

This is a workspace document for the author.

HDD_ABOUTBOX 0x20064

(Main Config. Window)

HDD_PYTHONPROTO_DIALOG 0x20066

(VLAN Config Window)

HDD_VLANCFG 0x20086

(SHD Config Window)

HDD_FTOLS 0x2008C

(Advanced RSL Window)

HDD_ARSL 0x2008D

3Com 3C980-TX Fast EtherLink Server NIC Configuration Help Files

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RSL, SHD, VLAN Configuration Window:

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NICs Detected

This field lists all 3C980-TX NICs detected with installed network drivers. The NIC currently selected from this list is called the current NIC in these help files.

Select NIC to back up

To make the [current NIC](#) a standby NIC, double-click an active NIC number in the Select NIC to back up box.

All available active NICs that do not already have a designated standby NIC are listed here by their number which is the list number of the NIC as it appears in the NICs Detected field.

Standby NIC for

The [current NIC](#) is a standby NIC for the indicated active NIC. There is no number displayed in this field if the current NIC is not configured as a resilient server link.

Active NIC for

The [current NIC](#) is an active NIC for the indicated standby NIC. There is no number displayed in this field if the current NIC is not configured as a resilient server link.

VLAN Options (radio buttons)

Click Enabled to enable VLANs on the [current NIC](#) that have been previously disabled.

Click Disabled to disable installed VLANs on the [current NIC](#).

No resources are recovered by disabling configured VLANs.

Current NIC

The current NIC is the NIC displayed in the NICs Detected field.

Self-Check Level

Options: Off, Basic, Enhanced

Default: Basic

When Self-Check Level is set to Basic or Enhanced, the Self-healing drivers provide continual error checking of the NIC and the network link.

Basic level self-check monitors the following:

- n Ability of driver to detect an interrupt from the NIC
- n Data transfers to and from the NIC FIFOs
- n Transmit and Receive errors such as CRC, transmit underruns receive overruns, late collisions, jabbers, and carrier lost
- n Loss of linkbeat (indicates the NIC is no longer connected to the network)
- n NIC failure

Enhanced level checking performs all basic level tests and verifies the integrity of critical data structures, rebuilding them if necessary. Enhanced level checking consumes more CPU time than basic level checking.

The driver forces basic level checking if resilient server links are configured.

Sampling Window

Options: Any decimal value that is a multiple of two.

Default: 1024 (packets)

This field specifies the sample size of network activity to monitor for transmit and receive (Tx/Rx) errors.

Setting the Sampling Window to 0 disables Tx/Rx error checking.

Sampling Ratio

Options: Enter a decimal value from 0 to 100

Default: 50 (percent)

The decimal value in this field represents a percentage that is used with the Sampling Window to establish a measure of the rate of error accumulation. The error counters are diminished by the Sampling Ratio in one second intervals. The larger the Sampling Ratio, the more recent are the accumulated errors.

Error Tolerance

Options: Low, Medium, High

Default: Medium

Error Tolerance specifies threshold levels for [Tx/Rx](#) errors. A resilient server link (RSL) failover or NIC reset occurs when the threshold is exceeded during the sampling period.

Low = 5 of each error category

Medium = 50 of each error category

High = 100 of each error category

Alert Type

Enable/Disable options: Off, Informational, Warning, Error

Default: Error enabled

Alert type defines three types of events that can be reported to the Windows NT Events Monitor:

- n Informational messages that require no user intervention
- n Warning Messages that may require user intervention
- n Error Messages which report a failure

Configuring the Self Healing Driver (SHD)

[Self-check Level](#)

[Sampling Window](#)

[Sampling Ratio](#)

[Error Tolerance](#)

[Alert Type](#)

Transmit and Receive errors

The self-healing drivers monitor the following transmit and receive (Tx/Rx) errors:

CRC

Transmit underruns

Receive overruns

Late collisions

Jabbers

Carrier lost

Failure Count

Options: any decimal number

Default: 10 (there is no upper limit)

Failure count sets the maximum number of times a failover from an active to a standby NIC can occur. This prevents excessive frequent failovers due to a persistent but intermittent error condition.

Preferred NIC

Options: Enabled, Disabled

Default: Disabled

When the Preferred NIC option is enabled, the active NIC resumes control should it recover after a failover to the standby NIC.
When the Preferred NIC option is set to disabled, the standby NIC becomes the new active NIC after failover.

Alternative NIC Checking

Options: Enabled, Disabled

Default: Enabled

Enables or disables Self-check Level on the standby NIC.

NIC Diagnostic Packets

Options: Enabled, Disabled

Default: Enabled

When the NIC Diagnostic Packets option is enabled, active and standby NICs send each other packets to verify that both NICs are functioning on the same subnetwork.

Advanced RSL Configuration Parameters

[Failure Count](#)

[Preferred NIC](#)

[Alternative NIC Checking](#)

[NIC Diagnostic Packets](#)

Changing an Active NIC with installed VLANs to a Standby NIC

If you change an active NIC that has more than one installed VLAN to a standby NIC, you must remove all but one VLAN instance from the NIC before restarting Windows NT.

Use the adapter tab of the Windows NT Network control panel to remove the extra VLAN instances.

VLAN Configuration Parameters

VLAN Name

VLAN ID

VLAN Instance

MAC Address

VLAN Name

A VLAN name can be up to 32 Alphanumeric ASCII characters. The VLAN name is not used by the switch and is provided for the convenience of the network administrator. Only the VLAN ID is used by the switch.

VLAN Instance

The VLAN instance number is assigned by the 3Com driver installation program. The instance number is not used by the switch.

VLAN ID

Assign a decimal number from 1 to 16. No two VLANs on the same NIC can have the same VLAN ID number. VLANs on different NICs in the same computer can have the same VLAN ID. There can be a maximum of 16 VLANs per NIC.

MAC Address

The MAC address for VLANs is assigned by the 3Com driver installation program. Each VLAN appears to the operating system as a separate NIC. A VLAN MAC address is made up from the base MAC address of the physical NIC plus the VLAN ID as the last nibble.

Installing a Driver on a 3C980-TX Server NIC

The 3C980-TX network driver detects only 3C980-TX NICs that do not have installed drivers. Each NIC is identified by its PCI slot and bus number.

Installing VLANs on a 3C980-TX Server NIC

The two VLAN dialog boxes appear during first time installations and when adding additional VLAN instances.

If you are installing additional VLAN instances, make sure that the correct 3C980-TX NIC is indicated on both dialog boxes (PCI slot and bus number) and that you enter the new total number of VLANS in the Total VLANs field.

