

# Configuring Windows 2000 DHCP Server for Cisco CallManager

Document ID: 13992

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## Introduction

### Prerequisites

Requirements

Components Used

Conventions

### Configure the Windows 2000 DHCP Server

Create a New Scope in the DHCP Server

Add the TFTP Option to the Scope

### NetPro Discussion Forums – Featured Conversations

### Related Information

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## Introduction

This document describes how to configure a Dynamic Host Configuration Protocol (DHCP) Server on Windows 2000 to work with the Cisco IP Telephony solution, Cisco CallManager. Cisco CallManager devices boot up and request an IP address. They also need additional information, such as the default gateway and the TFTP Server IP Address (Option 150). This document provides a step-by-step procedure on how to configure all the necessary parameters for the Windows 2000 DHCP Server.

## Prerequisites

### Requirements

There are no specific prerequisites for this document.

### Components Used

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

### Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

## Configure the Windows 2000 DHCP Server

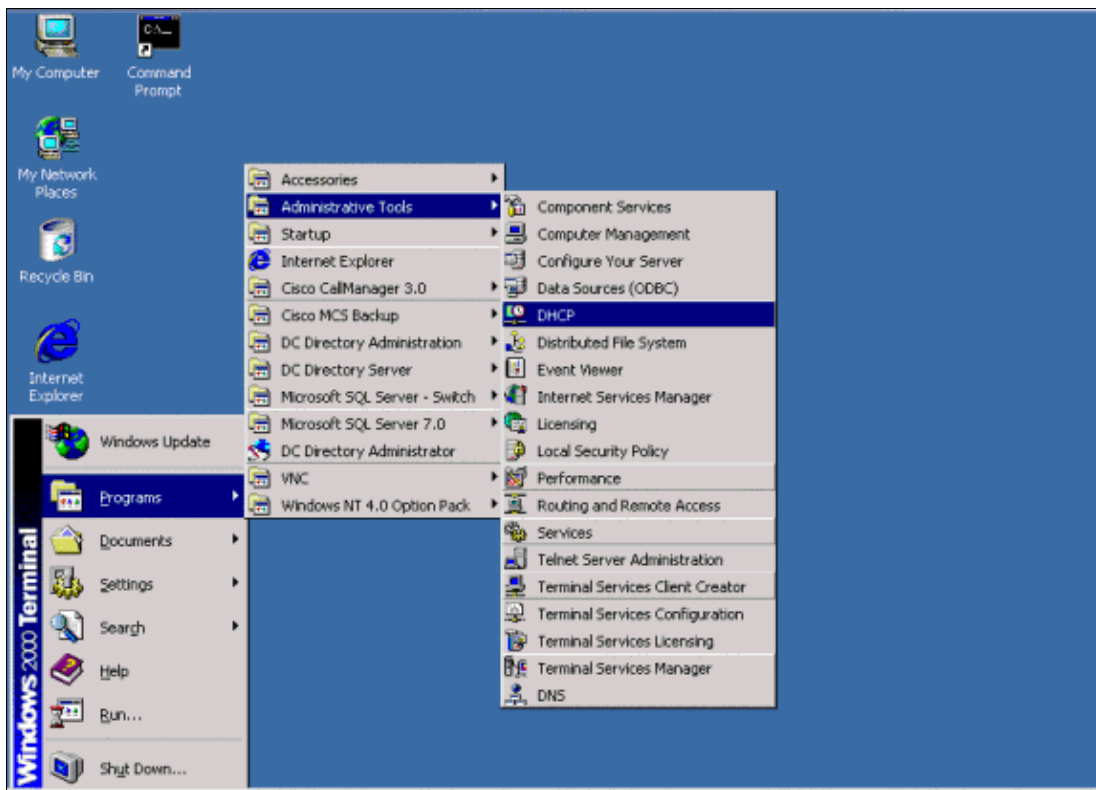
The configuration of the Windows 2000 DHCP Server for Cisco CallManager has two major tasks.

1. Create a new scope in the DHCP server.
2. Add a TFTP option to the scope.

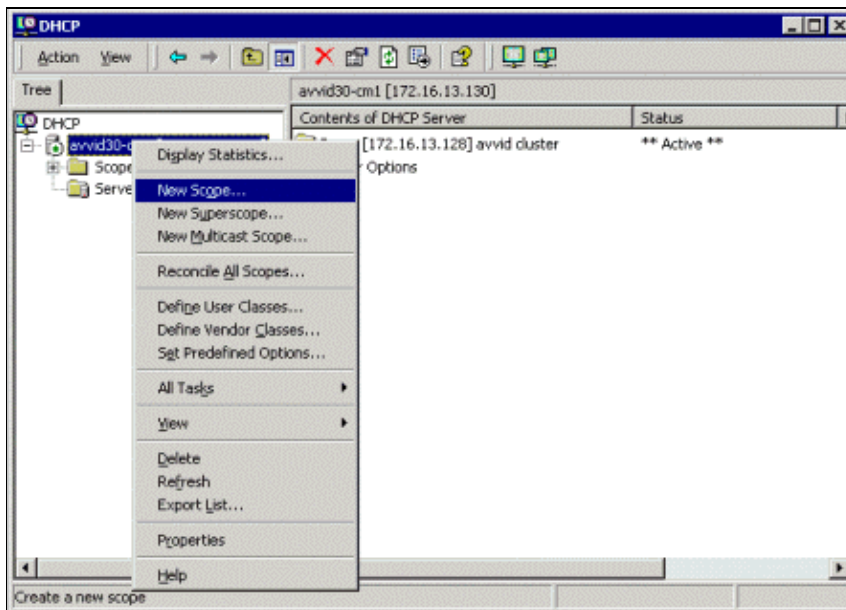
# Create a New Scope in the DHCP Server

Complete these steps in order to create a new DHCP scope.

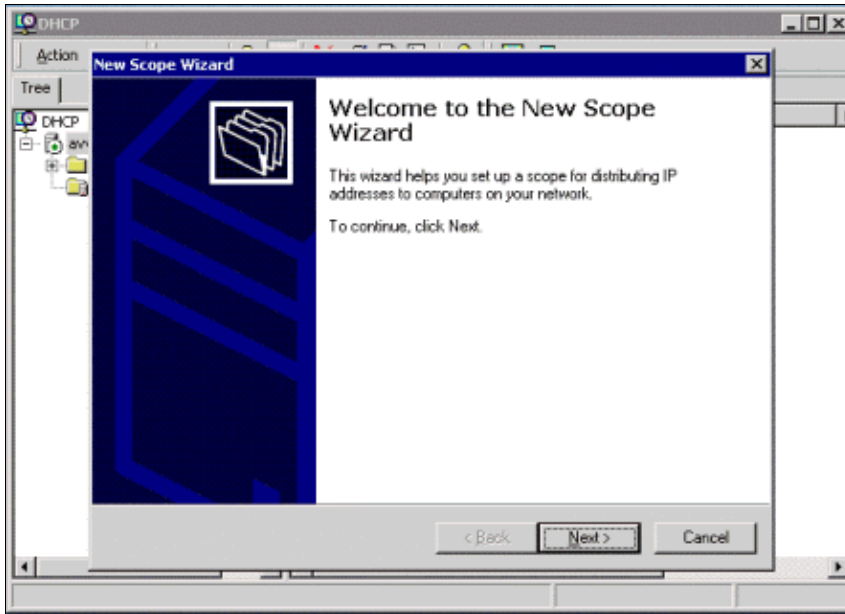
1. Select **Start > Programs > Administrative Tools > DHCP** in order to go to the DHCP Manager.



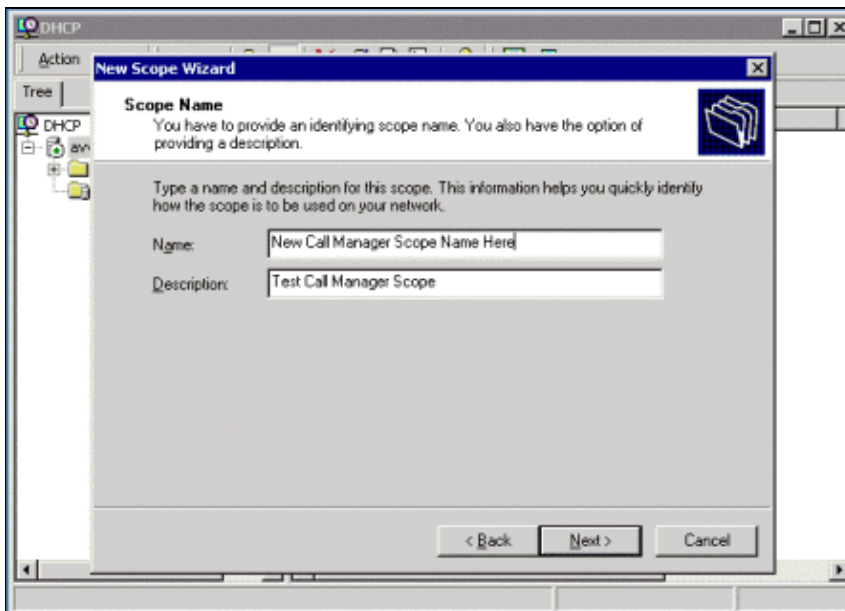
2. Right-click the DHCP Server and click **New Scope**.



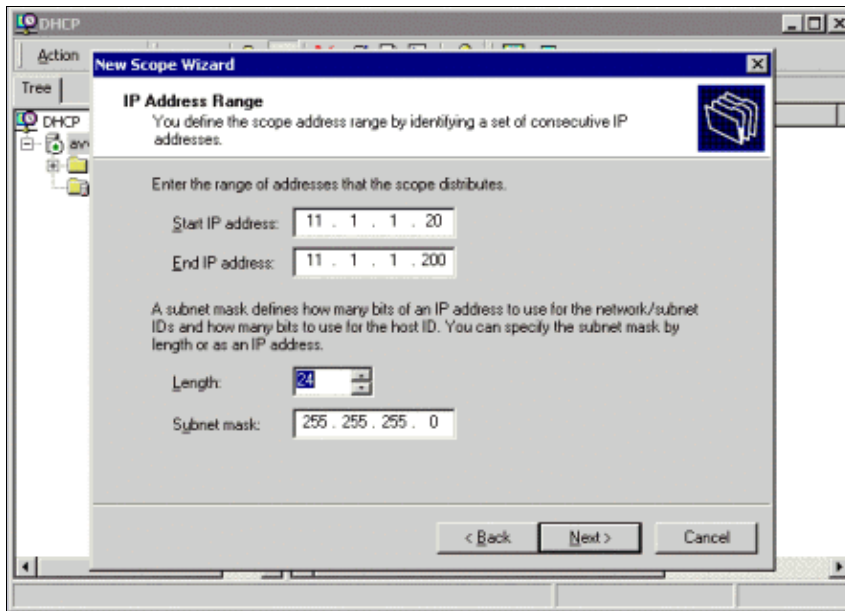
3. Follow the instructions in the New Scope Wizard.



4. Add a Name and a Description for your new scope and click **Next** in order to continue.

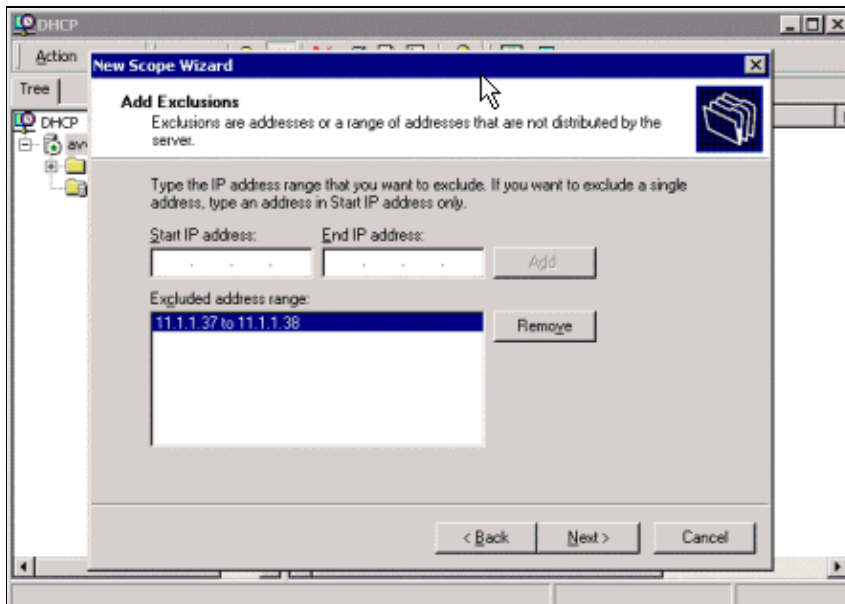


5. Add the IP Address Range which you want the DHCP Server to hand out IP Addresses in. Make sure to set the subnet mask correctly for what your network settings are.

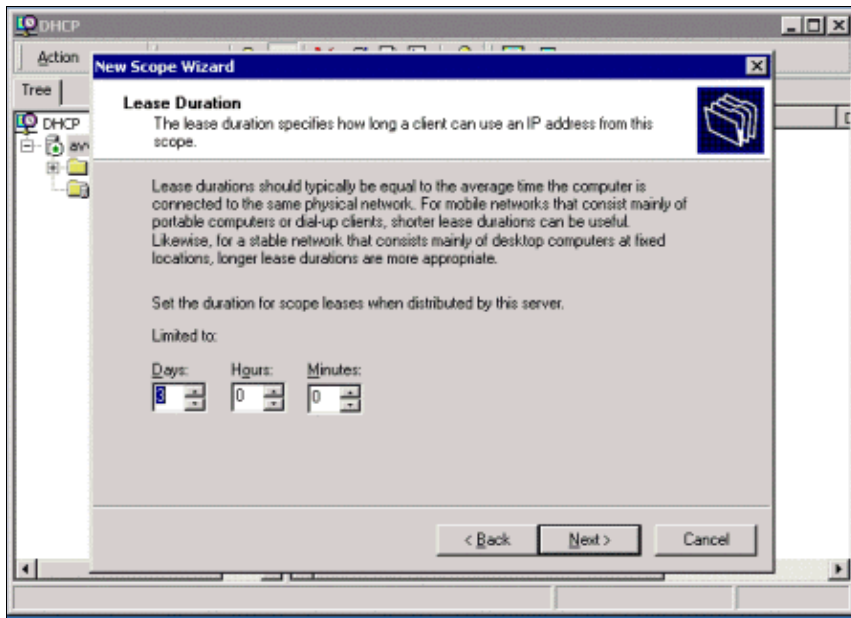


Click **Next** to continue.

**Note:** You may want to exclude IP Addresses within this range that have been previously assigned to other devices, so that the same addresses are not used twice.

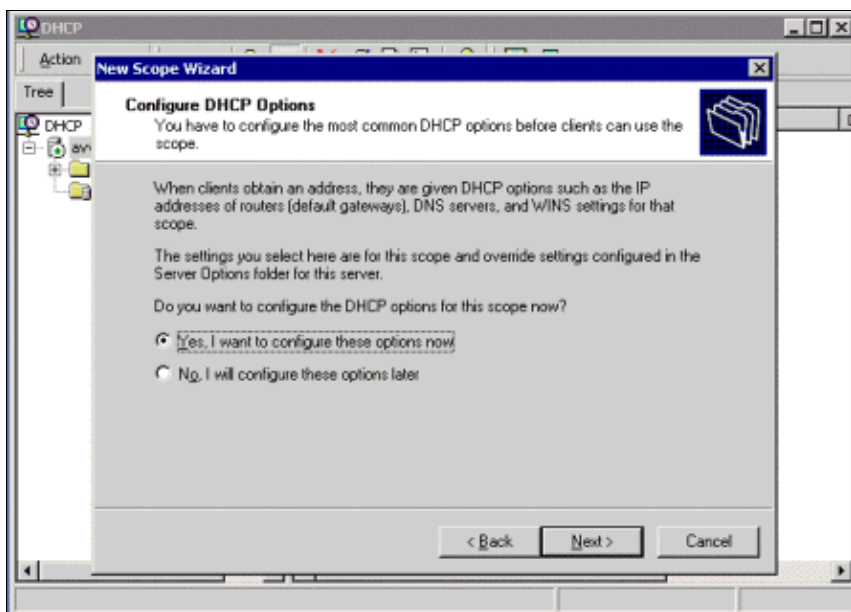


6. Set the **Lease Duration** to a value that makes sense for your network. This is how often the IP address of a device expires and it needs to be renewed by the device.



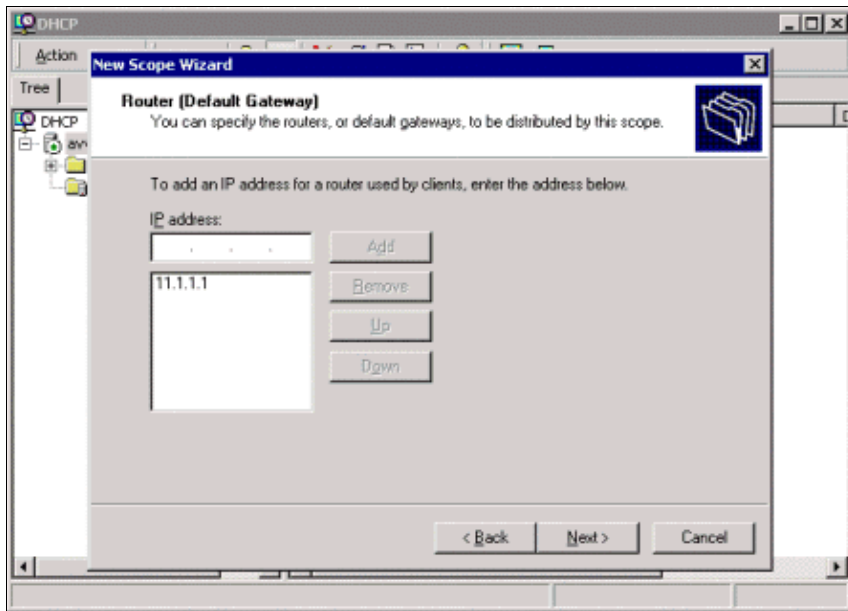
Click **Next** to continue.

7. You need to configure additional options for the devices to pick up when they get their IP Addresses from the DHCP Server. Select **Yes, I want to configure these options now** option.

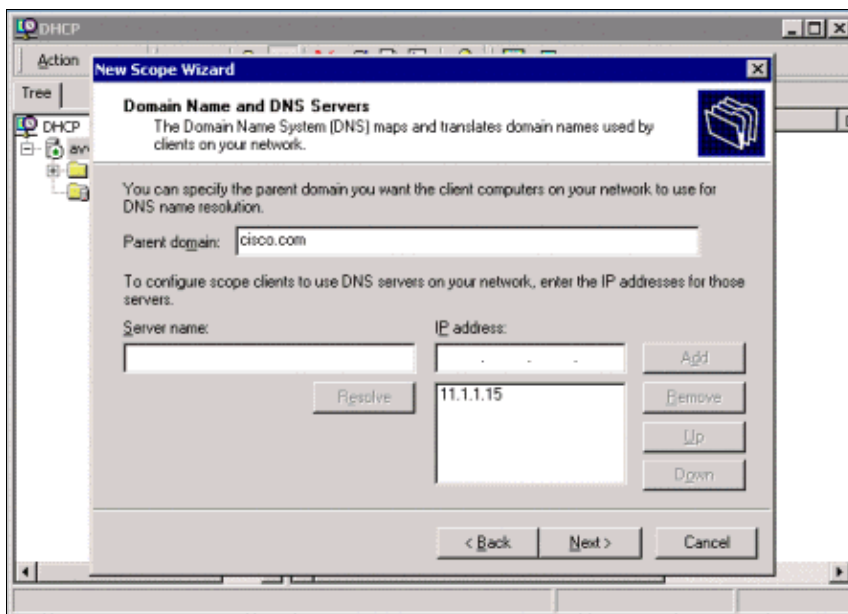


Click **Next** to continue.

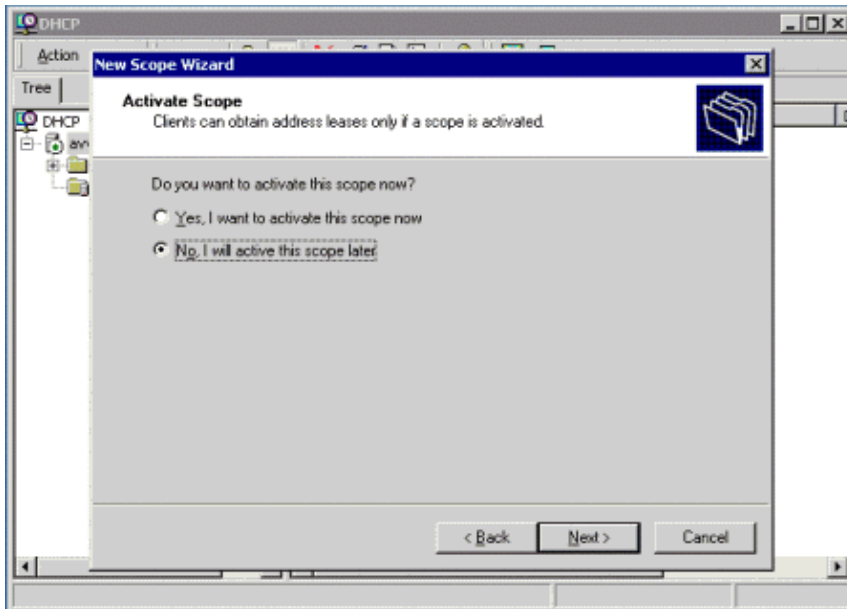
8. All devices need a Default Gateway configured. This is the router interface nearest to the devices, which has an interface on the same IP subnet as the devices. This is where the devices send IP packets if the receiving device is not on the same IP subnet as the sending device. Type the IP address of the Default Gateway and click **Add**.



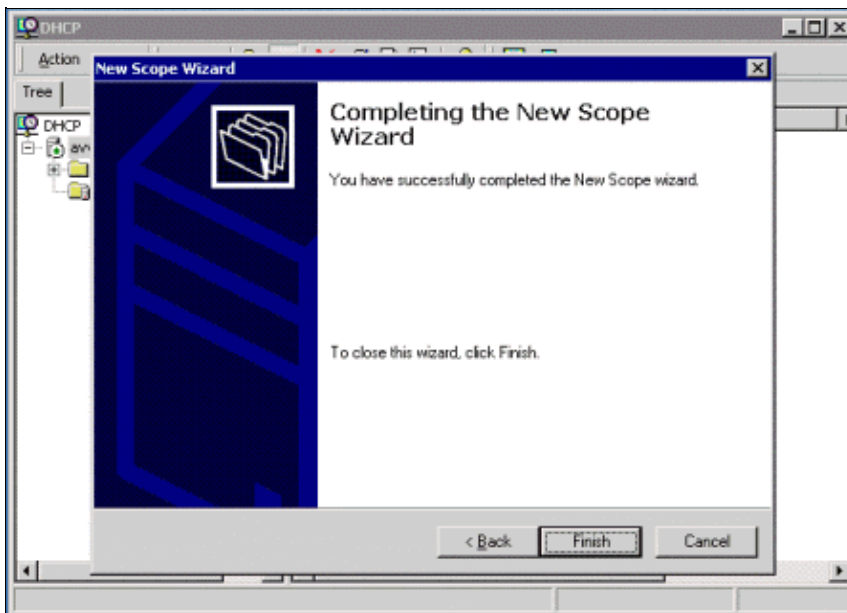
**Note:** If you intend to use the Domain Name System (DNS) in your network, you can configure the device to receive an IP address for the domain name and DNS servers.



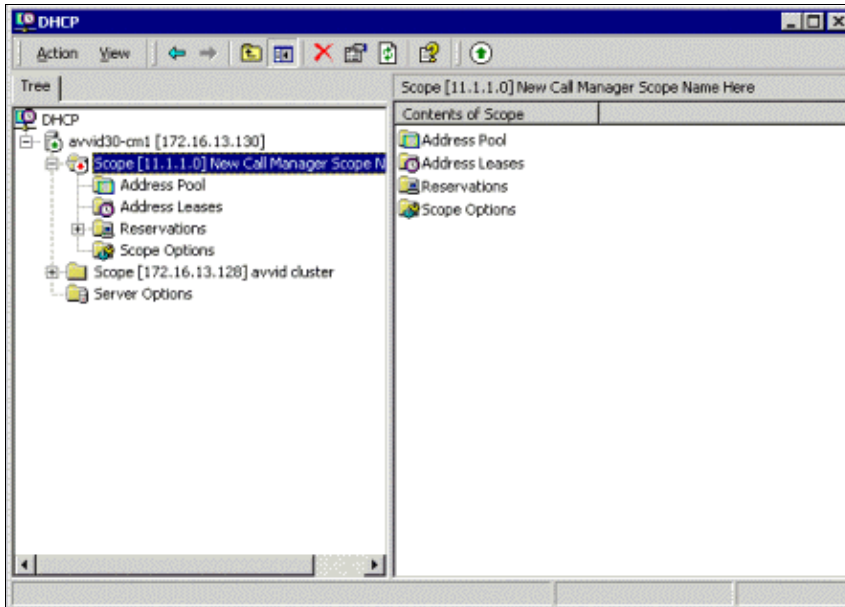
9. Skip the Windows Internet Naming Service (WINS) server configuration because Cisco CallManager devices do not use WINS (just click **Next**). Then Click **No, I will activate this scope later**.



10. Click **Finish**.



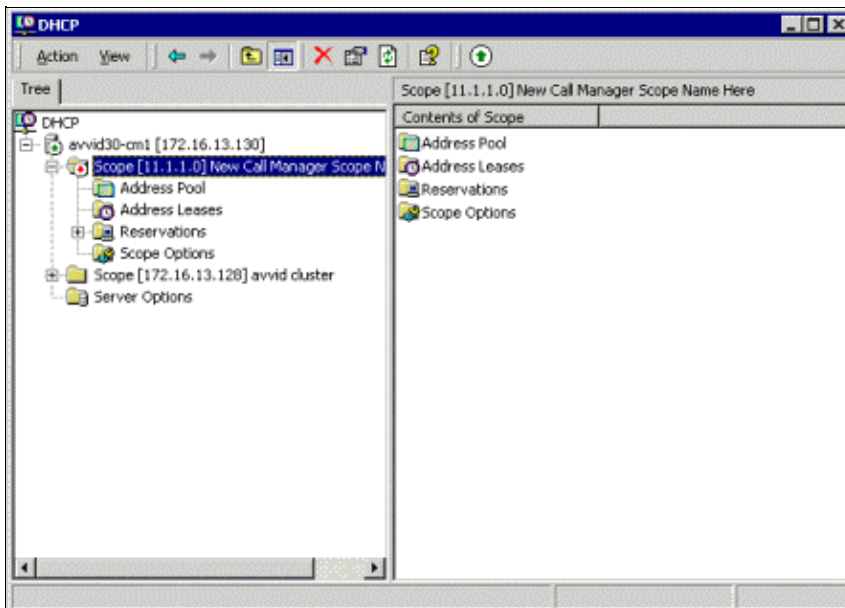
The new DHCP Scope is now created. However, it is not Active and does not hand out IP addresses yet.

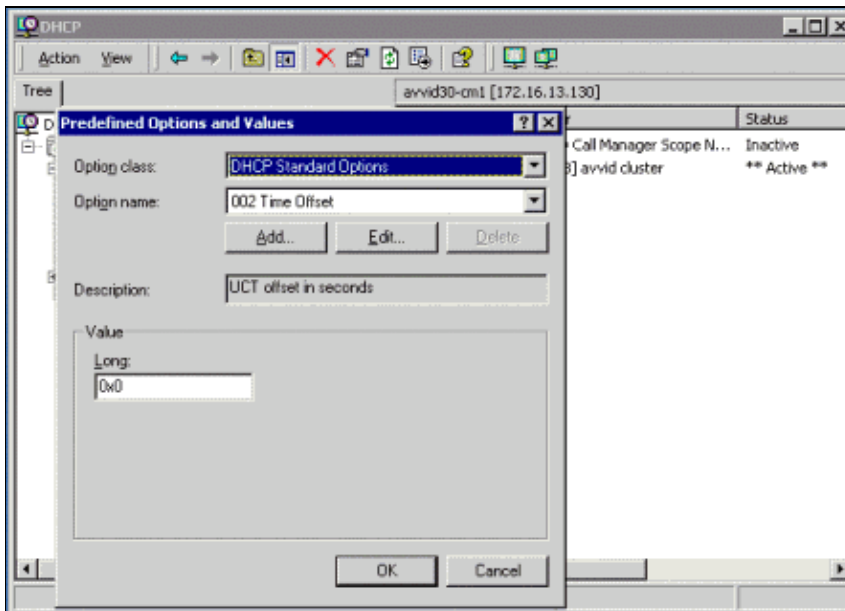


## Add the TFTP Option to the Scope

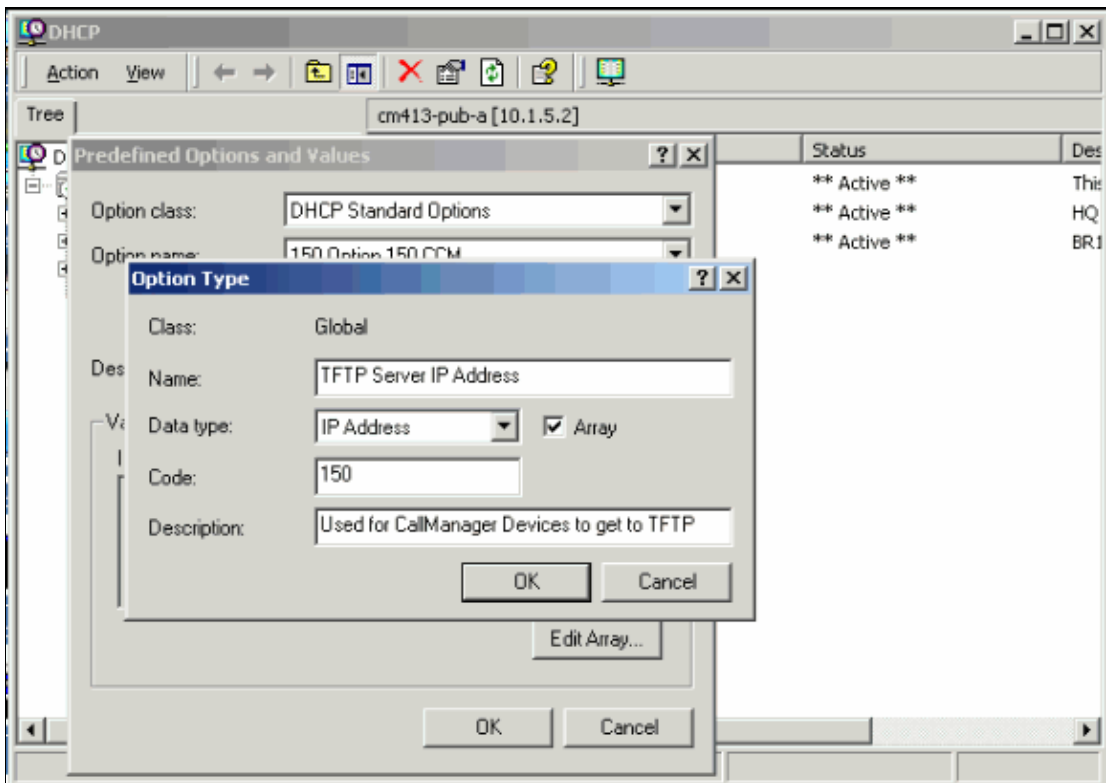
Cisco IP Phones expect the DHCP server to also provide the IP address of the TFTP server. By default, the TFTP option is not available in a newly defined DHCP scope. Complete these steps in order to add the TFTP option to the scope.

1. Right-click the server and select **Set Predefined Options**, then click **Add**.

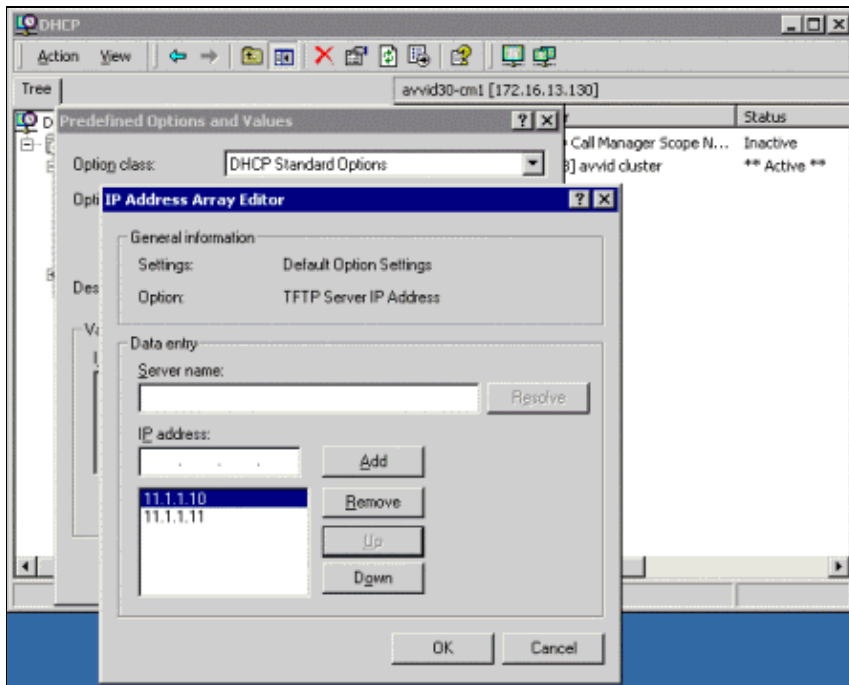




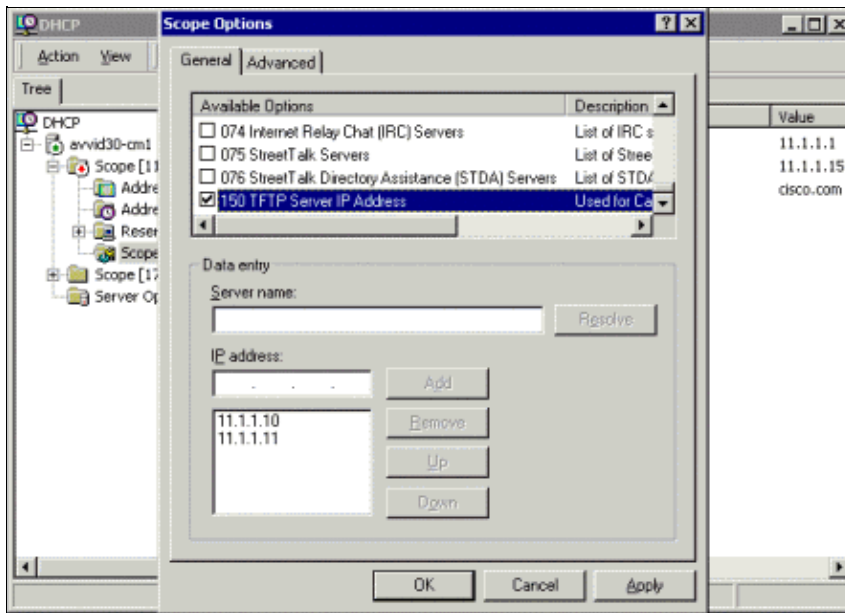
2. Enter the Name as **TFTP Server IP Address**, Data Type is **IP Address**, Code is **150**, and Description is **TFTP Server IP Address for CallManager Devices**.



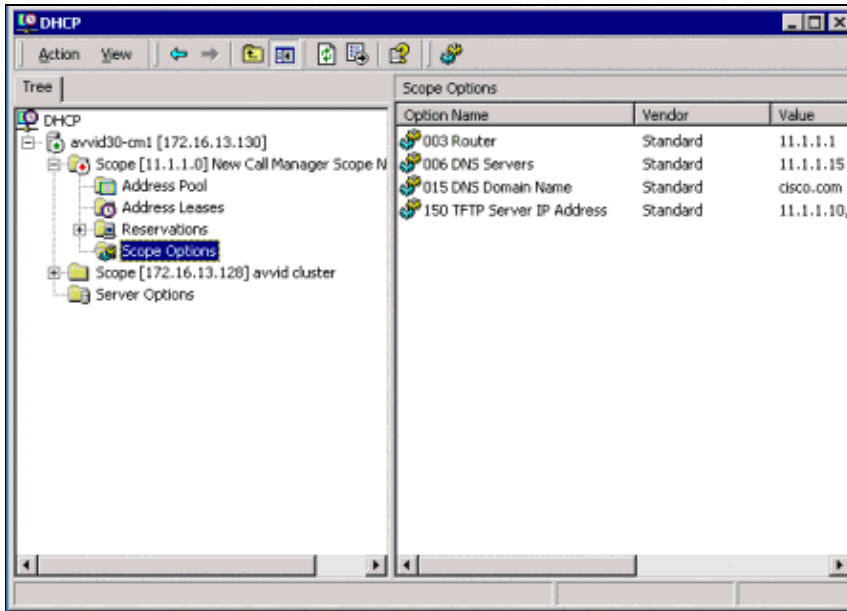
3. Click **OK** and then **Edit Array**. Enter the IP address(es) for TFTP server(s) that are normally housed on the Cisco CallManager systems.



- Click **OK** twice in order to complete the creation of Option 150. Under the new Cisco CallManager DHCP Scope you created is a field labeled "Scope Options". If you right-click **Scope Options** and select **Configure Options**, you can select Option 150 as an option to hand out to Devices.



- Click **Apply** and **OK** in order to see that the scope now has Option 150.



6. Right-click the **Scope** and select **Activate** in order to activate the Scope.

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Voice & Video: Unified Communications
Voice & Video: IP Phone Services for Developers
Voice & Video: General

## Related Information

- **Solving DHCP and TFTP Problems with Windows 2000 and CallManager IP Phones**
- **Voice Technology Support**
- **Voice and Unified Communications Product Support**
- **Recommended Reading: Troubleshooting Cisco IP Telephony**
- **Technical Support – Cisco Systems**

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