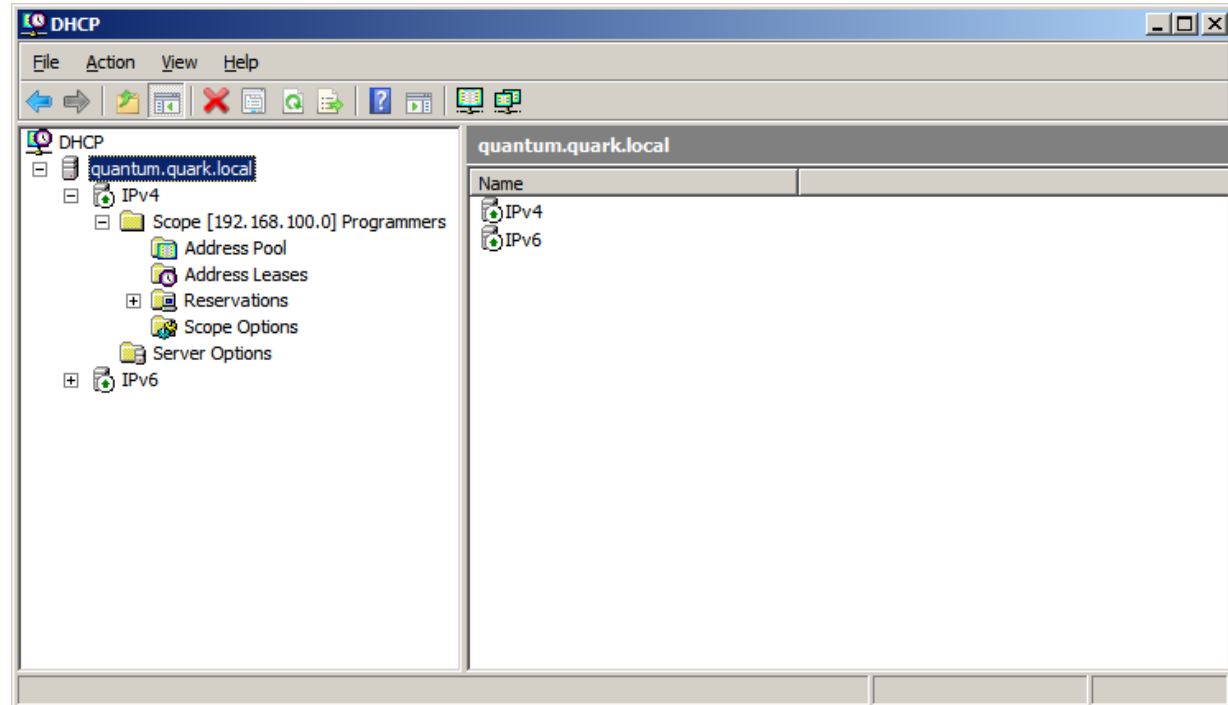


# DHCP Console

May 31, 2012

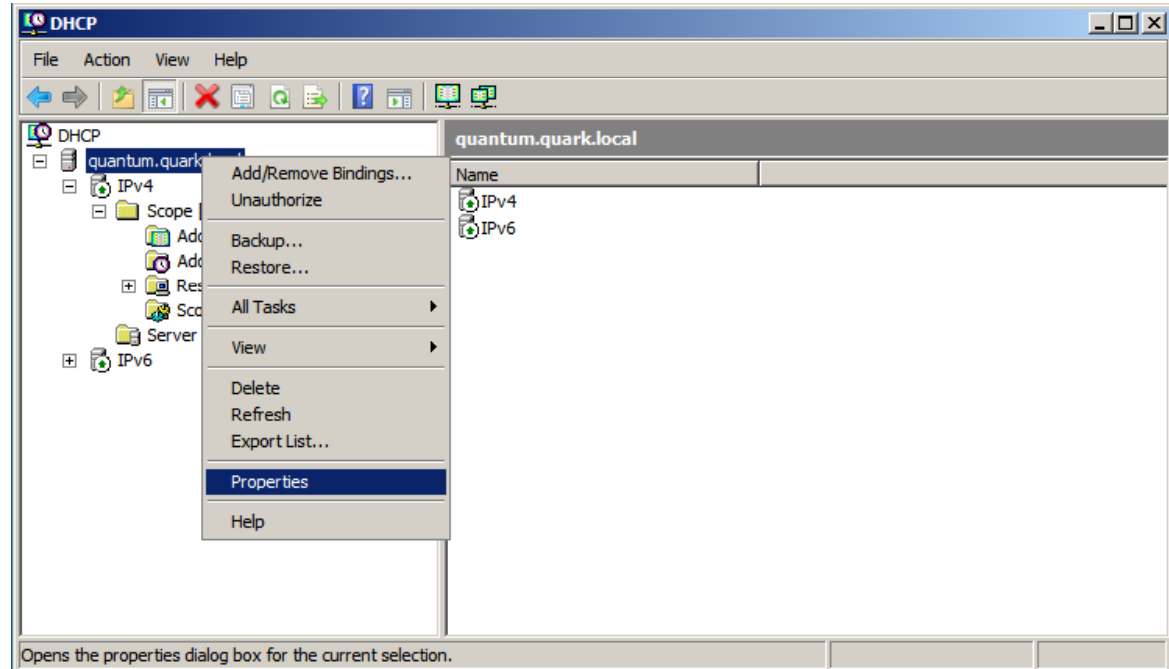
# DHCP Console

There are two groups in the DHCP server left pane. They are IPv4 and IPv6.



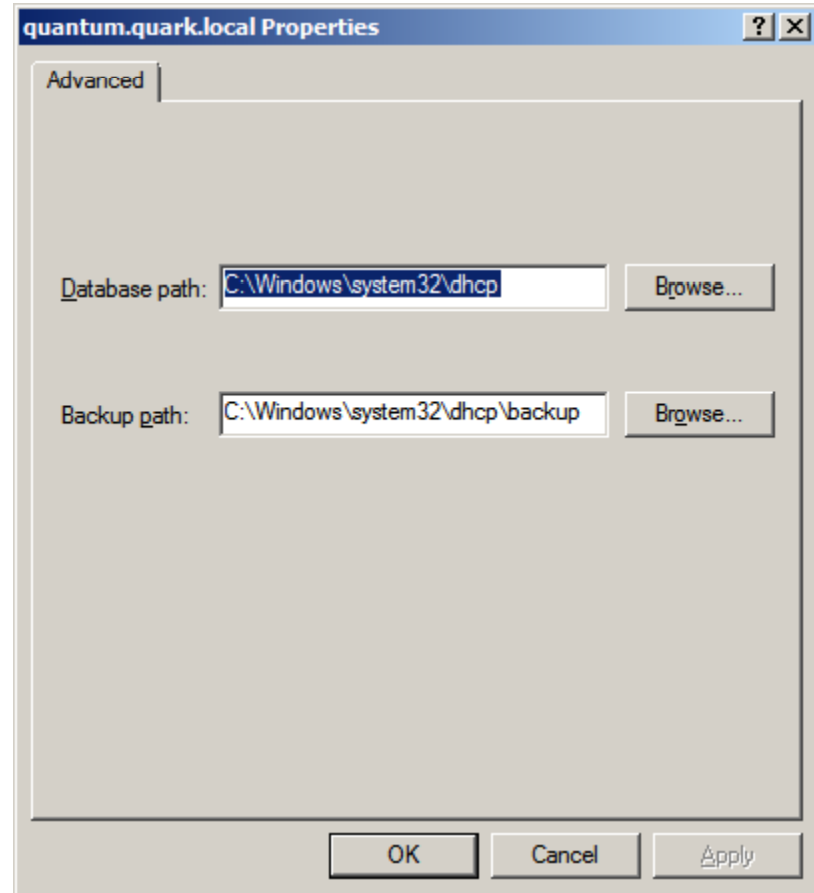
# DHCP Properties

We can right click on the DHCP server and authorize or unauthorize it. We can backup or restore the data. Under task, we can start, stop, pause, resume, or restart the service. We can also see the Properties window.



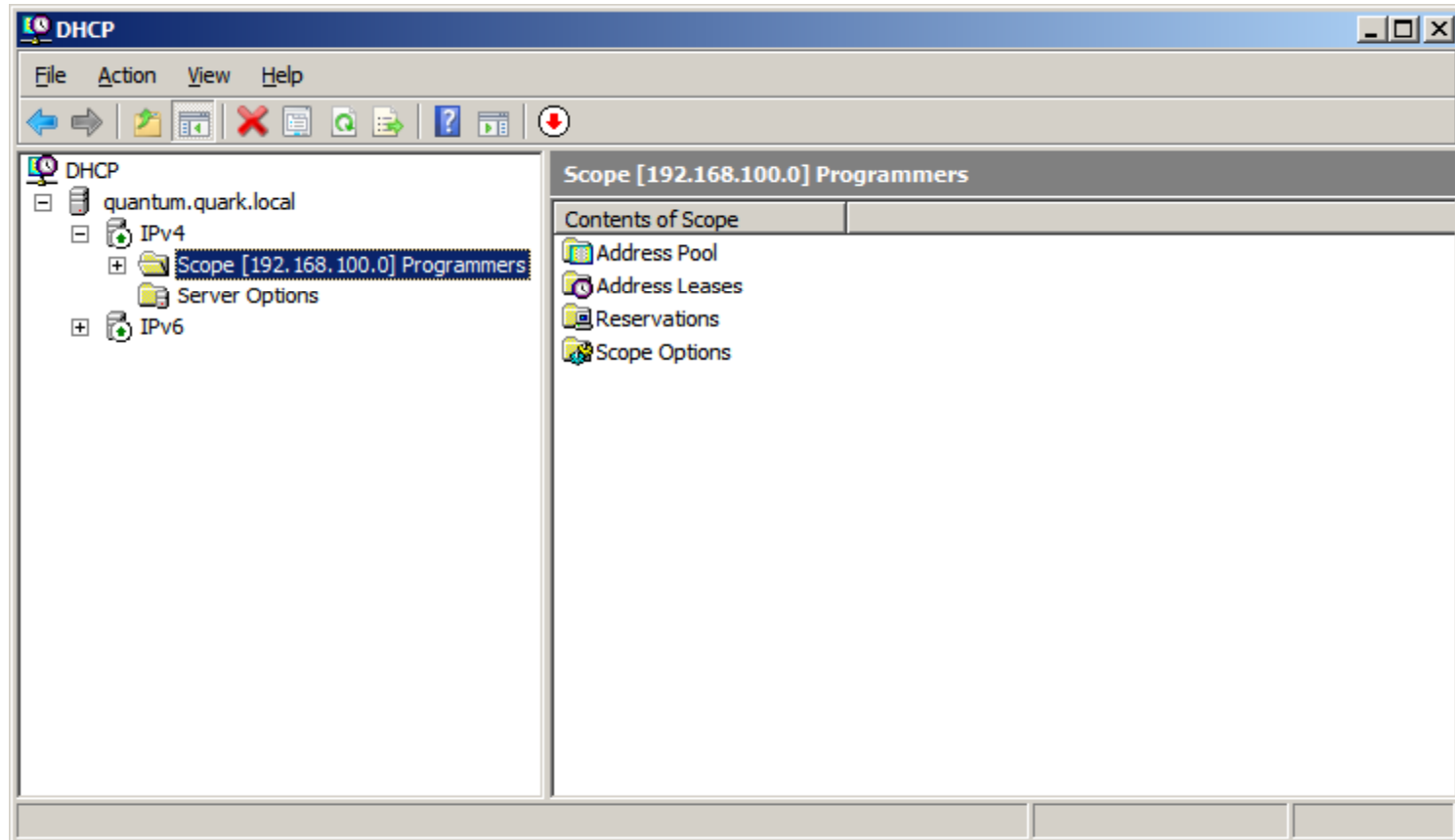
# DHCP IPv4 Properties

In the DHCP Properties window, we can see the path for the database and backup files.



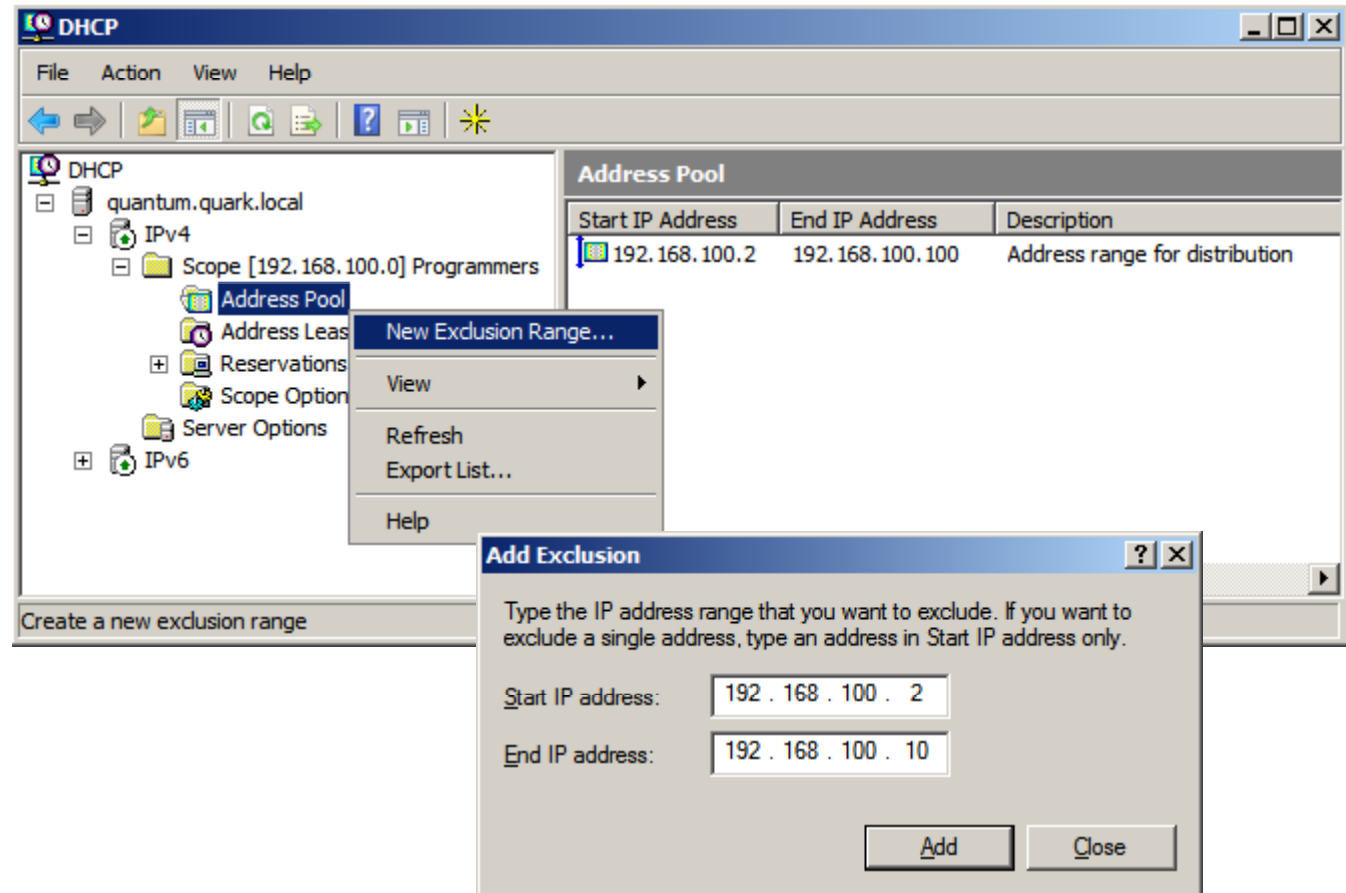
# Scope Folder

The Scope we added during the DHCP installation is shown in the IPv4 section of the DHCP server. There are four folders in the Scope. They are Address Pool, Address Leases, Reservations and Scope Options.



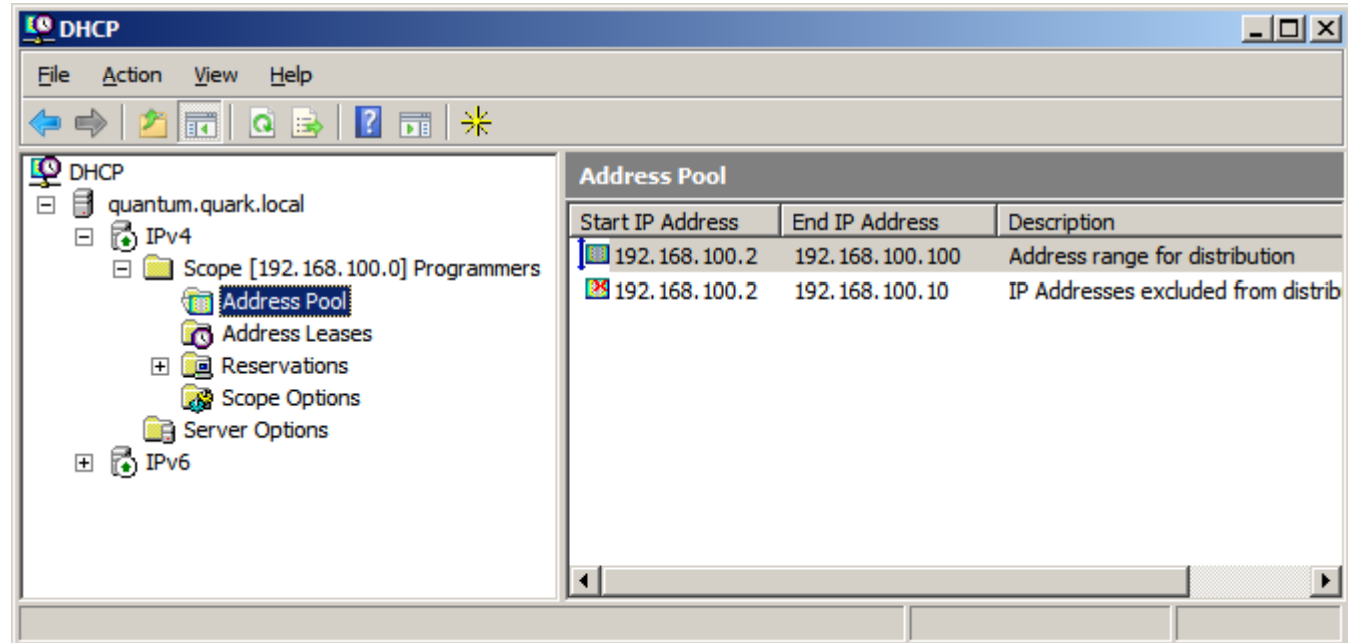
# Address Pool

We can click on the Address Pool and view the range. To add a New Exclusion Range for devices such as servers, printers, faxes and routers, we pick New Exclusion Range. We can type in the Start and End IP address of the exclusion and choose Add.



# Address Pool with Exclusion

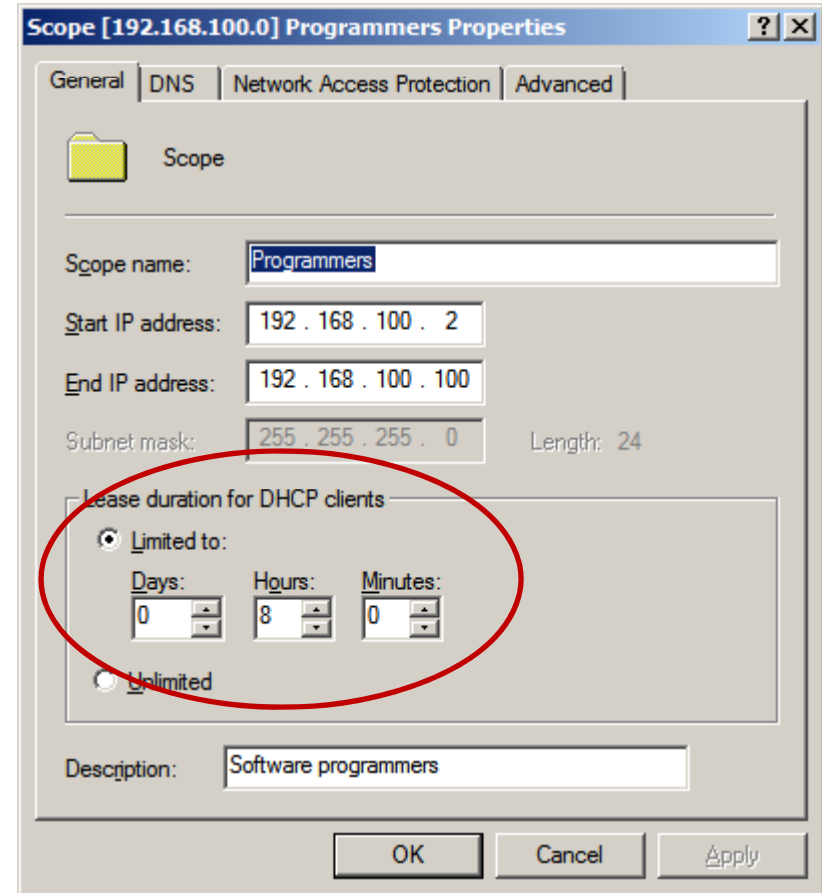
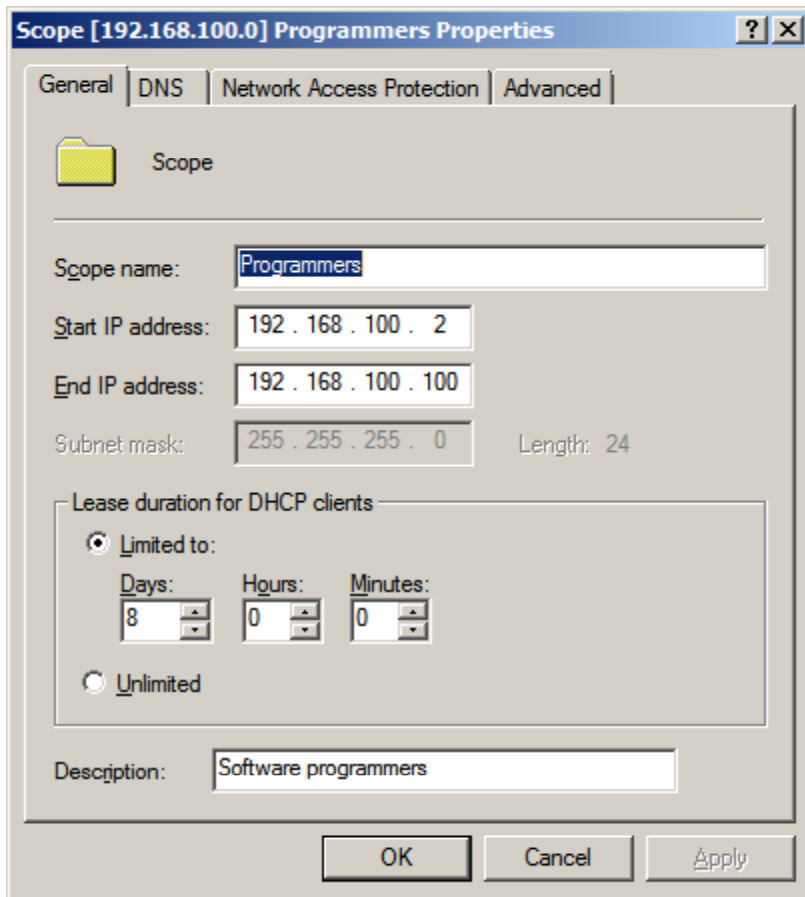
We now have two records in the Address Pool.



Address Pool		
Start IP Address	End IP Address	Description
192.168.100.2	192.168.100.100	Address range for distribution
192.168.100.2	192.168.100.10	IP Addresses excluded from distrib

# Change Scope

To change a Scope, we can right click on the Scope name and select Properties.

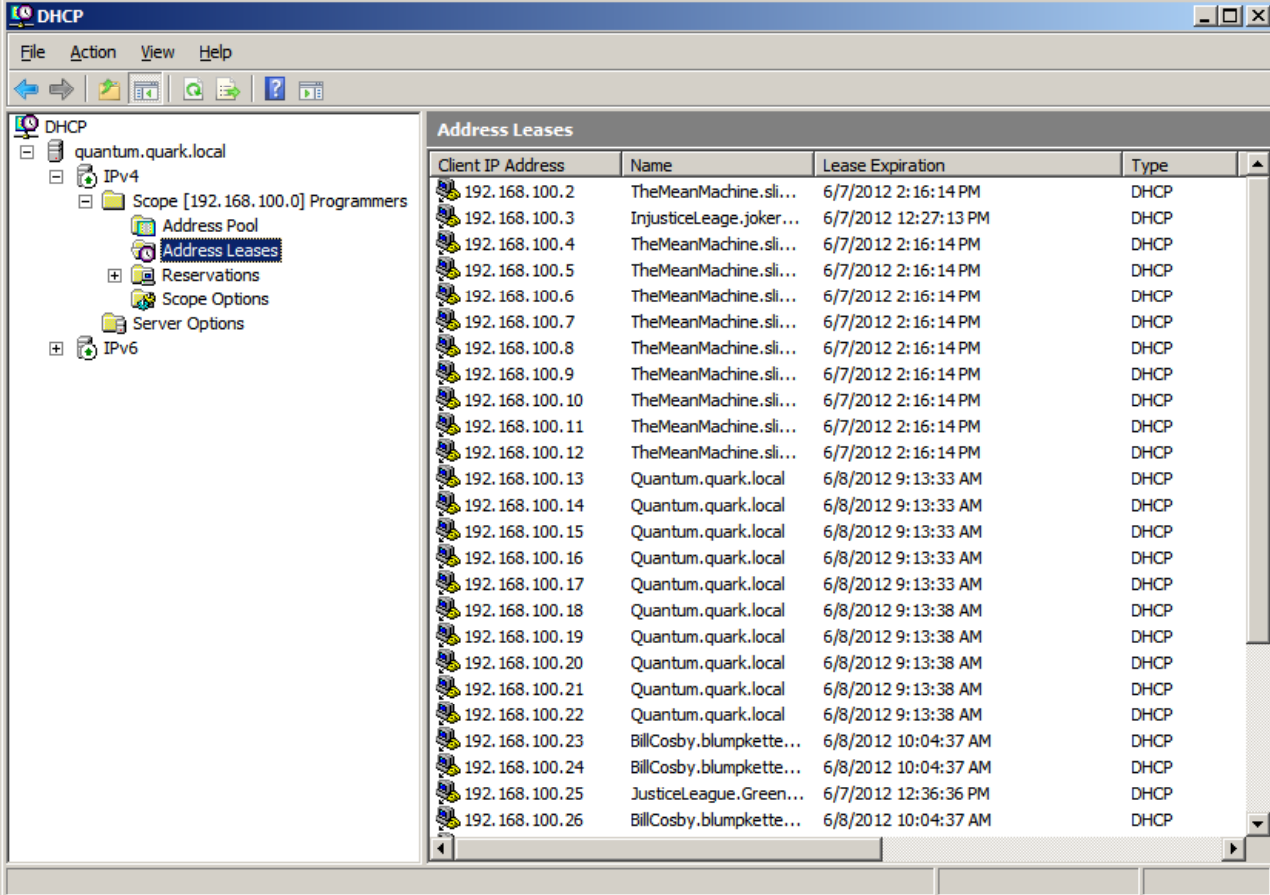


We will change the lease duration from 8 days to 8 hours.



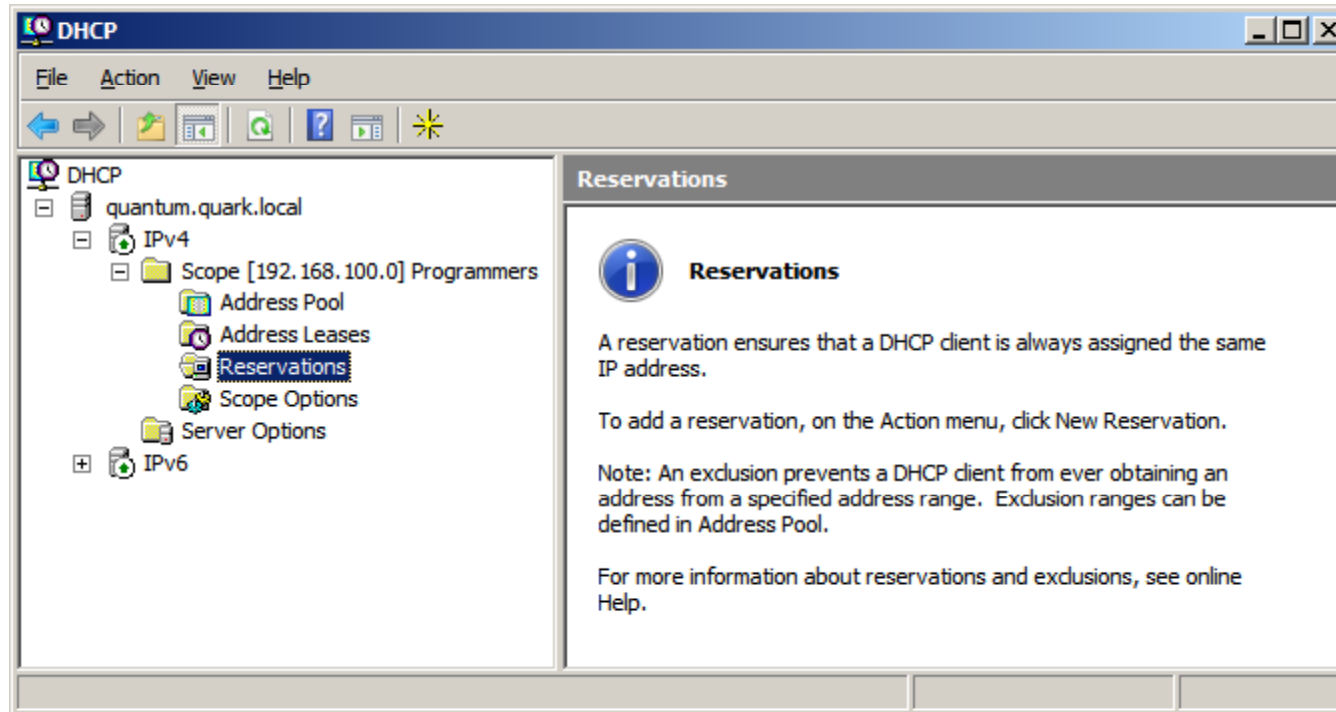
# Address Leases

Client computers in our lab can lease IP addresses from the DHCP server. We can see them in the Address Leases folder. We can see the computer name and lease expiration date and time.



Client IP Address	Name	Lease Expiration	Type
192.168.100.2	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.3	InjusticeLeage.joker...	6/7/2012 12:27:13 PM	DHCP
192.168.100.4	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.5	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.6	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.7	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.8	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.9	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.10	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.11	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.12	TheMeanMachine.sli...	6/7/2012 2:16:14 PM	DHCP
192.168.100.13	Quantum.quark.local	6/8/2012 9:13:33 AM	DHCP
192.168.100.14	Quantum.quark.local	6/8/2012 9:13:33 AM	DHCP
192.168.100.15	Quantum.quark.local	6/8/2012 9:13:33 AM	DHCP
192.168.100.16	Quantum.quark.local	6/8/2012 9:13:33 AM	DHCP
192.168.100.17	Quantum.quark.local	6/8/2012 9:13:33 AM	DHCP
192.168.100.18	Quantum.quark.local	6/8/2012 9:13:38 AM	DHCP
192.168.100.19	Quantum.quark.local	6/8/2012 9:13:38 AM	DHCP
192.168.100.20	Quantum.quark.local	6/8/2012 9:13:38 AM	DHCP
192.168.100.21	Quantum.quark.local	6/8/2012 9:13:38 AM	DHCP
192.168.100.22	Quantum.quark.local	6/8/2012 9:13:38 AM	DHCP
192.168.100.23	BillCosby.blumpkette...	6/8/2012 10:04:37 AM	DHCP
192.168.100.24	BillCosby.blumpkette...	6/8/2012 10:04:37 AM	DHCP
192.168.100.25	JusticeLeague.Green...	6/7/2012 12:36:36 PM	DHCP
192.168.100.26	BillCosby.blumpkette...	6/8/2012 10:04:37 AM	DHCP

# DHCP Reservations



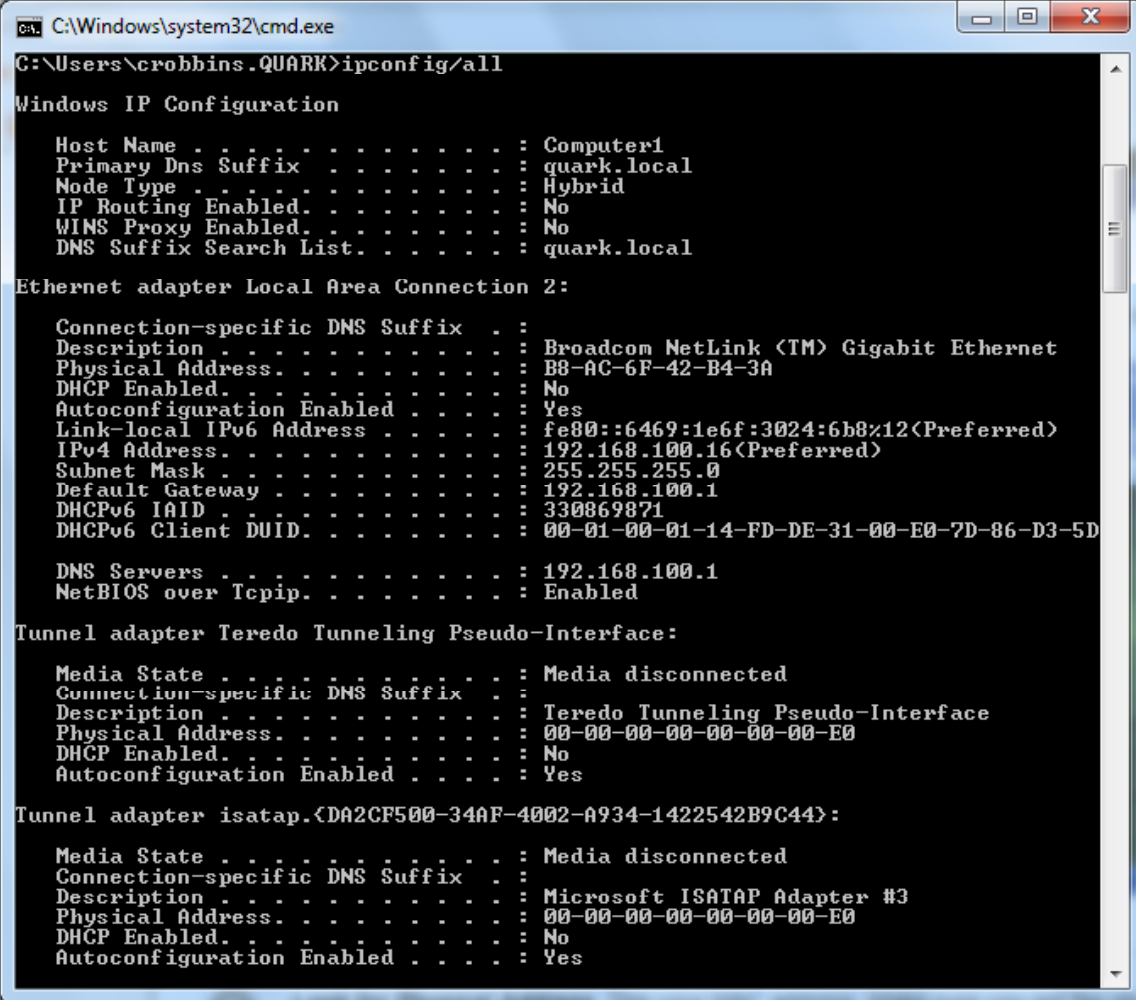
Some DHCP addresses can be reserved to a certain client so a DHCP Reservation requires the MAC address of the client computer. We can acquire that by using `ipconfig/all` on the client computer.

# Locate MAC Address

Open the Start Menu and type cmd in the run textbox.

On the command line, we should type ipconfig/all. The MAC address for the Network Interface Card (NIC) is:

BB-AC-6F-42-B4-3A



```
C:\Windows\system32\cmd.exe
C:\Users\crobbins.QUARK>ipconfig/all

Windows IP Configuration

Host Name . . . . . : Computer1
Primary Dns Suffix . . . . . : quark.local
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : quark.local

Ethernet adapter Local Area Connection 2:

Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetLink (TM) Gigabit Ethernet
Physical Address. . . . . : BB-AC-6F-42-B4-3A
Dhcp Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::6469:1e6f:3024:6b8%12(Preferred)
IPv4 Address. . . . . : 192.168.100.16(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.100.1
Dhcpv6 IAID . . . . . : 330869871
Dhcpv6 Client DUID. . . . . : 00-01-00-01-14-FD-DE-31-00-E0-7D-86-D3-5D

DNS Servers . . . . . : 192.168.100.1
NetBIOS over TcPIP. . . . . : Enabled

Tunnel adapter Teredo Tunneling Pseudo-Interface:

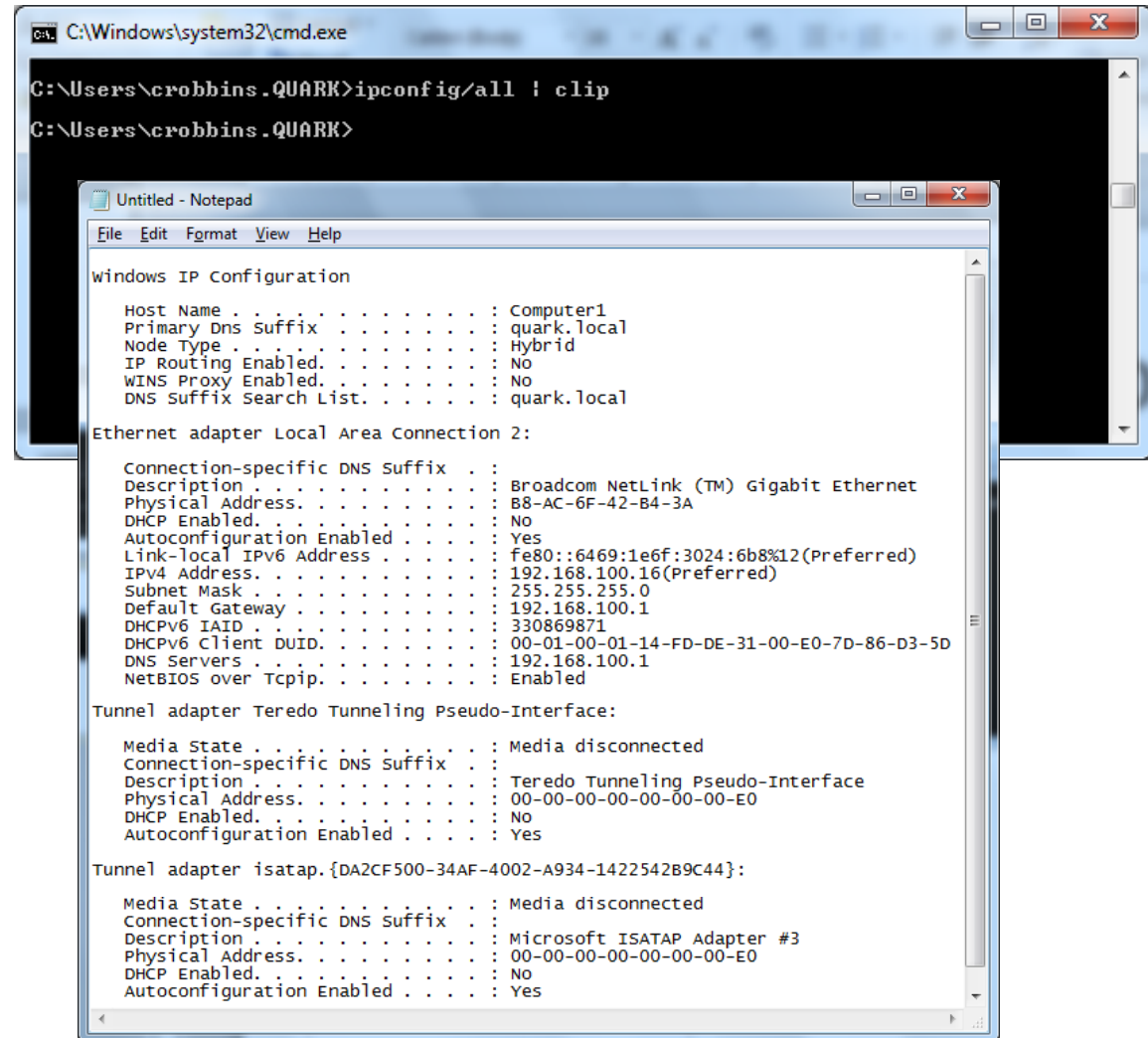
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . :
Description . . . . . : Teredo Tunneling Pseudo-Interface
Physical Address. . . . . : 00-00-00-00-00-00-E0
Dhcp Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

Tunnel adapter isatap.{DA2CF500-34AF-4002-A934-1422542B9C44}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
Dhcp Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
```

# Copying MAC Address to Notepad

We can use `ipconfig/all` with `| clip` added behind it to pipe the text data to the clipboard. We can copy the file to our computer and open the text file to copy the MAC address to the form we want.



```
C:\Windows\system32\cmd.exe
C:\Users\crobbins.QUARK>ipconfig/all | clip
C:\Users\crobbins.QUARK>

Untitled - Notepad
File Edit Format View Help
Windows IP Configuration
Host Name . . . . . : Computer1
Primary Dns Suffix . . . . . : quark.local
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : quark.local

Ethernet adapter Local Area Connection 2:

Connection-specific DNS Suffix . . . :
Description . . . . . : Broadcom NetLink (TM) Gigabit Ethernet
Physical Address. . . . . : B8-AC-6F-42-B4-3A
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::6469:1e6f:3024:6b8%12(Preferred)
IPv4 Address. . . . . : 192.168.100.16(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.100.1
DHCPv6 IAID . . . . . : 330869871
DHCPv6 Client DUID. . . . . : 00-01-00-01-14-FD-DE-31-00-E0-7D-86-D3-5D
DNS Servers . . . . . : 192.168.100.1
NetBIOS over Tcpip. . . . . : Enabled

Tunnel adapter Teredo Tunneling Pseudo-Interface:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . . :
Description . . . . . : Teredo Tunneling Pseudo-Interface
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes

Tunnel adapter isatap.{DA2CF500-34AF-4002-A934-1422542B9C44}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
```

# New Reservation

We right click on Reservations and we choose New Reservation. We type in the Reservation name, IP address from either the Scope range or Scope Exclusion list. We cut the MAC address from the notepad and paste it into the MAC address textbox. We type in a description and we choose Both DHCP and Bootp.

**New Reservation** ? X

Provide information for a reserved client.

Reservation name: Computer1

IP address: 192 . 168 . 100 . 15

MAC address: BB-AC-6F-42-B4-3A

Description: First client computer

Supported types

Both

DHCP only

BOOTP only

Add Close

# Scope Options

We can add Scope Options. One common option is 006 DNS Server. We type our server name in the textbox and resolve the IP address. We then push the Add button to put it into the list.

