

# Solving DHCP and TFTP Problems with Windows 2000 and CallManager IP Phones

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## **Introduction**

### **Prerequisites**

Requirements

Components Used

Conventions

### **Cisco IP Phone Cannot Identify IP Address**

Problem

Symptom/Error

Solution

### **Contact Failure Between the Cisco IP Phone and DHCP Server**

Problem

Symptom/Error

### **TFTPRequestNotFound Error in RTMT**

### **Related Information**

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## **Introduction**

This document addresses the common problems, symptoms and resolutions related to the Dynamic Host Configuration Protocol. (DHCP) server.

## **Prerequisites**

### **Requirements**

There are no specific requirements for this document.

### **Components Used**

This document is not restricted to specific software and hardware versions.

### **Conventions**

Refer to Cisco Technical Tips Conventions for more information on document conventions.

## **Cisco IP Phone Cannot Identify IP Address**

### **Problem**

The Cisco IP Phone cannot identify the IP address of the TFTP server.

### **Symptom/Error**

- The Cisco IP Phone displays this information:

- The Cisco IP Phone does not register with Cisco CallManager.
- When the IP phone configuration is displayed, the TFTP address field shows 0.0.0.0, or a wrong IP address. This can be done when you press \* # # # # # # # #.

## Solution

This issue can be addressed with this procedure.

1. Make sure these options are on the DHCP server:
  - ◆ Option 003: Default Gateway
  - ◆ Option 006: Domain Name System. (DNS) Servers
  - ◆ Option 015: Domain Name
  - ◆ Option 066: Boot Server Hostname (TFTP server) (Not Mandatory)
2. Define option 150 if the TFTP server does not have an entry in the DNS server.
3. Add a custom TFTP server. In order to do this, complete these steps:
  - a. Right-click the DHCP server and select **Set Predefined Options**.
  - b. Click **Add**.
  - c. Type **TFTP Server IP address** in the Name field.
  - d. Choose **IP address** in the data type list.
  - e. Type **150** in the Identifier box and click **OK**.
  - f. Select **Option 150** from the Option Name under the Value section, type the IP address of the TFTP Server in the DHCP Options Default Values window, and click **OK**.
4. Add Option 150 in Cisco Network Registrar.
  - a. Select the DHCP cluster.
  - b. Go to the Advanced tab and click on **Custom Options**.
  - c. Click **Add**.
  - d. Enter Option number **150** and the Option Data Type of IP address. Click **OK**.
  - e. Go to the Policies tab and select your policy.
  - f. Add the custom Option 150.
  - g. Enter the TFTP IP address under IP address array.
  - h. Click on **Always send to DHCP clients**.
  - i. Enter **Yes** to commit the changes to the database.

## Contact Failure Between the Cisco IP Phone and DHCP Server

### Problem

The Cisco IP Phone fails to contact the DHCP server.

### Symptom/Error

- The Cisco IP Phone displays this information:

- The Cisco IP Phone does not register with Cisco CallManager.
- The Status Code on the phone (press \*\*\*) returns a DHCP problem.

## TFTPRequestNotFound Error in RTMT

The TFTP server sends a request for all configuration files, phone loads, audio files, and so forth. Even when the phone boots up for the first time with the new TFTP server, it sends a **TFTPRequestNotFound** error message because it is in the process of creating the file for the first time.

The **TFTPRequestNotFound** error message always shows some failed requests for the IP phone that have registered for the first time, or for IP phones that are deleted, but have their CNF files in the TFTP server. You can solve this when you disable the caching of the startup and configuration files and then recreate them.

1. From the CallManager Administration page, choose **Service > Service Parameters**.
2. Select your TFTP server from the drop-down list, select **Cisco TFTP service**, click the **Advanced** tab and then set these parameters:

- ◆ Set Build CNF Files to **Build All**.
- ◆ Set Enable Caching of Constant and Bin Files at Startup to **False**.
- ◆ Set Enable Caching of Configuration Files to **False**.

Clusterwide Parameters(Parameters that apply to all servers)		
Parameter Name	Parameter Value	Suggested Value
Build CNF Files*	Build All	Build Selective
Enable Caching of Constant and Bin Files at Startup*	False	True
Enable Caching of Configuration Files*	False	True

3. Click on **Update** and restart the TFTP service.

**Note:** This recreates the configuration files and might take a long time if a large number of devices exist on the network.

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## Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
- [Technical Support – Cisco Systems](#)

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