Wavelink Avalanche Reporting Tool Reference Guide

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Chapter 1: Avalanche Reporting Tool

This document provides information about the Avalanche Reporting Tool. The Reporting Tool consists of a Web-based interface that provides important network inventory, health, and status information. You can schedule when to run reports, store reports for later viewing, and export reports in various formats.

This chapter provides the following information:

- Introduction
- Installation
- Avalanche Report Console

Introduction

This section provides information about document conventions and gives an overview of the Reporting Tool.

Document Conventions

This document uses the following typographical conventions:

Courier New

Any time you type specific information into a text box (such as a file name), that option appears in the Courier New text style. This text style is also used for any keyboard commands that you might need to press.

Examples:

Type Enter to continue.

Press CTRL+ALT+DELETE.

Bold Any time you interact with an option (such as a

button or descriptions of different options in a dialog box), that option appears in the **Bold** text style.

Examples:

Click **Open** from the **File** Menu.

Select the **Update** option.

Italics Any time this document refers to another section

within the document, that section appears in the *Italics* text style. This style is also used to refer to the

titles of dialog boxes.

Examples:

See *Viewing Reports* on page 45 for more information.

The Screen Reformatter dialog box appears.

About Avalanche Reporting Tool

The Avalanche Reporting Tool offers the following types of reports:

- Mobile Device Inventory
- Mobile Device Summary

- Mobile Device Property
- Infra Device Inventory
- Software Profile
- Software Profile Status
- Alert Summary
- Access Point Associations
- Mobile Device Roaming
- Battery Summary
- Mobile Device Statistics
- Customized Reports

For more information about each type of report, refer to *Chapter 2: Building Reports* on page 11 and *Chapter 3: Viewing and Exporting Reports* on page 45.

Terminology

For conciseness and clarity, the term *Avalanche Console* applies to both Avalanche MC and Avalanche SE. This document will reference Avalanche Console for both products. For more information about each product, refer to the specific user guide.

Installation

This section provides information about installing the Reporting Tool, including:

- Installation Requirements
- Installing Avalanche Reporting Tool

Installation Requirements

This section lists the hardware and software requirements that the Reporting Tool requires for best performance.

Hardware Requirements

The Reporting Tool requires the following hardware components to operate effectively:

- Intel Pentium 4 Processor at 2.8 GHz (or equivalent).
- 1.5 GB RAM
- 2 GHz and above
- 100 GB free disk space

NOTE You must be logged onto the computer on an account with Administrator privileges to run the installer.

Software Requirements

The Reporting Tool requires one of the following operating systems to run effectively:

- Windows 2000 Server (SP 4)
- Windows 2000 Professional (SP 4)
- Windows 2003 Server (SP 1)
- Windows XP (SP 2)

NOTE If you are installing the Reporting Tool on a 2000 Server or 2003 Server you will need to move a copy of the msvcr71.dll file to the \system32 folder. For 2000 Server, move a copy to the WINNT\system32 folder. For 2003 Server, move a copy to the Windows\system32 folder. If you do not move the file to the \system32 folder, the Reporting Tool will not work.

Installing Avalanche Reporting Tool

The Reporting Tool installation package also contains the components to run the Reporting Tool and Apache Tomcat installation. Apache Tomcat provides an environment for the Java code to run in cooperation with a Web server.

NOTE You must install the Reporting Tool on the same system where the Avalanche Enterprise Server resides.

To install the Reporting Tool:

- 1 Obtain the Avalanche Web Utilities installation package from Wavelink Customer Service or the Wavelink Web site.
- **2** Double-click the file to start the installation process.

The Avalanche Web Utilities InstallShield Wizard appears.

3 Click **Next** to continue the installation process.

The Avalanche Web Utilities Installation Options dialog box appears.

- 4 Chose the **Custom** installation option and click **Next**.
- **5** Enable the **Avalanche Reporting** option and click **Next**.

NOTE If desired, you can also enable the **Avalanche Web UI** option, which will install the Avalanche Web UI along with the Reporting Tool. For more information about the Avalanche Web UI, refer to the *Avalanche Web-Based Alerts Console* document, located on the Wavelink web site.

Apache Tomcat and Wavelink Avalanche Reporting Tool are installed on your system.

- **6** Click **Finish** to close the *Apache Tomcat Setup Wizard*.
- **7** Click **Finish** to close the *Avalanche Web Utilities InstallShield Wizard*.

Avalanche Report Console

This section provides information about using the Report Console, including:

- Accessing the Report Console
- Scheduled Reports
- Reports Now Available

• Report Preferences

Accessing the Report Console

You can access the Report Console through the Avalanche Console.

To access the Report Console:

- 1 Open the Avalanche Console.
- **2** Click the Reports icon

-Or-

Select **Tools** > **Reports**

The Report Console opens in a separate web browser window.



Figure 1-1. Avalanche Report Console

Scheduled Reports

The **Scheduled Reports** region of the Report Console lists all scheduled reports. These include reports that are scheduled to run at a future time or date, and recurring reports. The following information is provided:

Report Displays the type of report.

Type Indicates whether the report is based on location or

device group.

Start Indicates the time the report began processing.

End Indicates the time the report processing completed.

Frequency Displays how often the report is scheduled to run.

Details Provides a link to the summary page for the report.

Reports Now Available

As reports are completed, they are filed by category under the **Reports now available** region of the Report Console. Click any folder to view the available reports for that category. The following information is provided:

Name Displays the type of report.

Type Indicates whether the report is based on location or

device group.

Created Displays the date and time the report was created.

Scope Indicates the location or group the report was generated

from.

You can also use the icons to the right of the screen to **View** or **Delete** any report

Report Preferences

The Report Preferences option allows you to establish default report settings for the Report Console.

To change report preferences:

1 Select **Report Preferences**.

A new web browser page appears. The following options are available:

Purge Reports Enable this checkbox and enter a number in the **Purge**

Report older than (in days) text box to have the Report Console automatically delete reports after a given time

period.

Generate Enable this checkbox to generate three-dimensional

Charts in 3D report graphics.

2 Click **Apply** to save your changes.

Chapter 2: Building Reports

The Report Console allows you to build reports using criteria that you set. You can determine what type of report to create, the scope of the report, and when to run the report.

This chapter provides information about building the following:

- Mobile Device Inventory Report
- Mobile Device Summary Report
- Mobile Device Property Report
- Infra Device Inventory Report (Avalanche MC only)
- Software Profile Report
- Software Profile Status Report
- Alert Summary Report
- Access Point Associations Report (Avalanche MC only)
- Mobile Device Roaming Report
- Battery Summary Report
- Mobile Device Statistics Report
- Customized Reports

Mobile Device Inventory Report

Mobile Device Inventory Reports provide specific information about your mobile device inventory. For more information, see *Mobile Device Inventory Report* on page 46.

To build a Mobile Device Inventory Report:

- 1 Access the Report Console.
- 2 Click Create a Report....

The Select the Report Type page appears.



Figure 2-1. Selecting the Report Type

3 In the list of available reports, enable the **Mobile Device Inventory** option and click **Next**.

The *Define the Scope* page appears.

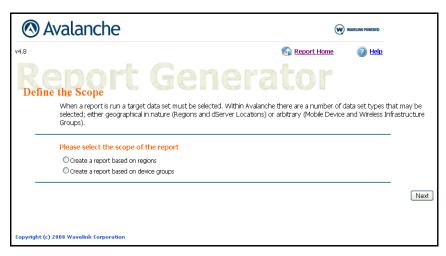


Figure 2-2. Defining the Scope

- 4 Select whether to Create a report based on regions or Create a report based on device groups and click Next.
- **5** If you selected **Create a report based on regions**, select the desired region(s) and dServer Location(s).

-Or-

If you selected **Create a report based on device groups**, select the desired group(s).

- 6 Click Next.
- 7 Select the desired output format and click **Next**.

The Define the Schedule page appears.

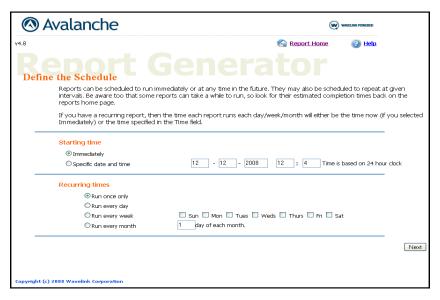


Figure 2-3. Define the Schedule

- 8 Determine when the event will occur and click Next.
 - If you want the event to occur immediately, enable the **Immediately** option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.



Figure 2-4. Summary

9 Click the link next to Report name to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Mobile Device Summary Report

Mobile Device Summary Reports provide general information about the mobile devices being managed by your system. For more information, see *Mobile Device Summary Report* on page 47.

To build a Mobile Device Summary Report:

- **1** Access the Report Console.
- **2** Click **Create a Report...**.

The Select the Report Type page appears.

3 In the list of available reports, enable the **Mobile Device Summary** option and click **Next**.

The *Defining the Scope* page appears.

- 4 Select Create a report based on regions or Create a report based on device groups and click Next.
- **5** If you selected **Create a report based on regions**, select the desired region(s) and dServer Location(s).

-Or-

If you selected **Create a report based on device groups**, select the desired group(s).

- 6 Click Next.
- **7** Select the desired output format and click **Next**.

The Define the Schedule page appears.

- 8 Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the **Immediately** option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

9 Click the link next to Report name to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Mobile Device Property Report

Mobile Device Property Reports provide information specific to your mobile device's properties. FOr more information, see *Mobile Device Property Report* on page 47.

To build a Mobile Device Property Report:

- **1** Access the Report Console.
- **2** Click **Create a Report...**.

The *Select the Report Type* page appears.

3 In the list of available reports, enable the Mobile Device Property option and click Next.

The *Defining the Scope* page appears.

- 4 Select Create a report based on regions or Create a report based on device groups and click Next.
- **5** If you selected **Create a report based on regions**, select the desired region(s) and dServer Location(s).

-Or-

If you selected **Create a report based on device groups**, select the desired group(s).

- 6 Click Next.
- **7** Select the desired output format and click **Next**.

The Define the Schedule page appears.

- 8 Determine when the event will occur and click Next.
 - If you want the event to occur immediately, enable the **Immediately** option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

9 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Infra Device Inventory Report (Avalanche MC only)

Infra Device Inventory Reports provide detailed information about your access points and switches. For more information, see *Infra Device Inventory Report* on page 47.

To build an Infra Device Inventory Report:

- **1** Access the Report Console.
- 2 Click Create a Report....

The Select the Report Type page appears.

3 In the list of available reports, enable the **Infra Device Inventory** option and click **Next**.

The Select Regions page appears.

- 4 Select the desired region by enabling the checkbox next to the region name and click **Next**.
- **5** Select the desired dServer Location(s) and click **Next**.
- 6 Select the desired output format and click Next.

The Define the Schedule page appears.

7 Determine when the event will occur and click **Next**.

- If you want the event to occur immediately, enable the **Immediately** option.
- If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

 If you want the event to occur continuously, select one of the available Recurring times options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

8 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Software Profile Report

Software Profile Reports display the status of your software profiles. For more information, see *Software Profile Report* on page 48.

To build a Software Profile Report:

- 1 Access the Report Console.
- 2 Click Create a Report....

The Select the Report Type page appears.

3 In the list of available reports, enable the Software Profile option and click Next.

The *Define the Scope* page appears.

- **4** Select the desired region by enabling the checkbox next to the region name and click **Next**.
- **5** Select the desired output format and click **Next**.

The Define the Schedule page appears.

- **6** Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the Immediately option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

7 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Software Profile Status Report

Software Profile Status Reports provide a summary of software installation, including which software packages failed, succeeded, and which packages are still pending. For more information, see *Software Profile Status Report* on page 48.

To build a Software Profile Status report:

- 1 Access the Report Console.
- 2 Click Create a Report....

The Select the Report Type page appears.

3 In the list of available reports, enable the **Software Profile Status** option and click **Next**.

The Select Regions page appears.

- **4** Select the desired region by enabling the checkbox next to the region name and click **Next**.
- **5** Select the desired output format and click **Next**.

The *Define the Schedule* page appears.

- **6** Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the Immediately option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

7 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Alert Summary Report

Alert Summary Reports provide a summary of Avalanche Console alerts that occurred over a given time period. You can view the severity of the alert and whether the alert was acknowledged and cleared. For more information, see *Alert Summary Report* on page 49.

To build an Alert Summary Report:

1 Access the Report Console.

2 Click Create a Report....

The Select the Report Type page appears.

- 3 In the list of available reports, enable the Alert Summary option and click Next.
- 4 Select the time period over which the report will be run and click **Next**.

The *Defining the Scope* page appears.

- 5 Select the desired region by enabling the checkbox next to the region name and click Next.
- **6** Select the desired dServer Location(s) and click **Next**.
- 7 Select the desired output format and click **Next**.

The *Define the Schedule* page appears.

- 8 Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the Immediately option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The Summary page appears, displaying the report name, format, scope, and report type.

9 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Access Point Associations Report (Avalanche MC only)

Access Point Associations Reports show all connections between mobile devices and access points. For more information, see *Access Point Associations Report* on page 49.

To build an Access Point Association Report:

- **1** Access the Report Console.
- **2** Click **Create a Report...**.

The Select the Report Type page appears.

3 In the list of available reports, enable the Access Point Associations option and click Next.

The Select the Time Period page appears.

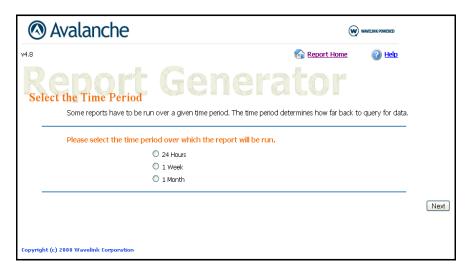


Figure 2-5. Select the Time Period

4 Select the time period over which the report will be run and click **Next**.

The Select Regions page appears.

5 Select the desired region by enabling the checkbox next to the region name and click Next.

- 6 Select the desired dServer Location(s) and click Next.
- **7** Select the desired output format and click **Next**.

The Define the Schedule page appears.

- 8 Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the Immediately option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The Summary page appears, displaying the report name, format, scope, and report type.

9 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Mobile Device Roaming Report

Mobile Device Roaming Reports show which mobile devices have roamed from one dServer to another. You can also view the number of times each device has roamed, along with the time and date of the last device roam. For more information, see *Mobile Device Roaming Report* on page 49.

To build a Mobile Device Roaming Report:

- **1** Access the Report Console.
- 2 Click Create a Report....

The Select the Report Type page appears.

- **3** In the list of available reports, enable the **Mobile Device Roaming** option and click **Next**.
- **4** Select the time period over which the report will be run and click **Next**.

The *Define the Scope* page appears.

- 5 Select Create a report based on regions or Create a report based on device groups and click Next.
- **6** If you selected **Create a report based on regions**, select the desired region(s) and dServer Location(s).

-Or-

If you selected **Create a report based on device groups**, select the desired group(s).

- 7 Click Next.
- **8** Select the desired output format and click **Next**.

The *Define the Schedule* page appears.

- **9** Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the **Immediately** option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

10 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Battery Summary Report

Battery Summary Reports display mobile device battery charge information. For more information, see *Battery Summary Report* on page 50.

To build a Battery Summary Report:

- **1** Access the Report Console.
- 2 Click Create a Report....

The *Select the Report Type* page appears.

- 3 In the list of available reports, enable the Battery Summary option and click Next.
- **4** Select the time period over which the report will be run and click **Next**.

The *Defining the Scope* page appears.

- 5 Select Create a report based on regions or Create a report based on device groups and click Next.
- **6** If you selected **Create a report based on regions**, select the desired region(s) and dServer Location(s).

-Or-

If you selected **Create a report based on device groups**, select the desired group(s).

- 7 Click Next.
- **8** Select the desired output format and click **Next**.

The *Define the Schedule* page appears.

- **9** Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the Immediately option.

 If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

 If you want the event to occur continuously, select one of the available Recurring times options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

10 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Mobile Device Statistics Report

Mobile Device Statistics Reports provide information about network radio performance. For more information, see *Mobile Device Statistics Report* on page 50.

To build a Mobile Device Statistics Report:

- **1** Access the Report Console.
- 2 Click Create a Report....

The Select the Report Type page appears.

- 3 In the list of available reports, enable the Mobile Device Statistics option and click Next.
- **4** Select the time period over which the report will be run and click **Next**.

The *Define the Scope* page appears.

5 Select Create a report based on regions or Create a report based on device groups and click Next.

6 If you selected **Create a report based on regions**, select the desired region(s) and dServer Location(s).

-Or-

If you selected **Create a report based on device groups**, select the desired group(s).

- 7 Click Next.
- **8** Select the desired output format and click **Next**.

The *Define the Schedule* page appears.

- **9** Determine when the event will occur and click **Next**.
 - If you want the event to occur immediately, enable the Immediately option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

10 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Customized Reports

The Report Console allows you to create customized reports using information from your PostgreSQL database. In order to utilize customized reports, you must be familiar with SQL query statements.

To build a customized report:

- **1** Access the Report Console.
- 2 Click Create a Report....

The *Select the Report Type* page appears.

3 Enable the **Custom** option and click **Next**.

The Select Table page appears.

4 Select the table on which you would like to report and click **Next**.

NOTE For more information on the available tables, refer to *Database Tables* on page 30.

The Select Table Columns page appears.

5 Select the table columns on which you would like to report and click Next.

NOTE For more information on the available columns, refer to *Database Tables* on page 30.

The Edit SQL Query page appears.

- 6 If desired, edit the SQL query statement using the available text boxes.
 - The Select text box indicates the table properties from which the report will be created.
 - The From text box indicates the table from which the report will be created.
 - The **Where** text box indicates how the report will be filtered.

NOTE For SQL query examples, refer to Sample Query Statements on page 42.

7 If you would like to add additional tables to the report, click the **Add Table** button and repeat the preceding steps.

- **8** If you would like to test your SQL query statement, click the **Test** button. The *SQL Query Test* page appears, displaying the results of your query.
- **9** Click **Back** to return to the *Edit SQL Query* page.
- **10** When you have finished customizing the report parameters, click **Next**.

The *Define the Scope* page appears.

11 Select the desired output format, enter a name in the **Report Name** text box, and click **Next**. You may wish to reference this name if you want to run the same custom report at a later time.

The *Define the Schedule* page appears.

- 12 Determine when the event will occur and click Next.
 - If you want the event to occur immediately, enable the **Immediately** option.
 - If you want the event to occur at some point in the future, enable the Specific date and time option and enter the start date and time in the available text boxes.

NOTE Time must be entered in 24-hour mode.

• If you want the event to occur continuously, select one of the available **Recurring times** options.

The *Summary* page appears, displaying the report name, format, scope, and report type.

13 Click the link next to **Report name** to access the report.

The report appears in the selected format. You can save the report or return to the Report Console home page.

Database Tables

Database information is stored in various related tables. These tables are linked through fields called foreign keys, which identify information in one

table that is related to information in other tables. The database tables also have primary keys, which uniquely identify each record in a table.

The foreign key is identified with the abbreviation FK in the Report Console, while the primary key is identified with the abbreviation PK.

NOTE You must be familiar with SQL query statements to create custom reports.

NOTE To obtain the desired information for your custom report, you may need to include multiple related tables in your SQL query statement.

This section provides information about the tables and columns that can be used to create custom reports, including the following:

- InfraDeviceStats Table
- Deployed AP Profile Table
- Event Data Table
- Site Table
- AP Profile Table
- MobileDeviceStats Table
- Event Table
- Mobile Device Table
- Software Profile Table
- Network Profile Table
- Deployed Software Profile Table
- Region Table
- Software Package Table

- Deployed Network Profile Table
- Infrastructure Device Table
- Device Property Table
- dServer Table

InfraDeviceStats Table

The InfraDeviceStats Table, which is only available in Avalanche MC, contains the following columns:

Field Name	Туре	Description	
Id	Integer	The ID of the statistic.	
SiteIdent	Integer	The ID of the device.	
MacAddress	String	The MAC address of the device.	
DeviceInterface	Integer	The interface on which the statistic was captured.	
TimeStamp	Timestamp	The time this statistic was generated.	
BytesSent	Integer	The number of bytes transmitted.	
BytesRcvd	Integer	The number of bytes received.	
PacketsSent	Integer	The number of packets transmitted.	
PacketsRcvd	Integer	The number of packets received.	
CrcErrors	Integer	The number of CRC errors.	
RetryCount	Integer	The number of retries.	
WepErrors	Integer	The number of WEP errors.	
MobileCount	Integer	The number of mobile devices seen during this capture.	
BitRate	Integer	The bit rate.	
RadioMode	Integer	The mode of the radio.	
InboundErrors	Integer	The number of inbound errors.	
OutboundErrors	Integer	The number of outbound errors.	

Deployed AP Profile Table

The Deployed AP Profile Table, which is only available in Avalanche MC, refers to deployed Infrastructure Profiles, and contains the following columns:

Field Name	Туре	Description	
ApProfileId	Integer	The unique identifier for the access point profile.	
Default	Bit	Indicates whether the profile is a default profile. The result may be true or false.	
Deployed	Bit	Indicates whether the profile is deployed. The result may be true or false.	
GroupId	Integer	Identifies where the profile is applied. The result may be a Region ID or a Site ID.	

Event Data Table

The Event Data Table contains the following columns:

Field Name	Туре	Description	
EventId	Integer	The unique identifier for the event.	
Name	String	The name of the event data.	
Value	String	The value of the event data.	

Site Table

The Site Table refers to dServer Locations, and contains the following columns:

Field Name	Туре	Description	
RegionId	Integer	The ID of the region to which this site is assigned.	
SiteId	Integer	The unique identifier for a site. Use the SiteId from other tables to obtain the site's name and region.	
SiteName	String	The name of the site.	

AP Profile Table

The AP Profile Table, which is only available in Avalanche MC, refers to Infrastructure Profiles, and contains the following columns:

Field Name	Туре	Description	
ApProfileId	Integer	The unique identifier for the access point profile.	
Enabled	Bit	Indicates whether the access point profile is enabled. The result may be true or false.	
LastUpdated	Timestamp	Indicates the date and time of the last change made to the profile.	
Name	String	The name of the profile.	

MobileDeviceStats Table

The MobileDeviceStats Table contains the following columns:

Field Name	Туре	Description
Id	Integer	The ID of the statistic.
DeviceId	Integer	The ID of the mobile device.
TimeStamp	Timestamp	Time of the reported statistic.
Mode	Integer	The mode of the device (adhoc or infrastructure).
XmtdFragmentCount	Integer	Transmitted fragment count.
MulticastXmtdFrameCount	Integer	Multicast transmitted frame count.
FailedCount	Integer	Failed frame count.
RetryCount	Integer	The number of retries.
MultipleRetryCount	Integer	The number of multiple retries.
AckFailureCount	Integer	The number of ACK failures.
FrameDuplicateCount	Integer	The number of duplicate frames.
RcvdFragmentCount	Integer	The received fragment count.
MulticastRcvdFrameCount	Integer	The multicast received fragment count.
FcsErrorCount	Integer	The FCS error count.
FramesXmtdOK	Integer	The number of frames transmitted.
FramesRcvdOK	Integer	The number of frames received.
TransmitErrors	Integer	The number of transmit errors.
RcvErrors	Integer	The number of receive errors.

Field Name	Туре	Description
FramesMissedNoBuffersAvaila ble	Integer	Frames dropped for no buffer available.
DirectedBytesXmtdOK	Integer	The number of directed bytes.
DirectedBytesRcvdOK	Integer	The number of received bytes.
DirectedFramesXmtdOK	Integer	The number of directed frames transmitted.
DirectedFramesRcvdOK	Integer	The number of frames received.
MulticastBytesXmtdOK	Integer	The number of multicast bytes transmitted.
MulticastBytesRcvdOK	Integer	The number of multicast bytes received.
MulticastFramesXmtdOK	Integer	The number of multicast frames transmitted.
MulticastFramesRcvdOK	Integer	The number of multicast frames received.
BroadcastBytesXmtdOK	Integer	The number of broadcast bytes transmitted.
BroadcastBytesRcvdOK	Integer	The number of broadcast bytes received.
BroadcastFramesXmtdOK	Integer	The number of broadcast frames transmitted.
BroadcastFramesRcvdOK	Integer	The number of broadcast frames received.
RcvCRCErrors	Integer	The number of CRC errors.
PowerSource	Integer	The power source
TotalMemory	Integer	Total available memory.
ProgramMemory	Integer	Total program memory.
ProgramFreeMemory	Integer	The amount of program memory free.
StoreMemory	Integer	The amount of storage memory.
StoreFreeMemory	Integer	The amount of storage memory free.
BatteryCharge	Integer	The battery charge level.
BatteryMask	Integer	The battery mask.
BackupBatteryMask	Integer	The backup battery mask.
BackupBatteryCharge	Integer	The backup battery charge level.
RootFileSystemSize	Integer	The root file system size.
RootFileSystemFree	Integer	The file system free.
MountedStorageFolderName	Integer	The first mounted storage folder name.

Field Name	Туре	Description
MountedStorage1Size	Integer	The first mounted storage size.
MountedStorage1Free	Integer	The first mounted storage free.
MountedStorage2FolderName	Integer	The second mounted storage folder name.
MountedStorage2Size	Integer	The second mounted storage size.
MountedStorage2Free	Integer	The second mounted storage free.
TotalVirtualMemory	Integer	Total virtual memory.
AvailVirtualMemory	Integer	Available virtual memory.
DataRate	Integer	The data rate.
SignalStrength	Integer	The signal strength.

Event Table

The Event Table contains the following columns:

Field Name	Туре	Description
Acknowledged	Bit	Indicates whether the event was acknowledged by an administrator on the Avalanche Console. The result may be true or false.
Cleared	Bit	Indicates whether the event is still active. The result may be true or false.
Created	Timestamp	Indicates the time when the event was reported to Avalanche.
Description	String	The description of the event.
ld	Integer	The unique identifier for the event.
Name	String	The name of the event.
Severity	Integer	Indicates the alert level of the event. The result may be: 1 (informational), 2 (warning), 3 (error), 4 (critical), 5 (fatal).

Mobile Device Table

The Mobile Device Table contains the following columns:

Field Name	Туре	Description
BatteryCharge	String	Displays the mobile device's remaining battery charge. The result may be: 1 (high), 2 (low), 4 (critical), 8 (charging), 128 (no battery), 255 (unknown).
BatteryLevel	String	The description of the battery level. The result may be good, poor, or charging.
BatteryLife	String	Indicates the mobile device's remaining battery life in hours and minutes. This property may not be supported on all mobile devices.
BatterySerialNo	String	The battery's serial number. This property may not be supported on all mobile devices.
DataRate	String	Displays the data rate reported by the 802.11 radio. The result will be expressed in Mbps.
DisplayColumns	String	Indicates the number of columns supported by the mobile device's display screen. The result will be expressed in characters.
DisplayRows	String	Indicates the number of rows supported by the mobile device's display screen. The result will be expressed in lines.
EnablerVersion	String	Displays the version of the Enabler installed on the mobile device.
GUID	String	Displays the mobile device's 64 bit GUID.
IPAddress	String	Indicates the IP address of the mobile device.
Id	Integer	The unique identifier for the mobile device.
KeyboardName	String	Indicates the name of the keyboard on the mobile device (when multiple keyboard options are available).
KeyboardType	String	Indicates the type of keyboard on the mobile device (when multiple keyboard options are available).
MacAddress	String	Displays the MAC address of the mobile device.
Manufacturer	String	Displays the name of the mobile device manufacturer.
Model	String	Displays the model name of the mobile device.
Name	String	Displays a string that includes the device type, MAC address, and unique identifiers.

Field Name	Туре	Description
OS	String	Indicates the type of operating system installed on the mobile device.
OSVersion	String	Indicates the version of the operating system installed on the mobile device.
Processor	String	Indicates the type of processor installed on the mobile device.
Radio	String	Indicates the type of radio installed on the mobile device.
SignalQuality	String	Indicates the quality of the signal reported by the mobile device's radio interface. The result may be good, marginal, poor, or very poor.
SignalStrength	String	Indicates the strength of the signal reported by the mobile device's 802.11 radio. The result will be expressed in dBm.
SiteId	Integer	Displays the site to which the mobile device is assigned. Use this property in other tables to obtain information such as the site's name and region.
TerminalId	String	Displays the Terminal ID assigned to the mobile device.

Software Profile Table

The Software Profile Table contains the following columns:

Field Name	Туре	Description
Enabled	Bit	Indicates whether the software profile is enabled. The result may be true or false.
LastUpdated	Timestamp	Indicates the date and time of the last change made to the profile.
Name	String	Displays the name of the software profile.
SoftwareProfileId	Integer	The unique identifier for the software profile.
Version	String	Indicates the version of the profile.

Network Profile Table

The Network Profile Table contains the following columns:

Field Name	Туре	Description
Enabled	Bit	Indicates whether the network profile is enabled. The result may be true or false.
LastUpdated	Timestamp	Indicates the date and time of the last change made to the profile.
Name	String	Displays the name of the network profile.
NetworkProfileId	Integer	The unique identifier for the network profile.

Deployed Software Profile Table

The Deployed Software Profile Table contains the following columns:

Field Name	Туре	Description
Criteria	String	Displays the selection criteria configured for the software profile.
Deployed	Bit	Indicates whether the software profile is active and deployed to mobile devices. The result may be true or false.
GroupId	Integer	Identifies where the profile is applied. The result may be a Region ID or a Site ID.
SoftwareProfileId	Integer	The ID of the software profile to which this deployment profile refers.

Region Table

The Region Table, which is only available in Avalanche MC, contains the following columns:

Field Name	Туре	Description
RegionId	Integer	The unique identifier for the region.
RegionName	String	Displays the name of the region.

Software Package Table

The Software Package Table contains the following columns:

Field Name	Туре	Description
Criteria	String	Displays the selection criteria configured for the software package.
LastUpdated	Timestamp	Indicates the date and time of the last change made to the package.
Name	String	Displays the name of the software package.
ProfileId	Integer	The unique identifier for the software profile to which the software package is assigned.
SoftwarePackageId	Integer	The unique identifier for the software package.
Title	String	Displays the title of the software package.
Version	String	Indicates the version of the software package.

Deployed Network Profile Table

The Deployed Network Profile Table contains the following columns:

Field Name	Туре	Description
Criteria	String	Displays the selection criteria configured for the network profile.
Deployed	Bit	Indicates whether the profile is deployed. The result may be true or false.
GroupId	Integer	Identifies where the profile is applied. The result may be a Region ID or a Site ID.
NetworkProfileId	Integer	The ID of the network profile to which this deployment profile refers.

Infrastructure Device Table

The Infrastructure Device Table, which is only available in Avalanche MC, contains the following columns:

Field Name	Туре	Description
FirmwareVersion	String	Indicates the version of the firmware installed on the infrastructure device.
IPAddress	String	Indicates the IP address of the infrastructure device.
Id	Integer	The unique identifier for the infrastructure device.
MacAddress	String	Displays the MAC address of the infrastructure device.
Manufacturer	String	Displays the name of the infrastructure device manufacturer.
Model	String	Displays the model name of the infrastructure device.
Name	String	Displays the name assigned to the infrastructure device by the infrastructure profile.
SiteId	Integer	Displays the site to which the infrastructure device is assigned. Use this property in other tables to obtain information such as the site's name and region.

Device Property Table

The Device Property Table contains the following columns:

Field Name	Туре	Description
DeviceId	Integer	The unique identifier for the device.
Name	String	Displays the name of the device property.
Value	String	Displays the value of the device property.

dServer Table

The dServer Table, which is only available in Avalanche MC, contains the following columns:

Field Name	Туре	Description
ld	Integer	The unique identifier for the dServer.
LastUpdated	Timestamp	Indicates the date and time the dServer last communicated with the Enterprise Server.
LicenseCount	Integer	Indicates the number of licenses in use at the dServer.
SiteId	Integer	Displays the site to which the dServer is assigned. Use this property in other tables to obtain information such as the site's name and region.
Status	String	Displays the dServer status.
Туре	Integer	Displays the dServer type.
Version	String	Indicates the dServer version.

Sample Query Statements

This section contains example query statements used to obtain database information for assorted custom reports. You can use the Report Console to modify and customize these query statements as desired.

Software Profile Query Statement

You can use the software profile query statement to create a custom report that lists all software profiles that have been deployed directly to dServer Locations. This example incorporates the following database tables: Software Profile Table, Deployed Software Profile Table, and Site Table.

The SQL query statement is as follows:

Select a.Enabled,a.LastUpdated,a.Name,a.SoftwareProfileId,a.

Version, b. Criteria, b. Deployed, b. Group Id, b. Software Prof

ileId,c.RegionId,c.SiteId,c.SiteName

From SoftwareProfile as a,DeployedSoftwareProfile as b,Site

as c

Where b.Deployed = true AND b.SoftwareProfileId =

a.SoftwareProfileId AND c.SiteId = b.GroupId

You can modify the **Where** query to create a report that lists only software profiles applied to a specific dServer Location. This example modifies the **Where** query statement to include only software profiles assigned to Seattle dServer Locations:

Where b.Deployed = true AND b.SoftwareProfileId =

a.SoftwareProfileId AND c.SiteId = b.GroupId AND

c.SiteName LIKE 'Seattle'

You can also modify the SQL query statement to create a report that lists only software profiles applied to specific regions. The modified statement is as follows:

Select a.Enabled,a.LastUpdated,a.Name,a.SoftwareProfileId,a.

Version, b. Criteria, b. Deployed, b. Group Id, b. Software Prof

ileId,c.RegionId,c.RegionName

From SoftwareProfile as a,DeployedSoftwareProfile as

b,Region as c

Where b.Deployed = true AND b.SoftwareProfileId =

a.SoftwareProfileId AND c.RegionId = b.GroupId

Mobile Device Query Statement

You can use the mobile device query statement to create a custom report that lists information about your mobile device inventory. This example incorporates the following database tables: Mobile Device Table, Site Table, and Region Table.

The SQL query statement is as follows:

Select c.RegionId,c.RegionName,a.SiteName,a.SiteId,b.IPAddr

ess,b.SiteId,b.MacAddress,b.OSVersion,b.Processor

From Site as a, Mobile Device as b, Region as c

Where a.SiteId = b.SiteId AND c.RegionId = a.RegionId

In this example, the **Where** statement ensures that the data is displayed only if information in all three database tables matches. The Site ID in the Mobile Device table must match that in the Site table, and the Region ID in the Site table must match that in the Region table.

Chapter 3: Viewing and Exporting Reports

Use the Avalanche Reporting Tool to view reports you have created and save reports in a PDF format for future use.

This chapter provides the following information:

- Viewing Reports
- Exporting Reports

Viewing Reports

You can view any report by clicking the **View** icon to the right of the report name in the **Reports now available region** of the Report Console. Each report provides general information and information specific to the report type. This section provides information about viewing the following:

- General Report Information
- Mobile Device Inventory Report
- Mobile Device Summary Report
- Mobile Device Property Report
- Infra Device Inventory Report
- Software Profile Report
- Software Profile Status Report
- Alert Summary Report
- Access Point Associations Report
- Mobile Device Roaming Report
- Battery Summary Report
- Mobile Device Statistics Report

General Report Information

Each report contains the following:

- Header Information
- Graphs

Header Information

General report information, such as execution time and report criteria, appears in the header of each report. This information varies by report.

Graphs

All reports provide a graph, which displays a visual summary of all information contained in the report.

Mobile Device Inventory Report

The Mobile Device Inventory Report contains the following information:

dServer D:	isplays the location of the dServer Location the
------------	--

Location mobile device is communicating with.

Vendor Displays the name of the device vendor.

Model Displays the model number of the device.

OS Load Indicates the operating system currently running on

the device.

MAC Displays the Media Access Control address of the

mobile device.

Enabler Indicates the version of the Enabler running on the

device.

IP Address Displays the Internet Protocol address assigned to the

device.

State Indicates whether the device is updated or needs to be

updated.

Mobile Device Summary Report

The Mobile Device Summary Report contains the following information:

Vendor Displays the name of the device vendor.

Model Displays the model number of the device.

OS Version Indicates the operating system currently running

on the device.

Qty Displays the number of devices.

Mobile Device Property Report

The Mobile Device Property Report contains the following information:

IP Address Displays the Internet Protocol address assigned

to the device.

Model Displays the model number of the device.

Location Displays the IP address of the location of the

dServer Location with which the mobile device is

communicating.

Region Displays the location of the Region to which the

mobile device is assigned.

Property Displays the name of the mobile device property.

Value Displays the value of the mobile device property.

Infra Device Inventory Report

The Infra Device Inventory Report, which is only available in Avalanche MC, contains the following information:

dServer Displays the location of the dServer Location the mobile

Location device is communicating with.

Vendor Displays the name of the device vendor.

Model Displays the model number of the device.

Firmware Indicates the firmware currently running on the device.

IP Address Displays the Internet Protocol address assigned to the

device.

MAC Address Displays the Media Access Control address of the

mobile device.

Status Indicates the status of the connection attempt.

Software Profile Report

The Software Profile Report contains the following information:

Profile Name Displays the name of the software profile.

Criteria Displays the selection criteria associated with the

profile.

Targets Indicates the number of devices matching the

profile selection criteria.

Installed Indicates the number of devices that have the

profile installed.

Pending Indicates the number of devices pending the

profile install.

Failed Indicates the number of devices that failed to

install the profile.

Software Profile Status Report

The Software Profile Status Report contains the following information:

IP Address Displays the Internet Protocol address assigned to

the device.

Manufacturer Displays the name of the device manufacturer.
Enabler Indicates the version of the Enabler running on the

device.

dServer Displays the location of the dServer Location the

Location mobile device is communicating with.

Status Indicates the status of the connection attempt. Time Indicates the time and date of the connection

attempt.

Alert Summary Report

The Event Summary Report, which is only available in Avalanche MC, contains the following information:

Time Displays the time the alert occurred.

Name Displays the name of the alert.

Description Displays the type of alert.

Severity Indicates the alert level.

Acked Indicates whether the alert has been acknowledged

in the Avalanche Console.

Cleared Indicates whether the alert has been cleared from

the Avalanche Console.

Access Point Associations Report

The Access Point Associations Report, which is only available in Avalanche MC, contains the following information:

IP Address Displays the Internet Protocol address assigned to

the device.

MAC Address Displays the Media Access Control address of the

mobile device.

Manufacturer Displays the name of the device manufacturer.

dServer Displays the location of the dServer Location the

Location mobile device is communicating with.

Associations Indicates the number of times a device connected

with the access point.

Reassociations Indicates the number of times a device re-connected

with the access point.

Mobile Device Roaming Report

IP Address

The Mobile Device Roaming Report contains the following information:

the device.

Manufacturer Displays the name of the device manufacturer.

Enabler Indicates the version of the Enabler running on the

Displays the Internet Protocol address assigned to

device.

Current dServer Displays the location of the dServer Location the mobile device is currently communicating with.

Last dServer Displays the location of the dServer Location the Location mobile device was communicating with previously. # Roams Indicates the number of times the mobile device has

roamed.

Last Roam Displays the date and time of the last roaming

incident.

Battery Summary Report

The Battery Summary Report contains the following information:

IP Address Displays the Internet Protocol address assigned to

the device.

Manufacturer Displays the name of the device manufacturer.
Enabler Displays the version of the Enabler running on the

device.

Current dServer Displays the location of the dServer Location the

Location mobile device is currently communicating with.

Avg. Charge Duration Indicates the average amount of time the mobile

device battery holds a charge.

Bad Charge Events Indicates the number of times the device failed to

charge.

Mobile Device Statistics Report

The Mobile Device Statistics Report contains the following information:

BSSID Displays the Basic Service Set Identifier of the

mobile device.

Total Bytes Displays the total number of bytes sent.

Avg Bytes Displays the average number of bytes sent.

Total Packets Displays the total number of packets received.

Avg Packets Displays the average number of packets received.

Total Errors Displays the total number of network errors.

Avg Errors Displays the average number of network errors.

Exporting Reports

All reports can be exported from the Report Console and saved for future use.

To export a report:

1 Access the Report Console.

- **2** From the **Reports now available** region, select the desired folder.
- **3** Click the View icon to the right of the desired report.

The report appears in the browser widow.

- 4 Select File > Save As.
- **5** Navigate to the desired location and click **Save**.

The report is saved to the location you selected.

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