want to view objects from and click **Expand**.
- 4 Click an object or use CTRL-click or SHIFT-click to select a number of objects.
You can either create shortcuts to individual objects in the folder or create a shortcut to the entire folder.
- 5 Click **Shortcut**.
The Link To page appears.
- 6 Click the **Folders** list and select the **Favorites** folder.
If there are subfolders in your Favorites folder, highlight the folder where you want the shortcut to appear and click **Expand**.
- 7 Click **Link To**.
A shortcut to the object, objects, or folder is placed in the Favorites folder.
Note: When you create a shortcut, an object isn't copied or moved. A link to the object appears in your Favorites folder; you share scheduling and instances with all other users who have access to the object.

Working with Crystal Enterprise

Once you have logged on to Crystal Enterprise, you can start to work with objects. This section of the guide describes the following tasks:

- Choosing the object type
- Sorting objects
- Searching for objects
- Navigating through folders
- Creating folders

Choosing the object type

By default, Crystal Enterprise shows you all the objects you have the rights to see in your view. If you want to temporarily limit the type to make searching easier, you can choose to display objects of a specific type. Object types include Crystal reports, Excel, PowerPoint, program objects, object packages, text files, and many others.

To change the object type

- 1 In the folders area on any view, click the **Type** list.
- 2 Select the type of object you want to see.

Sorting objects

By default, objects are sorted alphabetically by title. Objects can also be sorted by owner. The owner is the person who publishes the object.

To sort objects

- 1 In the folders area on any view, click the **Sort By** list.
- 2 Select **Title** or **Owner**.

Searching for objects

You can do a structured search to find objects on Crystal Enterprise. Type the exact phrase and select a search field, such as title or description.

The objects displayed depend on how your Crystal Enterprise administrator has set up your account privileges. For example, users in Marketing may see objects that differ from those seen by the users in Human Resources. For more information, see the *Crystal Enterprise Administrator's Guide*.

Note: A search includes all public folders you have rights to as well as your Favorites folder.

To search for an object

- 1 In the **Search** box on the menu bar, type the keywords that describe the object you're searching for.
- 2 Click the list next to the search box to select a search field.
The available search fields are:
 - title
 - description
 - folder title
 - all fields
- 3 Click **Go**.
A list of objects meeting your search parameters appears.
Tip: If you need more information to identify an object, move the mouse over the object's link. The object's Crystal Enterprise path, title, and summary information (if available) are displayed.
- 4 To view an instance of the object, click the object link and, in the shortcut menu that appears, select **View** or **View Latest Instance**.
Note: Depending on the rights given to you by your administrator, you may be unable to select "View" and/or "View Latest Instance." In addition, if there are no instances on the system, you may need to schedule the object first.

Navigating through folders

Folders and subfolders are used to organize objects. Although these folders look different from those used in some web applications, they function in the same way.

To navigate through folders

- 1 On the Crystal Enterprise web desktop, drag your mouse over the list of subfolders.
The subfolders you can select turn a different color as the mouse passes over them.
Note: The color feature is available only when you use Microsoft's Internet Explorer as your browser.
- 2 Click the subfolder of your choice.
The appropriate folder page appears.
Note: You can use the path information on the Navigation bar to navigate through Crystal Enterprise.

Creating folders

Normally, folders and subfolders are created for you by your Crystal Enterprise administrator, but you can also create folders in your Favorites folder.

Note: You can create new folders and subfolders in any folder, as long as you have the necessary rights.

To create a folder

- 1 Log on to Crystal Enterprise with your own account.
See [“Signing on to your own Crystal Enterprise account” on page 13](#) for more information on how to do this.
- 2 On the title bar, click **Organize**.
- 3 In the Contents area, select the **Favorites** folder and click **Create a new folder**.
- 4 On the Add New Folder page, type a folder name in the name field and click **Add**.
You are returned to the Organize Favorites page and your new folder appears in the Favorites contents area. You can move objects to the new folder as described in [“Organizing your favorite objects” on page 16](#).



Working with objects in Crystal Enterprise

Once you’ve accessed and logged on to Crystal Enterprise, you can begin to work with reports. You can do many things depending on the permissions set for you by your Crystal Enterprise administrator:

- Schedule objects.
- Review the scheduling history of objects.
- Create and modify report objects.
- Launch report objects in one of the Crystal report viewers.

Note:

- Your ability to perform any of these tasks is determined by the rights assigned to you by your Crystal Enterprise administrator.
- Your Crystal Enterprise product activation keycode and your rights determine whether or not you can create and modify reports.

Scheduling objects

Scheduling an object lets you run it automatically at specified times. When a scheduled object runs successfully, an instance is created. An instance is a version of the object containing the data available at the time it was run—instances created later contain more recent data.

You can see a list of instances by looking at an object's history, and you can click the link to any historical instance. If you have the rights to view objects on demand, you can view and refresh any instance to retrieve the latest data from the database.

By scheduling and viewing instances, you can ensure you have the latest information available for viewing, printing, and distributing. For example, you can schedule a report object to run every night so it's available for you first thing in the morning.

Note: Before scheduling objects, check your time zone setting on the Preferences page in Crystal Enterprise. The default time zone is local to the web server that is running Crystal Enterprise, not to the Crystal Management Server (CMS) machine(s) that each user connects to. By setting your time zone, you ensure that your scheduled objects are processed in accordance with the time zone in which you are working. You must have your own account on the system in order to set your preferences.

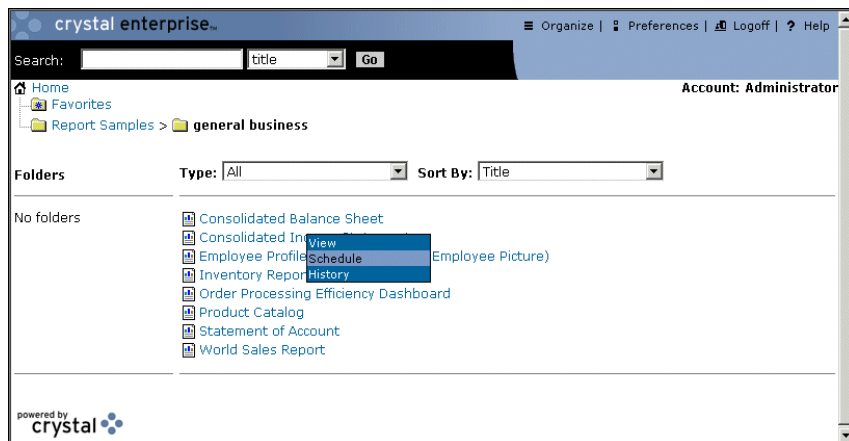
Depending on the type of object you are scheduling, you might want to customize your scheduling options. You can set:

- [Schedule parameters](#)
- [Database logon information](#)
- [Parameters](#)
- [Filters](#)
- [Destination locations](#)
- [Format](#)
- [Print settings](#)

Note: For some scheduling options, the settings that the administrator has specified for the object will be displayed when you choose that option. You can schedule a object with these options or customize your options.

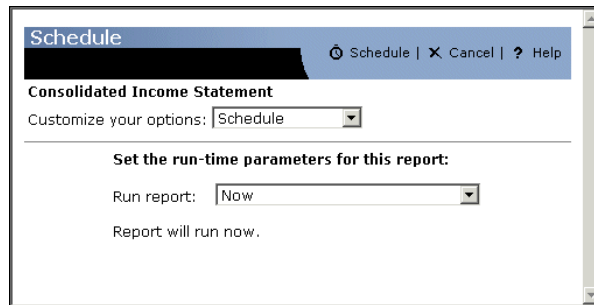
To schedule an object

- 1 Click the object link in Crystal Enterprise.



2 Click **Schedule**.

The Schedule page appears.



The “Customize your options” list contains the choices you can make while scheduling. The area below the list contains items specific to the schedule option you choose.

Schedule parameters

The Schedule parameters specify a time for running a scheduled object. Each parameter in the “Run report” list has its own specific data entry requirements.

Note: For every parameter listed below (except for the “Now” parameter), you can specify both start and end dates and times.

The following parameters are available:

- **Now**
When you click Schedule, the report runs once (immediately).
- **Once**
This option requires a start time parameter. The report runs once at the time specified.
- **Hourly**
This option requires information in hours and/or minutes for how frequently the report should run. Instances are created regularly to match the parameters you entered. The first instance is created at the start time specified.
- **Daily**
This option requires a start time parameter. The report runs once every N days at the time specified.
- **Weekly**
This option requires a start time parameter. Each week, the report runs on the selected days at the time specified.
- **Monthly**
This option requires a start date and time, along with a recurrence interval in months. The report runs on the specified date and time, every N months.

- **Nth Day of Month**
This option requires a day of the month the report should run on. Instances are created regularly each month on the day you entered, at the start time specified.
- **1st Monday of Month**
This option requires a start time parameter. An instance is created on the first Monday of each month, at the time specified.
- **Last Day of Month**
This option requires a start time parameter. An instance is created on the last day of each month, at the time specified.
- **X Day of Nth Week of the Month**
This option requires a start time parameter. An instance is created monthly, on a specified day of a week.
- **Calendar**
This option allows you to select a calendar of dates. Created by the Crystal Enterprise administrator, calendars are customized lists of schedule dates. An instance is created on each day specified in the calendar.

To schedule an object using Schedule parameters

- 1 In the **Customize your options** list, click **Schedule**.
- 2 In the **Run report** list, click the parameter of your choice.
- 3 Select a date and/or start time, if necessary.
- 4 On the title bar, click **Schedule**.
Note: If you want to set other options, do *not* click Schedule until you have made all your selections.

Database logon information

Some objects require you to log on to a database before you can schedule them successfully. You can do this on the Schedule page if you have credentials for the object's data source.

To schedule a report object with database logon information

- 1 In the **Customize your options** list, click **Database Logon**.
- 2 Change information as necessary for your report's database.
- 3 On the title bar, click **Schedule**.
Note: If you want to set other options, do *not* click Schedule until you have made all your selections.

Parameters

Some objects use the parameters feature. Parameters prompt the user to enter information. For report objects, this information may determine what data appears in the report. For example, in a report used by sales, there might be a parameter that asks the user to choose a region. The report returns the results for the specific region instead of returning the results for all of the regions.

You can set parameters on the Schedule page. If the object you schedule does not contain parameters, you will not be able to choose this option in the “Customize your options” list.

To schedule an object with parameters

- 1 In the **Customize your options** list, click **Parameters**.
- 2 Select the parameter you need for your object and click **Add**.
Note: The appearance of the parameter prompts on the Schedule page may differ from object to object depending on how the parameter field was created in Crystal Reports. Program objects may provide an Argument box
- 3 On the title bar, click **Schedule**.
Note: If you want to set other options, do *not* click Schedule until you have made all your selections.

Filters

If a report object includes a record or group selection formula, you can modify it before you schedule the report. Selection formulas help determine what data appears in a report and may improve performance by eliminating unwanted records. For more information on selection formulas, see the *Crystal Reports User's Guide*.

To schedule a report object with a record selection formula

- 1 In the **Customize your options** list, click **Filters**.
- 2 Change the record or group selection formula as necessary.
- 3 Click **Update**.
- 4 On the title bar, click **Schedule**.
Note: If you want to set other options, do *not* click Schedule until you have made all your selections.

Destination locations

You can schedule an object instance to be sent to a specific destination on your computer or network, to a default file location, to email, or to FTP. For destination options other than Default, you can choose the preset settings (as determined by your administrator) or enter specific requirements for the destination.

You can choose from the following destination locations:

- **Default**
If you select the Default option, the object is scheduled to (and saved on) Crystal Enterprise.
- **Unmanaged Disk**
If you select Unmanaged Disk, the object is saved to the file location that you specify.
- **Email (SMTP)**
If you select Email (SMTP) as your destination, the administrator has to have the server information set up on the Job Server.
- **FTP**
If you select this option, you can select the FTP server set up by your administrator, or you can specify your own.

If the administrator has specified a particular destination for the object, this destination option will be displayed. You may be able to update the fields for this destination, or select a different destination. For many of these destinations, you must provide additional information.

To schedule an object to a specific destination

- 1 In the **Customize your options** list, click **Destination**.
- 2 In the **Destination** list, click the format of your choice.
- 3 Where applicable, select either **Use the Crystal Job Server's defaults** or **Set the values to be used at schedule time here**.
Choose the first option if you want to use the settings that your administrator has specified. Choose the second option if you want to specify the destination settings. Complete the necessary fields as required.
- 4 Click **Update**.
- 5 On the title bar, click **Schedule**.
Note: If you want to set other options, do *not* click Schedule until you have made all your selections.

Format

When scheduling a report object, the instance is created and saved using the Crystal Report format (.rpt), unless you choose a different file format. You can choose from the following:

- Crystal Report
- Excel
- Excel (Data Only)
- Word
- Acrobat
- Rich Text
- Plain Text

- Paginated Text
- Tab-separated Text
- Tab-separated Values
- Character-separated Values

An instance of a report scheduled to one of the available formats is created in that format. For some of these formats, you can specify properties for the report.

Note:

- When you schedule a report to a file format other than Crystal Reports format (.rpt), you may lose some or all of the formatting that appears in your report. However, the program attempts to preserve as much formatting as the export format allows.
- The difference between Excel and Excel (Data only) is that Excel attempts to preserve the look and feel of your original report, while Excel (Data only) saves only the data, with each cell representing a field.
- The Tab-separated Values format places a tab character between values; the Character-separated Values format places a specified character between values. Each of these two formats produce data lists. In contrast, the Tab-separated Text format attempts to preserve the formatting of the report.

To schedule a report using a format

- 1 In the **Customize your options** list, click **Format**.
- 2 In the **Report Format** list, click the format of your choice.
Where applicable, update the format properties information and click Update.
- 3 On the title bar, click **Schedule**.
Note: If you want to set other options, do *not* click Schedule until you have made all your selections.

Print settings

You can choose to print a report instance when scheduling it; report instances are always printed in Crystal Reports format. When printing a report, you can set the number of copies and the page range.

The Print Settings page contains two areas: the first area specifies whether or not a report instance is printed, and if printed, the number of copies and the page range; the second area specifies the printer, and custom layout settings for changing the page size and orientation (regardless of whether the report instance is printed or not).

To set the print settings for a report

- 1 In the **Customize your options** list, click **Print Settings**.
- 2 In the **Report Format** list, click the format of your choice.
- 3 If you want to print a report instance, select **Print a copy of the report in Crystal Reports format when scheduling**.
Specify the number of copies, and the page range.

- 4 Specify the report's page layout by choosing a setting from the **Set layout to** list. You can choose to use the default layout, choose whether to use a default printer or not, and choose to use standard or custom layout settings.

Looking at the object history

Crystal Enterprise saves a history of object instances for scheduled objects that have been run. The history list is arranged chronologically (with the most recent instances first) and contains information such as:

- Instance Time
- Run By
- Parameters
- Format
- Status

The Instance Time for a successful instance becomes a hyperlink to that instance. You can view the instance by clicking the hyperlink.

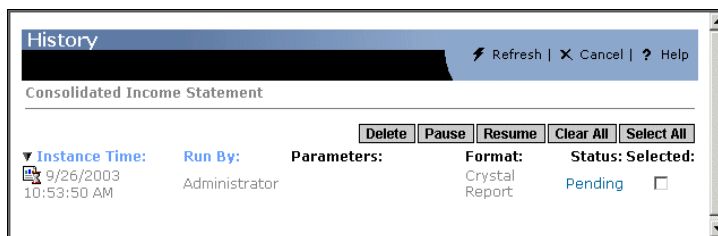
Tip:

- Sort instances chronologically by clicking the "Instance Time" column heading. Click the column again to reverse the sort order. Or, sort instances by owner (alphabetically and reverse-alphabetically) by clicking the "Run By" column heading.
- Use the Delete, Pause, and Resume buttons in the History page to delete a selected object, to pause the publication of an object, or to resume a paused instance. Choose an object from the "Selected" column and click either the Delete, Pause, or Resume button.

To view an object's history

- 1 Click the object link in Crystal Enterprise.
- 2 Click **History**.

The History page appears.



- 3 Move the mouse over the **Instance Time** of a successful instance.

The instance link changes color.

Note: The color feature is available only when you use Microsoft's Internet Explorer as your browser.

You can see detailed status information for recurring and failed instances by clicking the link(s) under the Status column.

- 4 Click the link(s) under the **Instance Time** column to launch the object instance. When you launch a report object instance, it opens in a Crystal report viewer. When you launch a program object instance from the History, an output file appears, displaying the program's standard out and standard error information.

Creating new reports

You can create and save new reports to Crystal Enterprise. While creating a new report, you can specify the fields, groups, filters, charts, style, and so on.

Note: Your Crystal Enterprise license key and your user rights determine whether or not you can create new reports. Depending on your license key, the New Report button may not be visible. You must have at least View On Demand rights and edit rights in order to create reports. Contact your Crystal Enterprise administrator for more information.

To create a new report

- 1 On the title bar, click the **New Report** button.
The New Report Wizard appears.
- 2 Specify the settings and options displayed on each page (where relevant), and click **Next**. Or, at any point, click **Finish** or **Cancel**.
Tip: Click the Help link (located at the top-right corner of the New Report Wizard) for detailed information.

Modifying reports

You can modify an existing report in Crystal Enterprise through the Modify Report Wizard.

Note: Your Crystal Enterprise license key and your user rights determine whether or not you can modify existing reports. Depending on your license key, the Modify link may not be available. You must have at least View On Demand rights and edit rights in order to create reports. Contact your Crystal Enterprise administrator for more information.

To modify an existing report

- 1 Click a report's link; then click **Modify**.
The Modify Report Wizard appears.
- 2 Specify the settings and options displayed on each page (where relevant), and click **Next**. Or, at any point, click **Finish** or **Cancel**.
Tip: Click the Help link (located at the top-right corner of the New Report Wizard) for detailed information.

Looking at Alerts

Crystal Enterprise tracks report instances that trigger Alerts. Alerts are custom messages created in Crystal Reports that appear when certain conditions are met by report data. Alerts may indicate action to be taken by the user or information about report data.

To view Alerts

- 1 Click a report's link; then click **Alerts**.

The Alerts page appears.



Note: You can click the Alerts link only for reports that contain Alerts. The Alerts page displays only those instances that triggered the alert.

- 2 Click the Alert link to launch the report instance in a Crystal report viewer.

Viewing reports in a report viewer

To view a report in a Crystal report viewer, select the report and click “View” or “View Latest Instance.” Depending on the rights given to you by your administrator, you may or may not be able to select “View” and/or “View Latest Instance.”

Tip: You select “View” when you want to view a report on demand; that is, Crystal Enterprise runs the report and updates the report data with the most current information from the database. If you select “View Latest Instance,” the most current successful instance is displayed.

If you want to view an instance other than the most recent one, look at the report history and select a previous instance. For more information, see [“Looking at the object history” on page 28](#).

To view a report in a Crystal report viewer

- 1 Click a report's link in Crystal Enterprise.
- 2 Click **View** or **View Latest Instance**.

The report opens in a viewer.

This chapter provides you with information about the Crystal report viewers (including the Crystal Offline Viewer) and how to view reports from them. It also includes instructions for distributing reports using one of two methods: printing or exporting.

The default Crystal report viewers

The default Crystal report viewers allow you to view reports, navigate through multiple pages, refresh data, drill down to see details behind charts and summarized data, select parameters, and so on. As well, the viewers have powerful printing and exporting capabilities.

The online Crystal report viewers support ActiveX, Java, and DHTML. Your Crystal Enterprise administrator can select the viewer type best suited to your company's needs. You can also manually select your preferred viewer type through the Preferences page. For more information, see ["Selecting your preferences" on page 13](#). The selected viewer is launched each time you choose to view a report.

You can view your reports using any of the following online Crystal report viewers:

- ["ActiveX viewer" on page 33](#)
The ActiveX viewer is for Microsoft Internet Explorer versions that support ActiveX controls.
- ["DHTML viewer" on page 34](#)
The DHMTL viewer is a zero-client viewer for browsers that support Dynamic HTML.
- ["Advanced DHMTL viewer" on page 35](#)
In addition to providing all of the features found in the DHTML viewer, the Advanced DHTML viewer is a zero-client viewer that provides an Advanced Search Wizard (for advanced searches using Boolean operators).
- ["Java viewer" on page 36](#)
This viewer is designed for web browsers that support the Java Virtual Machine.

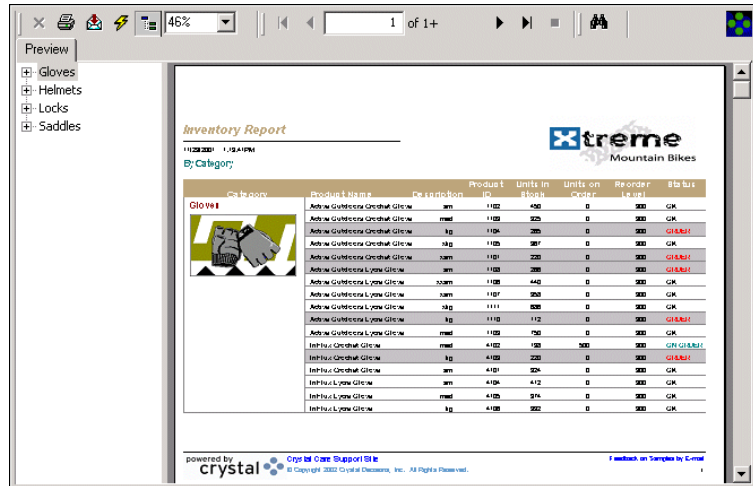
You can also view your reports when not connected to Crystal Enterprise by using the ["Crystal Offline Viewer" on page 37](#).

Note:

- Some features of the Crystal report viewers may be disabled by your Crystal Enterprise administrator. Contact your administrator for more information.
- In addition to these default viewers, other custom viewers may be available. Contact your administrator for more information.

ActiveX viewer

The ActiveX viewer is accessed using Microsoft Internet Explorer versions that support ActiveX controls. You can view your reports, refresh them, print them, and export them in a variety of formats.



In addition to the functions provided on the browser's standard toolbar, the ActiveX viewer has the following extra functions on its custom toolbar:

- Close current view
- Print report
- Export report
- Refresh
- Toggle group tree
- Zoom
- Go to first page
- Go to previous page
- Page number
- Go to next page
- Go to last page
- Stop loading
- Search text

Place the mouse pointer over any of the buttons on the custom toolbar to see the associated tool tip.

Note: If a report is created using a different type of printer than the one available from your system, you may experience formatting problems when attempting to print a report displayed by the ActiveX viewer. The Report Viewer Print button uses printer settings saved with the report file. If you experience problems printing a report, contact your Crystal Enterprise administrator.

DHTML viewer

The DHTML viewer is accessed using a web browser that supports Dynamic HTML. You can view your reports, refresh them, and export them in a variety of formats.

Main Report

1 / 1 +

100%

powered by crystal

Gloves

Helmets

Locks

Saddles

Inventory Report

9/26/2003 11:25:27AM

By Category

Category	Product Name	Description	Product ID
<div>Gloves</div> <div> </div>	Active Outdoors Crochet Glove		
		xsm	1101
		sm	1102
		med	1103
		lrg	1104
		xlr	1105
	Active Outdoors Lycra Glove		
		xxsm	1106
		xsm	1107
		sm	1108
		med	1109
		lrg	1110
		xlr	1111
	InFlux Crochet Glove		
		sm	4101
		med	4102
		lrg	4103

In addition to the functions provided on the browser's standard toolbar, the DHTML viewer has extra functions on its custom toolbar:

- Toggle group tree
- Export report
- Print report
- Drilldown view name
- First page
- Previous page
- Page number
- Next page
- Last page
- Go to page
- Search for text
- Zoom

Advanced DHMTL viewer

The Advanced DHTML viewer is accessed using a web browser that supports Dynamic HTML. You can view your reports, refresh them, and export them in a variety of formats. In addition, the Advanced DHTML viewer provides an Advanced Search Wizard, which enables you to perform a search on your report data using Boolean operators.

The screenshot shows the 'Advanced DHTML Viewer' window. The title bar includes 'powered by crystal' and 'Advanced DHTML Viewer'. The toolbar contains icons for file operations, a dropdown menu set to 'Main Report', navigation buttons, a search box, a zoom dropdown set to '100%', and a help icon. On the left, a tree view shows 'Gloves' selected under a plus icon. The main content area displays the 'Inventory Report' for 'Gloves', dated '9/26/2003 11:30:02AM'. The report is titled 'By Category' and shows a table with columns: Category, Product Name, Description, Product ID, and Unit Price. The 'Gloves' category is expanded, showing two sub-headers: 'Active Outdoors Crochet Glove' and 'Active Outdoors Lycra Glove'. Each sub-header has a corresponding image of the glove. The table lists products with sizes (xsm, sm, med, lrg, xlrg) and product IDs (1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111). The 'sm' and 'lrg' rows for both glove types are highlighted in red.

Category	Product Name	Description	Product ID	Unit Price
Gloves	Active Outdoors Crochet Glove			
		xsm	1101	
		sm	1102	
		med	1103	
		lrg	1104	
		xlrg	1105	
	Active Outdoors Lycra Glove			
		xsm	1106	
		sm	1108	
		lrg	1110	

In addition to the functions provided on the browser's standard toolbar, the DHTML viewer has extra functions on its custom toolbar:

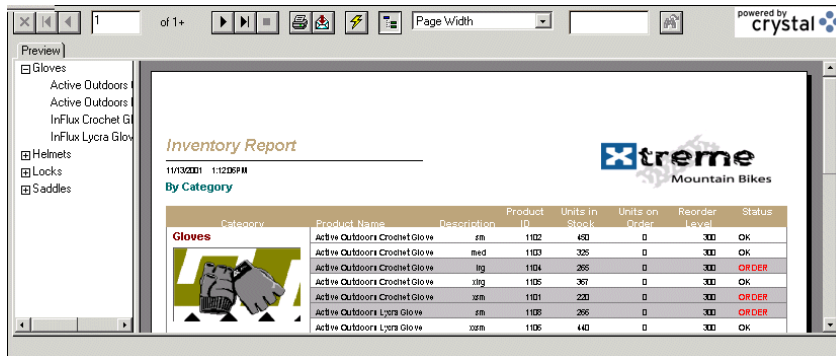
- Drilldown view name
- Show/Hide group tree
- First page
- Previous page
- Page number
- Next page
- Last page
- Go to page
- Export report
- Print report
- Search for text
- Zoom
- Refresh report
- Help
- Show/Hide Advanced Search Wizard

Note:

- The Advanced DHTML viewer contains its own help file—click the Help button on the custom toolbar for detailed information on the viewer's extra functions, and on using the Advanced Search Wizard.
- In order to use the Advanced Search Wizard, you must have at least View On Demand rights or higher, as the search wizard access the report's data source.
- In some cases, you may not have the Advanced Search Wizard available in your viewer. This will depend on how your Crystal Enterprise administrator has set up the report.

Java viewer

The Java viewer is accessed using a web browser that supports the Java Virtual Machine. You can view your reports, refresh them, print them, and export them in a variety of formats.



Category	Product Name	Description	Product ID	Units in Stock	Units on Order	Reorder Level	Status
Gloves	Active Outdoors Crochet Glove	2m	1102	490	0	300	OK
	Active Outdoors Crochet Glove	med	1103	325	0	300	OK
	Active Outdoors Crochet Glove	lg	1104	265	0	300	ORDER
	Active Outdoors Crochet Glove	2lg	1105	367	0	300	OK
	Active Outdoors Crochet Glove	2m	1101	220	0	300	ORDER
	Active Outdoors Lycra Glove	2m	1106	266	0	300	ORDER
	Active Outdoors Lycra Glove	22m	1106	440	0	300	OK

In addition to the functions provided on the browser's standard toolbar, the Java viewer has the following extra functions on its custom toolbar:

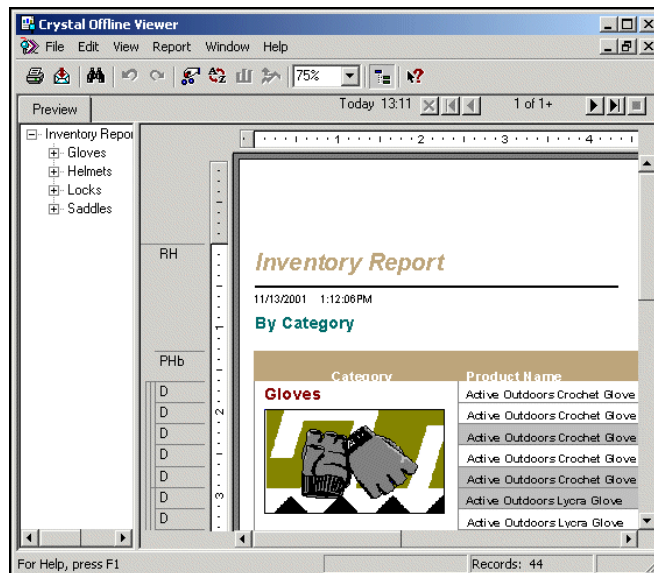
- Close current view
- Go to first page
- Go to previous page
- Current and last page numbers
- Go to next page
- Go to last page
- Stop
- Print report
- Export report
- Refresh data
- Show/hide group tree
- Magnification factor
- Text to search for
- Find next

When you place the mouse pointer over a button on the custom toolbar the associated description appears in the bottom left-hand side of the browser's status bar.

Note: You may experience minor problems scrolling through reports in the Java viewer. Such problems are a result of the Java Virtual Machine implemented in certain web browsers and cannot be accounted for by the Java viewer. If you experience problems, click repeatedly on the scroll buttons to scroll. Do not hold the scroll buttons down.

Crystal Offline Viewer

The Crystal Offline Viewer is a report viewer installed locally on your computer. You can use this viewer to look at Crystal reports you've downloaded without being connected to Crystal Enterprise.



Using the Crystal Offline Viewer, you can:

- Print or export your report
- Select the data you want to view
- Drill down for more detail in the report
- Sort the data in the report you want to view
- View multiple reports

The Crystal Offline Viewer functions similarly to Crystal Reports. For information on the tasks you can perform with the Crystal Offline Viewer (selecting records, sorting records, graphing, choosing Top N values, and so on), access the online help from the Crystal Offline Viewer Help menu.

Note: The Crystal Offline Viewer is not supported on Windows XP.

Installing the Crystal Offline Viewer

The Crystal Offline Viewer can be installed from the Crystal Enterprise Launchpad. Once it is installed, it resides locally as a client-side viewer.

To install the Crystal Offline Viewer

- 1 In your browser, type the following:
`http://webserver/crystal/enterprise10/`
Note: Check with your Crystal Enterprise administrator for the web server name or exact URL to enter.
The Crystal Enterprise Launchpad page appears.
- 2 Click **Crystal Offline Viewer**.
- 3 Select **Run this program from its current location** and click **OK**.
You can save the program to your hard drive if you'd like. If you save it, you must find the file and launch it in order to start the installation.
- 4 If you receive a security warning, click **Yes** to continue the installation.
The Wise Installation Wizard appears.
- 5 Follow the instructions on your screen accepting the default values when possible.
- 6 When the installation is done, click **Finish**.

Launching the Crystal Offline Viewer

The Crystal Offline Viewer is launched when you select a report (.rpt) from your machine and double-click it.

Note: If Crystal Reports is installed on your computer, it takes precedence over the Crystal Offline Viewer and displays your reports by default.

Viewing reports

Once you choose a report in Crystal Enterprise, you can view it in its entirety. If you click the report link and select either "View" or "View Latest Instance," the report opens in a Crystal report viewer. See ["Viewing reports in a report viewer" on page 30](#) for more information.

Report viewing activities

Depending on which Crystal report viewer you are using, there are a number of activities you can carry out when reviewing a report. For more information on what activities are available in each browser, see ["The default Crystal report viewers" on page 32](#).

Refresh

Click Refresh to obtain the most up-to-date report data from the report's data source. You need to have the proper rights to run this report and the report must contain the necessary data source information before you can refresh the report.

Find

Click Find to launch the Search dialog box. You can type the search criteria you want to find in the report.

Toggle Group Tree

Click Toggle Group Tree to show or hide the report's group tree. When the Group Tree is displayed, you can use it to navigate through your report's data.

Drill down

You can drill down on report data to show the data beneath charts and summarized groups. Double-click the chart or summarized data to see a drill-down view.

Zoom

Select a magnification factor from the drop-down list to zoom in or out on a report.

Scroll through pages

Use the scroll bars or First Page/Previous Page to move through the pages of a report. Go to First Page and Go to Last Page options are also available.

Set parameters

When you launch a report that contains data selection parameters, or when you refresh its data, you are prompted to select a value. The values and/or value ranges you can choose differ from report to report, depending on how the parameter was created in Crystal Reports.

Distributing reports

Using the Crystal report viewers, you can distribute reports using one of two methods: printing or exporting.

Tip: If you have the rights to schedule reports, you can also distribute reports by scheduling directly to a disk location, email, FTP, or printer. For details, see [“Destination locations” on page 25](#).

Printing reports

Successful instances of reports can be printed. Depending on which Crystal report viewer you use, the steps detailed below may be different; however, the general principles remain the same. (If there are on-screen instructions provided, follow those, rather than the steps below.)

- 1 On the viewer's toolbar, click **Print Report**.
The Print dialog box appears.
- 2 In the Print range area, select all pages or a specific range of pages.
- 3 In the Copies area, select the number of copies for the report.
- 4 If you select the **Collate** check box, the report prints each page in order.
For example, if you are printing two copies of a report with four pages, your report prints page one, two, three, and four of the first copy, and then prints the second copy.
- 5 Click **OK**.
The Printing Records dialog box appears displaying the progress of your print job.

Exporting reports

Successful instances of reports can be exported to several reporting formats, as well as to popular word processor and spreadsheet formats. This makes the distribution of information easier. For example, you may want to export data that projects sales trends to an Excel spreadsheet before you email it to the sales team.

Tip:

- You can select the page range for the report that you wish to export.
- For reports in which you can drill down, you can export the drill-down view.

Format types

Crystal Enterprise provides you with several export format types. They include:

- Crystal Reports
- Microsoft Excel
- Microsoft Excel (Data only)
- Microsoft Word
- Rich Text Format
- Adobe Acrobat

Note:

- When you export a report to a file format other than Crystal Reports format (.rpt), you may lose some or all of the formatting that appears in your report. However, the program attempts to preserve as much formatting as the export format allows.

- The difference between Excel and Excel (Data only) is that Excel attempts to preserve the look and feel of your original report.
- The Crystal Offline Viewer provides other formats for exporting. For more information about these formats, see the *Crystal Reports User's Guide*.

Publishing Objects to Crystal Enterprise 4

This chapter focuses on the publishing process: it introduces the Crystal Publishing Wizard and tells you how you can use it to add Crystal reports (RPT and CAR files) and other objects to the Crystal Enterprise web desktop or to your custom web desktop; it also describes alternative ways of adding objects to the Crystal Enterprise environment.

Publishing overview

Publishing is the process of adding objects such as Crystal reports to the Crystal Enterprise environment and making them available to authorized users. There are several types of objects that you can publish to Crystal Enterprise: reports (RPT and CAR files), programs, Microsoft Excel files, Microsoft Word files, Microsoft PowerPoint files, Adobe Acrobat PDFs, rich text format files, text files, and hyperlinks, as well as object packages, which consist of report and/or program objects.

When you publish an object to Crystal Enterprise, an entry is made in the Crystal Management Server (CMS) database. The Input File Repository Server stores the new object below the `\Enterprise\FileStore\Input\data\` directory. When a user schedules an instance of any object, Crystal Enterprise queries the CMS for the location of the object file; the appropriate server component then retrieves and processes the object file from the Input File Repository. The processed instance is stored by the Output File Repository Server below the `\Enterprise\FileStore\Output\data\` directory.

Note: Only reports, programs, and object packages can be scheduled. Thus, only these three types of objects have instances.

You can publish objects to Crystal Enterprise in three ways:

- Use the Crystal Publishing Wizard when you:
 - Have access to the locally installed application.
 - Are adding multiple objects or an entire directory.

For details, see [“Publishing with the Crystal Publishing Wizard” on page 45.](#)

- Use the Crystal Management Console (CMC) when you are:
 - Publishing a single object.
 - Taking care of other administrative tasks.
 - Performing tasks remotely.

For details, see [“Publishing with the Crystal Management Console” on page 53.](#)

- Save directly to your Enterprise folders when you are:
 - Designing reports with Crystal Reports.
 - Using the Crystal Analysis Application Designer.
 - Creating other objects with Crystal Enterprise plug-in components.

For details, see [“Saving objects directly to the CMS” on page 55.](#)

Note: Crystal Enterprise supports reports created in versions 6 through 10 of Crystal Reports. Once published to Crystal Enterprise, reports are saved, processed, and displayed in version 10 format.

Publishing options

During the publishing process, you specify how often an object is run. You can choose to set a schedule (recurring), or you can choose to let users set the schedule themselves (on demand).

For RPT report files, this affects when data is refreshed and what data users see (You cannot schedule Crystal Analysis reports (CAR files)):

- **Specifying the data that users see (recurring)**

This option is recommended for objects that are accessed by a large number of people and that do not require separate database logon credentials.

Benefits

- Users view the same instance of the report, reducing the number of times the database is hit (and thus system resources are used more effectively).
- The report instance is static (contains saved data) and is stored on the Cache Server, allowing multiple users to access the report at the same time.

Drawbacks

- The report instance the users see is based on the selection criteria (parameters and record selection formulas) and schedule set by the administrator.
- **Allowing users to update the data in the report (on demand)**

This option is recommended for smaller reports that use parameters and selection formulas, require separate database logon credentials, or have frequent data changes.

Benefits

- Users are able to determine the frequency in which the data in the report is updated.

Drawbacks

- Multiple users generating reports at the same time increases the load on the system and the number of times the database is hit.
- Each unique report page is cached separately. It's possible that the Cache Server can contain many copies of the cached report, each of them being generated by hitting the Page Server and database.

Publishing with the Crystal Publishing Wizard

The Crystal Publishing Wizard is a locally installed, 32-bit Windows application. The wizard is made up of a series of screens. Only the screens applicable to the objects or folders you are publishing appear. For example, the settings for parameters and schedule format do not appear when you publish Crystal Analysis applications. This section of the guide features a series of procedures to help you through the Crystal Publishing Wizard.

Once the object has been published, it will appear in the folder you specified in the Crystal Enterprise web desktop (or other web desktop) and in the Objects management area of the CMC.

Note: Depending on the rights assigned by your Crystal Enterprise administrator, you may not be able to publish objects using the Crystal Publishing Wizard.

Logging on to Crystal Enterprise

- 1 From the **Crystal Enterprise 10** program group, click **Crystal Publishing Wizard**.
- 2 Click **Next**.
- 3 In the **System** field, type the name of the CMS to which you want to add objects.
- 4 In the **User Name** and **Password** fields, type your Crystal Enterprise credentials.
- 5 From the **Authentication** list, select the appropriate authentication type.
- 6 Click **Next**.
The Select A File dialog box appears.

Adding objects

- 1 Depending on the type of object you are adding, click either **Add Files** or **Add Folders**.
- 2 Navigate to and select the object you want to add.
If you are adding a folder, you can choose to also add its subfolders by selecting the Include Subfolders check box.
Tip: Ensure the appropriate file type is listed in the Files of type field; by default this value is set to Report (*.rpt).
- 3 Repeat steps 1 and 2 for each of the objects you want to add.
- 4 Click **Next**.
The Folder Hierarchy dialog box appears if it is needed.

Duplicating the folder structure

If you are adding multiple objects from a directory and its subdirectories, you are asked if you want to duplicate the existing folder hierarchy on the CMS.

- 1 Click **Yes** or **No**.
Click the Yes button to have all of the folders and subfolders recreated on the CMS as they appear on your hard drive.
Click the No button to have all of the objects placed in a single folder.
- 2 Click **Next**.
The Specify Location dialog box appears.

Creating and selecting a folder on the CMS

To add the selected objects, you must create or select a folder on the host CMS. Only the folders that you have full control access to will appear.

- 1 Click the folder you want to add the objects to. Click + to the left of the folder to view the subfolders.



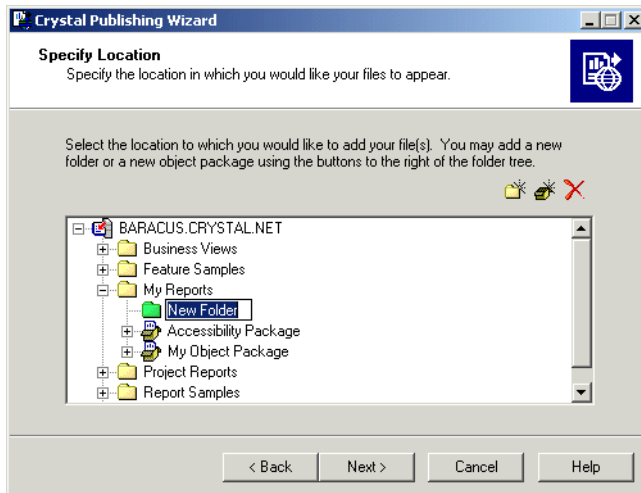
To add a new folder to the CMS, select a parent folder and then click the New Folder button. The new folder appears and can be renamed.



To add a new object package to the CMS, select a parent folder and then click the New Object Package button. The new object package appears and can be renamed.



To delete a folder or object package, select the item and click the Delete Folder button.



Note: From the wizard, you can delete only new folders and object packages. (New folders are green; existing folders are yellow.)

If you are adding multiple objects and want to place them in separate directories, you can do so in the next section.

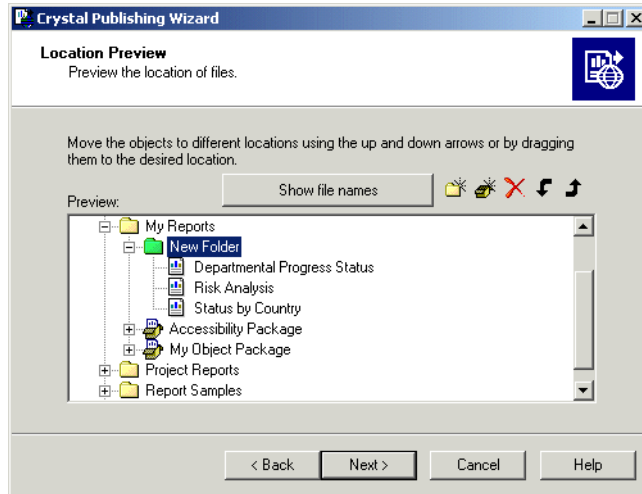
- 2 Click **Next**.

The Location Preview dialog box appears.

Moving objects between folders



- 1 Move objects to the desired folders by selecting each object and then clicking **Move Up** or **Move Down**.



You can also add folders and object packages by selecting a parent folder and clicking the New Folder or New Object Package button. To delete a folder or object packages, select it and click the Delete button. You can drag-and-drop objects to place them where you want. And you can right-click objects to rename them. By default, objects are displayed using their titles. You can display the objects' local file names by clicking the "Show file names" button.

- 2 Click **Next** when you are finished.
The Schedule Interval dialog box appears if it is needed.

Changing scheduling options

The Schedule Interval dialog box allows you to schedule each report, program, and/or object package that you are publishing to run at specific intervals.

Note: This dialog box appears only for objects that can be scheduled.

- 1 Select the object you want to schedule.
- 2 Select one of three intervals:
 - **Run once only**
Selecting the "Run once only" option provides two more sets of options:
 - **when finished this wizard**
This option runs the object once when you've finished publishing it. The object is not run again until you reschedule it.

- **at the specified date and time**

This option runs the object once at a date and time you specify. The object is not run again until you reschedule it.

- **Let users update the object**

This option does not schedule the object. Instead, it leaves the task of scheduling up to the user.

- **Run on a recurring schedule**

Once you have selected this option, click the Set Recurrence button to set the scheduling options.

The “Pick a recurrence schedule” dialog box appears.

The options in this dialog box allow you to choose when and how often the report runs. Select the appropriate options and click the OK button.

- 3 Click **Next** after you have set the schedule for each object you are publishing.

Enabling repository refresh

The Crystal Repository is a central location which stores shared report elements such as text objects, bitmaps, custom functions, and custom SQL commands. You can choose to refresh an object’s repository fields if the object references the repository. To complete this task, the Crystal Publishing Wizard needs to connect to your Crystal Repository database from the local machine. For details, see the *Crystal Enterprise Administrator’s Guide*.

Note: This dialog box appears only when you publish report objects.

To enable repository refresh

- 1 Select a report, and then select the **Use Object Repository when refreshing report** check box if you want to refresh it against the repository.

Tip: Click the “Enable All” button if you want to refresh all objects that reference the repository; click the “Disable All” button if you want to refresh none of the objects.

- 2 Click **Next** when you are finished.

Selecting a program type

- 1 In the **Program Type** dialog box, select a program.

- 2 Specify one of three program types:

- **Binary/Batch**

Binary/Batch programs are executables such as binary files, batch files, or shell scripts. They generally have file extensions such as: .com, .exe, .bat, .sh. You can publish any executable program that can be run from the command line on the machine where the Program Job Server is running.

- **Java**

You can publish any Java program to Crystal Enterprise as a Java program object. They generally have a .jar file extension.

- **Script**

Script program objects are JScript and VBScript scripts.

- 3 Once you have specified the type of each program you are adding, click **Next**. The Program credentials dialog box appears.

Note: For details about program objects and program object types, see the *Crystal Enterprise Administrator's Guide*.

Specifying program credentials

- 1 In the **Program Credentials** dialog box, select a program.
- 2 In the **User Name** and **Password** fields, specify the user credentials for the account for the program to run as.
The rights of the program are limited to those of the account that it runs as.
- 3 Once you have specified the user credentials for each program to run as, click **Next**. The Change Default Values dialog box appears.

Changing default values

You can choose to publish objects without changing any of the default properties, or you can go through the remaining screens and make changes.

Note: If you use the default values, your object may not schedule properly if the database logon information is not correct, or if the parameter values are invalid.

If you want to publish objects without making modifications:

- 1 Select **Publish without modifying properties**.
- 2 Click **Next** through the wizard's remaining dialog boxes.

If you want to review or modify objects before publishing:

- 1 Select **Review or modify properties**.
- 2 Click **Next**.
The Review Object Properties dialog box appears.

Changing object properties

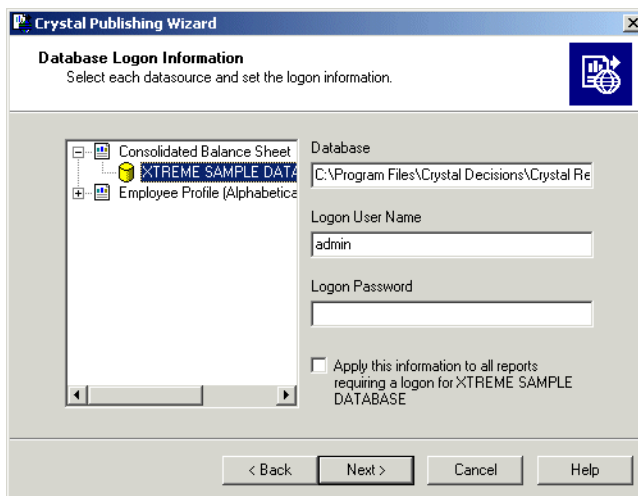
- 1 In the **Review Object Properties** dialog box, select the object you want to modify.
- 2 Enter a new title or description.

- 3 Select the **Generate thumbnail image** check box if you want users to see a thumbnail of a report object before they open it.
Tip: The “Generate thumbnail image” check box is available only if the object is an RPT file and was saved appropriately. To display thumbnails for a report, open the report in Crystal Reports and click Summary Info on the File menu. Select the “Save preview picture” check box and click OK. Preview the first page of the report and save your changes.
- 4 Click **Next**.
 The Database Logon Information dialog box appears if it is needed.

Entering database logon information

Some objects use data sources that require logon information. If objects you are adding are of this type, follow these steps.

- 1 Double-click the object, or click + to the left of the object to expose the database.



- 2 Select the database and change the logon information in the appropriate fields. If the database does not require a user name or password, leave the fields blank.
Note: Enter user name and password information carefully. If it is entered incorrectly, the object cannot retrieve data from the database.
- 3 Once you have completed the logon information for each object using a different database, click **Next**.
 The Set Report Parameters dialog box appears if it is needed.

Setting parameters

Some objects contain parameters for data selection. Before such an object can be scheduled, you must set the parameters in order to determine the default prompts.

- 1 Select the object whose prompts you want to change.
The object's prompts and default values appear in a list on the right-hand side of the screen.
- 2 Click **Edit Prompt** to change the value of a prompt.
Depending on the type of parameter you have chosen, different dialog boxes appear.
- 3 If you want to set the prompts to contain a null value (where possible), then click **Set Prompts to NULL**.
- 4 Click **Next** after you have finished editing the prompts for each object.
The Schedule Format dialog box appears.

Setting the schedule format

You can choose a schedule format for each report that you publish. For some of the formats, you can customize the schedule format options.

- 1 Select the object whose schedule format you want to change.
- 2 Select a format from the list (Crystal Report, Excel, Word, and so on).
Where applicable, customize the schedule format options. For example, if you select Paginated Text, enter the number of lines per page.
- 3 Click **Next**.
The Extra files for Program dialog box appears if it is needed.

Adding extra files for programs

Some programs require access to other files in order to run.

- 1 Select a program.
- 2 Click **Add** to navigate to and select the necessary file.
- 3 Once you have added all necessary extra files for each program, click **Next**.
The Command line for Program dialog box appears.

Specifying command line arguments

For each program, you can specify any command-line arguments supported by your program's command-line interface. They are passed directly to the command-line interface, without parsing.

- 1 Select a program.
- 2 In the **Command line** area, type the command-line arguments for your program, using the same format you would use at the command line itself.
- 3 Once you have specified all necessary command-line arguments for each program, click **Next**.
The final dialog box appears.

Finalizing the objects to be added

- 1 After ensuring all the objects you want to publish have been added to the list, click **Next**.
The objects are added to the CMS, scheduled, and run as specified. When the processing is done, you are returned to the final screen of the Crystal Publishing Wizard.
- 2 To view the details for an object, select it from the list.
- 3 Click **Finish** to close the wizard.

Publishing with the Crystal Management Console

If you have administrative rights to Crystal Enterprise, you can publish objects over the Web from within the CMC.

To add an object with the CMC

- 1 Go to the **Objects** management area of the CMC.
- 2 Click **New Object**.
The New Object page appears, with the Report properties displayed.

Home > Objects > New Object

Report

- Object Package
- Program
- Microsoft Excel
- Microsoft Word
- Adobe Acrobat
- Text
- Rich Text
- Microsoft PowerPoint
- Hyperlink

Browse for an existing report
(New reports are created in this system by adding an existing report from outside the CMS)

☒ Generate thumbnail for the report

☐ Use Object Repository when refreshing report

Then select a destination in which to save the report

Destination:

Look for:

3 On the left side of the page, click the type of object you want to add.

4 Enter the object's properties.

The properties that appear vary according to the type of object you are adding:

Property	Object Types	Description
File name	Report, Program, Microsoft Excel, Microsoft Word, Microsoft PowerPoint, Adobe Acrobat, Text, Rich Text	Type the full path to the object, or click Browse to perform a search.
Title	Object Package, Hyperlink	Type the name of the object.
Description	Object Package, Hyperlink	Type a description of the object.
Generate thumbnail for the report	Report	<p>If you do not want the user to see a thumbnail preview of the report in Crystal Enterprise, clear the "Generate thumbnail for the report" check box.</p> <p>Tip: To display thumbnails for a report, open the report in Crystal Reports and click Summary Info on the File menu. Select the "Save preview picture" check box and click OK. Preview the first page of the report and save your changes.</p>
Use Object Repository when refreshing report	Report	Select this option to automatically refresh an object's repository fields against the repository each time the report runs.
Program Type	Program	<p>Select Executable, Java, or Script.</p> <p>Tip:</p> <ul style="list-style-type: none"> • Run Java programs as Java program objects. • Run JScript and VBScript programs as Script program objects. • Run all other programs as Executable program objects.
URL	Hyperlink	Type the URL address of the page you want the hyperlink object to link to.

5 Ensure that the correct folder or object package name appears in the **Destination** field.

Tip:

- To expand a folder, select it and click Show Subfolders.
- To search for a specific folder or object package, use the Look For field.

Note: Only report and program objects can be published to object packages.

6 Click **OK**.

When the object has been added to the system, the CMC displays the Properties screen. If necessary, you can now modify the object's properties, such as its title and description, the database logon information, scheduling information, user rights, and so on.

Saving objects directly to the CMS

If you have installed one of the Crystal designer components, such as Crystal Reports or Crystal Analysis, you can use the Save As command to add objects to Crystal Enterprise from within the designer itself.

For instance, after designing a report in Crystal Analysis, click Save As on the File menu. In the Save As dialog box, click Enterprise Folders; then, when prompted, log on to the Crystal Management Server (CMS). Specify the folder where you want to save the report and click Save.

Saving objects directly to the CMS

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