



# Cisco Videoscape Session Resource Manager Release 3.0 Configuration Guide

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The Cisco Videoscape Session Resource Manager (VSRM) is the Videoscape component that provides the sessions and resources that enable clients to access Videoscape services. Video delivery system control applications typically provide some form of on-demand or switched content, and thus require some form of session and resource management.

The application scope for VSRM is the set of typical video control plane applications, such as SDV, VOD, and cDVR Recorder Manager, that are required for video service delivery platforms. The scope also includes Protocol Adaptors (PAs), which are required in most VSRM applications to communicate with back-office facilities.

This book describes how to configure the VSRM.

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## About This Book

This preface describes the audience, use, and organization of the *Cisco Videoscape Session Resource Manager Release 3.0 Configuration Guide*. The preface also outlines the document conventions and support information.

## Revision History

Document Version	Date	Notes
OL-26147-01	January 2013	Initial release.
OL-26147-02	October 2012	This release has been updated to support Release 3.0.

## Audience

This book is intended for:

- System operators and head-end engineers who deploy version 3.0 or later of the VSRM.
- Cisco field service engineers who help support the VSRM.

## Document Conventions

This guide uses the following conventions for command syntax descriptions and textual emphasis:

Convention	Description
<b>boldface font</b>	Commands and keywords are in <b>boldface</b> .
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[ ]	Elements in square brackets are optional.
{x   y   z}	Alternative, mutually exclusive, keywords are grouped in braces and separated by vertical bars.
[x   y   z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
screen font	Terminal sessions and information the system displays are in <i>screen font</i> .
<b>boldface screen font</b>	Information you must enter is in <b>boldface screen font</b> .
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
^	The symbol ^ represents the key labeled Control—for example, the key combination ^D in a screen display means hold down the Control key while you press the D key.

Convention	Description
< >	Nonprinting characters, such as passwords, are in angle brackets in contexts where italics are not available.
!, #	An exclamation point ( ! ) or a pound sign ( # ) at the beginning of a line of code indicates a comment line.

**Caution**

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

**Note**

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this publication.

**Tip**

Means the following information might help you solve a problem.

## Related Publications

These documents provide complete information about the VDS-OS and are available from the Cisco.com site:

- *Getting Started Guide for the Videoscape Control Suite (OL-27702)*
- *COP Files for Cisco Videoscape Control Suite Services Installation Guide (OL-27753)*

## 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 the following URL:

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

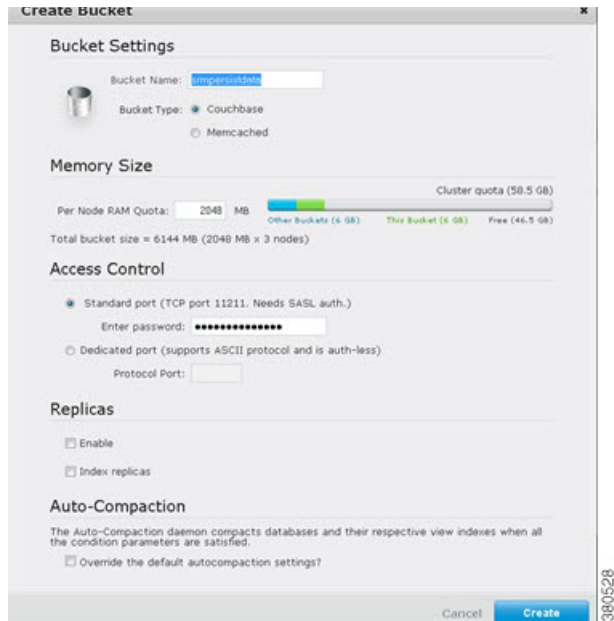
Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

## Configuring the Couchbase Server for VSRM

This section describes how to configure the Couchbase server for use with VSRM, by creating the following `srmobjects` data bucket.

- 
- Step 1** Log into the Couchbase user interface (UI) with username **Administrator** and password **Public123**.
  - Step 2** Click **Create Bucket**. the Create Bucket window is displayed ([Figure 1](#)).

**Figure 1** The Create Bucket Window



**Step 3** In the Create Bucket window, set the following values:

- In the Bucket Name field, enter **srmobjects**
- For Bucket Type, select **Couchbase**.
- In the Per Node RAM Quota field, enter **2048**.
- Select **Dedicated port**, then enter **5123** in the Protocol Port field.

**Step 4** For Replicas, make sure **Enable** is not selected, unless you are setting up a cluster.

## Configuring the VSRM

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## Configuring the Session State Manager

**Step 1** Expand the menus on the left under **Platform > SessionStateManager**.

- Step 2** Click **Configuration**.
  - Step 3** Change the DisplayMode field to **Config**, then click **Commit Changes** to save.
  - Step 4** Under **Platform > SessionStateManager**, click **Workflows**.
  - Step 5** In the WorkflowName column, enter **EventStore**, then click **Commit Changes** to save.
  - Step 6** Change the Display Mode field to **Normal**, then click **Commit Changes** to save.
- 

## Configuring Couchbase

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- Step 1** Navigate to the VSRM Web user interface (WebUI).  
`VSRM_IP`
  - Step 2** Click **Platform > Platform Adaptors > Db Adaptor Couchbase > Object Database Settings**. The Couchbase Object Database Settings window is displayed.
  - Step 3** Confirm the following settings:
    - **ObjectDatabaseWebIP**—Couchbase server IP address.
    - **ObjectDatabaseWebPort**—Port used by the Couchbase client to communicate with the server; preset with **8091**.
    - **ObjectBucketName**—Couchbase bucket name; preset with **srmobjects**.
    - **ObjectBucketUsername**—Leave this field blank.
    - **ObjectBucketPassword**—Password for the bucket name; preset.
  - Step 4** Click **Commit Changes** to save.
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## Configuring the VSRM Client

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- Step 1** Navigate to the VSRM WebUI.  
`VSRM_IP`
- Step 2** Click **Platform > Platform Adaptors > Bus Adaptor Conductor Client > Network Config**. The ConductorClient.Network Config window is displayed.
- Step 3** Set the following fields:
  - **SpecificIpAddress**—Leave this field blank.
  - **ServerIp**—Enter the Connection Manager (CM) IP address.
  - **ServerPort**—Keep the default setting: **5222**.
  - **ConductorUserName**—Enter the Conductor XMPP Server IP username from the manager console.
  - **Password**—Enter the Conductor XMPP Server IP password from the manager console.
  - **Domain**—Enter the Conductor XMPP Server Domain from the manager console.
  - **ServiceDomain** —Use the hostname that begins with **svc** for the SDNS type in the **cluster.xml** file.

- **Resource**—Keep the default setting: **Conductor**.
- **OpMode**—Keep the default setting: **Server**.

**Step 4** Click **Commit Changes** to save.

**Step 5** After committing the changes, you must reset the VSRM. On the VSRM WebUI, click **Reset**, then change the ServerState from **Active** to **Reset**.

**Step 6** Click **Commit Changes** to save.

**Step 7** Verify the connection between the VSRM and the CMC.

a. Navigate to the VSRM WebUI.

`VSRM_IP`

b. Click **Platform > PlatformAdaptors > BusAdaptorConductorClient.Statistics**. The ConductorClient.Statistics are displayed.

c. Verify that the Connections field is set to **1**.

## Configuring the Workflow

**Step 1** Open the `/opt/cisco/vsrm/Workflows/EventStore.xml` file using a text editor.

**Step 2** Under **EventHandlers**, add the XML elements that you want the SessionStateManager to handle.

- Set the XML element name to the stanza name that you want the SessionStateManager to handle.
- Set the value to the corresponding workflow that is to be called. If there is no workflow, do not set a value.

For example, the following workflow is configured with three registered events: **SessionCreate**, which runs the **SsrKeys** workflow; **SessionDelete**; and **SessionUpdate**.

```
<WorkflowConfig>
  <EventHandlers>
    <SessionCreate>SsrKeys</SessionCreate>
    <SessionDelete></SessionDelete>
    <SessionUpdate></SessionUpdate>
  </EventHandlers>
</WorkflowConfig>
```

**Step 3** Restart the VSRM using the **Reset** menu in the VSRM GUI.

**Step 4** Click **Platform > SessionStateManager > Workflow Event Table**. The Workflow Event Table is displayed. Verify that the events are displayed in the table.

## Configuring the VSRM Workflow

The VSRM Workflows are configured with an XML file located in `/opt/cisco/vsrm/workflows`. The XML filename is `<WorkflowName>.xml`.

- [Sample VSRM Comcast Recorder Manager Workflow, page 7](#)
- [Configuring Recorder Manager Workflow Parameters, page 7](#)

- [VSRM EventStore Workflow, page 7](#)

## Sample VSRM Comcast Recorder Manager Workflow

The following sample workflow file is named **ComcastNdvrRecorderManager.xml**.

```
<WorkflowConfig>
  <ResponseBusAddress></ResponseBusAddress>
  <VirtualServiceJid></VirtualServiceJid>
  <VirtualServicePassword></VirtualServicePassword>
  <ResourceManagerAddress></ResourceManagerAddress>
  <SchedulerAddress></SchedulerAddress>
  <VnsAddress></VnsAddress>
  <EventHandlers>
    <ComcastNdvrRequest>ComcastNdvrRequest</ComcastNdvrRequest>
    <ComcastNdvrSelect>ComcastNdvrSelect</ComcastNdvrSelect>
    <ComcastNdvrConfirm>ComcastNdvrConfirm</ComcastNdvrConfirm>
    <ComcastNdvrSetLocatorResponse>ComcastNdvrSetLocatorResponse
  </ComcastNdvrSetLocatorResponse>
    <ComcastNdvrSetStatusResponse>ComcastNdvrSetStatusResponse
  </ComcastNdvrSetStatusResponse>
    <ComcastNdvrQueryDevInfoResponse>ComcastNdvrQueryDevInfoResponse
  </ComcastNdvrQueryDevInfoResponse>
    <ComcastNdvrUpdate>ComcastNdvrUpdate</ComcastNdvrUpdate>
    <ComcastNdvrDelete>ComcastNdvrDelete</ComcastNdvrDelete>
    <ComcastNdvrRelease>ComcastNdvrRelease</ComcastNdvrRelease>
    <ComcastNdvrReportStatus>ComcastNdvrReportStatus</ComcastNdvrReportStatus>
    <ComcastNdvrTimeout></ComcastNdvrTimeout>
  </EventHandlers>
</WorkflowConfig>
```

## Configuring Recorder Manager Workflow Parameters

You can configure the following parameters in the Recorder Manager workflow file.

- **ResponseBusAddress**—Reply-to address for Recorder Manager events.
  - If not stand-alone mode, configure the virtual service name for the Recorder Manager (that is, **conductor://com/cisco/srm/recordermanager**).
  - If stand-alone mode, leave empty.
- **VirtualServiceJid**—Jabber ID (JID).
  - If not stand-alone mode, configure the JID for the instance of the Recorder Manager.
  - If stand-alone mode, leave empty.
- **VirtualServicePassword**—Password for the instance of the Recorder Manager.
- **ResourceManagerAddress**—JID for the Recorder Manager.
- **SchedulerAddress**—JID for the scheduler protocol adaptor.
- **VnsAddress**—JID for the VNS protocol adaptor.

## VSRM EventStore Workflow

The following sample workflow file is named **EventStore.xml**.

```
<WorkflowConfig>
  <EventHandlers>
    <SessionCreate>SsrKeys</SessionCreate>
  </EventHandlers>
</WorkflowConfig>
```

```
</EventHandlers>
</WorkflowConfig>
```

Event Handlers are handlers for EventStore messages. All messages that need to be stored in session records must to be defined in the EventStore workflow file.

- To define a message for storage, add it as an XML element with no value under EventHandlers.
- To define a message to be handled by a workflow, add it as an XML element under EventHandlers with the value set to the workflow name.

## Configuring the DNS

Verify that the service XMPP domain (such as **svc.sdvlab.cisco.com**) can be resolved via DNS, or add an entry in the **/etc/hosts file** on the VSRM.

## Configuring the VSRM

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- Step 1** Navigate to the service that you are going to virtualize, such as **Platform.SessionStatweMgr.Configuration**.
  - Step 2** Verify that the **VirtualServiceJid** field matches the **InstanceJID** configured on the management console.
  - Step 3** Verify that the **VirtualServicePassword** field matches the **Password** configured on the management console.
  - Step 4** Reset the VSRM server.
  - Step 5** Verify that the service virtualization is working correctly. Navigate to **MessageInfrastructure > Service Instance Management** on the management console and verify that the component shows up as **in service**.
- 

## Managing and Operating the VSRM

To manage the VSRM:

- 
- Step 1** Access the Management Console GUI.
  - Step 2** Click **Services > VSRM Management**.
  - Step 3** Select the item you want to manage:
    - [Dashboard, page 9](#)
    - [Apps/Protocol Adaptors, page 9](#)
    - [Managed Devices, page 9](#)
    - [SW Components, page 9](#)
-



## Dashboard

The Dashboard page provides an overview and status of all of the VSRMs on the system.

For each VSRM, the page displays:

- **Site Name**—Name of the VSRM.
- **IP Address**—Primary management IP address of the VSRM.
- **Summary Status**—Status of the highest level alarm on the system.
- **Current Mode**—Current mode of the VSRM. Valid values are **Online** or **Offline**.
- **Startup Mode**—Startup mode of the VSRM.
- **SW Version**—Current software version running on the VSRM.

## Apps/Protocol Adaptors

The Apps/Protocol Adaptors page lists the applications and protocol adaptors that are running on the VSRM.

For each adaptor, the page displays:

**componentName**—Name of the adaptor.

**adminState**—Administrative state of the adaptor. Valid values are **InService** or **OutOfService**.

**status**—Status of the alarm on the adaptor.

**vsrcIp**—IP Address of the VSRM on which the adaptor is running.

**componentType**—Type of adaptor.

**componentCategory**—Category of adaptor. Valid values are **Applications** or **ProtocolAdaptor**.

## Managed Devices

The Managed Devices page lists all of the managed devices that are running on the VSRM platform. Fields are similar to those for the Apps/Protocol Adaptors page.

## SW Components

The SW Components page lists all of the software components that are running on the VSRM platform. Fields are similar to those for the Apps/Protocol Adaptors page.

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