



EMC<sup>®</sup> Avamar<sup>®</sup>

Version 7.3

## Reports Guide

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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.

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## 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.

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## 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       | April, 2016 | GA release of Avamar 7.3 |

## 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 <b>More Options</b> .  | 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                     | <i>EMC Avamar Administration Guide</i>   | Use for full titles of publications referenced in text.   |
| Monospace font                      | Event Type =<br>INFORMATION<br>Event Severity = OK<br>Event Summary = New<br>group created                 | Use for: <ul style="list-style-type: none"> <li>• System code</li> <li>• System output, such as an error message or script</li> <li>• Pathnames, file names, prompts, and syntax</li> <li>• Commands and options</li> </ul> |
| Monospace font with italic typeface | Type <i>Avamar_server</i> , where <i>Avamar_server</i> is the DNS name or IP address of the Avamar server. | Use for variables.  |
| Monospace font with bold typeface   | Type <b>yes</b> .  | Use for user input.   |
| Square brackets                     | <code>[--domain=<i>String</i>()] --name=<i>String</i></code>   | Square brackets enclose optional values.  |
| Vertical bar                        | <code>[--domain=<i>String</i>()]   --name=<i>String</i></code>   | Vertical bar indicates alternate selections - the bar means “or”.   |
| Braces                              | <code>{[--domain=<i>String</i>()]   --name=<i>String</i>}</code>   | Braces enclose content that the user must specify.  |
| Ellipses                            | <code>valid hfs ...</code>   | 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**.

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### 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.

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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](mailto: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](#)..... 16
- [Avamar administration requirements](#)..... 17
- [Third-party reporting tools](#)..... 18

## 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.

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 upper right pane. Results from previous reports and the status of currently running reports are in the lower right pane.

You select a report and click **Run**. You can export most reports to an HTML file, except for the following reports:

- Capacity
- Misc - Stats 1
- Serviceability
- Site Inventory
- System - Configuration Audit
- System - GSAN Perf Stats

These reports are exported 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 1** Options for the Activities template

The screenshot shows the 'New Report' dialog box with the following settings:

- Name:** [Empty text box]
- Title:** [Empty text box]
- Description:** [Empty text box]
- Report View and Settings:** Activities (selected in dropdown)
- Filter Activities by:**
  - Status:** All Statuses
  - Type:** All Types
  - Group:** All Groups
  - Source:** All Sources
- Data Domain System:**
  - System [Empty text box]
  - All Systems
- Client:**
  - Client [Empty text box]
  - All Clients
- Client's Domain:**
  - Domain [Empty text box]
  - All Domains
- Date:** scheduled\_start\_ts

Buttons at the bottom: OK, Cancel, Reset Filter

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 79](#) 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 an 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](#) ..... 20
- [Capacity reports](#) ..... 37
- [Client reports](#) ..... 39
- [System reports](#) ..... 45

## 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: <ul style="list-style-type: none"> <li>• Total amount of primary data in GB protected by the system</li> <li>• Average percent of common data</li> <li>• Average amount of data in GB protected by the system</li> <li>• Average amount of new data in GB</li> </ul>   |
| Activities - Plugin Stats - 2           | Shows the following statistics for each plug-in for a specific time period: <ul style="list-style-type: none"> <li>• Total amount of primary data in GB protected by the system</li> <li>• Average percent of common data</li> <li>• Average amount of data in GB protected by the system</li> <li>• Average amount of new data in GB</li> </ul> <hr/> <p><b>Note</b></p> <p>This report is the same as the Activities - Plugin Stats report, except that you can specify a date range.</p> <hr/> |
| 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: <ul style="list-style-type: none"> <li>• Average percent of common data</li> <li>• Amount of primary data in GB protected by the system</li> <li>• Amount of new data in GB</li> </ul>  |
| Activities - Client Stats - 2           | Shows the following statistics for each client for a specific time period:  |

**Table 4** Activity reports (continued)

| Report                                       | Description   |
|--|---|
|  | <ul style="list-style-type: none"> <li>Total amount of data in GB protected by the system</li> <li>Average percent of common data</li> <li>Average amount of data in GB protected by the system</li> <li>Average amount new data in GB</li> </ul>   |
| 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 <code>rptActException.sql</code> script.  |
| Activities - Exceptions (extended)           | Shows all activities within a specific time period that completed with exceptions. This report runs the <code>ActExceptionExt.pl</code> script.   |
| Activities - Failed                          | Shows all activities within a specific time period that failed due to errors.   |
| Activities - Licensed Bytes Protected Client | <p>Shows the total amount of primary data in GB protected by the system for each client within the license period.</p> <hr/> <p><b>Note</b></p> <p>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.</p> <hr/>   |
| Activities - Licensed Plugin Stats           | <p>Shows the following statistics for each plug-in client:</p> <ul style="list-style-type: none"> <li>Number of backups</li> <li>Average percent of common data</li> <li>Total amount of data in GB protected by each data source plug-in</li> <li>Amount of new data</li> </ul> <hr/> <p><b>Note</b></p> <p>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.</p> <hr/> |
| Activities - Licensed Bytes Protected Total  | <p>Shows the total amount of primary data in GB protected by the system within the license period.</p> <hr/> <p><b>Note</b></p> <p>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.</p> <hr/>   |
| 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  |
|----------------------|--|
|                      | <p><b>Note</b></p> <p>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.</p> |
| 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: <ul style="list-style-type: none"> <li>• true for a client platform</li> </ul> |

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

| Column | Description   |
|--------|---|
|        | <ul style="list-style-type: none"> <li>false for a server platform</li> </ul> |

- To save the report to an HTML 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

- Select **Tools > Manage Reports**.

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

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

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

- 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.  |

- To save the report to an HTML 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 an HTML 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: <ul style="list-style-type: none"> <li>• On-Demand Backup</li> <li>• Scheduled Backup</li> <li>• Restore</li> <li>• Validate</li> <li>• Replication source</li> </ul> |



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

| Column             | Description  |
|--------------------|--|
|                    | <ul style="list-style-type: none"> <li>Replication destination</li> </ul>  |
| 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        | <p>Unique identifier for the following activities:</p> <ul style="list-style-type: none"> <li>For scheduled backups, the format of a workorder ID is <i>schedule_name-group_name-time</i> where <i>schedule_name</i> is the name of the Avamar schedule, <i>group_name</i> is the name of the Avamar group, and <i>time</i> is the UNIX time in milliseconds.</li> <li>For on-demand backups that you start with the <b>Back Up Group Now</b> command from the <b>Policy</b> window, the format of the workorder ID is <i>group_name-time</i> where <i>group_name</i> is the name of the Avamar group and <i>time</i> is the UNIX time in milliseconds.</li> <li>For on-demand backups or restores that you start from the <b>Backup, Restore and Manage</b> window, the format of the workorder ID is <i>MOD-time</i> where <i>time</i> is the UNIX time in milliseconds.</li> <li>For on-demand backups that you start from the system tray icon on a Windows client, the format of the workorder ID is <i>COD-time</i> where <i>time</i> is the UNIX time in milliseconds.</li> <li>For command line backups or restores, the format of the workorder ID is <i>NAH-time</i> where <i>time</i> is the UNIX time in milliseconds.</li> <li>For replication activities, the format of the workorder ID is <i>COD-NAH-time</i> where <i>time</i> is the UNIX time in milliseconds.</li> </ul> |
| 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             | <p>Status message for the activity:</p> <ul style="list-style-type: none"> <li>Activity completed successfully.</li> <li>Activity completed with exceptions.</li> </ul>  |

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

| Column            | Description  |
|-------------------|--|
|                   | <ul style="list-style-type: none"> <li>• Activity cancelled.</li> <li>• Activity failed - timed out before starting.</li> <li>• Activity failed - timed out before completion.</li> <li>• Activity failed - client was given a workorder, but did not acknowledge its receipt.</li> <li>• Activity failed - client error(s).</li> <li>• Activity failed - timed out before completion.</li> <li>• Activity failed - client has no data specified by dataset.</li> <li>• Dropped Session - No progress reported.</li> </ul> |
| 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 an HTML 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 an HTML 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    | <p>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:</p> <ul style="list-style-type: none"> <li>• Indexing information</li> <li>• Requests from the client to the server for the presence of specific data chunks</li> <li>• ACLs</li> <li>• Directory information</li> <li>• Message headers</li> </ul> <p>On any active file system, overhead is usually a small percentage of the file data that is sent to the Avamar server.</p>  |
| WorkOrderID | <p>Unique identifier for the following activities:</p> <ul style="list-style-type: none"> <li>• For scheduled backups, the format of a workorder ID is <i>schedule_name-group_name-time</i>, where <i>schedule_name</i> is the name of the Avamar schedule, <i>group_name</i> is the name of the Avamar group, and <i>time</i> is the UNIX time in milliseconds.</li> <li>• For on-demand backups initiated from the <b>Policy</b> window <b>Back Up Group Now</b> command, the format of the workorder ID is <i>group_name-time</i> where <i>group_name</i> is the name of the Avamar group and <i>time</i> is the UNIX time in milliseconds.</li> <li>• For on-demand backups or restores that you start from the <b>Backup, Restore and Manage</b> window, the format of the</li> </ul> |

**Table 9** Activities - DPN Summary column descriptions (continued)

| Column    | Description  |
|-----------|--|
|           | <p>workorder ID is MOD-<i>time</i> where <i>time</i> is the UNIX time in milliseconds.</p> <ul style="list-style-type: none"> <li>For on-demand backups that you start from the system tray icon on a Windows client, the format of the workorder ID: COD-<i>time</i> where <i>time</i> is the UNIX time in milliseconds.</li> <li>For command line backups or restores, the format of the workorder ID is NAH-<i>time</i> where <i>time</i> is the UNIX time in milliseconds.</li> <li>For replication activities, the format of the workorder ID: COD-NAH-<i>time</i> where <i>time</i> is the UNIX time in milliseconds.</li> </ul> |
| ClientVer | Avamar client software version.  |
| Operation | <p>Type of activity:</p> <ul style="list-style-type: none"> <li>On-Demand Backup</li> <li>Scheduled Backup</li> <li>Restore</li> <li>Validate</li> <li>Replication source</li> <li>Replication destination</li> </ul>  |
| Status    | <p>Status message for the activity:</p> <ul style="list-style-type: none"> <li>Activity completed successfully.</li> <li>Activity completed with exceptions</li> <li>Activity cancelled</li> <li>Activity failed - timed out before starting</li> <li>Activity failed - timed out before completion</li> <li>Activity failed - client was given a workorder, but did not acknowledge its receipt</li> <li>Activity failed - client error(s)</li> <li>Activity failed - timed out before completion</li> <li>Activity failed - client has no data specified by dataset</li> <li>Dropped Session - No progress reported</li> </ul>       |
| SessionID | Unique identifier for the client to storage subsystem session for this activity.   |

4. To save the report to an HTML 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: <ul style="list-style-type: none"> <li>• Activity completed successfully</li> <li>• Activity completed with exceptions</li> <li>• Activity cancelled</li> <li>• Activity failed - timed out before starting</li> <li>• Activity failed - timed out before completion</li> <li>• Activity failed - client was given a workorder, but did not acknowledge its receipt</li> <li>• Activity failed - client error(s)</li> <li>• Activity failed - timed out before completion</li> <li>• Activity failed - client has no data specified by dataset</li> <li>• Dropped Session - No progress reported</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• On-Demand Backup</li> <li>• Scheduled Backup</li> <li>• Restore</li> <li>• Validate</li> <li>• Replication source</li> <li>• Replication destination</li> </ul>   |

**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 an HTML 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: <ul style="list-style-type: none"> <li>• Activity completed successfully.</li> <li>• Activity completed with exceptions</li> </ul> |

**Table 11** Activities - Failed report column descriptions (continued)

| Column          | Description  |
|-----------------|--|
|                 | <ul style="list-style-type: none"> <li>• Activity cancelled</li> <li>• Activity failed - timed out before starting</li> <li>• Activity failed - timed out before completion</li> <li>• Activity failed - client was given a workorder, but did not acknowledge its receipt</li> <li>• Activity failed - client error(s)</li> <li>• Activity failed - timed out before completion</li> <li>• Activity failed - client has no data specified by dataset</li> <li>• Dropped Session - No progress reported</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• On-Demand Backup</li> <li>• Scheduled Backup</li> <li>• Restore</li> <li>• Validate</li> <li>• Replication source</li> <li>• Replication destination</li> </ul>   |
| 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 an HTML 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 an HTML 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 an HTML 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 an HTML 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 an HTML 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: <ul style="list-style-type: none"> <li>• On-Demand Backup</li> <li>• Scheduled Backup</li> <li>• Restore</li> <li>• Validate</li> <li>• Replication source</li> <li>• Replication destination</li> </ul>  |
| 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: <ul style="list-style-type: none"> <li>• Activity completed successfully.</li> <li>• Activity completed with exceptions.</li> <li>• Activity cancelled.</li> <li>• Activity failed - timed out before starting.</li> <li>• Activity failed - timed out before completion.</li> </ul> |

**Table 15** Activity - Success report column descriptions (continued)

| Column | Description   |
|--------|---|
|        | <ul style="list-style-type: none"> <li>• Activity failed - client was given a workorder, but did not acknowledge its receipt.</li> <li>• Activity failed - client was given a workorder, but did not acknowledge its receipt.</li> <li>• Activity failed - timed out before completion.</li> <li>• Activity failed - timed out before completion.</li> <li>• Dropped Session - No progress reported.</li> </ul> |

4. To save the report to an HTML 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 2 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: <ul style="list-style-type: none"> <li>• Number of registered Avamar clients</li> <li>• Plug-ins installed on Avamar clients</li> <li>• Total bytes backed up</li> <li>• Client operating systems backed up</li> <li>• Maximum bytes backed up for each Avamar client</li> </ul> |

### 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. |

- To save the report to an HTML 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

- Select **Tools > Manage Reports**.

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

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

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

- 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: <ul style="list-style-type: none"> <li>t for true</li> <li>f for false</li> </ul>                |
| RegisteredDate    | The date when the client was registered.   |
| Activated         | Determines whether the client is activated: <ul style="list-style-type: none"> <li>t for activated</li> <li>f for not activated</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul> |
| PageAddr        | IP address or hostname used to contact the client.  |
| PagePort        | Data port used to contact the client.   |

- To save the report to an HTML 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

- Select **Tools > Manage Reports**.  
The **Manage All Reports** dialog box appears.
- Select **Clients - No Check Ins** in the list of predefined reports and click **Run**.  
The **Run Report - Clients - No Check Ins** dialog box appears.
- 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: <ul style="list-style-type: none"> <li>t for true</li> <li>f for false</li> </ul>                                       |
| RegisteredDate    | The date when the client was registered.  |
| Activated         | Determines whether the client is activated: <ul style="list-style-type: none"> <li>t for activated</li> <li>f for not activated</li> </ul>                        |
| 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: <ul style="list-style-type: none"> <li>t for true</li> <li>f for false</li> </ul> |
| PageAddr          | IP address or hostname used to contact the client.  |
| PagePort          | Data port used to contact the client.   |

- To save the report to an HTML 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

- Select **Tools > Manage Reports**.  
The **Manage All Reports** dialog box appears.
- 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: <ul style="list-style-type: none"> <li>t for activated</li> <li>f for not activated</li> </ul> |
| 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 an HTML 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: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>                                       |
| RegisteredDate    | The date when the client was registered.  |
| Activated         | Determines whether the client is activated: <ul style="list-style-type: none"> <li>• t for activated</li> <li>• f for not activated</li> </ul>                        |
| 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: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul> |
| PageAddr          | IP address or hostname used to contact the client.  |
| PagePort          | Data port used to contact the client.   |

4. To save the report to an HTML 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
-----+-----+-----+-----
bu-winddance    | Windows DB2 | /Client On-Demand| 0.0000
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: <ul style="list-style-type: none"> <li>• Operating system version</li> <li>• Hostname</li> <li>• System hardware type</li> <li>• Network</li> <li>• Avamar software version</li> <li>• Storage controller settings</li> <li>• Physical disk settings</li> <li>• Virtual disk settings</li> <li>• RPMs installed</li> </ul> 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 <i>EMC Avamar Administration Guide</i> 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"
```

- 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

- Select **Tools > Manage Reports**.

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

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

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

- 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
SuSEfirewall12-3.6_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 an HTML file, click **Export**.

# CHAPTER 3

## Custom Reports

This chapter includes the following topics:

- [Choosing the correct domain level for a custom report](#)..... 54
- [Creating a report from the Activities template](#)..... 54
- [Creating a report from the Backend Capacity template](#).....55
- [Creating a report with the backendreport command](#)..... 56
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## 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 upper right pane contains the settings that you specified for the report, the lower right pane contains the results from previous reports and the status of currently running reports.

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 79](#) contains descriptions for all column headings for this table.

17. To save the report to an HTML file, click **Export**.

## 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 or Data Domain storage, for a specific domain, or for a specific client in a domain. Do not run a backend capacity report when backup or maintenance activities are in progress, or are scheduled to occur.

### 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. For the **Report Type**, select either: **Backend Capacity**.

- **Backend Capacity Report (Avamar Datastore)**  
Creates a backend capacity report for the Avamar Datastore (GSAN).
- **Backend Capacity Report (Data Domain)**  
Creates a backend capacity report for Data Domain based storage targets.

6. If **Backend Capacity Report (Avamar Datastore)** was selected in [5 on page 55](#), click **Edit**.

The **Edit Report** dialog box appears.

a. 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.

---

- b. Click **OK**.

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

7. If **Backend Capacity Report (Avamar Datastore)** was selected in [5 on page 55](#), 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 under **Choose Client(s)**.
- 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 new report appears in the right pane.

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

**Results**

The status of the report will be displayed in the Results pane on the lower right side of the **Manage All Reports** dialog box.

## Important features of the Data Domain backend capacity report

The following are important features provided with Data Domain backend capacity reports:

- Data Domain backend capacity reports can be cancelled while it is running by clicking **Cancel**.
- You can include the /REPLICATE domain in Data Domain backend capacity reports, which allows you to associate replicated data with the originating Tenant and associated Avamar source.
- Multiple Data Domain backend capacity reports can be run in parallel. By default, three reports can be run simultaneously; to modify this number, edit the `capacity_report_dd_max_simultaneous_jobs` option in the `mserver.xml` file.

## 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:

```
<backendreport 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.

- 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:

```
<backendreport 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.

- 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*.

- 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:

```
<backendreport 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 upper right pane contains the settings that you specified for the report, the lower right pane contains the results from previous reports and the status of currently running reports.

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 79](#) contains descriptions for all column headings for this table.

13. To save the report to an HTML 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 upper right pane contains the settings that you specified for the report, the lower right pane contains the results from previous reports and the status of currently running reports.

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 79](#) contains descriptions for all column headings for this table.

15. To save the report to an HTML 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.  |
| completed_ts       | Date and time that this activity ended, which is adjusted for the prevailing time zone. Shown in parentheses.  |
| type               | Type of activity: <ul style="list-style-type: none"> <li>• On-Demand Backup</li> <li>• Scheduled Backup</li> <li>• Restore</li> <li>• Validate</li> </ul>  |
| 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.  |

**Table 23** Activities Report column descriptions (continued)

| Column                    | Description   |
|---------------------------|---|
| 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: <ul style="list-style-type: none"> <li>• proprietary</li> <li>• ssl</li> </ul>  |
| 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.  |
| 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: <ul style="list-style-type: none"> <li>• D—Daily</li> <li>• W—Weekly</li> <li>• M—Monthly</li> <li>• Y—Yearly</li> <li>• N—No retention type</li> </ul> |
| original_retention        | Original retention types that were programmatically assigned to this backup when it occurred: <ul style="list-style-type: none"> <li>• D—Daily</li> <li>• W—Weekly</li> <li>• M—Monthly</li> </ul>                |

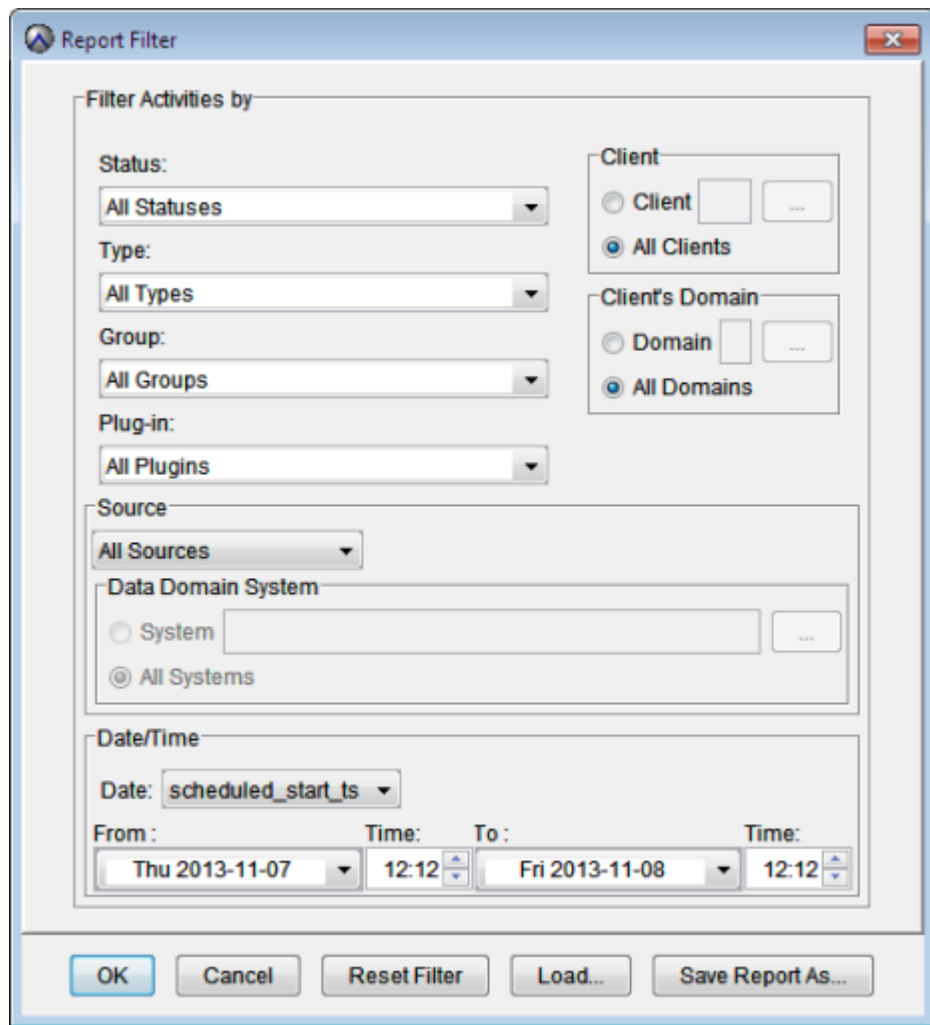
**Table 23** Activities Report column descriptions (continued)

| Column              | Description  |
|---------------------|--|
|                     | <ul style="list-style-type: none"> <li>• Y—Yearly</li> <li>• N—No retention type</li> </ul>  |
| encrypt_method2     | <p>Encryption method that is used for client/server data transfer:</p> <ul style="list-style-type: none"> <li>• High—Strongest available encryption setting for that specific client platform.</li> <li>• Medium—Medium strength encryption.</li> <li>• None—No encryption.</li> </ul> <p>The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform and Avamar server version. The <i>EMC Avamar Product Security Guide</i> provides details.</p> |
| encrypt_method2_sa  | Identifies whether server authentication was enforced at the time of the backup. Server authentication is enforced if the <code>encrypt_server_authenticate</code> preference in <code>mcserver.xml</code> 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 3** 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: <ul style="list-style-type: none"> <li>• Replication Destination</li> <li>• Replication Source</li> </ul>   |
| initiated_by        | Activity started by this user or the MCS.   |
| retention_type      | One or more of the following retention types: <ul style="list-style-type: none"> <li>• D—Daily backups</li> <li>• W—Weekly backups</li> <li>• M—Monthly backups</li> <li>• Y—Yearly backups</li> <li>• N—No retention type</li> </ul>   |
| 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.  |
| encrypt_method      | Encryption method that is used for client/server data transfer. Choices are: <ul style="list-style-type: none"> <li>• proprietary</li> <li>• ssl</li> </ul>   |
| encrypt_method2     | Encryption method that is used for client/server data transfer: <ul style="list-style-type: none"> <li>• High—Strongest available encryption setting for that specific client platform.</li> <li>• Medium—Medium strength encryption.</li> <li>• None—No encryption.</li> </ul> <p>The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform</p> |

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

| Column                  | Description   |
|-------------------------|---|
|                         | and Avamar server version. The <i>EMC Avamar Product Security Guide</i> provides information.   |
| encrypt_method2_sa      | True, if server authentication was enforced at the time of the backup, because the <code>encrypt_server_authenticate</code> preference in <code>mcserver.xml</code> 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 <code>type</code> column in the <code>v_activities_2</code> view. <a href="#">v_activities_2 on page 83</a> 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 4 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: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>                                |
| registered          | Determines whether the client has checked in to the MCS: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>                 |
| allow_overtime      | Determines whether the client can ignore the scheduling window end time: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul> |
| restore_only        | Determines whether the client can only do restores: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>                      |
| modified            | Date that the client information was last modified.  |
| ds_override         | Determines whether the client can override the group dataset: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>            |
| rp_override         | Determines whether the client can override the group retention policy: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>   |
| 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   |
|------------------------|---|
|                        | <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>   |
| rc_override            | Determines whether the client can override the group retry count setting: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul> |
| can_page               | Determines whether the MCS can contact the client: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>                        |
| 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: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>   |
| 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: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>                                |
| allow_userinit_backups | Determines whether the client allows user-initiated backups: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>              |

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

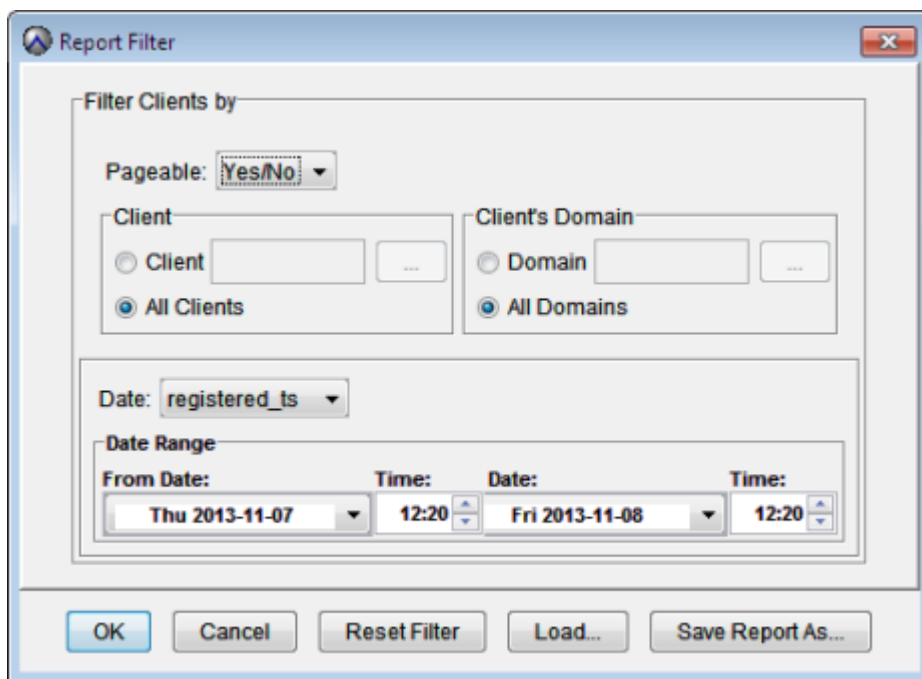
| Column                         | Description  |
|--------------------------------|--|
| allow_add_dttl_targets         | Determines whether Avamar Desktop/Laptop users can add targets to datasets: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>  |
| allow_userinit_backup_file_sel | Determines whether the client allows file selection on user-initiated backups: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>   |
| override_userinit_retpol       | Determines whether the backup overrides the standard retention policy on user-initiated backups: <ul style="list-style-type: none"> <li>• t for true</li> <li>• f for false</li> </ul>   |
| overtime_option                | One of the following: <ul style="list-style-type: none"> <li>• ALWAYS—Scheduled group backups are always allowed to run past the schedule duration setting.</li> <li>• NEXT—Only the next scheduled group backup is allowed to run past the schedule duration setting.</li> <li>• NEXT_SUCCESS—Scheduled group backups are allowed to run past the schedule duration setting until a successful backup is completed.</li> <li>• NEVER—Scheduled group backups are never allowed to run past the schedule duration setting.</li> </ul> This value is automatically set to NEXT_SUCCESS when the client initially registers, and is cleared after one backup successfully completes. |
| dttl_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: <ul style="list-style-type: none"> <li>• REGULAR—Default client type.</li> <li>• VCENTER—vCenter client.</li> <li>• VMACHINE—Virtual machine client.</li> <li>• VPROXY—Avamar proxy client.</li> <li>• VREGULAR—Virtual machine client that runs the Avamar client software.</li> </ul>  |
| 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. |

- (Optional) To modify the report's contents, select **Actions > Filter**.  
The **Report Filter** dialog box appears.

**Figure 5** Report Filter dialog box



- 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.
- 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](#).....74
- [Setting up the PostgreSQL ODBC driver](#)..... 74

## Crystal Reports templates

Avarar 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](http://www.postgresql.org) for more information.

- From the Windows **Start** menu, select **Control Panel** > **Administrative Tools**.

The **Administrative Tools** window appears.

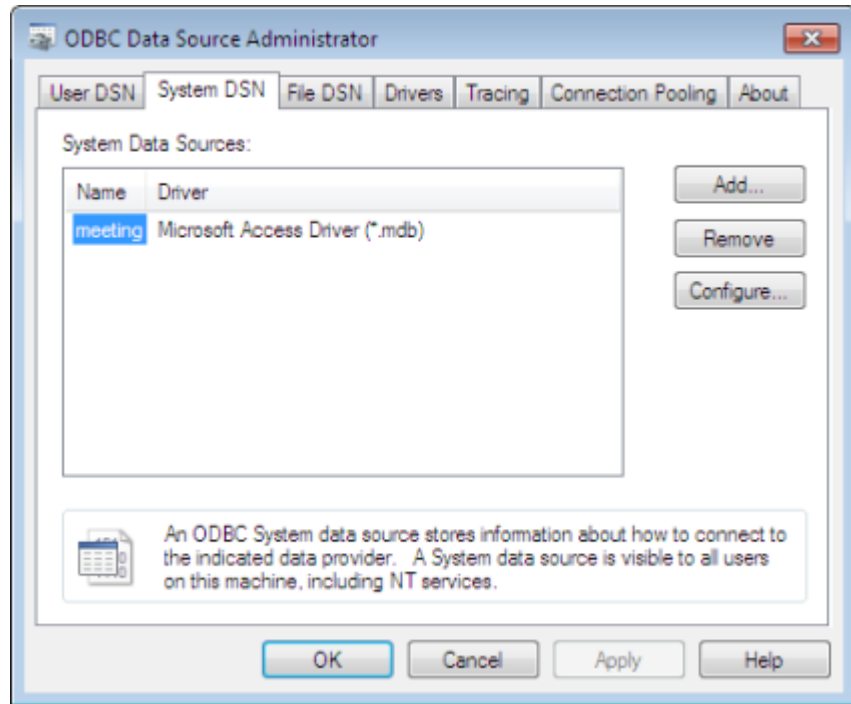
- Double-click **Data Sources (ODBC)**.

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

- Click the **System DSN** tab.

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

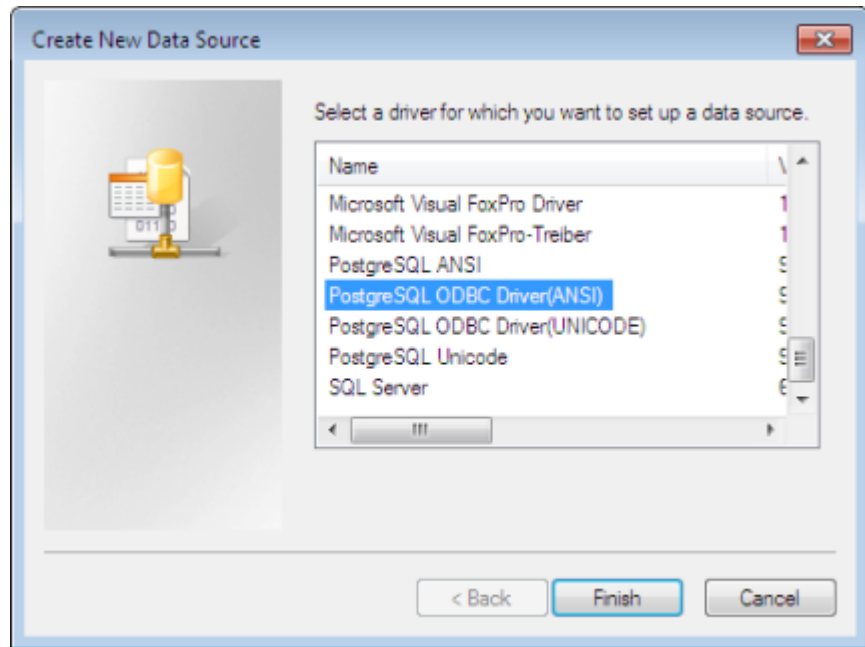
**Figure 6** System Data Sources table in the ODBC Data Source Administrator dialog box



- Click **Add**.

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

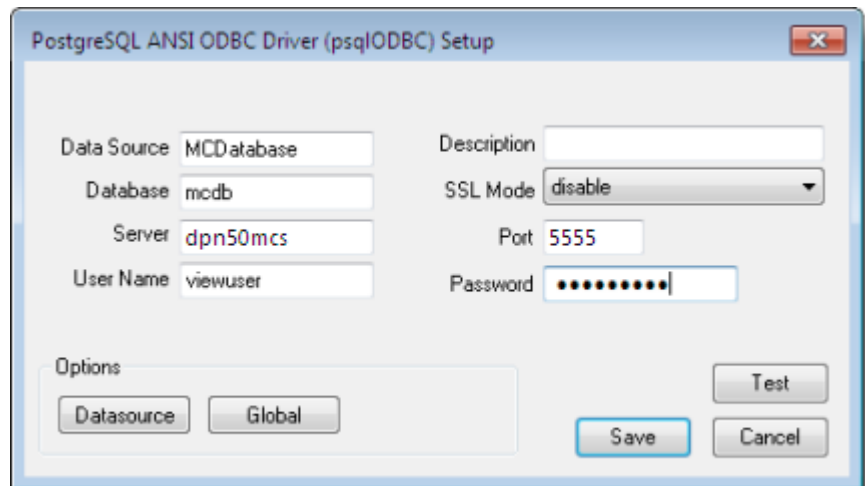
**Figure 7** Create New Data Source dialog box



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

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

**Figure 8** PostgreSQL ODBC Driver (psqlODBC) Setup dialog box



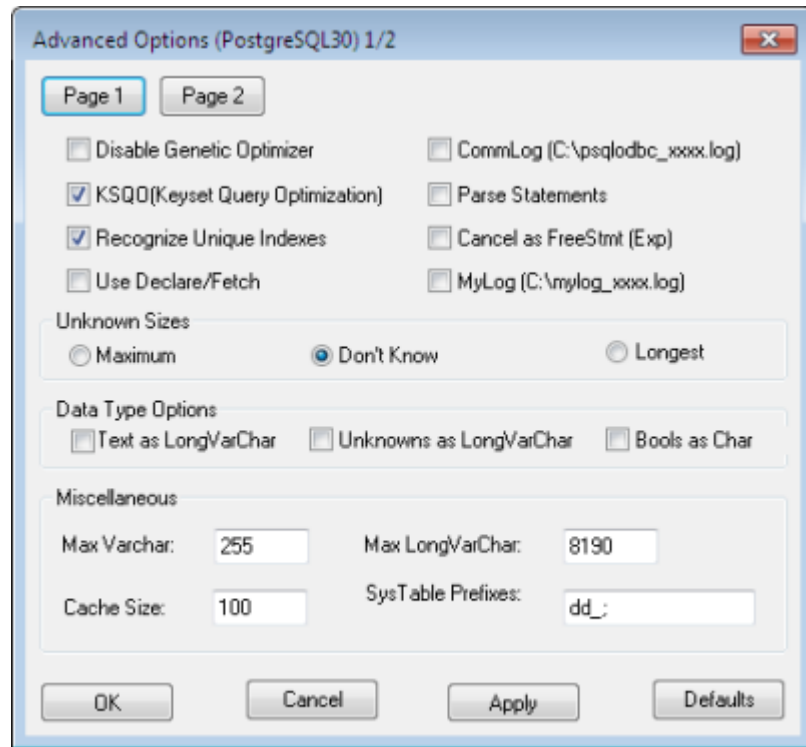
7. In the **PostgreSQL ODBC Driver (psqlODBC) Setup** dialog box, complete the following settings:

- 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 9** Advanced Options (PostgreSQL30 1 / 2) dialog box



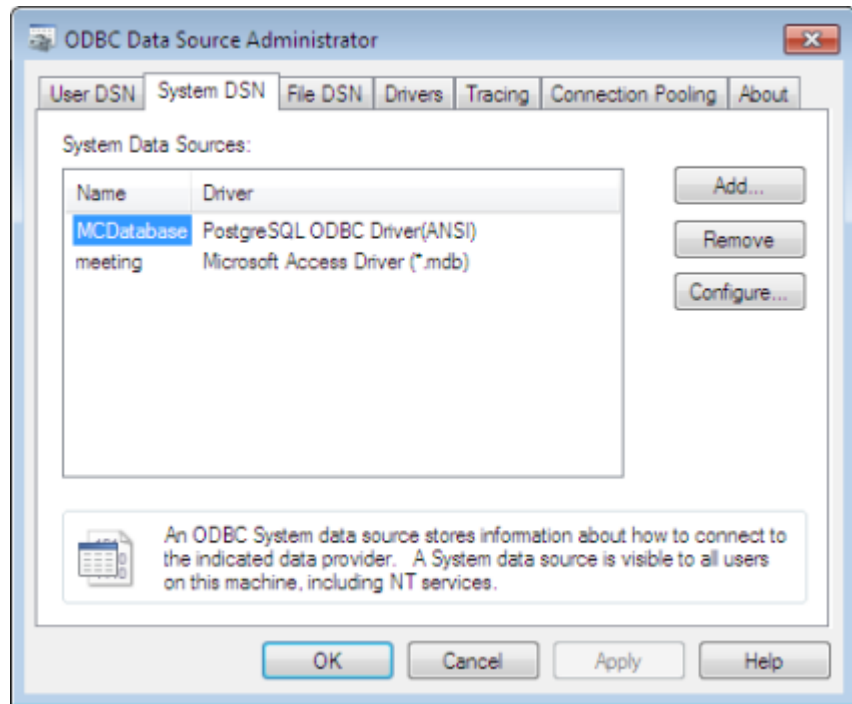
8. In the **Advanced Options (PostgreSQL30 1/2)** dialog box, complete the following settings:
  - a. In the **Unknown Sizes** group box, select **Don't Know**.
  - b. In the **Data Type Options** group box, clear **Text as LongVarChar** and **Bools as Char**.
  - c. Click **OK**.

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 10** 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](#).....80
- [MCS database views](#)..... 80

## 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 83](#). 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: <ul style="list-style-type: none"> <li>• proprietary</li> <li>• ssl</li> </ul> |
| 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   |
|--------|------|---|
|        |      | <ul style="list-style-type: none"> <li>• 0, UNDEFINED</li> <li>• 1, On-Demand Snapup</li> <li>• 2, Scheduled Snapup</li> <li>• 3, Restore</li> <li>• 4, Validate</li> </ul> |

## 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 116](#).

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: <ul style="list-style-type: none"> <li>proprietary</li> <li>ssl</li> </ul>   |
| encryption_method2      | varchar   | Encryption method that is used for client/server data transfer. Choices are: <ul style="list-style-type: none"> <li>High—Strongest available encryption setting for that specific client platform.</li> <li>Medium—Medium strength encryption.</li> <li>None—No encryption.</li> </ul> <p>The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform and Avamar server version. The <i>EMC Avamar Product Security Guide</i> provides information.</p> |
| encrypt_method2_sa      | bool      | True if the <code>encrypt_server_authenticate</code> preference in <code>mcserver.xml</code> 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: <ul style="list-style-type: none"> <li>• Avamar—Avamar server</li> <li>• DD—Data Domain system</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• 0, UNDEFINED</li> <li>• 1, On-Demand Backup</li> <li>• 2, Scheduled Backup</li> <li>• 3, Restore</li> <li>• 4, Validate</li> <li>• 12, Replication Destination</li> <li>• 13, Replication Source</li> <li>• 14, Search Result</li> <li>• 15, Replication Backup</li> <li>• 16, Export</li> <li>• 17, Upgrade</li> <li>• 18, Capacity Report</li> <li>• 19, Import</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• EM</li> <li>• EMT</li> <li>• END_USER</li> <li>• MCCLI</li> <li>• MCGUI</li> <li>• MCS</li> <li>• SNMP_SUB_AGENT</li> <li>• WEB_RESTORE</li> </ul>  |
| role      | varchar   | Values include: <ul style="list-style-type: none"> <li>• Administrator</li> <li>• Activity Operator</li> <li>• Restore Only Operator</li> </ul>  |
| object    | varchar   | Values include: <ul style="list-style-type: none"> <li>• ACTIVITY</li> <li>• AGENT</li> <li>• BACKUP</li> <li>• CLIENT</li> <li>• CP</li> <li>• CPV</li> <li>• CRG</li> <li>• CRON</li> <li>• DATASET</li> <li>• DOMAIN</li> <li>• EMT</li> <li>• EVENT</li> <li>• GC</li> <li>• GROUP</li> <li>• HFSCHECK</li> <li>• MCS</li> </ul> |

**Table 31** MCS database v\_audits view (continued)

| Column    | Type    | Description  |
|-----------|---------|--|
|           |         | <ul style="list-style-type: none"> <li>• PLUGIN</li> <li>• PROFILE</li> <li>• REPL</li> <li>• REPORT</li> <li>• RETENTION</li> <li>• SCHEDULE</li> <li>• SNMP_SUB_AGENT</li> <li>• SNMPD</li> <li>• SYSLOGD</li> <li>• USER</li> </ul>   |
| operation | varchar | Values include: <ul style="list-style-type: none"> <li>• ACK</li> <li>• ACTIVATE</li> <li>• ADD</li> <li>• AUTH</li> <li>• BACKUP</li> <li>• BROWSE</li> <li>• CANCEL</li> <li>• COPY</li> <li>• DELETE</li> <li>• DISABLE</li> <li>• EDIT</li> <li>• ENABLE</li> <li>• EXPORT</li> <li>• LOGON</li> <li>• RESTART</li> <li>• RESUME</li> <li>• RETIRE</li> <li>• RUN</li> <li>• START</li> <li>• STOP</li> <li>• SUSPEND</li> <li>• VALIDATE</li> </ul> |
| 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\_clientperfrack

The v\_clientperfrack 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\_clientperfrack view.

**Table 33** MCS database v\_clientperfrack 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\_clientpertrack 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: <ul style="list-style-type: none"> <li>Avamar—Avamar server</li> <li>DD—Data Domain system</li> </ul> |
| 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 92](#). 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 <i>overtime_option</i> 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: <ul style="list-style-type: none"> <li>REGULAR</li> <li>VCENTER</li> <li>VMACHINE</li> <li>VPROXY</li> <li>VREGULAR</li> </ul>   |
| 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: <ul style="list-style-type: none"> <li>ALWAYS—Scheduled group backups are always allowed to run past the schedule duration setting.</li> <li>NEXT—Only the next scheduled group backup is allowed to run past the schedule duration setting.</li> <li>NEXT_SUCCESS—Scheduled group backups are allowed to run past the schedule duration setting until a successful backup is completed.</li> </ul> |

**Table 34** MCS database v\_clients view (continued)

| Column                 | Type      | Description   |
|------------------------|-----------|---|
|                        |           | <ul style="list-style-type: none"> <li>NEVER—Scheduled group backups are never allowed to run past the schedule duration setting.</li> </ul> <p>The overtime_option value is automatically set to NEXT_SUCCESS when the client initially registers, and is cleared after one backup successfully completes.</p> |
| 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                      | vchar     | Client ID.   |
| client_addr              | vchar     | Client IP address.   |
| client_name              | vchar     | Client name.   |
| client_type              | vchar     | Client type. One of the following values: <ul style="list-style-type: none"> <li>REGULAR</li> <li>VCENTER</li> <li>VMACHINE</li> <li>VPROXY</li> <li>VREGULAR</li> </ul>   |
| contact_email            | vchar     | Contact email address.   |
| contact_location         | vchar     | Contact location.  |
| contact_name             | vchar     | Person to contact regarding issues with this client.   |
| contact_notes            | vchar     | Contact notes.   |
| contact_phone            | vchar     | Contact phone number.  |
| created                  | date      | Creation date.   |
| display_client_name      | vchar     | Virtual machine displayable node name.   |
| display_full_domain      | vchar     | 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         | vchar     | 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                  | vchar     | Client operating system.   |
| override_userinit_retpol | vchar     | Override standard retention policy on user initiated backups.  |
| overtime_option          | vchar     | One of the following values: <ul style="list-style-type: none"> <li>ALWAYS—Scheduled group backups are always allowed to run past the schedule duration setting.</li> <li>NEXT—Only the next scheduled group backup is allowed to run past the schedule duration setting.</li> </ul> |

**Table 35** MCS database v\_clients\_2 view (continued)

| Column                 | Type      | Description   |
|------------------------|-----------|---|
|                        |           | <ul style="list-style-type: none"> <li>• NEXT_SUCCESS—Scheduled group backups are allowed to run past the schedule duration setting until a successful backup is completed.</li> <li>• NEVER—Scheduled group backups are never allowed to run past the schedule duration setting.</li> </ul> <p>The overtime_option value is automatically set to NEXT_SUCCESS when the client initially registers, and is cleared after one backup successfully completes.</p> |
| 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 | <p>Subsystem component. One of the following values:</p> <ul style="list-style-type: none"> <li>• db_schema_version_init</li> <li>• db_schema_version</li> <li>• db_views_schema_version</li> </ul> |

**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\_dpnsuammary

The v\_dpnsuammary 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\_dpnsuammary view.

**Table 39** MCS database v\_dpnsuammary 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.<br><br><b>Note</b><br>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\_dtl\_dataset\_targets

The v\_dtl\_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\_dtl\_dataset\_targets view.

**Table 45** MCS database v\_dtl\_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\_dtltd\_sched\_override

The v\_dtltd\_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\_dtltd\_sched\_override view.

**Table 46** MCS database v\_dtltd\_sched\_override view

| Column           | Type     | Description  |
|------------------|----------|--|
| cid              | vvarchar | Client ID.   |
| client_name      | vvarchar | Client name.   |
| full_domain_name | vvarchar | Fully qualified client location.                           |
| gid              | vvarchar | Group ID.  |
| group_name       | vvarchar | Group name.  |
| group_domain     | vvarchar | Group domain.  |
| timezone         | vvarchar | 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 | vvarchar | Event category.  |
| code     | int4     | Event code.  |
| name     | vvarchar | Event name.  |
| object   | vvarchar | Values include: <ul style="list-style-type: none"> <li>• ACTIVITY</li> <li>• AGENT</li> <li>• BACKUP</li> <li>• CLIENT</li> <li>• CP</li> <li>• CPV</li> <li>• CRG</li> <li>• CRON</li> <li>• DATASET</li> <li>• DOMAIN</li> </ul> |

**Table 47** MCS database v\_ev\_catalog view (continued)

| Column    | Type    | Description   |
|-----------|---------|---|
|           |         | <ul style="list-style-type: none"> <li>• EMT</li> <li>• EVENT</li> <li>• GC</li> <li>• GROUP</li> <li>• HFSCHECK</li> <li>• MCS</li> <li>• PLUGIN</li> <li>• PROFILE</li> <li>• REPL</li> <li>• REPORT</li> <li>• RETENTION</li> <li>• SCHEDULE</li> <li>• SNMP_SUB_AGENT</li> <li>• SNMPD</li> <li>• SYSLOGD</li> <li>• USER</li> </ul>  |
| operation | varchar | Values include: <ul style="list-style-type: none"> <li>• ACK</li> <li>• ACTIVATE</li> <li>• ADD</li> <li>• AUTH</li> <li>• BACKUP</li> <li>• BROWSE</li> <li>• CANCEL</li> <li>• COPY</li> <li>• DELETE</li> <li>• DISABLE</li> <li>• EDIT</li> <li>• ENABLE</li> <li>• EXPORT</li> <li>• LOGON</li> <li>• RESTART</li> <li>• RESUME</li> <li>• RETIRE</li> <li>• RUN</li> <li>• START</li> </ul> |

**Table 47** MCS database v\_ev\_catalog view (continued)

| Column   | Type    | Description   |
|----------|---------|---|
|          |         | <ul style="list-style-type: none"> <li>• STOP</li> <li>• SUSPEND</li> <li>• VALIDATE</li> </ul> |
| 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 (.csv) 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: <ul style="list-style-type: none"> <li>• day</li> <li>• week</li> <li>• month</li> <li>• last_notified</li> </ul> |

## 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: <ul style="list-style-type: none"> <li>• 1—user</li> <li>• 16—local0</li> <li>• 17—local1</li> <li>• 18—local2</li> <li>• 19—local3</li> <li>• 20—local4</li> <li>• 21—local5</li> <li>• 22—local6</li> <li>• 23—local7</li> </ul> |
| format      | int4    | Output format. Valid values are: <ul style="list-style-type: none"> <li>• 1—XML</li> <li>• 2—Plain text</li> </ul>  |
| syslog_host | varchar | Default value is localhost.   |
| syslog_port | int4    | Default value is port 514.  |



**Table 55** MCS database v\_ev\_cus\_syslog\_contact view (continued)

## 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: <ul style="list-style-type: none"> <li>APPLICATION</li> <li>SECURITY</li> <li>SYSTEM</li> <li>USER</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>NODE</li> <li>NODE_FATAL</li> </ul>                                    |

**Table 57** MCS database v\_ev\_unack view (continued)

| Column          | Type    | Description  |
|-----------------|---------|--|
|                 |         | <ul style="list-style-type: none"> <li>• OK</li> <li>• PROCESS</li> <li>• PROCESS_FATAL</li> <li>• SYSTEM_FATAL</li> <li>• USER</li> <li>• USER_FATAL</li> </ul>       |
| 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: <ul style="list-style-type: none"> <li>• INTERNAL</li> <li>• ERROR</li> <li>• WARNING</li> <li>• INFORMATION</li> <li>• DEBUG</li> </ul> |

## 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: <ul style="list-style-type: none"> <li>• APPLICATION</li> <li>• SECURITY</li> <li>• SYSTEM</li> <li>• USER</li> </ul> |
| code     | int4    | Event code.   |
| data     | varchar | Event data.   |
| date     | date    | Date of the event.  |

**Table 58** MCS database v\_events view (continued)

| Column          | Type    | Description  |
|-----------------|---------|--|
| 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: <ul style="list-style-type: none"> <li>• NODE</li> <li>• NODE_FATAL</li> <li>• OK</li> <li>• PROCESS</li> <li>• PROCESS_FATAL</li> <li>• SYSTEM_FATAL</li> <li>• USER</li> <li>• USER_FATAL</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• INTERNAL</li> <li>• ERROR</li> <li>• WARNING</li> <li>• INFORMATION</li> <li>• DEBUG</li> </ul>   |

## 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. |

**Table 59** MCS database v\_gcstatus view (continued)

| Column                 | Type      | Description  |
|------------------------|-----------|--|
| 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: <ul style="list-style-type: none"> <li>REGULAR</li> <li>VCENTER</li> </ul> |
| 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.  |
| 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.   |

**Table 63** MCS database v\_node\_util view (continued)

| Column      | Type    | Description                       |
|-------------|---------|-----------------------------------|
| 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: <ul style="list-style-type: none"> <li>proprietary</li> <li>ssl</li> </ul> |
| 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.   |

**Table 65** MCS database v\_plugin\_catalog view (continued)

| Column                     | Type    | Description   |
|----------------------------|---------|---|
| 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: <ul style="list-style-type: none"> <li>• logical</li> <li>• radio</li> </ul> |



## 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: <ul style="list-style-type: none"> <li>• browse</li> <li>• restore</li> <li>• snapup</li> <li>• validate</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• restore</li> <li>• backup</li> </ul> |
| 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.  |

**Table 69** MCS database v\_plugin\_flags view (continued)

| Column        | Type    | Description  |
|---------------|---------|--|
| 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: <ul style="list-style-type: none"> <li>boolean (checkbox)</li> <li>integer (field)</li> <li>string (field)</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>browse_supported</li> <li>disable_browse</li> <li>disable_mc_adhoc_snapups</li> <li>disable_restore</li> <li>disable_validate</li> <li>disable_scc_adhoc_snapups</li> <li>disable_scheduled_snapups</li> <li>restore_supported</li> <li>snapup_supported</li> <li>snapup_supports_cl_options</li> <li>snapup_supports_exclusion</li> <li>snapup_supports_inclusion</li> <li>validate_supports</li> </ul> |

**Table 70** MCS database v\_plugin\_options view (continued)

| Column       | Type    | Description         |
|--------------|---------|---------------------|
| 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.  |

**Table 72** MCS database v\_plugins view (continued)

| Column      | Type    | Description          |
|-------------|---------|----------------------|
| 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.   |
| dpn_domain              | varchar   | Client domain.  |
| encrypt_method          | text      | Encryption method used for client/server data transfer. Choices are: <ul style="list-style-type: none"> <li>proprietary</li> <li>ssl</li> </ul> <hr/> <p><b>Note</b></p> <p>This column is deprecated and exists for historical purposes only. Use encrypt_method2 instead.</p> <hr/> |
| encrypt_method2         | varchar   | Encryption method used for client/server data transfer. Choices are:  |

**Table 73** MCS database v\_repl\_activities view (continued)

| Column             | Type    | Description   |
|--------------------|---------|---|
|                    |         | <ul style="list-style-type: none"> <li>• High—Strongest available encryption setting for that specific client platform.</li> <li>• Medium—Medium strength encryption.</li> <li>• None—No encryption.</li> </ul> <p>The encryption technology and bit strength for a client/server connection depend on several factors, including the client platform and Avamar server version. The <i>EMC Avamar Product Security Guide</i> provides information.</p> |
| encrypt_method2_sa | bool    | True if server authentication was enforced at the time of the backup. (The <code>encrypt_server_authenticate</code> preference in <code>mcs_server.xml</code> 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: <ul style="list-style-type: none"> <li>• If the activity was a scheduled replication, this column contains the replication group.</li> <li>• If the activity was an on-demand replication activity, this column contains Admin On-Demand Group.</li> </ul>  |
| 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.   |
| 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: <ul style="list-style-type: none"> <li>• D—Daily backups</li> <li>• W—Weekly backups</li> <li>• M—Monthly backups</li> <li>• Y—Yearly backups</li> <li>• N—No retention type</li> </ul>   |

**Table 73** MCS database v\_repl\_activities view (continued)

| Column              | Type      | Description  |
|---------------------|-----------|--|
| server              | varchar   | Specifies the destination system for backups, or source system for restores. Valid values are: <ul style="list-style-type: none"> <li>• Avamar—Avamar server</li> <li>• DD—Data Domain system</li> </ul> |
| 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: <ul style="list-style-type: none"> <li>• Replication Destination</li> <li>• Replication Source</li> </ul>  |
| 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. |
| 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.          |

**Table 74** MCS database v\_repl\_backups view (continued)

| Column              | Type      | Description  |
|---------------------|-----------|--|
| 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: <ul style="list-style-type: none"> <li>• D—Daily backup</li> <li>• W—Weekly backup</li> <li>• M—Monthly backup</li> <li>• Y—Yearly backup</li> <li>• N—No retention type</li> </ul>  |
| 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: <ul style="list-style-type: none"> <li>• D—Daily backup</li> <li>• W—Weekly backup</li> <li>• M—Monthly backup</li> <li>• Y—Yearly backup</li> <li>• N—No retention type</li> </ul> |
| pid                 | int4      | Numeric plug-in ID.  |
| repl_end_ts         | timestamp | Replication end date and time.   |
| 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. |



**Table 77** MCS database v\_retention\_policies view (continued)

| Column    | Column  | Description   |
|-----------|---------|---|
| 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: <ul style="list-style-type: none"> <li>• 0—Undefined</li> <li>• 1—Compute expiration date</li> <li>• 2—Static expiration date</li> <li>• 3—No expiration date</li> </ul> |
| read_only | bool    | True if the retention policy cannot be modified.  |
| unit      | int4    | Duration unit. Valid duration units are: <ul style="list-style-type: none"> <li>• 0—No expiration</li> <li>• 1—Days</li> <li>• 2—Weeks</li> <li>• 3—Months</li> <li>• 4—Years</li> </ul>                          |
| 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: <ul style="list-style-type: none"> <li>• day—Indicates that this is a monthly schedule that runs on every numerical calendar day specified by the value column entry.</li> <li>• hour—Indicates that this is a daily schedule that runs on every hour of the day specified by the value column entry.</li> <li>• every—Indicates that this is a weekly schedule that runs on every day of the week specified by the value column entry.</li> </ul> |

**Table 78** MCS database v\_sch\_recurrence view (continued)

| Column         | Type    | Description  |
|----------------|---------|--|
|                |         | <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul> |
| name           | varchar | Name of the schedule.  |
| recur_interval | text    | Recurrence interval. Valid recurrence intervals are: <ul style="list-style-type: none"> <li>• DAILY</li> <li>• HOURLY</li> <li>• WEEKLY</li> <li>• MONTHLY</li> <li>• YEARLY</li> </ul>  |
| value          | text    | Recurrence value: <ul style="list-style-type: none"> <li>• For DAILY schedules, this value is the hour of the day.</li> <li>• For WEEKLY schedules, this value is the day of week, such as Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, and Friday.</li> <li>• For MONTHLY schedules that repeat on a specific day of the month, this numerical value is the day of the month.</li> <li>• 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.</li> </ul>   |

## 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 124](#). 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: <ul style="list-style-type: none"> <li>• 2—Never end</li> <li>• 3—Run <i>n</i> number of times</li> <li>• 4—End on a specific date</li> </ul>   |
| end_recur      | numeric   | End recurrence. One of the following: <ul style="list-style-type: none"> <li>• A specific date</li> <li>• Count of the number of times the schedule should run</li> <li>• 0 (for schedules that do not end)</li> </ul> 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: <ul style="list-style-type: none"> <li>• DAILY</li> <li>• HOURLY</li> <li>• WEEKLY</li> <li>• MONTHLY</li> <li>• YEARLY</li> </ul>   |
| 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.   |

**Table 79** MCS database v\_schedules view (continued)

## 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: <ul style="list-style-type: none"> <li>• 2—Never end</li> <li>• 3—Run // number of times</li> <li>• 4—End on a specific date</li> </ul> |
| 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.   |
| recur_interval | varchar   | Recurrence interval. Valid recurrence intervals are: <ul style="list-style-type: none"> <li>• DAILY</li> <li>• WEEKLY</li> <li>• MONTHLY</li> <li>• ADHOC</li> </ul>                            |
| 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.  |

**Table 80** MCS database v\_schedules\_2 view (continued)

| Column         | Type      | Description   |
|----------------|-----------|---|
| 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.                                    |
| 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.

