



# DHCP Forwarder Application

Published: February 25, 2015

## Introduction

This chapter describes how to install the DHCP forwarder application as well as adding and removing resources.



### Note

This module is relevant only when the DHCP Lease Query Login Event Generator (LEG) or the DHCPv6 Lease Query LEG is installed on the Cisco Service Control Subscriber Manager server. See the [“DHCP Forwarder Application Enhancements for DHCPv6”](#) chapter.

The DHCP Forwarder application acts as a bridge between the DHCP Lease Query LEG and the DHCP servers. The LEG sends a request to the DHCP Forwarder, which then forwards the request to the appropriate DHCP server. The DHCP Forwarder passes the replies from the DHCP servers to the LEG. The LEG signals the forwarder which server should receive each request. Therefore, no special configuration is needed for this application.

The DHCP Forwarder runs with root privileges; because only those applications that have root privileges can open ports below 1024. DHCP uses ports 67 and 68. No other application must use these ports.

- [Installing the DHCP Forwarder, page 10-1](#)
- [Uninstalling the DHCP Forwarder, page 10-2](#)
- [DHCP Forwarder Veritas Cluster Server Agent, page 10-3](#)

## Installing the DHCP Forwarder



### Note

If you are performing a fresh install of the Cisco Service Control Subscriber Manager, manually install the DHCP forwarder by following these steps.

### Step 1

Run the DHCP Forwarder installation script from the SM DIST root directory.

Run the installation script as **root**.

```
#./install-forwarder.sh
```

The installation script extracts DHCP Forwarder distribution to the *sm-inst-dir* \sm\server\addons\dhcp-forwarder directory (*sm-inst-dir* refers to the Subscriber Manager installation directory). The script adds the initialization scripts to their location according to the operating system running on the machine.

**Step 2** (Optional) Confirm that the following ports are not being used by any other application:

- DHCP—67, 68
- DHCPv6—546, 547

**Step 3** Run the DHCP Forwarder application.

This application can be run using one of the following methods:

- Restart the machine. The initialization script will start the application automatically.
- Run the following command as **root**:

```
#!/etc/init.d/p3dhcpforwarder start
```



**Note**

It is not possible to run the **install-forwarder.sh** script if the `/etc/motd` file exists. The file should be moved *or* removed prior to running the script. Use the **ps -eaf | grep DHCP** command to view the running process of the DHCP Forwarder.

## Uninstalling the DHCP Forwarder

**Step 1** Start the DHCP Forwarder.

```
#!/etc/init.d/p3dhcpforwarder stop
```

**Step 2** Run the DHCP Forwarder installation script as **root** from the SM DIST root directory.

```
./uninstall-forwarder.sh
```

## Upgrading the DHCP Forwarder

If you upgrade the Cisco Service Control Subscriber Manager from any previous version to version 4.1.0, DHCP forwarder is also upgraded automatically, if DHCP forwarder is already installed. If DHCP forwarder is not already installed, install it manually. For more details on how to perform a fresh install of DHCP forwarder, see the [“Installing the DHCP Forwarder” section on page 10-1](#).

After the Cisco Service Control Subscriber Manager is upgraded, DHCP forwarder starts automatically if the DHCP Forwarder process is already running.

# DHCP Forwarder Veritas Cluster Server Agent

To verify that the DHCP Forwarder process is active at all times, a Veritas Cluster Server (VCS) Agent of type *OnOnlyProcess* is added as a resource.

- [Adding a DHCP Forwarder Resource, page 10-3](#)
- [Removing a DHCP Forwarder Resource, page 10-4](#)

## Adding a DHCP Forwarder Resource

**Step 1** Import the OnOnlyProcess agent's type from the `/opt/VRTSvcs/bin/OnOnlyProcess/OnOnlyProcess.cf` file.

**Step 2** Add an OnOnlyProcess resource called *DHCP\_Forwarder* to the service group.

**Step 3** Note the path and arguments of the DHCP Forwarder.

Run the following command via a Telnet session on each of the servers:

```
>ps -ea -o pid,s,args
```

Look for the line containing the text “DHCP\_FORWARDER”. This line contains the path and arguments of the DHCP Forwarder to be used in the next step.

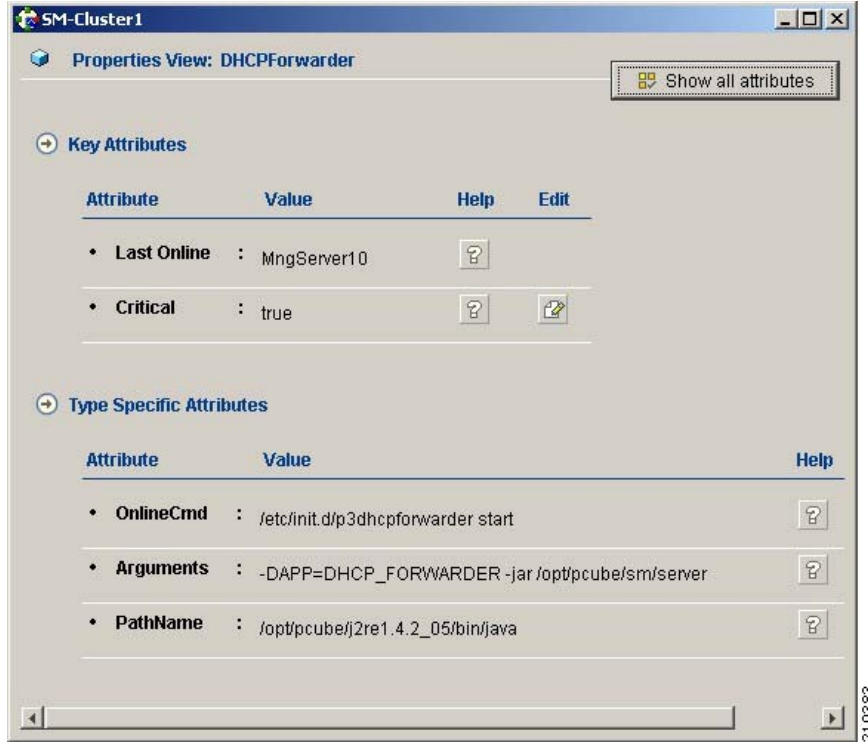
**Step 4** Define the **OnlineCmd**, **PathName**, and **Arguments** parameters.

Define the parameters as follows:

- **OnlineCmd**—Type the DHCP Forwarder start command:  
`/etc/init.d/p3dhcpforwarder start`
- **PathName**—Type the DHCP Forwarder process path (from the previous step). For example:  
`/opt/pcube/j2re1.4.2_05/bin/java`
- **Arguments**—Type the DHCP Forwarder process arguments (from the previous step). For example:  
`DAPP=DHCP_FORWARDER -jar /opt/pcube/sm/server/addons/dhcp-forwarder/dhcpforwarder.jar`

For further information about the parameters, see [Figure 10-1](#).

Figure 10-1 Adding a DHCP Forwarder Resource

**Note**

The arguments line might seem shorter than the actual full argument list. This is perfectly acceptable.

**Step 5** Check the Critical and Enable parameters.

**Step 6** Link the DHCP Forwarder resource with the Cisco Service Control Subscriber Manager.

## Removing a DHCP Forwarder Resource

**Step 1** Right-click on the DHCP Forwarder Resource icon and choose **Delete** from the drop-down menu (Figure 10-2).

Figure 10-2 Removing a DHCP Forwarder Resource

