Cisco Application and Content Networking System vACNS Installation and Configuration Guide

Feb 29, 2016

Contents

This document describes how to install and configure virtual ACNS (vACNS) on a VMware virtual machine (VM). The vACNS software is a virtual form of ACNS for setting up and managing content delivery and content caching service.

This document includes the following sections:

Overview

The vACNS software supports managing content delivery and content caching service in a cloud environment where physical ACNS devices cannot usually be deployed. It also follows the VMware ESXi standard as the preferred platform to deploy data center applications and services.

Virtualization provides various benefits like elasticity, ease of maintenance, and a reduction of branch office footprint. (See Figure 1.)

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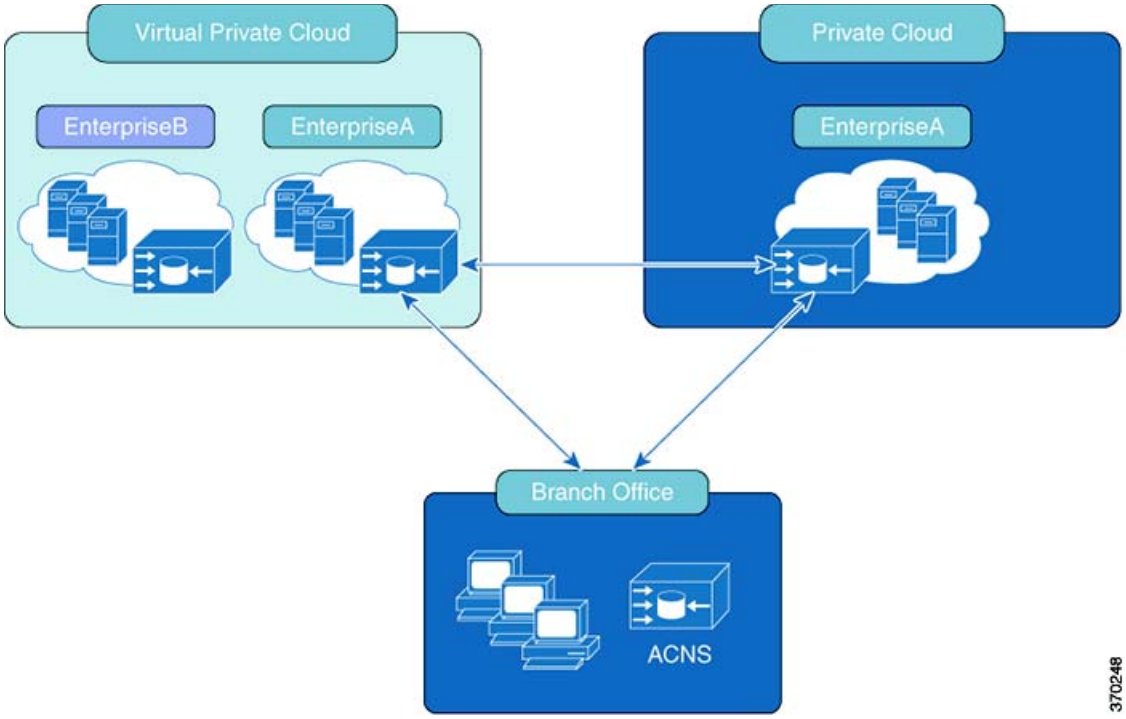
Figure 1 vACNS—Virtual Private Cloud



vACNS can be deployed at the traditional WAN-edge, in both the branch office and data center. It can also be deployed close to the server.

Requirements

This section includes the requirements for vACNS:

- Platforms supported:
  - Cisco UCS server including:
    - —64-bit CPU hardware from the VMware compatibility list (HCL).
    - —Intel VT (virtualization technology) enabled in the BIOS.
- ESX/ESXi version:
  - Cisco UCS server—VMware ESX/ESXi 4.0+ hypervisor.
- VMware vSphere client version 4.x management software.
- For virtual ACNS models that have a disk size greater than 256 GB, a datastore block size greater than 1 MB is required.

  The following VMFS (Virtual Machine File System) limitations apply:

Block Size	Maximum Disk Size
1 MB	256 GB
2 MB	512 GB

Block Size	Maximum Disk Size
4 MB	1024 GB
8 MB	2046 GB

- ESXi server datastore memory and disk space per model:

vACNS Model	Memory	Disk	vCPUs
VCE 674	4 GB	600 GB	4
VCE 674	8 GB	600 GB	4
VCE 7341	12 GB	900 GB	4

- For the vACNS datastore, you can use either SAN storage or local storage on the ESXi server.
- The OVA file for the specific virtual ACNS model (all models are available with ACNS version 5.7.1 and later):

vACNS Model	Filename
VCE 674	VCE674_small.ova
VCE 674	VCE674_large.ova
VCE 7341	VCE7341.ova

- An ESXi server should have access to either a Content Distribution Manager or a virtual Content Distribution Manager before installing vACNS. A vCDM does not require a Content Distribution Manager.

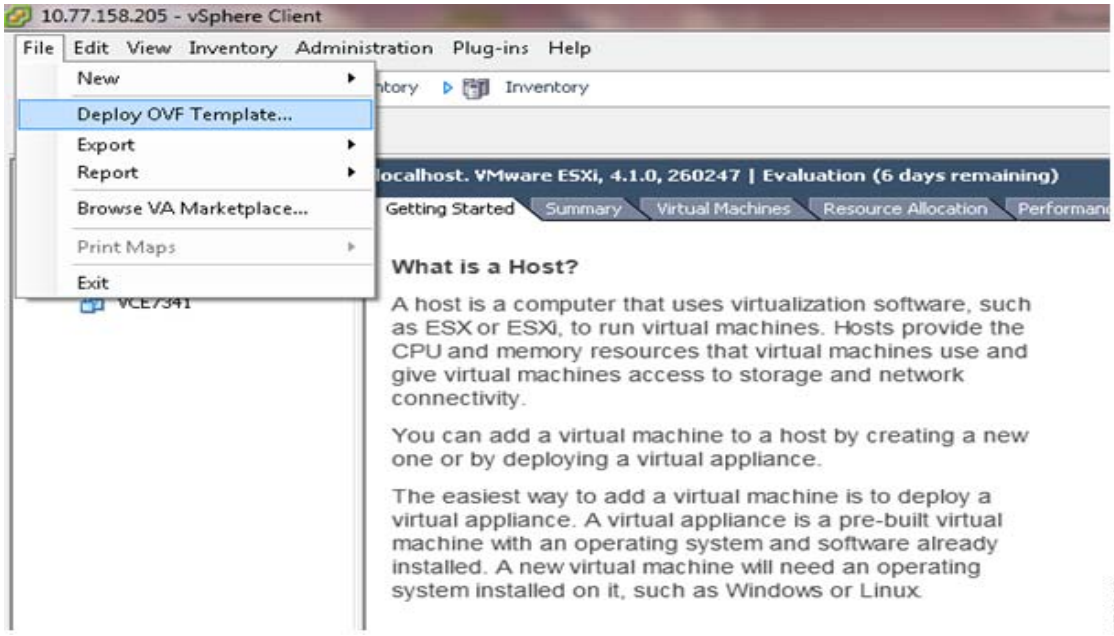
Note On the UCS C-Series Server Module running vACNS, downgrading to a version earlier than 5.7.1 is not supported.

Installing the vACNS VM

You must first install the vACNS VM on the VMware server using vSphere before configuring vACNS. To install the vACNS VM, follow these steps:

Step 1 From the vSphere Client, choose **File > Deploy OVF Template**. (See Figure 2.)

Figure 2 vACNS—Deploy OVF Template



The Source window appears.

Step 2 Click **Browse**.

The Open window appears.

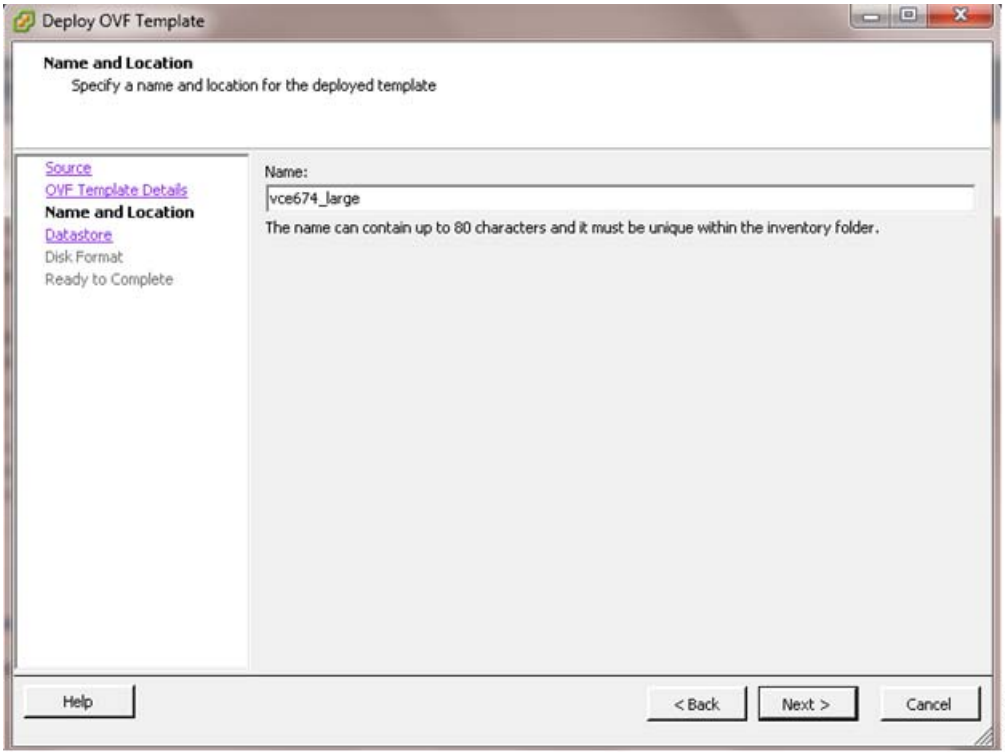
Step 3 Navigate to the location of the vACNS OVA file and click **Open**.

Step 4 Click **Next** to accept the selected OVA file.

The Name and Location window appears.

Step 5 Enter a name for the vACNS VM, choose the appropriate data center, and then click **Next**. (See Figure 3.)

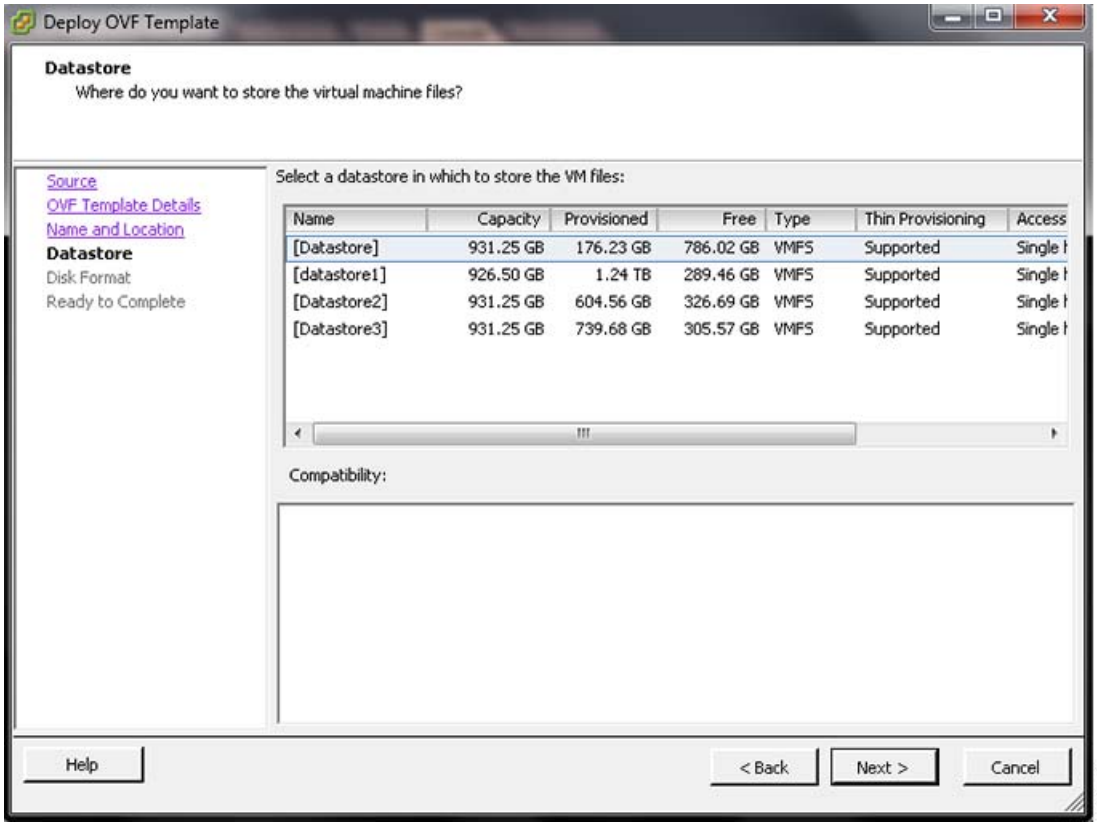
Figure 3 vACNS—Name and Data Center Location



The Datastore window appears.

Step 6 Choose a datastore to host the virtual machine and click **Next**. (See Figure 4.)

Figure 4 vACNS—Datastore

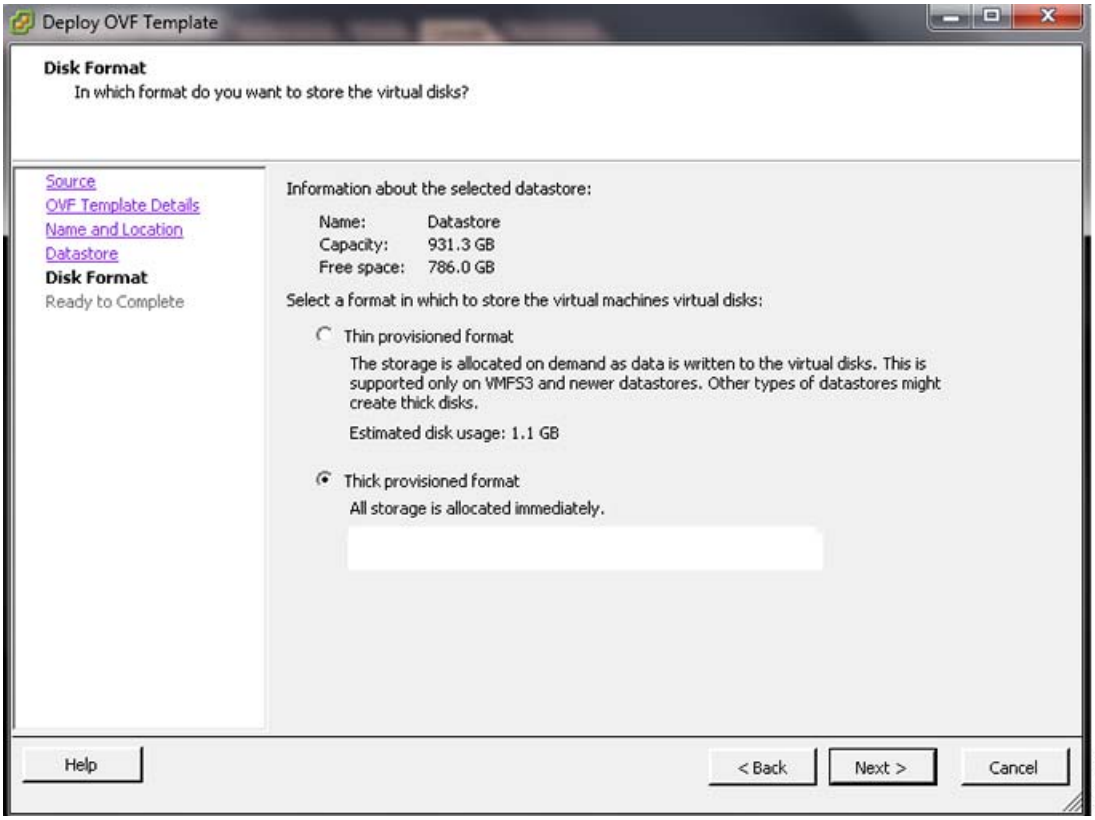


Note The datastore must be formatted with a block size greater than 1 MB to support file sizes larger than 256 GB.

The Disk Format window appears.

Step 7 Choose **Thick provisioned format** disk format and click **Next**. (See Figure 5.)

Figure 5 vACNS—Disk Format



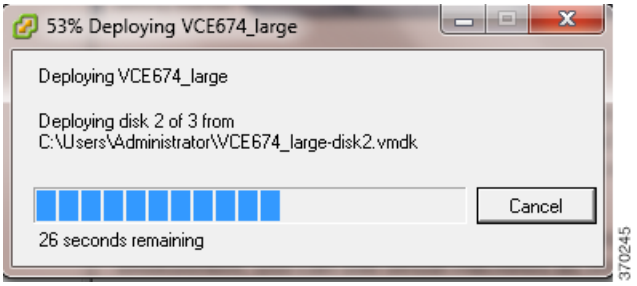
Note You must choose Thick provisioned format for vACNS deployment.

The Ready to Complete window appears.

Step 8 Click **Finish** to complete the installation.

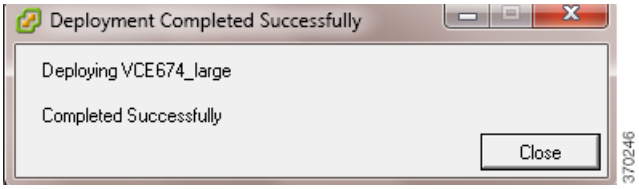
The status window appears while the OVA file is being deployed. (See Figure 6.)

Figure 6 vACNS—Status Window



Step 9 When the deployment is finished, the Deployment Completed Successfully window appears. (See Figure 7.)

Figure 7 vACNS—Completed

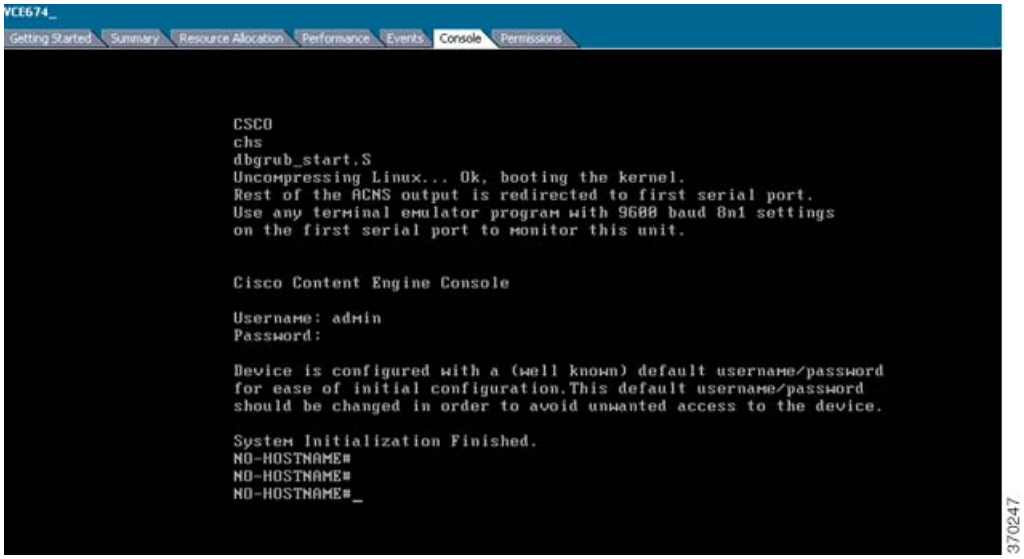


Click **Close**.

Step 10 You are ready to start the VM. Highlight the vACNS VM and click **Power on Virtual Machine**.

Step 11 After vACNS finishes booting, click the **Console** tab to view boot up messages. (See Figure 8.)

Figure 8 vACNS—Console



For vACNS configuration information, see the "Configuring vACNS" section.

Configuring vACNS

Once the vACNS VM has been installed, you must configure the following vACNS settings:

- IP address and netmask
- Default gateway and primary interface
- Content Distribution Manager address
- CMS
- Interception (WCCP or other)

To configure vACNS for network connectivity, follow these steps:

Step 1 In the vSphere Client, choose the **Console** tab and log in to the vACNS console.

The username is **admin**, and password is **default**.

Step 2 Configure the IP address and netmask using the **interface virtual** command:

```
vACNS(config)# interface virtual 1/0
vACNS(config-if)# ip address 2.1.6.111 255.255.255.0
vACNS(config-if)# exit
```

Step 3 Configure the default gateway and primary interface using the **ip** command:

```
vACNS(config)# ip default-gateway 2.1.6.1

vACNS(config)# primary-interface virtual 1/0
```

Note If you are using a separate virtual interface for management traffic, you must set the management virtual interface as the primary interface.

Ping the IP addresses of the default gateway and Central Manager to verify they can be reached before continuing to the next step.

Step 4 Add the Content Distribution Manager address using the **cdm** command :

```
VACNS(config)# cdm ip 2.75.16.100
```

Step 5 Enable CMS to register with the Content Distribution Manager using the **cms** command:

```
VWAAS(config)# cms enable
```

Caution Services will be disabled in vCE when:
- vCE is not registered to CDM or
- Resource (CPU, RAM, Disk) configuration does not meet the requirements. Please refer to Requirements for more information.

Step 6 Configure WCCP for traffic redirection to vACNS. WCCP uses a WCCP-enabled router or Layer 3 switch.

Refer to the Cisco *ACNS Configuration Guide* to enable and configure WCCP interception.

Refer to the Cisco *ACNS Configuration Guide Command Reference* for more information on specific commands.

Displaying Version Information

To display vACNS version information, enter the following commands:

```
NO-HOSTNAME#show version
Application and Content Networking System Software (ACNS)
Copyright (c) 1999-2013 by Cisco Systems, Inc.
Application and Content Networking System Software Release 5.7.0 (build b10 Jul  1 2013)
Version: vce674-5.7.0.10

Compiled 09:28:40 Jul  1 2013 by cnbuild
```

```
Compile Time Options: KQ SS

System was restarted on Tue Jul  2 12:27:08 2013.
The system has been up for 1 hour, 54 minutes, 0 seconds.

NO-HOSTNAME#show hardware
Application and Content Networking System Software (ACNS)
Copyright (c) 1999-2013 by Cisco Systems, Inc.
Application and Content Networking System Software Release 5.7.0 (build b10 Jul  1 2013)
Version: vce674-5.7.0.10

Compiled 09:28:40 Jul  1 2013 by cnbuild
Compile Time Options: KQ SS

System was restarted on Tue Jul  2 12:27:08 2013.
The system has been up for 1 hour, 54 minutes, 33 seconds.

CPU 0 is GenuineIntel Intel(R) Xeon(R) CPU           X5650  @ 2.67GHz (rev 12) running at
2664MHz.
CPU 1 is GenuineIntel Intel(R) Xeon(R) CPU           X5650  @ 2.67GHz (rev 12) running at
2664MHz.
CPU 2 is GenuineIntel Intel(R) Xeon(R) CPU           X5650  @ 2.67GHz (rev 12) running at
2664MHz.
CPU 3 is GenuineIntel Intel(R) Xeon(R) CPU           X5650  @ 2.67GHz (rev 12) running at
2664MHz.
Total 4 CPUs.
8128 Mbytes of Physical memory.
1 CD ROM drive (VMware Virtual IDE CDROM Drive)
2 Virtual interfaces
1 Console interface

Manufactured As: Cisco Virtual ACNS

BIOS Information:
Vendor                          : Phoenix Technologies LTD
Version                         : 6.00
Rel. Date                       : 10/13/2009

  Cookie info:
    SerialNumber: VMware-56
    SerialNumber (raw): 86 77 119 97 114 101 45 53 54 0 0
    TestDate: 7-2-2013
    ExtModel: VCE674
    ModelNum (raw): 55 0 0 0 1
    HWVersion: 1
    PartNumber: 53 54 55 56 57
    BoardRevision: 1
    ChipRev: 1
    VendID: 0
    CookieVer: 2
    Chksum: 0xfb52

This command provides information on direct attached SCSI storage arrays only.

No valid storage-array is detected on this device.
Check 'show disks details' output for additional info.

List of all disk drives:
disk00: Normal          (IDE disk)              307197MB(300.0GB)
        disk00/04: SYSFS          1023MB(  1.0GB) mounted at /local1
        System use:              17829MB( 17.4GB)
        FREE:                   288344MB(281.6GB)
disk01: Normal          (IDE disk)              307200MB(300.0GB)
        FREE:                   307200MB(300.0GB)
```

```
No NAS share is attached to this device.
```

Related Documentation

For additional information on the Cisco ACNS software, see the following documentation:

- *Cisco ACNS Software Configuration Guide for Locally Managed Deployments, Release 5.5.13*
- *Cisco ACNS Software Configuration Guide for Centrally Managed Deployments, Release 5.5.13*
- *Cisco ACNS Software Command Reference, Release 5.5.13*

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.