



DECswitch 900EF Router Release Notes

Firmware Version 1.0a

October 1995

This is a maintenance update of the DECswitch 900EF Router Version 1.0. These release notes contain firmware and software requirements, and list known conditions and restrictions that apply to the operation of the DECswitch 900EF Router Version 1.0a (also referred to in this document as the module). Note that the software version number displayed by the command line interface (using the `Talk 5`, configuration command) will display `SW=V01.0.002` instead of `V1.0a`.

Contents

What Is New in This Release?	2
Requirements	2
Firmware	2
Hardware	2
Software	2
Docking Station	2
Known Conditions and Restrictions	3
Nomenclature for Module Port Numbers on Bezel	3
FDDI Optical Bypass Relay (OBR)	4
Enable RTS	4
OBM Access	4
IP Host Only Mode	4
HUBwatch	5
TFTP Load Issues	6
Upgrading from a Switch to a Router	7
Module Setup in a DEChub 900	8
Module Setup in a DEChub ONE	9
Accessing the NPB Home Page on the Web.	10

What Is New in This Release?

This section lists problems that existed in the previous release and have been fixed for this release.

- A problem where the firmware fails to perform appropriate link address translation for IP packets received over the FDDI interface when DECnet Phase IV is enabled has been fixed.
- A problem when running IS-IS where LSP packets may become corrupted and IP routing information may become lost has been fixed.
- A problem when bridging and IP routing with OSPF is configured on the FDDI interface would cause incoming OSPF packets to be ignored has been fixed.
- FDDI CONFIG now correctly sets the FDDI interface parameters TREQ, TVX, TMAX-LOWER-BOUND.
- A problem with the DUMP command where a Buglht: Bad Trap error could occur in certain situations after the dump takes place has been fixed.

Requirements

The following sections list requirements for the DECswitch™ 900EF Router.

Firmware

When you are configuring the DECswitch 900EF Router module in a DEChub™ 900 MultiSwitch™, ensure that the DEChub 900 MultiSwitch firmware version is V4.1 or higher.

Hardware

The minimum hardware revision level required to support this release is DECswitch 900EF Router hardware version V1/2 or DECbridge™ 900MX hardware version V0/1.

Software

If you are using HUBwatch™ to manage the module, you must install HUBwatch software version V4.1 or higher.

Docking Station

When the DECswitch 900EF Router is installed into a DEChub ONE-MX docking station, the connection to the FDDI port on the back of the docking station is not supported.

Known Conditions and Restrictions

The following conditions and restrictions apply to the DECswitch 900EF Router module.

Nomenclature for Module Port Numbers on Bezel

The DECswitch 900EF Router hardware and software refers to network connections by a variety of names and numbers. The following table shows the mappings between different nomenclatures.

Name	Description
Bezel Number	The numbers inscribed in the front panel of the DECswitch 900EF Router, above the LEDs and the network connectors.
HUBwatch Port Number	The number used in HUBwatch to refer to a particular port.
Bridge Port Number	A number used by the Command Line Interface (CLI) to refer to a particular interface performing bridging.
Net/Interface Number	A number used by the CLI to refer to a particular network interface.
Interface Name	A descriptive string used by the CLI in output to describe a particular network interface.

The following table show the relationships between these names.

Bezel Number	HUBwatch Port Number	Bridge Port Number	Net/Interface Number	Interface Name
1	1	1	0	FDDI/0
2	2	2	1	Eth/0
3	3	3	2	Eth/1
4	4	4	3	Eth/2
5	5	5	4	Eth/3
6	6	6	5	Eth/4
7	7	7	6	Eth/5

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FDDI Optical Bypass Relay (OBR)

If the module is powered on and the FDDI cables are installed, connect the OBR device to the module in the following order.

Step	Action
1	Disconnect the module's FDDI port connectors from Port 1A/M and Port 1B/S.
2	Connect the OBR device to the module's OBR connector.
3	Reconnect the module's FDDI port connectors to Port 1A/M and Port 1B/S.

Enable RTS

The Enable RTS option is not supported in this version.

OBM Access

To Telnet to the module out-of band via the DEChub ONE or the DEChub 900 OBM port, you must perform the following steps.

Step	Action
1	Configure the OBM IP address via setup menu or command line interface.
2	Initialize the router IP protocol by either: <ul style="list-style-type: none">a. Assigning IP addresses to the DECswitch 900EF module interfaces, orb. Enabling bridging and configuring HST IP address of the module

IP Host Only Mode

To improve IP connectivity in IP host only mode, it is recommended that the bridge ID be set to the highest MAC address assigned to the module. This MAC address is computed as follows:

$$[\text{base MAC address} + 7] \text{ modulo } 256$$

where the base MAC address is the address that appears on the label on the module.

HUBwatch

The following sections relate to HUBwatch software.

Support for Router Products

HUBwatch™ V4.1 contains support for the DECswitch 900EF Router products. Refer to the HUBwatch documentation and Release Notes for details on the use of HUBwatch.

Support for Management Facilities

HUBwatch displays the DECswitch 900EF Router in the Hub Front Panel window but does not provide management facilities except for LAN interconnect

Support for HUBloader Application

The HUBloader application does *not* support the DECswitch 900EF router product.

Support for Telnet Connections

When a DECswitch 900EF Router module is installed in a DEChub that is managed by HUBwatch, double-clicking on the module's bezel in the HUBwatch front panel will invoke a terminal window with a Telnet connection to the module. HUBwatch will attempt to use the highest numbered IP address assigned to the module as the Telnet destination address. If that address is not reachable from the workstation running HUBwatch, then HUBwatch, where applicable, will default to the IP address assigned to the DEChub 900 management. The procedure just described will invoke the terminal window, but will not produce a successful Telnet connection. As a workaround, enter the "telnet" command at another terminal window on the workstation, using one of the other IP addresses assigned to the module.

Support for IP Services

The DECswitch 900EF Router does not support IP services for DEChub 900 management when configured as a *bridge only* with HOST IP address. To use the DECswitch 900EF Router for IP services, assign the IP address to a network interface.

EXPAND Button Does Not Work Properly in Windows Version

If the module is configured with more than 4 ports pointing to the DEChub 900 backplane, HUBwatch requires that you select the "expand" button so that the individual ports may be assigned. When using HUBwatch for DOS/Windows, selecting the "expand" button when all the ports have IP addresses assigned will result in a TELNET window being opened, and a TELNET session to a random address will be attempted. If IP addresses are not assigned, HUBwatch becomes inoperable.

There is no known workaround for this problem.

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TFTP Load Issues

The following sections relate to TFTP issues.

TFTP Timeouts for Reloads

The TFTP load timeout value that is specified in the boot config record is not used. Rather, a sliding window timeout is used, which allows TFTP to adapt to changing network conditions.

TFTP Boot File Name Size

The maximum file name size in the boot config record is 63 characters.

Upgrading from a Switch to a Router

To upgrade a DECswitch 900EF from running switch software to running routing software perform the following steps.

Step	Action
1	<p>Place the routing software image on a TFTP server.</p> <p>Ensure that there is IP connectivity from a port on the DECswitch 900EF to the TFTP server.</p>
2	<p>Configure the IP address of the DECswitch 900EF switch. If the module is installed in a standalone docking station, begin with step c; otherwise, use the DEChub 900 local console as follows:</p> <ol style="list-style-type: none"> Select option [9] Start Redirect Mode, from the DEChub console main menu.. Enter the slot number of DECswitch 900EF switch. Select option [4] Configure IP ... Select option [4] Set In-Band Interface IP Address. Enter the IP Address. Enter the subnet mask. Enter the default gateway (if needed).
3	<p>Download the new image from the TFTP server, if necessary. If the module is installed in a standalone docking station, begin with step c; otherwise, use the DEChub 900 local console as follows:</p> <ol style="list-style-type: none"> Select option [9] Start Redirect Mode, from the DEChub console main menu. Enter the slot number of DECswitch 900EF switch. Chose option [6] Downline Upgrade. Enter the load filename. Enter the load host IP address. Press Return to start the load. <p>When the download is complete the hub console will say:</p> <pre>Module not Responding ... Connection Closed</pre> <p><i>Do not</i> power off the module while the new image is being burned into the flash memory. When the flash programming operation is complete, the module will restart and the hub LCD will display the following message:</p> <div style="border: 1px solid black; padding: 5px; text-align: center; background-color: #f0f0f0;"> DECswitch 900EF/MP Up </div>

Module Setup in a DEChub 900

After a DECswitch 900EF Router is first installed in a DEChub 900 or after resetting to factory defaults, you must perform the following tasks:

- To use LAN interconnect capability of the DEChub 900, configure the DECswitch 900EF Router, and restart with current settings.
- To access the module's command line interface via a Telnet session to the modules in-band IP address, configure the IP address and subnet mask, and then restart the module with current settings.
- To access the module's command line interface via a Telnet session to the modules out-of-band IP address, configure the out-of-band IP address and either the in-band IP address or HST IP address, and restart the module.
- To invoke a Telnet session to the module, double-click on the module's bezel in the HUBwatch front panel. The SNMP community string must be configured using the setup menu.

The following two steps provide an example of how to perform the setup tasks.

Step	Action
1	Use the hub console to set an IP address for management of the DECswitch 900EF/MP.
2	To complete the configuration, access that address using Telnet.

To configure an IP interface from the hub console, proceed as follows.

Step	Action
1	Select option [9] Start Redirect Mode, from the DEChub console main menu.
2	Enter the slot number of DECswitch 900EF router.
3	Select option [4] IP Configuration.
4	Select option [1] Set SNMP Read/Write Community.
5	At the "Enter the community string" prompt type: public.
6	Press Return to return to the IP configuration menu.
7	Select option [2] Set In-Band Interface IP Address.
8	Set the Port Number to the port associated with that IP address.
9	Enter the IP address.
10	Enter the subnet mask.
11	Press Return to return to the IP configuration menu.
12	Select [5] Return to Main Menu.
13	Select [2] Restart with Current Settings.
14	Press Y to confirm.

At this point, one interface (the one you selected) is configured for IP routing with the interface address set to the address you entered. No other protocols or interfaces are configured. Now you should be able to Telnet to the router's IP address, and use the CLI to fully configure the unit.

Module Setup in a DEChub ONE

After a DECswitch 900EF Router is first installed in a DEChub ONE or after resetting to factory defaults, you must perform the following tasks:

- To access the module's command line interface via a Telnet session to the module's in-band IP address, configure the IP address and subnet mask, and restart the module with current settings.
- To access the module's command line interface via a Telnet session to the module's out-of-band IP address, configure the out-of-band IP address, configure the in-band IP address, and restart the module with current settings.

For additional information about in-band and out-of-band IP address configuration, refer to the Bridge Router Software documentation.

Accessing the NPB Home Page on the Web

The Network Product Business (NPB) Unit is pleased to announce the establishment of the NPB Home Page on the World Wide Web. Web addresses are:

Digital USA: **<http://www.networks.digital.com>**

Europe: **<http://www.networks.europe.digital.com>**

Australia: **<http://www.digital.com.au/networks>**

To access the DECswitch 900EF Router Release Note Addendum, select the following six items in the order specified.

1. **Products & Technology**
2. **Technical Data**
3. **Hub Products**
4. **Routers and Routers**
5. **Technical Tips & Notes**
6. **DECswitch 900EF Router Release Notes Addendum**

If you are not yet connected to the Web, you can access the same information through NPB's Bulletin Board System (BBS). All you need is a PC and a modem. Set your modem to 8 bits, no parity, 1 stop bit. Dial 508-486-5777 (U.S.A.)

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