

Video Surveillance Recovery Guide for UCS Express Platform

November 2012

This guide describes the procedure to recover a virtualized $Cisco^{\ensuremath{\mathbb{B}}}$ Video Surveillance Manager (VSM) on the Cisco Unified Computing SystemTM (UCS) Express platform.

Contents

This document includes the following sections: Introduction, page 2 Recovering the VSM on the UCS, page 2 More Information, page 14



Introduction

This guide describes the procedure to recover a virtualized VSM on the UCS Express platform.

Audience

This recovery guide is intended for use by Cisco System Engineers, Physical Security Advanced Technology Provider (ATP) partners, and technical field staff that are developing and implementing Cisco Video Surveillance and UCS Servers for branch office and data center 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 VSM (Release 6.3.2) installation and configuration

Assumptions

This guide details instructions for the recovery of VSM on UCS Express on the ISR G2 and assumes that data has been backed up and is available for restoring on the new recovered image. For backup instructions, see the *Cisco Video Surveillance Manager Install and Upgrade Guides* at http://www.cisco.com/en/US/products/ps9152/prod_installation_guides_list.html.

Recovering the VSM on the UCS

This recovery procedure assumes that the backup has been performed on the machine and that backup files are available for data recovery.

To recover the VSM on the UCS:

Step 1 Download the VSM, Release 6.3.2 VMware recovery template from the Cisco web site.



Template files are typically large in size. We recommend downloading and copying it to universal serial bus (USB) flash to avoid download delays.

Step 2 Launch the vSphere Client software (see Figure 1).

WIKRAM-PC - vSphere Cli	ent	desisistanting Divertion 11	_						
File Edit View Invento	ry #	dministration Plug-ins He	P						
🖸 🔛 🟠 Home	Þ ð	Inventory D 🖑 Hosts an	d Clusters				Search Inver	ntory	e
🖬 🔢 🕨 🧐	3	🗟 😰 🖳 🐼) il						
	3 47 52		UC Ge	SXP_ESX41_VSM632_Oc etting Started Summary	t28_Temp Resource/	Hate Allocation Performance Task	s & Events Alarms	Console	Permiss 4
UCSXP_E	SX41	_VSM632_Feb0812_NoMedia_1	Template V	vhat is a virtual Mac	nine?				
		Power Guest Snapshot Open Console	> > >	Power On Power On Power Off Suspend Reset	Ctrl+B Ctrl+E Ctrl+Z Ctrl+Z Ctrl+T	mputer that, like a ng system and nstalled on a virtual g system.	Clu	ster	
		Edit Settings Migrate		Shut Down Guest Restart Guest	Ctrl+D Ctrl+R	achines as desktop or ig environments, or to	(
	8 ⁰⁰	Clone Template	,	vCenter Server, virtual machines run on hosts or usters. The same host can run many virtual machines.					\times
		ault Tolerance							
			VM Storage Profile Add Permission Alarm	Storage Profile Permission Ctrl-P asic Tasks m Storage Profile asic Tasks		chine	vSphere C	vCenter	Server
		Report Performance							
		Rename		Suspend the vin	ual mac	nine	Explore	Eurthor	-
Recent Tasks		Open in New Window C Remove from Inventory Delete from Disk	trl+Alt+N	Edit virtual mach	ine sett	Name, Target or Status of	ontains: •	Furmer	Clear
Name		1	larget	Status		Details	Ini	iated by	vCenter Se
 Power On virtual machi Initialize powering On 	ne		Moscow D	C Completed C Completed			ikr	am am	IKRA
4			111						

Figure 1 vSphere Client Software – Powering Off the VSM VM

- **Step 3** In the left pane (Inventory tree), right-click a virtual machine (VM) and select **Power Off** to power off the current VSM VM.
- **Step 4** On the vSphere Client toolbar, click **File > Deploy from OVF Template** (see Figure 2).

ile Edit View Inventory Ad	dministration Plug-ins Help						
New	htory D 🕅 Hosts and Clus	ters				Search Inventory	C
Deploy OVF Template Export		2	FOV41 1/F14/22 0.42	0 Tomoloto			
Browse VA Marketplace		Getting	Started Summary R	esource Allocation	Performance Task	& Events Alarms Cons	ole Permiss d
DietMan		octanig	Stated (Samual) (10		i en ormanee (10010	a constraints (cons	
Print Maps	2 Eeb0812 NoMedia Tempi	What	is a Virtual Machi	ine?			
	vSM632_Oct28_Template	A virtu physio applic machi	ual machine is a sof cal computer, runs a ations. An operating ine is called a guest	tware computer an operating sys g system installe t operating syste	that, like a stem and ed on a virtual em.		Sec.
		Becau enviro works conso	use every virtual ma onment, you can use tation environments bildate server applic	achine is an isola e virtual machine s, as testing env ations.	ated computing es as desktop or ironments, or to	Cluster	
		In vCe cluste	enter Server, virtual rs. The same host of	machines run o can run many vi	on hosts or rtual machines.		X
		Basic	: Tasks			vCer vSphere Client	ter Server
		🔳 P	ower Off the virte	ual machine			
			suspend the virtu	al machine			
		- 🗇 E	dit virtual machin	e settings		Explore Furth	er
cent Tasks				Na	me, Target or Status co	ontains: •	Clear
ame	Target		Status	Details	-	Initiated by	vCenter Se
Power On virtual machine	a i	JCSXP_ESX41	Completed			ikram	
Initialize powering On		Moscow DC	Completed			ikram	🛃 IKRA

Figure 2 Deploying the OVF Template

Step 5 In the left pane (Inventory tree), select the newly recovered VM (see Figure 3).

Figure 3 Current Summary of Selected VM



Step 6 Right-click the VM and select Edit Settings to display the devices (see Figure 4).

rdv	ware Options Resources F	Profiles VServices		Virtual Machine Version: 7
	Chave All Devices	مسمع المهم	Memory Config	uration
	Show All Devices	Add	255 GB	Memory Size: 3584 - MB -
ard	lware	Summary	128 68	
	Memory	3584 MB		guest OS: 64 GB.
	CPUs Video and	2 Video cord	64 GB	Maximum recommended for best
2	VIGEO CARG	Video card Restricted	32 GB	performance: 4068 MB.
	SCSI controller 0	LSI Logic Parallel	16 CB	Default recommended for this
3	Hard disk 1	Virtual Disk		Minimum recommended for this
2	CD/DVD drive 1	CD/DVD Drive 1	8 GB -	guest OS: 256 MB.
2	Network adapter 1	VM Network	4 GB	
	Floppy drive 1	Floppy drive 1		
			2 GB -	
			1 GB -	
			512 MB	
			012110	
			256 MB	
			128 MB	
			64 MB	
			01110	
			32 MB -	
			16 MB	
			8 MB	
			4 MB 🗖	
_				
	Help			OK Cancel

Figure 4 Adding a Hard Disk

Step 7 Click Add > OK to connect to the existing media virtual disk from the old VM (see Figure 5).

Device Type Select a Disk Create a Disk Advanced Options Ready to Complete	Choose the type of device you v Serial Port Parallel Port	vish to add. Information This device can be added to this Virtual Machine.
	CU/DVD Drive	

Figure 5 Selecting Device Type (Hard Disk)

Step 8 From the list of device types, select **Hard Disk** and click **Next** to display the disk types (see Figure 6).

Figure 6 Selecting the Disk Type to Use

🕗 Add Hardware	
Select a Disk	
Device Type Select a Disk Select Existing Disk Advanced Options Ready to Complete	A virtual disk is composed of one or more files on the host file system. Together these files appear as a single hard disk to the guest operating system. Select the type of disk to use. Disk C Create a new virtual disk V Use an existing virtual disk Reuse a previously configured virtual disk. C Raw Device Mappings Give your virtual machine direct access to SAN. This option allows you to use existing SAN commands to manage the storage and continue to access it using a datastore.
Help	< Back Next > Cancel

Step 9 Click the **Use an existing virtual disk** radio button and click **Next** to display the existing disks (see Figure 7).

I

🕜 Add Hardware		×
Select Existing Disk Which existing disk do y	ou want to use as this virtual disk?	
Device Type Select a Disk Select Existing Disk Advanced Options Ready to Complete	Disk File Path	
Help	< Back Next > Cance	

Figure 7 Select an Existing Disk

Step 10 Click Browse to navigate to the datastore in the old VM directory (see Figure 8).

Browse Datastore	s res	▼ €	
Name	Capacity 927.00 GB	Free space 16.41 GB	
, File type:	Compatible Virtual Disk	ss (*.vmdk, *.dsk, *	Open Cancel

Figure 8 Browsing Datastores

Step 11 Select the virtual disk file with **850 GB** file size (see Figure 10) and click **OK**.

Browse Datastores	- • ×
Look in: UCSXP_ESX41_VSM632_Oct28_Templa	
Name	File Size
UCSXP_ESX41_VSM632_Oct28_Template.vmdk	30 GB
UCSXP_ESX41_VSM632_Oct28_Template_1.vmdk	850 GB
4	Þ
File type: Compatible Virtual Disks (*.vmdk, *.dsk, *. 💌	OK Cancel

Figure 9 Browse Datastores (850 GB)

Step 12 Click OK and complete the remaining steps by selecting the default values (see Figure 10).

Figure 10 Ready to Complete

🕗 Add Hardware		—
Ready to Complete Review the selected options	and click Finish to add	the hardware.
Device Type Select a Disk Select Existing Disk Advanced Options Ready to Complete	Options: Hardware type: Create disk: Virtual Device Node: Disk file path: Disk mode:	Hard Disk Use existing disk SCSI (0:1) [datastor8] UCSXP_ESX41_VSM632_Oct28_Template/UCSXP_ESX41_ Persistent
Help		Kack Cancel

Step 13 Click **Finish** to display the devices (see Figure 11).

rdware Options Resources P	rofiles VServices	Virtual Machine Version
Show All Devices	Add Remove	Disk File [datastor8] UCSXP_ESX41_VSM632_Oct28_Template/UCSXF
ardware Memory CPUs Video card VMCI device SCSI controller 0 Hard disk 1 CD/DVD drive 1 Network adapter 1 Floppy drive 1 New Hard Disk (adding)	Summary 3584 MB 2 Video card Restricted LSI Logic Parallel Virtual Disk CD/DVD Drive 1 VM Network Floppy drive 1 Virtual Disk	Disk Provisioning Type: Thick Provision Lazy Zeroed Provisioned Size: 850 - GB - Maximum Size (GB): N/A Virtual Device Node SCSI (0:1) Mode Independent Independent disks are not affected by snapshots. C Persistent Changes are immediately and permanently written to the disk. C Nonpersistent Changes to this disk are discarded when you power off or revert to the snapshot.
Help		OK Cancel

Figure 11 New Hard Disk (Adding)

Step 14 Select New Hard Disk (adding) and click OK to display the list of VMs (see Figure 12).

I

IKRAM-PC - vSphere Client								_	
File Edit View Inventory Administrati	on F	Plug-ins Help							
🖸 🔝 🏠 Home 🕨 👸 Inventor	y Þ	Hosts and Clusters					🚱 🔹 Search	Inventory	Q
🔳 II 🕨 G 🔯 👰 😰		r 🔛 🧇 🤛							
E 🛃 IKRAM-PC		UCSXP_ESX4	1_V5N	1632_Oct28_Template					
Moscow DC = 10,194,31,68		Getting Starte	ed Si	mmary Resource Allocatio	on Perfor	mance Task	s & Events A	larms Consol	e Permiss 🛛 🕨
	eb081	2_NoMedia_Template	Virtu	al Machine?					1
UCSXP_ESX41_VSM632_C)c+28	Power	achin	Power On	Ctrl+B	ike a			~
		Guest	•	Power Off	Ctrl+E	irtual		0	24
		Snapshot		Suspend	Ctrl+Z	0.0111			
		Open Console		Reset	Ctrl+T	puting		Cluster	
	2	Edit Settings		Shut Down Guest	Ctrl+D	sktop or s. or to			
		Migrate		Restart Guest	Ctrl+R				
	80	Clone Template	,	r, virtual machines run on hosts or me host can run many virtual machines.				18	\times
		Fault Tolerance							
		VM Storage Profile	•					vCente	er Server
		Add Permission Ctrl+ Alarm	Ctrl+P		he virtual machine		vSph	ere Client	
		Report Performance		machine settings					
		Rename		inacinite settings			Exp	ore Further	
		Open in New Window Ctrl+Alt+	N				Exp	oreruntiner	,
Recent Tasks		Remove from Inventory Delete from Disk			Name, Tar	get or Status c	ontains: •		Clear >
Name	-	larget Stat	tus	Deta	ils			Initiated by	vCenter Si 4
Power On virtual machine Initialize powering On		UCSXP_ESX41 O Moscow DC	Comp	leted				ikram ikram	
		III							•
Tasks 🞯 Alarms									ikram R

Figure 12 List of New VMs

Step 15 In the left pane (Inventory tree), right-click a VM and select Power > Power On to display the VMs (see Figure 13).

Image: State of the state	Image: State of the state	 tome b in twentory b in hots and Clusters town b in twentory b in hots and Clusters town b in twentory b in hots and Clusters town b in twentory b in hots and Clusters town b in twentory b in hots and Clusters town b in twentory b in hots and Clusters town b in twentory b in twentory b in twentory town b in twentory b in twentory b in twentory town b in twentory b in twentory b in twentory town b in twentory b in twentory b in twentory town b in twentwentory town b in twentory towentory	Recent Tasks	Add Permission Ctrl+1 Alarm Report Performance Rename Open in New Window Ctrl+Alt+N Remove from Inventory Delete from Disk	•	Tasks ower Off the virtual machine uspend the virtual machine dit virtual machine settings Name, Target or S	vSphere C Explore atus contains: •	vCenter lient Further	Server Clear
10.124.31.00	III VORT III VORT VORT	Image: Search Inventory I		Power Guest Snapshot Open Console Edit Settings Migrate Clone Template Fault Tolerance VM Storage Profile	What	is a Virtual Machine? al machine is a software computer that, like a al computer, runs an operating system and ations. An operating system installed on a virtu ne is called a guest operating system. se every virtual machine is an isolated comput ment, you can use virtual machines as deskt ation environments, as testing environments, of idate server applications. nter Server, virtual machines run on hosts or is. The same host can run many virtual machine	al por r to es.	ster	

Figure 13 Opening the VM Console

- Step 16 In the left pane (Inventory tree), right-click a VM and select Open Console.
- **Step 17** Log on to the VSM with the standard default **root** username and the **secur4u** password.
- **Step 18** Launch the Yet Another Setup Tool (YaST) Control Center (see Figure 14) to configure the network and Network Time Protocol (NTP) settings to match the original VM.

Figure 14

98		YaST Control Center		_ 🗆 ×
Filter	Network Devices			
	DSL		Modem	
Groups Hardware	Network Card	Remote Administration		
Miscellaneous Network Devices	Network Services			
Network Services Novell AppArmor	DHCP Server	DNS and Hostname	-W DNS Server	
Security and Users Software	Hostnames	HTTP Server	Kerberos Client	
System Virtualization	LDAP Browser	LDAP Client	LDAP Server	=
	Mail Transfer Agent	Network Services (xinetd)	NFS Client	
	NFS Server	NIS Client	- NIS Server	
	NTP Configuration	Фгоху	Routing	
	Samba Server	TFTP Server	Windows Domain Membership	
	WOL			
	Novell AppArmor			
	Add Profile Wizard	AppArmor Control Panel	AppArmor Reports	
	Delete Profile	Edit Profile	Manually Add Profile	-

- 1. Restore the VSOM to VSM data:
 - **a.** Copy the VSOM backup file from its current location to the installed VSM server.Enter the following shell commands to stop the server:

shell> service cisco stop

YaST Control Center

b. From the Secure Shell (SSH) command line, enter the following command, where filename is the name of the backup file, and must include the .tar.gz extension:

shell> /usr/BWhttpd/bin/vsom_backup_restore -f filename

For example:

shell> /usr/BWhttpd/bin/vsom_backup_restore -f
VSOM_psbu-dev03_backup_20100128164352.tar.gz

c. Restart the server.

shell> service cisco start

I

- **2.** Restore the VSM data:
 - **a**. Enter the following command to stop the server:

shell> service cisco stop

- **b.** Copy the Video Surveillance Media Server (VSMS) backup file from its current location to the VSMS server.
- **c.** Use the following command to extract the backup file, where the filename is the name of the backup file, and must include the .tar.gz extension:

shell> gunzip filename.tar.gz e.

d. From the SSH command line, enter:

shell> tar -Pxvf filename.tar

For example:

shell> tar -Pxvf VSMS_PST_backup_20070327153851.tar

e. Restart the server:

shell> service cisco restart

- **3.** Verify that the data is restored by logging on to the VSOM and viewing feeds from cameras and playing back archives.
- In the left pane (Inventory tree), right-click the non-functional VSM VM and select Delete from Disk (see Figure 15).

Caution

Do not delete the original machine until all the previous steps in the recovery procedure have been completed.



Figure 15 Deleting the VSM VM from the Disk

More Information

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

Cisco Physical Security product information: http://www.cisco.com/go/physec/

Cisco UCS Express Install and Upgrade Guides: http://www.cisco.com/en/US/products/ps11273/prod_installation_guides_list.html

Cisco Video Surveillance Manager Install and Upgrade Guides: http://www.cisco.com/en/US/products/ps9152/prod_installation_guides_list.html