



Setting Up a Cisco Device Provisioning Engine

A Cisco Device Provisioning Engine caches provisioning information and handles all configuration requests including downloading configuration files to devices. It is integrated with the Cisco Network Registrar DHCP server to control the assignment of IP addresses. Multiple DPEs can communicate with a single DHCP server. DPEs come with factory installed software that enables provisioning, but you must perform some initial configuration.

You need to set up at least one DPE for every 250,000 devices on your network. This chapter describes the set up procedure.

Order of Operations

Follow the order of operations described in [Table 5-1](#) to set up a DPE.

Table 5-1 Order of Operations

Item	Description
1.	Connect the DPE to the serial port of a computer.
2.	Configure and run a terminal emulation program on the computer.
3.	Log in to the DPE and change the login/enable password.
4.	Configure the DPE.
5.	Reload the DPE.

Connecting the DPE

Each DPE comes with a console cable. To begin setting up the DPE, complete the following steps:

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- Step 1** Attach one end of the cable to the console port of the DPE.
 - Step 2** Attach the other end of the cable to the serial port on the computer that you want to use to configure the DPE.
 - Step 3** Proceed to the [“Configuring and Running a Terminal Emulation Program”](#) section on page 5-2.
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Configuring and Running a Terminal Emulation Program

You must configure and then run a terminal emulation program on the computer that you have connected to the DPE.

To configure and run a terminal emulation program, complete the following steps at the console of the computer:

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- Step 1** Log in to the computer as *root*.
At the command line, enter the name of a terminal emulator. Choose a terminal emulation program that enables communication with the DPE through the serial port on the host computer.
 - Step 2** Configure the terminal emulator as follows:
 - Speed:9600
 - Data Bits:8
 - Parity:None
 - Stop Bits:1
 - Flow Control:HardwareWhen you have correctly configured the terminal emulation program, you are prompted to log in to the DPE.
 - Step 3** Proceed to the [“Logging In”](#) section on page 5-3.
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Logging In

To login to the DPE, complete the following steps:

- Step 1** At the password prompt, enter the login password. The default user and enable passwords are changeme. For example:

```
localhost BPR Device Provisioning Engine

User Access Verification

Password:
```



Note For security reasons, Cisco Systems strongly recommends that you change this password.

The system displays the following user mode prompt:

```
localhost>
```

- Step 2** Run the **enable** command to enter privileged mode. You must be working in privileged mode to configure the DPE. For example:

```
localhost> enable
```

The system prompts you for the enable password.

- Step 3** At the prompt, enter the enable password. The default is changeme.

The system displays the following privileged mode prompt:

```
localhost#
```

- Step 4** To change the login and enable password, as Cisco Systems recommends, do the following:

- a. At the localhost# prompt, enter the **password** command. For example:

```
localhost# password
```

The system prompts you for the new password.

- b. Enter the new password. The system prompts you to enter the new password again.
c. Re-enter the new password. The system displays a message that you successfully changed the password.

Remember that this is your new log in password. If you want to change the privileged mode password, use the **enable password** command.

- Step 5** Proceed to the [“Configuring a Device Provisioning Engine” section on page 5-4](#).

Configuring a Device Provisioning Engine

To configure a DPE, have the following information available:

- The static IP address that you want to assign to the DPE
- The IP address or fully qualified domain name of the RDU for the DPE
- The provisioning group or groups of which the DPE is part
- The IP address of the default gateway on your network, if the default gateway is implemented on your network
- The hostname of the DPE

To configure a DPE, complete the following steps:

- Step 1** Assign a static IP address and subnet mask to the first ethernet port on the DPE. For example, to assign IP address 192.168.0.10 and the subnet mask 255.255.255.0, enter the following commands:

```
localhost# interface ethernet 0 ip address 192.168.0.1 255.255.255.0
localhost# interface ethernet 0 ip enabled true
localhost# interface ethernet 0 provisioning enabled true
```



Note The values provided here are sample values only. Use values appropriate for your network.

- Step 2** Enter the IP address for the RDU or its domain name if you are implementing DNS. Also, identify the port on which the RDU is listening. The default listening port is 49187. For example:

```
localhost# dpe rdu-server 192.168.0.5 49187
```

- Step 3** Specify the provisioning group or groups of which the DPE is part. Where appropriate, specify the secondary provisioning group of which it is part. For example:

```
localhost# dpe provisioning-group primary group1
localhost# dpe provisioning-group secondary group2
```

- Step 4** If your network topology has a default gateway IP address, enter that information. For example:

```
localhost# ip default-gateway 192.168.0.128
```

- Step 5** To set up DNS for the DPE, enter the IP address of the DNS server. For example:

```
localhost# ip name-server 192.168.0.2
```



Note To enter more than one DNS server name, lists the servers with a space between each entry.

- Step 6** Provide the DNS hostname and domain name for the DPE. For example:

```
localhost# hostname DPE1
localhost# ip domain-name example.com
```

- Step 7** Configure the current time on the DPE. For example:

```
localhost# clock set 23:59:59 20 12 2001
```

- Step 8** Set the shared secret password to be the same as that on the RDU. The default shared secret password is **secret**. For example:

```
localhost# dpe shared-secret secret
```

- Step 9** For the configuration to take effect, you must reload the DPE. For example:

```
localhost# reload
```

After you reload the DPE, you can establish a Telnet session using the IP address of the DPE. Remember to use the new login and enable password that you created in the [“Logging In” section on page 5-3](#).
