DEC WANcontroller 622

digital™

Problem Solving

Part Number: EK–A0550–PS.001

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 outlines 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.

Note for X.21 leased line and BT Kilostream ®
There is no loopback test for X.21 leased line or BT Kilostream. If you are unable to solve your problem, contact Digital Services.

Loopback Connectors

Loopback Connector	Part Number	Component
50-way loopback connector (male)	DNSXT–CA	NIC
V.36/V.11, EIA-422 V.35	H3198 H3250	Adapter cable and extension cable

® Kilostream is a registered trademark of British Telecommunications, plc.

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NIC 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.

	Slow flash	Module self-test in progress.
	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	The NIC is partly working. You can continue to use working port(s), but you must isolate and replace the faulty component as soon as possible.  A flickering RUN LED indicates that the NIC software is waiting to load.

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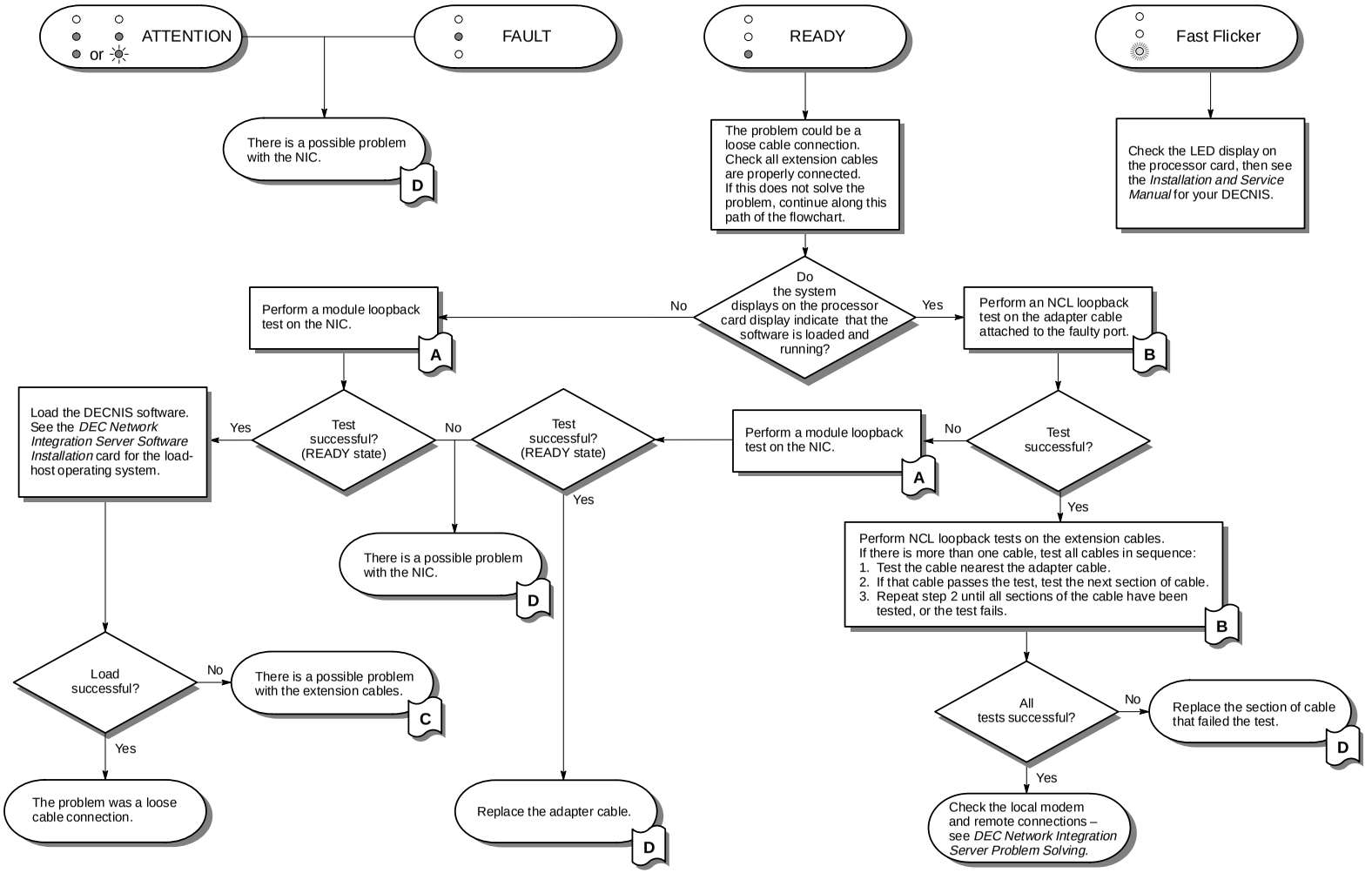
Problem Solving Flowchart – note the NIC LED (state) and follow the procedure indicated



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

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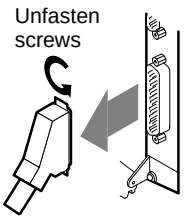
A Module Loopback Test

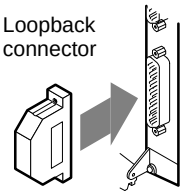
NIC

(a) Unfasten screws



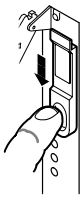
1. Attach the 50-way loopback connector to the port to be tested.

(b) Loopback connector

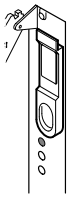


2. Run the module loopback test:

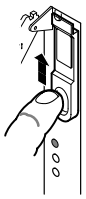
1. Move the NIC switch down.



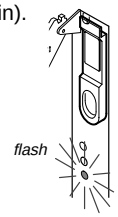
2. Wait until the hot-swap LED lights up (approx. 2 s).



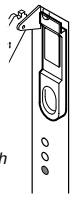
3. Move the NIC switch up.



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



5. Observe the test result on the LED display.



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.*

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

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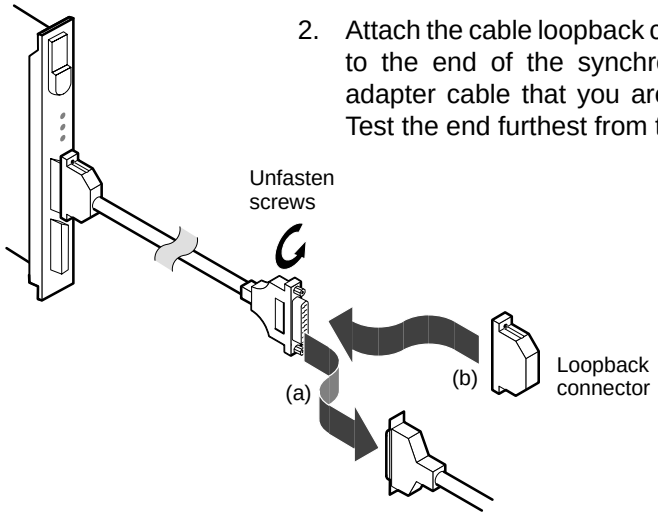
B NCL Loopback Test

1. Start NCL on the load host.

2. Attach the cable loopback connector to the end of the synchronous or adapter cable that you are testing. Test the end furthest from the NIC.



3. Enter the following command:

```
NCL> STARTLOOP NODE server MODEM CONNECT LINE –
_NCL> line–name MODE CONNECTOR
```

When the prompt returns, enter the following command:

```
NCL> LOOP NODE server MOP CIRCUIT circuit [COUNT –
_NCL> integer,] [LENGTH integer,] [DATA type]
```

NCL Command Information

server = server name
line–name = name of physical line
circuit = circuit name

COUNT, LENGTH, and DATA specify the number of blocks, length, and type of data to be sent in the test. The default sends 1 block of 40 bytes with an alternating sequence of 1s and 0s (hexadecimal value=55). For more details, see *DEC Network Integration Server Problem Solving*.

4. If the test passes, no message is displayed.
   If the test fails, an error message is displayed.

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C Check the Synchronous Cables

When no software is loaded, a faulty cable can be detected only by substituting with a new cable:

1. Replace a section of synchronous cable with a new cable.
2. Attempt to load the software.
3. If loading is successful, you have solved the problem (the replaced cable is faulty).
   If loading is unsuccessful, the cable you tested was not faulty. Reconnect the cable.

Repeat the procedure until you have isolated the faulty cable.
If you still cannot solve the problem, contact Digital Services.

D 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.
Adapter cable Extension cable	Refer to the panel for attaching cables in the *DEC WANcontroller 622 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).