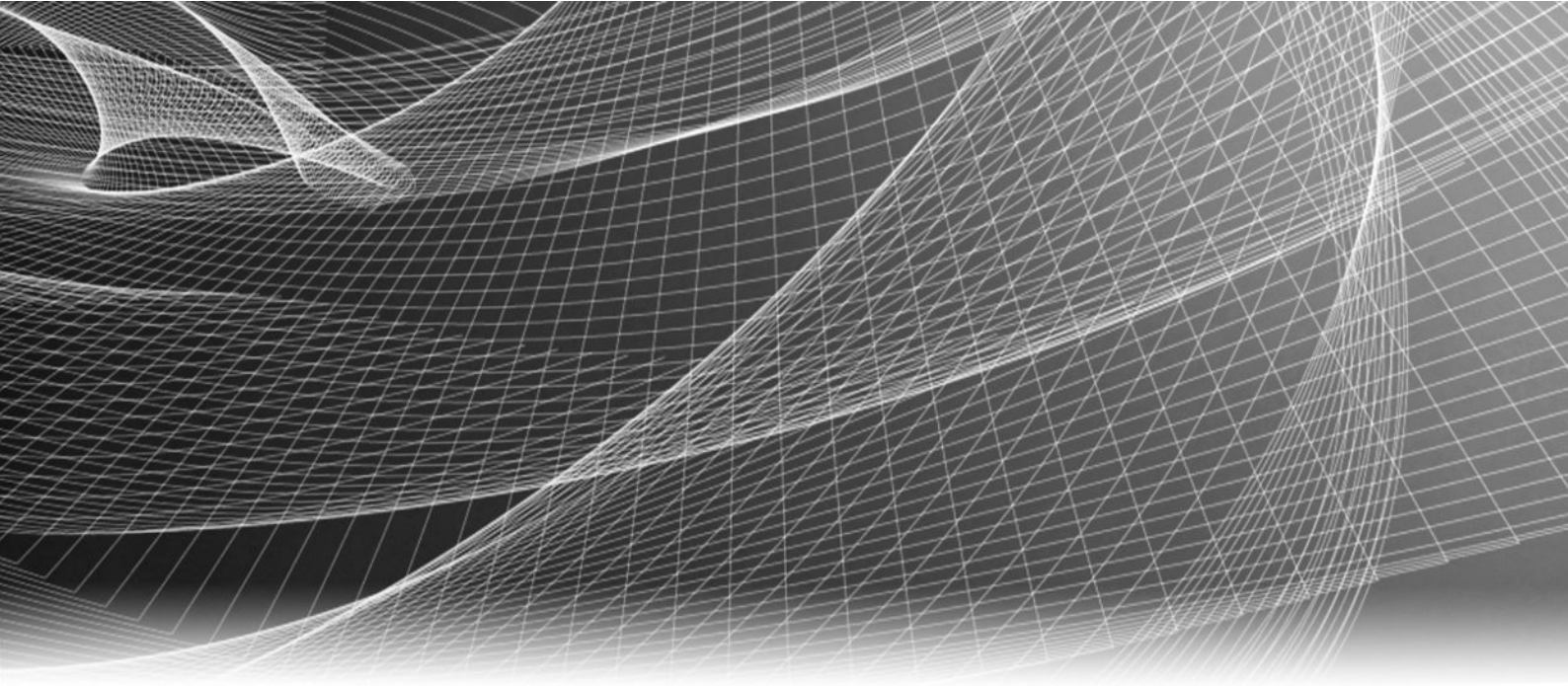

EMC® Avamar®

Version 7.2

Reports Guide

302-001-934

REV 01

EMC²

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For the most up-to-date regulatory document for your product line, go to EMC Online Support (https://support.emc.com).

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PREFACE

As part of an effort to improve its product lines, EMC periodically releases revisions of its software and hardware. Therefore, some functions described in this document might not be supported by all versions of the software or hardware currently in use. The product release notes provide the most up-to-date information on product features.

Contact your EMC technical support professional if a product does not function properly or does not function as described in this document.

Note

This document was accurate at publication time. Go to EMC Online Support (https://support.EMC.com) to ensure that you are using the latest version of this document.

Purpose

This guide describes how to create, manage, and interpret the information in Avamar reports.

Audience

The audience for this guide includes Avamar system administrators, sales force personnel, and other technicians who manage an Avamar server.

Revision history

The following table presents the revision history of this document.

Table 1 Revision history

Revision	Date	Description
01	June, 2015	Initial release of Avamar 7.2.

Related documentation

The following EMC publications provide additional information:

- *EMC Avamar Administration Guide*
- *EMC Avamar Operational Best Practices Guide*
- *EMC Avamar Release Notes*

Special notice conventions used in this document

EMC uses the following conventions for special notices:

NOTICE

Addresses practices not related to personal injury.

Note

Presents information that is important, but not hazard-related.

Typographical conventions

In this document, EMC uses the typographical conventions shown in the following table:

Table 2 Typographical conventions

Convention	Example	Description
Bold typeface	Click **More Options**.	Use for names of interface elements, such as names of windows, dialog boxes, buttons, fields, tab names, key names, and menu paths (what a user specifically selects or clicks).
Italic typeface	*EMC Avamar Administration Guide*	Use for full titles of publications referenced in text.

Monospace font	`Event Type = INFORMATION`
	`Event Severity = OK`
	`Event Summary = New group created`
		Use for:
		• System code
		• System output, such as an error message or script
		• Pathnames, file names, prompts, and syntax
		• Commands and options

Monospace font with italic typeface	Type ***Avamar_server***, where *Avamar_server* is the DNS name or IP address of the Avamar server.	Use for variables.
Monospace font with bold typeface	Type **yes**.	Use for user input.
Square brackets	**[--domain=*String*(/)] --name=*String***	Square brackets enclose optional values.
Vertical bar	**[--domain=*String*(/)] | --name=*String***	Vertical bar indicates alternate selections - the bar means “or”.
Braces	**{[--domain=*String*(/)] | --name=*String*}**	Braces enclose content that the user must specify.
Ellipses	`valid hfs ...`	Ellipses indicate nonessential information omitted from the example.

Where to get help

The Avamar support page provides access to licensing information, product documentation, advisories, and downloads, as well as how-to and troubleshooting information. This information may enable you to resolve a product issue before you contact EMC Customer Support.

To access the Avamar support page:

1. Go to https://support.EMC.com/products.
2. Type a product name in the **Find a Product** box.
3. Select the product from the list that appears.
4. Click the arrow next to the **Find a Product** box.
5. (Optional) Add the product to the **My Products** list by clicking **Add to my products** in the top right corner of the **Support by Product** page.

Documentation

The Avamar product documentation provides a comprehensive set of feature overview, operational task, and technical reference information. Review the following documents in addition to product administration and user guides:

- Release notes provide an overview of new features and known limitations for a release.
- Technical notes provide technical details about specific product features, including step-by-step tasks, where necessary.
- White papers provide an in-depth technical perspective of a product or products as applied to critical business issues or requirements.

Knowledgebase

The EMC Knowledgebase contains applicable solutions that you can search for either by solution number (for example, esgxxxxxx) or by keyword.

To search the EMC Knowledgebase:

1. Click **Search** at the top of the page.
2. Type either the solution number or keywords in the search box.
3. (Optional) Limit the search to specific products by typing a product name in the **Scope by product** box and then selecting the product from the list that appears.
4. Select **Knowledgebase** from the **Scope by resource** list.
5. (Optional) Specify advanced options by clicking **Advanced options** and specifying values in the available fields.
6. Click **Search**.

Online communities

Visit EMC Community Network at http://community.EMC.com for peer contacts, conversations, and content on product support and solutions. Interactively engage online with customers, partners and certified professionals for all EMC products.

Live chat

To engage EMC Customer Support by using live interactive chat, click **Join Live Chat** on the **Service Center** panel of the Avamar support page.

Service Requests

For in-depth help from EMC Customer Support, submit a service request by clicking **Create Service Requests** on the **Service Center** panel of the Avamar support page.

Note

To open a service request, you must have a valid support agreement. Contact your EMC sales representative for details about obtaining a valid support agreement or with questions about your account.

To review an open service request, click the **Service Center** link on the **Service Center** panel, and then click **View and manage service requests**.

Facilitating support

EMC recommends that you enable ConnectEMC and Email Home on all Avamar systems:

- ConnectEMC automatically generates service requests for high priority events.
- Email Home emails configuration, capacity, and general system information to EMC Customer Support.

Your comments

Your suggestions will help us continue to improve the accuracy, organization, and overall quality of the user publications. Send your opinions of this document to DPAD.Doc.Feedback@emc.com.

Please include the following information:

- Product name and version
- Document name, part number, and revision (for example, 01)
- Page numbers
- Other details that will help us address the documentation issue

CHAPTER 1

Introduction

This chapter includes the following topics:

Overview of Avamar reports

The EMC® Avamar® server software includes a reporting function that accesses system information to view in a report format. The reporting function is part of the Management Console Server (MCS).

The MCS provides centralized administration, which includes scheduling, monitoring, and management, for the Avamar server. The MCS uses a postgres database to store backup schedules, datasets, configurations, and so forth. The MCS also runs the server-side processes used by the Avamar Administrator graphical management console.

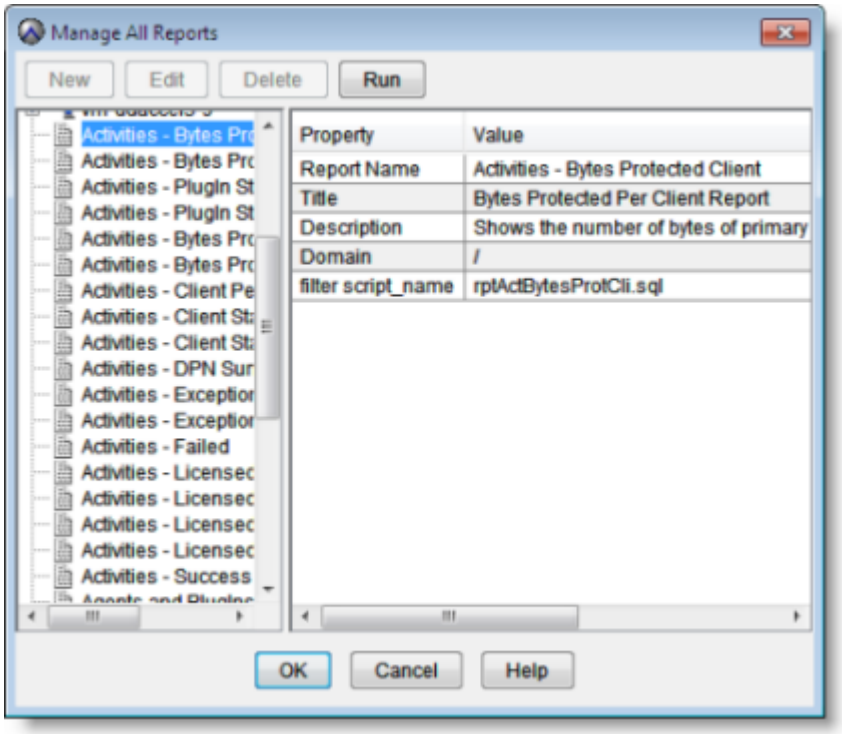
The Avamar reporting function enables you to create, manage, and run system reports by using Avamar Administrator.

Reports available from Avamar Administrator

From Avamar Administrator, you can run predefined reports or custom reports that you create from report templates.

The set of predefined reports include the activity, capacity, client, and system reports. These reports are available from the **Manage All Reports** dialog box.

Figure 1 Manage All Reports dialog box



The list of reports are shown in the left pane. The description of the report that is selected, **Activities - Bytes Protected Client**, is in the right pane.

You select a report and click **Run**. You save most reports to a comma-separated values (`.csv`) text file except for the following reports:

- Capacity
- Misc - Stats 1
- Serviceability

- Site Inventory
- System - Configuration Audit
- System - GSAN Perf Stats

You save these reports to a text file.

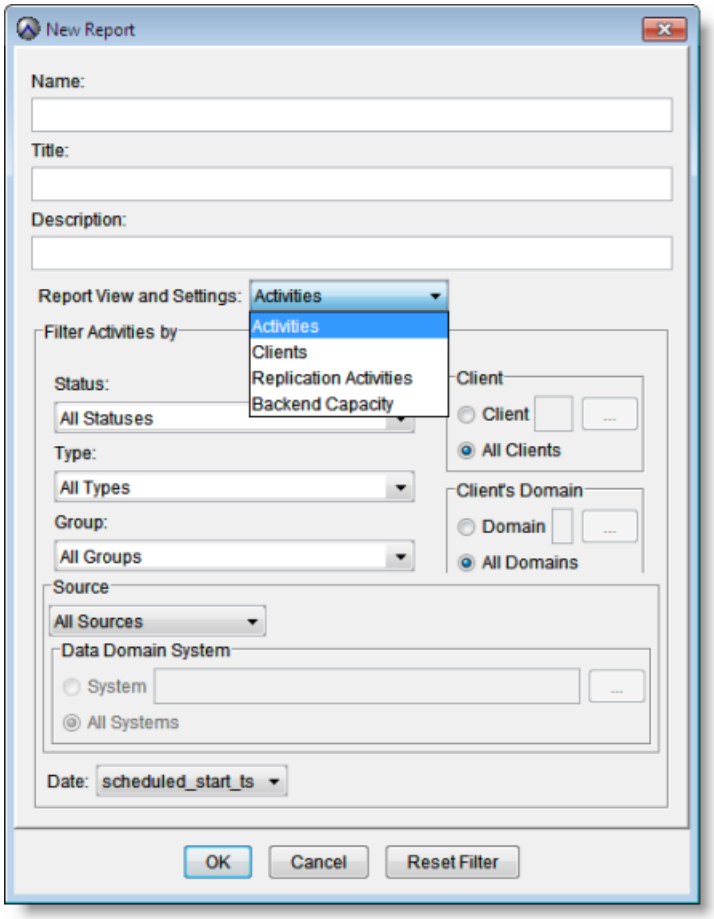
Avamar Administrator provides four report templates for creating custom reports. The following table describes the four report templates.

Table 3 Report templates for custom reports

Template	Description
Activities	Shows information about system activities, such as backups, restores, backup validations, and replication.
Clients	Shows information about one or more backup clients.
Replication Activities	Similar to Activities reports, but only shows information related to replication.
Backend Capacity	Shows the amount of physical server storage capacity used. This calculation includes capacity optimized by data deduplication, but does not include capacity consumed by RAIN overhead.

The report templates are available from the **Report View and Settings** list in the **New Report** dialog box. The following figure shows the options for the Activities template.

Figure 2 Options for the Activities template



The selection of a template from the **Report View and Settings** list controls the options that the **New Report** dialog box displays. For example, when you select **Clients** from the **Report View and Settings** list, the **New Report** dialog box displays options specific to the Clients template.

Avamar administration requirements

You create reports from the root domain level, the domain level, or the subdomain level. The level at which you create a report depends on the administrator role for the user.

To run a report from the root domain requires root administrator access. Root administrators have full control of the system. The Avamar server node is known as the root domain. To run a report from a domain below the root domain requires domain administrator access. Domain administrators have access to objects within their domain and within their subdomains, but cannot access objects in the root domain or objects in other subdomains.

The domain you select for a report controls the report's contents. Content, for example, can be capacity usage data, client activity statistics, licensing statistics, backup statistics, and so forth.

A report that you create from the root domain can include capacity usage data from the entire server or from specific subdomains. A report that you create from a subdomain can only include capacity usage data from the subdomain.

Third-party reporting tools

You can also generate Avamar reports by using any third-party PostgreSQL-compliant Open DataBase Connectivity (ODBC) database reporting tool that runs on the platform.

You must create report templates by using the schema listings that are found in `dbviews.sql`. This file is located in the `/usr/local/avamar/lib/sql` directory on the utility node.

MCS Database Views on page 83 provides more information about each view in `dbviews.sql` and descriptions of the individual columns that store data.

Crystal Reports

Crystal Reports is a popular database reporting tool. Avamar Administrator provides several Crystal Reports templates that you can use to quickly generate various Avamar system reports. You can customize these templates or create new ones.

PostgreSQL

PostgreSQL is a open-source Relational Database Management System (RDMS). Avamar uses a PostgreSQL database to store data. Information in the Avamar database is accessible through any PostgreSQL-compliant ODBC interface.

The PostgreSQL database runs on the Avamar utility node. The MCS uses a postgres database to store backup schedules, datasets, configurations, and so forth. Access to views in the PostgreSQL database requires you to log in as the admin user. The following command provides an example of the syntax you use to interact with the PostgreSQL database:

```
select client_name, type, status_code, started_ts,
completed_ts, bytes_scanned, bytes_modified_sent
from v_activities_2 where started_ts > '2014-1-1 00:00:00'
order by completed_ts
```

CHAPTER 2

Predefined Reports

This chapter includes the following topics:

Activity reports

Activity reports comprise the largest category of reports. You create activity reports from the **Manage Reports** dialog box in Avamar Administrator. After you run the report, you can save it to a comma delimited file or for some reports to a text file.

The following table lists predefined activity reports that you can run from Avamar Administrator.

Table 4 Activity reports

Report	Description
Activities - Bytes Protected Client	Shows the amount of primary data in GB protected by the system for each client.
Activities - Bytes Protected Client - 2	Shows the amount of primary data in GB protected by the system for each client during a specific time period.
Activities - Plugin Stats	Shows the following statistics for each plug-in: • Total amount of primary data in GB protected by the system • Average percent of common data • Average amount of data in GB protected by the system • Average amount of new data in GB
Activities - Plugin Stats - 2	Shows the following statistics for each plug-in for a specific time period: • Total amount of primary data in GB protected by the system • Average percent of common data • Average amount of data in GB protected by the system • Average amount of new data in GB **Note** This report is the same as the Activities - Plugin Stats report, except that you can specify a date range.
Activities - Bytes Protected Total	Shows the total amount of primary data protected by the system.
Activities - Bytes Protected Total - 2	Shows the total amount of primary data protected by the system during a specific time period.
Activities - Client Perf Track	Shows daily client performance statistics for a specific time period
Activities - Client Stats	Shows the following statistics for each client: • Average percent of common data • Amount of primary data in GB protected by the system • Amount of new data in GB
Activities - Client Stats - 2	Shows the following statistics for each client for a specific time period:

Table 4 Activity reports (continued)

Report	Description
	• Total amount of data in GB protected by the system • Average percent of common data • Average amount of data in GB protected by the system • Average amount new data in GB
Activities - DPN Summary	Shows summary information about client data the Avamar server stores and statistical data for each client backup.
Activities - Exceptions	Shows all activities within a specific time period that completed with exceptions. This report runs the `rptActException.sql` script.
Activities - Exceptions (extended)	Shows all activities within a specific time period that completed with exceptions. This report runs the `ActExceptionExt.pl` script.
Activities - Failed	Shows all activities within a specific time period that failed due to errors.
Activities - Licensed Bytes Protected Client	Shows the total amount of primary data in GB protected by the system for each client within the license period. **Note** This 14-day timeframe ensures that any backups that belong to clients that might have migrated to another Avamar server are not included in the licensing calculations for the server.
Activities - Licensed Plugin Stats	Shows the following statistics for each plug-in client: • Number of backups • Average percent of common data • Total amount of data in GB protected by each data source plug-in • Amount of new data **Note** This 14-day timeframe ensures that any backups that belong to clients that might have migrated to another Avamar server are not included in the licensing calculations for the server.
Activities - Licensed Bytes Protected Total	Shows the total amount of primary data in GB protected by the system within the license period. **Note** This 14-day timeframe ensures that any backups that belong to clients that might have migrated to another Avamar server are not included in the licensing calculations for the server.
Activities - Licensed Client Stats	Shows the amount of primary data in GB protected by the system and other statistics for each client within a license period.

Table 4 Activity reports (continued)

Report	Description
	Note This 14-day timeframe ensures that any backups that belong to clients that might have migrated to another Avamar server are not included in the licensing calculations for the server.
Activities - Success	Shows all activities that completed without exceptions within a specific time period.

Use case for Activities - Bytes Protected Client - 2 report

The **Activities Bytes Protected Client** report lists the amount of the largest single backup without deduplication in GB for each client. Run this report to determine how much space is required to restore the largest recent backup to the client or to a tape. A failed backup does not decrease this value unless the backup has been failing for a long time.

The amount of bytes protected does not correspond to capacity utilization on the Avamar server.

The **Activities - Bytes Protected Client** and **Activities - Bytes Protected Client - 2** reports contain the same information except that the **Activities - Bytes Protected Client - 2** report enables you to specify a date range.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - Bytes Protected Client - 2** in the list of predefined reports and click **Run**.

   The **Run Reports - Activities - Bytes Protected Client -2** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that contains details about the clients appears in the dialog box.

   Table 5 Activities - Bytes Protected Client - 2 column descriptions

Column	Description
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
PluginName	Name of the plug-in. For example: Windows DB2.
Dataset	Name of the dataset. For example: /Client On-Demand Data.
TotalGBProtected	Total amount of GB protected by the Avamar server. For example: 0.2404.
Version	Version of the Avamar client software.
OS	Client operating system.
IsClientOS	Determines whether the platform is a client or a server platform. Value is true or false: • true for a client platform

Table 5 Activities - Bytes Protected Client - 2 column descriptions (continued)

Column	Description
	• false for a server platform

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Plugin Stats report

The **Activities - Plugin Stats** report provides a summary of backup information for each client. This report, like the **Activities- Bytes Protected Client -2** report, includes the total bytes protected amount for each client. In addition, this report lists the number of backups for each client, the average commonality percent for the backups, and the average amount of new data in GB in the backups.

The **Activities - Plugin Stats** and **Activities - Plugin Stats - 2** reports contain the same information except that the **Activities - Plugin Stats - 2** report enables you to specify a date range.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - Plugin Stats** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - PlugIn Stats** dialog box appears.

3. Click **Retrieve**.

   A table that contains statistics for all client plug-ins appears in the dialog box.

   Table 6 Activities - Plugin Stats column descriptions

Column	Description
PluginName	Name of the Avamar plug-in. For example: Linux Oracle RMAN.
Clients	Number of clients that run the plug-in specified in the PluginName column.
Backups	Number of backups available.
TotalGBProtected	Total amount of GB protected by the Avamar server. For example: 1.2810.
AvgPcntCommon	Average percent of common data.
AvgGBProtected	Average amount of data in GB that the system protects.
AvgGBNew	Average amount of new data in GB.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Licensed Bytes Protected Total report

The **Activities - Licensed Bytes Protected Total** report provides the amount of primary data protected by the Avamar server within a 14-day timeframe. The value that this report produces represents the sum of all bytes protected for all clients.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. Select **Activities - Licensed Bytes Protected Total** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Licensed Bytes Protected Total** dialog box appears.
3. Click **Retrieve**.

   The total amount of licensed bytes the system protects appears in the dialog box. For example: 11.0606.
4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Client Perf Track report

The **Activities - Client Perf Track** report provides performance statistics for all clients in the Avamar configuration. Run this report to view statistics such as backup start times, elapsed times, error codes, number of files scanned, number of bytes scanned, status messages, commonality, number of bytes with a hit in the local cache, and so forth.

The information in **Activities - Client Perf Track** report is more advanced than the information you can view in the **Activity** window.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. Select **Activities - Client Perf Track** in the list of predefined reports and click **Run**.

   The **Run Reports - Activities - Client Perf Track** dialog box appears.
3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that contains performance statistics for all Avamar clients appears in the dialog box.

   Table 7 Activities - Client Perf Track column descriptions

Column	Description
Server	Type of server.
AxionSystemID	Avamar system ID.
Operation	Type of activity: • On-Demand Backup • Scheduled Backup • Restore • Validate • Replication source

Table 7 Activities - Client Perf Track column descriptions (continued)

Column	Description
	• Replication destination
ClientOS	Client operating system.
ClientVer	Avamar client software version.
PluginNum	Number for the plug-in.
CID	Unique alphanumeric identifier that the Avamar server stores for the Avamar client.
Host	Hostname of the Avamar client.
WorkOrderID	Unique identifier for the following activities: • For scheduled backups, the format of a workorder ID is *schedule_name-group_name-time* where *schedule_name* is the name of the Avamar schedule, *group_name* is the name of the Avamar group, and *time* is the UNIX time in milliseconds. • For on-demand backups that you start with the **Back Up Group Now** command from the **Policy** window, the format of the workorder ID is *group_name-time* where *group_name* is the name of the Avamar group and *time* is the UNIX time in milliseconds. • For on-demand backups or restores that you start from the **Backup, Restore and Manage** window, the format of the workorder ID is MOD-*time* where *time* is the UNIX time in milliseconds. • For on-demand backups that you start from the system tray icon on a Windows client, the format of the workorder ID is COD-*time* where *time* is the UNIX time in milliseconds. • For command line backups or restores, the format of the workorder ID is NAH-*time*where *time* is the UNIX time in milliseconds. • For replication activities, the format of the workorder ID is COD-NAH-*time* where *time* is the UNIX time in milliseconds.
SessionID	Unique identifier for the client to storage subsystem session for this activity.
GroupBasedPath	Avamar domain of the group. By default, groups are located on the root Avamar domain. You can manually change a group's location to limit access, if necessary.
ScheduledStartTime	The date and time when the activity was scheduled to start.
StartedTime	The date and time when the activity started.
CompletedTime	The date and time when the activity completed.
ElapsedSeconds	The amount of time in seconds for the activity.
Status	Status message for the activity: • Activity completed successfully. • Activity completed with exceptions.

Table 7 Activities - Client Perf Track column descriptions (continued)

Column	Description
	• Activity cancelled. • Activity failed - timed out before starting. • Activity failed - timed out before completion. • Activity failed - client was given a workorder, but did not acknowledge its receipt. • Activity failed - client error(s). • Activity failed - timed out before completion. • Activity failed - client has no data specified by dataset. • Dropped Session - No progress reported.
ErrorCode	Error code returned from the workorder.
NumFiles	Number of files processed.
NumFilesMod	Number of files modified since the last backup.
NumFilesSkipped	Number of files unintentionally skipped.
BytesScanned	Number of bytes processed.
BytesReduced	Number of bytes reduced by compression.
BytesAfterReduced	The bytes to be protected, which already exist on GSAN.
BytesExcluded	Number of bytes intentionally excluded.
BytesSkipped	Number of bytes unintentionally skipped.
BytesOverhead	Number of bytes of overhead.
BytesModNotSent	Number of bytes modified but not sent.
BytesModSent	Number of bytes modified and sent.
PcntCommon	The deduplication rate as a percentage. The higher the value, the more deduplication of the data. A value of 100% means that all data backed up is already on the Avamar server.
isDTLT	Boolean flag that determines whether Avamar Desktop/Laptop clients are included.
BytesHCache	Number of bytes with a hit in the local cache.
BytesIsPresent	Number of bytes with a hit in the server cache.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Licensed Client Stats report

The **Activities - Licensed Client Stats** report lists client backup statistics for the last 14 days. The 14-day timeframe (referred to as "Licensed") ensures that all backups that

belong to clients that have been migrated to another Avamar server are not included in the licensing calculations for the server.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - Licensed Client Stats** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Licensed Client Stats** dialog box appears.

3. Click **Retrieve**.

   A table that contains the number of bytes protected by the system for each client and other client statistics appears in the dialog box.

   Table 8 Activities - Licensed Client Stats report column descriptions

Column	Description
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
Dataset	Name of the dataset. For example: /Client On-Demand Data.
PluginName	Name of the Avamar plug-in. For example: LINUX Lotus Domino.
Backups	Number of backups available.
AvgPcntCommon	Average percent of common data.
GBProtected	Amount of primary data in GB protected by the system.
GBNew	Amount of new data in GB.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - DPN Summary report

The **Activities - DPN Summary** report provides a summary of backup results and statistics for all clients. You can select a date range to limit the amount of output for the report. This report includes expired backups.

A common use for this report is to identify the clients that add more data than other clients.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - DPN Summary** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - DPN Summary** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that contains DPN summary information appears in the dialog box.

   Table 9 Activities - DPN Summary column descriptions

Column	Description
Host	Hostname of the Avamar client.

Table 9 Activities - DPN Summary column descriptions (continued)

Column	Description
StartValue	UNIX start time of the activity. The UNIX start time is in the local time of the Avamar server.
OS	Client operating system.
StartTime	The date and time when the activity started.
Root	The name of the dataset that the activity used.
Seconds	The duration of the activity in seconds.
Numfiles	The total number of files scanned during the activity less those files that were excluded through exclusion rules.
NumModFiles	The total number of modified files associated with the activity.
ModReduced	The amount of modified data that is reduced due to compression during commonality processing.
ModNotSent	The amount of bytes in modified files that do not have to be sent to the Avamar server because of subfile-level commonality factoring.
ModSent	The amount of new bytes sent to the Avamar server.
TotalBytes	Number of bytes processed.
PcntCommon	The deduplication rate as a percentage. The higher the value, the more deduplication of the data. A value of 100% means that all data backed up is already on the Avamar server.
Overhead	The number of bytes for COMPOSITEs and DIRELEMs used to store data. Overhead is the amount of nonfile data that the client sends to the server for the following items: • Indexing information • Requests from the client to the server for the presence of specific data chunks • ACLs • Directory information • Message headers On any active file system, overhead is usually a small percentage of the file data that is sent to the Avamar server.
WorkOrderID	Unique identifier for the following activities: • For scheduled backups, the format of a workorder ID is *schedule_name-group_name-time*. where *schedule_name* is the name of the Avamar schedule, *group_name* is the name of the Avamar group, and *time* is the UNIX time in milliseconds. • For on-demand backups initiated from the **Policy** window **Back Up Group Now** command, the format of the workorder ID is *group_name-time* where *group_name* is the name of the Avamar group and *time* is the UNIX time in milliseconds. • For on-demand backups or restores that you start from the **Backup, Restore and Manage** window, the format of the

Table 9 Activities - DPN Summary column descriptions (continued)

Column	Description
	workorder ID is MOD-*time* where *time* is the UNIX time in milliseconds. • For on-demand backups that you start from the system tray icon on a Windows client, the format of the workorder ID: COD-*time* where *time* is the UNIX time in milliseconds. • For command line backups or restores, the format of the workorder ID is NAH-*time* where *time* is the UNIX time in milliseconds. • For replication activities, the format of the workorder ID: COD-NAH-*time* where *time* is the UNIX time in milliseconds.
ClientVer	Avamar client software version.
Operation	Type of activity: • On-Demand Backup • Scheduled Backup • Restore • Validate • Replication source • Replication destination
Status	Status message for the activity: • Activity completed successfully. • Activity completed with exceptions • Activity cancelled • Activity failed - timed out before starting • Activity failed - timed out before completion • Activity failed - client was given a workorder, but did not acknowledge its receipt • Activity failed - client error(s) • Activity failed - timed out before completion • Activity failed - client has no data specified by dataset • Dropped Session - No progress reported
SessionID	Unique identifier for the client to storage subsystem session for this activity.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Exceptions report

The **Activities - Exceptions** report shows all backup activity that completed with exceptions. These backups include backups that can be restored, but might not have

complete client data. Backups of this type appear in the **Activity** window as `Completed with exceptions`.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - Exceptions** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Exceptions** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that contains activities that completed with exceptions appears in the dialog box.

   Table 10 Activities - Exceptions column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
Status	Status message for the activity: • Activity completed successfully • Activity completed with exceptions • Activity cancelled • Activity failed - timed out before starting • Activity failed - timed out before completion • Activity failed - client was given a workorder, but did not acknowledge its receipt • Activity failed - client error(s) • Activity failed - timed out before completion • Activity failed - client has no data specified by dataset • Dropped Session - No progress reported
ClientErrorCode	Client error code number that indicates the reason for a backup failure.
ClientVersion	Avamar client software version.
ClientOS	Client operating system.
LabelNum	Backup identifier. for example: GUI-C-DB2 Database(s) backup.
Type	Type of activity: • On-Demand Backup • Scheduled Backup • Restore • Validate • Replication source • Replication destination

Table 10 Activities - Exceptions column descriptions (continued)

Column	Description
Dataset	Name of the dataset. For example: /Client On-Demand Data.
DSTarget	Name of the dataset target. For example: /ds_db2.
Schedule	Name of the schedule used for the scheduled backup.
SchStartDate	Scheduled start date.
SchStartTime	Scheduled start time.
SchEndDate	Expected end date of the activity.
SchEndTime	Expected end time of the activity.
StartDate	The date when the activity started.
StartTime	The date and time when the activity started.
EndDate	The date when the activity completed.
EndTime	The time when the activity completed.
ElapsedTime	The total elapsed time for the activity.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Failed report

The **Activities - Failed** report shows all backup activities that failed. These backups include all backups that cannot be restored. Backups of this type appear in the **Activity** window as `Failed`.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - Failed** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Failed** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that contains statistics for client activities that failed appears in the dialog box.

Table 11 Activities - Failed report column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
Status	Status message for the activity: • Activity completed successfully. • Activity completed with exceptions

Table 11 Activities - Failed report column descriptions (continued)

Column	Description
	• Activity cancelled • Activity failed - timed out before starting • Activity failed - timed out before completion • Activity failed - client was given a workorder, but did not acknowledge its receipt • Activity failed - client error(s) • Activity failed - timed out before completion • Activity failed - client has no data specified by dataset • Dropped Session - No progress reported
ClientErrorCode	Client error code number that indicates the reason for a backup failure.
ClientVersion	Avamar client software version.
ClientOS	Client operating system.
LabelNum	Backup identifier. For example: GUI-C-DB2 Database(s) backup.
Type	Type of activity: • On-Demand Backup • Scheduled Backup • Restore • Validate • Replication source • Replication destination
Dataset	Name of the dataset. For example: /Client On-Demand Data.
DStarget	Name of the dataset target. For example: /ds_db2.
Schedule	Name of the schedule used for the scheduled backup.
SchStartDate	Scheduled start date.
SchStartTime	Scheduled start time.
SchEndDate	Expected end date of the activity.
SchEndTime	Expected end time of the activity.
StartDate	The date when the activity started.
StartTime	The time when the activity started.
EndDate	The date when the activity completed.
EndTime	The time when the activity completed.
ElapsedTime	The total elapsed time for the activity.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Licensed Bytes Protected Client report

The **Activities - Licensed Bytes Protected Client** report lists the amount of the largest single backup without deduplication in GB for each client for the last 14 days.

Run this report to determine how much space is required to restore the largest recent backup to the client or to a tape. A failed backup does not decrease this value unless the backup has been failing for a long time.

The amount of bytes protected does not correspond to capacity utilization on the Avamar server.

The 14-day timeframe (referred to as "Licensed") ensures that all backups that belong to clients that have been migrated to another Avamar server are not included in the licensing calculations for the server.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Activities - Licensed Bytes Protected Client** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - DPN Summary** dialog box appears.

3. Click **Retrieve**.

   A table that contains total licensed bytes for each client appears in the dialog box.

   Table 12 Activities - Licensed Bytes Protected Client report column descriptions

Column	Description
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
PlugInName	Name of the Avamar plug-in. For example: LINUX Lotus Domino.
Dataset	Name of the dataset. For example: /Client On-Demand Data.
TotalGBProtected	The total amount of GB for each client that the system protects within a license period. For example: 0.1330.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Licensed PlugIn Stats report

The **Activities - Licensed Plugin Stats** report shows the number of bytes of primary data protected by the Avamar server for each plug-in for a 14-day timeframe. This report, like the **Activities - Plugin Stats** report and other similar reports, lists information by plug-in type, number of backups, total bytes protected by the plug-in type, and so forth.

The bytes protected amount is the amount of the largest single backup without deduplication in GB for each client. The amount of bytes protected does not correspond to capacity utilization on the Avamar server.

The 14-day timeframe (referred to as "Licensed") ensures that all backups that belong to clients that have been migrated to another Avamar server are not included in the licensing calculations for the server.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. Select **Activities - Licensed PlugIn Stats** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Licensed PlugIn Stats** dialog box appears.
3. Click **Retrieve**.

   A table that contains client statistics, which includes the total amount of GB the system protects for each client plug-in, appears in the dialog box.

   Table 13 Activities - Licensed PlugIn Status report column descriptions

Column	Description
PluginName	Name of the Avamar plug-in. For example: LINUX Lotus Domino.
Clients	Number of clients that run the plug-in specified in the PluginName column.
Backups	Number of backups available.
TotalGBProtected	The total amount of GB for each client that the system protects within a license period. For example: 0.1330.
AvgPcntCommon	Average percent of common data.
AvgGBProtected	Average amount of data in GB that the system protects.
AvgGBNew	Average amount of new data in GB.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Licensed Bytes Protected Total report

The **Activities - Licensed Bytes Protected Total** report provides the amount of primary data protected by the Avamar server within a 14-day timeframe. The value that this report produces represents the sum of all bytes protected for all clients.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. Select **Activities - Licensed Bytes Protected Total** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Licensed Bytes Protected Total** dialog box appears.
3. Click **Retrieve**.

   The total amount of licensed bytes the system protects appears in the dialog box. For example: 11.0606.
4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Licensed Client Stats report

The **Activities - Licensed Client Stats** report lists client backup statistics for the last 14 days. The 14-day timeframe (referred to as "Licensed") ensures that all backups that

belong to clients that have been migrated to another Avamar server are not included in the licensing calculations for the server.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. Select **Activities - Licensed Client Stats** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Licensed Client Stats** dialog box appears.
3. Click **Retrieve**.

   A table that contains the number of bytes protected by the system for each client and other client statistics appears in the dialog box.

   Table 14 Activities - Licensed Client Stats report column descriptions

Column	Description
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
Dataset	Name of the dataset. For example: /Client On-Demand Data.
PluginName	Name of the Avamar plug-in. For example: LINUX Lotus Domino.
Backups	Number of backups available.
AvgPcntCommon	Average percent of common data.
GBProtected	Amount of primary data in GB protected by the system.
GBNew	Amount of new data in GB.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Activities - Success report

The **Activities - Success** report shows all backup activities that succeeded. The successful backups include all backups that backed up all intended data. You can use these backups for full or partial restores.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. Select **Activities - Success** in the list of predefined reports and click **Run**.

   The **Run Report - Activities - Success** dialog box appears.
3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that contains statistics for all Avamar clients appears in the dialog box.

   Table 15 Activity - Success report column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.

Table 15 Activity - Success report column descriptions (continued)

Column	Description
ClientVersion	Avamar client software version.
ClientOS	Client operating system.
LabelNum	Backup identifier. For example: GUI-C-DB2 Database.
Type	Type of activity: • On-Demand Backup • Scheduled Backup • Restore • Validate • Replication source • Replication destination
Dataset	Name of the dataset. For example: /Client On-Demand Data.
DSTarget	Name of the dataset target. For example: /ds_db2.
StartDate	The date when the activity started.
StartTime	The time when the activity started.
EndDate	The date when the activity started.
EndTime	The time when the activity completed.
ElapsedTime	The total elapsed time for the activity.
ElapsedMin	The total elapsed time in minutes in decimal notation.
KBProtected	The amount of data in KB that was scanned on the backup client.
KBSent	The amount of data in KB sent to the Avamar server over the network.
KBOverhead	The amount of data in KB sent to the Avamar server. This data is used for source-side deduplication checks.
GBProtectedPerHr	The scan rate of the backup job. The GBProtectedPerHr value helps to evaluate performance.
MBSentPerSec	The data sent rate of the backup job. The MBSentPerSec value helps to evaluate performance.
SentPct	The percentage of data, out of all data that was scanned, that was sent from the client to the server over the network.
UnSentPct	The percentage of data, out of all data that was scanned, that was not sent from the client to the server over the network.
FinalStatus	Status message for the activity: • Activity completed successfully. • Activity completed with exceptions. • Activity cancelled. • Activity failed - timed out before starting. • Activity failed - timed out before completion.

Table 15 Activity - Success report column descriptions (continued)

Column	Description
	• Activity failed - client was given a workorder, but did not acknowledge its receipt. • Activity failed - client was given a workorder, but did not acknowledge its receipt. • Activity failed - timed out before completion. • Activity failed - timed out before completion. • Dropped Session - No progress reported.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Capacity reports

A capacity report shows the available capacity for each node. Avamar Administrator provides one predefined capacity report.

Use case for the Capacity Report

The **Capacity Report** is an advanced report that shows Avamar server capacity segregated by node. This report includes other information such as garbage collection status for each node, `hfscheck` status for each node, contact information, and Data Domain information. Data Domain information includes the hostname, OS version, and serial number. The information is enclosed in `ddlist` tags.

This report is provided as XML output, and for that reason, is used most often by EMC support personnel.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

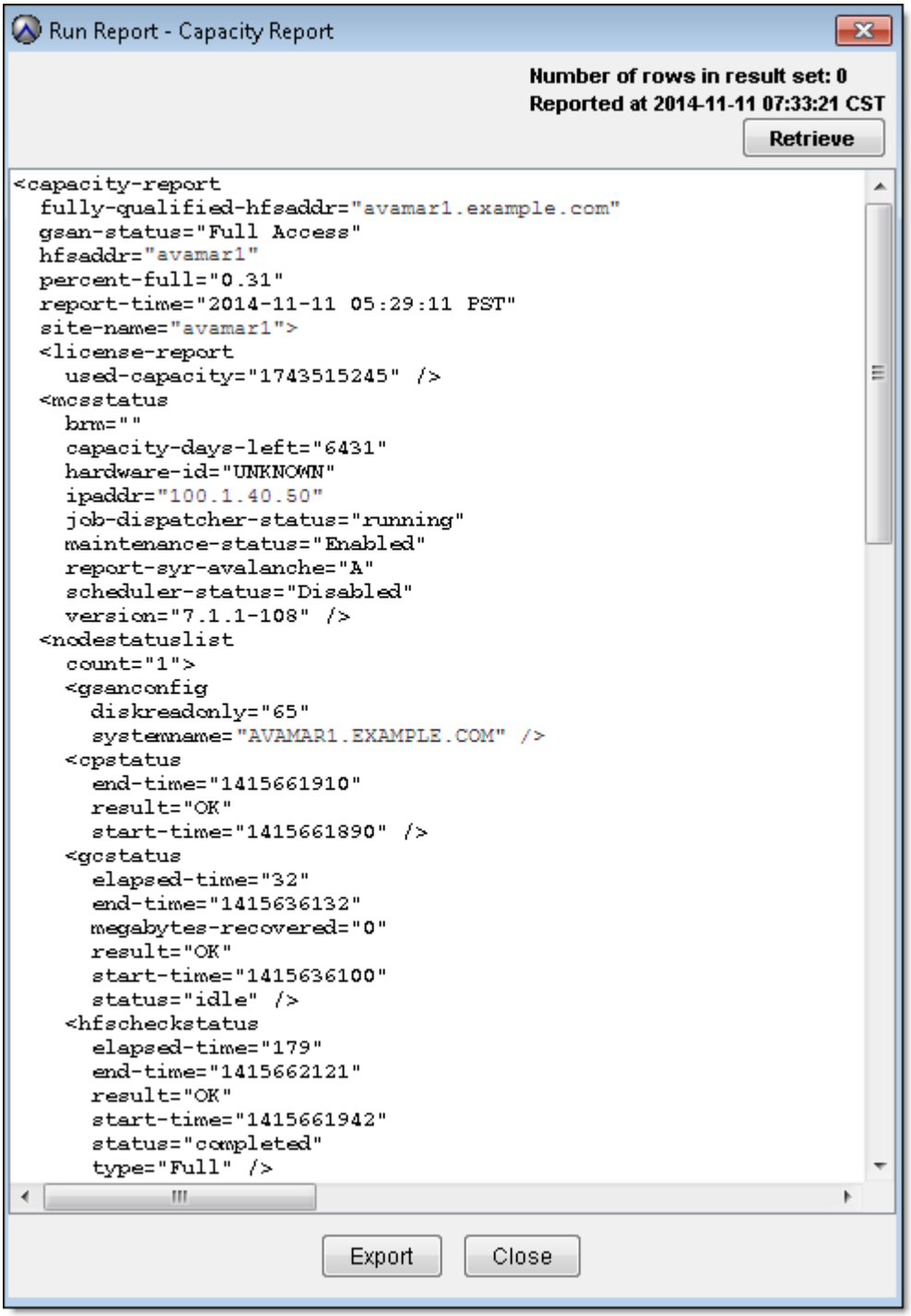
2. Select **Capacity Report** in the list of predefined reports and click **Run**.

   The **Run Report - Capacity Report** dialog box appears.

3. Click **Retrieve**.

   The XML output for the **Capacity Report** appears in the **Run Report - Capacity Report** dialog box.

Figure 3 Run Report - Capacity Report dialog box



4. To save the **Capacity Report** to a text file, click **Export**.

   The **Save** dialog box appears.

5. Navigate to a folder, type a file name in the **File name** field, and click **Save**.

Client reports

Client reports show status information specific to Avamar clients. Each predefined client report includes statistics such as client name, server name, whether the client is activated, and so forth.

The following table lists client reports that you can run from Avamar Administrator.

Table 16 Client reports

Report	Description
Agent and PlugIns - Client Count	Shows all file system and database plug-ins that are installed on all client systems.
Clients - No activities	Shows all clients that did not have any activities for the specified period.
Clients - No Check Ins	Shows all clients that did not check in with the server for the specified period.
Clients - Protected	Shows all clients with at least one backup stored on the Avamar server.
Clients - Unprotected	Shows all clients that are known to the MCS but are not actively being backed up.
Misc - Stats 1	Shows the following statistics for a specific time period: • Number of registered Avamar clients • Plug-ins installed on Avamar clients • Total bytes backed up • Client operating systems backed up • Maximum bytes backed up for each Avamar client

Use case for the Agents and PlugIns - Client Count report

The **Agents and PlugIns - Client Count** report lists the plug-in types in use and the number of clients that use the plug-in. This report is similar to the **Activities - Plugin Stats** report, but with less information.

Procedure

1. Select **Tools › Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Agents and Plugins - Client Count** in the list of predefined reports and click **Run**.

   The **Run Report - Agents and Plugins - Client Count** dialog box appears.

3. Click **Retrieve**.

   A table that lists the total amount of installations of client file systems and database plug-ins appears in the dialog box.

Table 17 Agents and Plugins - Client Count report column descriptions

Column	Description
AgentsOrPlugIns	The name of the file system client or database application plug-in.
Count	The amount of installations of the file system client or database application plug-in.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Client - No activities report

The **Client - No activities** report shows the clients that are idle without backup jobs for a specific date range. If you have clients that are not configured to be backed up, the **Client - No activities** report identifies these clients. For example, run this report to identify inactive clients that you want to delete. Or, run this report to identify clients that were not backed up because of the backup policy.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Client - No activities** in the list of predefined reports and click **Run**.

   The **Run Report - Client - No activities** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that lists inactive clients appears in the dialog box.

   Table 18 Client - No activities report column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
Enabled	Determines whether the client is enabled: • t for true • f for false
RegisteredDate	The date when the client was registered.
Activated	Determines whether the client is activated: • t for activated • f for not activated
ActivatedDateTime	The data and time when the client was activated.
LastCheckedIn	Last check-in date and time.
ContactName	Person to contact regarding issues with this specific client.
ContactPhone	Contact phone number.
ContactEmail	Contact email address.

Table 18 Client - No activities report column descriptions (continued)

Column	Description
ContactLocation	Contact location.
ContactNotes	Contact notes.
OS	Client operating system.
ClientVersion	Avamar client software version.
ClientAddr	IP address of the client.
Pageable	Determines whether the client is reachable on the network by the Avamar server: • t for true • f for false
PageAddr	IP address or hostname used to contact the client.
PagePort	Data port used to contact the client.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Clients - No Check Ins report

The **Clients - No Check Ins** report shows clients that have no contact with the Avamar server for a specific date range. Avamar clients run a service that contacts the Avamar server to confirm status and receive workorders. A client might fail to contact the Avamar server if the client service is disabled or removed, or if the client was renamed or removed.

The Avamar server might be able to contact a client despite network communications that are partially blocked in one direction.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Clients - No Check Ins** in the list of predefined reports and click **Run**.

   The **Run Report - Clients - No Check Ins** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   A table that lists all Avamar clients that have not checked in with the Avamar server appears in the dialog box.

   Table 19 Clients - No Check Ins report column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
LastCheckedIn	Last check-in date and time.

Table 19 Clients - No Check Ins report column descriptions (continued)

Column	Description
Enabled	Determines whether the client is enabled: • t for true • f for false
RegisteredDate	The date when the client was registered.
Activated	Determines whether the client is activated: • t for activated • f for not activated
ActivatedDateTime	The data and time when the client was activated.
ContactName	Person to contact regarding issues with this client.
ContactPhone	Contact phone number.
ContactEmail	Contact email address.
ContactLocation	Contact location.
ContactNotes	Contact notes.
OS	Client operating system.
ClientVersion	Avamar client software version.
ClientAddr	IP address of the client.
Pageable	Determines whether the client is reachable on the network by the Avamar server: • t for true • f for false
PageAddr	IP address or hostname used to contact the client.
PagePort	Data port used to contact the client.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Clients - Protected report

The **Clients - Protected** report shows all clients protected by the Avamar server. This report includes statistics such as the Avamar server name, the client name, the registration date for the client, the client operating system, the Avamar client software version, and so forth.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Clients - Protected** in the list of predefined reports and click **Run**.

   The **Run Report - Clients - Protected** dialog box appears.

3. Click **Retrieve**.

   A table that lists all Avamar clients protected by the Avamar server appears in the dialog box.

   Table 20 Clients - Protected report column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
RegisteredDate	The date when the client was registered.
Activated	Determines whether the client is activated: • t for activated • f for not activated
ActivatedDateTime	The data and time when the client was activated.
LastCheckedIn	Last check-in date and time.
ContactName	Person to contact regarding issues with this client.
ContactPhone	Contact phone number.
ContactEmail	Contact email address.
ContactLocation	Contact location.
ContactNotes	Contact notes.
OS	Client operating system.
ClientVersion	The Avamar client software version.
ClientAddr	IP address of the client.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Clients - Unprotected report

The **Clients - Unprotected** report lists clients that have no backups, which are also referred to as “empty” clients. The information in this report does not have a date range, which enables the report to list completely empty clients. Whereas other reports such as **Clients - No Check Ins** or **Client - No activities** show clients with no recent backup, but do not show completely empty clients.

For example, run this report to identify inactive clients that you want to delete. Or, run this report to identify clients that were not backed up because of the backup policy.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Clients - Unprotected** in the list of predefined reports and click **Run**.

   The **Run Report - Clients - Unprotected** dialog box appears.

3. Click **Retrieve**.

A table that lists all clients without any backups appears in the dialog box.

Table 21 Clients - Unprotected report column descriptions

Column	Description
Server	Name of the server. For example: avamar-server1.emc.com.
ClientDomain	Pathname of the Avamar domain.
ClientName	Name of the Avamar client. For example: db2-1.emc.com.
Enabled	Determines whether the client is enabled: • t for true • f for false
RegisteredDate	The date when the client was registered.
Activated	Determines whether the client is activated: • t for activated • f for not activated
ActivatedDateTime	The data and time when the client was activated.
LastCheckedIn	Last check-in date and time.
ContactName	Person to contact regarding issues with this specific client.
ContactPhone	Contact phone number.
ContactEmail	Contact email address.
ContactLocation	Contact location.
ContactNotes	Contact notes.
OS	Client operating system.
ClientVersion	Avamar client software version.
ClientAddr	IP address of the client.
Pageable	Determines whether the client is reachable on the network by the Avamar server: • t for true • f for false
PageAddr	IP address or hostname used to contact the client.
PagePort	Data port used to contact the client.

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

Use case for the Misc - Stats 1 report

The **Misc - Stats 1** report produces a text-formatted report that contains an assortment of information from other Avamar reports. This information includes the status of the Avamar server, a list of clients with activities, a list of plug-ins in use, a list of file system clients in use, and so forth. The actual title of this report is Licensing Report.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Misc - Stats 1** in the list of predefined reports and click **Run**.

   The **Run Report - Misc - Stats 1** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   The Licensing Report appears in the dialog box. This output of this report is plain text. For example:

```
============================================================
Licensing Report for period of 2014-10-05 09:06:00 EDT to
2014-08-27 09:06:00 EDT
============================================================
Administrator Server is running.
Database server is running...
Executing SQL script '/tmp/stats.temp.1377608815.sql'

RegisteredClients
-------------------
41
(1 row)

ClientsWithActivities
----------------------
0
(1 row)

  OS                                    | Clients
----------------------------------------+---------
 AIX                                    |       2
 HP-UX                                  |       1
 Linux                                  |      21
 Solaris                                |       3
 Windows 7 Ultimate N Edition 64-bit    |       1
(5 rows)

TotalGBProtected
------------------
0.4146
(1 row)

PluginName    |Clients|Backups|TotalGBProtected|AvgPcntCommon
------------+-------+-------+----------------+-------------
LINUX DB2   |      1|      2|          0.1330|      95.43
Windows DB2 |      3|   2053|          0.2530|      48.12
(2 rows)

 ClientName    |  PlugInName  |   Dataset       |TotalGBProtected
---------------+--------------+-----------------+----------------
               | Windows DB2  |/Client On-Demand| 0.0000
 bu-winddance  | Windows DB2  |/Client On-Demand| 0.2491
 db2beta264    | LINUX DB2    |/Client On-Demand| 0.1330
 motu          | Windows DB2  |/Client On-Demand| 0.0039

(4 rows)

Database server is still running...
==================================
```

4. To save the report to a text file, click **Export**.

System reports

System reports show status information for the Avamar server system.

The following table lists system reports that you can run from Avamar Administrator.

Table 22 System reports

Report	Description
Serviceability	This report shows the status of hardware components in the Avamar server, including controllers and attached components such as array disks and virtual disks. The format of this report is plain text.
Site Inventory	This report shows the following information for the Avamar server: • Operating system version • Hostname • System hardware type • Network • Avamar software version • Storage controller settings • Physical disk settings • Virtual disk settings • RPMs installed The format of this report is plain text.
System - Configuration Audit	This report lists all currently installed server operating system RPMs and a comparison against a master list that was used to initialize the system. The format of this report is plain text.
System - GSAN Perf Stats	This report lists data server (also known as GSAN) performance statistics that are useful for system tuning and debugging purposes. By default, this report is enabled in the High Priority Events profile. The *EMC Avamar Administration Guide* provides more information about the High Priority Events profile. The format of this report is XML.

Use case for the Serviceability report

The **Serviceability** report contains information about the status of the hardware components in the Avamar server. The content of this report uses the `avsysreport` command to generate the status information.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Serviceability** in the list of predefined reports and click **Run**.

   The **Run Report - Serviceability** dialog box appears.

3. Click **Retrieve**.

   The following message appears in the dialog box for a few moments before the **Serviceability** report appears:

   ```
   Retrieving data. Please wait.
   ```

The following output shows a portion of a sample **Serviceability** report:

```
#####################################################################
#                    Serviceability Report                          #
# ------------------------------------------------------------------ #
# This report contains multiple sections: Controller, vdisks and     #
# physical disks.  Each section will include result ran from on each #
# nodes.                                                             #
# Here are the sections ran from avsysreport:                        #
# 1) avsysreport --yaml controller                                   #
# 2) avsysreport --yaml vdisk                                        #
# 3) avsysreport --yaml pdisk controller=0                           #
#####################################################################
                    Utility Node - avsysreport controller          #

- Controller ID: 0
  Status: OK
#                    Data Nodes - avsysreport controller            #
(0.0) ssh  -x  -o GSSAPIAuthentication=no admin@1.23.46.7 'avsysreport --
yaml controller'

- Controller ID: 0
  Status: OK
#                    Utility Node - avsysreport vdisk               #
- Status: OK
  Virtual Disk ID: "2"
- Status: OK
  Virtual Disk ID: "1"
- Status: OK
  Virtual Disk ID: "0"
#                    Data Nodes - avsysreport vdisk                 #
(0.0) ssh  -x  -o GSSAPIAuthentication=no admin@1.23.46.7 'avsysreport --
yaml vdisk'
- Status: OK
  Virtual Disk ID: "2"
- Status: OK
  Virtual Disk ID: "1"
- Status: OK
  Virtual Disk ID: "0"
#                    Utility Node - avsysreport pdisk controller=0  #
- Status: Online
  Physical Disk ID: "0"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "1"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "2"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "3"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "4"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "5"
  Failure Predicted: "No"
#                    Data Nodes - avsysreport pdisk controller=0    #
(0.0) ssh  -x  -o GSSAPIAuthentication=no admin@1.23.46.7 'avsysreport --
yaml pdisk controller=0'
- Status: Online
  Physical Disk ID: "0"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "1"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "2"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "3"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "4"
  Failure Predicted: "No"
- Status: Online
  Physical Disk ID: "5"
  Failure Predicted: "No"
```

4. To save the report to a text file, click **Export**.

Use case for the Site Inventory report

The **Site Inventory** report is an advanced report for use by EMC support personnel. This report contains various types of information, including operating system version, system kernel release, the kickstart version, patch level version, and so forth.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **Site Inventory** in the list of predefined reports and click **Run**.

   The **Run Report - Site Inventory** dialog box appears.

3. Click **Retrieve**.

   The following message appears in the dialog box for a few moments before the Site Inventory report appears:

   ```
   Retrieving data. Please wait.
   ```

   The following output shows a portion of a sample Site Inventory report.

```
sudo /usr/local/avamar/lib/mcs_ssh_wrapper
/usr/local/avamar/bin/site_inventory
Using /usr/local/avamar/var/probe.xml
/bin/tar czhf /tmp/.mapall28152 site_inventory_info
(0.0) scp -q  -o GSSAPIAuthentication=no /tmp/.mapall28152
root@11.5.151.555:.
(0.0) ssh  -x  -o GSSAPIAuthentication=no root@11.5.151.555 'tar xzf
.mapall28152; rm -f .mapall28152'
(0.0) ssh  -x  -o GSSAPIAuthentication=no root@11.5.151.555 'perl
site_inventory_info'
(0.0) scp -q  -o GSSAPIAuthentication=no
root@11.5.151.555:/usr/local/avamar/var/site_inventory.log 0.0
0.0_site_inventory.log
--------------------
       0.0
--------------------

General OS Information
======================
Kickstart version: sles11-SP1-64v30
Hostname: avamar-test

Kernel release: 2.6.32.59-0.7-default

OS: SUSE Linux Enterprise Server 11 (x86_64) VERSION = 11 PATCHLEVEL = 1

Date: Tue May 15 10:36:17 EDT 2013
Timeserver: Ntpd is not running.

Product, System, Chassis and BIOS Information
=============================================

Product:
No Product-related values for this server.
System:
    Manufacturer: Dell Inc.
    Product Name: PowerEdge R510
    Version: Not Specified
    Serial Number: CZGR3P1
    UUID: 44454C4C-5A00-1047-8052-C3C04F335031
Chassis:
    Manufacturer: Dell Inc.
    Version: Not Specified
    Serial Number: CZGR3P1
    Asset Tag: Not Specified
BIOS:
    Vendor: Dell Inc.
    Version: 1.4.0
```

```
    Release Date: 09/03/2010
    BIOS Revision: 1.4

General Hardware Information
============================

Total Memory: 32871812 kB
Processor Vendor: GenuineIntel
Processor Model: Intel(R) Xeon(R) CPU           E5620  @ 2.40GHz
Total Processors: 8
Processor Speed: 2400.215 MHz

General Network Information
===========================

Hostname IP: 11.5.151.555

eth0 settings
=============
eth0 IP:
eth0 Mac Address: 84:2B:2B:5E:89:18
eth0 Link Speed: 1000Mb/s
eth0 Link Mode: Full Duplex
Auto-negotiation: on
Link detected: yes

eth1 settings
=============
eth1 IP:
eth1 Mac Address: 84:2B:2B:5E:89:19
eth1 Link Speed: 65535Mb/s
eth1 Link Mode: Unknown! (255) Duplex
Auto-negotiation: on
Link detected: no

eth2 settings
=============
eth2 IP:
eth2 Mac Address: 84:2B:2B:5E:89:18
eth2 Link Speed: 65535Mb/s
eth2 Link Mode: Unknown! (255) Duplex
Auto-negotiation: on
Link detected: no

eth3 settings
=============
eth3 IP:
eth3 Mac Address: 00:10:18:84:12:6E
eth3 Link Speed: 65535Mb/s
eth3 Link Mode: Unknown! (255) Duplex
Auto-negotiation: on
Link detected: no
...
```

4. To save the report to a text file, click **Export.**

Use case for the System - Configuration Audit report

The **System - Configuration Audit** report is an advanced report for use by EMC support personnel. This report contains configuration information for the Avamar server, including a list of RPMs.

Procedure

1. Select **Tools › Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **System - Configuration Audit** in the list of predefined reports and click **Run.**

   The **Run Report - System - Configuration Audit** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   The following message appears in the dialog box for a few moments before the **System Configuration Audit** report appears:

```
Retrieving data. Please wait.
```

The following output shows a portion of the **System Configuration Audit** report.

```
================================================================================
System Configuration Audit Report for period of 2014-11-05 10:46:00
EDT to 2015-01-05 10:46:00 EDT
================================================================================

avrpm_report: v1.4
avrpm_report: Begin Report
WARNING: BASELINE CONFIGURATION FILE
"/usr/local/avamar/etc/master_rpm_list" DOES NOT EXIST!
Current RPM list is:
avrpm_report: Begin RPM List
ConsoleKit-0.2.10-64.65.1
ConsoleKit-32bit-0.2.10-64.65.1
DirectFB-1.2.3-6.32
OpenIPMI-2.0.16-0.3.29
PolicyKit-0.9-14.34.9
PolicyKit-doc-0.9-14.34.11
SuSEfirewall2-3.6_SVNr208-2.5.1
aaa_base-11-6.46.46.2
acl-2.2.47-30.34.29
aide-0.13.1-40.14
apache2-2.2.12-1.30.1
apache2-doc-2.2.12-1.30.1
apache2-example-pages-2.2.12-1.30.1
apache2-mod_jk-1.2.26-1.30.110
apache2-mod_python-3.3.1-147.24.1
apache2-prefork-2.2.12-1.30.1
apache2-utils-2.2.12-1.30.1
apparmor-admin_en-10.3-8.17
apparmor-parser-2.3.1-8.18.7
apparmor-profiles-2.3-48.9.8.1
apparmor-utils-2.3.1-9.8.5
at-3.1.8-1069.18.2
atk-1.28.0-1.4.1
atk-lang-1.28.0-1.4.1
audit-1.7.7-5.18.10.1
audit-libs-1.7.7-5.18.10.1
audit-libs-32bit-1.7.7-5.18.10.1
autofs-5.0.5-11.25.1
autoyast2-2.17.43-0.2.36
autoyast2-installation-2.17.43-0.2.36
avamar-adaptor-7.0.0-325
avbase-1.0.0-27
bash-3.2-147.12.1
bash-doc-3.2-147.12.1
bc-1.06-838.15
bind-libs-9.6ESVR7P3-0.2.1
bind-utils-9.6ESVR7P3-0.2.1
binutils-2.20.0-0.7.9
blktrace-1.0.0-2.32.47
blt-2.4z-343.13
boost-license-1.36.0-12.3.1
bootcycle-0.3-225.18
bootsplash-3.3-146.24.12
bootsplash-branding-SLES-3.1-47.22
branding-SLES-11-3.15
bzip2-1.0.5-34.253.1
cairo-1.8.8-2.1.48
cairo-32bit-1.8.8-2.1.48
checkmedia-2.2-1.22
cifs-mount-3.4.3-1.42.1
connectemc-3.1.0.1-4
coreutils-6.12-32.39.1
coreutils-lang-6.12-32.39.1
cpio-2.9-75.76.1
cpio-lang-2.9-75.76.1
cracklib-2.8.12-56.9.9
cracklib-32bit-2.8.12-56.9.9
cracklib-dict-full-2.8.12-43.16
cron-4.1-194.199.1
cryptsetup-1.0.5_SVNr46-58.30.38
...
```

4. To save the report to a text file, click **Export**.

Use case for the System - GSAN Perf Stats report

The **System - GSAN Perf Stats** report is an advanced report for use by EMC support personnel. This report, which is formatted as XML content, contains various types of Avamar server performance statistics. The output from the **System - GSAN Perf Stats** report is included, by default, in the Avamar Email Home report, which is used by EMC support personnel to review server performance information.

Procedure

1. Select **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. Select **System - GSAN Perf Stats** in the list of predefined reports and click **Run**.

   The **Run Report - System - GSAN Perf Stats** dialog box appears.

3. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

   The following message appears in the dialog box for a few moments before the Server Performance Statistics Report appears:

   ```
   Retrieving data. Please wait.
   ```

   The format of this report uses XML. For example, the following output shows a portion of the Server Performance Statistics Report.

```
======================================================================

Server Performance Statistics Report for period of 2014-11-05 11:19:00
EDT to 2015-01-27 14:19:00 EDT

======================================================================

/usr/local/avamar/bin/avmaint --avamar perf status --xmlperline=1000 --
maxdays=5
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<perfstatuslist>
  <perfstatus node="0.0" create-time="1377623988" start-time="1374925896"
      init-time="1361890434">
    <stripekindslist>
      <stripekinds diskid="0">
                      <stripekind name="indx" count="1"/>
        <stripekind name="data" count="19"/>
        <stripekind name="comp" count="8"/>
        <stripekind name="wcmp" count="2"/>
        <stripekind name="udat" count="1"/>
        <stripekind name="mang" count="1"/>
      </stripekinds>
      <stripekinds diskid="1">
        <stripekind name="indx" count="1"/>
        <stripekind name="data" count="20"/>
        <stripekind name="comp" count="8"/>
        <stripekind name="wdat" count="1"/>
        <stripekind name="uinx" count="1"/>
      </stripekinds>
      <stripekinds diskid="2">
        <stripekind name="indx" count="1"/>
        <stripekind name="data" count="20"/>
        <stripekind name="comp" count="8"/>
        <stripekind name="winx" count="1"/>
        <stripekind name="wcmp" count="1"/>
      </stripekinds>
      <stripekinds diskid="3">
        <stripekind name="indx" count="1"/>
        <stripekind name="data" count="19"/>
        <stripekind name="comp" count="8"/>
        <stripekind name="winx" count="1"/>
        <stripekind name="wdat" count="1"/>
        <stripekind name="wcmp" count="4"/>
      </stripekinds>
      <stripekinds diskid="4">
        <stripekind name="indx" count="1"/>
```

```
        <stripekind name="data" count="19"/>
        <stripekind name="comp" count="8"/>
        <stripekind name="wcmp" count="1"/>
        <stripekind name="udat" count="1"/>
      </stripekinds>
      <stripekinds diskid="5">
        <stripekind name="indx" count="1"/>
        <stripekind name="data" count="20"/>
        <stripekind name="comp" count="8"/>
        <stripekind name="wdat" count="1"/>
        <stripekind name="uinx" count="1"/>
      </stripekinds>
    </stripekindslist>
    <eventlist>
      <event name="backup" started="19749" finished="19749" active="0">
      <statvalue name="elapsed-time" count="19749" last="4" min="0"
max="2313"
         sum="51504" mean="2"/>
       <statvalue name="nbytes" count="19749" last="91123" min="0"
max="11037350941"
          sum="78501968600"/>
        <statvalue name="nchunks" count="19749" last="35" min="0"
max="1743157"
          sum="15492934" mean="784"/>
      </event>
      <event name="restore" started="18257" finished="18257" active="0">
        <statvalue name="elapsed-time" count="18257" last="3" min="0"
max="13792"
          sum="192873" mean="10"/>
        <statvalue name="nbytes" count="18257" last="21395" min="1890"
max="35726224962"
          sum="554373417639"/>
...
```

4. To save the report to a comma delimited (`.csv`) file, click **Export**.

CHAPTER 3

Custom Reports

This chapter includes the following topics:

Choosing the correct domain level for a custom report

To send a report as a custom event profile attachment, you must create the report in the root domain. You cannot send reports you create at lower-level domains as custom event profile attachments. The *EMC Avamar Administration Guide* provides more information about custom event profile attachments.

Creating a report from the Activities template

Use the Activities template to create a custom report that includes statistical information for system activities. The report can show statistical information for all domains on the Avamar server, for a specific domain, or for a specific client in a domain. The report can include statistical information from an Avamar Data Store, one or more Data Domain systems, or from all sources.

Procedure

1. In Avamar Administrator, click **Tools** › **Manage Reports**.

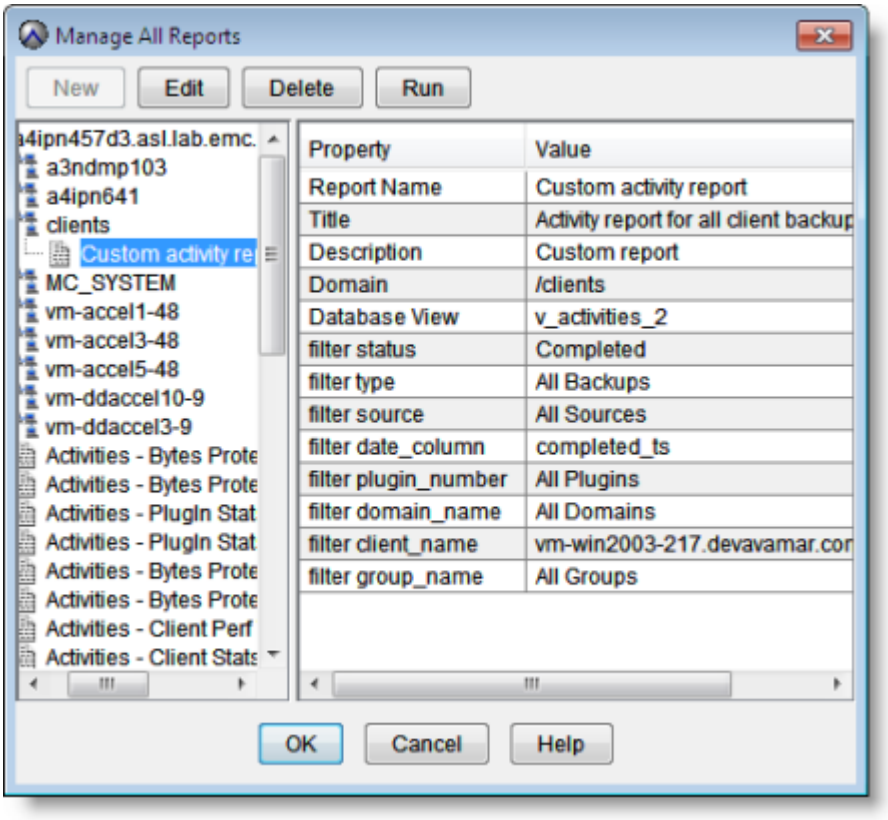
   The **Manage All Reports** dialog box appears.
2. From the left pane, select a domain.
3. Click **New**.

   The **New Report** dialog box appears.
4. Specify a name, display title, and optional short description for the report in the **Name**, **Title**, and **Description** fields.
5. From the **Report View and Settings** list, select **Activities**.
6. From the **Status** list, select the type of status information.
7. From the **Type** list, select the type of activity.
8. From the **Group** list, select a specific group or select **All Groups**.
9. From the **Plug-in** list, select a specific plug-in or select **All Plugins**.
10. From the **Client** group box, select a client. The default selection is **All Clients**. To select a single client, select **Client** and click the **...** button. Select the client from the **Select Client** dialog box and click **OK**.
11. From the **Client's Domain** group box, select a domain. The default selection is **All Domains**. To select a single domain, select **Domain** and click the **...** button. Select the domain from the **Select domain:** dialog box and click **OK**.
12. Select a source from the **Source** list.
    - Select **All Sources** to include information from all storage devices in the activity report.
    - Select **Avamar** to include information from the Avamar server in the activity report.
    - Select **Data Domain Systems** to include information from one or more Data Domain systems in the activity report. The **Data Domain Systems** selection enables the **Data Domain System** options.
      - To select a single Data Domain system, select **System** and click the **...** button. Select the Data Domain system from the **Select Data Domain System** dialog box and click **OK**.
      - To select all Data Domain systems, select **All Systems**.

13. From the **Date** list, select a date.
14. Click **OK**.

    The new report appears in the left pane under the domain. The right pane contains the settings that you specified for the report.

Figure 4 Manage All Reports dialog box showing a custom activities report



15. To run the report, select the report from the **Manage All Reports** dialog box and click **Run**.

    The **Run Report -** *report_name* dialog box appears.
16. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

    Status information that you selected for this report appears in a table in the dialog box. MCS Database Views on page 83 contains descriptions for all column headings for this table.
17. To save the report to a comma delimited (`.csv`) file, click **Export**.

Backend capacity report limitations

Backend capacity reports can show you how much capacity is being used by backups. The amount of processing that occurs when you run a backend capacity report can impact system resources.

Before you run a backend capacity report from Avamar Administrator or from the command line, review the following limitations:

- Do not run more than one backend capacity report at a time.
- Do not run a backend capacity report when backup or maintenance activities are in progress, or are scheduled to occur.

- Do not run a backend capacity report that includes Data Domain system data. When you run a backend capacity report that includes clients that store data on a Data Domain system, the report fails.

Creating a report from the Backend Capacity template

Use the Backend Capacity template to create a custom report that contains usage statistics. The report can show capacity usage for all domains on the Avamar server, for a specific domain, or for a specific client in a domain.

Procedure

1. In Avamar Administrator, click **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. From the left pane, select a domain.
3. Click **New**.

   The **New Report** dialog box appears.
4. Specify a name, display title, and optional short description for the report in the **Name**, **Title**, and **Description** fields.
5. From the **Report View and Settings** list, select **Backend Capacity**.
6. Click **Edit**.

   The **Edit Backend Capacity** dialog box appears.
7. Select clients to include in the report:
   - To select all clients in a domain, select the checkbox next to the domain.

     The list of clients appears in the right pane.
   - To select individual clients, click a domain to highlight it, and then select the checkbox next to each client to include in the report.

     Note

     Do not select the checkbox next to the domain.
8. Click **OK**.

   The domains and clients you selected appear in the **Selected Domains** and **Selected Clients** boxes.
9. Click **OK**.

   A message dialog box appears to warn you to never run more than one backend capacity report at a time.
10. Click **OK**.

    The new report appears in the left pane under the domain.
11. To run the report, select the report from the **Manage All Reports** dialog box and click **Run**.

    The **Run Report -** *report_name* dialog box appears.
12. Click **Retrieve**.

    The following message appears in the dialog box for a few moments before the report appears:

    ```
    Retrieving data. Please wait.
    ```

Content similar to the following output appears in the dialog box:

```
Backend Capacity Used: 264.2 MB
Clients:
/clients/2003lotusk853
/clients/brocade
/clients/bu-co-op1.lss.emc.com
```

Creating a report with the backendreport command

Use the `backendreport` command line utility to create a backend capacity report. The report can show capacity usage for the entire Avamar server for specific Avamar domains or for a specific Avamar client.

Procedure

1. Open a command shell and log in to the Avamar server as admin.
2. To run a report on the entire Avamar server (all domains), type the following command:

   backendreport

   Information similar to the following output appears in the command shell:

   ```
   <backenreport version="7.2.100-nnn"
   reporttime="2015/01/16-03:33:35" bytessent="1538144256"
   totaltime="403.3">
   completed backendreport (pid=29954)
   ============== Finished backendreport ==============
   ```

   The `bytessent` value is the amount of backend capacity in bytes used by the entire server.
3. To run a report on a specific domain, type the following command:

   backendreport --include=/*domain*

   where *domain* is the domain to include in the report.

   Information similar to the following output appears in the command shell:

   ```
   <backenreport version="7.2.100-nnn"
   reporttime="2015/01/15-23:51:29" bytessent="859967232"
   totaltime="172.3">
   completed backendreport (pid=29954)
   ================ Finished backendreport ================
   ```

   The `bytessent` value is the amount of backend capacity in bytes used by all clients in the /*domain* domain.
4. To run a report on a specific client, type the following command:

   backendreport --include=/*domain*/*client*

   where *domain* is the directory that contains the client and *client* is the name of the client.

   Information similar to the following output appears in the command shell:

   ```
   <backendreport version="7.2.100-nnn"
   reporttime="2015/01/16-04:04:43" bytessent="163564"
   totaltime=0.9">
   ```

```
completed backendreport (pid=3344)
================ Finished backendreport ================
```

The `bytessent` value is the amount of backend capacity in bytes used by *client*.

5. To include clients in a report whose names contain a specific character string, specify the `--include` option with the `backendreport` command:

   `backendreport --include=/domain/vm`

   where */domain* is a domain. The `backendreport` command searches the *domain* directory for all clients that contain "vm" in their names.

   Information similar to the following output appears in the command shell:

```
<backenreport version="7.2.100-nnn"
reporttime="2015/01/16-03:33:35" bytessent="1266826752"
totaltime="15.9">
completed backendreport (pid=29954)
--include
================ Finished backendreport ================
```

   The `bytessent` value is the amount of backend capacity in bytes used by all clients in the */domain* domain that have "vm" anywhere in the client name.

Creating a report from the Clients template

Use the Clients template to create a custom report that contains client statistics. The report can show client statistics for clients in all domains, for clients in a specific domain, or for a specific client in a domain.

Procedure

1. In Avamar Administrator, click **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. From the left pane, select a domain.
3. Click **New**.

   The **New Report** dialog box appears.
4. Specify a name, display title, and optional short description for the report in the **Name**, **Title**, and **Description** fields.
5. From the **Report View and Settings** list, select **Clients**.

   The **Filter Client by** settings appear.
6. From the **Pageable** list, select an option. The term pageable means whether the MCS can successfully contact the client and receive a response.
   - To include all clients that are pageable by the MCS, select **Yes**.
   - To include all clients that are not pageable by the MCS, select **No**.
   - To include all clients regardless of whether they are pageable by the MCS, select **Yes**/**No**.
7. Select a value from the **Date** list:
   - Select **registered_ts** to set the date that corresponds to when the client was registered.
   - Select **checkin_ts** to set the date to when the client was last checked in.

- Select **backed_up_ts** to set the date to when the client was last backed up.

8. From the **Client** group box, select a client. The default selection is **All Clients**.

   To select a single client, select **Client** and click the **...** button. Select the client from the **Select Client** dialog box and click **OK**.

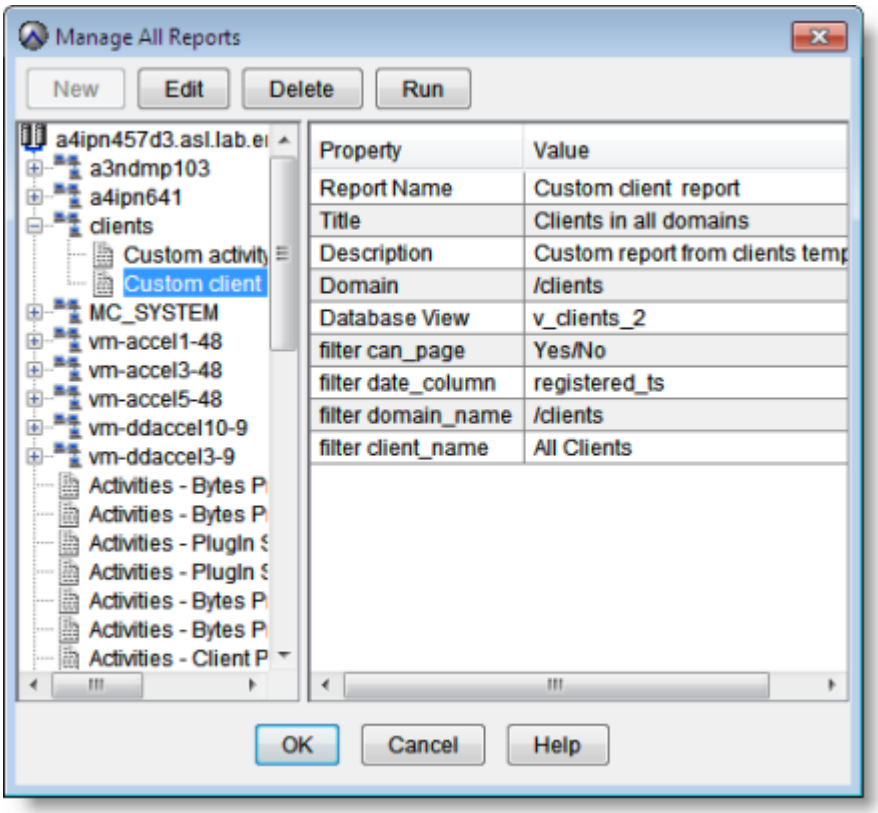
9. From the **Client's Domain** group box, select a domain. The default selection is **All Domains**.

   To select a single domain, select **Domain** and click the **...** button. Select the domain from the **Select domain:** dialog box and click **OK**.

10. Click **OK**.

    The new report appears in the left pane under the domain. The right pane contains the settings that you specified for the report.

Figure 5 Manage All Reports dialog box showing a custom client report



11. To run the report, select the report from the **Manage All Reports** dialog box and click **Run**.

    The **Run Report** - *report_name* dialog box appears.

12. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

    Status information that you selected for this report appears in a table in the dialog box. MCS Database Views on page 83 contains descriptions for all column headings for this table.

13. To save the report to a comma delimited (`.csv`) file, click **Export**.

Creating a report from the Replication Activities template

Use the Replication Activities template to create a custom report that contains statistics for replication activities. The report can show statistics for all domains, for a specific domain, or for a specific client in a domain.

Procedure

1. In Avamar Administrator, click **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. From the left pane, select a domain.
3. Click **New**.

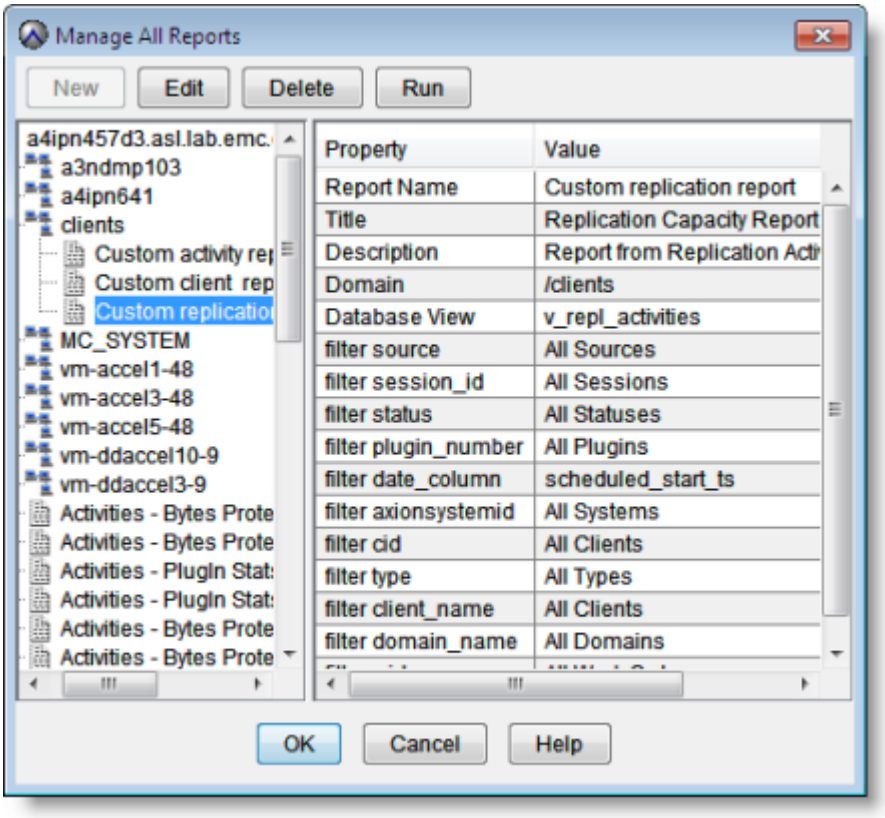
   The **New Report** dialog box appears.
4. Specify a name, display title, and optional short description for the report in the **Name**, **Title**, and **Description** fields.
5. From the **Report View and Settings** list, select **Replication Activities**.
6. From the **Status** list, select the type of status information, for example, **all statuses**, **all failures**, **all completed**, and so forth.
7. From the **Type** list, select the type of activity, for example, **capacity report**, **replication destination**, **source destination**, and so forth.
8. From the **Plug-in** list, select a specific plug-in or select **All Plugins**.
9. From the **Client** group box, select a client. The default selection is **All Clients**.

   To select a single client, select **Client** and click the **...** button. Select the client from the **Select Client** dialog box and click **OK**.
10. From the **Client's Domain** group box, select a domain. The default selection is **All Domains**.

    To select a single domain, select **Domain** and click the **...** button. Select the domain from the **Select domain:** dialog box and click **OK**.
11. From the **Date** list, select a date, for example, **scheduled start date**, **scheduled end date**, **start date**, or **completed data**.
12. Click **OK**.

    The new report appears in the left pane under the domain. The right pane contains the settings that you specified for the report.

Figure 6 Manage All Reports dialog box showing a custom replication report



13. To run the report, select the report from the **Manage All Reports** dialog box and click **Run**.

    The **Run Report** - *report_name* dialog box appears.

14. Select dates for the **From Date** and the **To Date** fields, and then click **Retrieve**.

    Status information that you selected for this report appears in a table in the dialog box. MCS Database Views on page 83 contains descriptions for all column headings for this table.

15. To save the report to a comma delimited (`.csv`) file, click **Export**.

Editing custom reports

Procedure

1. In Avamar Administrator, click **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.

2. In the left pane, select the custom report.
3. Click **Edit**.

   The **Edit Report** dialog box appears.

4. Edit the settings for the report.

   To clear all current settings, click **Reset Filter**.

5. Click **OK**.

Deleting custom reports

Procedure

1. In Avamar Administrator, click **Tools** › **Manage Reports**.

   The **Manage All Reports** dialog box appears.
2. In the left pane, select the custom report.
3. Click **Delete**.

   A confirmation message appears.
4. Click **Yes**.

Viewing reports from the Activity window

The Avamar Administrator dashboard includes the **Activities** launcher button, which provides access to the **Activity Report** and the **Replication Report**. The **Activity Report** and the **Replication Report** contain the same types of information as the custom reports you create with the Activities template and the Replication Activities template.

Viewing the Activity Report from the Activity window

Procedure

1. In Avamar Administrator, click the **Activity** launcher button.

   The **Activity** window appears.
2. Click the **Activity Report** tab.

   The **Activity Report** window appears.
3. Click **Retrieve**.

   A table that contains status information appears in the dialog box.

Table 23 Activities Report column descriptions

Column	Description
status_code	Numeric event code that describes the latest status of this activity.
error_code	If the activity is successfully completed, zero appears in this column. If the activity did not successfully complete, a numeric error code appears.
scheduled_start_ts	Earliest date and time this activity was scheduled to begin, adjusted for the prevailing time zone, which is shown in parentheses.
scheduled_end_ts	Latest date and time this activity was scheduled to end, which is adjusted for the prevailing time zone. Shown in parentheses.
started_ts	Date and time that this activity started, which is adjusted for the prevailing time zone. Shown in parentheses.

Table 23 Activities Report column descriptions (continued)

Column	Description
completed_ts	Date and time that this activity ended, which is adjusted for the prevailing time zone. Shown in parentheses.
type	Type of activity: • On-Demand Backup • Scheduled Backup • Restore • Validate
effective_path	For group-based backups, the dataset that is used in the backup.
display_name	Name of the Avamar client. If the Avamar client is a virtual machine, the client has an internal name and a displayable name. If the client is not a virtual machine, the display_name is the same as the value in the client_name column.
domain	Full location of the client in the Avamar server.
client_os	Client operating system.
client_ver	Avamar client software version.
group_name	If the activity was a scheduled backup, the group that the client was a member of when the scheduled activity started (clients can be members of more than one group). On-demand is shown for all other activities.
plugin_number	Plug-in that is used for this activity.
schedule	If the activity was a scheduled backup, the schedule that started this activity. `On-Demand` is shown for all other activities that are started from Avamar Administrator `End User Request` is shown for all other activities that are started from the client.
dataset	Dataset that is used to perform this backup.
dataset_override	If true, the group dataset was not used for this activity.
retention_policy	Retention policy that is used to perform this backup.
effective_expiration	Calendar date and time that this backup expires.
retention_policy_override	If true, the group retention policy was not used for this activity.
encryption_method	Encryption method that is used for client/server data transfer: • proprietary • ssl
initiated_by	For On-Demand Backup activity, the user that started the activity.
num_of_files	Total number of files that are processed during this activity.
bytes_scanned	Total number of bytes that are processed during this activity.

Table 23 Activities Report column descriptions (continued)

Column	Description
bytes_new	Total number of bytes that are processed during this activity after data deduplication.
bytes_excluded	Total number of bytes that are intentionally excluded during this activity.
bytes_skipped	Total number of bytes that are unintentionally skipped during this activity.
num_files_skipped	Total number of files that are unintentionally skipped during this activity.
bytes_overhead	Total number of overhead bytes.
cid	Client ID.
session_id	Workorder ID. Unique identifier for this activity.
status_code_summary	Short summary of the status code.
error_code_summary	If the activity did not successfully complete, a short summary of the error code.
backup_label	Backup label. Blank for replication activities.
backup_number	Backup number. Blank for replication activities.
current_retention	Current retention types that are assigned to this backup: • D—Daily • W—Weekly • M—Monthly • Y—Yearly • N—No retention type
original_retention	Original retention types that were programmatically assigned to this backup when it occurred: • D—Daily • W—Weekly • M—Monthly • Y—Yearly • N—No retention type
encryp_method2	Encryption method that is used for client/server data transfer: • High—Strongest available encryption setting for that specific client platform. • Medium—Medium strength encryption. • None—No encryption. The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform and Avamar server version. The *EMC Avamar Product Security Guide* provides details.

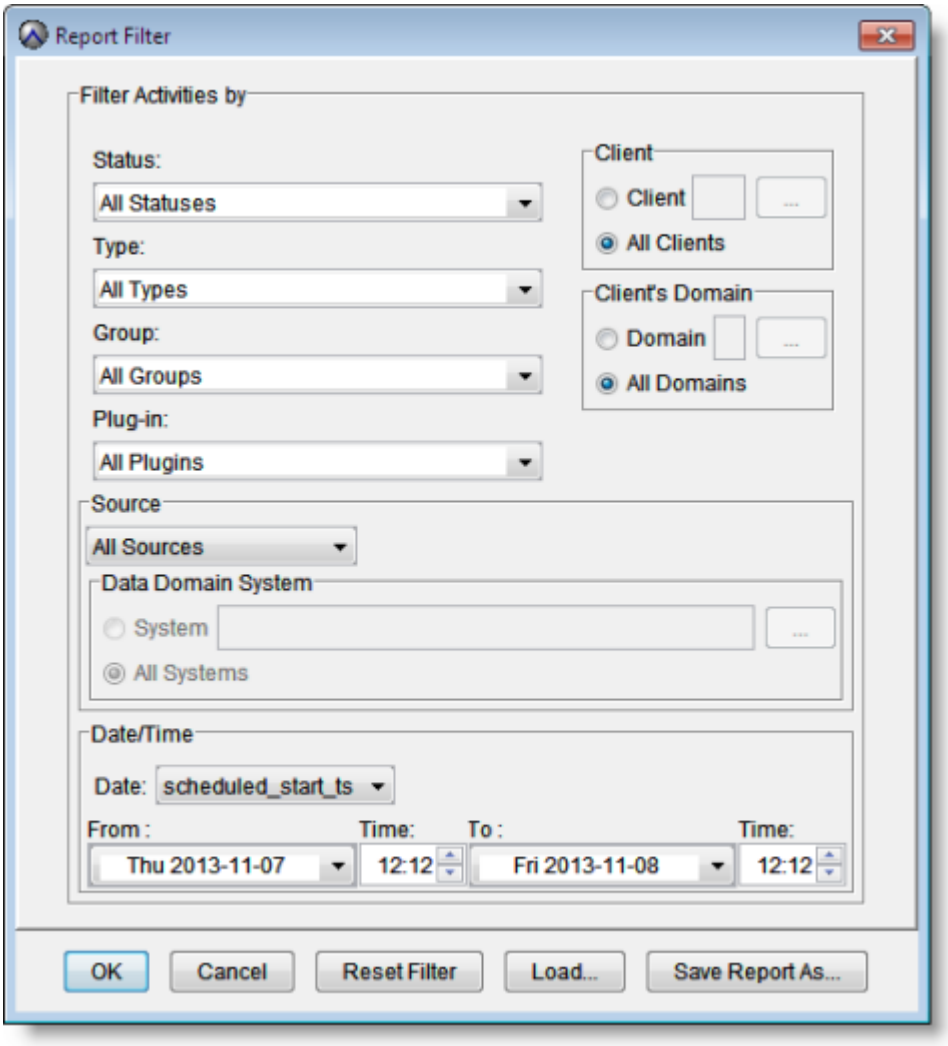
Table 23 Activities Report column descriptions (continued)

Column	Description
encryp_method2_sa	Identifies whether server authentication was enforced at the time of the backup. Server authentication is enforced if the `encrypt_server_authenticate` preference in `mcserver.xml` was set to true at the time of the backup.
proxy_cid	VMware proxy client unique ID.
client_name	Avamar client name.
server	Server on which the activity occurred, either the Avamar server or a Data Domain system.
ddr_hostname	Hostname of the Data Domain system on which the activity occurred, if the activity occurred on a Data Domain system.
hard_limit_exceeded	Indicates whether a backup exceeded the hard limit set for the client. Value is true if limit was exceeded and false if limit was not exceeded.
soft_limit_exceeded	Indicates whether a backup exceeded the soft limit set for the client. Value is true if limit was exceeded and false if limit was not exceeded.

4. (Optional) To modify the report's contents, select **Actions** › **Filter**.

   The **Report Filter** dialog box appears.

Figure 7 Report Filter dialog box



5. Change the settings in the **Report Filter** dialog box and click **OK**.
6. Use the following options, as necessary:
   - Click **Reset Filter** to clear all setting in the **Report Filter** dialog box.
   - Click **Load** to import a report from another Avamar system.
   - Click **Save Report As** to export the report to another Avamar server.

Viewing the Replication Report from the Activity window

Procedure

1. In Avamar Administrator, click the **Activity** launcher button.

   The **Activity** window appears.
2. Click the **Replication Report** tab.

   The **Replication Report** window appears.
3. Click **Retrieve**.

   A table that contains status information appears in the dialog box.

Table 24 Replication Report column descriptions from the Activity window

Column	Description
cid	Client ID.
client_name	Avamar client name.
domain	Full location of the client in the Avamar server.
plugin_number	Plug-in that is used for this replication operation.
plugin_name	Name of the plug-in.
wid	Unique workorder identifier for this activity.
type	Type of activity: • Replication Destination • Replication Source
initiated_by	Activity started by this user or the MCS.
retention_type	One or more of the following retention types: • D—Daily backups • W—Weekly backups • M—Monthly backups • Y—Yearly backups • N—No retention type
scheduled_start_ts	Date and time this replication operation was scheduled to start.
scheduled_end_ts	Date and time this replication operation was scheduled to end.
started_ts	Date and time this replication operation started.
completed_ts	Date and time this replication operation ended.
bytes_scanned	Total number of bytes processed during this replication operation.
bytes_new	Total number of bytes processed during this replication operation after data deduplication.
status_code_summary	Short summary of this status code.
error_code_summary	If the replication operation did not successfully complete, a short summary of the error code.
encryp_method	Encryption method that is used for client/server data transfer. Choices are: • proprietary • ssl
encryp_method2	Encryption method that is used for client/server data transfer: • High—Strongest available encryption setting for that specific client platform. • Medium—Medium strength encryption. • None—No encryption. The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform

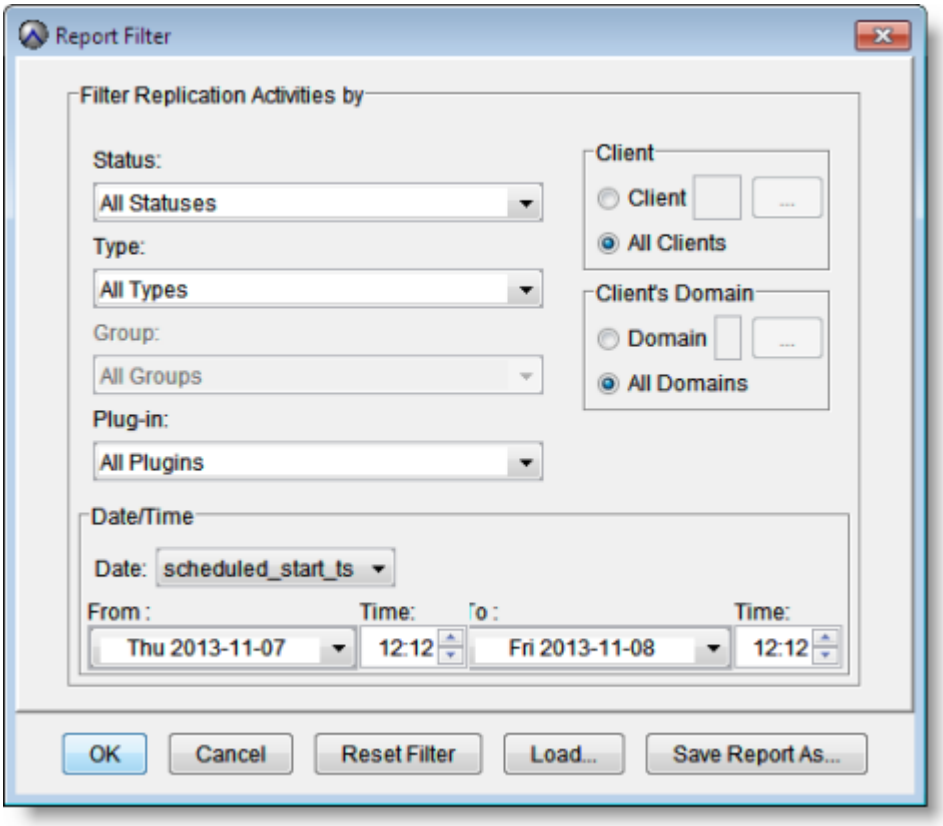
Table 24 Replication Report column descriptions from the Activity window (continued)

Column	Description
	and Avamar server version. The *EMC Avamar Product Security Guide* provides information.
encryp_method2_sa	True, if server authentication was enforced at the time of the backup, because the `encrypt_server_authenticate` preference in `mcserver.xml` is set true.
bytes_excluded	Total number of bytes intentionally excluded during the replication operation.
bytes_skipped	Total number of bytes unintentionally skipped during the replication operation.
num_files_skipped	Total number of files that are unintentionally skipped during the replication operation.
status_code	Numeric event code from the replication operation.
error_code	If the replication operation did not successfully complete, a numeric error code appears.
client_os	Client operating system.
client_ver	Avamar client software version.
bytes_overhead	Total number of overhead bytes.
session_id	Workorder ID, which is a unique identifier for the replication operation.
num_mod_files	Number of files modified.
bytes_modified_not_sent	Number of bytes modified but not sent.
bytes_modified_sent	Number of bytes modified and sent.
bytes_reduced_compr	Number of bytes reduced by compression.
systemid	Avamar system ID.
server	Server on which the activity occurred, either the Avamar server or a Data Domain system.
gid	Group ID.
action_code	Replication Destination or Replication Source. This value comes from the type column in the v_activities_2 view. v_activities_2 on page 87 provides more information.
proxy_cid	VMware proxy client unique ID.
hostname	Destination server hostname.
activitiesid	Unique activity identifier.

4. (Optional) To modify the report's contents, select **Actions** › **Filter**.

   The **Report Filter** dialog box appears.

Figure 8 Report Filter dialog box



5. Change the settings in the **Report Filter** dialog box and click **OK**.
6. Use the following options, as necessary:
   - Click **Reset Filter** to clear all setting in the **Report Filter** dialog box.
   - Click **Load** to import a report from another Avamar system.
   - Click **Save Report As** to export the report to another Avamar server.

Viewing the Client Summary Report from the Policy window

The Avamar Administrator dashboard includes the **Policy** launcher button, which provides access to the **Client Summary Report**. The **Client Summary Report** contains the same type of information as the custom report that you create with the Clients template.

Procedure

1. In Avamar Administrator, click the **Policy** launcher button.

   The **Policy** window appears.
2. Click the **Client Summary Report** tab.
3. Click **Retrieve**.

   A table that contains client status information appears in the dialog box.

Table 25 Client Summary Report column descriptions from the Policy window

Column	Description
cid	Unique alphanumeric identifier that the Avamar server stores for the Avamar client.
display_full_domain	Fully qualified domain and client name. (Same as full_domain_name.)
display_client_name	Avamar client name. (Same content as client_name.)
client_addr	Client IP address.
os_type	Client operating system.
timeout	Connection time-out value. This value is used for browsing a client.
retry_cnt	Connection retry count.
created	Creation date of the Avamar client.
enabled	Determines whether the client is enabled: • `t` for true • `f` for false
registered	Determines whether the client has checked in to the MCS: • `t` for true • `f` for false
allow_overtime	Determines whether the client can ignore the scheduling window end time: • `t` for true • `f` for false
restore_only	Determines whether the client can only do restores: • `t` for true • `f` for false
modified	Date that the client information was last modified.
ds_override	Determines whether the client can override the group dataset: • `t` for true • `f` for false
rp_override	Determines whether the client can override the group retention policy: • `t` for true • `f` for false
tp_override	Determines whether the client can override the group time-out period setting:

Table 25 Client Summary Report column descriptions from the Policy window (continued)

Column	Description
	• t for true • f for false
rc_override	Determines whether the client can override the group retry count setting: • t for true • f for false
can_page	Determines whether the MCS can contact the client: • t for true • f for false
page_addr	IP address that is used to contact the client.
page_port	Data port that is used to contact the client.
pageadr_locked	Determines whether automatic updates of the address by MCS are blocked: • t for true • f for false
mcs_addr	Hostname for the Avamar server.
checkin_ts	Last check-in date and time.
backed_up_ts	Last backup date and time.
registered_ts	Registered date and time.
agent_version	Version of the agent installed.
plugin_for_last_backup	Plug-in that is used for the last backup.
contact_name	Person to contact regarding issues with the client.
contact_phone	Contact phone number.
contact_email	Contact email address.
contact_location	Contact location.
contact_notes	Contact notes.
has_backups	Determines whether the client has backups: • t for true • f for false
allow_userinit_backups	Determines whether the client allows user-initiated backups: • t for true • f for false

Table 25 Client Summary Report column descriptions from the Policy window (continued)

Column	Description
allow_add_dtlt_targets	Determines whether Avamar Desktop/Laptop users can add targets to datasets: • `t` for true • `f` for false
allow_userinit_backup_file_sel	Determines whether the client allows file selection on user-initiated backups: • `t` for true • `f` for false
override_userinit_retpol	Determines whether the backup overrides the standard retention policy on user-initiated backups: • `t` for true • `f` for false
overtime_option	One of the following: • `ALWAYS`—Scheduled group backups are always allowed to run past the schedule duration setting. • `NEXT`—Only the next scheduled group backup is allowed to run past the schedule duration setting. • `NEXT_SUCCESS`—Scheduled group backups are allowed to run past the schedule duration setting until a successful backup is completed. • `NEVER`—Scheduled group backups are never allowed to run past the schedule duration setting. This value is automatically set to `NEXT_SUCCESS` when the client initially registers, and is cleared after one backup successfully completes.
dtlt_sch_override	Determines whether Avamar Desktop/Laptop users can override the schedule for groups that include the client.
client_type	Internal values for the Avamar client type: • `REGULAR`—Default client type. • `VCENTER`—vCenter client. • `VMACHINE`—Virtual machine client. • `VPROXY`—Avamar proxy client. • `VREGULAR`—Virtual machine client that runs the Avamar client software.
full_domain_name	Fully qualified domain and client name. (Same as display_full_domain.)
client_name	Avamar client name. (Same as display_client_name.)

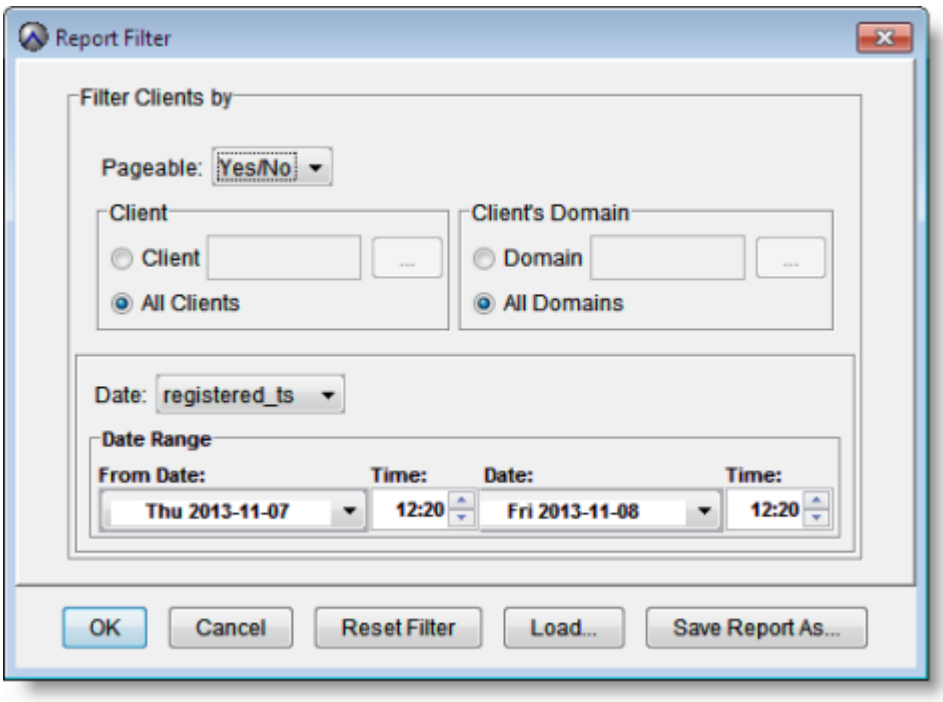
Table 25 Client Summary Report column descriptions from the Policy window (continued)

Column	Description
ds_id	Internal dataset ID.
pol_id	Internal retention policy ID.

4. (Optional) To modify the report's contents, select **Actions › Filter**.

   The **Report Filter** dialog box appears.

   Figure 9 Report Filter dialog box



5. Change the settings in the **Report Filter** dialog box and click **OK**.

   Click **Reset Filter** to clear all settings in the **Report Filter** dialog box.

6. Use the following options, as necessary:

   - Click **Reset Filter** to clear all setting in the **Report Filter** dialog box.
   - Click **Load** to import a report from another Avamar system.
   - Click **Save Report As** to export the report to another Avamar server.

CHAPTER 4

Crystal Reports

This chapter includes the following topics:

Crystal Reports templates

Avamar provides a set of Crystal Reports templates that you can use to generate reports. The templates are located, by default, in the `C:\Program Files (x86)\avs\administrator\doc` folder on Windows and in the `/usr/local/avamar/doc` directory on Linux.

Information about how to use Crystal Reports templates is beyond the scope of this guide. The Crystal Reports documentation provides more information.

The following table lists the default Avamar Crystal Reports templates.

Table 26 Avamar Crystal Reports templates

Template name	File name	Description
Client Installation Report	`ClientInstallation.rpt`	This report contains information for all clients installed on the MCS when the report is run.
Errors and Warning Events Report	`ErrorWarningEvents.rpt`	This report contains all warning or error severity events within a specified date and time interval.
Events Report	`AllEvents.rpt`	This report contains all events recorded by the MCS within a specified date and time interval.
Failed Restores Report	`FailedRestores.rpt`	This report contains information for all failed restores within a specified date and time interval for all clients or for a specific client.
Failed Backups Report	`FailedBackup.rpt`	This report contains information for all failed backups within a specified date and time interval for all clients or for a specific client.
Group Backup By Group Report	`GroupbackupByGroup.rpt`	This report contains group backup statistics for all groups or for a specific group.
Group Backup By Schedule Report	`GroupbackupByScheduled.rpt`	This report contains group backup statistics for backups within a specified date and time interval.
Server Drive Capacity Report	`ServerDriveCapacity.rpt`	This report provides hard drive capacity statistics for each server node based on the specified date and time interval.
Successful Restores Report	`SuccessfulRestores.rpt`	This report contains information for all successful restores within a specified date and time interval for all clients or for a specific client.
Successful Backups Report	`SuccessfulBackup.rpt`	This report contains information for all successful backups within a specified date and time interval for all clients or for a specific client.

Setting up the PostgreSQL ODBC driver

Set up the PostgreSQL ODBC driver on a local Windows client to enable support for common third-party reporting packages such as Crystal Reports.

Procedure

1. Download and install the latest driver from the PostgreSQL website. See www.postgresql.org for more information.

2. From the Windows **Start** menu, select **Control Panel** › **Administrative Tools**.

   The **Administrative Tools** window appears.

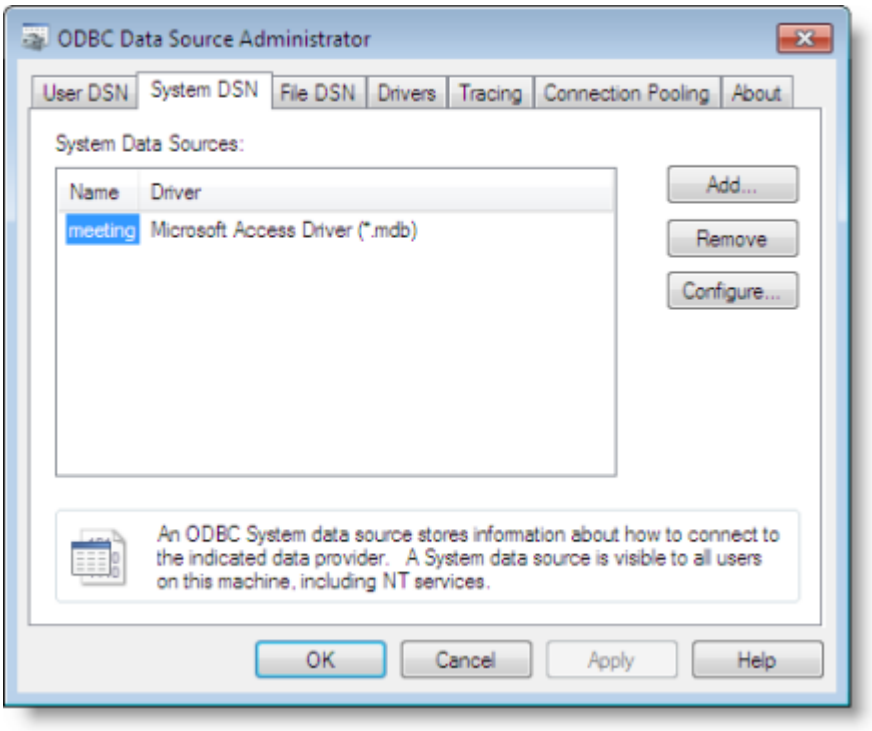
3. Double-click **Data Sources (ODBC)**.

   The **ODBC Data Source Administrator** window appears.

4. Click the **System DSN** tab.

   The **ODBC Data Source Administrator** windows displays the **System Data Sources** table.

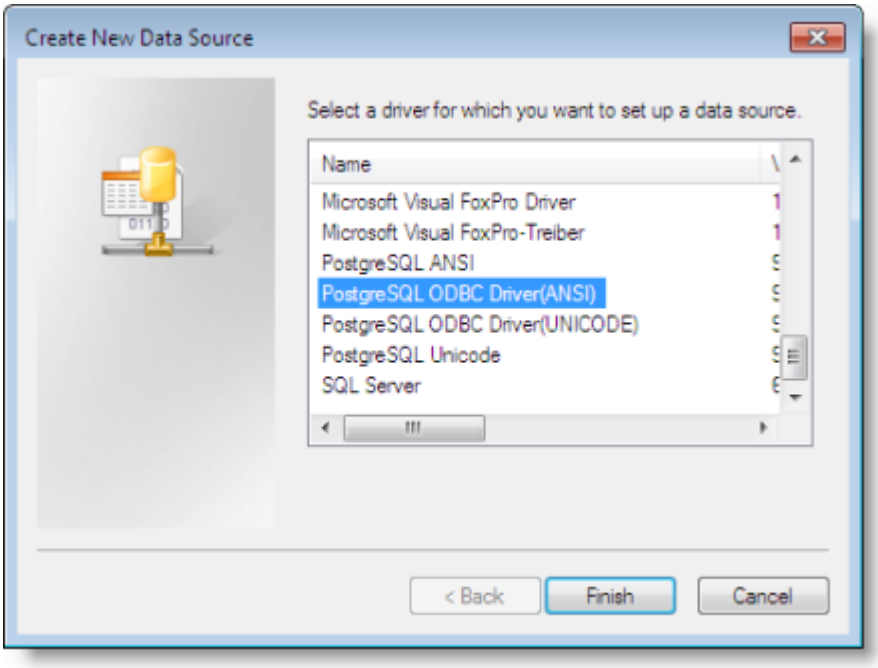
   Figure 10 System Data Sources table in the ODBC Data Source Administrator dialog box



5. Click **Add**.

   The **Create New Data Source** dialog box appears.

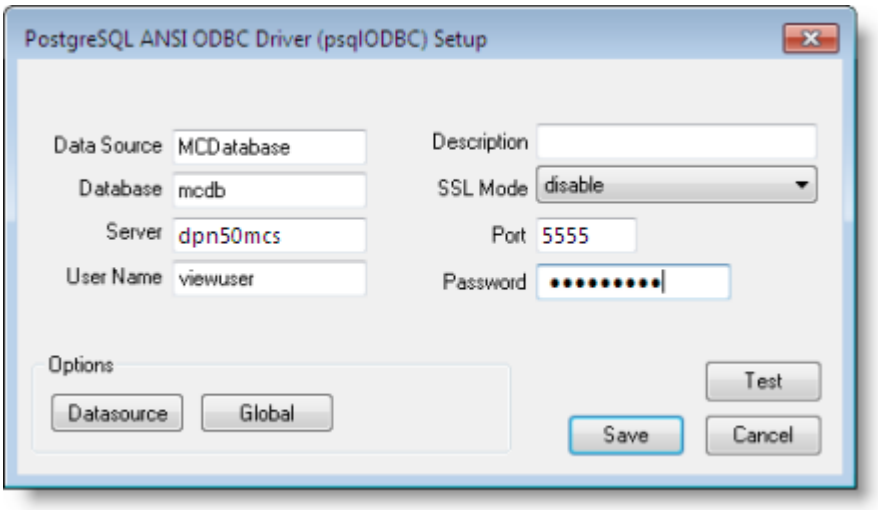
Figure 11 Create New Data Source dialog box



6. Select the **PostgreSQL Driver** and click **Finish**.

   The **PostgreSQL ODBC Driver (psqlODBC) Setup** dialog box appears.

   Figure 12 PostgreSQL ODBC Driver (psqlODBC) Setup dialog box



7. In the **PostSQL ODBC Driver (psqlODBC) Setup** dialog box, complete the following settings:

   a. In the **Data Source** box, type a short name, such as **`MCDatabase`**.

   b. Leave the **Description** box blank.

   c. In the **Database** box, type **`mcdb`**.

   d. In the **Server** box, type the hostname where mcdb is running, such as dpn50mcs.

   e. Leave the **Port** box set to **`5555`**.

f. In the **User Name** box, type **viewuser**.

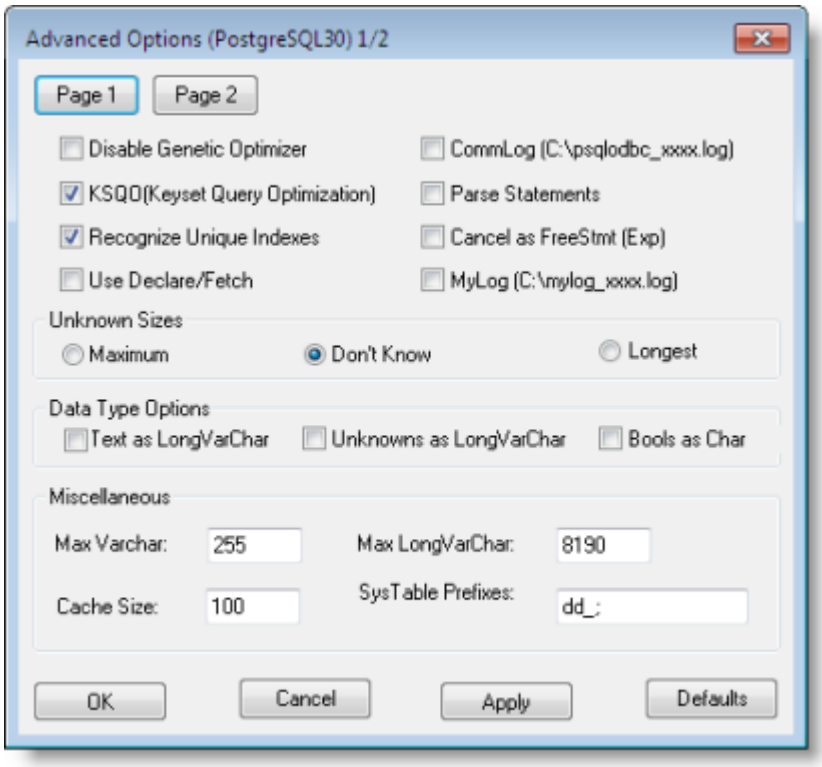
g. In the **Password** box, type the password for the viewuser account.

The person who installed or upgraded the Avamar server software created the viewuser account password during the install or upgrade.

h. Click **Datasource**.

The **Advanced Options (PostgreSQL30 1 / 2)** dialog box appears.

Figure 13 Advanced Options (PostgreSQL30 1 / 2) dialog box



8. In the **Advanced Options (PostgreSQL30 1/2)** dialog box, complete the following settings:

a. In the **Unknown Sizes** group box, select **Don't Know**.

b. In the **Data Type Options** group box, clear **Text as LongVarChar** and **Bools as Char**.

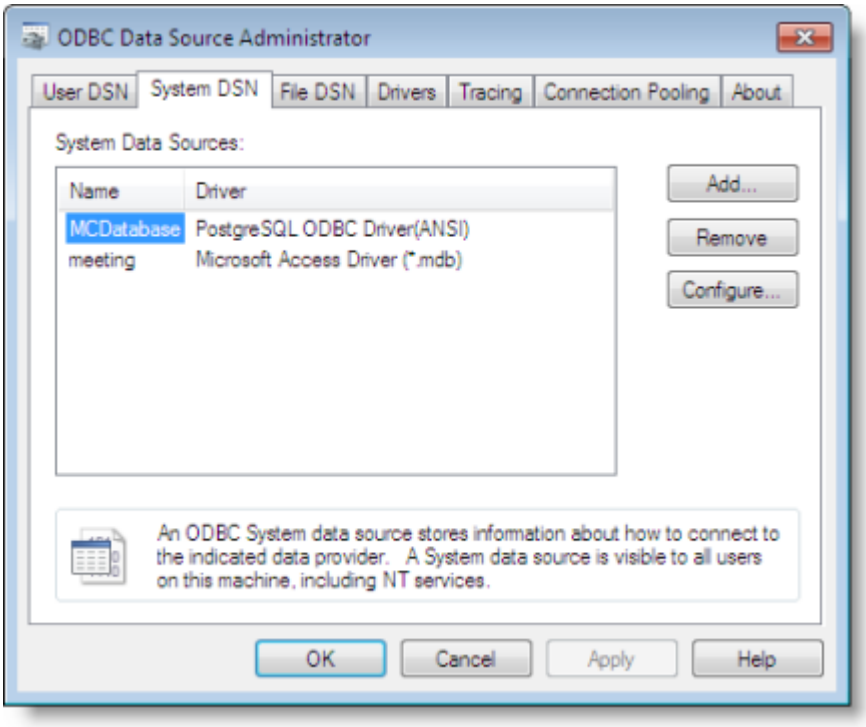
c. Click **OK**.

The **Advanced Options (PostgreSQL 1 / 2)** dialog box closes.

9. In the **PostgreSQL ODBC Driver (psqlODBC) Setup** dialog box, click **Save**.

The **PostgreSQL ODBC Driver (psqlODBC) Setup** dialog box closes. The **ODBC Data Source Administrator** dialog box contains an entry for the **PostgreSQL ODBC Driver**.

Figure 14 ODBC Data Source Administrator dialog box



10. In the **ODBC Data Source Administrator** dialog box, click **OK**.

    The **ODBC Data Source Administrator** closes.

11. Close the **Administrative Tools** and **Control Panel** windows.

APPENDIX A

MCS Database Views

This appendix includes the following topics:

Data types

A data type is a term that describes a particular type of information such as a date, an integer, or a text string.

Each column in a database view stores one of the data types listed in the following table.

Table 27 Database view data types

Type	Description
bool	Logical Boolean value (true or false).
date	Specific calendar date (year, month, day).
float8	8-byte floating-point number.
int2	Signed 2-byte integer (whole number).
int4	Signed 4-byte integer (whole number).
int8	Signed 8-byte integer (whole number).
numeric	Exact numeric value with selectable precision.
text	Variable-length character string.
time	Specific time of day.
timestamp	Specific calendar date and time of day.
varchar	Variable-length character string.

MCS database views

MCS database views provide types of information that you can access from Avamar Administrator by creating custom reports or by running predefined reports.

v_activities

The v_activities view contains a record for each backup, restore, or validation activity.

Note

Beginning with version 4.0, use of this database view is deprecated in favor of v_activities_2 on page 87. Official support for this database view is likely to be discontinued in a future release.

The following table shows the information available from the v_activities view.

Table 28 MCS database v_activities view

Column	Type	Description
axionsystemid	varchar	Avamar system ID.
bytes_excluded	float8	Number of bytes intentionally excluded. Not relevant for replication activities.

Table 28 MCS database v_activities view (continued)

Column	Type	Description
bytes_modified_sent	float8	Not relevant for replication activities.
bytes_modified_not_sent	float8	Not relevant for replication activities.
bytes_new	float8	Number of bytes processed after data deduplication.
bytes_overhead	float8	Number of bytes of overhead. Not relevant for replication activities.
bytes_scanned	float8	Number of bytes processed. Not relevant for replication activities.
bytes_skipped	float8	Number of bytes unintentionally skipped.
cid	varchar	Client ID.
client_name	varchar	Client name.
client_os	varchar	Client operating system.
client_ver	varchar	Avamar client software version.
completed_date	date	Completed or terminated date.
completed_time	time	Completed or terminated time.
completed_ts	timestamp	Completed or terminated date and time.
createtime	numeric	Avamar server timestamp for when the backup was created.
dataset	varchar	Dataset that is used to perform this backup (applies to group-based backups only).
dataset_override	bool	True if a client dataset was used instead of a group dataset to perform this backup.
display_name	varchar	VMware client display name.
domain	varchar	Client domain.
effective_expiration	varchar	Expiration of the backup as calculated at the time of the backup.
effective_expiration_ts	timestamp	Expiration of the backup as calculated at the time of the backup.
effective_path	varchar	Dataset that is used in the backup (applies to group-based backups only).
encryption_method	varchar	Encryption method that is used. Valid values are: • proprietary • ssl
error_code	int4	Numeric activity status completion code.
error_code_summary	varchar	If the activity did not successfully complete, a short summary of the error code.
expiration	text	Current expiration date.

Table 28 MCS database v_activities view (continued)

Column	Type	Description
expiration_ts	timestamp	Current expiration timestamp.
group_name	varchar	Group name (applies to group-based backups only).
initiated_by	varchar	Username responsible for starting the on-demand backup.
num_files_skipped	float8	Number of files unintentionally skipped. Not relevant for replication activities.
num_of_files	float8	Number of files processed. Can be zero for replication activities. Not relevant for replication activities.
plugin_name	varchar	Name of the plug-in that is used to perform this activity.
plugin_number	int4	Numeric plug-in ID.
recorded_date	date	Date the activity was recorded.
recorded_date_time	timestamp	Date and time the activity was recorded.
recorded_time	time	Time the activity was recorded.
retention_policy	varchar	Retention policy that is used to perform this backup (applies to group-based backups only).
retention_policy_override	bool	True if a client retention policy was used instead of a group retention policy to perform this backup.
schedule	varchar	Schedule that is used for scheduled backups.
schedule_recurrence	varchar	Recurrence interval, either daily, weekly, yearly, or monthly.
scheduled_end_date	date	Expected end date of the activity.
scheduled_end_time	time	Expected end time of the activity.
scheduled_end_ts	timestamp	Expected end date and time of the activity.
scheduled_start_date	date	Scheduled start date.
scheduled_start_time	time	Scheduled start time.
scheduled_start_ts	timestamp	Scheduled start date and time.
session_id	varchar	Unique identifier for this activity.
snapup_label	varchar	Backup label. Blank for replication activities.
snapup_number	varchar	Backup number. Blank for replication activities.
started_date	date	Start date of the activity.
started_time	time	Start time of the activity.
started_ts	timestamp	Start date and time of the activity.
status_code	int4	Last known status code of the activity.
status_code_summary	varchar	Short summary of this status code.
type	varchar	Type of activity. Valid values are:

Table 28 MCS database v_activities view (continued)

Column	Type	Description
		• 0, UNDEFINED • 1, On-Demand Snapup • 2, Scheduled Snapup • 3, Restore • 4, Validate

v_activities_2

The v_activities_2 view contains a record for each backup, restore, or validation activity.

Note

Replication activities are stored in v_repl_activities on page 120.

The following table shows the information available from the v_activities_2 view.

Table 29 MCS database v_activities_2 view

Column	Type	Description
axionsystemid	varchar	Avamar system ID.
bytes_excluded	float8	Number of bytes intentionally excluded. Not relevant for replication activities.
bytes_modified_sent	float8	Not relevant for replication activities.
bytes_modified_not_sent	float8	Not relevant for replication activities.
bytes_new	float8	Number of bytes processed after data deduplication.
bytes_overhead	float8	Number of bytes of overhead. Not relevant for replication activities.
bytes_scanned	float8	Number of bytes processed. Not relevant for replication activities.
bytes_skipped	float8	Number of bytes unintentionally skipped.
cid	varchar	Client ID.
client_name	varchar	Client name.
client_os	varchar	Client operating system.
client_ver	varchar	Avamar client software version.
completed_date	date	Completed or terminated date.
completed_time	time	Completed or terminated time.
completed_ts	timestamp	Completed or terminated date and time.
createtime	numeric	Avamar server timestamp for when backup was created.

Table 29 MCS database v_activities_2 view (continued)

Column	Type	Description
dataset	varchar	Dataset that is used to perform this backup (applies to group-based backups only).
dataset_override	bool	True if a client dataset was used instead of a group dataset to perform this backup.
ddr_hostname	varchar	If the server column value lists `DD`, then this column lists the Data Domain system name.
display_name	varchar	VMware client display name.
domain	varchar	Client domain.
effective_expiration	varchar	Expiration of the backup as calculated at the time of the backup.
effective_expiration_ts	timestamp	Expiration of the backup as calculated at the time of the backup.
effective_path	varchar	Dataset that is used in the backup (applies to group-based backups only).
encryption_method	varchar	Encryption method that is used. Valid values are: • proprietary • ssl
encryption_method2	varchar	Encryption method that is used for client/server data transfer. Choices are: • High—Strongest available encryption setting for that specific client platform. • Medium—Medium strength encryption. • None—No encryption. The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform and Avamar server version. The *EMC Avamar Product Security Guide* provides information.
encrypt_method2_sa	bool	True if the `encrypt_server_authenticate` preference in `mcserver.xml` is set to true. Otherwise, false.
error_code	int4	Numeric activity status completion code.
error_code_summary	varchar	If the activity did not successfully complete, a short summary of the error code.
expiration	text	Current expiration date.
expiration_ts	timestamp	Current expiration timestamp.
group_name	varchar	Group name (applies to group-based backups only).
initiated_by	varchar	Username responsible for starting the on-demand backup.

Table 29 MCS database v_activities_2 view (continued)

Column	Type	Description
num_files_skipped	float8	Number of files unintentionally skipped. Not relevant for replication activities.
num_of_files	float8	Number of files processed. Can be zero for replication activities. Not relevant for replication activities.
plugin_name	varchar	Name of the plug-in that is used to perform this activity.
plugin_number	int4	Numeric plug-in ID.
proxy_cid	varchar	VMware proxy client unique ID.
recorded_date	date	Date the activity was recorded.
recorded_date_time	timestamp	Date and time the activity was recorded.
recorded_time	time	Time the activity was recorded.
retention_policy	varchar	Retention policy that is used to perform this backup (applies to group-based backups only).
retention_policy_override	bool	True if a client retention policy was used instead of a group retention policy to perform this backup.
server	varchar	For backups, this column specifies the destination system. For restores, this column specifies the source system. Valid values are: • Avamar—Avamar server • DD—Data Domain system
schedule	varchar	Schedule that is used for scheduled backups.
schedule_recurrence	varchar	Recurrence interval, either daily, weekly, yearly, or monthly.
scheduled_end_date	date	Expected end date of the activity.
scheduled_end_time	time	Expected end time of the activity.
scheduled_end_ts	timestamp	Expected end date and time of the activity.
scheduled_start_date	date	Scheduled start date.
scheduled_start_time	time	Scheduled start time.
scheduled_start_ts	timestamp	Scheduled start date and time.
session_id	varchar	Unique identifier for this activity.
snapup_label	varchar	Backup label. Blank for replication activities.
snapup_number	varchar	Backup number. Blank for replication activities.
started_date	date	Start date of the activity.
started_time	time	Start time of the activity.
started_ts	timestamp	Start date and time of the activity.
status_code	int4	Last known status code of the activity.
status_code_summary	varchar	Short summary of this status code.

Table 29 MCS database v_activities_2 view (continued)

Column	Type	Description
type	varchar	Type of activity. Valid values are: • 0, UNDEFINED • 1, On-Demand Backup • 2, Scheduled Backup • 3, Restore • 4, Validate • 12, Replication Destination • 13, Replication Source • 14, Search Result • 15, Replication Backup • 16, Export • 17, Upgrade • 18, Capacity Report • 19, Import
wid	varchar	Unique workorder identifier for this activity.

v_activity_errors

The v_activity_errors view contains a record that stores the total number of times a specific event code is encountered during a specific activity.

The following table shows the information available from the v_activity_errors view.

Table 30 MCS database v_activity_errors view

Column	Type	Description
cid	varchar	Client ID.
cnt	int4	Count of the number of times that this event code occurred.
code	int4	Event code.
pid_number	int4	Plug-in number.
session_id	varchar	Session ID.

v_audits

The v_audits view contains a record for each audit log entry.

The following table shows the information available from the v_audits view.

Table 31 MCS database v_audits view

Column	Type	Description
audit_id	int4	Internally generated unique ID for this audit entry.
date_time	timestamp	Date and time of the event.
domain	varchar	Domain associated with this event.
ecode	int4	Event code.
product	varchar	Values include: • EM • EMT • END_USER • MCCLI • MCGUI • MCS • SNMP_SUB_AGENT • WEB_RESTORE
role	varchar	Values include: • Administrator • Activity Operator • Restore Only Operator
object	varchar	Values include: • ACTIVITY • AGENT • BACKUP • CLIENT • CP • CPV • CRG • CRON • DATASET • DOMAIN • EMT • EVENT • GC • GROUP • HFSCHECK • MCS

Table 31 MCS database v_audits view (continued)

Column	Type	Description
		• PLUGIN • PROFILE • REPL • REPORT • RETENTION • SCHEDULE • SNMP_SUB_AGENT • SNMPD • SYSLOGD • USER
operation	varchar	Values include: • ACK • ACTIVATE • ADD • AUTH • BACKUP • BROWSE • CANCEL • COPY • DELETE • DISABLE • EDIT • ENABLE • EXPORT • LOGON • RESTART • RESUME • RETIRE • RUN • START • STOP • SUSPEND • VALIDATE
user_name	varchar	User ID that initiated this action.

v_client_backups_users

The v_client_backups_users view contains a record of disk capacity data for each disk on each node.

The following table shows the information available from the v_client_backups_users view.

Table 32 MCS database v_client_backups_users view

Column	Type	Description
activitiesid	bigint	Unique activity identifier.
backup_number	varchar	Numerical backup identifier.
cid	varchar	Client ID.
name	varchar	Name of the backup user.
sid	varchar	User Security Identifier (SID).
userid	bigint	Unique backup user identifier.

v_clientperftrack

The v_clientperftrack view contains a record for client performance statistical data. This data is included in High Priority Events profile. The *EMC Avamar Administration Guide* provides more information about the High Priority Events profile.

The following table shows the information available from the v_clientperftrack view.

Table 33 MCS database v_clientperftrack view

Column	Type	Description
axionsystemid	varchar	Avamar system ID.
bytes_excluded	float8	Number of bytes intentionally excluded.
bytes_modified_not_sent	float8	Number of bytes modified but not sent.
bytes_modified_sent	float8	Number of bytes modified and sent.
bytes_new	float8	Number of bytes processed after data deduplication.
bytes_overhead	float8	Number of bytes of overhead.
bytes_reduced_compr	float8	Number of bytes reduced by compression.
bytes_scanned	float8	Number of bytes processed.
bytes_skipped	float8	Number of bytes unintentionally skipped (errors and so forth).
cid	varchar	Client ID.
client_os	varchar	Client operating system.
client_ver	varchar	Avamar client software version.
completed_ts	timestamp	Completed or terminated date and time.

Table 33 MCS database v_clientperftrack view (continued)

Column	Type	Description
effective_path	varchar	Dataset used in the backup (applies to group-based backups only).
failure_event_code	integer	Failure event code.
num_files_skipped	float8	Number of files unintentionally skipped (errors and so forth).
num_mod_files	float8	Number of files modified.
num_of_files	float8	Number of files processed.
operation	varchar	Type of activity reported by this entry.
pid_number	int4	Plug-in number.
scheduled_start_ts	timestamp	Scheduled start date and time.
server	varchar	Specifies the destination system for backups, or source system for restores. Valid values are: • Avamar—Avamar server • DD—Data Domain system
session_id	varchar	Unique identifier for this activity.
started_ts	timestamp	Start date and time of the activity.
wid	varchar	Unique workorder identifier for this activity.

v_clients

The v_clients view contains a record for each client that is known to the MCS.

Note

Beginning with version 4.0, use of this database view is deprecated in favor of v_clients_2 on page 96. All official support for this database view is likely to be discontinued in a future release.

The following table shows the information available from the v_clients view.

Table 34 MCS database v_clients view

Column	Type	Description
agent_version	varchar	Version of the agent installed.
allow_overtime	bool	True if the client can ignore the scheduling window end time. See also `overtime_option` in this table.
allow_userinit_snapup_file_sel	varchar	Allow file selection for on-demand backups.
allow_userinit_snapups	varchar	Allow on-demand backups.
backed_up_ts	timestamp	Last backup date and time.

Table 34 MCS database v_clients view (continued)

Column	Type	Description
can_page	bool	True if the MCS can contact the client.
checkin_ts	timestamp	Last check-in date and time.
cid	varchar	Client ID.
client_addr	varchar	Client IP address.
client_name	varchar	Client name.
client_type	varchar	Client type. One of the following values: • REGULAR • VCENTER • VMACHINE • VPROXY • VREGULAR
contact_email	varchar	Contact email address.
contact_location	varchar	Contact location.
contact_name	varchar	Person to contact regarding issues with this client.
contact_notes	varchar	Contact notes.
contact_phone	varchar	Contact phone number.
created	date	Creation date.
ds_override	bool	True if the client can override the group dataset.
enabled	bool	True if the client can generate activities.
full_domain_name	varchar	Fully qualified client location.
has_snapups	bool	True if the client has backups.
modified	date	Date that the client information was last modified.
os_type	varchar	Client operating system.
override_userinit_retpol	varchar	Override standard retention policy for on-demand backups.
overtime_option	varchar	One of the following values: • ALWAYS—Scheduled group backups are always allowed to run past the schedule duration setting. • NEXT—Only the next scheduled group backup is allowed to run past the schedule duration setting. • NEXT_SUCCESS—Scheduled group backups are allowed to run past the schedule duration setting until a successful backup is completed.

Table 34 MCS database v_clients view (continued)

Column	Type	Description
		• NEVER—Scheduled group backups are never allowed to run past the schedule duration setting. The overtime_option value is automatically set to NEXT_SUCCESS when the client initially registers, and is cleared after one backup successfully completes.
page_addr	varchar	IP address that is used to contact the client.
page_port	varchar	Data port that is used to contact the client.
pageadr_locked	bool	True when MCS cannot automatically update the address.
plugin_for_last_backup	varchar	Plug-in that is used for the last backup.
rc_override	bool	True if the client can override the group retry count setting.
registered	bool	True if the client has checked in to the MCS.
registered_ts	timestamp	Registered date and time.
restore_only	bool	True if the client can only do restores.
retry_cnt	int4	Connection retry count.
rp_override	bool	True if the client can override the group retention policy.
timeout	int4	Connection time-out value.
tp_override	bool	True if the client can override the group time-out period setting.

v_clients_2

The v_clients_2 view contains a record for each client known to the MCS.

The following table shows the information available from the v_clients_2 view.

Table 35 MCS database v_clients_2 view

Column	Type	Description
agent_version	varchar	Version of the agent installed.
allow_overtime	bool	True if the client can ignore the scheduling window end time. See also `overtime_option` in this table.
allow_userinit_snapup_file_sel	varchar	Allow file selection on user initiated backups.
allow_userinit_snapups	varchar	Allow user initiated backups.
backed_up_ts	timestamp	Last backup date and time.

Table 35 MCS database v_clients_2 view (continued)

Column	Type	Description
can_page	bool	True if the MCS can contact the client.
checkin_ts	timestamp	Last check-in date and time.
cid	varchar	Client ID.
client_addr	varchar	Client IP address.
client_name	varchar	Client name.
client_type	varchar	Client type. One of the following values: • REGULAR • VCENTER • VMACHINE • VPROXY • VREGULAR
contact_email	varchar	Contact email address.
contact_location	varchar	Contact location.
contact_name	varchar	Person to contact regarding issues with this client.
contact_notes	varchar	Contact notes.
contact_phone	varchar	Contact phone number.
created	date	Creation date.
display_client_name	varchar	Virtual machine displayable node name.
display_full_domain	varchar	Fully qualified domain and client display name.
ds_override	bool	True if the client can override the group dataset.
enabled	bool	True if the client can generate activities.
full_domain_name	varchar	Fully qualified client location.
has_snapups	bool	True if the client has backups.
modified	date	Date that the client information was last modified.
os_type	varchar	Client operating system.
override_userinit_retpol	varchar	Override standard retention policy on user initiated backups.
overtime_option	varchar	One of the following values: • ALWAYS—Scheduled group backups are always allowed to run past the schedule duration setting. • NEXT—Only the next scheduled group backup is allowed to run past the schedule duration setting.

Table 35 MCS database v_clients_2 view (continued)

Column	Type	Description
		• NEXT_SUCCESS—Scheduled group backups are allowed to run past the schedule duration setting until a successful backup is completed. • NEVER—Scheduled group backups are never allowed to run past the schedule duration setting. The overtime_option value is automatically set to NEXT_SUCCESS when the client initially registers, and is cleared after one backup successfully completes.
page_addr	varchar	IP address used to contact the client.
page_port	varchar	Data port used to contact the client.
pageadr_locked	bool	True if the address cannot be updated automatically by the MCS.
plugin_for_last_backup	varchar	Plug-in used for the last backup.
rc_override	bool	True if the client can override the group retry count setting.
registered	bool	True if the client has checked in to the MCS.
registered_ts	timestamp	Registered date and time.
restore_only	bool	True if the client can only do restores.
retry_cnt	int4	Connection retry count.
rp_override	bool	True if the client can override the group retention policy.
timeout	int4	Connection time-out value.
tp_override	bool	True if the client can override the group time-out period setting.

v_compatibility

The v_compatibility view stores MCS database compatibility information.

The following table shows the information available from the v_compatibility view.

Table 36 MCS database v_compatibility view

Column	Type	Description
component	varchar	Subsystem component. One of the following values: • db_schema_version_init • db_schema_version • db_views_schema_version

Table 36 MCS database v_compatibility view (continued)

Column	Type	Description
version	varchar	Version number of the component.

v_datasets

The v_datasets view contains a record for each dataset known to the MCS.

The following table shows the information available from the v_datasets view.

Table 37 MCS database v_datasets view

Column	Type	Description
all_data	bool	True if the dataset saves all data.
domain	varchar	Avamar domain associated with the dataset.
is_link	bool	True if the dataset is a pointer to another dataset.
is_read_only	bool	True if the dataset cannot be modified.
link_name	varchar	Name of the dataset if is_link is true.
name	varchar	Name of the dataset.

v_ddr_node_space

The v_ddr_node_space view tracks Data Domain system utilization and capacity.

The following table shows the information available from the v_ddr_node_space view.

Table 38 MCS database v_ddr_node_space view

Column	Type	Description
date	date	Date.
time	time	Time.
date_time	timestamp	Date and time.
ddr_id	varchar	Unique Data Domain system ID.
ddr_hostname	varchar	Data Domain system hostname.
utilization	numeric	/backup: post-comp percentage of space utilized.
capacity_gib	float8	/backup: post-comp size in GiB.

v_dpnsummary

The v_dpnsummary view contains a record for each backup, restore, or validation activity on a client-by-client basis.

The following table shows the information available from the v_dpnsummary view.

Table 39 MCS database v_dpnsummary view

Column	Type	Description
clientver	varchar	Version of the agent software running on the client.
host	varchar	Client name.
mod_sent	float8	Bytes modified and sent.
modnotsent	float8	Bytes modified but not sent.
numfiles	float8	Number of files processed.
nummodfiles	float8	Number of files modified.
operation	varchar	Type of activity reported by this entry.
os	varchar	Client operating system.
overhead	float8	Number of bytes of overhead sent and stored on the storage subsystem.
pcntcommon	int4	Percentage of data deduplication.
reduced	float8	Bytes reduced by compression.
root	varchar	Dataset used in the backup (applies to group-based backups only).
seconds	float8	Completed or terminated date and time.
sessionid	varchar	Unique identifier for the client to storage subsystem session for this activity.
starttime	timestamp	Date and time the job was dispatched to the client by Avamar Administrator. **Note** Start time in the client log might be slightly later due to communication and job setup latency.
startvalue	float8	Scheduled start date and time, expressed as elapsed time (in seconds) since the beginning of the UNIX epoch.
status	varchar	Success or failure result of this activity.
totalbytes	float8	Number of bytes processed.
workorderid	varchar	Unique workorder identifier for this activity.

v_dpn_stats

The v_dpn_stats view contains a record for Avamar server statistics.

The following table shows the information available from the v_dpn_stats view.

Table 40 MCS database v_dpn_stats view

Column	Type	Description
data_protected_mb	float8	Megabytes protected.

Table 40 MCS database v_dpn_stats view (continued)

Column	Type	Description
date	date	Date.
date_time	timestamp	Date and time.
dpn_name	varchar	Avamar server name.
time	time	Time.

v_ds_commands

The v_ds_commands view contains a record for each optional plug-in command defined for each dataset.

The following table shows the information available from the v_ds_commands view.

Table 41 MCS database v_ds_commands view

Column	Type	Description
command_name	varchar	Name of the command.
dataset_name	varchar	Name of the dataset.
domain	varchar	Domain.
plugin_name	varchar	Name of the plug-in.
type	varchar	Type of optional plug-in command.
value	varchar	Value associated with the command name.

v_ds_excludes

The v_ds_excludes view contains a record for each exclude definition defined for each dataset.

The following table shows the information available from the v_ds_excludes view.

Table 42 MCS database v_ds_excludes view

Column	Type	Description
dataset_name	varchar	Name of the dataset.
domain	varchar	Domain.
plugin_name	varchar	Name of the plug-in.
value	varchar	Exclude value for the dataset or plug-in.

v_ds_includes

The v_ds_includes view contains a record for each include definition defined for each dataset.

The following table shows the information available from the v_ds_includes view.

Table 43 MCS database v_ds_includes view

Column	Type	Description
dataset_name	varchar	Name of the dataset.
domain	varchar	Domain.
plugin_name	varchar	Name of the plug-in.
value	varchar	Include value for the dataset or plug-in.

v_ds_targets

The v_ds_targets view contains a record for each source target defined for each dataset.

The following table shows the information available from the v_ds_targets view.

Table 44 MCS database v_ds_targets view

Column	Type	Description
dataset_name	varchar	Name of the dataset.
domain	varchar	Domain.
plugin_name	varchar	Name of the plug-in.
value	varchar	Target value for the dataset or plug-in.

v_dtlt_dataset_targets

The v_dtlt_dataset_targets view contains a record of files or directories that Avamar Desktop/Laptop users selected to include in a backup group.

The following table shows the information available from the v_dtlt_dataset_targets view.

Table 45 MCS database v_dtlt_dataset_targets view

Column	Type	Description
cid	varchar	Client ID.
client_name	varchar	Client name.
full_domain_name	varchar	Fully qualified client location.
plugin_number	int4	Numeric plug-in ID.
target	varchar	Target path.

v_dtlt_sched_override

The v_dtlt_sched_override view contains a record of each backup start time that Avamar Desktop/Laptop users selected from the web UI to override daily group schedules.

The following table shows the information available from the v_dtlt_sched_override view.

Table 46 MCS database v_dtlt_sched_override view

Column	Type	Description
cid	varchar	Client ID.
client_name	varchar	Client name.
full_domain_name	varchar	Fully qualified client location.
gid	varchar	Group ID.
group_name	varchar	Group name.
group_domain	varchar	Group domain.
timezone	varchar	Time zone where the schedule was created or last modified.
hour	integer	Hour.
minutes	integer	Minutes.

v_ev_catalog

The v_ev_catalog view contains a record for each event code in the events catalog.

The following table shows the information available from the v_ev_catalog view.

Table 47 MCS database v_ev_catalog view

Column	Type	Description
category	varchar	Event category.
code	int4	Event code.
name	varchar	Event name.
object	varchar	Values include: • ACTIVITY • AGENT • BACKUP • CLIENT • CP • CPV • CRG • CRON • DATASET • DOMAIN

Table 47 MCS database v_ev_catalog view (continued)

Column	Type	Description
		• EMT • EVENT • GC • GROUP • HFSCHECK • MCS • PLUGIN • PROFILE • REPL • REPORT • RETENTION • SCHEDULE • SNMP_SUB_AGENT • SNMPD • SYSLOGD • USER
operation	varchar	Values include: • ACK • ACTIVATE • ADD • AUTH • BACKUP • BROWSE • CANCEL • COPY • DELETE • DISABLE • EDIT • ENABLE • EXPORT • LOGON • RESTART • RESUME • RETIRE • RUN • START

Table 47 MCS database v_ev_catalog view (continued)

Column	Type	Description
		• STOP • SUSPEND • VALIDATE
severity	varchar	Event severity.
summary	varchar	Single-line event description.
swSource	varchar	Software modules generating the event.
type	varchar	Event type.

v_ev_cus_body

The v_ev_cus_body view contains a record listing the attachments for each custom events profile.

The following table shows the information available from the v_ev_cus_body view.

Table 48 MCS database v_ev_cus_body view

Column	Type	Description
attachments	varchar	String of attachment data.
epid	varchar	Unique ID for this events profile.

v_ev_cus_cc_list

The v_ev_cus_cc_list view contains a record listing the email cc recipients for each custom events profile.

The following table shows the information available from the v_ev_cus_cc_list view.

Table 49 MCS database v_ev_cus_cc_list view

Column	Type	Description
cc_list	varchar	List of email cc recipients.
epid	varchar	Unique ID for this events profile.

v_ev_cus_codes

The v_ev_cus_codes view contains a record for each event code that should be included in a custom events profile.

The following table shows the information available from the v_ev_cus_codes view.

Table 50 MCS database v_ev_cus_codes view

Column	Type	Description
code	int4	Event code to monitor.
cur_value	bool	True if the code triggers email and syslog notification.
default_value	bool	Original default setting for the email and syslog notification.
epid	varchar	Unique ID for this events profile.

v_ev_cus_prof

The v_ev_cus_prof view contains a record for each custom events profile.

The following table shows the information available from the v_ev_cus_prof view.

Table 51 MCS database v_ev_cus_prof view

Column	Type	Description
active	bool	True if the profile is enabled.
connectemc_channel	varchar	ConnectEMC configuration channel used for this profile.
connectemc_notify_enabled	bool	True if ConnectEMC Notification is enabled for this profile.
domain	varchar	Profile domain.
email_notify_enabled	bool	True if email notification should occur.
epid	varchar	Unique ID for this events profile.
include_logs	bool	True if logs are included in the email.
include_nodelist	bool	True if nodelist is included in the email.
inline_email_attachments	bool	True if email attachments are included in the body of the email.
log_dir	varchar	Directory location of log files.
name	varchar	Name of the custom profile.
read_only	bool	True if you cannot edit the profile.
sched_id	varchar	Email schedule.
snmp_notify_enabled	bool	True if snmp notification should be enabled.
subject	varchar	Email subject header string.
syslog_notify_enabled	bool	True if syslog notification should occur.
timestamp	numeric	Date and time of the last email check, expressed as elapsed time in seconds since the beginning of the UNIX epoch.

v_ev_cus_prof_params

The v_ev_cus_prof_params view contains event code-specific parameters for each custom events profile.

The following table shows the information available from the v_ev_cus_prof_params view.

Table 52 MCS database v_ev_cus_prof_params view

Column	Type	Description
ecode	int4	Event code.
epid	varchar	Profile ID.
param	varchar	Parameter.
value	varchar	Value.

v_ev_cus_rpt

The v_ev_cus_rpt view contains a record for each report emailed with an event profile.

The following table shows the information available from the v_ev_cus_rpt view.

Table 53 MCS database v_ev_cus_rpt view

Column	Type	Description
enabled	bool	True if the option to email the report was set.
epid	varchar	Profile ID.
output_csv	bool	True if the report was emailed in comma-separated values (`.cvs`) text file.
output_txt	bool	True if the report was emailed in plain text format.
output_xml	bool	True if the report was emailed in XML format.
rptid	varchar	Report ID.
since_count	int4	Number of days, weeks, or months since the last email was sent, or 0 if The value in the since_option column is last_notified.
since_option	varchar	Unit of measure for the since_count column, as one of the following values: • day • week • month • last_notified

v_ev_cus_snmp_contact

The v_ev_cus_snmp_contact view contains a record for the SNMP trap configuration for each profile.

The following table shows the information available from the v_ev_cus_snmp_contact view.

Table 54 MCS database v_ev_cus_snmp_contact view

Column	Type	Description
community	varchar	Name of the SNMP community that the SNMP trap listener is configured to use.
epid	varchar	Profile ID.
snmp_host	varchar	Host to which to send SNMP traps.
snmp_port	varchar	Data port to send SNMP traps to. The default is 162.

v_ev_cus_syslog_contact

The v_ev_cus_syslog_contact view contains a record for each custom event profile that uses syslog as the notification mechanism.

The following table shows the information available from the v_ev_cus_syslog_contact view.

Table 55 MCS database v_ev_cus_syslog_contact view

Column	Type	Description
epid	varchar	Unique ID for this events profile.
facility	int4	Syslog facility. Valid values are: • 1—user • 16—local0 • 17—local1 • 18—local2 • 19—local3 • 20—local4 • 21—local5 • 22—local6 • 23—local7
format	int4	Output format. Valid values are: • 1—XML • 2—Plain text
syslog_host	varchar	Default value is localhost.
syslog_port	int4	Default value is port 514.

v_ev_cus_to_list

The v_ev_cus_to_list view contains a record listing the email recipients for each custom events profile.

The following table shows the information available from the v_ev_cus_to_list view.

Table 56 MCS database v_ev_cus_to_list view

Column	Type	Description
epid	varchar	Unique ID for this events profile.
to_list	varchar	List of email recipients.

v_ev_unack

The v_ev_unack view contains a record for each unacknowledged event logged by the MCS.

The following table shows the information available from the v_ev_unack view.

Table 57 MCS database v_ev_unack view

Column	Type	Description
audience	varchar	Intended audience of the event.
category	varchar	Event category. Valid values are: • APPLICATION • SECURITY • SYSTEM • USER
code	int4	Event code.
data	varchar	Event data.
date	date	Date of the event.
description	varchar	Long event description.
domain	varchar	Domain associated with the event.
event_id	int4	Internally generated event ID.
notes	varchar	Event notes text.
remedy	varchar	Event remedy text.
severity	varchar	Event severity. Valid values are: • NODE • NODE_FATAL • OK • PROCESS • PROCESS_FATAL • SYSTEM_FATAL • USER • USER_FATAL
software_source	varchar	Software modules generating the event.
source	varchar	Host generating the event.
summary	varchar	Single-line event description.
time	time	Time of the event.
timestamp	numeric	Date and time of the event, expressed as the elapsed time in seconds since the beginning of the UNIX epoch.
type	varchar	Event type. Valid values are: • INTERNAL • ERROR • WARNING • INFORMATION

Table 57 MCS database v_ev_unack view (continued)

Column	Type	Description
		• DEBUG

v_events

The v_events view contains a record for each event logged by the MCS.

The following table shows the information available from the v_events view.

Table 58 MCS database v_events view

Column	Type	Description
audience	varchar	Intended audience of the event.
category	varchar	Event category. Valid values are: • APPLICATION • SECURITY • SYSTEM • USER
code	int4	Event code.
data	varchar	Event data.
date	date	Date of the event.
description	varchar	Long event description.
domain	varchar	Domain associated with the event.
event_id	int4	Internally generated event ID.
notes	varchar	Event notes text.
remedy	varchar	Event remedy text.
severity	varchar	Event severity. Valid values are: • NODE • NODE_FATAL • OK • PROCESS • PROCESS_FATAL • SYSTEM_FATAL • USER • USER_FATAL
software_source	varchar	Software modules generating the event.
source	varchar	Host generating the event.
summary	varchar	Single-line event description.

Table 58 MCS database v_events view (continued)

Column	Type	Description
time	time	Time of the event.
timestamp	numeric	Date and time of the event, expressed as the elapsed time in seconds since the beginning of the UNIX epoch.
type	varchar	Event type. Valid values are: • INTERNAL • ERROR • WARNING • INFORMATION • DEBUG

v_gcstatus

The v_gcstatus view contains a record for each garbage collection (GC) operation.

The following table shows the information available from the v_gcstatus view.

Table 59 MCS database v_gcstatus view

Column	Type	Description
bytes_recovered	int8	Number of bytes recovered in this garbage collection operation.
chunks_deleted	int4	Number of chunks deleted in this garbage collection operation.
elapsed_time	int8	Total elapsed time in seconds for this garbage collection operation.
end_time	timestamp	Date and time this garbage collection operation ended.
gcstatusid	int8	Unique ID for this garbage collection operation.
indexstripes_processed	int4	Number of index stripes involved in this garbage collection operation.
indexstripes_total	int4	Number of index stripes.
node_count	int4	Number of nodes involved in this garbage collection operation.
result	varchar	String result code.
start_time	timestamp	Date and time this garbage collection operation started.

v_group_members

The v_group_members view contains a record for each client organized by group assignment. A client can be a member of more than one group.

The following table shows the information available from the v_group_members view.

Table 60 MCS database v_group_members view

Column	Type	Description
cid	varchar	Client ID.
client_name	varchar	Client name.
dataset_name	varchar	Dataset name.
enabled	bool	True if the client is enabled in the group.
full_client_name	varchar	Client domain and hostname.
group_name	varchar	Group name.
restore_only	bool	True if the client has been deleted and is available only for restore.
retention_name	varchar	Retention policy name.
use_client_ds	bool	True if the client dataset should be used.
use_client_retry	bool	True if the client retry should be used.
use_client_rp	bool	True if the client retention policy should be used.
use_client_timeout	bool	True if the client timeout should be used.

v_groups

The v_groups view contains a record for each group known to the MCS.

The following table shows the information available from the v_groups view.

Table 61 MCS database v_groups view

Column	Type	Description
created	date	Creation date.
dataset_name	varchar	Dataset name.
dataset_domain	varchar	Dataset domain.
domain	varchar	Domain.
enabled	bool	True if the group is active and enabled.
failed_stop	bool	True if group backups should stop on a failed backup.
group_type	varchar	One of the following values: • REGULAR • VCENTER
modified	date	Last modified date.
name	varchar	Group name.
priority	int4	Group priority.
read_only	bool	True if the group cannot be modified.
retention_name	varchar	Retention policy name.

Table 61 MCS database v_groups view (continued)

Column	Type	Description
retention_domain	varchar	Retention policy domain.
retry_cnt	int4	Retry count.
run_once	bool	True if running only one backup.
schedule_name	varchar	Schedule name.
schedule_domain	varchar	Schedule domain.
skip_next	bool	True if skipping the next scheduled backup.
target_dpn	varchar	Avamar server to be used for this group.
timeout_min	int4	Timeout in minutes.

v_node_space

The v_node_space view contains a record of disk capacity data retrieved or calculated per disk and per node.

The following table shows the information available from the v_node_space view.

Table 62 MCS database v_node_space view

Column	Type	Description
capacity_mb	float8	Disk size.
date	date	Date.
date_time	timestamp	Date and time.
disk	int2	Disk number.
diskreadonly	int2	Value applied to normalize percent full.
node	varchar	Node number.
stripes_reserved_mb	float8	Bytes reserved for stripe usage.
stripes_used_mb	float8	Amount of reserved stripe bytes used.
time	time	Time.
used_mb	float8	Disk capacity used.
utilization	numeric	Percentage of storage space used.

v_node_util

The v_node_util view contains a record of node statistics retrieved or calculated per node at a particular date and time.

The following table shows the information available from the v_node_util view.

Table 63 MCS database v_node_util view

Column	Type	Description
cpu_sys_percentage	numeric	Percentage of node utilization by operating system.
cpu_user_percentage	numeric	Percentage of node utilization by user.
date	date	Date.
date_time	timestamp	Date and time.
disk_reads_per_sec	int4	Disk reads per second.
disk_writes_per_sec	int4	Disk writes per second.
diskreadonly	int4	Value applied to normalize percent full.
load_avg	numeric	Load average.
net_in_kbytes_per_sec	int4	Network received in KB/s.
net_out_kbytes_per_sec	int4	Network transmitted in KB/s.
net_ping	numeric	Node ping time.
node	varchar	Node ID.
state	varchar	Node state.
time	time	Time.
utilization	numeric	Percentage of storage space used.

v_plugin_can_restore

The v_plugin_can_restore view contains a record of allowable plug-in substitutions for restores. Each record is a one-to-one allowable substitution in which the original backup plug-in (build, version) is matched with an allowable substitute plug-in ID (can_restore_pid).

The following table shows the information available from the v_plugin_can_restore view.

Table 64 MCS database v_plugin_can_restore view

Column	Type	Description
build	varchar	An exception to the plug-in version value if not ALL.
can_restore_pid	int4	PID of the plug-in that the plug-in can use to perform restores.
pid_number	int4	Numeric plug-in ID.
version	varchar	Plug-in version.

v_plugin_catalog

The v_plugin_catalog view contains a record for each known plug-in.

The following table shows the information available from the v_plugin_catalog view.

Table 65 MCS database v_plugin_catalog view

Column	Type	Description
content	varchar	Content description of the plug-in.
description	varchar	Descriptive name of the plug-in.
encryption_mode	varchar	Encryption method used. Valid values are: • proprietary • ssl
explicit_target_supported	bool	True if targets for the plug-in can be entered when creating or editing a dataset for the plug-in.
implicit_target_supported	bool	True if the concept of all systems for the plug-in is supported when creating or editing a dataset.
include_implicit_as_default	bool	True if the implicit target is included by default when creating or editing a dataset.
multiple_restore_targets_supported	bool	True if multiple restore targets can be entered when restoring a backup.
multiple_targets_supported	bool	True if multiple targets can be entered when creating or editing a dataset for the plug-in.
pid	varchar	Name of the plug-in.
pid_number	int4	Unique plug-in identification.
version	varchar	Plug-in version.

v_plugin_depends_upon

The v_plugin_depends_upon view contains a record for each known plug-in dependency. Each record is a one-to-one match of a plug-in ID (build, version) and the plug-in ID on which it is dependent (dependence_on_pid).

The following table shows the information available from the v_plugin_depends_upon view.

Table 66 MCS database v_plugin_depends_upon view

Column	Type	Description
build	varchar	An exception to the plug-in version value if not ALL.
dependence_on_pid	int4	PID of the plug-in that this plug-in depends upon.
pid_number	int4	Numeric plug-in ID.
version	varchar	Plug-in version.

v_plugin_flag_groups

The v_plugin_flag_groups view contains a record for each grouping of plug-in options.

The following table shows the information available from the v_plugin_flag_groups view.

Table 67 MCS database v_plugin_flag_groups view

Column	Type	Description
cgid	varchar	Control group ID.
description	varchar	Description.
group_order	int4	Order of group.
tooltip	varchar	Text shown when the cursor hovers over the plug-in.
type	varchar	One of the following: • logical • radio

v_plugin_flag_pulldown

The v_plugin_flag_pulldown view contains a record for each entry in a plug-in option list.

The following table shows the information available from the v_plugin_flag_pulldown view.

Table 68 MCS database v_plugin_flag_pulldown view

Column	Type	Description
build	varchar	An exception to the plug-in version value if not ALL.
command	varchar	One of the following values: • browse • restore • snapup • validate
description	varchar	Displayable value of the entry.
entry	varchar	Entry in the pulldown menu.
fid	varchar	Flag ID.
flag_order	int4	Order of the flag in the pulldown.
plugin_number	int4	Numeric plug-in ID.
version	varchar	Plug-in version.

v_plugin_flags

The v_plugin_flags view contains a record for each plug-in option available for backups and restores.

The following table shows the information available from the v_plugin_flags view.

Table 69 MCS database v_plugin_flags view

Column	Type	Description
build	varchar	An exception to the plug-in version value if not ALL.
cgid	varchar	Control grouping.
command	varchar	One of the following values: • restore • backup
description	varchar	Plug-in option label.
fid	varchar	Flag ID.
flag_order	int4	Order of group.
max	int4	Maximum value of the flag, if applicable.
min	int4	Minimum value of the flag, if applicable.
name	varchar	Plug-in option name.
plugin_number	int4	Numeric plug-in ID.
pidnum	int4	Plug-in number that this flag should be directed to.
tooltip	varchar	Text shown when the cursor hovers over the plug-in option.
type	varchar	One of the following values: • boolean (checkbox) • integer (field) • string (field)
value	varchar	Default value of the flag.
version	varchar	Plug-in version.

v_plugin_options

The v_plugin_options view contains a record for each available plug-in option.

The following table shows the information available from the v_plugin_options view.

Table 70 MCS database v_plugin_options view

Column	Type	Description
build	varchar	An exception to the version if not ALL.
can_modify	bool	For disable options only. True if the option value is preserved on upgrades.
option_name	varchar	Valid values are: • browse_supported • disable_browse • disable_mc_adhoc_snapups

Table 70 MCS database v_plugin_options view (continued)

Column	Type	Description
		• disable_restore • disable_validate • disable_scc_adhoc_snapups • disable_scheduled_snapups • restore_supported • snapup_supported • snapup_supports_cl_options • snapup_supports_exclusion • snapup_supports_inclusion • validate_supports
option_value	bool	True or false.
pid_number	int4	Numeric plug-in ID.
version	varchar	Plug-in version.

v_plugin_state

The v_plugin_state view contains a record that stores the state of each plug-in.

The following table shows the information available from the v_plugin_state view.

Table 71 MCS database v_plugin_state view

Column	Type	Description
build	varchar	An exception to the plug-in version values if not ALL.
obsolete	bool	True if the plug-in is obsolete.
obsolete_comment	varchar	Comment as to why the plug-in became obsolete.
pid_number	int4	Numeric plug-in ID.
user_added	bool	True if the user added the build.
version	varchar	Plug-in version.

v_plugins

The v_plugins view contains a record for each plug-in installed on any client known to the MCS.

The following table shows the information available from the v_plugins view.

Table 72 MCS database v_plugins view

Column	Type	Description
backed_up_ts	timestamp	Date of the last backup that used this plug-in.
build	varchar	Plug-in build.
cid	varchar	Client ID.
client_name	varchar	Name of the client.
full_client_name	varchar	Client domain and hostname.
installed_ts	timestamp	Date this plug-in type was first registered with the MCS.
lastupdate_ts	timestamp	Date this current plug-in version was first registered with the MCS.
name	varchar	Description of the plug-in.
pid_number	int4	Plug-in number.
plugin_name	varchar	Name of the plug-in.
version	varchar	Plug-in version.

v_repl_activities

The v_repl_activities view contains a record for each replication activity.

The following table shows the information available from the v_repl_activities view.

Table 73 MCS database v_repl_activities view

Column	Type	Description
bytes_excluded	float8	Number of bytes intentionally excluded.
bytes_modified_sent	float8	Number of bytes modified and sent.
bytes_modified_not_sent	float8	Number of bytes modified but not sent.
bytes_new	float8	Number of bytes processed after data deduplication.
bytes_overhead	float8	Number of bytes of overhead.
bytes_reduced_compr	float8	Number of bytes reduced by compression.
bytes_scanned	float8	Number of bytes processed.
bytes_skipped	float8	Number of bytes unintentionally skipped (errors and so forth).
cid	varchar	Client ID.
client_name	varchar	Client name.
client_os	varchar	Client operating system.
client_ver	varchar	Avamar client software version.
completed_ts	timestamp	Date and time this replication operation ended.
ddr_hostname	varchar	If the value in the server column is DD, then this column contains the Data Domain system name.

Table 73 MCS database v_repl_activities view (continued)

Column	Type	Description
dpn_domain	varchar	Client domain.
encryp_method	text	Encryption method used for client/server data transfer. Choices are: • proprietary • ssl **Note** This column is deprecated and exists for historical purposes only. Use encryp_method2 instead.
encryp_method2	varchar	Encryption method used for client/server data transfer. Choices are: • High—Strongest available encryption setting for that specific client platform. • Medium—Medium strength encryption. • None—No encryption. The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform and Avamar server version. The *EMC Avamar Product Security Guide* provides information.
encrypt_method2_sa	bool	True if server authentication was enforced at the time of the backup. (The `encrypt_server_authenticate` preference in `mcserver.xml` is set to true).
error_code	int4	Numeric activity status completion code.
error_code_summary	varchar	Last known error code summary.
gid	varchar	Group ID.
group	varchar	Group that initiated the replication activity. One of the following values: • If the activity was a scheduled replication, this column contains the replication group. • If the activity was an on-demand replication activity, this column contains Admin On-Demand Group.
hostname	varchar	Destination server hostname.
initiated_by	varchar	Activity initiated by this user or the MCS.
num_files_skipped	float8	Number of files unintentionally skipped (errors and so forth).
num_mod_files	float8	Number of files modified.
num_of_files	float8	Number of files processed. Can be zero for replication activities.
plugin_name	varchar	Plug-in name.

Table 73 MCS database v_repl_activities view (continued)

Column	Type	Description
plugin_number	int4	Plug-in number.
recorded_date	date	Date when the replication occurred.
retention_type	varchar	The replication activity included one or more of the following retention types: • D—Daily backups • W—Weekly backups • M—Monthly backups • Y—Yearly backups • N—No retention type
server	varchar	Specifies the destination system for backups, or source system for restores. Valid values are: • Avamar—Avamar server • DD—Data Domain system
scheduled_end_ts	timestamp	Date and time the replication operation was scheduled to end.
scheduled_start_ts	timestamp	Date and time the replication operation was scheduled to occur.
session_id	varchar	Unique identifier for the activity.
started_ts	timestamp	Date and time the replication operation started.
status_code	int4	Numeric status code.
status_code_summary	varchar	Status code summary.
systemid	varchar	Avamar system ID.
type	varchar	Type of activity. Valid values are: • Replication Destination • Replication Source
wid	varchar	Unique workorder identifier for the activity.

v_repl_backups

The v_repl_backups view contains a record for each replicated backup.

The following table shows the information available from the v_repl_backups view.

Table 74 MCS database v_repl_backups view

Column	Type	Description
bytes_excluded	float8	Number of bytes intentionally excluded from the original backup.

Table 74 MCS database v_repl_backups view (continued)

Column	Type	Description
bytes_modified_not_sent	float8	Number of bytes in the original backup modified but not sent.
bytes_modified_sent	float8	Number of bytes in the original backup modified and sent.
bytes_new	float8	Number of bytes processed after data deduplication.
bytes_overhead	float8	Number of bytes of overhead in the original backup.
bytes_reduced_compr	float8	Number of bytes in the original backup reduced by compression.
bytes_scanned	float8	Number of bytes processed for the backup.
bytes_skipped	float8	Number of bytes unintentionally skipped for the backup.
cid	varchar	Client ID.
current_expiration	varchar	Current expiration date of the backup.
current_retention	varchar	Current backup retention type. One of the following values: • D—Daily backup • W—Weekly backup • M—Monthly backup • Y—Yearly backup • N—No retention type
date_time	timestamp	Date and time of the original backup.
dst_label_num	varchar	Numeric backup label on destination system.
files_skipped	varchar	Number of file unintentionally skipped for the backup.
label	varchar	Backup label.
mod_files	float8	Number of files modified when the backup was taken.
num_of_files	float8	Number of files in the backup.
original_expiration	varchar	Expiration date of the backup as calculated at the time of the backup.
original_retention	varchar	Original backup retention type. One of the following values: • D—Daily backup • W—Weekly backup • M—Monthly backup • Y—Yearly backup • N—No retention type
pid	int4	Numeric plug-in ID.
repl_end_ts	timestamp	Replication end date and time.

Table 74 MCS database v_repl_backups view (continued)

Column	Type	Description
repl_start_ts	timestamp	Replication start date and time.
size	float8	Backup size in bytes.
src_label_num	varchar	Numeric backup identifier (label) on source system.
systemid	varchar	Avamar source system ID.
wid	varchar	Unique workorder identifier for the backup.

v_report_filter

The v_report_filter view contains a record for each report identifying its filter options.

The following table shows the information available from the v_report_filter view.

Table 75 MCS database v_report_filter view

Column	Type	Description
filter_name	varchar	Filter name.
filter_value	varchar	Filter value.
rptid	varchar	Report ID.

v_reports

The v_reports view contains a record for each report.

The following table shows the information available from the v_reports view.

Table 76 MCS database v_reports view

Column	Type	Description
adhoc_query	bool	True if a query statement is being used instead of filtering options.
domain	varchar	Report domain.
graphs_allowed	varchar	Not currently supported.
name	varchar	Report name.
readonly	bool	True if the report cannot be edited or deleted. Used for reports that are provided with the product.
rptid	varchar	Report ID.
sql	varchar	The SQL statement is displayed if the value in the adhoc_query column is true.
view_name	varchar	Database view used by this report.

v_retention_policies

The v_retention_policies view contains a record for each retention policy known to the MCS.

The following table shows the information available from the v_retention_policies view.

Table 77 MCS database v_retention_policies view

Column	Column	Description
daily	int4	Advanced policy daily retention.
domain	varchar	Domain.
duration	numeric	Duration of retention.
enabled	bool	True if enabled.
expiration_date	numeric	Expiration date.
is_link	bool	True if this is a reference to another retention policy.
link_name	varchar	Name of the retention policy if the value in the is_link column is true.
monthly	int4	Advanced policy monthly retention.
name	varchar	Name of the retention policy.
override	bool	True if the advanced policy is used for scheduled backups.
policy_no	int4	Policy number. Valid policy numbers are: • 0—Undefined • 1—Compute expiration date • 2—Static expiration date • 3—No expiration date
read_only	bool	True if the retention policy cannot be modified.
unit	int4	Duration unit. Valid duration units are: • 0—No expiration • 1—Days • 2—Weeks • 3—Months • 4—Years
weekly	int4	Advanced policy weekly retention.
yearly	int4	Advanced policy yearly retention.

v_sch_recurrence

The v_sch_recurrence view contains a record for each recurring schedule known to the MCS.

The following table shows the information available from the v_sch_recurrence view.

Table 78 MCS database v_sch_recurrence view

Column	Type	Description
domain	varchar	Schedule domain.
modifier	text	Qualifies entries in the value column: • day—Indicates that this is a monthly schedule that runs on every numerical calendar day specified by the value column entry. • hour—Indicates that this is a daily schedule that runs on every hour of the day specified by the value column entry. • every—Indicates that this is a weekly schedule that runs on every day of the week specified by the value column entry. • first—Indicates that this is a monthly schedule that runs during the first week of the month on the day of the week specified by the value column entry. • second—Indicates that this is a monthly schedule that runs during the second week of the month on the day of the week specified by the value column entry. • third—Indicates that this is a monthly schedule that runs during the third week of the month on the day of the week specified by the value column entry. • fourth—Indicates that this is a monthly schedule that runs during the fourth week of the month on the day of the week specified by the value column entry. • last—Indicates that this is a monthly schedule that runs during the last week of the month on the day of the week specified by the value column entry.
name	varchar	Name of the schedule.
recur_interval	text	Recurrence interval. Valid recurrence intervals are: • DAILY • HOURLY • WEEKLY • MONTHLY • YEARLY
value	text	Recurrence value: • For DAILY schedules, this value is the hour of the day. • For WEEKLY schedules, this value is the day of week, such as Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, and Friday. • For MONTHLY schedules that repeat on a specific day of the month, this numerical value is the day of the month. • For MONTHLY schedules that repeat on a specific day of a specific week, this value is the day of week, such as Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, and Friday.

v_schedules

The v_schedules view contains a record for each schedule that is known to the MCS.

Note

Beginning with version 4.0, use of this database view is deprecated in favor of v_schedules_2 on page 128. Official support for this database view is likely to be discontinued in a future release.

The following table shows the information available from the v_schedules view.

Table 79 MCS database v_schedules view

Column	Type	Description
description	varchar	Schedule description.
domain	varchar	Domain.
enabled	bool	True if the schedule is enabled and active.
end_policy	int4	Type of schedule termination setting. Valid values are: • 2—Never end • 3—Run *n* number of times • 4—End on a specific date
end_recur	numeric	End recurrence. One of the following: • A specific date • Count of the number of times the schedule should run • 0 (for schedules that do not end) This value is related to the value in the end_policy column.
first_start	timestamp	First start.
is_link	bool	True when the record is a reference to another schedule.
last_check	timestamp	Last check.
last_start	timestamp	Last started.
link_name	varchar	Schedule name if the value in the is_link column is true.
min_interval	timestamp	Minimum interval.
name	varchar	Name of the schedule.
overtime	bool	True if the schedule end time can be overridden.
read_only	bool	True if the schedule cannot be modified.
recur_counter	numeric	Recurrence counter.
recur_interval	varchar	Recurrence interval. Valid recurrence intervals are: • DAILY • HOURLY • WEEKLY

Table 79 MCS database v_schedules view (continued)

Column	Type	Description
		• MONTHLY • YEARLY
start_duration	timestamp	Duration of the start scheduling window.
start_time	timestamp	Start time for the scheduling window.
time_zone_id	varchar	Time zone where the schedule was created or last modified.
total_duration	timestamp	Total duration of the scheduling window.
type_enum	varchar	Type of schedule. The only valid schedule type is CALENDAR.

v_schedules_2

The v_schedules_2 view contains a record for each schedule known to the MCS.

The following table shows the information available from the v_schedules_2 view.

Table 80 MCS database v_schedules_2 view

Column	Type	Description
description	varchar	Schedule description.
domain	varchar	Domain.
enabled	bool	True if the schedule is enabled and active.
end_policy	int4	Type of schedule termination setting. Valid values are: • 2—Never end • 3—Run *n* number of times • 4—End on a specific date
end_recur	numeric	End recurrence. This is a specific date or a count of the number of times the schedule should run or 0 if the schedule never ends. This value is related to the value in the end_policy column.
first_start	timestamp	First start.
is_link	bool	True if this is a reference to another schedule.
last_check	timestamp	Last check.
last_start	timestamp	Last started.
link_name	varchar	Schedule name if the value in the is_link column is true.
min_interval	timestamp	Minimum interval.
name	varchar	Name of the schedule.
overtime	bool	True if the schedule end time can be overridden.
read_only	bool	True if the schedule cannot be modified.
recur_counter	numeric	Recurrence counter.

Table 80 MCS database v_schedules_2 view (continued)

Column	Type	Description
recur_interval	varchar	Recurrence interval. Valid recurrence intervals are: • DAILY • WEEKLY • MONTHLY • ADHOC
start_duration	timestamp	Duration of the start scheduling window.
start_time	timestamp	Start time for the scheduling window.
time_zone_id	varchar	Time zone where the schedule was created or last modified.
total_duration	timestamp	Total duration of the scheduling window.
type_enum	varchar	Type of schedule. The only valid schedule type is CALENDAR.

v_server_info

The v_server_info view stores the fully qualified domain name (FQDN), the IP address, and the hardware ID for each Avamar system.

The following table shows the information available from the v_server_info view.

Table 81 MCS database v_server_info view

Column	Type	Description
lastupdate	timestamp	Last updated timestamp.
fqdn	varchar	Fully qualified domain name (FQDN) of the Avamar server.
ipaddress	varchar	IP address of the Avamar server.
hardwareid	varchar	Hardware serial number assigned to the Avamar server.

v_systems

The v_systems view contains a record for each Avamar system.

The following table shows the information available from the v_systems view.

Table 82 MCS database v_systems view

Column	Type	Description
gsansystemid	varchar	Avamar server ID.
gsansystemname	varchar	User-assigned name.
hfsaddr	varchar	IP address of the server.
hfsport	int4	Port address of the server.
lastupdate	timestamp	Last updated timestamp.

Table 82 MCS database v_systems view (continued)

Column	Type	Description
local_hfsaddr	varchar	Local IP address of the server.
mcsport	int4	Port address of the MCS for the server from axion_systems.
systemid	int8	Numeric system ID (automatically assigned by the MCS).

GLOSSARY

A

activation The process of passing the client ID (CID) back to the client, where it is stored in an encrypted file on the client file system.

See also client activation

administrator Person who normally installs, configures, and maintains software on network computers, and who adds users and defines user privileges.

avagent The name of the *client agent* process.

Avamar Administrator A graphical management console software application that is used to remotely administer an Avamar system from a supported Windows or Linux client computer.

Avamar client A computer or workstation that runs Avamar software and accesses the Avamar server over a network connection. Avamar client software comprises a *client agent* and one or more *plug-ins*.

Avamar server The server component of the Avamar client/server system. Avamar server is a fault-tolerant, high-availability system that efficiently stores the backups from all protected clients. It also provides essential processes and services required for data restores, client access, and remote system administration. Avamar server runs as a distributed application across multiple networked storage nodes.

avtar The Avamar process that performs backups and restores.

B

backup A point-in-time copy of client data that can be restored as individual files, selected data, or as an entire backup.

bare metal recovery (BMR) The process of restoring data from a backup to recover a computer system from "bare metal," or without previously installed software or operating system.

browse The process of viewing data that is available for backup on a client computer or restore from the Avamar server.

C

client activation The process of passing the client ID (CID) back to the client, where it is stored in an encrypted file on the client file system.

See also activation

client agent A platform-specific software process that runs on the client and communicates with the Management Console Server (MCS) and with any plug-ins installed on that client.

client registration The process of establishing an identity with the Avamar server. When Avamar recognizes the client, it assigns a unique client ID (CID), which it passes back to the client during *client activation*.

See also registration

cluster Two or more independent network servers, usually with exact copies of the same software and data, that operate and appear to clients as if they are a single unit. A cluster configuration enables work to be shifted from one server to another, providing high availability, which allows application services to continue despite most hardware or software failures.

Cluster Configuration Tool Avamar configuration wizard to configure the cluster client.

D

database A collection of data arranged for ease and speed of update, search, and retrieval by computer software.

Data Domain system Disk-based deduplication appliances and gateways that provide data protection and disaster recovery (DR) in the enterprise environment.

dataset A policy that defines a set of files, directories, and file systems for each supported platform that are included or excluded in backups across a group of clients. A dataset is a persistent and reusable Avamar policy that can be named and attached to multiple groups.

disaster recovery Recovery from any disruptive situation, such as hardware failure or software corruption, in which ordinary data recovery procedures are not sufficient to restore a system and its data to normal day-to-day operations. A disaster recovery can be a *bare metal recovery*.

DNS Domain Name Server. A dynamic and distributed directory service for assigning domain names to specific IP addresses.

domain A feature in Avamar Administrator that is used to organize large numbers of clients into named areas of control and management.

F

file system Software interface used to save, retrieve, and manage files on storage media by providing directory structures, data transfer methods, and file association.

G

group A level of organization in Avamar Administrator for one or more Avamar clients. All clients in an Avamar group use the same group policies, which include the *dataset*, *schedule*, and *retention policy*.

group policy The *dataset*, *schedule*, and *retention policy* for all clients in an Avamar group.

H

HFS Hash File System. The content addressed storage area inside the Avamar server used to store client backups.

HFS check An Avamar Hash File System check (HFS check) is an internal operation that validates the integrity of a specific checkpoint. Once a checkpoint has passed an HFS check, it can be considered reliable enough to be used for a server rollback.

J

JRE Java Runtime Environment.

L

LAN Local Area Network.

M

MAC address Media Access Control Address. A unique hardware address, typically embedded at the lowest level in a hardware assembly, that uniquely identifies each device on a network.

MCS Management console server. The server subsystem that provides centralized administration (scheduling, monitoring, and management) for the Avamar server. The MCS also runs the server-side processes used by *Avamar Administrator*.

metadata Data about the backup, including information about the original database files, the backup types, the date and time of the backup, and other information necessary for restore.

module Avamar 1.2.0 and earlier multi-node Avamar servers utilized a dual-module synchronous RAIN architecture in which nodes were equally distributed in two separate equipment cabinets on separate VLANs. The term “module” is a logical construct used to describe and support this architecture (older multi-node Avamar servers comprised a primary module and a secondary module). These legacy systems continue to be supported. However, newer multi-node Avamar servers use a single module architecture, and even though Avamar Administrator provides “module detail” information, a module is therefore logically equivalent to the entire server.

N

NAT Network Address Translation.

NFS Network File System.

NIS Network Information Service. An external authentication system that can be used to log in to an Avamar server.

node A networked storage subsystem with processing power and hard drive storage. A node runs Avamar software.

NTP Network Time Protocol. Controls the time synchronization of a client or server computer to another reference time source.

O

ODBC Open DataBase Connectivity. A standard database access method that makes it possible to access any data from any application, regardless of which database management system (DBMS) is handling the data.

P

plug-in Avamar client software that recognizes a particular kind of data resident on that client.

plug-in options Options that you specify during backup or restore to control backup or restore functionality.

policy A set of rules for client backups that can be named and applied to multiple groups. Groups have dataset, schedule, and retention policies.

R

redirected restore The process of restoring a backup to a different location than the original location where the backup occurred.

registration The process of establishing an identity with the Avamar server. When Avamar recognizes the client, it assigns a unique client ID (CID), which it passes back to the client during *client activation*.

See also client registration

replication An optional feature that enables one Avamar server to store a read-only copy of its data on another Avamar server to support future disaster recovery of that server.
Although Avamar software supports replication between servers that run different versions of Avamar server, for the best results, ensure that the target server is running the same or a later version of the Avamar software than the source Avamar server.

restore An operation that retrieves one or more file systems, directories, files, or data objects from a backup and writes the data to a designated location.

retention The time setting to automatically delete backups on an Avamar server. Retention can be set to permanent for backups that should not be deleted from an Avamar server. Retention is a persistent and reusable Avamar policy that can be named and attached to multiple groups.

S

schedule The ability to control the frequency and the start and end time each day for backups of clients in a group. A schedule is a persistent and reusable Avamar policy that can be named and attached to multiple groups.

single-node server A single-node Avamar servers combine all the features and functions of utility and storage nodes on a single node.

SSH Secure Shell. A remote login utility that authenticates by way of encrypted security keys instead of prompting for passwords. This prevents passwords from traveling across networks in an unprotected manner.

storage node A node in the Avamar server that provides storage of data.

U

utility node In scalable multi-node Avamar servers, a single utility node provides essential internal services for the server. These services include MCS, cronjob, Domain Name Server (DNS), External authentication, Network Time Protocol (NTP), and Web access. Because utility nodes are dedicated to running these essential services, they cannot be used to store backups.

V

virtual machine (VM) A computer that is a software implementation of a computer. Virtual machines are used to run different operating systems at the same time on one physical computer. Each operating system runs in its own isolated execution environment.