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StadiumVision

Cisco StadiumVision Mobile Reporter Administration Guide

Release 1.3
November 15, 2013

CONTENTS

Preface

Revised: November 15, 2013,
Cisco StadiumVision Mobile Release 1.3

Document Revision History

Table 1   *Document Revision History*

Date	Change Summary
June 28, 2013	Release of Cisco StadiumVision Mobile Reporter, Release 1.3.
March 28, 2013	Initial release of Cisco StadiumVision Mobile Reporter.

Document Purpose

This document describes how to administer the StadiumVision Mobile Reporter.

Document Audience

The intended audience is StadiumVision Mobile (also referred to as SVM) Reporter system administrators, Cisco Technical Field Engineers who are responsible for designing and deploying StadiumVision Mobile, and Cisco Partners. It is expected that readers of this document are familiar with basic IP networking and video technology, have a general understanding of the sports and entertainment business, and understand the objectives and operations of live events.

Related Documentation

See the *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide* for information about installing the StadiumVision Mobile Reporter software.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as an RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service. Cisco currently supports RSS Version 2.0.

P A R T   1

Cisco StadiumVision Mobile Reporter Reporting Functionality

Using the Cisco StadiumVision Mobile Reporter Reporting Functionality

Revised: March 28, 2013

This module describes how to access and to generate various reports for both the admin and marketing user. This module contains the following sections:

User Roles

The Cisco StadiumVision Mobile Reporter has two user roles by default:

- **admin**—provides access to the following reports and functions:
    - Data export to .csv files. detailed in Table 1
    - Upload Event Schedule
    - Upload Upgrade File
    - Disk Utilization
    - Current Viewers
    - System State Report
    - System Tools
    - Event Scorecard
- **marketing**—provides access to live and historical reports only:
    - Event Scorecard
    - Peak Concurrent Video Viewers
    - Unique Video Viewers
    - Total Video Viewing Time
    - Client Demographic
    - Concurrent Clients

- Concurrent WiFi Clients

Log into the Cisco StadiumVision Mobile Reporter user interface using the credentials in .

Cisco StadiumVision Mobile Reporter Login Credentials

Device	URL	User Name and Password
Cisco StadiumVision Mobile Reporter	http://*reporter ip address*	• marketing / cisco!123 • admin / cisco!123

How to Change System Account Passwords

To change the admin or marketing user account passwords, use the following procedure. You must have SNE TAC access to perform this task.

Step 1 Log on with an **snetac** account to access the command line prompt.

Step 2 Execute the following command:

```
$ /var/svm/bin/svmcass

Column Family assumptions read from /home/x/.cassandra/assumptions.json
Connected to: "Test Cluster" on 127.0.0.1/9160
Welcome to Cassandra CLI version 1.1.6

Type 'help;' or '?' for help.
Type 'quit;' or 'exit;' to quit.
```

Step 3 Execute the following commands to change the marketing and admin user account passwords:

```
[default@BDASchema] set Users['marketing']['Password']='myNewPassword';
Value inserted.
Elapsed time: 55 msec(s).
[default@BDASchema] set Users['admin']['Password']='adminNewPassword';
Value inserted.
Elapsed time: 2.97 msec(s).
```

Step 4 Exit the procedure.

```
[default@BDASchema] exit;
```

Accessing the Cisco StadiumVision Mobile Reporter GUI

The Cisco StadiumVision Mobile Reporter GUI provides the following features:

- A scorecard with quality and uptake scores—for both the season and a chosen event
- Reports via data export for a chosen event
- Event schedule upload with downloadable templates
- ISO upgrade file upload
- Disk utilization report
- Current viewers report
- System state report

Uploading Event Schedule Information

The event schedule is used by the Cisco StadiumVision Mobile Reporter to know when event data is to be collected and processed into predefined reports and charts. The Event and Season reports depend on the event schedule to define a time period for each event and for the sports season.

This schedule is used to present the charts. When an event transpires, the Live Event reports will begin to show data from the start of the event. At some point in time after an event is over (the next night), the charts in categories for Event Report and Season Report will be updated with the latest summary data from the most recent event.

To create an event schedule, use the included template (accessed via the **Upload Event Schedule** menu option when logged in as admin. Alternatively, navigate to the following path to download the event schedule spreadsheet template:

http://*<stadiumvision mobile reporter ip address>*:80/EventSchedule.xlsx

Note the following conditions regarding the event schedule spreadsheet:

- A spreadsheet application such as Microsoft Excel should be used to populate the spreadsheet
- Spreadsheet should be saved as Unicode Text and a tab separated text file (a sample is shown in Figure 1)

The Upload Event Schedule dialog box contains a **Download Template button** and an **Upload** button to upload the populated spreadsheet.

Figure 1   *Event Schedule Spreadsheet Sample*

	A	B	C	D	E	F
1	#Subject	Start Date	Start Time	End Date	End Time	Notes
2	Jets vs. Giants	11/9/2012	7:00 AM	11/9/2012	8:00 PM	none
3	Jets vs. Giants,Gates Open	11/9/2012	8:00 AM	11/9/2012	10:00 AM	none
4	Jets vs. Giants,Gates Close	11/9/2012	4:00 PM	11/9/2012	6:00 PM	none
5	Jets vs. Panthers	11/10/2012	7:00 AM	11/10/2012	8:00 PM	none
6	Jets vs. Panthers,Gates Open	11/10/2012	8:00 AM	11/9/2012	10:00 AM	none
7	Jets vs. Panthers,Gates Close	11/10/2012	4:00 PM	11/9/2012	6:00 PM	none
8	Jets vs. Chargers	11/11/2012	7:00 AM	11/11/2012	8:00 PM	none
9	Jets vs. Chargers,Gates Open	11/11/2012	8:00 AM	11/9/2012	10:00 AM	none
10	Jets vs. Chargers,Gates Close	11/11/2012	4:00 PM	11/9/2012	6:00 PM	none
11	Jets vs. Nicks	11/12/2012	7:00 AM	11/12/2012	9:00 PM	none
12	Giants vs. Panthers	11/13/2012	7:00 AM	11/13/2012	10:00 PM	none
13	Chargers vs. Panthers	11/13/2012	8:00 AM	11/13/2012	11:00 PM	none
14	Nicks vs. Giants	11/14/2012	9:00 AM	11/14/2012	10:00 PM	none
15						

To create and upload an event schedule, use the following procedure:

Step 1   Log into the Cisco StadiumVision Mobile Reporter as admin.

Step 2   Click **System Tools**.

Step 3   Click **Download Template**.

Step 4   Populate the spreadsheet with the appropriate event data.

Step 5   Save the spreadsheet.

Step 6 Click **Choose File**, and navigate to the schedule spreadsheet.

Step 7 Click **Upload** to load the event schedule.

Step 8 Verify that the event schedule has been uploaded by logging into the Cisco StadiumVision Mobile Reporter as the marketing user, and click **Select an Event**. View the event schedule and verify that the uploaded schedule appears in the list as shown in Figure 9.

Admin User Reports

There are two report categories avaialable to the admin user via the Select View drop-down menu:

- The Event Scorecard—Contains a Quality and Uptake Score.
- Data Export—Starting in Cisco StadiumVision Mobile Reporter Release 1.3, additional reports are available for the administrator via CSV file export. The reports in Table 1 are available via the web browser user interface.

Event Scorecard—Quality and Uptake Scores

The uptake score is a measure of the number of WiFi devices that are on a venue's WiFi network compared to how many of those devices are using the Cisco StadiumVision Mobile app. It is the percentage of devices using the SDK out of all the devices on the appropriate SSID in the wireless network.

Both the Quality Score and the Uptake Score will be a value between 0 and 100.

Data Export

Table 1 lists the admin user reports available via the Data Export menu option, as well as a description of the report and its corresponding download filename. Reports are exported from the Cisco StadiumVision Mobile Reporter as CSV (comma-separated values) files contained within a .zip file. The CSV file can be viewed in a spreadsheet application.

Table 1   Admin User Reports

Chart Title	Description	Filename downloaded as
Performance Timeline	Cumulative errors per minute based on client SDK stats.	PerformanceTimeline
AP Performance	WiFi Access Point Performance	ApPerf
Client Sessions	Total number of client sessions	Sessions
Unique Clients	List of unique client devices. One row per client device.	Clients
Client Device Demographics	Metrics categorized by Device Type. One row per client device type and band. Device Type = Manufacturer + Model + HW_Model	Category_Type
Client OS Demographics	Metrics categorized by Device OS. One row per OS type and version and band.	Category_OS

Table 1   Admin User Reports

Chart Title	Description	Filename downloaded as
Client App Versions	Metrics categorized by App Version. One row per application version.	Category_App_Ver
SDK Versions	Metrics categorized by SDK Version. One row per SDK version.	Category_Sdk_Ver
Streamer Input Quality	'Good' is when the difference in active_video_windows is the same non-zero difference as for protection_windows. Bad is for when the active_video_windows delta is zero, and Poor is anywhere in between.	StreamerInputQuality
Concurrent Clients	This statement gives the number of active users including those with 'data only' or no channel name	ActdiveUsersHistory
Concurrent Video Viewers	This report gives the number of unique users per channel per minute based on wifi macAddress. It is updated every minute.	CurrentUsersPerChannel ForCsv
Reporter Server Statistics	Selects all system performance related fields in the system monitor.	SystemMonitorStats

Data Export—Report Field Descriptions

This section provides detailed descriptions of the fields contained within each report.

Key Service Quality Fields

Table 2 lists the key fields for measuring Cisco StadiumVision Mobile service quality.

Table 2   Service Quality Fields

Field Name	Description	Expected Value or Range for Normal Operation
Unrecoverable block error rate	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.	5% or less is an acceptable value. Greater than 5% indicated abnormal conditions.
(Video) Glitches per minute	Calculated as the number of unrecoverable block errors per minute.	Greater than 6 indicates a problem.
Streamer announcements loss rate in percent	Percentage of the Cisco StadiumVision Mobile Streamer service announcements that were missed. An indicator of network multicast performance.	20% or less is an acceptable value. Anything greater than 20% indicates abnormal conditions.

Table 2   Service Quality Fields

Field Name	Description	Expected Value or Range for Normal Operation
Stats upload failure rate	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.	10% or less is normal; 10-25% indicates an area for concern; greater than 25% indicates a very bad failure rate.
Average RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. Average RSSI for a session or all sessions on an access point (AP).	5 GHz: -68 dbm or better 2.4 GHz: -63 dbm Average: -65 dbm

Performance Timeline

Table 3   Performance Timeline

Field Name	Description
Time	Time of measurement.
Block Error Rate	Blocks that could not be recovered via forward error correction (FEC).
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches Per Minute	Calculated as the number of unrecoverable block errors per minute.

AP Performance

Table 4   AP Performance

Field Name	Description
BSSID	Access point basic service set identifier. Use to identify access points and their associated clients.
AP Name	Name assigned to the wireless access point.
AP Area	Location of AP.
Band	WiFi spectrum assignment.
SVM Clients	Number of Cisco StadiumVision Mobile clients.
Viewing Time Min	Viewing time in minutes.
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches per minute	Calculated as the number of unrecoverable block errors per minute.
Stats Upload Failure rate in percent	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.

Table 4 **AP Performance (continued)**

Field Name	Description
Streamer announcements loss rate in percent	Percentage of the Cisco StadiumVision Mobile Streamer service announcements that were missed. An indicator of network multicast performance.
Avg RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.

Modifying the AP Name Field Prefix

To modify the prefix that appears after the AP name, use the following procedure:

Step 1 Log on with an **snetac** account to access the command line prompt.

Step 2 Go to /var/svm/config.

Step 3 Edit the variables.xml file.

At the bottom, you will find two lines.

The first contains "AP_AREA_REGEX". This line contains a regular expression to match the AP name. It contains regex 'grouping' operators which are parentheses. These parentheses mean 'take any characters inside the parentheses and assign it to a variable. The variable resulting starts with a $ and has a number, sequential based on reading the regex left to right.

The next line contains AP-AREA_REPLACEMENT. This uses those groupings found above.

Client Sessions

Table 5 **Client Sessions**

Field Name	Description
Time 24H	Time in 24 hour format.
Session ID	Session identifier.
Wifi Mac Address	Unique identifier assigned to an access point for communications on the network.
Device UUID	Universally unique identifier (UUID) is an identifier standard.
App Name	Application name.
App Version	Application version.
SDK Version	Version number of the Cisco StadiumVision Mobile SDK.
Channel	WiFi channel.
AP BSSID	Access point basic service set identifier. Use to identify access points and their associated clients.
AP Name	Access point name.
Band	WiFi spectrum assignment.

Table 5 *Client Sessions (continued)*

Field Name	Description
Test point	Internal field used by Cisco TAC.
Viewing Time Min	Viewing time in minutes.
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches Per Minute	Calculated as the number of unrecoverable block errors per minute.
Stats Upload Failure rate in percent	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announcements loss rate in percent	Percentage of lost streamer announcements.
Average RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.

Unique Clients

Table 6 *Unique Clients*

Field Name	Description
Wifi Mac Address	Unique identifier assigned to an access point for communications on the network.
Device UUID	Universally unique identifier (UUID) is an identifier standard.
Manufacturer	Manufacturer name.
Model	Device model name.
OS Type	Operating system type.
OS Version	Operating system version.
Brand	Device brand name.
HW Model	Hardware model number.
Platform String	

Client Device Demographics

Table 7 *Ciient Device Demographics*

Field Name	Description
Device Type	Device name and model number.
Band	WiFi spectrum assignment.
SVM Clients	Number of Cisco StadiumVision Mobile clients.
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches Per Minute	Calculated as the number of unrecoverable block errors per minute.

Table 7   *Ciient Device Demographics (continued)*

Field Name	Description
Stats Upload Failure rate in percent	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announcements loss rate in percent	Percentage of the Cisco StadiumVision Mobile Streamer service announcements that were missed. An indicator of network multicast performance.
Average RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal.

Client OS Demographics

Table 8   *Client OS Demographics*

Field Name	Description
Client OS	Name of the operating system used on a client device.
Band	WiFi spectrum assignment.
SVM Clients	Number of Cisco StadiumVision Mobile clients.
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches per minute	Calculated as the number of unrecoverable block errors per minute.
Stats Upload Failure rate in percent	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announcements loss rate in percent	Percentage of the Cisco StadiumVision Mobile Streamer service announcements that were missed. An indicator of network multicast performance.
Average RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.

Client App Versions

Table 9   *Client App Versions*

Field Name	Description
Client App Version	Client application version.
Band	WiFi spectrum assignment.
SVM Clients	Number of Cisco StadiumVision Mobile clients.
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches per minute	Calculated as the number of unrecoverable block errors per minute.
Stats Upload Failure rate in percent	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.

Table 9 Client App Versions (continued)

Field Name	Description
Streamer annoucements loss rate in percent	Percentage of the Cisco StadiumVision Mobile Streamer service announcements that were missed. An indicator of network multicast performance.
Average RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.

SDK Versions

Table 10 SDK Versions

Field Name	Description
SDK Version	Version number of the Cisco StadiumVision Mobile SDK.
Band	WiFi spectrum assignment.
SVM Clients	Number of Cisco StadiumVision Mobile clients.
Unrecoverable block error rate in percent	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches per minute	Calculated as the number of unrecoverable block errors per minute.
Stats Upload Failure rate in percent	Calculated from the number of upload attempts and upload failures.
Streamer annoucements loss rate in percent	Percentage of the Cisco StadiumVision Mobile Streamer service announcements that were missed. An indicator of network multicast performance.
Average RSSI	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.

Streamer Input Quality

Table 11 Streamer Input Quality

Field Name	Description
Time	Time in 24 hour format.
Channel Name	Assigned channel name.
Total Delta	A comparison of current and previous video protection windows.
Active Delta	A comparison of current and previous active video windows.
Discontinuity Event	An internal event in the Cisco StadiumVision Mobile Streamer which is used to rate video quality.

Concurrent Clients

Table 12   *Concurrent Clients*

Field Name	Description
SVM Clients	Number of Cisco StadiumVision Mobile clients.

Concurrent Video Viewers

Table 13   *Concurrent Video Viewers*

Field Name	Description
Time	Time in 24 hour format.
Channel Name	Assigned channel name.
Users	Number of users.

Reporter Server Statistics

Table 14   *Reporter Server Statistics*

Field Name	Description
Time	Time in 24 hour format.
apache status	One or zero; one means up, zero means down.
cassandra log msgs	Configuration database log messages.
cassandra status	One or zero; one means up, zero means down.
cpu util	CPU utilization percentage.
disk free gb	Hard disk free space in gigabytes.
disk used gb	Hard disk space used in gigabytes.
disk util	Hard disk utilization percentage.
httpd log msgs	
load avg	
memory util	Memory utilization.
mongo log msgs	Report database log messages.
mongo status	One or zero; one means up, zero means down.
sym log msgs	
svm server status	One or zero; one means up, zero means down.
swap util	
raw uploads	

Marketing User Reports

The marketing user has access to five report types (listed in Table 15). Each of these five reports has two distinct presentation views. One view is the event view, which presents data collected during the span of one specific event. The other view is the season view, which presents summarized data for all of this seasons events that have been completed so far.

The Reporter UI distinguishes between the event view for past events and the event view for a live event happening right now. This separation is mostly a navigational one, as the live and historical event views are almost identical.

Terminology

In order to maximize report comprehension, the following terminology should be noted.

Term	Definition
Client	A generic Wi-Fi device, such as a tablet or smartphone, which may or may not be running an SVM client app.
SVM Client	A Google Android or Apple iOS client with an SVM app installed.
Video Viewer	An SVM client that is watching a video channel.
Concurrent	Used to describe clients that are performing the same task at the same time. For example clients watching the same channel at the same time are concurrent viewers of that channel.
Peak Concurrent Video Viewers	The event report shows the highest number of SVM clients that are viewed at the same time for each of the available video channels during a specific event. The live event report has a unique twist in that in addition to peak viewers it also shows the current number of viewers watching each channel right now. The season report shows the highest number of SVM clients that concurrently viewed video for each of the past events, regardless of channel.

Example:

1. A group of 20 clients (A) watch the in-house channel for the entire game.

2. A second group of 10 clients (B) watch the in-house channel for the first half. At half time they switch to ESPN. Finally, right before the start of the 2nd half all 10 clients are turned off.

3. A third group of 5 clients (C) show up during the second half, and watch ESPN for the remainder of the game.

As a result the event report shows 30 peak viewers for the in-house channel, and 10 peak viewers for ESPN. The season report shows 30 peak viewers for the event.

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Table 15   Marketing User Reports

Report Type	Report	Description
Live Report		
	Current and Peak Concurrent Video Viewers	Displays both the current and peak number of StadiumVision Mobile video viewers.
	Unique Video Viewers	Displays the unique numbers of StadiumVision Mobile video viewers.
	Video Viewing Time	Displays the total time StadiumVision Mobile video has been viewed up to the current time.
	SVM Client Demographic	Displays the current number of StadiumVision Mobile clients by client operating system.
	Concurrent SVM Clients	Displays the concurrent number of StadiumVision Mobile clients.
Event Report		
Season Report		
	Event Scorecard—Quality and Uptake Scores	Quaity and uptake scores.
	Peak Concurrent Video Viewers	Displays both the peak number of StadiumVision Mobile video viewers, by event or by season.
	Unique Video Viewers	Displays the unique numbers of StadiumVision Mobile video viewers, by event or by season.
	Video Viewing Time	Displays the total time StadiumVision Mobile video has been viewed for an event or a season.
	SVM Client Demographic	Displays the current number of StadiumVision Mobile clients by client operating system, for an event or a season.
	Concurrent SVM Clients	Displays the concurrent number of StadiumVision Mobile clients for an event or a season.

Unique Video Viewers

The event report shows the number of unique SVM clients that watched each of the available video channels during a specific event. A client is uniquely identified by its MAC address, and is only counted once per channel it viewed, even if it left a channel and resumed viewing it later. A client that watches multiple channels during the event is counted as one unique viewer for each of the channels it viewed.

The season report shows the total number of unique SVM clients that viewed video for each of the past events, regardless of channel watched. Hence each unique client is counted once per event only.

Example:

1. A group of 20 clients (A) watch the in-house channel for the entire game.

2. A second group of 10 clients (B) watch the in-house channel for the first half. At half time they switch to ESPN. And right before the start of the 2nd half all 10 clients are turned off.

3. A third group of 5 clients (C) show up during the second half, and watch ESPN for the remainder of the game.

As a result the event report shows 30 unique viewers for the in-house channel, and 15 unique viewers for ESPN. The season report shows 35 unique viewers for the event.

Video Viewing Time

The event report shows the total duration that each channel was viewed during a specific event. This is calculated by summing up the number of minutes watched by each of the clients that tuned to this channel. It makes no difference if a client watched a channel once for 30 minutes or twice for 15 minutes.

The season report shows the total number of minutes of video viewed across all channels, broken down by event. This aggregate number is a simple summation of the minutes recorded for each individual channel for that event.

Example:
1. A group of 20 clients (A) watch the in-house channel for 10 minutes each.

2. A second group of 10 clients (B) watch the in-house channel for 20 minutes each. The same clients also watch ESPN for 10 minutes each.

As a result the event report shows the in-house channel being watched for 400 minutes, and the ESPN channel being watched for 100 minutes. The season report shows that a total of 500 minutes was watched during this event.

SVM Client Demographic

The event report shows the total number of unique Google Android and Apple iOS clients that used the SVM client app at some point during the event. This includes devices that never tuned to a channel to watch video. The fact that the SVM client was launched, and briefly ran in the foreground, is sufficient for that client to be recorded. Hence the client demographic count is likely to be higher than that shown for the same event on the 'Unique Video Viewers' season.

Example:
1. A group of 20 Apple iOS clients (A) watch the in-house channel during the first half.

2. A group of 15 Google Android clients (B) watch the in-house channel during the second half.

3. A group of 10 Apple iOS clients (C) use the SVM enabled app for in seat ordering only. They never tune to any of the video channels.

4. A group of 5 Google Android clients (D) use the SVM enabled app for way finding only. They never tune to any of the video channels.

As a result the event report shows 30 unique Apple iOS clients and 20 unique Google Android clients. The season report also shows 30 Apple iOS and 20 Google Android clients for this event.

Concurrent SVM Clients

The event report shows the number of SVM clients that were active at the same time (concurrent) over the course of the event. This includes clients that are not tuned to a video channel. The fact that the SVM client is launched, and running in the foreground, is sufficient for that client to be recorded. Hence the concurrent SVM client count reported here is likely to be higher than that shown for the same event on the 'Peak Video Viewers' season report.

Example:

1. A group of 20 clients (A) were watching the in-house channel at 5:13 PM.

2. A group of 10 clients (B) were using the SVM enabled app for in seat ordering at 5:13 PM. Hence it is a given that they were not also watching video at that time.

3. The time of peak SVM activity is at 6:03 PM, when there are a total of 100 concurrently active SVM clients, including groups A and B.

As a result the event report shows 30 active clients at 5:13 PM. The season report captures the peak value of the event chart, which in this case is 100 concurrent clients.

Maintenance Window

Reports for an event begin generation at 3:00 a.m. by default. If an event occurs at 10:00 p.m., the reports will be available after the 3:00 a.m. generation cycle.

Note   The Cisco StadiumVision Mobile Reporter performs maintenance from 3:00 a.m. to 6:00 a.m. Do not schedule events to run during the maintenance window.

Marketing Reports Navigation and Showing Detail

Figure 2 depicts the navigation path for the various reports on the Cisco StadiumVision Mobile Reporter. Reports are organized into three categories: Live Reports, Historical Reports, and the Season Reports.

- Live Reports—Real-Time reports

- Event Reports—Reports for a specific event

- Season Reports—Cumulative reports over a span of time

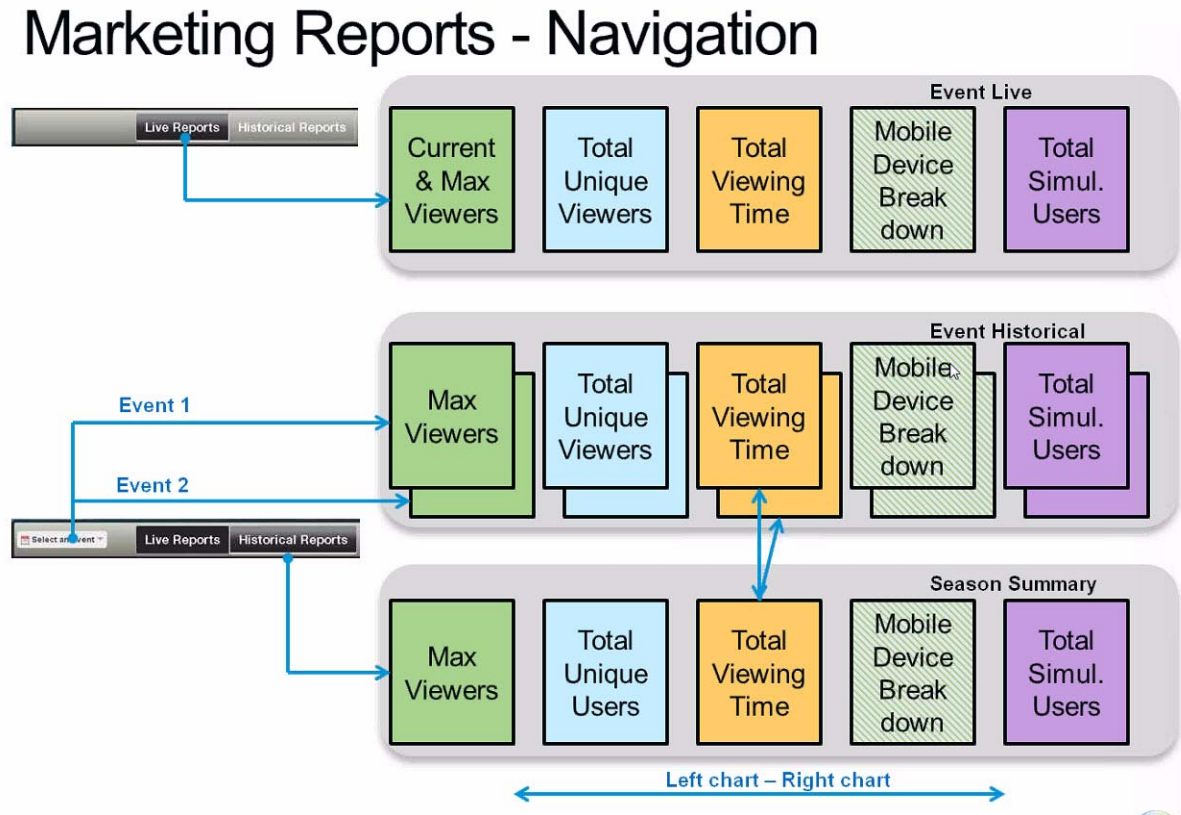**Figure 2** *Marketing Reports Navigation*

Figure 3 displays a sample Event Scorecard report, showing the right and left navigation arrows to scroll through the reports. as well as the Live Report and Historical Report buttons to select a report type. The Select an Event drop-down menu shown in Figure 3.

Samples of all marketing reports follow:

- Event Scorecard Report
- Peak Concurrent Video Viewers Report
- Unique Video Viewers Report
- Client Demographic Report
- Concurrent Clients Report
- Total Video Viewing Time

Figure 3   *Event Scorecard Report*
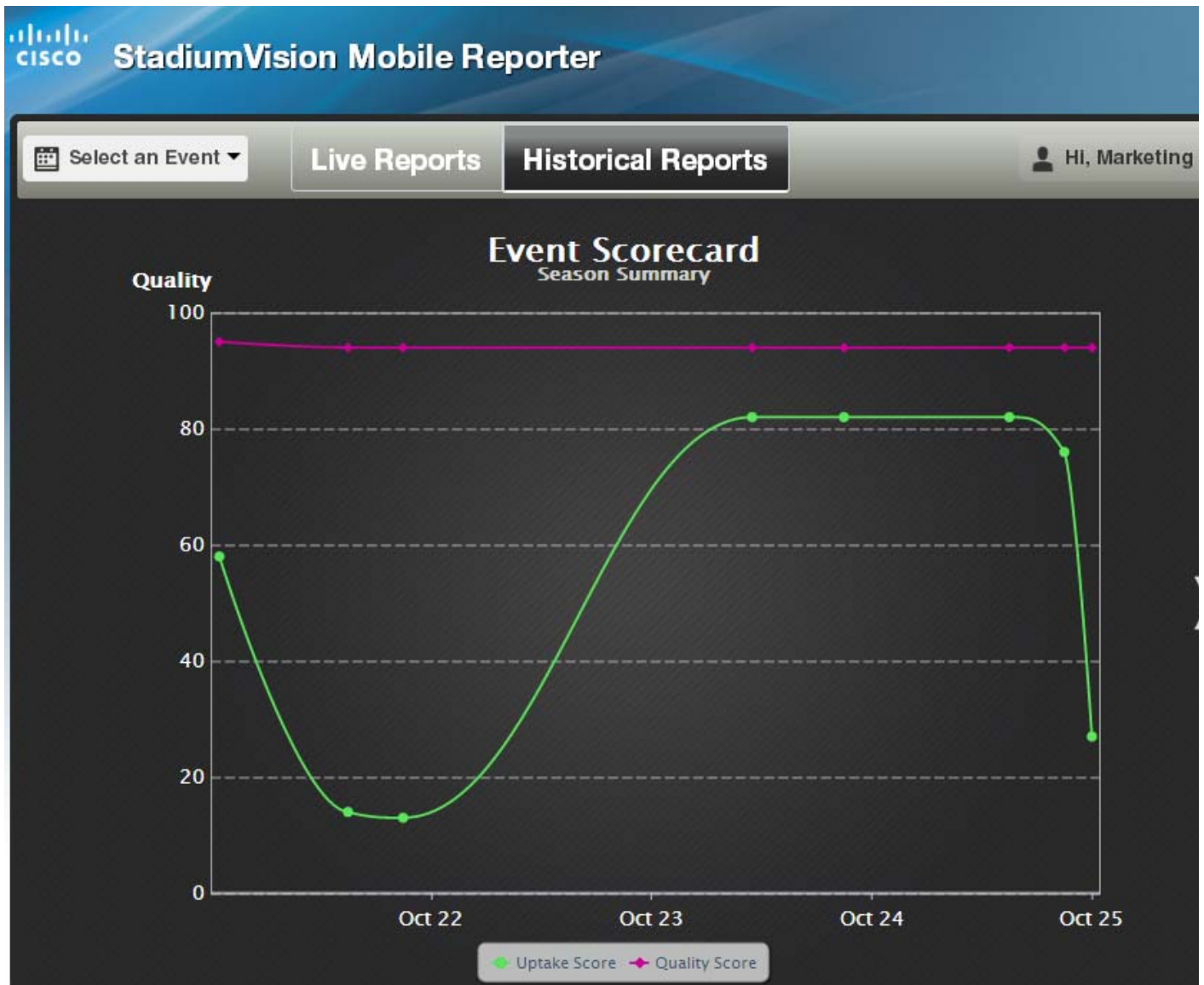
Figure 4   *Peak Concurrent Video Viewers Report*
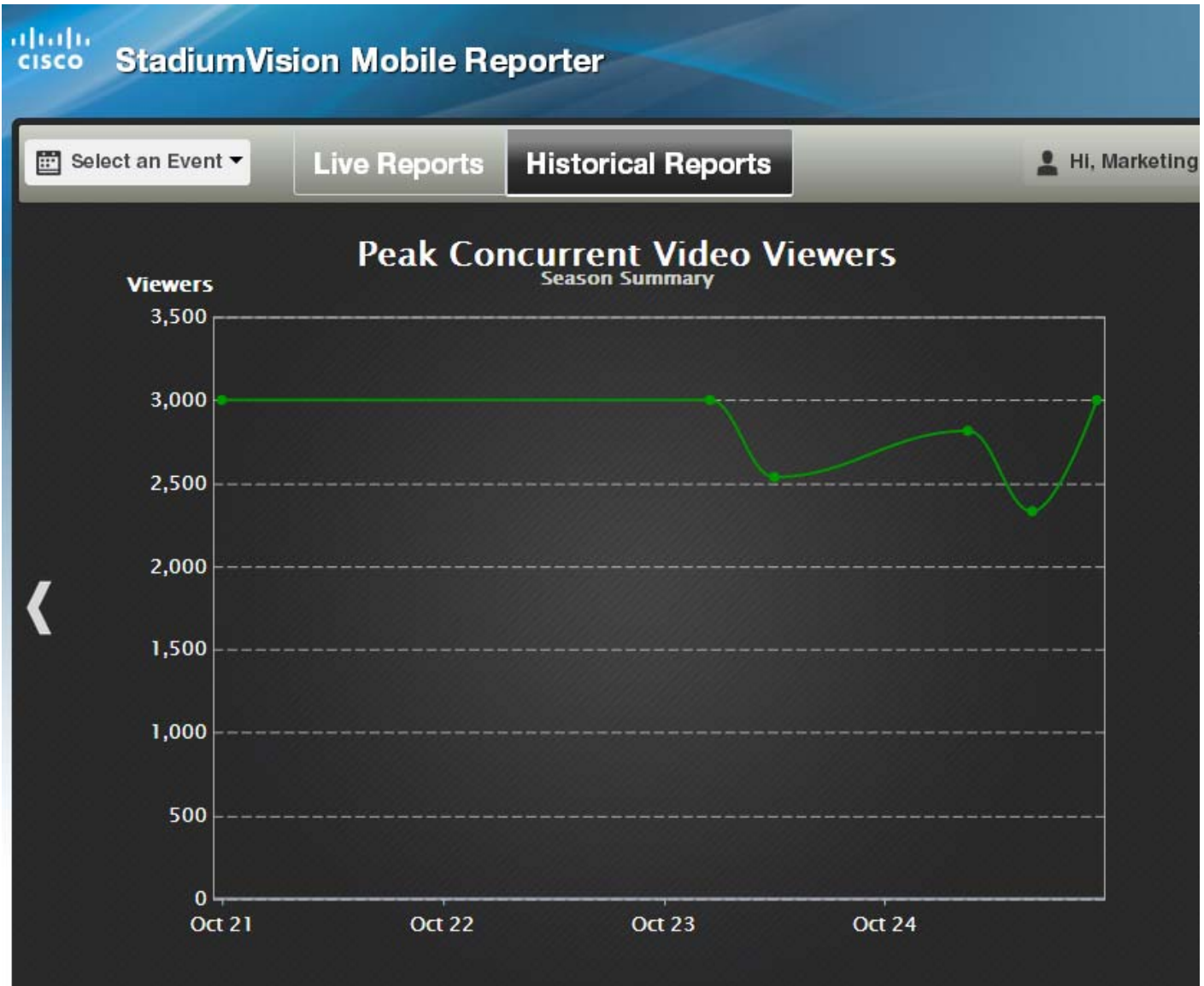
Figure 5   *Unique Video Viewers Report*
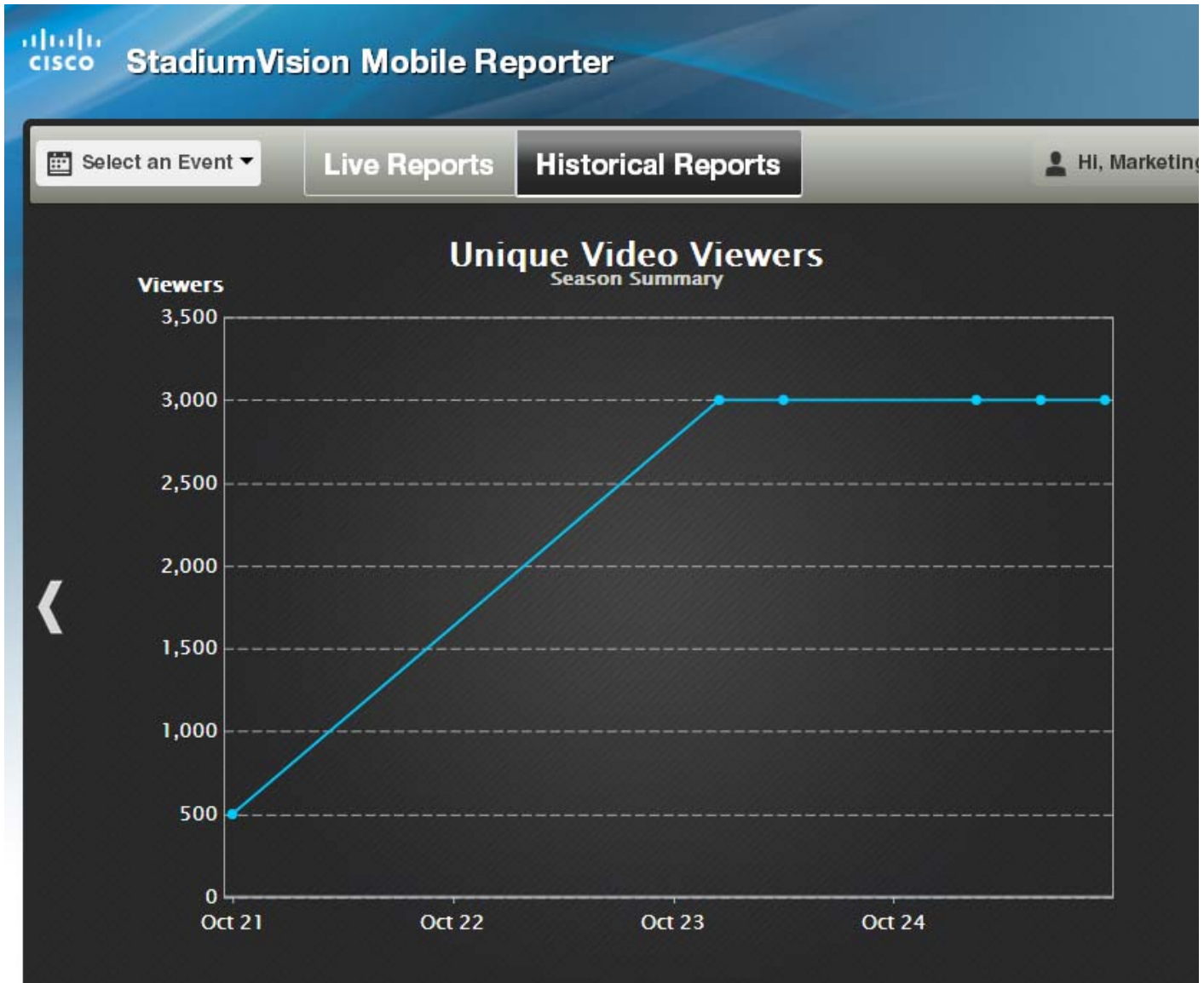
Figure 6   *Client Demographic Report*
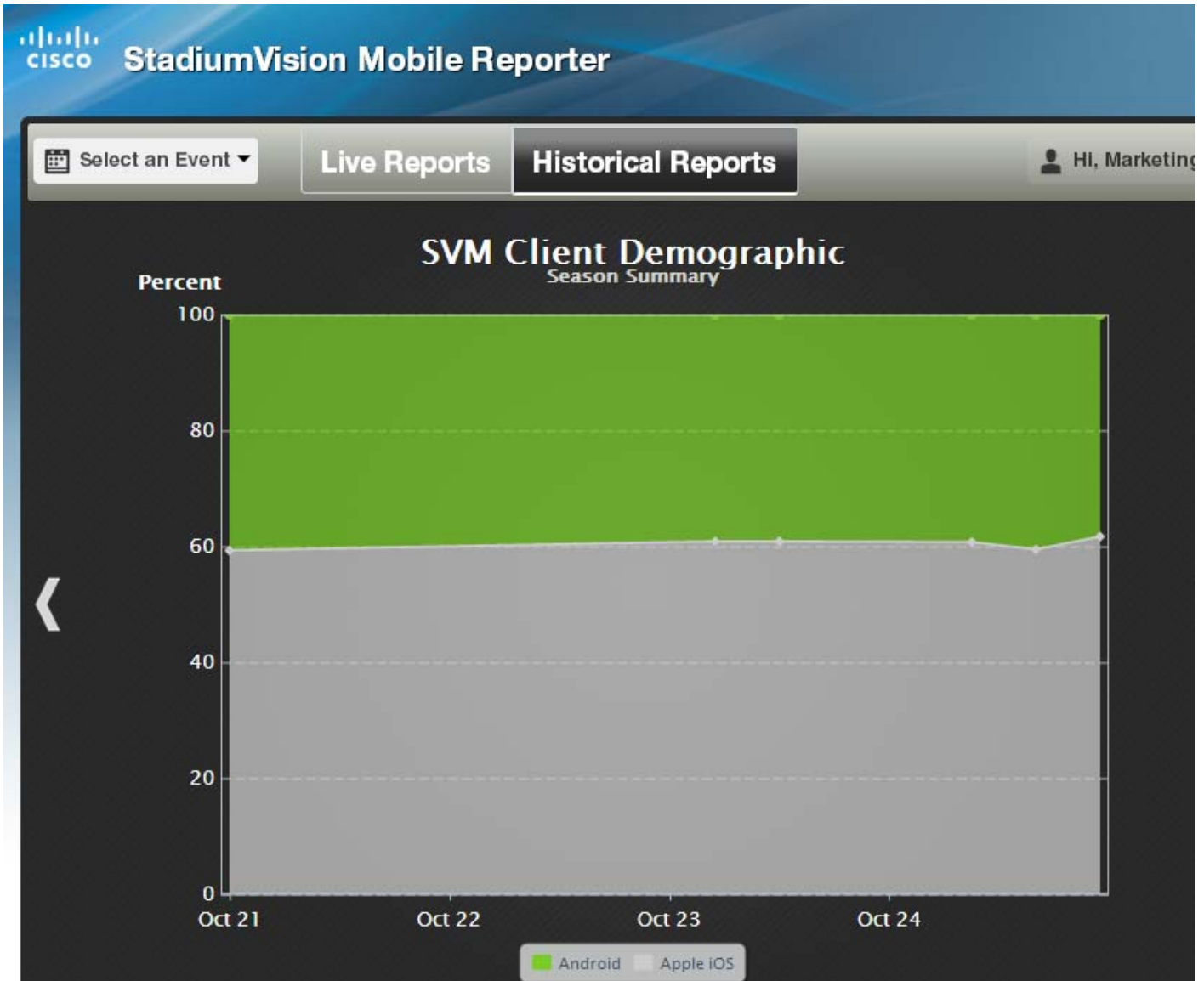
Figure 7   *Concurrent Clients Report*
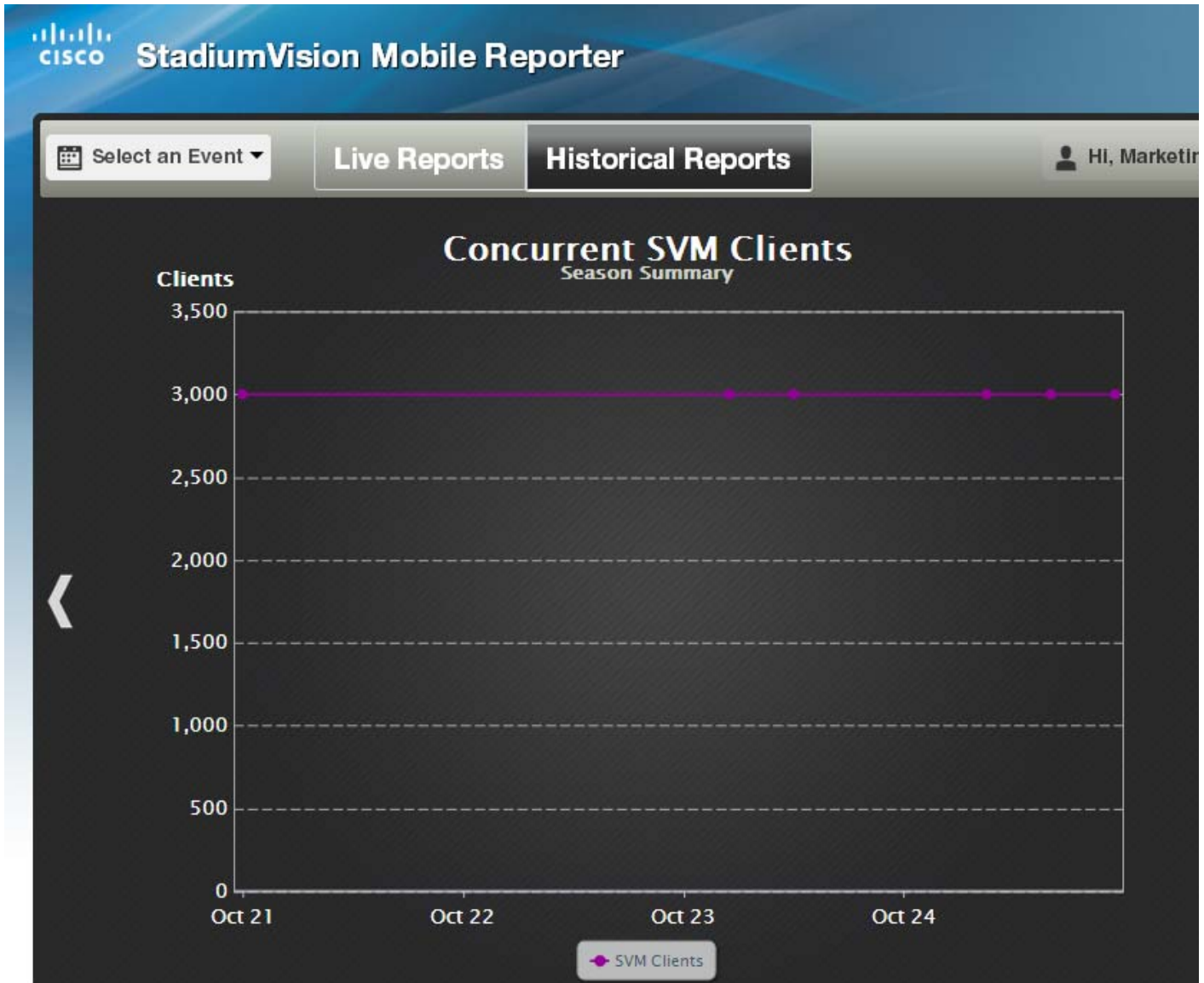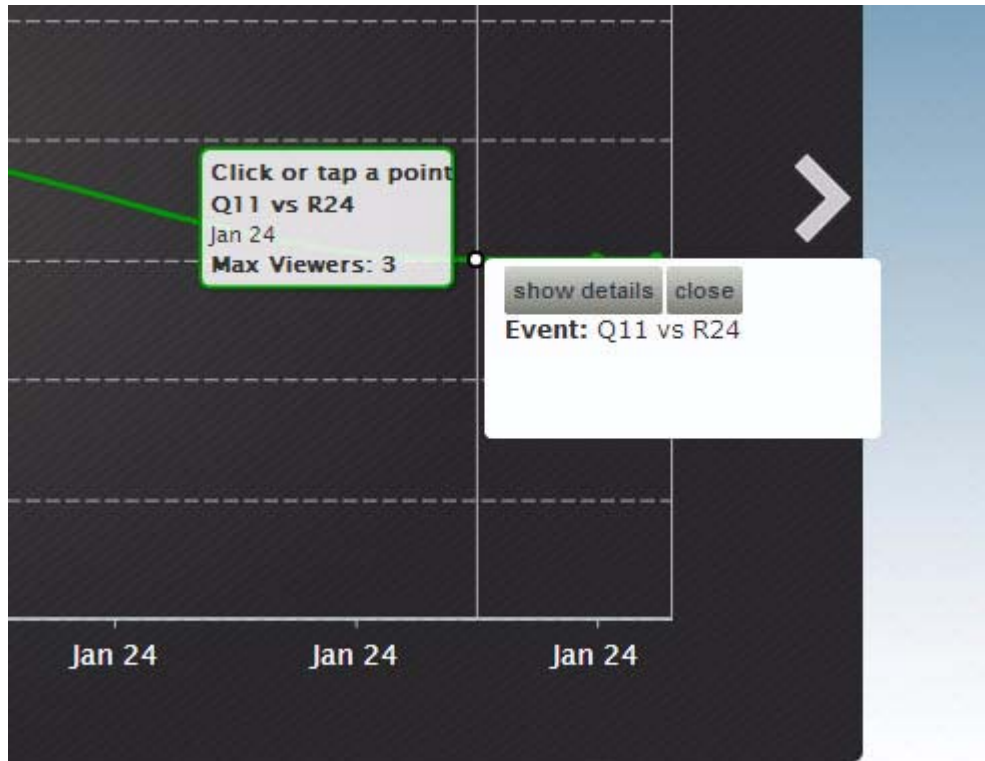
Figure 8   *Total Video Viewing Time*
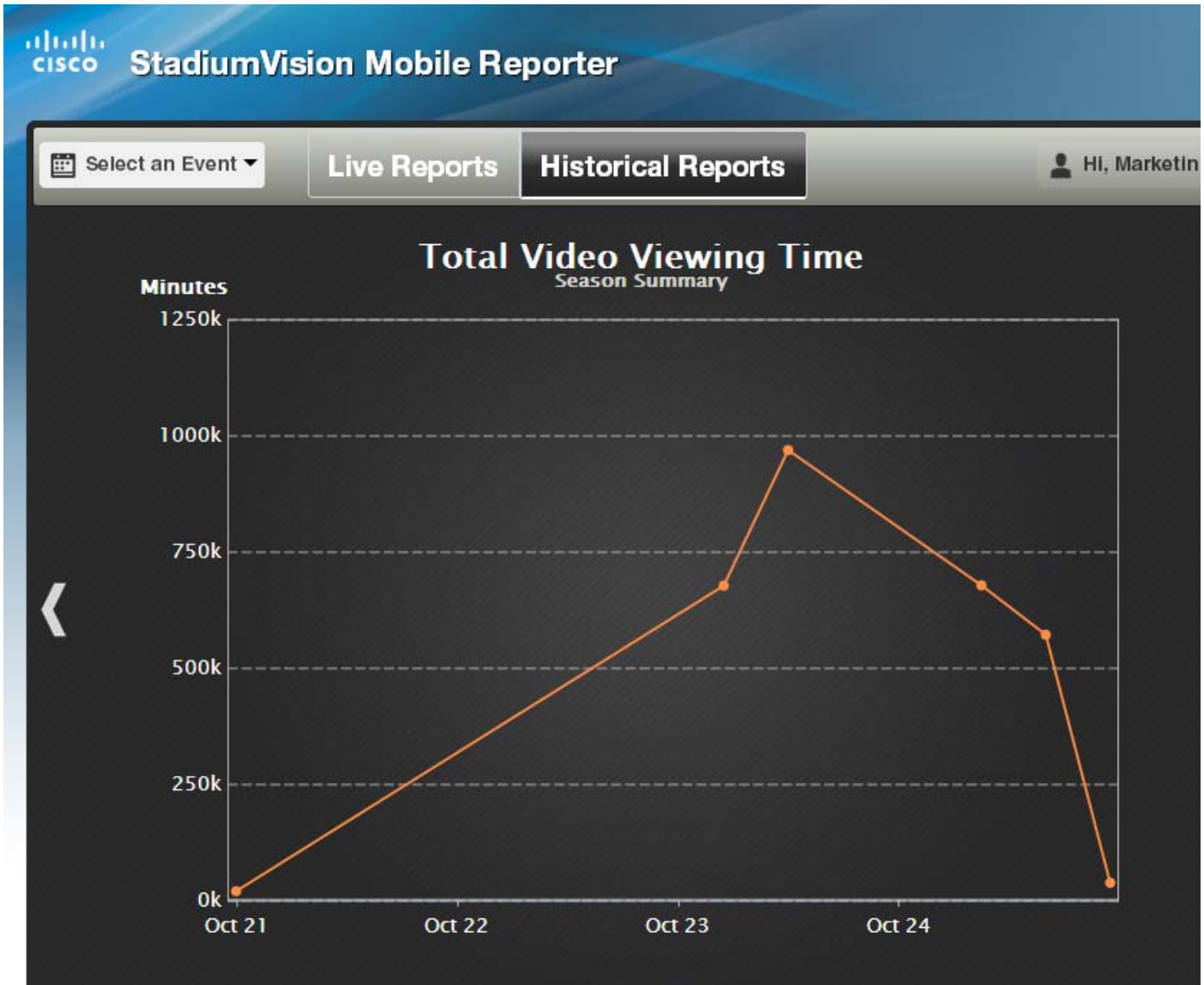
Figure 9 *Choosing an Event*
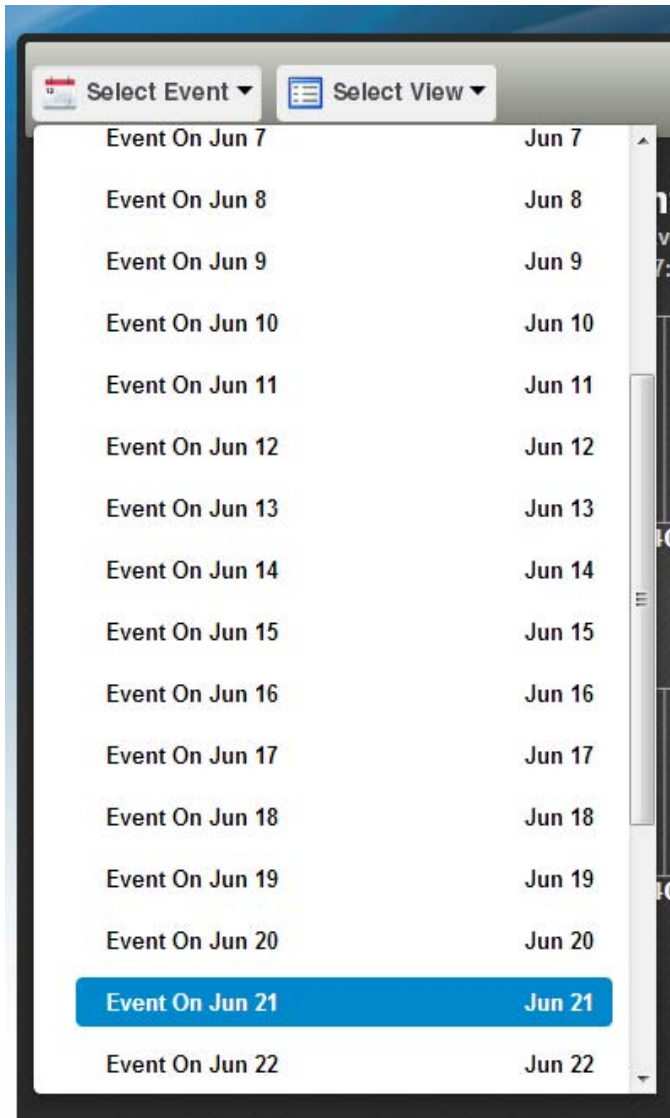
Several reports offer additional details for an event by clicking on the data point in the chart, and clicking **show details**, as shown in Figure 10.

Figure 10　　　*Sample Report Time Point Detail*

Cisco StadiumVision Mobile Reporter Architecture and Administration

This module contains information that system administrators will use to configure and maintain the StadiumVision Mobile Reporter, and contains the following sections:

- Overview of the StadiumVision Mobile Reporter, page 25
- User Roles and Capabilities, page 26
- Cisco StadiumVision Mobile Reporter Text Utility Interface, page 26
- About Databases, Backups, and Managing Disk Utilization, page 36
- Configuring Failover Between Cisco StadiumVision Mobile Reporters, page 41
- Service Quality Reporting and Cisco Prime Infrastructure Integration, page 43
- Troubleshooting and CLI Access (Cisco Personnel Only), page 43
- Accessing Administrative Interfaces, page 45

Overview of the StadiumVision Mobile Reporter

The StadiumVision Mobile Reporter works in conjunction with the StadiumVision Mobile Streamer, SDK, and client application to provide quality of experience statistics. It collects and processes data from the StadiumVision Mobile Streamer, SDK, and client application, and provides wireless network analysis via reports and live event charts. Figure 1 depicts the Cisco StadiumVision Mobile Reporter in the Cisco StadiumVision Mobile solution.

The Reporter accepts data from mobile devices in the stadium which are running an application based on the Cisco StadiumVision Mobile Client SDK. The clients report their data periodically and frequently, perhaps once per minute or more. The Cisco StadiumVision Mobile Reporter is designed to efficiently process large amounts of data and summarize it in multiple and flexible ways.

Figure 1 *Cisco StadiumVision Mobile Architecture*

User Roles and Capabilities

The Cisco StadiumVision Mobile Reporter has two users enabled by default: Admin and Marketing.

The **admin** user role provides technical tools with the following features:

- System monitoring reports
    - Disk utilization
    - Current number of users)
- System alerts
- Event upload function for event statistics

The **marketing** user role provides marketing information with the following reports on both a live and historical basis:

- Maximum Viewers
- Total unique viewers
- Total viewing time
- Mobile device break down

Cisco StadiumVision Mobile Reporter Text Utility Interface

The StadiumVision Mobile Reporter Text Utility Interface (TUI) provides a console-based text interface for use by system installers and on-site troubleshooting personnel. The TUI can be used to perform routine system tasks such as modifying system configurations, changing passwords, and checking system logs. Remote TAC access and troubleshooting can both be facilitated from the TUI in the event of a StadiumVision Mobile Reporter outage or failure.

Logging into the TUI

To access the TUI, you need either physical console access or an SSH client such as PUTTY. Log in from the console or over SSH with the following credentials:

username = installer
password = cisco!123

You can change the password via the TUI.

File Editor

Several of the TUI options open server system files for you to modify using the Unix system vi editor. The following configuration files are editable from the TUI:

- DNS information—/etc/resolv.conf
- NTP server information—/etc/ntp.conf
- Server host information—/etc/hosts

Before modifying configuration files, you should be familiar with the simple editing techniques used within the vi editor. Table 1 describes some of the more common vi Editor commands.

Table 1   *Common vi Editor Commands*

Command	Description
ZZ or **:wq**	Exit vi and save changes.
:q!	Exit vi without saving changes.
Esc key	Exit current mode and enter vi command mode.
Cursor Movement	
h	Move left (backspace).
j	Move down.
k	Move up.
l	Move right.
Enter key	Move to the beginning of the next line.
Inserting	
a	Append character after cursor.
i	Insert character before cursor. Enters INSERT mode.
r	Replace character under cursor with next character typed.
R	Keep replacing character until [Esc] is pressed.
Deleting	
db	Delete word before cursor.
dd	Delete line under cursor.
dw	Delete word under cursor.
x	Delete character under cursor.
P	Undo deletion of characters, words, or lines before cursor.
p	Undo deletion of characters, words, or lines after cursor.

Using the TUI

Figure 2 shows an overall view of the StadiumVision Mobile Reporter TUI.

Figure 2   Cisco StadiumVision Mobile Reporter TUI Hierarchy
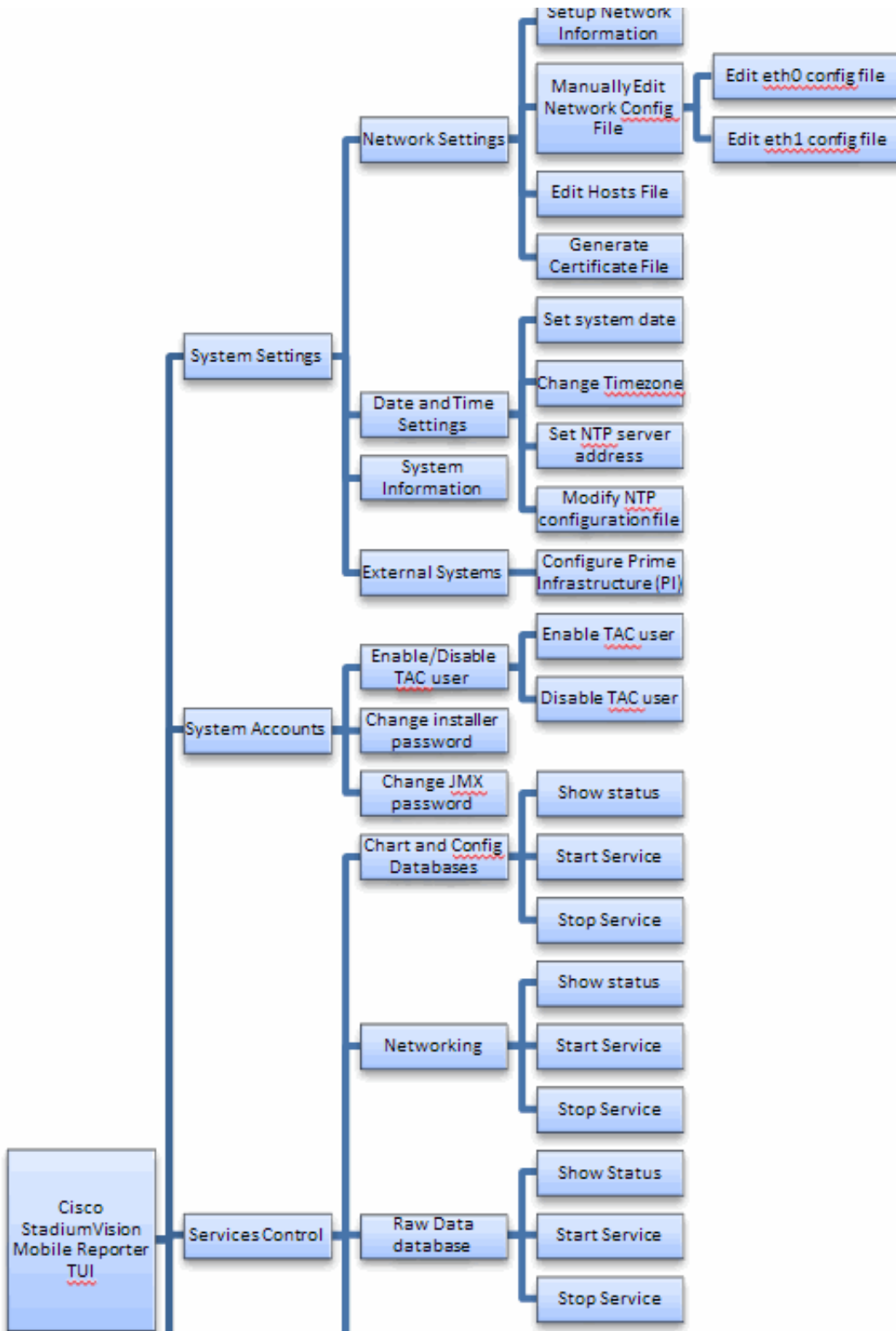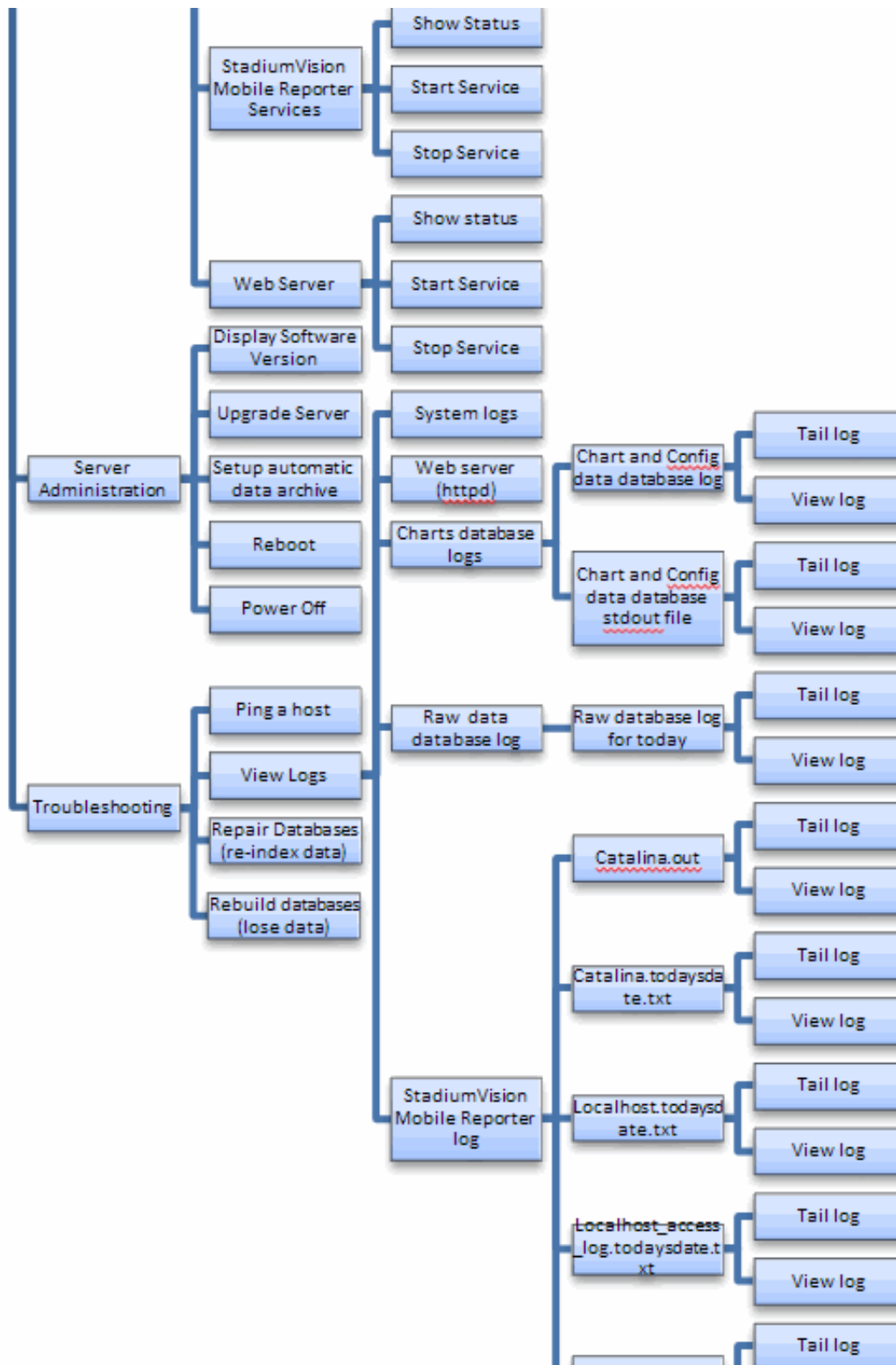
Figure 3　　　*Cisco StadiumVision Mobile Reporter TUI Hierarchy (continued)*

The following sections provide a brief description of each TUI menu item.

System Settings

Network Settings

Setup Network Information
Allows for configuration of network devices and the DNS server

Manually edit network config file
- Edit eth0 config file - allows for configuration of Ethernet port 0
- Edit eth1 config file - allows for configuration of Ethernet port 1

Edit hosts file
Uses the vi editor to modify the /etc/hosts file

Generate certificate file
Generates a new networked certificate file

Data and time settings

The system date, timezone, and NTP server address should be set during the installation process. If these items were not configured during installation, it is critical to configure these items to avoid time drift and to ensure accurate reporting.

Set system date
Manually sets the date.

Change timezone
Allows for setting the timezone. Choose a number next to the correct timezone.

Set NTP server address
Allows for setting the Network Time Protocol (NTP). Enter an IP address for a valid NTP server.

Modify NTP configuration file
Allows for manually editing the NTP configuration file.

System Information

Displays network information for eth0 and eth1 ports, hosts file, DNS information, and NTP server information.

External Sources

Configure Prime Infrastructure (PI) system on the Cisco StadiumVision Mobile Reporter

Allows configuration of the Prime Infrastructure for service quality reporting. When this option is selected, the user provides the following information:

- The IP address of the Prime Infrastructure (PI) server

- A user name with access to the API on the Prime Infrastructure (PI)

- A user password

- A list of SSIDs that are to be used, separated by commas. If the SSID contains a space, surround it with double quotes. Example:

  ```
  svmdata,sande-guest,"Stadium Center"
  ```

Perform the Configuration

1. In PI, configure a user which in the admin group. This is the user account for the Cisco StadiumVision Mobile Reporter configuration above.

2. Make sure https is allowed for API calls if you have a firewall.

For more details about Prime Infrastructure and service quality reporting, see the .

Troubleshoot the Configuration

To troubleshoot communication between Cisco StadiumVision Mobile Reporter and Cisco Prime Infrastructure (PI), use the curl command (see example). Note the following:

- Pay attention to the "200 OK" part of the output. Anything other than 200 indicates an error. For example, incorrect credentials will give you a "401 Unauthorized".

- A misconfigured firewall will result in the lack of any response.

```
[user@reporter mongo]$ curl -i -k -u api1
'https://10.194.172.75/webacs/api/v1/data/AccessPoints.json?.full=true&clientCount=gt(0)'
Enter host password for user 'biff':
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Set-Cookie: JSESSIONID=F0C78493D4E62D8009A547DD61F74169; Path=/webacs; Secure
Content-Range: instances 0-4/5
Date: Thu, 18 Jul 2013 21:59:22 GMT
Content-Type: application/json
Content-Length: 3961
(remainder of example text removed)
{"queryResponse":{"@type":"AccessPoints","@rootUrl":"https:\/\/10.194.172.75\/webacs\/api\
/v1\/data","@requestUrl":"https:\/\/10.194.172.75\/webacs\/api\/v1\/data\/AccessPoints?.fu
ll=true&clientCount=gt(0)","@responseType":"listEntityInstances","@count":"5","@first":"0"
,"@last":"4","entity":[{"@url":"https:\/\/10.194.172.75\/webacs\/api\/v1\/data\/AccessPoin
ts\/6251248","@type":"AccessPoints","@dtoType":"accessPointsDTO","accessPointsDTO":{"@id":
"6251248","@displayName":"6251248","adminStatus":"ENABLE","bootVersion":"12.4.2.4","client
Count":8,"clientCount_2_4GHz":6,"clientCount_5GHz":2,"controllerIpAddress":"10.194.205.53"
,"controllerName":"sjc29-wlc2-bottom","countryCode":"US","ethernetMac":"1c:df:0f:95:dc:65"
,"hreapEnabled":false,"ipAddress":"10.194.175.250","location":"in the
cube","lwappUpTime":145558800,"macAddress":"40:f4:ec:4b:9e:60","model":"AIR-CAP3502E-A-K9
","name":"sjc28-svmdemo-3502E-ap3","serialNumber":"FTX1504K0TJ","softwareVersion":"7.2.110
.104","status":"CLEARED","type":"AP3500E","upTime":868736700}},{"@url":"https:\/\/10.194.1
72.75\/webacs\/api\/v1\/data\/AccessPoints\/6251265","@type":"AccessPoints","@dtoType":"ac
cessPointsDTO","accessPointsDTO":{"@id":"6251265","@displayName":"6251265","adminStatus":"
ENABLE","bootVersion":"12.4.23.0","clientCount":3,"clientCount_2_4GHz":2,"clientCount_5GHz
":1,"controllerIpAddress":"10.194.168.2","controllerName":"qa29-5508-WLC1","countryCode":"
US","ethernetMac":"64:9e:f3:8e:fb:65","hreapEnabled":false,"ipAddress":"10.194.168.12","lo
```

```
cation":"default
location","lwappUpTime":196977900,"macAddress":"08:d0:9f:17:f0:80","model":"AIR-CAP3502I-A
-K9
","name":"Lab172-12","serialNumber":"FTX1547K6EG","softwareVersion":"7.2.110.101","status"
:"CLEARED","type":"AP3500I","upTime":196984700}},{"@url":"https:\/\/10.194.172.75\/webacs\
/api\/v1\/data\/AccessPoints\/15862848","@type":"AccessPoints","@dtoType":"accessPointsDTO
","accessPointsDTO":{"@id":"15862848","@displayName":"15862848","adminStatus":"ENABLE","bo
otVersion":"12.4.2.4","clientCount":2,"clientCount_2_4GHz":1,"clientCount_5GHz":1,"control
lerIpAddress":"10.194.168.2","controllerName":"qa29-5508-WLC1","countryCode":"US","etherne
tMac":"30:e4:db:d9:55:03","hreapEnabled":false,"ipAddress":"10.10.10.60","location":"defau
lt
location","lwappUpTime":5750200,"macAddress":"64:ae:0c:00:0a:a0","model":"AIR-CAP3502P-A-K
9
","name":"SVM-Pod3-DavidN","serialNumber":"FTX1530E3ZZ","softwareVersion":"7.2.110.101","s
tatus":"CLEARED","type":"AP3500P","upTime":158081600}},{"@url":"https:\/\/10.194.172.75\/w
ebacs\/api\/v1\/data\/AccessPoints\/22485469","@type":"AccessPoints","@dtoType":"accessPoi
ntsDTO","accessPointsDTO":{"@id":"22485469","@displayName":"22485469","adminStatus":"ENABL
E","bootVersion":"12.4.23.5","clientCount":1,"clientCount_2_4GHz":0,"clientCount_5GHz":1,"
controllerIpAddress":"10.194.205.53","controllerName":"sjc29-wlc2-bottom","countryCode":"U
S","ethernetMac":"b0:fa:eb:e3:a6:9c","hreapEnabled":false,"ipAddress":"10.10.98.159","loca
tion":"default
location","lwappUpTime":8161400,"macAddress":"70:10:5c:1e:db:20","model":"AIR-CAP3502P-A-K
9
","name":"Boulder-2","serialNumber":"FTX1720K15Q","softwareVersion":"7.2.110.104","status"
:"CLEARED","type":"AP3500P","upTime":8168600}},{"@url":"https:\/\/10.194.172.75\/webacs\/a
pi\/v1\/data\/AccessPoints\/22485471","@type":"AccessPoints","@dtoType":"accessPointsDTO",
"accessPointsDTO":{"@id":"22485471","@displayName":"22485471","adminStatus":"ENABLE","boot
Version":"12.4.23.5","clientCount":1,"clientCount_2_4GHz":1,"clientCount_5GHz":0,"controll
erIpAddress":"10.194.205.53","controllerName":"sjc29-wlc2-bottom","countryCode":"US","ethe
rnetMac":"00:06:f6:ee:77:9a","hreapEnabled":false,"ipAddress":"10.10.98.155","location":"d
efault
location","lwappUpTime":8620200,"macAddress":"70:10:5c:1e:d5:d0","model":"AIR-CAP3502P-A-K
9
","name":"Boulder-1","serialNumber":"FTX1720E138","softwareVersion":"7.2.110.104","status"
:"CLEARED","type":"AP3500P","upTime":8627400}}]}}
```

Removing the PI Configuration

If the PI is unconfigured, the **svmreporter** service must be restarted. See the for details.

System Accounts

Enable/Disable TAC user

- Enable TAC user

  Enables a Cisco TAC representative to remotely troubleshoot the StadiumVision Mobile Reporter. This will allow for remote shell access which will be used for remote troubleshooting purposes. Always disable this access once you complete troubleshooting the system.

- Disable TAC user

  Disables remote shell access.

Change installer password

Changes the installer password.

Change JMX password

Changes the Java Management Extensions password, which may be used to allow JMX clients to monitor and troubleshoot the Reporter.

Services Control

Charts and Config Database

Allows the user to show the status of the charts and configuration database, and to start or stop the charts and configuration database service.

- Show Status - displays the overall service status
- Start Service - starts the service
- Stop Service - stops the service

Networking

- Networking status - displays the status of ports eth0 and eth1
- Restart networking - restarts the networking service

Raw Data Database

The StadiumVision Mobile Reporter contains two databases: the raw data database, where the unprocessed event data is collected, and the charts and config database

- Show Status - displays the status of the raw data database service
- Start Service - starts the raw data database service
- Stop Service - stops the raw data database service

StadiumVision Mobile Reporter Services

- Show Status - displays the svmreporter service status
- Start Service - starts the svmreporter service
- Stop Service - stops the svmreporter service

Web Server

- Show Status - displays the httpd service status
- Start Service - starts the httpd service
- Stop Service - stops the httpd service

Server Administration

Display Software Version

Displays the installed software version.

Upgrade Server

Provides a way to upgrade the StadiumVision Mobile Reporter software by choosing an ISO image from a list. See the "Upgrading StadiumVision Mobile Reporter Using the Web Browser User Interface" section in the *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide*.

Setup automatic data archive

On a nightly basis, backups are done of the chart and config database. Also a nightly archive of the raw data database is performed. These file archives are available to download via HTTP download as shown in Table 2. The file archives are automatically removed from the Cisco StadiumVision Mobile Reporter after 20 days.

Reboot

Reboots the Cisco StadiumVision Mobile Reporter.

Power Off

Powers the Cisco StadiumVision Mobile Reporter off.

Troubleshooting

Ping a host

Allows for connectivity testing by pinging an IP address.

View logs

Log files are written as events transpire. The log files are available to be downloaded via HTTP. The log files are intended for a Cisco TAC representative to aid in troubleshooting. The log files are rotated out of the system, typically after 20 days.

- System logs
    - System console messages (/var/log/messages)
    - Authentication/Authorization logs (/var/log/secure)
    - Driver messages (dmesg)
    - Tail log
    - View log
    - Authentication/Authorization logs
- Web Server logs (httpd)
    - Web Server access log (/var/log/httpd/error_log)
    - Tail log
    - View log
    - Web Server error log
    - Tail log
    - View log
- Charts database logs
    - Chart and Config data database log
    - Tail log
    - View log
    - Chart and Config data database stdout file
    - Tail log
    - View log

- Raw data database log
    - Raw database log for today
        - Tail log
        - View log
- StadiumVision Mobile Reporter Log
    - catalina.out
        - Tail log
        - View log
    - catalina.2012-12-11.log
        - Tail log
        - View log
    - localhost.2012-12-11.log
        - Tail log
        - View log
    - localhost_access_log.2012-12-11.txt
        - Tail log
        - View log
    - svmreporter.log
        - Tail log
        - View log

Repair databases (re-index data)
- Repair Raw Data database

Rebuild databases (lose data)
- Rebuild Raw Data database (data will be lost)
- Rebuild Chart and Config database (data will be lost)
- Re-seed Chart and Config database

About Databases, Backups, and Managing Disk Utilization

There are two databases in the Reporter: the raw data database, and the chart and configuration data database. The configuration database is never deleted. The raw data can potentially use up all available disk space, and therefore the data must be periodically purged.

On a daily basis, a backup of both databases is done at around 4:00 AM. The data files can be viewed by going to the URL http://svm:8080/reporter/jsp/svmbackup.jsp. These files are kept on the Reporter for 20 days and can be downloaded from that location. The backup files are listed below:

Chart and Configuration data backup file:
- ChartAndConfigData.MMDDHHMI.tgz (where YYYYMMDDHHMI is the year/month/day/hour/minute)

Raw data backup files:

- MonitorEvent.YYYYMMDDHHMI.bson.gz

- CepResults.YYYYMMDDHHMIbson.gz

- StreamerEvent.YYYYMMDDHHMI.bson.gz

- SvmMobileMapEvent.YYYYMMDDHHMI.bson.gz

In StadiumVision Mobile Reporter release 1.2, there is an automated scheduled to remove all the raw data in the reporter. It happens every 6 months, on June 1 and December 1, at 5:30AM. Just prior to the data purge, an archive file of the existing data will be created and available at the above URL.

Changing the Data Purge Schedule

To change the purge schedule, a change should be made to the 'crontab' file. From a shell terminal session, use the following command:

$**sudo crontab -e**

This invokes vi editor, and you will see two lines like the following:

```
# purge mongo raw data every 6 months at 5:00 AM
0 05 01 Jun,Dec *
/var/svm/bin/purgeMongoData.sh/opt/sv/servers/svmreporter/logs/purgeMongo.log 2>&1
```

Modify the second line as desired, according to crontab conventions. For example, if you would like to purge data every 3 months, change "Jun,Dec" to "Mar,Jun,Sep,Dec".

Performing a Backup

Download the backup file on a regular basis. The purpose of performing a backup is to maintain a copy of the files in the event that the reporter machine becomes unusable or hard drive failure.

Step 1 Access the following link in a web browser:

http://*reporter ip adress:*8080/reporter/jsp/svmbackup.jsp

Note After a fresh install, no backup files will exist.

A list of files will appear, as shown below:

Step 2   Identify the following backup files:

Chart and Configuration data backup file:

- ChartAndConfigData.MMDDHHMI.tgz (where YYYYMMDDHHMI is the year/month/day/hour/minute)

Raw data backup files:

- MonitorEvent.YYYYMMDDHHMI.bson.gz
- CepResults.YYYYMMDDHHMIbson.gz
- StreamerEvent.YYYYMMDDHHMI.bson.gz
- SvmMobileMapEvent.YYYYMMDDHHMI.bson.gz

Step 3   Copy the backup files from the list onto a backup drive.

Performing a Restore

A restore is typically required for one of two reasons:

1. The Cisco StadiumVision Mobile Reporter has suffered a catastrophic failure, and is being rebuilt from scratch or being replaced with a spare server.

2. The Cisco StadiumVision Mobile Reporter has suffered data loss or corruption, and needs to be rolled back to an earlier known good state.

In scenario 1., first install the Cisco StadiumVision Mobile Reporter software by following the directions in the *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide.*

Make sure to configure the DNS and NTP servers, timezone, and SNETAC account (see the "Troubleshooting and CLI Access (Cisco Personnel Only)" section on page 43), as these parameters are not included in the restore. One this has been completed, continue with the restore steps below.

In scenario 2., go directly to the restore steps that follow:

Step 1   Log on with an SNETAC account to access the command line prompt.

Step 2   Use the **scp** command to copy the **ChartAndConfigData.MMDDHHMI.tgz** and **CepResults.MMDDHHMI.bson.gz** backup files from your laptop to a chosen restore folder (Reporter /tmp is used in the following examples, however, see the ecommendations in the note below).

> ✎
>
> **Note**   It is suggested to not use **/tmp** as the suggested location, as it is small.
>
> Use a directory somewhere in the root partition such as **/opt/sv/servers/svmreporter/logs** or **/opt/sv/servers/svmreporter/restore** (the latter of which would need to be created).

Step 3   Run the restore script '**restoreCassandra.sh**' and '**restoreMongo.sh**' to restore the two backup files. For example:

    a. **/var/svm/bin/restoreCassandra.sh /tmp/ChartAndConfigData.11140402.tgz**

    b. **/var/svm/bin/restoreMongo.sh /tmp/CepResults.11140402.bson.gz**

Step 4   Wait for the script to stop and start the SVM tomcat and chart and config database processes (see the "Services Control" section on page 34 for details).

Output will go to the console but also to the system log (/var/log/messages) and the chart and config database log (/var/log/restoreCassandra.out).

Step 5   Once the script has completed verify that the restore was successful as follows:

    a. Verify that the PI connection is operational. See the "External Sources" section on page 32 for more information.

    b. Login as the admin and verify that the expected event schedule appears, and that CSV files for all past events are present.

    c. Login as the marketing user and verify that all historical events and season charts are present.

Disk Utilization Report

The Admin role in the StadiumVision Mobile Reporter GUI provides a graphic report of the current disk utilization, as shown in Figure 4.
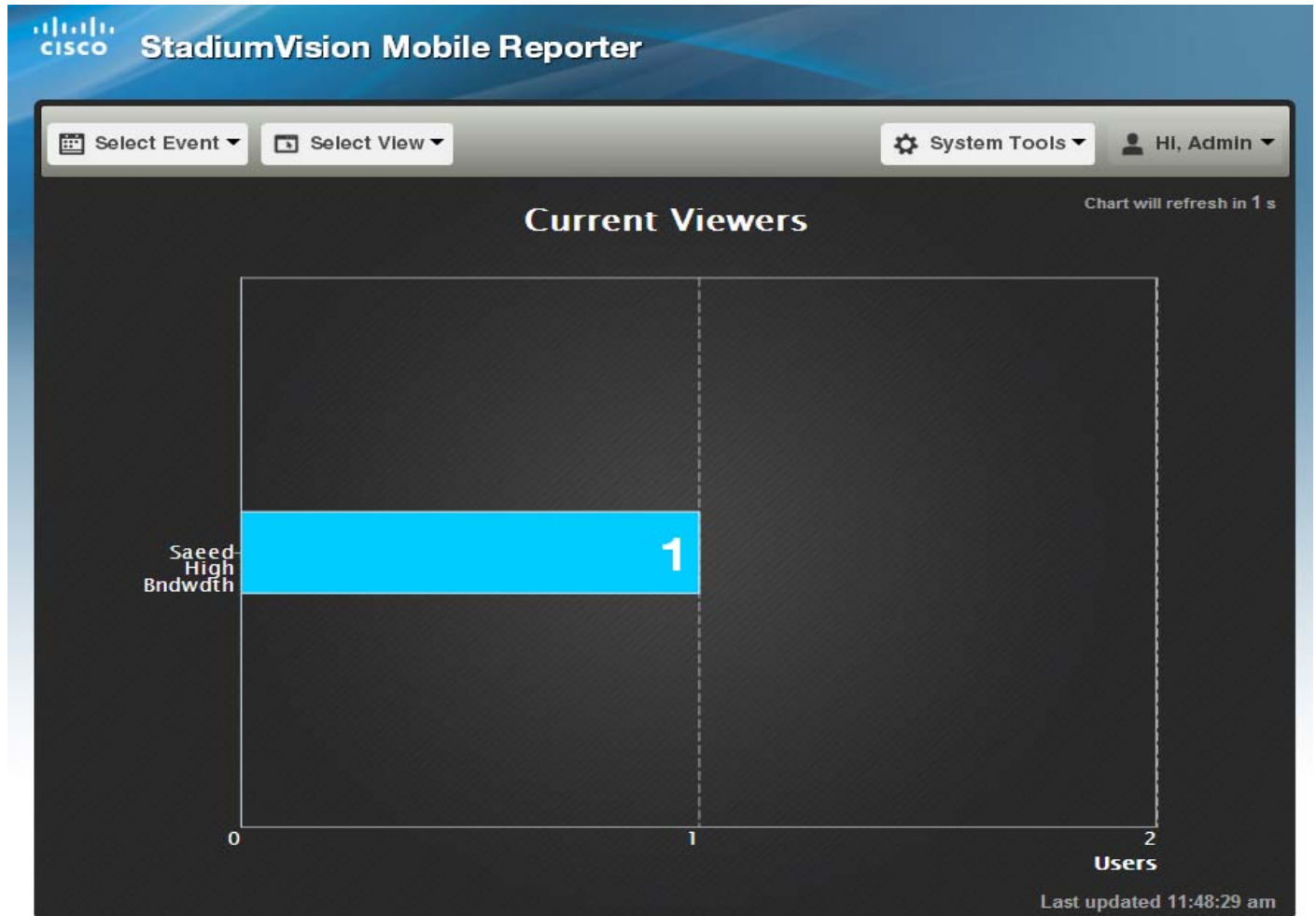
Figure 4   *Disk Utilization Report*
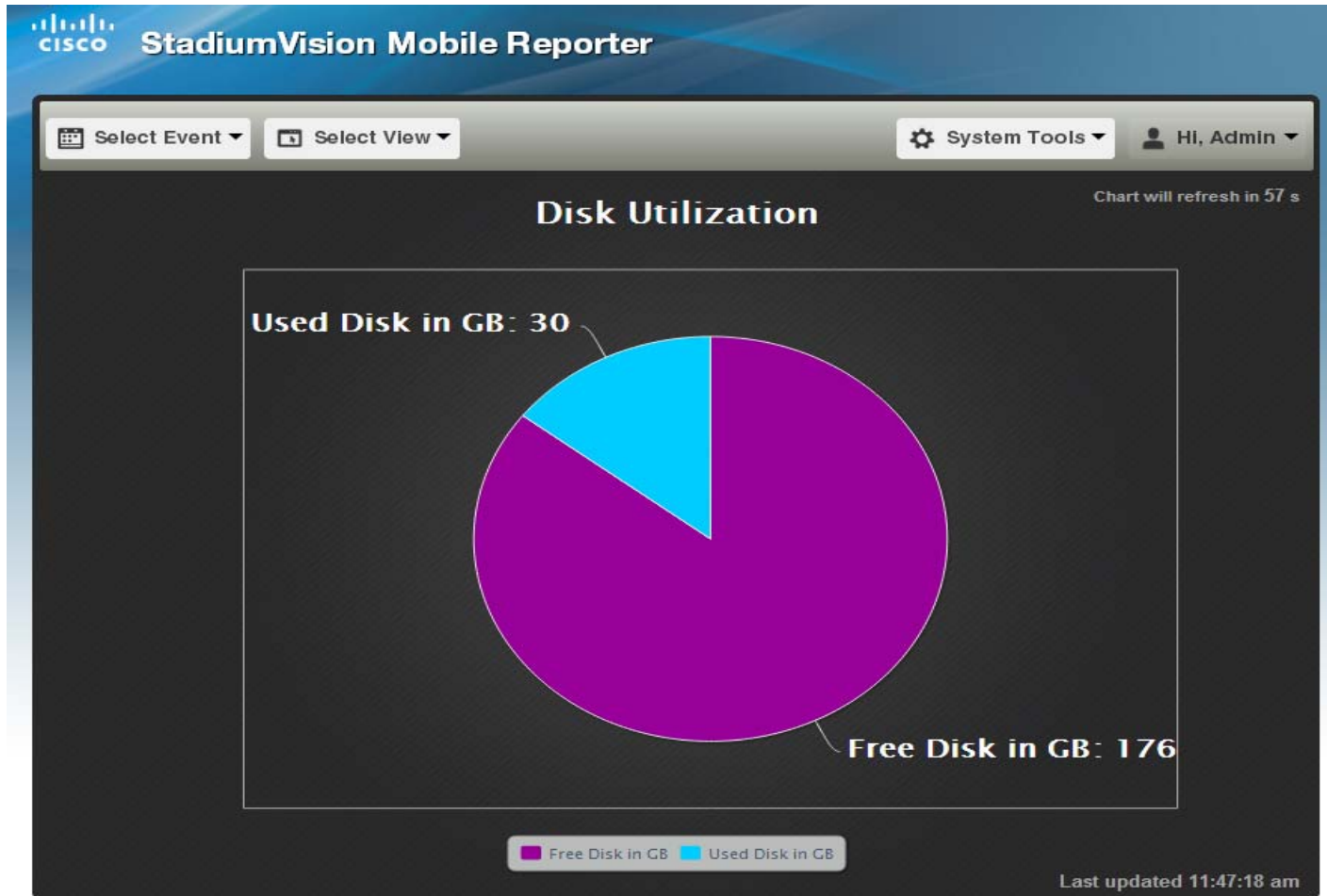
Current Viewer Report

The StadiumVision Mobile Reporter provides a report that depicts the current number of unique clients using StadiumVision Mobile, as shown in Figure 5.

Figure 5   *Current Viewers Report*

Configuring Failover Between Cisco StadiumVision Mobile Reporters

To configure the initial failover setup for between two Cisco StadiumVision Mobile Reporters, use the following procedures.

Step 1 Install two Cisco StadiumVision Mobile Reporters. referred to here as primary and secondary. Assign each Cisco StadiumVision Mobile Reporter its own unique IP address.

Step 2 Configure them identically, i.e. same DNS and NTP server, same timezone, same PI integration, etc. Anything that is configured via TUI should be repeated on both pri and sec.

Performing a Manual Failover

To perform a manual failover, use the following procedure:

Peform a backup using the procedure in the "Performing a Backup" section on page 37. Download the following files from the primary Cisco StadiumVision Mobile Reporter to your laptop:

- ChartAndConfigData.*.tgz
- CepResults.*.bson.gz

Step 3   Use the documented procedure to restore the two files onto the secondary reporter.

Step 4   On the defaults tab on the active streamer, change the Reporter url to point to the secondary Reporter.

Service Quality Reporting and Cisco Prime Infrastructure Integration

Starting with Cisco StadiumVision Mobile Release 1.3, the Cisco StadiumVision Mobile Reporter is integrated with the Cisco Prime Infrastructure (PI). which is the management infrastructure used to configure a wireless network and access points (APs).

The quality reporting feature has the following benefits:

- Every device with a Cisco StadiumVision Mobile application is also a telemetry point for Cisco StadiumVision Mobile metrics.
- Cisco StadiumVision Mobile Reporter collects, aggregates and reports by client, AP and AP area.
- AP groupings are created based on a common prefix in the AP names.
- Area reporting requires integration with Cisco Prime Infrastructure 1.2 or later.

Configuration of the Prime Infrastructure (PI) is performed in the Text Utility Interface (TUI). For more details on configuring Cisco Prime Infrastructure. see the "Configure Prime Infrastructure (PI) system on the Cisco StadiumVision Mobile Reporter" section on page 32.

Troubleshooting and CLI Access (Cisco Personnel Only)

For troubleshooting, Cisco support personnel will need to create a TAC account to have full access to the CLI.

Step 1   From the TUI, select **System accounts**, **Enable/Disable TAC user**, and **Enable TAC user account**.

Confirmation that the TAC account has been enabled appears on the screen.

Step 2   Access the SNE TAC Token Exchange at http://10.194.171.10/cgi-bin/SNETACAuth.cgi.

Step 3   Generate an authentication key by entering the IP address of the Cisco StadiumVision Mobile Reporter and clicking the Submit button. A sample screen is shown in Figure 6.

Step 4   Copy the generated token (if needed save it someplace as you will need it later).

Step 5   SSH (VPN in first if needed) into the Cisco StadiumVision Mobile server you are requesting access to using the username "snetac" and the default password

Step 6   Paste the copied token into the SSH session when prompted for a token.

Step 7   Go through the password setting process when prompted.

An SSH account is now set up with username you specified, and the password you previously entered into this system. This account will be active for the next 24 hours. You may extend and/or re-enable your account at any time by going through this process again.

Figure 6   *SNE TAC Token Exchange*

Figure 6   SNE TAC Token Exchange

Accessing Administrative Interfaces

Table 2 lists URLs and addresses to access various StadiumVision Mobile Reporter interfaces and functions.

Table 2   *StadiumVision Mobile Reporter Interface URLs and Addresses*

URL	Usage
http://*ip address*:8080/reporter/upload	SDK 1.1 streamer and mobile devices
http://*ip address*:8080/reporter/client.up	SDK 1.2+ mobile client devices
http://*ip address*:8080/reporter/streamer.up	SDK 1.2+ streamer
http://*ip address*:8080/reporter/dashboard.svm	Client report login
http://*ip address*:8080/reporter/jsp/svmbackup.svm	Data archive and backups
http://*ip address*:8080/reporter/eventupload.svm	Event schedule upload
http://*ip address*/EventSchedule.txt	Event schedule template
http://*ip address*/query	Query UI
ssh installer@*ip address*	StadiumVision Mobile Reporter TUI

P ART 2

Cisco StadiumVision Mobile Reporter Administration

System State Reports

This section describes how to generate a system status report.

Generating a System Status Report on the Cisco StadiumVision Mobile Reporter

The System Status Report feature on the Cisco StadiumVision Mobile Reporter main page enables easy capture and export of system state data for the Cisco StadiumVision Mobile Reporter server. This information can be sent to a remote support engineer to help troubleshoot any issues that may occur with the system.

Figure 1 shows the System Extract Report Request Page. A description of the items in the page follows in Table 1.

Figure 1   *System State Report Request Page*

Table 1   *System Extract Report Request Page Description*

Category	Description
Report Destination	Allows you to choose whether you want to download the report or view it in your browser window. If you check **Download report**, your browser will download the resulting report when the system state report is ready. You can save this file on your computer, view its contents, and mail it to support personnel. If you check **View in browser**, the resulting report is available for immediate viewing online via the link provided.
Level	Selects the level of detail you want in the report. • **Basic First Level**: Provides detailed information of the system state, including information on configuration and current performance of the hardware, the operating system, the database, the Java VM, and the SV application. • **Java Heap Dump**: Displays a report indicating the internal activities of the selected Java Virtual Machine (JVM). Before running the report, you will see a selection screen showing the process ID, the name of the JVM, and its command line. Select one of the JVMs that you wish to get the head dump for, then click **Get Heap Dump**. The heap dump report will generate. Exercise care in taking a heap dump, because while this is running, it can affect system performance. • **Full SVM Logs**: Displays a list of system log files available for retrieving from the server and copying to your local drive or sending to Cisco Support. If you select **View in Browser**, then you can view the logs online as well.
Previous Reports	Lists up to 15 of the most recent exports of the system state reports that were collected. The reports may have been collected from someone accessing this request page, or from a system scheduled task. You can select one of the links to download to your local drive to view or email to Cisco support.

After the extract report runs, a resulting page will display **Report is ready**. If you selected **View in browser**, a link will appear to view the report in the browser. Depending on your browser and its settings, if you selected **Download Report**, you may get a dialog box to save the report on your local machine. If so, save it as desired.

If the automatic download does not work, you can click on the link after the word **Download** to again download the file. This is a compressed file containing multiple parts to the report. The file has the extension .zip, indicating a compressed folder. The heap dump is a compressed report file which you can save to your local drive and forward to support personnel for troubleshooting, packaged just the same way that the Basic Level report is. You can extract the system state data on a periodic basis through the **Tools > Advanced > Scheduled Tasks** function in the Management Dashboard. The reports generated can be viewed under P**revious Reports** on the main System State Report page.

Note The format of the file name is the date and time that the report was run.

Viewing the Contents of the Zip File

Once you have downloaded the report file to your PC, you will have a .zip file. You can email it to Cisco support as is. If you want to view the contents of this file, follow these steps:

Step 1 Double-click on the file to open the .zip file archive manager. The contents of this file depends on the file compression software program installed on your PC. For example purposes, these instructions will assume you have WinZip on a PC.

Step 2 Click on the **Extract** button and extract ALL the contents of the archive to a new directory on your local drive.

Step 3 Using Windows Explorer, navigate to the extracted directory you just created. In the resulting folder is a file named **index.html**. Double-click that file and it will open in your internet browser.

Step 4 You can now review the rest of the report by clicking on links available from this page.

Step 5 In the case of the heap dump and log file reports, there is no **index.html**. Simply navigate down the levels of folders until you see the log files of interest.