



StadiumVision



## **Cisco StadiumVision Mobile Reporter Administration Guide**

Release 2.0.1-1

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**Cisco Systems, Inc.**

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# Preface

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This document describes how to configure, use, and maintain the Cisco StadiumVision Mobile Reporter in Release 2.0 and later releases.

## Document Revision History

[Table 1](#) lists the technical changes made to this document since it was first published.

**Table 1** *Document Revision History*

Date	Change Summary
June 4, 2015	<ul style="list-style-type: none"> <li>Removed the Cisco Prime Infrastructure 1.2 or later requirement for area reporting in <a href="#">“Service Quality Reporting and Cisco Prime Infrastructure Integration”</a>. Refer to <a href="#">“Configuring Cisco StadiumVision Mobile Reporter for Service Quality Reporting”</a> for reporting information.</li> </ul>
May 26, 2015	<ul style="list-style-type: none"> <li>Updated the version on the title page from 2.0 to 2.0.1-1.</li> <li>Updated the title page date from October, 2014 to May 26, 2015.</li> <li>Updated the <a href="#">Figure 1 on page 4</a>.</li> <li>Added a note about event scheduling restrictions in <a href="#">“Configuring the Cisco StadiumVision Mobile Reporter Server”</a>.</li> </ul>
April 13, 2015	Added a note to the <a href="#">“Information About Uploading Data”</a> section on <a href="#">page 17</a> regarding the scheduling of events.
October 17, 2014	Initial version for Cisco StadiumVision Mobile Reporter Release 2.0.

# Document Organization

Module	Description
<a href="#">Cisco StadiumVision Mobile Reporter Overview</a>	Provides an introduction to the Cisco StadiumMobile Reporter network architecture and application.
<a href="#">Configuring the Cisco StadiumVision Mobile Reporter Server</a>	Describes how to set up the Cisco StadiumVision Mobile Reporter system and is intended for the system installer and administrator (admin user).
<a href="#">Admin and Marketing User Report Reference</a>	Provides a detailed reference of the reports available in Cisco StadiumVision Mobile reporter
<a href="#">System Accounts on the Cisco StadiumVision Mobile Reporter Server</a>	Describes the default system accounts implemented by Cisco StadiumVision Mobile Reporter for access and control of certain server functions.
<a href="#">Cisco StadiumVision Mobile Reporter Data Management</a>	Describes the information that you should know about managing Cisco StadiumVision Mobile Reporter data and disk utilization on the server.
<a href="#">Cisco StadiumVision Mobile Reporter Failover</a>	Describes how to set up two servers for a redundant environment and how to manually fail over as needed.
<a href="#">Cisco StadiumVision Mobile Reporter Text Utility Interface</a>	Provides an overview of the Cisco StadiumVision Mobile TUI and how to use it.
<a href="#">System State Reports</a>	Provides information about the System State Report feature that enables easy capture and export of system state data for Cisco StadiumVision servers, as well as raw data from the Cisco StadiumVision Reporter databases. This information can be sent to a remote support engineer to help troubleshoot any issues that occur with the system.
<a href="#">Troubleshooting the Raw Database</a>	Describes some of the ways that you can troubleshoot the Raw Data Database
<a href="#">Enabling a TAC User Account (Cisco Personnel Only)</a>	Describes how to create a TAC account for Cisco Technical Support to have full access to the CLI.

## Related Documentation

For the listing page of all Cisco StadiumVision documentation, go to:

<http://www.cisco.com/c/en/us/support/video/stadiumvision/tsd-products-support-series-home.html>

- [Cisco StadiumVision Mobile Release Notes](#)

The following documents are available on Cisco.com at:

<http://www.cisco.com/c/en/us/support/video/stadiumvision/products-maintenance-guides-list.html>

- [Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Software Installation and Upgrade Guide](#)—This guide contains instructions on how to install the StadiumVision Mobile Streamer software.



- *Cisco StadiumVision Mobile Reporter Administration Guide*—This guide describes how to install, configure and operate the StadiumVision Mobile Reporter server.
- *Cisco StadiumVision Mobile Streamer Administration Guide*—This guide describes how to install, configure and operate the StadiumVision Mobile Streamer server.
- *Cisco StadiumVision Mobile SDK Guide*—This guide describes how to use the library elements provided in the SDK (Software Development Kit) to create a venue application for mobile devices that accesses the Cisco StadiumVision Mobile feeds.
- *Cisco UCS C220 Installation and Service Guide*—This hardware guide contains information and instructions for installing and servicing the Cisco UCS C220 server. The UCS C220 is the server on which the StadiumVision Mobile Streamer and Reporter each run.
- *Cisco UCS C200 Installation and Service Guide*—This hardware guide contains information and instructions for installing and servicing the Cisco UCS C200 server. The UCS C200 is the server on which the StadiumVision Mobile Streamer and Reporter each run.

The following document is available by contacting your Cisco sales representative:

- *Cisco StadiumVision Mobile Design and Implementation Guide*—This guide provides additional information regarding the Streamer parameters described in this document.

## 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.





StadiumVision



## **PART 1**

# **Cisco StadiumVision Mobile Reporter Architecture Overview**





# Cisco StadiumVision Mobile Reporter Overview

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**First Published: October 17, 2014**

**Revised: June 4, 2015**

This module includes the following topics:

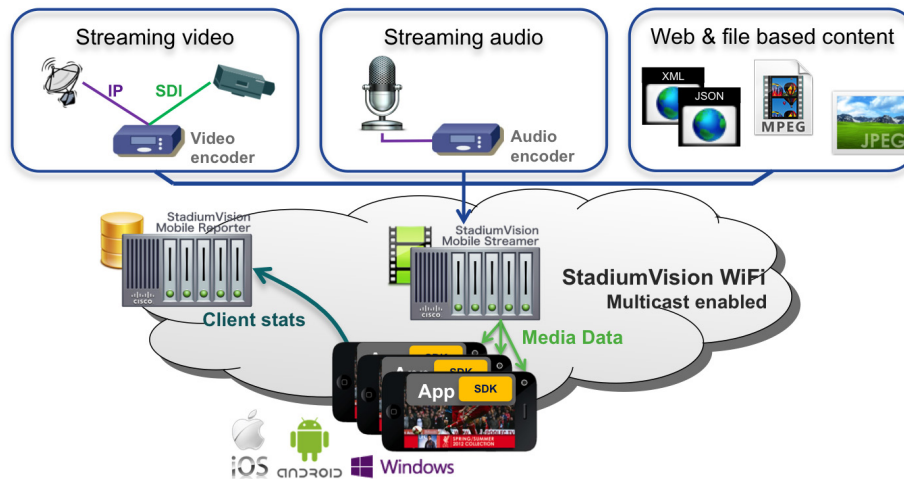
- [Cisco StadiumVision Mobile Reporter Architecture, page 3](#)
- [Service Quality Reporting and Cisco Prime Infrastructure Integration, page 4](#)
- [Cisco StadiumVision Mobile Reporter Application Overview, page 5](#)

## Cisco StadiumVision Mobile Reporter Architecture

Cisco StadiumVision Mobile Reporter works in combination with the Cisco StadiumVision Mobile Streamer, SDK, and client application to provide quality of experience statistics. It collects and processes data from the Cisco StadiumVision Mobile Streamer, SDK, and client application, and provides wireless network analysis through 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



## Service Quality Reporting and Cisco Prime Infrastructure Integration

Beginning in Cisco StadiumVision Mobile Release 1.3, Cisco StadiumVision Mobile Reporter supports integration with Cisco Prime Infrastructure (PI), which is the management infrastructure used to configure a wireless network and access points (APs). Integration with Cisco PI was initially used both to discover AP names and areas as well as to provide data for WiFi client reporting.

Beginning in Release 2.0, the Reporter application supports a new mechanism to upload AP names using a CSV file. This is now the only recommended method of provisioning AP information for the Reporter application.

Integration with Cisco PI is now used only to track the total number of WiFi clients in the venue to provide data for the WiFi clients marketing report and for calculation of the Event Scorecard Uptake Score. Configuration of the PI is performed in the Text Utility Interface (TUI). For more details on configuring Cisco Prime Infrastructure, see the [“Configuring Cisco Prime Infrastructure Integration for Cisco StadiumVision Mobile Reporter”](#) section on page 13. For information about compatible PI versions, see the [Cisco StadiumVision Mobile Release Notes](#).

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.

# Cisco StadiumVision Mobile Reporter Application Overview

This section provides an overview of the Cisco StadiumVision Mobile Reporter application and user roles. It includes the following sections:

- [User Roles, page 5](#)
- [Admin User Interface, page 5](#)
- [Marketing User Interface, page 6](#)
- [Accessing the Cisco StadiumVision Mobile Reporter Application, page 6](#)

## User Roles

The Cisco StadiumVision Mobile Reporter supports the following two user roles for access to different areas of the application:

- **admin**—Intended for network engineers to get reports about venue network performance and also to access system management tools.
- **marketing**—Intended for user to obtain summary information about how the Cisco StadiumVision Mobile solution is being used at the venue.

## Admin User Interface

The admin user can obtain certain reports from the Select View menu, and also perform administrative functions from the System Tools menu.

### Select View Menu for the Admin User

The admin user has access to the following reports from the Select View menu:

- **Event Scorecard**—Contains a Quality and Uptake Score.
- **Data Export**—Additional reports made available using CSV file export. For more information, see the [“Data Export Reports” section on page 25](#).

### System Tools Menu for the Admin User

From the System Tools menu, the admin user can access the functions described in [Table 1](#) to monitor and maintain the system.

**Table 1** System Tools Menu Options

Report Name	More Information
Upload Event Schedule	<a href="#">“Uploading Event Schedule Information to Cisco StadiumVision Mobile Reporter” section on page 16</a>
Upload Testpoints	<a href="#">“Uploading Test Points to StadiumVision Mobile Reporter” section on page 18</a>
Upload AP names	<a href="#">“Uploading AP Information to StadiumVision Mobile Reporter” section on page 12</a>

**Table 1** System Tools Menu Options (continued)

Report Name	More Information
Disk Utilization	<a href="#">“Monitoring Disk Utilization” section on page 54</a>
Current Viewers	<a href="#">“Current Viewers Report” section on page 24</a>
Software Manager	<a href="#">“Using the Software Manager to Upgrade Cisco StadiumVision Mobile Software” module of the <i>Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide</i>.</a>
System State Report	<a href="#">“System State Reports” module on page 79</a>
Upload Data Archive	<a href="#">“Performing a Restore of System Data” section on page 58</a>
Download Data Archive	<a href="#">“Viewing and Obtaining a Copy of Backup Data” section on page 55</a>

## Marketing User Interface

The marketing user role has access to the following reports for both live and historical data:

- Event Scorecard (historical view only)
- Peak Concurrent Video Viewers
- Unique Video Viewers
- Total Video Viewing Time
- SVM Client Demographic
- Concurrent SVM Clients
- Concurrent WiFi Clients

For more information, see the [“Marketing User Reports” section on page 36](#),

## Accessing the Cisco StadiumVision Mobile Reporter Application



### Note

Do not use a server URL that you might have bookmarked from prior releases that references port :8080, such as `http://ip-address:8080`. This will no longer work beginning in Release 2.0.

**To access the Cisco StadiumVision Mobile Reporter application, complete the following steps:**

### Step 1

Using a supported browser version, open a browser window and type the URL for the Cisco StadiumVision Mobile Reporter server in the following sample format, where *ip-address* is the IPv4 address of the server:

```
https://ip-address
```

or

```
http://ip-address
```



### Note

If you specify an HTTP address, the URL will automatically translate to a secure HTTPS URL.



**Step 2** Log into Cisco StadiumVision Mobile Reporter with either the **admin** or **marketing** Username and corresponding account password.

The graphical user interface is displayed for the type of account that you used to log in.



**Note**

---

The first time that a user accesses Cisco StadiumVision Mobile Reporter, a message might appear that the server is not guaranteed secure due to the self-signed certificate on the server. If this occurs, acknowledge the security exception and proceed.

---





StadiumVision



## **PART 2**

# **Cisco StadiumVision Mobile Reporter Server Setup**





# Configuring the Cisco StadiumVision Mobile Reporter Server

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**First Published: October 17, 2014**

**Revised: June 4, 2015**

This module is intended for the system installer and administrator (admin user) to set up the Cisco StadiumVision Mobile Reporter system. It includes the following sections:

- [Configuring Cisco StadiumVision Mobile Reporter for Service Quality Reporting, page 11](#) (required)
- [Uploading Event Schedule Information to Cisco StadiumVision Mobile Reporter, page 16](#) (required)
- [Uploading Test Points to StadiumVision Mobile Reporter, page 18](#) (optional)
- [Configuring Performance Mode for StadiumVision Mobile Reporter, page 19](#) (as required)

For other server configuration information not documented in this module, see also the “[Cisco StadiumVision Mobile Reporter Text Utility Interface](#)” module.

## Configuring Cisco StadiumVision Mobile Reporter for Service Quality Reporting



### Note

Beginning in Release 2.0, the Reporter application supports a new mechanism to upload AP names using a CSV file.

Although AP names and areas can still be discovered through integration with Cisco Prime Infrastructure in Release 2.0, the CSV upload method is preferred and recommended to provision this AP information.

Integration with Cisco PI is configured to allow the Reporter application to track the total number of WiFi clients in the venue to provide data for the WiFi clients marketing report and for calculation of the Event Scorecard Uptake Score.

- [Uploading AP Information to StadiumVision Mobile Reporter, page 12](#) (preferred)
- [Configuring Cisco Prime Infrastructure Integration for Cisco StadiumVision Mobile Reporter, page 13](#) (optional)

## Uploading AP Information to StadiumVision Mobile Reporter

Complete this task to map each access point (AP) to an AP area so that you can obtain client reports in Cisco StadiumVision Mobile Reporter.

### Prerequisites for Uploading AP Information

The admin user can download a template spreadsheet file to use as an example for specifying the AP information. See the [“Information About Uploading Data” section on page 17](#).

**Caution**

---

When adding new AP information, be sure to retain and include *all* AP information that is downloaded in the CSV file. New data is *not* merged with AP data from any prior upload—each time that you upload, the information contained in the CSV file replaces all existing information.

---

Be sure that you have the following information before uploading access point (AP) information to Cisco StadiumVision Mobile Reporter:

- Radio MAC address
- AP Name
- AP Area

### Procedure

**To create and upload AP information, complete the following steps:**

- 
- Step 1** Log into the Cisco StadiumVision Mobile Reporter as **admin**.
- Step 2** Click **System Tools**.
- Step 3** Click **Upload AP Names**.  
The “Upload Access Point (AP) names” screen is displayed.
- Step 4** To access a sample template from which to specify your AP data, click **Download a template**.
- a. Open or save the sample apnames.xlsx file.
  - b. Populate the spreadsheet with the appropriate AP data.
  - c. Save the spreadsheet as **Unicode Text** format, with a **.txt** file extension.
- Step 5** From the “Upload Access Point (AP) names” screen, click **Browse** and navigate to the .txt file that you created in the previous step.
- Step 6** Click **Upload** to load the AP names.
-

# Configuring Cisco Prime Infrastructure Integration for Cisco StadiumVision Mobile Reporter

In this method of obtaining AP information for service quality reporting, Cisco StadiumVision Mobile Reporter uses the Cisco Prime Infrastructure (PI) interface, and retrieves AP area information using rules from the data in PI.

This section includes the following topics:

- [Prerequisites for Cisco PI Server Configuration, page 13](#)
- [Configuring Cisco PI Integration on Cisco StadiumVision Mobile Reporter, page 14](#)
- [Modifying the AP Name Field Prefix, page 15](#) (only when using PI for AP information)
- [Enabling or Disabling Cisco PI Integration, page 16](#)

## Prerequisites for Cisco PI Server Configuration

Before you configure Cisco PI integration, be sure that you have met the following requirements:

- An SVM user account (name and password) is configured with access to the API on the PI server. See the “[Cisco PI User Account Configuration Example](#)” section on page 13.
- You have the following information:
  - IP address of the PI server.
  - The SVM user account (username and password) on the PI server.
  - The list of network SSIDs to be used.
- Verify that HTTPS is allowed for API calls if you have a firewall. The following API calls are made to PI using HTTPS:
  - Access Point Summary
  - Access Point Details
  - Client Summary

## Cisco PI User Account Configuration Example

In Cisco PI, an SVM user account needs to be configured with permissions to access the API on Prime Infrastructure.

[Figure 1](#) shows how to add an SVM user and define a custom **User Defined Group**.

**Figure 1** Adding a PI User

Add User  
Administration > Users, Roles & AAA > Users > Add User

General Virtual Domains

Username

New Password

Confirm Password

[Groups Assigned to this User](#)

Admin

Config Managers

Lobby Ambassador [i](#)

Monitor Lite [i](#)

North Bound API [i](#)

Root [i](#)

Super Users

System Monitoring

User Assistant [i](#)

User Defined 1

Figure 2 shows the User Defined Group permissions to configure for access to the Cisco StadiumVision Mobile Reporter API calls.

**Figure 2** Prime Infrastructure Settings for Cisco StadiumVision Mobile Reporter API Calls

Group Detail :User Defined 1  
Administration > Users, Roles & AAA > Groups > Group Detail  
User definable group.

Tasks Permissions Members

Access to the NCS Rest NBI  
 nbiAccessPrivilege

<input checked="" type="checkbox"/> <b>Configure Menu String Task</b> <input checked="" type="checkbox"/> Configure Menu Access	<input checked="" type="checkbox"/> <b>Administration Menu String Task</b> <input checked="" type="checkbox"/> Administration Menu Access	<input checked="" type="checkbox"/> <b>Reports Menu String Task</b> <input checked="" type="checkbox"/> Reports Menu Access
<input checked="" type="checkbox"/> <b>Tools Menu String Task</b> <input checked="" type="checkbox"/> Tools Menu Access	<input checked="" type="checkbox"/> <b>Help Menu String Task</b> <input checked="" type="checkbox"/> Help Menu Access	<input checked="" type="checkbox"/> <b>Search Widget String Task</b> <input checked="" type="checkbox"/> Search Access
<input checked="" type="checkbox"/> <b>Monitor Menu String Task</b> <input checked="" type="checkbox"/> Monitor Menu Access	<input checked="" type="checkbox"/> <b>Home Menu String Task</b> <input checked="" type="checkbox"/> Home Menu Access	<input checked="" type="checkbox"/> <b>Services Menu String Task</b> <input checked="" type="checkbox"/> Services Menu Access

## Configuring Cisco PI Integration on Cisco StadiumVision Mobile Reporter

To configure Cisco PI integration on Cisco StadiumVision Mobile Reporter, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI”](#) section on page 73.
- Step 2** From the Main Menu, go to **System Settings > External Systems > Configure Prime Infrastructure (PI) system**.



A series of configuration prompts appear to step you through entering the PI server integration information.

**Step 3** At the prompts, type the following information:

- IP address of the PI server.
- Username and password of the account configured on the PI server for SVM access.
- The network SSIDs to be used, separated by commas. If the SSID contains a space, surround it with double quotes as shown in the following example:

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

After you complete entering the PI server information, return to the External Systems menu.

**Step 4** To verify the configuration, select **View Prime Infrastructure (PI) Configuration**.

**Step 5** Confirm the PI configuration information that appears has been correctly specified.

---

## Modifying the AP Name Field Prefix



### Note

This task is only used when obtaining AP information for Cisco StadiumVision Mobile Reporter from Cisco PI. It is no longer needed when using the recommended CSV file upload method to provision AP information.

---

This task allows you to group common characters found in AP names and group them for AP area reporting. AP names frequently are defined in parts that describe the locations of those APs in a venue. For example, “SJC1-LOWER-A100-3” might be an AP name for the third AP located in the “SJC1-LOWER-A100” section of the venue. In this task, you can define an Area for all AP names using these first three parts of the AP name: “SJC1-LOWER-A100.”

**To modify the AP name prefix, complete the following steps:**

---

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

**Step 2** Change directory 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.

---

## Enabling or Disabling Cisco PI Integration

By default, the Cisco PI configuration is disabled on the Cisco StadiumVision Mobile Reporter server. When Cisco PI integration is enabled, the Reporter application makes a call periodically (every 60 seconds) to the PI server to collect statistics.

**To enable or disable Cisco PI integration, complete the following steps:**

---

**Step 1** Log into the TUI.

For more information, see the [“Logging Into the TUI” section on page 73](#).

**Step 2** From the Main Menu, go to **System Settings > External Systems** and do one of the following:

- Choose **Enable Prime Infrastructure (PI)**.
- Choose **Disable Prime Infrastructure (PI)**.

The Cisco StadiumVision Mobile Reporter services are restarted and PI integration is either enabled or disabled.

---

## Troubleshooting the Cisco PI Server Connection

**To troubleshoot communication between Cisco StadiumVision Mobile Reporter and the Cisco PI server, complete the following steps:**

---

**Step 1** Log into the TUI.

For more information, see the [“Logging Into the TUI” section on page 73](#).

**Step 2** From the Main Menu, go to **System Settings > External Systems > Test Prime Infrastructure (PI) Connection**.

If you receive a JSON report after running the script, then the Cisco StadiumVision Mobile Reporter server has access to the Cisco PI server. If you receive an http or an error message, there is an issue.

---

# Uploading Event Schedule Information to Cisco StadiumVision Mobile Reporter

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 that you can get using the **System Tools > Upload Event Schedule** menu option when logged in as **admin**.



### Caution

When you upload additional events, be sure to include existing events that you want to preserve. Start with the spreadsheet you used the previous time, and add the new events to that. Then upload the set of existing and new events using unique names for the new events.

## Information About Uploading Data

Note the following conditions about the event schedule and AP names:

- A spreadsheet application such as Microsoft Excel should be used to populate the spreadsheet.
- The spreadsheet should be saved as Unicode Text and a tab separated text file (a sample is shown in [Figure 3](#)).

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

**Figure 3** *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	1/9/2014	7:00 AM	1/9/2014	8:00 PM	none
3	Jets vs Panthers	1/10/2014	7:00 AM	1/10/2014	8:00 PM	none
4	Jets vs Chargers	1/11/2014	7:00 AM	1/11/2014	8:00 PM	none
5	Jets vs Nicks	1/12/2014	7:00 AM	1/12/2014	9:00 PM	none
6	Giants vs Panthers	1/13/2014	7:00 AM	1/13/2014	8:00 AM	none
7	Chargers vs Panthers	1/13/2014	8:00 AM	1/13/2014	11:00 PM	none
8	Nicks vs Giants	1/14/2014	9:00 AM	1/14/2014	10:00 PM	none



### Note

Events can only be scheduled for single days (the Start Date and End Date must be the same day). Events cannot exceed 24-hours or be scheduled past midnight.

**To create and upload an event schedule, complete the following steps:**

- Step 1** Log into the Cisco StadiumVision Mobile Reporter as **admin**.
- Step 2** Click **System Tools**.
- Step 3** Click **Upload Event Schedule**.

The “Upload an event schedule screen” is displayed showing the currently uploaded schedule.

- Step 4** To access a sample template from which to specify your event data, click **Download a template**.
  - a. Open or save the sample EventSchedule.xlsx file.
  - b. Populate the spreadsheet with the appropriate event data.

**Note**


---

You cannot change past events. For example, the current date is January 2 and in December you had uploaded an event for Jan 1 that went from 6-10pm, you cannot now re-upload that event and rename it nor change the times. You can only change names and times in the future. If you attempt to do this, the schedule will upload but no prior events will be changed.

---

c. Save the spreadsheet as **Unicode Text** format, with a **.txt** file extension.

**Step 5** From the “Upload an event schedule” screen, click **Browse** and navigate to the .txt file that you created in the previous step.

**Step 6** Click **Upload** to load the event schedule.

**Step 7** When the upload is complete, verify the information shown on the screen to confirm success.

---

## Troubleshooting Uploaded Data

If there are errors in the upload, an error form is displayed. The form indicates the line in the uploaded file that has the error, and a description of the problem. Examples of some errors are:

- The event name is already used.

**Caution**


---

Only an error message is given for duplicate event names in the same schedule. However, an error message is *not* given to block the upload of a secondary event schedule which has the same event names as the prior schedule. In this case, data is transferred from the previous schedule, and it is used to produce the charts for the events that are uploaded with same event names but at a later date.

---

- The end time is before the start time.
- The number of columns in the spreadsheet is not correct.
- The file is not in UTF format.

## Uploading Test Points to StadiumVision Mobile Reporter

During deployment of Cisco StadiumVision Mobile at a venue, the deployment team can verify the WiFi performance throughout the venue using test points that are uploaded to Cisco StadiumVision Mobile Reporter and by running a special mobile application that reports on the manually-entered test point locations.

It is not expected that performance is uniform throughout the venue, so multiple locations should be selected by the deployment team to test performance quality. This allows the report "D: Location Performance" to be generated by the admin user in Cisco StadiumVision Mobile Reporter. If adjustments are needed, they can be made and the location can be re-tested.

# Configuring Performance Mode for StadiumVision Mobile Reporter

Use Performance Mode when the expected number of clients is very large and not all functionality is required.

**Note**

If the expected number of mobile clients is 5000 or greater, it is recommended that Performance mode be enabled.

Two things are affected when using Performance mode:

- The amount of logging is less verbose.
- The size of the memory heap is larger (20 GB) versus 15 GB in normal mode.

## Enabling or Disabling Performance Mode

To enable or disable performance mode, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI” section on page 73](#).
- Step 2** From the Main Menu, go to **Services Control > Performance Mode** and do one of the following:
- Choose **Enable Performance Mode**.
  - Choose **Disable Performance Mode**.

The Cisco StadiumVision Mobile Reporter services are restarted and Performance Mode is either enabled or disabled.

---

## Verifying Performance Mode Configuration

If you need to verify whether Performance Mode is enabled or disabled you can display the status using the TUI.

To verify performance mode configuration, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI” section on page 73](#).
- Step 2** From the Main Menu, go to **Services Control > Performance Mode > Display Performance Mode Status**.  
The display shows whether Performance Mode is enabled or disabled.
- Step 3** Press any key to return to the Performance Mode menu.
-





StadiumVision



## **PART 3**

# **Cisco StadiumVision Mobile Reporter Application**







# Admin and Marketing User Report Reference

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**First Published: October 17, 2014**

This module provides a detailed reference of the reports available in Cisco StadiumVision Mobile reporter. It includes the following sections:

- [Admin User Reports, page 23](#)
- [Marketing User Reports, page 36](#)

## Admin User Reports

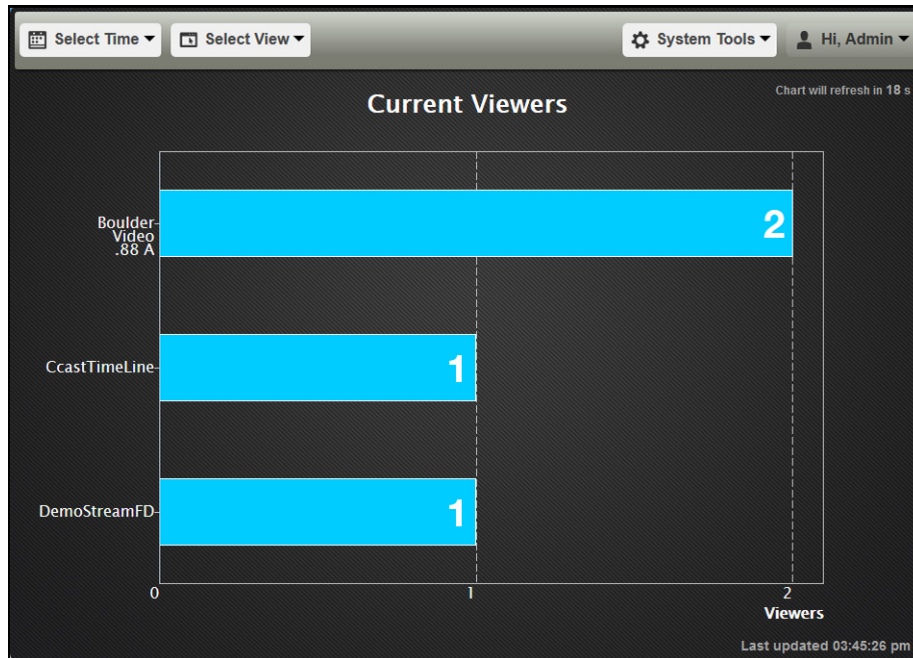
This section provides the details about the following types of reports for the admin user:

- [Current Viewers Report, page 24](#) (System Tools menu)
- [Event Scorecard—Quality and Uptake Scores, page 24](#) (Select View menu)
- [Data Export Reports, page 25](#) (Select View menu)

## Current Viewers Report

The StadiumVision Mobile Reporter provides a report that depicts the current number of unique clients using StadiumVision Mobile, as shown in [Figure 1](#).

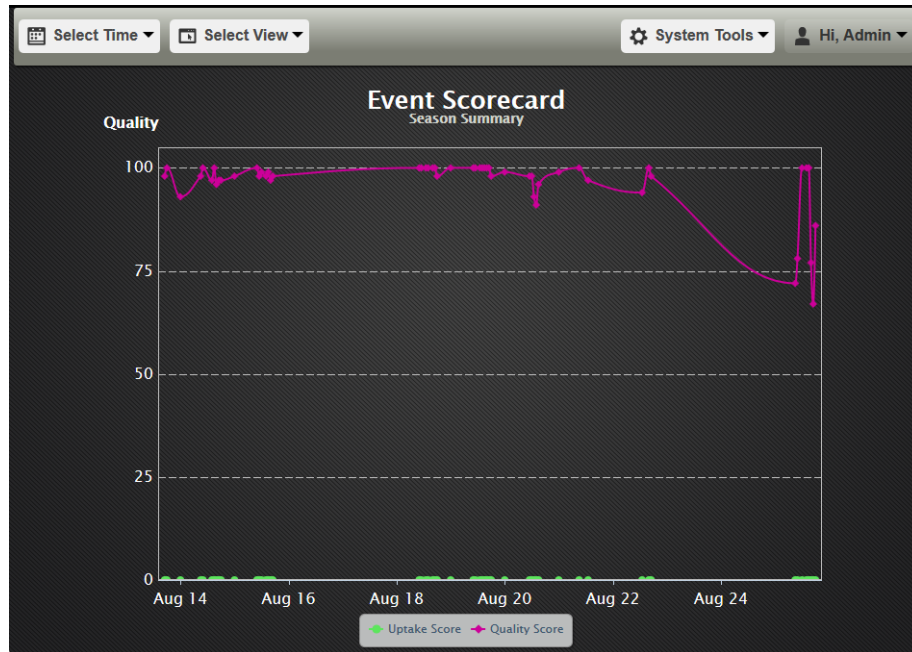
**Figure 1** *Current Viewers Report*



## Event Scorecard—Quality and Uptake Scores

When you log into Cisco StadiumVision Mobile Reporter as an admin, the Event Scorecard report opens with the Season Summary as the default view.

**Figure 2** Event Scorecard Report—Default View



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. When Prime Infrastructure is disabled, the Uptake Scores will be zero as shown in [Figure 2](#).

## Data Export Reports

The list of reports available for data export for the selected event are displayed from the Cisco StadiumVision Mobile Reporter admin screen using the **Select View > Data Export** option.



### Timesaver

Depending on your data collection and the report that you are viewing, certain navigation buttons are available:

—You can toggle between the Event Scorecard and Data Export report views for the selected event using the < and > buttons located in the middle of the report screen (on either side of the chart).

—You can select other events in the data collection using the < and > buttons located at the top of the report screen (on either side of the chart title).

Figure 3 Data Export Reports—Download View



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 Data Export Reports

Chart Title	Description
A: <a href="#">Venue Performance Timeline</a>	Errors per minute based on client SDK statistics.
B: <a href="#">AP Performance</a>	Quality fields organized by Access Point (AP).
C: <a href="#">Area Performance</a>	Key quality fields organized by logical area which can include multiple APs.
E: <a href="#">Client Device Demographics</a>	Metrics categorized by Device Type. One row per client device type and band. Device Type is determined from the manufacturer and model information.
D: <a href="#">Location Performance</a>	Available for internal testpoint data only.
F: <a href="#">Client OS Demographics</a>	Metrics categorized by Device OS. One row per client device type and band.
G: <a href="#">Client App Versions</a>	Metrics categorized by App Version. One row per client device type and band.
H: <a href="#">SDK Versions</a>	Metrics categorized by SDK Version. One row per client device type and band.
I: <a href="#">Unique Clients</a>	List of unique client devices. One row per client device type and band.
J: <a href="#">Client Sessions</a>	Detailed information about each client session. A <i>client session</i> occurs whenever a user on a mobile device starts an audio or video channel, or initiates a data file transfer from the Cisco StadiumVision Mobile Streamer. When that user activity stops, that client session is terminated, but the client can start a new session.
K: <a href="#">Streamer Input Quality</a>	Provides metrics indicating the quality of the Streamer input streams.

**Table 1** Admin User Data Export Reports

Chart Title	Description
L: <a href="#">Concurrent SVM Clients</a>	Provides the data for the marketing chart named Concurrent SVM Clients. For more information on the marketing chart of the same name, see the <a href="#">“Concurrent SVM Clients” section on page 35</a> .
M: <a href="#">Concurrent Video Viewers</a>	This report gives the number of unique users per channel per minute based on WiFi MAC address. It is updated every minute.
N: <a href="#">Reporter Server Statistics</a>	Provides system performance metrics and troubleshooting information.
Z: All Available Reports	This is an archive that contains all reports in the above list, subject to there being data for that report for that time period.

## 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 Field Descriptions

Field Name	Description	Expected Value or Range for Normal Operation
Unrecoverable block error ratio	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	Number of buffering stalls per minute, accumulated over all of the devices reporting.	Greater than 6 indicates a problem.
Streamer announcements loss ratio (%)	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.
Stats upload failure ratio	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.	5 GHz: -68 dbm or better 2.4 GHz: -63 dbm Average: -65 dbm

## Venue Performance Timeline


**Note**

This report is based only on video sessions, not on audio or data sessions.

**Table 3** *Venue Performance Timeline Report Fields Descriptions*

Field Name	Description
Time	Time of measurement.
Block Error ratio (%)	Blocks that could not be recovered via forward error correction (FEC).
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Glitches Per Minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.

## AP Performance

**Table 4** *AP Performance Report Field Descriptions*

Field Name	Description
AP Radio MAC	Access point basic service set identifier. Use to identify access points and their associated clients.
Band	WiFi spectrum assignment.
AP Name	Name assigned to the wireless access point.
AP Area	Set of APs grouped as an area.
Date	Event date.
Event	Event name.
<b>Non-Session Fields</b>	
Total unique SVM Clients	Number of unique clients that Reporter has heard from, including clients that never consumed any video, audio or data sessions.
Reporting Activity (min)	The total length of client reporting activity.
Stats Upload Failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.
<b>Video Session Fields</b>	
Unique SVM Video clients	Number of unique clients that consumed at least one video session.
Session time (min)	Cumulative value of all the sessions from all the clients reporting, for the given AP and Band combination.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.



**Table 4** AP Performance Report Field Descriptions (continued)

Field Name	Description
Video glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting for the given AP and Band.
<b>Audio Session Fields</b>	
Unique SVM Audio clients	Number of unique clients that consumed at least one audio session.
Session time (min)	Cumulative value of all the sessions from all the clients reporting, for the given AP and Band combination.
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting for the given AP and Band.
<b>Data Session Fields</b>	
Unique SVM Data clients	Number of unique clients that consumed at least one data session.
Session time (min)	Session length of time in minutes.
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.

## Area Performance

**Table 5** Area Performance Report Field Descriptions

Field Name	Description
AP Area	Set of APs grouped as an area.
Band	WiFi spectrum assignment.
Date	Event date.
Event	Event name.
<b>Non-Session Fields</b>	
Total unique SVM Clients	Number of unique clients that Reporter has heard from, including clients that never consumed any video, audio or data sessions.
Reporting Activity (min)	The total length of client reporting activity.
Stats Upload Failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.
<b>Video Session Fields</b>	
Unique SVM Video clients	Number of unique clients that consumed at least one video session.
Session time (min)	Length of session in minutes.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.

**Table 5** Area Performance Report Field Descriptions (continued)

Field Name	Description
Video glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting for the given area.
<b>Audio Session Fields</b>	
Unique SVM Audio clients	Number of unique clients that consumed at least one audio session.
Session time (min)	Length of session in minutes.
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting for the given area.

## Client Device Demographics

**Table 6** Client Device Demographics Report Field Descriptions

Field Name	Description
Device Type	Device name and model number.
Band	WiFi spectrum assignment.
Date	Event date.
Event	Event name.
<b>Non-Session Fields</b>	
Total unique SVM Clients	Number of unique clients that Reporter has heard from, including clients that never consumed any video, audio or data sessions.
Reporting Activity (min)	The total length of client reporting activity for the specific device type and band.
Stats Upload Failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.
<b>Video Session Fields</b>	
Unique SVM Video clients	Number of unique clients that consumed at least one video session.
Session time (min)	Length of session in minutes.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Video glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
<b>Audio Session Fields</b>	
Unique SVM Audio clients	Number of unique clients that consumed at least one audio session.
Session time (min)	Length of session in minutes.



**Table 6** *Client Device Demographics Report Field Descriptions (continued)*

Field Name	Description
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.

## Client OS Demographics

**Table 7** *Client OS Demographics Report Field Descriptions*

Field Name	Description
Client OS	Name of the operating system and version used on a client device.
Band	WiFi spectrum assignment.
Date	Event date.
Event	Event name.
<b>Non-Session Fields</b>	
Total unique SVM Clients	Number of unique clients that Reporter has heard from, aggregated for the specific Client OS, including clients that never consumed any video, audio or data sessions.
Reporting Activity (min)	The total length of client reporting activity.
Stats Upload Failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.
<b>Video Session Fields</b>	
Unique SVM Video clients	Number of unique clients that consumed at least one video session.
Session time (min)	Length of session in minutes.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Video glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
<b>Audio Session Fields</b>	
Unique SVM Audio clients	Number of unique clients that consumed at least one audio session.
Session time (min)	Length of session in minutes.
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.

## Client App Versions

**Table 8** Client App Versions Report Field Descriptions

Field Name	Description
Client App Version	Client application version.
Band Ghz	WiFi spectrum assignment.
Date	Event date.
Event	Event name.
<b>Non-Session Fields</b>	
Total unique SVM Clients	Number of unique clients that Reporter has heard from, including clients that never consumed any video, audio or data sessions.
Reporting Activity (min)	The total length of client reporting activity.
Stats Upload Failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.
<b>Video Session Fields</b>	
Unique SVM Video clients	Number of unique clients that consumed at least one video session.
Session time (min)	Length of session in minutes.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Video glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
<b>Audio Session Fields</b>	
Unique SVM Audio clients	Number of unique clients that consumed at least one audio session.
Session time (min)	Length of session in minutes.
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
<b>Data Session Fields</b>	
Unique SVM Data clients	Number of unique clients that consumed at least one data session.
Session time (min)	Session length of time in minutes.

## SDK Versions

**Table 9** SDK Versions Report Field Descriptions

Field Name	Description
SDK Version	Version number of the Cisco StadiumVision Mobile SDK.
Band	WiFi spectrum assignment.
Date	Event date.
<b>Non-Session Fields</b>	
Total unique SVM Clients	Number of unique clients that Reporter has heard from, including clients that never consumed any video, audio or data sessions.
Reporting Activity (min)	The total length of client reporting activity.
Stats Upload Failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.
<b>Video Session Fields</b>	
Unique SVM Video clients	Number of unique clients that consumed at least one video session.
Session time (min)	Length of session in minutes.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Video glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
<b>Audio Session Fields</b>	
Unique SVM Audio clients	Number of unique clients that consumed at least one audio session.
Session time (min)	Length of session in minutes.
Unrecover block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
<b>Data Session Fields</b>	
Unique SVM Data clients	Number of unique clients that consumed at least one data session.
Session time (min)	Session length of time in minutes.

## Unique Clients

**Table 10** Unique Clients Report Field Descriptions

Field Name	Description
Device UUID	Universally unique identifier (UUID). For SVM, this ID is unique for each device for each installation of an SVM app.
MAC Address	MAC address assigned to the SVM client (mobile device).
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	Platform name.
App Name	Application name.
App ver	Application version.
SDK ver	Version of the Cisco StadiumVision Mobile Reporter client SDK.

## Client Sessions

**Table 11** Client Sessions Report Field Descriptions

Field Name	Description
Session UUID	Session universally unique identifier (UUID).
Session Type	Either video, audio, or data.
Client device UUID	Device universally unique identifier (UUID) .
BSSID	Basic Service Set Identification (BSSID). The BSSID is the MAC address of the wireless access point.
Channel name	WiFi channel.
Start Time 24H	Time in 24 hour format.
Client MAC Address	Client media access control address (MAC address).
Client IP Address	Client IP address.
App name	Application name.
App ver	Application version.
SDK ver	Version number of the Cisco StadiumVision Mobile SDK.
AP	Access point MAC address.
AP Name	Access point name.
Band GHz	WiFi spectrum assignment.
Wifi channel	WiFi channel.

**Table 11** *Client Sessions Report Field Descriptions (continued)*

Field Name	Description
Test point	Internal field used by Cisco TAC.
Session time (min)	Session time in minutes.
Blocks Received	Total blocks received.
Unrecoverable block error ratio (%)	Percentage of blocks that could not be recovered via forward error correction (FEC). An indicator of network multicast performance.
Video glitches per minute	Calculated as the number of unrecoverable block errors per minute.
Audio glitches per minute	Number of buffering stalls per minute, accumulated over all of the devices reporting.
Stats upload failure ratio (%)	Percentage of stat reports that could not be uploaded to Cisco StadiumVision Mobile Reporter. An indicator of network unicast performance.
Streamer announce loss ratio (%)	Percentage of lost streamer announcements.
Average RSSI (dBm)	Received Signal Strength Indicator. A measurement of the power present in a received radio signal. An average value.

## Streamer Input Quality

**Table 12** *Streamer Input Quality Report Field Descriptions*

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 SVM Clients

**Table 13** *Concurrent Clients Report Field Descriptions*

Field Name	Description
Time	Time data was polled.
SVM Clients	Number of Cisco StadiumVision Mobile clients.

## Concurrent Video Viewers

**Table 14** *Concurrent Video Viewers Report Field Descriptions*

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

## Reporter Server Statistics

**Table 15** *Reporter Server Statistics Report Field Descriptions*

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	Apache httpd log messages.
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	Cisco StadiumVision Mobile log messages.
svm server status	One or zero; one means up, zero means down.
swap util	Swap utility status.

## Marketing User Reports

The marketing user has access to six report types. Each of these 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.

Reports are organized into three categories: Live Reports, Historical Reports, and the Season Reports (listed in [Table 16](#)).

- Live Reports—Real-Time reports
- Historical Reports—Reports for a specific event
- Season Reports—Cumulative reports over a span of time

The Cisco StadiumVision Mobile Reporter user interface 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.

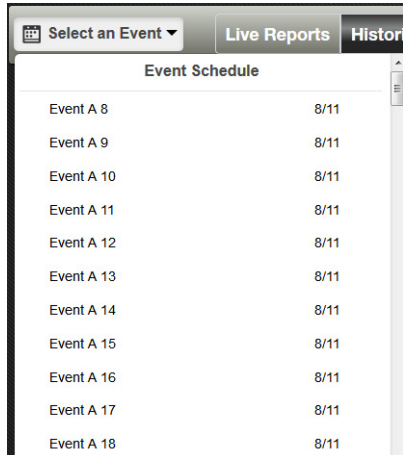
**Table 16**      **Marketing User Reports**

Report Type	Report	Description
<b>Live Report</b>		
	Current and Peak Concurrent Video Viewers Report	Displays both the current and peak number of StadiumVision Mobile video viewers.
	<a href="#">Unique Video Viewers</a>	Displays the unique numbers of StadiumVision Mobile video viewers.
	<a href="#">Total Video Viewing Time</a>	Displays the total time StadiumVision Mobile video has been viewed up to the current time.
	<a href="#">SVM Client Demographic</a>	Displays the current number of StadiumVision Mobile clients by client operating system.
	<a href="#">Concurrent SVM Clients</a>	Displays the concurrent number of StadiumVision Mobile clients.
	<a href="#">Concurrent WiFi Clients</a>	Displays the number of WiFi clients connected during an event.
<b>Event Report</b>		
<b>Season Report</b>		
	<a href="#">Event Scorecard Report</a>	Quality and uptake scores.
	<a href="#">Peak Concurrent Video Viewers Report</a>	Displays the peak number of StadiumVision Mobile video viewers, by event or by season.
	<a href="#">Unique Video Viewers</a>	Displays the unique numbers of StadiumVision Mobile video viewers, by event or by season.
	<a href="#">Total Video Viewing Time</a>	Displays the total time StadiumVision Mobile video has been viewed for an event or a season.
	<a href="#">SVM Client Demographic</a>	Displays the current number of StadiumVision Mobile clients by client operating system, for an event or a season.
	<a href="#">Concurrent SVM Clients</a>	Displays the concurrent number of StadiumVision Mobile clients for an event or a season.
	<a href="#">Concurrent WiFi Clients</a>	Displays the number of WiFi clients connected during an event.

## Marketing Report Navigation and Showing Detail

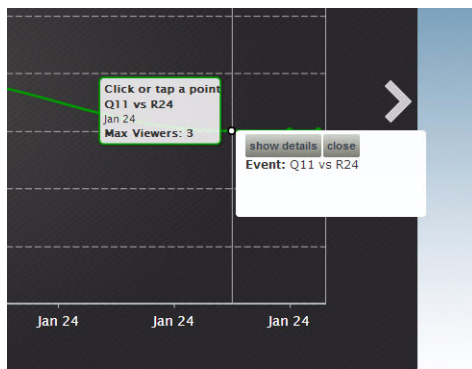
- To see a report for a particular event, use the **Select an Event** dropdown (Figure 4).

**Figure 4** *Choosing an Event*



- You can move between reports for the selected event using the < and > buttons located in the middle of the report screen (on either side of the chart).
- If you have multiple series of plots, you can show/hide plots on the chart using the button at the bottom of some reports.
- 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 5.

**Figure 5** *Sample Report Time Point Detail*





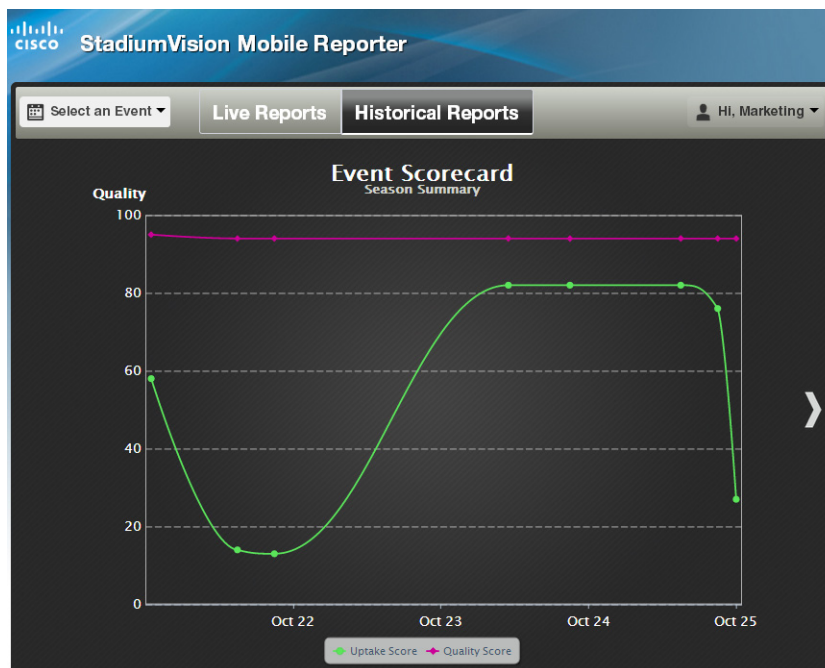
## Report Terminology

To maximize report comprehension, the following terminology should be understood.

Term	Definition
WiFi Client	A generic WiFi 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.

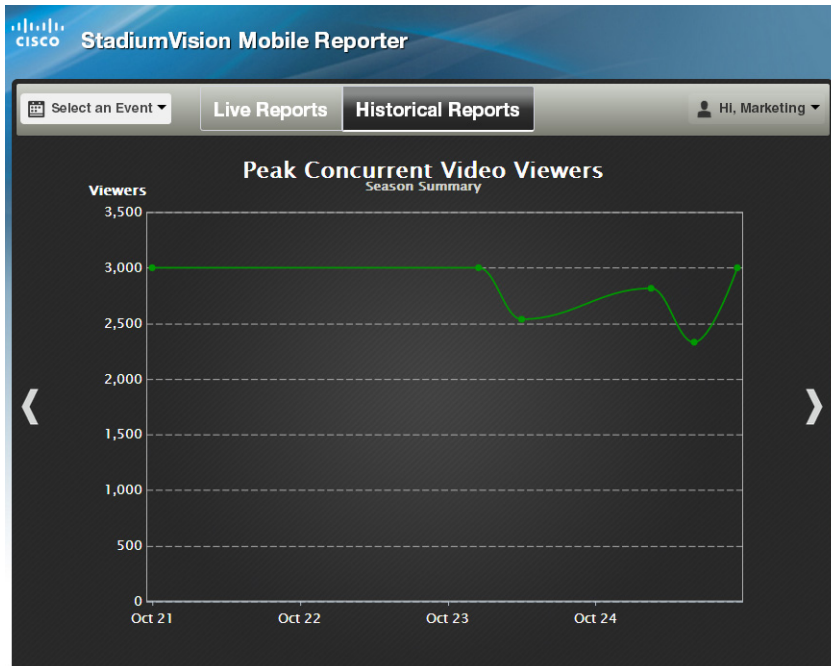
## Event Scorecard Report

Figure 6 Event Scorecard Report



## Peak Concurrent Video Viewers Report

Figure 7 Peak Concurrent Video Viewers Report



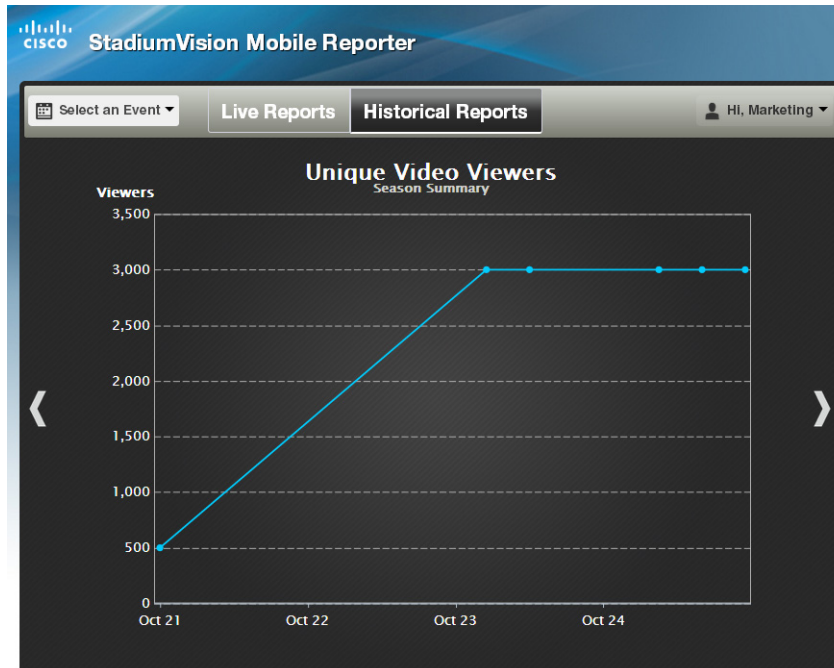
### Understanding Peak Viewer Reporting: Example

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.

# Unique Video Viewers

Figure 8 Unique Video Viewers Report



The event report shows the number of unique SVM clients that watched each of the available video channels during a specific event. An SVM client is uniquely identified by its UUID, 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.

## Total Video Viewing Time

Figure 9 Total 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.

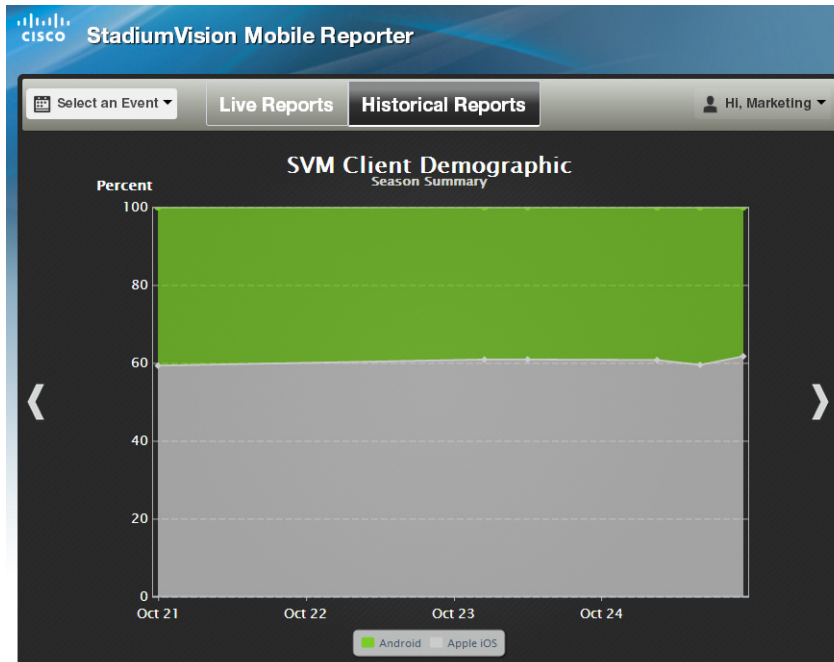
### Example:

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

Figure 10 SVM Client Demographic Report



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.

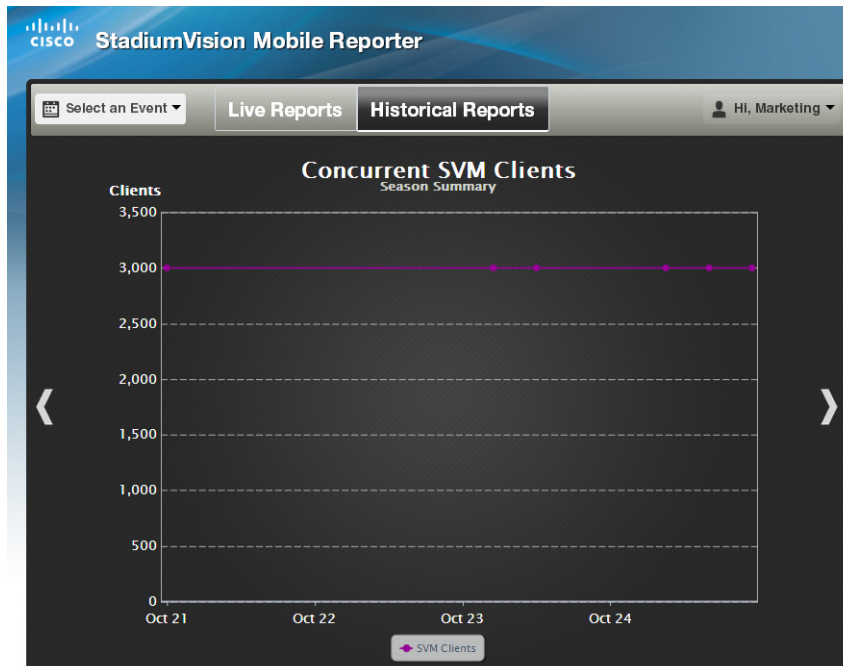
### Example:

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

Figure 11 Concurrent SVM Clients Report



The event report shows the number of SVM clients that were active at the same time (concurrently) 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.

## Concurrent WiFi Clients

Figure 12 Concurrent WiFi Clients Report



## Maintenance Window

Event and Season reports 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.







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## **PART 4**

### **Cisco StadiumVision Mobile Reporter Account Management**





# System Accounts on the Cisco StadiumVision Mobile Reporter Server

**First Published: October 17, 2014**

This module describes the default system accounts implemented by Cisco StadiumVision Mobile Reporter for access and control of certain server functions.

The admin and marketing accounts are the basic user accounts that secure access to the Cisco StadiumVision Mobile Reporter feature configuration and operation. Other system accounts are reserved for special services or technical support and should not be modified unless you are instructed to do so, or you otherwise understand the impact to your server installation.

## Information About System Accounts

[Table 1](#) describes the system accounts in Cisco StadiumVision Mobile Reporter that are automatically implemented upon installation of the Cisco StadiumVision Mobile software.

Using the TUI, the installer should change the default passwords for these accounts after deployment of the server as needed for increased security. For more information, see the [“How to Change System Account Passwords”](#) section on page 50.

**Table 1** *Description of System Accounts*

Account	Purpose
Admin	<p>Account that provides access to the administrator functions in the Cisco StadiumVision Mobile Reporter user interface(UI). It is automatically implemented upon installation of the Cisco StadiumVision Director software.</p> <p>The username is: <b>admin</b></p> <p>The default password is: <b>cisco!123</b></p> <p><b>Note</b> Using the Text Utility Interface (TUI) to change the admin account password allows an installer to recover access to the UI.</p>
Installer	<p>Account that provides access to the TUI using a directly-connected console or SSH client.</p> <p>The username is: <b>installer</b></p> <p>The default password is: <b>cisco!123</b></p>

**Table 1**      **Description of System Accounts**

Account	Purpose
JMX	Account that allows Java Management Extensions (JMX) clients to monitor and troubleshoot the Reporter. The default password is: <b>cisco!123</b>
marketing	User account that provides access to live and historical reports only. The username is: <b>marketing</b> The default password is: <b>cisco!123</b>
TAC user	Reserved for troubleshooting with remote shell access. This account should remain disabled and only activated when instructed by Cisco Technical Support for troubleshooting.

## How to Change System Account Passwords

You can change system account passwords from the defaults on the Cisco StadiumVision Mobile servers using the TUI.


**Tip**

To navigate through the TUI menus you must type the character that corresponds to the menu area where you want to go (a, b, c, and so on) and press **Enter**.

To return to other menus, you must back out of the hierarchy of menus using one of the indicated keys to return you to prior menus.

**To change system account passwords, complete the following steps:**

- 
- Step 1** On the Cisco StadiumVision Mobile server, log into the TUI by doing the following:
- a. Use a directly connected console, or use an SSH client from a laptop computer that is connected to the Cisco StadiumVision Mobile network to run a secure login to the Cisco StadiumVision Mobile server using the IP address for your server.
  - b. When the login prompt appears, enter the **installer** userid followed by the installer password at the password prompt.
- Step 2** From the Main Menu, go to **System Accounts**.
- Step 3** Select the system account whose password you want to change.
- Step 4** At the prompt, type the new password.
- Step 5** When prompted to confirm, retype the password.
- Step 6** Press any key to return to the System Accounts menu.
- Step 7** Return to the Main Menu and exit the TUI.
- 

For more information about the TUI, see the [“Cisco StadiumVision Mobile Reporter Text Utility Interface”](#) module.



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## **PART 5**

# **Cisco StadiumVision Mobile Reporter System Management**





# Cisco StadiumVision Mobile Reporter Data Management

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**First Published: October 17, 2014**

This module describes the information that you should know about managing Cisco StadiumVision Mobile Reporter data and disk utilization on the server.

This module contains the following topics:

- [Information About Cisco StadiumVision Mobile Reporter System Data, page 53](#)
- [How to Manage System Data, page 54](#)

## Information About Cisco StadiumVision Mobile Reporter System Data

This section includes the following topics;

- [Reporter Databases, page 53](#)
- [Other System Data, page 54](#)

### Reporter Databases

There are two databases in Cisco StadiumVision Mobile Reporter:

- Raw data—Contains unprocessed event data.
- Chart and configuration data (reports)

The system automatically runs a daily backup of both databases at about 4:00 a.m. Both of these backup files are retained in the system for 20 days. You should get a copy of these files periodically and store them outside of the server to be sure that you can restore data from any unexpected failure.

The raw data can potentially use up all of the available system disk space, so the raw data is periodically purged from the system. The purge process removes all data from the raw database and stores it in an archive file. That archive file is retained for 20 days. By default, the system automatically removes all of the raw data in the reporter every 6 months—on June 1 and December 1—at 5:30 a.m. However, you can change this purge schedule using the Text Utility Interface (TUI).

## Other System Data

The Cisco StadiumVision Mobile Reporter server also stores other system data that can impact overall disk utilization, including System State Reports and ISO upgrade files. In addition to backup files, these files can be removed collectively from the system using the TUI Troubleshooting menu.

## How to Manage System Data

This topic includes the following tasks:

- [Monitoring Disk Utilization, page 54](#) (required)
- [Performing a Restore of System Data, page 58](#) (required)
- [Changing the Raw Data Purge Schedule, page 56](#) (as required)
- [Deleting Files From the System, page 57](#) (as required)
- [Performing a Restore of System Data, page 58](#) (as required)

## Monitoring Disk Utilization

The Admin role can obtain a chart of the current disk utilization from the **System Tools** menu, as shown in [Figure 1](#).

**Note**

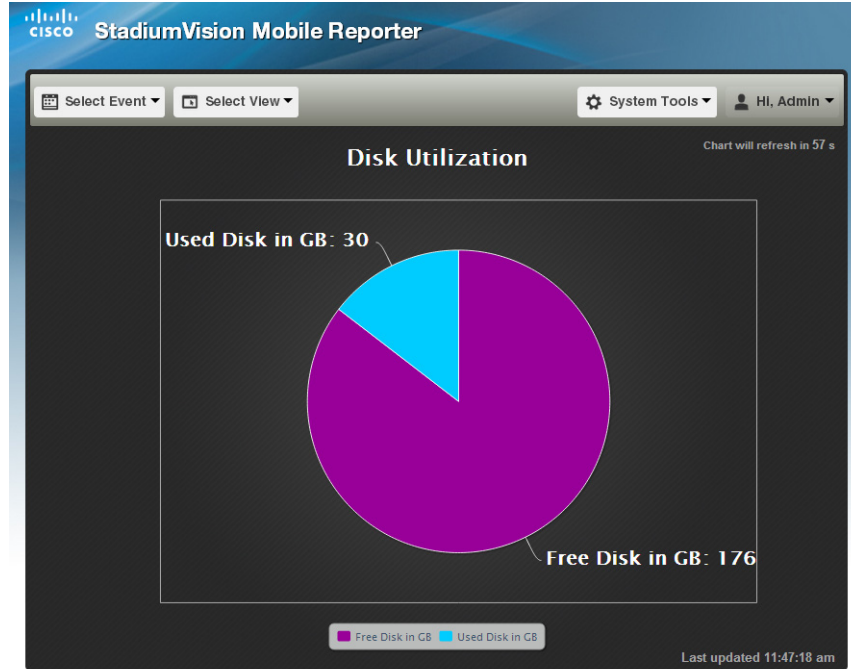
---

If the disk utilization is too high, you can use the TUI to delete files by going to **Troubleshooting > Disk Monitoring > Delete Files** menu. For more information, see the [“Deleting Files From the System” section on page 57](#).

---



Figure 1 Disk Utilization Report



## Viewing and Obtaining a Copy of Backup Data

The Cisco StadiumVision Mobile Reporter system automatically runs daily backups of the system databases and stores them for 20 days.



### Note

As a best practice, you should view the data archives and save a copy to an external storage device on a regular basis to maintain a copy of the files in the event that the reporter system becomes unusable or a hard drive failure occurs. If you want to support a redundant server environment and have the ability to failover to a backup server quickly and without any loss of data, it will be necessary to have these backup files available. For more information, see the [“Cisco StadiumVision Mobile Reporter Failover”](#) module.

**To view and copy the data archive files, complete the following steps:**

- Step 1** Log into the Cisco StadiumVision Mobile Reporter server as **admin**.
- Step 2** From the **System Tools** menu, select **Download Data Archive**.



### Note

After a fresh install, no backup files will exist.

A list of files will appear, as shown below:



### Tip

Click the column heading to sort the reports.

**Figure 2** Cisco StadiumVision Mobile Reporter Download Data Archive File List

Filename	Date	Size
AllTogether.2014062316.zip	Mon Jun 23 16:00:00 MDT 2014	10.7 KB
CrossCheck.2014062316.zip	Mon Jun 23 16:00:00 MDT 2014	1.1 KB
AllTogether.2014062315.zip	Mon Jun 23 15:00:00 MDT 2014	11.7 KB
CrossCheck.2014062315.zip	Mon Jun 23 15:00:00 MDT 2014	1.1 KB
AllTogether.2014062314.zip	Mon Jun 23 14:00:00 MDT 2014	9.5 KB
CrossCheck.2014062314.zip	Mon Jun 23 14:00:00 MDT 2014	1 KB
CrossCheck.2014062313.zip	Mon Jun 23 13:00:00 MDT 2014	889 Bytes
AllTogether.2014062313.zip	Mon Jun 23 13:00:00 MDT 2014	7.2 KB
AllTogether.2014062312.zip	Mon Jun 23 12:00:00 MDT 2014	1.4 KB
CrossCheck.2014062312.zip	Mon Jun 23 12:00:00 MDT 2014	575 Bytes
AllTogether.2014062311.zip	Mon Jun 23 11:00:00 MDT 2014	7.4 KB
CrossCheck.2014062311.zip	Mon Jun 23 11:00:00 MDT 2014	867 Bytes
AllTogether.2014062310.zip	Mon Jun 23 10:00:00 MDT 2014	1.3 KB
CrossCheck.2014062310.zip	Mon Jun 23 10:00:00 MDT 2014	576 Bytes
AllTogether.2014062309.zip	Mon Jun 23 09:00:00 MDT 2014	1.3 KB
CrossCheck.2014062309.zip	Mon Jun 23 09:00:00 MDT 2014	576 Bytes

**Note**

The CrossCheck report is intended for internal, non-production use only.

**Step 3** Locate 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
- AllTogether.YYYYMMDDHHMI.zip'. This file contains all of the download-able reports after an event has finished. It is equivalent to selecting 'Z: All Available Reports' on the Admin page.

**Step 4** Select and save the files onto a backup drive.

## Changing the Raw Data Purge Schedule

By default, the raw data database is cleared and stored in an archive file every 6 months at 5:30 a.m. You can change the data purge to occur once every 3 months, monthly, weekly, or daily. The archive file will be retained for 20 days.

**To change the purge schedule, complete the following steps:**

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI” section on page 73](#).
- Step 2** From the Main Menu, go to **Server Administration > Change reporter data purge schedule** menu.
- Step 3** Type the number that corresponds to the purge scheduling period and press **Enter**, where:
- 1—Specifies that the raw database purge occurs daily.
  - 2—Specifies that the raw database purge occurs weekly.
  - 3—Specifies that the raw database purge occurs monthly.
  - 4—Specifies that the raw database purge occurs every 3 months.
  - 5—(Default) Specifies that the raw database purge occurs every 6 months (June 1 and December 1 at 5:30 am)
- Step 4** Return to the Main Menu and exit the TUI.
- 

## Deleting Files From the System

If you need to free disk space on the Cisco StadiumVision Mobile Reporter, you can delete the following types of files:

- System State Reports
- Upgrade ISO files
- Backup/restore files



**Tip**

If you want to retain any System State Reports or backup files, be sure to download and store them outside of the Cisco StadiumVision Mobile Reporter server before you delete.

---

**To delete files from the system., complete the following steps:**

- 
- Step 1** Log into the TUI.
- Step 2** From the Main Menu, go to **Troubleshooting > Disk Monitoring > Delete Files**.
- Step 3** Type the menu letter option that corresponds to the file type that you want to delete from the system and press **Enter**.
- Step 4** At the prompt, type the letter to confirm the delete or cancel.
- Step 5** Return to the Main Menu and exit the TUI.
-

## Performing a Restore of System Data

A restore is required for one of two reasons:

- Catastrophic failure—In this case, the Cisco StadiumVision Mobile Reporter is being rebuilt from scratch or being replaced with a spare server.
- Data loss or corruption—In this case, the Cisco StadiumVision Mobile Reporter needs to be rolled back to an earlier known good state.

### Prerequisites

Before you perform a restore from a catastrophic failure, be sure that the following conditions are met:

- The Cisco StadiumVision Mobile Reporter software is reinstalled. For more information, see the [Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide](#).
- The DNS and NTP servers, and time zone are reconfigured (these settings are not included in the restore process).
- You have downloaded and have access to the most recent backup files external to the server. For more information, see the “[Viewing and Obtaining a Copy of Backup Data](#)” section on page 55.

### Procedure

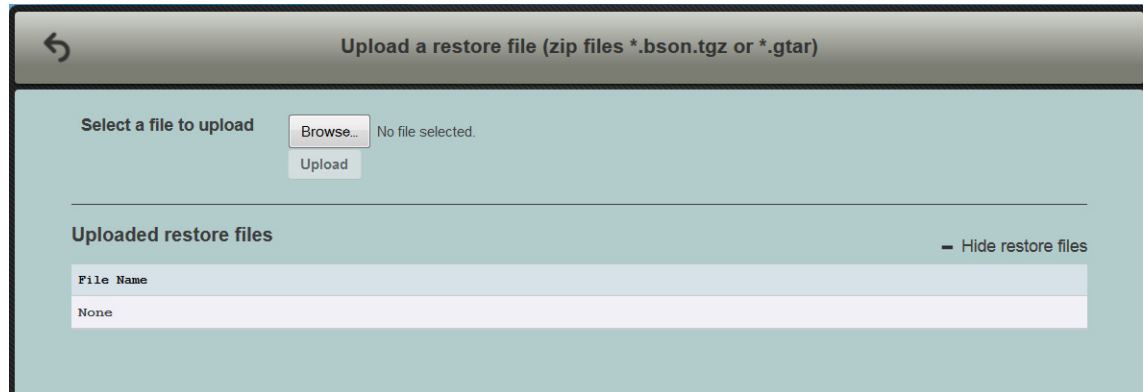
**Note**

If you still have access to Cisco StadiumVision Mobile Reporter and are attempting to recover some data loss or possible corruption from a non-catastrophic system failure, then you can perform a restore from the most recent backup files that are already available on the system. You do not need to perform the steps associated with uploading a data archive, and can begin the following procedure from [Step 5](#).

**To perform a restore, complete the following steps:**

- Step 1** Log into Cisco StadiumVision Mobile Reporter as admin.
- Step 2** Go to **System Tools > Upload Data Archive**.
- Step 3** Click **Browse** to select a file to upload and select the backup that you want to restore.

**Figure 3** Cisco StadiumVision Mobile Reporter Restore File Dialog



**Step 4** Click **Upload** to copy the file to the server.

**Step 5** To restore the backup database file, log into the TUI and select **Server Administration > Restore databases**.

Depending on the nature of the failure, restore either or both of the Chart and Config and Raw databases.

**Step 6** Once the script has completed verify that the restore was successful as follows:

- a. Verify that the PI connection is operational. See the [“External Systems” section on page 69](#) for more information.
- b. Log in as **admin** user and verify that the expected event schedule appears, and that CSV files for all past events are present.
- c. Log in as **marketing** user and verify that all historical events and season charts are present.





# Cisco StadiumVision Mobile Reporter Failover

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**First Published: October 17, 2014**

The Cisco StadiumVision Mobile server environment does not currently support automatic failover to a backup server. If you want to build some redundancy into your environment, you can set up two servers that are configured identically to have the ability to manually fail over as needed.

This module includes the following topics:

- [Setting Up Redundant Servers, page 61](#)
- [Performing a Manual Failover to a Secondary Server, page 62](#)

## Setting Up Redundant Servers

To set up redundant servers, complete the following steps:

- 
- Step 1** Install two Cisco StadiumVision Mobile Reporter servers. referred to as primary (active production server) and secondary (backup server).
  - Step 2** Assign each server a unique IP address.
  - Step 3** Configure each server identically, according to the options that you have set up in the Text Utility Interface (TUI), including but not limited to:
    - DNS server
    - NTP server
    - Time zone
    - Prime Infrastructure (PI) integration
- 

## Performing a Manual Failover to a Secondary Server



If the primary Cisco StadiumVision Mobile Reporter server that is used in production becomes unusable or unable to be accessed, it is important that you have already externally retained backup copies of your production server system data, For more information, see the [“Viewing and Obtaining a Copy of Backup](#)

[Data” section on page 55.](#)

---

**To perform a manual failover to a secondary server, complete the following steps:**

- 
- Step 1** Download the following files from the primary Cisco StadiumVision Mobile Reporter to your laptop, and select the most recent version for each file, where the asterisk (\*) in the filename shown here represents a timestamp in the actual file name:
- ChartAndConfigData.\*.tgz
  - CepResults.\*.bson.gz
- Step 2** Restore these files onto the secondary server.
- For more information, see the [“Performing a Restore of System Data” section on page 58.](#)
- Step 3** Log into the Cisco StadiumVision Mobile Streamer.
- Step 4** On the Defaults tab, change the Reporter URL to reflect the address of the secondary Cisco StadiumVision Mobile Reporter server.
-





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## **PART 6**

# **Cisco StadiumVision Mobile Reporter System Tools**





# Cisco StadiumVision Mobile Reporter Text Utility Interface

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**First Published: October 17, 2014**

The Cisco 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.

This module includes the following topics:

- [Information About the TUI, page 65](#)
- [How to Access the TUI, page 73](#)

## Information About the TUI

This section includes the following topics:

- [Overview of the TUI Menus, page 66](#)
- [Working with the TUI Interface, page 72](#)

## Overview of the TUI Menus

The TUI is a nested structure of menus with options that allow you to drill down to specific system tasks to be performed on the server. The primary menus are:

- Main Menu
- System Settings
- System Accounts
- Services Control
- Server Administration
- Troubleshooting

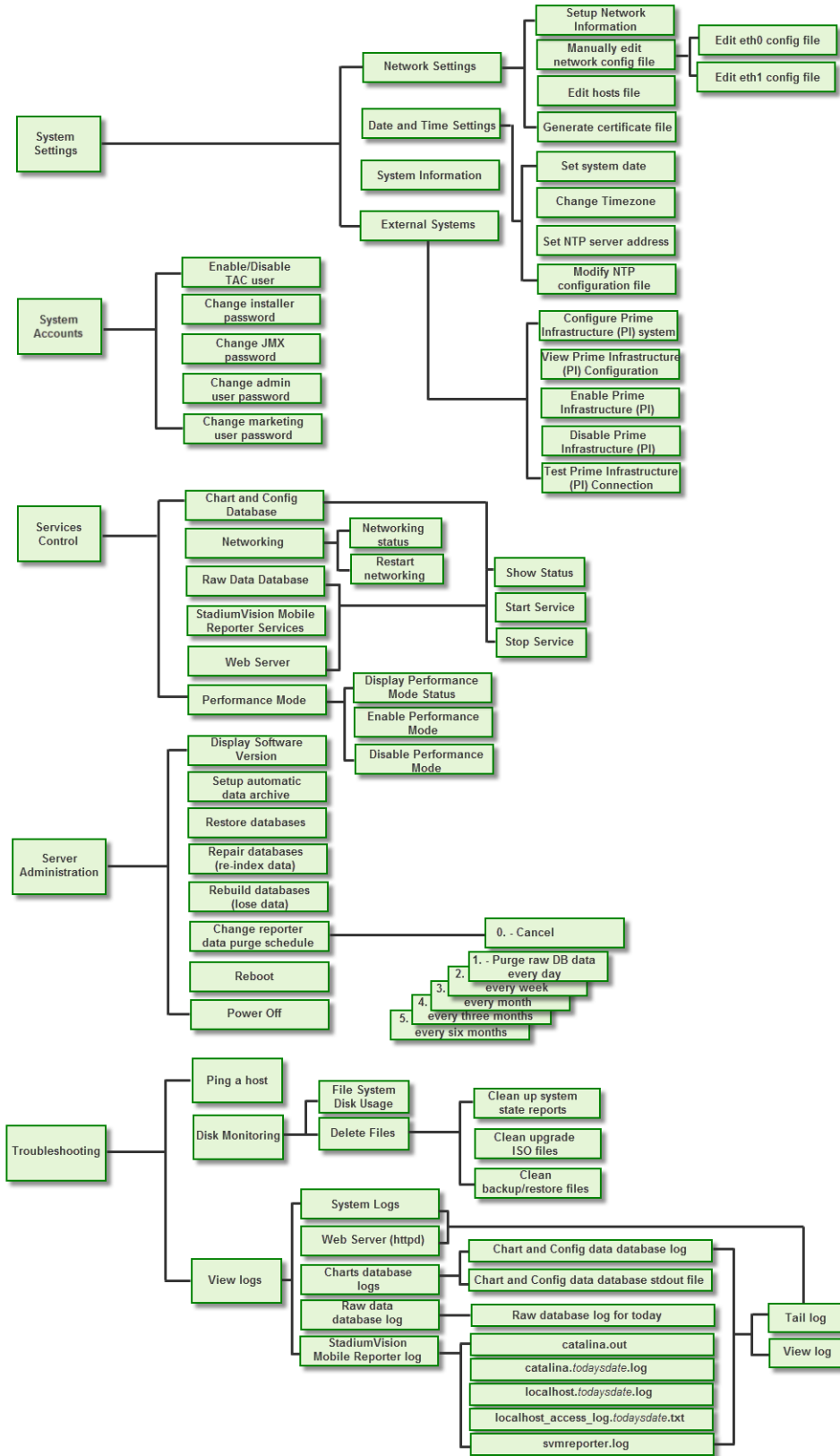
[Table 1](#) provides a description of the primary menus included in the Cisco StadiumVision Director TUI.

**Table 1** Description of the Primary TUI Menus

Menu Name	Use this menu to . . .
Main Menu	Access all other menus or exit the TUI.
System Settings	Change server network configuration, generate a certificate, configure system date/time, display system information, and configure external systems.
System Accounts	Change default system passwords.  For more information about system accounts and modifying them, see the <a href="#">“System Accounts on the Cisco StadiumVision Mobile Reporter Server”</a> module.
Services Control	Access services running on the server to start, stop, or show status.
Server Administration	Manage the operation and software configuration of the server.
Troubleshooting	Run a <b>ping</b> command, monitor disk space usage, clean up files to free up disk space, or display system logging information.

[Figure 3](#) shows an overall view of the Cisco StadiumVision Mobile Reporter TUI.

Figure 1 TUI Map for Cisco StadiumVision Mobile Reporter



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

- [System Settings, page 68](#)
- [System Accounts, page 69](#)
- [Services Control, page 69](#)
- [Server Administration, page 70](#)
- [Troubleshooting, page 70](#)

## 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

Opens the vi editor to modify the /etc/hosts file.

#### Generate certificate file

Generates a new self-signed certificate for network access using HTTPS.

**Note**

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If you want to use a signed certificate that you have purchased, contact Cisco Technical Support to install it.

---

### 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

Allows you to manually set 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 Systems

Allows you to configure, enable, and test integration with a Prime Infrastructure (PI) server for service quality reporting. For more information, see the [“Configuring Cisco Prime Infrastructure Integration for Cisco StadiumVision Mobile Reporter”](#) section on page 13.

## System Accounts

The System Accounts menu allows you to manage accounts on the Cisco StadiumVision Mobile Reporter server. For more information about changing system accounts, see the [“System Accounts on the Cisco StadiumVision Mobile Reporter Server”](#) module.

You also can enable and disable a TAC user for a Cisco TAC representative to remotely troubleshoot the Cisco StadiumVision Mobile Reporter server. This allows remote shell access to be used for remote troubleshooting purposes. Always disable this access once you complete troubleshooting the system. For more information, see the [“Enabling a TAC User Account \(Cisco Personnel Only\)”](#) module.

## Services Control

### Chart and Config Database

Shows information about the service that controls the Charts and Configuration database, and allows you to start or stop that database service.

### Networking

Shows information about the eth0 and eth1 ports and allows you to restart the networking service.

### Raw Data Database

Shows information about the service that controls the Raw Data database, and allows you to start or stop that database service.

### StadiumVision Mobile Reporter Services

Displays information about the svmreporter service, and allows you to start or stop it.

### Web Server

Displays information about the httpd service, and allows you to start or stop it.

### Performance Mode

Displays whether or not Performance Mode is enabled, and allows you to enable or disable it.

## Server Administration

### Display Software Version

Displays the installed software version.

### Setup automatic data archive



#### Note

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This TUI option is not supported for Cisco StadiumVision Mobile Reporter.

---

On a nightly basis, backups are automatically run for Chart and Config and Raw Data databases. These file archives are available to download. The file archives are automatically removed from the Cisco StadiumVision Mobile Reporter after 20 days. For more information, see the [“Cisco StadiumVision Mobile Reporter Data Management”](#) module.

### Restore databases

See the [“Performing a Restore of System Data”](#) section on page 58.

### Repair databases (re-index data)

- Repair Raw Data database

See the [“Repairing the Raw Data Database”](#) section on page 86.

### 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

See the [“Rebuilding the Raw Data Database”](#) section on page 86.

### 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
- 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.log
    - Tail log
    - View log
  - localhost\_access\_log.*date*.txt
    - Tail log
    - View log
  - svmreporter.log
    - Tail log
    - View log

## Working with the TUI Interface

This section includes the following topics:

- [Menu Navigation, page 72](#)
- [File Editor, page 72](#)

### Menu Navigation

The Main Menu is displayed when you log in. To navigate through the menus you must type the character that corresponds to the menu area where you want to go (**a**, **b**, **c**, and so on) and press **Enter**.

To return to other menus, you must back out of the hierarchy of menus using one of the indicated keys to return you to prior menus.



#### Caution

Avoid pressing Ctrl-c from the TUI. This immediately terminates the TUI session and if services were started during the session they might stop running. Use the TUI menu system to exit the interface.

### 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
- Network configuration—/etc/sysconfig/network-scripts/ifcfg-eth0

Before modifying configuration files, you should be familiar with the simple editing techniques used within the vi editor. [Table 2](#) describes some of the more common vi Editor commands.

**Table 2** Common vi Editor Commands

Command	Description
<b>ZZ</b> or <b>:wq</b>	Exit vi and save changes.
<b>:q!</b>	Exit vi without saving changes.
Esc key	Exit current mode and enter vi command mode.
<b>Cursor Movement</b>	
<b>h</b>	Move left (backspace).
<b>j</b>	Move down.
<b>k</b>	Move up.
<b>l</b>	Move right.
Enter key	Move to the beginning of the next line.
<b>Inserting</b>	
<b>a</b>	Append character after cursor.
<b>i</b>	Insert character before cursor. Enters INSERT mode.

**Table 2** Common vi Editor Commands (continued)

Command	Description
<b>r</b>	Replace character under cursor with next character typed.
<b>R</b>	Keep replacing character until [Esc] is pressed.
<b>Deleting</b>	
<b>db</b>	Delete word before cursor.
<b>dd</b>	Delete line under cursor.
<b>dw</b>	Delete word under cursor.
<b>x</b>	Delete character under cursor.
<b>P</b>	Undo deletion of characters, words, or lines before cursor.
<b>p</b>	Undo deletion of characters, words, or lines after cursor.

## How to Access the TUI

This section includes the following topics:

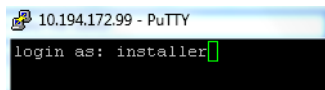
- [Logging Into the TUI, page 73](#)
- [Exiting the TUI, page 74](#)

## Logging Into the TUI

To access the TUI, you need either physical console access or an SSH client such as PuTTY.

To log into the TUI, complete the following steps:

- 
- Step 1** Do one of the following:
- Access the server using a directly-attached console.
  - In the SSH client software, specify the IP address of the server that you want to access.
- Step 2** When the “login as:” prompt appears, type **installer** and press **Enter** (Figure 2):

**Figure 2** TUI Login Prompt

- Step 3** At the password prompt, type the installer password and press **Enter**.



**Note** In the terminal emulator, the keystrokes for your password entry are not shown.









StadiumVision



## **PART 7**

# **Cisco StadiumVision Mobile Reporter Troubleshooting**







# System State Reports

**First Published: October 17, 2014**

The System State Report feature 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.

This module includes the following topics:

- [Information About System State Reports, page 79](#)
- [How to Run a System State Report, page 81](#)

## Information About System State Reports

Figure 1 shows the System State Report screen.

**Figure 1**      **System State Report Screen**



Table 1 describes the options provided on the System State Report screen.

**Table 1** System State Report Screen Description

Category	Description
Report Destination	<p>Allows you to choose whether you want to download the report or view it in your browser window. If you check <b>Download report</b>, 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.</p> <p>If you check <b>View in browser</b>, the resulting report is available for immediate viewing online via the link provided.</p>
Level	<p>Selects the level of detail you want in the report.</p> <ul style="list-style-type: none"> <li>• <b>Basic First Level:</b> 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.</li> <li>• <b>Java Heap Dump:</b> 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 <b>Get Heap Dump</b>. The heap dump report will generate.</li> </ul> <p>Exercise care in taking a heap dump, because while this is running, it can affect system performance.</p> <ul style="list-style-type: none"> <li>• <b>Full SVM Logs:</b> 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 <b>View in Browser</b>, then you can view the logs online as well.</li> <li>• <b>Export Raw Data:</b> Provides a mechanism to export the raw data from the Cisco StadiumVision Mobile Reporter.</li> </ul>
Previous Reports	<p>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.</p> <p>You can select one of the links to download to your local drive to view or email to Cisco support.</p>

# How to Run a System State Report

This section includes the following tasks:

- [Running a System State Report](#), page 81
- [Viewing the Contents of the Zip File](#), page 82
- [Exporting Raw Data From Cisco StadiumVision Mobile Reporter](#), page 82

## Running a System State Report

You can run a System State Report when logged into Cisco StadiumVision Mobile Reporter, or from a browser when the reporter GUI is not available.

### Using the Cisco StadiumVision Mobile Reporter GUI to Run a System State Report

To use the GUI to run a System State Report, complete the following steps:

- 
- Step 1** Log into Cisco StadiumVision Mobile Reporter as admin.
  - Step 2** From the System Tools menu, click **System State Report**.
  - Step 3** Under Report Destination, select one or both types, **Download report** and/or **View in browser**.
  - Step 4** Under Level, select the type of report that you want to run.
  - Step 5** Click **Get System State**.

A status bar is displayed while the report is generating.

---

### Running a System State Report When the Cisco StadiumVision Mobile Reporter GUI is Not Available

To run a System State Report when the GUI is not available, complete the following steps:

- 
- Step 1** Log into the TUI as installer.
  - Step 2** From the TUI, shut down the reporter by going to **Services Control > StadiumVision Mobile Reporter Services**.
  - Step 3** Click **Stop Service**.
  - Step 4** Exit the TUI.
  - Step 5** From your browser, navigate to the system state report directly with the following URL, where *reporter-ip-address* is replaced with the IP address of your server:

<https://reporter-ip-address/cgi-bin/snap.cgi>

---

## Viewing the Contents of the Zip File

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.

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.



### Note

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

---

**To view the contents of this file, complete the following 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 **Extract** 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.
- 

## Exporting Raw Data From Cisco StadiumVision Mobile Reporter

**To export raw data, complete the following steps:**

- 
- Step 1** From the System State Report screen, select **Export Raw Data**.
  - Step 2** Click **Get System State**.
  - Step 3** In the **Start Date** and **End Date** fields on the Raw Data Export screen, type the date and time range for the period from which you want data, as shown in [Figure 2](#).  
The default value is based on the last event times in the event schedule.

**Figure 2** Cisco StadiumVision Mobile Reporter Raw Data Export Dialog

**CISCO** StadiumVision Mobile Reporter System Status Report

StadiumVision Mobile Reporter Raw Data Export

### StadiumVision Mobile Reporter Raw Data Export

Please select the date and time range, the collection(s) and client criteria

**Date and time range**

Start Date:

End Date:

**Collection(s)**

Client

PI

Streamer

**Clients sub-criteria**

All in time range

Client Mac Address

Device UUID

Session UUID

- Step 4** Under **Collections**, select one or more of the checkboxes to specify where you want to get the data from:
- **Client**—Data from mobile clients using the Cisco StadiumVision Mobile SDK.
  - **PI**—Data from Cisco Prime Infrastructure (if using the Cisco StadiumVision Mobile-PI integration capability).
  - **Streamer**—Data sent from the Cisco StadiumVision Mobile Streamer to the Cisco StadiumVision Mobile Reporter.

- Step 5** (Client data only) Under **Clients sub-criteria**, specify additional options to further refine the data that is returned.

You can select either a specific client MAC address, or a device UUID or a session UUID. This data might be known to you from studying the report 'J: Client Sessions'. You can only specify one type of sub-criteria, and only one specific mac address or UUID.



**Note** For PI and Streamer data collections, **All in time range** is automatically selected and is all that applies.

- Step 6** Click **Get raw data**.

The report generates as a .csv file inside of a .zip archive file.





## Troubleshooting the Raw Database

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Sometimes, such as in the event of a sudden power loss, the raw data database might not restart properly. This module describes some of the ways that you can troubleshoot the Raw Data Database. If a rebuild of the database is required, you will need to contact Cisco Technical Support.

This module includes the following topics:

- [Displaying the Status of the Raw Data Database, page 85](#)
- [Raw Data Database is Not Running, page 85](#)

## Displaying the Status of the Raw Data Database

To display the status of the raw database, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI”](#) section on page 73.
- Step 2** From the main menu, go to **Services Control > Raw Data Database > Show Status**.
- Step 3** If the database is not running, try to start it. See the [“Starting the Raw Data Database”](#) section on page 86.
- 

## Raw Data Database is Not Running

If the Raw Data Database service status shows that it is not running, perform the following tasks to recover:

## Starting the Raw Data Database

If the raw database is not running, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI” section on page 73](#).
- Step 2** From the main menu, go to **Services Control > Raw Data Database > Start Service**.
- Step 3** After the Start Service process completes, run the **Show Status** command.  
If the database is not running after you started it, try to repair the database. See the [“Repairing the Raw Data Database” section on page 86](#).
- 

## Repairing the Raw Data Database

If the Raw Data Database is not running after you attempt to start it, then try to run a repair of the database. The repair process re-indexes the data.

To repair the Raw Data Database, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI” section on page 73](#).
- Step 2** From the main menu, go to **Server Administration > Repair Database (re-index data)**.  
The system automatically starts the database after the repair is complete.
- 

## Rebuilding the Raw Data Database



### Caution

This process will result in a loss of data. Be sure to contact Cisco Technical Support and perform this task as a last resort.

---

To rebuild the Raw Data Database, complete the following steps:

- 
- Step 1** Log into the TUI.  
For more information, see the [“Logging Into the TUI” section on page 73](#).
- Step 2** From the main menu, go to **Server Administration > Rebuild databases (lose data)**.  
The system automatically starts the database after the rebuild is complete.
-





# Enabling a TAC User Account (Cisco Personnel Only)

**First Published: October 17, 2014**

For troubleshooting, Cisco technical support personnel will need to create a Technical Assistance Center (TAC) account to have full access to the CLI.

**To enable a TAC user account, complete the following steps:**

- Step 1** From the TUI main menu, go to **System accounts > Enable/Disable TAC user > 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 Cisco StadiumVision Mobile server and click **Submit**.

A sample screen is shown in [Figure 1](#).

**Figure 1 SNE TAC Token Exchange**

## SNE TAC Token Exchange

[Token Generator](#)

Stadium Vision server IP:

**Step 1: Copy the following token (if needed save it someplace as you will need it later)**

```
BVp1wXSW/R9zq3x11abRcZHpSbkWY7UgG814Y677...
x3JqEYqgMuMtFadaTehcqVdNTbtEm...
IGhouYsjx1tiUPqcYISA83jWzPSGj2/...
```

**Step 2: SSH (VPN in first if needed) into the StadiumVision server you are requesting access to using the username "snetac" and the default password**

**Step 3: Paste the copied token into the SSH session when prompted for a token**

**Step 4: Go through the password setting process when prompted**

Done! You are now setup with a SSH account with username "snetac" 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 anytime by going through this process again.

- Step 4** Copy the generated token (save it someplace as you will need it later).
- Step 5** Use SSH (VPN in first if needed) to log into the Cisco StadiumVision Mobile server for which you are requesting access 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 the username that 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.

---