Db2 Web Query Report Broker

Release 2.2.1

Contents

IBM

Using Report Broker

Report Broker is a report scheduling and distribution tool that provides a central point from which you can automatically distribute essential and current information to select people in an organization.

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Introducing Report Broker

Through Report Broker, you can schedule a report to run at specific times or intervals and be distributed through email, to a printer, or using FTP, to the Web Query repository. You have the option to distribute the report to a single address or to a group of recipients using a distribution list.

You can distribute an entire report or you can break a report into sections using the Report Broker burst feature. When you burst a report, you send only the relevant report sections to the users you specify.

The Report Broker Scheduling tool is the interface through which you create schedules. It offers all of the scheduling options you need to define the parameters of a schedule.

Report Broker Overview

The following Report Broker tools can be accessed by authorized users from the Repository tree in the Business Intelligence Portal and from Developer Workbench. The Client Security Authorization Model controls whether users are authorized to access the Report Broker Scheduling tools. To enable named users access to the Report Broker tools, they must belong to the Web Query group, folder-sched.

Note: A named user is a user ID that exists in the License Manager entry for the base Db2 Web Query product.

❏ **Schedule Tool.** The Basic Scheduling tool provides the options to define the parameters of a schedule, such as when a report procedure (FEX) will run, what format the output will take, and where the output will be distributed. For more information about the Basic Scheduling tool, see *Creating Schedules* on page 105.

❏ **Distribution List.** A list stored in the Repository that allows you to specify multiple recipients to whom the report output of a schedule will be distributed. For more information, see *Creating and Maintaining Distribution Lists* on page 91.

❏ **Log Report.** This report enables you to view information about a distributed job, such as whether or not the job executed successfully, when the report output was distributed, in what format the report output was sent, and the method of distribution. For more information about Log Reports, see *Tracking Schedules* on page 177.

❏ **Report Broker Explorer.** The Explorer interface enables users to list and review all Report Broker items of a specific type at once. Each item type (schedules and distribution lists) lists column information specific to the selected item type.

❏ **Report Broker Status.** The Console is the interface that provides access to the Report Broker administration tools (Server Status, Job Status, Configuration, and Global Update) and schedule management tools (Job Logs and Blackout Dates) for Report Broker.

Authorizing Users for Report Broker

To enable named users access to the Report Broker tools, they must belong to the Web Query group, folder-sched.

Note: A named user is a user ID that exists in the License Manager entry for the base Db2 Web Query product.

Distribution Server Features

Authorized users should be aware of the following Distribution Server activities and features:

❏ *Distribution Server Startup* on page 11.

❏ *Recovery* on page 11.

❏ *Scanback* on page 12.

❏ *Report Broker Server Configuration Tool* on page 13.

Distribution Server Startup

During startup, the Distribution Server calls the IBFS system to obtain information about how to communicate with the Db2 Web Query Repository. If the Distribution Server cannot communicate with the Repository, it will not start. If the Distribution Server does not start, check the Distribution Server startup trace and log files for error messages.

Upon successful initialization, the Distribution Server checks for jobs that need to be recovered, as specified by the Recovery and Scanback parameters and jobs that need to run as specified by the NEXTRUNTIME value of each schedule.

Recovery

The purpose of the Recovery parameter is to recover jobs that were placed in the Distribution Server queue, but did not complete schedule execution processing. This could be due to the Distribution Server or Reporting Server being stopped. You can activate the recovery feature by setting Recovery to ON in the Report Broker section of the Administration Console.

When you create a schedule and the Recovery parameter is set to ON, the RECOVERY field for the schedule is set to N. When the schedule is placed in the run queue, the RECOVERY field is set to Y. This means that if the Distribution Server becomes unavailable while the job is still in the queue, Report Broker will recover the job when the Distribution Server becomes available, even if the Recovery parameter is set to OFF. After the job is run and all log records have been written, the RECOVERY field is set back to N.

Any job that is running because the Recovery parameter is set to ON runs only once. After the job is placed in the run queue, its NEXTRUNTIME is updated to the next time it should run after the current time. For example, if a job is scheduled to run hourly and the Distribution Server is unavailable for four hours, when the Distribution Server becomes available, the job will run only once and will resume running on an hourly basis thereafter.

Note: The Recovery option works independently of the Scanback option. For more information about the Scanback option, see *Scanback* on page 12.

Reference: How Jobs Are Recovered

Scheduled jobs are recovered as follows:

1. When you start the Distribution Server, it checks for Recovery ON in the Report Broker configuration.
2. If Recovery is set to ON, the Distribution Server reads all records whose RECOVERY field is set to Y and places them in the run queue, regardless of schedule information and NEXTRUNTIME value.

3. The Distribution Server begins the process of polling and looking for jobs to run after having queued all the jobs whose RECOVERY field is set to Y.

4. After the scheduled job is placed on the Distribution Server queue, its NEXTRUNTIME is updated to the next time it should run after the current time.

Note:

❏ If the Recovery parameter is set to OFF, the Distribution Server modifies all jobs with a RECOVERY field value of Y to N. This turns recovery off for all jobs.

❏ If the Recovery parameter is set back to ON, it is only activated for jobs whose NEXTRUNTIME is later than the time at which the Recovery parameter was set back to ON.

Scanback

In certain instances, the Distribution Server may be unavailable for a period of time. During this time, no scheduled jobs can run. By default, when the Distribution Server becomes available again, it searches for and runs all jobs with a next run time less than the current time and resets the next run time according to the next scheduled run time of the job. If the Distribution Server is unavailable for a long time, you may want to adjust this behavior. Using the Scanback parameter, you can run only those jobs found in a specified time period of the outage, or just reset the next run time of all unexecuted jobs without running them.

There are two Scanback parameters:

❏ Scanback Type (On, Off, or Reset Next Run Time)

❏ Scanback Interval (number of days)

The Scanback Interval is active only when the Scanback Type is On.

The Scanback Type parameter can have the following settings:

❏ **On, when Scanback interval is an integer value greater than zero.** Represents the number of 24-hour periods (beginning with the Distribution Server restart time) that the Distribution Server will scan back to look for and run jobs with a next run time less than the current time.

For example, if the Distribution Server is unavailable for three days and Scanback is set to 2, then the Distribution Server will only run those jobs it finds with a next run time within the previous 48 hours of the server restart time.

A valid value is any integer from 1 to 365. The default value is 15 days.

❏ **Reset Next Run Time.** Looks for all jobs with a next run time less than the current time and resets the next run time to the next scheduled run time of the job.

❏ **Off.** Disables Scanback. This means the Distribution Server follows its default behavior to find, run, and reset all jobs with a next run time that is less than the current time.

Note:

❏ The Scanback option works independently of the Recovery option. For more information about the Recovery option, see *Recovery* on page 11.

❏ Consider Daylight Saving Time when setting the Scanback parameter. For more information, see *http://webexhibits.org/daylightsaving/b.html*.

Report Broker Server Configuration Tool

The Report Broker Server Configuration tool is an administration tool that allows authorized users the ability to navigate through and change the various settings that define the Report Broker configuration. For example, the polling interval for the Distribution Server can be changed and the Maximum Threads to control the number of connections available for each Reporting Server can be defined. The configuration settings are accessed from the Configuration tab in the Report Broker Console.

Verifying Report Broker Distribution Server Configuration Settings

Web Query Administrators can manage the Distribution Server Configuration Settings using the Administration Console.

Note: It is important to verify these settings before using Report Broker.

Chapter **2**

Using the Report Broker Console

The following tools are accessible from the Console.

❏ Server Status

❏ Server Performance

❏ Job Status

❏ Job Log

❏ Configuration

❏ Blackout Periods

❏ Global Updates

❏ Refresh

In configurations licensed for Report Broker, authorized users can access the Console by selecting *Report Broker Status* from the Tools menu.

The Console displays in a new browser window. The ribbon displays buttons for each of the tools the user is authorized to access.

In this chapter:

Server Status

The Server Status tool allows Managers to select a Distribution Server to restart, suspend, or stop. The tool also enables Managers to switch servers, view traces, or refresh data.

Viewing the Distribution Server Status

The Server Status tool, accessed by selecting the Server Status tab in the Console, enables you to view the status of the Distribution Server. The Server Status tool provides details about the Distribution Server, such as the host name and port number, the status, and the number of jobs that are running and in the queue. The Distribution Server information includes:

❏ **Distribution Server.** The name used to identify the server in the Console.

Note: When the Distribution Server attempts to make an SMTP connection to a mail server, the connection will timeout after five minutes.

❏ **Host** and **Port.** The host name and port number where the Distribution Server is installed.

❏ **Mode.** The state and function of the Distribution Server. Options include:

Manager. When a Distribution Server operates as a Manager, the server listens for requests for on-demand jobs and polls the repository for scheduled jobs. Scheduled and on-demand jobs are dispatched by the Manager to a Distribution Server operating as a Worker. The Manager does not execute jobs. The Manager monitors jobs running on the Worker and communicates job status information to the Client and the Report Broker API.

Worker. When a Distribution Server operates as a Worker, it receives a job from a Manager and executes the job. The Worker communicates with the Client to retrieve procedures stored in the Repository and with the Reporting Server to run schedule job procedures. The Worker also dispatches HTTP requests and communicates with the file system or FTP servers to retrieve files for distribution. The Worker distributes the results returned from either the Reporting Server, HTTP, or file requests by Email, FTP, Printer, or to Managed Reporting as specified in the schedule. The Worker also updates the Report Broker logs with job information and updates the schedule with the next run time.

   ❏ **Full Function.** Indicates that the Distribution Server is up and functioning.

   ❏ **Down.** Indicates that the Distribution Server is stopped.

❏ **Running.** The number of scheduled and on demand jobs that are currently running.

❏ **Queued.** The number of scheduled and on demand jobs that are in the Distribution Server queue.

❏ **Services.** The services currently running on the Distribution Server. Options include:

❏ **Cache Cleaner.** The Distribution Server uses this service to refresh the IBFS Cache. The frequency at which the cache is refreshed is controlled by the setting IBI_Repository_Sync_Interval in the Administration Console.

❏ **Console.** The Distribution Server uses this service to listen for communication from the Report Broker application or API.

❏ **Dispatcher.** The Distribution Server uses this service to execute scheduled jobs.

Note: Depending on your server configuration, you may have one or more additional Dispatchers listed in the Server Status dialog box.

❏ **Reader.** The Distribution Server uses this service to poll the Repository.

❏ **Status.** The status of each service currently running on the Distribution Server. Options include:

❏ **Ready.** The service is available.

❏ **Standing By.** The service is standing by.

❏ **Suspend.** The service is suspended.

❏ **Listening.** The Console service is actively listening.

❏ **Polling.** The Reader service is active.

❏ **Monitoring.** The Repository Monitor is active.

❏ **Waiting.** Displayed when a job in the running queue is waiting for a connection to the Reporting Server. Occurs when a multi-task schedule is started because a connection is available to the Reporting Server in the first task but then waits because a connection is not available to the reporting server in the second task.

From the Server Status interface, you can perform the following tasks:

❏ **Refresh.** Retrieves the most current information and refreshes the Distribution Server status with this information.

❏ **Restart.** Recycles the Distribution Server and the Application Server.

❏ **Suspend.** This option is always available, regardless of whether a failover Distribution Server is configured or not. Suspends the Distribution Server services, but the server remains running. When you suspend a server, the Suspend button label will change to Resume.

❏ **Stop.** Brings the Distribution Server completely down.

Note: When you stop the Distribution Server using this option, you must restart it from the machine where it resides. You cannot restart the Distribution Server remotely.

❏ **Server Log.** Allows you to view trace information for the scheduler.log, main.trc, reader.trc, console.trc, and dispatcher.trc files. You can also turn the Distribution Server traces on or off. For more information, see *How to Turn Distribution Server Traces On or Off* on page 18.

Note: Distribution Server traces are tracked separately from job traces using this functionality. You do not need to turn on job traces to see Distribution Server traces.

❏ **Help.** Opens the Server Status online documentation.

Procedure: How to Turn Distribution Server Traces On or Off

1. From the Report Broker Console, select *Server Status*.

2. From the Distribution Server list, select a server.

3. On the toolbar, click the down arrow on the Server Log button.

4. Click *Turn On Server Traces* to turn the Distribution Server traces on.

   To disable the Distribution Server traces, follow steps 1 and 2, hover over *Turn On Server Traces*, and click *Turn Off Server Traces*.

Separate Job Queues for Each Data Server

The Distribution Server has separate job queues for each Reporting Server, as well as an additional queue for tasks that do not require a Reporting Server. Therefore, there will always be at least one job thread available for each Reporting Server, in addition to at least one thread for non-server based jobs. No one Reporting Server can have all of the available job threads consumed by jobs associated with that server.

Each Reporting Server is allocated job threads equal to the total number of connections available for that Reporting Server. The Maximum Threads setting is now the total number of threads for each Reporting Server, in addition to the number of threads allocated for remaining tasks.

Server Performance

The Server Performance tab displays graphs that provide a one hour performance history of memory usage, active jobs, and CPU usage for the Distribution Server that you select. You can also see a one day history of active jobs.

The following image shows an example of the Server Performance tab.
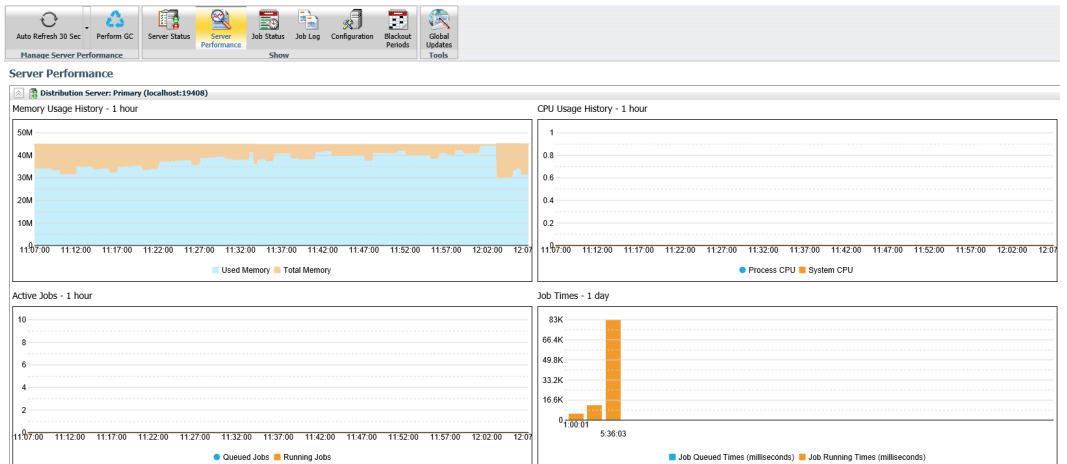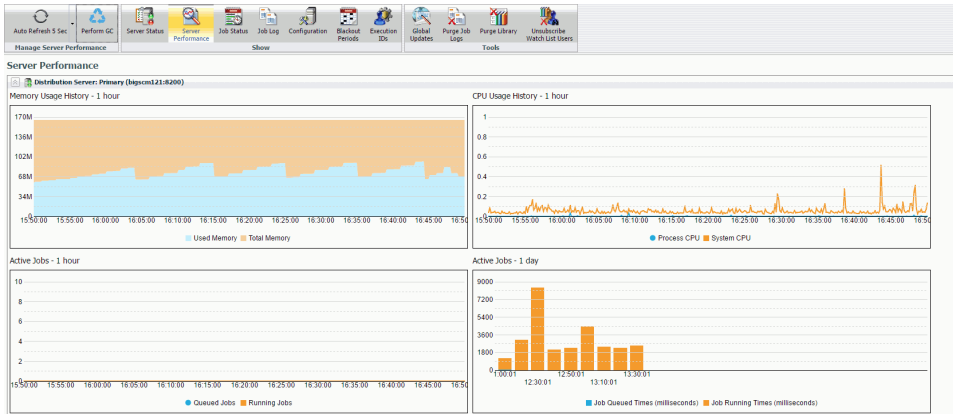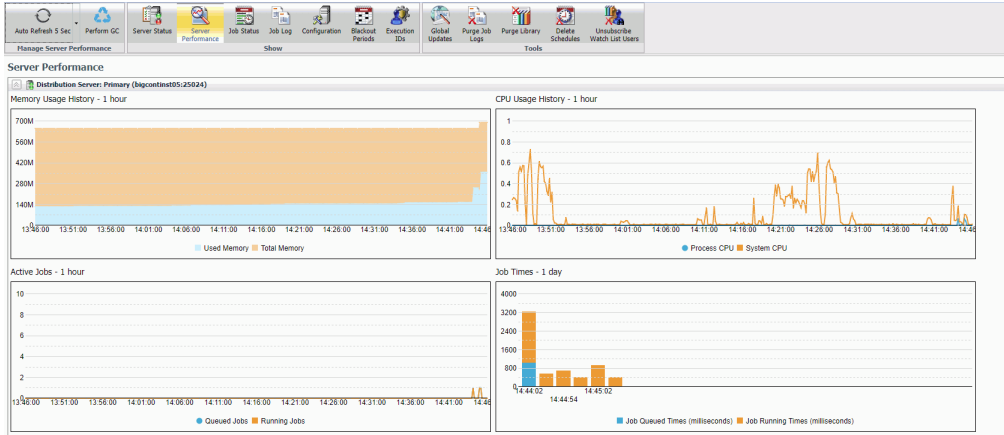
Job Status

Another resource for tracking schedules is the schedule job status. The schedule status provides a list of scheduled jobs that are in the Distribution Server queue. Status information includes the Schedule ID, the time it started running, and the status of the job.

The schedule information includes:

❏ **Job Id.** The ID assigned to the job.

❏ **Description.** The description provided when the schedule was created.

❏ **Priority.** The priority level of the schedule. 1 is the highest and 4 is the lowest priority.

❏ **Start Time.** The time that the schedule run began.

❏ **Owner.** The name of the user who owns the schedule.

❏ **Status.** The status of the scheduled job. It contains one of the following values:

  ❏ **Running.** The scheduled job is currently running.

  ❏ **Queued.** The scheduled job is waiting for a thread to become available to run the request.

❏ **Server Name.** The Reporting Server to which the job has been submitted.

❏ **Dispatcher Name.** The Distribution Server Dispatcher that submitted the job.

❏ **Full Path.** The full path the Schedule in the Db2 Web Query repository.

Job Log

The Job Log tab enables you to view the logs of executed jobs belonging to you or to users whose job logs you are authorized to see. You can view log and trace information, download trace files, open job logs, delete job logs, refresh job logs, or access related help for job logs on the Job Log tab. You can also view log and trace information for the daily and on-demand Log Purge and Schedule Purge jobs. The Log Purge and Schedule Purge logs can be accessed from the system folder. The logs for other jobs can be accessed under the folder of the user to whom the job belongs.

Note: The Job Log tab supports the functionality of a multiple selection, whereby you can open or delete multiple files simultaneously.

The job logs information includes:

❏ **Job Id.** The ID assigned to the job.

❑ **Start Time.** The time that the schedule was run.

❑ **Job Duration(seconds).** The amount of time needed to complete a job.

❑ **Job Status.** The status of the job when it completed processing.

　❑ **Success.** No errors occurred during the scheduled job processing.

　❑ **Error.** One or more errors occurred during the scheduled job processing. No report was generated or distributed.

　❑ **Warning.** One or more warnings occurred during the scheduled job processing. A report was generated and distributed.

For information about downloading Report Broker job trace files, see *How to Download Report Broker Job Trace Files* on page 186.

Report Broker Configuration

The Configuration tool enables Managers to view and manage the configuration of the Distribution Server, Servlet (deployed in Report Broker web application) interfaces and tools. Options that Managers can modify include Distribution Servers, General Preferences, Email Distribution, Notification, and other options.

Configuration Icons

In the Configuration tab on the Report Broker Console ribbon, a series of icons enable you to perform the following tasks.

Note: When you select *Configuration* in the Report Broker Console ribbon, the Manage Configuration group displays on the left-hand side. Clicking *Server Status*, *Server Performance*, *Job Status*, *Job Log*, or *Blackout Periods* will change the name and functionality of this group, depending where you are in the interface. These options all appear in the Show group of the ribbon.

❑ **Manage Configuration group**

　❑ **Save.** Saves any changes made to the configuration. You will receive a message asking you to confirm the save. You must save the changes to the configuration settings as part of the process to implement the change. For details, see *Changing Configuration Settings* on page 24.

　❑ **New.** Creates a new Reporting Server connection. This option is only active when working in the Data Servers folder.

❏ **Remove.** Deletes a Reporting Server from the Report Broker configuration. You will receive a message asking you to confirm the deletion. This option is only active when working in the Data Servers folder.

❏ **Test.** Tests the connection to the selected server or repository. This option is only active when working in the Data Servers and LDAP Settings folders. You may be prompted for a user ID and password to connect to a specified server. You will receive a message describing whether the test succeeded or failed.

❏ **Restart.** Restarts the Distribution Server and Report Broker to implement changes to the server configuration. You can also select *Restart* from the Action menu. For more information, see *Changing Configuration Settings* on page 24.

❏ **Configuration Files.** Provides options to view and download the Report Broker configuration files. Click the arrow to access the following individual files.

❏ **dserver.xml**. Contains a record of current Report Broker configuration settings.

❏ **sendmodes.xml**. Contains information about MIME output file formats.

❏ **rc_preference.xml**. Contains information about the display of options in the UI.

Clicking one of these file options displays the file information in a browser window. Click *Download Configuration Files* to download all files as a single zip file.

❏ **Tools group**

❏ **Global Updates.** Authorized users can make global updates for the values stored in schedules and distribution lists. using the Global Updates interface, the following settings can be updated:

❏ Mail Server

❏ FTP Server

❏ Printer

❏ Email Address

❏ Email From

❏ Data Server

❏ Notification Type

❏ Notification Reply Address

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❏ Notification Subject

❏ Notification Brief Message To

❏ Notification Full Message To

❏ First Pre-processing Procedure

❏ Second Pre-processing Procedure

❏ First Post-processing Procedure

❏ Second Post-processing Procedure

❏ **Delete Schedules.** The Delete Schedules functionality provides on-demand options for deleting all inactive or nonrecurring schedules. You can also specify an option for traces: Default Traces, No Traces, or Trace On. For more information, see *Delete Schedules*.

❏ **Actions group**

❏ **Refresh.** Refreshes the settings to reflect the last saved configuration settings.

Configuration Tab Folders

The Configuration tab provides access to configuration settings through the following folders:

❏ **Distribution Servers.** Defines and configures the Distribution Server. This folder provides settings to define a failover Distribution Server to act as a backup, and configure two or more Distribution Servers to share the workload. This folder also contains the Additional Settings folder. For details on these settings, see *Distribution Server Settings* on page 25.

❏ **General Preferences.** Specifies which Address Book access types, distribution formats, and methods will be available to a user creating a schedule. In this folder, you can also specify whether schedule group blackout dates can be defined, and if Report Broker scheduling options will include the ability to distribute a PDF file directly to a printer. For details on these settings, see *General Preferences* on page 33.

❏ **Email Distribution.** Configures email settings, such as the default email host, number of attempts to distribute to an email host, and security information. For details on these settings, see *Email Distribution* on page 37.

❏ **Notification.** Configures notification settings, such as the notification email host and default notification type. For details on these settings, see *Notification* on page 49.

❏ **FTP Settings.** Allows you to specify the default FTP and user ID, and security plug-in. You can also indicate whether the server requires a secure SFTP connection and specify the authentication method. For details on these settings, see *How to Configure FTP Settings* on page 55.

❏ **Zip Settings.** Provides settings to configure how Zip files will be created and named. For details on these settings, see *Zip Settings* on page 56.

❏ **Other Schedule Defaults.** Defines the default end date and time of a Report Broker schedule. For details on these settings, see *Other Schedule Defaults* on page 62.

❏ **Log Purge.** Allows you to specify the time and period that log files will be automatically purged. For details on these settings, see *Log Purge* on page 62.

❏ **Data Servers.** Allows you to configure multiple Reporting Servers, including cluster servers. For details on these settings, see *Data Servers Settings* on page 63.

Changing Configuration Settings

To implement changes to the Report Broker server configuration settings, you must save the changes, and then restart the Distribution Server and the Report Broker web application. Use the following steps to save any configuration changes.

1. After you make changes to any of the configuration settings within a Configuration folder, click the *Save* icon in the Manage Configuration group toolbar.

   A window opens, asking you to confirm the save.

2. Click *OK*.

   A window opens, explaining that you must restart the Distribution Server and the Report Broker web application in order for the changes that you saved to take effect.

3. Click *OK*.

4. Click the *Restart* icon in the Manage Configuration group toolbar.

   A window opens, asking you to confirm that you want to stop all running jobs and restart.

5. Click *Yes*.

6. Notify all users that are currently logged that they must restart their sessions to obtain the new configuration information. This is required because user sessions have information cached pertaining to the Report Broker configuration. The user interfaces must be restarted to obtain any updated configuration information.

Distribution Server Settings

The Distribution Servers folder contains the settings that define and configure the Distribution Server. The Server Status option, located on the ribbon, provides the ability to restart the Distribution Server, suspend distribution, stop distribution, switch servers, and refresh data.

The Distribution Servers folder contains the following configuration settings.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Primary Distribution Server section		
Host	Required.	Host name of the primary Distribution Server.
Port	Required.	Port number of the primary Distribution Server.
Restrict to IP Address	Optional.	Restricts Distribution Server Console access to one or more IP Addresses. For more information, see *Restricting Distribution Server Console Access to an IP Address List* on page 32.

Maximum Threads

Controls how many simultaneous connections (threads) the Report Broker Distribution Server can utilize to process scheduled jobs. The default value is 3. This setting is also available in the Administration Console.

Server Name	Required if one or more servers are listed.	Displays the name of the server.
Threads (Connections)	Required. The Default Value is 3.	Displays the simultaneous connections (threads) for each server.
Other Task		Non server-based tasks.

Reader Interval, Recovery, Processing for No Report to Distribute, and Max Messages per Task from Data Server options:

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Reader Interval	Required. Default value is 1 minute.	Polling interval (in minutes) for the Report Broker Distribution Server to check for scheduled jobs. An acceptable value is any positive integer from 1 to 999999. Negative numbers and zero are not allowed. **Note:** This setting is also available in the Administration Console.
Recovery	Default value is OFF.	**On.** During startup, the Report Broker Distribution Server recovers scheduled jobs that were processed but not completed. **Off (Default).** During startup, the Report Broker Distribution Server does not recover any scheduled jobs. **Note:** This setting is also available in the Administration Console.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Processing for No Report to Distribute	Required. Default value is Error.	Specifies whether the *No Report to Distribute* message from the Reporting Server is categorized as an error or a warning. This is a global setting, relevant to all schedules. Possible values are: ❏ **Error.** The *No Report to Distribute* message is categorized as an error and the message is written to the Report Broker log report in red. When the schedule has the Notification option set to Error, the Notification is sent. ❏ **Warning.** The *No Report to Distribute* message is categorized as a warning and the message is written to the log report (in orange) as an informational message. When the schedule has the Notification option set to Warning, no error notification is sent. These settings also apply to burst reports when there is a *No Report to Distribute* message for an individual burst value. If a schedule contains multiple tasks, the *No Report to Distribute* processing only applies if all tasks that are part of the schedule produce the *No Report to Distribute* message. If one task in the schedule produces a report, then the value of this setting does not affect log messaging or notification.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Max Messages per Task from Data Server	Required. Default value is 1000	Controls the number of messages for each task from the Data Server written to the Report Broker log file.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Scan-back section		
Scan-back Type	Required. Default value is On.	Possible values are: ❏ On ❏ Off ❏ Reset Next Run Time
Scan-back Interval	Default value is 15, 24 hour periods.	If the Distribution Server is unavailable for a period of time, this is the number of 24 hour periods (beginning with the Distribution Server restart time) that you want the Distribution Server to scan for jobs not yet run and run them. **Note:** This setting is also available in the Administration Console.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Settings for the Additional Settings folder:		

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
The Console Requires Secure SSL Connection	Optional.	Select this check box to encrypt the communication between the Report Broker application and the Report Broker Distribution Server. After enabling secure communication and saving the changes, you must manually restart the Report Broker application and the Report Broker Distribution Server.
SSL Certificate	Required if *The Console Requires Secure SSL Connection* check box is selected.	A default SSL Certificate is supplied by the installation procedure. You can optionally replace the default certificate with your own certificate to activate secure communication.
		To do this, you must import your signed server certificate from a CA or self-signed certificate to the distribution server keystore, and then export an SSL certificate from the keystore.
		Once you have exported the SSL certificate, you must paste this certificate to the SSL Certificate setting, save the configuration changes, and manually restart the ReportCaster application and the ReportCaster Distribution Server.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Schedule Job Traces	Optional. The default value is Off.	Enables Distribution Server Traces. ❑ **Off.** Trace is disabled. ❑ **Schedule.** Schedule job processing information. ❑ **Schedule and Report.** Scheduled job processing information and report output is returned to the Distribution Server to be distributed.
Job Status Notification Plug-in	Optional.	Name of a custom written Java class that implements the Report Broker Job Status Notification interface and instructs the Distribution Server to perform some action (such as notifying a Web Service or other listener) that a scheduled job has started and ended. For more information, see *How to Configure the Job Status Notification Plug-in* on page 31.
Provide Metrics Information from Resource Analyzer	Optional.	This functionality enables the collection of RA DBMS statistics from the Reporting Server for display in the schedule log. **Note:** If you do not have Resource Analyzer on the Reporting Server, this functionality will not work. When the check box is selected, the RC log displays messages containing RA DBMS information. When the check box is not selected, messages are not displayed.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Hold Repository Connection	Required. By default, this option is selected.	**Selected.** The database connection is kept open throughout the execution of the schedule, including obtaining Address Book information, and writing information to the log files. **Not selected.** The database connection is dropped before executing the schedule. A new connection is made after the schedule is executed to obtain Address Book information and write information to the log files.

Procedure: **How to Configure the Job Status Notification Plug-in**

1. From the Tools menu, click *Report Broker Status*.

2. Click the *Configuration* button.

3. In the left pane, select the *Distribution Servers* folder, then select the Additional Settings folder.

4. Populate the Distribution Servers fields using the information provided in the preceding tables.

5. In the Job Status Notification Plug-in field, enter the name of the program that implements the Job Listener interface.

6. Click *Save*.

   Your program will be called at the start and end of each schedule to perform the customized actions it has been designed to do. For more information, refer to the ibi.broker.scheduler.plugin package found in the Java documentation.

Restricting Distribution Server Console Access to an IP Address List

Limiting Distribution Server access to a preselected IP address helps prevent denial of service (DoS) attacks against your server. A DoS attack is a malicious cyber-attack that overloads a server with requests from multiple IP addresses, which blocks legitimate IP addresses from accessing the server. You can use the Restrict to IP Addresses option in the Report Broker Console to enhance the security of your network. If you populate the Restrict to IP Addresses field with one or more IP addresses, the Distribution Server only accepts TCP/IP requests from the addresses listed. This setting is blank by default.

Procedure: **How to Configure IP Address Restrictions**

1. Open the Report Broker Console.

2. On the ribbon, in the Show group, click *Configuration*.

3. In the Configuration pane, click *Distribution Servers*.

   The Primary Distribution Server options display.

4. Click the *Restrict to IP Addresses* open folder button.

   The Allowed IP Addresses dialog box opens.

5. Click *Add*.

   The Add IP Address dialog box opens, as shown in the following image.
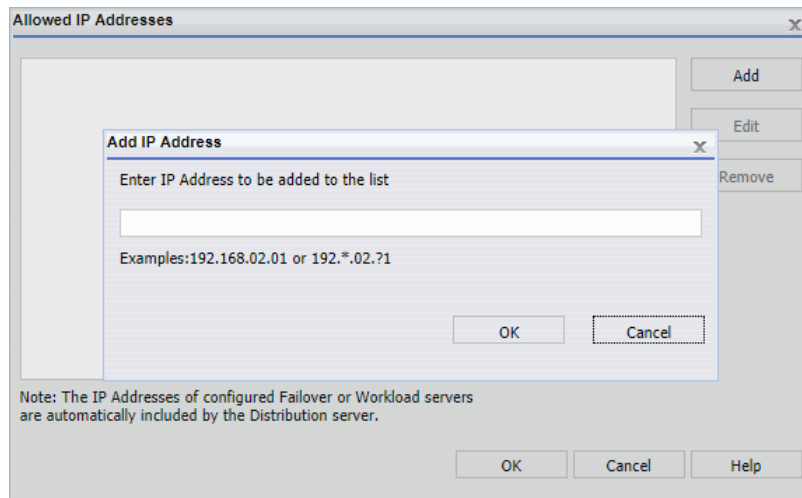
6. Type an IP address and click *OK*. This adds the IP address to the Allowed IP Address list.

7. Repeat steps 5-6 to add any additional IP addresses.

8. Click *OK* to save the Allowed IP Address list and return to the Report Broker Console.

9. On the ribbon, in the *Manage Configuration* group, click *Save* to keep your allowed IP address changes.

10. On the ribbon, in the *Manage Configuration* group, click *Restart* to apply your changes.

Procedure: **How to Edit an IP Address**

1. Click the Restrict to IP Addresses open folder button.

   The Allowed IP Addresses dialog box opens.

2. Click the IP address that you want to modify, and then click *Edit*.

   The Edit IP Addresses dialog box opens.

3. Modify the IP address, and then click *OK*.

4. On the ribbon, in the *Manage Configuration* group, click *Save* to keep your allowed IP address changes.

5. On the ribbon, in the *Manage Configuration* group, click *Restart* to apply your changes.

Procedure: **How to Delete an IP Address**

1. Click the *Restrict to IP Addresses* open folder button.

   The Allowed IP Addresses dialog box opens.

2. Click the IP address that you want to delete, and then click *Remove*.

   The selected IP address is deleted.

3. Click *OK*.

4. On the ribbon, in the *Manage Configuration* group, click *Save* to keep your allowed IP address changes.

5. On the ribbon, in the *Manage Configuration* group, click *Restart* to apply your changes.

General Preferences

The General Preferences folder in the Configuration tab contains settings that determine which schedule tasks, distribution formats and methods will be available to a user.

The General Preferences folder contains the following configuration settings.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Allow PDF Distribution Directly to a Printer	Required. By default, this option is selected.	When selected, PDF is a selectable format for the Printer distribution method. This enables a PDF file to be distributed directly to a printer. The printer must have the appropriate driver to print PDF files.
Use Legacy Behavior for Parameterized Schedule Settings	Optional. By default, this option is not selected.	Restores the legacy behavior for the use of amper variables in schedule settings. When selected, amper variables can only be used in the Email Subject. The value of an amper variable is set to the value stored with the schedule in the Report Broker parameters table. Runtime values are not available.
Schedule Tasks	Optional. All Task Types are enabled, by default.	Specifies what Task Types are available to users. For more information, see *Task Options in the Basic Scheduling Tool* on page 110.
Distribution Formats	Optional. All formats are enabled, by default.	Specifies what report and graph formats are available to users.
Distribution Methods	Optional. All distribution methods are enabled, by default.	Specifies what distribution methods are available to users.

Specifying Schedule Task Settings

The Schedule Tasks setting in the General Preferences folder enables authorized users to specify what Task Types are available to users and groups.

By default, all Task Types are enabled (selected). A minimum of one Task Type must be selected.

Note:

❑ If a task is cleared after a schedule using that Task has been created, the schedule will fail when it is run. A message in the log will indicate how to fix the problem.

Procedure: **How to Specify Schedule Task Settings**

1. In the General Preferences folder, click the icon to the right of the *Schedule Tasks* field. The Report Broker - Schedule Tasks dialog box opens.

2. To enable or disable specific General Task Types, select or clear the check box for the following options:

   ❑ Report Broker Report

   ❑ WF Server Procedure

   ❑ File

   ❑ URL

   ❑ FTP

   ❑ Report Broker Schedule

3. Optionally, enable the Schedule Job Management option to designate if existing schedules that use address books with access types are no longer allowed to run.

4. When your selections are complete in the Schedule Tasks dialog box, click *OK*.

   The changes are saved and the Schedule Tasks dialog box closes.

5. To implement the configuration changes, restart the Distribution Server and Report Broker web application.

Specifying Schedule Format Settings

The Distribution Formats setting in the General Preferences folder enables users to specify what report and graph formats are available to users and groups.

This setting only applies to Report Broker (Repository) procedures. By default, all report and graph formats are enabled (selected). A minimum of one report or graph format must be selected.

Note: If a Format is cleared after a schedule using that Format has been created, the schedule will fail when it is run. A message in the log will indicate how to fix the problem.

Procedure: **How to Specify Schedule Format Settings**

1. In the General Preferences folder, click the icon to the right of the *Distribution Formats* field.

    The Report Broker - Report/Graph Formats dialog box opens.

2. Using the Styled Formats drop-down list, you can select *Specialized Formats*, *Non-styled Formats*, or *Graph Images*. Optionally, you can keep the default, *Styled Formats*.

    By default, Styled Formats are displayed with each format type selected.

3. To enable or disable styled formats, select or clear the check box for one of the listed formats.

4. To enable or disable Non-styled Formats, which do not support styling using Report Broker StyleSheet commands, select *Non-styled Formats* from the drop-down list. By default, the Non-styled Formats are displayed with each format type enabled.

5. To enable or disable graph images, select *Graph Images* from the drop-down list. By default, the graph image formats are displayed with each format type enabled.

6. When your selections are complete in the Report/Graph Formats dialog box, click *OK*.

    The changes are saved and the Report/Graph Formats dialog box closes.

7. To implement the configuration changes, restart the Distribution Server and Report Broker.

Specifying Schedule Distribution Method Settings

The Distribution Methods setting, in the General Preferences folder, enables authorized users to specify the distribution methods that are available to users and groups. If a method is cleared after a schedule using that method has been created, and *Only run schedules for selected Distribution Method* is selected, the schedule processing will not run the scheduled tasks. A message in the log will indicate that the distribution method is not configured for use. In addition, a schedule that has multiple distributions will not run if one of the distribution methods is cleared in the Distribution Methods drop-down menu, in the General Preferences folder, of the Configuration tab.

By default, all distribution methods are enabled (selected).

Note: A minimum of one distribution method must be selected.

The Repository option only appears if these products are enabled. Repository is an optional product component that is installed with the Report Broker Client.

Procedure: **How to Specify Schedule Distribution Method Settings**

1. In the General Preferences folder, click the icon to the right of the *Distribution Methods* field.

The Report Broker - Schedule Distribution Methods dialog box opens.

2. To enable or disable specific distribution methods, select or clear the check box for one of the listed options.

   Note: At least one schedule distribution method must be selected.

3. Optionally, select the *Only run schedules for selected Distribution Methods* check box to limit the schedules running to those that have at least one of the Distribution Methods selected.

4. When your selections are complete in the Schedule Distribution Methods dialog box, click *OK*.

   The changes are saved and the Schedule Distribution Methods dialog box closes.

5. To implement the configuration changes, restart the Distribution Server and Report Broker web application.

Email Distribution

The Email Distribution folder in the Configuration tab contains default email settings, email retry options, and email security.

The Email Distribution folder contains the following configuration settings.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Inline Report Distribution	Required. The default value is Allowed.	Specifies whether the Schedule tool will enable the email distribution option to send a report in the body of the email (inline). **Note:** If this option is cleared after a schedule using this option has been created, the schedule will fail when it is run. A message in the log will indicate how to fix the problem.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Packet Email	Required. The default value is Yes.	Controls how task output and burst content are distributed through email. Valid values are: ❑ **No.** Each burst value or task output is distributed in a separate email. ❑ **Yes.** People receiving burst values or output from tasks will receive a single email with multiple attachments. ❑ **Burst.** Each burst value in a distribution list will generate a separate email for a given email address. There may be one or more attachments in the email, depending on the number of tasks in the schedule.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Allowed Email Domains and Addresses	The default value is off.	Contains the email domains and addresses that are authorized to be used in a distribution. Select the *Restrict user input with this list* check box to restrict user input of email addresses and domains to the allowed addresses saved in your list. For more information, see *Validating Allowed Email Domains and Addresses* on page 43. **Note:** ❑ If this list has changed before you attempt to edit email addresses for a previously saved Basic Schedule, Distribution List, Distribution File, or Dynamic Distribution List, the system checks if your new email addresses and domains are still valid. If you enter an invalid email address or domain, you will be prompted to change the email address or domain before saving. ❑ Files containing email addresses intended for distribution are also verified for valid domains at schedule execution time. If it contains a restricted address, then no delivery is made to that address and an error message is written to the log file.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Restrict Email Distribution to the Email Address of the Schedule Owner	Optional.	Check this box if you want to restrict email distribution to the email address of the schedule owner. **Note:** If no email address is specified for the schedule owner in the Security Center, the schedule cannot be saved.
Always Compress and Password Protect Distributed Report	Optional.	Select this box to have any distributed reports converted into a password-protected Zip file. Passwords can be provided in a distribution file, a dynamic distribution list, or by way of the zip encryption plug-in. If no password is created, the report will not be distributed. The distribution server will enforce this rule on all schedules, including schedules created prior to selecting the check box. **Note:** When this check box is selected, Inline Report Distribution will be disabled. If Inline Email is enabled, the Always Compress and Password Protect Distributed Report check box will be cleared. Also, if the Always Compress and Password Protect Distributed Report check box is selected, then the Add Report to Zip File check box in the Distribution tabs of schedules created from the Basic scheduling tool is selected, by default.
Customize Attachment Message	Optional.	Provides the ability to specify a custom message.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Default Attachment Message	Required.	Defines the default message used in your Email Distribution. The message that you define here displays in the Basic Scheduling Tool. **Note:** If you customize the default message, this new message will be the default message for new schedules.
Mail Server Defaults section		
Mail Server	Required.	Name of the default mail server used to distribute an email schedule. You can also specify a port for Mail Host using *hostname*:*port*. If you do not specify a port or the port you specify is not present, the default port is used.
This Server Requires a Secure SSL Connection	Optional.	Select this check box if the specified mail server uses SSL.
This Server Requires a Secure TLS Connection	Optional.	Select this check box if the specified mail server uses TLS.
This Server Requires Authentication	Optional.	Select this check box if the specified mail server requires authentication with a user ID and password.
SMTP User Id/ Password	Required if the mailhost is using SMTP Authorization. No default value.	User ID and password used to connect to the mailhost.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
SMTP Security Plug-in	Optional.	Name of a custom written Java class that implements the Report Broker SMTP security interface to dynamically retrieve the user ID and password needed to connect to an SMTP server. For more information, see *How to Configure Email Distribution* on page 43.
Email Reply Defaults section		
Mail From	Optional.	Default value for the email From field. This can be any value.
Mail Reply Address	Optional.	Default email reply address when creating an email schedule. **Note:** If you do not provide a Mail Reply Address, the default Reply Address used in the Basic Scheduling tool will be the email address of the user that is signed in to Web Query. Report Broker obtains the email address of the user from the Web Query security system.
Email Retries section		
Email Retries	The default value is 1.	Number of times the Distribution Server will try to connect to the email server to deliver report output. If the Distribution Server is unable to connect to the email server on the first try, it will attempt to connect again after the specified Email Retry Interval has passed. A message for each attempt is written to the log file. Valid values are 0 through 9.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Email Retry Interval(seconds)	The default value is 60 seconds.	Amount of time that the Distribution Server will wait between retries. Valid values are 1 through 999.

Procedure: **How to Configure Email Distribution**

1. From the Tools menu, click *Report Broker Status*.

2. Click the *Configuration* button.

   Note: Authorized users can also access the Report Broker Configuration tool from the Administration Console.

3. In the left pane, select the *Email Distribution* folder.

4. Populate the email distribution fields. You can:

   ❏ Make changes to the current email settings. For more information, refer to the preceding table.

   ❏ Supply any default values that you would like to be available at schedule creation time.

5. If your mail server(s) require authentication or SSL or TLS, check the appropriate boxes and enter the required credentials.

6. Click *Save*.

Validating Allowed Email Domains and Addresses

When sending reports by email, you can restrict user selection of email domains and addresses from a pre-defined list.

The following image shows the Allowed Email Domains and Addresses dialog box in the Report Broker Console, where this option is available.
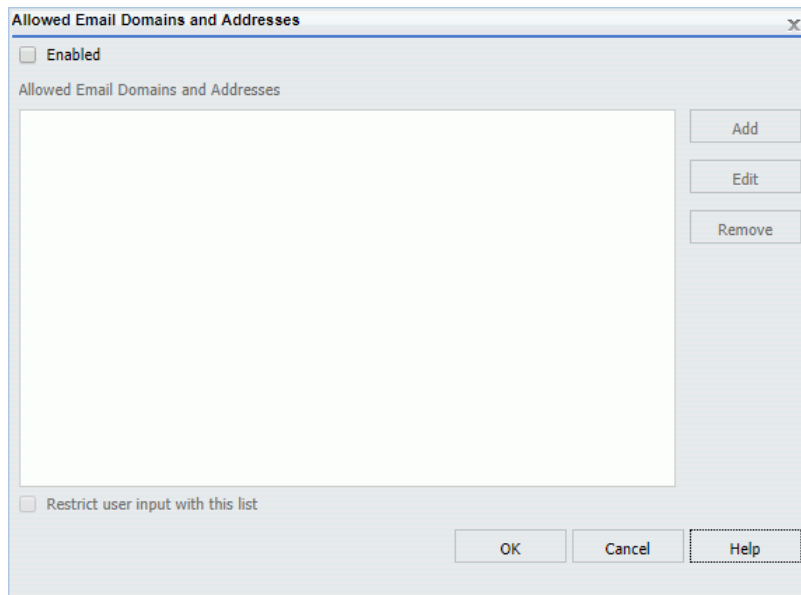
Select the *Enabled* check box to restrict email distribution to a list of valid email domains and addresses. When the list is enabled, and a user enters an email address that is not on this list, the Report Broker job cannot be saved.

If you select the *Restrict user input with this list* check box, users will only be able to use email domains and addresses selected from this list, applying another layer of email distribution restriction for other users.

Note: You must select the Enabled check box in order to select the Restrict user input with this list check box.

Examples of Invalid Email Addresses and Domains

In this example, an Administrator added the following email addresses and email domains to the Allowed Email Domains and Addresses list:

❏ john@ibi.com

❏ roger@ibi.com

❏ @gmail.com

❏ @yahoo.com

These additions to the list define what is valid and what is invalid for user input.

Invalid Email Addresses

For example, since john@ibi.com was added to the list, if a user types in John@ibi.com, with an upper case J, the email address is valid. This is because the Allowed Email Domains and Addresses feature is not case sensitive.

However, if a user types johnroger@ibi.com, which is a combination of two email addresses that were added to the list, the email address would be invalid, because this specific email address was not added to the list.

Invalid Email Domains

When entering domain addresses, if a user types in any email address with the email domain @gmail.com, it is valid, because @gmail.com is one of the domains added to the list.

However, if a user types in any email address with the email domain @outlook.com, it is not valid, because @outlook.com is not one of the domains added to the list.

Email Domain and Address Restrictions

Restrictions apply during the following situations:

❏ Editing Email Distribution options in the Basic Scheduling tool.

The following image shows the Email Distribution options in the Basic Scheduling tool. If you select the *Restrict user input with this list* check box, you can click the *To*, *From*, and *Reply Address* fields to select or create email addresses.

❏ Editing Notification Email options in the Basic Scheduling tool.

The following image shows the Notification Email options in the Basic Scheduling tool. If you select the *Restrict user input with this list* check box, you can click the *Reply Address*, *Brief Message To*, and *Full Message To* fields to select or create email addresses.
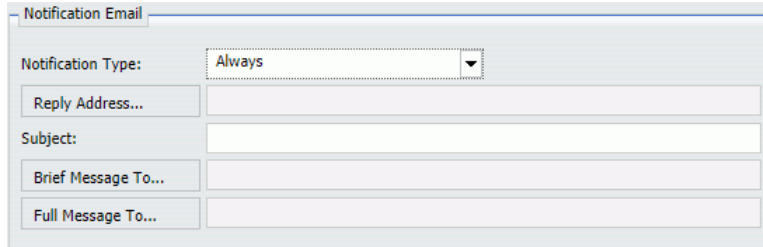
❏ Adding new members to a Distribution List

The following image shows the Distribution List Add New Member dialog box. If you select the *Restrict user input with this list* check box, you can click the *ellipsis* button next to the E-mail address field to select or create email addresses.
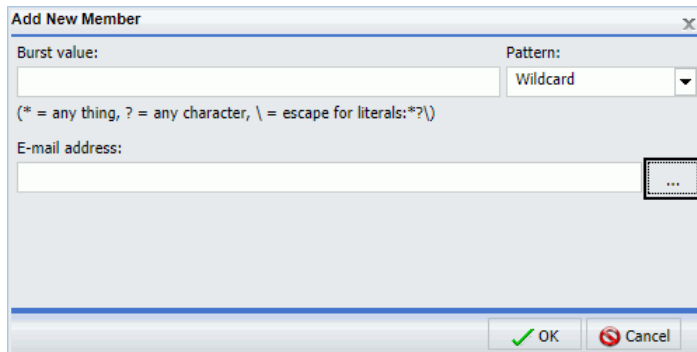
Restrictions also apply to the following file types:

❏ **Distribution Files**. If you import an external distribution file, the emails listed in the file are validated against the list of allowed email addresses and domains.

❏ **Dynamic Distribution Lists**. If you create a Dynamic Distribution List, the emails selected for use are validated against the list of allowed email addresses and domains.

The Email Selection Dialog Box

When the Restrict user input with this list check box has been selected, you can click a *To*, *From*, *Cc*, *Bcc*, *Reply*, *Reply Address*, *Brief Message To*, *Full Message To*, or *ellipsis* button to display one of three dialog boxes. The dialog box that displays is based on the type of email domain and address information contained in the Allowed Email Domains and Addresses list.

Note:

❏ You can enter multiple email addresses into the To, From, Cc, Bcc, Reply, Reply Address, Brief Message To, and Full Message To fields.

❏ To cancel the selection of an email address in the Select Email Addresses dialog box, hold the Crtl key and select the email address.

A List of Only Email Addresses

If the Allowed Email Domains and Addresses list contains only email addresses, the Select Email Addresses dialog box allows you to select an email address for the *To*, *Cc*, *Bcc*, or *Reply* fields, as shown in the following image.
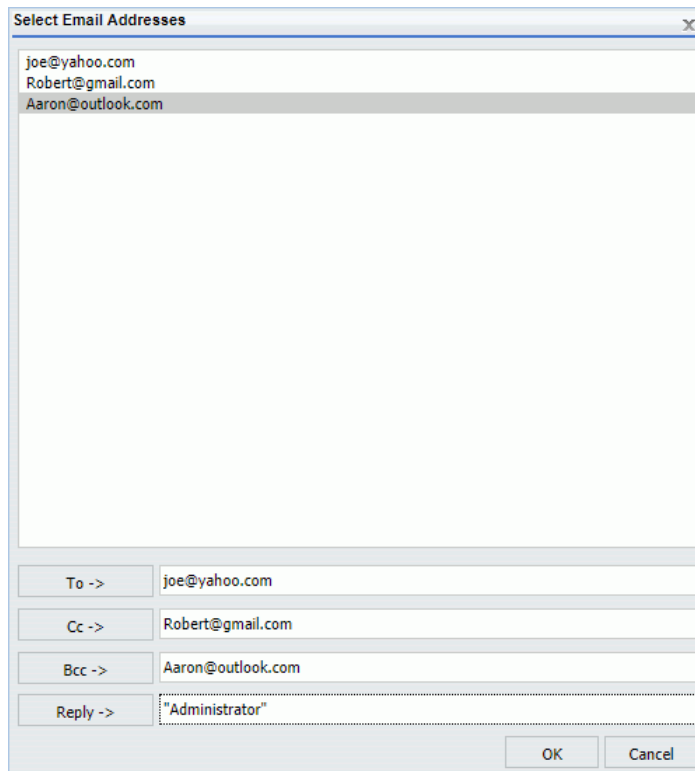
After you select an email address, click the To, Cc, Bcc, or Reply button to assign the email address to the respective field.

A List of Email Domains and Addresses

If the Allowed Email Domains and Addresses list contains both email domains and addresses, the Select or Enter Email Addresses dialog box lets you select from a list of email address. The dialog box also lets you create an email address for specific domains, as shown in the following image.
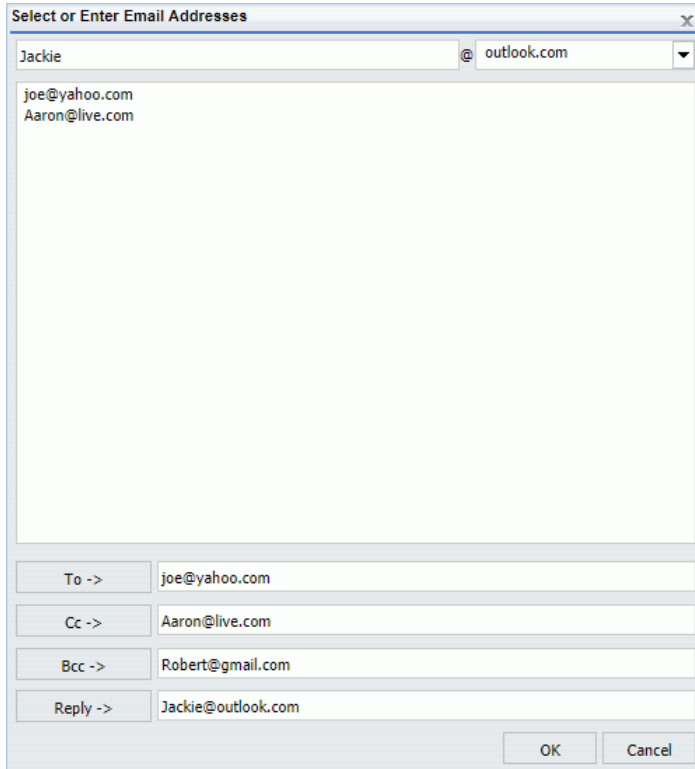
After you select an email address, or enter an email address and choose a domain, click the *To*, *Cc*, *Bcc*, or *Reply* button to assign the email address to the respective field.

A List of Only Email Domains

If the Allowed Email Domains and Addresses list contains only email domains, the input dialog box lets you select an email domain and enter the name of an email address, as shown in the following image.

After you enter an email address and choose a domain, click the *To*, *Cc*, *Bcc*, or *Reply* button to assign the email address to the respective field.

Notification

The Notification folder in the Configuration tab contains default notification settings.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Notification Defaults section		

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Notify Mail Server	Optional.	Name of the mail server that distributes the notification email. If blank, Report Broker uses the Mailhost setting as the notification mail server. **Tip:** Information Builders recommends using different mail servers for notification and email distribution. This way, if there is a problem with your Mailhost, notification will still be sent. Having separate mail servers ensures that you will be informed when the default mail server falters. You can also specify a port for the Notify Mailhost using *hostname*:*port*. If you do not specify a port or the port you specify is not present, the default port is used.
Default Notify Type	The default value is Never.	Specifies whether to send notification of the schedule status to a specified email address. Possible values are: ❑ **Never.** This is the default value. Report Broker does not send notification of the schedule status under any circumstance. ❑ **On Error.** The specified users are notified when errors are encountered while running the schedule. Information Builders recommends using the On Error notification option. ❑ **Always.** The specified user is always notified when the schedule runs. **Note:** This setting is also available in the Administration Console.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Enable Brief Notification Only	Optional.	Controls whether Full Notification is available as a scheduling option. When this check box is selected, you can only select the Brief Notification option when you schedule a report. Full Notification is not available. **Note:** Messages are displayed in the log when Full Notification is disabled. If a schedule is created before Full Notification is disabled, when the schedule executes, a Brief Notification will be sent, and a warning will be displayed in the schedule log.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Enable system notifications	Optional.	Controls whether a notification is sent to a designated administrator when a Failover event occurs, when a Distribution Server changes from Failover Mode to Full Function mode, or when a Distribution Server is stopped. When this option is selected, the fields within the System Notifications section must be filled out before this configuration can be saved. When a Distribution Server changes from Failover to Full Function mode, the body of the email will display as follows: The Distribution Server at *<Host>*:*<Port>* has changed from Failover to Full Function mode. When a Distribution Server has stopped, the body of the email will display as follows: The Distribution Server at *<Host>*:*<Port>* is going to stop.

System Notifications section

Administrative Email Address	Required.	Enter the default Administrative Email Address to which you want the system notification to be sent. This value is required.
From	Optional.	Enter the default address from which you want the system notification to be sent. This value is not required.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Reply Email Address	Required.	Enter the default Reply Email Address to which you want the user receiving the email address to reply. This value is required.
Email Subject	Optional.	Enter the default Email Subject line. This value is not required.

Procedure: **How to Configure Notification**

1. From the Tools menu, click *Report Broker Status*.

2. Click the *Configuration* button.

   Note: Authorized users can also access the Report Broker Configuration tool from the Administration Console.

3. In the left pane, select the *Notification* folder.

4. Populate the notification fields. You can:

   ❏ Make changes to the current notification settings. For more information, refer to the preceding table.

   ❏ Supply any default values that you would like to be available at schedule creation time.

5. Click *Save*.

FTP Settings

The FTP Settings folder in the Configuration tab contains the settings that define the default FTP server that Report Broker will use for FTP distributions.

The following table lists and describes the configuration settings that are available in the FTP Settings folder.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Default FTP Host	Optional.	Name of the default FTP server when creating an FTP schedule. If you want to designate a port number other than the default port number, then use the following format: *hostname:port*
Default FTP Location	Optional.	Name of the default FTP location (directory) when creating an FTP schedule.
Default User	Optional.	Default user ID and password to perform FTP file transfers. To access the Default User settings, click the icon to the right of the Default User field. The User dialog box opens, where you can type the user name and password.
SFTP Security Plug-in	Optional.	Name of a custom written Java class that implements the Report Broker SFTP security interface to dynamically retrieve the value of a public key needed to connect to a secure FTP server. For configuration information, see *How to Configure FTP Settings* on page 55.
Create Index File with Burst Distribution	Required. By default, this option is selected.	For an FTP distribution of burst reports, this option determines whether or not to create an index file when the schedule runs.
FTP Server Information		

Setting	Optional or Required/Default Value	Descriptions and Possible Values
This server requires a File Transfer Protocol (FTP).	Optional By default, this option is selected.	This option specifies that the default setting in the schedule tool is to use FTP.
This server requires a secure File Transfer Protocol over TLS/SSL (FTPS).	Optional	This option specifies that the default setting in the schedule tool is to use FTPS. This functionality enables you to select this option once in the configuration tool, eliminating the need to select the button each time you use the scheduling tool. You can clear the option in the scheduling tool. If this button is not selected, you can optionally select the button in the scheduling tool at schedule creation time.
This server requires a secure SSH File Transfer Protocol (SFTP)	Optional.	This option specifies that the default setting in the schedule tool is to use SFTP. This functionality enables you to select this option once in the configuration tool, eliminating the need to select the button each time you use the scheduling tool. You can clear the button in the scheduling tool. If this button is not selected, you can optionally select the button in the scheduling tool at schedule creation time.

Procedure: **How to Configure FTP Settings**

You can optionally supply values for the Default FTP Host, Default FTP Location, and Default User fields. These values are defaults for the schedule, as they are used at schedule creation time.

1. From the Tools menu, click *Report Broker Status*.

2. Click the *Configuration* button.

3. In the left pane, select the *FTP Settings* folder.

4. Optionally, populate the FTP Settings fields, using the following information as a guideline:

   ❏ **Default FTP Host.** Enter a name for the default FTP Server. This will be used when creating an FTP schedule.

   ❏ **Default FTP Location.** Enter the name of the directory that will be used when creating an FTP schedule.

   ❏ **Default User.** Enter the default user ID and password to perform FTP file transfers.

   ❏ **SFTP Security Plug-in.** Enter the name of a custom written Java class that will implement the Report Broker SFTP security interface to dynamically retrieve the value of a public key needed to connect to a secure FTP server.

   Note: Once stored, these values are used when you create a schedule. They are constant, unless you override them at the time you create a schedule.

5. Optionally, clear the *Create Index File with Burst Distribution* check box to indicate that an index will not be generated when the FTP schedule is run.

6. If your SFTP Server uses encryption keys, you can use the SFTP Security Plug-in to provide the values. To use this plug-in, enter the name of your program that implements the SFTP Security interface.

7. Optionally, select the *This server requires a File Transfer Protocol (FTP)* button if the FTP server does not require SFTP or FTPS.

8. Optionally, select the *This server requires a secure SSH File Transfer Protocol (SFTP)* button to secure the configuration information. Select the Security Mode, Protocol, and Data Connection Security settings to authenticate the server.

9. Optionally, select the *This server requires a secure File Transfer Protocol over TLS/SSL (FTPS)* button if the FTP server requires FTPS. Select the type of authentication you want for the server.

10. Click *Save*.

Zip Settings

The Zip Settings folder in the Configuration tab contains settings for adding an extension to a distributed Zip file, the Zip encryption to use for distribution, and defining a Zip encryption password plug-in.

The Zip Settings folder contains the following configuration settings.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Add Zip Extension to Filename if Not Specified	Required. By default, this option is selected.	Controls whether or not the .zip file extension will be automatically appended to the Zip file name entered by the user in a schedule distributed by email or FTP. Select this option if you want to automatically append .zip to the entered file name. Do not select this option if you want to use the file name as entered by the user and not have .zip automatically appended to the file name.
Zip Minimum with Email Distribution	Required. The default size is in KB and set to 0.	Select either MB or KB and customize the size of your file using the up and down arrows.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Zip Encryption Password Plug-in	Required. Default value is None.	Global setting that enables you to password protect and encrypt scheduled output distributed in a Zip file. This setting controls how passwords are obtained by the Distribution Server. The zip encryption is AES 256. For more information, see *How to Configure the Default Zip Encryption Password Plug-in* on page 61. Possible values are: ❑ **None.** Do not use a plug-in to return the password for Zip protection. When set to None, you have the option to use the Zip encryption password feature by embedding the password in either a Dynamic Distribution List or a Distribution File rather than using a plug-in. ❑ **Default.** Use the provided default plug-in to return a password for the Zip encryption password feature. ❑ **Custom.** Use the provided custom plug-in named in the Zip Encryption Pwd Plug-in Name setting.
Zip Encryption Password Plug-in Name	Required when Zip Encryption Password Plug-in setting is Custom.	Type the name of a custom written plug-in that will return passwords. This plug-in must be available to the Distribution Server.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Zip Encoding	Optional.	Specifies an encoding other than the default encoding of the Report Broker Distribution Server platform. The encoding specified must match the encoding used by WinZip or any other Zip utility installed on the Distribution Server. **Note:** This setting is also available in the Administration Console.
Maximum Concurrent Compressions	Optional The default value is zero (0).	The total number of compression operations that the Distribution Server will perform simultaneously. If many running jobs include a compression operation (for example, zipping the output before sending), the compression operations could consume all of the available resources on the Distribution Server. You can lower this number to prevent this from occurring.
Use Distributed Filename for FTP Archive Filename if Archive Filename not Specified in Schedule	Optional.	If this box is checked, then when a schedule is created that uses FTP as the distribution method and the archive file name is left blank, the Distribution Server will use the name found in the FTP Distribution List as the name of the archive file to be distributed.

Using the Zip Encryption Protection Default Plug-in

The default plug-in provided with Report Broker enables the encryption password to be associated with the Db2 Web Query Repository folder where the scheduled report resides. For information on customizing a Zip Encryption Protection Plug-in, see *How to Configure the Default Zip Encryption Password Plug-in* on page 61.

The plug-in delivers the password to the Distribution Server at schedule execution time, where the output is then encrypted and zipped. To use the default plug-in, choose *Default* for the Zip Encryption Password Plug-in setting. The default plug-in references the password file, zipencrypt.txt, for the domain and password. During installation, an empty version of this file is included in the /qibm/UserData/qwebqry/base80/ReportCaster/cfg directory.

The password statement in this file must be in the following format:

```
domain, domainhref, password, $
```

where:

domainhref

   Is the location of the HTML page (for example, untitled/untitled.htm) that contains the Report Broker Repository folder.

password

   Is the password to open content from the associated domain.

Note: The Report Broker log will indicate that encryption was used.

The guidelines for using the default plug-in are:

❑ The zipencrypt.txt file must be in the /qibm/UserData/qwebqry/base80/ReportCaster/cfg directory.

❑ The zipencrypt.txt file must contain the Report Broker Repository folder of the Report Broker Repository report.

   Note: Since a Report Broker Repository folder is required to use the Zip Encryption Password Plug-in, attempting to enter a task other than a Report Broker Repository report will result in a failure to distribute the output of that task.

❑ If the zipencrypt.txt file contains an entry with the Web Query Repository folder, but no password, then the output is not encrypted and will be zipped or not zipped according to the Zip option selected in the schedule when it was created.

❑ If both the Web Query Repository folder and a password are in the password file, then the output is zipped regardless of the Zip option selected in the schedule when it was created.

To edit the zipencrypt.txt password file:

1. From the bin directory on the Distribution Server, run the decode utility, *decdpwds*.

   Note: Once the decdpwds utility is run, a log file named decdpwds.log will be created in the /qibm/UserData/qwebqry/base80/logs directory.

2. Make the necessary additions or edits, such as adding a domain or changing the password.

3. Run the encode utility, *encdpwds*, to encrypt the file.

   Note: Once the encdpwds utility is run, a log file named encdpwds.log will be created in the /qibm/UserData/qwebqry/base80/logs directory.

Procedure: **How to Configure Zip Settings**

1. From the Tools menu, click *Report Broker Status*.

2. Click the *Configuration* button.

   Note: Authorized users can also access the Report Broker Configuration tool from the Administration Console.

3. In the left pane, select the *Zip Settings* folder.

4. Populate the Zip Settings fields using the information provided in the preceding tables.

5. If you want to produce zipped output that is encrypted and password protected, you can use the Zip Encryption Password Plug-in. To use your own program to supply the password, select *Custom* from the drop-down list and enter the name of the program in the Zip Encryption Password Plug-in Name field. To use the default, select *Default*. For more information, see *How to Configure the Default Zip Encryption Password Plug-in* on page 61.

6. Click *Save*.

Procedure: **How to Configure the Default Zip Encryption Password Plug-in**

1. From the Tools menu, click *Report Broker Status*.

2. Click the *Configuration* button.

3. In the left pane, select the *Zip Settings* folder.

4. From the Zip Encryption Password Plug-in drop-down list, select *Default*.

   The default implementation requires that Inline Email be disabled.

   If you click *OK*, Inline Email is automatically disabled.

5. Click *Save*.

6. In the /qibm/UserData/qwebqry/base80/ReportCaster/cfg directory, create the zipencrypt.txt file that contains the passwords used by the Zip Encryption Password Plug-in.

   This file has the following structure:

   ```
   Domain, domainhref, Password, $
   ```

where the first column is the word Domain, the second column identifies the folder containing the report to be scheduled, and the third column is the password.

Note: Only Report Broker procedures can be scheduled when this plug-in is configured. If a password is found, the output is encrypted. If a password is not found, the output is zipped but not encrypted.

7. Restart the Distribution Server.

Other Schedule Defaults

The Other Schedule Defaults folder in the Configuration tab contains settings for Schedule End Date and Schedule End Time.

Note: Depending on your time zone, the default Schedule End Date may be set to Jan 1, 2100.

The following table lists and describes the configuration settings available in the Other Schedule Defaults folder.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Schedule End Date	Required.	Clicking the drop-down menu displays a calendar where you can select the schedule end date.
Schedule End Time	Required.	Manually, you can enter an end time for the schedule. Alternatively, use the arrows to assign a schedule end time.

Log Purge

The Log Purge folder in the Configuration tab contains settings for purging log files, log purge periods, and log purge times.

The Log Purge folder contains the following configuration settings.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Purge Log at Distribution Server Start	Optional. By default, the check box is unchecked.	When selected, log reports are automatically purged each time the Distribution Server starts. This is in addition to the scheduled log purging that is set using the Log Purge Period and Log Purge Time options.
Daily Scheduled Log Purge section:		
Log Purge Period (Days)	Optional.	Automatically purges individual log reports when they are older than a set number of days. **Note:** This setting is also available in the Administration Console.
Log Purge Time	Optional.	Time at which log purging occurs. **Note:** This setting is also available in the Administration Console.

Data Servers Settings

The Data Servers folder in the Configuration tab contains settings to configure the Reporting Servers associated with Report Broker. Using the configuration settings in this folder, you can also configure multiple Reporting Servers with Report Broker.

Note: Data Server connection information is stored in the Db2 Web Query Client, and not in Report Broker. Report Broker runs scheduled procedures through the Db2 Web Query Client which is installed with the Distribution Server. When a Report Broker job is executed by the Db2 Web Query Client, the alternate deferred server is used if an alternate deferred server is defined.

The Data Servers folder contains the following configuration settings.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Settings for the Data Servers folder:		
Graph Agents	The default value is 1.	Optimizes the processing of graphs. Due to performance considerations, Information Builders generally recommends configuring this setting to 1 Graph Agent for each concurrent graph report. However, your own internal testing should determine the Graph Agent value that best suits the business needs of your organization.

Graph Servlet URL	Optional.
	
	There is no default.
		Overrides the default graph server setting and configures graph image files to be created on the Application Server.
		
		Type the following value
		
		`http://hostname/context_root/`
		`IBIGraphServlet`
		
		where:
		
		hostname
		
		Is the host name of the Application Server where the Db2 Web Query Client is installed.
		
		context_root
		
		Is the site-customized context root for the Db2 Web Query web application deployed on your Application Server. The default is webquery.
		
		This setting is available for Reporting Server and Db2 Web Query procedures.
		
		This setting should not be used when web server security is enabled. This includes Basic authentication, IWA, SSL, and third-party security products (such as SiteMinder). In these cases, the web server security settings can prevent Db2 Web Query from creating the graph.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values

Excel Servlet URL	Optional.	Specifies the application server to be used to zip the file components that comprise an EXCEL® 2007 file (.xlsx) as follows:
		
		`&URL_PROTOCOL://servername/alias/ IBIEXCELSERVURL`
		
		where:
		
		`URL_Protocol`
		
		    Is HTTP.
		
		`servername`
		
		    Is the name of the application server where the Db2 Web Query Client is installed.
		
		`alias`
		
		    Is the context root of the Db2 Web Query application. The default is webquery.
		
		This setting is available for the Reporting Server and Db2 Web Query procedures. This setting should not be used when web server security is enabled. This includes Basic authentication, IWA, SSL, and third-party security products (such as SiteMinder). In these cases, the web server security settings can prevent Db2 Web Query from creating the Excel 2007/2010 file.

FOCEXURL/ FOCHTMLURL	Default value is `http://localhost: 8080`	Specifies the host name and port of the FOCEXURL/ FOCHTMLURL.

Settings for an individual Data Server:

Name	Required.	Name of the selected Data Server. **Note:** Data Server names are case-sensitive. Data Servers are defined in the Db2 Web Query Client as uppercase so you should also define Data Servers as uppercase in Report Broker.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Default	Required.	This option is selected by default.
Set FOCEXURL/ FOCHTMLURL in the scheduled procedure	Required.	This setting is selected, by default. If this setting is not selected, the Distribution Server will not set the value of FOCEXURL or FOCHTMLURL for a scheduled procedure. Therefore, when cleared, if FOCEXURL or FOCHTMLURL is already set in the edasprof.prf file, this setting remains in effect, unless it is overridden in the scheduled procedure.
Security section		
Security Type	By default, this option is set to Trusted and should not be changed.	**Static.** A valid Execution Id and password is supplied in the User setting. When creating a schedule, you cannot specify an Execution Id and password.
		User. A valid Execution Id and password must be specified when creating a schedule.
		Shared. When creating a schedule, the user ID and password is internally assigned as the Execution Id and password.
		Note: Since the actual password is not stored in the Db2 Web Query repository, the Shared configuration can only be used when a password is not required to connect to the Reporting Server.
		Trusted. The Execution Id is the schedule owner and no password is sent to the Reporting Server when schedules run.
		Note: The Reporting Server must be a configured to accept a Trusted connection when the Trusted option is selected.
User	Required if Security Type is set to Static.	Default Execution Id and password. To access the ID and password, select the icon to the right of the User field. The User dialog box opens, where you can type the user name and password.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Graph section		
Graph Engine	Required. The value is GRAPH53.	Controls which graph engine to use for server-side graphics. By default, this specifies the GRAPH53 setting.
Headless	By default, this option is not selected.	Determines whether a graphics card exists on the Reporting Server. When not selected (the default), a graphics card exists on the server. When selected, no graphics card exists on the server.
Maximum Connection/Threads	Required. The default connection is 3.	Maximum number of connections available to the Reporting Server. You can specify a maximum of 20 connections. This setting works in conjunction with the optional Weight setting, enabling you to prioritize the alternate servers in a cluster queue.

Using Blackout Periods

Blackout Periods are those dates and times on which schedules will not run and cannot be set to run. A user authorized to access the Blackout Periods tool can view, define, update, import, extract, and delete blackout periods.

To view schedule blackout periods, select *Blackout Periods* from the Show group in the Console. The Blackout Periods interface provides a calendar in the left panel and the right panel lists the blackout dates you are authorized to manage.

Web Query Administrators can add new blackout periods, delete blackout periods, replace the description of existing blackout periods, import blackout period information defined within a file, and extract existing blackout period information to a file for future use. In the Report Broker Blackout Periods interface, these tasks can be completed using the following features:

❏ The Blackout Date and Time dialog box, accessed from the New and Edit buttons in the Manage Blackout Periods group.

❏ The Import Dates dialog box, accessed from the Import button in the Manage Blackout Periods group.

❏ The Extract Blackout Dates dialog box, accessed from the Manage Blackout Periods group.

You can change the month or year using the arrows at the top of the calendar. Dates only appear as available or unavailable. You can show or hide the left panel by clicking the arrow in the top-right corner of the left panel.

Reference: Blackout Period Configurations

Every type of Blackout Period profile shares the same basic settings: Group Assignment, Name, Description, Details, and Blackout Time. Within that basic configuration, there are four types of Blackout Periods that accommodate differing scheduling requirements. These include:

❑ **Weekly Blackout Periods.** Recur on a specified day or days of the week.

❑ **Monthly Blackout Periods.** Recur on a specified monthly date or dates.

❑ **Single Day Blackout Periods.** Occur only once on a specified date.

❑ **Every Day Blackout Periods.** Recur at a specified time every day.

This variety of profiles enables you to build blackout periods into your reporting schedule that accommodate those regularly recurring and special one-day events that would cause you to suspend reporting.

Reference: Basic Blackout Period Settings

The Blackout Date and Time dialog box contains settings that define the timing and frequency of a scheduled Blackout Period. There are four variations of this dialog box to accommodate the Weekly, Monthly, Single Day, and Every Day frequency options.

The following table describes settings in the Global Blackout Date and Times profile.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Group	Displays the name (Global).	Displays the name (Global).
Name	Optional. By default displays the name: Blackout-[Current Date] [Current Time] For example: Blackout-Jun 26 2015 10:27 AM	A descriptive name for the Blackout Date and Time profile. You can modify the default name by clicking within the Name field.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Description	Optional.	A detailed description of the Blackout Date and Time profile.
Details Label	Assigned to the profile after creation.	A summary of the detailed times and frequency of the Blackout Period. This is a narrative description of the selections you make in the Weeks, Days, Months, and Blackout Time fields. Report Broker creates this description automatically when you save the profile, and updates it when you save changes to it. You cannot create, edit, or delete it directly.
Blackout Time check box	By default this check box is cleared.	**Selected.** The Blackout Period covers the hours specified in the Start (Time) and End (Time) fields. **Not Selected.** The Blackout Period covers the entire day. **Note:** If you change a profile from Single Date to any other frequency setting, you must clear this check box if the blackout period is to cover the entire day.
Start (Time)	Optional. By default, displays the current hour and minute.	The Hour and Minute in which a Blackout Period is to begin. This value is relevant only if the Blackout Time check box is selected.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
End (Time)	Optional. By default, displays the time two hours *after* the current hour and minute.	The Hour and Minute in which a Blackout Period is to end. This value is relevant only if the Blackout Time check box is selected.
Frequency	Required. By default, the Weekly option is selected.	**Weekly.** Blackout periods that recur on a specified day of the week. **Monthly.** Blackout periods that recur on a specified monthly date. **Single Day.** Blackout periods that occur once on a specified date. **Every Day.** Blackout periods that recur at a specified time every day.

Procedure: **How to Configure a Blackout Period**

To configure a blackout period:

1. From the Manage Blackout Periods group on the ribbon, click *New*.

   The Blackout Date and Time dialog box opens.

2. Accept the default Name assigned to the Blackout Period profile or enter a new value for Name.

3. Type a description for the Blackout Period profile in the Description field.

4. If this blackout period must cover the entire day, leave the Blackout Time check box cleared and skip to step 7.

5. If this blackout period must be limited to a range of hours within a day, select the Blackout Time check box and configure the start and end time for the Blackout Period.

   For more information, see *How to Configure a Start Time and End Time for a Blackout Period* on page 77.

6. Click the appropriate frequency option:

   ❏ **Weekly.** Establish the frequency for the blackout period. For configuration information, see *Configuring Weekly Blackout Periods* on page 71.

❏ **Monthly.** Establish the frequency for the blackout period. For configuration information, see *Configuring Monthly Blackout Periods* on page 73.

❏ **Single Day.** Select the date for the blackout period. For configuration information, see *Configuring Single Day Blackout Periods* on page 75.

❏ **Every Day.** Establish the hours for the daily blackout period. For configuration information, see *Configuring Every Day Blackout Periods* on page 76.

7. Review your configuration.

❏ If your configuration of dates and hours is unacceptable, the OK button will not respond when you attempt to click OK. Adjust your configuration and refresh the profile by clearing and reselecting the recurring check boxes.

❏ If your configuration is acceptable, the OK button will be available, and the Details label will include a description summarizing your selections.

8. When your configuration is complete, click *OK*.

An entry for the Blackout Profile appears in the right pane of the Blackout Dates window and the Blackout Date Calendar in the left pane highlights the new blackout dates.

Configuring Weekly Blackout Periods

The Weekly Blackout Period configuration bases its recurrence on a specified day of the week. It suits events that recur as part of a weekly schedule, regardless of the date on which that day falls.

Even though the name implies that this Blackout Period occurs only once a week, Blackout Periods using the weekly configuration can occur more or less frequently.

The tools in this configuration enable you to specify:

❏ The day, or days, of the week on which the blackout period will occur.

❏ The week, or weeks, of the month in which the blackout period will occur.

❏ The month, or months, of the year in which the blackout period will occur.

Instead of requiring you to enforce blackout periods on the same day each and every week, this flexible configuration enables you to schedule Blackout Periods that occur more than once a week. It also enables you to configure Blackout Periods that skip one or more weeks in a month or skip one or more months in a year.

Weekly Blackout Period Settings

If you select the Weekly option, the Blackout Date and Time dialog box displays a unique set of options that enables you to schedule Blackout Periods for specified days of the week.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
On Week of the Month Check Boxes (Left Column)	Required (At least one selection from this column.)	The week of the month check boxes list ordinal weeks of the month. When you select one, you define the week of the month in which this blackout period is to occur. That is, the first week of the month, the second week, and so on. You can select one or more individual weeks. The Select All check box automatically selects every week of the month, establishing a blackout period that takes place every week in a month.
On Days of the Week check boxes (Right Column)	Required (At least one selection from this column).	The day of the week check boxes list the days of the week. When you select one, you define the day of the week in which this blackout period will occur. That is, on Monday, Tuesday, and so on. You can select one or more individual days. The Select All check box automatically selects every day of the week, establishing a blackout period that takes place every day of your selected weeks in the month.

Setting	Optional or Required/ Default Value	Descriptions and Possible Values
Months	Required (At least one selection from this group).	The Month check boxes list the months of the year. When you select one, you define the month of the year in which this weekly black out period will occur. That is, in January, February, and so on.
		You can select one or more individual months.
		The Select All check box automatically selects every month of the year, establishing a blackout period that takes place during every month on your selected week and day.

Procedure: **How to Configure Weekly Blackout Period Settings**

To configure weekly blackout period settings:

1. From the Blackout Date and Time dialog box, click *Weekly*.

   The dialog box displays check boxes that support the Weekly frequency schedule.

   Note: In order to enable the *OK* button and save the profile, you must select at least one week, day, and month check box.

2. Select the check boxes for the week or weeks of the month in which the Blackout Period is to occur, or click *Select All* to select every week automatically.

3. Select the check boxes for the day or days of the week on which the Blackout Period is to occur, or click *Select All* to select every day of the week automatically.

4. Select the check boxes for the month or months in which the Blackout Period is to occur, or click *Select All* to select every month automatically.

Configuring Monthly Blackout Periods

The Monthly Blackout Period configuration bases its recurrence on a specified monthly date. It suits events that recur on the same date, regardless of the day of the week on which that date falls.

Even though the name implies that this Blackout Period occurs only once a month, Blackout Periods using this configuration can occur more or less frequently. They can occupy the entire day, or they can be limited to a range of hours within a single day.

The tools in this configuration enable you to specify:

❏ The day, or days, of the month on which the blackout period will occur.

❏ The month, or months, of the year in which the blackout period will occur.

Instead of requiring you to enforce blackout periods on the same day of the month, each and every month, this flexible configuration enables you to schedule Blackout Periods that occur more than once a month. It also enables you to configure Blackout Periods that skip one or more months.

Monthly Blackout Period Settings

If you select the *Monthly* option, the Blackout Date and Time dialog box displays a unique set of options that enables you to schedule Blackout Periods for specified dates of the month.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Days	Required.	The Days check boxes list the dates within a month. When you select one, you define the day of the month on which this blackout period will occur. That is, on the first day of the month, the second, the third, and so on.
		You can select one or more individual dates.
		The Select All option automatically selects every day of the month, establishing a blackout period that takes place every day during your selected months.

Setting	Optional or Required/Default Value	Descriptions and Possible Values
Months	Required.	The Months check boxes list the months of the year. When you select one, you define the month in which this black out period will occur. That is, in January, February, and so on. You can select one or more individual months. The Select All option automatically selects every month of the year, establishing a blackout period that takes place during every month on your selected day or days.

Procedure: **How to Configure Monthly Blackout Period Settings**

To configure monthly blackout period settings:

1. From the Blackout Date and Time dialog box, click *Monthly*.

   The Blackout Date and Time dialog box displays the check boxes that support the Monthly frequency.

   Note: At a minimum, you must select a check box for one day and a check box for one month. Until you do, the OK button will be unavailable, and you will be unable to save the profile.

2. Select the check boxes for the day or days of the month on which the Blackout Period is to occur, or click *Select All* to select every date in the month automatically.

3. Select the check boxes for the month or months in which the Blackout Period is to occur, or click *Select All* to select every month automatically.

Configuring Single Day Blackout Periods

Single Day Blackout Periods occur once, on a single, specified date. They can occupy the entire day, or they can be limited to a range of hours within a single day.

Single Day Blackout Period Settings

If you select the *Single Day* option, the Blackout Date and Time dialog box displays a copy of the Blackout Dates calendar, which enables you to select a single date for a scheduled Blackout Period.

Procedure: **How to Configure Single Day Blackout Period Settings**

1. From the Blackout Date and Time dialog box, click *Single Day*.

   The dialog box appears, displaying the calendar automatically set to the current date.

2. Click the single arrows to change the month and click the double arrows to change the year.

3. When you have found the month and year for the scheduled single day blackout period, click on the date on which you want the Blackout Period to occur.

   The calendar highlights the new date.

Configuring Every Day Blackout Periods

Every Day Blackout Periods recur every day. To prevent Every Day Blackout Periods from blocking the release of any reports, you must limit them to a range of hours within the day.

Every Day Blackout Period Settings

If you select the *Every Day* option, the Blackout Date and Time dialog box limits its display to the Beginning and End time for the Blackout Period. No other options are relevant.

Procedure: **How to Configure Every Day Blackout Period Settings**

1. From the Blackout Date and Time dialog box, click *Every Day*.

   The Blackout Time check box is selected automatically, and the dialog box displays a note reminding you to select the start and end time.

   The Start time is automatically set to the current time, and the End time is automatically set to a value two hours later.

2. To change the Start or End Time values, see *How to Configure a Start Time and End Time for a Blackout Period* on page 77.

Procedure: **How to Configure a Start Time and End Time for a Blackout Period**

From the Blackout Date and Time dialog box:

1. To change the hour of the start time, click in the *Hour* section of the Start field.

   a. Click the up or down arrow to move the value ahead one hour or back one hour, respectively.

   b. You can also type the hour in this section, but be careful to stay within the twelve hour range. If you enter a value outside of this range, the dialog box will automatically recalculate your value in terms of a twelve hour clock. For example, 44 hours would become 8. (44-(12X3))=(44-36)=8

   c. Ensure that the start time is earlier than the end time.

2. To change the minutes of the start time, click in the *Minutes* section of the Start field.

   a. Click the up or down arrow to move the value ahead one minute or back one minute, respectively.

   b. You can also type the minutes in this section, but be careful to stay within the sixty minute range. If you enter a value outside of this range, the dialog box will automatically recalculate your value in terms of the number of minutes within an hour. For example, 88 minutes would become 28. (88-60 = 28).

   c. Ensure that the start time is earlier than the end time.

3. To change the start time from AM to PM, click in the AM/PM section of the Start field.

   a. Click the up arrow to move from AM to PM.

   b. Click the down arrow to move from PM to AM.

   c. You can also type AM or PM directly into this section.

4. To change the hour of the end time, click in the *Hour* section of the End field.

   a. Click the up or down arrow to move the value ahead one hour or back one hour, respectively.

   b. You can also type the hour in this section, but be careful to stay within the twelve hour range. If you enter a value outside of this range, the dialog box will automatically recalculate your value in terms of a twelve hour clock. For example, 44 hours would become 8. (44-(12X3))=(44-36)=8.

   c. Ensure that the end time is later than the start time.

5. To change the minute of the end time, click in the *Minutes* section of the End field.

   a. Click the up or down arrow to move the value ahead one minute or back one minute, respectively.

b. You can also type the minute in this section, but be careful to stay within the sixty minute range. If you enter a value outside of this range, the dialog box will automatically recalculate your value in terms of the number of minutes within an hour. For example, 88 minutes would become 28. (88-60 = 28).

c. Ensure that the end time is later than the start time.

6. To change the end time from AM to PM, click in the *AM/PM* section of the End field.

a. Click the up arrow to move from AM to PM.

b. Click the down arrow to move from PM to AM.

c. You can also type AM or PM directly into this section.

Important: You must use the right or left arrow keys to move between the Hour, Minutes, and AM/PM sections of the Start and End fields.

If you try to use the Tab key to move between sections, you will move down to the next option instead of across to the next section of the Start or End field.

For example, if you use the Tab key to move from the Hours section of the Start field, you will move down to the Hours section of the End field, not over to the Minutes section of the Start field. To move right, you must use the right direction key instead.

Similarly, the Shift+Tab key combination will move you to the previous option, not back to a previous section within the Start or End field. To move left, you must use the left direction key instead.

Procedure: How to Delete a Blackout Period Profile

1. In the left pane of the Blackout Dates dialog box, click the folder for the Group to which the Blackout Period profile you want to delete is assigned.

2. In the right pane, click the entry for Blackout Period profile you want to delete.

3. On the ribbon, in the Manage Blackout Periods group, click *Delete*.

4. When you receive a confirmation message, click *Yes*.

    Your newly deleted entry disappears from the right pane and the dates assigned to that entry are no longer highlighted on the Blackout Dates calendar in the left pane.

Importing Blackout Periods

You can use the Blackout Period Import operation to automate Blackout Period management tasks. Using a properly formatted import file with this tool, you can:

❑ Create new Blackout Period profiles.

❏ Remove Blackout Period profiles.

❏ Replace Blackout Period information.

❏ Perform the actions specified in an uploaded file.

The source file for the import contains the following information about a Blackout Period Profile:

❏ **Date.** The date on which the Blackout Period profile becomes effective. This date can be omitted for Every Day Blackout Period profiles.

❏ **Start Hour.** The time (HH:MM:SS) at which the Blackout Period becomes effective. This value is optional for all but Every Day Blackout Period profiles.

❏ **End Hour.** The time (HH:MM:SS) at which the Blackout Period ceases to be effective. This value is optional for all but Every Day Blackout Period profiles.

❏ **Description.** A detailed description of the Blackout Period profile.

❏ **Name.** The unique name assigned to a Blackout Period profile.

Note: Additional Codes precede entries for Weekly or Monthly Blackout Period profiles. For more information, see *Weekly Blackout Period Import File Entry Layout* on page 80 and *Monthly Blackout Period Import File Entry Layout* on page 81.

The task you select when you run an import operation determines the way in which Report Broker uses the information in the source file for the Import.

If you select:

❏ *Add*, the import creates new Blackout Period profiles from the records in the import source file.

❏ *Remove*, the import compares date and additional information in import file records to that of existing Blackout Period profiles and removes those profiles that match the file records.

❏ *Replace*, the import compares date information in import file records to that of existing Blackout Period profiles and adds Name and Description information to them.

❏ *Use the actions specified in the file*, the import runs the add, remove, and replace operations as required by commands included in the Import file along with entries for the Blackout Period profiles affected by them.

The automation of these tasks frees you from manually creating, updating, or deleting Blackout Period profiles when operational changes, such as monthly, quarterly, or annual operation schedule updates, require a sweeping review and revision of your reporting schedule.

For example, at the start of the year, you have a file containing the dates and names of all scheduled holidays that must be incorporated into your reporting schedule. The Blackout Period Import enables you to import that file and establish the holiday blackout schedule for an entire year in a single operation. Without the import you would have to create a Single Date Blackout Date and Time profile for each holiday in the coming year.

Viewing Blackout Period Import File Format

Even though entries in the Import File format for Blackout Period records use the same basic structure, each profile type contains minor variations that identify the type of Blackout Period profile Report Broker must create from the entry details.

Single Date Blackout Period Import File Entry Layout

You can import Single Date Blackout Date and Time profiles from a flat file that lists the information for each profile on a separate line. Each line must follow the following layout:

For example:

```
#Schedule Blackout Date Extract created 161004 102629 by admin
#for date range:(All)
#Dates Extracted from Group: administrators
##BLACKOUT DATE: yyyyMMdd/HH:mm:ss|HH:mm:ss description|name
##BLACKOUT TIME: /HH:mm:ss|HH:mm:ss description|name
##BLACKOUT PATTERN: [10100000000/00000000000000000000000000000001]/
HH:mm:ss|HH:mm:ss description|name
##BLACKOUT PATTERN: [10100000000/00001:0001000]/HH:mm:ss|HH:mm:ss
description|name
[000001000000/01000:0000100]/11:44:00|15:44:00 Administrators February 4,
2016|Blackout-Feb 4 2016 11:25 AM
```

❏ Dates use the format YYYYMMDD

❏ Hours use the format HH:MM:SS

❏ You can omit the hours to schedule an all day blackout.

The Weekly, Monthly, and Every Day Blackout Date and Time profiles use a variation of this format.

Weekly Blackout Period Import File Entry Layout

You can import Weekly Blackout Date and Time profiles from a flat file that lists the information for each profile on a separate line. Each line must follow the following layout:

```
[Blackout Pattern] [Description]|[Name]
```

For example:

```
[111111111111/10000:0000010]/17:00:00|23:59:00 Report Blackout First Friday
of Every Month 5:00 PM to 11:59 PM|First Friday Afternoons
```

This information identifies the entry as a Weekly Blackout Period, and includes its Description and Name. The Blackout Pattern indicates the selected Month(s) and Selected Day(s) of the Week. A '1' means that a month or day is selected. A '0' means that a month or day is not selected.

Monthly Blackout Period Import File Entry Layout

You can import Monthly Blackout Date and Time profiles from a flat file that lists the information for each profile on a separate line. Each line must follow the following layout:

```
[Blackout Pattern]/[Start Hour]|[End Hour] [Description]|[Name]
```

For example:

```
[111111111111/10000:0000010]/17:00:00|23:59:00 Report Blackout First Friday
of Every Month 5:00 PM to 11:59 PM|First Friday Afternoons
```

This information identifies the entry as a Monthly Blackout Period, and includes its Description and Name. The Blackout Pattern indicates the selected Month(s) and Selected Day(s) of the Month. A '1' means that a month or day is selected. A '0' means that a month or day is not selected.

Every Day Blackout Period Import File Entry Layout

You can import Every Day Blackout Date and Time profiles from a flat file that lists the information for each profile on a separate line. Each line must follow the following layout:

```
/[Start Hour]|[End Hour] [Description]|[Name]
```

For example:

```
/21:04:00|23:04:00 Every Day Blackout between 3:00 PM and Midnight|Daily
Afternoon Blackout
```

This information identifies the entry as an Every Day Blackout Period and includes its Description and Name.

Procedure: **How to Add Blackout Period Profiles Using an Import File**

To add a Blackout Period profile through the import utility is to create a new Blackout Period profile from information in the import file. Your Import file must therefore contain records for all Blackout Period profiles you want to add to Report Broker through this import operation.

1. In the Blackout Dates pane, click the folder of the group for which you are importing Blackout Period profiles.

2. On the ribbon, in the Manage Blackout Periods group, click *Import*.

   The Import Dates dialog box opens.

3. In the File Name field, type the full path to the file, or click *Choose File* and navigate to the file you want to import.

4. Click *Add*, and click *OK*.

   The Import Blackout Data dialog box opens, listing details of the new Blackout Profiles based on each entry in the Import file.

5. Click *Add* to add the new Blackout Period profiles listed in the Import Blackout Data dialog box to the Blackout Dates Calendar and Group entries.

   A message displays, informing you that the blackout dates have been successfully imported.

6. Click *OK*.

   The Blackout Dates calendar highlights the newly imported Blackout Period Dates in the left pane of the Blackout Dates window, and entries for the new Blackout Period profiles appear in the right pane.

Procedure: **How to Replace Blackout Periods Using an Import File**

To replace a Blackout Period profile through the import utility is to add updated information to its Name and Description fields. To ensure that the import-based update affects the proper profiles, your import file must contain records whose dates match those of the existing Blackout Period profiles that must be enriched by this Import operation.

1. In the right pane of the Blackout Dates dialog box, select the group for which you are importing Blackout Period profiles.

2. On the ribbon, in the Manage Blackout Periods group, click *Import*.

   The Import Dates dialog box opens.

3. In the File Name field, type the full path to the file, or click *Choose File* and navigate to the file you want to import.

4. Click *Replace*, and then click *OK*.

   The Import Blackout Data dialog box opens, listing the details from each entry in the Import file that will be added to their corresponding Blackout Period profiles.

5. Click *Replace* to add new the information listed in the Import Blackout Data dialog box to the designated Blackout Period profiles.

   A message displays, informing you that the blackout dates have been successfully imported.

6. Click *OK*.

   Enriched entries for the updated Blackout Period profiles appear in the right pane.

Procedure: **How to Remove Blackout Periods Using an Import File**

Removing a Blackout Period profile through the import utility deletes it. To ensure that the import-based deletion affects the proper profiles, your import file must contain records whose dates match those of the existing Blackout Period profiles that are to be deleted by this Import operation.

1. In the Blackout Dates tab pane, select the group containing blackout period profiles that must be removed.

2. On the ribbon, in the Manage Blackout Periods group, click *Import.*

   The Import Dates dialog box opens.

3. In the File Name field, type the full path to the file, or click *Choose File* and navigate to the file you wish to import.

4. Click *Remove*, and then click *OK*.

   The Import Blackout Data dialog box opens, listing details from each entry in the import file that successfully matched an existing Blackout Period profile.

5. Click *Remove* to delete those Blackout Period profiles listed in the Import Blackout Data dialog box.

   A window opens, informing you that the blackout dates have been successfully imported.

6. Click *OK*.

   Blackout Period profiles removed by this operation are no longer highlighted in the left pane of the Blackout Dates window or as entries for the new Blackout Period profiles in the right pane.

Procedure: How to Manage Multiple Blackout Period Updates Using an Import File

The *Use the actions specified in the file* option allows the import process to add, remove, and replace multiple Blackout Period profiles in a single operation. Your Import file must therefore contain the all necessary commands followed by entries representing Blackout Period profiles that must be added, removed, or replaced by the import operation.

1. In the right pane of the Blackout Dates dialog box, select the group for which you are managing Blackout Period profiles.

2. On the ribbon, in the Manage Blackout Periods group, click *Import*.

    The Import Dates dialog box opens.

3. In the File Name field, type the full path to the file, or click *Browse* and navigate to the file you want to import.

4. Click *Use the actions specified in the file*, and then click *OK*.

    The Import Blackout Data dialog box opens, listing details from each entry in the Import file and a note about its proposed update.

5. Click *OK*.

6. When you receive the *Blackout Dates have been successfully imported* message, click *OK*.

    The Blackout Dates calendar highlights the dates of the newly imported Blackout Periods in the left pane of the Blackout Dates window. Entries for the new and enriched Blackout Period profiles appear in the right pane. Calendar highlights and entries for profiles removed by the Import no longer appear.

    Note: You will be unable to use the Edit command to update Blackout Period profiles created from a direct file import. You will be required to update these profiles using the Replace option in the Import operation.

Extracting Blackout Period Profiles

You can extract existing blackout period profile information from the Report Broker Development Interface to a .txt file.

A direct file extract minimizes the time it would take to transfer information about multiple Blackout Periods to a text file that can serve as a backup of your Blackout Calendar configuration or as the source of an import to an external system for reporting or auditing purposes.

For example, if your group is required to maintain a backup copy of blackout dates for the coming six months, the extract operation enables you to transfer the Description, Date, and Name of all scheduled blackout periods during that time. You can recreate basic information about these profiles from the backup file in an emergency, shortening the time required to reconstruct your reporting schedule.

Extracting File Formats

The Import and Extract file operations use the same layout and format conventions. The Extract file contains additional comments that document the range of dates selected for the extract and templates for the format of the entries it contains.

For more information about each entry type layout, see *Viewing Blackout Period Import File Format* on page 80.

Procedure: **How to Extract Schedule Blackout Period Profiles to a File**

To extract schedule blackout period profiles:

1. In the Blackout Dates pane, select the group from which you are extracting blackout period profiles.

2. In the Manage Blackout Periods Toolbar group, click *Extract*.

    The Extract Blackout Dates dialog box opens. The Group Name from which you are extracting the blackout dates appears at the top of the dialog box.

3. Select one of the following from the Date Range Options:

    ❏ *All* to extract all currently saved blackout period profiles.

    ❏ *Date Range* to specify the range of dates containing scheduled blackout period profiles that you want to extract.

    If you select Date Range, type or select the Start Date and End Date. To select a date, click the down arrow next to the field. A calendar opens, from which you can choose a date.

4. Click *OK*.

5. To open the file, click the *Open* button when your browser presents it.

    A window opens, displaying the contents of the extracted content profiles.

    You can save and close the file using the commands in the File menu.

6. To accept an automatic download of the extract file, click the *Save* button (users of Google Chrome need only close the page displaying the new file name).

You can later retrieve the file from the Downloads folder of your computer, rename it if necessary, and save a copy of it in another folder for archival or other purposes.

7. To rename and save the file in a different location, click the *Open* or *Open With* button, and select the *Save As* command from the program that opens the file.

8. From the Save As window, navigate to the folder in which you want to save the file, rename the file if necessary, and click *Save*.

You can close any additional web pages that may remain open after you save the file.

Note: The default extract file name is *rcbdextract_GroupName_YYMMDD_HHMMSS.txt*, where *GroupName* is the name of the group from which the blackout dates are extracted, YYMMDD and HHMMSS are the date (year, month, day) and time (hour, minute, second) that the file was created.

Global Updates

Authorized users can make global updates for the values stored in schedules and Distribution Lists. Using the Global Updates interface, the following settings can be updated:

❑ Mail Server

❑ FTP Server

❑ Printer

❑ Email Address

❑ Email From

❑ Data Server

❑ Notification Type

❑ Notification Reply Address

❑ Notification Subject

❑ Notification Brief Message To

❑ Notification Full Message To

Procedure: How to Make a Global Update for a Mail Server

1. In the Global Updates interface, click the *Setting* drop-down list and select *Mail Server* (the default).

2. Type the existing Mail Server in the *Old Value* box.

3. Type the new Mail Server in the *New Value* box.

4. Click *Update* to update the new Mail Server value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for an FTP Server**

1. In the Global Updates interface, click the *Setting* drop-down list and select *FTP Server*.

2. Type the existing FTP Server in the *Old Value* box.

3. Type the new FTP Server in the *New Value* box.

4. Click *Update* to update the new FTP Server value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for a Printer**

1. In the Global Update interface, click the *Setting* drop-down list and select *Printer*.

2. Type the existing Printer in the *Old Value* box.

3. Type the new Printer in the *New Value* box.

4. Click *Update* to update the new Printer value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for an Email Address**

1. In the Global Update interface, click the *Setting* drop-down list and select *Email Address*.

2. Type the existing Email address in the *Old Value* box.

3. Type the new Email address in the *New Value* box.

4. Click *Update* to update the new Email address value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for an Email From**

1. In the Global Update interface, click the *Setting* drop-down list and select *Email from*.

2. Type the existing Email from in the *Old Value* box.

3. Type the new Email from in the *New Value* box.

4. Click *Update* to update the new Email from value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for a Data Server**

1. In the Global Update interface, click the *Setting* drop-down list and select *Data Server*.

2. Type the existing Data Server in the *Old Value* box.

3. Type the new Data Server in the *New Value* box.

4. Click *Update* to update the new Data Server value in schedules and distribution lists.

Procedure: How to Make a Global Update for a Notification Type

1. In the Global Updates interface, click the *Setting* drop-down list and select *Notification Type*.

   The notification options are:

   ❏ **Never.** Report Broker will not send a notification of the schedule status under any circumstances. This is the default value.

   ❏ **Always.** Send a notification each time the schedule runs.

   ❏ **On Error.** Only send a notification when there is an error running the schedule.

   For more information, see *Notification Options in the Basic Scheduling Tool* on page 152.

2. Select the existing value in the Old Value box.

3. Select the new value in the New Value box.
   If the Old Value is Never, then the Reply Address, Subject, Brief Message To, and Full Message To fields will display. Provide each field with the necessary information.

4. Click *Update* to update the new Notification Type value in schedules and Distribution Lists.

Procedure: How to Make a Global Update for a Notification Reply Address

1. In the Global Updates interface, click the *Setting* drop-down list and select *Notification Reply Address*.

2. Type the existing Notification Reply Address in the *Old Value* box.

3. Type the new Notification Reply Address in the *New Value* box.

4. Click *Update* to update the new Notification Reply Address value in schedules and Distribution Lists.

Procedure: How to Make a Global Update for a Notification Subject

1. In the Global Updates interface, click the *Setting* drop-down list and select *Notification Subject*.

2. Type the existing Notification Subject in the *Old Value* box.

3. Type the new Notification Subject in the *New Value* box.

4. Click *Update* to update the new Notification Subject value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for a Notification Brief Message To**

1. In the Global Updates interface, click the *Setting* drop-down list and select *Notification Brief Message To*.

2. Type the existing Notification Brief Message To in the *Old Value* box.

3. Type the new Notification Brief Message To in the *New Value* box.

4. Click *Update* to update the new Notification Brief Message To value in schedules and Distribution Lists.

Procedure: **How to Make a Global Update for a Notification Full Message To**

1. In the Global Updates interface, click the *Setting* drop-down list and select *Notification Full Message To*.

2. Type the existing Notification Full Message To in the *Old Value* box.

3. Type the new Notification Full Message To in the *New Value* box.

4. Click *Update* to update the new Notification Full Message To value in schedules and Distribution Lists.

Creating and Maintaining Distribution Lists

A Distribution List is an easy way to distribute content to multiple recipients by specifying the name of a list stored in the Repository that contains the individual recipients rather than entering each recipient separately into a schedule. A Distribution List can be made available to other users by sharing it or changing its ownership to be managed or published.

In this chapter:

❏ Creating a Distribution List

❏ Editing and Deleting a Distribution List

❏ Bursting a Report

❏ Specifying Multiple Email Addresses

Creating a Distribution List

A Distribution List is an easy way to distribute content to multiple recipients by selecting a list that contains the individual recipients rather than entering each recipient separately into a schedule.

Before creating a Distribution List, understand what groups or individual users require access to it to determine the folder in which to create it.

Procedure: **How to Create a Distribution List**

1. Right-click a Repository folder, point to *New*, and then click *Distribution List*.

The Distribution List window opens, as shown in the following image.
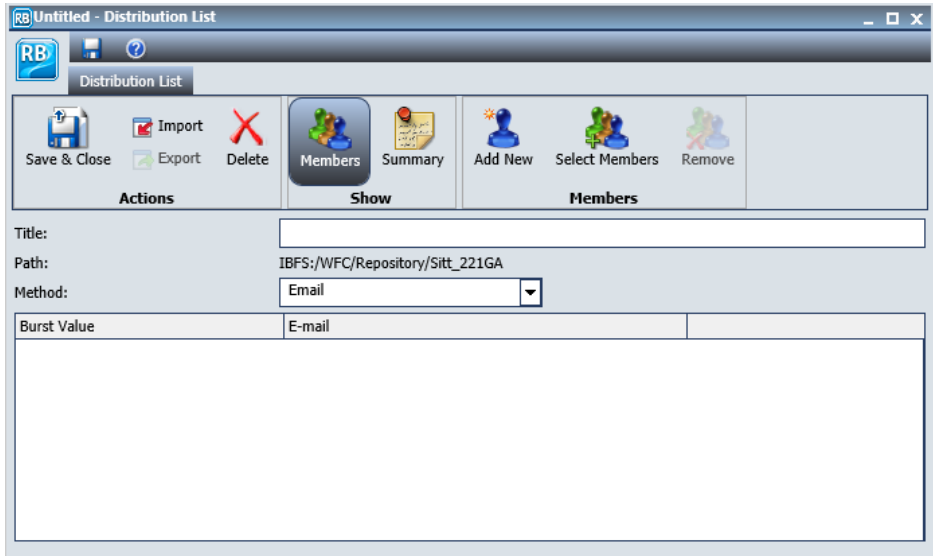
2. In the *Title* box, type a descriptive name for the Distribution List.

3. From the Method drop-down list, select the distribution method for the Distribution List. Email is the default distribution method.

   ❑ **If you select Email,** you must provide a list of email addresses and can optionally burst values associated with an address. For details on entering burst values, see *Bursting a Report* on page 95.

   In the *Address* box, specify the email addresses of the recipients (for example, *chuck_hill@ibi.com* for an individual user or *#sales@ibi.com* for an email server list that contains multiple email addresses). Be careful typing this information because there is no edit checking. The maximum number of email addresses you can specify in a Distribution List is 9999. You can specify a maximum of 800 characters within a single Address line.

   You can specify multiple email addresses within a single Address field. For more information, see *Specifying Multiple Email Addresses* on page 100.

   If the Email Delivery, Restrict Email Domains option is set to yes, then only those email domains (the portion of the email address following the at (@) symbol) listed in Allowed Email Domains are valid email recipients.

   ❑ **If you select FTP,** you must specify the names of the FTP files that will hold the report (including the extension) and, optionally, burst values associated with FTP file.

The extension specified here should be appropriate for the format selected when creating the schedule. For example, if you selected Excel or EXL2K on a Windows platform, the file should be *drive:\directory\filename.xls*. The maximum number of FTP files you can specify in a Distribution List is 9999.

When using FTP to transfer cascading style sheet (CSS) files from any platform to z/OS UNIX and the z/OS UNIX httpd.conf file contains the default MIME type of 8-bit for CSS files, then the CSS files must be transferred in binary mode.

❏ **If you select Print,** you must specify the printers that will receive the distribution and, optionally, burst values associated with the printer. For details on entering burst values, see *Bursting a Report* on page 95.

In the Printer input field, specify the printer using the following format:

queue@printserver

where:

queue

Is the name of the printer queue.

printserver

Is the host name or IP address of the printer.

Although Report Broker supports specifying only the print server (host name or IP address), we recommend that you specify both the print queue and print server. (Report Broker differentiates between the printer queue and the printer server by detecting the presence of the '@' separator.)

4. Click the *Add New* button.

The Add New Member dialog box displays.

5. Complete the Burst Value, Pattern, name of the Printer, FTP Location, and Email fields.

6. Optionally, you can click the *Select Members* button to add members from an address book.

7. If you are finished creating a Distribution List, click *Save & Close*.

Note:

❏ The maximum length of a title value for a file is 256 characters.

❏ If the title of your file has the same name of an existing file in the folder, you will receive a message asking if you wish to replace the file.

Editing and Deleting a Distribution List

If you are authorized to access the Distribution List tool, you can view and edit the Distribution Lists of which you are the owner. If the Distribution List is owned by a group or is published, you have to be authorized to edit it.

Procedure: How to Edit a Distribution List

1. From the Resources tree, select the Distribution List you want to edit and click *Open*, or double-click the list.

   A window opens displaying the properties of the selected Distribution List, as shown in the following image.

2. From this window, you can perform the following:

   ❏ Change the name of the Distribution List by typing a new name in the *Title* field.

   ❏ Change the value of the existing Distribution List entries. For example, you can change the Distribution Method.

❑ Click *Add New* or double-click within the area below the Burst Value or E-mail column to add a new member to the Distribution List. The Add New Member dialog box appears, as shown in the following image.

❑ Delete a Distribution List entry by selecting the item to be deleted, then click *Delete*.

Note: In the Allowed Email Addresses and Domains dialog box in the Report Broker Console, if the *Restrict user input with this list* check box has been selected, user input of email addresses is restricted to a list of allowed email domains and addresses. For more information, see *Validating Allowed Email Domains and Addresses* on page 43

3. When you have completed your changes, click *Save & Close*.

Note: If the title of your file has the same name of an existing file in the folder, you will receive a message asking if you wish to replace the file.

To exit the editing window without making changes, click *Close*.

Bursting a Report

Instead of distributing an entire report from a scheduled report procedure (FEX), you can use the Report Broker burst feature to break the report into sections to be distributed separately to the same or different destinations. Bursting enables you to target relevant sections of a report to individual users. Each report section is saved to a separate file.

If you are distributing a burst tabular report, the burst value is determined by the first BY field. If you are distributing a burst graph report, the burst value is determined by the second BY field. The burst value is automatically determined by the internal matrix, which is a memory area that stores each database field value and calculates values referenced by the TABLE or GRAPH request.

You can send several report sections to one recipient by specifying the destination of that recipient (email addresses, FTP server locations, and files or printers) for each section you want to send. You can also send several report sections to one destination. The burst values you specify in the Distribution List must exist in the data source you are reporting against.

Note:

❏ If you want to burst a report, you must enable the bursting option within the Task for a schedule. The burst values specified in the Burst Value column in the Distribution List are ignored unless the Task specifies to burst the report.

❏ Report names containing more than 60 National Language Support (NLS) characters are truncated to 60 characters prior to distribution. This prevents a report name from becoming corrupted when the report is emailed.

Example: **Specifying Burst Values in a Distribution List**

You can specify sort field burst values and destinations (email addresses, FTP, or printers) when creating or editing a Distribution List. The following image shows burst values and the destination email addresses specified in the Distribution List window.

Using the primary sort field values (Northeast Sales, South Sales, and Midwest Sales), the email address of each representative is associated with the relevant sales report data. Since Chuck Hill needs only the data for the Northeast branch, the sort value Northeast is listed in the Burst Value column and is associated with his email address in the E-mail column.

However, Tom Gregory works in both the Midwest and South regions. Since he requires data for both regions, his email address is listed in the E-mail column twice, next to a Burst Value column entry for each region.

Note: You can click on a column heading to sort the data in that column.

Tip: You can specify multiple email addresses on a single Address line. For details, see *Specifying Multiple Email Addresses* on page 100.

Reference: **Considerations When Distributing a Burst Report Using FTP**

When distributing a burst report using FTP, consider the following:

❑ When using a format of HTML, PDF, or EXL2K, an index page for the burst report output is generated.

❑ The index page for FTP distribution will only contain the burst values specified in the Distribution List. The report output is distributed only for the specified burst values.

❑ The index page links for burst report output distributed using FTP are incorrect when specifying BASEURL in the scheduled procedure. This is because Report Broker does not parse and evaluate the procedure code of the scheduled job. To resolve this, move the distributed files to the BASEURL directory or specify the fully qualified directory path of the distributed output in the index page.

❑ On z/OS, burst report output distributed using FTP is created in sequential data sets having the following qualifiers:

  ❑ **High-level Qualifier:** User ID specified for the FTP Server.

  ❑ **Additional Qualifiers:** Location value in the Distribution tab and file(s) supplied in a Distribution List.

  To send burst output to a partitioned data set, specify an existing partitioned data set as Location and specify member names, without extensions, in the Distribution List File column. For example, *highlevelqualilfier.location.file*.

❑ On z/OS, do not use an index name that is the same as the data (input) file from which you are reporting. If you specify an index name that is the same as the DDNAME in the DYNAM for your data file, the data file is overwritten with the report output.

❑ On z/OS, the index page is generated with extra characters preceding the burst values. The links on the page to the report sections are correct.

Bursting Guidelines and Limitations

This section provides detailed information to assist you in defining burst values.

When a schedule task specifies to burst a report procedure (FEX), all data values generated for each burst section are returned to the Distribution Server.

❑ For the email and printer distribution methods, specific burst sections are distributed based on the burst values specified when creating the Distribution List or Single Address used by the schedule.

The following are guidelines and limitations that apply to the burst feature:

❏ **Case.** Burst values are case-sensitive.

❏ **Keywords.** Burst values can contain the following keywords:

❏ **Wildcard Characters.** Use an asterisk (*) and a question mark (?) as wildcards to represent characters at the beginning, end, or middle of the burst values. The asterisk represents one or more characters, while the question mark represents any single character. Precede each instance of a burst value using a wildcard with the wildcard keyword enclosed in brackets followed by a colon, [wildcard]:, as shown in the following examples.

[wildcard]:abc* = all values that start with 'abc'.

[wildcard]:a?c = all three-character values that start with 'a' and end with 'c'.

[wildcard]:a?c* = all values that start with 'a' and have a 'c' as the third character.

Note: Wildcards in a distribution list are not supported with FTP.

❏ **Java Regular Expressions.** Use to identify strings of text. Precede each instance of a burst value using a Java regular expression with the regular expression keyword enclosed in brackets followed by a colon, [regexp]:, as shown in the following examples.

[regexp]:[bcr]at = values that are bat, cat, or rat.

[regexp]:[^bcr]at = any value that is not bat, cat, or rat.

❏ **Default Distribution.** You can provide a default destination for burst values that are not specified in the Distribution List. To do this, enter the following in the burst value column of the Distribution List.

[elsesend] = reports for burst values not contained in the Distribution List will be sent to the named recipient.

❏ **'%BURST' Syntax.** You can include a burst value in the name of a distributed file by using the '%BURST' syntax in the name. The use of '%BURST' is not supported in a zip file name when the Packet email setting is Yes.

The following are example entries in an email Distribution List that illustrate the use of the wildcard and default distribution keywords in burst values.

Burst Value	Address
[wildcard]:*an*	sml@company.com

Burst Value	Address
England	ray@company.com
[elsesend]:	jt@company.com

Using a scenario where the report output from a scheduled report procedure (FEX) is burst on the Country field that contains values of Germany, USA, France, Canada, Italy, Chile, England, and Japan, then:

❏ Report information for Germany, France, Canada, England, and Japan will be delivered to sml@company.com.

❏ Report information for England will be delivered to ray@company.com.

❏ Report information for USA, Italy, and Chile will be delivered to jt@company.com.

❏ **Formats.** All formats support bursting except XML and EXCEL. Each burst section of the report output from a scheduled report procedure (FEX) will be named *burstvalue_filename.format* (for example, Northeast_Sales.pdf).

❏ **ACROSS command.** This command is not evaluated as a primary sort field. To burst report output from a scheduled report procedure (FEX), you must also include a BY field. Bursting occurs on the BY field.

❏ **TABLEF.** No internal sort processing is performed. The specification of a BY field requires that the data already be sorted in the data source.

❏ **ON TABLE SUBHEAD/ON TABLE SUBFOOT.** Creates a SUBHEAD for only the first page of the report output from a scheduled report procedure (FEX), and a SUBFOOT for only the last page of the report output from a scheduled report procedure (FEX). When bursting report output from a scheduled report procedure (FEX), the SUBHEAD and SUBFOOT should occur for each sort break. Therefore, specify the primary sort field in place of TABLE in the ON command. For example:

```
ON primarysortfield SUBHEAD
```

❏ **A*n*V field types.** Bursting is not supported on a field with the A*n*V (where *n* is an integer value) field type.

Specifying Multiple Email Addresses

When creating a schedule or Distribution List, you can specify multiple email addresses within a single field, row, or record.

When creating a schedule or Distribution List, you can separate each email address with a comma (,) or a semicolon (;).

The multiple email addresses will appear in the To line of a single email when the scheduled output is distributed.

Note:

❑ To distribute separate emails for each address, specify the email addresses on separate lines within the Distribution List.

❑ If the Email Delivery, Restrict Email Domains option is set to yes, then only those email domains (the portion of the email address following the at (@) symbol) listed in Allowed Email Domains are valid email recipients.

Example: ## Specifying Multiple Burst Email Addresses

If you are using the default configuration (Packet Email = YES), one email is distributed for multiple burst values specified for the same email address. The email address values specified on each row are treated as a string that is a key. If there are multiple rows with the same address value (key), one email is distributed with all the burst values. For example, consider the following Distribution List:

Burst Value Address

```
A              user1@abcd.com;user2@abcd.com
B              user1@abcd.com
C              user1@abcd.com
```

In this example, user1@abcd.com receives two emails when the scheduled output is distributed. In the first email, user1@abcd.com; user2@abcd.com appears in the email To line and one attachment is distributed for burst value A. In the second email, user1@abcd.com appears in the To line and two attachments are distributed, one for burst value B and one for burst value C.

If you are using the configuration that specifies to distribute a single email for each row (Packet Email = NO), then the following behavior occurs for our example. Three separate emails are distributed. In the first email, user1@abcd.com; user2@abcd.com appears on the To line and one attachment is distributed for burst value A. The second email is sent to user1@abcd.com with one attachment for burst value B. The third email is sent to user1@abcd.com with one attachment for burst value C.

If a schedule has multiple tasks and Packet Email = BURST, then for each burst value the output of all of the tasks is combined and distributed. In our example, three separate emails are distributed. In the first email, user1@abcd.com; user2@abcd.com appears on the To line and all output from the multiple tasks for burst value A are distributed. The second email is sent to user1@abcd.com with all output from all tasks for burst value B. The third email is sent to user1@abcd.com with all output from all tasks for burst value C.

Another consideration is when using the default configuration (Packet Email = YES) and the same burst value is specified multiple times for the same Address (key) value. For example, consider the following Distribution List:

Burst Value Address

```
A          user1@abcd.com;user2@abcd.com
B          user1@abcd.com
B          user1@abcd.com
```

In this Distribution List, only two emails are distributed for user1@abcd.com. In the first email, user1@abcd.com; user2@abcd.com appears in the To line and the attachment is for burst value A. In the second email, user1@abcd.com appears in the To line and the attachment is for burst value B. The third row in the Distribution List is ignored since it contains the same key and the same burst value, B, as the second row.

As a best practice, be sure to review your distribution information to make sure you have not duplicated the same burst and address value pairs.

Example: Specifying Multiple Non-Burst Email Addresses

Consider the following sample Distribution List, which does not contain burst values:

Address

```
user1@abcd.com;user2@abcd.com
```

```
user1@abcd.com
```

```
user2@abcd.com
```

```
user3@abcd.com
```

```
user1@abcd.com;user2@abcd.com;user3@abcd.com
```

In this Distribution List, an email is distributed for each address line regardless of whether Packet Email is set to YES or NO. This is because each address value is unique. For the first email, user1@abcd.com; user2@abcd.com appears in the To line and the attachment is for the full report output from a scheduled report procedure (FEX). The second email is distributed to user1@abcd.com, and so on.

If one of the address lines is repeated in the Distribution List (for example, if user3@abcd.com is added as the sixth line in the example Distribution List), the behavior would work as follows. If Packet Email = YES, only one email is distributed for user3@abcd.com. However, if Packet Email = NO, two separate emails are distributed to user3@abcd.com.

Chapter 4

Creating Schedules

A schedule allows you to specify when to run a report, the format in which to create the output, and how it will be distributed. Schedules are created with the Basic Scheduling tool.

In this chapter:

About the Basic Scheduling Tool

The Basic Scheduling tool provides the ability to create a schedule for a procedure (FEX). The Db2 Web Query Client security authorization model controls whether users are authorized to access the application content stored in the Repository and the Scheduling tools.

To create a new schedule for a report procedure (FEX), navigate to the Resources tree and expand a folder to display your report procedures (FEX). Right-click the report procedure (FEX) you want to schedule, point to *Schedule*, and then select the method to distribute the report procedure (FEX). You can distribute the report procedure (FEX) by Email, FTP, Printer, or Repository.

Basic Scheduling Tool Quick Access Toolbar

The Quick Access Toolbar, located at the top of the Basic Scheduling tool, is always visible no matter which options are selected. It provides access to the most commonly used functions. From the Quick Access Toolbar, you can select the Report Broker button to access the New Distribution List, Save, Save As, Delete, and Close options. You can also access the Save, Run, and Help options from the toolbar.

Run options are available for selection from the Run drop-down list.

Note: The schedule must be saved for Run options to be available or enabled.

The Run options you can select include: Run with default traces, Run with no traces, Run with Schedule traces, and Run with Schedule and Report traces .

Note:

❏ If you have the Session Traces privilege, you will have the Run with Traces options in the schedule tools. If you are not authorized to run with traces, these options will not display.

❏ Online help is available by clicking the online help icon.

Basic Scheduling Tool Ribbon

The Basic Scheduling tool ribbon partitions the scheduling options into the following categories:

❏ **Actions**

  ❏ **Save & Close.** Saves and closes the schedule.

  ❏ **Delete.** Deletes the schedule and closes the Scheduling tool.

❏ **Show**

   ❏ **Properties.** Provides a Title, Path where the schedule will be created or was opened from, Summary, Job Priority Level, No Report to Distribute, and other settings for the schedule. The *Delete this schedule if it is not scheduled to run again* check box specifies to delete the schedule if, after it is run, it is not scheduled to run again. The *Enabled (Scheduled job runs at specified time)* check box specifies to run the schedule as specified by the Recurrence settings within the schedule. The *No Report to Distribute* drop-down list box specifies whether to process a No Report to Distribute result as an Error or a Warning.

   ❏ **Recurrence.** Provides run-time intervals for distribution and repeat options. Provides the facility to Manage Recurrences (New, Edit, and Remove).

   ❏ **Task.** Provides information on the report procedure (FEX) that is being scheduled.

   ❏ **Distribution.** Provides options to specify the recipients or location to which the report will be distributed. It also provides the ability to create, edit, and remove distributions.

   ❏ **Notification.** Provides the options to set up notification of the schedule status.

   ❏ **Log Reports.** Shows the Number of Jobs and the Log Report for individual jobs.

❏ **Options**

   ❏ **Parameters.** Specifies values for parameters that are required at run time by the report procedure (FEX) being scheduled.

   ❏ **Advanced Task Settings.** Allows you to input the report language and additional FOC Errors to be processed as warnings.

   ❏ **Email Server.** Allows you to adjust the Mail Server settings. The default Mail Server displays in the Mail Server Name field. If the *This server requires authentication* checkbox is selected, you will be required to type an account name and password.

Creating a Schedule in the Basic Scheduling Tool

This section provides the overall procedure to create a new schedule for a report procedure (FEX). Some steps in the procedure contain details on the associated options, while other steps direct you to a separate section that contains detailed descriptions of the options and additional information, such as tips in making a selection.

To save a schedule, the required information in the Properties, Recurrence, Distribution and Notification tabs must be provided. If required schedule information is missing when you save the schedule, a message will display informing you of the schedule information that needs to be entered.

Procedure: How to Create a Schedule

1. Open the Basic Scheduling tool, as described earlier in this section. For more information, see *About the Basic Scheduling Tool* on page 105.

2. In the Properties tab, you can edit the name for the schedule in the *Title* box.

   This is a required field and a default name is provided.

3. Type a descriptive summary in the *Summary* box.

   Note: This is an optional field.

4. Select a Job Priority Level.

   Normal - 3 Job Priority Level is the default.

5. Check the *Delete this schedule if it is not scheduled to run again* check box if you do not want this schedule to be stored in the Repository if it will not run again as specified in the Schedule recurrence settings.

6. Leave the *Enabled (Scheduled job runs at specified time)* check box checked if you want scheduled jobs to run as specified in the recurrence settings.

7. Select the *Recurrence* tab and make the following selections.

   a. From the Settings radio button list, select a time interval that the schedule will use to run the report procedure (FEX).

      You can set the interval to Run Once, Minutes, Hourly, Daily, Weekly, Monthly, Yearly, or at Custom intervals.

   b. From the Start Schedule options, select the date (from the drop-down calendar) and time you want the schedule to begin running.

      Note: To change the time setting, select either the hour or minutes and use the arrows to increase or decrease the value.

   c. If applicable to the Run Interval selection, from the End Schedule options, select the date and time you want the schedule to stop running.

   d. If applicable to the Run Interval selection, from the Advanced settings, click the *Repeat schedule every:* check box to enable custom intervals.

      Note: This option is disabled for the Run Once, Minutes, and Hourly settings options.

8. Select the *Task* tab. The Path, Procedure, Server Name, and Save Report As fields are populated according to the report procedure (FEX) you selected to schedule. For a description of the Task tab, see *About Tasks in the Basic Scheduling Tool* on page 110.

9. Select the *Distributions* tab and specify the information for the distribution method you selected.

10. Select the *Notification* tab and specify whether or not you want to send a notification when the schedule runs and under what conditions to send it. The notification options are:

❏ **Never.** Report Broker will not send a notification of the schedule status under any circumstances. This is the default value.

❏ **Always.** Send a notification each time the schedule runs.

❏ **On Error.** Only send a notification when there is an error running the schedule.

For more information, see *Notification Options in the Basic Scheduling Tool* on page 152.

11. In the Log Reports tab, you can view log and manage log reports for the schedule.

12. To save the schedule, click *Save & Close* on the ribbon.

Note: You can optionally click *Save* on the toolbar to remain in the scheduling tool.

13. Select the folder that will contain the schedule.

Note:

❏ You must be authorized to create content in this folder.

❏ The default location for saving a schedule is dependent upon your privileges. If you can create content in the folder where the scheduling tool is launched, the Save dialog will be positioned in that folder. If you are not allowed to create content in that folder, the Save dialog will be positioned in the My Content folder located under that folder. If a My Content folder is not available, the Save dialog will be positioned in the first writable folder found.

14. Enter a name for the schedule and click *Save*.

Note:

❏ If the WFDescribe process, which checks for parameters, has not completed before the schedule is saved, you will be prompted to either allow the process to continue or to save the schedule without checking for parameters.

❏ The maximum length of a title value for a file is 256 characters.

❏ If the title of your file has the same name of an existing file in the folder, you will receive a message asking if you wish to replace the file.

About Tasks in the Basic Scheduling Tool

When you access the Basic Scheduling tool, the information for the Task tab options is predefined with the selected report procedure (FEX) information. You can complete the available task options, such as specifying parameter values, as well as select whether or not to burst the report.

Note:

❏ You can use parameters (amper variables) when specifying a value in the Save Report As field of a schedule. These parameters can be system variables, such as &YYMD or any amper variable for which a value is returned by the Reporting Server when the scheduled procedure is executed. To use the dot file extension separator after a variable, terminate the variable with the '|' character, for example, &YYMD|.htm. Similarly, to use the ampersand character itself, follow the ampersand with the '|' character (for example, Smith&|Jones). If a value for a parameter specified in a schedule is not returned by the Reporting Server when the procedure executes, the schedule will fail with a "No report to distribute" error. If the scheduled task is burst, you can also use the '%BURST' symbol to include the burst value in the Save Report As field.

Task Options in the Basic Scheduling Tool

The options available when you select the Task tab are:

❏ **Path.** Shows the report path in the Repository or on the Reporting Server.

❏ **Procedure.** The name of the procedure you are scheduling.

❏ **Server Name.** The Reporting Server to which the report procedure (FEX) will be submitted.

❏ **Alert.** Specifies how to reactivate the alert or to deactivate the alert condition when it is triggered. Click *Alert* to specify the alert options.

Select one of the following options from the Alert Options dialog box.

❏ **Automatically Reset.** After the alert is triggered, reactivate the alert when the condition is no longer true. The system will keep checking the condition after the alert has been triggered. As soon as the condition is no longer true, it will reactivate the alert. This is the default value.

❏ **Continue After Alert.** After the alert is triggered, reactivate the alert immediately.

❏ **Deactivate Schedule After Alert.** Deactivate the schedule after the alert is triggered.

❏ **Delay.** Restart the alert after a specified period. You can specify to restart the alert after a maximum of 99 hour(s), day(s), week(s), month(s), or year(s).

Caution: Be sure that you set the schedule interval to a time period greater than the time it takes to run the scheduled procedure. When the schedule interval is less than the time it takes to run the procedure and the Delay option is selected, an alert schedule will distribute (based on the distribution option that you selected) more frequently than expected. For email distribution, this can result in unnecessary distribution of emails which can impact the business or operational goals of the alert report distribution.

Report Properties

❏ **Burst Report.** If you want to burst the report, select the *Burst Report* check box. The burst feature enables you to instruct the Reporting Server to create the report in sections so that they can be distributed separately. For more information, see *Bursting a Report* on page 95.

❏ **Override the Format Specified in the Procedure.** Select this check box to display the list of report formats and indicate a format other than the one specified in the procedure.

Note:

  ❏ If the scheduled report is a compound report that uses the stabilized SET COMPOUND OPEN syntax, you must select the *Override the Format Specified in the Procedure* check box and specify the format in the schedule when scheduling this report. Otherwise, the report will not be distributed. Compound reports produced by the Report Broker and Developer Workbench reporting tools such as InfoAssist+ and the App Studio Document canvas do not require that the *Override the Format Specified in the Procedure* check box be checked.

  ❏ FLEX report output format is no longer supported. If you are editing a task that uses one of these formats within a schedule, you can change the output format in the dialog box that opens.

    ❏ If you click *OK*, and the output format of the report is set to FLEX, the task output is saved as AHTML.

    ❏ If you click *OK*, and the output format of the report is set to VISDIS or VISDISAE, the task output is saved as HTML.

    ❏ If you click *Exit*, the output format will not be changed, and any changes that you made to the task will not be saved.

  ❏ When an existing schedule is opened in the Basic Scheduling tool, if the *Override the Format Specified in the Procedure* check box was selected, the list of formats displays. If you clear the *Override the Format Specified in the Procedure* check box, the list of formats does not display.

❏ When an existing schedule is opened in the Basic Scheduling tool, if the *Override the Format Specified in the Procedure* check box was not selected, the list of formats does not display. If you select the *Override the Format Specified in the Procedure* check box, the list of formats displays.

❏ **Save Report As.** Allows you to specify a different name for the report, which defaults to the name of the report that you selected to schedule.

Specifying Parameter Values

You can customize a report and control its execution with parameters. When scheduling a report procedure (FEX), the schedule Task Parameters section allows you to supply a value for parameters referenced in the report procedure or add a parameter to the schedule by creating a new parameter and specifying the parameter name and value.

If your Server Procedure contains Pre/Post Procedures, see *Use the pre- or post-procedures Tab or a Web Query Report*.

Procedure: How to Specify Parameter Values

If the scheduled procedure contains parameters for which values must be supplied at run time, these parameters are displayed in the parameters section of the scheduling tool.

In the Basic Scheduling tool, click the *Parameters* tab to open the Task Parameters dialog box, shown in the following image.

Parameters may have default values and may have values that can be selected from a static or dynamic list. For more information about selecting parameters in the Scheduling Task Parameters dialog box, see the examples provided in this chapter.

Reference: Considerations When Specifying Parameter Values

The following are considerations when specifying parameter values for a procedure:

❏ The maximum number of characters for each individual parameter value is 3200. You can store multiple values for a single parameter. Multiple values for a parameter are stored as one entry, which must not exceed the 3200 maximum character limit.

❏ Report Broker displays the description for the parameter when it is specified in the procedure. Otherwise, Report Broker displays the parameter name.

❏ Report Broker displays default variable values, as well as static or dynamic single-select and multiselect lists.

Note:

❏ The No Selection option is displayed for dynamic multiselect lists. When selected, this option does not perform any data selection test on that field.

❏ Report Broker does not support using the -HTMLFORM command to create a dynamic selectable list of parameter values.

❏ Report Broker displays global variables that are used in FILTERS defined in Master Files and referenced by a procedure. For example, if a Master File contains

```
FILENAME=CAR,SUFFIX=FOC
VARIABLE NAME=&&COUNTRY1, USAGE=A10, DEFAULT=ENGLAND,$
FILTER FILTER1=COUNTRY EQ '&&COUNTRY1'; $
```

and the procedure being scheduled contains

```
WHERE FILTER1
```

then Report Broker displays COUNTRY1 in the Parameters window.

❏ Report Broker will not prompt for variables with defaults set by the -DEFAULTH command. The purpose of the -DEFAULTH command is to assign a default value to amper variables and not be dynamically prompted for that variable.

❏ Report Broker does not prompt for the value of its internal variables that are set by the Distribution Server at schedule execution time. For example, &DSTOWNER is the user ID of the schedule owner. If this parameter is referenced in a scheduled procedure, the value will be available because the Distribution Server sets the value to the owner of the schedule at schedule execution time. However, the scheduling tool will not prompt for this value in the Task Parameters dialog box.

❏ When specifying parameters with special characters (for example, %, &, |):

 ❏ If you are specifying the entire WHERE condition as the parameter value, you must enclose the value within two single quotation marks rather than a double quotation mark. For example, ''WHERE CAR NOT LIKE MOTO%''.

 ❏ If you are only specifying a value as the parameter value, you do not need to enclose the parameter value within quotation marks. For example, O&DINFO.

❏ Once a parameter is stored for a schedule, Report Broker will continue to display that parameter in the Parameter list and submit the parameter to the Reporting Server when the schedule is run even if the parameter is removed from the underlying report. To remove the parameter from the schedule information, edit the schedule and delete the parameter. For information on how to delete a parameter from a schedule, see *Deleting a Parameter* on page 135.

❏ A parameter value that contains special characters should not be used in a schedule setting that refers to an output file name, since file names cannot contain special characters. Examples of affected schedule settings include the Save Report As value, the Report Name value for single-file FTP distribution, and the Zip File Name.

❏ A FEX can be coded to set the Display Value for any value. For example, if a value is named ENGLAND, the Display Value can be set to display as England.

Example: **Specifying a Default Parameter Value in the Report Procedure (FEX)**

Specifying default parameter values can be done with the -DEFAULT or -DEFAULTH command or within the WHERE statement. Default values specified with the -DEFAULTH command are not prompted for.

The following procedure sets a default value of NY for the STATE (2-3 letters for US State) parameter.

```
-DEFAULT &STATE=NY
TABLE FILE GGSALES
SUM DOLLARS UNITS
BY ST
BY CATEGORY
BY PRODUCT
ON TABLE SUBHEAD
"Product Sales Report"
WHERE ST EQ '&STATE.2-3 letters for US State.'
END
```

The parameters that have default values defined in the report procedure (FEX) are listed within the Parameters tab with the default value in the Value column. When parameters are stored in a schedule, Report Broker adds a -SET for the parameter to the schedule procedure sent to the Reporting Server to be run. A -SET command overrides a value specified in a -DEFAULT command.

The following image shows the Task Parameters dialog box displaying the STATE parameter. In the Use Default column, the State parameter shows a value of Yes. In the Parameter Properties section, NY is shown in the Value and Default Value fields. This is the default parameter value.
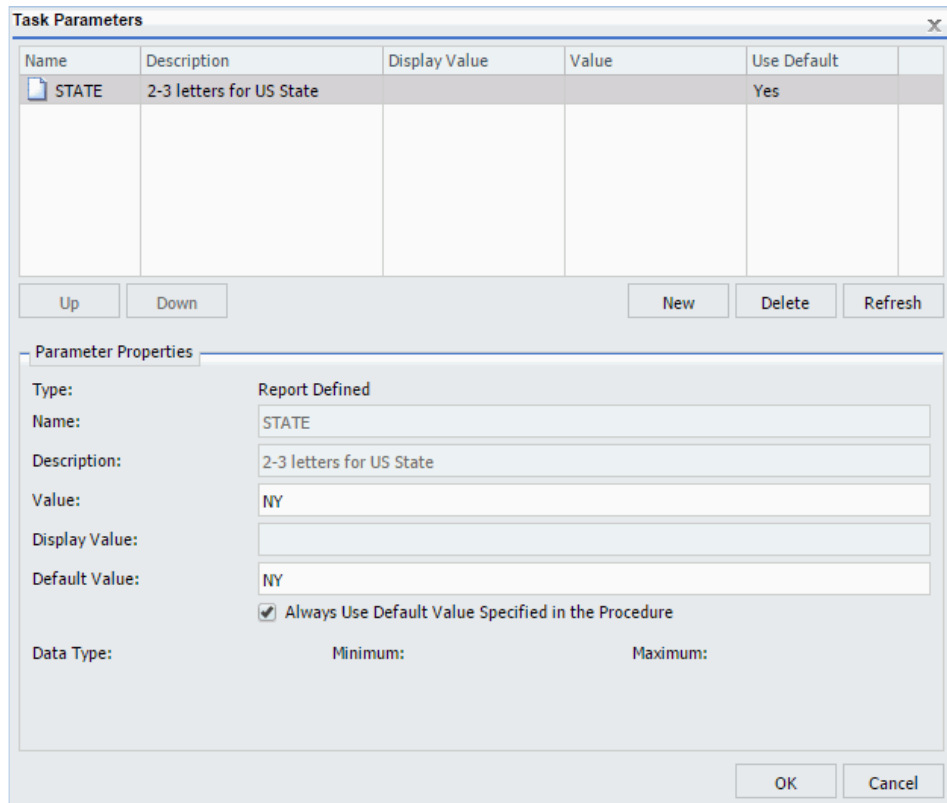
To use a value other than the default value at schedule execution time, so that it will be used even if the procedure is changed, click the parameter and change the parameter value within the Parameter Properties section. Values for simple parameters are specified by entering a value for the parameter in the Value field. There are also static and dynamic parameter types that allow selection of a single or multiple values, which are explained in the following examples.

When parameters are stored in a schedule, Report Broker adds a -SET for the parameter to the schedule procedure sent to the Reporting Server to be run. A -SET command overrides a default value specified in a -DEFAULT command.

Example: **Adding a Static Single-Select List of Parameter Values**

The following procedure provides a list of static values that are valid for the CATEGORY (Category) parameter.

```
-DEFAULT &STATE=NY
TABLE FILE GGSALES
SUM DOLLARS UNITS
BY ST
BY CATEGORY
BY PRODUCT
ON TABLE SUBHEAD
"Product Sales Report"
WHERE ST EQ '&STATE.2-3 letters for US State.'
WHERE CATEGORY EQ '&CATEGORY.(Coffee,Food,Gifts).Category.'
END
```

The following image shows the Task Parameters dialog box displaying the CATEGORY parameter. In the Value column, the CATEGORY parameter has a value of Coffee. Since this CATEGORY parameter has a list of possible parameter values, there is no default value specified. Therefore, the Use Default column is blank.
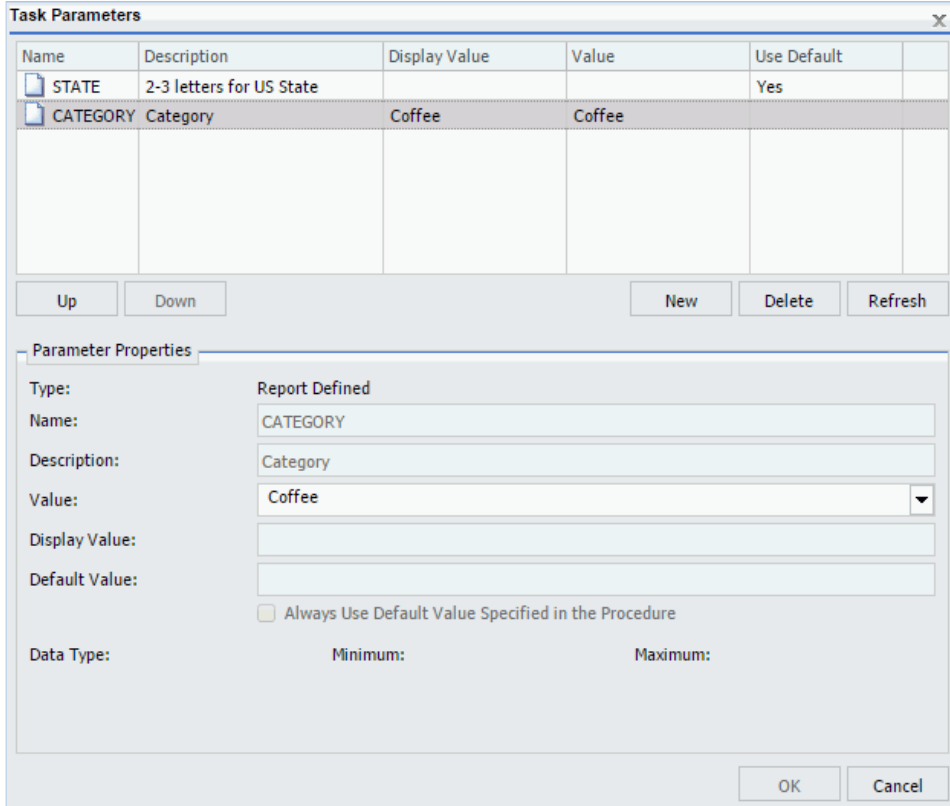
To supply a value for a single select parameter, select the parameter in the Task Parameters table and enter a value in the Value field in the Parameter Properties section. From the list of the values, select a value to assign to the parameter. You can select only one value for a static single-select parameter.

Example: Adding a Dynamic Single-Select List of Parameter Values

The following procedure provides a single select list of values that are valid for the PRODUCT (Product Name) field. This list is dynamically populated with values from the GGSALES data source.

```
-DEFAULT &STATE=NY;
TABLE FILE GGSALES
SUM DOLLARS UNITS
BY ST
BY CATEGORY
BY PRODUCT
ON TABLE SUBHEAD
"Product Sales Report"
WHERE ST EQ '&STATE.2-3 letters for US State.'
WHERE PRODUCT EQ '&PRODUCT.(FIND PRODUCT IN GGSALES).Product Name.'
END
```

The following image shows the Task Parameters dialog box displaying the PRODUCT parameter. In the value column, the PRODUCT parameter has a value of Espresso. Since the PRODUCT parameter has a list of possible parameter values, there is no default value specified. Therefore, the Use Default column is blank.

To supply a different value, click the *PRODUCT* parameter in the table and change the parameter value within the Parameter Properties section. You can select only one value from the dynamic single-select list.

Example: **Adding a Static Multiselect List of Parameter Values**

The following procedure provides a static multiselect list of values that are valid for the CATEGORY (Category) field.

```
-DEFAULT &STATE=NY
TABLE FILE GGSALES
SUM DOLLARS UNITS
BY ST
BY CATEGORY
BY PRODUCT
ON TABLE SUBHEAD
"Product Sales Report"
WHERE ST EQ '&STATE.2-3 letters for US State.'
WHERE CATEGORY EQ '&CATEGORY.(OR(Coffee,Food,Gifts)).Category.'
END
```

The following image shows the Task Parameters dialog box displaying the CATEGORY parameter. The CATEGORY parameter has been encoded to only use the values Coffee, Food or Gifts. The selected values will show in the Value column. Since the CATEGORY parameter has a list of possible parameter values, there is no default value specified. Therefore, the Use Default column is blank.

When the Value button is selected in the Parameter Properties section, a list of available values displays, as shown in the following image. Using the Ctrl key, you can select more than one value from the static multiselect list.
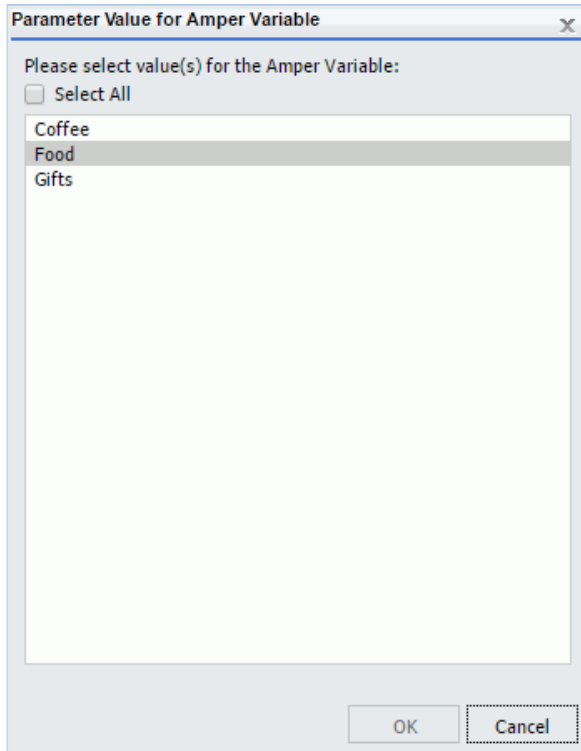
Example: Adding a Dynamic Multiselect List of Parameter Values

The following procedure provides a dynamic multiselect list of values that are valid for the PRODUCT field. This list is dynamically populated with values from the GGSALES data source.

```
-DEFAULT &STATE=NY;
TABLE FILE GGSALES
SUM DOLLARS UNITS
BY ST
BY CATEGORY
BY PRODUCT
ON TABLE SUBHEAD
"Product Sales Report"
WHERE ST EQ '&STATE.2-3 letters for US State.'
WHERE PRODUCT EQ '&PRODUCT.(OR(FIND PRODUCT IN GGSALES)).Product Name.'
END
```

The following image shows the Task Parameters dialog box displaying the CATEGORY parameter. The CATEGORY parameter has been encoded to use any value found in the GGSALES data source. The selected values will show in the Value column. Since the CATEGORY parameter has a list of possible parameter values, there is no default value specified. Therefore, the Use Default column is blank.

When the Value button is selected in the Parameter Properties section, a list of available values displays, as shown in the following image. Using the Ctrl key, you can select more than one value from the dynamic multiselect list.
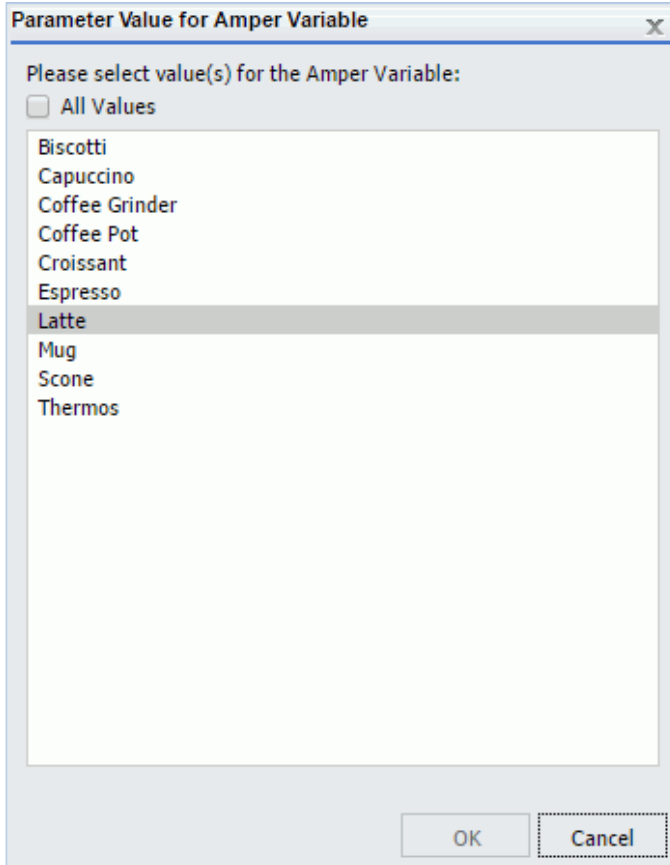
Using Parameter Values to Burst Active Dashboards and Compound Reports

In addition to the ability to distribute sections of a single report to individual users using standard bursting, you can distribute sections of reports by using a filter with a static or dynamic multi-select parameter.

Active dashboards, which are compound reports that contain active reports, and reports that use an Excel format output, can be burst by using the parameter values saved in these reports. You can also burst Excel reports that contain a table of contents. You can burst these reports using a field other than the first BY field.

The Repeat Task for Each Selected Value check box must be selected in order to burst each parameter separately. In the Basic Scheduling tool, the Repeat Task for Each Selected Value check box is found in the Parameter Value for Amper Variable dialog box, as shown in the following image.
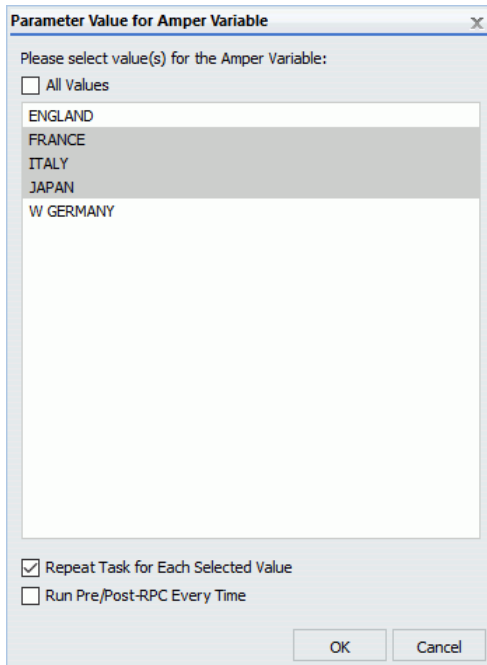
Note:

❏ This check box is cleared by default.

❏ The Repeat Task for Each Selected Value check box only displays for static or dynamic multiselect parameters.

❏ At least one parameter value must be selected.

❏ If the All Values check box is selected, the term _FOC_NULL appears in the Value field of the Task Parameters dialog box. The server then performs a WFDescribe at run time to generate the list of values for the parameter.

❏ The Repeat Task for Selected Parameter Value feature can only be applied to one parameter at a time.

❏ If the Burst Report check box within the Task tab is selected first, then the Repeat Task for Each Selected Value check box will be disabled and cannot be selected. The two bursting methods cannot be combined in one schedule.

❏ If the Repeat Task for Each Selected Value check box is selected on the Parameter Value dialog box, then the Burst Report check box within the Task tab becomes the Burst Report by Parameterized Report Filter check box. This check box will now be automatically selected and cannot be cleared unless the Repeat Task for Each Selected Value check box is cleared.

The values you choose are shown in the Task Parameters dialog box and placed between square brackets in the Value column to indicate their selection, as shown in the following image.
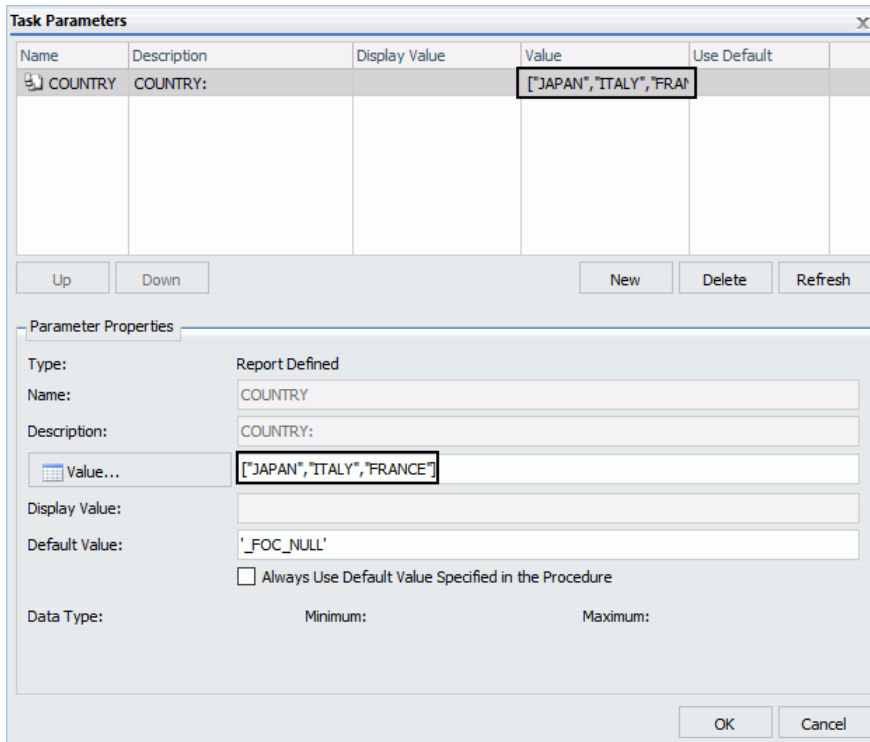
Once the schedule is run, the Distribution Server repeats the execution of the task for each parameter selected. For example, since the parameter values Japan, Italy, and France are selected, and the Repeat Task for Each Selected Parameter check box is selected, the schedule bursts the report information into three separate reports. Each report shows information related to one of the three selected parameters, as shown in the following image.

Procedure: How to Burst a Filtered Active Dashboard or Excel Compound Report Using the Basic Scheduling Tool

1. Create an active dashboard or Excel compound report that contains at least one static or dynamic multiselect parameter. For more information, see the *InfoAssist+ User's Guide*.

2. Right-click the report, point to *Schedule*, and select a distribution method to begin a new Basic Schedule.

3. In the Options group, click *Parameters*.

   The Task Parameters dialog box opens.

4. Choose the parameter you wish to edit.

   Once the parameter is chosen, the Parameter Properties section is populated with information about the selected parameter.

5. In the Parameters Properties section, click the *Value* button.

   Note: For the Value button to be able to be selected, the chosen parameter must be a multiselect parameter.

   The Parameter Value for Amper Variable dialog box opens.

6. Choose the values that you want the schedule to burst. While holding the Ctrl key, use your mouse to select more than one value. To choose all values, select the *All Values* check box.

7. Select the *Repeat Task for Each Selected Value* check box.

8. Click *OK*.

The selected parameter values now appear in square brackets in the Task Parameters dialog box in the Value column, as shown in the following image.
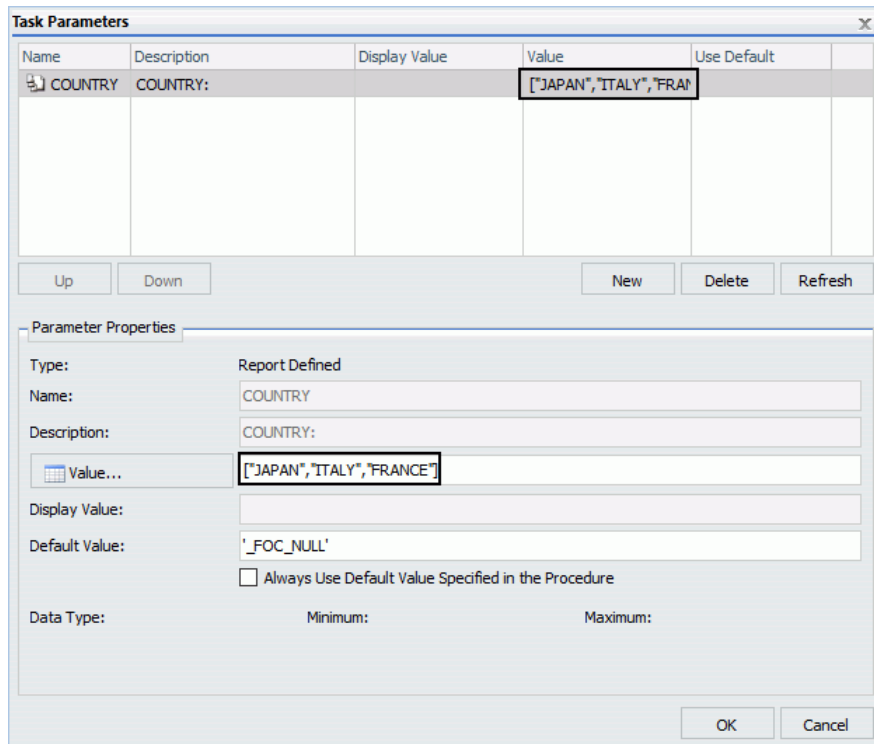
9. Click *OK*.

10. Input all other necessary options and settings for your schedule, then save the schedule. For more information, see *Creating a Schedule in the Basic Scheduling Tool* on page 107.

11. Run the schedule.

When the schedule is run, it distributes a report for every burst parameter that you selected, as shown in the following image.
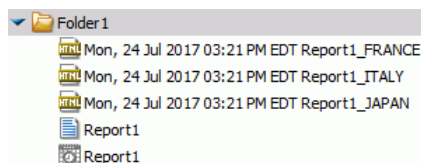
Bursting an Active Dashboard or Excel Compound Report That Contains Filtered and Unfiltered Reports

When you create an active dashboard or Excel compound report that contains filtered and unfiltered reports, only the filtered reports can be configured for bursting.

The following image shows two reports created in InfoAssist+ on one dashboard. The report showing MODEL, CAR, COUNTRY, and DEALER COST data has a COUNTRY filter applied, which allows the user to filter report results by country. The report showing MODEL and RETAIL_COST data does not have a filter.

When you access Task Parameters for this compound report through the scheduling tool, any edits you make to the parameter will only apply to the filtered report. Meaning, you will only be able to assign values to a parameter in the filtered report. An example of this is shown in the following image, where you can see the values that were assigned to the COUNTRY parameter.
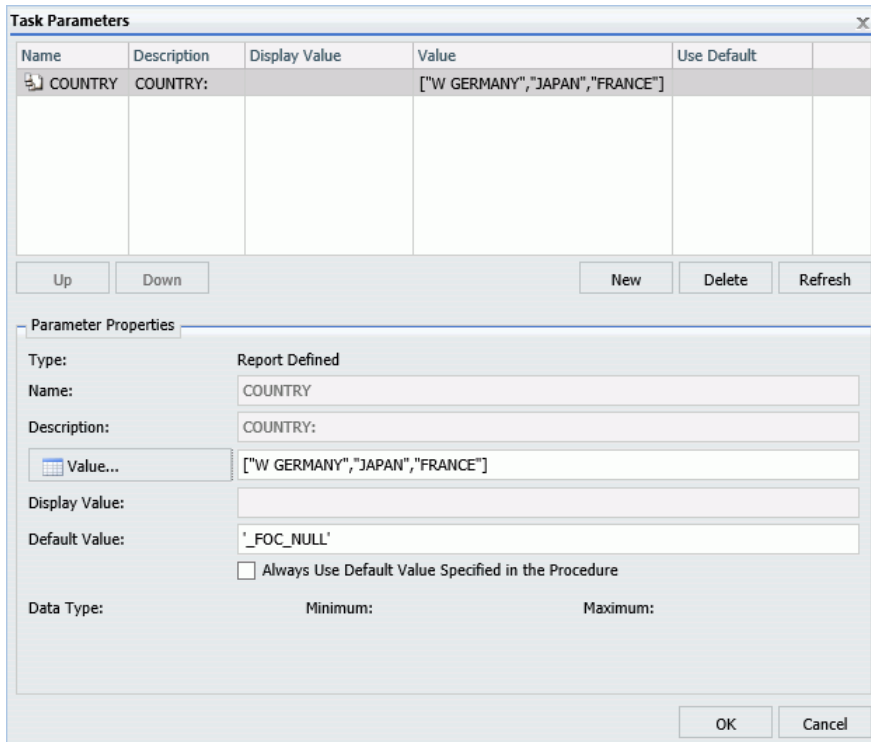
When you schedule a compound report to be burst, and the Repeat Task for Each Selected Value check box is selected, the reports that contain filters will burst based on the parameter values selected. In the following image, the compound report is distributed into three separate burst reports, which show filtered data about W GERMANY, FRANCE, and JAPAN, respectively.

For each burst report, the first chart shows data for the selected COUNTRY value.

The following image shows the W GERMANY burst compound report.

MODEL	CAR	COUNTRY	DEALER_COST
100 LS 2 DOOR AUTO	AUDI	W GERMANY	5,063
2002 2 DOOR	BMW	W GERMANY	5,800
2002 2 DOOR AUTO	BMW	W GERMANY	6,000
3.0 SI 4 DOOR	BMW	W GERMANY	10,000
3.0 SI 4 DOOR AUTO	BMW	W GERMANY	11,000
530I 4 DOOR	BMW	W GERMANY	8,300
530I 4 DOOR AUTO	BMW	W GERMANY	8,400

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MODEL	RETAIL_COST
100 LS 2 DOOR AUTO	5,970
2000 4 DOOR BERLINA	5,925
2000 GT VELOCE	6,820
2000 SPIDER VELOCE	6,820
2002 2 DOOR	5,940
2002 2 DOOR AUTO	6,355
3.0 SI 4 DOOR	13,752
3.0 SI 4 DOOR AUTO	14,123
504 4 DOOR	5,610
530I 4 DOOR	9,097
530I 4 DOOR AUTO	9,495
B210 2 DOOR AUTO	3,139
COROLLA 4 DOOR DIX AUTO	3,339
DORA 2 DOOR	31,500
INTERCEPTOR III	17,850
TR7	5,100
V12XKE AUTO	8,878
XJ12L AUTO	13,491

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Because no filters have been applied to the second report, the results of the second report are the same for each burst compound report. Only the report that uses the COUNTRY filter changes.

Bursting an Active Dashboard or Excel Compound Report That Contains Only Filtered Reports

If you attempt to burst an active dashboard or Excel compound report that contains only filtered reports, all reports will be compatible with bursting.

The following images show two reports created in InfoAssist+ on one dashboard. Both reports use the same filter for the MODEL data.

When Task Parameters are accessed through the scheduling tool for this compound report, you can specify the MODEL values for both reports.

As shown in the following image, the MODEL parameter has the filter values 3.0 SI 4 DOOR, 100 LS 2 DOOR AUTO, XJ12L AUTO, B210 2 DOOR AUTO, and 2000 SPIDER VELOCE selected.
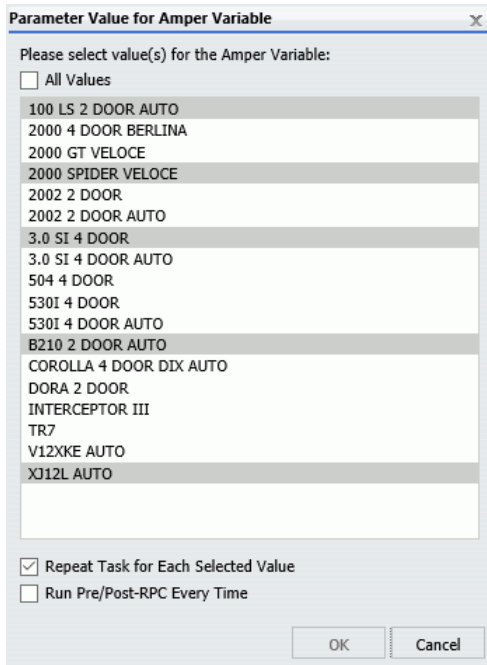
The selected values appear in brackets in the Task Parameters dialog box, as shown in the following image.
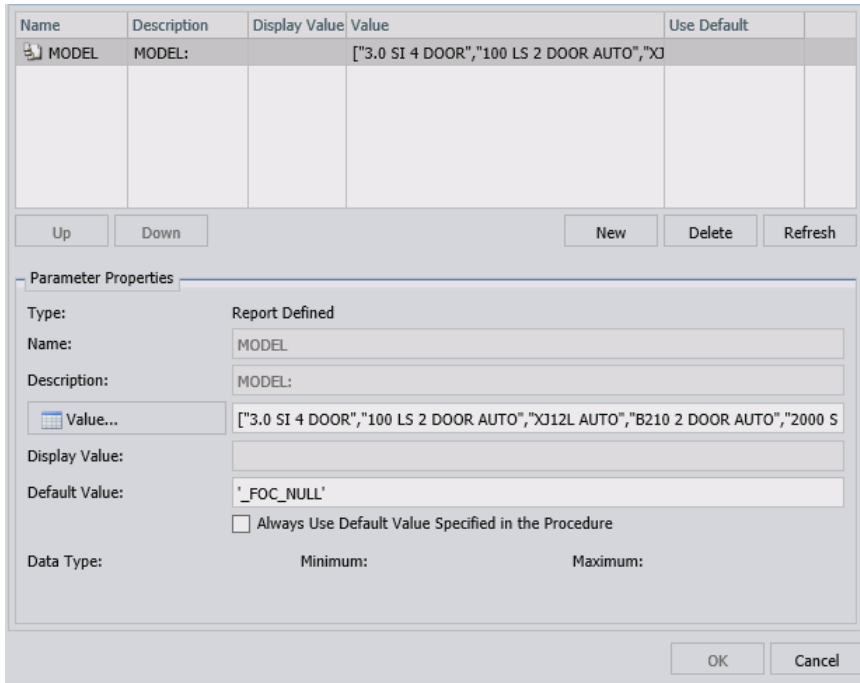
When you schedule a compound report to be burst, and the Repeat Task for Each Selected Value check box is selected, burst reports are created based on the parameter values selected. In the following image, the compound report is distributed and burst into five separate compound reports, which show filtered data about each selected car model.
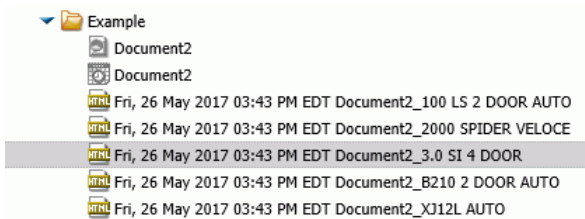
For each burst compound report, both reports show data for the selected car model. In the following image, the burst compound report showing information about the 3.0 SI 4 DOOR car model is selected. Both reports in the burst compound report only show information about the selected model.

Deleting a Parameter

It is important to verify that the parameters you delete when scheduling a report procedure (FEX) will be handled, as follows, so that the scheduled job will run successfully:

❏ A default value is specified in the report procedure (FEX) being scheduled.

❏ A value will be dynamically assigned to the parameter by the report procedure (FEX) processing when the scheduled job runs on the Reporting Server.

❏ The parameter will not be referenced when the report procedure (FEX) is processed by the Reporting Server.

To delete a parameter so that it is not stored with the schedule information, highlight the parameter in the parameter table you want to delete, and click the *Delete* button.

Creating a New Parameter

If you need to have the schedule job send a parameter and value that is not defined in the report procedure being scheduled, you can create a new parameter in the Task Parameters dialog box. Parameters referenced during processing by the Reporting Server must be assigned a value for the scheduled job to run successfully. The schedule job log report will contain information when required parameter values were not provided.

Procedure: **How to Create a New Parameter**

You can create parameters for a task as follows:

1. Click *Parameters* on the ribbon to display the Task Parameters dialog box, which is shown in the following image.
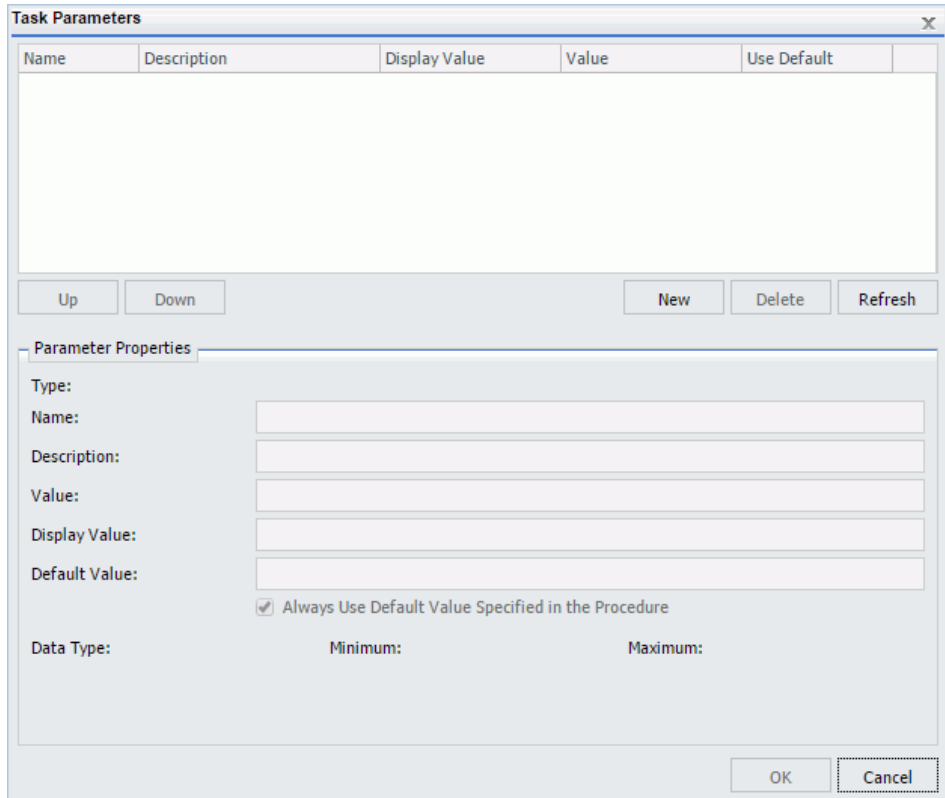
2. Click the *New* button located above the Parameter Properties section.

The Task Parameter dialog box displays, as shown in the following image.

3. Enter a value in the *Name* and *Value* boxes.

4. Click *OK*.

   The *Name* and *Value* boxes are populated in the Task Parameters dialog box Parameters table.

5. If you would like to change the parameter value, select the parameter in the Parameters table and specify the values in the *Value* field located in the Parameter Properties section.

6. Click *OK* when you have completed entering parameter settings for the task.

Selecting a Report Format

Use the following guidelines when selecting a format:

❏ The formats that support bursting are AHTML, DHTML, DOC, EXL2K, EXL2K FORMULA, EXL97, HTML, JPEG, PDF, PNG, PS, SVG, and WP. Coordinated compound reports can only be burst with DHTML, PDF, and PPT formats.

❏ When a format is selected, Report Broker automatically adds an appropriate file extension to the output file name in the Save As field. In certain cases, you must manually change the extension added by Report Broker. For example, if you select format DHTML in the schedule and the report output is not a web archive file, you must change the extension to .htm. If you select format HTML in the schedule and the report output is a web archive file, you must change the extension to .mht. If you select format EXL07 TEMPLATE in the schedule and the specified template is a macro-enabled template, you must change the extension to .xlsm. For more information about DHTML and EXL07 TEMPLATE formats, see *Report Broker Formats for Scheduled Output* on page 189.

❏ The WP, DOC, and PS formats support printing. The PDF format supports printing when Report Broker is configured to enable PDF to print and the printer is configured with the appropriate driver.

❑ When a format is selected using the *Override the Format Specified in the Procedure* option, only the HTML, DHTML, WP, and DOC formats can be distributed as an inline email message. When the *Override the Format Specified in the Procedure* option is not used and inline is selected, the output will be distributed as an attachment if the format does not support inline distribution. Additionally, when distributing a report inline, the appearance of the report can be affected by the email server, or potentially blocked. Review the restrictions for your mail server provider before utilizing reporting formats and options that utilize JavaScript™, embedded images, and referenced CSS.

Advanced Task Settings

The Advanced Options tab provides access to the Additional FOC Errors to be Processed as Warnings dialog box, where you can specify one or more FOCUS error message numbers, separated by a comma. If one of these FOCUS error numbers is encountered during schedule execution, Report Broker will process it as a warning rather than an error. For example, if a FOC1517 error is generated by the procedure, add 1517 to the text box to convert this error to a warning. This means that if a report is produced, it will be distributed in spite of the FOCUS error number. It also means that this FOCUS error number will not trigger error notification if the schedule is configured to notify on error.

The Advanced Task Settings dialog box is shown in the following image.
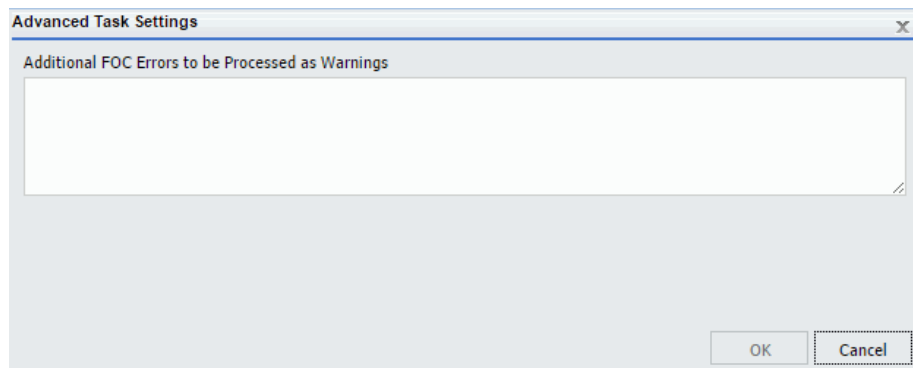
Distribution Options in the Basic Scheduling Tool

The Distribution tab in the Basic Scheduling tool provides the options available for distributing the report output for the scheduled report procedure (FEX). After selecting the option from the shortcut menu of a procedure, you can distribute a report output using one of the following methods.

❑ Email

❏ FTP

❏ Printer

❏ Repository

Note:

❏ Distribution methods can be limited globally (for all users) in Report Broker configuration and for groups or individual users by security operations.

❏ Maps can only be distributed to the Web Query Repository.

❏ If you want to remove trailing spaces from reports distributed in text format, your administrator needs to add the following setting to the Administration Console Custom Settings text box: IBIWF_trimreport=YES. You can also apply this setting to affect specific report formats, for example, IBIWF_trimreport=WP.

Using the Email Distribution Option in the Basic Scheduling Tool

When you distribute a report through email, you can include the report in the body of the email (known as an inline email message) or send it as an attachment. Only the HTML, DHTML, WP, and DOC formats can be distributed as an inline email message.

Note: You must be authorized to distribute by Email in order to create a schedule that uses Email distribution.

Distributing a report as an inline email message is particularly useful when the report is distributed to mobile devices or through email systems that do not support attachments.

You can also distribute a report to a fax machine, as explained later in this section.

Note:

❏ The availability of the inline message option when you create a schedule depends on the *Inline Report Distribution* setting accessible from the Report Broker Console.

❏ The display of a report that is distributed as an inline email message can be affected by settings and restrictions of your email server or email client.

❏ In the Allowed Email Addresses and Domains dialog box in the Report Broker Console, if the *Restrict user input with this list* check box has been selected, user input of email addresses is restricted to a list of allowed email domains and addresses. For more information, see *Validating Allowed Email Domains and Addresses* on page 43

Reference: **Considerations When Sending a Report to Multiple Email Addresses**

When you create a schedule that uses email distribution, you can type email addresses in the To field, as shown in the following image.

If you type multiple email addresses in the To field, you can use a semi-colon or comma symbol between each email address, to designate how the Distribution Server delivers information.

Example: **Using a Comma to Separate Email Addresses in the To Field**

If you use the comma symbol to separate email addresses, all email addresses are visible to every email recipient.

The following image shows the email addresses EmailA@ibi.com and EmailB@ibi.com separated by a comma.

The schedule will distribute a report named Sales_Metrics_YTD.htm to these email addresses. When you run the schedule, the log report states that one report named Sales_Metrics_YTD.htm has been distributed to both email addresses through a single email, as shown in the following image.

Example: **Using a Semi-Colon to Separate Email Addresses in the To Field**

If you use the semi-colon symbol to separate email addresses, each recipient only sees their own email address.

4. Creating Schedules

The following image shows the email addresses EmailA@ibi.com and EmailB@ibi.com separated by a semi-colon.

The schedule will distribute a report named Sales_Metrics_YTD.htm to these email addresses. When you run the schedule, the log report states that two reports named Sales_Metrics_YTD.htm have been distributed to EmailA@ibi.com and EmailB@ibi.com through separate emails, as shown in the following image.

Procedure: How to Use the Email Distribution Option

Note: You can use parameters (amper variables) when specifying values in the Email settings of a schedule. These parameters can be system variables, such as &YYMD, or any amper variable for which a value is returned by the Reporting Server when the scheduled procedure is executed. To use the dot file extension separator after a variable, terminate the variable with the '|' character (for example, &YYMD|.htm). Similarly, to use the ampersand character itself, follow the ampersand with the '|' character (for example, Smith&|Jones). If a value for a parameter specified in a schedule is not returned by the Reporting Server when the procedure executes, the schedule will fail with a "No report to distribute" error. If the scheduled task is burst, you can also use the '%BURST' symbol to include the burst value. If the Packet Email setting is Yes, the burst value will not be substituted in the Zip filename.

1. Right-click a report procedure (FEX), point to *Schedule*, and then click *Email*.

   The Basic Scheduling tool appears.

2. Select the *Distribution* tab.

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3. From the Type drop-down list, select the method you will use to provide the email addresses that will receive the distribution. The options are Distribution List, and Email Address(s). For more information, see *Creating and Maintaining Distribution Lists* on page 91. These options all show where the report procedure (FEX) distributes To, From, Reply Address, and Subject. Additionally, in the Email Information section, select whether you would like to send all reports as attachments or send a report as an inline message.

❏ **Distribution List.** The report will be sent to all email addresses in the selected email Distribution List. For more information, see *Creating and Maintaining Distribution Lists* on page 91.

❏ **Email Address(s).** This is the default method for supplying email addresses in the scheduling tools. The default value of this field is the email address of the user that is creating the schedule. You can specify multiple email addresses in an email address field. Separate each email address with a comma (,) or a semicolon (;). The email addresses will appear in the To line of a single email when the scheduled output is distributed. Each individual email address can be a maximum of 130 characters, according to the SMTP specification. The total maximum length of this field is 800 characters. For more information, see *Specifying Multiple Email Addresses* on page 100.

Additionally, you can use group mail lists (defined on your mail server) with the Email Address(es) option. You can use group mail lists to distribute a report or notification to multiple recipients without having to maintain multiple email addresses in the Repository. The format of the group mail list depends on the mail server being used. For example, if you are using a Microsoft Exchange Server and your group mail list is defined as #group1, you would enter group1@*listdomain* in the Email Address(es) field. If the group mail list contains a space within its name, enclose the space with double quotation marks ('' ''). For more information, see your mail server administrator.

4. In the To box, type the email address of the recipient.

5. Optionally, click the *To* button to open the Enter Email Addresses dialog box and type an email address in the To, Cc, Bcc, and Reply fields.

Note:

❏ You can create a schedule that bursts sections of a report to different email recipients. However, if you type an email address in the Cc or Bcc field, every section of a burst report will distribute to the same Cc or Bcc email address.

❏ If you type multiple email addresses in the Cc and Bcc fields, Cc and Bcc emails are always sent to each email address individually, regardless of whether a comma or semi-colon is used to separate addresses.

6. In the From box, type any value (for example, the name of the person creating the schedule). Report Broker does not require a value for this field, but your email system may require one.

7. In the Reply Address box, type a valid email address. If recipients reply to the email, their messages will be sent to this address. If your email system is unable to deliver the content, the undeliverable output message is also returned to this address. Report Broker requires this field.

   Note: If a default Mail Reply Address was not provided in the Report Broker Configuration tool, the default Reply Address used for this field is the email address of the user that is signed in to Db2 Web Query. Report Broker obtains the email address of the user from the Db2 Web Query security system.

8. In the Subject box, type the text that you want to appear in the email subject line. Report Broker may not require this information, but it may be needed by your email system. The value you entered in the schedule Title field is the default Subject value.

9. Specify whether you want to send the report as an email attachment, or within the body of the email inline by selecting or clearing the *Send all reports as attachments* option. For more information, see *Using the Email Distribution Option in the Basic Scheduling Tool* on page 139.

10. Optionally, you can type a message to appear in the email body to replace the default message, *Please see attachment(s)*.

    Note: You can also provide a custom default distribution message using the Email Distribution and Notification settings in the Report Broker Configuration tool in the Report Broker Console. This allows you to override the default message, *Please see attachment(s)*, by enabling you to create a custom message specific to your organization. The message displays when creating a schedule using Email distribution. The new message will not affect existing schedules.

11. Optionally, select a file from the Report Broker Repository that contains the message you want to distribute with your Email distribution.

    Note: When you use the file option, the information can be maintained in one common place. It can also be revised among multiple schedules. There is no size limit to the contents of the file, other than what the email client and server support.

12. Optionally, specify a value for the Packet Email or accept the default value. The Packet Email option is set to the default value configured by the Manager. For a schedule that has a task that is burst, you can decide how many emails to send to each recipient. Options include:

    ❏ **No.** Sends each attachment in a separate email.

    ❏ **Yes.** Sends one email that contains all attachments.

❏ **By Burst Values.** Sends one email with multiple attachments for each burst value.

13. Specify whether to send the report as a compressed (.zip) file by selecting or clearing the *Add Report to Zip File* check box.

    You have the option of converting your distributed report into a password-protected compressed file. By default, the Add Report to Zip File check box is not selected and the report will not be compressed. You can optionally password protect a zipped file by including a password in a Distribution File or Dynamic Distribution List.

14. If the *Add Report to Zip File* check box is selected, enter the name of the Zip file in the *Zip File Name* box.

    Note: Support of Unicode characters in a Zip file name and content within a Zip file on Windows 7 and Windows 2008 Server R2 requires the following hotfix from Microsoft: *http://support.microsoft.com/kb/2704299/en-us*. Without this hotfix, file names are corrupted after you decompress a .zip file in Windows 7 or in Windows Server 2008 R2.

15. Additionally, you can override the default minimum size (in KBs) a file must exceed before it is automatically added to a Zip file. The Zip minimum size is set to the default value configured by the administrator. To automatically zip an attachment that exceeds a certain size that is different from the default, set this value to the desired size.

16. Select the *Notification* tab to specify whether to send an email notification of the schedule job status. If you select Always or On Error, then you have to specify the Reply Address, Subject, Brief Message To, and Full Message To.

17. Select the *Properties* tab to specify the Title, Priority, whether to delete the schedule if it will not run again, and whether the schedule is enabled to run. For more information, see *About Properties in the Basic Scheduling Tool* on page 154.

18. Select the *Recurrence* tab to specify how often to run the schedule. If you want the schedule to run on the current day, set the Start Date and Start Time to values later than the current time. For more information, see *About Recurrence in the Basic Scheduling Tool* on page 155.

19. Click *Save & Close* to save the schedule.

Using the FTP Distribution Option in the Basic Scheduling Tool

This section provides information about distributing scheduled output using File Transfer Protocol (FTP). FTP distribution options can be accessed by clicking the FTP Server button in the Options group on the ribbon. The FTP Distribution Options dialog box is shown in the following image.

❏ You must be authorized to distribute by FTP in order to create a schedule that uses FTP distribution.

❏ Credentials for FTP servers are stored on a user level when a schedule is created in the same way that Reporting Server credentials are stored. The user needs to enter credentials only once for each FTP server. Those credentials will be available in the Basic Scheduling tool each subsequent time that the user creates a new schedule that utilizes that FTP server for distribution.

❏ If the FTP Server requires FTPS, select the *This server requires a secure File Transfer Protocol over TLS/SSL (FTPS)* check box. Options include:

❏ **Security Mode.** Options include Explicit and Implicit mode.

❏ **Protocol.** Options include Transport Layer Security (TLS) and Secure Socket Layer (SSL).

❏ **Data Connection Security.** Options include Clear security (neither Integrity nor Privacy) and Private security (Integrity and Privacy).

❏ When distributing HTML reports by FTP, the scheduled report (.fex) must set a fully qualified FOCEXURL and FOCHTMLURL for the report styling options defined below. These reference the JavaScript components located on the web or application server where the Client is configured. The Distribution server will set a fully qualified FOCEXURL and FOCHTMLURL for FTP distribution using the host name and port provided at installation time. This can be overridden by setting these values in the scheduled procedure. For example:

```
SET FOCEXURL='hostname:port/ibi_apps/'
```

```
SET FOCHTMLURL='hostname:port/ibi_apps/ibi_html'
```

Styling options include:

❏ Table of Contents (TOC) reports

❏ Peer Graphics/Data Visualization graphical reporting

❏ Multi-drill reports

❏ HFREEZE options

Procedure: How to Use the FTP Distribution Option

Note: You can use parameters (amper variables) when specifying values in the FTP settings of a schedule. These parameters can be system variables, such as &YYMD, or any amper variable for which a value is returned by the Reporting Server when the scheduled procedure is executed. To use the dot file extension separator after a variable, terminate the variable with the '|' character (for example, &YYMD|.htm). Similarly, to use the ampersand character itself, follow the ampersand with the '|' character (for example, Smith&|Jones). If a value for a parameter specified in a schedule is not returned by the Reporting Server when the procedure executes, the schedule will fail with a "No report to distribute" error. If the scheduled task is burst, you can also use the '%BURST' symbol to include the burst value. If the multiple reports are distributed in one archive file, the burst value will not be substituted in the Zip filename.

1. Right-click a report procedure (FEX), point to *Schedule*, and then click *FTP*.

   The Basic Scheduling tool appears.

2. Click the *Properties* tab.

3. Enter a title in the *Title* box or leave the default. Optionally, enter a summary in the *Summary* box.

4. Click the *Distribution* tab.

5. From the *Type* drop-down menu, select the method in which you will provide the file names to distribute to the FTP server. The options are:

   ❏ **Distribution List.** The report will be sent to all FTP addresses in the selected Distribution List. For more information, see *Creating a Distribution List* on page 91.

   ❏ **Single File.** Type the name of the fully qualified path and file name to the file containing the file names to distribute. Report Broker cannot validate the file existence. The burst option is not supported with this distribution option. The maximum length of this field is 800 characters.

6. Select the *Notification* tab to specify whether to send an email notification of the schedule job status. If you select Always or On Error, you must specify the Reply Address, Subject, Brief Message To, and Full Message To.

7. Select the *Properties* tab to specify the Title, Priority, whether to delete the schedule if it will not run again, and whether the schedule is enabled to run. For more information, see *About Properties in the Basic Scheduling Tool* on page 154.

8. Select the *Recurrence* tab to specify how often to run the schedule. If you want the schedule to run on the current day, set the Start Date and Start Time to values later than the current time. For more information, see *About Recurrence in the Basic Scheduling Tool* on page 155.

9. Select the *FTP Server* and specify the FTP Server Name, Account Name, and Password for the FTP Server. Optionally, select the *SFTP* and *FTPS* preferences.

10. Click the *Save & Close* button.

Using the Printer Distribution Option in the Basic Scheduling Tool

The report formats that support printing are DOC, PDF (when you configure Report Broker to enable PDF to print and the printer has the appropriate driver), PS, and WP.

Note:

❏ You must be authorized to distribute to a Printer in order to create a schedule that uses Printer distribution.

❏ Problems may occur in printed output if the distributed reports contain UTF-8 characters.

❏ Since a Printer schedule will not work unless the report output format is a valid print format, Report Broker always sets the format of a schedule with distribution to a printer to a valid format. If the default configuration of PDF as a valid print format is in place, the override format is set to PDF. Otherwise, the override format is set to DOC. You can change this format on the Task tab.

Procedure: **How to Use the Printer Distribution Option**

Note: You can use parameters (amper variables) when specifying a value for the Printer Name field of a schedule. These parameters can be system variables, such as &YYMD, or any amper variable for which a value is returned by the Reporting Server when the scheduled procedure is executed. To use the dot file extension separator after a variable, terminate the variable with the '|' character (for example, &YYMD|.htm). Similarly, to use the ampersand character itself, follow the ampersand with the '|' character (for example, Smith&|Jones). If a value for a parameter specified in a schedule is not returned by the Reporting Server when the procedure executes, the schedule will fail with a "No report to distribute" error. If the scheduled task is burst, you can also use the '%BURST' symbol to include the burst value.

1. Right-click a report procedure (FEX), point to *Schedule*, and then click *Printer*.

   The Basic Scheduling tool appears.

2. Click the *Distribution* tab.

3. From the Type drop-down menu, select the method in which you will provide the file names to distribute to the printer. The options are:

   ❏ **Distribution List.** The report will be sent to all printers in the selected Distribution List. To select a Distribution List, click the icon next to the Distribution List field.

   ❏ **Distribution File.** Type the full path and file name of the external distribution file you want to use for this schedule. The path and file must be accessible to the ReportCaster Distribution Server. For more information, see *Creating an External Distribution File*.

   ❏ **Printer Name.** Specify the printer using the following format.

   queue@printserver

   where:

   queue

   Is the name of the printer queue.

   printserver

   Is the host name or IP address of the printer.

   Report Broker can differentiate between the printer queue and the printer host name or IP address due to the presence of the '@' separator. Although Report Broker supports specifying only the host name or IP address of the printer, we recommend that you specify both the printer queue and host name or IP address when distributing Report Broker output to a printer. The maximum length of this field is 800 characters.

❏ **Dynamic Distribution List.** A Dynamic Distribution List enables you to return in memory either a list of burst values and destinations, or only a list of destinations from a data source (for example, a flat file, SQL database, FOCUS data source, or LDAP). For more information, see *Creating a Dynamic Distribution List*.

4. If you select Distribution List, click the *Name* button, which will display the Open dialog box to allow you to select a Distribution List.If you select Printer, specify the printer name in the Name field.

5. Select the *Notification* tab to specify whether to send an email notification of the schedule job status. If you select Always or On Error, then you must specify the Reply Address, Subject, Brief Message To, and Full Message To.

6. Select the *Properties* tab to specify the Title, Priority, whether to delete the schedule if it will not run again, and whether the schedule is enabled to run. For more information, see *About Properties in the Basic Scheduling Tool* on page 154.

7. Select the *Recurrence* tab to specify how often to run the schedule. If you want the schedule to run on the current day, set the Start Date and Start Time to values later than the current time. For more information, see *About Recurrence in the Basic Scheduling Tool* on page 155.

8. Click *Save & Close* to save your changes.

Using the Repository Distribution Option in the Basic Scheduling Tool

When distributing scheduled output to Repository in the Basic Scheduling tool, specify the Repository folder location to which to distribute the report output.

Note: You must be authorized to distribute to Repository in order to create a schedule that uses Repository distribution.

The best practice for recurring and burst schedules is to create and specify a different folder location for each report being distributed for the same report procedure (FEX). This is important so the security access can be defined and managed at the folder level and when opting to burst the distributed report output because the burst value is assigned as the title value to each report section that is distributed. The title value is the value that displays in the Db2 Web Query tree.

When the report output is distributed using the Repository distribution option, the Day, Date, and Time information is prepended to the Save Report As value specified in the schedule task information. For example, the Schedule for the Product Packaging & Price report is assigned the default *Save Report As* value 'Product_Packaging_Price.htm' (blanks and special characters are replaced with an underscore character).

The report output distributed to the Repository on Monday December 19, 2011 at 1:35pm EST is assigned the description: Mon, 19 Dec 2011 01:35 PM EST Product Packaging Price.

Procedure: **How to Use the Repository Distribution Option**

1. Right-click a report procedure (FEX), select *Schedule*, and then select Repository.

   The Basic Scheduling tool displays in a new window.

2. Enter or verify task information. For more information, see *About Tasks in the Basic Scheduling Tool* on page 110.

3. Click the *Distribution* tab.

   The Distribution Server adds Day, Date, and Time to the beginning of the *Save Report As* value specified in the Task tab.

Verify that the folder location is the folder to which you want to distribute the report output. The folder location defaults to the same folder as the report procedure (FEX) being scheduled. Users can select a different folder to distribute the report output to by clicking the *Folder Location* button, which will display a dialog box of the Resources tree from which a folder location can be selected, as shown in the following image.
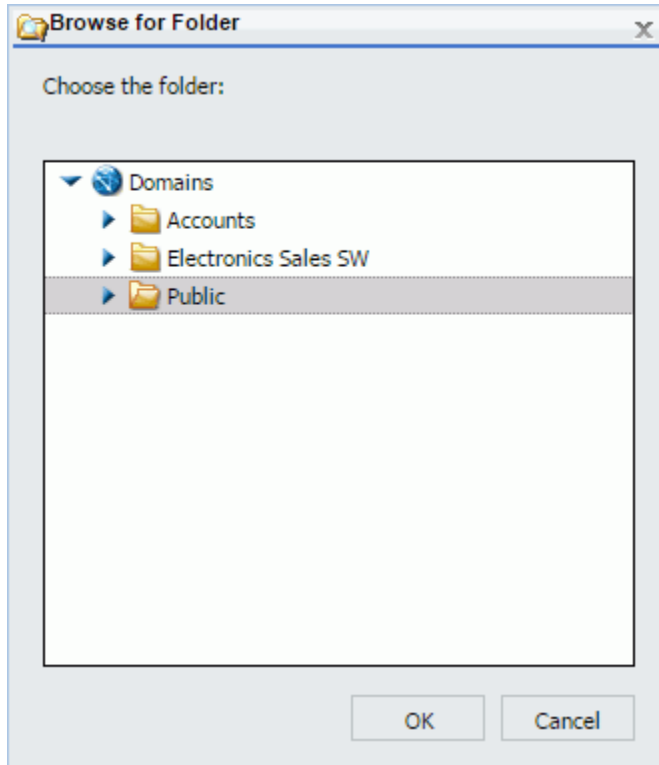

4. Optionally, select the *Do not add a timestamp to the filename* check box if you want the report output to be overwritten with each distribution.

5. Select the *Notification* tab to specify whether to send an email notification of the schedule job status. For more information, see *Notification Options in the Basic Scheduling Tool* on page 152. If you select *Always* or *On Error*, then you must specify the Reply Address, Subject, Brief Message To, and Full Message To.

6. Select the *Properties* tab to specify the Title, Priority, whether to delete the schedule if it will not run again, and whether the schedule is enabled to run. For more information, see *About Properties in the Basic Scheduling Tool* on page 154.

7. Select the *Recurrence* tab to specify how often to run the schedule. If you want the schedule to run on the current day, set the Start Date and Start Time to values later than the current time. For more information, see *About Recurrence in the Basic Scheduling Tool* on page 155.

8. Select *Save & Close* to save your changes.

Distributing to the File System Using the Repository Distribution Method in the Basic Scheduling Tool

The Repository File System Distribution function allows you send reports to a directory accessible by the distribution server. When you distribute to the Repository with the File System configured, you can choose a File System folder, as shown in the following image.
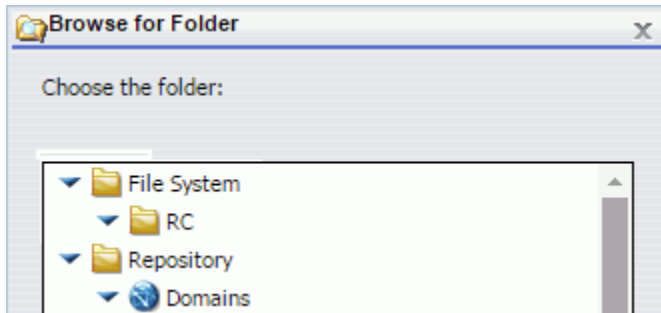
Note:

❏ This method does not require an FTP server.

❏ When the report is distributed, the Distribution Server adds Day, Date, and Time to the beginning of the Save Report As value specified in the Task tab.

Once authorized, a user can schedule content to be distributed to a configured folder.

Notification Options in the Basic Scheduling Tool

The Notification tab in the Basic Scheduling tool provides the options to send a notification of the schedule status to specific email recipients.

Note:

❏ Notification will not work unless a mail server is configured. If a mail server is not configured, notification will fail and an error message will be recorded in the schedule job log.

❏ You can use parameters (amper variables) when specifying values for the Notification fields of a schedule. These parameters can be system variables, such as &YYMD, or any amper variable for which a value is returned by the Reporting Server when the scheduled procedure is executed. To use the dot file extension separator after a variable, terminate the variable with the '|' character (for example, &YYMD|.htm). Similarly, to use the ampersand character itself, follow the ampersand with the '|' character (for example, Smith&|Jones). If a value for a parameter specified in a schedule is not returned by the Reporting Server when the procedure executes, the schedule will fail with a "No report to distribute" error.

❏ In the Allowed Email Addresses and Domains dialog box in the Report Broker Console, if the *Restrict user input with this list* check box has been selected, user input of email addresses is restricted to a list of allowed email domains and addresses. For more information, see *Validating Allowed Email Domains and Addresses* on page 43.

The notification options are:

❏ **Never.** Report Broker will not send a notification of the schedule status under any circumstances. This is the default value.

❏ **Always.** The specified users are always notified when the schedule runs.

❏ **On Error.** The specified users are notified when errors are encountered while running the schedule.

Setting On Error and Always Notification in the Basic Scheduling Tool

When you select the On Error or Always notification option, additional options become available.

The On Error and Always notification options are:

❏ **Reply Address.** Type the email address of the sender. If report recipients reply to the report sender, then their messages are sent to this address. If your email system is unable to deliver a report, then the undeliverable report message is also returned to this address.

Note:

❏ If you are authenticating to the mail server with your user ID and password, then the reply address will be the email address associated with that user ID.

❏ If the mail server is configured with authentication and the Reply Address is configured in the Report Broker Configuration tool, then the Reply Address field in the scheduling tools will be disabled. If a Reply Address is not configured, then the field is enabled to allow a Reply Address to be sent to the email server, however the actual Reply Address of the delivered email will be that of the authenticating account.

❏ **Subject.** Type the text you want to display in the subject line of the email notification. There is a limit of 255 alphanumeric characters. By default, this field inherits the title of the schedule.

❏ **Brief Message To.** Type the email address where you want a full notification sent. There is no syntax error checking for this field.

Tip: Use the Brief Message To option when you are sending notification to devices that have limited memory, such as pagers and cell phones. If you want to notify multiple recipients, you can use group mail lists defined on your mail server provided that you append an at sign (@) followed by a valid domain.

❏ **Full Message To.** Type the email address to which you want a full notification sent. There is no syntax error checking for this field.

About Properties in the Basic Scheduling Tool

When you access the Basic Scheduling tool, the Title and Path Properties options are predefined for the selected report procedure (FEX).

The options within the Properties tab are:

❏ **Title.** This allows you to provide a brief description of the purpose of the schedule. It is pre-populated with the Title of the report procedure being scheduled when creating schedules with the Basic Scheduling tool. You can edit the Title while creating the schedule or after saving the schedule from within the Schedule tools. You can also edit the title from the Properties option from the Resources tree after saving the schedule.

The Title of the schedule is the default name assigned when saving the schedule. If the name value already exists in the selected Resources tree folder, a message is displayed informing you that the name already exists. You can change the Title field in the Save dialog box, which when saved, will also update the Title field within the schedule information.

❏ **Path.** This is the Repository path of the report procedure (FEX) you selected to schedule.

❏ **Summary.** This allows you to insert a detailed description for the schedule. This is an optional field.

❏ **Job Priority Level.** This specifies the priority the scheduled job will be given when processed by the Distribution Server. The default Job Priority Level is set to Normal - 3. However, you can use the drop-down list to set the priority level.

❏ **No Report to Distribute.** This option is set to the default value configured by the Manager. To trigger error notification if no report is generated, set this value to Error. If you do not want to trigger notification when no report is generated, set this value to Warning.

❏ **Delete this schedule if it is not scheduled to run again.** This check box allows you to specify that the schedule should be deleted after the scheduled job processing is completed if the schedule is not scheduled to run again. Selecting this option for schedules you will not utilize again is recommended as it will improve overall performance within the Resources tree listing folder contents.

❏ **Enabled (Scheduled job runs at specified time).** This check box is selected by default to specify that the schedule should be evaluated by the Distribution Server when polling for scheduled jobs to run. If you do not want to distribute the schedule based on its NEXTRUNTIME value, clear this check box.

About Recurrence in the Basic Scheduling Tool

When you access the Basic Scheduling tool, the Recurrence tab options allow you to define how often to run the schedule.

Options that users must determine include frequency of distribution, start and end times, and Advanced interval settings. Select one of the following frequency of distribution settings:

❏ Run Once

❏ Minutes

❏ Hourly

❏ Daily

❏ Weekly

❏ Monthly

❏ Yearly

❏ Custom

You can assign start and end times by using the drop-down lists. When you click on the down arrow, a calendar will display that enables an authorized user to set the date for schedule distribution. Use the up and down arrows to set a specific time for schedule distribution. Alternatively, you can enter the time manually.

If the user has the privilege to set Advanced settings, check the *Repeat schedule every* check box to enable Advanced interval setting options. Set how often you want to repeat schedule distribution, when you want to stop distributing the schedule (Until Time), and the duration to distribute the schedule (Last For). Enter this information manually or use the up and down arrows to set parameters.

The Run Once Interval

The Run Once option sets the job to execute immediately. This is the default value. You can modify the date or time if you do not want the schedule to run immediately. You can specify the date and time you want the schedule to run using the Start Schedule options.

To select a date, choose a date from the drop-down date calendar. To select a time, select either the hour or minutes, and use the up and down arrows to increase or decrease the value. Alternatively, you can enter the time manually.

The Minutes Interval

The Minute(s) option sets the schedule to run every *n* minutes.

In the Every minute(s) field, type or select the minutes interval (1 to 59), check the days of the week on which you want to run the schedule, and select the *Start* and *End* date and time to define the time period in which the schedule will run.

Tip: Selecting this option may affect system performance if you choose to run the schedule every 5 minutes or less. We recommend specifying a minimum of 30 minutes. The minute interval option is primarily for alert schedules.

The Hourly Interval

The Hourly option sets the schedule to run every *n* hours.

In the Every hour(s) field, type or select the hours interval (1 to 24), check the days of the week on which you want to run the schedule, and select the *Start* and *End* date and time to define the time period in which the schedule will run.

The Daily Interval

The Daily option in the Run Interval drop-down list sets the schedule to run every *n* days. In the Every day(s) field, type or select the days interval to run the schedule and select *Start* and *End* date and time to define the period in which the schedule will run.

You can also set a secondary run interval. For information about this setting, see *Advanced Settings* on page 158.

The Weekly Interval

The Weekly option in the Run Interval drop-down list sets the schedule to run every *n* weeks.

In the Every week(s) field, type or select the weekly interval to run the schedule, check the days of the week on which you want to run the schedule, and select the *Start* and *End* date and time to define the time period in which the schedule will run.

Note: When selecting the *Weekly* interval, set the *Start* to the date of the first day (current or future) of the week you want the schedule to run. If you select the current date, then you must make sure that the Start time is later than the current time when you save the schedule. If the Start time is less than or equal to the current time, the calculation for the next run time results in the schedule not running on the current date.

You can also set a secondary run interval. For more information about this settings, see *Advanced Settings* on page 158.

The Monthly Interval

The Monthly option sets the schedule to run every *n* months. You can then refine the monthly interval with one of the following options. Note that these options are mutually exclusive.

❏ Every first, second, third, fourth, or last *n* day of the week (where n is Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday) every *n* months.

❏ Specific days every *n* months.

Additionally, select the *Start* and *End* date and time to define the time period in which the schedule will run.

You can also select the *Last Day of the Month* option at the end of the calendar to run the schedule on the last day of the month.

Note: When selecting the *Month(s)* interval, set the *Start* date to the date of the first day (current or future) of the month you want the schedule to run. If you select the current date, then you must make sure that the *Start* time is later than the current time when you save the schedule. If the *Start* time is less than or equal to the current time, the calculation for the next run time results in the schedule not running on the current date.

You can also set a secondary run interval. For information about this setting, see *Advanced Settings* on page 158.

The Yearly Interval

The Yearly option sets the schedule to run every *n* years during a specific time period.

You can also set a secondary run interval. For information about this setting, see *Advanced Settings* on page 158.

The Custom Interval

The Custom option allows you to select a set of dates that do not follow a specific pattern. For example, if you want to run a quarterly report on a different day of each quarter, then you can use the Custom run interval to set the schedule to run on dates, such as March 3 (Saturday), June 4 (Monday), September 7 (Friday), and December 2 (Sunday).

Define the time period in which the schedule will run by selecting the *Start* date and time and the *End* date and time. Select the specific days on which to run the schedule by clicking the day in the calendar. (Use the forward and back buttons at the top of the calendar to move through the months and years.) As you select a date, it appears in the Custom Date List. If it does not already exist, a folder for the year and month of the date you select is automatically created under the Custom Date List node.

To remove a date from the list, click the date in the calendar. The date is no longer highlighted in the calendar and will not appear in the Custom Date List. You can optionally use the left single arrow to remove a date from the list. The double arrow button removes all defined lists.

You can also set secondary run interval. For information about this setting, see *Advanced Settings* on page 158.

Advanced Settings

The Advanced settings option enables you to create a secondary run interval within the day the schedule runs. You can apply the secondary run interval every *n* minutes or hours for a specified number of hours and minutes or until a specified time. This option is available for schedules that run every day(s), week(s), month(s), or year(s).

Note: When a schedule is saved, the hours setting is converted to minutes. When a schedule is edited, this value appears as minutes.

The secondary run interval will not be validated when the schedule is created. Instead, validation is performed every time the next run time of the schedule is calculated when running within the secondary run interval. The secondary run interval cannot exceed the next run time for the primary run interval. For example, a daily schedule cannot have a secondary run interval greater than Every 1 day(s). If you schedule a secondary run interval to run after the next primary run interval of the schedule, the secondary run interval is stopped and an error message appears. This error message is also written to the log file.

The Advanced settings section allows you to specify repeat options, as well as time intervals.

The Apply secondary run interval options are:

❏ **Repeat schedule every.** Applies the secondary run interval every *n* minutes or hours (in this example, every 10 minutes) within the day the schedule runs.

❏ **Until Time.** The time up until which the secondary run interval will be applied. In this example, the schedule will rerun every 10 minutes until 4:10 PM when the Until Time option is selected.

❏ **Last For.** The duration, specified in hours and minutes, during which the secondary run interval will be applied. This option and the Until Time option are mutually exclusive.

Note: When a schedule is updated, the next run time is recalculated based only on the primary run interval. This means that if a schedule that includes a secondary run interval is updated before the secondary schedule is able to run, then the secondary run interval is ignored and the NEXTRUNTIME is calculated based on the primary interval.

For example, a schedule exists that is set to run daily at 2:00 PM with a secondary run interval of every 10 minutes from 2:00 PM to 3:00 PM. When the schedule runs at 2:00 PM, the NEXTRUNTIME resets to run at 2:10, which honors the secondary run interval. If this schedule is updated at 2:03 PM, the NEXTRUNTIME is recalculated to be 2:00 PM the next day, rather than 2:10 PM on the current day.
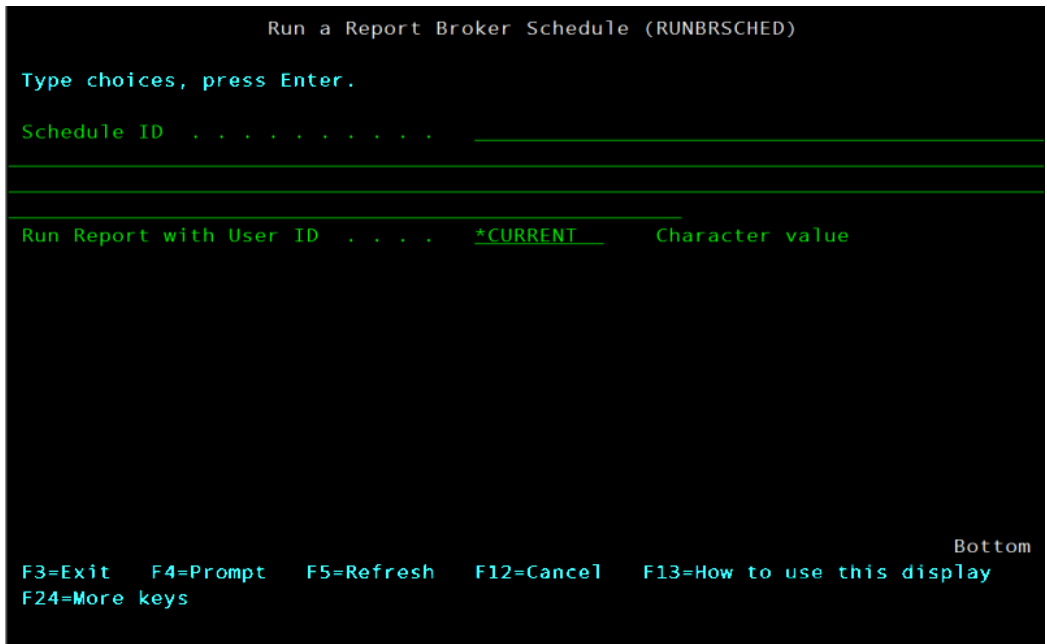
Chapter 5

Running a Schedule From Control Language (CL)

Once you have created a schedule in Report Broker, you can run it at any time from the Db2 Web Query Report Broker application. There are times when a business user is not logged into Db2 Web Query, but may want to run a schedule as part of a business workflow process. The Report Broker CL program allows you to run schedules from outside of Db2 Web Query.

If you are a Db2 Web Query named licensed user or developer, you can run the schedules that you own. If you are a Report Broker Administrator, you can run any schedule.

To run a Report Broker schedule outside of Db2 Web Query, type the following in a 5250 emulation session CL command line:

RUNBRSCHED

```
                 Run a Report Broker Schedule (RUNBRSCHED)

 Type choices, press Enter.

 Schedule ID  . . . . . . . . . .   _____



                                 _____
 Run Report with User ID  . . . .   *CURRENT      Character value












                                                                    Bottom
 F3=Exit    F4=Prompt    F5=Refresh    F12=Cancel    F13=How to use this display
 F24=More keys
```

Schedule ID

> **Note:** The Schedule ID is a unique 12-alphanumeric string assigned to a schedule when it is created. The Schedule full path is the logical location of the schedule within the Web Query repository. The Schedule ID and full path are found by right clicking the schedule in the BI portal tree, and selecting the Show Path option, as shown in the following image.

Show Path   ✕

IBM

Full Path: IBFS:/WFC/Repository/Rob/Rob1_1b11c15d_42dc_4b52_9a2c
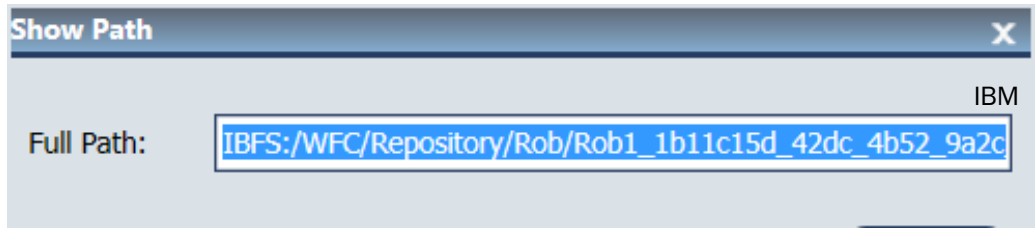
In this chapter:

Chapter **6**

Maintaining Schedules

Maintaining a schedule allows you to edit schedule properties or delete the schedule when it is no longer needed. If a schedule contains properties that you want to use in a new schedule, the duplicate or copy option creates a template with those properties for the new schedule. You can also check the status of a schedule and run a log report to obtain detailed information about the schedule.

In this chapter:

❑ About Maintaining a Schedule in the Basic Scheduling Tool

❑ Editing a Schedule in the Basic Scheduling Tool

❑ Copying a Schedule in the Basic Scheduling Tool

❑ Deleting a Schedule in the Basic Scheduling Tool

❑ Publishing Schedules

About Maintaining a Schedule in the Basic Scheduling Tool

Right-click a schedule in the tree to show the following options:

Edit

Allows you to open and edit an existing schedule.

Run

Runs the schedule.

View Log

Allows you to view a log report for one or more selected schedules.

Enable and Disable

You can enable or disable schedules in the Resources tree. This option is also found in the Properties tab of the Basic Scheduling tool.

Duplicate

Creates a new schedule with the same properties in the same folder. The new schedule is disabled automatically, because it is a duplicate of an existing schedule.

Cut

Allows you to move the schedule from the original folder to a target folder using the paste operation.

Copy

Allows you to create a new schedule by copying an existing schedule.

Create Shortcut

Allows you to create a shortcut to the schedule.

Delete

Deletes the existing schedule.

Change Title

Allows you to rename the schedule.

Publish and Unpublish

An owner of a schedule can make a schedule available to other members of the top-level folder in which the schedule resides. The schedule owner remains the execution ID.

Note: The default setting is Unpublish.

Hide and Show

Once an owner publishes a schedule, they can elect to Hide the schedule from groups not authorized to create content in the folder. To hide or show a schedule, right-click on a schedule and select the *Hide* or *Show* option.

Note: The default setting is Show.

Security

Allows you to set the owner of a schedule.

Properties

This option is only available to Web Query Administrators to view schedule properties. A Web Query Administrator is any user belonging to the WebQueryAdministrator group.

Editing a Schedule in the Basic Scheduling Tool

From the Resources tree, you can edit the schedules you are authorized to access.

Procedure: How to Edit a Schedule in the Basic Scheduling Tool

1. Right-click the schedule you want to edit and select *Edit*.

2. Make the required changes to the schedule. For details on the Basic Scheduling tool options, see *Creating a Schedule in the Basic Scheduling Tool* on page 107.

3. Click *Save & Close*.

Reference: **Considerations When Editing a Schedule in the Basic Scheduling Tool**

❏ When you open a schedule that uses unavailable options, such as a distribution method, information is displayed that describes the change or changes that you must make for the schedule to use available options. Changes to the schedule cannot be saved until the schedule uses available options.

❏ If you selected *Run once* for the run interval, the schedule runs immediately unless you change the Start Time to a time later than the current time. All other run intervals run at the next primary run-time interval of the schedule.

❏ You must save your changes in order to be able to run from within the scheduling tool.

❏ If you want your selected schedule or schedules to run immediately, click *Run*.

❏ When an existing schedule is opened in the Basic Scheduling tool, if the *Override the Format Specified in the Procedure* check box was selected, the list of formats displays. If you clear the *Override the Format Specified in the Procedure* check box, the list of formats does not display.

❏ When an existing schedule is opened in the Basic Scheduling tool, if the *Override the Format Specified in the Procedure* check box was not selected, the list of formats does not display. If you select the *Override the Format Specified in the Procedure* check box, the list of formats displays.

Copying a Schedule in the Basic Scheduling Tool

For your convenience, you can copy an existing schedule for use as a template to create a new schedule. The copied schedule is created disabled because it is a duplicate schedule.

Procedure: **How to Copy a Schedule in the Basic Scheduling Tool**

Note: The cut, copy, and paste options display when you are authorized to use these options.

1.   From the Resources tree, right-click the schedule you want to copy and click *Copy*.

2.   Right-click the folder you wish to copy the schedule into and click *Paste*.

Deleting a Schedule in the Basic Scheduling Tool

From the Resources tree, you can delete schedules using the following procedure.

Procedure: **How to Delete a Schedule in the Basic Scheduling Tool**

Note that the Delete option displays when you are authorized to delete the selected schedule.

1. Right-click the schedule you want to delete and click *Delete*.

   Note: To select multiple schedules, use the Shift key and Ctrl key as in a standard Windows interface. A message appears asking to confirm if you want to delete the selected schedules.

2. Click *OK* to delete the schedule or schedules.

Publishing Schedules

A published schedule is visible to all users with access to the folder in which it resides. The shortcut menu options that appear on the schedule depend upon the privileges of the user that is signed in. For example, a user with the Run privilege is able to run the published schedule. When a published schedule runs, it runs as the creator of the schedule and not as the signed in user that initiated the run.

Note: A published schedule runs as the creator of the schedule. A user that is allowed to edit a published schedule may make a change to the schedule that the creator of the schedule is not permitted to make. In this case, the schedule will fail at run time. For example, a user may change the Distribution List used in the schedule to a private Distribution List that is not available to the creator of the schedule. When the changed schedule runs, it will fail due to inability of the creator to retrieve the Distribution List from the Db2 Web Query Repository.

Procedure: **How to Publish a Schedule**

From the Resources tree, you can publish a schedule by performing the following steps.

1. In the Resources tree, select a schedule that you want to publish.

2. Right-click the selected schedule and select *Publish*.

   The schedule is published.

Report Broker Explorer

The Report Broker Explorer interface provides users with the ability to obtain a list of Report Broker items, by type, displayed with detail column information specific to the item type selected.

Note: Throughout this topic, the term Explorer refers to the Report Broker Explorer.

In this chapter:

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Using the Report Broker Explorer

The Explorer interface provides users the ability to obtain a list of Report Broker items, by type, displayed with detail column information specific to the item type selected. The list can be filtered by Schedules and Distribution Lists in the selected folder. It can also include items in subfolders of the selected folder.

Access to the Explorer is controlled by the Client security authorization model. Users can be authorized to access the Explorer at the Repository folder or at specified lower-level folders.

Authorized users can access the Explorer option from the context menu of a folder. The Explorer option is also available from the *Tools* menu, located on the BI Portal Menu Bar, provided that the user is authorized to access the Explorer from the *Db2 Web Query* folder.

When Report Broker Explorer is selected from the Tools menu, the Explorer interface opens in a new tab. The *Repository* node is the default folder location and is expanded to list the folders that the user is authorized to access.

When the Explorer is selected from the context menu of a folder, the selected folder location is passed to Explorer so that the folder is the selected folder in the Explorer tree and schedules the user is permitted to access are listed in the right panel.

Note: Once the Report Broker Explorer is launched from the BI Portal, logging out of or closing the BI Portal does not close the Report Broker Explorer. You must manually close the Report Broker Explorer when you sign out of or close the BI Portal. If you sign back in to the BI Portal with a different user name while the Report Broker Explorer is open from a previous session, the Report Broker content from the previous session will be visible and available in the Report Broker Explorer.

Explorer Schedule Toolbar

The following image shows the Explorer toolbar. This allows the user to quickly access the options available for a selected Report Broker item. You can specify what Report Broker item type to list and whether to list the items in the current folder or include subfolders. You can also access online help.
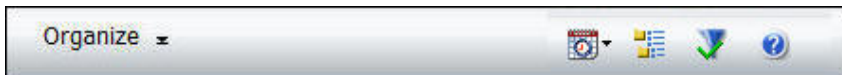
The Organize option displays the options the user is authorized to use for the Report Broker item selected in the right panel.

Note: The Organize menu is activated only when you have an item selected in the right panel.

The Change your filter option allows the user to specify whether to list Report Broker schedules or Distribution Lists. The default filter is Schedule. The following image shows the right side of the Explorer toolbar with the *Change your filter* option expanded.
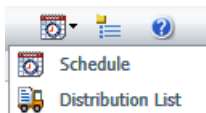
The *List files in selected folder and subfolders* option allows the user to list the Report Broker items, based on the selected filter, in the current folder or in the current folder and its subfolders. The default is to list files in the current folder.

Note: The *List files in selected folder and subfolders* icon, which is displayed on the toolbar, is a toggle button to allow the user to change the depth of the folder search (that is, between the selected folder or the selected folder and its subfolders). It does not reflect the folder depth of the current list. Review the *Path* column in the right panel to confirm the folder location of the Report Broker items.

The following image shows the *List files in selected folder and subfolders* option that when selected, will list the Report Broker items for the selected Filter in the selected folder and its subfolders.

The following image shows the *List files in selected folder* option that when selected, will list the Report Broker items for the selected Filter in the selected folder.

The following image shows the *Show only folders with content* option that when selected, shows only folders with content.

The following image shows the *Show all folders* option that restores the folder view to show all folders. This option displays only when *Show only folders with content* has been selected.

The following image shows the *Help* option and displays help information for the Report Broker Explorer interface.

Explorer Tree

The Explorer tree provides the same folder navigation as the Resources tree that is accessible from the BI Portal. Double-click a folder to expand or collapse a folder.

Explorer Item List Panel

The Explorer right panel displays the Report Broker items as specified by the Change your filter and List files in selected folder and subfolders toolbar options. The columns displayed are specific to each Report Broker Item type. The options available for a selected Report Broker item are accessible from the Organize toolbar option and the context menu of the item.

Explorer Schedule List Column Information

In the right panel of the Explorer, users can view the following information about schedules they are authorized to list.

❑ **Title.** Displays the descriptive title of the schedule.

❑ **Schedule ID.** Displays the unique identification code for each schedule.

❑ **Path.** Displays the Repository path where the schedule is stored.

❑ **Owner.** Displays the user that owns the schedule.

❑ **Last Time Executed.** Displays the last day and time the schedule ran.

❑ **Last Job Status.** Displays whether the last schedule job ran with or without an error.

❑ **Next Run Time.** Displays the next day and time the schedule is set to run.

❑ **Method.** Displays the method the schedule will use to distribute the report output. Up to five distribution methods will display. Each method is separated by a comma. If there are more than five distribution methods, an ellipse displays at the end of the list.

❑ **Destination Address.** Displays the email address or location to which the report will be sent. Up to five destination addresses will display. Each destination address is separated by a comma. If there are more than five destination addresses, an ellipse displays at the end of the list.

❑ **Priority.** Displays the level of priority the schedule will have when it is processed by the Distribution Server. Priority value 1 is the highest priority and 5 is the lowest priority.

Explorer Distribution List Column Information

In the right panel of the Explorer, users can view the following information about Distribution Lists they are authorized to list.

❑ **Title.** Displays the descriptive title of the Distribution List.

❑ **Path.** Displays the Repository path where the Distribution List is stored.

❑ **Method.** Displays the distribution method (Email, FTP, Print) for which the content within the Distribution List is specified.

❑ **Owner.** Displays the user that owns the Distribution List.

Explorer Item Options

The options available from the Organize menu or the context menu for Report Broker items (Schedule and Distribution List) allow authorized users to select the following options.

❏ Open a Schedule. For more information, see *How to Open a Schedule* on page 173.

❏ Run a Schedule. For more information, see *How to Run a Schedule* on page 173.

❏ Enable or Disable a Schedule. For more information, see *How to Enable or Disable a Schedule* on page 174.

❏ Enable or Disable Multiple Schedules. For More Information, see *How to Enable or Disable Multiple Schedules* on page 174.

❏ Delete a Schedule. For more information, see *How to Delete a Schedule* on page 174.

❏ Open a Distribution List. For more information, see *How to Open a Distribution List* on page 174.

❏ Delete a Distribution List. For more information, see *How to Delete a Distribution List* on page 175.

Note: In Explorer, you can perform the following operations on multiple files simultaneously: Edit, Run, View Log, Cut, Copy, Delete, and Share.

Procedure: **How to Open a Schedule**

1. Select the folder where the items are that you want to access and select the *List files in selected folder* option on the toolbar.

2. In the Change your filter drop-down list, select *Schedule*. Schedule is the default filter option.

3. Select the Schedule displaying in the Explorer to open.

4. Right-click the selected schedule and click *Edit* on the drop-down list.

Procedure: **How to Run a Schedule**

1. Select the folder where the items are that you want to access and select the *List files in selected folder* option on the toolbar.

2. In the Change your filter drop-down list, select *Schedule*. Schedule is the default filter option.

3. Select the schedule displaying in the Explorer to run.

4. Right-click the schedule and click *Run*.

Procedure: **How to Enable or Disable a Schedule**

1. Select the folder where the items are that you want to access and select the *List files in selected folder* option on the toolbar.

2. In the drop-down list, select *Schedule*. Schedule is the default filter option.

3. Right-click an enabled schedule.

   The shortcut menu opens.

4. Click *Disable*. If the schedule is already disabled, the option will appear as Enable.

Procedure: **How to Enable or Disable Multiple Schedules**

1. Select the folder where the items are that you want to access and select the *List files in selected folder* option on the toolbar.

2. In the drop-down list, select *Schedule*. Schedule is the default filter option.

3. Hold the Ctrl key and select the schedules that you want to enable or disable.

4. Right-click one of the selected schedules.

   The shortcut menu opens.

5. Click *Enable* to enable all selected schedules, or click *Disable* to disable all selected schedules.

Procedure: **How to Delete a Schedule**

1. Select the folder where the items you want to access are located, and select the *List files in selected folder* option on the toolbar.

2. In the Change your filter drop-down list, select *Schedule*. Schedule is the default filter option.

3. Select the schedule displaying in the Explorer to delete.

4. Right-click the schedule and click *Delete*.

Procedure: **How to Open a Distribution List**

1. Select the folder where the items you want to access are located, and select the *List files in selected folder* option on the toolbar.

2. In the Change your filter drop-down list, select *Distribution List*.

3. Select the Distribution List displaying in the Explorer to open.

4. Right-click the Distribution List and click *Edit*.

Procedure: **How to Delete a Distribution List**

1. Select the folder where the items you want to access are located, and select the *List files in selected folder* option on the toolbar.

2. In the Change your filter drop-down list, select *Distribution List*.

3. Select the Distribution List displaying in the Explorer to delete.

4. Right-click the Distribution List and click *Delete*.

Searching Subfolders

Users authorized to access the Explorer can use the *Search* function in the right corner of the Explorer to locate folders and Report Broker items for the selected Report Broker item filter, as shown in the following image.
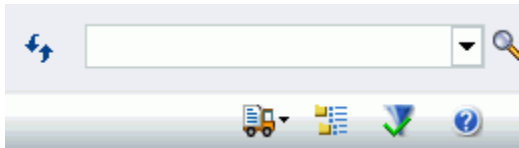
While searching for items in the Repository, the status bar at the bottom of the Report Broker Explorer window displays an In Progress or Done status. In Progress shows when search items are being retrieved, and Done shows when the search results are available.

Note:

❏ When searching subfolders, any preset filters (for example, Schedules and Distribution Lists) will be respected unless you change them prior to running a search. For more information on the use of filters, see *Explorer Schedule Toolbar* on page 170.

❏ If you clear the contents of the search text box after performing a search in the Report Broker Explorer, the list of items in the right pane of the Explorer is not refreshed. Refresh the browser to restore the Explorer to its original state.

Tracking Schedules

Information about a schedule, such as date, time, execution status, and recipients of a distributed job, can be accessed by running a log report and checking the job status in the Report Broker Status. You can also analyze the resource utilization of schedules.

In this chapter:

❏   Log Reports

Log Reports

Log reports are stylized HTML format and appear in a separate browser window. You can search, print, or save the log report. The log report displays information according to your specifications in a separate browser window. One log record is produced for each scheduled job run in the specified time frame.

Tracking Schedules in the Console

Information about a schedule, such as date, time, execution status, and recipients of a distributed job, can be accessed by running a log report and checking the job status.

Using Schedule Logs

Log reports enable you to view information about a distributed job, such as whether or not the job executed successfully, when the scheduled output was distributed, in what format the distributed output was sent, and the method of distribution. Log reports are stylized HTML format and display in a separate browser window. You can search, print, or save the log report. Log reports can be accessed within the scheduling tool when editing a schedule or by right-clicking on a schedule from the Resources tree.

The log file accumulates information. You should periodically purge log records to manage the number of log reports stored in the Repository, as well as the performance of log report information that is displayed.

The list in the right panel provides basic information about the job execution, including the job ID, the time the job started running, the amount of time it took to complete the execution of the job, and the general status of the job. To view a full log report for a job, double-click the job in the job list.

Checking the Job Status

Another resource for tracking schedules is the schedule job status. The schedule status provides a list of scheduled jobs that are in the Distribution Server queue. Status information includes the schedule ID, the time it started running, and the status of the job.

To access the schedule job status information, see the Job Status tab in the Report Broker Console. For more information, see *Job Status* on page 20.

Procedure: How to View a Log Report From the Resources Tree

1. Right-click the schedule from the Resources tree and select *View Log*.

   The Schedule Log Options dialog box appears .

2. Specify which log report you would like to view by selecting *Last Executed*, *All*, or *Date*.

   If you select *Date*, you will have the option to specify your search using start date and time and end date and time parameters.

3. Click *OK*.

   The log reports that match your search criteria appear .

   The log report first lists the job description for the record, which is the unique description identifier that you specified when you created the schedule. Underneath the Job Description, the left column of the log report includes the following information:

   ❏ **User.** Report Broker user ID, indicating the owner of the schedule.

   ❏ **Procedure.** Unique key generated by Report Broker that identifies a specific execution of a scheduled job.

   ❏ **Schedule ID.** Unique key generated by Report Broker that was assigned to the job when it was scheduled.

   ❏ **Start Time.** Date and time the job started running.

   ❏ **End Time.** Date and time the job finished running.

   In the second column, the log report specifies messages consisting of the following:

   ❏ General information, such as the method of distribution for a particular job (for example, email distribution).

   ❏ Processing information, indicating that the request started, distribution was successful, and the request was completed. Processing information also includes reasons why a request failed, such as the unavailability of a data source.

Procedure: **How to View a Log Report in the Scheduling Tool**

1. From the Resources tree, right-click the schedule for which you want to see the logs, and click *Edit*.

   The Basic Scheduling tool opens.

2. From the Basic Scheduling tool, click the *Log Reports* tab.

   The Log Reports panel appears.

3. Observe the Number of Jobs that have run.

4. Click the Job Number to view the log report information for that job in the panel below the job listing.

Reference: **Considerations When Viewing a Log Report**

When viewing a log report, be aware of the following considerations.

Task and Report Names

The Report Broker Log references Db2 Web Query folders and procedures (FEXs) by their path and file names and not their descriptions.

Email Addresses

Report Broker cannot validate email addresses since email validation is performed by the mail server. The log report will include any email addresses validated by the mail server and returned to Report Broker.

Burst Reports

❏ If a valid burst value is omitted in a Distribution List, Report Broker treats the blank value as if it is a valid burst value and no entries indicating a blank burst value appear in the log file. This will significantly reduce the size of the log file, particularly when the database contains many values for the primary field and only a small subset of those values are burst.

❏ If a burst value is specified in a Distribution List and it is not found in the database, the following message appears in the log file:

   ```
   Burst Value: value is not in the database.
   ```

❏ When a report procedure (FEX) is successfully burst, the log file will include the following message for each burst value:

   ```
   FILE filename SUCCESSFULLY DISTRIBUTED TO destination FOR burst value.
   ```

Unavailable Options

❏ When schedules with unavailable task types or distribution methods are not permitted to run, an error notification is triggered. The error is shown in red text within the job process log report. The log report, as well as the full and brief notifications, contains information on the unavailable options that the owner of the schedule must change.

❏ When schedules with unavailable task types or distribution methods are permitted to run, normal job execution occurs and a message appears in the log report indicating that existing schedules using the unavailable task types or distribution methods are able to run.

Using the Report Broker Performance Log to Track Schedule Performance

You can use the performance log to analyze the resource utilization of schedules with Report Broker. This log records the processing duration of individual schedules and schedule components.

To access the performance log, navigate to the Report Broker Console. On the ribbon, in the Manage Server group, click the *Server Status* tab. Then click the *Server Log* drop-down arrow to view the Server Log menu.

The performance log feature is turned off by default. To activate performance log recordings, click *Turn On Server Performance Trace*.

The performance.log and Turn On Server Performance Trace options are shown in the following image.
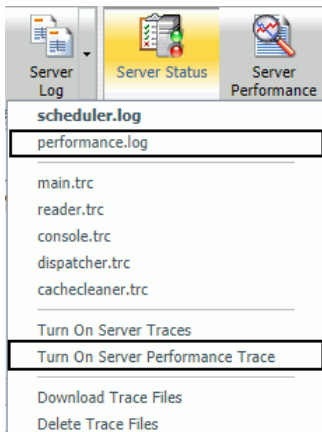
The performance.log records the following information in each record:

❏ Job ID

❏ Schedule ID

❏ Schedule Name

❏ User ID

❏ Time

❏ Type - (Begin, End)

❏ Event - (QUEUED, JOB, WF_REPORTING_SERVER, DESTINATION_MAPPING, COMPRESSION, EMAIL, FTP, REPOSITORY, PRINT)

❏ Source - (Schedule ID, Task ID, Distribution ID)

❏ Server Name - (EDASERVE, IBIMAIL, FTP Server Name, Print Name…)

❏ Server User - (Execution ID)

❏ Object - Scheduled fex

Chapter 9

Using Traces

Tracing enables authorized users of Report Broker to obtain information about the internal operations of Report Broker components. Tracing a Report Broker request produces a detailed sequence of statements (stored in trace files) that describe the events as they are executed.

In this chapter:

❏ Enabling Tracing

❏ Servlet Tracing

❏ Distribution Server Startup Trace Files

❏ Schedule and Report Tracing

❏ Distribution Server Initialization Tracing

❏ Reporting Server Tracing

Enabling Tracing

You can enable and disable the Distribution Server Schedule trace by using the Report Broker Servlet Trace using the Administration Console.

Servlet Tracing

Servlet tracing enables tracing for all Report Broker servlets deployed in the web application, including the Report Broker API. Servlet tracing provides information about queries to, and maintenance of, the Repository. This includes events that occur when a schedule is created.

Procedure: **How to Access Servlet Tracing**

1. Navigate to the Administration Console.

2. Click the *Diagnostics* tab.

3. On the Diagnostics tab, under the Diagnostics folder, click *Log Files*.

4. Select the type of information from the log file you would like to access, as shown in the following image.
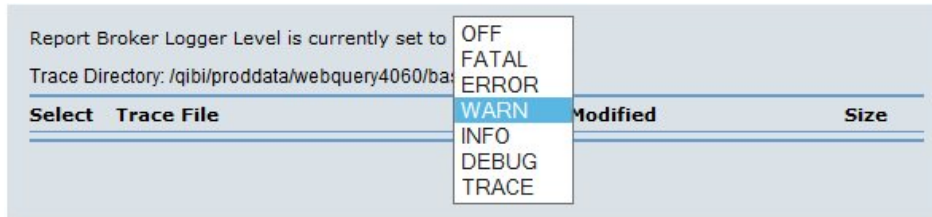
5. Click the log file for which you would like to view traces.

Distribution Server Startup Trace Files

When you enable schedule tracing, the following core Distribution Server trace files are created in the /qibm/userdata/qwebqry/base80/ReportCaster/trc directory. When a new instance of the Distribution Server starts, these trace files replace the previous trace files:

❑ **main.trc.** Traces the commands processed by the main Distribution Server thread. These commands include initialization, shutdown, and running a job immediately.

❑ **reader.trc.** Traces when the Distribution Server checks for schedules. The default polling interval is 1 minute.

❑ **disp.trc.** Traces the thread between the Distribution Server and the Reporting Server. The number of threads is defined by the Maximum Thread setting in the Report Broker Servlet Trace in the Administration Console. The default number of threads is 3.

❑ **console.trc.** Traces all communications between the Report Broker API and the Report Broker servlets to the Distribution Server.

Note: If the Distribution Server is started as a service, a service.log file is created containing initialization information about the service.

Schedule and Report Tracing

The Distribution Server schedule tracing is enabled by setting Schedule Trace to SCHEDULE (or to SCHEDULE & REPORT if you also want to enable report tracing) in the General tab of the Console Configuration tab.

Report Broker also provides the ability to enable SCHEDULE or SCHEDULE & REPORT tracing on a per schedule basis when dynamically running the schedule on demand. When you run a schedule, the Schedule Trace setting specified in the Report Broker Configuration tool appears along with options that enable you to change the setting for this particular schedule.

Trace Files Related to Specific Jobs

When the Schedule Trace parameter is set to SCHEDULE, Report Broker produces trace files containing Report Broker Distribution Server information related to the specific job or jobs being run. Each job creates the following trace files in the /qibm/userdata/qwebqry/base80/ReportCaster/trc directory, each with a unique Job Process ID (*Jobid*):

❏ **Jobid.trc** (for example, J0ud2a6kqk01.trc). Contains all information related to the execution of a job. This includes information about the scheduled procedure, distribution information, and the log creation and its contents. When SCHEDULE & REPORT traces is selected, this file also contains the report sent back from the Reporting Server.

❏ **procedure.log** Contains distribution information, report parameters (if any), procedure code (if Db2 Web Query), or an -INCLUDE FOCEXEC (if Server Procedure).

❏ **Jobid.err.** If there is a processing error, Report Broker generates a *jobid*.err file containing information about why the report was not distributed successfully.

❏ **DistRun.trace** Contains IBFS trace information.

❏ **DistRun.html** Contains an .html version of the report.

❏ **session.log** Contains information about the IBFS session.

Note: You can identify the Job Process ID of the target job by running a log report. For more information about log reports, see *Tracking Schedules* on page 177 or *Job Log* on page 20. A Job Process ID begins with a J and is followed by a series of random digits and lowercase letters.

Trace Error Files

When Report Broker encounters an unexpected error or abend, the following trace error files are created:

❏ **console.err** when the console terminates.

❏ **disp.err** when the dispatcher terminates.

❏ **main.err** when the main thread terminates.

❏ **reader.err** when the reader terminates.

❏ **Jobid.err** when there is a job processing error.

Schedule Trace File Clean Up

When the Schedule Trace setting is turned OFF, the files and folders in the Distribution Server /temp directory, and the schedule trace files J*.* in the /trc directory, are deleted when you start the Distribution Server. Therefore, if you want to keep any of these files, you must either back them up or make sure that schedule tracing is enabled (meaning that Schedule Trace is set to either SCHEDULE or SCHEDULE & REPORT in the Report Broker Servlet Trace in the Administration Console).

Downloading Report Broker Job Trace Files

After you run a schedule, or use the Purge Job Logs utility, you can select the corresponding job log stored in the Report Broker Console to download the trace files that were created by the job.

Procedure: How to Download Report Broker Job Trace Files

1. Run a schedule, or use the Purge Job Logs utility.

   Note: To receive trace files for a Report Broker job, traces must be enabled for the job.

2. Navigate to the Report Broker Console. On the ribbon, in the Show group, click the *Job Log* button.

3. In the Job Logs panel, choose the folder that contains the job log you wish to select.

   The job logs appear in the right panel.

4. Click a job log.

5. On the ribbon, in the Manage Job Logs group, click the down arrow on the *View Trace* button.

   The Download Trace Files menu option appears.

6. Click the *Download Trace Files* option.

   The Windows Save dialog box displays, from which you can save the trace files to your machine. The Job Id of the log becomes the name of the zip file to be opened or saved.

Distribution Server Initialization Tracing

The scheduler.log trace file is always created in the /qibm/userdata/qwebqry/base80/ReportCaster/log directory. This file traces Distribution Server initialization and indicates the options enabled in the Report Broker Servlet Trace in the Administration Console. It also shows information that is written to the log file.

The following files are generated when the Distribution Server is installed and started as a Windows service:

❏ **service.log.** Created at service installation time.

❏ **commons-daemon.log.** Tracks the starting and stopping of the service.

❏ **wf80-stdout.log.** Indicates that the various Distribution Server services have started.

❏ **wf80-stderr.log.** Contains information about potential problems with the service.

Note: When multiple scheduler.log files are created on the same day, Report Broker creates a unique file for each instance, using a date and time stamp. The following format is used: scheduler_DD-MM-YY_HH-MM-SS.

Reporting Server Tracing

Reporting Server tracing provides information about job execution and distribution. To enable server tracing, perform the following steps:

1. Access the Reporting Server Console.
2. Select *Workspace* from the menu bar, then select *Diagnostics*, *Traces*.
3. Click *Enable Traces*.

Chapter 10

Report Broker Formats for Scheduled Output

When you create a schedule, Report Broker outputs the report in the format coded in the procedure, or the default format, if no format is specified in the procedure. You can optionally override the format coded in the procedure and specify a particular format in the schedule. This section describes each format available to Report Broker, and includes suggestions for using the format, as well as considerations that you should be aware of when distributing that format. Some formats cannot be produced by overriding the format in the procedure. The scheduled report must be coded to produce these formats. Formats that cannot be produced through an override are not available for selection in the scheduling tools. For more information, refer to the considerations of each format.

In this chapter:

- ❏ AHTML
- ❏ APDF
- ❏ DHTML
- ❏ DOC
- ❏ EXL07
- ❏ EXL2K
- ❏ EXL2K FORMULA
- ❏ EXL97
- ❏ HTML

- ❏ HTML5
- ❏ JPEG
- ❏ PDF
- ❏ PNG
- ❏ PPT
- ❏ PPTX
- ❏ PS
- ❏ SVG
- ❏ WP

AHTML

Format: AHTML (.htm, .html)

Description: Provides customizable options for creating HTML formatted reports that enable users to experience features normally found in Excel workbooks.

Suggested Uses: Email for display in a web browser.

Considerations:

❏ Bursting is supported, except for compound reports.

❏ Can only be distributed as an email attachment. Inline email messages are not supported.

APDF

Format: APDF (.pdf)

Description: Also known as active report for PDF, it allows a report saved in FLEX format to be embedded in a PDF.

Suggested Uses: For the dynamic display of reports.

DHTML

Format: DHTML (.htm, .mht)

Description: Supports hyperlinks and other World Wide Web features. Retains StyleSheet formatting.

Along with the features of the HTML format, DHTML supports the web archive format (.mht). An .mht file can contain multiple reports and graphs and is utilized for Coordinated Compound Reports.

Suggested Uses: Email for display in a web browser.

Considerations:

❏ The default file type for the DHTML format is .mht. If the output returned from your procedure is HTML, you must manually change the file type to .htm in order for the output file to open correctly.

❏ Bursting is supported.

❏ DHTML can be distributed inline, provided the Reporting Server is not returning a web archive file (.mht). It cannot be used to distribute inline if the returned file is a web archive file.

❏ DHTML can be distributed as an email attachment and be sent as an inline email message when the output is .htm, but not when the output is .mht.

❏ DHTML will return two possible formats:

  ❏ The scheduled procedure (FOCEXEC) outputs an HTML file when the request does not contain the SET HTMLARCHIVE=ON command. When distributing by email or FTP, the file type should be .htm.

❏ The scheduled procedure (FOCEXEC) outputs a web archive file (.mht) when the SET HTMLARCHIVE=ON command is specified. When distributing by email or FTP, the file type should be .mht.

DOC

Format: DOC (.txt)

Description: Scheduled output opens as a plain-text word processing document. Text can be opened by any word processing application. Retains ASCII form feed characters to correctly display page output.

Suggested Uses: Word Processing applications, printing unformatted reports, email.

Considerations:

❏ Does not retain most formatting. Does not support hyperlinks or alerts.

❏ Can be distributed as an email attachment or as an inline email message.

❏ Bursting is supported.

EXL07

Format: EXL07 (.xlsx)

Description: Scheduled output opens within Excel 2007 or 2010.

Suggested Uses: Email.

Considerations:

❏ When scheduling a report to be distributed in this format, ensure that either the FEX or the Report Broker configuration setting, *Excel server URL*, specifies the application server that will zip the Excel 2007 file components for distribution. The Excel server URL in the FEX will override the value specified in the Report Broker Configuration.

❏ Bursting is supported, except compound reports.

EXL2K

Format: EXL2K (.xls)

Description: Scheduled output opens within Excel 2000 or higher.

Supports most StyleSheet attributes, allowing for full report formatting.

Suggested Uses: Email.

Considerations:

❏ Microsoft Excel 2000 or higher must be installed.

❏ The format is ASCII.

❏ All EXL2K output with an .xht extension is dynamically changed to .xls for email or FTP distribution. You must edit your web server MIME table so that the .xls extension is ASCII application data, instead of binary.

❏ Bursting is supported, except compound reports.

EXL2K FORMULA

Format: EXL2K FORMULA (.xls)

Description: Scheduled output opens within Excel 2000 or higher.

Contains Excel formulas that calculate and display the results of any type of summed information, such as column totals, row totals, and subtotals.

Suggested Uses: Email.

Considerations:

❏ Microsoft Excel 2000 or higher must be installed.

❏ The format is ASCII.

❏ All EXL2K output with an .xht extension is dynamically changed to .xls for email or FTP distribution. You must edit your web server MIME table so that the .xls extension is ASCII application data, instead of binary.

❏ Bursting is supported, except compound reports.

EXL97

Format: EXL97 (.xls)

Description: Scheduled output opens as an Excel97 spreadsheet file, an HTML-based display format that supports report formatting and drill downs.

Suggested Uses: Email.

Considerations:

❏ Microsoft Excel 97 or higher must be installed.

❏ Bursting is supported.

HTML

Format: HTML (.htm, .html)

Description: Supports hyperlinks and other web-based features. Retains StyleSheet formatting.

Suggested Uses: Report Library, Email for display in a web browser.

Considerations:

❏ The default file type for the HTML format is .htm. If the output returned from your procedure is an .mht file, you must manually change the file type to .mht, in order for the output file to open correctly.

❏ When a chart is scheduled in HTML format and is burst, Report Broker generates an extra blank report, in addition to the report for each burst value.

❏ In order to output HTML pages with images, normally you would select DHTML as the format and the output is distributed with the extension .mht. You can select HTML as the distribution format. If you select HTML, Report Broker creates the output with the extension .htm by default.

If the scheduled procedure contains the SET WEBARCHIVE = ON command, outputs pages with images, and you select HTML as the format, be sure to change the extension in the Save Report As field from .htm to .mht.

❏ When distributing HTML reports by email or FTP, the scheduled report (.fex) must set a fully qualified FOCEXURL and FOCHTMLURL for the report styling options defined below. These reference the JavaScript components located on the web or application server where the Client is configured. For example:

```
SET FOCEXURL='hostname:port/ibi_apps/'
```

```
SET FOCHTMLURL='hostname:port/ibi_apps/ibi_html'
```

Styling options include:

❏ Accordion reports

❏ Table of Contents (TOC) reports

❏ Peer Graphics/Data Visualization graphical reporting

❏ Multi-drill reports

❑ HFREEZE options

❑ Bursting is supported.

❑ Can be distributed as an email attachment or as an inline email message.

❑ Works with procedures that contain GRAPH FILE syntax. When used with GRAPH FILE, Report Broker automatically generates the graph on the reporting server (using JSCOM3) and embeds it into the HTML output using HTMLEMBEDIMG=ON. If the scheduled procedure specifies HTMLARCHIVE=ON, this will override HTMLEMBEDIMG=ON and generate output that can be displayed in older versions of Internet Explorer.

HTML5

Format: HTML5 (.htm)

Description: Scheduled output opens as a graph image. These graph images are bit-mapped and can support 16 million colors. In addition, HMTL5 graphics have lossless compression (data is decompressed 100% back to the original). Therefore, saving, altering, and resaving an HTML5 image does not degrade its overall quality.

Suggested Uses: Email and FTP.

Considerations:

❑ A report distributed in HTML5 may not open correctly in Internet Explorer 8. Internet Explorer 8 does not support HTML5 and will first attempt to render a chart distributed in HTML5 format (JSCHART) using the Adobe Flash Platform. If it is unable to render, the Microsoft VML standard will be used.

❑ Only works with procedures that contain GRAPH FILE syntax.

❑ Bursting is not supported.

❑ Drill downs are not supported, as this format creates a static image.

❑ A fully qualified FOCEXURL is required for email and FTP distribution.

JPEG

Format: JPEG (.jpg, .jpeg, .jpe, .jfif)

Description: Scheduled output opens as a graph image in JPEG format.

Suggested Uses: Email.

Considerations:

❏ Only works with procedures that contain GRAPH FILE syntax.

❏ Bursting is supported and is performed on the second BY field in the GRAPH FILE request.

❏ Drill downs are not supported since the JPEG format creates a static image.

❏ If the chart contains a header or footer and you want to distribute an image format (JPEG, PNG or SVG), then you must select the InfoAssist+ option to embed the header and footer in the image. If the embed option is not selected, then the header and footer are not included in the distributed JPEG file. In this case, you must use HTML, HTML5, or PDF to distribute a chart that contains a header or footer.

PDF

Format: PDF (.pdf)

Description: Appearance of the scheduled output is preserved in an electronic document when printed using Adobe Acrobat or distributed to a printer that has an appropriate driver. Retains all relevant StyleSheet formatting.

Suggested Uses: Email, printing.

Considerations:

❏ Does not support hyperlinks in email attachments. Recipient must have an Adobe Acrobat application to view.

❏ Printing is supported when Report Broker is configured for PDF printing and the printer has the appropriate driver.

❏ Bursting is supported.

❏ When Report Broker distributes PDF reports created with a TABLE request containing BY HIGHEST *primarysortfield* syntax, the report contains page breaks on each primary sort field value.

❏ The PDF Drill-Through feature is supported.

PNG

Format: PNG (.png)

Description: Scheduled output opens as a graph image. These graph images are bit-mapped and can support 16 million colors. In addition, PNG graphs have lossless compression (data is decompressed 100% back to the original). Therefore, saving, altering, and resaving a PNG does not degrade its overall quality.

Suggested Uses: Email.

Considerations:

❏ Only works with procedures that contain GRAPH FILE syntax.

❏ Bursting is supported and is performed on the second BY field in the GRAPH FILE request.

❏ Drill downs are not supported, as this format creates a static image.

❏ If the chart contains a header or footer and you want to distribute an image format (JPEG, PNG or SVG), then you must select the InfoAssist+ option to embed the header and footer in the image. If the embed option is not selected, then the header and footer are not included in the distributed PNG file. In this case, you must use HTML, HTML5, or PDF to distribute a chart that contains a header or footer.

PPT

Format: PPT (.ppt)

Description: Generates a new PowerPoint file in the web archive format (.mht).

Suggested Uses: Email.

Considerations:

❏ Bursting is supported.

❏ PPT can output as a single report and can also include as many graphs as desired embedded in the StyleSheet of the report (TABLE).

PPTX

Format: PPTX (.pptx)

Description: Generates a new PowerPoint file, created using the Open XML format, in the web archive format (.mht).

Suggested Uses: Email.

Considerations:

❏ Bursting is supported with the Release 8.1 Version 05 Reporting Server and a procedure that is scheduled 'as is', which means that the ON TABLE PCHOLD FORMAT PPTX must be specified in the procedure and the user must create the schedule without checking the Override option.

❏ If PPTX is selected, then at schedule execution time, add SET DISTRIBUTE=PPTX to the .fex that is run by the Distribution Server.

❏ PPTX can output as a single report and can also include as many graphs as desired embedded in the style sheet of the report (TABLE).

PS

Format: PS (.ps)

Description: Appearance of the scheduled output is preserved in an electronic document when printed using PostScript. Retains all relevant StyleSheet formatting.

Suggested Uses: Printing.

Considerations:

❏ Does not support hyperlinks.

❏ Printers must support PostScript. Recipient must have an application (for example, GhostView) that supports PostScript.

❏ Bursting is supported.

SVG

Format: SVG (.svg)

Description: Scheduled output opens as a graph image. This file format, based on Extensible Markup Language (XML), presents powerful, interactive images.

Suggested Uses: Email.

Considerations:

❏ Recipient must have a browser that supports viewing SVG graph images or an SVG viewer, such as Adobe SVG Viewer for Windows. To download Adobe SVG Viewer for Windows, go to *http://www.adobe.com*.

❏ Only works with procedures that contain GRAPH FILE syntax.

❏ Bursting is supported and is performed on the second BY field in the GRAPH FILE request.

❏ If the chart contains a header or footer and you want to distribute an image format (JPEG, PNG or SVG), then you must select the InfoAssist+ option to embed the header and footer in the image. If the embed option is not selected, then the header and footer are not included in the distributed SVG file. In this case, you must use HTML, HTML5, or PDF to distribute a chart that contains a header or footer.

❏ Drill downs are not supported, as this format creates a static image.

WP

Format: WP (.txt, .wp)

Description: Scheduled output opens as a plain-text word processing document in the web browser. Text can be opened by any word processing application.

Suggested Uses: Word processing applications, printing unformatted reports, email.

Considerations:

❏ Does not retain page breaks or most formatting.

❏ Does not support hyperlinks or alerts.

❏ Can be distributed as an email attachment or as an inline email message.

❏ Bursting is supported.

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