

Netsh commands for Interface IP

Updated: January 21, 2005

Netsh commands for Interface IP

You can use commands in the Netsh Interface IP context to configure the TCP/IP protocol (including addresses, default gateways, DNS servers, and WINS servers) and to display configuration and statistical information.

You can run these commands from the Windows Server 2003 family command prompt or from the command prompt for the Netsh interface IP context. For these commands to work at the Windows Server 2003 family command prompt, you must type **netsh interface ip** before typing commands and parameters as they appear in the syntax below. There might be functional differences between Netsh context commands on Windows 2000 and the Windows Server 2003 family.

For more information on Netsh, see [Netsh overview](#) [<http://technet2.microsoft.com/WindowsServer/en/library/61427fbd-de1f-4c8a-b613-321f7a3cca6a1033.mspx>] and [Enter a netsh context](#) [<http://technet2.microsoft.com/WindowsServer/en/library/d9b4eed7-f79b-4daf-8c22-ffd9428ddea51033.mspx>] .

To view the command syntax, click a command:

- [set address](#)
- [add address](#)
- [delete address](#)
- [show address](#)
- [set dns](#)
- [add dns](#)
- [delete dns](#)
- [show dns](#)
- [set wins](#)
- [add wins](#)
- [delete wins](#)
- [show wins](#)
- [show icmp](#)
- [show interface](#)
- [show ipaddress](#)
- [show ipnet](#)
- [show ipstats](#)
- [show joins](#)
- [show tcpconn](#)
- [show tcpstats](#)
- [show udpconn](#)
- [show udpstats](#)
- [show config](#)
-

[show offload](#)

- [delete arpcache](#)
- [dump](#)

set address

Configures an IP address and a default gateway on a specified interface.

Syntax

```
set address [name=] InterfaceName [source=]{ dhcp | static [addr=] IPAddress [mask=] SubnetMask [gateway=]{ none | DefaultGateway [[gwmetric=] GatewayMetric]} }
```

Parameters

[name =] *InterfaceName*

Required. Specifies the name of the interface for which you want to configure address and gateway information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[source=]{ **dhcp** | **static** [**addr=]** *IPAddress* [**mask=]** *SubnetMask* [**gateway=]**{ **none** | *DefaultGateway* [[**gwmetric=]** *GatewayMetric*]} }

Required. Specifies whether the IP address to configure originates from a Dynamic Host Configuration Protocol (DHCP) server or is static. If the address is static, *IPAddress* specifies the address to configure, and *SubnetMask* specifies the subnet mask for the IP address being configured. If the address is static, you must also specify whether you want to leave the current default gateway (if any) in place or configure one for the address. If you configure a default gateway, *DefaultGateway* specifies the IP address of the default gateway to be configured, and *GatewayMetric* specifies the metric for the default gateway to be configured.

/?

Displays help at the command prompt.

Remarks

- You can use this command to switch an interface between DHCP configuration and static configuration. If the interface is configured statically, the DNS and WINS server addresses for this interface must also be statically configured.
- Omitting the *DefaultGateway* parameter does not clear gateway configuration but preserves whatever was previously configured.

[↑ Top of page](#)

add address

Adds an IP address and a default gateway on a specified interface configured with a static IP address.

Syntax

```
add address [name=] InterfaceName [addr=] IPAddress [mask=] SubnetMask [[gateway=] DefaultGateway [gwmetric=] GatewayMetric]
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to add address and gateway information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[addr=] *IPAddress* [**mask=]** *SubnetMask*

Required. Specifies the IP address to add and the subnet mask for that IP address.

[gateway=] *DefaultGateway* [**gwmetric=]** *GatewayMetric*

Specifies the IP address of the default gateway to add and the metric for that default gateway.

/?

Displays help at the command prompt.

delete address

Deletes an IP address or a default gateway on a statically configured interface.

Syntax

```
delete address [name=] InterfaceName [addr=] IPAddress [[gateway=]{ DefaultGateway | all}]
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to delete address and gateway information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[addr=] *IPAddress*

Required. Specifies the IP address to delete.

[gateway=]{ *DefaultGateway* | all}

Specifies whether to delete one default gateway or all default gateways. If only one default gateway should be deleted, *DefaultGateway* specifies the IP address of the default gateway to be deleted.

/?

Displays help at the command prompt.

Remarks

- This command will not delete the last IP address on the interface.

show address

Displays information about static IP addresses and default gateways on a specified interface. Used without parameters, **show address** displays address information for all interfaces.

Syntax

```
show address [[name=] InterfaceName]
```

Parameters

[name=] *InterfaceName*

Specifies the name of the interface for which you want to display address information. The *InterfaceName* must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

/?

Displays help at the command prompt.

Remarks

- For interfaces configured using DHCP, use the **ipconfig** command to display the assigned IP addresses, lease parameters, and other DHCP information.

set dns

Configures a DNS server address for a specified interface.

Syntax

```
set dns [name=] InterfaceName [source=]{ dhcp | static } [addr=]{ IP Address | none } [register=]{ none | primary |
```

both}

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to set DNS information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[source=] { *dhcp* | *static* }

Required. Specifies whether the IP address of the DNS server is configured by DHCP or is static.

[addr=] { *IP Address* | *none* }

If the IP address is static, *IP Address* specifies the IP address of the DNS server to configure, and **none** specifies that the DNS configuration should be removed.

[register=] { *none* | *primary* | *both* }

None specifies whether to disable Dynamic DNS resolution. **Primary** registers the computer name under the primary DNS suffix only. **Both** registers the computer name under both the primary DNS suffix as well as under the connection-specific suffix.

/?

Displays help at the command prompt.

Remarks

- If the interface is already statically configured, the **static** parameter replaces the existing list of DNS server addresses with the one specified in the command.
- Only if the [source] is **static** is the [addr] option available for configuring a static list of DNS server IP addresses for the specified interface.

Examples

```
set dns name="Local Area Connection" source=dhcp
```

```
set dns "Local Area Connection" static 10.0.0.1 primary
```

[↑ Top of page](#)

add dns

Adds a DNS server to a list of DNS servers for a specified interface.

Syntax

```
add dns [name=] InterfaceName [addr=] DNSAddress [[index=] DNSIndex]
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to add DNS information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[addr=] *DNSAddress*

Required. Specifies the IP address of the DNS server to add.

[index=] *DNSIndex*

Specifies the position of the added DNS server in the list of DNS servers for the interface.

/?

Displays help at the command prompt.

Remarks

- A lower number for the *DNSIndex* parameter corresponds to a higher preference. If no index is specified, then the server is added with the lowest preference.

[↑ Top of page](#)

delete dns

Deletes a DNS server or all DNS servers from a list of DNS servers for a specified interface or for all interfaces.

Syntax

```
delete dns [name=]InterfaceName [addr=]{DNSAddress | all}
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to delete DNS information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[addr=]{ *DNSAddress* | all}

Required. Specifies whether to delete the address of one DNS server or all servers for all interfaces. If only one DNS server should be deleted, *DNSAddress* specifies the IP address of the DNS server to delete.

/?

Displays help at the command prompt.

[↑ Top of page](#)

show dns

Displays the DNS configuration of a specified interface. Used without parameters, **show dns** displays the DNS configurations of all interfaces.

Syntax

```
show dns [[name=]InterfaceName]
```

Parameters

[name=] *InterfaceName*

Specifies the name of the interface whose DNS configuration you want to display. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

/?

Displays help at the command prompt.

[↑ Top of page](#)

set wins

Sets WINS server configuration to either DHCP or static mode for a specified interface.

Syntax

```
set wins [name=]InterfaceName [source=]{dhcp | static [addr=]{WINSAddress | none }}
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to set WINS information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[source=]{ dhcp | static [addr=]{ *WINSAddress* | none }}

Required. Specifies whether the IP address of the WINS server to configure should be assigned by DHCP or is static. If the IP address is static, *WINSAddress* specifies the IP address of the WINS server to configure, and **none** specifies that the WINS configuration should be removed.

/?

Displays help at the command prompt.

Remarks

- If the interface is already statically configured, the **static** parameter replaces the existing WINS server address list with the one specified in the **set wins** command.

[↑ Top of page](#)

add wins

Adds a WINS server to a list of WINS servers for a specified interface.

Syntax

```
add wins [name=] InterfaceName [addr=] WINSAddress [[index=] WINSIndex]
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to add WINS information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[addr=] *WINSAddress*

Required. Specifies the IP address of the WINS server to add.

[index=] *WINSIndex*

Specifies the position of the added WINS server in the WINS server list for that interface.

/?

Displays help at the command prompt.

Remarks

- A lower number for the *WINSIndex* parameter corresponds to a higher preference. If no index is specified, then the server is added with the lowest preference.

[↑ Top of page](#)

delete wins

Deletes a WINS server or servers from a list of WINS servers for a specified interface or all interfaces.

Syntax

```
delete wins [name=] InterfaceName [addr=]{ WINSAddress | all }
```

Parameters

[name=] *InterfaceName*

Required. Specifies the name of the interface for which you want to delete a WINS server or servers. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

[addr=]{ *WINSAddress* | all }

Required. Specifies whether to delete only one server for an interface or all servers for all interfaces. If only one server should be deleted, *WINSAddress* specifies the IP address of the WINS server to delete.

/?

Displays help at the command prompt.

[↑ Top of page](#)

show wins

Displays the WINS configuration for a specified interface. Used without parameters, **show wins** displays the WINS configuration for all interfaces.

Syntax

show wins [[name=] *InterfaceName*]

Parameters

[name=] *InterfaceName*

Specifies the name of the interface whose WINS information you want to display. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

/?

Displays help at the command prompt.

[↑ Top of page](#)

show icmp

Displays ICMP statistics. Used without parameters, **show icmp** displays the statistics only once.

Syntax

show icmp [[rr=] *RefreshRate*]

Parameters

[rr=] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

/?

Displays help at the command prompt.

[↑ Top of page](#)

show interface

Displays statistics for a specified interface. Used without parameters, **show interface** displays statistics for all interfaces only once.

Syntax

show interface [[index=] *InterfaceIndex*] [[rr=] *RefreshRate*]

Parameters

[index=] *InterfaceIndex*

Specifies the interface index, an integer that identifies the interface.

[rr=] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

/?

Displays help at the command prompt.

Remarks

- To obtain the interface index for an interface, review the output of the **show interface** command used without parameters.

[↑ Top of page](#)

show ipaddress

Displays information for a specified IP address. Used without parameters, **show ipaddress** displays information for all IP addresses on all interfaces once.

Syntax

show ipaddress [[*index=*] *IPAddress*] [[*rr=*] *RefreshRate*]

Parameters

[*index=*] *IPAddress*

Specifies an IP address of an interface.

[*rr=*] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

/?

Displays help at the command prompt.

Remarks

- To obtain the IP addresses of all interfaces, review the display of the **show ipaddress** command used without parameters.

[↑ Top of page](#)

show ipnet

Displays the contents of the Address Resolution Protocol (ARP) cache, which contains the hardware addresses of resolved next-hop IP addresses. Used without parameters, **show ipnet** displays the information once.

Syntax

show ipnet [[*rr=*] *RefreshRate*]

Parameters

[*rr=*] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

/?

Displays help at the command prompt.

[↑ Top of page](#)

show ipstats

Displays IP statistics. Used without parameters, **show ipstats** displays the statistics once.

Syntax

show ipstats [[*rr=*] *RefreshRate*]

Parameters

[*rr=*] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

/?

Displays help at the command prompt.

[↑ Top of page](#)

show joins

Displays IP multicast groups that have been joined for the specified IP address. Used without parameters, **show joins** displays information for all IP addresses.

Syntax

show joins *[[index=]IPAddress]*

Parameters

[index=] *IPAddress*

Specifies an IP address of an interface.

/?

Displays help at the command prompt.

Remarks

- To obtain the IP addresses for all interfaces, review the display of the **show ipaddress** command used without parameters.

[↑ Top of page](#)

show tcpconn

Displays information on a specified TCP connection. Used without parameters, **show tcpconn** displays information for all TCP connections once.

Syntax

show tcpconn *[[index=]{LocalIPAddress | LocalPort | RemoteIPAddress | RemotePort}] [[rr=]RefreshRate]*

Parameters

[index=] { *LocalIPAddress* | *LocalPort* | *RemoteIPAddress* | *RemotePort* }

Specifies the connection about which to display information. The *LocalIPAddress* parameter specifies an IP address of an interface. The *LocalPort* parameter specifies a TCP port for a local process. The *RemoteIPAddress* parameter specifies an IP address of a remote host. The *RemotePort* parameter specifies a TCP port for a remote process.

[rr=] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the information).

/?

Displays help at the command prompt.

[↑ Top of page](#)

show tcpstats

Displays TCP statistics. Used without parameters, **show tcpstats** displays the statistics once.

Syntax

show tcpstats *[[rr=]RefreshRate]*

Parameters

[rr=] *RefreshRate*

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

/?

Displays help at the command prompt.

[↑ Top of page](#)

show udpconn

Displays information about the UDP ports used for each IP address. Used without parameters, **show udpconn** displays UDP port information for all IP addresses once.

Syntax

show udpconn `[[index=]{ LocalIPAddress | LocalPort}]` `[[rr=]RefreshRate]`

Parameters

`[index=]{ LocalIPAddress| LocalPort}`

Specifies the connection about which to display information. The *LocalIP*Address parameter specifies an IP address of an interface. The *LocalPort* parameter specifies a UDP port for a local process.

`[rr=] RefreshRate`

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

`/?`

Displays help at the command prompt.

[↑ Top of page](#)

show udpstats

Displays UDP statistics. Used without parameters, **show udpstats** displays the statistics once.

Syntax

show udpstats `[[rr=]RefreshRate]`

Parameters

`[rr=] RefreshRate`

Specifies the refresh rate (the number of seconds between refreshing the display of the statistics).

`/?`

Displays help at the command prompt.

[↑ Top of page](#)

show config

Displays IP address and other configuration information for a specified interface. Used without parameters, **show config** displays configuration information for all interfaces.

Syntax

show config `[[name=]InterfaceName]`

Parameters

`[name=] InterfaceName`

Specifies the name of the interface for which you want to display configuration information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

`/?`

Displays help at the command prompt.

[↑ Top of page](#)

show offload

Displays the tasks that can be performed by the network adapter for the specified interface corresponding to installed network hardware. Used without parameters, **show offload** displays offload information for all interfaces corresponding to installed network hardware.

Syntax

show offload `[[name=]InterfaceName]`

Parameters

[name=] *InterfaceName*

Specifies the name of the interface for which you want to display offload information. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

/?

Displays help at the command prompt.

[↑ Top of page](#)

delete arpcache

Removes the entries in the Address Resolution Protocol (ARP) cache for a specified interface. Used without parameters, **delete arpcache** removes the entries in the ARP caches of all interfaces.

Syntax

delete arpcache [[name=] *InterfaceName*]

Parameters

[name=] *InterfaceName*

Specifies the name of the interface for which you want to remove the ARP cache entries. The *InterfaceName* parameter must match the name of the interface as specified in Network Connections. If *InterfaceName* contains spaces, use quotation marks around the text (for example, "*Interface Name*").

/?

Displays help at the command prompt.

[↑ Top of page](#)

dump

Displays the current configuration as a series of Netsh Interface IP commands.

Syntax

dump

Parameters

none

Remarks

- To create a configuration script file, redirect the output of this command to a file.

[↑ Top of page](#)

Netsh Interface IP example

The following command configures the interface named **Local Area Connection** with the static IP address 10.0.5.99, the subnet mask of 255.255.255.0, and a default gateway of 10.0.5.1:

```
set address name="Local Area Connection" source=static addr=10.0.5.99 mask=255.255.255.0 gateway=10.0.5.1 gwmetric=1
```

Formatting legend

Format	Meaning
<i>Italic</i>	Information that the user must supply

Bold	Elements that the user must type exactly as shown
Ellipsis (...)	Parameter that can be repeated several times in a command line
Between brackets ([])	Optional items
Between braces ({}); choices separated by pipe (). Example: {even odd}	Set of choices from which the user must choose only one
Courier font	Code or program output

Related Links

- [Netsh commands for AAAA](#)
- [Netsh commands for DHCP](#)
- [Netsh diagnostic \(diag\) commands](#)
- [Netsh commands for remote access \(ras\)](#)
- [Netsh commands for WINS](#)
- [Command-line reference A-Z](#)
- [Command shell overview](#)

[Manage Your Profile](#)

© 2008 Microsoft Corporation. All rights reserved. [Terms of Use](#) | [Trademarks](#) | [Privacy Statement](#)

Microsoft