



## CHAPTER 4

# Performing Software Installation and Initial Configuration for TV CDSM

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This chapter explains how to perform Content Delivery System Manager (CDSM) software installation and initial configuration of a new Cisco CDE110 server for a Cisco TV Content Delivery System. On a new Cisco CDE110 server, the Linux operating system is installed at the factory. The TV CDSM software image is on the server, but you must install the TV CDSM software.

For initial configuration for CDS Video Navigator, see the *Cisco CDS Video Navigator Application User Guide*.

For initial configuration for Visual Quality Experience, see the *Cisco CDA Visual Quality Experience Application User Guide*.

## Configuring Terminal Emulation Software

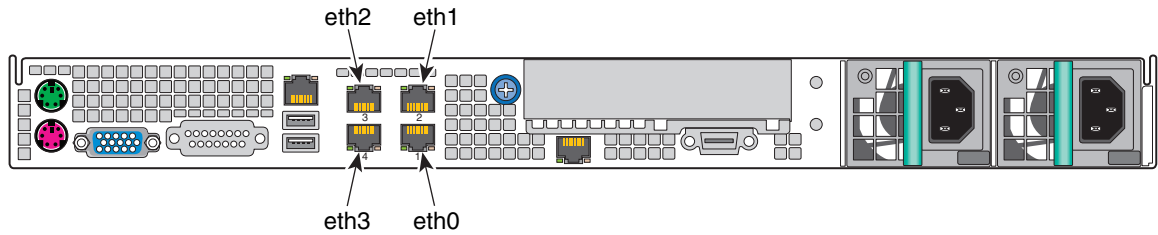
The RJ-45 serial ports on the Cisco CDE110 front and back panels can be used for administrative access to the CDE110 through a terminal server. Terminal emulation software must be configured as follows:

- Bits per second: 115200
- Data bits: 8
- Parity: none
- Stop bits: 1
- Hardware flow control: ON

## Performing Software Installation and Initial Configuration for TV CDSM

Before performing software installation and initial configuration, you must correctly install the CDE110 and connect cables to the CDE110 as described earlier in this guide.

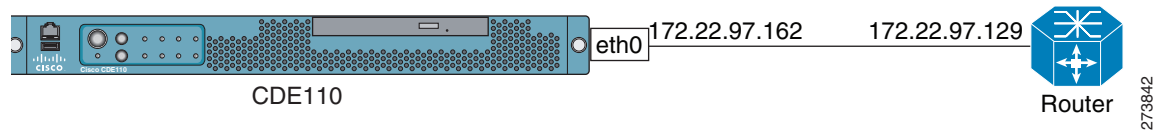
For software configuration, the RJ-45 NIC (Ethernet) ports on the Cisco CDE110 back panel are specified as eth0, eth1, eth2, and eth3 as shown in [Figure 4-1](#).

**Figure 4-1** NIC Port Numbering for Software Configuration**Note**

On the Cisco CDE110 back panel, the NIC ports labeled 1, 2, 3, and 4 are, respectively, for interfaces eth0, eth1, eth2, and eth3.

For the configuration examples in this section, [Figure 4-2](#) shows the IP addresses for the following interfaces:

- CDE110 interface eth0 (172.22.97.162) connecting to the network used for management and back-office communication
- Default gateway interface (172.22.97.129) on the router directly attached to eth0

**Figure 4-2** IP Addresses for TV CDSM Configuration Example

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

- IP address and subnet mask of the CDE110 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 CDE110 management (eth0) interface.
- Hostname for the CDE110—Name for the CDSM host.
- Group ID—A unique user-defined value. All servers (ssv [ISV], Vault, Streamer, controller) that are part of the same CDS system (managed by one CDSM) have the same group ID. This group ID should be unique across an enterprise.
- Server ID—A unique user-defined value. The ID must be unique for each CDS device.

- Replication group members—The CDS devices that will be 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 Content Delivery System.

**Note**

With the exception of the CDSM itself, all CDS devices (Integrated Streamer-Vaults, Vaults, and Streamers) that are members of the replication group should be configured at this time. The CDSM itself is *not configured* as a replication group member.

- In simple cases, because all CDS servers share information with each other, all 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 only talk the CDSM, Vaults, and Streamers *within a specific streamer group*, then the Streamers replication group includes only these devices.

To install the TV CDSM software and configure the CDE110 and TV CDSM software, follow these steps:

**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.

**Step 3** So that your password for root is not the default password, use the **passwd** command to change the password used.

**Step 4** To install the TV CDS software, issue the following command and, depending on your deployment type, choose 3) CDSM or 4) CDSM w/ ISA:

```
[root]# ./cdsinstall
```

The following prompt is displayed:

```
Continuing first-time installation after kickstart using image //CDS-TV.iso
Select Deployment Type (ctrl-c to quit):
  1) CDSM
1
CDSM Selected

... Output omitted ...

Unmounting /mnt/cdrom
inst.sh completed, removing .iso image

=====
Configure the system for initial installation
=====
```

**Step 5** To configure the Ethernet interface (eth0), which will be 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
- HWADDR=*hw\_address\_for\_eth0*
- IPADDR=*ip\_address\_for\_eth0*

- `NETMASK=netmask_for_eth0`

For example:

```
DEVICE=eth0
BOOTPROTO=static
ONBOOT=yes
HWADDR=00:0E:0D:C7:70:EB
IPADDR=172.22.97.162
NETMASK=255.255.255.128
```

**Step 6** Save and close the `ifcfg-eth0` file.

**Step 7** Use a text editor to modify the `/etc/hosts` file and add a line with the IP address for `eth0` and the associated hostname. For example:

```
172.22.97.162 cdsm162
```

**Step 8** Save and close the `hosts` file.

**Step 9** To configure the network characteristics, use a text editor to modify the file `/etc/sysconfig/network` and add the following lines:

- `NETWORKING=yes`
- `NETWORKING_IPV6=no`
- `HOSTNAME=name`
- `GATEWAY=gateway_ip_address`

For example:

```
NETWORKING=yes
NETWORKING_IPV6=no
HOSTNAME=cdsm162
GATEWAY=172.22.97.129
```

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.

**Step 10** Save and close the `network` file.

**Step 11** 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 12** To run the initial configuration script, issue the `cdsconfig` command. In the prompts displayed by the script, the default values in brackets are taken from the configuration that you just completed.

- If a default value is correct, press **Enter** to accept that value.
- If a default value is incorrect, enter the correct value and press **Enter**.

```
[root]# cdsconfig

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:172.22.97.162  mask:255.255.255.128  bcast:172.22.97.255
```

```

    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
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
  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
Choice: 16

Please select a device role:
  1. cdsm
Choice: 1
Please enter a group ID: 12345
Please enter a server ID [62]: 162
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 CDSM itself, all CDS devices (Integrated Streamer-Vaults, Vaults, and Streamers) that are members of the replication group should be configured at this time. The CDSM itself is *not configured* as a replication group member.

In the following example, the configuration of the CDS devices shows generalized input values.

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

```

1. ssv
2. vault
3. streamer
4. controller
Choice: device_role (1, 2, or 3)
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
Configuring CDSM
Database is running.
Writing rc.local
CDSM configuration finished
cdsconfig finished, please use CDSM to complete configuration

[root]#

```

**Step 13** View the contents of the hidden file `/home/isa/.arroyorc` and make sure that the file contains the following line:

```
Dbdsock      /tmp/isadb
```

If the preceding line is not in the file, use a text editor to add the line. Close and save the `.arroyorc` file.

**Step 14** To ensure that the AVS database (avbdb) and the Apache web server are started, issue the following commands and verify that a process ID exists for avbdb:

```

[root]# su - isa      //==== start avbdb
[isa]$ pgrep avbdb
28794                //==== verify avbdb process is running
[isa]$ exit
logout
[root]# /arroyo/www/bin/apachectl start //==== start apache server
httpd: Could not reliably determine the server's fully qualified domain name, using
172.22.97.162 for ServerName

[root]#

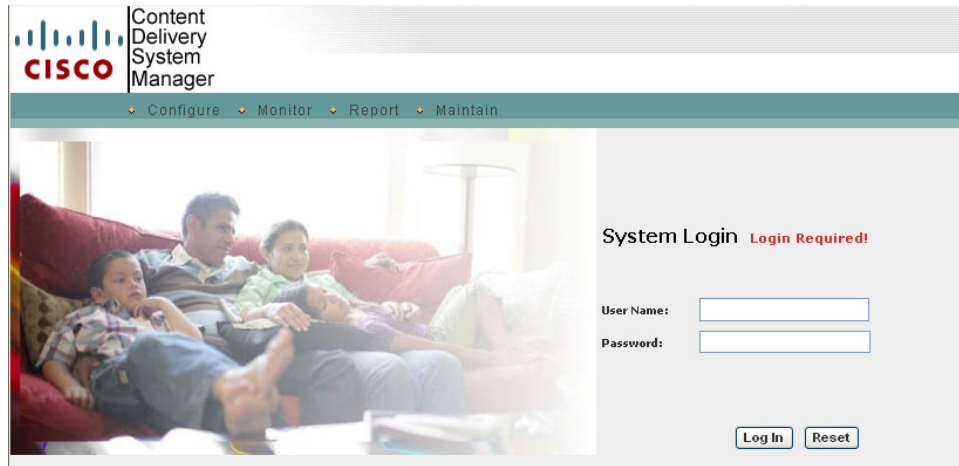
```

**Step 15** To verify that CDSM is operational, point your web browser to the Cisco CDE110 that hosts TV-CDSM by entering the IP address using the following format:

```
http://CDSM_ip_address
```

The CDSM Login page is displayed (see [Figure 4-3](#)).

Figure 4-3 CDSM Login Page



**Step 16** Enter **admin** as the username and **admin** as the password and press **Login**.

If you are unable to log in with the username admin and the password admin, do the following:

- a. Run the following command as root on the Cisco CDE110 that hosts TV-CDSM:

```
[root]# /home/stats/runonce
```

- b. Log in to CDSM with the username admin and the password admin.

The CDSM Configure page is displayed.

**Step 17** Use CDSM to complete the configuration. For information on the other configuration tasks, see one of the following:

- For an ISA deployment, see the *Cisco TV CDS 2.0 ISA Software Configuration Guide*.
- For an RTSP deployment, see the *Cisco TV CDS 2.0 RTSP Software Configuration Guide*.

