

Video Surveillance Deployment Guide for the UCS Express Platform

November 2012

This guide describes the key requirements and instructions for deploying a virtualized Cisco[®] Video Surveillance Manager (VSM) on the Cisco Unified Computing System[™] (UCS) Express platform.

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Introduction

This guide describes the key requirements and instructions for deploying a virtualized Cisco VSM on the Cisco UCS Express platform. This guide describes installation and configuration guidelines for the Service Ready Engine (SRE) blade server, VMware vSphere Hypervisor, Integrated Service Router Generation 2 (ISR G2), and the VSM virtual machine (VM), as well as best practice recommendations.

Audience

This guide is intended for use by Cisco System Engineers, Physical Security Advanced Technology Provider (ATP) partners, and technical field staff who develop and implement Cisco Video Surveillance and UCS Express for branch office solutions.

A successful implementation also requires additional knowledge in the following areas:

- Cisco ISR-G2 (29xx/39xx Series) Internetwork Operating System (IOS) router configuration
- Cisco Video Surveillance Manager (Version 6.3.2) installation and configuration

Scope

This guide contains detailed instructions on the installation of the VSM on UCS Express on the ISR G2 (Figure 1).







This guides assumes that the ESXi Hypervisor is installed on the SRE 910 service module.

This guide does not describe the configuration and operation of these products. For a full description of these products, see the "More Information" section on page 27.

<u>Note</u>

System Overview

The Cisco UCS Express product is an SRE blade on an ISR G2 branch office router running the SRE-V (ESXi) virtualization software. The 2900 and 3900 series routers have various Gigabit Ethernet interfaces onboard, wide-area network (WAN) interface card (WIC) interface slots, and multiple service module slots, depending on the model (Figure 2).

Figure 2 Cisco Integrated Service Routers and Service Ready Engine



The SRE 910 blade is inserted into one of the service module slots. Figure 3 displays that there are two Gigabit Ethernet internal interfaces on the router: one connected to the router and the second connected to MultiGigabit Fabric (MGF). There is also one external Gigabit Ethernet interface on the front panel of the SRE. The SRE blade has two 500 GB hard drives and 4 GB of random-access memory (RAM).





EtherSwitch Router Configuration

The specific router configuration depends on which interface is being used to connect to the external switch. In the first recommended deployment configuration (Figure 4), the EtherSwitch Enhanced High-speed WAN interface card (EHWIC) or EtherSwitch Service Module is used to connect to the external switch (Figure 5).

Figure 4 Host Router Connected to External Switch via MGF and EtherSwitch



Figure 5 Router Configuration Sample and Topology for External Switch via MGF and EtherSwitch



Note For this configuration, the Cisco EtherSwitch EHWIC/EtherSwitch service module is required. A list of supported EtherSwitch modules can be found in the *Installation and Configuration Guide for Cisco Services Ready Engine Virtualization*, Release 2.0 at http://www.cisco.com/en/US/docs/interfaces_modules/services_modules_modules/services_modules_modules_modules_modules_modules_modules_modules_modules_modules_modules_modules_modules_modules_modules_modules

http://www.cisco.com/en/US/docs/interfaces_modules/services_modules/sre_v/2.0/user/guide/overvie w.html.

Onboard Ethernet Router Configuration

Figure 6

In the second possible deployment configuration (Figure 6), the router's onboard Ethernet port is used to connect to the external switch (Figure 7).

Host Router Connected to an External Switch via an Onboard Router Port







Γ

External Interface Router Configuration

In the third potential deployment configuration (Figure 8), the external interface on the front panel of the UCS Express Service Module is used to connect to the external switch.

Figure 8 Host Router for External Switch via Front Panel Service Module Interface



This option has some limitations:

- It does not go through the router.
- ISR Router features, such as Transmission Control Protocol (TCP) Internet Protocol (IP)/User Datagram Protocol (UDP) offload, is not supported on this interface.

More details can be found in the Installation and Configuration Guide for Cisco Services Ready Engine Virtualization, Release 2.0 at

http://www.cisco.com/en/US/docs/interfaces_modules/services_modules/sre_v/2.0/user/guide/overvie w.html.

Logical Network Topology

Figure 9 illustrates the overall logical topology of the networking and video surveillance components, including a UCS Express containing the SRE-V running VSM, the Video Surveillance Operations Manager (VSOM), various IP cameras, an external switch, and the operator workstations running the VSOM client.



Cisco Video Surveillance Manager for UCS Express Data Sheet (http://www.cisco.com/en/US/prod/collateral/vpndevc/ps6918/ps9145/ps9152/data_sheet_c7 8-703863.html). See the data sheet on cisco.com for the latest guidelines, including maximum number of cameras, maximum I/O, and maximum raw storage.

Installing and Configuring the ISR Router and SRE

This guide describes the installation steps of configuring the ISR router and SRE, setting up the network interfaces, configuring hypervisor services and guest clients, and deploying and verifying the VSM VM.

Note

In the following configuration examples, it is assumed that:

- SRE is inserted into Slot 1
- 10.10.1.0/24 is the management network
- 10.3.8.0/21 is the VSM network
- VSM virtual LAN (VLAN) is 60

Verifying the IOS Image of the ISR

To verify the IOS image of the ISR:

- **Step 1** Log on to the router console and run the show version command to check the running version.
- **Step 2** Ensure that the ISR G2 is running 15.1(4)M, or a later version of IOS image.

If the router is running a version older than 15.1(4)M, then download and upgrade the IOS image to the correct version. To learn how to upgrade an IOS image, navigate to the Cisco web site at http://www.cisco.com/en/US/docs/net_mgmt/configuration_engine/3.0/administration/guide/upgrade.h tml.

Configuring the ISR Interface

To configure the ISR interface:

Step 1 Log on to the router console and view the running configuration with the **show running-config** command.

This command displays two interfaces, sm 1/0 and sm 1/1, assuming that the SRE blade is plugged into Service Module Slot 1. sm 1/0 is connected to the vSwitch0 vmKernel port of the Hypervisor, and sm 1/1 is connected to the vSwitch0 VM port group.

Step 2 Configure the router and hypervisor IP addresses by executing the following commands:

```
interface GigabitEthernet0/0
description $ETH-LAN$$ETH-SW-LAUNCH$$INTF-INFO-GE 0/0$
ip address 10.10.1.151 255.255.255.0
interface SM1/0
ip unnumbered GigabitEthernet0/0
service-module ip address 10.10.1.152 255.255.255.0
service-module ip default-gateway 10.10.1.151
```

Configuring the ISR VLANs

To configure the ISR VLANs:

```
Configure the SM 1/1 connected to the Service Module as a trunk port:
Step 1
        interface SM1/1
        description Internal switch interface connected to Service Module
        switchport mode trunk
Step 2
        Create sub-interfaces on the onboard router port to run 802.1q encapsulation for VLAN traffic, assign
        IP address for the sub-interfaces for VLAN routing, and create the VLANs:
        interface GigabitEthernet0/1.60
        encapsulation dot1Q 60
        ip address 10.3.8.3 255.255.248.0
        vlan 60
        interface Vlan60
        description VSM VLAN
        ip unnumbered GigabitEthernet0/1.60
Step 3
        Create VLAN routes and a static route for the hypervisor:
        ip route 10.10.1.152 255.255.255.255 SM1/0
        ip route 10.3.8.5 255.255.255.255 Vlan60
```

Verifying and Configuring the SRE Hypervisor

To verify and configure the SRE hypervisor:

- **Step 1** From the router console, session into the Service Module to verify that the hypervisor is running on the SRE blade.
- **Step 2** Assuming that the SRE is inserted into Slot 1 and the ESXi 5 hypervisor is installed and running on the blade, run the following command to session into the blade:

service-module sm 1/0 session

Step 3 Verify that you are now logged on to the hypervisor user interface logon screen (Figure 10).





- **Step 4** Log on to the hypervisor with the **root** username and **blank** password.
- Step 5 Press the F2 key to enter the Customize System mode and set the password.
- Step 6 Navigate to Troubleshooting Options and enable SSH.
- **Step 7** Press the **Esc** key to save and exit this mode.
- **Step 8** Return to the IOS console or exit the session:
 - To return to the IOS console, press the Ctrl+Shift+6 sequence and then press x.
 - To exit the session, enter the following command:

service-module sm 1/0 session clear



SRE-V comes with a 60-day trial license. A permanent license is required after 60 days. For details about licensing, see the *Installation and Configuration Guide for Cisco Services Ready Engine Virtualization*, Release 2.0 at

http://www.cisco.com/en/US/docs/interfaces_modules/services_modules/sre_v/2.0/user/guide/license. html

Installing the vSphere Client

To install the vSphere client:

Step 1 Open a web browser and enter the hypervisor URL (http://3.1.1.152/).

Step 2



Click the **Download vSphere Client** link to download the vSphere client to your computer.

Internet connection is required to download the vSphere client. After the vSphere client is installed, launch the client (Figure 11) and enter the hypervisor's IP address and credentials to access the host.





Deploying the VSM 6.3.2 Template

To deploy the VSM 6.3.2 template:

- **Step 1** Download the **VSM 6.3.2 template** from the Cisco web page or insert a USB drive with the VSM template.
- **Step 2** Copy the template to the same computer on which the vSphere client was previously installed.



te The OVF Template is approximately 2.5 GB in size. Once deployed, the VM requires 20 GB of space (without including the space for the video partitions).

- **Step 3** Launch the vSphere client and connect to the hypervisor.
- Step 4 Click File > Deploy OVF Template to launch the OVF Deploy Template wizard (Figure 12).

Figure 12 Launching the Deploy OVF Template Wizard in the vSphere Client

🖉 c	Venter_UCS - vSphere Client			- • ×
File	Edit View Inventory Administration Pl	lug-ins Help		
	New 🕨 e 🕨 👼	Inventory D 🕅 Hosts and Clusters	🔊 - Search Inventory	Q
	Deploy OVF Template			
	Export •			
÷	Report			
	Browse VA Marketplace	10.3.1.20 VMware ESXi, 5.0.0, 623860		
	Print Maps 🕨	Getting Started Summary Virtual Machines Pe	erformance Configuration Tasks & Events Alarms Permis	sions Map ∉ ♪
Rece	Exit 10.3.1.20 10.3.1.3 10.3.1.4 Perf-UCS-VSMS7-1.3 Perf-UCS-VSMS7-1.3 Perf-UCS-VSMS7-2.4 Perf-UCS-VSMS7-2.4 Perf-UCS-VSMS7-3.3 Perf-UCS-VSMS7-3.3 Perf-UCS-VSMS7-3.3 Perf-UCS-VSMS7-4.4 Perf-UCS-VSMS7-4.4 Perf-UCS-VSMS7-4.3 Perf-UCS-VSMS7-4.4 Perf-UCS-VSMS7-5.4 VSM632.2 VSM632.2 VSM632.2 VSM632.2 VSM632.2 VSM632.3 VSM632.2 VSM632.3 VSM632.2 VSM632.3 VSM632.2 VSM632.3 VSM632.2 VSM632.3 VSM632.4 VSM64	What is a Host? A host is a computer that uses virtualizati as ESX or ESX, to run virtual machines. For the component of the co	ion software, such hosts provide the machines use and and network Cluster Uster Venter Server VSphere Client	Clear ×
Nam	e Target	Status	Details Initiated by	vCenter Serv 🔺

- **Step 5** Follow the instructions in the wizard:
 - a. Click Browse and either enter a URL to download, or specify a location and select the VSM template.
 - **b.** Enter an appropriate **name** for this virtual machine.
 - c. Complete the remaining steps by choosing all of the default options.
 - d. Click Finish to begin deploying the VSM template.

Figure 13 displays the result of those selected deployment settings.

Contraction OVF Template		
Ready to Complete Are these the options you	want to use?	
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	When you dick Finish, the deployment Settings: OVF file: Download size: Size on disk: Name: Folde: Host/Cluster: Specific Host: Datastore: Disk provisioning: Network Mapping: Power on after deployment	nt task will be started. C:\UCS_ESX5_Template\UCS_B_C_VSM_632_MR2_Templ 2.3 GB 20.0 GB Cisco 632 Video Surveillance Manager VSM_UCS VSMS 10.3.1.20 datastore1 (8) Thick Provision Lazy Zeroed "VM Network" to "VM Network"
Help		< Back Finish Cancel

Figure 13 Ready to Complete the OVF Wizard – VSM Template and Default Settings

Once the VSM template is successfully deployed, the VSM VM displays under the hypervisor entry in the left-hand Inventory tree (Figure 14, left pane).

For more information about OVF Templates, see http://www.vmware.com/technical-resources/interfaces/ovf.html.



The VSM VM size is 30 GB.

IKRAM-PC - vSphere Client File Edit View Inventory Administration Plug-ir	is Help	
💽 🔝 🏠 Home 🕨 👸 Inventory 🕨 🕅 H	osts and Clusters	🛃 🔹 Search Inventory
🔳 II 🕨 🕲 🔯 🚳 😰 属	» 📀 🎰	
Cisco Video Surveillance Manager Cisco Video Surveillance Manager	Cisco Video Surveillance Manager Getting Started Summary Resource Allocation Performance Tasks 8 What is a Virtual Machine? A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system. Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop or workstation environments, as testing environments, or to consolidate server applications. In vCenter Server, virtual machines run on hosts or clusters. The same host can run many virtual machines.	Eventa Alarma Console Permissiona Mapa Stor D close 1 Virtual Machin Cluster Host
	Basic Tasks Power on the virtual machine Bedit virtual machine settings	Datacenter vCenter Server vSphere Client Explore Further
		•

Figure 14 VSM VM Console in the vSphere Client

Creating New Media Hard Disks

The size of a new media hard disk is based on the redundant array of independent disks (RAID) configuration of the hypervisor. If the hypervisor is configured with a RAID 0 setting, then the usable disk size for the media partition is 860 GB; if using a RAID 1 setting, then the usable disk size is 400 GB. A RAID configuration is specified when the SRE module is ordered.

Note

Cisco assumes that the SRE comes with RAID configured. If it is not configured, or if the RAID configuration must be modified, then follow the instructions in the SRE configuration guide listed in the reference section.

To create a new media hard disk for the VSM VM:

- **Step 1** Launch the vSphere client and connect to the vCenter server (see Figure 11 on page 11).
- **Step 2** In the left pane (Inventory tree), right-click the hypervisor's name and select **Edit Settings** (Figure 15) to launch the Virtual Machine Properties—Hardware Tab settings (Figure 16).

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cent Tasks		Open in New Window Ctrl+Alt Remove from Inventory Delete from Disk	+N		Name, Target	or Status contains: •	Clear
		Rename		I machine settings		Evaluate Evather	
		Report Performance					
		Alarm	•	the virtual machine		vSphere Client	
		Add Permission Ctr	+P			vCenter Server	
		VM Storage Profile	•				Datacenter
		Fault Tolerance	•	me host can run many vi	tual machines.		
	8 9	Clone Template	•	er applications.	n hosts or		н
		Upgrade Virtual Hardware		u can use virtual machine ronments, as testing envi	es as desktop or ironments, or to		
		Migrate		virtual machine is an isola	ted computing	Cluster	4
		Open Console		d a guest operating system	ed on a virtual em.		
		Snapshot	•	er, runs an operating sys	tem and	Carla Carl	Virtual Mac
		Power Guest	•	e is a software computer	that like a		
IO.194.76. Cisco V	152 iq	<u> </u>		al Machine?			clos
		Getting Sta	rted	Summary Resource Allocation	Performance Tasks & Eve	ents Alarms Console Permission	s Maps St
IKRAM-PC		Cisco Video	Surve	illance Manager			
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e Edit View Invent	ory /	Administration Plug-ins Help					
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Figure 15 vCenter UCS, vSphere Client–Edit Settings





Step 3 Select Hard disk n and note the Disk Provisioning sizes (Maximum Size and Provisioned Size).Step 4 Click Add to display the Add Hardware screen (Figure 17).

🕜 IKR	AM-F	PC - vS	phere Clie	ent			
File	Edit	View	Inventor	y Ad	Administration Plug-ins Help		
(-		Home	2	Cisco Video Surveillance Manager - Virtual Machine Properties		rento
				Har	ardware Options Resources Profiles VServices	Virtual Machine Version: 7	
	TKP	AM-PC	0	Ц	Add Hardware	—	
•		DC1 DC2 10.:	194.76.15 Cisco Vid	H	Device Type What sort of device do you wish to add to your virtual machine?		mis
					Device Type Ready to Complete Choose the type of device you wish to add. Serial Port Parallel Port Floppy Drive CD/DVD Drive CD/DVD Drive CD/DVD Drive USB Controller USB Device (unavailable) Floppy Drive ScSI Device (unavailable) Choose the type of device you wish to add.		ver
Recen	t Tas	ks			Help <a>Kex	:> Cancel	
Name Vame	Deploy	y OVF te	emplate	_	Help	OK Cancel	nitia kran

Figure 17 Selecting a Hard Disk

Step 5 From the device type list, select **Hard Disk** and click **Next** to display the next screen.

Step 6 Select the default options for adding the new hard disk and proceed to the final screen (Figure 18).

ć	JIKRAM-PC	- vSphere Cli	ent						
	File Edit V	iew Inventor	y Ad	ministration Plug-ins Help					
	F	🔥 Home	20	Cisco Video Surveillance Manag	er - Virtual Machine Properties			rentory	Q
			Hard	dware Options Resources Pr	ofiles VServices	Carfornation	Virtual Machine Version: 7		
	E 🖓 IKRAM	1-PC	Г	🕗 Add Hardware					
		21	н	Ready to Complete	one and dick Einich to add the hardware			missions Ma	ps Sto 4 🕨
		10.194.76.15		Review the selected opt	ons and click Finish to add the hardware.			<u> </u>	close t
		CISCO VID	g	Device Type					
				Select a Disk	Options:				
				Create a Disk Advanced Options	Hardware type: Hard Disk Create disk: New virtual disk			Virt	ual Machii
				Ready to Complete	Disk capacity: 880 GB Disk provisioning: Thick Provision La	zy Zeroed			
					Datastore: datastore1 Virtual Device Node: SCSI (0:1)			4	
					Disk mode: Persistent				
									Host
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R	ecent Tasks			Help		< Back	Finish Cancel		Clear ×
P	Vame			uala I			OK Canad	nitiated by	vCenter Serv
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Figure 18 Summary of New Hard Disk Options

- **Step 7** Click **Finish** to return to the Virtual Machine Properties (Figure 16 on page 15) and view the newly created hard disk.
- **Step 8** Click **OK** (Figure 19) to accept the new hard disk and to complete the procedure.

🕜 IKRAM-PC - vSphere Clie	ent		
File Edit View Inventor	y Administration Plug-ins Help		
🔽 🗊 , 👌 Home	Cisco Video Surveillance Manager - Virtual Machine Propert	es entory	y Q
	Hardware Options Resources Profiles vServices	Virtual Machine Version: 7	
II	Show All Devices Add Remove		
DC1 DC2	Hardware Summary	Dick Provisioning	ons Maps Sto 4 🖡
□ □ □ 10.194.76.15	Memory 3584 MB	Type: Thick Provision Lazy Zeroed	close 1
🔂 Cisco Vid	Uideo card	Provisioned Size: 880 - GB	
	VMCI device Restricted		
	SCSI controller 0 LSI Logic Parallel	Maximum Size (GB):	Virtual Machin
	Hard disk 1 Virtual Disk	-Virtual Device Node	
	CD/DVD drive 1 CD/DVD drive 1	SCSI (0:1)	
	Network adapter 1 VM Network 1		4
	New Hard Disk (adding) Virtual Disk	Mode	
		 Independent Independent disks are not affected by snapshots. Persistent Changes are immediately and permanently written to the disk. Nonpersistent 	Host
Recent Tasks		Changes to this disk are discarded when you power off or revert to the snapshot.	Clear ×
Name	Help	OK Cancel	d by 🛛 vCenter Serv

Figure 19 Ready to Add New Hard Disk to VSM VM

Configuring Network Switches for the VSM VM

To set up the networking configuration for the VSM VM:

- **Step 1** Launch the vSphere client and connect to the vCenter server (see Figure 11 on page 11).
- **Step 2** In the left pane (Inventory tree), click the hypervisor's name > click the **Configuration** tab.
- **Step 3** In the Hardware section, click **Networking** (Figure 20).

🕑 10.194.76.152 -	vSphere Clien	t					
File Edit View Inven	tory Administrat	ion Plug-ins Help					
💽 💽 🏠 Hor	me 🕨 🚮 Inve	ntory 🕨 🛐 Inventory					
6 ⁷ 6 ⁷							
□	VM	sre-ucpxp. VMware ESXi, 4.1.0, 3 Getting Started Summary Virtu	18481 Ial Machines Reso	urce Allocatio	n VPerformanc	e Configuration Local Users & Groups Events	Permissions 🛛 🕨
		Hardware	View:	Virtual Swite	h		-
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		DNS and Routing Authentication Services					~
Recent Tasks						Name, Target or Status contains: 👻	Clear ×
Name	Target	Status	1	Details	Initiated by	Requested Start Ti 🤝 Start Time	Completed Time
<							
🐖 Tasks							root //

Figure 20 VM Switch Networking Properties—vSphere Client

The defaults, virtual switch: vswitch 0 and virtual switch: vswitch1, display.

Step 4 Click **Properties** to configure the virtual switch's properties (Figure 21).

rts Network Adapters	5			
Configuration	Summary	Port Group Properties		
↓ ↓ Switch	120 Ports	Network Label: VM P	letwork	
👳 VM Network	Virtual Machine	VLAN ID: 60		
		Effective Policies		
		Security		
		Promiscuous Mode:	Reject	
		MAC Address Changes:	Accept	
		Forged Transmits:	Accept	
		Traffic Shaping		
		Average Bandwidth:		
		Peak Bandwidth:		
		Burst Size:		
		Failover and Load Balancing		
		Load Balancing:	Port ID	
		Network Failure Detection:	Link status only	
		Notify Switches:	Yes	
		Failback:	Yes	
		Active Adapters:	vmnic2	
		Standby Adapters:	None	
Add	Edit Remove	Lipused Adapters:	None	

Figure 21 VM Switch1 Networking Properties – vSphere Client

Step 5 Select VM Network and click Edit.

Step 6 Optional. Change the VLAN ID to the VSM VLAN (for example, 60) (Figure 22).

Figure 22 VM Networking Properties—vSphere (
--

VM Network Properties	
General Security Traffic Shap	ing NIC Teaming
Port Group Properties	
Network Label:	VM Network
VLAN ID (Optional):	<u>50</u>
	OK Cancel Help

Step 7 Click **OK** to complete the network configuration.

Configuring NTP



We recommend that you use the Network Time Protocol (NTP) source to maintain the correct time on the server. Configuring NTP should be done before configuring the video. The clock should be set to use Coordinated Universal Time (UTC) and the appropriate time zone for the server.

To set up the NTP configuration for the VSM VM:

- **Step 1** Launch the vSphere client and connect to the vCenter server.
- **Step 2** In the left pane (Inventory tree), click the hypervisor's name.
- **Step 3** Click the **Configuration** tab, and in the Software area (Figure 23), click **Time Configuration**.

IKRAM-PC - vSphere Client - - -File Edit View Inventory Administration Plug-ins Help 🚰 🗸 Search Inventory Ame 🕨 🚮 Inventory 👂 🗊 Hosts and Clusters C 岡 e 🐮 🖃 🛃 IKRAM-PC 10.194.76.152 VMware ESXi, 5.0.0, 474610 Configuratio 10.194.76.152 Hardware Refresh Properties Time Configuration Cisco Video Survei General Memory Date & Time 15:04 5/21/2012 Storage NTP Client Running Networking 10.10.50.11 NTP Servers Storage Adapters Network Adapters Advanced Settings Power Managemen Software Licensed Features Time Configuration DNS and Routing Authentication Services Power Management Virtual Machine Startup/Shutdown Virtual Machine Swapfile Location Security Profile Note: The date and time values of the host have been translated into the local time of this vSphere Client Host Cache Configuratio Recent Tasks Name, Target or Status contains: -Clea

Figure 23 Time Configuration Properties—NTP Settings

- **Step 4** Click **Properties** to configure the NTP settings.
- Step 5 Check the NTP Client Enabled check box and click Options to add NTP server address (Figure 24 and Figure 25).

General		
Date and Time - Set the date and	d time for the host in the vSphere Client's local time.	
Time:	2:38:03 PM +	
Date:	Monday , May 21, 2012 💌	
	on	
NTP Configuration		
NTP Configuration	123	
Outgoing Port: Protocols:	123 udp	

Figure 24 Time Configuration – General Properties



NTP Settings	NTP Servers
	Add Edit Remove

Step 6 Click **OK** to complete the NTP configuration for the hypervisor.



To set up the NTP configuration on the VSM VM running SUSE, use Yet Another Setup Tool (YaST) to configure the NTP source and server time.

Launching the VSM VM

To launch the VSM VM:

Step 1 In the left pane (Inventory tree) of the vCenter_UCS-vSphere client, right-click the VSM VM name and select **Open Console** (Figure 26) to launch the VM console.

∂ ⊿ IKRAM-PC - vSphere Client File Edit View Inventory Administration Plug-ins Help Ame 👂 🚌 Inventory 👂 🗊 Hosts and Clusters 🚰 👻 Search Inventory 0 F ▶ 9 🔯 🖓 😰 🔛 📎 🦫 E C IKRAM-PC Cisco Video Surveillance Manager Getting Started Su 🖃 🔼 10.194.76.152 close 1 Cisco Video Iachine? Power a software computer that, like a Guest uns an operating system and Snapshot Virtual Machin rating system installed on a virtual 2 Open Console guest operating system. Edit Settings... al machine is an isolated computing Migrate... • in use virtual machines as desktop or Upgrade Virtual Hardware nents, as testing environments, or to pplications Clone... Template ٠ irtual machines run on hosts or host can run many virtual machines Fault Tolerance VM Storage Profile Datacenter vCenter Server Add Permission... Ctrl+P vSphere Client Alarm virtual machine Report Performance... chine settings Rename Explore Further Open in New Window... Ctrl+Alt+N • Remove from Inventory Recent Tasks Delete from Disk Name, Target or Status contains: • Clear

Figure 26 Opening the VSM VM Console

Step 2 On the console toolbar, click the **green** arrow (Figure 27).



Figure 27 Launching the VSM VM Console

Configuring the VSM VM

To configure the VSM VM:

- **Step 1** Open the VSM VM console and log on to VSM with either your specific authentication or the standard default username of **root** and the **secur4u** password.
- **Step 2** Launch the Yet another Software Tool (YaST) partitioner utility to add the new media partition (Figure 28, Figure 29, Figure 30, Figure 31).

🕜 Cisco Video Surveillance Man	nager on 10.194.76.152	
File View VM		
🔳 II 🕨 🗐 🔯		
Partition your hard disks 🔺	Separate Partitioner	
This is intended for		
experts. If you are not familiar with the concepts		
of hard disk partitions	Device Size F Type Mount Mount By Start End Used By Label Device ID	Devic
and how to use them, you might want to go back and	/dev/sda 30.0GB VMware-Virtual disk 0 3915 /dev/sda1 2.0GB Linux swap swap K 0 261	pci-00 pci-00
select automatic	/dev/sda2 27.9 GB Linux native / K 262 3915	pci-00
partitioning.	/dev/sdb 880.0 GB VMware-Virtual disk 0 114875	pci-00
Nothing will be written to		
confirm all your changes		
with the "Apply" button.		
safely abort.		
For LVM setup, using a		
non-LVM root device and		
a non-LVM swap device is recommended. Other than		
the root and swap devices,		
managed by LVM.		
The table to the right		
shows the current		
partitions on all your hard disks.		
Hard disks are		
designated like this		
/dev/bda_1stEIDE	•	
disk /dev/hdb 2nd EIDE	Create Erlit Delete Resize	
disk /dev/hdc 3rd EIDE		
at 🗸	<u>L</u> VM <u>R</u> AID ▼ Crypt File ▼ Expert. ▼	
	Quit	Apply

Figure 28 Creating a New Media Partition in YaST





View VM												
II 🕨 🧐	0	🕼 🚺 I	🧇 🍫									
artition your hard disks his is intended for xperts . If you are not amiliar with the concepts f hard disk partitions		Device	Size	F Type	Mount	Mount By	Start	End	Used By	Label	Device ID	Devic
nd how to use them, you		/dev/sda1	20.0 GB	Linux swap	al disk swap	к	0	3915				pci-00
elect automatic		/dev/sda2	27.9 GB	Linux native	/	к	262	3915				pci-00
artitioning.		/dev/sdb	880.0 GB	VMware-Virtu	al disk		0	114875	_	_		pci-00
ontim all your changes in the "Apply" buton. Initi that point, you can afely abort. Or LVM setup, using a on-LVM root device and non-LVM swap devices, acommended. Other than is eroot and swap devices, ou should have partitions nanaged by LVM. he table to the right hows the current artificons on all your hard isls.				Part Part Ext	X ition Type mary Parition ended Parition							
esignated like this dev/hda 1st EIDE isk /dev/hdb 2nd EIDE isk /dev/hdc 3rd EIDE isk	4	•		<u> </u>	reate <u>E</u> di	t <u>D</u> elet	e	Re <u>s</u> ize) pert. 🔻)			••

Figure 30 Selecting Partition Type in YaST





- **Step 3** After successfully creating the partition, change ownership of partition to the nobody account and group with the **chown nobody:nobody/media1** command.
- **Step 4** Reboot the VSM VM: log off and select **Reboot**.
- Step 5 After the VM reboots, open the Video Surveillance Management Console (VSMC) page from the browser and configure the Media Server options to set the /media1 partition for storing archives and video clip data.



Remember to finish all of the remaining VSM administration and configuration tasks. For information about VSM Install and User Guides, refer to the "More Information" section on page 27.

Testing Network Connectivity

To verify that network connectivity is working properly between endpoints, including IP cameras and VSOM operator workstations:

- **Step 1** Log on to the VSM server and ensure that all Cisco services are running and operational.
- Step 2 Navigate to the VSMC page and from the Status Console, verify the status of the Cisco services.

More Information

For more information about Cisco-related products, see the following resources:

- Cisco Physical Security and Building Systems: http://www.cisco.com/go/physec/
- Cisco UCS Express (SRE-V) Install and Upgrade Guides: http://www.cisco.com/en/US/products/ps11273/prod_installation_guides_list.html
- Cisco Video Surveillance Media Server Software—Install and Upgrade Guides: http://www.cisco.com/en/US/products/ps9152/prod_installation_guides_list.html
- Installing and Configuring VMware Tools: http://www.vmware.com/pdf/vmware-tools-installation-configuration.pdf
- Cisco Configuration Engine Administration Guide—Upgrade or Downgrade an IOS Image http://www.cisco.com/en/US/docs/net_mgmt/configuration_engine/3.0/administration/guide/upgra de.html
- Installation and Configuration Guide for Cisco Services Ready Engine Virtualization, Release 2.0 http://www.cisco.com/en/US/docs/interfaces_modules/services_modules/sre_v/2.0/user/guide/overview.html

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