CISCO SYSTEMS

Cisco CTE 1400 and Design Studio

1 Install the Cisco CTE 1400

The Cisco Content Transformation Engine (CTE) 1400 handles requests for web pages from devices, such as Cisco IP phones, wireless phones, and personal digital assistants, and uses transformation instructions to convert HTML/XML pages into wireless-compatible formats. Transformation instructions are created in the companion PC-based application, Cisco CTE Design Studio.

Requirements

To set up the CTE, you need the following hardware in addition to what is delivered with the CTE:

- Power cable
- Null-modem cable (9-pin female connector at both ends)
- A computer capable of hosting terminal console communication through a serial port
- One or two network cables to connect the CTE to a LAN

Procedure

The following steps summarize the installation procedure described in the *Cisco CTE 1400 Hardware Installation Guide*.

Step 1 Install the CTE in a rack (if rack-mounted).

Step 2 Connect a null-modem cable to the 9-pin serial port on the back of the CTE and connect the cable to a second computer capable of running terminal emulation software.

Step 3 On the second computer, start a terminal emulation application. For example, start HyperTerminal.

Step 4 Set the serial connection to 9600 bits per second, 8 data bits, no parity, 1 stop bit; set the Backspace key to issue a Delete character.

Hardware flow control is optional.

Step 5 Power up the CTE.

After about five minutes, the CTE console appears on the serial console of the second computer.

You are now ready to configure the CTE with your network.

2 Configure the Cisco CTE 1400

Typical network configurations for a CTE are summarized below.

Network and Website Characteristics	Network Location of CTE
A server load balancer sits in front of the web servers. Most of the network traffic to be intercepted by a CTE uses website content supplied by servers directly connected to the server load balancer.	Behind the server load balancer. or In front of a web server that routes traffic to a CTE or to web servers based on browser detection.
A server load balancer sits in front of the web servers. Most of the network traffic to be intercepted by a CTE uses website content supplied by servers at other locations. For example, a results page served by a search engine portal contains links to content that resides outside of the domain of the search site.	Behind the server load balancer, with requests from a CTE directed through the router.
One web server. All traffic destined for the web server goes through the CTE.	In front of the web server.

Procedures

This section summarizes the procedures for configuring two CTEs with a server load balancer. For detailed information on this and other configurations, see the *Cisco CTE 1400 Configuration Note*.

Figure 1 on page 4 shows the network configuration for this procedure. The steps assume that you are adding the CTEs to a network that already has a server load balancer and web server farm.

Figure 1   Two CTEs Connected to a Server Load Balancer
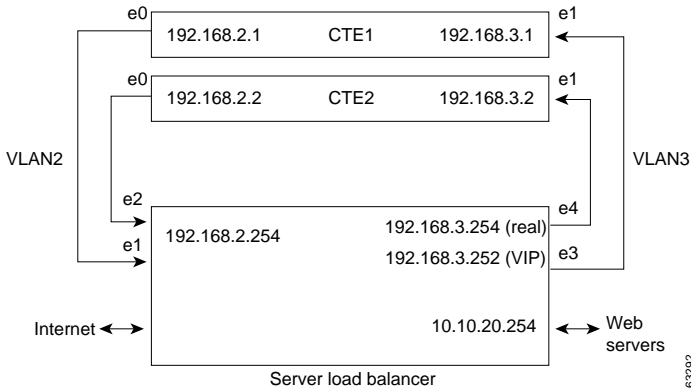
To configure a CTE with a server load balancer, perform these general steps:

To configure a CTE with a server load balancer, perform these general steps:

Step 1 Use network cables to connect the CTE NIC 1 (e0) port to a client-side port on the server load balancer. Connect the CTE NIC 2 (e1) port to a server-side port on the server load balancer.

Step 2 On the computer where the CTE console is running, type 3 (Set Networking Parameters for eth0), press Enter, and answer the prompts as follows:

```
IP address for eth0 [x.x.x.x] ([RETURN] to clear): ipaddress
NETMASK for eth0 [x.x.x.x] ([RETURN] to clear): mask
Press ENTER to display CTE Console Menu
```

Step 3 Type 4 (Set Networking Parameters for eth1) and press Enter.

Step 4 Answer the prompts as follows:

```
IP address for eth1 [x.x.x.x] ([RETURN] to clear): ipaddress      [must be on
                                                                 different subnet
                                                                     from eth0]

NETMASK for eth1 [x.x.x.x] ([RETURN] to clear): mask
Press ENTER to display CTE Console Menu
```

Step 5   Press 5 (Set Default Gateway) and press Enter.

Specify the gateway device you want to define (eth0 or eth1). Then define the gateway address for the appropriate Ethernet port.

```
GATEWAY Device (eth0 or eth1) ([RETURN] to select eth0):   [eth0 = e0/NIC 1;
                                                            eth1 = e1/NIC 2]
DEFAULT GATEWAY [x.x.x.x] ([RETURN] to clear): webserver_port_ipaddress
Press ENTER for menu
```

Step 6   Type 13 (Review and (optionally) commit console changes), press Enter, and review the settings.

Step 7   If the settings are correct, type yes when asked if you are sure, and press Enter.

Step 8   Type 17 (Restart/Shutdown CTE 1400 Device), and type R to restart the CTE so that the new changes can take effect.

To continue configuring the CTE, go to the CTE Administration Interface, and perform these steps:

Step 1   Make sure that:

   a.   The CTE console is running.

   b.   You have a Design Studio user identity. If you do not, you can create one using the **[12] Manage Users** command on the CTE console.

Step 2   From any browser, enter the following URL:

https://<*ip-address*>:<*configuration-port*>

Step 3   Press OK if a Security Alert dialog appears.

Step 4   Type your Design Studio username and password, and press OK.

Step 5   Under Protocol Settings, define the Masquerade Host by entering an IP address for Network Address Translation (NAT) in the Masquerade Host field. You can use either an IP address or a DNS server name for this value.

NAT makes all requests appear to originate from the same client, so that the CTE sends its response to the request back on the correct network connection. If the NAT IP address is not defined, the CTE sends responses out through the NIC where the gateway is identified.

Step 6   Define the Inline Host by entering an IP address for the web server in the Inline Host field.

Step 7   If you are using DNS, define one or more DNS servers by entering their IP addresses in the Primary Interface area of the window.

Step 8 Press the Save button at the bottom of the window to save your changes.

Next, you will configure the server load balancer. The commands in the following procedure are based on the sample configuration shown in Figure 1 on page 4.

To configure the server load balancer, perform these general steps:

Step 1 On a computer that is connected to the server load balancer, log into the command line interface for the server load balancer.

Step 2 Create links between the CTE ports and the server load balancer by adding VLAN2 and VLAN3, and defining the interfaces to the VLANs.

In the sample configuration, the e1 and e2 ports are the interfaces for VLAN2; e3 and e4 are the interfaces for VLAN3.

Step 3 Specify the IP addresses for the VLAN circuits.

In the sample configuration, the IP address for the VLAN2 circuit is 192.168.2.254. The IP address for the VLAN3 circuit is 192.168.3.254.

Step 4 Create services to identify the two CTEs.

In the sample configuration, the IP address for the CTE1 service is 192.168.2.1. The IP address for the CTE2 service is 192.168.2.2.

Step 5 Create an owner so that you can define content rules for the CTE1 and CTE2 services.

Step 6 Create a Layer 3 content rule for the services.

In the sample configuration, the content rule is configured with the virtual IP address 192.168.3.252 and is added to the CTE1 and CTE2 services.

Step 7 Check network connectivity.

3 Install Design Studio

Design Studio is the application used to create the rules that transform website content for delivery to wireless devices and Cisco IP phones.

Requirements

Design Studio requires the following:

- Windows 95, Windows 98/ME, Windows 2000, or Windows NT 4.0 with Service Pack 6.
- At least 10 MB of disk space.
- At least 128 MB of RAM; 256 MB is recommended.
- Internet Explorer version 5.0 or higher or Netscape version 4.01 or higher.
- Java 2 Runtime Environment (JRE), Standard Edition, version 1.2.2.
- VGA color monitor with a graphics card capable of showing 16-bit color or higher. A minimum screen resolution of 640 x 480. Recommended resolution is 1280 x 1024.
- Network connection to the Cisco CTE 1400.

Procedure

To install Design Studio, perform these steps:

Step 1 If JRE 1.2.2 is not already installed on your computer, install it.

Step 2 Insert the Design Studio CD-ROM into your CD-ROM drive.

If auto-start is enabled on your computer, the installer starts.

If auto-start is not enabled on your computer, double-click the drive icon for your CD-ROM, and then double-click Cisco CTE 1400 Design Studio.exe.

Step 3 Follow the instructions in the installer.

Step 4 Follow the instructions in Chapter 2 of the *Design Studio User Guide* to install and configure the wireless device simulators used to preview and test your work in Design Studio.

By default, Design Studio is installed in C:\Program Files\Cisco\CTE 1400\Design Studio\2.0.

4 Start Design Studio

See the *Design Studio User Guide* for detailed information on using Design Studio to create, preview, and publish transformation rules. That information is also available from the Design Studio Help menu.

Requirements

To start Design Studio, you need the following login information from the administrator who set up the Cisco CTE 1400:

- Your Design Studio username and password
- The IP address of the CTE 1400
- The server upload port number

Procedure

To start Design Studio, perform these steps:

Step 1   From the Windows Start menu, choose Program Files> Cisco > CTE 1400 > Design Studio.

Step 2   Enter your username and password.

Step 3   Enter the IP address of the CTE you want to use.

Step 4   Enter the server upload port number.

The default upload port number is 9001. You might need to change the port number if your firewall redirects ports. Contact your CTE administrator if you do not know which port to use.

Step 5   Click OK.

If you cannot connect to a Cisco CTE 1400, verify that your computer has a network connection to a running Cisco CTE 1400. Contact your CTE administrator for help.

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