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# How to configure a Windows Vista client to obtain an IPv6 DHCP address

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## System Tip

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## Symptom

This article describes how to properly configure your Windows Vista client computer to obtain an IPv6 address from a DHCP server using the netsh.exe tool.

## More Information

By default, a Windows Vista client will configure its local IPv6 address based on what a local IPv6 router instructs it to do. If you don't have a properly configured router in your environment, a Windows Vista client will not contact a DHCP server for an address even if the settings on the network interface are configured to "Obtain an IPv6 address automatically", but will instead automatically configure an address.

If you want your client to obtain an address from a DHCP server, you must configure the client to do so using the netsh.exe tool. Using this tool, two things must be done:

1. Disable Router Discovery.
2. Enable Managed Address Configuration OR enable Other Stateful Configuration.

For both of the above steps, you need to do the following:

1. Open an elevated command prompt
2. netsh int ipv6 show int

The output from this command will list your interfaces and their respective index numbers. You will use this index value in the next command.

To disable Router Discovery:

```
- netsh int ipv6 set int [index] routerdiscovery=disabled
```

You next need to enable either Managed Address or Other Stateful. Managed Address instructs the client to obtain an address and all options from the DHCP server (the normal behavior for an IPv4 address). Other Stateful instructs the client to configure its own IPv6 address (or use the statically configured address), but to get all other configuration options from a DHCP server.

To enable Managed Address:

```
- netsh int ipv6 set int [index] managedaddress=enabled
```

**Note** After enabling Managed Address, you may need to run the following commands to delete the existing IP address and renew the DHCP assigned IPv6 address:

- netsh int ipv6 delete address [index] <static IPv6 address>
- ipconfig /renew6 [index]

To enable Other Stateful:

```
- netsh int ipv6 set int [index] otherstateful=enabled
```

**Note** After enabling Other Stateful, you may need to run the following commands to release an existing DHCP IPv6 address before assigning a static IPv6 address:

- ipconfig /release6 [index]
- netsh int ipv6 add address [index] <static IPv6 address>

You can confirm your changes by using the following command to view the existing settings:

```
- netsh int ipv6 show int [index]
```

Example:

In the following example, the network adapter in use has been renamed to CorpNet to make it easy to identify.

```
C:\Windows\System32>netsh int ipv6 show int
```

```
Idx Met  MTU  State      Name
---
1  50 4294967295 connected Loopback Pseudo-Interface 1
13  10 1280 connected Local Area Connection* 3
8   10 1500 connected CorpNet
10  50 1280 disconnected Local Area Connection* 2
9   10 1280 disconnected Local Area Connection*
```

```
C:\Windows\System32>netsh int ipv6 show int 8
```

```
Interface CorpNet Parameters
```

```
-----
IfLuid           : ethernet_6
IfIndex          : 8
Compartment Id   : 1
State            : connected
Metric           : 10
Link MTU         : 1500 bytes
Reachable Time   : 36500 ms
Base Reachable Time : 30000 ms
Retransmission Interval : 1000 ms
DAD Transmits    : 1
Site Prefix Length : 64
Site Id          : 1
Forwarding       : disabled
Advertising      : disabled
Neighbor Discovery : enabled
```

Neighbor Unreachability Detecion : enabled

Router Discovery : enabled <-- enabled by default

Managed Address Configuration : disabled <-- disabled by default

Other Stateful Configuration : disabled

Weak Host Sends : disabled

Weak Host Receives : disabled

Use Automatic Metric : enabled

Ignore Default routes : disabled

```
C:\Windows\system32>netsh int ipv6 set int 8 routerdiscovery=disabled
```

Ok.

```
C:\Windows\system32>netsh int ipv6 set int 8 managedaddress=enabled
```

Ok.

```
C:\Windows\system32>netsh int ipv6 show int 8
```

#### Interface CorpNet Parameters

```
-----  
IfLuid : ethernet_6  
IfIndex : 8  
Compartment Id : 1  
State : connected  
Metric : 10  
Link MTU : 1500 bytes  
Reachable Time : 36500 ms  
Base Reachable Time : 30000 ms  
Retransmission Interval : 1000 ms  
DAD Transmits : 1  
Site Prefix Length : 64  
Site Id : 1  
Forwarding : disabled  
Advertising : disabled  
Neighbor Discovery : enabled  
Neighbor Unreachability Detecion : enabled  
Router Discovery : disabled <-- changed  
Managed Address Configuration : enabled <-- changed  
Other Stateful Configuration : disabled  
Weak Host Sends : disabled  
Weak Host Receives : disabled  
Use Automatic Metric : enabled  
Ignore Default routes : disabled
```

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### APPLIES TO

- Windows Vista Enterprise

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