

Progress Fathom Management Standard Edition

Reporting Guide

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Preface

This Preface contains the following sections:

- [Purpose](#)
- [Audience](#)
- [Fathom Management with OpenEdge or Progress](#)
- [Organization](#)
- [Typographical conventions](#)

Purpose

This guide describes how to create and run reports using Progress® Fathom™ Management Standard Edition.

Throughout this guide, Fathom Management Standard Edition is referred to as Fathom.

Audience

This manual is designed for users of the Fathom Management product. Typical users are Progress database administrators and any others responsible for the daily management of a Progress database.

Fathom Management with OpenEdge or Progress

Fathom Management Version 3.0A runs against the following:

- OpenEdge 10.0B.
- Progress Version 9.1D and the 9.1D09 service pack.

For the sake of simplicity, the procedures and screen shots provided in this manual refer to running Fathom against OpenEdge 10.0B. However, be assured that unless indicated otherwise, the procedures are the same for both Progress Version 9.1D with the 9.1D09 service pack and OpenEdge 10.0B. For example, if a procedure refers to an OpenEdge database, the procedure applies to a Progress database as well.

Organization

Chapter 1, “Understanding Reports”

Introduces Fathom report types and Fathom report terminology and contains steps for creating a report instance.

Chapter 2, “Historical Reports”

Describes the trend report templates supplied by Fathom.

Chapter 3, “Working with Report Instances”

Explains how to schedule reports and view report output. Also contains steps for working with scheduled, completed, and running reports.

Chapter 4, “Creating Custom Report Templates”

Describes how to create, edit, copy, delete, import, and export custom report templates.

Chapter 5, “Real-time Reports”



Provides a description of each real-time report.

Chapter 6, “Fathom Diagnostic Reports”

Provides an overview of the reports used to debug Fathom. Includes information on the Fathom log file and the work scheduler.

Typographical conventions

This manual uses the following typographical conventions:

Convention	Description
Bold	Bold typeface indicates commands or characters the user types, or the names of user interface elements.
<i>Italic</i>	Italic typeface indicates the title of a document, provides emphasis, or signifies new terms.
SMALL, BOLD CAPITAL LETTERS	Small, bold capital letters indicate OpenEdge™ key functions and generic keyboard keys; for example, GET and CTRL .
KEY1-KEY2	A hyphen between key names indicates a <i>simultaneous</i> key sequence: you press and hold down the first key while pressing the second key. For example, CTRL-X .
KEY1 KEY2	A space between key names indicates a <i>sequential</i> key sequence: you press and release the first key, then press another key. For example, ESCAPE H .
Syntax:	
Fixed width	A fixed-width font is used in syntax statements, code examples, and for system output and filenames.
<i>Fixed-width italics</i>	Fixed-width italics indicate variables in syntax statements.
<i>Fixed-width bold</i>	Fixed-width bold indicates variables with special emphasis.
UPPERCASE fixed width	Uppercase words are Progress® 4GL language keywords. Although these always are shown in uppercase, you can type them in either uppercase or lowercase in a procedure.
	This icon (three arrows) introduces a multi-step procedure.
	This icon (one arrow) introduces a single-step procedure.

Understanding Reports

You can create a variety of reports based on data in the FathomTrendDatabase. Each report is based on a report template, one either provided with Fathom or created by you.

This chapter introduces the basics of Progress® Fathom™ Management reporting, as described in the following sections:

- [Fathom report terminology](#)
- [Fathom report types](#)
- [Report instances](#)

Fathom report terminology

It is important to understand Fathom report terminology so that you can be sure you are creating reports based on and containing the kind of data you require.

Remember the following terms as you create Fathom reports:

- **Report History** — The history of how a report ran.
- **Report Instance** — The report entity that you schedule to run in order to produce the report result. The *report instance* identifies specific details that you want reported on; a report instance can specify, for example, a particular resource on which to report or a period of time that the report covers. You specify these report instance details and also schedule when you want the report to run. A report instance is based on a *report template*.
- **Report Log** — A file where error messages and debug tracing information for a report is written.
- **Report Output** — The formatted data returned when a report instance is run.
- **Report Template** — The *report template* defines the characteristics of the report. When you want to create a report instance, you begin by selecting the template on which the report is to be based. If you want, you can make changes to some of the properties inherited from the template for a particular report instance so that you get the reporting data you require; for example, you can specify when you want the report to run and what period of time the report should cover. There are template properties that you cannot change in the report instance; for example, you cannot change the type and number of resources in the report or the location in which the report results are written when the report is run.

In summary, to create reports in Fathom, you use a *report template* to create a *report instance* that runs to produce the *report output*.

Fathom report types

To open the **Fathom Reports** home page, click **Reports** in the Fathom Management console menu bar. The **Fathom Reports** home page opens, as shown in [Figure 1–1](#).

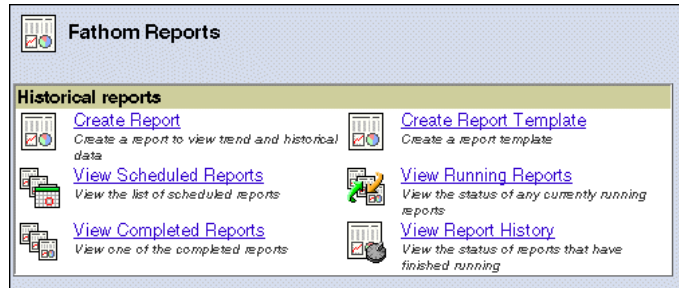


Figure 1–1: Fathom Reports home page

When you click **Reports** in the Fathom Management console menu bar, the list frame updates, showing the three kinds of reports:

- **Defined** — Reports based on information in the FathomTrendDatabase. You create instances of these reports using report templates.

See the “[Historical report descriptions](#)” section on page 2–3 for more information about defined reports.
- **Realtime** — Reports that show the state of your resources and system at the time the reports are run.
- **Diagnostic** — A report of the Fathom AdminServer log file, the Work Scheduler, and the Task Scheduler.

Note that a list of report templates also appears in the list frame, as shown in [Figure 1–2](#).

Fathom supplies the report templates shown in [Figure 1–2](#). Fathom adds any report templates you create to this list.

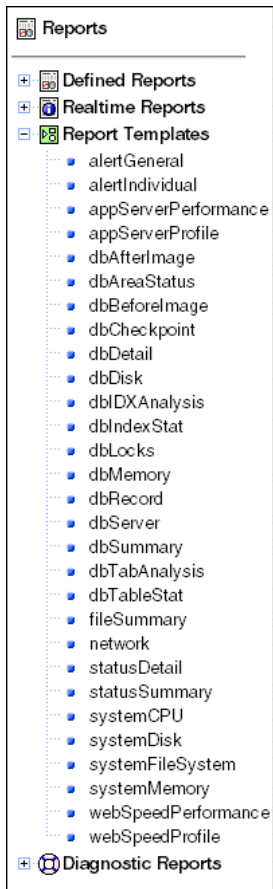


Figure 1–2: Reports list frame

Report instances

Use any existing report template to create a report instance. See the [“Creating a custom report template”](#) section on page 4–2 for details about creating your own template. You access existing report templates from the **Create Report** page and enter the report instance’s properties on the **Report Edit** page.

Create Report page

The **Create Report** page divides reports into five menu groups:

- AppServer™
- Database
- General
- System
- WebSpeed®

Additionally, any menu group you create on the **Report Template** page also appears on the **Create Report** page. See the [“Creating a custom report template”](#) section on page 4–2 for more information about creating menu groups and adding new reports to existing menu groups.

Report Edit page

The **Report Edit** page is divided into three sections. While the content of each section varies by report type, certain fields appear on all **Report Edit** pages:

- The top section:
 - **Name** — The name you assign to your report instance.
 - **Description** — A brief description of the report instance.
 - **Output Formats** — The format in which you want the report output to appear. See the [“Viewing report output”](#) section on page 3–3 for output format examples.
 - **Report Format** — The format (**Hourly**, **Daily**, **Weekly**, or **Monthly**) into which the report’s data is arranged.
- The middle section:
 - **Report on daily information** — Indicates that each day covered by the report period will have its own column in the output.
 - **Report Period** — Whether the report instance will cover a previous number of hours, days, weeks, or months or a specific period of days, weeks, or months.

- **Time Period within the day to include in the report** — Whether the report instance should cover a full day (24 hours) or a partial day.
- **Display Units** — The units in which the data is presented. Options are per second, per minute, per hour, per transaction, per record, or as raw data.
- The bottom section:
 - **Environment** — Any environment variables. Available environment variables depend on the type of report you are creating and your environment. For a list of environment variables available for your report, run the report with the **Generate debug log file** option on. The debug log file lists all environment variables and, if applicable, their values. For more information about viewing environment variables in the debug log file, see the entry below for **Generate debug log file**.

If the report's output will appear in HTML, you may want to set the GRAPH1COLUMNS or the fathomResourcesPerGraph variables. See the [“Graphical output environment variables”](#) section on page 2–15 for more information on these two variables.
 - **Account Information** — The user name, group, and password (if you want to run the report as a user other than the AdminServer).
 - **Working Directory** — The Fathom working directory (if you do not want to use the default working directory).
 - **4GL Client Parameters** — Any additional client startup parameters.

- **Generate debug log file** — Indicates whether Fathom will create a trace file when it executes the report instance. Select the check box if you want to create debug log files; otherwise, leave the check box cleared. Creating a debug log file allows you to examine the report's environment variables. When viewing the debug log file, lines beginning with **env** show the names and values of applicable environment variables, as shown in the following figure:

```

154 env: (REPORTNAME=) .
155 env: (fathomReportOutputDir=database/FTrendAreaStatus/2004_06_15_13_02_32/) .
156 env: (fathomReportDataList=) .
157 env: (fathomReportOutputSort=descending) .
158 env: (fathomReportLabelSort=) .
159 env: (fathomReportProcedureFilter=*) .
160 env: (fathomReportProcedureFilterType=literal) .
161 env: (RESRC_NAME=FathomTrendDatabase) .
162 env: (RESRC_DBDISPLAY=FathomTrendDatabase) .
163 env: (RESRC_DBHOST=localhost) .
164 env: (RESRC_DBPATH=/usr1/besg/progress/fathom/db/fathom) .
165 env: (RESRC_DBNAME=FathomTrendDatabase) .
166 env: (FM_CONTAINERNAME=finch) .
167 env: (RESRC_DBCONFIG=defaultConfiguration) .
168 env: (RESRC_DB&MSRVSPORT=20931) .
169 env: (RESRC_DBPORT=12345) .
170 env: (fathomDebug4gl=1) .

```

For a detailed explanation about environment variables, see the chapter on jobs in the *Resource Monitoring Guide*.

Creating a report instance

The specific steps you follow to create a report instance vary depending on the report’s menu group.



To create a report instance:

1. From the **Create Report** page, click the type of report you want to create. The **Report Edit** page for that report type appears.
2. Complete the top section of the **Report Edit** page, as described in the [“Report Edit page”](#) section on page 1–5. Note that certain reports contain unique fields. The following information will help you complete the unique fields:
 - AppServer Application Profile and WebSpeed Application Profile reports:

Field		Explanation
Resources		The resource whose activity you want in the report. Click the right arrow to move a highlighted resource from the Available column to the Selected column. Click the left arrow to move a highlighted resource from the Selected field to the Available field. Click the up and down arrows to change the order in which the resources will appear in the report output.
Procedure filter		To run a procedure filter, choose Literal , Begins With , or Matches and enter the applicable text in the field. Use the procedure filter to return data on when the broker ran a procedure. When the report instance runs, Fathom will search the OE_ActBrk table in the FathomTrendDatabase for the text you enter.
	Literal	To use the Literal filter, type the exact text you want to find. For example, inventory.p .
	Begins with	To use the Begins with filter, type the beginning of the procedure name. For example, in , inv , or inven .

Field		Explanation
	Matches	<p>To use the Matches filter, type the character expression that you want to match (such as .nventory or inven*).</p> <p>Note: The expression can contain wildcard characters: a period (.) indicates that any single character is acceptable in that position and an asterisk (*) indicates that any group of characters is acceptable. To use a literal period or asterisk in the expression, precede the period or asterisk by a tilde (~).</p> <p>You can also use the OR symbol or a vertical line () in the Matches field to indicate a search for a procedure or another. For example, the expression inventory.p onorder.p indicates a search for either of these two procedures. The search concludes when at least one of them is found.</p> <p>Note: You can identify multiple files using this approach. For example, inventory.p onorder.p bckorder.p.</p>
Sort order		<p>The criteria by which you want the returned procedure data sorted and whether to sort the data in descending or ascending order.</p>

- AppServer Performance and WebSpeed Performance reports:

Field	Explanation
Resources	<p>The resource whose activity you want in the report.</p> <p>Click the right arrow to move a highlighted resource from the Available column to the Selected column.</p> <p>Click the left arrow to move a highlighted resource from the Selected field to the Available field.</p> <p>Click the up and down arrows to change the order in which the resources will appear in the report output.</p>
Data to display	<p>The desired broker activity on which to report: Client, Broker, and/or Server.</p> <p>Click the left arrow to move highlighted text from the Available to the Selected column. Click the right arrow to move highlighted text from the Selected to the Available column.</p> <p>Click the up and down arrows to change the order in which the activity data will appear in the report output.</p>

- Resource Alert Detail, Resource Status Detail, CPU Summary, Network Activity, System Disk Device Activity, System Memory Summary, and all Database menu group reports:

Field	Explanation
Resources	The resource whose activity you want in the report.

- Complete the middle section of the **Report Edit** page, as described in the “[Report Edit page](#)” section on page 1–5. Note that the time interval indicated by the **Report on** check box changes based on the report format chosen:

Option	Displays the data...	With a maximum of...
Hourly	Hourly in four, 15-minute increments	288 columns (3 days)
Hourly	Hourly, daily by hour	168 columns (7 days)
Daily	Weekly by day	365 columns (1 year)
Weekly	Monthly by week	208 columns (4 years)
Monthly	Monthly	96 columns (8 years)

- Complete the bottom section of the **Report Edit** page, as described in the “[Report Edit page](#)” section on page 1–5.
- Click **Save**. The name of your report instance appears in the list frame under **Defined Reports**, and a summary of the report definition appears.

After you create your report instance, you can:

- Click **Edit** to make changes in the report specifics. When you finish the edits, click **Save**.
- Click **Copy** to make a copy of the report specifics, perhaps to use for another report. Type a new name for the report instance, and click **Save**.
- Click **Delete** to remove the report instance. When asked if you want to delete the report instance, click **OK**.

You can also run the report now or schedule it to run later. See the “[Running reports](#)” section on page 3–12 for more details.

Historical Reports

Historical reports are reports created from information in the FathomTrendDatabase. This chapter describe historical reports and how to create them, as outlined in the following sections:

- [Overview of historical reports](#)
- [Historical report descriptions](#)
- [Customizing graphical output](#)

Overview of historical reports

Historical reports are created using data from the FathomTrendDatabase.



To see available historical report templates, click **Create Report** from the **Fathom Reports** home page. The **Create Report** page appears.

Working with report templates

You can modify or delete any of the existing Fathom templates, or you can create your own templates. All report templates, regardless of whether they are provided with Fathom or created, appear in this list of report templates. If you add, delete, or rename a report template, that change is reflected on the **Create Report** page.

When you create a report template, you provide the template's name, menu group (choose from the existing groups or create your own), and a brief report description that appears on the **Create Report** page. See the [“Creating a custom report template”](#) section on page 4–2 for detailed instructions on creating a report template.

Each of the report templates provided with Fathom defines reports based on one resource (with the exception of the AppServer and WebSpeed reports, which can report on multiple resources). When you modify the Fathom-provided report templates or create your own templates, you can choose to generate a report based on multiple resources and even resources of different types (database and system CPU in one report, for example).

You can modify or remove any of the individual templates you see listed on the **Create Report** page. This flexibility allows you to set up a **Fathom Reports** page that includes only those reports relevant to your business needs.



To delete a report template:

1. Expand the **Report Templates** category in the report list frame.
2. Click the report template name. The **Report Template Summary** page appears.
3. Click **Delete**. The template no longer appears on the **Create Report** page or in the list frame's list of templates.

Historical report descriptions

When you click the **Create Report** link on the **Fathom Reports** home page, the **Create Report** page appears with a list of report templates divided into the following menu groups:

- AppServer™ reports.
- Database reports.
- General reports.
- System reports.
- WebSpeed® reports.

Note: Fathom supports management of the WebSpeed® Transaction Server product. Throughout this guide, WebSpeed Transaction Server and WebSpeed are used interchangeably.

Any report templates or menu groups you create will also show on the **Create Report** page.

Table 2–1 lists and describes each Fathom-provided report.

Table 2–1: Fathom-provided reports

(1 of 12)

Report name	Template name	Description
AppServer Application Profile	appServerProfile	Provides information on procedures run by the broker, including: how many times the procedure ran, the average and maximum durations of each request, the number of successful requests, the number of errors, and the number of times each request quit and was stopped. The AppServer Application Profile report retrieves its data from the OE_ActASProc, OE_ActBrk, OE_ActSrv, and OE_APPService tables in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports*(2 of 12)*

Report name	Template name	Description
AppServer Performance	appServerPerformance	Provides performance information on broker, client, and server activity. Broker activity information returned includes: number of complete requests, number of queued requests, percentage of queued requests, average and maximum request duration, average and maximum CPU use, and average and maximum memory use. Client activity information returned includes: average and maximum number of active clients, and average and maximum number of client requests. Server activity information returned includes: average and maximum CPU pool use, average and maximum memory pool use, average and maximum number of busy servers, average and maximum number of running servers, and average and maximum number of locked servers. The AppServer Performance report retrieves its data from the OE_ActBrk, OE_ActSrv, OE_APPService, and Sys_Process tables in the FathomTrendDatabase.
Database After-imaging	dbAfterImage	Provides performance details for after-imaging, including: read and write activity, full and partial buffer activity, and AIW write status. The Database After-imaging report retrieves its data from the Db_ActLog in the FathomTrendDatabase.
Database Area Status	dbAreaStatus	Provides trend status for each area within a database. Included in this report is information about total blocks, the high water mark, free blocks, available space (in blocks), and available space as a percentage of area. The Database Area Status report retrieves its data from the DB_AreaStatus table in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports*(3 of 12)*

Report name	Template name	Description
Database Before-imaging	dbBeforeImage	Provides performance details for before-imaging, including: read and write activity; wait activity; full, partial, and empty buffer activity; and BIW statistics. This report also helps you determine the health of your BI subsystem by indicating increases in the amount of BI writes (which can indicate the growth of an application or questionable application design). The Database Before-Imaging report retrieves its data from the Db_ActLog and Db_ActIOType tables in the FathomTrendDatabase.
Database Buffer I/O	dbMemory	Provides details about memory buffer usages for all buffers (database, BI, and AI). The information provided in the Database Memory Usage report helps you determine the proper use of OpenEdge memory on your machine. This report retrieves its data from the Db_ActBuf and Db_ActLog tables in the FathomTrendDatabase.
Database Checkpointing	dbCheckpoint	Provides performance details for checkpoints. The Database Checkpointing report retrieves its data from the Db_Checkpoint table in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports (4 of 12)

Report name	Template name	Description
Database Details	dbDetail	Provides information on all database tables and includes fields from almost every table, depending on relevance. Use this report to gather cross-functional information and to understand the relationship between different aspects of an OpenEdge database. The Database Details report retrieves information from the following FathomTrendDatabase tables: Db_ActBuf, Db_ActRec, Db_ActLog, Db_ActAPW, Db_ActIdx, Db_ActLock, Db_ActSum, and Db_ActIOType.
Database Disk Information	dbDisk	Provides performance details for database reads and writes to disk, including: database read and write activity, BI file, AI file, and index reads and writes. This report helps you track the growth of your database and predict when you need more throughput. The Database Disk Information report retrieves its data from the Db_ActSum, Db_ActAPW, and Db_ActIOType tables in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports

(5 of 12)

Report name	Template name	Description
Database Index Analysis	dbIDXAnalysis	<p>Provides analysis of index information gathered from the execution of the database analysis job. Information included in this report includes the maximum, minimum, and average of the following: number of blocks in the index, number of bytes in the index, utilization percentage of the block space, and number of index levels in the index. The Database Index Analysis report retrieves its information from the Db_IdxAnalysis table.</p> <p>Note: In order for the Database Index Analysis report to display data, the Database Analysis job must first be run against the desired database. For more information on the Database Analysis job, see the <i>Database Management Guide</i>.</p>
Database Index Usage	dbIndexStat	<p>Provides performance details for each index in the schema, including the number of updates, creates, deletes, and blocks returned to the free chain. By showing which of your indexes are most active, this report helps you determine the structure of your database areas and where to place indexes. Combining the information presented in this report with that presented in the Database Table Usage report gives you a complete picture of database activity. The Database Index Utilization report retrieves its data from the Db_IndexStat table in the FathomTrendDatabase.</p> <p>Note: Fathom reports on a default of 50 tables. Use the startup parameter <code>-idxrange size</code> to increase this number, if necessary. This parameter must be set on the production database when it is started.</p>

Table 2–1: Fathom-provided reports*(6 of 12)*

Report name	Template name	Description
Database Locking	dbLocks	Provides performance details for record locking, based on the categories of requests, finds, locks, and waits. Each of the four categories contains information about exclusive, record, share, and upgrade locks. The Database Locking report retrieves its data from the Db_ActLock table in the FathomTrendDatabase.
Database Record Information	dbRecord	Provides performance details for record locking, including information on increased record update activity, increased fragment activity, and increased record deletion. This report groups information into three categories: record, fragment, and bytes. Each category contains read, update, create, and delete fields. The Database Record Information report retrieves its data from the Db_ActRec table in the FathomTrendDatabase.
Database Server Activity	dbServer	Provides detailed information about client activity on servers, including I/O for the server in bytes, records, and blocks. This report helps you assess the performance of your servers by showing how balanced or unbalanced the server activity is. The Database Server Activity report retrieves its information from the Db_ActServer table in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports

(7 of 12)

Report name	Template name	Description
Database Summary	dbSummary	Provides a summary of performance information for several subsections of a database, including: logical and physical I/O, buffer activity, BI file activity, AI file activity, page writer activity, index I/O, table I/O, and record activity. The Database Summary report retrieves its data from the following FathomTrendDatabase tables: Db_ActBuf, Db_ActSum, Db_ActRec, Db_ActLog, Db_ActAPW, Db_ActIdx, and Db_ActIOType.
Database Table Analysis	dbTabAnalysis	<p>Provides analysis of table information gathered from the execution of the database analysis job. This reports includes the maximum, minimum, and average for the following: record counts, the number of bytes in the table, the number of record fragments in the table, and the scatter factor. The Database Table Analysis report retrieves its data from the Db_TabAnalysis table.</p> <p>Note: In order for the Database Table Analysis report to display data, the Database Analysis job must first be run against the desired database. For more information on the Database Analysis job, see the <i>Database Management Guide</i>.</p>

Table 2–1: Fathom-provided reports*(8 of 12)*

Report name	Template name	Description
Database Table Usage	dbTableStat	<p>Provides performance details for each table in the schema, including information related to the number of table updates, creates, and deletes. This report tells you which tables are the most active, allowing you to better structure your database areas by moving tables. The Database Table Utilization report retrieves its data from the Db_TableStat table in the FathomTrendDatabase.</p> <p>Note: Fathom reports on a default of 50 tables. Use the startup parameter <code>-tablerangesize</code> to increase this number, if necessary. This parameter must be set on the production database when it is started.</p>
Resource Alert Detail	alertIndividual	<p>Provides summary and detail information for alerts specific to a resource, including counts of the different types of alerts that have occurred, details of all severe alerts, and data entered when the alert was cleared. The Resource Alert Summary report retrieves its data from the Cf_Alert_Detail table in the FathomTrendDatabase.</p>
Resource Alert Summary	alertGeneral	<p>Provides summary information about a site's alerts, including information sorted by the resource name. This report shows which of a site's resources cause the most problems. The Resource Alert Summary report retrieves its data from the Cf_Alert_Detail table in the FathomTrendDatabase.</p>

Table 2–1: Fathom-provided reports*(9 of 12)*

Report name	Template name	Description
Resource Status Detail	statusDetail	Provides a detail of status states for a resource. This report provides information that includes a category for each status change reported in the time frame chosen. Also, there are specific details for each status change within the database. The Resource Status Detail report retrieves its information from the Cf_Status table.
Resource Status Summary	statusSummary	Provides a summary of status states for all resources. This report provides information that includes a category for each status reported in the time frame chosen. The Resource Status Summary report retrieves its data from the Cf_Status table.
CPU Summary	systemCPU	<p>Provides a summary of the defined CPU resource's performance. This report helps you track how well the CPU works, the different areas it works in, and how often it works in each area. Use the information from this report to identify growth in CPU usage over time. The CPU Summary report retrieves its data from the Sys_CPU table in the FathomTrendDatabase.</p> <p>Note: If run for a multi-CPU system, this report returns information based on all the CPUs together. For further information on individual CPUs, refer to the appropriate vendor's information.</p>

Table 2–1: Fathom-provided reports*(10 of 12)*

Report name	Template name	Description
File Summary	fileSummary	Provides size information about the defined file monitor. This report returns the average of the file size over the period being reported. Use this report to check the size of ASCII-based text files. This report does not typically deal with variable-length extents. The File Size Summary report retrieves its information from the Sys_FileSize table in the FathomTrendDatabase.
Network Activity	network	Provides status summaries for the defined network resource, including the count of statuses received during the report period as well as the average response time of tests. Use the information in this report to monitor and flag potential network bottlenecks.
System Disk Device Activity	systemDisk	Provides performance information for defined disk devices, including the relationship between disk reads and writes and the average queue length of disk activity. Use this report to identify disk bottlenecks and a decline in disk performance. The System Disk Device Activity report retrieves its data from the Sys_Dev table in the FathomTrendDatabase.
System Filesystem Usage	systemFileSystem	Provides usage information for defined local or remote file systems, including how fast disk space grows from all software (including OpenEdge). Use this report to debug actual or potential file space problems where OpenEdge temporary files reside. The System Filesystem Usage report retrieves its data from the Sys_Filesys table in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports*(11 of 12)*

Report name	Template name	Description
System Memory Summary	systemMemory	Provides a summary of the defined memory resource's performance. By detailing how much memory is used and how much is available, this report helps you identify growth in memory consumption. Combining the information in this report with that of the Database Buffer I/O report provides views of memory from the standpoint of both the system and OpenEdge. The System Memory Summary report retrieves this information from the Sys_Mem table in the FathomTrendDatabase.
WebSpeed Application Profile	webSpeedProfile	Provides information on procedures run by the broker, including: how many times the procedure ran, the average and maximum durations of each request, the number of successful requests, the number of errors, and the number of times each request quit and was stopped. The WebSpeed Application Profile report retrieves its data from the OE_ActWSProc, OE_ActBrk, OE_ActSrv, and OE_APPService tables in the FathomTrendDatabase.

Table 2–1: Fathom-provided reports (12 of 12)

Report name	Template name	Description
WebSpeed Performance	webSpeedPerformance	Provides performance information on broker, client, and agent activity. Broker activity information returned includes number of complete requests, number of queued requests, percentage of queued requests, average and maximum request duration, average and maximum CPU use, and average and maximum memory use. Client activity information returned includes average and maximum number of active clients and average and maximum number of client requests. Server activity information returned includes average and maximum CPU pool use, average and maximum memory pool use, average and maximum number of busy servers, average and maximum number of running servers, and average and maximum number of locked servers. The WebSpeed Performance report retrieves its data from the OE_ActBrk, OE_ActSrv, OE_APPService, and Sys_Process tables in the FathomTrendDatabase.

For more information about FathomTrendDatabase tables, see the [FathomTrendDatabase Guide and Reference](#).

Customizing graphical output

Each historical report is designed to display data in both graphical and tabular formats. You can customize the data displayed in the HTML graph report output. To do so, you must set the proper environment variable and identify the specific report fields or column headings that you want to include in the graph output.

See the [“Graphical output environment variables”](#) section on page 2–15 for more information about the two environment variables that affect graphical output. See the [“Report output field and column headings”](#) section on page 2–20 for the field and column headings.

Graphical output environment variables

There are two environment variables that control how graphs display in HTML report output.

- **GRAPH1COLUMNS** — For use with report output associated with either a single resource or multiple resources:
 - For instances reporting on single resources, this variable controls the number of columns displayed in the graph. For example, most historical reports are designed to display graphical data in HTML output associated with report-related default fields. However, by adding the variable GRAPH1COLUMNS followed by other fields associated with a report, you can customize the graphic report output. See the [“Single resource output”](#) section on page 2–16 for an example.
 - For instances reporting on multiple resources, GRAPH1COLUMNS controls the number of graphs displayed. The output will contain one graph for each output category you indicate. Enter the names of the output categories in quotes.
- **fathomResourcesPerGraph** — For use with report instances that report on multiple resources. This variable controls the number of resources displayed in each graph. The default number of resources displayed is five.

Note: Only AppServer and WebSpeed reports allow you to report on multiple resources.

Single resource output

Figure 2–1 shows an example of the type of graph that displays when you run the CPU Summary report without GRAPH1COLUMNS defined. In instances when you do not choose to define environment variables in the **Environment** field on the **Create Report** page, Fathom creates a report graph using the values associated with a report type’s default fields.

The graph report output example in Figure 2–1 uses the values associated with the CPU Summary report’s default fields.

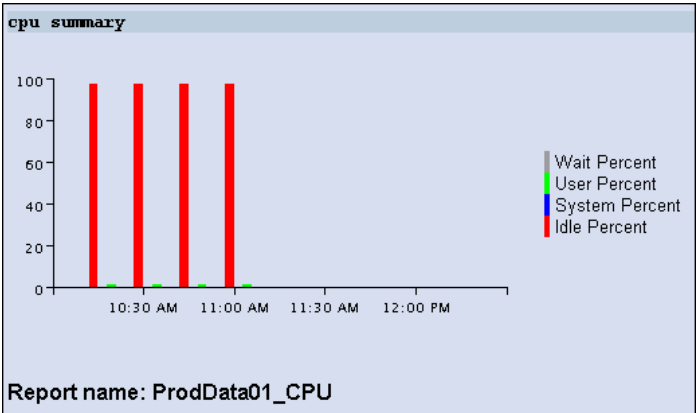


Figure 2–1: CPU Summary output

In contrast, the following code, entered in the **Environment** field on the **Create Report** page, shows how you can customize the graph output of the report by defining fields:

```
GRAPH1COLUMNS=CPU_Idle,CPU_System,CPU_Wait
```

When the CPU Summary report is run with this code, the data associated with the specified fields appears. [Figure 2–2](#) shows this customized output.

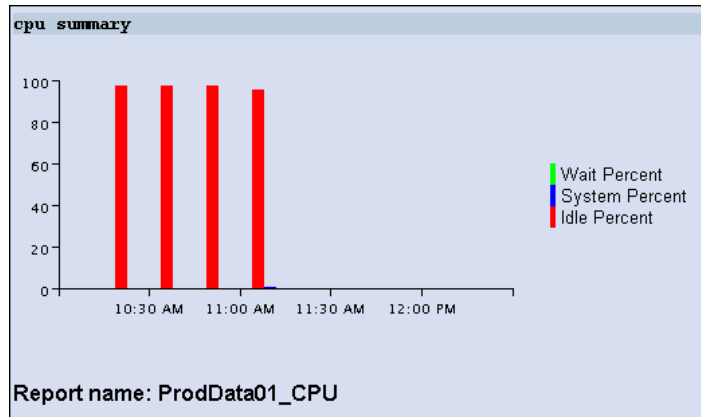


Figure 2–2: Customized graph output for CPU Summary

See the [“Report output field and column headings”](#) section on page 2–20 for a complete list of the column and field headings available for each report template.

Multiple resources output

[Figure 2–3](#) shows an example of the type of graph that displays when you run the AppServer Application Profile report without the GRAPHICOLUMNS or the fathomResourcesPerGraph defined. In instances when you do not choose to define environment variables in the **Environment** field in the **Create Report** page, Fathom creates a report graph using the values associated with a report type’s default fields.

The graph report output example in [Figure 2–3](#) uses the values associated with the AppServer Application Profile report’s default fields.

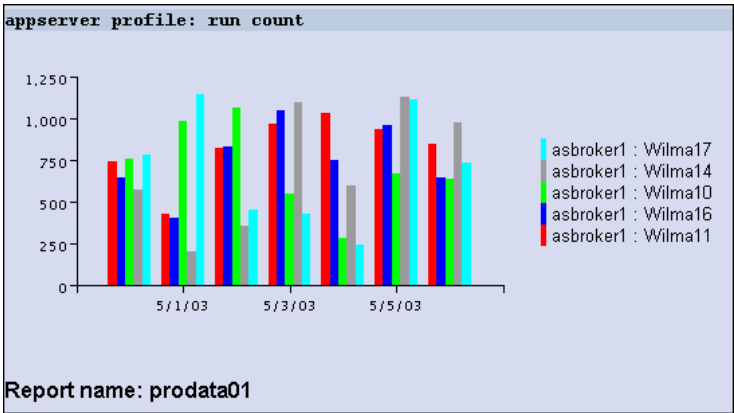


Figure 2–3: AppServer Application Profile output

In contrast, the following code, entered in the **Environment** field on the **Create Reports** page, shows how you can customize the graph output of the report by defining:

- Column headings for GRAHP1COLUMNS.
- Number of resources to display per graph for fathomResourcesPerGraph.

When the AppServer Application Profile report is run with the following code, only the column heading-related data with the specified number of resources per graph appear:

```
GRAPH1COLUMNS="Run Count,Request Duration (avg),Return Code Success"
fathomResourcesPerGraph="7"
```


Figure 2–4, Figure 2–5, and Figure 2–6 show this customized output.

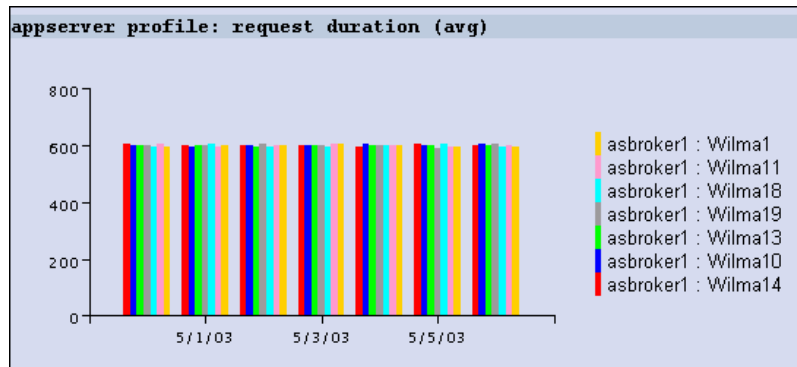


Figure 2–4: Request duration graph

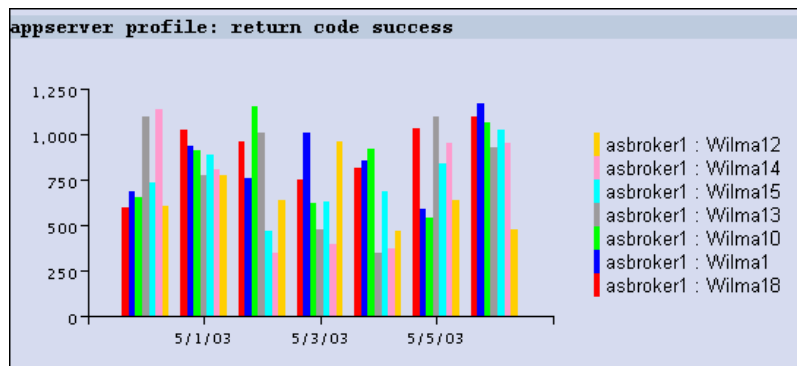


Figure 2–5: Return code success graph

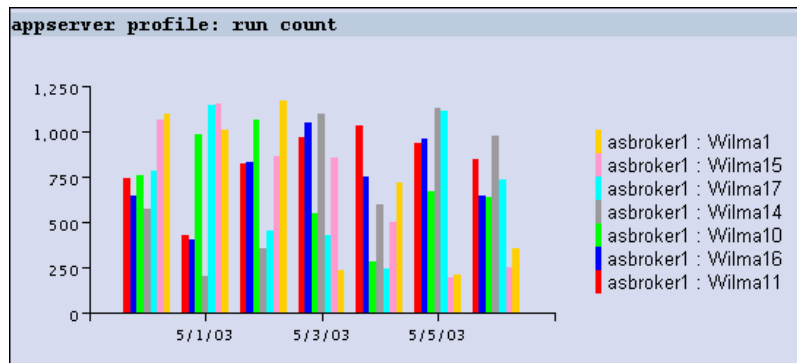


Figure 2–6: Run count graph

Report output field and column headings

This section identifies the fields or column headings associated with each historical report template.

Note: Fields and column headings in this section that are identified with an asterisk (*) are also the Fathom-supplied defaults associated with each report type.

AppServer Application Profile

Table 2–2 identifies the AppServer Application Profile column headings.

Table 2–2: AppServer Application Profile column headings

Run Count*	Average Request Duration (ms)	Maximum Request Duration (ms)
Return Code Success	Return Code Error	Return Code Quit
Return Code Stop	Sample Count	—

AppServer Performance

Table 2–3, Table 2–4, and Table 2–5 identify the column headings for an AppServer Performance graphical report.

Table 2–3: AppServer Client Activity column headings

Average Active Clients*	Maximum Active Clients	Client Requests
Average Client Requests	Maximum Client Requests	Sample Count

Table 2–4: AppServer Broker Activity column headings

Requests Completed	Requests Queued	Requests Queued %
*Average Request Duration (ms)	Maximum Request Duration (ms)	Average CPU Usage %
Maximum CPU Usage %	Average Memory Usage (k)	Maximum Memory Usage (k)
Sample Count	—	—

Table 2–5: AppServer Activity column headings

Average Pool CPU Usage %	Maximum Pool CPU Usage %	Average Pool Memory Usage % (k)
Maximum Pool Memory Usage (k)	*Average Busy Server Count	Maximum Busy Server Count
Average Busy Server Time (ms)	Average Locked Server Count	Maximum Locked Server Count
Average Locked Server Time (ms)	Sample Count	—

Database After-Imaging

Table 2–6 identifies the column headings for a Database After-Imaging graphical report.

Table 2–6: Database After-Imaging column headings

ActLog_AIBBufWaits	ActLog_AIByteWrites	ActLog_AINoBufAvail
ActLog_AIPartialWrites	ActLog_AIRecWrites	ActLog_AITotWrites*
ActLog_AIWWrites*	—	—

Database Area Status

Table 2–7 identifies the column headings for a Database Area Status graphical report.

Table 2–7: Database Area Status column headings

Sample Count	Total Blocks	Hi Water Mark*
Free Blocks	RM Blocks	Blocks Available*
Pct. Blocks Available	—	—

Database Before-Imaging

Table 2–8 identifies the fields for a Database Before-Imaging graphical report.

Table 2–8: Database Before-Imaging fields

ActLog_BITotReads	ActLog_BITotWrites*	ActLog_BIWWrites*
ActSum_BIReads	ActSum_BIWrites	ActLog_BIBBufWaits
ActLog_BIByteReads	ActLog_BIByteWrites	ActLog_BIEBufWaits
ActLog_BIPartialWrites	ActLog_BIRecReads	ActLog_BIRecWrites

Database Checkpointing

Table 2–9 identifies the column headings for a Database Checkpointing graphical report.

Table 2–9: Database Checkpointing column headings

Sample Count	Checkpoint Length*	Buffer Scanned
Checkpoint Queue	APW Queue	Buffers Flushed*

Database Details

Table 2–10 identifies the fields for a Database Details graphical report.

Table 2–10: Database Details fields

(1 of 2)

ActBuf_Flushed	ActBuf_LogicReads*	ActBuf_LogicWrites*
ActSum_DbReads	ActSum_DbWrites	ActRec_RecRead
ActLog_BITotWrites	ActLog_BIWWrites	ActAPW_APWEnq
ActIOType_IdxReads	ActIOType_IdxWrites	ActAPW_APWQWrites
ActAPW_BufsCkpt	ActAPW_BufsScanned	ActAPW_CkptQWrites
ActAPW_Ckpts	ActAPW_DBWrites	ActAPW_Marked
ActAPW_ScanCycles	ActAPW_ScanWrites	ActAPW_TotDBWrites
ActBuf_Deferred	ActBuf_OSReads	ActBuf_OSWrites
ActIdx_Create	ActIdx_Delete	ActIdx_Find
ActIdx_Free	ActIdx_Remove	ActIdx_Splits
ActLock_CancelReq	ActLock_Downgrade	ActLock_ExclFind
ActLock_ExclLock	ActLock_ExclReq	ActLock_ExclWait
ActLock_RecGetLock	ActLock_RecGetReq	ActLock_RecGetWait
ActLock_ShrFind	ActLock_ShrLock	ActLock_ShrReq
ActLock_ShrWait	ActLock_UpgLock	ActLock_UpgReq
ActLock_UpgWait	ActRec_ByteCreate	ActRec_ByteDel
ActRec_ByteRead	ActRec_ByteUpd	ActRec_FragCreate
ActRec_FragDel	ActRec_FragRead	ActRec_FragUpd
ActRec_RecCreate	ActRec_RecDel	ActRec_RecLock
ActRec_RecUpd	ActRec_RecWait	ActSum_AllocNewRm
ActSum_BytesAlloc	ActSum_Examined	ActSum_FromFree

Table 2–10: Database Details fields*(2 of 2)*

ActSum_FromRm	ActSum_Removed	ActSum_RetFree
ActSum_TakeFree	ActSum_AiWrites	ActSum_BiReads
ActSum_Commits	ActSum_DBAccesses	ActSum_DbExtend
ActSum_Undos	ActLog_AIBBufWaits	ActLog_AIByteWrites
ActLog_AINoBufAvail	ActLog_AiPartialWrites	ActLog_AIRecWrites
ActLog_AITotWrites	ActLog_AIWWrites	ActLog_BIBufWaits
ActLog_BIByteReads	ActLog_BIByteWrites	ActLog_BIEBufWaits
ActLog_BIPartialWrites	ActLog_BIRecReads	ActLog_BIRecWrites
ActLog_BITotReads	ActIOType_AiReads	ActIOType_AiWrites
ActIOType_BiReads	ActIOType_BiWrites	ActIOType_DataReads
ActIOType_DataWrites	—	—

Database Disk Information

[Table 2–11](#) identifies the fields for a Database Disk Information graphical report.

Table 2–11: Database Disk Information fields

ActSum_DbReads	ActSum_DbWrites	ActAPW_DBWrites*
ActAPW_TotDBWrites*	ActSum_DBAccesses	ActSum_DbExtend
ActIOType_AiReads	ActIOType_AiWrites	ActIOType_BiReads
ActIOType_BiWrites	ActIOType_DataReads	ActIOType_DataWrites
ActIOType_IdxReads	ActIOType_IdxWrites	—

Database Index Analysis

Table 2–12 identifies the column headings for a Database Index Analysis graphical report.

Table 2–12: Database Index Analysis column headings

Sample Count	Max Block Count	Min Block Count
Avg Block Count	Max Byte Count	Min Byte Count
Avg Byte Count	Max Util Percent	Min Util Percent
Avg Util Percent*	Max Level Count	Min Level Count
Avg Level Count	—	—

Database Index Usage

Table 2–13 identifies the column headings for a Database Index Usage graphical report.

Table 2–13: Database Index Utilization column headings

Index Reads*	Index Splits	Index Creates
Index Deletes	—	—

Database Locking

Table 2–14 identifies the fields for a Database Locking graphical report.

Table 2–14: Database Locking fields

ActLock_CancelReq	ActLock_Downgrade	ActLock_ExclFind
ActLock_ExclLock	ActLock_ExclReq	ActLock_ExclWait*
ActLock_RecGetLock	ActLock_RecGetReq	ActLock_RecGetWait*
ActLock_ShrFind	ActLock_ShrLock	ActLock_ShrReq
ActLock_ShrWait*	ActLock_UpgLock	ActLock_UpgReq
ActLock_UpgWait*	—	—

Database Buffer I/O

Table 2–15 identifies the fields for a Database Buffer I/O graphical report.

Table 2–15: Database Memory Usage fields

ActBuf_Flushed	ActBuf_LogicReads*	ActBuf_LogicWrites
ActBuf_Deferred	ActBuf_OSReads*	ActLog_AIBBufWaits
ActLog_AINoBufAvail	ActLog_AIPartialWrites	ActLog_BIBBufWaits
ActLog_BIEBPartialWaits	ActLog_BIPartialWrites	—

Database Record Information

Table 2–16 identifies the fields for a Database Record Information graphical report.

Table 2–16: Database Record Information fields

ActRec_RecRead	ActRec_RecCreate*	ActRec_RecDel*
ActRec_ByteRead	ActRec_ByteUpd	ActRec_FragCreate
ActRec_FragDel	ActRec_FragRead	ActRec_FragUpd
ActRec_RecCreate	ActRec_RecDel	ActRec_RecLock*
ActRec_RecUpd*	ActRec_RecWait	ActRec_ByteCreate
ActRec_ByteDel	—	—

Database Server Activity

Table 2–17 identifies the column headings for a Database Server Activity graphical report.

Table 2–17: Database Server Activity column headings

Messages Received	Messages Sent	Bytes Received
Bytes Sent	Records Received*	Records Sent*
Min Users	Max Users	Avg Users

Database Summary

Table 2–18 identifies the fields for a Database Summary graphical report.

Table 2–18: Database Summary fields

ActBuf_Flushed	ActBuf_LogicReads*	ActBuf_LogicWrites*
ActSum_DbReads	ActSum_DbWrites	ActRec_RecRead
ActLog_BITotWrites	ActLog_BIWWrites	ActAPW_BufsCkpt
ActBuf_OSReads	ActBuf_OSWrites	ActIdx_Create
ActIdx_Delete	ActIdx_Find	ActIdx_Free
AdxIdx_Remove	ActIdx_Splits	ActSum_Commits
ActSum_DbAccesses*	ActSum_DbExtend	ActIOType_DataReads
ActIOType_IdxReads	ActIOType_IdxWrites	—

Database Table Analysis

Table 2–19 identifies the column headings for a Database Table Analysis graphical report.

Table 2–19: Database Table Analysis column headings

Sample Count	Max Record Count	Min Record Count
Ave Record Count*	Max # of Bytes	Min # of Bytes
Ave # of Bytes	Max # of Fragments	Min # of Fragments
Ave # of Fragments	Max Scatter Factor	Min Scatter Factor
Ave Scatter Factor	—	—

Database Table Usage

Table 2–20 identifies the column headings for a Database Table Usage graphical report.

Table 2–20: Database Table Usage column headings

Record Reads*	Record Updates*	Record Creates*
Record Deletes*	—	—

CPU Summary

Table 2–21 identifies the fields for a CPU Summary graphical report.

Table 2–21: CPU Summary fields

CPU_User*	CPU_System*	CPU_Wait*
CPU_Idle	—	—

File Summary

Table 2–22 identifies the column headings for a File Summary graphical report.

Table 2–22: File Summary column headings

Sample Count	Average File Size (k)*	Minimum Size (k)
Maximum Size (k)	—	—

Network Activity

Table 2–23 identifies the column headings for a Network Activity graphical report.

Table 2–23: Network Activity column headings

Sample Count	Avg. Response*	—
--------------	----------------	---

System Disk Device Activity

Table 2–24 identifies the column headings for a System Disk Device Activity graphical report.

Table 2–24: System Disk Device Activity column headings

Sample Count	Pct Busy*	Avg Queue
Avg Wait	Avg Serve	Minimum Busy
Maximum Busy	–	–

System Filesystem Usage

Table 2–25 identifies the column headings for a System Filesystem Usage graphical report.

Table 2–25: System Filesystem Usage column headings

Sample Count	Capacity	Pct Used*
Current Available	Maximum Available	Minimum Available

System Memory Summary

Table 2–26 identifies the column headings for a System Memory Summary graphical report.

Table 2–26: System Memory Summary column headings

Max System Memory	Min System Memory	Max Virtual Memory
Min Virtual Memory	Max Free System Memory	Min Free System Memory
Max Free Virtual Memory	Min Free Virtual Memory	Pages In
Pages Out	–	–

WebSpeed Application Profile

[Table 2–27](#) identifies the column headings for a WebSpeed Application Profile graphical report.

Table 2–27: WebSpeed Application Profile column headings

Run Count*	Average Request Duration (ms)	Maximum Request Duration (ms)
Sample Count	—	—

WebSpeed Performance

[Table 2–28](#), [Table 2–29](#), and [Table 2–30](#) identify the column headings for a WebSpeed Performance graphical report.

Table 2–28: WebSpeed Client Activity column headings

Average Active Clients*	Maximum Active Clients	Client Requests
Average Client Requests	Maximum Client Requests	Sample Count

Table 2–29: WebSpeed Broker Activity column headings

Requests Completed	Requests Queued	Requests Queued %
*Average Request Duration (ms)	Maximum Request Duration (ms)	Average CPU Usage %
Maximum CPU Usage %	Average Memory Usage (k)	Maximum Memory Usage (k)
Sample Count	—	—

Table 2–30: WebSpeed Server Activity column headings

Average Pool CPU Usage %	Maximum Pool CPU Usage %	Average Pool Memory Usage (k)
Maximum Pool Memory Usage (k)	*Average Busy Server Count	Maximum Busy Server Count
Average Busy Server Time (ms)	Average Locked Server Count	Maximum Locked Server Count
Average Locked Server Time(ms)	Sample Count	—

Working with Report Instances

Once you create a report instance, you can run the report immediately or schedule it to run at a later time. You can also view information about all scheduled, completed, or running reports. This chapter contains the following sections:

- [Scheduling reports to run](#)
- [Viewing report output](#)
- [Viewing report history](#)
- [Scheduled reports](#)
- [Completed reports](#)
- [Running reports](#)

Scheduling reports to run

A report instance will not run until you schedule it or tell Fathom to run it immediately.



To run a report immediately:


1. If the report’s **Summary** page is not displayed, choose the report from the **Defined Reports** section of the list frame. The **Summary** page appears.
2. From the **Summary** page, click **Run Now**. A message appears acknowledging your report request.

After you run the report, you can view the output by clicking **View Last Output File**. See the “[Viewing report output](#)” section on page 3–3 for more information about viewing report output.



To schedule a report to run at another time:

1. If the report’s **Summary** page is not displayed, choose the report from the **Defined Reports** section of the list frame. The **Summary** page appears.
2. From the **Summary** page, click **Schedule**. The **Report Schedule** page appears, as shown below:

 **Report Schedule: CPU_Summary**

Save

Cancel

Schedule

Frequency

Start Date (dd/mm/yyyy):

28

/

5

/

2004

Start Time:

9

:

45

AM

Repeat interval:

One time

Include days:

☒ Sun

☒ Mon

☒ Tue

☒ Wed

☒ Thu

☒ Fri

☒ Sat

Cron expression:

Help

Enabled? ☒

3. Choose a start date and time.

3–2

4. Determine the repeat interval: **One time**, **At startup**, **Weekly from date**, **Monthly from date**, **Every 5 minutes**, **Every 15 minutes**, **Every 30 minutes**, **Every 60 minutes**, **Daily**, or **Cron expression**.

Use cron-based scheduling when you need a report to run at a specific time, such as according to a business period interval (on the last Friday of the month, or every ten minutes from 4 P.M. to 6 P.M. daily, for example).

You can include from one to five cron expressions (separated by semi-colons) in the **Cron expression** field in a job schedule.

For more details about using cron expressions, click the **Cron expression** field **Help** button or see the chapter on jobs in the *Resource Monitoring Guide*.

5. Select which days to include.
6. Select the **Enabled** check box (if it is not already selected).
7. Click **Save**.

After the report's scheduled run, you can view the output by clicking **View Last Output File** from the **Summary** page.

Viewing report output

After you run a report, you can view:

- The last output file for the report.
- A list of output files for the report.
- The history of the report.



To view the last output file generated for a report:

1. If the report's **Summary** page is not displayed, choose the report from the **Defined Reports** section of the list frame. The **Summary** page appears.
2. Click **View Last Output File**. The report opens.
3. Use the scroll bar to review the output, or choose **File→Print** if you want a hard-copy version.

The details that the report supplies depend on the type of report you are running. [Figure 3–1](#) shows the output from a Database Area Status report.

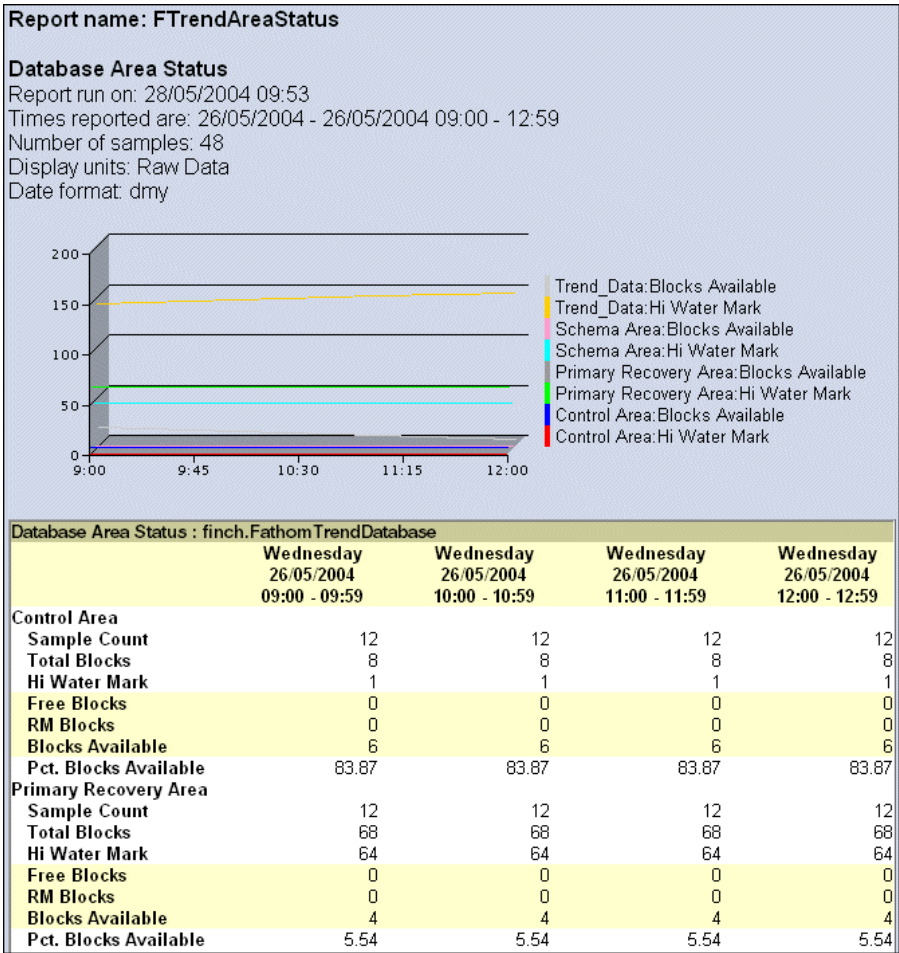


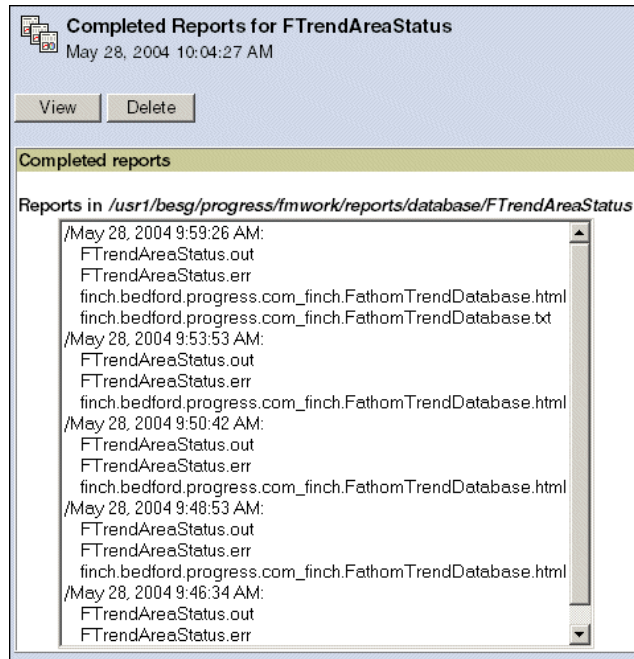
Figure 3–1: Sample Database Area Status report output

Note: Some reports include a category called Change Pct. If the difference between the first set of data and the last set of data is more than 20%, the change percentage is shown in the report. If the change is less than 20%, the column is empty.



To see a list of all output files for a report:

1. If the report's **Summary** page is not displayed, choose the report from the **Defined Reports** section of the list frame. The **Summary** page appears.
2. Click **List of Report Output Files**. The **Completed Reports** page appears with a list of the reports that have been created:



The following table describes the files that appear on the **Completed Reports** page:

Files with this extension	Contain the report's. . .
.err	Errors.
.htm	Output in HTML format.
.log	Debugging information. Fathom creates a debug log file when you select the Generate debug log file check box on the Report Edit page.
.out	Status.
.txt	Output in text format.
.xml	Output in xml format, with debugging information.

The most recently created files appear first.

Note: If a report is scheduled to run frequently, the list of output files may grow large.

3. Select the desired report file and click **View**. The display of report output depends on the report run and whether you chose to view the text or HTML file. For an example of HTML output, see [Figure 3-1](#). An example of text output is shown as follows:

Report Name: FTrendAreaStatus			
Database Area Status			
Report run on: 28/05/2004 09:59			
Times reported are: 26/05/2004 - 26/05/2004 09:00 - 12:59			
Number of samples: 48			
Display units: Raw Data			
Date format: dmy			
Resource name: finch.FathomTrendDatabase			
	Wednesday 26/05/2004 09:00 - 09:59	Wednesday 26/05/2004 10:00 - 10:59	Wednesday 26/05/2004 11:00 - 11:59
Control Area			
Sample Count	12	12	12
Total Blocks	8	8	8
Hi Water Mark	1	1	1
Free Blocks	0	0	0
RM Blocks	0	0	0
Blocks Available	6	6	6
Pct. Blocks Available	83.87	83.87	83.87
Primary Recovery Area			
Sample Count	12	12	12
Total Blocks	68	68	68
Hi Water Mark	64	64	64
Free Blocks	0	0	0
RM Blocks	0	0	0
Blocks Available	4	4	4
Pct. Blocks Available	5.54	5.54	5.54



To delete a report output file:

1. Navigate to the **Completed Reports** page.
2. Select the output file you wish to delete.
3. Click **Delete**.

Viewing report history

Once a report instance has run, you can view summary information about it. Fathom displays the following information for each completed report instance:

- The report name.
- The start time (when the report began running).
- The end time (when the report finished running).
- The exit code.


A report's exit code indicates whether or not the process succeeded. Typically, an exit code of zero indicates success, while a nonzero code indicates an error. For more information on nonzero exit codes, search the log file. If a report running on Windows returns a positive, nonzero code, use the `net helpmsg` command for information.



To view a report's history:

1. If the report's **Summary** page is not displayed, choose the report from the **Defined Reports** section of the list frame. The **Summary** page appears.
2. Click **View Report History**. The **Report History** page appears.
3. In the **Report History query** section, select the period of time.






4. Click **Submit**. The report's history appears on the bottom of the **Report History** page:

 **Report History: FTrendAreaStatus as of: May 28, 2004 10:08:17 AM**

Submit Cancel Purge Selection

Report History query
Select a *Start Date* range for the query (dd/mm/yyyy)

From: 21 / 5 / 2004
To: 28 / 5 / 2004

Report	Name	Start Time	End Time	Exit Code
	FTrendAreaStatus	May 28, 2004 9:46:35 AM	May 28, 2004 9:46:42 AM	0
	FTrendAreaStatus	May 28, 2004 9:48:54 AM	May 28, 2004 9:49:01 AM	0
	FTrendAreaStatus	May 28, 2004 9:50:42 AM	May 28, 2004 9:50:47 AM	0
	FTrendAreaStatus	May 28, 2004 9:53:54 AM	May 28, 2004 9:53:56 AM	0
	FTrendAreaStatus	May 28, 2004 9:59:27 AM	May 28, 2004 9:59:31 AM	0

Note: The steps above show you how to access the history of a single report. For the history of all reports run, click **View Report History** from the **Fathom Reports** page (shown in [Figure 1-1](#)). Continue from [Step 3](#) above. The query returns results for any reports run during the date range.

To remove a report's history, follow the steps above. After submitting the query dates, click **Purge Selection**. Once you purge a selection, you can no longer access the report's history for that time frame.

Scheduled reports

Use the **Scheduled Reports** page to track all scheduled report instances.



To view a list of reports that are scheduled to run:

From the **Fathom Reports** home page, click **View Scheduled Reports**. The **Scheduled Reports** page appears:



Report	Name	Frequency	Next Scheduled Time
	CPU Summary	Weekly from date	Jun 1, 2004 6:00:00 AM
	FTrendAreaStatus	One time	May 28, 2004 4:30:00 PM
	MailAlertDetail	Every 60 minutes	May 28, 2004 11:00:00 AM

Clicking on a report name brings you to the report's **Summary** page.

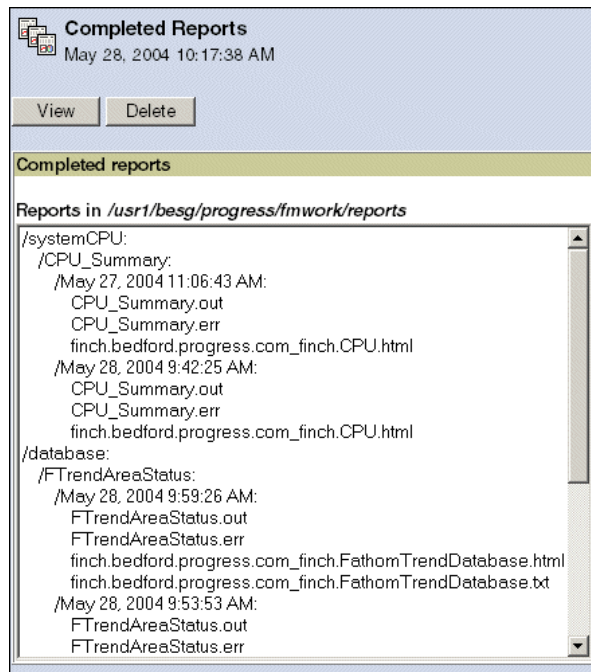
If an expected report instance does not appear on the **Scheduled Reports** page, make sure the **Enabled** box is checked on that report's **Edit** page. Only enabled reports appear in the **Scheduled Reports** list.

Completed reports

Use the **Completed Reports** page to track which reports have run.

- To view reports that have completed running:

Click **View Completed Reports** from the **Fathom Reports** page. A list of reports already run appears:



Note that each report is listed under its corresponding resource type, report name, and occurrence.

- To view a report, select it and click **View**.
- To delete a report, select it and click **Delete**. Click **OK** to confirm the deletion.



Note: Deleting reports from the **Report Viewer** removes the report output file. It does not delete the report's data from the FathomTrendDatabase.

Running reports

The **Running Reports** page displays the following details about each report:

- The report name.
- The ID of the process running the 4GL program.
- The start time (when the report began running).
- The command executed to run the report.
- Any parameters you defined for the command.

► To view a list of reports that are currently running, click **View Running Reports** from the **Fathom Reports** home page. A list of reports appears:

Running Reports				
May 28, 2004 10:25:02 AM				
Name	PID	Start Time	Command	Parameters
 MailAlertDetail	20061	May 28, 2004 10:25:01 AM	/usr1/besg/progress/dlc/bin/_progres	[-db, fathom, -H, localhost, MailAlertDetail,finch.SMTF
 FTrendAreaStatus	20062	May 28, 2004 10:25:01 AM	/usr1/besg/progress/dlc/bin/_progres	[-db, fathom, -H, localhost, FTrendAreaStatus,finch.Fa Area Status,h,]

Clicking on a report name brings you to the report's **Summary** page.

Creating Custom Report Templates

Using Fathom, you can create your own report templates or modify any of the supplied templates. Once you edit a report template (or create your own), you need not re-enter the criteria each time you want to create a report instance.

This chapter explains how to work with custom report templates, as described in the following sections:

- [Creating a custom report template](#)
- [Editing the report template](#)
- [Copying the report template](#)
- [Deleting the report template](#)
- [Importing and exporting report templates](#)

Creating a custom report template

You specify each Fathom report template’s properties and characteristics on two pages. The first template page defines the properties that are related to the type of report. You cannot change these properties in the instances you create from the template. On the second page, you provide default values for the report instances; you can change these values, such as the schedule, for each instance.



To create a report template:

- 1. From the **Fathom Reports** home page, click **Create Report Template**. The first of two **Report Template** pages appears. This page consists of a **Template Properties** box divided into four sections.

The first two sections are shown below:

Name:

Information for the Create Report screen

Menu group:

Existing:

Menu entry:

Menu description:

- 2. Provide the following:
 - a. In the **Name** field, enter the report template name. Note that the name must be unique among the report templates. Note also that spaces are not allowed in the name fields on this page.
 - b. In the **Menu group** field, enter the name of the new menu group or choose an existing menu group in the **Existing** field. (When you choose an existing group, the name automatically appears in the **Menu group** field.) The menu group is the heading under which the report template name appears (for example, **Database Reports**).

- c. In the **Menu entry** field, enter the template name you want to appear on the **Create Trend Report page** (for example, **Database Monthly Report**).
 - d. In the **Menu description** field, enter a brief description of the report template. This is the description that appears on the list of available report templates on the **Create Custom Trend Report** page under the name you specify in [Step c](#).
3. Move to the third section of the **Template Properties** box:

The screenshot shows the third section of the 'Template Properties' dialog box. It contains the following elements:

- Source of eligible resources:** Three radio buttons:
 - ☒ Resources currently defined on the system
 - ☐ Local resources in the trend database
 - ☐ All resources in the trend database
- Resource types:** A list box on the left containing 'Network', 'File', 'AppServer', and 'WebSpeed'. To its right is an 'Available' list box (empty) and a 'Selected' list box (empty). Arrows indicate the flow of resources between these boxes.
- If you choose AppServer or WebSpeed resource types, please choose a performance report or a profile report:** Two radio buttons:
 - ☒ Performance
 - ☐ Profile
- Limit how many resources can be included in the report:** Two spin boxes, both set to '1':
 - Databases: [1]
 - All resources: [1]

Under **Source of eligible resources**, choose one of the following:

- **Resources currently defined on the system** — Only resources, such as databases, defined for a container. This is the default that all Fathom-provided report templates use, unless you modify the template and change it.
- **Local resources in the trend database** — Information obtained from whatever is in the local trend database. This might include resources no longer on your machine; information can be gathered from historical records.

Use this option only if you are trending locally.

- **All resources in the trend database** — This includes local resources as well as resources that are not local but are trending to the trend database. The report instance will display choices such as the container name and the resource name, and selection lists for each site will be added to the page.

4. Under **Resource types**, review the available types: **Database**, **System CPU**, **System Memory**, **System Disk**, **System File system**, **Network**, **File**, **AppServer**, and **WebSpeed**.

Highlight a type, then click **Add** to move it to the **Selected** column. Likewise, to remove a type from the **Selected** column, click **Remove**.

If creating a template for an AppServer or WebSpeed resource, indicate if the report should be a performance or profile report.

5. Under **Limit how many resources can be included in the report**, select how many database resources and how many total resources the report instance is allowed to select. You can choose up to three in each field. (Keep in mind that the **All resources** field includes databases.)
6. Move to the third section of the **Template Properties** box:

Progress 4GL program to run:

Title of generated report:

Output file sub-directory:

- a. In the **Progress 4GL program to run** field, enter the path to the Progress 4GL program to run when this report is scheduled.

When you create a report by using any one of the Fathom report templates, the particular Progress 4GL program that you use to run the report is provided in the `<fathom-install-dir>\src` directory. When you create your own report template, you must provide the name of the Progress 4GL program to run. To run a program that you've written, copy the program into the `<fathom-install-dir>\src` and include the fully qualified path of your program in the **Progress 4GL program to run** field.

For more information about writing programs in the Progress 4GL, see *OpenEdge Development: Programming Interfaces*.

- b. In the **Title of generated report** field, enter the text that you want to use as the title in the report result.

- c. In the **Output file sub-directory** field, enter the location where the generated report output file will be placed when the report is run.

Fathom stores completed reports in a reports subdirectory in your working directory. You do not need to create this directory; Fathom creates it during the installation process. Within the reports subdirectory, there are subdirectories based on each Historical report type. Another set of subdirectories, based on the name of each report, is created within the report type subdirectories. Fathom names reports by their full path, followed by the year, month, day, hour, minute, and second of the report's generation, as well as by the site ID and the resource name.

The default directory for Fathom-provided reports is:

`<fathom-work-dir>\reports\<resource-type>`

7. Click **Save** at the top of the **Report Template** page to save the report template properties.

The second of two **Report Template** pages (the **Report Properties** page) appears with the **Name** field filled:


Name:

DbDiskSummary

Description:

Output formats:

Select formats to create

Available		Selected
Text		HTML

Report format:

Weekly

Report on daily information:

☐

Report Period:

☒ Report for the previous 1 weeks, ☒ including the day the report is run

☐ Report for particular weeks (dd/mm/yyyy)

From:

27

/

5

/

2004

To:

2

/

6

/

2004

Time period within the day to include in the report:

☒ Full day (24 hours)

☐ Partial day

From:

1

:

45

PM

To:

1

:

45

PM

Display units:

raw data

Environment

name=value pairs

Account information

User name:

Group:

Password:

4GL client parameters:

Generate debug log file?

☐

8. Specify the following information:

- **Description** — A description of the template.
- **Output Formats** — Select whether you want the report's output in text, HTML, or both.
- **Report Format** — Select the format for your report: **Hourly**, **Daily**, **Weekly**, **Monthly**. To break the report display into additional columns, select the **Report on** check box.
- **Report period** — Choose a previous number of days or specify a block of days by choosing the start date and end date.
- **Time period** — Choose either full day or a block of time.
- **Display units** — Choose the period of time, such as per second, per minute, per hour, per transaction, raw data, per record.
- **Environment name** — Enter any environment variables. Available environment variables depend on the type of report you are creating and your environment. For a list of environment variables available for the report, run the report with the **Generate debug log file** option on. The debug log file lists all environment variables and, if applicable, their values. Environment variables are preceded by **env** in the log file.

For a detailed explanation about environment variables, see the chapter on jobs in the [*Resource Monitoring Guide*](#).

- **User name** — Enter your user name. Providing this information is optional; you can also run the report using another user's name. If you do not supply a name, the report runs under the account given in the AdminServer.
- **Password** — Enter your password (optional; required only if you also enter a user name).
- **4GL client parameters** — List any other client parameters you want to pass to the 4GL program that produces the report output.

- **Generate debug log file** — Select the check box if you want to create debug log files; otherwise, leave the check box cleared. Creating a debug log file allows you to examine the report's environment variables. When viewing the debug log file, lines beginning with **env** show the names and values of applicable environment variables.

Note: See the “[Report instances](#)” section on page 1–4 for details about entering information into the **Report Properties** page.

9. Click **Save**. The **Report Template Summary** page appears.

You can now edit or copy the template's characteristics, delete the template, or create a report instance to run based on the template.

Once you create a report instance from a report template, the two are no longer tied together. You can modify the characteristics of a report instance without affecting the template and you can update the template without affecting the characteristics of a report instance you have already created.

Editing the report template

Once you create a report template, you can edit it.



To edit a report template:

1. From the **Report Summary** page, click **Edit**. The first template page appears.
2. Make whatever edits you want and click **Save**. The second template page appears.
3. Make your edits and click **Save**. The **Report Summary** page appears, reflecting the changes you have made.

Copying the report template

You can copy the report template and use it as the basis for another template.



To copy a report template:

1. From the **Report Summary** page, click **Copy**. The first template page appears.
2. Enter a unique name and a unique menu entry in the fields provided; then click **Save**.

Deleting the report template

After creating a report template, you may decide to delete it.



To delete a report template:

1. From the **Report Summary** page, click **Delete**. A message appears asking you to confirm that you want to delete the template.
2. Click **OK** to confirm the deletion.

Importing and exporting report templates

You can either import report templates into your own environment or export them to another environment.

For detailed information about importing and exporting templates, see the [Resource Monitoring Guide](#).

Real-time Reports

Real-time reports receive their information directly from resources. Because these reports are real-time, the data they contain represent the state of your system at the time of the report's generation. This chapter contains the following sections:

- [Introduction](#)
- [System Information report](#)
- [System Activity report](#)
- [Open Alert Detail report](#)
- [Hotspot report](#)
- [Database Summary report](#)
- [Open Alert Summary report](#)

Introduction

To access real-time reports, expand the **Realtime Reports** category of the **Reports** list frame, as shown in [Figure 5–1](#).

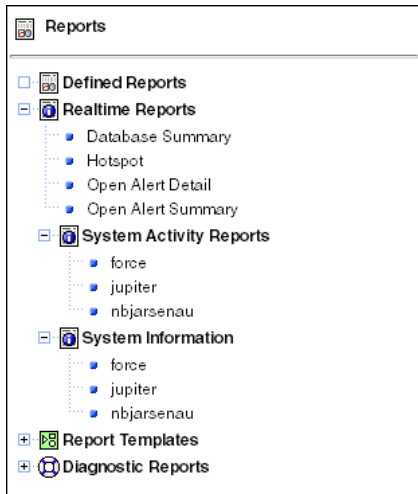


Figure 5–1: Real-time reports

You can run the following real-time reports:

- **Database Summary report** — Displays a summary report of all databases.
- **Hotspot report** — Displays a report of all resources with open alerts.
- **Open Alert Detail report** — Displays a detailed report of all open alerts.
- **Open Alert Summary report** — Displays a summary report of all open alerts.
- **System Activity report** — Displays system performance and resource utilization details identified by container.
- **System Information report** — Displays system and operating system information details identified by container.

The following sections describe the contents of each type of report.

System Information report

The System Information report displays the information shown in [Table 5–1](#).

Table 5–1: System Information report details

Category	Detail
Host information	Name of the host machine. IP address for the host machine. Host’s system time. Host’s system up-time.
Operating system	Operating system name. Operating system version.
Fathom	Fathom version number. Fathom install directory. Fathom work directory. Fathom report directory. Fathom up-time.
Progress	Progress version. Progress install directory.
Java™	Java vendor. Java version. Java classpath.
Paths	Library path. System path.

System Activity report

The System Activity report displays the information shown in [Table 5–2](#).

Table 5–2: System Activity report details

Category	Details
Host information	Name of the host machine. Operating system version. IP address. System up-time.
CPU utilization	Percentage of CPU that is busy. Percentage of CPU being used. Percentage of CPU kernel being used. Percentage of CPU wait I/O.
Memory utilization	Total system memory use. Total swap memory use. Pages inputs. Amount of system free. Amount of swap free. Pages outputs.

Open Alert Detail report

The Open Alert Detail report displays the following alert statistics:

- Fathom up-time.
- Most recent alert.
- Worst-case severity.
- Number of open alerts.
- Number of unseen alerts.
- Number of open alerts from last hour.
- Number of open alerts from last 24 hours.
- Number of monitored resources.
- Number of resources with alerts.
- Percentage of resources with alerts.
- Number of internal alerts.

Hotspot report

The Hotspot report displays the following information for each resource that is a hot spot:

- Last date and time of the alert.
- Name of the alert.
- Severity of the alert.
- Count of the alert.

Database Summary report

The Database Summary report displays the following information:

- Overall database statistics, including:
 - Total number of databases.
 - Number of running databases.
 - Number of monitored databases.
 - Number of databases with alerts.
 - Percentage of databases with alerts.
- Statistics for each database are listed separately and include:
 - Database location.
 - Database status.
 - Monitoring agent status.
 - Polling status.
 - Time in polling status.
 - Number of alerts.

Open Alert Summary report

The Open Alert Summary report displays the following alert statistics:

- Fathom up-time.
- Date and time of most recent alert.
- Worst case severity.
- Number of open alerts.
- Number of unseen alerts.
- Number of open alerts from last hour.
- Number of open alerts from last 24 hours.
- Number of monitored resources.
- Number of resources with alerts.
- Percentage of resources with alerts.
- Number of internal alerts.

The Open Alert Summary report also lists the following for each open alert:

- Last date and time of the alert.
- Container in which the monitored resource resides.
- Monitored resource.
- Name of the alert.
- Severity of the alert.
- Count of the alert.

Fathom Diagnostic Reports


Fathom Diagnostic reports can only be accessed through the list frame. They provide information to help you and technical support debug Fathom problems. The following sections detail the diagnostic tools:

- [Viewing Fathom log files](#)
- [Fathom Task Scheduler](#)
- [Fathom Work Scheduler](#)

Viewing Fathom log files

From the **Fathom Reports** list frame, you can view the Fathom log file (admserv.log).

- ▶ To access the log file, expand the **Fathom Diagnostics** category and click the **Fathom Log File** link. The log file appears:

**File: admserv.log**
Fathom Log File
May 28, 2004 10:52:34 AM

FirstPriorNextLastReload

Go To

Show: 20Overlap: 2

Display: ☒ Ascending ☐ Descending

admserv.log log file summary

Size of log: 72.09 KB
Lines in log: 598
Display start line: 150
% of log at start line: 25.1 %
Log file status: unchanged

150	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin UBPropMgrPlugin. (7434
151	[5/24/04 3:43:37 PM]	[1]	[AdminServer]	Admin server initialization completed.
152	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin UBPropMgrPlugin. (7435)
153	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin SystemPlugIn. (7434)
154	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin SystemPlugIn. (7435)
155	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin Fathom. (7434)
156	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin Fathom. (7435)
157	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin DatabaseAgent. (7434)
158	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin DatabaseAgent. (7435)
159	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin ManagementPlugin. (743
160	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin ManagementPlugin. (7435
161	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin SMDatabasePlugin. (743
162	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin SMDatabasePlugin. (7435
163	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin DatabasePlugin. (7434)
164	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin DatabasePlugin. (7435)
165	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin UBrokerPlugin-WebSpeed
166	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin UBrokerPlugin-WebSpeed.
167	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin UBrokerPlugin-AppServe
168	[5/24/04 3:43:37 PM]	[3]	[AdminServer]	Started plugin UBrokerPlugin-AppServer
169	[5/24/04 3:43:37 PM]	[2]	[AdminServer]	Starting plugin AdapterPlugin-SonicMQA

A summary box provides these details: size of file, lines in file, display start line, percentage of log at start line, and file status.

You work with the file as follows:

- Click **First** to go to the beginning of the file.
- Click **Prior** to see the same number of entries preceding the ones you are viewing. For example, if you are currently viewing 20 entries and you click **Prior**, the preceding 20 entries appear.

- Click **Next** to see the same number of entries following those you are viewing. For example, if you are currently viewing 20 entries and you click **Next**, the following 20 entries appear.
- Click **Last** to see the final entries in the log file.
- Click **Reload** to refresh the log file.
- To go to a particular entry in the file, type the line number in the **Go To** field, and then click **Go To**.
- To specify how many entries you want to see at one time, type the number in the **Show** field. You can also specify how many entries can overlap in the **Overlap** field.
- Choose either **Ascending** or **Descending** to specify the sort order of the log file.

Fathom Task Scheduler

The **Task Scheduler** page is provided for Fathom diagnostic purposes. If you encounter problems with Fathom jobs or reports, Technical Support will use the information provided by the Task Scheduler when debugging. [Figure 6–1](#) shows a sample **Task Scheduler** page.


Fathom Task Scheduler Diagnostics						
						
Schedule	Resource	Type	State	Next Run	Run Count	Triggers
finch.CPU_Summary	CPU_Summary	Report	disabled	Jun 1, 2004 6:00:00 AM	0	finch.CPU_SummaryTrigger1
finch.FTrendAreaStatus	FTrendAreaStatus	Report	disabled	no schedule	0	
finch.MailAlertDetail	MailAlertDetail	Report	scheduled	May 28, 2004 11:25:00 AM	0	finch.MailAlertDetailTrigger1
finch.Test	Test	Report	disabled	no schedule	0	
finch.Is	Is	Job	disabled	no schedule	0	
Trigger	Schedule	State	Previous Run	Next Run		
finch.CPU_SummaryTrigger1	finch.CPU_Summary	default	no previous run	Jun 1, 2004 6:00:00 AM		
finch.MailAlertDetailTrigger1	finch.MailAlertDetail	default	no previous run	May 28, 2004 11:25:00 AM		

Figure 6–1: Sample Task Scheduler page

Table 6–1 explains the contents that appear on the **Task Scheduler** page.

Table 6–1: Task Scheduler Diagnostics

Table	Column heading	Description
Schedule		Internal name of the schedule.
	Resource	Owning job or report resource name.
	Type	Type of task (job or report).
	State	State of the task (disabled or scheduled).
	Next Run	Next scheduled run after the present time.
	Run Count	Number of times the scheduled task has run since Fathom started.
	Triggers	Name of any schedule triggers. (Triggers contain the actual scheduling information).
Trigger		Internal name of the trigger.
	Schedule	Name of the owning schedule (this will match the names listed in the schedule table).
	State	State of the trigger: complete, default, error, none, normal, or paused.
	Previous Run	Time stamp of the trigger’s previous run.
	Next Run	Time the trigger is next scheduled to run.

Note: If the defined tasks are not scheduled to run (that is, they do not have a schedule defined or their schedules are not enabled), only the **Schedule** table appears on the **Task Scheduler** page.

Fathom uses the Quartz Enterprise Job Scheduler to run tasks. The **Restart** button allows you to stop and restart the Quartz Scheduler. Use the **Restart** button only when directed to do so by Technical Support.

Note: For more information about the Quartz Enterprise Job Scheduler, see <https://www.quartz-scheduler.org>.

- To access the Task Scheduler, expand the **Fathom Diagnostics** category and click the **Task Scheduler** link. The **Fathom Task Scheduler Diagnostics** page appears.

Fathom Work Scheduler

The **Work Scheduler** page is provided for Fathom diagnostic purposes. If you encounter problems with Fathom, Technical Support will use the information provided by the Work Scheduler when debugging.

- To access the Work Scheduler, expand the **Fathom Diagnostics** category and click the **Work Scheduler** link. The **Fathom Work Scheduler Diagnostics** page appears:

Fathom Work Scheduler Diagnostics		
Scheduled Work	UnScheduled Work	Trend Work
Scheduled count: 380	Scheduled count: 1	Scheduled count: 290
Drop count: 0	Drop count: 0	Drop count: 0
Thread count: 6	Thread count: 1	Thread count: 1
Thread max: 25	Thread max: 25	Thread max: 1
Threads active: 0	Threads active: 0	Threads active: 0
Queue size: 0	Queue size: 0	Queue size: 0
Queue capacity: 250	Queue capacity: 250	Queue capacity: 1000
Queue threshold: 5	Queue threshold: 0	Queue threshold: 0
Queue highwater mark: 5	Queue highwater mark: 1	Queue highwater mark: 6
Thread Detail	Thread Detail	Thread Detail

For more detail about a work category, click the **Thread Detail** button below it.

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