CHAPTER 2

Performing a Basic Setup of VSM

This chapter describes the procedures you can perform to set up a basic VSM deployment. It includes these topics:

Overview

This chapter describes the procedures that you perform to complete a basic deployment of VSM. These procedures assume that you have already installed your VSM servers and cameras, and that these devices are connected to the network. It also assumes that you have loaded the VSM software.

A basic installation includes setting up IP cameras and archives. When you complete these setup, you will be able to view, archive, and retrieve video from the IP cameras. You can add features and devices to a basic deployment at any time as your requirements grow or change.

Use the procedures in this chapter as guidelines for a basic deployment or as a general reference for basic procedures in a more advanced deployment. See the reference chapters throughout this manual for detailed information about additional features, functions, and configuration options.

Adding a Server

Adding servers is the process of configuring information about each Multi Services Platform that runs Video Surveillance Media Server (VSMS) and each Multi Services Platform that runs Video Surveillance Virtual Matrix (VSVM) in your VSM deployment. This information includes the name and IP address or host name of each server. If a Multi Services Platform runs VSMS and VSVM, add that server twice, once for each component.

To add servers, follow these steps:

Procedure

Step 1 Access the VSOM as described in the "Accessing VSOM" section on page 1-4.

Step 2 In the VSOM Operator page, click the **Admin** link, which appears near the top left of the page

The Administration area appears.

Step 3 Take the following actions to configure each server that will run VSMS:

a. Click **Servers** under Devices in the left panel of the VSOM Administrator page.

The Servers area appears.

b. In the Servers area, click **Add a New Server**.

c. In the Server Information area in the Details tab, choose **Video Surveillance Media Server (VSMS)** from the Server Type drop-down list.

d. In the Server Name field, enter a name for the server.

Enter a descriptive name that can help you identify the server. For example, enter the location of the server or its primary use. The name can include any combination of characters and spaces.

e. (Optional) In the Description field, enter a description for the server.

For example, the description could include the location or type of the server.

f. In the Host IP/Name field, enter the host name or IP address of the server that you are adding.

g. Click the **Submit** button to add the server.

h. Repeat this Step 3 for each server on which you will run VSMS.

Step 4 If you will use VSVM, take the following actions to configure the server that will run VSVM:

a. Click **Servers** under Devices in the left panel of the VSOM Administrator page.

The Servers area appears.

b. In the Servers area, click **Add a New Server**.

c. In the Server Information area in the Details tab, choose **Video Surveillance Virtual Matrix (VSVM)** from the Server Type drop-down list.

d. In the Server Name field, enter a name for server.

Enter a descriptive name that can help you identify the server. The name can include any combination of characters and spaces.

e. (Optional) In the Description field, enter a description for the server.

For example, the description could include the location or type of the server.

f. In the Host IP/Name field, enter the host name or IP address of the server that you are adding, followed by **:8086**.

"8086" is the default port number and appears in this field by default.

g. Click the **Submit** button to add the server.

Adding an IP Camera

Adding IP cameras is the process of configuring information about the IP cameras that will operate in your VSM deployment. This information includes the name of the camera, information about its video stream, and its log in credentials.

IP cameras (also called *network camera*s) connect directly to an IP network and do not require separate encoders.

To add an IP camera, perform the following steps. If you want to configure pan/tilt/zoom for an IP camera, follow the steps in the "Configuring PTZ and Joystick Settings" section on page 3-28 after you complete the following procedure.

Note Cisco recommends that you use the Batch Administration to add cameras. For detailed information, see the "Performing Batch Administration Functions" section on page 5-11.

Procedure

Step 1 Access the VSOM as described in the "Accessing VSOM" section on page 1-4.

Step 2 In the VSOM Operator page, click the **Admin** link, which appears near the top left of the page.

The Administration area appears.

Step 3 Click **IP/Network Cameras** under Devices in the left panel of the VSOM Administrator page.

The IP/Network Cameras area appears.

Step 4 In the IP/Network Cameras area, click **Add a New IP/Network Camera**.

Step 5 In the Camera Information area in the Camera Type tab, take these actions:

a. In the Camera Name field, enter a name for the camera.

Enter a descriptive name that can help you identify the camera. The name can include any combination of characters and spaces.

b. (Optional) In the Description field, enter a description for the camera.

For example, the description could include the location or type of the camera.

c. From the Camera Type drop-down list, choose the model of the camera that you are adding.

d. In the Host IP/Name field, enter the IP address or host name of the camera.

Step 6 In the Camera Feed area in the Camera Type tab, take these actions:

a. From the Server drop-down list, choose the VSMS that will manage the video stream.

This list displays the servers that you configured as described in the "Adding a Server" section on page 2-1.

b. From the Media Type drop-down list, choose the digital video encoding type for the video stream from the camera.

c. From the Format drop-down list, choose the format for the video stream from the camera.

The options in this list depend on the camera model that you chose.

d. From the Resolution drop-down list, choose the resolution for the video stream from the camera.

The options in this list depend on the camera model that you chose.

e. For the Transport option, take one of these actions to designate the protocol that VSMS uses to obtain video from the encoder (the available choices depend on the model of the IP camera):

- To choose Transport Control Protocol (TCP), click the **TCP** radio button
- To choose Universal Datagram Protocol (UDP) unicast, click the **UDP** radio button
- To choose UDP multicast, click the **UDP** radio button, then in the Multicast Address field enter the multicast address that camera should use to multicast the video to VSMS

f. From the Bitrate drop-down list, choose the bit rate for the video stream from the camera.

The Bitrate drop-down list appears only if you chose MPEG-2, MPEG-4, or H.264 for the media type.

g. From the Frame Rate drop-down list, choose the frame rate per second for the video stream from the camera.

The Frame Rate drop-down list appears only if you chose JPEG for the media type.

h. Use the Quality slider to specify the quality of the video stream. (This slider is not available for Cisco IP cameras with a Media Type setting other than JPEG unless the Variable Bitrate check box is checked.)

Moving the Quality slider to the right designates a higher value. A higher value uses less compression and provides higher quality.

Step 7 In the Camera requires authentication area in the Camera Type tab, take these actions:

a. Check the **Camera requires authentication** check box if the camera allows access from VSMS only if VSMS provides valid authentication credentials.

b. In the Username field, enter the user name that VSMS should provide when accessing the camera.

The user name is configured on the camera and the value that you enter in this field must match the configured name exactly. The user name can contain alphabetic and numeric characters only and is case sensitive.

c. In the Password field, enter the password that VSMS should provide when accessing the camera.

The password is configured on the camera and the value that you enter in this field must match the configured password exactly. The password can contain alphabetic and numeric characters only and is case sensitive.

d. In the Confirm Password field, reenter the password.

Step 8 Click the **Submit** button to add the camera.

Step 9 Repeat Step 4 through Step 8 as needed to add other cameras.

Configuring Archives

An archive is a recording of the feed from a camera in your VSM deployment. Configuring archives is the process of designating a camera feed that you want to record, setting parameters for the recording, and specifying a schedule for the recording. The feed includes video and, depending on the camera and VSM configuration, may include audio.

A recorded feed is called an *archive*. You can display archives when you need to review a video surveillance feed.

You can configure a scheduled archive, in which the system records based on a defined schedule, or motion-based archive, in which the system records based on motion that a camera detects.

Configuring a Scheduled Archive

You can configure any of the following schedule types for a recording:

- Simple Schedule—Recording occurs once during one or more designated time periods. You specify the start date and time and end date and time for each period.

- Recurring Schedule—Recording occurs on a weekly schedule. For each day, you can specify the time range or ranges in which recording occurs, and you can specify start and stop dates for the entire schedule.
- Continuous Loop—Records continuously and the system retains video for the duration that you designate.

Procedure

Step 1 Access the VSOM as described in the "Accessing VSOM" section on page 1-4

Step 2 In the VSOM Operator page, click the **Admin** link, which appears near the top left of the page.

The Administration area appears.

Step 3 Click **Archives** under Video Feeds in the left panel of the VSOM Administrator page.

Step 4 In the Archives area, click **Start/Schedule a New Archive**.

Step 5 In the Archive Source area in the Feeds tab, take these actions:

a. Click the radio button that corresponds to the camera feed that you want to record.

b. Click **Next**.

Step 6 In the Archive Information area in the Details tab, take these actions:

a. In the Archive Name field, enter a name for the archive.

Enter a descriptive name that can help you identify the archive. The name can include any combination of to 30 characters and spaces.

b. (Optional) In the Description field, enter a description for the archive.

c. From the Status drop-down list, make sure that **Enabled** is selected.

d. From the Force Start drop-down list, choose either of these options:

- **Default**—VSMS verifies whether there is enough capacity to store the archive that you are configuring. If there is not enough capacity when you submit the archive, the archive operation does not start and VSMS generates an error message.
- **Force**—VSMS starts recording even if there is not enough capacity for the archive that is configured. If you choose this option, make sure to provide enough disk space for the archive that you want. If the system runs out of disk space, it begins to delete the oldest retained video to make room for new video.

e. From the Keep on Server drop-down list, choose the number of days that VSMS retains the archive after the recording stops. The system deletes the archive after this period. If you choose **Forever**, the archive is never deleted.

f. If the video feed is a JPEG type, choose a frame rate for the archive from the Frame Rate drop-down list. A higher frame rate provides better quality but consumes more disk space.

Step 7 Click the **Archive Type** tab and take the appropriate actions in the Archive Type area to designate and configure the archive type:

- To record during one or more designated periods, take these actions:
  1. Click the **Simple Schedule** radio button.
  2. In the **Start on** and **End On** fields, specify the start date and the end date for the recording. In the corresponding **At** fields, enter the start time and end time for the recording.

     You can type information in these fields, or you can use the calendar in the date fields or the drop-down arrows in the time to select information.

3. (Optional) To designate an additional start/stop schedule, click **Add Date(s)** and enter the desired dates and times. You can repeat this process to designate as many start and stop dates and times as needed.

   To remove a start/stop schedule, click **Remove** next to the corresponding schedule.

- To designate a regular weekly schedule for recording, take these actions:

  1. Click the **Recurring Schedule** radio button.
  2. In the **Start On** field, type or use the calendar to enter the date on which the schedule becomes active.
  3. Specify the days on which the recording executes during identical time periods:

     a. Check the check box that corresponds to each day on which you want the recording to execute identically.

     b. In the **Start At** and **Stop At** fields, enter the times that the recording starts and stops on the selected day or days.

     c. (Optional) To add another time interval for the selected days, click **Add Time Range** and enter the start time and stop time in the **Start At** and **Stop At** fields that appear. Repeat as needed to add more time intervals for these days.

     d. (Optional) To specify other days with different schedules, check the check boxes that correspond to the days, enter start and stop times for as many ranges as desired, and click **Next Weekdays**. Repeat as needed.
  4. Specify whether the recurring schedule ends:

     - To stop the schedule after a designated number of weekly runs, click the **End After** radio button and enter the number of times that the schedule should run.

     - To stop the schedule at the beginning of the day on a certain date, click the **End by** radio button and enter the stop date.

     - To run the schedule indefinitely, click the **No End Date** radio button.

- To designate a continuos loop schedule, take these actions:

  1. Click the **Continuous Loop** radio button.
  2. In the **Loop Duration** field, enter the duration of the loop by entering a number and choosing the time unit from the drop-down list.

     The system archives video for the duration that you specify.

Step 8 Click Submit.

If you configured a continuous loop archive, recording starts immediately. Other recording types start as they are scheduled.

Configuring a Motion-Based Archive

You can configure VSOM to record video from a camera that supports motion detection when the camera detects motion. To do so, perform the following steps. For more detailed information about motion-based recording, see the "About Motion Detection Events" section on page 6-10 and the "Setting Up Windows for Motion Detection" section on page 6-14.

Procedure

Step 1 In the Administrator pages, take these actions to enable motion detection:

a. Click **Camera Feeds**.

b. Click the **Edit** icon in the Actions column for the desired feed.

c. Check the **Enable Motion Detection** check box.

d. Click **Submit**.

The system creates a default motion event, named motion-*camera_name_ID*.

Note For related information, see the "Enabling Motion Detection" section on page 5-11.

Step 2 In the Administrator pages, click **Events**.

Step 3 Click the **Edit** icon in the Actions column for the desired event in the Actions column.

Step 4 To set up windows for motion detection, click the **Motion Config** tab and use the following items to configure settings.

The selected motion detection window appears with a green border.

- Motion Window drop-down list—Choose the motion configuration window to configure.
- Active/inactive indication—Displays ACITVE when the selected windows senses motion, otherwise displays INACTIVE.
- **New**—Click to create new motion detection window, then enter window name (using alphanumeric characters only). Click **This is a mask window** if you want the system to ignore motion in this window. Drag the window to the desired location, and drag a border to resize the window.
- **Delete**—Click in a motion detection window, then click **Delete** to remove it.
- Mask Window—Indicates whether the window is a mask window.
- Sensitivity—Use the slider to configure sensitivity for the selected motion detection window. Higher sensitivity means that less motion is required for the system to detect motion.
- Object Size min—Choose a value from 0 to 100 to configure the relative size of an object that triggers motion detection when it moves.
- Object Size max—Not used.
- Persistence—Not used.
- **Show grid**—Click to display a grid on the video display, which can help you arrange motion detection windows.

Step 5 Configure settings on the Motion Start and Motion Stop subtabs described in Table 6-3 on page 6-12.

Step 6 Click **Submit**.