

HP OpenView ServiceCenter

For the Windows®, HP-UX, AIX, Linux and Solaris Operating Systems

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Report Writer Guide

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This manual's title page contains the following identifying information:

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Introducing Report Writer

Welcome to the HP OpenView ServiceCenter Report Writer Guide. Report Writer is a component of the HP OpenView ServiceCenter toolkit. This guide tells you how to run existing reports and create new reports using Report Writer.

This guide contains information on:

- [Report Writer Basics on page 11](#)
- [Using Report Forms on page 33](#)
- [Using Format Control in Reports on page 51](#)
- [Using Stacked Queries on page 27](#)
- [Running Reports on page 19](#)

What you need to know

To run Report Writer reports, you need a working knowledge of your HP OpenView ServiceCenter system. To create new Report Writer reports you need a working knowledge of your DBMS, HP OpenView ServiceCenter applications and utilities.

- For information about a particular RDBMS, refer to the documentation for your database.
- For database configuration information, refer to the [HP OpenView ServiceCenter Database Conversion and RDBMS Support Guide](#).
- For information about P4, HP OpenView ServiceCenter administration and configuration, and customizing HP OpenView ServiceCenter, refer to the [HP OpenView ServiceCenter Help](#).

Report Writer Basics

Report Writer is a component of the HP OpenView ServiceCenter toolkit. You can use it to query for existing reports, and to create simple or complex reports that you can modify at any time.

Overview

Report Writer enables you to define selection, totaling, and report form criteria to create listings from one or more database files, using one database file as the primary file. The reports may be simple or complex, and can be modified at any time to add complexity or clarify details. Report Writer allows for complete user-definition.

You can base a report on one or more database tables. If you use several tables, you will need to specify a primary file. You can define the data selection and totaling criteria as well as the forms used to display the report.

How do I access a report?

To access an existing a report using Report Writer

- 1 Open Report Writer.
 - Open **ToolKit > Report Writer**.
 - Type `rw` on the HP OpenView ServiceCenter command line and press **Enter**.

The Report Writer Entry form (report.prompt.rw) opens.

- 2 Select one of the following options.
 - Click **Search** or press **Enter** without specifying any values, to pull up a list of existing report records.
 - Type an existing report name or primary file name and click **Search** or press **Enter**, to find reports with that match your search criteria.

If the specified query produces only one record, that report record opens on the Report Maintenance form.

If the specified query selects more than one record, Report Writer displays a list of report records. Scroll through the list. Place your cursor on any record and double-click to select the record.

- 3 Click **Back** to exit Report Writer.

The Report Maintenance form




When you open an existing report, Report Writer displays it in the Report Maintenance form (*report*).










The screenshot shows the 'Report Maintenance' form within the 'ServiceCenter - Report Writer - Peregrine ServiceCenter Client' application. The form is titled 'Report Maintenance' and is divided into three main sections: 'Basic', 'Formats', and 'Select'.
 - **Basic Section:** Contains fields for Name (ocml.category-print), Title (Print Line Item Category Definition), Application, Initial Form, Primary File (ocmlcat), and Query Form. It also includes Author (alan) and Editor (Falcon) information, and a 'Save Report' section with radio buttons for Summary, Detail, Auto, and Manual.
 - **Formats Section:** Contains fields for Header, Subheader, and Detail, and checkboxes for Print Master Header, Print Subheader, and Subheader Page Break.
 - **Select Section:** Contains fields for Primary Query (true), Stacked Queries (status#"alert" or status#"DEADLINE"), and Sort Sequence. It also includes 'Lines Per Page' (60) and 'Width (80/132)' (80) settings.

The fields in this form are described in the HP OpenView ServiceCenter field help.

- To view the help for a field, put your cursor in the field and press **Ctrl+H** or select **Help > Help on Field**.

The available options may vary depending on the preferences you have selected, the record you select, and your permissions.

Button	Option	Description
	Update	Saves changes to the current record.
	Back	Returns to the previously displayed form.
	Delete	Deletes the currently displayed query record.




Button	Option	Description
	Run	Opens the Run Report Exerciser, enabling you to run a report in the foreground or background. It saves new reports and modifications made to existing reports. For more information, see Running Reports on page 19 .
	Previous	Displays the previous report on the list.
	Next	Displays the next report on the list.
	Edit	Opens the Report Maintenance Editing form, enabling you to edit the report.
	View Spooled Reports	Opens the spoolheader form, enabling you to view spooled reports. For more information, see Viewing reports on page 25 .
	Forms Designer	Opens Forms Designer, enabling you to edit the form for the report. For more information, refer to the HP OpenView ServiceCenter Help.
	Create RAD	Opens the RAD Editor, enabling you to create or edit RAD code for the report.
	Maintenance Schedule	Open the form, enabling you to modify the current schedule for this report. For more information, see Viewing and editing report schedules on page 24 .
	Close Application	Closes the current application.

How do I copy or rename reports?

To copy or rename reports

- 1 Access the report.
For this example, open the *ocml.category.print* report.
- 2 Click **Edit** to access the edit functions of Report Writer.
- 3 Open **Options > Copy/Rename**.
The Report Writer Entry form opens with the current name of the report in the **Name** field.
- 4 Type new report's name over the existing name in the **Name** field.
This must be a unique name.

- 5 Type the new report's title in the **Title** field.
- 6 Continue with one of the following options.

Button	Option	Result
	Copy	Creates a copy of the report using a different name. This action copies all definitions from the current record to the new report. If you make any changes to the fields, Report Writer copies the edited version to the new report. Report Writer does not change the existing definition during the copy process. Although reports can share forms, Report Writer does not copy the forms defined in the original report.
	Rename	Renames the current report. This action changes only the report name and report title. All other definitions for the report remain unchanged.
	Cancel	Cancels the procedure and return to the Report Maintenance form. This cancels all actions. The original report remains unchanged.

How do I delete reports?

To delete reports

- 1 Access the report.
For this example, open the *ocml.category.print* report.
- 2 Click **Delete** to delete the report.
The Report Deletion (*report.prompt.delete*) form opens.
- 3 Continue with one of the following Delete options.
 - Select **Abort Del** to end the delete process and exit to the report form.
 - Select **Rpt Record** to delete only the report record.
 - Select **Rpt Fmt** to delete the report record and its report forms.
 - Select **All** to delete the report record, report forms, and all associated application panels. This option is only available for manual reports.

Note: When you delete report forms, be sure that the forms defined in this report are not required in any other report that is used.

How do I create a new report?

To create a new report

- 1 Open **ToolKit > Report Writer**.
– OR –
Type `rw` on a HP OpenView ServiceCenter command line and press **Enter**.
The Report Writer Entry form opens.
- 2 Type a unique name for the new report in the **Report** field. Do not use special characters other than "." or blank spaces.

For this example name the report, `problem.category.report`.

Note: Use the text before the first "." to indicate the primary file for the report. If there are no ".", HP OpenView ServiceCenter does not associate a primary file with the report.

For example, if you name the report `problem.category.report`, HP OpenView ServiceCenter assumes that *problem* is the name of the primary file. If you type `problemcategory` without a separating ".", Report Writer does not make that assumption.

- 3 Type the name of the primary file for the report.
- 4 Click **Create New Report**.

HP OpenView ServiceCenter checks to see if the report form already exists.

- If the report form already exists, Report Writer displays it in the Report Maintenance form to enable you to make changes, or copy data to create a new report.
 - If the report form does not exist, Report Writer displays the new report in the Report Maintenance form and populates the **Name**, **Primary File**, **Header**, and **Details** fields based on the data you entered.
- 5 Fill in the fields and click **OK**. For more information, see [The Report Maintenance form on page 13](#) and [The Report Maintenance Editing form on page 17](#).

Note: To set the width of a report, complete the **Page Width** field of the **Client Printing** structure in the user's operator record. For more information, refer to the HP OpenView ServiceCenter Help.

The maximum width of a report is 132 characters. If the forms defined for a report exceed this limit, Report Writer generates them with the specified width. However, when passing the report to the printer, it truncates them to 132 characters. You can change this setting in the *config* record for the printer used to print the report.

- 6 Create the header and detail forms for the report, if they do not already exist. For more information, see [How do I create or edit report forms?](#) on page 34.

The Report Maintenance Editing form








When you create a new report, Report Writer displays Report Writer displays it in the Report Maintenance form (report.maint).

The screenshot shows the 'Report Maintenance' form in the ServiceCenter application. The form is titled 'Report Maintenance' and is divided into three main sections: Basic, Formats, and Select. The Basic section contains fields for Name, Title, Application, Initial Form, Primary File, and Query Form. The Formats section contains fields for Header, Subhdr, and Detail, along with checkboxes for Print master Header, Print Subheader, and Subheader Page Break. The Select section contains fields for Primary Query, Stacked Queries, and Sort Sequence. The form also includes a 'Save Report' section with radio buttons for Summary, Detail, Auto, and Manual. The bottom right corner shows 'Lines Per Page: 60' and 'Width (80/132): 80'.

The fields in this form are described in the HP OpenView ServiceCenter field help.

- To view the help for a field, put your cursor in the field and press **Ctrl+H** or select **Help > Help on Field**.

The available options may vary depending on the preferences you have selected, the record you select, and your permissions.

Button	Option	Description
	OK	Saves the report and returns you to the previous screen.
	Cancel	Cancels any changes and returns you to the previous screen.
	Run	Opens the Run Report Exerciser, enabling you to run a report in the foreground or background. It saves new reports and modifications made to existing reports. For more information, see Running Reports on page 19 .
	Forms Designer	Opens Forms Designer, enabling you to edit the form of a report. For more information, refer to the HP OpenView ServiceCenter Help.
	Set Query	Opens the Report Query Maintenance screen, enabling you to edit or define the primary query for the selected report. For more information, see Creating Query forms for reports on page 35 .
	Totals	Opens the Report Totals screen, to enable you to define totals parameters. For more information, see Using initial forms with reports on page 41 .
	Copy/Rename	Enables you to create a new record by copying an existing record and giving it a new name. For more information, see How do I copy or rename reports? on page 14 .

Running Reports

Running reports in foreground

You can run your report in the foreground, or schedule it for background processing. When you run a report in the foreground the user's session and terminal are dedicated to the task until the report has completed.

How do I run a report in the foreground?

To run a report in the foreground

- 1 Access the report you want to run. See [How do I access a report?](#) on page 12.
- 2 When you have access to the report form, check the information to make sure it is correct.

Click **Edit** to make any necessary modifications.

- 3 Click **Run** to run the report.

- 4 From the Run Report Exerciser form, you can modify the summary or detail and Primary File Query definitions.
 - a The **Print Report After Spooling** field defaults to true (yes). Change this to false (no).
 - b The **Background** field defaults to true (yes). Change this to false (no).
 - If you leave the default set to true, the report will run at a set time in the background processor.
 - If you change the default setting to false, Report Writer schedules the report to pass to the printer and print immediately after generating it.
 - c Click **View Spooled Reports**. The spoolheader form opens, which enables you to view the report output online.
 - d Click **End** to exit.

Background Processing

When you schedule a report to run in the background, a simulated user session within the HP OpenView ServiceCenter system generates the report.

The default background processor (report), starts when HP OpenView ServiceCenter starts and processes all reports. Report Writer adds information about the report to the schedule table. The report background processor scans the schedule table every 60 seconds (the default scan interval), for any records whose scheduled time has elapsed and whose class is defined as report. When it finds a record, the background processor performs all functions necessary to generate the report to the spool and spoolheader tables. You can schedule reports to run in the future and specify a repeat interval. For example, you can schedule a report to run once every few hours, once a day, or once a week.

How do I run a report in the background?

To schedule a report for background processing

- 1 Access a report, following the procedures discussed in [How do I access a report? on page 12](#). For this example, access the Problem Response Analysis by Assignment report.
- 2 From the Report Maintenance form, ensure that all the information about the report is correct. To modify any information, click **Edit** and make the necessary changes.
- 3 When you are finished editing the report, click **Run** to schedule the report for background processing.

The Run Report Exerciser form opens.

- 4 Click **Summary** to print a summary report.
– OR –
Click **Detail** to print a detailed report.
- 5 If necessary, modify the **Primary File Query** field definitions.
- 6 Select one of the following print options.

Select (check) **Print** to print the report when it finishes spooling. Report Writer prints the report immediately after generating it.

Leave the field blank (unchecked) to only spool the report. The report remains in the spool table until you delete it schedule it to print.

– OR –

Select (check) **Background** to print the report in the background when it finishes spooling. You must schedule the report to run at a particular time (defined in the next screen sequence) in a background processor.

Leave the field blank (unchecked) to print the report in the user's session. To learn more about running reports in a user's session, see [Running reports in foreground on page 19](#).

- 7 Type the number of lines per page in the **Lines Per Page** field that you would like printed on the report. Otherwise, it will default to the original settings in the report form.
- 8 Click **Run**.
The Schedule a Report (*report.prompt.sch1*) form opens.
- 9 Specify all the necessary values to generate the report.
- 10 Click **Schedule**.

HP OpenView ServiceCenter returns you to the Report Maintenance (report) form and displays the following message in the status bar: "Approx. time of exec: (00: 00: 00) for report: (name of report)."

A record in the schedule table now contains all the pertinent run information.

- 11 Press **Enter** to erase the message and return to Ready.
- 12 Open **Option > Maintenance Schedule** to view the schedule record. For more information, see [Viewing and editing report schedules on page 24](#).
- 13 Open **Options > View Spooled Reports** to view the report. For more information, see [How do I view a report online? on page 25](#).

The Run Report Exerciser form

When run a report, Report Writer displays your options in the Run Report Exerciser form (report.prompt.exer).

ServiceCenter - Report Exerciser - Peregrine ServiceCenter Client

File Edit Window Help

db

Main Menu: falcon Report Exerciser

Back Run

Record updated in the report file. Peregrine

ServiceCenter® Run Report Exerciser

Reports Category

Report Name: ocml.category.print

Report Title: Print Line Item Category Definition

Verify this Report information, Modify if necessary

Primary File Query: true

Stacked Queries: status#"alert" or status#"DEADLINE"

Sequence of Report:

Summary
Detail

Background




Lines Per Page:

report.prompt.exer.g

The fields in this form are described in the HP OpenView ServiceCenter field help.

- To view the help for a field, put your cursor in the field and press **Ctrl+H** or select **Help > Help on Field**.

The available options may vary depending on the preferences you have selected, the record you select, and your permissions

Button	Option	Description
	Run	Opens the Run Report Exerciser, enabling you to run a report in the foreground or background. It saves new reports and modifications made to existing reports.
	Back	Returns to the previously displayed form.
	Close Application	Closes the current application.

Viewing and editing report schedules

When you schedule a report for background processing, Report Writer adds it to the schedule table with a scheduled class of report. The schedule definition remains in effect until the background processor processes the report, or until you delete the record from the schedule table.

When the background processor begins processing the report, it changes the **Class** field from report to blank, and updates the **Status** field to application running. While both of these conditions exist, the background processor is actively processing the report.

If you specify a repeat interval in the schedule record, Report Writer uses the same schedule record to re-define when the report should be spooled again. Report Exerciser (the application called by the background processor) takes the original expiration time and adds the repeat interval to it, updates the status to re - scheduled, and changes the application name back to its original setting.

How do I edit report schedules?

To view and edit a report schedule

- 1 Access a report that is currently scheduled to run, following the procedures discussed in [How do I access a report?](#) on page 12.
- 2 Select **Options > Maintenance Schedule**.
- 3 Make any necessary changes and click **Save**.

Viewing reports

When Report Writer generates a report, it adds the report to the spoolheader and spool tables to be printed or available for online viewing. The spoolheader and spool tables link to each other. You cannot modify the contents of the report, but you can adjust the spoolheader table information, if necessary.

After sending a report to the spoolheader and spool tables, Report Writer passes it to the operating system based on parameters you define when scheduling the report to run.

The spoolheader table defines the name of the report, the time the report started and ended spooling, and the operator who scheduled the report to be processed.

The spool table contains the actual report (each page being a separate record within the spool table). You can view the generated reports online.

The fields in the spoolheader and spool forms are described in the HP OpenView ServiceCenter field help.

- To view the help for a field, put your cursor in the field and press **Ctrl+H** or select **Help > Help on Field**.

How do I view a report online?

To view a report online

- 1 Access a report, following the procedures discussed in [How do I access a report? on page 12](#). For this example, access the resolution code listing report.
- 2 Select **Options > View Spooled Reports**.

Place your cursor in the field on which you would like to base your search, and click **Find**.

A record list opens, and a record frame opens to display the item details.

- 3 Click **Refresh** to refresh your view of the report.
- 4 Click **Back** to finish viewing the report.

Using Stacked Queries

Report Writer enables you to define selection, totaling, and report form criteria Using stacked queries for sorting

Report Writer bases report generation on the records retrieved from the primary file by the definition of the primary query or the definition of the stacked queries. Different rules apply to each of these situations and each has advantages and disadvantages over the other.

When should I choose the Primary Query option?

Choose the Primary Query option in the following circumstances:

- A query of *true* is defined and either:
 - No sort fields are defined (Report Writer uses the first key in the key list to retrieve the data records).
 - OR –
 - The sort fields are defined as keys.
 - The primary query and the sort fields reference the same key and the primary query is fully keyed.
- The primary query is fully keyed and no sort fields are defined.

Rules for primary queries

The following rules apply if you run a report with a primary query.

- Report Writer does not create a work table.
- For optimum performance, the primary query must be fully keyed.

- If you define sort fields, Report Writer uses that key (and that key only) to retrieve records from the database.

Note: If the primary query is not fully keyed based on the sort key, turnaround time is degraded.

For example, if a table has the following keys,

- category
- status
- open.time
- assignment
- category

and the sort fields for the report are,

- open.time
- assignment
- category

then the query,
category="network" and status~="closed"
is not fully keyed.

This query is partially keyed. The sort fields force HP OpenView ServiceCenter to use the second key to retrieve the records. Report Writer must expand each record the query retrieves (in this case all records appearing in the key list for the second key) to determine if the data record meets the search requirement.

When should I choose the Stacked Queries option?

Stacked queries are separate and distinct from secondary queries.

Choose the Stacked Queries option in the following circumstances:

- The sorting requirements for a report are not defined as a key in the Primary File's dbdict.
- The primary query does not reference the same key as the sort fields.
- The reporting requirements are such that one fully keyed query cannot be defined.

Rules for stacked queries

The following rules apply if you run a report with stacked queries:

- Repertories creates a work table.
- Any Format Control definitions specified for any forms used in the report are still in effect.
- Any subtotalling requirements defined for the report are still in effect.
- Sort fields do not have to be keys in the primary file's dbdict, but they must exist as fields.
- If you use structure names in one sort field, you must use them in all sort fields.
- Report Writer performs the following validations on all sort fields and logs any errors msglog file.
 - The structure name (if any) referenced in each sort field must be valid.
 - The sort field must belong to the indicated structure (if one is specified).
 - The sort field must be a scalar number, character, logical, or date/time field.

Important: Do not specify other field types. Other types of fields can cause Report Writer to abort the sort.

- Report Writer runs each stacked query against the primary file and stores all records in the sort work table, temporarily.
- Report Writer runs the primary query against the sort work table, and therefore, under normal circumstances, is defined as true.
- The work table is a logical file defined with the following naming standard:
workxxxmmdyyhhmss
where work is a constant, xxx is the name of the primary file and mmdyyhhmss is the date and time that the work table was created.
- The work table is created in physical file 3. Exercise caution when using stacked queries. Stacked queries causes all records from any table to be read and placed in the sort work table.
- The work table, scheduled for deletion 2 hours after its creation, has a class of report and an operator name of sortsubr. Periodically review the dbdict file to ensure that all work tables have in fact been deleted. Be sure to only delete those files that completely follow the naming standards of the sort work tables.

- The sort routine copies all unique keys from the primary file to the sort work table and adds the sort fields as nulls&duplicates keys. All no nulls and no duplicates keys that appear in the keylist before the first unique key are copied to the sort work table. If no unique, no nulls or no duplicates keys exist, the first key in the keylist is copied to the sort work table.
- If the same record is retrieved using different queries and at least one unique key is defined for the sort work table, the duplicate record is not added to the sort work table.
- All error messages issued from the sort routine are logged in the msglog file.
- A message stating how many records were added to the sort work table based on the execution of each stacked query is issued to the msglog file.

Stacked Queries Example

Suppose that the requirements of a report are:

- 1 List all open Incident tickets for the categories of lines, modems, and operator.
- 2 The sort requirements are by category, assignment, status, and open.time.
- 3 The primary file is *probsummary* and the following keys are defined.

```

number
*****
flag
category
subcategory
company
*****
Logical.name
*****
    
```

The specifications for the report would be:

Field	Value
Primary File	probsummary

Field	Value
Primary Query	true
Stacked Queries	category="lines" and status=~"closed" category="modems" and status=~"closed" category="operator" and status=~"closed"

Note: Each of these queries is fully keyed. For optimal performance, define the queries so that HP OpenView ServiceCenter can meet all or most of the query requirements from a key list rather than having to expand records retrieved from a particular key.

The sort fields would be:

```
category
assignment
status
open.time
```

Note: These sort fields are not defined as keys in the primary file, but they will be defined as keys in the temporary file.

If the report ran at 15:00 hours on 02/07/06, the name of the sort work table would be *workprobsummary0207061500*.

Using Report Forms

When you create a report, Report Writer uses several forms to generate it.

This table describes the report forms.

Report Form	Description
Initial	Collects data from the user at runtime.
Header	Displays the report titles or headings. Report Writer prints this form at the top of every page. It usually contains column headings that explain the fields in the detail section of the report.
Detail	Displays the values of database fields. The detail form comprises the input fields, positioned in a columnar arrangement immediately beneath the corresponding headings. The names of the input fields must reflect the exact names used in the respective database tables or variables that are defined through Format Control or Totals Parameters definitions. You can use the same detail form for multiple reports.
Subheader	Displays information immediately preceding detail information extracted from a secondary file. To use subheader reports, you must define a Format Control record for the detail form, to identify the secondary file to use to extract information for the detail form.
Totals	Display summary totals of the data gathered.

How do I create or edit report forms?

To create or edit a report form

- 1 Open an existing report following the instructions in [How do I access a report?](#) on page 12.

For this example, open `problem.category`. This is the report created in [How do I create a new report?](#) on page 16.)

- 2 Click **Edit** to open then editing screen and add any necessary information. The Report Maintenance form opens.
- 3 Edit the fields, based on the following table and the information in [The Report Maintenance form](#) on page 13.

Field	Description
Detail	<code>probsummary.category.detail</code>
Sort Sequence	assignment This example report does not use stacked queries, therefore the sort sequence field must be a key in the primary filename (<code>probsummary</code>) <code>dbdict</code> .
Width (80/132)	80

- 4 When filling in a detail form for a report, you must define the **Input** fields. You may also define **Caption** fields.
- 5 Open **Options > Forms Designer**.

If the **Name** field is blank, Forms Designer opens a prompt where you can name your report.

- a Type the detail form name at the **Name** field.

For this example, type `probsummary.category.detail`.

- b Associate the form with the primary file of the report.

For this example, use `probsummary`.

- 6 Fill in the detail form, following normal Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.
- 7 Click **Add**.

Note: Edit the field names to reflect their dbdict field names. To ensure that the input field names are correct, you can associate the form with the primary file of the report. As you define each input field, check the field name to verify that the field does exist in the primary file.

- 8 Click **Cancel** to close the edit field window.
- 9 Click **OK** or **Back** until you return to the Report Maintenance form.
- 10 Save the newly-created form.

Note: Update the header form if prompted to do so.

- 11 To run this report, follow the instruction in [Running Reports on page 19](#).

Creating Query forms for reports

Report Writer provides the option to define a set of queries for a report, which you can then use as the Primary Query when initially scheduling the report to run. HP OpenView ServiceCenter stores these queries by report name and user ID. You can access them for viewing and updating. These stored queries do not overwrite the original Primary Query defined in the report record.

How do I create Query forms?

To create a query form for a report and establish stored queries

- 1 Open an existing report following the instructions in [How do I access a report? on page 12](#).

For this example, open `problem.category.report`. This is the report created in [How do I create a new report? on page 16](#). The Report form opens.

- 2 Click **Edit** to access the edit functions of Report Writer.
- 3 Specify a **Query Format** name.
If you leave the **Query Format** field blank, Report Writer takes the value in the **Primary File** field as the form to use when creating queries.

For this example leave the this field blank.

- 4 Open **Options > Set Query** to access the query form and begin the process of setting queries for the report. The Report Query Maintenance form opens. For a description of this form, see [The Report Query Maintenance form on page 39](#).
 - If report queries already exist for this report, a record list of those queries opens. From this list, you can select a query for maintenance.
 - If there no report queries exist for this report, HP OpenView ServiceCenter prompts you to add a query.
- 5 Select a record from the list and click Edit to make changes.

For this example, select the *problem.category.report* record.

- a Type the name of the query in the **Name** field and the query into the **Query** field.

For this example, type Alert Status in the **Name** field.

- b Type the query you want to use as the primary query in the **Query** field.

For this example, type the following in the **Query** field.

```
status#"alert" or status#"DEADLINE"
```

- 6 Click **Add** to add the stored query.

- 7 To begin the process of entering a report query, click **Build**.

The associated form opens. For this example, the *probsummary* form opens.

Report Writer displays the form and the search arguments you specify in the **Query** field of the Report Query Maintenance form. For more information, see [Field descriptions for the probsummary form on page 40](#).

- 8 Type data that will satisfy your search. The more fields you fill in, the narrower your search will be.

For this example, type the following in the **Category** field.
=network

- 9 Click **Query Window** to open the query form. You can view and edit the SQL translation of this query in this form.

– OR –

Press **Enter** to translate the query into SQL. HP OpenView ServiceCenter again displays the form with that SQL expression in the **Query** field.

For this example, click **Query Window**.

Note: This routine does not automatically insert the `flag=true` portion of queries, which are normally associated with queries used against Incident Management and Change Management.

You must make the necessary modification to the translated SQL to accommodate these or any other special query needs.

If the query is correct, press **Enter**.

– OR –

If the query shown in the Report Query Maintenance form is not the desired query, make changes as needed and click **Update**.

For this example, the desired query, which will select all records from the *probsummary* file that have a *category* value of *network*, is displayed. Therefore, press Enter.

HP OpenView ServiceCenter displays the translated SQL expression in the **Query** field.

- 10 Specify a unique name for the query.

For this example, type the following in the **Name** field.

```
network
```

- 11 Optionally, you can modify the SQL expression shown in the **Query** field.

For this example, add the following to the expression in the **Query** field.

```
and flag=true
```

- 12 Click **Add** to add a new query record, or click **Update** to update an existing record.

- 13 Click **Back** to get back to the Report Maintenance form.

– OR –

Click **Run** to run the new report query. For more information, see [Running Reports on page 19](#).

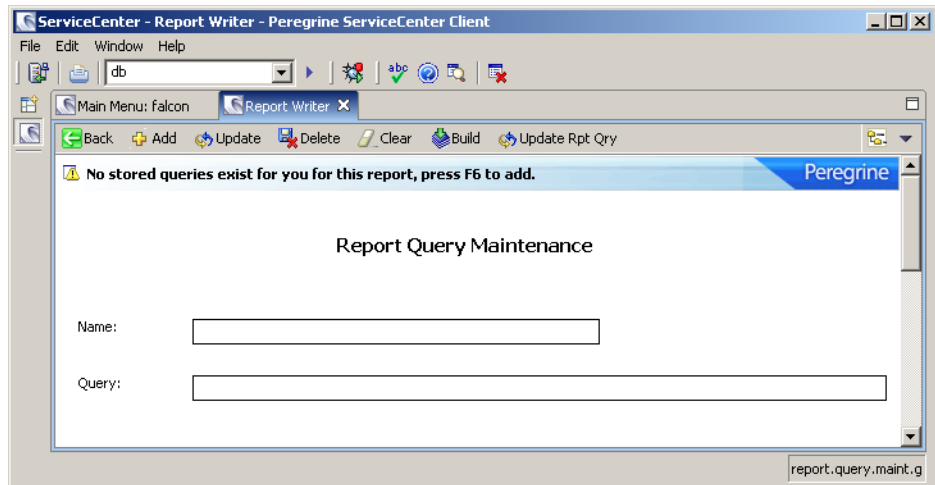
A record list of one or more queries opens.

- Double-click the query name of one of the query records listed.
- The Run Report Exerciser form opens, enabling you to schedule the report to run in either the background or foreground.

While in the Run Report Exerciser form, the query you defined in the previous steps is now in the **Primary File Query** field. However, the original Primary Query defined in the report record itself is not affected.

The Report Query Maintenance form





When you add queries to a report, Report Writer displays your options in the Report Query Maintenance form (report.query.maint).





The fields in this form are described in the HP OpenView ServiceCenter field help.

- To view the help for a field, put your cursor in the field and press **Ctrl+H** or select **Help > Help on Field**.

The available options may vary depending on the preferences you have selected, the record you select, and your permissions

Button	Option	Description
	Add	Enables you to modify a selected record and add it to the database, while leaving the original record in place.
	Update	Saves changes to the current record.
	Back	Returns to the previously displayed form.
	Delete	Deletes the currently displayed query record.
	Build	Displays the form defined in the Query Form. If you do not specify a form, HP OpenView ServiceCenter displays the form with the same name as the primary file name of the report (if any.)

Button	Option	Description
	Clear	Clears all displayed fields.
	Update Report Query	Copies the currently displayed query and overlays the Primary Query of the report you are editing.

Field descriptions for the probsummary form

The field descriptions in the *probsummary* form describe how you to set up your data to satisfy your search. The Header Information structure delineates how to print each record within the query.

Field	Description
<i>Header Information structure</i>	
Incident No	Use this field to query for a specified Incident number. Leave this field blank to return records with any incident number.
Status	Use this field to query for a status. Leave this field blank to return records with any status.
Category	Use this field to query for incidents classified by this the category. Leave this field blank to return records with any category.
Assigned To	Use this field to query for incidents assigned to this person. Leave this field blank to return records assigned to any person.
Priority	Use this field to query for incidents with the Priority (1 through 4). Leave this field blank to return records with any priority.
Change No.	Use this field to query for incidents with this the unique change record number. Leave this field blank to return records with any change number.
Page	Use this field to query for a specific page number of the printed report. Leave this field blank to return all pages.
Reassign Count	Use this field to query for incidents tickets that have been reassigned the specified number of times. Leave this field blank to return records that have been reassigned any number of times.
Opened	Use this field to query for incidents opened on this date. Leave this field blank to return records opened on any date.
Alert	Use this field to query for the alert status that was generated, if an alert has been generated for this record. Leave this field blank to return records with any alert status.
Updated	Use this field to query for the date the record was last updated. Leave this field blank to return records updated on any date.
Closed	Use this field to query for the date the record was closed. Leave this field blank to return records closed any date

Field	Description
Logical Name	Use this field to query for the logical file name of the device associated with the record. Leave this field blank to return records with any logical name.
Location	Use this field to query for a particular company location. Leave this field blank to return records with any location.
Contact Name	Use this field to query for a particular contact name. Leave this field blank to return records with any contact name.
Service Contact	Use this field to query for a particular service contact. Leave this field blank to return records with any service contact.

Using initial forms with reports

An initial form enables you to enter data for Report Writer to use to develop the query for the report. If you want to retrieve data from the user at runtime, you must create an Initial form.

For example, if the report requires a date and time range, you can use an initial form to enable the user to enter this range rather than entering a complete SQL query in the **Primary Query** field.

How do I access a form in Forms Designer?

To access a form in Forms Designer

- From the Report Maintenance form or Report Totals form, open **Options > Forms Designer**.
- From the main menu or system navigator, open **Toolkit > Forms Designer**.

How do I use an initial form?

To specify an initial form for a report

- 1 Access the form in forms designer.

For this example, access the *problem.category* report.

- 2 Type the form name in the **Initial Format** field.

- 3 Create the form, using the usual Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.

Note: The **Input** field names for the fields displayed when creating your new form in Forms Designer are \$start and \$end.

- 4 To include information from the initial form on the report, change the Primary Query statement to the following.

```
number> $start and number <$end
```

- 5 Click **Run** to run the report. For more information, see [Running Reports on page 19](#).

Note: You cannot run reports that use the initial form option in the background. Therefore, the **Run Report in Background** field is defaulted to f (false).

- 6 Click **Run** to complete the request.

Using page breaks and report totals

In addition to producing simple report listings, Report Writer also allows for accumulation of various statistics, based on user - specified totals and parameters. You can print these statistics according to user - defined forms at various phases of report generation based on user - defined control/condition breaks. You can use variations of Totals Parameters with or without Format Control definitions. Format Control definitions enable you to create a wide variety of report statistics.

How do I access the Totals section of a report?

This section demonstrates accessing the Totals section of a report and defines the various Totals Parameters, including referencing them and creating the forms used to print accumulated statistics.

To access the Totals section of a report

- 1 Open **ToolKit > Report Writer**

– OR –

Type `rw` on a HP OpenView ServiceCenter command line and press **Enter**.

The Report Writer Entry form opens.

- 2 Type `problem.category` in the **Report** field.

The Report form opens.

Click **Edit** to access the edit functions of Report Writer.

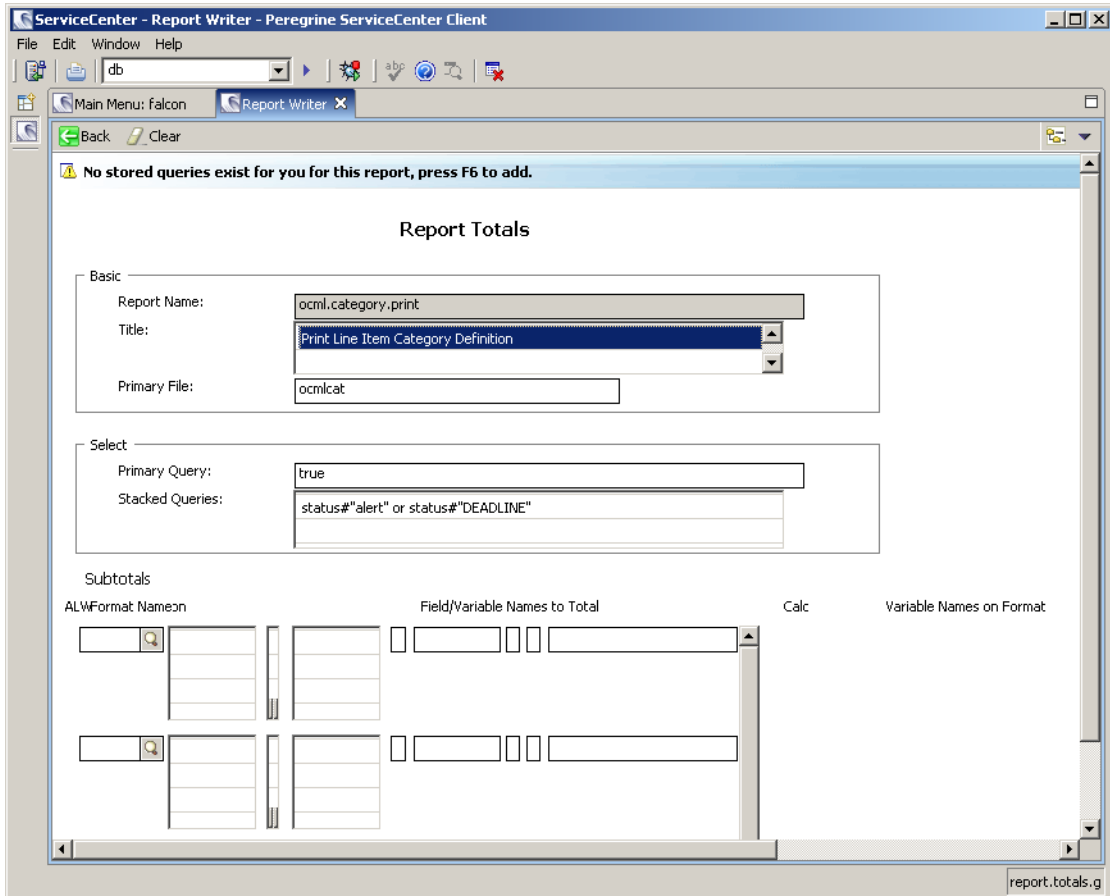
The Report Maintenance form opens. See the [The Report Maintenance Editing form on page 17](#).

- 3 Open **Options > Totals** to access the Report Totals (`report.totals`) form. This form is described in [The Report Totals form on page 44](#).

This form utilizes a lot of screen real estate. You can use the scroll bars to move to the left and to the right or up and down.

The Report Totals form




When you create a totals or subtotals report, Report Writer displays it in the Report Totals form (report.totals).



The fields in this form are described in the HP OpenView ServiceCenter field help.

- To view the help for a field, put your cursor in the field and press **Ctrl+H** or select **Help > Help on Field**.

The available options may vary depending on the preferences you have selected, the record you select, and your permissions

Button	Option	Description
	Back	Returns to the previously displayed form.
	Clear	Clears the data displayed on the form.
	Forms Designer	Opens Forms Designer, enabling you to edit the form of a report. For more information, see the HP OpenView ServiceCenter Help.

Sample Report 1: Using Simple subtotals

This sample report demonstrates how to define the Totals parameters to print a subtotals form. It is a continuation of the form created in [How do I create a new report? on page 16](#).

This report generates subtotals from the primary file (*problem*), showing the total number of records for each Assignment Group.

To create a subtotals form

- 1 Access the totals section of the report you want to create a totals form for. For more information, see [How do I access the Totals section of a report? on page 42](#).

For this example access the totals section of the *problem.category* report.

- 2 Type the name of the form want to use to print the subtotal in the **Form Name** field of the **Totals** structure.

For this example, type `probsummary.demo.totals` and press **Enter**.

Report Writer checks for a form called *probsummary.demo.totals* in the format table. If the form already exists, it opens.

If the form does not exist, open **Options > Forms Designer** and create the form using normal Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.

- 3 Create each field, using the input properties described in this table.

Input properties for the subtotals form:

Field	Description
report.count	Contains the total number of detail records processed by the report and is normally printed on a grand totals form, but may be printed on any totals form to show a running total.
report.subcount	Contains the total number of records processed for each calculation of each subtotal. If it is necessary to reference a particular array element on a subtotals form, the correct field name would be report . subcount , x where x is an array element number relative to the position of a calculation within the totals definition. This field is normally used in conjunction with the report.sumflds field for summary totals.
report.sumflds	Contains the value of each field that caused a control break. This field is normally used in conjunction with report.subcount for summary totals.
report.subfld	Contains the value of the field entered in Reset Field/Variable Name at the time a control/condition break is detected.
\$rw.dummy	A variable defined by Report Writer that contains NULL characters.
\$rw.months	Contains full month names. January is the first element with December being the twelfth element.
\$rw.mon	Contains abbreviated (three-character) month names. Jan is the first array element with Dec being the twelfth element.
\$rpt.date	A variable defined by Report Writer that contains the date and time when the report was run.
\$page	A variable defined by Report Writer that contains the page of the output of the report.

- 4 Click **OK** to save your new form before exiting the Forms Designer to save the changes you made to the form.
- 5 Scroll to the left to enter parameters in other fields on this form.

Note: Any time you scroll left or right while in this form, place the cursor in the home position before scrolling. This ensures that the labels and input fields remain properly aligned within the structured array.

- 6 To define the field by which you will be subtotaling, type its name in the **Reset/Field Variable Name** field.

This causes the subtotals form (in this example, *problem.category.totals*) to print every time the value of the **Assignment** field changes. For example, if the **Assignment** field value of the current detail record is network control and the next detail record has an **Assignment** field value of software support, the subtotals are printed before the next detail record.

- 7 Scroll to the left again to enter parameters in the third section of this form.
- 8 Type true in the **Always** field.

This forces the subtotals to print even if only one detail record is printed.

- 9 Click **End** to return to the Report Maintenance form.

Note: If you would like to erase all values in the Report Totals form, click **Clear Fields**.

A confirmation prompt will display, allowing you to either click **Clear Fields** to continue clearing the fields or **Abort** to cancel deleting the totals information.

- 10 To run this report, follow the instruction in [Running Reports on page 19](#).

Sample Report 2: Using subtotals, summary totals, and grand totals

This example report demonstrates how to define the necessary Totals Parameters to print subtotals, summary totals, and grand totals.

- Summary totals display the same statistics printed in each subtotal, but in a summarized form. Changing the **Summary/Detail** field on the Report Maintenance form causes only the totals portions (subtotals, summary totals, and grand totals) of the report to print. The detail form does not print.
- Grand totals show the total number of detail records selected during report generation.

To define the totals parameters

- 1 Create the report. For this example, use the following parameters.

Field	Value
Report Name	operator.count
Report Title	Monthly Inventory
Auto/Manual	Auto
Summary/Detail	Detail
Primary File	operator
Header Format Name	operator.count.header
Detail Format Name	operator.count.detail
Primary Query	true
Sequence of Report	model

For instructions on creating a report, see [How do I create a new report?](#) on page 16.

- 2 ServiceCenter checks for a form the matches the name you specified in the Detail Format Name fields.
 - If the form exists, it open.
 - If the form does not exist, Forms Designer opens.
- 3 Create the detail form using following input fields. For more information, refer to the HP OpenView ServiceCenter Help.

model
 logical.name
 serial.no
 location

- 4 Add captions to identify the fields.
- 5 When you are finished adding the report, click **Edit Rpt** to access the Edit functions.
- 6 Click **Totals** to access the Report Totals form.

- 7 Type the name of the form to use to print the subtotal in the **Subtotals Format Name** field.

For this example, type `operator.count.subtotal`.

Note: You can create the subtotals form through normal Forms Designer procedures either before entering the Totals Parameters or during the Totals Parameters definition process.

In this example, we create the subtotals form *operator.count.subtotal* from the Report Totals form.

- 8 Position the cursor on the **Totals Format Name** field and open **Options > Forms Designer**.

HP OpenView ServiceCenter checks for a form called *operator.count.subtotal* in the format table.

- If that form already exists, it opens.
- If the form does not exist, a blank screen opens, allowing you to fill in the form using the normal Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.

- 9 Edit the fields to update the form. For the example use the following values.

Caption	Input
Subtotals for:	<code>report.subfield</code>
No. of recs:	<code>report.subcount,1</code>
	<code>\$rw.dummy</code>

- 10 Click **OK** to return to the Report Totals form.
- 11 To force a page break after each subtotals form prints, type `true` in the **New Page** field.
- 12 To access the second portion of the Report Totals form, press **Home** to move the cursor from the array, and scroll to the left until you see the label **Reset/Field Variable Name**.

- 13 To define the field by which you will be subtotaling, type its name in the **Reset/Field Variable Name** field. This causes the subtotals form (*operator.count.subtot*) to print every time the value of the **Model** field changes.

For this example, type `model`.

- 14 Scroll to the left again to enter parameters in the third section of this form
- 15 To run this report, follow the instruction in [Running Reports on page 19](#).

Using Format Control in Reports

Report Writer uses several forms. Each of these forms can have Format Control records for Report Writer to run when executing your report.

This table describes format control on the report forms and how to use it.

Report Form	Description
Initial form	Set up Format Control on the Initial form to initialize data entered on the Initial form. Use initialization expressions to validate data entered on the Initial form. The Format Control record looks like Format Control on any HP OpenView ServiceCenter form.
Header form	Set up Format Control on the header form to initialize the variables, defined in the initialization expressions section of the Format Control record, for other forms to use. Use the header form to initialize a variable only once when executing the report.
Detail form	Set up Format Control on the detail form to initialize or calculate data, select records from secondary files, and run P4 subroutines, using the display option of the Format Control record. Validation expressions have no effect in this version of the Report Writer. HP OpenView ServiceCenter resets all variables set in the detail form each time a user selects a record.

Accessing Format Control

Accessing Format Control through Forms Designer reduces the chances of accessing the incorrect record, because you are accessing the record directly from the form with the same name as the Format Control record.

How do I access Format Control?

To access Format Control

- 1 When in the Report Maintenance form or Report Totals form, open **Options > Forms Designer**.
The initial Forms Designer view opens.
- 2 Type the name of the form you want to see in the **Form** field of the **Forms Designer** dialog box.
– OR –
Click **Search** to find the form.
- 3 Open **Options > Format Control**.
The Format Control record appears for the selected form.

Important: Ensure that this Format Control record has the same name as the detail form.

Format Control options

Option	Description
Add	Adds the Format Control record.
Update	Updates the Format Control record.
End	Saves and Exits the Format Control record.
Calculations	Accesses the calculations section of the Format Control record. Example calculation expression: if (flag=false) then (\$demo.elapsed=close.time in \$file - open.time in \$file) else (\$demo.elapsed=tod() - open.time in \$file)
More	Accesses other sections of the Format Control record.
End	Exits the Format Control record without saving the information. Returns back to the Report Writer Entry form.

Sample Report 3: Using Format Control for Calculations

This example report demonstrates how to define the necessary Totals Parameters to use calculations. You can use the calculations process within Format Control whenever you want to perform a calculation on currently available fields or variables.

To use calculations in a report

- 1 Create the report. For this example, use the following parameters.

Field	Value
Report Name	problem.calculations.demo
Report Title	Demo of Using Totals Calculations
Auto/Manual	auto
Summary/Detail	detail
Primary File	probsummary
Header Format Name	problem.calculations.demo.header
Detail Format Name	problem.calculations.demo.detail
Stacked Query	flag=true and status~="closed"
Sequence of Report	assignment

For instructions on creating a report, see [How do I create a new report?](#) on page 16.

HP OpenView ServiceCenter checks for a form called *problem.calculations.demo* in the format table.

- If the form already exists, it opens.
- If the form does not exist, a blank screen opens, allowing you to fill in the form using normal Forms Designer procedures. For Forms Designer procedures, see the HP OpenView ServiceCenter Help.

- 2 Create the detail form using following input fields. For more information, refer to the HP OpenView ServiceCenter Help.

number
category
sassignment
status
open.time
\$demo.elapsed

- 3 Add captions to identify the fields.
- 4 When you are finished adding the report, click **Edit Rpt** to access the edit functions. The report opens.
- 5 Click **Totals** to access the Report Totals form.
- 6 Type the name of the form being used to print the subtotal in the **Format Name** field.

For this example, type `problem.calculations.demo.subtotal`.

- 7 Create the subtotals form.

Open **Options > Forms Designer**.

If the form does not exist, a blank screen opens.

- 8 Fill in the detail form, following normal Forms Designer procedures. Open **Options > Forms Designer**. For more information, refer to the HP OpenView ServiceCenter Help.

For this example, create the form `problem.category2.subtotal` with the following values.

Caption	Input
Summary totals For:	report.subfld
Average Elapsed Time:	\$demo.elapsed.average
Total Elapsed Time:	\$demo.elapsed.sum

- 9 To calculate the average and sum of the variable `$demo.elapsed` for each grouping of problem records by category, type the values shown for the **Field/Variable Names to Total** and **Calc** fields.

Field/Variable Names to Total	Calc
<code>\$demo.elapsed</code>	AVG
<code>\$demo.elapsed</code>	SUM

- 10 Scroll left to view the second portion of the Report Totals form.
- 11 Specify values in the **Variable Names on Form** array to identify where to print the result of the calculation within the subtotals form.

Field/Variable Names to Total	Calc	Variable Names on Form
<code>\$demo.elapsed</code>	AVG	<code>\$demo.elapsed.average</code>
<code>\$demo.elapsed</code>	SUM	<code>\$demo.elapsed.sum</code>

- 12 Type category in the **Reset Field/Variable Name** field to calculate the totals separately for each category grouping.
- 13 When you are finished entering the appropriate data, click **End** to return to the Report Maintenance form.
- 14 To evaluate the value to be used for the `$demo.elapsed` variable, you must attach Format Control to the detail form.
- When you are finished with your design changes, open **Options > Format Control** to create a new Format Control record.
 - A prompt asks you to save your changes. Click **Yes**. The `formatctrl.maint.initial` form opens.
 - Ensure the name of your Format Control record is the same name as your subheader form.
 - Specify any initialization expressions, and click **Add**. For this example, there are no entries required in the **Initialization Expressions** field.
 - When you are finished, click **OK**.

- f Click **Calculations** in the Format Control Maintenance form.
- g Type the values in the fields as described below.

Field	Value
Display	true
Calculation	<pre>if (status in \$file#"closed") then (\$demo.elapsed=close.time in \$file - open.time in \$file) else (#\$demo.elapsed=tod() - open.time in \$file) Put all expressions on one expression line, separated by semicolons. Never place a semicolon at the end of the final expression. This causes HP OpenView ServiceCenter to expect another expression.</pre>

- h When you are finished, click **OK**. Continue to click **OK** until you return to the Report Maintenance form.

15 To run this report, follow the instruction in [Running Reports on page 19](#).

Sample report 4: Using Format Control for subheaders

You use the subheader form when designing a report to print the information that immediately precedes the detail information from a secondary file. The subheader form identifies the secondary file used to extract information for the detail form, therefore, you must define Format Control for the subheader form of all Subheader reports.

- The subheader form contains the fields from the primary file, defined in the report.
- The detail form contains fields from the secondary file, defined in the Secondary File Queries section of the Format Control record of the subheader form.
- A common field value connects the primary and secondary files.

In this example, we match the value in the **Location** field from the *location* table (primary file) with the value in the location field from the *operator* table (secondary file). Each time the report selects a record based on the Primary Query from the primary file (*location*), Report Writer uses Format Control to find the matching records in the secondary file (*operator*) using the **Location** field.

To use Format Control for subheaders

- 1 Create a new report in Report Writer, using the following values. For more information, see [How do I create a new report?](#) on page 16.

Field	Value
Name	location.summary (or any unique name)
Title	Any title
Auto or Manual	Auto
Summary or Detail	Detail
Primary File	location
Header Format	location.summary.header (default)
Subhdr Format	location.summary.subhdr
Detail form	location.summary.detail (default)
Primary Query	true
Sort Sequence	location Since stacked queries are not used, location must be a key in the primary file's dbdict before you can use it as a sort field.

- 2 Create the header form.
 - a Open **Options > Forms Designer** and create a form in with the following input fields. For more information, refer to the HP OpenView ServiceCenter Help.

Name

 Location

 Address

 City

 State

 Zip

 Primary Contact

- b Add captions to identify the fields.
- c When you are finished working within the Forms Designer utility, click **OK**.

3 Create the subheader form.

- a Open **Options > Forms Designer**. Create the form using the following values. For more information, refer to the HP OpenView ServiceCenter Help.

Caption	Input
Location:	location
Location Name:	location.name
Address:	address
	window=1
City:	city
State:	state
Zip:	zip
Primary Contact:	primary.contact

- b When you are finished working within the Forms Designer utility, click **OK**.

4 Add Format Control.

- a Open **Options > Format Control** to create a new Format Control record. For more information, refer to the HP OpenView ServiceCenter Help.
- b A prompt asks you to save your changes. Click **Yes**.
The *formatctrl.maint.initial* form opens
- c Ensure the name of your Format Control record is the same name as your subheader form.
- d Specify and initialization expressions and click **Add**.
In this example, there are no entries required in the **Initialization Expressions** field.

5 Add queries.

- a Open **Options > Queries**.
- b Click **Yes**.

- c Make the file queries entries as needed.

For this example, use the following values.

Field	Value
Display	true
Filename	operator This identifies the operator table as the secondary file for this report. The <i>location</i> table and <i>operator</i> table are connected when the values in their Location fields match.
Query	location=location in \$file
Req'd Query	false This signifies that the match is not required for the subheader form to print.

- d Click **Save** to save the record.
 - e Click **OK** twice to exit the forms and return to the Report Maintenance form.
- 6 Create the detail form.
- a From the Report Maintenance form, put your cursor in the **Detail** field of the Forms structure of the Report Maintenance form (on the location.summary.detail value) and open **Options > Forms Designer**.

HP OpenView ServiceCenter checks for a form called *location.summary.detail* in the *format* table. If the form already exists, it opens. If it does not exist, a blank screen opens, allowing you to paint the form using normal Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.

- b Click **Design** to create the form or change the existing form.

- c Add the appropriate **Input** fields.
For this example, include:

Caption	Input field
Logical Name:	logical.name
Serial Number:	serial.number
Manufacturer:	manufacturer
Model:	model
Type:	type

- d Click **Add** or **OK** to return to the Report Maintenance form.

- 7 To run this report, follow the instruction in [Running Reports on page 19](#).

Sample Report 5: Using Format Control in a Matrix report

The following sample report gives summary count information on severity codes and the status of incident tickets. The severity code labels print in the column and the status (such as, open and update) labels print in a row.

The report consists of a header and two subtotals forms. It is a summary report, but it does not use the **Summary** field (true/false) on the **Totals** screen. There is a Format Control record associated with both the header and detail forms. they contain initialization and calculation expressions for processing record counts.

To create a matrix report using Format Control

- 1 Use the following values to create the report.

Field	Value
Name	problem.severity.summ (or any unique name)
Title	A user - defined title
Auto or Manual	Auto
Summary or Detail	Summary
Primary File	probsummary

Field	Value
Header Format	problem.severity.summ.header (default)
Detail format	problem.severity.summ.detail (default)
Primary Query	flag=true Unix users can also use status~="closed".
Sort Sequence	severity To sort and break on the Severity field for a Summary report, the field must exist as a key in the <i>probsummary</i> dbdict, or the primary query must be defined as a stacked query.

2 Create the header form.

- a When you have all the field values entered, place the cursor in the **Header** field (problem.severity.summ.header value) and open **Options > Forms Designer**.

HP OpenView ServiceCenter checks for a form called problem.severity.summ.header in the format table. If the form already exists, it opens. If it does not exist, a blank screen opens, which allows the user to paint the form using normal Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.

- b In order to sort and break on the **Severity** field for a Summary report, you must set up the same field as a key in the probsummary dbdict, or define the primary query as a stacked query.
- c Click OK to add the new form and return to the Report Maintenance form.

3 Create a detail form.

Since this report is a Summary report, Report Writer does not print a detail form when it generates the report. However, because a Format Control record is required for calculations to occur on each detail record, we must create a detail form to attach to the Format Control record.

Place your cursor in the **Detail** field (on the problem.severity.summ.detail value) and open **Options > Forms Designer**.

HP OpenView ServiceCenter checks for a form called *problem.severity.summ.detail* in the *Format* table. If the form already exists, it opens. If it does not exist, a blank screen opens, enabling you to paint the form using normal Forms Designer procedures.

- 4 Create the first subtotals form.
 - a Select **Options > Totals** to open the Report Totals form.
 - b Position the cursor on the first **Subtotals Format Name** field and open **Options > Forms Designer**.
 - c Type `problem.severity.summ.sub` and click **New**.
 - d A prompt asks if you want to use the Forms Designer wizard. Click **No**.
 - e Follow normal Forms Designer procedures to create a new form including the following input fields. For more information, refer to the HP OpenView ServiceCenter Help.

report.subfield	\$open	\$updt
\$alrt1	\$alrt2	\$alrt3
report.subcount,1		

- f Add captions to identify the fields.
 - g When you are finished, click **OK**.
- 5 Edit the Report Totals form.
 - a Open **Options > Totals**.
 - b Fill in the fields in the Report Totals form as follows:

Subtotals Format Name field: `problem.severity.summ.sub`

Field/Variable Names to Total	Calc	Variable names on form
\$opn	SUM	\$open
\$upd	SUM	\$updt
\$al1	SUM	\$alrt1

Field/Variable Names to Total	Calc	Variable names on form
\$al2	SUM	\$alrt2
\$al3	SUM	\$alrt3

- c Access the second portion of the Report Totals form and scroll to the right until you see the **Reset Field/Variable Name** field.
 - d Type severity.
 - e Type true in the **ALWAYS** field.
 - f Click **OK**.
- 6 Create the second subtotals form.
- a Position the cursor on the second **Format Name** field and type `problem.severity.summ.tot`.
 - b Open **Options > Forms Designer**.
 - c Follow normal Forms Designer procedures to create a new form with the following input fields. For more information, refer to the HP OpenView ServiceCenter Help.
- | | | |
|--------------|-------------|-------------|
| open.tot | \$upd.tot | |
| \$alrt1.tot | \$alrt2.tot | \$alrt3.tot |
| report.count | | |
- d Add captions to identify the fields.
 - e When you are finished, click **OK**.
- 7 Edit the Report Totals form.
- a Open **Options > Totals**.
 - b Fill in the fields in the Report Totals form to add the following values.

Subtotals Format Name field: `problem.severity.summ.tot`

Field/Variable Names to Total	Calc
\$opn	SUM
\$upd	SUM
\$al1	SUM
\$al2	SUM
\$al3	SUM

- c Access the second portion of the Report Totals form and scroll to the right until you see the **Reset Field/Variable Name** field.
 - d Type `severity`.
 - e Type `true` in the **ALWAYS** field.
 - f When you are finished, click **OK**.
- 8 Create a Format Control record for the header form.
- a Position the cursor on the **Format Header** field and open **Options > Forms Designer**.
 - b Open **Options > Format Control**.
 - c The Format Control utility opens, enabling you to add a new Format Control record.

Note: Ensure that the name of this Format Control record is the same name as your header form.

- d Type the following statements in the **Initializations Expressions** fields.

```
$open=0 ; $updt=0 ; $alrt1=0 ; $alrt2=0 ; $alrt3=0
$opn.tot=0 ; $upd.tot=0 ; $alrt1.tot=0 ; $alrt2.tot=0 ;
$alrt3.tot=0
```


Note: These initialization expressions run only once during the report generation.

- e When you are finished, click **OK**. Continue to click **OK** until you return to the Report Maintenance form.
- 9 Create a Format Control record for the detail form.
 - a Position the cursor on the **Format Detail** field and open **Options > Forms Designer**.
 - b Create the necessary fields using the normal Forms Designer procedures. For more information, refer to the HP OpenView ServiceCenter Help.
 - c Click **OK**.
 - d Open **Options > Format Control**.
 - e When prompted, click **Yes**.

Ensure that the name of this Format Control record is the same name as your detail form.

- f Type the following statements in the **Initializations Expressions** field.

```
$open=0 ; $updt=0 ; $a11=0 ; $a12=0 ; $a13=0
```

Note: These initialization expressions run each time you select a new detail record.

- g When you are finished, click **OK**.
- h Click **Calculations** in the Format Control Maintenance form. The Format Control Maintenance - Calculations form opens.

- i Type the values in the fields as described below.

Field	Value
Display	true
Calculation	<pre>if status in \$file#"open" then \$opn=1 ; if status in \$file#"upd" then \$upd=1 ; if (index("1",status in \$file)> 0) then \$a1=1 ; if (index("2",status in \$file)> 0) then \$a2=1 ; if (index("3",status in \$file)> 0) then \$a3=1</pre> <p>Put all expressions on one expression line, separated by semicolons. Never place a semicolon at the end of the final expression. This causes HP OpenView ServiceCenter to expect another expression.</p>

- j When you are finished, click **OK**. Continue to click **OK** until you return to the Report Maintenance form.

10 To run this report, follow the instruction in [Running Reports on page 19](#).

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