



**Wavelink Avalanche MC  
Reporting Tool  
Reference Guide**

amc-rg-reports-20080516

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# Chapter 1: Avalanche MC Reporting Tool

This document provides information about the Avalanche MC 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 to a PDF format.

This chapter provides the following information:

- Introduction
- Installation
- Avalanche MC 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 43 for more information.

The *Screen Reformatter* dialog box appears.

## About Avalanche MC Reporting Tool

The Avalanche MC Reporting Tool offers the following types of reports:

- Mobile Device Inventory
- Mobile Device Summary

- Infra Device Inventory
- Software Profile
- Software Profile Status
- Event 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 13 and *Chapter 3: Viewing and Exporting Reports* on page 43.

## Installation

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

- Installation Requirements
- Installing Avalanche MC 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** You must have Wavelink Avalanche MC 4.2 (or later versions) installed to run the Reporting Tool.

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**NOTE** If you are installing reporting on a 2000 Server or 2003 Server you will need to move a copy of the msvc71.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 MC 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.

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

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**To install the Reporting Tool:**

- 1 Obtain the Reporting Tool installation package from Wavelink Customer Service or the [Wavelink Web site](#).

- 2 Double-click the file to start the installation process.

The *Wavelink Avalanche MC Reports InstallShield Wizard* appears.

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

The *License Agreement* dialog box appears.

- 4 If you agree with the terms in the License Agreement, enable the **I accept the terms in the license agreement** option and click **Next**.

---

**NOTE** If you do not select this option, you will not be able to complete the installation process.

---

The *Destination Folder* dialog box appears.

- 5 Click **Next** to accept the default installation folder, or click **Change** to navigate to a folder of your choice. After you select an installation folder, click **Next** to continue the installation process.

The *Setup Type* dialog box appears.

- 6 Choose a **Complete** or **Custom** installation and click **Next**.

---

**NOTE** For full functionality, it is recommended that you choose the **Complete** installation.

---

The *Ready to Install the Program* dialog box appears.

- 7 Click **Install**.

The *Apache Tomcat Setup Wizard* appears.

- 8 Click **Next** to continue with the Apache Tomcat installation.

The *License Agreement* appears.

- 9 If you agree with the terms in the License Agreement, click **I Agree**.

---

**NOTE** If you do not click **I Agree**, you will not be able to complete the installation process.

---

The *Choose Components* dialog box appears.

- 10 Select an installation type and click **Next**.

---

**NOTE** For full functionality, it is recommended that you choose the **Normal** installation.

---

The *Choose Install Location* dialog box appears.

- 11 Click **Next** to accept the default installation folder, or click **Browse** to navigate to a folder of your choice. After you select an installation folder, click **Next** to continue the installation process.

The *Configuration* dialog box appears.

- 12 Enter the **Connector Port**, **User Name** and **Password** in the available text boxes and click **Next**.

---

**NOTE** The default port is 8080, however, you can use any port you desire.

---

---

**NOTE** The user name and password are for Apache Tomcat server administration only; they do not apply to Wavelink Avalanche MC.

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The *Java Virtual Machine path selection* dialog box appears.

- 13 Click **Install** to accept the default installation location, or click [...] to navigate to a location of your choice.

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

- 14 Click **Finish** to close the *Apache Tomcat Setup Wizard*.

**15** Click **Finish** to close the *Wavelink Avalanche MC Reports InstallShield Wizard*.

## **Avalanche MC 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 MC Console.

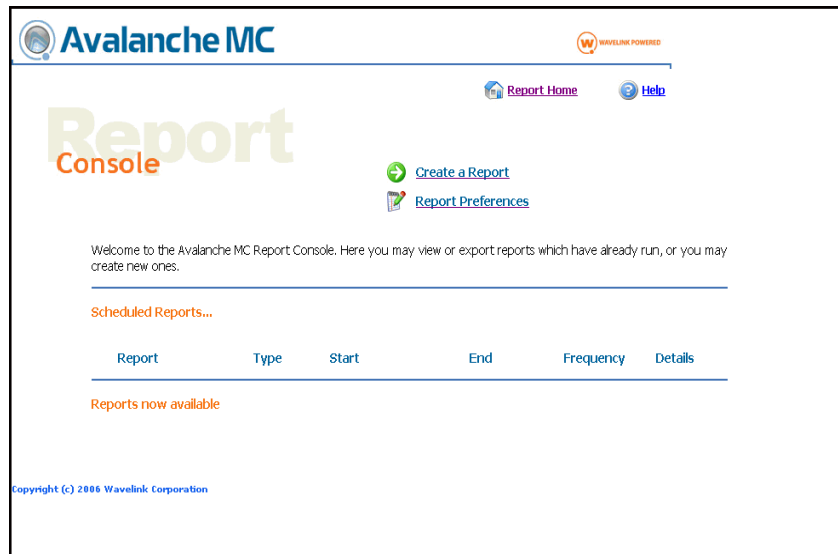
#### **To access the Report Console:**

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

-Or-

Select **Tools > Reports**

The Report Console opens in a separate Web browser window.



**Figure 1-1.** *Avalanche MC 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 Charts in 3D** Enable this checkbox to generate three-dimensional 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
- Infra Device Inventory Report
- Software Profile Report
- Software Profile Status Report
- Event Summary Report
- Access Point Associations Report
- Mobile Device Roaming Report
- Battery Summary Report
- Mobile Device Statistics Report
- Customized Reports

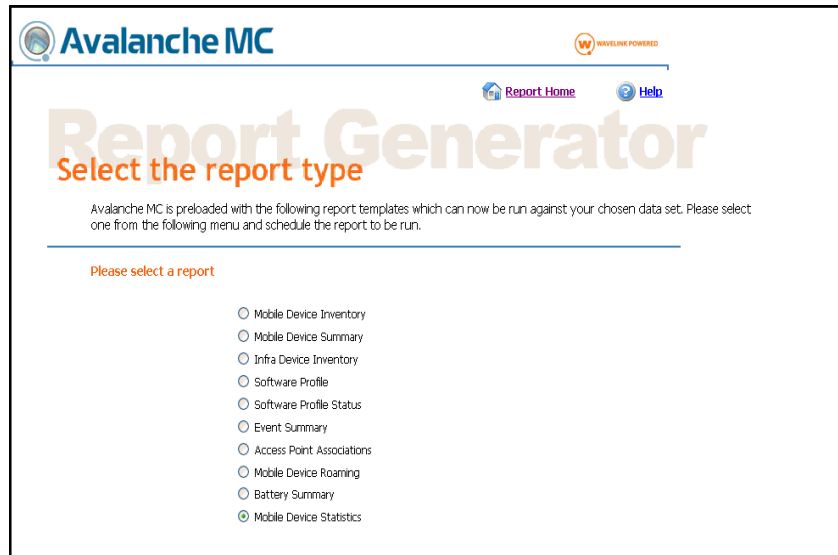
### Mobile Device Inventory Report

Mobile Device Inventory Reports provide specific information about your mobile device inventory. For more information, see *Mobile Device Inventory Report* on page 44.

#### To build a Mobile Device Inventory Report:

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

The *Select the Report Type* page appears.

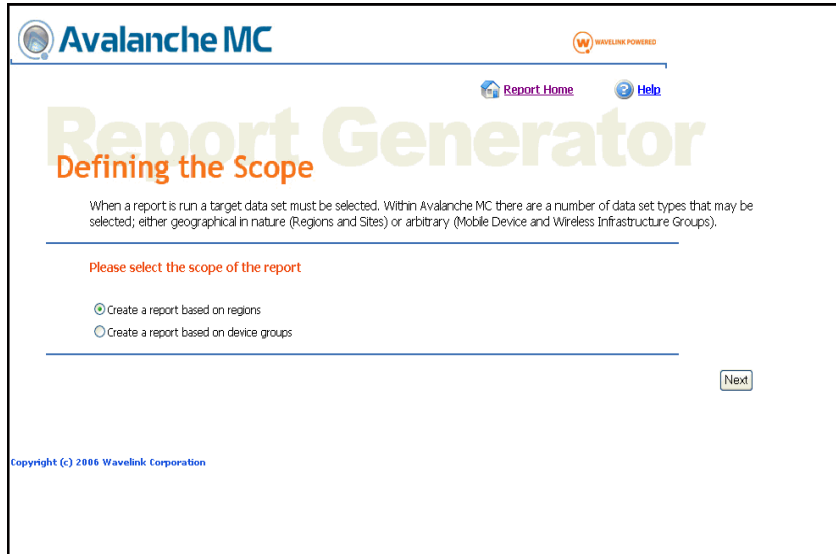


**Figure 2-1.** *Selecting the Report Type*

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

The *Defining the Scope* page appears.





The screenshot shows the 'Report Generator' interface for 'Avalanche MC'. The page title is 'Defining the Scope'. Below the title, there is a paragraph of text: 'When a report is run a target data set must be selected. Within Avalanche MC there are a number of data set types that may be selected; either geographical in nature (Regions and Sites) or arbitrary (Mobile Device and Wireless Infrastructure Groups)'. Below this text, there is a horizontal line and the instruction 'Please select the scope of the report'. There are two radio button options: 'Create a report based on regions' (which is selected) and 'Create a report based on device groups'. At the bottom right of the form area, there is a 'Next' button. The footer of the page reads 'Copyright (c) 2006 Wavelink Corporation'.

**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**.

The *Scheduling* page appears.

**Avalanche MC** W WAVELINK POWERED

[Report Home](#) [Help](#)

# Report Generator

## Scheduling

Reports can be scheduled to run immediately or at any time in the future. They may also be scheduled to repeat at given intervals. Be aware too that some reports can take a while to run, so look for their estimated completion times back on the reports home page.

If you have a recurring report, then the time each report runs each day/week/month will either be the time now (if you selected Immediately) or the time specified in the Time field.

---

**Starting time**

Immediately

Specific date and time  -  -   :

---

**Recurring times**

Run once only

Run every day

Run every week  Sun  Mon  Tues  Weds  Thurs  Fri  Sat

Run every month  day of each month.

**Figure 2-3.** Scheduling

**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.



**Figure 2-4.** Summary

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

The report appears in PDF 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 45.

### 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**.

The *Scheduling* 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 PDF format. You can save the report or return to the Report Console home page.

## Infra Device Inventory Report

Infra Device Inventory Reports provide detailed information about your access points and switches. For more information, see *Infra Device Inventory Report* on page 45.

**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 *Defining 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 dServer Location(s) and click **Next**.

The *Scheduling* 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 PDF 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 45.

### 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 Profiles** option and click **Next**.

The *Defining the Scope* page appears.

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

The *Scheduling* page appears.

5 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.

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

The report appears in PDF 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 46.

### 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 *Defining the Scope* page appears.

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

The *Scheduling* page appears.

- 5 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.

- 6 Click the link next to **Report name** to access the report.

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

## Event Summary Report

Event Summary Reports provide a summary of Avalanche MC 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 *Event Summary Report* on page 46.

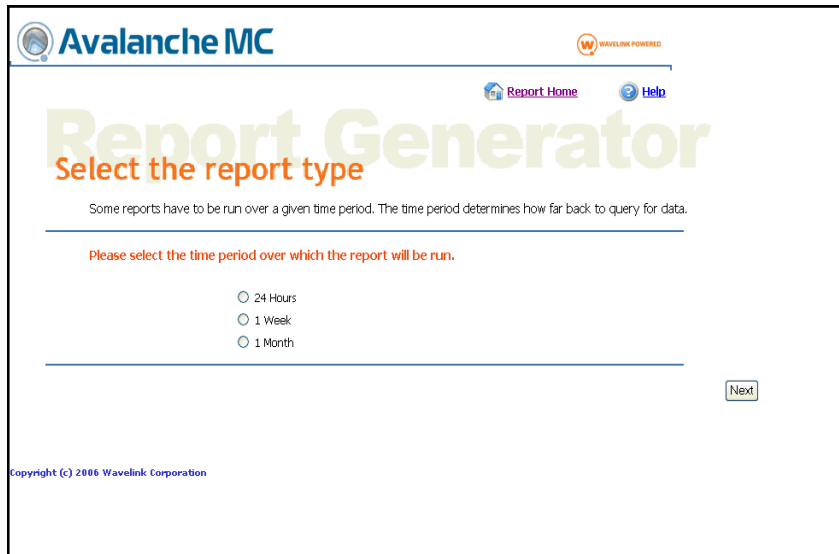
### To build an Event Summary Report:

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





The screenshot shows the 'Report Generator' interface for 'Avalanche MC'. At the top left is the 'Avalanche MC' logo. At the top right is the 'WAVELINK POWERED' logo. Below the logo is a navigation bar with 'Report Home' and 'Help' links. The main heading is 'Report Generator' in large green letters, with 'Select the report type' in orange below it. A sub-heading reads: 'Some reports have to be run over a given time period. The time period determines how far back to query for data.' Below this is a horizontal line, followed by the instruction: 'Please select the time period over which the report will be run.' There are three radio button options: '24 Hours', '1 Week', and '1 Month'. A 'Next' button is located at the bottom right. At the bottom left, there is a copyright notice: 'Copyright (c) 2006 Wavelink Corporation'.

**Figure 2-5.** *Selecting the Time Period*

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**.

The *Scheduling* 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 PDF format. You can save the report or return to the Report Console home page.

## Access Point Associations Report

Access Point Associations Reports show all connections between mobile devices and access points. For more information, see *Access Point Associations Report* on page 46.

### 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**.

- 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**.

The *Scheduling* 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 PDF 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 47.

### 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 *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**.

The *Scheduling* 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 PDF 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 47.

### 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**.**

The *Scheduling* 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 PDF 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 48.

### 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 *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**.

The *Scheduling* 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 PDF 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 *Name of the Report* page appears.

- 4 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 *Select Table* page appears.

- 5 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 31.

---

The *Select Table Columns* page appears.

**6** 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 31.

---

The *Edit SQL Query* page appears.

**7** 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 39.

---

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

**9** 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.

**10** Click **Back** to return to the *Edit SQL Query* page.

**11** When you have finished customizing the report parameters, click **Next**.

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 PDF 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:

- Deployed AP Profile Table
- Event Data Table
- Site Table
- AP Profile 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

### **Deployed AP Profile Table**

The Deployed AP Profile Table refers to deployed Infrastructure Profiles, and contains the following columns:

<b>Field Name</b>	<b>Type</b>	<b>Description</b>
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	Type	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	Type	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 refers to Infrastructure Profiles, and contains the following columns:

Field Name	Type	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.

## Event Table

The Event Table contains the following columns:

Field Name	Type	Description
Acknowledged	Bit	Indicates whether the event was acknowledged by an administrator on the Avalanche MC 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 MC.
Description	String	The description of the event.
Id	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	Type	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.

Field Name	Type	Description
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.
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	Type	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	Type	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	Type	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 contains the following columns:

Field Name	Type	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	Type	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	Type	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 contains the following columns:

Field Name	Type	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	Type	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 contains the following columns:

Field Name	Type	Description
Id	Integer	The unique identifier for the dServer.
LastUpdated	Timestamp	Indicates the date and time the dServer last communicated with the Enterprise Server.



Field Name	Type	Description
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.
Type	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.GroupId,b.SoftwareProf
                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.GroupId,b.SoftwareProf  
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,MobileDevice 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 MC 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
- Infra Device Inventory Report
- Software Profile Report
- Software Profile Status Report
- Event 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 Location	Displays the location of the dServer Location the 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.

## Infra Device Inventory Report

The Infra Device Inventory Report contains the following information:

dServer Location	Displays the location of the dServer Location the mobile 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 Location	Displays the location of the dServer Location the mobile device is communicating with.
Status	Indicates the status of the connection attempt.
Time	Indicates the time and date of the connection attempt.

### **Event Summary Report**

The Event Summary Report 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 MC Console.
Cleared	Indicates whether the alert has been cleared from the Avalanche MC Console.

### **Access Point Associations Report**

The Access Point Associations Report 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 Location Associations	Displays the location of the dServer Location the mobile device is communicating with.
Reassociations	Indicates the number of times a device connected with the access point.
	Indicates the number of times a device re-connected with the access point.

## Mobile Device Roaming Report

The Mobile Device Roaming 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.
Current dServer Location	Displays the location of the dServer Location the mobile device is currently communicating with.
Last dServer Location	Displays the location of the dServer Location the 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 Location	Displays the location of the dServer Location the 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 in PDF format 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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