



# Installing and Configuring the VDS-TV 3.5 Software

This chapter covers the installation of the new Release 3.5 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 1-1](#)
- [Initial Configuration Sequence of the CDEs, page 1-8](#)
- [Initially Configuring the CDE110, page 1-10](#)
- [Initially Configuring the CDE220, CDE250, CDE420 and CDE460, page 1-14](#)
- [Fresh Installation of VDS-TV Release 3.5 via YUM, page 1-18](#)
- [Installing Splunk Forwarder in VDS-TV Release 3.5, page 1-18](#)

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 3.5 ISA Software Configuration Guide* and the *Cisco VDS-TV 3.5 RTSP Software Configuration Guide*.

## 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: 115200
- 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 3.5 VDS-TV Software

A new CDE ships with Release 3.5. Download the software files for Release 3.5, 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. The CDE110s ship with the OS already upgraded.



### Note

Before you upgrade the CDEs, download the VDS-TV Release 3.5 software image files from the Cisco software download website. See the [“Getting the Cisco VDS-TV Software Files for Release 3.5”](#) section on page 2-6 for information on downloading these files.

The following upgrade procedures are for the CDEs used in a Release 3.5 VDS or VVI:

- [Upgrading the Software on a CDE110](#)
- [Upgrading the Software on a CDE220 or CDE420](#)

## Upgrading the Software on a CDE110

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.

To upgrade the software image on a CDE110, 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 password *rootroot*.



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

**Step 3** To copy the CDS-TV-3.5.iso and cdsinstall software files on the CDE110, configure the management interface.

- 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 CDS-TV-3.5.iso and cdsinstall 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/CDS-TV.3.5.iso /
# scp -p 172.22.97.109:/CDSdownloads/cdsinstall /root
```

- Step 5** Run the **cdsinstall** script to upgrade the ISO image to Release 3.5.

```
# cd/root
# ./cdsinstall CDS-TV-3.5.iso
Select Deployment Type (ctrl-c to quit):
  1) CDSM/VVIM
1
CDSM/VVIM Selected
Mounting CDS-TV-3.5.iso at /mnt/cdrom
Running inst.sh for isa
```

```

Killing running processes: statsd
Un-taring isa-base.tgz
Calling forprod.sh
Removing RTSP-specific files
Installing ISA-specific files (existing files backed up to .file)
ISA installation complete

Starting fixperms.sh
  Loading File List
  Processing File List
Ending fixperms.sh
Calling inst.sh for cdsm
Killing running processes: statsd

Starting cdsupgrade.sh
  Current SW version to backup is cdstv-3.2-es4-b4
  Processing File Lists
    /arroyo/image/backup/cdstv-3.2-es4-b4/files/common-files: does not exist
    /arroyo/image/backup/cdstv-3.2-es4-b4/files/isa-files: does not exist
    /arroyo/image/backup/cdstv-3.2-es4-b4/files/rtsp-files: does not exist
  Processing /arroyo/image/backup/cdstv-3.2-es4-b4/files/cdsm-files
Ending cdsupgrade.sh
Un-taring cdsm-base.tgz
Calling forprod.sh
Installing CDSM-specific files (existing files backed up to .file)
Upgrading CmdTool2 if necessary

[output omitted]

CDSM installation complete

Starting fixperms.sh
  Loading File List
  Processing File List
Ending fixperms.sh
Unmounting /mnt/cdrom
cdsinstall completed. Please reboot the device.

```

**Step 6** Reboot the CDE.

```
reboot
```

---

The CDE110 now has the Release 3.5 VDS-TV software installed. The next step is to initially configure the CDE110, which requires you to run the **cdsconfig** script and answer the prompts appropriately for your deployment. See the [“Preparing to Initially Configure the CDEs”](#) section on page 1-9 for more information.

## Upgrading the Software on a CDE220 or CDE420

The Cisco CDE220 can be used as a Streamer, ISV, or dense Vault, and the Cisco CDE420 can be used as a Vault or Caching Node. For more information about the upgrade kit, see the [“Upgrade and Downgrade Kits for VDS Servers”](#) section on page 2-13.

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

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**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 password *rootroot*.



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

**Step 3** To copy the `cdstv-3.5-b169-x86_64-os-kit.sh` OS upgrade kit to the CDE, 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 `cdstv-3.5-b169-x86_64-os-kit.sh` 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/cdstv-3.5-b169-x86_64-os-kit.sh /root
```

- Step 5** Verify the MD5 checksum value.

```
# md5sum /root/cdstv-3.5-b169-x86_64-os-kit.sh
```

The value provided should be compared with the value shown on the Cisco software download website. If they do not match, remove the file and download it again.

- Step 6** Change permissions assigned to the upgrade kit to allow the file to be executed.

```
# chmod+x cdstv-3.5-b169-x86_64-os-kit.sh
```

- Step 7** Run the self-extracting file to extract the contents.

```
# cd cds_remote_upgrade
# cd /root
```

There should be no errors during the extraction of the files in the kit. After extracting the kit, verify that there are no errors before proceeding. If an error message is displayed or “`cdstv-os-5.1-x86_64.iso: OK`” is not displayed as the last line, an error may have occurred when downloading the kit. Download and extract the kit again. See the [“Upgrade Kit Content” section on page 2-14](#) for information on the content of the kit.

- Step 8** Change directory to the `cds_remote_upgrade` directory and use the `cds_remote_iso_install` script with the `--upgrade` option, and `vnc-listener` suboption if being used.

```
# cd cds_remote_upgrade
# ./cds_remote_iso_install --upgrade
```

The `cds_remote_iso_install` script performs some checks, and prompts you for information about the remote server where a backup should be stored. These checks and prompts are for the CDS servers that have been in service. If this is the first time this CDE is being configured, you can press **Enter** to continue. To see an example of the script output, see the [“Manually Upgrading a VDS-TV Server to Release 3.5” section on page 3-5](#).




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**Caution**

If a backup is not completed, then all information is lost for future downgrades.

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- Step 9** Use the **scp** command to copy the `CDS-TV-3.5.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 172.22.97.108:/CDSdownloads/CDS-TV-3.5.iso /root
```

- Step 10** Run the `cdsinstall` script to upgrade the ISO image to Release 3.5. 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 the `cv-account-add-homeid0` script as user `isa` in the `/home/isa` directory on the Vault (or ISV).

---

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

```
# cd /root
# ./cdsinstall CDS-TV-3.5.iso

Select Deployment Type (ctrl-c to quit):
  1) ISA
  2) RTSP/FSI
  3) PEG/BARKER
2
RTSP Selected
Mounting /CDS-TV.iso at /mnt/cdrom
Calling inst.sh for common files
Killing running processes: statsd

Starting cdsupgrade.sh
  WARNING: No existing version found on this server. Cannot backup existing files
Un-taring common-base.tgz
Fixing modprobe.conf
Loading File List
...done

Processing File List
...done

Moving modprobe.conf into place
...done

Installing kernel rpm
Installing cserver production rpm
Disabled various startup scripts in /etc/init.d
Installing busybox
warning: /home/packages/busybox-1.2.0-4.el5.i386.rpm: Header V3 DSA signature: NOKEY, key
ID 37017186
Installing kdump
warning: /home/packages/kexec-tools-1.101-194.4.el5.x86_64.rpm: Header V3 DSA signature:
NOKEY, key ID 37017186

Configuring kdump...

Starting kdump service...

No kdump initial ramdisk found.[WARNING]
Rebuilding /boot/initrd-2.6.18-53.el5kdump.img
kernel-debuginfo-2.6.18-53.el5 is not installed. You need this to use makedumpfile!
please install it and restart the kdump service
Failed to run mkdumprd
Installing logrotate
warning: /home/packages/logrotate-3.7.4-8.i386.rpm: Header V3 DSA signature: NOKEY, key ID
37017186
Installing CmdTool2

Set Write Policy to WriteBack on Adapter 0, VD 0 (target id: 0) success

Set Write Cache OK if bad BBU on Adapter 0, VD 0 (target id: 0) success

Set Disk Cache Policy to Enabled on Adapter 0, VD 0 (target id: 0) success

Starting fixperms.sh
  Loading File List
  Processing File List
Ending fixperms.sh
Calling inst.sh for rtsp
```

```

Killing running processes: statsd
Un-taring rtsp-base.tgz
Calling forprod.sh
Removing ISA-specific files
Installing RTSP-specific files (existing files backed up to .file)
mv: `/home/isa/bss/database/avsdb' and `/arroyo/db/avsdb' are the same file
mv: `/home/isa/bss/database/AVSDBUtil' and `/arroyo/db/AVSDBUtil' are the same file
mv: `/home/isa/bss/database/DATADIR' and `/arroyo/db/DATADIR' are the same file
mv: `/home/isa/bss/database/lost+found' and `/arroyo/db/lost+found' are the same file
RTSP installation complete

Starting fixperms.sh
  Loading File List
  Processing File List
Ending fixperms.sh
Unmounting /mnt/cdrom
cdsinstall completed. Please reboot the device.

```




---

**Note** The warning, “Failed to run,” and the move messages are known, benign errors ,and can be ignored.

---

#### Step 11 Reboot the CDE.

**reboot**

---



#### Warning

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**Add the line allocation unit size 0 in /arroyo/test/vault/setupfile before starting the CServer else the contents will be lost while downgrading from 3.5 to older releases and CServer will have to be started with -C option**

---

The CDE now has the 64-bit OS, and the Release 3.5 VDS-TV software installed. The next step is to initially configure the CDE, which requires you to run the **cdsconfig** script, and answer the prompts appropriately for your deployment. See the [“Preparing to Initially Configure the CDEs” section on page 1-9](#) for more information.

## 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” section on page 1-10](#) 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” section on page 1-10 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” section on page 1-14 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” section on page 1-10 for more information

For more information about the CDSM (or VVIM) GUI, see the “Getting Started” chapter in either the *Cisco VDS-TV ISA 3.2 Software Configuration Guide* or the *Cisco VDS-TV RTSP 3.2 Software Configuration Guide*.

**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 1-1 lists the CDSM GUI ID names and maps them to the CServer names in the setupfile and .arrayorc files.

**Table 1-1 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

To initially configure the CDE110, do the following:

- 
- Step 1** Log in to the CDE110 as *root*.

- Step 2** Run the **cdsconfig** 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**.

```
[root]# cdsconfig

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

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

Please ensure an IP address and netmask are configured for management interface eth0:

Select an option or an interface to re-configure/disable:
1. Configure another interface
2. Done
Choice: 1
    Backing up old scripts in /etc/sysconfig/network-scripts
    Writing new ifcfg-ethX scripts

Enter a hostname [cdsm162]: Enter
Enter the number of the eth interface that connects to the gateway [0]: Enter
Enter the default gateway IP address [172.22.97.129]: Enter
    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:
    Shutting down interface eth0:                [ OK ]
    Shutting down loopback interface:            [ OK ]
    Bringing up loopback interface:              [ OK ]
    Bringing up interface eth0:                  [ OK ]
    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. 2U-SCSI-1
    2. 3U-SCSI-1
    3. 3U-SCSI-10
    .....
    15. CDE100-2C-1
    16. CDE110-2C-1
    17. CDE205-1C1-C
    18. CDE220-2A-C
    .....
Choice: <valid_platform> Enter

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

Please select a role for this CDSM:
    1. CDS Manager (single domain)
    2. VVI Manager (split domain for Vault and Caching node)
    3. CDS Manager (split domain for Streamers)
Choice: 2
Please enter a group ID: 12345
Please enter a server ID [62]: 162
```

**Note**

If this is the Stream Manager, choose option **3**. The **cdsconfig** 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 **cdsconfig** 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 3.5 Software Configuration Guide* or the *Cisco VDS-TV RTSP 3.5 Software Configuration Guide*.

```
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]: y
```

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

**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 and the VVIM (option **vvimgw**, when listed) as replication group members.

```
Select a role for the new replication group member:
```

1. ssv
2. vault
3. cache
4. cdsmgw
5. controller

```
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
```

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

```
Database is running.
[output omitted]
```

```

Do you want to enable Exporter? (yes/no) [y]: n
Do you want to enable CDSM Redundancy? (yes/no) [y]: y
CDSM Virtual IP [172.22.98.86]:
Subnet Mask [255.255.254.0]:
Writing rc.local
CDSM configuration finished
cdsconfig finished, please use CDSM to complete configuration

```

- Step 3** When the `cdsconfig` script completes, edit the `rc.local` file and uncomment all the command lines. The `su - isa -c "cd /home/isa/RTScheduler/Exporter..."` command is used only when the MediaX feature needs to send notifications to a catalog server or similar type of server. Following is an example with all the lines uncommented:

```

# vi /etc/rc.local

#!/bin/sh
#
# This script will be executed *after* all the other init scripts.
# You can put your own initialization stuff in here if you don't
# want to do the full Sys V style init stuff.

touch /var/lock/subsys/local

# Lines below this one modified by cdsflavconfig (ISA):

su - isa -c "cd /home/isa/IntegrationTest"

sleep 30

/arroyo/www/bin/apachectl start

sleep 30

#su - isa -c "cd /home/isa/RTScheduler/Exporter; ./ExporterServer >&
/home/isa/RTScheduler/Exporter/ExporterServer.log&"

/home/stats/statsd -i 172.11.99.100 -s 255.255.255.0 -d eth0

sleep 30

```

- Step 4** Reboot the CDSM.

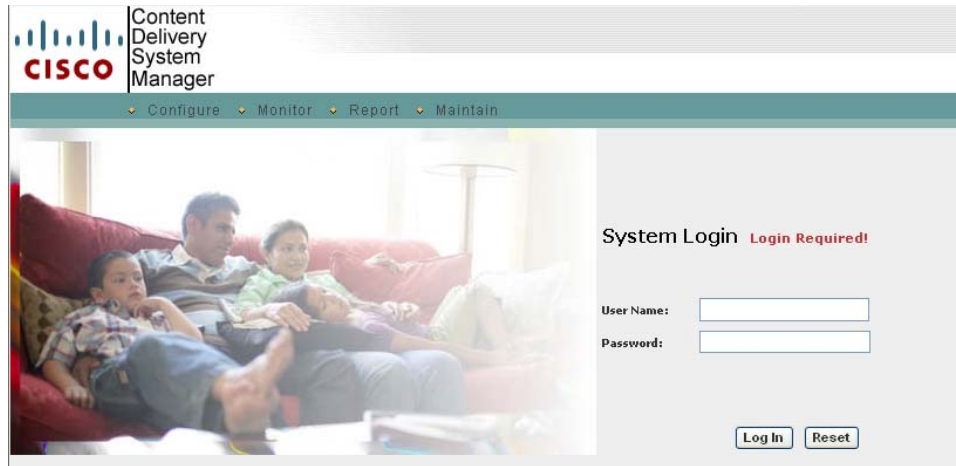
```
# reboot
```

- 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 1-1](#)).

Figure 1-1 CDSM Login Page



- Step 6** Log in to the VDS manager GUI. Enter *arroyo* 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 **3.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 3.5 ISA Software Configuration Guide*.
  - For information about an RTSP deployment, see the “Getting Started” chapter in the *Cisco VDS-TV 3.5 RTSP Software Configuration Guide*.

## Initially Configuring the CDE220, CDE250, CDE420 and CDE460

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 `cdsconfig` 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**.

```
[root]# cdsconfig
```

ATTENTION!!!

If a new image is installed on this server, a reboot is required before running `cdsconfig`. If a reboot is already performed, please continue.

Otherwise, please exit and execute `cdsconfig` after rebooting the server

```
Do you want to continue ? (yes/no) [y]: y
Enter management interface [eth0]: Enter

Please ensure an IP address and netmask are configured for management interface eth0:

Select an option or an interface to re-configure/disable:
1. Configure another interface
2. Done
Choice: 1

Do you want to disable interface eth0? (yes/no) [y]: n
Enter the IP address for eth0 [172.22.99.238]: Enter
Enter the netmask for eth0 [255.255.254.0]: Enter
Enter the broadcast address for eth0[172.22.99.255]: Enter

Select an option or an interface to re-configure/disable:
  1. eth0      ip:172.22.99.238      mask:255.255.254.0      bcast:172.22.99.255
  2. Configure another interface
  3. Done
Choice [3]: 3
  Backing up old scripts in /etc/sysconfig/network-scripts
  Writing new ifcfg-ethX scripts

Enter a hostname [cdsm162]: Enter
Enter the number of the eth interface that connects to the gateway [0]: Enter
Enter the default gateway IP address [172.22.97.129]: Enter
  Backing up /etc/sysconfig/network
  Writing new /etc/sysconfig/network
  Backing up /etc/hosts
  Writing new /etc/hosts
  Shutting down interface eth0: [ OK ]
  Shutting down loopback interface: [ OK ]
  PCI: Enabling device 0000:0e:00.0 (0000 -> 0003)
  PCI: Enabling device 0000:0e:00.1 (0000 -> 0003)
  Restarting network services, this may take a minute:
  Shutting down loopback interface: [ OK ]
  Bringing up loopback interface: [ OK ]
  Bringing up interface eth0: [ OK ]
  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. 2U-SCSI-1
  2. 3U-SCSI-1
  3. 3U-SCSI-10
  .....
 15. CDE100-2C-1
 16. CDE110-2C-1
 17. CDE205-1C1-C
 18. CDE220-2A-C
  .....
Choice <valid_platform>: Enter

Please select a device role:
  1. ssv
  2. vault
  3. streamer
  4. cache
  5. controller

Choice: device_role
Please enter a group ID: 12345
Please enter a server ID [62]: 162
```

**Note**

If the device role selected is a option **3** (Streamer), the **cdsconfig** 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 3.5 Software Configuration Guide* or the *Cisco VDS-TV RTSP 3.5 Software Configuration Guide*.

**Note**

If the device role is a Streamer, you have the option to enter the Stream Control interface using the **cdsconfig** 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]: y
```

```
There are currently no replication group members.
```

```
Do you want to add another replication group member? (yes/no) [y]: 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 **cdsconfig** 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]# su - isa
[isa]# exit
[root]# /home/stats/svrinit_15 -h <hostname> -i <ip address> -s <mask-ip address> -g <gateway>

```

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

```

[root]# su - isa
[isa]# arroyo start avbdb
[isa]# exit
[root]# /home/stats/svrinit_15 -h <hostname> -i <ip address> -s <mask-ip address> -g <gateway>

```

**Note**

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

```

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

```

```

Writing rc.local
ISA ecosystem configuration finished
cdsconfig finished, please use CDSM to complete configuration
[root@v238 ~]#

```

**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 1-2](#)).

**Figure 1-2** System Health Monitor Page

System Health <i>MONITOR</i>				
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	<span style="color: green;">■</span>	<span style="color: green;">■</span>	<span style="color: green;">■</span>	<span style="color: green;">■</span>
10.22.216.123	<span style="color: green;">■</span>	<span style="color: green;">■</span>	<span style="color: green;">■</span>	<span style="color: green;">■</span>
10.22.216.148	<span style="color: green;">■</span>	<span style="color: green;">■</span>	<span style="color: green;">■</span>	<span style="color: green;">■</span>

The VDS-TV installation is complete.

**Step 4** 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 3.5, run the `cdsconfig` script and answer **yes (Y)** at the following prompt:

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

## Fresh Installation of VDS-TV Release 3.5 via YUM

For fresh installation of VDS-TV software via YUM on a CDE device do the following

**Step 1** Install the VDS-TV software using `cdsinstall`. For more information on installing the VDS-TV software, see [Upgrading the New CDEs with Release 3.5 VDS-TV Software](#)

**Step 2** Configure the CDE device using `cdsconfig`. For more information on configuring the CDEs, see [Initial Configuration Sequence of the CDEs](#)

**Step 3** Upgrade the VDS-TV software using `yum groupupdate`. For more information on upgrading the VDS-TV software via YUM, see [Upgrading VDS-TV 3.5 Software via YUM](#)



**Note**

For supported upgrade paths, refer *Cisco VDS-TV 3.5 Release Notes*

## Installing Splunk Forwarder in VDS-TV Release 3.5

After successful installation of VDS-TV 3.5.x image, to install Splunk Forwarder in VDS-TV Release 3.5, do the following

- Step 1** Download the splunkforwarder-6.1.1-207789-linux-2.6-x86\_64.rpm from [Splunk](#) website.
- Step 2** Navigate to the directory where splunk forwarder RPM is placed and enter the following command to install the splunk forwarder
- ```
# rpm -ivh splunkforwarder-6.1.1-207789-linux-2.6-x86_64.rpm
```
- the following output is displayed on the console:
- ```
warning: splunkforwarder-6.1.1-207789-linux-2.6-x86_64.rpm: Header V3 DSA signature:
NOKEY, key ID 653fb112
Preparing...                               ##### [100%]
   1:splunkforwarder                         ##### [100%]
complete
```
- Step 3** On successful installation of splunk forwarder, verify if splunkforwarder directory is created. /opt is the default location in Linux is where splunk forwarder is installed
- Step 4** Enter the following commands to execute splunk forwarder license:
- ```
# cd /opt/splunkforwarder/bin
# ./splunk start or
# ./splunk start --accept-license
```

The following output is displayed on the console:

```
This appears to be your first time running this version of Splunk.
```

```
Splunk> Like an F-18, bro.
```

```
Checking prerequisites...
```

```
Checking mgmt port [8089]: open
```

```
Creating: /opt/splunkforwarder/var/lib/splunk
```

```
Creating: /opt/splunkforwarder/var/run/splunk
```

```
Creating: /opt/splunkforwarder/var/run/splunk/appserver/i18n
```

```
Creating: /opt/splunkforwarder/var/run/splunk/appserver/modules/static/css
```

```
Creating: /opt/splunkforwarder/var/run/splunk/upload
```

```
Creating: /opt/splunkforwarder/var/spool/splunk
```

```
Creating: /opt/splunkforwarder/var/spool/dirmoncache
```

```
Creating: /opt/splunkforwarder/var/lib/splunk/authDb
```

```
Creating: /opt/splunkforwarder/var/lib/splunk/hashDb
```

```
New certs have been generated in '/opt/splunkforwarder/etc/auth'.
```

```
Checking conf files for problems...
```

```
Done
```

```
All preliminary checks passed.
```

```
Starting splunk server daemon (splunkd)...
```

```
Declared role=universal_forwarder.
```

```
Done
```

```
[ OK ]
```

