DEC LANcontroller 601

digital ™   **Problem Solving**

DEC Network Integration Server Problem Solving

DECNIS Problem Solving Manuals
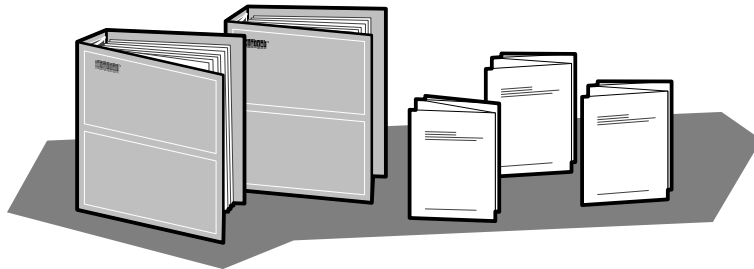
DEC Network Integration Server Problem Solving: outlines NCL commands for checking software problems.

DECNIS *Installation and Service Manual:* includes a problem solving section which describes procedures for checking hardware problems.

Network Interface Card (NIC) *Problem Solving* cards: are supplied with each NIC. The cards outline procedures for checking possible problems with NICs, their cables, distribution panels and modems. Start problem solving with the flowchart.

*DEC Network Integration Server Event Messages:* this is an on-line text file. The file lists event messages that can indicate faults with hardware and software. The event message describes the meaning of each event and what action to take.

Loopback Connectors

Loopback Connector	Part Number	Component
Ethernet loopback connector	H4080	NIC and Ethernet cable

LKG–5721–91I

Line Card LED States

The LED display shows the state of the NIC when the module self-test or system self-test was last run: see the *Installation and Service Manual* for your DECNIS for more details.

○ ○ *flash* ☼	Slow flash	Module self-test in progress.
○ ○ *flicker* ☼	Fast flicker	The NIC is either waiting to load or is loading software.
○ ○ ●	READY	The NIC has passed its module self-test and has successfully loaded the software.
● ○ ○	HOTSWAP	The NIC is disabled. (The NIC switch is set down.)
○ ● ○	FAULT	The NIC has failed its module self-test.
○ ● ●	ATTENTION	This indicates one of the following: 1. The Ethernet is not connected. 2. The NIC is faulty. ○ *flash* ☼ A flickering RUN LED indicates that the NIC software is waiting to load.

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Problem Solving Flowchart – note the NIC LED (state) and follow the procedure indicated

○ ○
● ● ATTENTION
● or ☀

● READY

○ FAULT
○
●

○ Fast Flicker
○
☀

ATTENTION branch:

Check the Ethernet cable is properly connected.

↓

Wait for 2–3 minutes.

↓

Does the FAULT LED go out? —No→ Complete the module loopback test on the Ethernet cable. **A**

Yes ↓

The ATTENTION state was shown because the Ethernet was not properly connected.

Complete the module loopback test on the Ethernet cable. **A**

↓

Test successful? (READY state) —Yes→ The fault is either at the Ethernet connection device or the Ethernet – see the appropriate manuals.

No ↓

Complete the module loopback test on the NIC. **A**

↓

Test successful? (READY state) —No→ There is a possible problem with the NIC. **C**

Yes ↓

Replace the Ethernet cable. **C**

READY branch:

Perform a module loopback test on the Ethernet cable. **B**

↓

Test successful? (READY state) —Yes→ The fault is either at the Ethernet connection device or the Ethernet – see the appropriate manuals.

No ↓

Perform a module loopback test on the NIC. **B**

↓

Test successful? (READY state) —No→ There is a possible problem with the NIC. **C**

Yes ↓

Replace the Ethernet cable. **C**

FAULT branch:

There is a possible problem with the NIC. **C**

Fast Flicker branch:

Check the LED display on the processor card, then see the *Installation and Service Manual* for your DECNIS.

For details of tests and procedures, refer to the panel with the matching flag (see overleaf).

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A │ Completing the Module Loopback Test
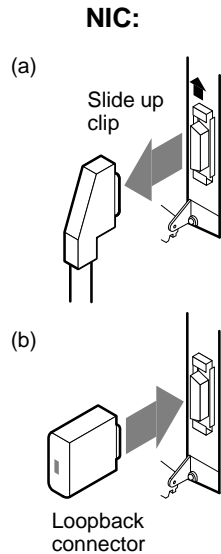
NIC: **Ethernet cable:**

(a)   (a)

Slide up
clip

Ethernet
connection
device

Slide up
clip

1. Attach the Ethernet
loopback connector
(H4080) to the NIC
port or Ethernet cable.

(b)   (b)

Loopback
connector

Loopback
connector
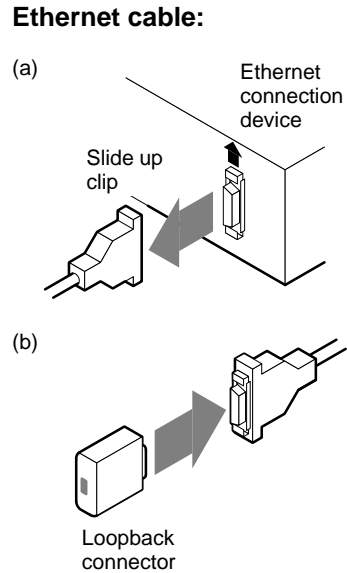
2. Wait until the FAULT LED goes out (approx. 2 min). Observe the
   test result on the LED display.

flash   *no flash*

NOTE
If loading has been dis-
abled for this slot, the
READY LED will not
stop flashing. To enable
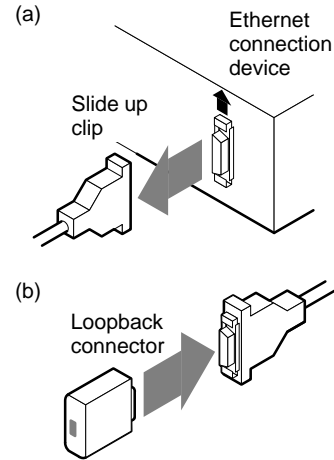the slot, see the manual
*DEC Network Integra-
tion Server Manage-
ment.*
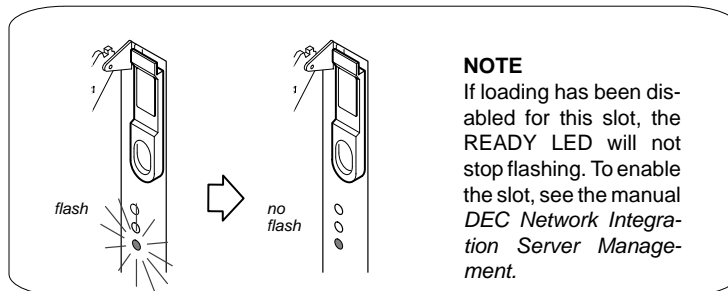
3. If the test passes, the LEDs will show the READY state.
   If the test fails, the LEDs will show the ATTENTION or FAULT state.

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B Performing a Module Loopback Test
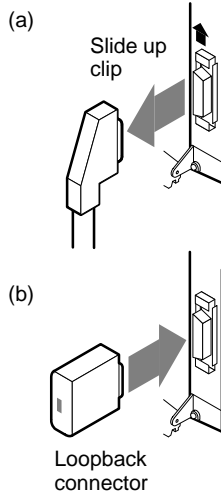
NIC:

(a)

Slide up clip

(b)

Loopback connector

Ethernet cable:

(a)

Ethernet connection device
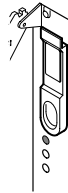
Slide up clip

(b)

Loopback connector

1. Attach the Ethernet loopback connector (H4080) to the NIC port or Ethernet cable.

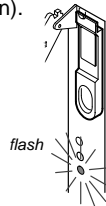2. Run the module loopback test:

1. Move the NIC switch down.

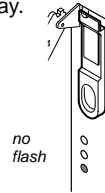2. Wait until the hot-swap LED lights up (approx. 2 s).

3. Move the NIC switch up.

4. Wait until the READY LED stops flashing (max. 2 min).

   flash

5. Observe the test result on the LED display.

   no flash

NOTE
If loading has been disabled for this slot, the READY LED will not stop flashing. To enable the slot, see the manual *DEC Network Integration Server Management.*

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3. If the test passes, LEDs show the READY state.
   If the test fails, LEDs show the ATTENTION or FAULT state.

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C Replacing Faulty Components

Faulty Components	Action
NIC	Install a new NIC. Refer to the *Installation and Service Manual* for your DECNIS: DO NOT do this unless you are a service person.
Ethernet cable	Refer to the panel for attaching cables in the *DEC LANcontroller 601 Cabling Information and Specifications* card.

If replacing the faulty component does not solve the problem, check the *Installation and Service Manual* for your DECNIS: do not perform any procedures in the manual unless you are a service person (see the *Installation and Service Manual* for your DECNIS).