Parameter descriptions

The following parameters are applicable for the NDIS 3 driver:

I/O Base Address
Bus Number
Early Token Release
Full Transmit Status
Network address

All parameters have a default value suitable in most situations. However, if you need to install several adapters in your system, or use locally-administered addresses, you may need to change some of them.

The I/O base address specifies where the network adapters I/O ports are located. Only the specified I/O range is scanned for an adapter. If an invalid I/O address range is selected, you will be unable to connect to the network.

Valid options are:

    0a18-0a23 + 0a30-0a3f
    0a24-0a2f + 0a40-0a4f
    0a50-0a53 + 0a58-0a6f
    0a54-0a57 + 0a70-0a87
    1a18-1a23 + 1a30-1a3f
    1a24-1a2f + 1a40-1a4f
    1a50-1a53 + 1a58-1a6f
    1a54-1a57 + 1a70-1a87

If the adapter cannot be found at the specified I/O address, the <u>Cannot find adapter</u> error message is posted.

Contents for Network Installation help

The Microsoft® Windows NT™ operating system uses NDIS 3 network drivers.

This help file explain the configuration parameters for the network driver you are installing or configuring. You must be logged on as a member of the Administrators group to install and configure network adapters.

Use this help file as a guide if you experience any problems with your network adapter. It contains a list of all NDIS 3 driver error messages and proposed actions.

The OCTKSTAT.EXE tool for obtaining driver statistics is also described.

Parameter descriptions
Error messages
Getting driver statistics

This help file is also accessible via the Winhelp.exe File|Open menu.

Use the Bus Number parameter only when the network adapter is installed in multi-bus PC's. If the PC only has a single bus, set this parameter to 0 (zero). This is the usual situation.

Specifies whether Early Token release should be used or not.
This parameter is only applicable when running at 16 Mb/s.

When set to "Yes", normal transmit verification is performed, and the upper layer protocols will be notified about the status of the transmitted frame, i.e. whether the destination address has been recognised and the frame has been copied by the receiving station. When this value is "No", all transmitted frames are assumed both recognised and copied by another station on the ring. If you have a bridge/router in your network or discover abnormal network behaviour, set this value to "Yes".

Use the Network address field if you do not want to use the network adapter's burned in Token Ring address. The value entered must be a locally administered address, i.e. in the range from 400000000000 to 7FFFFFFFFFFF. The value can be entered as "XX-XX-XX-XX-XX-XX" for readability.
If the NDIS 3 driver encounteres an invalid network address, the <u>invalid network address</u> error message is posted.
The value entered is verified by the setup program when you click "Ok" in the setup dialog box.

Using OCTKSTAT.EXE to view statistics

Use the **OCTKSTAT.EXE** program to display adapter status and statistics. OCTKSTAT.EXE is copied to your Windows NT "System32" directory, when you install the NDIS 3.0 driver. In order to use the OCTKSTAT.EXE utility you must have the NDIS 3 driver installed and loaded.

The program is called using the following parameters:

OCTKSTAT <u>adapter name</u> <u>[options]</u>

Examples:

OCTKSTAT

shows the option list.

OCTKSTAT octk1601 -s

will show the statistics for instance 01 of the octk16 driver.

OCTKSTAT octk3203 -c

will show the adapter configuration for instance 03 of the octk32 driver.

The *adapter name* consists of a *driver name* and an *instance* number:

    <driver name><instance>

where *<driver name>* is the name of the driver, i.e. "Octk16" or "Octk32" and *<instance>* is the instance number of the network adapter installed, i.e. 01, 02 etc. This value is displayed to the left of the driver name in the Network Setting window.

Example: **Octk1601** or **Octk3203**.

Notice: There must be no space between *<driver name>* and *<instance>*.

Valid *[options]* are

        -c for adapter configuration
        -a for additional adapter configuration
        -s for general adapter statistics
        -m for media-specific statistics

Options may be combined, i.e. **-c -a**.

Error descriptions

If you have any problems with the network, you should check if any error messages or warnings are posted by the NDIS 3 driver by using the Event Viewer in the Administrative Tools group. Ensure that the adapter is located at the correct <u>I/O base address</u>, and the cable is properly connected to the adapter.

All error messages and/or warnings posted by the NDIS 3 driver have the Source field set to "Octk16" or "Octk32" depending on the driver installed.

System error messages, related to the NDIS 3 driver, can occur with different source names, i.e. "Service Control Manager".

The messages are enumerated by the b Event field and are described below in Event number order. In the event viewer display the message description by highlighting the message and pressing the enter key. Error messages from 5000 are predefined error codes specific to the Windows NT™ operating system. You can retrieve additional information on these messages in your documentation.

0001 : Bring-up diagnostics failed for *driver*

0002 : Adapter initialize failed for *driver*

0003 : Adapter Check on *driver*

0004 : Could not open adapter *driver*. Ring beaconing. Check network speed settings

0005 : Could not open adapter *driver*. Duplicate node address

0006 : Could not open adapter *driver*. Request initialisation failed

0007 : Could not open adapter *driver*. Remove station received

0008 : Could not open adapter *driver*

0009 : Could not download code on adapter *driver*

0010 : Lobe wire fault detected by *driver*. Please check cable connections

0011 : *driver* has failed the lobe wrap test resulting from the beacon auto-removal process and has deinserted from the ring

0012 : *driver* has received a remove ring station Mac frame request and has deinserted from the ring

0013 : The detected adapter for *driver* is not supported by this driver

0014 : The configuration read for *driver* is invalid

0015 : *driver* has received a Trace Tool Remove frame from a Network Management station and has disabled the promiscuous packet filter

5000 : *driver* : Has encountered a conflict in resources and could not load

5001 : *driver* : Could not allocate resources necessary for the operation

5002 : *driver* : Has determined that the adapter is not functioning properly

5003 : *driver* : Could not find an adapter

5004 : *driver* : Could not connect to the interrupt number supplied

5005 : *driver* : Has encountered an internal error and has failed

5006 : *driver* : The version number is incorrect for this driver

5007 : *driver* : Timed out during an operation

5008 : *driver* : Has encountered an invalid network address

5009 : *driver* : Does not support the configuration supplied

5010 : *driver* : The adapter has returned an invalid value to the driver

5011 : *driver* : A required parameter is missing from the registry

5012 : *driver* : The IO Base Address supplied does not match the jumpers on the adapter
5014 : *driver* : The adapter is disabled. The driver cannot open the adapter
5015 : *driver* : There is an I/O port conflict
5016 : *driver* : There is an I/O port or DMA channel conflict
5018 : *driver* : There is a interrupt conflict at interrupt number xx
5019 : *driver* : There is a resource conflict at DMA channel xx

If you have any problems, write down the *Event ID*, *Source*, *Description* and *Data* fields in the **Event Detail** window. This information helps the support team to locate the error.

1 Bring-up diagnostics failed for *driver*.
The adapter failed during the bring-up diagnostics.
Action: Shut down your system and re-try the operation. If the error persists, contact your place of purchase for support.

2 Adapter initialize failed for *driver*.
The adapter failed the initialization phase.
Action: Shut down your system and re-try the operation. If the error persists, contact your place of purchase for support.

3 Adapter Check on *driver*.
A serious error occurred on the adapter, causing an adapter check code to be posted.
Action: Re-start your system. If the error persists, contact your place of purchase for <u>support</u>.

4 Could not open adapter *driver*. Ring beaconing. Check network speed settings.
The network speed settings on your network adapter propably do not match the ring-speed   used
on your token-ring network.
Action: Change your network speed settings and restart your system.

5 Could not open adapter *driver*. Duplicate node address.
A duplicate address has been discovered on the ring.
Action: Change your locally-administered address as discussed in the Adapter parameters section and restart your system.

6 Could not open adapter *driver*. Request initialization failed.
An error occurred during adapter initialisation.
Action: Re-start your system. If the error persists, contact your place of purchase for support.

7 Could not open adapter *driver*. Remove station received.
The adapter has been removed by a LAN Manager station.
Action: Contact your network administrator.

8 Could not open adapter *driver*.
The adapter failed to open.
Action: Check cables and connections and re-try. If the error persists, try a different lobe media cable.

9 Could not download code on adapter *driver*.
The download operation failed.
Action: Re-start your system. If the error persists, contact your place of purchase for support.

10 Lobe wire fault detected by *driver*. Please check cable connections.
The connection to the network has been removed.
Action: Check all cables and connections and try another lobe media cable. The adapter continues to try to re-insert on the ring.

11 *driver* has failed the lobe wrap test resulting from the beacon auto-removal process and has deinserted from the ring.

The adapter has deinserted from the ring, because the ring was beaconing.

Action: Check the network speed settings and cable connections and re-try. If the error persists, contact your network administrator.

12 *driver* has received a remove ring station Mac frame request and has deinserted from the ring.
The adapter has been removed by a LAN Manager station.
Action: Contact your network administrator.

13 The detected adapter for *driver* is not supported by this driver.
You have installed the wrong NDIS 3 driver for the adapter or your adapter is not supported.
Action: Get the newest NDIS 3 driver available for your network adapter.

14 The configuration read for *driver* is invalid.
A configuration entry is invalid.
Action: Use the network control panel to set-up proper <u>adapter settings</u>.

15 *driver* **has received a Trace Tool Remove frame from a Network Management station and has disabled the promiscuous packet filter.**
The NDIS 3 driver has cleared the PROMISCUOUS packet filter bit, as instructed by a LAN Manager station.
Action: Contact your network administrator.

5000 *driver* **: Has encountered a conflict in resources and could not load.**
The resources needed for your network adapter conflicts with another adapter.
Action: Check the resources used by the network adapter(s) to ensure that no conflicts exists.

5001 *driver* **: Could not allocate resources necessary for operation.**
The NDIS 3 driver failed to load, because it tried to allocate too many resources.
Action: Decrease the number of receive and/or transmit buffers and re-try.

5002 *driver* **: Has determined that the adapter is not functioning properly.**
The adapter could not be found or is not working properly.
Action: Check <u>I/O base</u> settings and re-try.

5003 *driver* **: Could not find an adapter.**
The adapter could not be found by the NDIS 3 driver.
Action: Check I/O base settings and re-try.

5004 *driver* **: Could not connect to the interrupt number supplied.**
The interrupt is already used by another device.
Action: Change the adapter interrupt number and re-try.

5005 *driver* : Has encountered an internal error and has failed.
An internal error has been discovered.
Action: Re-start your system. If the error persists, contact your place of purchase for <u>support</u>.

5006 *driver* : The version number is incorrect for this driver.
The NDIS 3 driver version is incorrect.
Action: Re-start your system. If the error persists, contact your place of purchase for <u>support</u>.

5007 *driver* **: Timed out during an operation.**
A time-out error occurred.
Action: Re-start your system. If the error persists, contact your place of purchase for <u>support</u>.

5008 *driver* **: Has encountered an invalid network address.**
An invalid network address was specified.
Action: Change the locally administered network address and re-start your system. If the error persists, try clearing the network address in the setup dialog. The NDIS 3 driver will then use the burned-in address when opening.

5009 *driver* **: Does not support the configuration supplied.**
An invalid configuration entry was discovered.
Action: Use the network control panel to set proper adapter parameters. Do not try to manually change any parameters in the registry.

5010 *driver* **: The adapter has returned an invalid value to the driver.**
An internal error has occurred.
Action: Re-start your system. If the error persists, contact your place of purchase for support.

5011 *driver* **: A required parameter is missing from the registry.**
A parameter necessary for operation has been omitted in the registry.
Action: Use the network control panel to set proper parameters.

5012 *driver* **: The IO Base Address supplied does not match the jumpers on the adapter.**
The adapter could not be found by the NDIS 3 driver.
Action: Check I/O base settings and re-try.

5014 *driver* **: The adapter is disabled. The driver cannot open the adapter.**
The adapter is disabled.
Action: Make sure the start-up parameter for the NDIS 3 driver is set to "Manual". Use the "Devices" applet in the control panel to change the settings.

5015 *driver* **: There is an I/O port conflict.**
The ports used by the NDIS 3 driver are already in use by another device.
Action: Change the I/O Base address for the adapter.

5016 *driver* : There is an I/O port or DMA channel conflict.
The ports or DMA channel used by the NDIS 3 driver are already in use by another device.
Action: Check the I/O port and DMA usage by the adapter to ensure that there is no resource conflicts.

5018 *driver* **: There is a interrupt conflict at interrupt number** *xx.*
The adapter tried to use an interrupt currently in use.
Action: Change the interrupt selection on the adapter and re-try.

5019 *driver* **: There is a resource conflict at DMA channel *xx*.**
The adapter tried to use a DMA channel currently in use.
Action: Change the DMA channel selection on the adapter and re-try.

If you have any problems, write down the *Event ID*, *Source*, *Description* and *Data* fields in the **Event Detail** window. This information helps the support team to locate the error.