



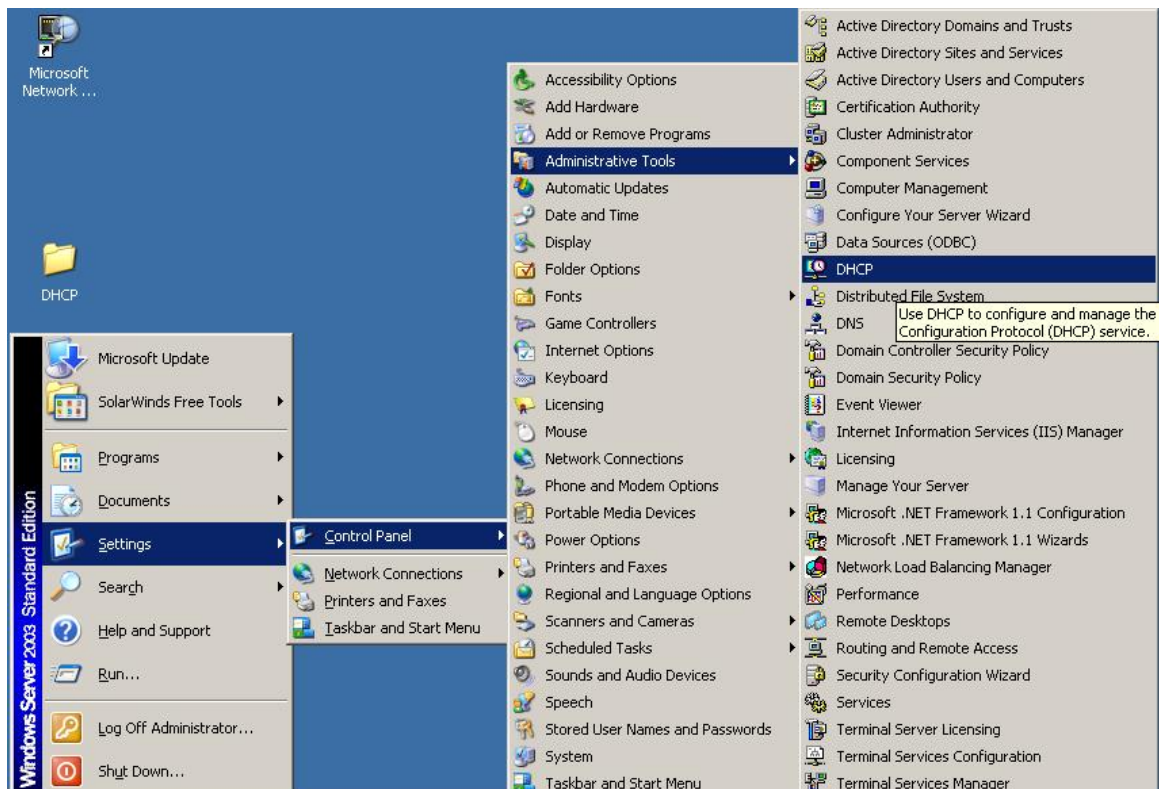
## How to set up Windows DHCP Server

Assist

How to configure Windows DHCP for Avaya IP telephones( *Compliments of Kyle L Holladay, Sr, R.I.P.*)

In this example we will configure Windows DHCP for Avaya IP telephones. In addition to your standard Option 003 Router you will also need a custom scope option in order for an Avaya IP phone to boot properly using DHCP. While I do reference the IP Office in this document the content is not specific to the IP Office. Options 176 and 242 are common to all Avaya IP telephones and this method would work equally well for phones connected back the an Avaya Aura or Avaya Communication Manager (aka ACM or CM)

1. Open the DHCP MMC under Control Panel>Administrative Tools>DHCP

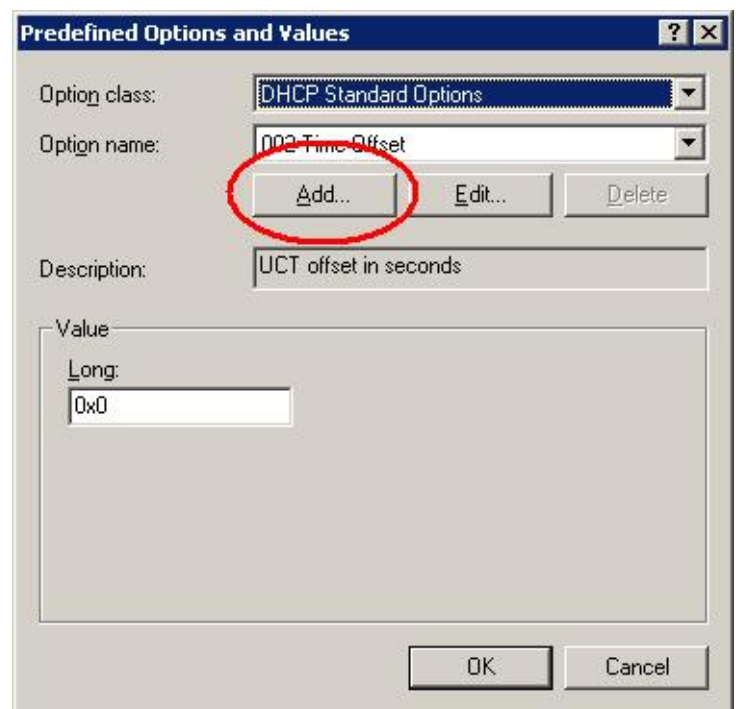
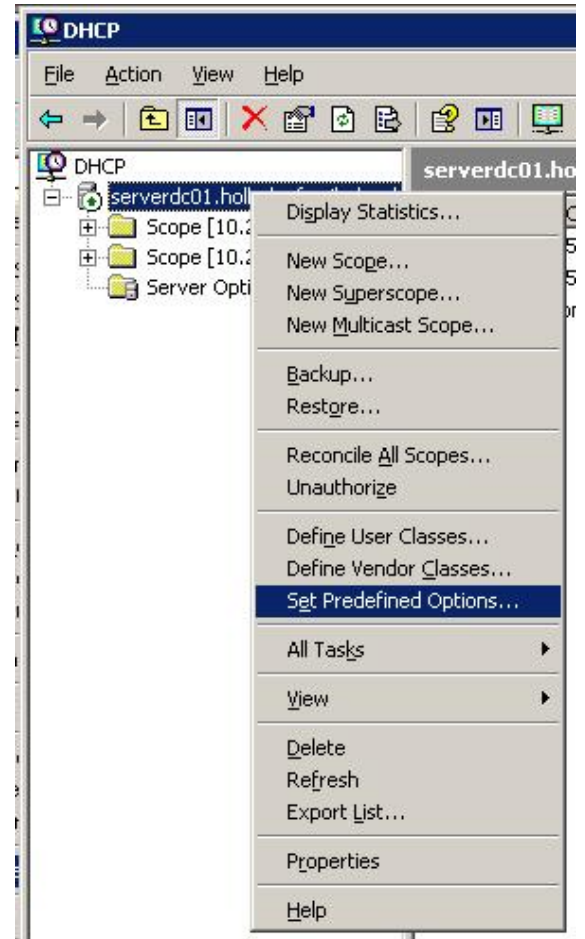


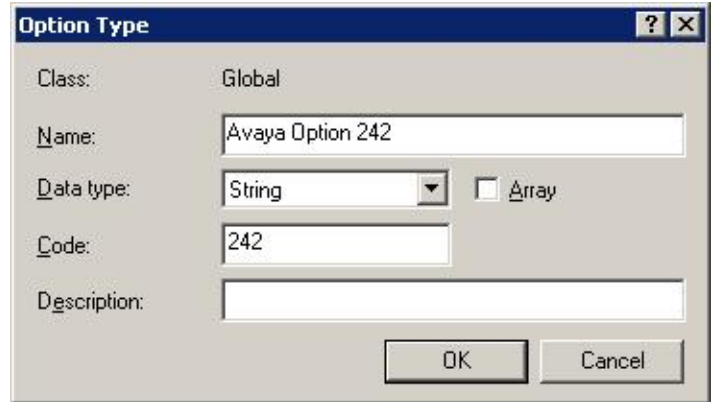
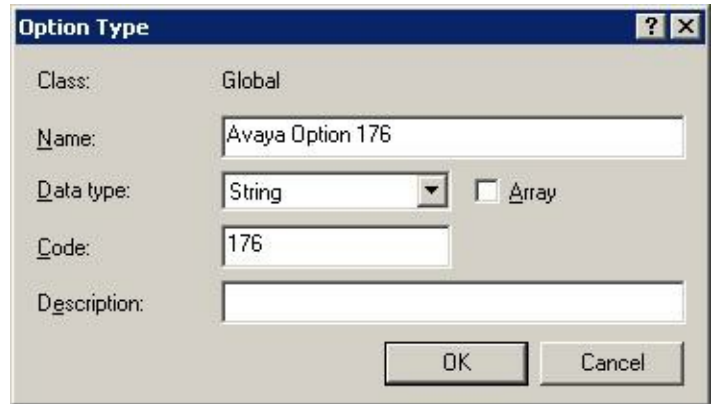
2. Right click on the DHCP server name at the top of the tree on the left side of the screen immediately under “DHCP” and select “Set Predefined Options”.

3. Click on the [Add] button.

4. **(Avaya 4600 & 5600 series IP phones)** Under Name enter “Avaya Option 176” and select a Data type of “String” and a Code of “176” then click [OK].

5. **(Avaya 1600 and 9600 series IP phones)** Repeat step 4 above to add option 242. Under Name enter “Avaya Option 242” and select a Data Type of “String” and a Code of “242” then click [OK].





From this point on things will change if you are using a single VLAN for both Voice and Data or two separate VLANs... I will cover both.

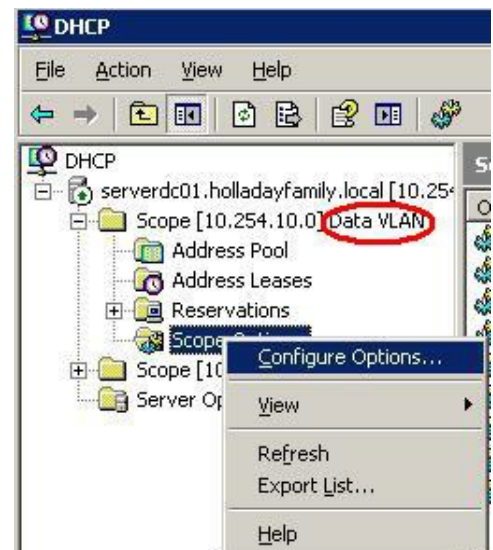
We will assume your IP Office is using the default IP address of 192.168.42.1 (modify to match your IP Office's actual IP address).

**\*\*\*\*\* If using only a single VLAN for both Voice and Data \*\*\*\*\***

1. Expand our your DHCP scope and right click "Scope Options" and select "Configure Options"

2. Scroll down and locate option(s) 176 and/or 242. Under "String value" enter the following:

Remember to replace the 192.168.42.1 with the actual IP address of your IP Office

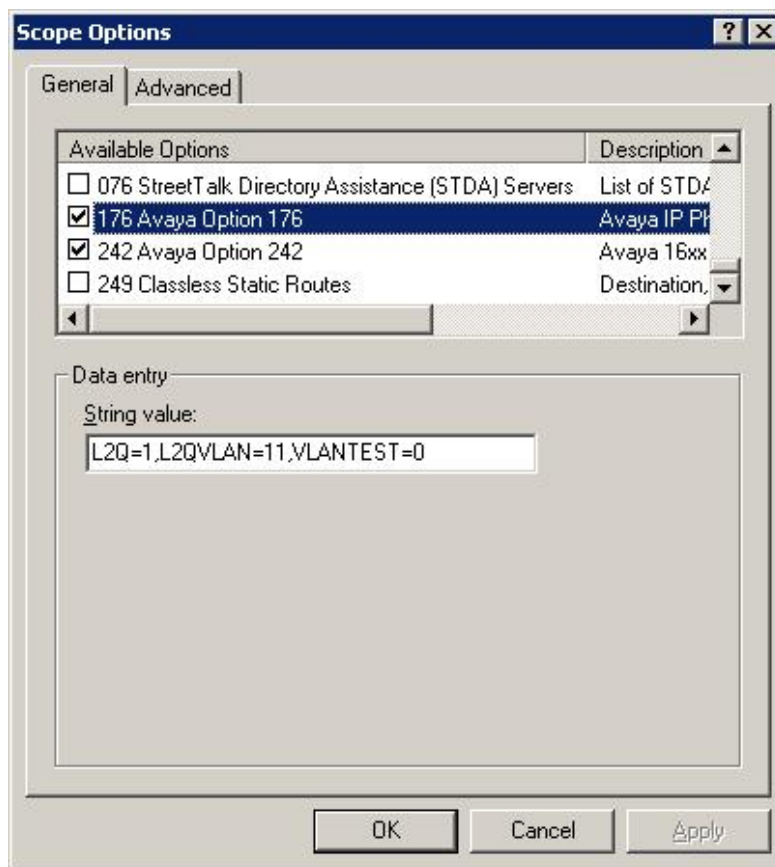
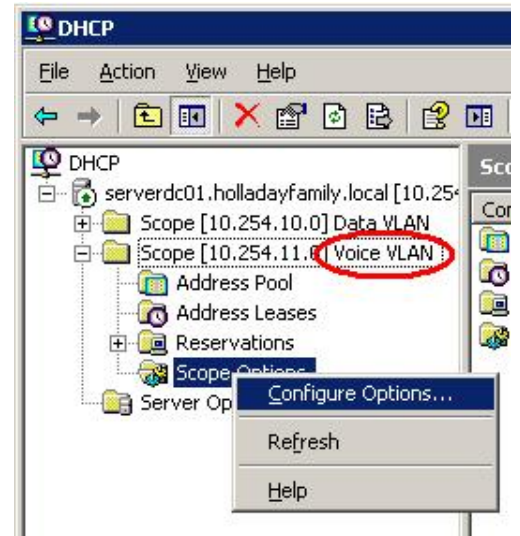


Option 176 MCIPADD=192.168.42.1,MCPORT=1719,TFTPSRVR=192.168.42.1



2. Scroll down and locate option(s) 176 and/or 242. Under “String value” enter the following:

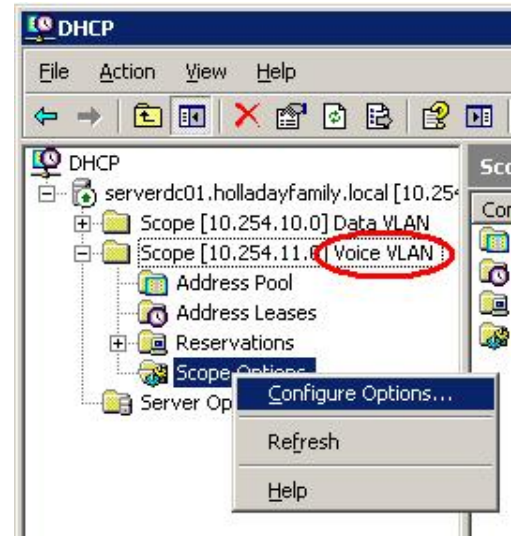
Both Option 176 & 242 L2Q=1,L2QVLAN=11,VLANTEST=0



3. Expand out your **VOICE** DHCP Scope and right click on “Scope Options” select “Configure Options”

2. Scroll down and locate option(s) 176 and/or 242. Under “String value” enter the following:

Remember to replace the 192.168.42.1 with the actual IP address of your IP Office



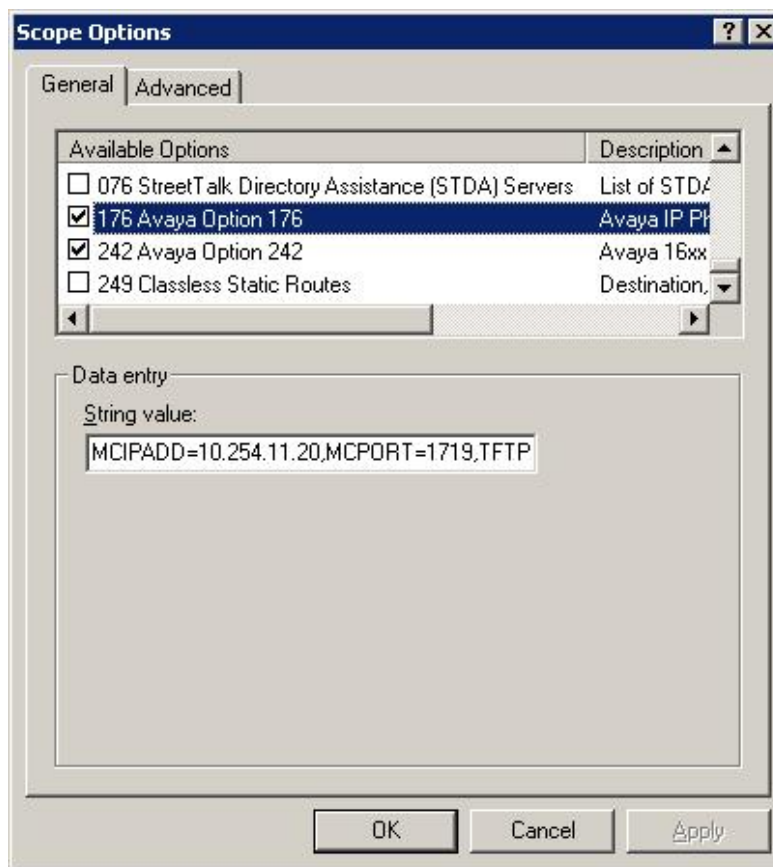
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Option 176 MCIPADD=192.168.42.1,MCPORT=1719,TFTPSRVR=192.168.42.1,VLANTEST=0

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Option 242 MCIPADD=192.168.42.1,MCPORT=1719,HTTPSRVR=192.168.42.1,VLANTEST=0

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*(NOTE: There are many other values that can be entered under your option 176 and option 242 such as L2QAUD and L2QSIG but those can just as easily be set in your 46xxsettings.txt file)*

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The final step is to configure the IP Office to handle the TFTP/HTTP requests. Your best option is to use a standard Compact Flash card inserted into the Embedded Voicemail slot or the Embedded Voicemail Card itself to hold your .bin, .txt and .scr files. The alternative is to use Manager or some other TFTP/HTTP server running on a PC to serve up the needed files. Here are examples of both

When using a Compact Flash card or Embedded Voicemail card to hold the files internal to the IP Office

The screenshot shows the configuration interface for a PSLLCIP500+ device. The interface has a menu bar at the top with options: System, LAN1, LAN2, DNS, Voicemail, Telephony, LDAP, System Events, SMTP, CDR/SMDR, Twinning, VCM, and SBCC. The main configuration area is titled "PSLLCIP500" and includes the following fields and options:

- Name: PSLLCIP500
- Locale: United States (US English)
- Contact Information: A section with a sub-header "Set contact information to place System under special control" and an empty text input field below it.
- Time Offset (hours:minutes): 00:00
- TFTP Server IP Address: 192 . 168 . 42 . 1
- HTTP Server IP Address: 192 . 168 . 42 . 1
- Time Server IP Address: 192 . 168 . 42 . 2
- File Writer IP Address: 0 . 0 . 0 . 0
- Dongle Serial Number: Local 5100297
- AVPP IP Address: 0 . 0 . 0 . 0
- Conferencing Center URL: (empty text input field)
- Branch Prefix: 1
- Local Number Length: 4
- Hide auto recording:
- Favour RIP Routes, over static routes:

Set the "TFTP Server IP Address" and the "HTTP Server IP Address" to the IP Office's own IP address. This will tell the unit to look to itself to handle all file requests.

When using an external TFTP server such as IP Office Manager

The screenshot shows the configuration window for a system named "PSLLCIP500". The window has a blue title bar with the name and standard window controls. Below the title bar is a navigation menu with tabs for System, LAN1, LAN2, DNS, Voicemail, Telephony, LDAP, System Events, SMTP, CDR/SMDR, Twinning, VCM, and SBCC. The "System" tab is selected.

The main configuration area includes the following fields and options:

- Name:** PSLLCIP500
- Locale:** United States (US English)
- Contact Information:** A section with a button labeled "Set contact information to place System under special control" and an empty text input field below it.
- Time Offset (hours:minutes):** 00:00
- TFTP Server IP Address:** 192 . 168 . 42 . 2
- HTTP Server IP Address:** . 0 . 0 . 0
- Time Server IP Address:** 192 . 168 . 42 . 2
- File Writer IP Address:** 0 . 0 . 0 . 0
- Dongle Serial Number:** Local 5100297
- AVPP IP Address:** 0 . 0 . 0 . 0
- Conferencing Center URL:** (empty text input field)
- Branch Prefix:** 1
- Local Number Length:** 4
- Hide auto recording
- Favour RIP Routes, over static routes

Set the "TFTP Server IP Address" to the IP Address of the PC running Manager but leave the HTTP address blank. The IP Office will relay all incoming TFTP requests and proxy all incoming HTTP requests as TFTP. This eliminates the need to setup both a TFTP and HTTP server on the target PC.