



Installing and Configuring the VDS-TV 4.2 Software

This chapter covers the installation of the new Release 4.2 systems in either a Content Delivery System (CDS) or a Virtual Video Infrastructure (VVI). This chapter includes the following topics:

- [Preparing the CDEs for Initial Configuration, page 2-1](#)
- [Upgrading the New CDEs with Release 4.2 VDS-TV Software, page 2-2](#)
- [Imaging a VDS Server with 64-Bit OS using a DVD, page 2-16](#)
- [Initial Configuration Sequence of the CDEs, page 2-18](#)
- [Initially Configuring the CDE110/UCS Hardware, page 2-20](#)
- [Initially Configuring the CDE220, CDE250, CDE420 and CDE460 or CDE280, page 2-25](#)
- [Installing the CDSM in UCS C220 M4 2U1 Server, page 2-36](#)

A VDS consists of Vaults, Streamers, and a Content Delivery System Manager (CDSM). A VDS can also consist of Integrated Streamer-Vaults (ISVs) and a CDSM. A VVI consists of Vaults, Caching Nodes, Streamers, Virtual Video Infrastructure Manager (VVIM), and Stream Manager (also called CDSM). For more information about the different system architectures and network designs, see the “Product Overview” and “Network Design” chapters in the *Cisco VDS-TV ISA Software Configuration Guide, Release 4.2* and the *Cisco VDS-TV RTSP Software Configuration Guide, Release 4.2*.

Preparing the CDEs for Initial Configuration

Before performing the software installation and initial configuration, you must correctly install the Content Delivery Engines (CDEs) and connect the cables as described in the *Cisco Content Delivery Engine 110 Hardware Installation Guide* and the *Cisco Content Delivery Engine 205/220/250/420/460/470 Hardware Installation Guide*.



Note

As part of the hardware installation of the CDEs, ensure that all I/O cards are properly and firmly seated, and all cables are firmly connected.

Connecting to the Serial Port on the CDE

The RJ-45 serial ports on the front and back panels of the Cisco CDEs can be used for administrative access to the CDEs through a terminal server. Terminal emulation software must be configured as follows:

- Bits per second: 9600
- Data bits: 8
- Parity: none
- Stop bits: 1
- Hardware flow control: ON

After installing the CDEs and connecting the cables, the software must be upgraded before initial configuration can occur.

Upgrading the New CDEs with Release 4.2 VDS-TV Software

A new CDE ships with Release 3.x. Download the software files for Release 4.2, and upgrade the operating system (OS) and software on the CDE models to be configured as VDS servers (Vaults, Caching Nodes, Streamers, and ISVs), and upgrade the software on the CDE110s, which are used for the CDSMs and VVIMs.



Note

Before you upgrade the CDEs, download the VDS-TV Release 4.2 software image files from the Cisco software download website. See the [“Getting the Cisco VDS-TV Software Files for Release 4.2”](#) section on page 1-5 for information on downloading these files.

Prerequisite for Asset Scalability Support

Starting from Release 3.9, VDS-TV supports one million assets in the overall system. Table size has been reduced in the new content object table (CONTENT_OBJECT3.db in RTSP environment and CONTENT_OBJECT4.db in ISA environment) to support large number of assets.

To maintain assets in old and upgraded database, choose **Maintain -> Software -> CDSM Setup** and set Asset scale Co-existence support to **Enabled**. Once all servers are upgraded to VDS-TV release 4.2 set Asset scale Co-existence support to **Disabled** and restart FSI in all the vaults. By default, Asset Scale Co-Existence Support is enabled.



Note

Disabling asset co-existence support is an irreversible process and the assets are maintained only in the upgraded database. Disable co-existence support only after upgrading all the servers to version 3.9 or higher.



Note

Disable asset scale co-existence support only during the scheduled maintenance time and restart FSI in all the vaults before next ingest.

The following upgrade procedures are for the CDEs used in a Release 4.2 VDS or VVI:

- [Installing the Software on a CDE110/UCS C220 M4 Hardware](#)
- [Installing the Software on a CDE220 or CDE420 or CDE250 or CDE460 or CDE280](#)

Installing the Software on a CDE110/UCS C220 M4 Hardware

The Cisco CDE110 is used for a CDSM or VVIM in a VDS or VVI. The CDE110 ships with a 64-bit OS, and therefore, requires only a software image upgrade.

Starting from Release 3.9, UCS C220 M4 hardware is also used for a CDSM or VVIM in a VDS or VVI

To install the software image on a CDE110/UCS C220 M4, do the following:

Step 1 If the Cisco CDE110 is not powered on, press the front panel power switch on the server.

The operating system boots.

Step 2 Log in as *root* with the default password.



Note To change the default password, use the **passwd** command.

Step 3 To copy the `tv_repo-4.2.1-x86_64.iso` and `vdsinit` software files on the CDE110, configure the management interface.

a. To configure the Ethernet interface (`eth0`), which is used to connect to the management network, use a text editor to modify the file `/etc/sysconfig/network-scripts/ifcfg-eth0`, and add the following lines:

- `DEVICE=eth0`
- `BOOTPROTO=static`
- `ONBOOT=yes`
- `IPADDR=ip_address_for_eth0`
- `NETMASK=netmask_for_eth0`

For example:

```
DEVICE=eth0
BOOTPROTO=static
ONBOOT=yes
IPADDR=172.22.97.162
NETMASK=255.255.255.128
```

b. Save and close the `ifcfg-eth0` file.

c. To configure the network characteristics, use a text editor to modify the file `/etc/sysconfig/network`, and add the following lines:

- `NETWORKING=yes`
- `HOSTNAME=name`
- `GATEWAY=gateway_ip_address`
- `GATEWAYDEV=device_id_number`
- `NOZEROCONF=yes`

For example:

```
NETWORKING=yes
HOSTNAME=cdsm162
GATEWAY=172.22.97.129
GATEWAYDEV=etho0
GATEWAY=yes
```

The *gateway_ip_address* is the default gateway IP address, the address of the interface on the router that is directly attached to the CDE110 eth0 interface.

- d. Save and close the network file.
- e. To restart the network, issue the following command:

```
[root]# /etc/init.d/network restart

Shutting down interface eth0:           [ OK ]
Shutting down loopback interface:      [ OK ]
Bringing up loopback interface:        [ OK ]
Bringing up interface eth0:            [ OK ]

[root]#
```

- Step 4** Use the `scp` command to copy the `tv_repo-4.2.1-x86_64.iso` and `vdsinit` software files. For example, if the remote server that you downloaded the software files to has the IP address 172.22.97.109, and the files are stored in the `CDSdownloads` directory, the following commands are used:

```
# scp -p 172.22.97.109:/CDSdownloads/tv_repo-4.2.1-x86_64.iso /root
# scp -p 172.22.97.109:/CDSdownloads/vdsinit-4.2.1 /root
```

- Step 5** Run the `vdsinit` script to install the ISO image to Release 4.2.

```
# cd /root
# ./vdsinit-4.2.1 tv_repo-4.2.1-x86_64.iso
```

Select the deployment type as **1 CDSM/VVIM**.

The following log output is displayed towards the end of the installation



Note

This example log output may not match the final image log output.

```
Taking backup of the existing httpd.conf file to httpd.conf-backup at /arroyo/www/conf/
Loaded plugins: security
Skipping security plugin, no data
Setting up Update Process
Resolving Dependencies
Skipping security plugin, no data
--> Running transaction check
----> Package vds_cache2app.x86_64 0:4.1.0-tv0.4 set to be updated
----> Package vds_cdsm.x86_64 0:4.1.0-tv0.194 set to be updated
----> Package vds_collectd.x86_64 0:4.1.0-tv0.25 set to be updated
----> Package vds_config.x86_64 0:4.1.0-tv0.194.117 set to be updated
----> Package vds_config-cdsm.x86_64 0:4.1.0-tv0.194.117 set to be updated
----> Package vds_framework.x86_64 0:4.1.0-tv0.2 set to be updated
----> Package vds_httpd.x86_64 0:4.1.0-tv0.58 set to be updated
----> Package vds_isa.x86_64 0:4.1.0-tv0.32.79 set to be updated
----> Package vds_php.x86_64 0:4.1.0-tv0.58 set to be updated
----> Package vds_snmp_cdsm.x86_64 0:4.1.0-tv0.25 set to be updated
----> Package vds_statsd.x86_64 0:4.1.0-tv0.25 set to be updated
----> Package vds_syslogtools.x86_64 0:4.1.0-tv0.2 set to be updated
----> Package vds_tavsd.b.x86_64 0:4.1.0-tv0.46 set to be updated
----> Package vds_utils.x86_64 0:4.1.0-tv0.2 set to be updated
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package             Arch             Version          Repository        Size
=====
Updating:
```

vds_cache2app	x86_64	4.1.0-tv0.4	tv-3.12.0-0b1	720 k
vds_cdsm	x86_64	4.1.0-tv0.194	tv-3.12.0-0b1	3.1 M
vds_collectd	x86_64	4.1.0-tv0.25	tv-3.12.0-0b1	442 k
vds_config	x86_64	4.1.0-tv0.194.117	tv-3.12.0-0b1	73 k
vds_config-cdsm	x86_64	4.1.0-tv0.194.117	tv-3.12.0-0b1	13 k
vds_framework	x86_64	4.1.0-tv0.2	tv-3.12.0-0b1	3.7 M
vds_httpd	x86_64	4.1.0-tv0.58	tv-3.12.0-0b1	131 M
vds_isa	x86_64	4.1.0-tv0.32.79	tv-3.12.0-0b1	74 M
vds_php	x86_64	4.1.0-tv0.58	tv-3.12.0-0b1	6.5 M
vds_snmp_cdsm	x86_64	4.1.0-tv0.25	tv-3.12.0-0b1	2.7 M
vds_statsd	x86_64	4.1.0-tv0.25	tv-3.12.0-0b1	169 k
vds_syslogtools	x86_64	4.1.0-tv0.2	tv-3.12.0-0b1	73 k
vds_tavsd	x86_64	4.1.0-tv0.46	tv-3.12.0-0b1	4.1 M
vds_utils	x86_64	4.1.0-tv0.2	tv-3.12.0-0b1	85 k

Transaction Summary

```

=====
Install      0 Package(s)
Upgrade     14 Package(s)

```

```

Total download size: 227 M
Downloading Packages:

```

```

-----
Total                                          36 GB/s | 227 MB    00:00

```

```

Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction

```

```

Updating      : vds_cache2app                    1/28

Updating      : vds_php                          2/28vds-httpd
is already stopped.

Updating      : vds_httpd                        3/28

Updating      : vds_framework                    4/28

Updating      : vds_snmp_cdsm                    5/28

Updating      : vds_statsd                       6/28

Updating      : vds_collectd                     7/28

Updating      : vds_syslogtools                   8/28
warning: /opt/syslog-ng/etc/cdstv-syslog-ng.conf created as
/opt/syslog-ng/etc/cdstv-syslog-ng.conf.rpmnew

Updating      : vds_tavsd                        9/28

Updating      : vds_utils                       10/28

Updating      : vds_config                       11/28Loading

```

File List

```

HW does not appear to be Merrimack... No work to do here.

```

```

Updating      : vds_cdsm                        12/28

Updating      : vds_isa                         13/28

Updating      : vds_config-cdsm                 14/28

```

```

Cleanup      : vds_snmp_cdsm          15/28
Cleanup      : vds_syslogtools       16/28
Cleanup      : vds_cdsm              17/28
Cleanup      : vds_collectd          18/28
Cleanup      : vds_utils              19/28
Cleanup      : vds_isa                20/28
Cleanup      : vds_statsd             21/28
Cleanup      : vds_cache2app          22/28
Cleanup      : vds_tavsd             23/28
Cleanup      : vds_httpd              24/28
Cleanup      : vds_php                 25/28
Cleanup      : vds_config-cdsm        26/28
Cleanup      : vds_framework          27/28
Cleanup      : vds_config              28/28

```

Updated:

```

vds_cache2app.x86_64 0:4.1.0-tv0.4
vds_cdsm.x86_64 0:4.1.0-tv0.194
vds_collectd.x86_64 0:4.1.0-tv0.25
vds_config.x86_64 0:4.1.0-tv0.194.117
vds_config-cdsm.x86_64 0:4.1.0-tv0.194.117
vds_framework.x86_64 0:4.1.0-tv0.2
vds_httpd.x86_64 0:4.1.0-tv0.58
vds_isa.x86_64 0:4.1.0-tv0.32.79
vds_php.x86_64 0:4.1.0-tv0.58
vds_snmp_cdsm.x86_64 0:4.1.0-tv0.25
vds_statsd.x86_64 0:4.1.0-tv0.25
vds_syslogtools.x86_64 0:4.1.0-tv0.2
vds_tavsd.x86_64 0:4.1.0-tv0.46
vds_utils.x86_64 0:4.1.0-tv0.2

```

Complete!

Loaded plugins: security

Setting up Group Process

```

Package vds_cache2app-4.1.0-tv0.4.x86_64 already installed and latest version
Package vds_statsd-4.1.0-tv0.25.x86_64 already installed and latest version
Package vds_utils-4.1.0-tv0.2.x86_64 already installed and latest version
Package vds_snmp_cdsm-4.1.0-tv0.25.x86_64 already installed and latest version
Package vds_tavsd-4.1.0-tv0.46.x86_64 already installed and latest version
Package vds_config-4.1.0-tv0.194.117.x86_64 already installed and latest version
Package vds_isa-4.1.0-tv0.32.79.x86_64 already installed and latest version
Package syslog-ng-3.0.5-1.rhel5.x86_64 already installed and latest version
Package vds_httpd-4.1.0-tv0.58.x86_64 already installed and latest version
Package monit-5.3-1.el5.x86_64 already installed and latest version
Package vsftpd-2.0.5-28.el5.x86_64 already installed and latest version
Package vds_cdsm-4.1.0-tv0.194.x86_64 already installed and latest version
Package vds_framework-4.1.0-tv0.2.x86_64 already installed and latest version
Package vds_config-cdsm-4.1.0-tv0.194.117.x86_64 already installed and latest version
Package vds_php-4.1.0-tv0.58.x86_64 already installed and latest version
Package vds_collectd-4.1.0-tv0.25.x86_64 already installed and latest version

```

```
Package vds_syslogtools-4.1.0-tv0.2.x86_64 already installed and latest version
No packages in any requested group available to install or update
Unmounting /mnt/cdrom
New image installed : cdstv-4.1.0-b117
vdsinit completed. Please reboot the device.
```

Step 6 Enter the following command to verify the version of VDS-TV installed.

```
# head /arroyo/image/tags

cdstv-4.2.1-b6
```

Step 7 Enter the following command to disable the services.

```
# vdsServices disable
```

Step 8 Reboot the CDE.

Step 9 Type the following command to verify the kernel version installed.

```
# uname -r

2.6.32-4.2_tv0.8
```

Step 10 Enter the following command to manually start the services.

```
# vdsServices start
```

The CDE110 now has the Release 4.2 VDS-TV software installed. The next step is to initially configure the CDE110, which requires you to run the **vdconfig** script and answer the prompts appropriately for your deployment. See the [“Preparing to Initially Configure the CDEs”](#) section on page 2-19 for more information.

Installing the Software on a CDE220 or CDE420 or CDE250 or CDE460 or CDE280

CDE280 BIOS and CIMC Settings

Before installing the software on CDE 280, verify that the BIOS and CIMC settings for CDE280 is configured as listed in the [Table 2-1](#).

Table 2-1 CDE 280 BIOS and CIMC Settings

Settings	Options
Container Image	Image file ucs-c240-huu-2.0.9c.iso
BIOS_version	Version Number C240M4.2.0.9a.0.120120151913

Settings	Options
CIMC_version	Version Number 2.0(9c)
3108 RAID Setting	Control Management: Enable controller BIOS Auto Enhanced Import Enable JBOD
CIMC Settings	
Server Power-Restore-policy	Restore-last-state
BIOS Boot-Order Setting	
Boot-order	USB, PCHSTORAGE
BIOS Main	
TPM Support	Disabled
BIOS Advanced Settings	
Processor Configuration	
Intel(R) Hyper-Threading Techno	Disabled
Number of Cores Enabled	All
Execute Disable	Enabled
Intel(R) VT	Disabled
Intel(R) VT-d	Disabled
Interrupt Remapping	Enabled
PassThrough DMA	Disabled
Intel(R) VT-d Coherency Support	Disabled
Intel(R) VT-d ATS Support	Disabled
CPU Performance	Enterprise
Hardware Prefetcher	Enabled
Adjacent Cache Line Prefetcher	Enabled
DCU Streamer Prefetch	Enabled
DCU IP Prefetcher	Enabled
Direct Cache Access Support	Auto
Power Technology	Disabled
Enhanced Intel Speedstep(R) Tec	Enabled
Intel(R) Turbo Boost Technology	Enabled
Processor C3 Report	Disabled
Processor C6 Report	Enabled
Processor Power state C1 Enhanc	Enabled
P-STATE Coordination	HW ALL
Energy Performance Tuning	OS

Settings	Options
Energy Performance	Performance
Package C State Limit	C6 Retention
Extended APIC	XAPIC
Workload Configuration	Balanced
Memory configuration	
Select Memory RAS	Maximum Performance
NUMA	Enabled
Channel Interleaving	Auto
Rank Interleaving	Auto
Patrol Scrub	Enabled
Demand Scrub	Enabled
Altitude	300 M
QPI Configuration	
QPI Link Frequency Select	Auto
Snoop Mode	Home Snoop
USB Configuration	
Legacy USB Support	Enabled
Port 60/64 Emulation	Enabled
XHCI Mode	Disabled
PCI Configuration	
MMIO above 4GB	Enabled
SR-IOV Support	Enabled
Serial Configuration	
Out-of-Band Management	Disabled
Console Redirection	Disabled
Terminal Type	VT100
Bits per second	9600
Flow Control	None
Putty KeyPad	ESCN
Redirection After BIOS POST	Enable (Default)
LOM and PCIe slot Configuration	
CDN Support for VIC	Disabled
PCI ROM CLP	Disabled
PCH SATA Mode	AHCI
All Onboard LOM Ports	Enabled
LOM Port 0 OptionROM	Enabled
LOM Port 1 OptionROM	Enabled

Settings	Options
All PCIe Slots OptionROM	Enabled
PCIe Slot:1 OptionROM	Enabled
PCIe Slot:2 OptionROM	Enabled
PCIe Slot:3 OptionROM	Disabled
PCIe Slot:4 OptionROM	Enabled
PCIe Slot:5 OptionROM	Enabled
PCIe Slot:6 OptionROM	Enabled
PCIe Slot:MLOM OptionROM	Enabled
PCIe Slot:HBA OptionROM	Enabled
PCIe Slot:N1 OptionROM	Enabled
PCIe Slot:N2 OptionROM	Enabled
Server Management	
FRB-2 Timer	Enabled
OS Watchdog Timer	Disabled
OS Watchdog Timer Timeout	10 Mins.
OS Watchdog Timer Policy	Power Down

The Cisco CDE220 can be used as a Streamer, ISV, or dense Vault, the Cisco CDE420 can be used as a Vault or Caching Node, the Cisco CDE 250 can be used as a Vault/Cache Gateway and Streamer, the Cisco CDE 460 can be used as a Vault and the Cisco CDE 280 can be used as Cache Gateway and Streamer.

To upgrade the OS and software image on a CDE220 or CDE420 or CDE250 or CDE460 or CDE 280, do the following:

Step 1 If the Cisco CDE is not powered on, press the front panel power switch on the server.

The operating system boots.

Step 2 Log in as *root* with the default password.



Note To change the default password, use the **passwd** command.

Step 3 To copy the tv_repo-4.2.1-x86_64.iso and vdsinit software files on the CDE hardware, configure the management interface.

a. To configure the Ethernet interface (eth0), which is used to connect to the management network, use a text editor to modify the file `/etc/sysconfig/network-scripts/ifcfg-eth0` and add the following lines:

- DEVICE=eth0
- BOOTPROTO=static
- ONBOOT=yes
- IPADDR=*ip_address_for_eth0*
- NETMASK=*netmask_for_eth0*

For example:

```
DEVICE=eth0
BOOTPROTO=static
ONBOOT=yes
IPADDR=172.22.97.162
NETMASK=255.255.255.128
```

- b. Save and close the ifcfg-eth0 file.
- c. To configure the network characteristics, use a text editor to modify the file `/etc/sysconfig/network` and add the following lines:
 - NETWORKING=yes
 - HOSTNAME=*name*
 - GATEWAY=*gateway_ip_address*
 - GATEWAYDEV =*device_id_number*
 - NOZEROCONF =yes

For example:

```
NETWORKING=yes
HOSTNAME=cdslm162
GATEWAY=172.22.97.129
GATEWAYDEV=etho0
GATEWAY=yes
```

The *gateway_ip_address* is the default gateway IP address, the address of the interface on the router that is directly attached to the CDE110 eth0 interface.

- d. Save and close the network file.
- e. To restart the network, issue the following command:

```
[root]# /etc/init.d/network restart

Shutting down interface eth0:           [ OK ]
Shutting down loopback interface:      [ OK ]
Bringing up loopback interface:        [ OK ]
Bringing up interface eth0:           [ OK ]

[root]#
```

- Step 4** Use the `scp` command to copy the VDS-TV 4.2 ISO file. For example, if the remote server that you downloaded the software files to has the IP address 172.22.97.109, and the files are stored in the CDSdownloads directory, the following command is used:

```
# scp -p 172.22.97.109:/CDSdownloads/tv_repo-4.2.1-x86_64.iso /root
# scp -p 172.22.97.109:/CDSdownloads/vdsinit-4.2.1 /root
```

- Step 5** For CDE250 hardware, before upgrading to Release 4.2, reinstall SuperDoctor version 2.111 and upgrade Firmware to version 3.0.6 using the instructions specified in the document [CDE 250 IPMI Firmware v3.06 Upgrade](#).
- Step 6** Run the **vdsinit** script to upgrade the ISO image to Release 4.2. When prompted, select the deployment type of the server, choose **1** for an Interactive Services Architecture (ISA) deployment, and **2** for an RTSP/FSI deployment.



Note If you are installing CDS in an RTSP environment and using the Real-Time Capture feature with call signs and home IDs, you must seed the database with the HomeID field for Real-Time Capture (non-Media Scheduler) by running run the cv-account-add-homeid0 script as user isa in the /home/isa directory on the Vault (or ISV).

The following example shows the **vdsinit** output for an Real Time Streaming Protocol (RTSP) deployment:

```
# cd /root
# ./vdsinit-4.2.1 tv_repo-4.2.1-x86_64.iso
```



Note This example log output may not match the final image log output.

EXAMPLE Log Output for Vault installation

```
Mounting tv_repo-4.1.0-0b117-x86_64.iso at /mnt/cdrom
Currently Installed Version is cdstv-3.9.1-es1-b3
Reading deployment from "/etc/vdstv.conf".
Removing unnecessary redhat rpms ...
1) ISA
2) RTSP/FSI
3) PEG/BARKER

RTSP Selected
Setting up Update Process
Resolving Dependencies
--> Running transaction check
----> Package cddm.x86_64 0:4.1.0-tv0.54 set to be updated
----> Package cserver-prod.x86_64 0:4.1.0-tv0.54.8.4 set to be updated
----> Package kernel-vds.x86_64 0:2.6.32-4.1.0_tv0.8 set to be updated
----> Package vds_avslauncher.x86_64 0:4.1.0-tv0.1 set to be updated
----> Package vds_cache2app.x86_64 0:4.1.0-tv0.4 set to be updated
----> Package vds_collectd.x86_64 0:4.1.0-tv0.25 set to be updated
----> Package vds_config.x86_64 0:4.1.0-tv0.194.117 set to be updated
----> Package vds_config-rtsp.x86_64 0:4.1.0-tv0.194.117 set to be updated
----> Package vds_framework.x86_64 0:4.1.0-tv0.2 set to be updated
----> Package vds_ndvr.x86_64 0:4.1.0-tv0.1 set to be updated
----> Package vds_rtsp.x86_64 0:4.1.0-tv0.79.32 set to be updated
----> Package vds_snmp.x86_64 0:4.1.0-tv0.25 set to be updated
----> Package vds_statsd.x86_64 0:4.1.0-tv0.25 set to be updated
----> Package vds_syslogtools.x86_64 0:4.1.0-tv0.2 set to be updated
----> Package vds_tavsdm.x86_64 0:4.1.0-tv0.46 set to be updated
----> Package vds_tools.x86_64 0:4.1.0-tv0.2.4 set to be updated
----> Package vds_utils.x86_64 0:4.1.0-tv0.2 set to be updated
--> Finished Dependency Resolution

Dependencies Resolved
```

```

=====
Package           Arch      Version              Repository           Size
=====
Updating:
cddm              x86_64    4.1.0-tv0.54        tv-3.12.0-0b1      22 k
cserver-prod     x86_64    4.1.0-tv0.54.8.4    tv-3.12.0-0b1      5.6 M
kernel-vds       x86_64    2.6.32-4.1.0_tv0.8  tv-3.12.0-0b1      71 M
vds_avslauncher  x86_64    4.1.0-tv0.1         tv-3.12.0-0b1      32 k
vds_cache2app    x86_64    4.1.0-tv0.4         tv-3.12.0-0b1      720 k
vds_collectd     x86_64    4.1.0-tv0.25        tv-3.12.0-0b1      442 k
vds_config       x86_64    4.1.0-tv0.194.117   tv-3.12.0-0b1      73 k
vds_config-rtsp x86_64    4.1.0-tv0.194.117   tv-3.12.0-0b1      18 k
vds_framework    x86_64    4.1.0-tv0.2         tv-3.12.0-0b1      3.7 M
vds_ndvr         x86_64    4.1.0-tv0.1         tv-3.12.0-0b1      2.1 M
vds_rtsp         x86_64    4.1.0-tv0.79.32     tv-3.12.0-0b1      50 M
vds_snmp         x86_64    4.1.0-tv0.25        tv-3.12.0-0b1      2.8 M
vds_statsd       x86_64    4.1.0-tv0.25        tv-3.12.0-0b1      169 k
vds_syslogtools  x86_64    4.1.0-tv0.2         tv-3.12.0-0b1      73 k
vds_tavssdb     x86_64    4.1.0-tv0.46        tv-3.12.0-0b1      4.1 M
vds_tools        x86_64    4.1.0-tv0.2.4       tv-3.12.0-0b1      114 k
vds_utils        x86_64    4.1.0-tv0.2         tv-3.12.0-0b1      85 k
=====

```

Transaction Summary

```

=====
Install      0 Package(s)
Upgrade     17 Package(s)
=====

```

Total download size: 141 M

Downloading Packages:

```

-----
Total                               21 GB/s | 141 MB    00:00

```

Running rpm_check_debug

Running Transaction Test

Finished Transaction Test

Transaction Test Succeeded

Running Transaction

```

Updating      : vds_framework                1/34
Updating      : vds_tools                    2/34
Updating      : cddm                        3/34
Updating      : vds_cache2app                4/34
Updating      : vds_snmp                    5/34
Updating      : vds_statsd                   6/34
Updating      : vds_syslogtools              7/34
warning: /opt/syslog-ng/etc/cdstv-syslog-ng.conf created as
/opt/syslog-ng/etc/cdstv-syslog-ng.conf.rpmnew
Updating      : vds_collectd                 8/34
Updating      : vds_tavssdb                  9/34
Updating      : vds_utils                    10/34
Updating      : vds_config                   11/34Loading

```

File List

driver: igb

driver: igb

...done

Processing File List

...done

Moving modprobe.conf into place

...done

Updating	: kernel-vds	12/34
Updating	: cserver-prod	13/34
Updating	: vds_rtsp	14/34
Updating	: vds_ndvr	15/34
Updating	: vds_config-rtsp	16/34
Updating	: vds_avslauncher	17/34
Cleanup	: vds_rtsp	18/34
Cleanup	: vds_framework	19/34
Cleanup	: cddm	20/34
Cleanup	: vds_collectd	21/34
Cleanup	: vds_utils	22/34
Cleanup	: vds_syslogtools	23/34
Cleanup	: vds_config-rtsp	24/34
Cleanup	: vds_statsd	25/34
Cleanup	: vds_cache2app	26/34
Cleanup	: vds_ndvr	27/34
Cleanup	: vds_avslauncher	28/34
Cleanup	: vds_tavsd	29/34
Cleanup	: cserver-prod	30/34
Cleanup	: kernel-vds	31/34
Cleanup	: vds_tools	32/34
Cleanup	: vds_snmp	33/34
Cleanup	: vds_config	34/34

Updated:

```

cddm.x86_64 0:4.1.0-tv0.54
cserver-prod.x86_64 0:4.1.0-tv0.54.8.4
kernel-vds.x86_64 0:2.6.32-4.1.0_tv0.8
vds_avslauncher.x86_64 0:4.1.0-tv0.1
vds_cache2app.x86_64 0:4.1.0-tv0.4
vds_collectd.x86_64 0:4.1.0-tv0.25
vds_config.x86_64 0:4.1.0-tv0.194.117
vds_config-rtsp.x86_64 0:4.1.0-tv0.194.117

```

```

vds_framework.x86_64 0:4.1.0-tv0.2
vds_ndvr.x86_64 0:4.1.0-tv0.1
vds_rtsp.x86_64 0:4.1.0-tv0.79.32
vds_snmp.x86_64 0:4.1.0-tv0.25
vds_statsd.x86_64 0:4.1.0-tv0.25
vds_syslogtools.x86_64 0:4.1.0-tv0.2
vds_tavsdB.x86_64 0:4.1.0-tv0.46
vds_tools.x86_64 0:4.1.0-tv0.2.4
vds_utils.x86_64 0:4.1.0-tv0.2

```

Complete!

Setting up Group Process

```

Package httpd-2.2.3-91.el5.x86_64 already installed and latest version
Package 1:mod_ssl-2.2.3-91.el5.x86_64 already installed and latest version
Package SuperDoctor2-2.88-1.el5.x86_64 already installed and latest version
Package kexec-tools-1.101-194.4.tv.x86_64 already installed and latest version
Package MegaCli-8.00.40-1.i386 already installed and latest version
Package syslog-ng-3.0.5-1.rhel5.x86_64 already installed and latest version
Package monit-5.3-1.el5.x86_64 already installed and latest version
Package apache2-mod_authnz_external-3.1.0-2.36.x86_64 already installed and latest version
Package cddm-4.1.0-tv0.54.x86_64 already installed and latest version
Package vds_cache2app-4.1.0-tv0.4.x86_64 already installed and latest version
Package vds_utils-4.1.0-tv0.2.x86_64 already installed and latest version
Package kernel-vds-2.6.32-4.1.0_tv0.8.x86_64 already installed and latest version
Package vds_tools-4.1.0-tv0.2.4.x86_64 already installed and latest version
Package vds_statsd-4.1.0-tv0.25.x86_64 already installed and latest version
Package vds_tavsdB-4.1.0-tv0.46.x86_64 already installed and latest version
Package vds_framework-4.1.0-tv0.2.x86_64 already installed and latest version
Package vds_snmp-4.1.0-tv0.25.x86_64 already installed and latest version
Package cserver-prod-4.1.0-tv0.54.8.4.x86_64 already installed and latest version
Package vds_avslaucher-4.1.0-tv0.1.x86_64 already installed and latest version
Package cds-vqe-3.5.0-13.x86_64 already installed and latest version
Package vds_config-4.1.0-tv0.194.117.x86_64 already installed and latest version
Package vds_collectd-4.1.0-tv0.25.x86_64 already installed and latest version
Package vds_syslogtools-4.1.0-tv0.2.x86_64 already installed and latest version
Resolving Dependencies
--> Running transaction check
---> Package ipmitool.x86_64 0:1.8.15-1.el5 set to be updated
--> Finished Dependency Resolution

```

Dependencies Resolved

```

=====
Package           Arch           Version           Repository           Size
=====
Installing:
ipmitool          x86_64         1.8.15-1.el5     tv-3.12.0-0b1       517 k

```

Transaction Summary

```

=====
Install          1 Package(s)
Upgrade          0 Package(s)

```

```

Total download size: 517 k
Downloading Packages:
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction

```

```

Installing      : ipmitool                                     1/1

```

Installed:

```
ipmitool.x86_64 0:1.8.15-1.e15
```

```
Complete!
Setting up Group Process
Package vds_ndvr-4.1.0-tv0.1.x86_64 already installed and latest version
Package vds_rtsp-4.1.0-tv0.79.32.x86_64 already installed and latest version
Package vds_config_rtsp-4.1.0-tv0.194.117.x86_64 already installed and latest version
No packages in any requested group available to install or update
Unmounting /mnt/cdrom
New image installed : cdstv-4.1.0-b117
File /etc/vdsServices.conf already exists.
vdsinit completed. Please reboot the device.
```

Step 7 Enter the following command to verify the version of VDS-TV installed.

```
# head /arroyo/image/tags
```

```
cdstv-4.2.1-b6
```

Step 8 Enter the following command to disable the services

```
# vdsServices disable
```

Step 9 Reboot the CDE.

Step 10 Type the following command to verify the kernel version installed.

```
# uname -r
```

```
2.6.32-4.2.1_tv0.8
```



Warning

Add the line allocation unit size 0 in /arroyo/test/vault/setupfile before starting the CServer when upgrading from 3.2.x release to release 4.2 else the contents will be lost while downgrading from 4.2 to older releases and CServer will have to be started with -c option

Step 11 Enter the following command to manually start the services.

```
# vdsServices start
```

The CDE now has the 64-bit OS, and the Release 4.2 VDS-TV software installed. The next step is to initially configure the CDE, which requires you to run the **vdconfig** script, and answer the prompts appropriately for your deployment. See the [“Preparing to Initially Configure the CDEs”](#) section on [page 2-19](#) for more information.

Imaging a VDS Server with 64-Bit OS using a DVD

If the VDS server upgrade process is interrupted because of power failure or for some similar reason, and if the upgrade was corrupted, you can use the DVD imaging process to load the OS and Release 4.2 software files. The DVD ISO imaging process can also be used for a clean installation. After the imaging is complete, you need to run the **vdsinit** script to install the software.

To image a VDS server with the OS required to run the VDS-TV Release 4.2 software, do the following:

- Step 1** Download the `tv_full-4.2.1-x86_64.iso` file from the Cisco software download website. See the [“Getting the Cisco VDS-TV Software Files for Release 4.2”](#) section on page 1-5 for more information.
- Step 2** Burn the ISO image file to a DVD.
- Step 3** Connect USB slim drive to CDE server.
- Step 4** Insert the VDS-TV ISO image DVD into the USB slim drive.
- Step 5** Remove the external HDD/SSDs.
- Step 6** Reboot the server.
- Step 7** The auto installation begins automatically in 10 seconds. Press **Enter** to start the installation immediately.
- Step 8** First, the pre-installation scripts are executed and then a warning message is displayed and the user is prompted with YES or NO to erase the existing data and configure new file system partition.



Note The file system partitioning process can approximately take 1 hour or more. It depends on the platform where the fresh installation is done. At times, erase existing data message appears multiple times even on selecting YES, click YES multiple times to move to next screen.

- Step 9** After partitioning, the image is transferred to hard drive and required packages are installed.
- Step 10** Reboot the server after successful installation.
- Step 11** For CDE 280, verify that the BIOS and CIMC settings is configured as listed in [CDE280 BIOS and CIMC Settings, page 2-7](#)



Note For CDE 220 hardware, once the server reboots do the following:

- Press Ctrl+C and go to LSI Corp Config Utility.
 - Disable the MPTSAS disks from the CDE 220.
 - Check if PCI Raid option is displayed under Boot Priority Order.
 - Reboot the server by pressing Ctrl+C.
-



Note Fresh installation using `tv_full-4.2.1-x86_64.iso` is not supported on CDE110. Only upgrade to VDS-TV 4.2 is supported.

Installing the VDS-TV software

Proceed with normal installation of the VDS-TV Release 4.2 software by running the `vdsmnit` script. For detailed information on CDSM installation, refer [Installing the Software on a CDE110/UCS C220 M4 Hardware, page 2-3](#). For detailed information on VDS-TV server installation, refer [Installing the Software on a CDE220 or CDE420 or CDE250 or CDE460 or CDE280, page 2-7](#)

Configuring the VDS-TV

Proceed with normal configuring of the VDS-TV. For detailed information on configuring the VDS-TV hardware, see [Initially Configuring the CDE110/UCS Hardware, page 2-20](#), [Initially Configuring the CDE220, CDE250, CDE420 and CDE460 or CDE280, page 2-25](#)

Initial Configuration Sequence of the CDEs

This section describes the initial configuration sequence for a VVI and a VDS. A VVI includes of Caching Nodes and possibly split domain management. A VDS consists of Streamers and Vaults or ISVs.

VVI Initial Configuration Sequence

The order in which you initially configure the CDEs for VVI is very important. The CDSM (VVIM for Vaults and Caching Node) and all the Vaults and Caching Nodes in the VVIM domain must be configured first and brought online before the Stream Domain is configured. Following is a high-level view of the initial configuration order:

1. **VVIM**—See the [“Initially Configuring the CDE110/UCS Hardware” section on page 2-20](#) for more information.
Log in to the VVIM GUI as a user with Engineering access and configure the VVIM Setup page.
2. **Vaults and Caching Nodes**
Log in to the VVIM GUI and configure each Vault and Caching Node.
3. **Stream Manager (CDSM)**—See the [“Initially Configuring the CDE110/UCS Hardware” section on page 2-20](#) for more information.
Log in to the CDSM GUI as a user with Engineering access and configure the CDSM Setup page.
4. **Streamers**—See the [“Initially Configuring the CDE220, CDE250, CDE420 and CDE460 or CDE280” section on page 2-25](#) for more information. Make sure a Streamer is configured completely and is displayed in the Stream Manager System Health Monitor page before moving on to the next Streamer.
Log in to the Stream Manager GUI and configure each Streamer.
5. Repeat 3 and 4 for each Stream Domain in the VVI.
6. **Redundant VVIM and Stream Manager**—See the [“Initially Configuring the CDE110/UCS Hardware” section on page 2-20](#) for more information

For more information about the CDSM (or VVIM) GUI, see the “Getting Started” chapter in either the *Cisco VDS-TV ISA Software Configuration Guide, Release 4.2* or the *Cisco VDS-TV RTSP Software Configuration Guide, Release 4.2*.



Note

In an ISA environment, the ISA services cannot be started until the Stream Manager is up and at least one Streamer in a Stream Domain has the VHO Setup and VHO ISA Setup settings configured.

VDS Initial Configuration Sequence

The only requirement with regard to the order in which you initially configure the CDEs for a VDS is that the CDSM must be configured first. The Vaults and Streamers are initialized next, followed by a second CDSM for redundancy. If the VDS consists of ISVs and CDSMs, initialize the primary CDSM first, followed by the ISVs, then the secondary CDSM.

Preparing to Initially Configure the CDEs

Before you run the initial configuration script, gather the following information:

- IP address and subnet mask of the CDE management interface—Typically, the eth0 interface is used for the management interface.
- IP address of the default gateway interface—This is the address of the interface on the router that is directly attached to the CDE management (eth0) interface.
- Hostname for the CDE—Name of the device host.
- Group ID—A unique user-defined value. All the VDS servers (ssv [ISV], Vault, Streamer, controller [CDSM]) that are part of the same system (managed by one CDSM) have the same group ID. This group ID should be unique across an enterprise. All the VDS servers that are part of a VVI have different group IDs depending on the number of managers (CDSMs and VVIMs).
- Server ID—A unique user-defined value. The ID must be unique for each VDS device.



Note If you are installing a VVI system with split-domain management, the server ID for Streamers in a Stream Domain is generated by the Stream Manager.

- Replication group members—The VDS servers that are replication group members and the IP address of each member. The servers to include in a replication group depends on the network design for the VDS.



Note With the exception of the VDS server you are configuring, all the VDS servers (VVIMs, Stream Managers, ISVs, Caching Nodes, Vaults, and Streamers) that are members of the replication group should be configured at this time. The server you are configuring is not configured as a replication group member.

- In simple cases, because all the VDS servers share information with each other, all the servers are in each other's replication group.
- In more complex cases, only a subset of the servers are included in a replication group. As an example, if Streamers talk only to the CDSM, Vaults, and Streamers within a *specific Streamer group*, the Streamers replication group includes only these servers.

In both the CDS and VVI, all the Vaults, Caching Nodes, and Streamers (or ISVs) are identified by an array ID, a group ID, and a server ID. In the CDSM GUI, the array ID identifies servers that are part of the same system, the group ID identifies servers that are part of the same group (Vault Group or Stream Group), and the server ID is a unique number that identifies the server.

Table 2-2 lists the CDSM GUI ID names and maps them to the CServer names in the setupfile and .arroyorc files.

Table 2-2 ID Names in the CDSM GUI and CServer Files

CDSM GUI ID Name	CServer ID Name
Array ID on the Array Name page	groupid
Group ID on the Server-Level pages	groupid
Stream Group ID on the Server Setup page	arrayid
Cache Group ID on the Server Setup page	arrayid
Vault Group ID on the Server Setup page	arrayid
Stream Group ID on the Configuration Generator page	arrayid



Note

During the initialization process of a VDS server or after recovering a VDS server that has been down for less than an hour, the VDS database performs a complete synchronization. The database synchronization takes about five minutes before the server becomes ready for service. If the VDS server is down for a much longer time than an hour, the database synchronization takes longer than five minutes. The **netstat** command does not show the interfaces as being up until the synchronization has completed.

Initially Configuring the CDE110/UCS Hardware

To initially configure the CDE110/UCS hardware, do the following:

- Step 1** Log in to the server as *root*.
- Step 2** Run the **vdconfig** script. The script displays prompts with the default values in brackets. If a default value is correct, press **Enter** to accept the value; otherwise, enter the correct value and press **Enter**.



Note

When bond interface is enabled, the user should first disable the bond configuration and then proceed with **vdconfig**. The user can re-enable bonding on successful completion of **vdconfig**.

```
[root]# vdconfig
```

```
ATTENTION!!!
```

```
The vdconfig script should be run only to configure the device after an image installation.
```

```
This script modifies the network and other critical configurations based on the deployment type.
```

```
Improper use of this script may result in mis-configuring the device or making it inaccessible.
```

```
If a new image is installed on this server, a reboot is required before running vdconfig. If a reboot is already performed, please continue. Otherwise, please exit and execute vdconfig after rebooting the server
```

```
Do you want to continue ? (yes/no): y
```

```
Enter management interface: eth0
```

```
Please ensure an IP address and netmask are configured for
```

```
management interface eth0:
```

```
Select an option or an interface to re-configure/disable:
```

- ```
1. eth0 ip:10.197.102.61 mask:255.255.255.0 bcast:10.197.102.255
2. Configure another interface
3. Done
```

```
Choice: 3
```

```
Backing up old scripts in /etc/sysconfig/network-scripts
```

```
Writing new ifcfg-ethX scripts
```

```
Enter a hostname: IPTV_61
```

```
Please choose your platform from the following list of valid platforms:
```

- ```
1. 2U-SCSI-1
2. 3U-SCSI-1
3. 3U-SCSI-10
4. 3U-SCSI-11
5. 2U-SATA-1
6. 2U-SATA-2
7. 2U-SATA-10
8. 2U-SATA-11
9. 4U-SATA-1
10. 4U-SATA-2
11. 4U-SATA-3
12. 4U-SATA-10
13. 4U-SATA-11
14. 4U-SATA-12
15. CDE100-2C-1
16. CDE110-2C-1
17. CDE205-1C1-C
18. CDE220-2A-C
19. CDE220-2A-F
20. CDE220-2C1-C
21. CDE220-2C1-F
22. CDE220-2C2-C
23. CDE220-2C2-F
24. CDE220-2D1-C
25. CDE220-2D1-F
26. CDE220-2S1-C
27. CDE220-2S1-F
28. CDE220-2S3-C
29. CDE220-2S3-F
30. CDE220-2S4-C
31. CDE220-2S4-F
32. CDE420-4A-C
33. CDE420-4A-F
34. CDE420-4G-C
35. CDE420-4G-F
36. CDE250-2S5
37. CDE250-2S6
38. CDE250-2S8
39. CDE250-2S9
40. CDE250-2S10
41. CDE250-2G3
42. CDE250-2A4
43. CDE250-2A2
44. CDE460-4R1
45. CDE470-4R2
46. CDE460-4R3
47. CDE465-4R4
48. CDE280-2U1
49. CDE280-2U2
50. CDE280-2U3
```

```
51. UCSC-220M4-2U1
Choice: 16
```

```
Please select a device role
1. cdsm
Choice: 1
```

```
Select a role for this CDSM
1. CDS Manager (Single Management Domain for Content Storage, Caching & Streaming )
2. VVI Manager (Split Domain Model - Content Storage and Caching Domain)
3. CDS Manager (Split Domain Model - Streaming Domain, with or without local Content
Storage)
Choice: 1
Please enter a Group ID(Array ID): 6161
Please enter a server ID: 61
```

**Note**

If this is the Stream Manager, choose option **3**. The **vdconfig** script displays the following questions:

```
Is this Streaming Domain going to use CCP as Cache Fill Protocol? (yes/no) [y]: Y
Is this the first CDS Manager getting added to this domain? (yes/no) [y]: Enter
Enter the name of this Stream Domain: StreamDomain1
Enter the IP address of the VVIM: 172.22.99.109
```

```
Retrieved Server ID '1001' from '172.22.99.109'
Please enter a group ID: 12345
```

For a VVI, the group ID for the VVIM and Stream Manager should be the same. This group ID is the ID of the array. The VVIM assigns the server ID to the Stream Manager. For a VVI in a split domain, when using CCP as the Cache Fill Protocol, the group ID for the VVIM and Streamer Manager must be same; however, when using HTTP as the Cache Fill Protocol, the group ID can be different in two domains.

During the running of the **vdconfig** script, the Stream Manager communicates with the VVIM to get a range of group IDs and server IDs to use in the Stream Domain. If the Stream Manager is unable to connect to the VVIM, the VVIM administrator can manually generate the IDs and send the information to the Stream Manager installer for manual entry. For more information, see the “Identifying Server IDs and Group IDs for VVI with Split-Domain Management” section in the *Cisco VDS-TV ISA Software Configuration Guide, Release 4.2* or the *Cisco VDS-TV RTSP Software Configuration Guide, Release 4.2*.

**Note**

With the exception of the server you are configuring, all the CDS servers (VVIMs, Stream Managers, ISVs, Vaults, Caching Nodes, and Streamers) that are members of the replication group should be configured at this time. The server you are configuring is not configured as a replication group member.

In the following example, the configuration of the VDS servers shows generalized input values. Option 4, **cdsmgw**, is the Stream Manager. Add the Stream Manager ip by selecting option 4 as replication group member. While configuring CDSM, option **vvimgw** would be listed and we need to add the VVIM as replication member in the CDSM.

```
Writing new configuration to /home/isa/.arrayorc
```

```
No existing replication group information found
Do you want to configure replication group members now? (yes/no): y
Do you want to add another replication group member? (yes/no): y
```

```
Select a role for the new replication group member. Select 'exit' to exit this menu
1. ssv
2. vmaster
3. vault
4. streamer
5. cache
6. controller
7. isr
8. recorder
9. exit
Choice: 3
Enter an IP address for new vault: 10.197.102.64
Do you want to add another replication group member? (yes/no): yes
```

```
Select a role for the new replication group member. Select 'exit' to exit this menu
1. ssv
2. vmaster
3. vault
4. streamer
5. cache
6. controller
7. isr
8. recorder
9. exit
Choice: 3
Enter an IP address for new vault: 10.197.102.50
Do you want to add another replication group member? (yes/no): yes
```

```
Select a role for the new replication group member. Select 'exit' to exit this menu
1. ssv
2. vmaster
3. vault
4. streamer
5. cache
6. controller
7. isr
8. recorder
9. exit
Choice: 4
Enter an IP address for new streamer: 10.197.102.67
Do you want to add another replication group member? (yes/no): yes
```

```
Select a role for the new replication group member. Select 'exit' to exit this menu
1. ssv
2. vmaster
3. vault
4. streamer
5. cache
6. controller
7. isr
8. recorder
9. exit
Choice: 4
Enter an IP address for new streamer: 10.197.102.68
Do you want to add another replication group member? (yes/no): yes
```

```
Select a role for the new replication group member. Select 'exit' to exit this menu
1. ssv
2. vmaster
3. vault
4. streamer
5. cache
6. controller
7. isr
```

```

8. recorder
9. exit
Choice: 4
Enter an IP address for new streamer: 10.197.102.32
Do you want to add another replication group member? (yes/no): n
Configuring CDSM
Do you want to enable CDSM Redundancy ? (yes/no): no
Is this node getting added to an existing deployment ? (yes/no): no
Do you want to enable Exporter ? (yes/no): no
Do you want to enable Importer ? (yes/no): no
Do you want to enable MSA Logging ? (yes/no): no

Choose Network Protocol to access CDSM GUI:

1. HTTP
2. HTTPS
3. HTTP and HTTPS
Choice: 3
Writing .arroyorc
Writing VDS Service config file
Do you want to configure Remote Authentication for CDSM GUI? (yes/no): n
ATTENTION!! svrinit failed. Please run svrinit manually and start statsd after vdsconfig
is completed.
CDSM configuration finished
Serial Console BAUD speed is configured as '115200'. Do you wish to change it (yes/no): n
vdsconfig finished, please use CDSM to complete configuration

```

Step 3 Reboot the CDSM.

```
# reboot
```

Step 4 Enter the following command and press **Enter**, to start the services

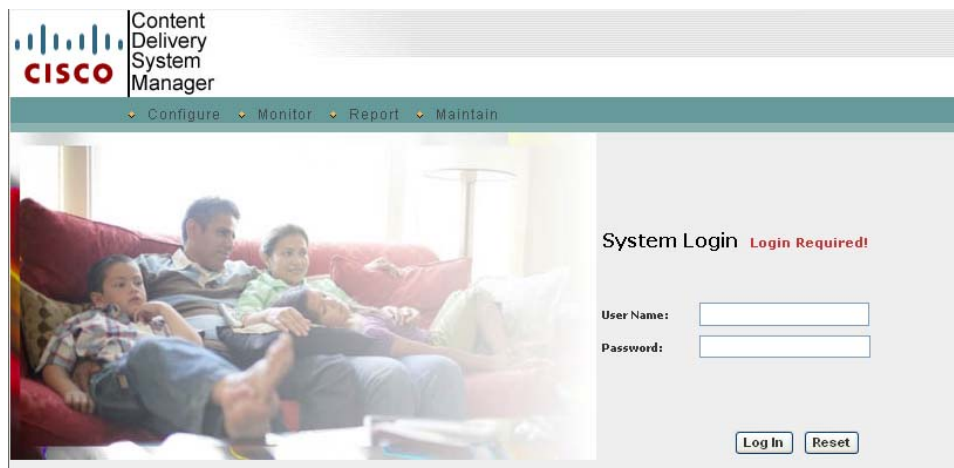
```
# vdsServices start
```

Step 5 To verify that the VDS manager (VVIM, Stream Manager or CDSM) is operational, using your web browser, enter the IP address of your VDS manager.

For example, if the IP address of your CDSM is 192.168.0.236, you can access it by entering `http://192.168.0.236` in the address or location text box of your browser program.

The System Login page is displayed (see [Figure 2-1](#)).

Figure 2-1 CDSM Login Page



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- Step 6** Log in to the VDS manager GUI. Enter *admin* as the user name and *admin* as the password, and click **Log In**.
- If you are unable to log in with the user name *arroyo* and the password *admin*, log in to the CDE110 Linux command line, run the `/home/stats/resetpw` command, and log in to the VDS manager GUI again. The VVIM Setup page or the CDSM Setup page is displayed.
- Step 7** Select **4.X** as the CServer Version.
- Step 8** Verify all the other configurations in the page and click **Submit**.
- Step 9** Use the VVIM GUI or CDSM GUI to complete the configuration.
- For more information, see one of the following:
- For information about an ISA deployment, see the “Getting Started” chapter in the *Cisco VDS-TV ISA Software Configuration Guide, Release 4.2*.
 - For information about an RTSP deployment, see the “Getting Started” chapter in the *Cisco VDS-TV RTSP Software Configuration Guide, Release 4.2*.

Initially Configuring the CDE220, CDE250, CDE420 and CDE460 or CDE280

To install the VDS-TV software and initially configure the CDE220, CDE250, CDE420 or CDE460 as a Vault, Caching Node, or Streamer, do the following:

- Step 1** Log in to the CDE as *root*.
- Step 2** Run the `vdconfig` script. The script displays prompts with the default values in brackets. If a default value is correct, press **Enter** to accept the value; otherwise, enter the correct value and press **Enter**.



Note When bond interface is enabled, the user should first disable the bond configuration and then proceed with `vdconfig`. The user can re-enable bonding on successful completion of `vdconfig`.

```
[root]# vdconfig

ATTENTION!!!
The vdconfig script should be run only to configure the device after an image
installation.
This script modifies the network and other critical configurations based on the deployment
type.
Improper use of this script may result in mis-configuring the device or making it
inaccessible.

If a new image is installed on this server, a reboot is required before running vdconfig.
If a reboot is already performed, please continue. Otherwise, please exit and execute
vdconfig after rebooting the server

Do you want to continue ? (yes/no): y
Enter management interface: eth0
Please ensure an IP address and netmask are configured for
management interface eth0:

Select an option or an interface to re-configure/disable:
```

```

1. eth0      ip:10.197.86.193   mask:255.255.255.0   bcast:10.197.86.255
2. Configure another interface
3. Done
Choice: 3
Backing up old scripts in /etc/sysconfig/network-scripts
Writing new ifcfg-ethX scripts

Enter a hostname: ABC-Vault-NOS
Enter the number of the eth interface that connects to the gateway
Enter the default gateway IP address: 10.197.86.1
Backing up /etc/sysconfig/network
Writing new /etc/sysconfig/network
Backing up /etc/hosts
Writing new /etc/hosts
Restarting network services, this may take a minute:
Network services restarted; may take a few seconds to establish connectivity
Reboot for hostname changes to take effect
Network configuration complete

Please choose your platform from the following list of valid platforms:

1. CDE250-2S5
2. CDE250-2S6
3. CDE250-2S8
4. CDE250-2S9
5. CDE250-2S10
6. CDE250-2G3
7. CDE250-2A4
8. CDE250-2A2
Choice: 7

Please select a device role
1. vault
2. recorder
3. isr
4. cache
Choice: 1
Is this a Local Vault, getting added to a Stream Domain in a Split Domain Management
Environment ? (yes/no): n
Please enter a Group ID(Array ID): 3000
Please enter a server ID: 93
Writing new configuration to /home/isa/.arroyorc

No existing replication group information found
Do you want to configure replication group members now? (yes/no): y
Do you want to add another replication group member? (yes/no): y

Select a role for the new replication group member. Select 'exit' to exit this menu
1. ssv
2. vault
3. streamer
4. cache
5. controller
6. recorder
7. isr
8. exit
Choice: 5
Enter an IP address for new controller: 10.197.86.181
Do you want to add another replication group member? (yes/no): n
Configuring ISA ecosystem
Is this node getting added to an existing deployment ? (yes/no)      :      y

Starting database sync...

```

Database sync completed.

```
Run svrinit to seed database? (yes/no)      :    y
Please enter an IP address for svrinit      :   10.197.86.193
Please enter a netmask for svrinit         :   255.255.255.0
Please enter a hostname for svrinit        :   TWC-Vault-NOS
Subnet Mask for Virtual IP failover       :   255.255.255.0
Writing VDS Service config file
ISA ecosystem configuration finished
Serial Console BAUD speed is configured as '9600'. Do you wish to change it (yes/no): n
vdsconfig finished, please use CDSM to complete configuration
```



Note

If the device role selected is a option **3** (Streamer), the **vdsconfig** script displays the following questions:

```
Is this server going to get added to a Stream Domain in a CDN Split Domain Management
Environment? (yes/no) [y]: y
Is this Stream Domain going to use CCP as Cache Fill Protocol? (yes/no) [y]: y
Enter the IP address of the Stream Manager:
```

For Streamers in a VVI using CCP, the Streamer communicates with the Stream Manager to get a server ID. If the Streamer is unable to connect to the Stream Manager, the Stream Manager administrator can manually generate the server ID and send the information to the Streamer installer for manual entry.

For more information, see the “Identifying Server IDs and Group IDs for VVI with Split-Domain Management” section in the *Cisco VDS-TV ISA Software Configuration Guide, Release 4.2* or the *Cisco VDS-TV RTSP Software Configuration Guide, Release 4.2*.



Note

If the device role is a Streamer, you have the option to enter the Stream Control interface using the **vdsconfig** script, or later through the CDSM GUI.

```
Writing new configuration to /home/isa/.arroyorc

No existing replication group information found
Do you want to configure replication group members now? (yes/no) [y]:

There are currently no replication group members.
Do you want to add another replication group member? (yes/no) [y]:

Select a role for the new replication group member:
  1. ssv
  2. vault
  3. streamer
  4. cdsm
  5. cache

Choice: device_role
Enter an IP address for new CDS_device: IP_Address

Current replication group members: device_role IP_Address

Do you want to add another replication group member? (yes/no) [n]: n
```

**Note**

For RTSP deployments, the **vdconfig** script displays the following questions:

```
Is this an NGOD deployment (yes/no):
Choose NPT Syntax:
  1. NGOD
  2. NGOD_SC
  3. Standard
Choice [NGOD]:3
Writing /home/isa/bss/scripts/arroyo-env.sh
Writing /home/isa/bss/scripts/arroyo-site-env.sh
Setting attributes for AVSRTSPServer
Do you want to enable Redirect Server ? (yes/no) [y]: n
Do you want to enable Authentication Server ? (yes/no) [y]: n
```

```
Is this node getting added to an existing deployment? (yes/no) [y]: n
Started avbdb, verify with "arroyo status"
Starting statsd
Run svrinit to seed database? (yes/no) [n]: y
Running svrinit
```

**Note**

Always select yes because you must seed the database whenever you add a new CDE to a network. You are asked to enter the IP address, netmask, hostname, and gateway for the CDE you are configuring. These are the same parameters you entered when you started running this script.

```
Please enter an IP address for svrinit: mgmt_ip_address
Please enter a netmask for svrinit: mgmt_netmask
Please enter a hostname for svrinit: hostname
Please enter a gateway for svrinit gateway
```

**Note**

If you receive an error message indicating the database is unavailable and cannot be set up, enter the following commands to initialize the database tables for a VDS server in an ISA environment:

```
[root]# service avbdb start
```

Enter the following commands to initialize the database tables for a VDS server in an RTSP environment:

```
[root]# service avbdb start
```

**Note**

For ISA deployments, the **vdconfig** script displays the following question:

```
Is this an IPTV deployment with Dual CAS? (yes/no) [n]:Enter
```

```
Writing /home/isa/bss/scripts/arroyo-env.sh
Writing /home/isa/bss/scripts/arroyo-site-env.sh
Setting attributes for AVSRTSPServer
Do you want to enable Redirect Server ? (yes/no) [y]: n
Do you want to enable Authentication Server ? (yes/no) [y]: n
Do you want to enable Watermark Server ? (yes/no) [y]: n
```

```
Is this node getting added to an existing deployment ? (yes/no) [y]: y
```

```
Starting database sync...
```

```
BDB2525 No log files found
```

```
1 size: 4180
2 size: 3148
3 size: 2136
4 size: 11412
5 size: 4180
6 size: 3148
7 size: 17628
8 size: 5208
10 size: 60
11 size: 1104
12 size: 52
14 size: 60
15 size: 2492
16 size: 156
17 size: 3164
18 size: 144
19 size: 180
20 size: 160
21 size: 1164
22 size: 16
23 size: 4228
24 size: 164
25 size: 14800
27 size: 1108
28 size: 3508
29 size: 156
30 size: 1108
31 size: 276
32 size: 1916
33 size: 1496
34 size: 1880
35 size: 3672
36 size: 6676
37 size: 1548
38 size: 184
39 size: 1748
40 size: 1492
41 size: 212
42 size: 212
43 size: 244
44 size: 144
45 size: 280
46 size: 156
48 size: 1024
49 size: 224
50 size: 660
51 size: 340
52 size: 2132
53 size: 1816
54 size: 440
56 size: 1440
57 size: 4244
58 size: 7468
59 size: 336
60 size: 204
63 size: 5336
64 size: 204
65 size: 24
66 size: 17732
```

70 size: 164
71 size: 1236
72 size: 5336
74 size: 3348
75 size: 2140
76 size: 5260
77 size: 12436
78 size: 6240
79 size: 340
80 size: 11412
81 size: 228
82 size: 24
83 size: 2208
84 size: 2128
85 size: 4348
86 size: 1168
88 size: 4180
89 size: 96
90 size: 2084
91 size: 84
92 size: 1444
93 size: 512
94 size: 172
95 size: 1512
96 size: 288
97 size: 2412
98 size: 5644
99 size: 160
100 size: 84
110 size: 476
111 size: 564
112 size: 5228
113 size: 88
115 size: 40
116 size: 292
117 size: 236
119 size: 1432
120 size: 5380
121 size: 1484
122 size: 14780
125 size: 24
126 size: 1376
128 size: 1296
130 size: 2292
131 size: 400
132 size: 144
134 size: 16488
135 size: 124
136 size: 2540
137 size: 2540
138 size: 2540
139 size: 1044
140 size: 10160
141 size: 3292
145 size: 116
146 size: 108
147 size: 360
148 size: 396
150 size: 1444
151 size: 184
152 size: 192
153 size: 11412
155 size: 1572
156 size: 832

```
157 size: 204
158 size: 292
159 size: 468
160 size: 240
161 size: 428
162 size: 2612
165 size: 672
166 size: 2192
167 size: 592
169 size: 272
171 size: 1168
175 size: 1208
180 size: 2724
181 size: 2396
182 size: 1120
183 size: 152
184 size: 164
185 size: 212
191 size: 628
192 size: 6228
195 size: 120
197 size: 140
200 size: 21772
204 size: 60
205 size: 16
206 size: 6292
207 size: 108
208 size: 1140
210 size: 2548
211 size: 2548
212 size: 240
213 size: 2732
214 size: 216
215 size: 104
220 size: 92
230 size: 1288
231 size: 1500
250 size: 80
251 size: 8352
252 size: 28
253 size: 3200
254 size: 416
255 size: 252
256 size: 104
257 size: 3264
266 size: 24656
267 size: 80
270 size: 660
271 size: 156
272 size: 144
273 size: 88
274 size: 28
275 size: 32
276 size: 32
282 size: 20
283 size: 184
285 size: 33456
290 size: 2556
353 size: 564
354 size: 51664
355 size: 11776
356 size: 1144
357 size: 2108
358 size: 20
```

```

359 size: 1316
360 size: 40
361 size: 1088
362 size: 1580
363 size: 44
364 size: 680
365 size: 4308
366 size: 1452
367 size: 192
368 size: 1436
369 size: 408
370 size: 520
371 size: 1592
372 size: 76
373 size: 208
374 size: 216
375 size: 84
376 size: 2964
377 size: 856
378 size: 592
379 size: 304
380 size: 276
381 size: 1100
382 size: 576
383 size: 3164
384 size: 2264
385 size: 2264
386 size: 13264
387 size: 1360
388 size: 2212
389 size: 2212
390 size: 2212
392 size: 348
393 size: 724
394 size: 32
395 size: 8416
396 size: 13264
397 size: 2264
398 size: 2264
399 size: 928
400 size: 8176
403 size: 3164
404 size: 92
405 size: 348
406 size: 280
407 size: 100
408 size: 4192
409 size: 3644
410 size: 1024
411 size: 7180
413 size: 116
414 size: 76
2015-10-07 15:04:23.505531 UTC iptv-s1-67:
tavbdb:berkeley_db_error_logging.c:berkeley_db_error_logging():132: DBCursor->close:
BDB0062 Successful return: 0
(backtrace:
 0: 0x431d1a - ./avbdb(berkeley_db_error_logging+0x7a) [0x431d1a];
 1: 0x7fcbaa0855ef - /usr/lib/libdb-6.0.so(__db_errcall+0x9f) [0x7fcbaa0855ef];
 2: 0x7fcbaa0913c8 - /usr/lib/libdb-6.0.so [0x7fcbaa0913c8];
 3: 0x43218d - ./avbdb(check_playout_scheduler_config+0x20d) [0x43218d];
 4: 0x42e848 - ./avbdb(main+0x11d8) [0x42e848];
 5: 0x7fcba98129f4 - /lib64/libc.so.6(__libc_start_main+0xf4) [0x7fcba98129f4];
 6: 0x42c969 - ./avbdb [0x42c969])

```



```

2015-10-07 15:04:27.493605 UTC iptv-s1-67:
tavsd:berkeley_db_error_logging.c:berkeley_db_error_logging():132: DBCursor->close:
BDB0062 Successful return: 0
(backtrace:
 0: 0x431d1a - ./avsd(berkeley_db_error_logging+0x7a) [0x431d1a];
 1: 0x7fcbaa0855ef - /usr/lib/libdb-6.0.so(__db_errcall+0x9f) [0x7fcbaa0855ef];
 2: 0x7fcbaa0913c8 - /usr/lib/libdb-6.0.so [0x7fcbaa0913c8];
 3: 0x432497 - ./avsd(check_rts_transformtype_scheduler_config+0x2f7) [0x432497];
 4: 0x42e84d - ./avsd(main+0x11dd) [0x42e84d];
 5: 0x7fcb98129f4 - /lib64/libc.so.6(__libc_start_main+0xf4) [0x7fcb98129f4];
 6: 0x42c969 - ./avsd [0x42c969])
2015-10-07 15:04:27.493855 UTC iptv-s1-67:
tavsd:berkeley_db_error_logging.c:berkeley_db_error_logging():132: DBCursor->close:
BDB0062 Successful return: 0
(backtrace:
 0: 0x431d1a - ./avsd(berkeley_db_error_logging+0x7a) [0x431d1a];
 1: 0x7fcbaa0855ef - /usr/lib/libdb-6.0.so(__db_errcall+0x9f) [0x7fcbaa0855ef];
 2: 0x7fcbaa0913c8 - /usr/lib/libdb-6.0.so [0x7fcbaa0913c8];
 3: 0x5236d2 - ./avsd(check_future_recording+0x202) [0x5236d2];
 4: 0x42e85a - ./avsd(main+0x11ea) [0x42e85a];
 5: 0x7fcb98129f4 - /lib64/libc.so.6(__libc_start_main+0xf4) [0x7fcb98129f4];
 6: 0x42c969 - ./avsd [0x42c969])
2015-10-07 15:04:27.494189 UTC iptv-s1-67:
tavsd:berkeley_db_error_logging.c:berkeley_db_error_logging():132: DBCursor->close:
BDB0062 Successful return: 0
(backtrace:
 0: 0x431d1a - ./avsd(berkeley_db_error_logging+0x7a) [0x431d1a];
 1: 0x7fcbaa0855ef - /usr/lib/libdb-6.0.so(__db_errcall+0x9f) [0x7fcbaa0855ef];
 2: 0x7fcbaa0913c8 - /usr/lib/libdb-6.0.so [0x7fcbaa0913c8];
 3: 0x5238e2 - ./avsd(check_redirect_server+0x202) [0x5238e2];
 4: 0x42e85f - ./avsd(main+0x11ef) [0x42e85f];
 5: 0x7fcb98129f4 - /lib64/libc.so.6(__libc_start_main+0xf4) [0x7fcb98129f4];
 6: 0x42c969 - ./avsd [0x42c969])
pollconfig thread starting: tid: 140512654469440
trickle thread starting: tid: 140512646076736
deadlock thread starting: tid: 140512637684032
checkpoint thread starting: tid: 140512629291328
trigger_worker thread starting: tid: 140512620898624
compaction thread starting: thread number = 6; thread identifier = 0xa45ad940
resource monitor thread starting: thread number = 7; thread identifier = 0xa3dac940

2015-10-07 15:04:27.496177 UTC iptv-s1-67: MALLOC STATS starts
Arena 0:
system bytes      = 14835712
in use bytes      = 14738368
Total (incl. mmap):
system bytes      = 52396032
in use bytes      = 52298688
max mmap regions = 6
max mmap bytes    = 37560320
2015-10-07 15:04:27.496209 UTC iptv-s1-67: MALLOC STATS ends
10.197.102.61: threadid 140512595720512: Performing full resync for node addition with
10.197.102.61
10.197.102.61: threadid 140512595720512: Full Resync SUCCESS
10.197.102.50: threadid 140512587327808: Performing full resync for node addition with
10.197.102.50
10.197.102.50: threadid 140512587327808: Full Resync SUCCESS
10.197.102.64: threadid 140512578935104: Performing full resync for node addition with
10.197.102.64
 10.197.102.64: db_resync_content_object: Finished with 3 new records found and 0
records deleted, 3 processed in getall
 10.197.102.64: db_resync_content_object4_cmpgetall: still processing remote getall, 0
contents processed so far

```

```

10.197.102.64: db_resync_content_object4: Finished with 0 new records found and 0
records deleted, 0 processed in getall
10.197.102.64: db_resync_content_object3_cmpgetall: still processing remote getall, 0
contents processed so far
10.197.102.64: db_resync_content_object3: Finished with 0 new records found and 0
records deleted, 0 processed in getall
10.197.102.64: threadid 140512578935104: Full Resync SUCCESS
10.197.102.68: threadid 140512570542400: Performing full resync for node addition with
10.197.102.68
10.197.102.68: threadid 140512570542400: Full Resync SUCCESS
serverid: 67 servertime: 2 ipaddr: 180708931
controller archiving thread starting: tid: 140512553756992
rep_mgr thread starting: tid: 140512472332608 rthreads: 4
trigger manager thread starting: tid: 140512463939904
pthread created: 140512654469440
pthread created: 140512646076736
pthread created: 140512637684032
pthread created: 140512629291328
pthread created: 140512620898624
pthread created: 140512612505920
pthread created: 140512604113216
pthread created: 140512595720512
pthread created: 140512587327808
pthread created: 140512578935104
pthread created: 140512570542400
pthread created: 140512562149696
pthread created: 140512553756992
pthread created: 140512472332608
pthread created: 140512463939904
replication threads: 4

```

Database sync completed.

```

Starting avssdb:          [OK]
Started avssdb, verify with "service avssdb status"
Run svrinit to seed database? (yes/no) [n]: y
Please enter an IP address for svrinit [10.197.102.67]:
Please enter a netmask for svrinit [255.255.255.0]:
Please enter a hostname for svrinit [iptv-s1-67]:
10.197.102.67 ASM tables initialized!

```

```

Writing VDS Service config file
Waiting for 30 sec max for cserver to come up ...
cserver not running, statsd starting without cserver.
Starting statsd.bin: device is: eth0
[ OK ]
Waiting for 30 sec max for cserver to come up ...
cserver not running, collectd starting without cserver...
Starting collectd.bin: [ OK ]
RTSP ecosystem configuration finished
Serial Console BAUD speed is configured as '9600'. Do you wish to change it (yes/no) [n]:
Synchronizing logging config files:
Wrote logging configuration file (/home/isa/logging.conf)
Wrote syslog configuration file (/opt/syslog-ng/etc/cdstv-syslog-ng.conf)
Reloading syslog-ng's config file:
Reloaded syslog-ng.
Removing symbolic links to log files: done.
Establishing symbolic links to log files: done.
vdsconfig finished, please use CDSM to complete configuration
[root@iptv-s1-67 ~]# vdsServices status
Status of the following VDS Services:
avssdb avsslauncher cserver statsd collectd appmonitor
avssdb (pid 9376 9374) is running...
avsslauncher.bin is stopped

```

```
cserver is not running
statsd.bin (pid 9550) is running...
collectd.bin (pid 9749) is running...
cde-app-monitor stopped
monit (pid 3572) is running...
```

Step 3 Verify connectivity to the CDSM by logging in to the CDSM GUI.

The System Health Monitor page is displayed, showing the devices and their IP address (see [Figure 2-2](#)).

Figure 2-2 System Health Monitor Page

System Level		System Health <i>MONITOR</i>			
<ul style="list-style-type: none"> ▼ System Health ▶ System Snapshot Content Objects ▶ Completed Ingests ▶ Active Ingests ▶ Package Expiration ▶ Publish Failures Stream Objects ▶ Stream Monitor 		Below is a breakdown of all servers that are part of the Cisco CDSM. If one of the monitored areas is yellow or red you may click that item to view the specific reason for the warning.			
		Overall	Network	Disk	Services
	10.22.216.119	■	■	■	■
	10.22.216.123	■	■	■	■
	10.22.216.148	■	■	■	■
CDSM Time 22:56:36					

The VDS-TV installation is complete.

Step 4 Restart collectd in both primary and secondary CDSM.

```
# service collectd restart
```

Step 5 To complete the server configuration, log in to the CDSM GUI and go through the **Configure > Server Level** pages for the new server.



Note

In RTSP deployments, if you need to enable the Redirect Server in Release 4.2, run the **vdconfig** script and answer **yes (Y)** at the following prompt:

```
Do you want to enable Redirect Server ? (yes/no) [y]
```

Installing the CDSM in UCS C220 M4 2U1 Server

Procedure

Table 2-3 Installing the CDSM in UCS C220 M4 Server

	Action	Purpose
Step 1	Configuring BIOS Settings in CIMC, page 2-36	Configure BIOS Settings in CIMC GUI before installing the CDSM.
Step 2	Hardware Setup, page 2-37	Configure your UCS C220 M4 server and assign CIMC IP Address.
Step 3	Installing the VDS-TV OS, page 2-38	Install the VDS-TV kernel.
Step 4	Installing the CDSM software on UCS C220 M4 2U1 Server, page 2-39	Install and configure the VDS-TV CDSM.

Configuring BIOS Settings in CIMC

Before installing the CDSM in UCS C220 M4 server, configure the BIOS settings in Cisco Integrated Management Controller (CIMC) for UCS C220 M4 used as CDSM.

To configure the BIOS settings, do the following

-
- Step 1** Configure CIMC and assign an IP Address to manage the UCS server.
 - a. Upgrade CIMC to the latest version.
 - Step 2** Connect Ethernet cable to CIMC management NIC and configure the network access.
 - Step 3** Launch CIMC GUI.
 - Step 4** Choose **Server > BIOS > Configure BIOS > Main**. The BIOS Settings Main tab page is displayed.
 - Step 5** Enter the BIOS settings as appropriate. See [Table 2-4](#) for description of the fields.

Table 2-4 BIOS Main tab settings

Field	Description
TPM Support	From the drop-down box, choose Disabled

- Step 6** Choose **Server > BIOS > Configure BIOS > Advanced**. The BIOS Settings Advanced tab page is displayed.
- Step 7** Enter the BIOS settings as appropriate. See [Table 2-5](#) for description of the fields.

Table 2-5 BIOS Advanced tab settings

Field	Description
Intel(R) Hyper-Threading Technology	From the drop-down box, choose Disabled
Intel(R) VT-d ATS Support	From the drop-down box, choose Disabled

Table 2-5 BIOS Advanced tab settings

Field	Description
Intel(R) VT	From the drop-down box, choose Disabled
Intel(R) VT-d	From the drop-down box, choose Disabled
Power Technology	From the drop-down box, choose Disabled
Energy Performance	From the drop-down box, choose Performance
Bits per second	From the drop-down box, choose 9600



Note For the remaining BIOS Advanced tab settings, the default option is retained.

- Step 8** Click **Save Changes**.
- Step 9** Reboot/Power Cycle the server for the settings to take effect.

Hardware Setup

To configure the UCS C220 M4 server and assign CIMC IP address, do the following:

- Step 1** Ensure that the server has all the expected hardware.
- Step 2** Connect console, USB keyboard and USB mouse.
- Step 3** Configure single virtual drive using CIMC.
- Choose **Storage > Virtual Drive Info** The Virtual Drive details are displayed. To create a new virtual drive from unused physical drives, do the following:
 - Clear any existing virtual drives.
 - Choose **Storage > Controller Info** and click **Create Virtual Drive from Unused Physical Drives**.
 - Create two RAID50 drive groups with four physical drives each. Configure the following settings for the RAID Config:
 1. RAID Level: 50
 2. Write Policy: Always Right Back



Note For the remaining RAID Config settings, the default option is retained.

- Using the two RAID50 drive groups, create one RAID50 drive and format it.
- Initialize the virtual drive and set it as boot drive.




Note Once the virtual drive is created, verify if the Write Policy is set as **Always Right Back**. If not edit the virtual drive, choose Write Policy as **Always Right Back** and resubmit.

Installing the VDS-TV OS

There are two options to install the VDS-TV Operating System (OS).

Option 1

To install the VDS-TV OS, do the following:

-
- Step 1** Download the latest TV image from the Cisco software download website and burn a DVD of tv_full.4.2.1-bxx ISO image
- Step 2** Connect a USB DVD drive to UCS C220 server
- a. On CIMC, choose **Server -> BIOS -> Configure Boot Order**. The Configure Boot Order page is displayed.
 - Verify if the boot order for USB is 1.
-  **Note** To modify the boot order, select the boot device and click **Modify**.
-
- Step 3** Insert the VDS-TV disc into the USB DVD drive.
- Step 4** On CIMC, choose **Server -> Summary**
- a. Select Power Cycle Server

Option 2

This section describes the procedure to map the storage drive connected to Laptop/PC as a virtual media and install the OS. The storage device should be a Local HDD in PC from where the CIMC is launched and the PC must have a bootable tv_full-4.2.1-x86_64.iso file.

To install the VDS-TV OS, do the following:

-
- Step 1** Launch CIMC GUI.
- Step 2** Choose **Server > Summary**. The Server Summary page is displayed.
- Step 3** Click **Launch KVM Console**. The KVM Console is launched.
- Step 4** Choose **Power > Power Off System** to power off the device.
- Step 5** Choose **Virtual Media > Activate Virtual Devices**.
- Step 6** Accept the pop-up displayed. Choose **Virtual Media > Map CD/DVD > Map Device** and browse for the image to be installed from your hard drive.
- Step 7** On selecting the **Map Device**, the virtual device mapped is displayed under Virtual Media tab.
- Step 8** Choose **Power > Power On System** to power on the device.
- Step 9** On server reboot, enter F6 on the initial Cisco logo screen. The boot options are displayed.
- Step 10** Select **Cisco vKVM-Mapped vDVD1.22** on the menu and Enter.
- Step 11** The OS installation screen is displayed.
- Step 12** Press Enter to proceed with the OS installation.
- Step 13** On successful installation of the OS, the server reboots.

**Note**

The file system creation can take between 2 to 4 hours.

Installing the CDSM software on UCS C220 M4 2U1 Server

To install the CDSM software on UCS C220 M4 2U1 server, refer [Installing the Software on a CDE110/UCS C220 M4 Hardware, page 2-3](#).

Configuring the VDS-TV Hardware

For detailed information on configuring the VDS-TV hardware, see [Initially Configuring the CDE110/UCS Hardware, page 2-20](#),

