IBM® DB2® Query Patroller

User's Guide

Version 7

SC09-2960-00

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Before using this information and the product it supports, be sure to read the general information under “Appendix B. Notices” on page 55.

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Contents

About This Book

This book provides users in a DB2 Query Patroller environment information and procedures for using QueryEnabler and QueryMonitor. All of the DB2 Query Patroller tools require a configured Java Run-Time Environment (JRE). The steps you need to perform to configure the DB2 Query Patroller tools for use are the same as the steps you follow to configure the Control Center.

This book assumes that you have a running JRE environment on your workstation. For information on how to set up a JRE environment for any of the DB2 graphical tools, refer to the *Control Center Installation and Configuration* section in the *Installation and Configuration Supplement*.

If you are a user with administrator or operator privileges, this book also assumes that you have read and are familiar with the following related publications:

- *DB2 Query Patroller Administration Guide*, GC09-2959-00.
- *DB2 Query Patroller Installation Guide*, SC09-2958-00.

Who Should Use This Book

Businesses collect enormous amounts of data every day. This data consists of information about orders, inventory, accounts payable, point-of-sale transactions, and customers. Businesses also acquire data, such as demographics and mailing lists, from both internal and outside sources. All of this data is stored in a data warehouse. The data warehouse, when used correctly, can help your company make better business decisions, leading to a competitive advantage in today's dynamic marketplace. The data warehouse that your company has implemented helps it to identify new and often overlooked business opportunities.

Queries issued against a data warehouse can often be resource intensive. Your company has installed DB2 Query Patroller to help manage the resource costs associated with those opportunity seeking queries that run against your data warehouse.

This book is intended for users of the data warehouse who submit and monitor queries. These users typically submit a query from an application and analyze the query's result set. In this environment, QueryEnabler is used to submit a query that is managed by the DB2 Query Patroller Server. QueryMonitor is used to monitor and manage those queries that you have submitted.

This book is organized in two parts. Use Table 1 to help you quickly navigate to the part of the book you are interested in:

Table 1. How the DB2 Query Patroller User's Guide is Organized

Part	Description
"Part 1. QueryEnabler" on page 1.	This section provides information and procedures for using QueryEnabler to schedule and execute queries that are managed by the DB2 Query Patroller Server. Read this section if you are new to submitting queries in a DB2 Query Patroller environment.
"Part 2. QueryMonitor" on page 17.	This section provides information and procedures for using QueryMonitor to monitor queries that are managed by the DB2 Query Patroller Server. Read this section if you would like detailed information on how to manage queries that you submitted using QueryEnabler.

Conventions

This book uses the following conventions:

- **Boldface** indicates commands or graphical user interface (GUI) controls such as names of fields, folders, icons, or menu choices.
- *Italics* indicates variables that you should replace with your own value. It is also used to indicate book titles and to emphasize words.
- `Monospace` indicates file names, directory paths, and examples of text you enter exactly as shown.
- The term *query* can also be referred to as a *job*, and vice-versa.

Part 1. QueryEnabler

Chapter 1. Introduction to QueryEnabler

QueryEnabler intercepts dynamic queries from applications and reroutes them to the DB2 Query Patroller Server before they are sent to the database. The DB2 Query Patroller Server and QueryEnabler then provide the mechanisms for returning the query results to the query application.

In order to use QueryEnabler, you must have installed the QueryEnabler Tool subcomponent from your DB2 Query Patroller Server or DB2 Administration Client installation. For more information, refer to the *DB2 Query Patroller Installation Guide*.

Note: Dynamic SQL statements with parameter markers are not support in this release of DB2 Query Patroller.

Before You Get Started

The steps outlined in this chapter assume that you have already installed QueryEnabler, according to the instructions in the *DB2 Query Patroller Installation Guide*. Before using QueryEnabler, you should ensure that your administrator has created a user profile for your user account and is familiar with the details in this section.

Since QueryEnabler is a Java-based tool, you should ensure that your workstation has enough Java Virtual Machine heap space. You should set the *JAVA_HEAP_SZ* database manager configuration (dbm cfg) parameter to a value no less than `2000`. We recommend that you set this parameter to `4096`.

To update the *JAVA_HEAP_SZ* dbm cfg parameter, perform the following steps:

Step 1. Log on to the system as a user with System Administrative (SYSADM) authority on the instance where you will issue your database queries. For more information on SYSADM authority and the users to which this privilege is granted, refer to the *Administration Guide*.

Step 2. Enter the following command to update the *JAVA_HEAP_SZ* dbm cfg parameter to `4096`:

```
db2 update dbm cfg using JAVA_HEAP_SZ 4096
```

Step 3. Enter the **db2 terminate** command if you are updating the dbm cfg file on a DB2 client. If you are updating the dbm cfg file on a DB2 server, you must stop and restart the database manager by entering the **db2stop** and **db2start** commands.

For more information on this dbm cfg parameter, refer to the *Administration Guide*.

In order to capture queries using QueryEnabler, you must set the *DYN_QUERY_MGMT* database configuration (db cfg) parameter to ENABLE for the database where the queries that you want to trap are to be run. After updating the *DYN_QUERY_MGMT* db cfg parameter, you can then submit queries that will be captured by the DB2 Query Patroller Server.

To update the *DYN_QUERY_MGMT* db cfg parameter, perform the following steps:

Step 1. Log on to the system as a user with at least Database Administrative (DBADM) authority on the database where you will issue your database queries. For more information on DBADM authority and the users to which this privilege is granted, refer to the *Administration Guide*.

Step 2. Terminate all connections to the database that you want to enable for DB2 Query Patroller by entering the following commands:

```
db2stop force
db2start
```

Step 3. Enter the following command to update the *DYN_QUERY_MGMT* db cfg parameter to DYN_QUERY_MGMT ENABLE:

```
db2 update db cfg for database_alias using DYN_QUERY_MGMT ENABLE
```

where *database_alias* is the database alias name of the database that you want to enable for DB2 Query Patroller.

For more information on this dm cfg parameter, refer to the *DB2 Query Patroller Administration Guide*.

For example, to enable the SAMPLE database for DB2 Query Patroller, and then submit a query that will be routed to the DB2 Query Patroller Server, enter the following commands:

```
db2stop force
db2 update db cfg for SAMPLE using DYN_QUERY_MGMT ENABLE
db2start
db2 connect to SAMPLE
db2 "select * from org"
```

The QueryEnabler: New Query or the QueryEnabler: Result Sets window opens if the cost of the query being run exceeds the management threshold defined in the user’s profile.

If this query exists in the job table on the DB2 Query Patroller Server, the QueryEnabler: Result Sets window opens. If this query does not exist, the QueryEnabler: New Query windows opens. For now, click on **Cancel** to close the opened window.

If a window did not open, the query you submitted did not exceed the management threshold defined by your administrator. By default, any queries that do not exceed the *Management Threshold* parameter set for a user or group by an administrator will not be trapped or routed to the DB2 Query Patroller Server. If the query does not exceed the management threshold, the query will be run against the database and the result set will be returned automatically to the application. A result table will not be created on the DB2 Query Patroller Server.

If you want to work with QueryEnabler using the examples outlined in the sections that follow, your administrator must set the *Management Threshold* parameter for your user ID to `0` using QueryAdmin. For more information, refer to the *DB2 Query Patroller Administration Guide*.

Using QueryEnabler

This section provides an overview of QueryEnabler and the windows that open when you submit a query. Before you can submit a query that will be routed to the DB2 Query Patroller Server, you must ensure that your administrator started the server using the **dqpstart** command. Only an administrator has the authority to start a DB2 Query Patroller Server. For more information, refer to the *DB2 Query Patroller Administration Guide*.

When you submit a query from your application, provided that it exceeds the management threshold set up for your user profile by your administrator, the query is trapped by QueryEnabler and routed to the DB2 Query Patroller Server. The DB2 Query Patroller Server will search its job table to see if this query has been submitted before and if results for this query are stored in the DB2 Query Patroller database.

If the DB2 Query Patroller Server cannot find the submitted query in its jobs table, the QueryEnabler: New Query windows opens. If the submitted query exists in the job table, the QueryEnabler: Result Sets window opens.

The following sections describe each window in detail:
- “Submitting a Query for the First Time”.
- “Submitting a Query that Has Been Previously Submitted” on page 13.

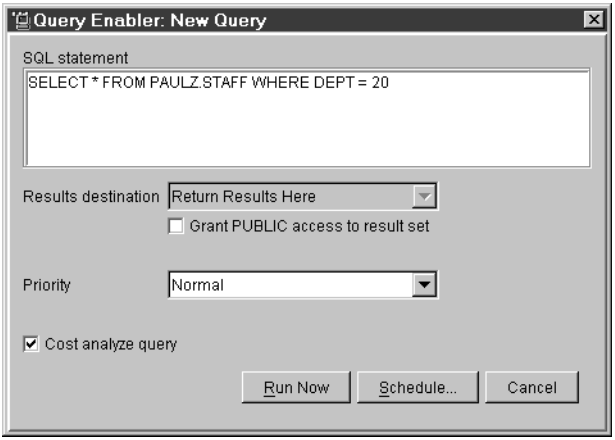
Submitting a Query for the First Time

If you are submitting a query for the first time, the QueryEnabler: New Query window opens.

For example, assume that you enter the following commands to create a new query that will select all of the staff members associated with department 20:

```
db2 terminate
db2 connect to sample
db2 "select * from paulz.staff where dept = 20"
```

After you enter this command, QueryEnabler will trap the query. Since this query has never been run before, the QueryEnabler: New Query window opens. For example:



The query that you submitted is shown in the **SQL statement** box. From the QueryEnabler: New Query window, you can define submission options for this query and submit it to run immediately or schedule it to run at a different time.

Defining Submission Options for a Query

When you submit a query, you can specify options to redirect the results of the query to a different destination, prioritize the query, or request not to have a cost analysis performed for the query (if your user profile has been given this right). You must define these options *before* submitting or scheduling the query to run.

If your administrator has set up alternate destinations for the result sets generated by your queries, you can click on the **Results destination** drop down box and select an alternative destination for the result set of this query.

If there are no alternate destinations for your queries, this field will not be available and will default to **Return Results Here**. This setting means that a DB2 table will be used to store the result set of your query. If you select this destination, you can grant public access to it so that all users have access to the result set by selecting the **Grant PUBLIC access to result set** check box.

You can optionally set the priority level of a query by clicking on the **Priority** drop down box and selecting the appropriate priority level. By default, there are three different priority levels: `Low`, `Normal`, and `High`. These priority levels are defined by the administrator of the DB2 Query Patroller Server. For more information, refer to the *DB2 Query Patroller Administration Guide*.

By default, the **Cost analyze query** check box is selected. If your administrator has set up your user profile with the right to optionally request a cost analysis, you can deselect this check box to bypass a cost analysis on the query that you are submitting. For more information, refer to the *DB2 Query Patroller Administration Guide*.

When a cost analysis is performed, an estimate of the query's cost is generated and compared to the *User Threshold* value for your user profile. Your administrator determines the user threshold level for each user in a DB2 Query Patroller environment. Only an administrator can change the user threshold defined for a user or group. For more information, refer to the *DB2 Query Patroller Administration Guide*.

If the estimated cost exceeds the limit set for a user, the query's status is changed to `Held`. If a job that you submitted is being held, you need to have an administrator or operator change the job's status using in order for the query to run. A job's status can be changed using QueryMonitor. For more information, see "Chapter 2. Introduction to QueryMonitor" on page 19.

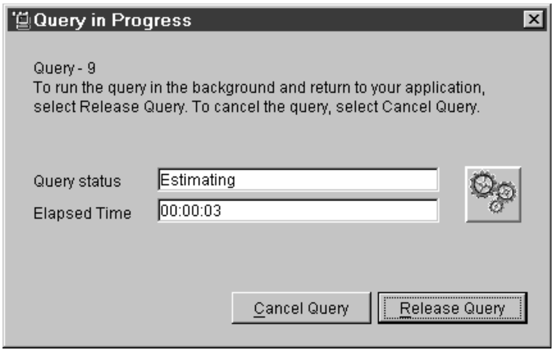
You can cancel the submission of the query by clicking on **Cancel**.

After you have defined all of the options for your query, you are ready to submit the query or schedule it to run at a later time. Go to the section that describes when you want to run your query:

- "Run the Query Immediately".
- "Schedule the Query to Run at a Later Time" on page 9.

Run the Query Immediately

You can select to run the query that you have submitted. To run the submitted query immediately, click on **Run Now**. The Query in Progress window opens. For example:



The query is now under the control of the DB2 Query Patroller Server. The server will run the query as long as the costs associated with the query do not exceed the threshold set by your administrator.

The Query in Progress window displays the status and the elapsed time of the query that you submitted. The status of the running query will be updated in the **Query status** field. It may take some time for the query to change states as the DB2 Query Patroller Server assigns resources and prioritizes the submitted query.

For example, the query's status may change from `Estimating` to `Scheduled`. In the `Scheduled` state, the query may be held until queries with a higher priority complete. Once the resources become available to run the query, the status will be changed to `Running`.

To continue running the query and return to your application, click on **Release Query**. Releasing the query returns control back to the application. The processing of the query still continues and the database on the DB2 Query Patroller Server will be updated with the query's result set.

You may want to release a query if it will take a long time to complete and you will not require the information contained in the result set immediately. If the same query were to be submitted at a later time, the DB2 Query Patroller Server would recognize this query and the QueryEnabler: Result Sets window would open. A user would then have the option to retrieve the result set associated with this query in a timely manner. If a user submitted the same query, a table scan would be run on the result table that was generated to satisfy this query when it was previously submitted.

Typically, an administrator may submit and select to release a number of queries that will be submitted by the users of the data warehouse at a later time. For details on submitting a query that has been previously processed by the DB2 Query Patroller Server, see “Submitting a Query that Has Been Previously Submitted” on page 13.

To cancel the query, click on **Cancel**.

When the processing of the query completes successfully, the result set is created as a table in the Query Patroller Server’s database. If you did not release the query, the result set is returned to the application. For example:

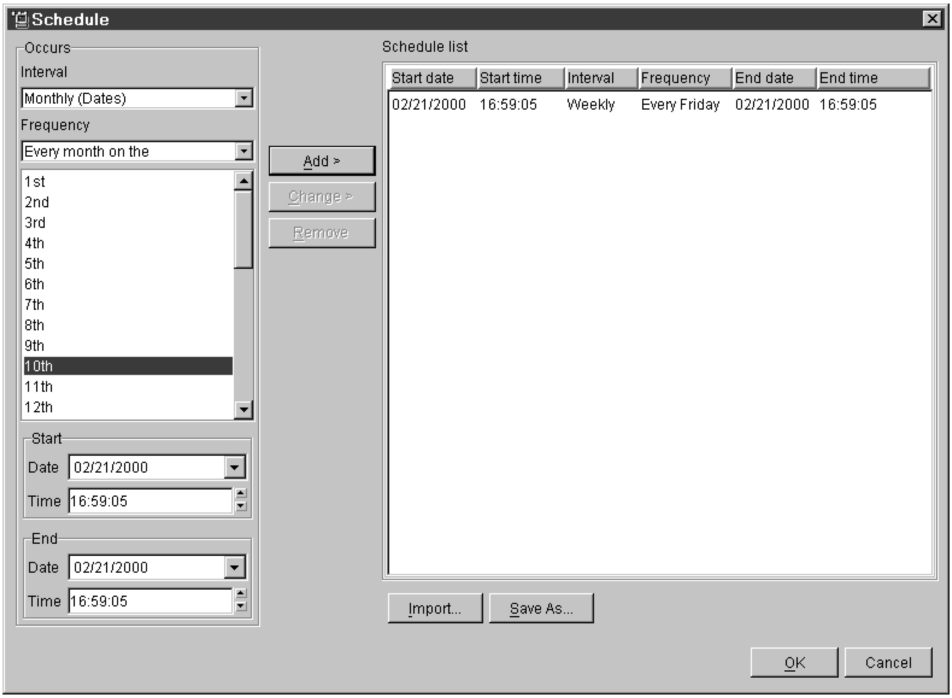
```
ID     NAME      DEPT   JOB   YEARS  SALARY    COMM
------ --------- ------ ----- ------ --------- ---------
    10 Sanders       20 Mgr        7  18357.50         -
    20 Pernal        20 Sales      8  18171.25    612.45
    80 James         20 Clerk      -  13504.60    128.20
   190 Sneider       20 Clerk      8  14252.75    126.50

  4 record(s) selected.
```

For details on how to monitor any queries that you submitted, see “Chapter 2. Introduction to QueryMonitor” on page 19.

Schedule the Query to Run at a Later Time

You can schedule the query that you have submitted to run at a later time using a combination of date and time characteristics. For example, you may want to run the query weekly, every Monday at nine o’clock in the morning. To schedule a query, click on **Schedule**. The Schedule window opens. For example:



To schedule a query, perform the following steps:

Step 1. Define when you want this query to run in the **Occurs** box.

To define the run-time for a query, perform the following steps:

a. Click on the **Interval** drop down box and select the interval for the query that you submitted.

The interval and frequency of a query provide powerful scheduling features that allow you to define when the job is to be submitted. Depending on the interval that you select, the frequency options will change. Using a combination of the interval and frequency characteristics, you can select virtually any schedule for the query.

Select any of the following intervals:

One time only

Specifies that this query is to be run only once.

For example, the query may seek to verify a hypothesis defined for a static point of time. You may want the query to run once on July 10th, 2000.

Hourly
: Specifies that this query is to be run on a hourly schedule, with the frequency, start date, and end date of the query.

  For example, the query may seek a relationship between the time of day and the amount of calls received in a call center. You may want to run the query every 12 hours, once in the morning and once in the evening.

Daily
: Specifies that this query is to be run on a daily schedule, with the frequency, start date, and end date of the query.

  For example, the query may search for a correlation between past due accounts that are 3 days old and accounts that eventually get passed to a collection agency. You may want to run the query every 3 days.

Weekly
: Specifies that this query is to be run on a weekly schedule, with the frequency, start date, and end date of the query.

  For example, the query may seek to validate the notion that the price of a stock fluctuates on a particular day more than others. You may want to run the query every Tuesday.

Monthly (Dates)
: Specifies that this query is to be run monthly on a specific date, with the frequency, start date, and end date of the query.

  For example, the query may seek to define a relationship between consumer demand for products in a department store and the date customers receive their credit card bill. You may want to run the query on the 10th day of every month.

Monthly (Days)
: Specifies that this query is to be run monthly on a specific sequential day in the month, with the frequency, start date, and end date of the query.

  For example, the query may look at the trade volume of a stock on the day its options expire. You may want to run the query on the third Friday of every month.

Yearly
: Specifies that this query is to be run yearly, with the frequency, start date, and end date of the query.

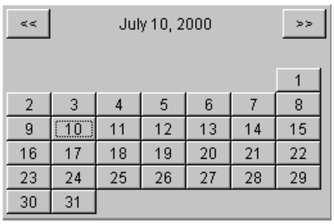
For example, the query may compare projected year end results with the actual values at the end of the year. You may want to run the query once every year.

b. Click on the **Frequency** drop down box and select the appropriate frequency that will be used in conjunction with the interval level that you selected. Depending on the interval you selected in the **Interval** drop box, the frequency options will change.

Step 2. Specify the date and time for which you want the query to be available for run-time, according to the interval and frequency options that you specified above. The date and time that you select is included in the set of possible times when the query can be run.

For example, you may define a query to run on the fourth Tuesday of each month, but may not want this condition to be enforced until after December 10th, 2001. If you specified the start date for this query to be on a fourth Tuesday in a month, it would be included in the schedule for the query.

To define a date, click on the **Date** field and enter a start date for this query. You can also click on the **Date** drop down box. A calendar opens that allows you to select a date. For example:



To define a time, click on the **Time** field and enter a start time for this query. You can also use the **Time** spin button to adjust the time that you want the query to start.

Step 3. Using the same method that you used in the previous step, specify the date and time that you no longer want the query to be available for run-time, according to the interval and frequency you specified. The date and time that you select is included in the set of possible times when the query can be run.

For example, you may define a query to run on the fourth Tuesday of each month after December 10th, 2001 , but may not want this condition to be enforced after December 10th, 2003.

Step 4. Click on **Add>>**. The schedule query is moved to the **Schedule list** box.

To change a scheduled entry, select a query from the **Schedule list** box, make any desired changes, and click on **Change**.

To remove a query from the **Schedule list** box, select the query and click on **Remove**.

Step 5. Click on **OK**. The query is scheduled to run at the interval, frequency, time, and date that you specified.

You can save a schedule that you defined for a query so that you can import the schedule at a later time and use it with the same query or a different query. This feature saves you the time of redefining often used schedules. To save a schedule, click on **Save As**. The schedule you defined will be saved as a schedule file, with the extension `.cal`. To import a defined schedule, click on **Import**.

Click on **Cancel** to cancel the scheduling of the query that you selected. You will be returned to the QueryEnabler: New Query window.

For details on how to monitor any queries that you submitted, see "Chapter 2. Introduction to QueryMonitor" on page 19.

Submitting a Query that Has Been Previously Submitted

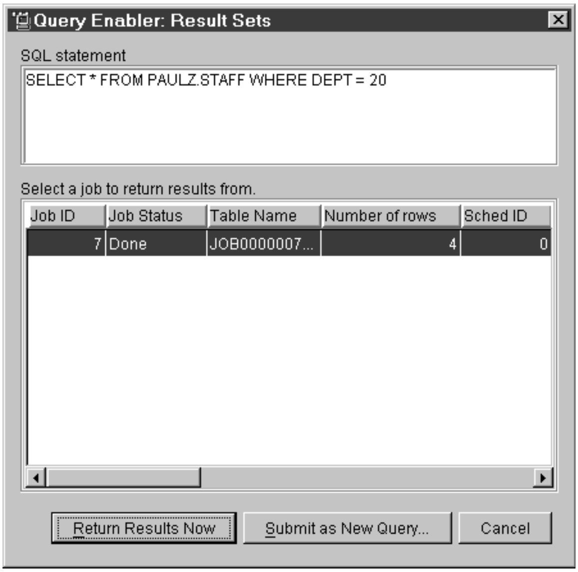
If you are submitting a query that has been submitted in the past and the query is stored in the DB2 Query Patroller Server's job table, QueryEnabler traps the query and the QueryEnabler: Result Sets window opens.

For example, assume that you enter the following commands to submit the same query that you submitted in "Submitting a Query for the First Time" on page 5:

```
db2 terminate
db2 connect to sample
db2 "select * from paulz.staff where dept = 20"
```

After you enter this command, the query will be trapped. Since this query has been submitted before, and it exists in the job table on the DB2 Query

Patroller Server, the QueryEnabler: Result Sets window opens. For example:



The query that you submitted is shown in the **SQL statement** box. From the QueryEnabler: Result Sets window, you can return the result set from a matching query that was submitted in the past, or resubmit the query and specify different submission options, or schedule it to run at a different time.

Typically, you would want to resubmit your query if the data that this query was run against has changed. For example, if you were running a query against your data warehouse to try and determine a target market for a particular product, and the data warehouse was updated with new demographic data after the original query was run, you may want to resubmit your query to leverage the updated data.

You can cancel the query that you submitted by clicking on **Cancel**. You can also cancel a job that is in progress. If the state of the query is `Estimating`, `Scheduled`, or `Queued`, you can select the job from the **Select a job to return results from** box, click on the right-mouse button, and select the **Cancel** option. Cancelling a query that has already been submitted is usually done using QueryMonitor.

To return the result set associated with this query to your application, select a job that was submitted at an acceptable time from the **Select a job to return results from** box and click on **Return Results Now**.

The **Select a job to return results from** box contains a list of all the jobs that contain the same query and have been submitted in the past. Jobs that completed successfully contain a time-related result set of your query based on the data in your data warehouse. Keep in mind that as the data warehouse is updated, the data in the result set may change or become out of date. When data isn't current and causes inferences that are not correct, it is often referred to as *dirty*. If you feel that a result set may have data that has become dirty, you can select the previously submitted job, click on the right-mouse button, and select the **Drop Results** option to drop the result set associated with the job.

After you click on **Return Results Now**, the results of your query are returned to your application. For example:

```
ID     NAME      DEPT   JOB   YEARS  SALARY    COMM
------ --------- ------ ----- ------ --------- ---------
    10 Sanders       20 Mgr        7  18357.50         -
    20 Pernal        20 Sales      8  18171.25    612.45
    80 James         20 Clerk      -  13504.60    128.20
   190 Sneider       20 Clerk      8  14252.75    126.50

  4 record(s) selected.
```

If you want to resubmit your query, click on **Submit as New Query**. The QueryEnabler: New Query window opens. For more information, see "Submitting a Query for the First Time" on page 5.

For details on how to monitor any queries that you submitted, see "Chapter 2. Introduction to QueryMonitor" on page 19.

Part 2. QueryMonitor

Chapter 2. Introduction to QueryMonitor

This section of the *DB2 Query Patroller User's Guide* provides an overview of QueryMonitor. As a user, you may want to use QueryMonitor to manage any queries that you submitted to the data warehouse and were passed to the DB2 Query Patroller Server. You could cancel a query that you submitted, submit a new job, drop an existing result set for a query, and view detailed information regarding the query. As an administrator or operator, you may want to use QueryMonitor to manage your data warehouse user's queries that were trapped by QueryEnabler and routed to the DB2 Query Patroller Server.

In order to use QueryMonitor, you must have installed the QueryMonitor Tool subcomponent from your DB2 Query Patroller Server or DB2 Administration Client installation. For more information, refer to the *DB2 Query Patroller Installation Guide*.

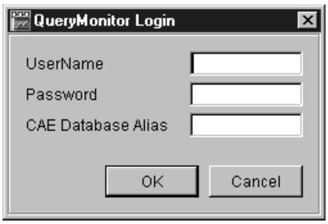
Starting and Stopping QueryMonitor

To start and stop QueryMonitor, perform the following steps:

Step 1. Start QueryMonitor by entering the **QueryMonitor** command.

On Windows NT or Windows 2000, you can also click on **Start** and select **Programs -> IBM DB2 -> DB2 Query Patroller -> QueryMonitor**.

The QueryMonitor Login window opens:

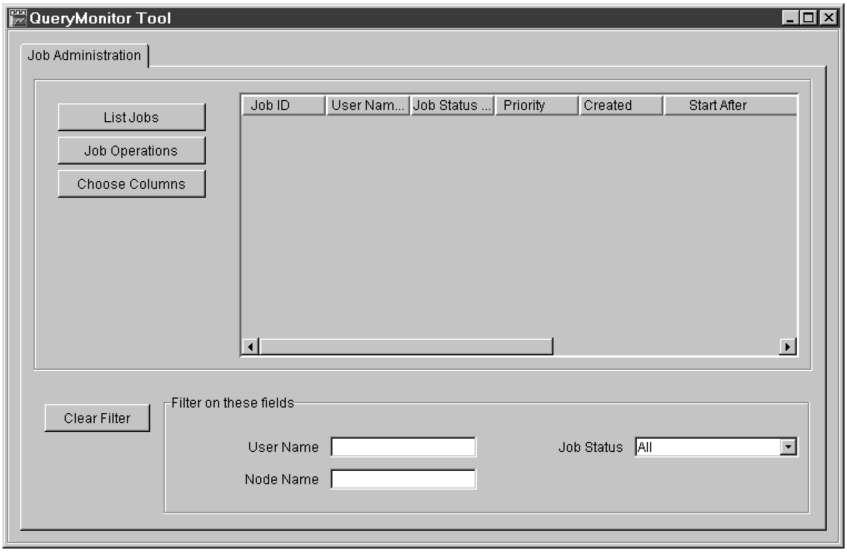


Step 2. Enter the username and password for the user account that has submitted a query, or as a user with administrative or operator privileges, in the **UserName** and **Password** fields.

Step 3. Enter the database alias of the database where the query that you want to monitor was submitted in the **CAE Database Alias** field.

Step 4. Click on **OK**.

The QueryMonitor’s main window opens:



Step 5. To stop QueryMonitor, simply shut down the active window.

Overview of Default Columns in the QueryMonitor’s Main Window

Table 2 contains an overview of each of the default columns that are displayed in the QueryMonitor’s main window. See “Choosing Columns” on page 25 for information on how to add or delete columns from the Query Monitor’s main window.

Table 2. Overview of Default Columns in the QueryMonitor’s Main Window

Column	**Description**
Job ID	Displays the ID of the job that was submitted.
User Name	Displays the username of the user that submitted the job.

Table 2. Overview of Default Columns in the QueryMonitor's Main Window (continued)

Column	Description
Job Status	Contains the status of the submitted job. A job's status can be in any of the following states: • `Aborted` - the job has been terminated due to an error. • `Cancelled` - the job was cancelled at the user's request. • `Done` - the job completed successfully. • `Estimating` - DB2 Query Patroller is determining the cost associated with this job. • `Held` - the cost associated with the job exceeded the user's threshold and requires manual intervention by a user with administrator or operator privileges. • `Queued` - the job is waiting to be run. • `Running` - the job is in progress. • `Scheduled` - the job is waiting for system resources to run.
Priority	Indicates the priority assigned to the job that was submitted.
Created	Displays the date and time that the job was created.
Start After	Displays the date and time that the submitted job can be scheduled for execution.
Completed	Displays the date and time that the submitted job was completed, aborted, or cancelled.
Result Rows	Indicates the number of rows returned from the job in the result set.
Result Destination	If results of the job were saved to an alternate destination, this field contains the name of that destination. If an alternative result destination has not been defined by your administrator, this value will be `null`.
Result Table Name	If results of the job were saved to the default location, this field contains the result table name.
Estimated Cost	Displays the estimated cost for the job.

Push Buttons on the QueryMonitor’s Main Window

Table 3 contains descriptions of each push button on the QueryMonitor’s main window.

Table 3. Push buttons on the QueryMonitor’s Main Window

Push Button	Description
List Jobs	Displays a list of jobs submitted to the DB2 Query Patroller Server. This push button is also used to refresh the contents of the Query Monitor’s main window.
Job Operations	Displays a list of other functions that can be performed using QueryMonitor. You can use this push button to view the details of a job, modify the status of a job, drop a result set, resubmit a job, or submit a new job.
Choose Columns	Used to select which columns are displayed in the Query Monitor’s main window. Any customizations that you make to the column list are for the duration of the current QueryMonitor session only. When you restart QueryMonitor, the default columns will appear.
Clear Filter	Used to clear the filtering criteria for the Query Monitor’s main window.

Using QueryMonitor

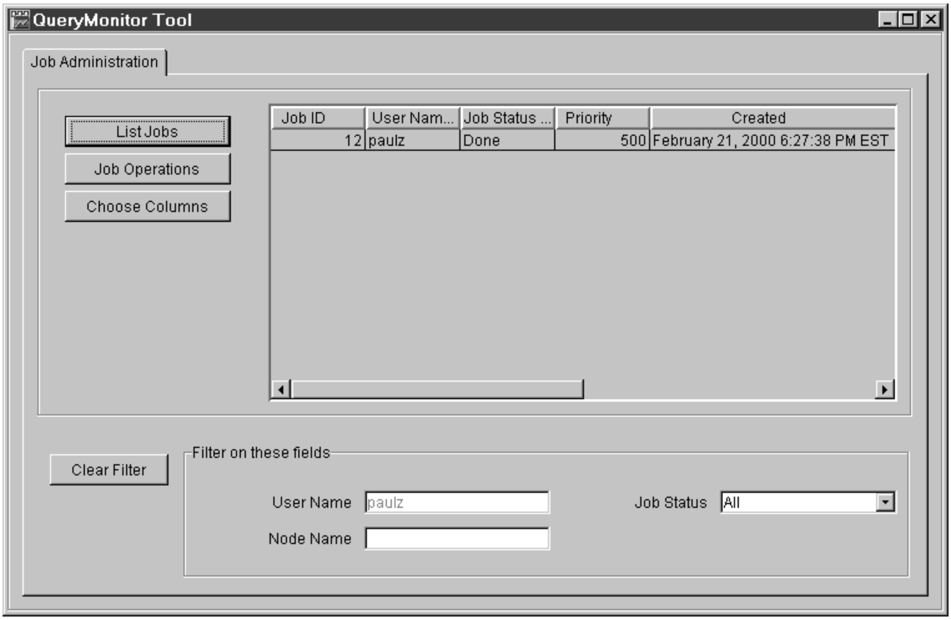
This section provides information on how to complete the most common tasks associated with QueryMonitor. Go to the section that describes the task that you want to perform:

- “Displaying a Job List”.
- “Displaying Detailed Job Information” on page 27.
- “Submitting a New Job” on page 32.
- “Resubmitting a Job” on page 33.
- “Modifying Job Status” on page 33.
- “Dropping a Result Set” on page 34.

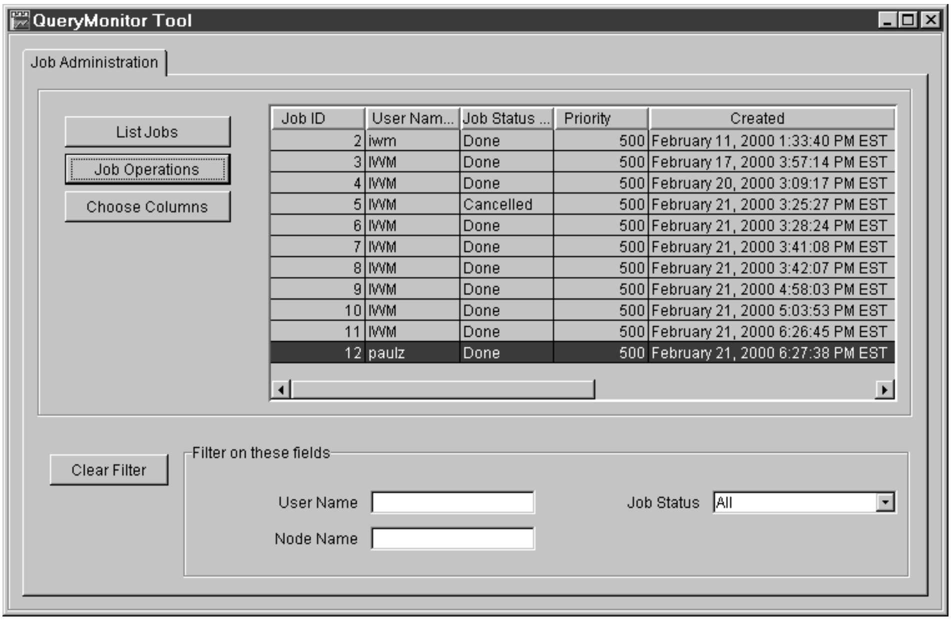
Displaying a Job List

When you start QueryMonitor, the QueryMonitor’s main window opens, as shown in “Starting and Stopping QueryMonitor” on page 19. By default, no jobs are displayed in the QueryMonitor’s main window.

To display a list of jobs that your user account has submitted, click on **List Jobs**. The QueryMonitor window will list all of the jobs submitted by the user account that you used to log on to QuerMonitor. For example:



If you are a user with administrative or operator privileges, clicking on **List Jobs** will return a list of jobs submitted by all users. For example:



Specifying Which Jobs to Display

You can use the filtering criteria in the **Filter on these fields** box to filter the jobs that are displayed in the QueryMonitor's main window. For example, you can display jobs with a status of `Done`, jobs that reside on a particular node, or a combination of the two.

You cannot obtain a job listing for user accounts other than your own, unless you are logged on to QueryMonitor as a user with administrative or operator privileges. If you are logged on as a user with either of these privileges, you can also specify the username as an additional filtering criteria.

To specify which jobs to display in QueryMonitor's main window, you must define a filtering criteria and then click on **List Jobs** or press the `Enter` key. The jobs listed will only be those that match the criteria that you defined in the **Filter on these fields** box.

Note: Whenever you change the **Job Status** field, the job list automatically redisplays. You do not need to click on **List Jobs** or press the `Enter` key to update the QueryMonitor's main window.

Any combination of the following criteria can be used to filter the list of jobs displayed in the QueryMonitor's main window:

User Name
Enter the username of the user whose queries you want to list in the QueryMonitor's main window. This field will default to the user account that you used to log on to QueryMonitor. If you are not logged on to QueryMonitor as a user with administrator or operator privileges, you will not be able to specify a value for this field.

Node Name
Enter the node name of the database partition server where the queries you want to list were submitted. In a DB2 Enterprise - Extended Edition environment, you would enter the hostname of the database partition server. In a DB2 Enterprise Edition environment, this field *must* be the hostname of your workstation.

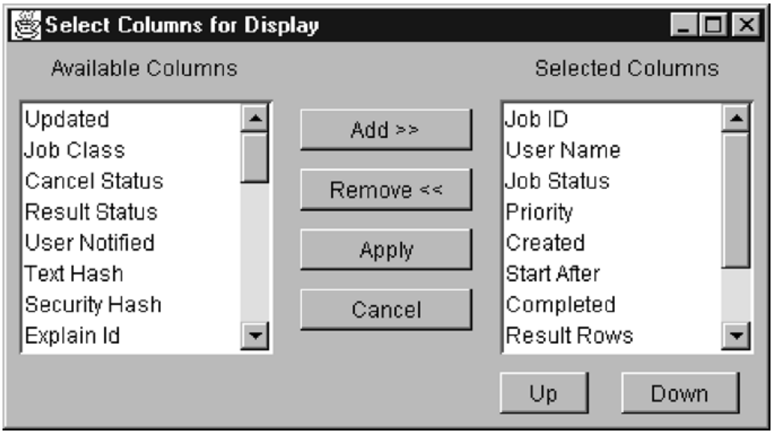
Job Status
Click on the **Job Status** drop down box and select the status of the jobs that you want listed in the QueryMonitor's main window. For example, you could list any jobs that have been cancelled by selecting the **Cancelled** option.

To reset the QueryMonitor's main window, click on **Clear Filter**. This option will clear the **User Name** and **Node Name** fields, and set **Job Status** to `ALL`.

Choosing Columns

You can customize the columns that appear in the QueryMonitor window to track specific information. A default list of the characteristics that describe each job is shown each time you start QueryMonitor. The customized columns that you select are added for the duration of the current session only. When you close and start QueryMonitor again, the columns displayed will return to the default list.

To customize the columns that appear in QueryMonitor, click on **Choose Columns**. The Select Columns for Display window opens:



You can add or remove any of the columns shown in the **Available Columns** box to the QueryMonitor's main window.

To add a column, perform the following steps:

Step 1. Select the column to be added from the **Available Columns** box.

Step 2. Click on **Add >>**. The selected column is moved to the bottom of the **Selected Columns** box.

Step 3. Select the column that you just added from the **Selected Columns** box and click on **Up** or **Down** to change the order of the column.

Note: You can also change the order of the columns displayed at any time by dragging-and-dropping a column in the QueryMonitor's main window.

Step 4. Click on **Apply**. The QueryMonitor's main window is updated. If you do not want these changes to take effect, click on **Cancel**.

To remove a column, perform the following steps:

Step 1. Select the column to be removed from the **Selected Columns** box.

Step 2. Click on **Remove <<**. The selected column will be moved to the bottom of the **Available Columns** box.

Step 3. Click on **Apply**. The QueryMonitor's main window is updated. If you do not want these changes to take effect, click on **Cancel**.

Reordering the Job List by Column

You can reorder any column in ascending or descending order by clicking on the column's heading. The order of a column is changed for the duration of the current session only. When you close and start QueryMonitor again, all columns will return to the default order.

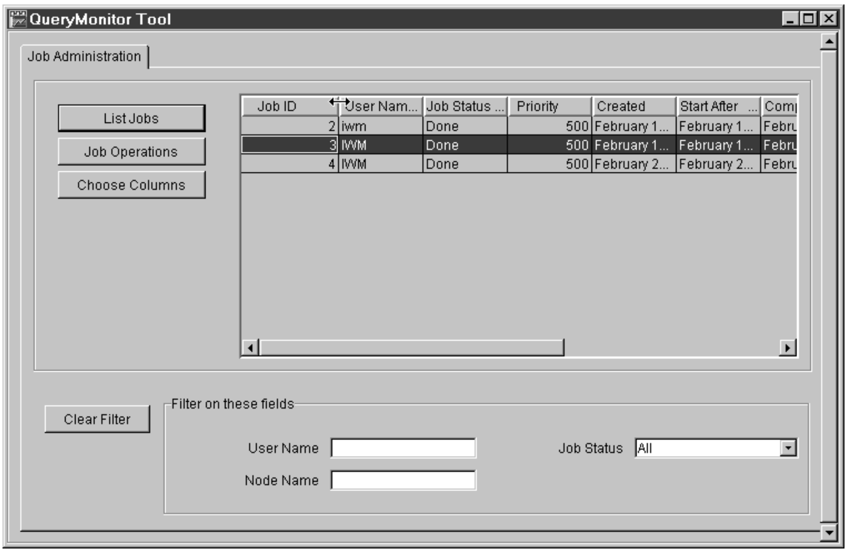
The first time you click on a column's heading, the order of the column is changed to descending order. Clicking on the same column heading will reorder the column in ascending order.

Resizing Columns

You can resize any column that appears in the QueryMonitor's main window. The width of a column is changed for the duration of the current session only. When you close and start QueryMonitor again, the width of the columns will return to the default size.

To resize a column, perform the following steps:

Step 1. Move the mouse pointer to the vertical line forming the right edge of the column that you want to resize. The mouse pointer changes to a double arrow. For example:



Step 2. Click and hold the mouse button on the vertical line and resize the column. Release the mouse button when the column is resized to the desired width.

Refreshing the QueryMonitor's Main Window

You must refresh the QueryMonitor's main window to retrieve the most current information from the DB2 Query Patroller Server. Some operations such as changing the job status filter criteria, or submitting a new job, automatically refresh this window for you.

To manually refresh the QueryMonitor's main window, click on **List Jobs**.

Displaying Detailed Job Information

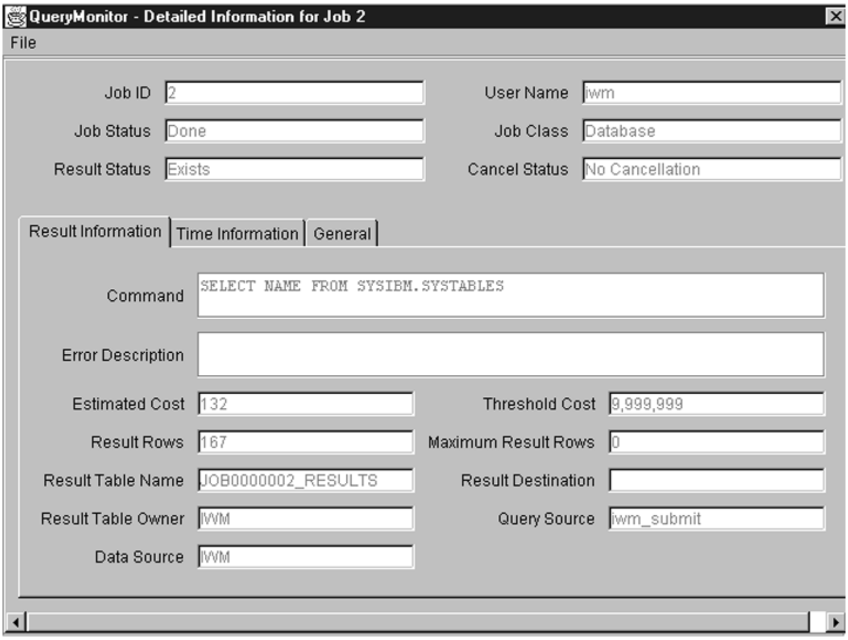
From the QueryMonitor's main window, you can select a specific job and drill down to view detailed information about that job. To view specific details about a job, perform the following steps:

Step 1. Select the job whose details you want to view. You can select more than one job by pressing and holding the `Ctrl` key.

Step 2. Click on **Job Operations**.

Step 3. Select the **Job Detail** option from the pop-up menu.

A Detailed Information for Job window opens. For example:



If you selected more than one job, a Detailed Information for Job window opens for each job that you selected.

Note: You can also view a job's detailed information by double-clicking on the job.

To refresh a Detailed Information for Job window with the most current information, select **File->Refresh** from the action menu bar.

To close a Detailed Information for Job window, select **File->Close** from the action menu bar.

Fields Above the Tab Section in a Detailed Information for Job Window

Table 4 contains a description for each field at the top of a Detailed Information for Job window.

Table 4. Fields Above the Tabs in the Detailed Information for Job Window

Field	Description
Job ID	Contains the ID of the job that was submitted.
User Name	Contains the username of the user that submitted the job.
Job Status	Contains the job's status.
Job Class	Contains the classification of the job. A job can be classified as a `Database` job or as an `OS` (operating system) job.
Result Status	Contains the result status of the job. The result status can be classified as: • `Purged due to abort` • `Truncated` • `Not existing` • `Exists` • `Dropped`
Cancel Status	Indicates the status of any cancellation requested for this job. The cancellation status can be classified as: • `No Cancellation` - no cancellation has been requested. • `Cancellation Requested` - cancellation was requested but not yet accepted. • `Cancellation Accepted` - cancellation accepted by the DB2 Query Patroller Server.

Displaying Result Information

To view result information, select the **Result Information** tab on a Detailed Information for Job window. The Result Information page displays result-related information with respect to the selected job. The Result

Information page is shown below:

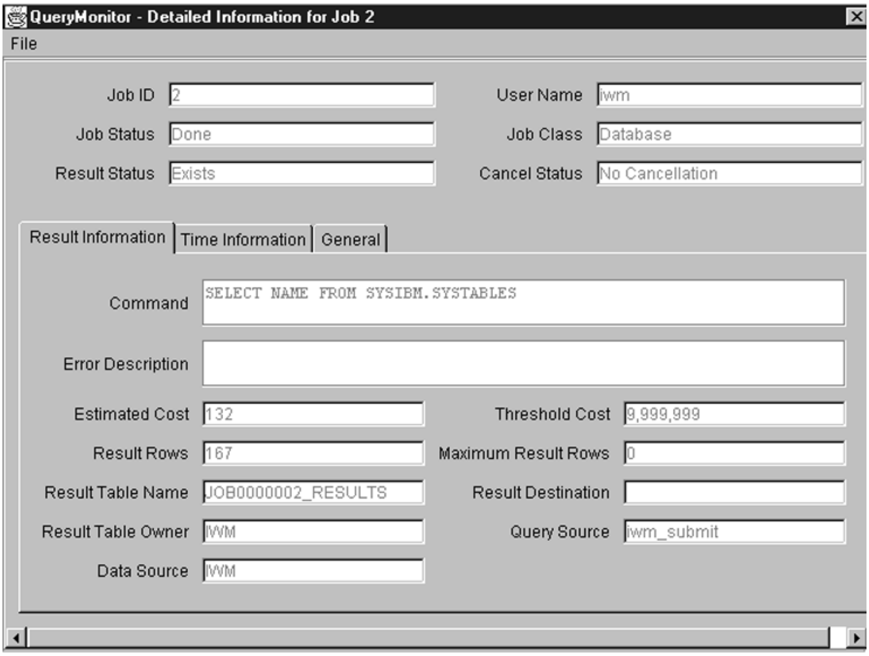


Table 5 contains a description of each field on the Result Information page.

Table 5. Fields on the Result Information Page

Field	**Description**
Command	Contains the command or query that is associated with the job.
Error Description	If the job was placed in a `Held` or `Aborted` state, this field will give a description of the error that was received. If the job was placed in a `Queued` state, this field will give a reason why.
Estimated Cost	Indicates the estimated database cost of the job.
Threshold Cost	Indicates the user's threshold cost of the job.
Result Rows	Indicates the number of rows returned in the result set for the job.
Maximum Result Rows	Indicates the user's threshold for the maximum number of rows in a result set allowed for this job.
Result Table Name	Contains the name of the result table.
Result Destination	Contains the name of the alternate result destination, if defined.
Result Table Owner	Contains the username of the result table owner.

Table 5. Fields on the Result Information Page (continued)

Field	Description
Query Source	Indicates the application that created the job.
Data Source	Indicates the database against which the query was run.

Displaying Time Information

To view time information, select the **Time Information** tab on a Detailed Information for Job window. The Time Information page displays time-related information with respect to the selected job. The Time Information page is shown below:

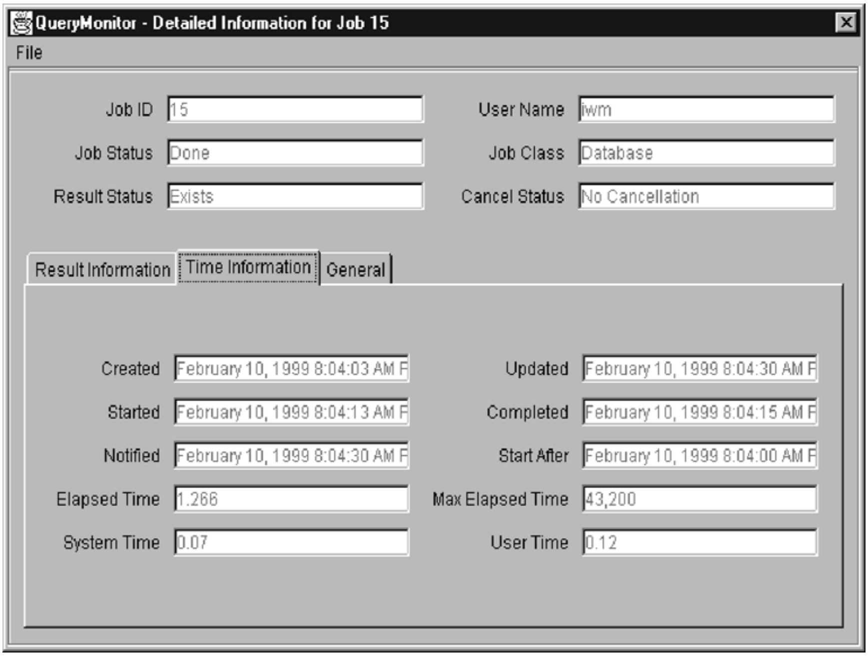


Table 6 contains a description of each field on the Time Information page.

Table 6. Fields on the Time Information Page

Field	Description
Created	Indicates the date and time the job was created.
Updated	If the job has been updated, this field indicates the date and time the job was updated.
Started	Indicates the date and time the job was started, if applicable.

Table 6. Fields on the Time Information Page (continued)

Field	Description
Completed	Indicates the date and time the job completed, if applicable.
Notified	Indicates the date and time a user notification of job completion was sent, if applicable.
Start After	Indicates the date and time after which the job can be scheduled for to run.
Elapsed Time	Displays the number of seconds it took for the job to run.
Maximum Elapsed Time	Indicates the maximum number of seconds allowed for the job to run.
System Time	Indicates the system CPU time, in seconds, that were used to run this job.
User Time	Indicates the user CPU time, in seconds, that were used to run this job.

Displaying General Information

To view general information, select the **General** tab on a Detailed Information for Job window. The General page displays general information with respect to the selected job. The General page is shown below:

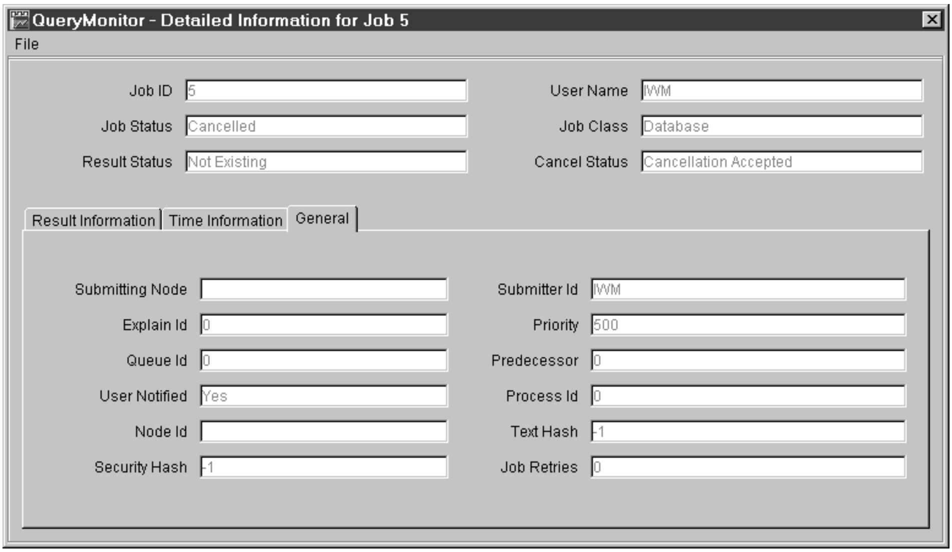


Table 7 contains a description of each field on the General page.

Table 7. Fields on the General Page

Field	Description
Submitting Node	Contains the hostname of the database partition server where the job was submitted. In a non-partitioned database environment, this will always be the hostname of the workstation where the query was submitted.
Submitter ID	Contains the username of the user who submitted the job.
Explain ID	Contains the ID of the job in the Explain cache.
Priority	Displays the priority level for the job.
Queue ID	Indicates the job queue ID.
Predecessor	Identifies which job must successfully complete before this job can be scheduled to run.
User Notified	Indicates whether or not the user was notified when the job completed.
Process ID	Contains the process ID of the run component.
Node ID	Contains the hostname of the database partition server where the job was run. In a non-partitioned database environment, this will always be the hostname of the DB2 Query Patroller Server.
Text Hash	Contains a hash value used to limit the number of rows scanned to find a specific SQL statement.
Security Hash	Contains the hash value used to ensure that job data is not modified.
Job Retires	The number of times DB2 Query Patroller will retry the job if it times out.

Submitting a New Job

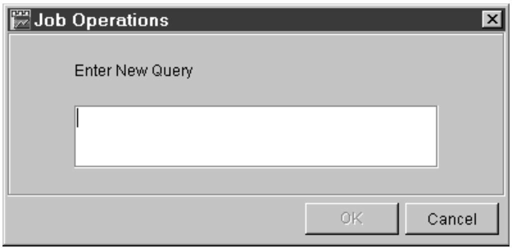
Typically, you will use an application to submit queries. The query is then trapped by QueryEnabler and passed to the DB2 Query Patroller Server. You can use QueryMonitor to submit simple queries that are directly routed to the DB2 Query Patroller Server. This method bypasses QueryEnabler and therefore you will not have the option to view the result set of your query. However, the result set is updated in the DB2 Query Patroller Server's database.

To submit a new job from QueryMonitor, perform the following steps:

Step 1. Click on **Job Operations**.

Step 2. Select **New Job** from the pop-up menu.

The Job Operations window opens:



Step 3. Click on the **Enter New Query** box and enter a query. For example, enter the following query:

```
select * from paulz.department
```

Step 4. Click on **OK**. The job list is automatically refreshed and displays the new job.

Resubmitting a Job

You can use the QueryMonitor to resubmit a job that has already completed. To resubmit a job, perform the following steps:

Step 1. Select the job you want to resubmit. The selected job must have a status of `Done`. You can select more than one job to resubmit by pressing and holding the `Ctrl` key.

Step 2. Click on **Job Operations**.

Step 3. Select **Resubmit Job** from the pop-up menu. A pop-up window opens asking you to confirm that you want to resubmit the selected job.

Step 4. Click on **Yes** to resubmit the job, or click on **No** to cancel the resubmission request.

Modifying Job Status

You can use QueryMonitor to modify the status of a job. If you are not logged on to QueryEnabler as a user with administrative or operator privileges, you can only cancel a job.

To modify the status of a job, perform the following steps:

Step 1. Select the job that you want to modify. The selected job must have a status of `Estimating`, `Hold`, `Queued`, or `Scheduled`. You can modify the status of more than one job by pressing and holding the `Ctrl` key.

Step 2. Click on **Job Operations**.

Step 3. Select **Modify Status** from the pop-up menu. The Job Operation window opens, for example:

Step 4. Click on the drop down box and select either **Cancel**, **Queue**, or **Scheduled**.

Step 5. Click on **Yes** to change the job status, or click on **No** to cancel. The Query Monitor's main window will automatically refresh.

Dropping a Result Set

If you are finished viewing a result set, you can drop the result set to free space in the database. To drop a result set, perform the following steps:

Step 1. Select the job for which you want to drop the result set. The selected job must have a status of `Done`. You can drop the result set for more than one job by pressing and holding the `Ctrl` key.

Step 2. Click on **Job Operations**.

Step 3. Select **Drop Result Set** from the pop-up menu. A pop-up window opens asking you to confirm the result set that you have selected to drop.

Step 4. Click on **Yes** to drop the selected result set or click on **No** to cancel the drop request.

Part 3. Appendixes

Appendix A. Using the DB2 Library

The DB2 Universal Database library consists of online help, books (PDF and HTML), and sample programs in HTML format. This section describes the information that is provided, and how you can access it.

To access product information online, you can use the Information Center. For more information, see "Accessing Information with the Information Center" on page 51. You can view task information, DB2 books, troubleshooting information, sample programs, and DB2 information on the Web.

DB2 PDF Files and Printed Books

DB2 Information

The following table divides the DB2 books into four categories:

DB2 Guide and Reference Information
: These books contain the common DB2 information for all platforms.

DB2 Installation and Configuration Information
: These books are for DB2 on a specific platform. For example, there are separate *Quick Beginnings* books for DB2 on OS/2, Windows, and UNIX-based platforms.

Cross-platform sample programs in HTML
: These samples are the HTML version of the sample programs that are installed with the Application Development Client. The samples are for informational purposes and do not replace the actual programs.

Release notes
: These files contain late-breaking information that could not be included in the DB2 books.

The installation manuals, release notes, and tutorials are viewable in HTML directly from the product CD-ROM. Most books are available in HTML on the product CD-ROM for viewing and in Adobe Acrobat (PDF) format on the DB2 publications CD-ROM for viewing and printing. You can also order a printed copy from IBM; see "Ordering the Printed Books" on page 47. The following table lists books that can be ordered.

On OS/2 and Windows platforms, you can install the HTML files under the `sqllib\doc\html` directory. DB2 information is translated into different languages; however, all the information is not translated into every language. Whenever information is not available in a specific language, the English information is provided

On UNIX platforms, you can install multiple language versions of the HTML files under the `doc/%L/html` directories, where *%L* represents the locale. For more information, refer to the appropriate *Quick Beginnings* book.

You can obtain DB2 books and access information in a variety of ways:

- "Viewing Information Online" on page 50
- "Searching Information Online" on page 54
- "Ordering the Printed Books" on page 47
- "Printing the PDF Books" on page 47

Table 8. DB2 Information

Name	Description	Form Number PDF File Name	HTML Directory
	DB2 Guide and Reference Information		
Administration Guide	*Administration Guide: Planning* provides an overview of database concepts, information about design issues (such as logical and physical database design), and a discussion of high availability. *Administration Guide: Implementation* provides information on implementation issues such as implementing your design, accessing databases, auditing, backup and recovery. *Administration Guide: Performance* provides information on database environment and application performance evaluation and tuning. You can order the three volumes of the *Administration Guide* in the English language in North America using the form number SBOF-8934.	SC09-2946 db2d1x70 SC09-2944 db2d2x70 SC09-2945 db2d3x70	db2d0
Administrative API Reference	Describes the DB2 application programming interfaces (APIs) and data structures that you can use to manage your databases. This book also explains how to call APIs from your applications.	SC09-2947 db2b0x70	db2b0

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
Application Building Guide	Provides environment setup information and step-by-step instructions about how to compile, link, and run DB2 applications on Windows, OS/2, and UNIX-based platforms.	SC09-2948 db2axx70	db2ax
APPC, CPI-C, and SNA Sense Codes	Provides general information about APPC, CPI-C, and SNA sense codes that you may encounter when using DB2 Universal Database products. Available in HTML format only.	No form number db2apx70	db2ap
Application Development Guide	Explains how to develop applications that access DB2 databases using embedded SQL or Java (JDBC and SQLJ). Discussion topics include writing stored procedures, writing user-defined functions, creating user-defined types, using triggers, and developing applications in partitioned environments or with federated systems.	SC09-2949 db2a0x70	db2a0
CLI Guide and Reference	Explains how to develop applications that access DB2 databases using the DB2 Call Level Interface, a callable SQL interface that is compatible with the Microsoft ODBC specification.	SC09-2950 db2l0x70	db2l0
Command Reference	Explains how to use the Command Line Processor and describes the DB2 commands that you can use to manage your database.	SC09-2951 db2n0x70	db2n0
Connectivity Supplement	Provides setup and reference information on how to use DB2 for AS/400, DB2 for OS/390, DB2 for MVS, or DB2 for VM as DRDA application requesters with DB2 Universal Database servers. This book also details how to use DRDA application servers with DB2 Connect application requesters. Available in HTML and PDF only.	No form number db2h1x70	db2h1

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
Data Movement Utilities Guide and Reference	Explains how to use DB2 utilities, such as import, export, load, AutoLoader, and DPROP, that facilitate the movement of data.	SC09-2955 db2dmx70	db2dm
Data Warehouse Center Administration Guide	Provides information on how to build and maintain a data warehouse using the Data Warehouse Center.	SC26-9993 db2ddx70	db2dd
Data Warehouse Center Application Integration Guide	Provides information to help programmers integrate applications with the Data Warehouse Center and with the Information Catalog Manager.	SC26-9994 db2adx70	db2ad
DB2 Connect User's Guide	Provides concepts, programming, and general usage information for the DB2 Connect products.	SC09-2954 db2c0x70	db2c0
DB2 Query Patroller Administration Guide	Provides an operational overview of the DB2 Query Patroller system, specific operational and administrative information, and task information for the administrative graphical user interface utilities.	SC09-2958 db2dwx70	db2dw
DB2 Query Patroller User's Guide	Describes how to use the tools and functions of the DB2 Query Patroller.	SC09-2960 db2wwx70	db2ww
Glossary	Provides definitions for terms used in DB2 and its components. Available in HTML format and in the *SQL Reference*.	No form number db2t0x70	db2t0
Image, Audio, and Video Extenders Administration and Programming	Provides general information about DB2 extenders, and information on the administration and configuration of the image, audio, and video (IAV) extenders and on programming using the IAV extenders. It includes reference information, diagnostic information (with messages), and samples.	SC26-9929 dmbu7x70	dmbu7
Information Catalog Manager Administration Guide	Provides guidance on managing information catalogs.	SC26-9995 db2dix70	db2di

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
Information Catalog Manager Programming Guide and Reference	Provides definitions for the architected interfaces for the Information Catalog Manager.	SC26-9997 db2bix70	db2bi
Information Catalog Manager User's Guide	Provides information on using the Information Catalog Manager user interface.	SC26-9996 db2aix70	db2ai
Installation and Configuration Supplement	Guides you through the planning, installation, and setup of platform-specific DB2 clients. This supplement also contains information on binding, setting up client and server communications, DB2 GUI tools, DRDA AS, distributed installation, the configuration of distributed requests, and accessing heterogeneous data sources.	GC09-2957 db2iyx70	db2iy
Message Reference	Lists messages and codes issued by DB2, the Information Catalog Manager, and the Data Warehouse Center, and describes the actions you should take. You can order both volumes of the Message Reference in the English language in North America with the form number SBOF-8932.	Volume 1 GC09-2978 db2m1x70 Volume 2 GC09-2979 db2m2x70	db2m0
OLAP Integration Server Administration Guide	Explains how to use the Administration Manager component of the OLAP Integration Server.	SC27-0787 db2dpx70	n/a
OLAP Integration Server Metaoutline User's Guide	Explains how to create and populate OLAP metaoutlines using the standard OLAP Metaoutline interface (not by using the Metaoutline Assistant).	SC27-0784 db2upx70	n/a
OLAP Integration Server Model User's Guide	Explains how to create OLAP models using the standard OLAP Model Interface (not by using the Model Assistant).	SC27-0783 db2lpx70	n/a
OLAP Setup and User's Guide	Provides configuration and setup information for the OLAP Starter Kit.	SC27-0702 db2ipx70	db2ip
OLAP Spreadsheet Add-in User's Guide for Excel	Describes how to use the Excel spreadsheet program to analyze OLAP data.	SC27-0786 db2epx70	db2ep

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
OLAP Spreadsheet Add-in User's Guide for Lotus 1-2-3	Describes how to use the Lotus 1-2-3 spreadsheet program to analyze OLAP data.	SC27-0785 db2tpx70	db2tp
Replication Guide and Reference	Provides planning, configuration, administration, and usage information for the IBM Replication tools supplied with DB2.	SC26-9920 db2e0x70	db2e0
Spatial Extender User's Guide and Reference	Provides information about installing, configuring, administering, programming, and troubleshooting the Spatial Extender. Also provides significant descriptions of spatial data concepts and provides reference information (messages and SQL) specific to the Spatial Extender.	SC27-0701 db2sbx70	db2sb
SQL Getting Started	Introduces SQL concepts and provides examples for many constructs and tasks.	SC09-2973 db2y0x70	db2y0
SQL Reference, Volume 1 and Volume 2	Describes SQL syntax, semantics, and the rules of the language. This book also includes information about release-to-release incompatibilities, product limits, and catalog views. You can order both volumes of the *SQL Reference* in the English language in North America with the form number SBOF-8933.	Volume 1 SC09-2974 db2s1x70 Volume 2 SC09-2975 db2s2x70	db2s0
System Monitor Guide and Reference	Describes how to collect different kinds of information about databases and the database manager. This book explains how to use the information to understand database activity, improve performance, and determine the cause of problems.	SC09-2956 db2f0x70	db2f0
Text Extender Administration and Programming	Provides general information about DB2 extenders and information on the administration and configuring of the text extender and on programming using the text extenders. It includes reference information, diagnostic information (with messages) and samples.	SC26-9930 desu9x70	desu9

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
Troubleshooting Guide	Helps you determine the source of errors, recover from problems, and use diagnostic tools in consultation with DB2 Customer Service.	GC09-2850 db2p0x70	db2p0
What's New	Describes the new features, functions, and enhancements in DB2 Universal Database, Version 7.	SC09-2976 db2q0x70	db2q0
	DB2 Installation and Configuration Information		
DB2 Connect Enterprise Edition for OS/2 and Windows Quick Beginnings	Provides planning, migration, installation, and configuration information for DB2 Connect Enterprise Edition on the OS/2 and Windows 32-bit operating systems. This book also contains installation and setup information for many supported clients.	GC09-2953 db2c6x70	db2c6
DB2 Connect Enterprise Edition for UNIX Quick Beginnings	Provides planning, migration, installation, configuration, and task information for DB2 Connect Enterprise Edition on UNIX-based platforms. This book also contains installation and setup information for many supported clients.	GC09-2952 db2cyx70	db2cy
DB2 Connect Personal Edition Quick Beginnings	Provides planning, migration, installation, configuration, and task information for DB2 Connect Personal Edition on the OS/2 and Windows 32-bit operating systems. This book also contains installation and setup information for all supported clients.	GC09-2967 db2c1x70	db2c1
DB2 Connect Personal Edition Quick Beginnings for Linux	Provides planning, installation, migration, and configuration information for DB2 Connect Personal Edition on all supported Linux distributions.	GC09-2962 db2c4x70	db2c4
DB2 Data Links Manager Quick Beginnings	Provides planning, installation, configuration, and task information for DB2 Data Links Manager for AIX and Windows 32-bit operating systems.	GC09-2966 db2z6x70	db2z6

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
DB2 Enterprise - Extended Edition for UNIX Quick Beginnings	Provides planning, installation, and configuration information for DB2 Enterprise - Extended Edition on UNIX-based platforms. This book also contains installation and setup information for many supported clients.	GC09-2964 db2v3x70	db2v3
DB2 Enterprise - Extended Edition for Windows Quick Beginnings	Provides planning, installation, and configuration information for DB2 Enterprise - Extended Edition for Windows 32-bit operating systems. This book also contains installation and setup information for many supported clients.	GC09-2963 db2v6x70	db2v6
DB2 for OS/2 Quick Beginnings	Provides planning, installation, migration, and configuration information for DB2 Universal Database on the OS/2 operating system. This book also contains installation and setup information for many supported clients.	GC09-2968 db2i2x70	db2i2
DB2 for UNIX Quick Beginnings	Provides planning, installation, migration, and configuration information for DB2 Universal Database on UNIX-based platforms. This book also contains installation and setup information for many supported clients.	GC09-2970 db2ixx70	db2ix
DB2 for Windows Quick Beginnings	Provides planning, installation, migration, and configuration information for DB2 Universal Database on Windows 32-bit operating systems. This book also contains installation and setup information for many supported clients.	GC09-2971 db2i6x70	db2i6
DB2 Personal Edition Quick Beginnings	Provides planning, installation, migration, and configuration information for DB2 Universal Database Personal Edition on the OS/2 and Windows 32-bit operating systems.	GC09-2969 db2i1x70	db2i1
DB2 Personal Edition Quick Beginnings for Linux	Provides planning, installation, migration, and configuration information for DB2 Universal Database Personal Edition on all supported Linux distributions.	GC09-2972 db2i4x70	db2i4

Table 8. DB2 Information (continued)

Name	Description	Form Number PDF File Name	HTML Directory
DB2 Query Patroller Installation Guide	Provides installation information about DB2 Query Patroller.	GC09-2959 db2iwx70	db2iw
DB2 Warehouse Manager Installation Guide	Provides installation information for warehouse agents, warehouse transformers, and the Information Catalog Manager.	GC26-9998 db2idx70	db2id
Cross-Platform Sample Programs in HTML			
Sample programs in HTML	Provides the sample programs in HTML format for the programming languages on all platforms supported by DB2. The sample programs are provided for informational purposes only. Not all samples are available in all programming languages. The HTML samples are only available when the DB2 Application Development Client is installed. For more information on the programs, refer to the *Application Building Guide*.	No form number	db2hs
Release Notes			
DB2 Connect Release Notes	Provides late-breaking information that could not be included in the DB2 Connect books.	See note #2.	db2cr
DB2 Installation Notes	Provides late-breaking installation-specific information that could not be included in the DB2 books.	Available on product CD-ROM only.	
DB2 Release Notes	Provides late-breaking information about all DB2 products and features that could not be included in the DB2 books.	See note #2.	db2ir

Notes:

1. The character *x* in the sixth position of the file name indicates the language version of a book. For example, the file name `db2d0e70` identifies the English version of the *Administration Guide* and the file name `db2d0f70` identifies the French version of the same book. The following letters are used in the sixth position of the file name to indicate the language version:

Language	Identifier
Brazilian Portuguese	b
Bulgarian	u
Czech	x
Danish	d
Dutch	q
English	e
Finnish	y
French	f
German	g
Greek	a
Hungarian	h
Italian	i
Japanese	j
Korean	k
Norwegian	n
Polish	p
Portuguese	v
Russian	r
Simp. Chinese	c
Slovenian	l
Spanish	z
Swedish	s
Trad. Chinese	t
Turkish	m

2. Late breaking information that could not be included in the DB2 books is available in the Release Notes in HTML format and as an ASCII file. The HTML version is available from the Information Center and on the product CD-ROMs. To view the ASCII file:
   - On UNIX-based platforms, see the `Release.Notes` file. This file is located in the `DB2DIR/Readme/%L` directory, where *%L* represents the locale name and `DB2DIR` represents:
     - `/usr/lpp/db2_07_01` on AIX
     - `/opt/IBMdb2/V7.1` on HP-UX, PTX, Solaris, and Silicon Graphics IRIX
     - `/usr/IBMdb2/V7.1` on Linux.
   - On other platforms, see the `RELEASE.TXT` file. This file is located in the directory where the product is installed. On OS/2 platforms, you can also double-click the **IBM DB2** folder and then double-click the **Release Notes** icon.

Printing the PDF Books

If you prefer to have printed copies of the books, you can print the PDF files found on the DB2 publications CD-ROM. Using the Adobe Acrobat Reader, you can print either the entire book or a specific range of pages. For the file name of each book in the library, see Table 8 on page 38.

You can obtain the latest version of the Adobe Acrobat Reader from the Adobe Web site at http://www.adobe.com.

The PDF files are included on the DB2 publications CD-ROM with a file extension of PDF. To access the PDF files:

1. Insert the DB2 publications CD-ROM. On UNIX-based platforms, mount the DB2 publications CD-ROM. Refer to your *Quick Beginnings* book for the mounting procedures.
2. Start the Acrobat Reader.
3. Open the desired PDF file from one of the following locations:
   - On OS/2 and Windows platforms:

     `x:\doc\language` directory, where *x* represents the CD-ROM drive and *language* represent the two-character country code that represents your language (for example, EN for English).
   - On UNIX-based platforms:

     `/cdrom/doc/%L` directory on the CD-ROM, where */cdrom* represents the mount point of the CD-ROM and *%L* represents the name of the desired locale.

You can also copy the PDF files from the CD-ROM to a local or network drive and read them from there.

Ordering the Printed Books

You can order the printed DB2 books either individually or as a set (in North America only) by using a sold bill of forms (SBOF) number. To order books, contact your IBM authorized dealer or marketing representative, or phone `1-800-879-2755` in the United States or `1-800-IBM-4YOU` in Canada. You can also order the books from the Publications Web page at http://www.elink.ibmlink.ibm.com/pbl/pbl.

Two sets of books are available. SBOF-8935 provides reference and usage information for the DB2 Warehouse Manager. SBOF-8931 provides reference and usage information for all other DB2 Universal Database products and features. The contents of each SBOF are listed in the following table:

Table 9. Ordering the printed books

SBOF Number	Books Included	
SBOF-8931	• Administration Guide: Planning • Administration Guide: Implementation • Administration Guide: Performance • Administrative API Reference • Application Building Guide • Application Development Guide • CLI Guide and Reference • Command Reference • Data Movement Utilities Guide and Reference • Data Warehouse Center Administration Guide • Data Warehouse Center Application Integration Guide • DB2 Connect User's Guide • Installation and Configuration Supplement • Image, Audio, and Video Extenders Administration and Programming • Message Reference, Volumes 1 and 2	• OLAP Integration Server Administration Guide • OLAP Integration Server Metaoutline User's Guide • OLAP Integration Server Model User's Guide • OLAP Integration Server User's Guide • OLAP Setup and User's Guide • OLAP Spreadsheet Add-in User's Guide for Excel • OLAP Spreadsheet Add-in User's Guide for Lotus 1-2-3 • Replication Guide and Reference • Spatial Extender Administration and Programming Guide • SQL Getting Started • SQL Reference, Volumes 1 and 2 • System Monitor Guide and Reference • Text Extender Administration and Programming • Troubleshooting Guide • What's New
SBOF-8935	• Information Catalog Manager Administration Guide • Information Catalog Manager User's Guide • Information Catalog Manager Programming Guide and Reference	• Query Patroller Administration Guide • Query Patroller User's Guide

DB2 Online Documentation

Accessing Online Help

Online help is available with all DB2 components. The following table describes the various types of help.

Type of Help	Contents	How to Access...
Command Help	Explains the syntax of commands in the command line processor.	From the command line processor in interactive mode, enter: `? command` where *command* represents a keyword or the entire command. For example, `? catalog` displays help for all the CATALOG commands, while `? catalog database` displays help for the CATALOG DATABASE command.
Client Configuration Assistant Help *Command Center Help* *Control Center Help* *Data Warehouse Center Help* *Event Analyzer Help* *Information Catalog Manager Help* *Satellite Administration Center Help* *Script Center Help*	Explains the tasks you can perform in a window or notebook. The help includes overview and prerequisite information you need to know, and it describes how to use the window or notebook controls.	From a window or notebook, click the **Help** push button or press the **F1** key.

Message Help	Describes the cause of a message and any action you should take.	From the command line processor in interactive mode, enter:
		`? XXXnnnnn`
		
		where *XXXnnnnn* represents a valid message identifier.
		
		For example, `? SQL30081` displays help about the SQL30081 message.
		
		To view message help one screen at a time, enter:
		`? XXXnnnnn | more`
		
		To save message help in a file, enter:
		`? XXXnnnnn > filename.ext`
		
		where *filename.ext* represents the file where you want to save the message help.

Type of Help	Contents	How to Access...
SQL Help	Explains the syntax of SQL statements.	From the command line processor in interactive mode, enter: `help` *`statement`* where *statement* represents an SQL statement. For example, `help SELECT` displays help about the SELECT statement. **Note:** SQL help is not available on UNIX-based platforms.
SQLSTATE Help	Explains SQL states and class codes.	From the command line processor in interactive mode, enter: `?` *`sqlstate`* `or ?` *`class code`* where *sqlstate* represents a valid five-digit SQL state and *class code* represents the first two digits of the SQL state. For example, `? 08003` displays help for the 08003 SQL state, while `? 08` displays help for the 08 class code.

Viewing Information Online

The books included with this product are in Hypertext Markup Language (HTML) softcopy format. Softcopy format enables you to search or browse the information and provides hypertext links to related information. It also makes it easier to share the library across your site.

You can view the online books or sample programs with any browser that conforms to HTML Version 3.2 specifications.

To view online books or sample programs:

- If you are running DB2 administration tools, use the Information Center.
- From a browser, click **File —>Open Page**. The page you open contains descriptions of and links to DB2 information:
  - On UNIX-based platforms, open the following page:

    ```
    INSTHOME/sqllib/doc/%L/html/index.htm
    ```

    where *%L* represents the locale name.
  - On other platforms, open the following page:

    ```
    sqllib\doc\html\index.htm
    ```

    The path is located on the drive where DB2 is installed.

If you have not installed the Information Center, you can open the page by double-clicking the **DB2 Information** icon. Depending on the system you are using, the icon is in the main product folder or the Windows Start menu.

Installing the Netscape Browser

If you do not already have a Web browser installed, you can install Netscape from the Netscape CD-ROM found in the product boxes. For detailed instructions on how to install it, perform the following:

1. Insert the Netscape CD-ROM.
2. On UNIX-based platforms only, mount the CD-ROM. Refer to your *Quick Beginnings* book for the mounting procedures.
3. For installation instructions, refer to the `CDNAV`*nn*`.txt` file, where *nn* represents your two character language identifier. The file is located at the root directory of the CD-ROM.

Accessing Information with the Information Center

The Information Center provides quick access to DB2 product information. The Information Center is available on all platforms on which the DB2 administration tools are available.

You can open the Information Center by double-clicking the Information Center icon. Depending on the system you are using, the icon is in the Information folder in the main product folder or the Windows **Start** menu.

You can also access the Information Center by using the toolbar and the **Help** menu on the DB2 Windows platform.

The Information Center provides six types of information. Click the appropriate tab to look at the topics provided for that type.

Tasks
Key tasks you can perform using DB2.

Reference
DB2 reference information, such as keywords, commands, and APIs.

Books
DB2 books.

Troubleshooting
Categories of error messages and their recovery actions.

Sample Programs
Sample programs that come with the DB2 Application Development Client. If you did not install the DB2 Application Development Client, this tab is not displayed.

Web
DB2 information on the World Wide Web. To access this information, you must have a connection to the Web from your system.

When you select an item in one of the lists, the Information Center launches a viewer to display the information. The viewer might be the system help viewer, an editor, or a Web browser, depending on the kind of information you select.

The Information Center provides a find feature, so you can look for a specific topic without browsing the lists.

For a full text search, follow the hypertext link in the Information Center to the **Search DB2 Online Information** search form.

The HTML search server is usually started automatically. If a search in the HTML information does not work, you may have to start the search server using one of the following methods:

On Windows
Click **Start** and select **Programs —> IBM DB2 —> Information —> Start HTML Search Server**.

On OS/2
Double-click the **DB2 for OS/2** folder, and then double-click the **Start HTML Search Server** icon.

Refer to the release notes if you experience any other problems when searching the HTML information.

Note: The Search function is not available in the Linux, PTX, and Silicon Graphics IRIX environments.

Using DB2 Wizards

Wizards help you complete specific administration tasks by taking you through each task one step at a time. Wizards are available through the Control Center and the Client Configuration Assistant. The following table lists the wizards and describes their purpose.

Note: The Create Database, Create Index, Configure Multisite Update, and Performance Configuration wizards are available for the partitioned database environment.

Wizard	Helps You to...	How to Access...
Add Database	Catalog a database on a client workstation.	From the Client Configuration Assistant, click **Add**.
Backup Database	Determine, create, and schedule a backup plan.	From the Control Center, right-click the database you want to back up and select **Backup —> Database Using Wizard**.

Wizard	Helps You to...	How to Access...
Configure Multisite Update	Configure a multisite update, a distributed transaction, or a two-phase commit.	From the Control Center, right-click the **Databases** folder and select **Multisite Update**.
Create Database	Create a database, and perform some basic configuration tasks.	From the Control Center, right-click the **Databases** folder and select **Create —> Database Using Wizard**.
Create Table	Select basic data types, and create a primary key for the table.	From the Control Center, right-click the **Tables** icon and select **Create —> Table Using Wizard**.
Create Table Space	Create a new table space.	From the Control Center, right-click the **Table Spaces** icon and select **Create —> Table Space Using Wizard**.
Create Index	Advise which indexes to create and drop for all your queries.	From the Control Center, right-click the **Index** icon and select **Create —> Index Using Wizard**.
Performance Configuration	Tune the performance of a database by updating configuration parameters to match your business requirements.	From the Control Center, right-click the database you want to tune and select **Configure Performance Using Wizard**. For the partitioned database environment, from the Database Partitions view, right-click the first database partition you want to tune and select **Configure Performance Using Wizard**.
Restore Database	Recover a database after a failure. It helps you understand which backup to use, and which logs to replay.	From the Control Center, right-click the database you want to restore and select **Restore —> Database Using Wizard**.

Setting Up a Document Server

By default, the DB2 information is installed on your local system. This means that each person who needs access to the DB2 information must install the same files. To have the DB2 information stored in a single location, perform the following steps:

1. Copy all files and subdirectories from `\sqllib\doc\html` on your local system to a Web server. Each book has its own subdirectory that contains all the necessary HTML and GIF files that make up the book. Ensure that the directory structure remains the same.

2. Configure the Web server to look for the files in the new location. For information, refer to the NetQuestion Appendix in the *Installation and Configuration Supplement*.
3. If you are using the Java version of the Information Center, you can specify a base URL for all HTML files. You should use the URL for the list of books.
4. When you are able to view the book files, you can bookmark commonly viewed topics. You will probably want to bookmark the following pages:
   - List of books
   - Tables of contents of frequently used books
   - Frequently referenced articles, such as the ALTER TABLE topic
   - The Search form

For information about how you can serve the DB2 Universal Database online documentation files from a central machine, refer to the NetQuestion Appendix in the *Installation and Configuration Supplement*.

Searching Information Online

To find information in the HTML files, use one of the following methods:

- Click **Search** in the top frame. Use the search form to find a specific topic. This function is not available in the Linux, PTX, or Silicon Graphics IRIX environments.
- Click **Index** in the top frame. Use the index to find a specific topic in the book.
- Display the table of contents or index of the help or the HTML book, and then use the find function of the Web browser to find a specific topic in the book.
- Use the bookmark function of the Web browser to quickly return to a specific topic.
- Use the search function of the Information Center to find specific topics. See "Accessing Information with the Information Center" on page 51 for details.

Appendix B. Notices

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Contacting IBM

If you have a technical problem, please review and carry out the actions suggested by the *Troubleshooting Guide* before contacting DB2 Customer Support. This guide suggests information that you can gather to help DB2 Customer Support to serve you better.

For information or to order any of the DB2 Universal Database products contact an IBM representative at a local branch office or contact any authorized IBM software remarketer.

If you live in the U.S.A., then you can call one of the following numbers:
- 1-800-237-5511 for customer support
- 1-888-426-4343 to learn about available service options

Product Information

If you live in the U.S.A., then you can call one of the following numbers:
- 1-800-IBM-CALL (1-800-426-2255) or 1-800-3IBM-OS2 (1-800-342-6672) to order products or get general information.
- 1-800-879-2755 to order publications.

http://www.ibm.com/software/data/
The DB2 World Wide Web pages provide current DB2 information about news, product descriptions, education schedules, and more.

http://www.ibm.com/software/data/db2/library/
The DB2 Product and Service Technical Library provides access to frequently asked questions, fixes, books, and up-to-date DB2 technical information.

Note: This information may be in English only.

http://www.elink.ibmlink.ibm.com/pbl/pbl/
The International Publications ordering Web site provides information on how to order books.

http://www.ibm.com/education/certify/
The Professional Certification Program from the IBM Web site provides certification test information for a variety of IBM products, including DB2.

ftp.software.ibm.com
Log on as anonymous. In the directory `/ps/products/db2`, you can find demos, fixes, information, and tools relating to DB2 and many other products.

comp.databases.ibm-db2, bit.listserv.db2-l
These Internet newsgroups are available for users to discuss their experiences with DB2 products.

On Compuserve: GO IBMDB2
Enter this command to access the IBM DB2 Family forums. All DB2 products are supported through these forums.

For information on how to contact IBM outside of the United States, refer to Appendix A of the *IBM Software Support Handbook*. To access this document, go to the following Web page: http://www.ibm.com/support/, and then select the IBM Software Support Handbook link near the bottom of the page.

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