cherwell®

Acquired by Ivanti

CAM 14.2 Reporting

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The Cherwell Software product suite includes:
- Cherwell Service Management
- Cherwell Asset Management

Contact Cherwell Software

Contents

Reporting

Reporting is the web application for viewing, filtering, exporting, and printing data gathered by Cherwell Asset Management. It includes dozens of reports you can use to analyze data created about your environment. Reports are based on information contained in the CAM Database.

Login Screen

This topic includes sections that are noted as only relevant in certain configurations:

■ Hosted installations; ■ On-premises installations; ■ CSM authentication; ■ CAM authentication

Enter the following information:

- ■■ User name—Your user name, in domain\user name format. Your user name must be a valid user name in the CAM Database, with permission to run Reporting.
- ■■ Password—Your password for the domain, if required.
- ■■ User name—Your Cherwell Service Management user name.
- ■■ Password—Your Cherwell Service Management password.

Reporting Panels

Reporting Status Panel

The Reporting Status panel presents a graphical view of data collected in reports. The charts presented here are called dashboard charts.

To customize the Reporting Status panel:

- To hide a dashboard chart, click ⚙ top right corner of the chart itself, then click **Remove**. Some charts also have an **Edit** option, which changes the data you want displayed; click **Done** to save your changes.

- To see charts not currently visible, click ⚙ at the top left of the Reporting panel, then click **Add Panels**. Select one or more charts from the list. When you're finished selecting charts, click **Done** to update the Dashboard display.

Reports Panel

Available reports are listed on Reporting's Reports panel, first alphabetically, and then by category. You can expand or collapse any of the category lists by clicking the symbol next to the category name.

To run a report, click its name. Each report name is followed by a short description; click the description for a longer explanation of what the report includes.

You can export most reports to PDF or Excel formats.

Note: Reports can generate up to 50,000 records each. If you expect that a report you run may generate more than 50,000 records, consider running the report multiple times, using different filters to narrow down the results each time.

Baselines

If you've created any baselines in CAM Administrator, you can run the What's Changed reports from within Reporting to compare any information that has changed between the time of the baseline and either another baseline or the time you run the report.

To create a baseline:

• open CAM Administrator and select **Tools > Baselines**, then click **New** in the Configure Baselines dialog box.

To select an existing baseline:

• Click the select baselines link to select an already existing baseline. Once you've selected a baseline and run a report, you can click **Change Baseline Selection** to select another baseline.

CAM-specific Hardware Properties

Some reports include information on fixed hardware properties (for example, BIOS Name and Hard Disk Serial Number). Most refer to machine specifications, but a few CAM-specific properties are listed as well:

- **Access Point**—The name of the CAM Access Point to which this machine reports.
- **Agent Version**—The version of the CAM Agent installed on this machine.
- **Install Date**—The date the CAM Agent was installed on this machine.
- **Inventory Enabled**—Whether inventory is enabled for this machine.
- **Inventory Managed**—Whether you can inventory this machine.
- **Inventory Only if Logged In**—Whether this machine is only inventoried when a user is logged into it.
- **Last Heartbeat**—The last time the CAM Agent checked in with the CAM Access Point.
- **Last Inventory**—The last time this machine was inventoried.
- **Last User**—The username of the last logged-in user on this machine.
- **Meter Managed**—Whether metering license units is available on this machine.
- **Metering Enabled**—Whether metering license units is enabled on this machine.

Reports You Can Run with the ReportRunner Application

This topic applies to: CAM authentication

This topic lists all the reports you can run with the ReportRunner application. The ReportRunner application is a command-line application you can use in order to set up reports to run on a scheduled basis.

The reports you can run with this application are listed below along with a short description, the name of the report as it must appear when running ReportRunner (the text you need to enter for the --report= parameter), and any additional parameters you need to include.

Activity Log

Description

License unit activity, grouped by license unit, machine, server, or user, and sorted by time.

--report=parameter

Grouped by machine: ActivityLogByMachine

Grouped by license unit: ActivityLogByLicenseUnit

Grouped by server: ActivityLogByServer

Grouped by machine and license unit: ActivityLogByMachineLicenseUnit

Grouped by machine with Terminal Servers: ActivityLogByMachineWithTerminalServer

Grouped by user: ActivityLogByUser

Grouped by user with Terminal Servers: ActivityLogByUserWithTerminalServer

Grouped by user and license unit: ActivityLogByUserLicenseUnit

Am I Compliant

Description

Information to help determine whether your organization is in compliance with its software licensing agreements.

--report=parameter

AmICompliant

CAM Administration Discovery Servers

Description

Information on what CAM Administration Service machines have performed discovery tasks.

--report=parameter

AdministrationServersDiscovery

CAM History

Description

Record of Cherwell Asset Management operations.

--report=parameter

CAMHistoryDetail

By user: CAMHistoryUser

Additional parameters

All events: --add=CAMHistoryInputAction=All

Machine-related events: --add=CAMHistoryInputAction=Machines

User-related events: --add=CAMHistoryInputAction=Users

License units: --add=CAMHistoryInputAction=License Units

Assets: --add=CAMHistoryInputAction=Assets

Profiles: --add=CAMHistoryInputAction=Profiles

Contracts: --add=CAMHistoryInputAction=Contracts

Other: --add=CAMHistoryInputAction=Other

CAM License Utilization

Description

List of machines consuming a CAM license.

--report=parameter

MachinesUsingCamLicenseDetail

Additional parameters

All platforms: --add=Platform=-1

Windows platform: --add=Platform=400

Mac OS platform: --add=Platform=100

Linux/Unix platform: --add=Platform=500

CAM Windows Agent Status

Description

CAM Windows Agent installation and inventory status.

--report=parameter

CAMAgentStatus

Additional parameters

All machines: --add=CAMAgentStatusInputType=All

Machines using a CAM Agent license: --add=CAMAgentStatusInputType=CAM

Concurrent Software License Allocation

Description

Information about how concurrent licenses are allocated by group.

--report=parameter

Grouped by allocation group: LicenseAllocationByAllocationGroup

Grouped by license unit: LicenseAllocationByLicenseUnit

Concurrent Software Peak Usage

Description

The peak number of users running each license unit that is configured for concurrent use.

--report=parameter

PeakUsage

Concurrent Software Statistics

Description

Statistical information about launches for concurrent license units, including launch counts and usage information.

--report=parameter

Ungrouped: ConcurrentLicenseStatisticsUngrouped

Grouped by machine: ConcurrentLicenseStatisticsByMachine

Grouped by user: ConcurrentLicenseStatisticsByUser

Grouped by license unit group: ConcurrentLicenseStatisticsByGroup

Database Script Log

Description

Information about when database scripts were run.

--report=parameter

DatabaseScriptLog

Failed CAM Windows Agent Installs/Inventories

Description

A list of CAM Windows agent machines where installation or inventory has failed.

--report=parameter

FailedInstallOrInventory

Group Membership

Description

A list of license units, machines, users, or assets contained in each group.

--report=parameter

GroupMembershipDetail

Additional parameters

Assets: --add=type=3

License units: --add=type=2

Machines: --add=type=0

Users: --add=type=1

ISO Software ID Tags

Description

Information about ISO 19770-2 software identification tags in your environment.

--report=parameter

By machine: ISOSoftwareIDTagsByMachine

By software creator: ISOSoftwareIDTagsBySoftwareCreator

Ungrouped: ISOSoftwareIDTagsUngrouped

Last User Login

Description

Information about the last time a user logged into and out of a machine.

--report=parameter

Ungrouped: LastUserLoginDetail

Grouped by user group: LastUserLoginByGroupDetail

Grouped by machine: LastUserLoginByMachine

Grouped by Terminal Server: LastUserLoginByTerminalServer

License Unit Maintenance Expiration

Description

Information on whether any maintenance agreements for your license unit purchases have expired.

--report=parameter

MaintenanceExpiration

Additional parameters

Optional parameter: --add=MaintenanceExpirationInputType=<days>

Note: For <days>, enter the number of days before expiration.

License Unit Purchase History

Description

Summary of all configured license unit purchases.

--report=parameter

Ungrouped: LicenseUnitPurchaseHistoryUngrouped

Grouped by category: LicenseUnitPurchaseHistoryByCategory

Grouped by license unit group: LicenseUnitPurchaseHistoryByGroup

Grouped by manufacturer: LicenseUnitPurchaseHistoryByManufacturer

License Unit Summary and Machine Assignments

Description

License unit summary that displays machine assignment details.

--report=parameter

By machine group: LUSummaryAndMachineAssignmentsByMachineGroup

Ungrouped: LUSummaryAndMachineAssignmentsUngrouped

Machine Drives Summary

Description

Disk drive summary information for each machine.

--report=parameter

MachineDrivesSummaryExport

Machine List

Description

A simple list of machines that conform to the filter requirements.

--report=parameter

MachineList

Non-runnable Files

Description

Any non-runnable files that were collected during machine inventory.

--report=parameter

Grouped by extension: NonRunnableFilesByExtension

Grouped by machine: NonRunnableFilesByMachine

Summary: NonRunnableFilesSummary

Oracle Database Summary

Description

Oracle database summary by physical host.

--report=parameter

OracleDatabaseSummary

Oracle Feature Summary

Description

Oracle option and management pack summary.

--report=parameter

OracleOptionAndManagementPackSummary

Product ID

Description

All product IDs associated with applications found on machines in the network.

--report=parameter

Grouped by application: ProductIDByApplication

Grouped by license channel: ProductIDByLicenseChannel

Grouped by machine: ProductIDByMachine

In Excel format: ProductIDByMachineExcel

Purchase Summary

Description

Purchase summary by group assignment and line item type.

--report=parameter

By group: PurchaseSummaryByGroup

By line item: PurchaseSummaryByLineItemType

Software Application Summary

Description

Installation count for each application version.

--report=parameter

SoftwareApplicationSummary

Software Installation by Machine Group, Version

Description

List of installed software locations by machine group.

--report=parameter

SoftwareInstallationByGroupVersion

Software Installation by Version

Description

For each suite/application, the version, machine name, and installation path of each occurrence.

--report=parameter

SoftwareInstallationByVersion

Software Inventory

Description

Installed applications/suites and their locations.

--report=parameter

Grouped by license unit: SoftwareInventoryByLicenseUnit

Grouped by machine: SoftwareInventoryByMachine

Grouped by machine group: SoftwareInventoryByMachineGroup

Grouped by user: SoftwareInventoryByUser

Grouped by user group: SoftwareInventoryByUserGroup

Grouped by category: SoftwareInventoryCategoryDrilldown

Grouped by manufacturer: SoftwareInventoryManufacturerDrilldown

Software Inventory and Order Summary

Description

License summary and order information for license units.

--report=parameter

Ungrouped: SoftwareInventorySummaryUngrouped

Operating systems only: SoftwareInventorySummaryOS

Grouped by category: SoftwareInventorySummaryByCategory

Grouped by license unit group: SoftwareInventorySummaryByGroup

Grouped by manufacturer: SoftwareInventorySummaryByManufacturer

Additional parameters

--add=orderDetail=1

Note: If you do not pass in this parameter, the Software Inventory Summary report (described next) is returned.

Software Inventory Summary

Description

Summary information about all license units.

--report=parameter

Ungrouped: SoftwareInventorySummaryUngrouped

Operating systems only: SoftwareInventorySummaryOS

Grouped by category: SoftwareInventorySummaryByCategory

Grouped by license unit group: SoftwareInventorySummaryByGroup

Grouped by manufacturer: SoftwareInventorySummaryByManufacturer

Additional parameters

Includes all filtered-in license units: --add=agfilter=0 (default)

or

Takes filtering/groups into account when computing license totals:--add=agfilter=1

Includes all filtered-in license units: --add=nzonly=0 (default)

or

Returns only those with non-zero installation, launch, or license counts: --add=nzonly=1

Software Recently Discovered

Description

New license units recently discovered on your network.

--report=parameter

SoftwareRecentlyDiscovered

Additional parameters

--add=SoftwareRecentlyDiscoveredInputType=<days>

Note: The value you specify for <days> indicates that you want to find license units discovered within that number of days.

Software Usage Statistics

Description

Analysis of software usage trends.

--report=parameter

Grouped by license unit: SoftwareUsageStatisticsByLicenseUnit

Grouped by machine: SoftwareUsageStatisticsByMachine

Grouped by machine and user: SoftwareUsageStatisticsByMachineUser

Grouped by machine with Terminal Servers: SoftwareUsageStatisticsByTerminalServer

Grouped by user: SoftwareUsageStatisticsByUser

Software Usage Summary

Description

Summary information about license units that are licensed concurrently.

--report=parameter

Ungrouped: SoftwareUsageSummaryUngrouped

Grouped by category: SoftwareUsageSummaryByCategory

Grouped by license unit group: SoftwareUsageSummaryByGroup

Grouped by manufacturer: SoftwareUsageSummaryByManufacturer

Suite Application

Description

Information about suites on your network, grouped by application or suite name, or by machine.

--report=parameter

Installations grouped by application: SuiteApplicationByApplication

Installations grouped by suite: SuiteApplicationBySuite

Launches grouped by machine: SuiteApplicationLaunchesByMachine

Unconfigured Files by Count

Description

List of all files that have not been configured sorted by count, sorted by the number of installations (the count).

--report=parameter

UnconfiguredFilesByCount

Unique Application Paths by Version (Metered)

Description

A list of all unique paths from which an application is launched.

--report=parameter

UniqueApplicationPaths

Unique Application Users by Version (Metered)

Description

A list of all unique users of an application.

--report=parameter

UniqueApplicationUsers

Unreconciled Machine Export

Description

A list of machines that have not been reconciled to purchasing data. Use this report as a starting point to create a spreadsheet for importing computer purchase data.

--report=parameter

UnreconciledMachineExportExcel

Unused Software

Description

List of all software that is installed by has not been used.

--report=parameter

By license unit: UnusedSoftwareByLicenseUnit

By machine: UnusedSoftwareByMachine

By manufacturer: UnusedSoftwareByManufacturer

Ungrouped: UnusedSoftwareUngrouped

Reports That Cannot Be Scheduled

You cannot run these reports via Report Runner; you must use Reporting to run them:

- Activity Log (ungrouped)
- Custom Expense History
- Custom Inventory

- Dashboard
- Expense History
- License Unit Custom Purchase History
- Machine Properties
- Machine Search
- Microsoft MSDN
- Network Devices
- Other Assets
- Software End of Life
- Unconfigured Files
- Virtual Machines and Hosts
- What's Changed
- What's Changed: Added or Deleted Machines

Related information
Rep_Scheduling_reports.xml#concept8734

Reporting Filters Panel

Use the Reporting Filters panel to view, load, create, and delete filters.

You can narrow down the amount of data shown on any report by using filters. For example, you can specify that only certain machines or machine groups are included in your reports, or that you only want data about events that occur during a specific date range.

Any reports you run are based on the selected filtering criteria, until you load another filter or edit the current filter. It is recommended that you save filters if you plan to regularly use different filtering criteria, so you don't have to configure filtering options each time. Saved filters are also useful if you plan to schedule reports.

> **Tip:** Consider modifying the default filter to fit your needs and then save it with a meaningful name and description. Besides making it easier to remember, the filter's name will also appear in the footer of any reports that are run when this filter is in use. You can also your filter as a starting point for creating more specialized filters.

Reporting Filters Panel Layout

The layout of the Filters panel includes a toolbar at the top and a list of filter categories in the left pane. The right pane, the largest area of the panel, is where you can view and modify the currently-selected filter. The right pane changes according to whatever you select in the left pane, and Reporting "remembers" where you were last.

Toolbar

The Filter tab's toolbar includes the following options:

- **Select a filter**: Select a filter to open. Any filters you've created are listed under **My Filters**, and any filters another user has created and shared are listed under **Shared Filters**. An asterisk appears next to the name of any filter to which changes need to be saved.
- **Save**: Save the current filtering options to the current filter.
- **Discard**: Discard any changes you've made to the current filter.
- **Save As**: Save the current filtering options to a new filter.

Left pane

When you click an item in the left pane, the right pane updates to display relevant information:

- **Filter Properties**: Shows details of the current filter: name, description, whether it is a shared filter, the filter's owner, and the effects of the filter. You can also delete the current filter here.
- **License Units**: Click one of the items listed here to set up filters that include or exclude license units based on group, license unit platform (Linux, Mac OS, Unix, Windows, or multiple), manufacturer,

software category, individual license unit, license type, whether metering is enabled, and purchasing features.

- **Machines**: Use to set up filters that include or exclude specific machine groups, individual machines, or machine platforms (Linux, Mac OS, Unix, Windows, or unknown). Clicking the last item in this section, Query Builder, lets you create simple queries to specify which machines are included in reports based on machine hardware properties, presence of license units, and presence of applications.

- **Terminal Servers**: Use to set up filters that include or exclude one or more terminal servers for use in reports that report activity involving workstations that connect to terminal servers.

- **Users**: Click one of the items here to set up filters that include or exclude specific user groups or individual users.

- **Assets**: Iinclude or exclude specific asset groups.

- **Network Devices**: Include or exclude specific network device groups.

- **Paths**: Include or exclude specific local machine paths in reports.

- **Duration**: Include only applications that were launched for a specified duration in reports.

- **Dates**: Include only events that occur within a specified date range.

 next to an item in the left pane indicates that this filter applies to report data.

Right Pane

As you change your selection in the left pane, the right pane also changes to show how you can filter the selected item. For example, if you select **Individual Machines** on the left, the right pane shows a list of machines you can exclude or include in reports, and you can specify that you want to see more or fewer machines on this page.

> **Note:** the information you see in the right pane is dependent on how you configured relevant items in CAM Administrator. For example, if you select **Groups** under **Machines** on the left, the right pane will show the same Discovered and User-defined groups as in CAM Administrator. If you didn't create any machine groups in CAM Administrator, the user-defined list here will be empty.

Related information
Rep_Query_Builder.xml#concept7022
Rep_How_to_use_path_filters.xml#concept1997

Filter Ownership

You can create, share, and delete filters, but there may be cases where you want to transfer ownership of filters from one user to another. Examples include:

- One user turns over job duties to another user. The first user may have created a number of useful filters that the second user wants to be able to use.

- You change from using CAM authentication to CSM authentication and you want the new CSM users who are authorized to use Reporting to have access to existing filters.

Notes: If your site uses CSM authentication, access to Reporting is controlled from Cherwell Service Management using CSM security groups and users.

See How to Edit Filter Ownership for step-by-step instructions for transferring all of one user's filters to another user. Once filter ownership is transferred to the second user, that second user can edit or delete any individual filters as needed.

Note: You do not need to edit ownership of shared filters. See the second Tip that follows the procedure in the above hyperlink.

Wildcards in Path Filters

When you are configuring a path filter, you need to enter all or part of a local machine path in the Path text box. That path or path fragment you enter must exactly match at least one path in the CAM Database to have any effect when you run a report with this filter.

To make this easier, you can use the following wildcard and special characters when specifying a path:

- ***** is a wildcard character used to indicate zero or more characters in a folder name.

- **?** is a wildcard character used to indicate any single character in a folder name.

- **[]** is a character class that indicates some number of characters in this set or range in the folder name. For example, entering **[a-z]** indicates all folders that start with letters between a and z.

- **[^]** is a character class that indicates some number of characters not in this set or range, as long as the caret (^) is the first character after the left bracket. For example, entering **[^aeiou]** indicates any character except a vowel. Entering **[a^y]** indicates folder names that start with the letters a and y, and with the caret character itself.

Notes:

- Note that these are path filters, not full file specification filters. The path filter editor will append a backslash character (\) to any pattern that does not already have one. That is, the pattern

  C:\windows*.*

  is interpreted and stored as

  C:\windows*.*\

- You cannot use * or ? in character classes.

- You cannot use * or ? literally. These characters are always interpreted as wildcards.

- You can use the left bracket ([) and right bracket (]) characters literally, even within a character class. These characters are only interpreted as special characters when used together as a character class, enclosed in quotation marks.

Reporting Preferences Panel

This panel shows the name of the user currently logged into Reporting and the current time zone, both of which will show up in any reports you run.

To specify a different time zone to use in reports, select a time zone from the **Preferred time zone** list, then click **Save**.

Reporting Administration Panel

This topic applies to: CAM authentication

The Administration panel is available when you've enabled Reporting and License Analytics user policies in CAM Administrator, and are logged into Reporting as a CAM administrator or a Reporting and License Analytics administrator.

Notes:

- Users with Purchasing permissions can also use Reporting.
- If your site uses CSM authentication, access to Reporting is controlled from Cherwell Service Management using security groups, rather than via user policies and the Administration tab. The Administration tab is not visible in these situations.

Use the options in this panel to set up multiple users for Reporting and License Analytics, with permissions (roles) that you specify. You can add and delete users from the list, and assign specific roles to users that give them full or limited permissions. You can also use this feature to block certain users from viewing these reports.

Types of Administrators

There are two types of administrator roles in Cherwell Asset Management:

- **CAM Administrator**: These users have full access to CAM Administrator, Reporting, Purchasing, and License Analytics. You won't see this role in this panel unless you are logged in as a CAM Administrator and both types of user policies (Administrator as well as Reporting and License Analytics) are enabled in CAM Administrator. If you see a CAM administrator on the list on this panel, you cannot change that user's role. You cannot assign a CAM administrator from Reporting.
- **Reporting Administrator**: These users have full access to Reporting, the current application, and License Analytics. Reporting administrators can run reports and read, use, create, edit, and delete all filters associated with any user. Reporting administrators can also specify user roles for other users, as described below, and view License Analytics.

Types of User Roles

When you select a user from the list and click **Edit**, specify one of the following roles for that user, then click **Update**:

- Reporting administrator—These users have full access to Reporting and License Analytics, and all panels and options are available. See the above description.
- Reporting and License Analytics user—These users can run all reports and view the dashboard reports on the Status panel, and use License Analytics. Reports users can also use and maintain their own filters, as well as use shared filters. Reporting users cannot view the Administration panel or make changes to any filters that an administrator owns.

- Not authorized—Users designated as "Not authorized" cannot launch Reporting or License Analytics. When unauthorized users attempt to launch one of these applications, they'll see a message to that effect. As a Reporting administrator, you can specify the message that appears by clicking the Not Authorized message link at the top of this panel.

Find a User

To find a particular user so that you can add that user to the list and specify a role:

1. Enter the user's name in **Search**. You can use ***** and **?** .

2. Select the user from the list of results.

3. Click **Add User**.

How to...

How to Change Filters While Running Reports

You can run multiple reports using different filters, but it's best to let a report finish running before you load another filter. Changing filters while a report is being generated may produce unpredictable results and is not recommended.

Do

For example, to switch filters between reports and get predictable results:

1. Load a filter.
2. Run a report from the Reports panel.
3. After report finishes, close it.
4. Load another filter.
5. Run another report from the Reports panel.

Don't

The following examples describe how not to switch filters. Following either of these procedures will yield unpredictable results; you won't know which filter was applied to which report.

1. Load a filter.
2. Run a report.
3. Close the report before it finishes.
4. Load another filter.
5. Run a report.

Or

1. Load a filter.
2. Run a report
3. After the report finishes, don't close it.
4. Load another filter.
5. Run a report.
6. Go back to the first report and click one of its links.

In the second case, the current filter is used for the report, which is not what you specified when you ran that report earlier.

How to Configure Email Services for Reports

This topic is intended for system administrators only.

If you plan to send reports as attachments to email messages or you want to schedule reports to automatically run, you'll need to first configure Reporting by providing information about your email server. To do so, you'll need to edit a configuration file that is installed on the Cherwell Asset Management Reports server in the following default location:

- C:\Inetpub\wwwroot\esmweb\camreports\Reports_Definitions_Settings.lgx
- C:\Inetpub\wwwroot\esmweb\esmreports\Reports_Definitions_Settings.lgx (version 12.0 and earlier)

Notes:

- The instructions on how to modify this file are also contained in the configuration file itself.
- The file is in XML format. You can use any kind of text editor to read and modify it.
- You can also use the Internet Information Services manager application to find the Reports directory.
- See How to Schedule and Email Reports Using ReportRunner for information on command syntax and parameters to use when emailing a report once you've configured email services.

You'll need to edit the following section of the file:

```
<Connection Type="Smtp" ID="EsmReportsSmtpServer" SmtpServer="mail_server_name"
SmtpPort="25"
SmtpAuthenticationMethod="one of 0 or 1 or 2"
SmtpConnectionTimeout="60"
SmtpAuthenticationAccount="email_login_account"
SmtpAuthenticationPassword="email_account_password" />
```

Notice that this section consists of a number of named fields. Each field consists of a keyword (such as **SmtpPort**), followed by an equal (=) sign and a value enclosed in quotation marks.

The relevant fields are as follows:

- **SmtpServer**—The name or IP address of your email server. This will have the form of "secure.emailsrvr.com" (server name) or "10.1.0.183" (IP address).
- **SmtpPort**—The IP port number that the mail server application listens on.
- **SmtpAuthenticationMethod**—A numeric value: 0, 1, or 2. Use the value "0" if your email server does not require a user name and password to login. Use the value "1" if your email server requires a login name and password. Use the value "2" if your email server uses CRAM-MD5

authentication. You must supply a login name and password if you supply either a "1" or "2" for this value.

- **SmtpConnectionTimeout**—The maximum length of time to wait for a response from the email server, in seconds. The default value is 60 seconds.

- **SmtpAuthenticationAccount**—The login name for the email account on your email server. If your email server does not require you to login (`SmtpAuthenticationMethod="0"`) the value you supply in this field will be ignored.

- **SmtpAuthenticationPassword**—The password for the email account on your email server. If your email server does not require you to login (`SmtpAuthenticationMethod="0"`), the value you supply in this field will be ignored.

How to Delete a Filter

To delete a filter:

- From the Filters panel, select it from the Select a filter list box.
- In the right pane, click the Delete button.
- When prompted to confirm the deletion, click OK.

How to Export a Report

You can export most reports to PDF or Excel format.

To export a report:

1. Run the report.
2. Click the Export to PDF or Export to Excel link.
3. If prompted, specify whether to open or save the file that will be created.

   - If you elect to save the file, another dialog box opens, where you can specify the file name, file type, and location for the file.
   - If you elect to open the file, it opens in another window in the appropriate format.
   - You may not be prompted to open or save the file if you have browser plug-ins installed that allow the display of PDF or Excel files. In these cases, the resulting file opens and you can save it from there.

Note that in some cases, the "Please wait" window may remain on your screen after the report is exported; you can safely close this window.

How to Launch and View Reports from a Browser

To launch and view reports directly from a browser:

- In your browser, enter the URL of Reporting; for example:

  http://<reports-web-site-machine>/camreporting

How to Open Specific Reports in a Browser

You can open some reports directly from a browser. The following tables list which reports you can run, and what to type in the URL field for each.

Syntax for Running Reports from a Browser

You can run the reports in the first table with this syntax:

http://<server>/camreports/rdpage.aspx?rdReport=<reportname>

Where:

- <server> is the machine that the reports server is running on.
- <reportname> is listed below.

Report Name	<reportname> Value
Activity Log	ActivityLog
Am I Compliant	AmICompliant
CAM Administration Discovery Servers	AdministrationServersDiscovery
CAM History	CAM History
CAM License Utilization	MachinesUsingCamLicenseDetail
CAM Windows Agent Status	CAMAgentStatus
Concurrent Software License Allocation	LicenseAllocation
Concurrent Software Peak Usage	PeakUsage
Concurrent Software Statistics	ConcurrentLicenseStatistics
Dashboard	Dashboard
Database Script Log	DatabaseScriptLog
Expense History	ExpenseHistory
Failed CAM Windows Agent Installs/Inventories	FailedInstallOrInventory
Group Membership	GroupMembership
ISO Software ID Tags	ISOSoftwareIDTags
Last User Login	LastUserLogin
License Unit Custom Purchase History	CustomPurchaseHistory
License Unit Maintenance Expiration	MaintenanceExpiration
License Unit Purchase History	LicenseUnitPurchaseHistory
License Unit Summary and Machine Assignments	LUSummaryAndMachineAssignments

Report Name	\<reportname\> Value
Machine Drives Summary	MachineDrivesSummary
Machine List	MachineList
Machine Properties	MachineAttributes
Machine Search	SearchForMachine
Microsoft MSDN	MicrosoftMSDN
Network Devices	NetworkDevices
Non-runnable Files	NonRunnableFiles
Oracle Database Summary	OracleDatabaseSummary
Oracle Feature Summary	OracleOptionAndManagementPackSummary
Other Assets	OtherAssets
Product ID	ProductID
Purchase Summary	PurchaseSummary
Software Application Summary	SoftwareApplicationSummary
Software End of Life	EndOfLife
Software Installation by Machine Group, Version	SoftwareInstallationByGroupVersion
Software Installation by Version	SoftwareInstallationByVersion
Software Inventory	SoftwareInventory
Software Inventory and Order Summary	SoftwareInventoryAndOrderSummary
Software Inventory Summary	SoftwareInventorySummary
Software Recently Discovered	SoftwareRecentlyDiscovered
Software Usage Statistics	SoftwareUsageStatistics
Software Usage Summary	SoftwareUsageSummary
Suite Application	SuiteApplication
Unconfigured Files	UnconfiguredFiles
Unconfigured Files by Count	UnconfiguredFilesByCount
Unique Application Paths by Version (Metered)	UniqueApplicationPaths
Unique Application Users by Version (Metered)	UniqueApplicationUsers
Unreconciled Machine Export	UnreconciledMachineExport
Unused Software	UnusedSoftware
Virtual Machines and Hosts	VirtualMachines
What's Changed	WhatsChanged
What's Changed: Added or Deleted Machines	AddedOrDeletedMachines

Syntax for Running Reports from a Browser with "Please wait" Message

You can run the following reports with this syntax if you want the "Please wait" message to appear while the report is being rendered.

http://<server>/camreports/rdProcess.aspx?rdProcess=Wait&rdTaskID=taskWait&report=<reportname>

Where:

- <server> is the machine that the reports server is running on.
- <reportname> is listed below.

Report Name	<reportname> Value
Activity Log	ActivityLog
Am I Compliant	AmICompliant
CAM Administration Discovery Servers	AdministrationServersDiscovery
CAM History	CAMHistory
CAM License Utilization	MachinesUsingCamLicenseDetail
CAM Windows Agent Status	CAMAgentStatus
Concurrent Software License Allocation	LicenseAllocation
Concurrent Software Peak Usage	PeakUsage
Concurrent Software Statistics	ConcurrentLicenseStatistics
Dashboard	Dashboard
Database Script Log	DatabaseScriptLog
Expense History	ExpenseHistory
Failed CAM Windows Agent Installs/Inventories	FailedInstallOrInventory
Group Membership	GroupMembership
ISO Software ID Tags	ISOSoftwareIDTags
Last User Login	LastUserLogin
License Unit Custom Purchase History	CustomPurchaseHistory
License Unit Maintenance Expiration	MaintenanceExpiration
License Unit Purchase History	LicenseUnitPurchaseHistory
License Unit Summary and Machine Assignments	LUSummaryAndMachineAssignments
Machine Drives Summary	MachineDrivesSummary
Machine List	MachineList
Machine Properties	MachineAttributes
Machine Search	SearchForMachine

Report Name	<reportname> Value
Microsoft MSDN	Microsoft MSDN
Network Devices	NetworkDevices
Non-runnable Files	NonRunnableFiles
Oracle Database Summary	OracleDatabaseSummary
Oracle Feature Summary	OracleOptionAndManagementPackSummary
Other Assets	OtherAssets
Product ID	ProductID
Purchase Summary	PurchaseSummary
Software Application Summary	SoftwareApplicationSummary
Software End of Life	EndOfLife
Software Installation by Machine Group, Version	SoftwareInstallationByGroupVersion
Software Installation by Version	SoftwareInstallationByVersion
Software Inventory	SoftwareInventory
Software Inventory and Order Summary	SoftwareInventoryAndOrderSummary
Software Inventory Summary	SoftwareInventorySummary
Software Recently Discovered	SoftwareRecentlyDiscovered
Software Usage Statistics	SoftwareUsageStatistics
Software Usage Summary	SoftwareUsageSummary
Suite Application	SuiteApplication
Unconfigured Files	UnconfiguredFiles
Unconfigured Files by Count	UnconfiguredFilesByCount
Unique Application Paths by Version (Metered)	UniqueApplicationPaths
Unique Application Users by Version (Metered)	UniqueApplicationUsers
Unreconciled Machine Export	UnreconciledMachineExport
Unused Software	UnusedSoftware
Virtual Machines and Hosts	VirtualMachines
What's Changed	WhatsChanged
What's Changed: Added or Deleted Machines	AddedOrDeletedMachines

How to Schedule and Email Reports Using ReportRunner

This topic applies to: CAM authentication

In most cases, you'll run reports from Reporting. There may be situations, however, where you want to be able to schedule a report to run later and either save it or email it to one or more recipients. To schedule reports, you can use ReportRunner, a command line application included with Cherwell Asset Management.

ReportRunner is installed on the machine where you installed CAM Administrator. Depending on how you installed Cherwell Asset Management, the Reportrunner.exe file is located in one of the following locations:

- On 64-bit systems:

    C:\Program Files (x86)\Cherwell Asset Management\CAM Administrator\Report Runner

- On 32-bit systems:

    C:\Program Files\Cherwell Asset Management\CAM Administrator\Report Runner

You can run ReportRunner:

- From the command line.

    Tip: Try this method first, to test that the syntax is correct and that the application yields the expected results.

- From a batch file you've created.

    You can use a batch file as a way to run multiple commands. Enter commands in the order you want them to run, with appropriate arguments. Once you're satisfied with the batch file, you can use Windows Scheduler to run it at the planned time, with the appropriate credentials. You can also run the batch file anytime you want to immediately run the commands included in it.

You can run most, but not all, reports using ReportRunner; see Reports You Can Run with the ReportRunner Application.

Command Syntax

Whether you're running ReportRunner from a command line or a batch file, you use the same syntax:

ReportRunner <command> <command parameters>

ReportRunner includes two commands:

- **loadfilter**, which loads a named filter for a specific filter owner.

- **runreport**, which runs a report on behalf of a particular user, using whatever filter was last loaded for that user.

Parameters for each command are described next.

Parameters for the loadfilter Command and Examples

The parameters you can use with the loadfilter command are as follows:

- **--server**: The report server name.
- **--filter**: The filter name.
- **--nofilter**: To select a default filter to run a report.

Example Use—Using a Filter You Created:

The following command starts ReportRunner and loads a specific filter:

ReportRunner loadfilter --server=reportserver --filter=MyFavoriteFilter

 Where:

- **ReportRunner** is the name of the application.
- **loadfilter** is the command for loading a filter.
- **--server** provides the name of the server that hosts the report generation application. (This is the server name you use when running reports or Reporting: http://reportserver/camreporting.)
- **--filter** identifies the data filter the report generation process should use when generating reports.

Example Use—Using a Filter Created by Another User:

There are two circumstances in which you can use a report data filter created by another user:

- You are a report administrator.
- The person who created the filter chose to "share" the filter.

In these cases, you can add the filter owner's name before the filter name to identify the filter you want to use.

The following command starts ReportRunner and loads a specific filter owned by the reports user whose login name is "fred":

ReportRunner loadfilter --server=reportserver --filter=mydomain\fred:SpecialFilter

Where:

- **ReportRunner** is the name of the application.
- **loadfilter** is the command for loading a filter.
- **--server** provides the name of the server that hosts the report generation application.

- --**filter** identifies the filter owner, "mydomain\fred", and the filter name, "SpecialFilter", (created by Fred) that you want to use to when running reports.

Example Use—Using the Default Filter to Run a Report:

The following command starts ReportRunner and loads the default filter. (The default filter includes all users, machines, and license units, and all events for the past 30 days.)

ReportRunner loadfilter --server=reportserver --nofilter

Where:

- **ReportRunner** is the name of the application.
- **loadfilter** is the command for loading a filter.
- --**server** provides the name of the server that hosts the report generation application.
- --**nofilter** specifies the default filter.

Parameters for the runreport Command and Examples

The runreport command runs a report on behalf of a particular user, using whatever filter was last loaded for that user. The command parameters are:

- **--server**: The report server name.
- **--report**: The report name.
- **--format**: The report output format (PDF or Excel).
- **--file**: The name and location of the resulting file to save.
- **--email** provides the names of email recipients. Use commas to separate multiple email addresses.
- **--sender** provides the email address of the sender. This parameter is required when using the **--email** parameter.
- **--subject** provides a subject line for the email. This parameter is relevant but optional when using the **--email** parameter. If not provided, a default subject is used.
- **--message** provides a body for the email message. This parameter is relevant but optional when using the **--email** parameter. If not provided, a default message body is used.
- **--add** provides the means to send additional parameters to reports that require them. For example, the ExpressHistory report needs a parameter named "ExpressHistoryInputAction", which tells what history information to report on.

Example Use:

The following command starts ReportRunner and runs a report:

ReportRunner runreport --server=reportserver --report=ActivityLogByMachine --format=pdf --file=C:\MyReport.pdf

Where:

- **ReportRunner** is the name of the executable program.

- **runreport** is the command for running a report.

- **--server** provides the name of the server that hosts the report generation application. (This is the server name you use when running reports or Reporting: **http://reportserver/camreporting**.)

- **--report** specifies that the ActivityLogByMachine should be run.

- **--format** specifies that the report should be saved in PDF format.

- **--file** specifies that the file is named MyReport.pdf and saved in the C:\ folder on the user's machine.

Example Use—Sending a Scheduled Report by Email:

If you want to send the report output by email, rather than save it to a file, use a command like the following:

ReportRunner runreport --server=reportserver --report=ActivityLogByMachine --format=pdf --email=fred@example.com,bill@example.com --sender=joe@example.com "--subject=Updated report" "--message=Updated activity log by machine report"

This example differs from the earlier one in that the recipient's email address is specified. With this command, the report, in PDF format, is sent with the email as an attachment.

Example Use—Generating a Report in Excel Spreadsheet Format:

The report scheduling format also provides an Excel output option that can you can use when saving the report to a file to emailing the report to someone. The following is an example:

ReportRunner runreport --server=reportserver --report=ActivityLogByMachine --format=excel --file=C:\MyReports\ActivityLogByMachine.xls

Where:

- **--format**=excel specifies that the report system generates an Excel-formatted output file.

- **--file** provides an output file name with an extension that Windows associates with the Microsoft Excel application.

Notes for Both Commands

- The application name (ReportRunner) must always come first, followed by the command (loadfilter or runreport). After that, command parameters can be used in any order.

- If there are spaces in any of your arguments (for example, in the name of the folder where you want to store the output file), enclose the argument in quotation marks. Note how quotation marks are used with the --file argument in the below example:

reportrunner runreport --server=myserver --report=LicenseAllocationByLicenseUnit --format=pdf "--file=C:\My Documents\test.pdf"

- You cannot use an ampersand (&) character in any parameter value, such as in the name of a license unit or other value printed in a report. Replace the "&" with the word "and". For example, if a

particular report requires a "name" parameter, and the name contains an "&", replace the ampersand with the word "and".

Getting More Help

You can type the following in the command window for additional help with ReportRunner commands and parameters:

ReportRunner help <command name or parameter>

For example, you can type the following to view help on the --server parameter:

ReportRunner help --server

How to Use Reports

This topic provides links to more information on common ways to use reports in Reporting:

- How to Export a Report
- How to Launch and View Reports from a Browser
- How to Open Specific Reports in a Browser
- How to Configure Email Services for Reports
- How to Schedule and Email Reports Using ReportRunner
- Reporting Filters Panel
- How to Use the Query Builder
- Reporting Preferences Panel
- Reporting Administration Panel

How to Use the Query Builder

The Query Builder is a machine filtering mechanism that you can use to build and save simple queries for selecting machines to include in reports. You can build queries that include or exclude machines based on hardware properties, or the presence or absence (based on installation) of specified license units or applications. You can think of queries as being similar to WHERE clauses in SQL expressions.

Queries that you build are saved to a filter. When you apply a filter that includes a query, all the other operations in the filter (for example, filtering out all machines except those in the HR department) take place first. The query is applied last.

Queries can include multiple lines (expressions), as well as AND and OR operators.

Query Components

As you build a query, you select expression types, related options, and operators. The Query Builder also includes controls for adding, validating, editing, and clearing expressions.

Expression Types

The following lists each expression type and the type of information you can enter for each:

- **License unit**—Select a license unit name from the list, and then click Is Installed or Is Not Installed from the Operator list box.
- **Application**—Select an application name and version number from the list, and then click Is Installed or Is Not Installed from the Operator list box.
- **Machine property**—Select a property from the list, and then use the Operator and Value boxes to specify how the property relates to (greater than, equal to, and so on) a value you specify.
- **Platform**—Select Linux, Mac OS, Unix, Windows, or Unknown from the list.

AND, OR, (,) Buttons

The following operators are intended for use in multiple-line queries:

- Use the **AND** button to join two or more expressions by specifying that both conditions must be met.
- Use the **OR** button to join two expressions to specify that one of the conditions must be met.
- Use the **(** and **)** buttons to enclose joined expressions, if necessary. In the absence of parentheses, expressions are evaluated in order.

See the how-to and example sections, later in this topic, to see how these work in context.

Select, Insert, and Delete Links

Each line in a query includes **Select**, **Insert**, and **Delete** links, which you can use to make changes to each expression.

Add, Validate, and Clear Buttons

Use these buttons as follows:

- **Add**—Use to add a completed expression to your query.
- **Validate**—Use to check the current query's syntax. If there are errors, use the Select, Insert, and Delete links to make corrections.
- **Clear**—Use to delete all expressions and operators from the query.

How to Build a Basic Query

A query is made up of one or more expressions, each based on the installation state of a license unit or application, or a value of a machine property. To build the basic query:

1. Select the Expression type (**License unit**, **Application**, **Machine property**, or **Platform**).
2. Make your selections from the displayed list boxes (which vary by expression type).
3. Click the **Add** button to add the expression to the query.
4. To make a multi-line query, use the **AND** and **OR** operator buttons. If you want to control the order in which multiple expressions are evaluated, use the **(** and **)** buttons.
5. Click the **Validate** button at any time to ensure that your query is syntactically correct. Use the **Select**, **Insert**, and **Delete** links to make any changes.
6. Click **Save** to add this query to the current filter, or click **Save As** to save the query and all other current filter settings to a new filter.

To undo your work and restore a query filter to the last saved state, click the **Cancel** link shown to the right of the query window. To clear the Query Builder completely, click the **Clear** button.

Notes:

- Filter evaluation is automatically done when you save a query filter or move to another filter panel.
- You cannot switch to another panel if the current query has a syntax error.

Example Query

For example, you can build a query where only machines that meet the following conditions are included in reports:

- The machine has 1 GB or greater of RAM.
- Microsoft Office Professional Plus 2016 or Microsoft Office Standard 2016 is installed.

To build this query, do the following:

1. In the Expression type list box, click **Machine property**. The Property, Operator, and Value boxes appear. From the Property list box, click **RAM**; from Operator, click **>= (greater than or equal to)**; in

Value, type **1** in the edit box (note that the units—in this case, GB—are shown on the right). Click the **Add** button.

2. Click the **AND** button.

3. Click the **(** button. This is necessary to enclose both license unit expressions, because you want to select machines where either license unit is installed.

4. In the Expression type list box, click **License unit**. The Name and Operator list boxes appear. From the Name list box, click **Microsoft Office Professional Plus 2016**; from Operator, click **Is Installed**. Click the **Add** button.

5. Click the **OR** button.

6. In the Expression type list box, click **License unit**. From the Name list box, click **Microsoft Office Standard 2016**; from Operator, click **Is Installed**. Click the **Add** button.

7. Click the **)** button. This is necessary to enclose the two license unit expressions.

8. Click the **Validate** button to verify your query's syntax. Use the **Select**, **Insert**, and **Delete** links to correct any syntax problems.

9. When you're satisfied with the query, click **Save** to add this query to the current filter, or click **Save As** to save the query and all other current filter settings to a new filter.

Note: Remember to click the Add button after entering each expression (line) in the query, as shown in the example.

Using Wildcards with LIKE and NOT LIKE Operators

Many machine properties are stored in the database as strings. When you create a machine property expression for a string property, two of the operators you can use are **LIKE** and **NOT LIKE**. With these operators, you can use wildcards to match portions of the values of a string. The Query Builder supports the same wildcard characters as are commonly used to match file names:

- The ***** character is used to match zero or more characters.
- The **?** character is used to match exactly one character.

For example, if you want your filter expression to evaluate the Computer Model machine property and you use the LIKE operator with a value of ***dell*latitude***, any machine whose computer model property contains **dell** and **latitude** is included. Note that if you don't include wildcards in a **LIKE** or **NOT LIKE** expression, the ***** wildcard character is automatically assumed at the beginning and end of the string.

How to View License Analytics

You can open License Analytics from anywhere in Reporting by clicking the ⬚ icon in the toolbar at the top right of the screen.

Troubleshooting

Troubleshooting: Currency Issues

If Reporting and Purchasing users in your organization use different language settings in their browsers, please read on for a description of possible currency issues and how to avoid them. This topic is not relevant for organizations where all of these users have the same browser language settings.

Cherwell Asset Management supports a single currency, and all currency data is stored without a currency symbol. Reporting and Purchasing determine which currency symbol to display to the logged-in user based on that user's language settings in the current browser. But when users have different browser language settings, currency issues can occur when interpreting data and exporting reports to Microsoft Excel.

Example of When Currency Issues Can Occur

Say User A uses English (United States) and User B uses English (United Kingdom) for their language settings in their browsers. When User A enters an order in Purchasing, $ (the dollar sign) is displayed in currency fields. When User B views that order or runs a report that includes data from that order, £ (the British pound sign) is displayed in currency fields. So the currency symbol is different, but numbers that follow the currency symbol are unchanged (not converted to the new currency).

What to Do

To avoid such currency issues, affected organizations can take the following steps:

- Decide on a standard, single currency to use for all currency data.
- Communicate that standard to all users of Reporting and Purchasing.
- Instruct users who need to use a language other than the standard for other tasks to add the standard to their list of languages in their browsers, and then change to the standard before starting Reporting or Purchasing.
  The following explains how to do this in Internet Explorer:
    1. Go to Tools > Internet Options > Languages > Add.
    2. Add a language that uses the appropriate currency.
    3. Move that language to the top of the list.
    4. Restart the browser.

Note: You may also notice similar currency issues in CAM Administrator.

Troubleshooting: Error if Report Is Left Open

If you leave a report open and Reporting inactive for a long time, you may receive an error when you return to the report. In this case, your Reporting session has probably timed out. Restart it and re-run the report.

Troubleshooting: Timeout Expired

If you encounter a "timeout expired" message when you run a report, there may be an issue with SQL Server and the amount of data. Try using filters to limit the data used in the report, and then re-run the report.