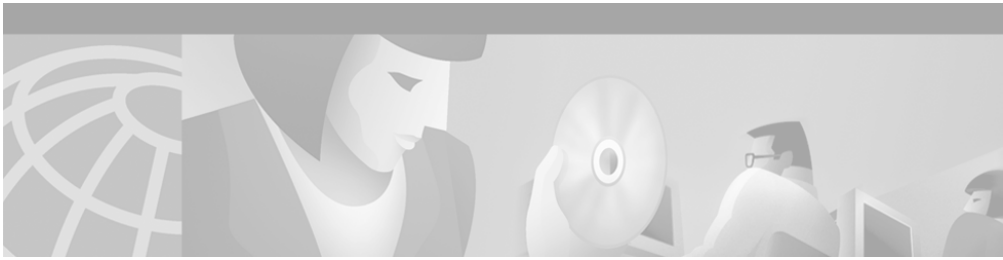

Configuring Key Software Features

This section describes how to configure the following software features:

- Configure the Login Banner—How to change the message-of-the-day display.
- Configure EtherChannel—How to configure EtherChannel on Ethernet ports.
- Configure DNS—How to configure the switch to use the Domain Name System (DNS).
- Configure CDP—How to enable the Cisco Discovery Protocol (CDP).

Configure the Login Banner

The login banner, or message of the day, is the text that appears onscreen when you open a Telnet session or console port connection to the switch. The login banner can be up to 255 characters long.

To configure the login banner, perform these steps in privileged mode:

	Task	Command
Step 1	Enter the message of the day (where *c* is a character that signifies the beginning and end of the message).	**set banner motd** *c* [*text*] *c*

	Task	Command
Step 2	If you are connected to the switch via the console port, verify the login banner by ending your session.	**exit**
Step 3	If you are connected to the switch via Telnet, exit and reconnect, or view the configuration file.	**show configuration**

This example shows how to configure the login banner and how to verify the banner configuration (when connected via the console port):

```
Console> (enable) set banner motd *Catalyst 6000
Software Release 5.5(1)
IP address 10.1.1.20
*
MOTD banner set
Console> (enable) exit


Cisco Systems Console


Catalyst 6000
Software Release 5.5(1)
IP address 10.1.1.20



Enter password:
```

Configure EtherChannel

EtherChannel provides parallel bandwidth of up to 1600 Mbps (Fast EtherChannel full duplex) or 16 Gbps (Gigabit EtherChannel full duplex) between a Catalyst 6000 family switch and another switch or host by grouping multiple Fast or Gigabit Ethernet interfaces into a single logical transmission path.

A Catalyst 6000 family switch supports a maximum of 128 EtherChannels. You can form an EtherChannel with up to eight compatibly configured Ethernet ports on any module in a Catalyst 6000 family switch. All ports in each EtherChannel must be the same speed: 10, 100, or 1000 Mbps.

The Port Aggregation Protocol (PAgP) negotiates EtherChannel port groups automatically. By default, Ethernet ports are set to **auto**. If a group of EtherChannel ports set to **auto** is connected to a group of ports set to **desirable** or **on**, PAgP automatically creates an EtherChannel connection between those ports. For complete information on the various EtherChannel modes, refer to the *Catalyst 6000 Family Software Configuration Guide*.

Configuring an EtherChannel creates an administrative group, designated by an integer between 1 and 1024, to which the EtherChannel belongs. When an administrative group is created, you can assign an administrative group number or let the next available administrative group number be assigned automatically. Forming a channel without specifying an administrative group number creates a new automatically numbered administrative group.

Note Before enabling EtherChannel, verify that all the ports in the channel are enabled, are assigned to the same VLAN, and have the same configuration on both ends of the channel.

To configure EtherChannel on a group of Ethernet ports, perform this task in privileged mode:

Task	Command
Create the EtherChannel on the desired ports.	**set port channel** {[*mod_num/port_num*] [*admin_group*]} {**on** | **off** | **auto** | **desirable**}

This example shows how to create a six-port EtherChannel in administrative group 2:

```
Console> (enable) set port channel 2/2-7 2 desirable
Ports 2/2-7 left admin_group 1.
Ports 2/2-7 joined admin_group 2.
admin_group  Ports
-----------  ------------------------------------------------
1            1/1-2
2            2/2-7
Ports 2/2-7 channel mode set to desirable.
Console> (enable)
```

Configure DNS

Domain Name System (DNS) allows you to use host names instead of IP addresses to refer to other devices on the network. To use DNS, you must have one or more name servers connected to the network.

To configure DNS, perform these steps in privileged mode:

	Task	Command
Step 1	Set the address of the DNS server. The first address entered is considered the primary server. If more than one server is entered, you can use the **primary** keyword to make a particular name server the primary server.	**set ip dns server** *ip_addr* [**primary**]
Step 2	Set the domain name.	**set ip dns domain** *name*
Step 3	Enable DNS.	**set ip dns enable**
Step 4	Verify the DNS configuration. Use the **noalias** keyword to show IP addresses instead of server names.	**show ip dns** [**noalias**]

This example shows how to configure the switch to use DNS and how to verify the DNS configuration:

```
Console> (enable) set ip dns server 10.1.1.100 primary
10.1.1.100 added to DNS server table as primary server.
Console> (enable) set ip dns server 10.1.1.122
10.1.1.122 added to DNS server table as backup server.
Console> (enable) set ip dns domain bigcorp.com
Default DNS domain name set to bigcorp.com
Console> (enable) set ip dns enable
DNS is enabled
Console> (enable) show ip dns
DNS is currently enabled.
The default DNS domain name is: bigcorp.com

DNS name server                          status
---------------------------------------  -------
10.1.1.100                               primary
10.1.1.122
Console> (enable)
```

Configure CDP

Cisco Discovery Protocol (CDP) is a media- and protocol-independent protocol that runs on all Cisco-manufactured equipment including routers, bridges, access servers, and switches. CDP allows a Catalyst 6000 family switch to learn the device type and other information about neighboring devices. CDP messages are sent every 60 seconds by default.

To configure CDP, perform these steps in privileged mode:

	Task	Command
Step 1	Enable CDP on the switch or on the desired ports.	**set cdp enable** [*mod_num/port_num*]
Step 2	(Optional) Set the message interval for CDP. The allowed range is 5–900 seconds.	**set cdp interval** *interval*

	Task	Command
Step 3	(Optional) Set the time that CDP frames are held by the device that receives them before being aged out. The allowed range is 10–255 seconds (default: 180 seconds).	**set cdp holdtime** *interval*
Step 4	Verify the CDP configuration.	**show cdp port** [*mod_num*[*/port_num*]]
Step 5	View information about CDP neighbors.	**show cdp neighbors** [*mod_num*[*/port_num*]] [**vlan** | **duplex** | **capabilities** | **detail**]

This example shows how to configure CDP on all ports, how to set the message interval to 100 seconds for all ports, how to verify the CDP configuration, and how to view information about the neighboring devices:

```
Console> (enable) set cdp enable
CDP enabled for all ports.
Console> (enable) set cdp interval 100
CDP message interval set to 100 seconds for all ports.
Console> (enable) show cdp port
Port      CDP Status  Message-Interval
--------  ----------  ----------------
 1/1      enabled     100
 1/2      enabled     100
 2/1      enabled     100
Console> (enable) show cdp neighbors
* - indicates vlan mismatch.
# - indicates duplex mismatch.

Port     Device-ID                      Port-ID                   Platform
-------- ------------------------------ ------------------------- ------------
3/5      002267619(cat1.cisco.com)      3/6 *                     WS-C5000
3/6      002267619(cat1.cisco.com)      3/5                       WS-C5000
4/1      002267619(cat1.cisco.com)      4/2                       WS-C5000
4/2      002267619(cat1.cisco.com)      4/1 #                     WS-C5000
4/20     069000057(cat2.cisco.com)      8/5                       WS-C5500
5/1      005763872(cat3.cisco.com)      2/1                       WS-C5000
5/1      066506245(cat4.cisco.com)      2/1                       WS-C5505
5/1      066508595(cat5.cisco.com)      5/12 *#                   WS-C5505
5/1      066508596(cat6.cisco.com)      5/1                       WS-C5505
Console> (enable)
```