

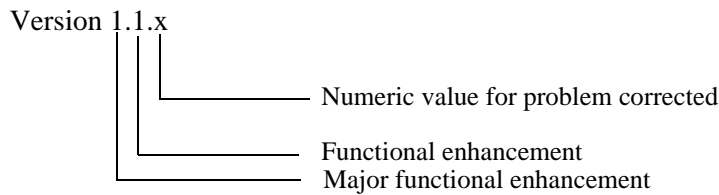


AA-PZ72K-TE

**DECagent 90  
Firmware Version 3.0.4  
Release Notes  
October 1997**

As warranted, DIGITAL changes the firmware of this device to make functional enhancements or to correct reported problems. These release notes identify enhancements and changes to the firmware that affect end-user operations. They also contain firmware and software requirements, and list updates in this release as well as known restrictions that apply to the operation of the DECagent 90 module.

The following example describes the firmware version number:



## Contents

Firmware Requirements .....	2
Software Requirements .....	2
Problems Fixed in This Release .....	2
Configuration Rules .....	2
Known Conditions and Restrictions .....	3
Trap Destination Addresses .....	4
Upgrading the DECagent 90 Firmware .....	4
MOP Load Procedure for the DECagent 90 .....	5
Accessing Online Information .....	8
Network Product Business Web Site .....	9
Using Electronic Mail .....	10

## Firmware Requirements

When you are configuring the DECagent 90 module in a DIGITAL MultiSwitch 900 (formerly DEChub 900 MultiSwitch), Digital Equipment Corporation requires that you use DIGITAL MultiSwitch 900 firmware Version 4.0 or higher to manage the DECagent 90 running firmware Version 3.0.4.

## Software Requirements

If you are using clearVISN software to manage the DECagent 90, you must install clearVISN software Version 2.0 or higher.

## Problem Fixed in This Release

Version 3.0.4 of the agent code fixes the following problem that was reported against Version 3.0.3.

---

Problem	The agent could not manage a DECbridge 90 or a DECserver 90 if the module's mac address begins with 00. (Due to a bug, the agent could not transmit any packets to a DECbridge 90 or DECserver 90 if that module's mac address began with 00. As a result, the module appeared to be unavailable to the agent.)
Status	Fixed. The agent can now manage a module having any mac address.

---

## New Features

There are no new features in this release.

## Configuration Rules

The following configuration rules apply to the DECagent 90 module:

- When using a DECbridge 90/90FL in a stack or hub, make the DECagent 90 the master. Only the DECagent 90 Autodiscoveres and manages the DECbridge 90/90FL.
- The DECrouter T1, T2, and T2A must be installed in positions 1 to 9 in a Digital MultiStack System. They are not recognized above position 9.
- All modules in a stack that are assigned an IP address will respond to user selection with the module's SNMP agent. There are two exceptions: the DEC repeater 90TS and 90FS, when installed as non-manager modules, but with an IP address, will not respond with the individual module's SNMP agent. To access the individual module's SNMP agent, use the "Open..." facility under the clearVISN MultiChassis Manager "File" menu option.
- The DECserver 90TL, 90L, and 90L+ are not Autodiscovered. Use the "Add..." facility under the clearVISN "Configuration" menu option to add these devices to the stack or hub.

## Known Conditions and Restrictions

The following conditions and restrictions apply to the DECagent 90 module:

---

### NOTE

References made to "Version 3.0" of the DECagent 90 firmware, also refer to subsequent Versions 3.0.1, 3.0.2, and 3.0.3.

---

- For standalone operation, you should always plug the DC power cord into the DECagent 90 before plugging in the AC power cord.
- Version 3.0 of DECagent 90 firmware is limited to managing up to 48 modules in up to 16 communities. The Version 2.1 firmware allows up to 64 modules. You can lose some of this information when upgrading to Version 3.0. After the upgrade to Version 3.0, the DECagent 90 retains the first 48 modules it finds when initializing. It scans the database for all possible modules starting at community 1, scanning from slot 1 to 16, and proceeding to community 16. After it finds 48 modules, it ignores all others.
- The DECagent 90 cannot manage any of the new stackable repeaters in remote communities. Remote repeaters are managed via the DECbridge 90, which does not support the new stackable repeaters.
- All DECbridge 90 modules that are managed by the DECagent 90 Version 3.0 firmware must be upgraded to Version 3.1 or higher of the DECbridge 90 firmware. Failing to do so may result in anomalous behavior both in managing the bridge and in managing repeaters in a remote hub.
- The DECagent 90 cannot be a hub master in a DIGITAL MultiSwitch 900 backplane if the Hub Manager is assigned an IP address. When it has an IP address, the Hub Manager should be used to manage DEChub 90 repeaters in the DIGITAL MultiSwitch 900. In a DEChub 90, the DECagent 90 can be a hub master and fully manage the repeaters.
- Version 3.0 firmware is fully compatible with module Rev E03 of DECagent 90 or newer (the module Rev is indicated on the back of the agent). However, DECagent 90 modules prior to Rev E03 may experience diagnostic errors that lead to corruption of the Version 3.0 firmware image in flash, rendering the DECagent inoperable. If this corruption occurs, you must reload the firmware by using the load procedure, which requires a MOP load host. See the sections titled *Upgrading the DECagent 90 Firmware* and *Load Procedure* for the DECagent 90.

## Trap Destination Addresses

The following trap destination address issues apply to the DECagent 90 module:

- You can enter trap destination addresses for the DECagent 90 module's community either from the DECagent 90 console or by an SNMP manager. Trap destination addresses for communities other than the DECagent 90 module's community (remote hubs) must be entered by an SNMP manager.
- Because of a restriction in some MIB compilers, trap definitions containing a variables list that refers to externally defined objects will not compile properly. To accommodate this restriction, the DEChub 90 MIB has a commented variables list for the `svrPortStatusChange` and `brdgPortStatusChange` trap definitions. If your MIB compiler does not have this restriction, see the MIB text for instructions on how to include the variables list in the trap definitions. The section titled `Accessing Online Information` in these release notes explains how to locate MIB information via FTP and from the DIGITAL Network Product Business Web Site.

## Upgrading the DECagent 90 Firmware

The following upgrading issues apply to the DECagent 90 module:

The DECagent 90 firmware may be upgraded using the TFTP protocol. Loads are most easily initiated by either clearVISN Flash Loader or directly from the DECagent 90 console. Using either method, the name of the load file and the IP address of the TFTP server must be provided. See the clearVISN documentation for more detail on loads initiated by Flash Loader; see the DECagent 90 Installation and Configuration manual (EK-DENMA-IN) for more detail on loads initiated from the DECagent 90 console.

When upgrading from an older version of DECagent 90 firmware, follow the guidelines below:

### 1 Upgrading from V1.0 or V1.1:

These versions of firmware cannot perform TFTP loads. They must be loaded using the MOP protocol. Most DIGITAL OpenVMS and ULTRIX systems are capable of performing MOP loads. Refer to the "MOP Load Procedure for the DECagent 90" section at the end of these release notes.

### 2 Upgrading from V2.1:

This version of firmware may be loaded using TFTP as explained above. Note that some loss of nonvolatile configuration may occur due to differences in the way that V2.1 and V3.0 firmware store module information. Refer to the "Known Conditions and Restrictions" section of these release notes for more detail.

### 3 Upgrading from V3.0.1 through V3.0.3:

These versions of firmware may be loaded using TFTP as explained above, with no loss of nonvolatile configuration.

## MOP Load Procedure for the DECagent 90

The MOP load protocol is supported by most DIGITAL OpenVMS and ULTRIX systems. This procedure first loads the preliminary image (denmalod.sys), then the final firmware.

**NOTE:** Perform this procedure only when you are upgrading from Version 1.0 or 1.1 firmware to Version 3.0 firmware, or if the Version 3.0 firmware becomes corrupted.

Step	Action
1	<p>Ensure that the following files are available in the proper location:</p> <p>On OpenVMS: <b>mom\$load:denmalod.sys</b> <b>mom\$load:denma304.sys</b></p> <p>On ULTRIX: <b>/usr/var/mop/denmalod.sys</b> <b>/usr/var/mop/denma304.sys</b></p>
2	<p>Ensure the mop process is running (ULTRIX ONLY).</p> <p><b>a</b> Verify that the ULTRIX RISC load host is set up to allow the downline load. The mop_mom process must be running. To verify that this is the case, type the following text:</p> <p><b>ps -ax   grep mop_mom</b></p> <p>The mop_mom process should display.</p> <p><b>b</b> If the mop_mom process does not displayed, type the following text:</p> <p><b>/etc/mop_mom</b></p>
3	<p>Configure the load host. The load host must have its circuit service enabled. Use the following procedure to enable the circuit service:</p> <p><b>a</b> Enter the Network Control Program (NCP) using the following command:</p> <p><b>\$ ncp</b></p> <p><b>b</b> Enter the following command to see whether the load host is set up to allow downline loads:</p> <p><b>ncp&gt; sho circ qna-0 char</b></p> <p>Use the appropriate Ethernet circuit; for example, sva, bna, qna, and so on.</p> <p><b>c</b> If the service is not enabled, enter the following commands to enable the service. Note that you are turning off the network here! You must have system privileges.</p> <p><b>ncp&gt; set cir qna-0 state off</b> <b>ncp&gt; set cir qna-0 service enabled</b> <b>ncp&gt; set cir qna-0 state on</b></p>

Step	Action
d	Set up a node for the DECagent 90 module. Follow these steps to set up a node:
i	Enter the following command using a new address in place of x.x:
	<b>ncp&gt; set node x.x name denma</b>
ii	Enter the following command:
	<b>ncp&gt; set node denma hardware address xx-xx-xx-xx-xx-xx</b>
	If you do not know the hardware address of the DECagent 90, you can find it printed on a label on the front panel of the module. You can also determine the address by selecting console menu number 3, Show Current Settings.
iii	Enter the following commands:
	<b>ncp&gt; set node denma service circuit qna-0</b>
	On OpenVMS, type: <b>ncp&gt; set node denma load file mom\$load:denma304.sys</b>
	On ULTRIX, type: <b>ncp&gt; set node denma load file /usr/var/mop/denma304.sys</b>
4	Initiate the downline load of the image loader via the terminal that is attached to the front asynchronous port on the DECagent 90 module. You must enable CCI on the terminal. Use the following procedure to enable CCI:
a	Connect the terminal to the asynchronous port (DB25 connector).
b	Set the communication settings as follows:
	<b>9600 baud</b>
	<b>8 bits</b>
	<b>No parity</b>
	<b>1 stop bit</b>
c	Power cycle the DECagent 90 module.
	Result: The DECagent 90 performs a self-test that lasts approximately 10 seconds.
d	Before the self-test is completed, press:
	<b>&lt;Ctrl-I&gt;</b>
	Result: The following text is displayed on your screen:
	<pre> Digital Equipment Corporation @ DENMA Console Command Interpreter CCI&gt; </pre>

---

<b>Step</b>	<b>Action</b>
<b>e</b>	<p>At the CCI&gt; prompt, enter the following command:</p> <p><b>CCI&gt; load denmalod.sys</b></p> <p>Result: The following message is displayed on the terminal screen:</p> <pre>Attempting to locate load host Host AA-00-04.....located Requesting load from load host Loading from load host Image load complete</pre> <p><b>Note:</b> If the Invalid load image message is displayed, there is an error in the load process. Try loading again.</p>
<b>f</b>	<p>Start the image loader as follows:</p> <p><b>CCI&gt; start 200000</b></p> <p>Result: If the image loader starts properly, the LED closest to the terminal connector is flashing.</p>
<b>5</b>	<p>Perform the downline load of the software image on the load host. To load the DECagent 90 with the software image, enter the following command:</p> <p><b>ncp&gt; load node denma</b></p> <p>Result: If the image loads properly, the DENMA (DECagent 90) automatically performs a reset and starts the software image.</p> <p>If a failure occurs during loading, the second LED flashes, indicating that the image did not load properly. Retry the load procedure, starting at <b>Step 3-a</b>.</p>

---

## Accessing Online Information

### *Direct Access via FTP*

Current release note information, RFCs, firmware, and MIBs are available online. Refer to the Accessing MIBs and RFCs section of your DECagent 90 Installation and Configuration manual for instructions on retrieving information. The online locations are as follows:

---

DECagent 90 release notes	<b><a href="ftp.digital.com/pub/DEC/hub900/release">ftp.digital.com/pub/DEC/hub900/release</a></b>
DECagent 90 firmware	<b><a href="ftp.digital.com/pub/DEC/hub900/firmware">ftp.digital.com/pub/DEC/hub900/firmware</a></b>
DEChub 90 MIB	<b><a href="ftp.digital.com/pub/DEC/hub900/mibs">ftp.digital.com/pub/DEC/hub900/mibs</a></b>

---

DECagent 90 files are named in the following syntax:

**denmaXXX.\*\*\***

where **XXX** is the version number and **\*\*\*** is the file extension.

For example: **denma304.txt**



## Network Product Business Web Site

Further information on this network product or topic is available on the DIGITAL Network Product Business (NPB) Web Site as well as its Bulletin Board System. Both systems maintain a common, rich set of up-to-date information on NPB's products, technologies, and programs.

The Web Site can be reached at geographic locations via the following URLs:

---

Americas Network Product Business Home Page	<a href="http://www.networks.digital.com/">http://www.networks.digital.com/</a>
Europe Network Product Business Home Page	<a href="http://www.networks.europe.digital.com/">http://www.networks.europe.digital.com/</a>
Australia Network Product Business Home Page	<a href="http://www.digital.com.au/networks/">http://www.digital.com.au/networks/</a>
Digital Equipment Corporation Home Page	<a href="http://www.digital.com/">http://www.digital.com/</a>
Japan Network Product Business Home Page	<a href="http://www.dec-j.co.jp/ic/network/">http://www.dec-j.co.jp/ic/network/</a>

---

You can access firmware, release note, MIB, and RFC information for your product as follows:

---

Step	Action
1	From the Network Product Business Home Page, choose the <b>Technical Information</b> link.
2	From the Technical Information page, choose the <b>Technical Information (Drivers, Manuals, Tech Tips, etc.)</b> link.
3	In the Technical Data page, scroll to the <b>Hub Products</b> list and choose either of the following links: <ul style="list-style-type: none"><li>a To access firmware and release notes, choose <b>Hubs Firmware</b>.</li><li>b To access MIBs and RFCs, choose <b>Hubs MIBs</b>.</li></ul>

---

To connect to the Network Product Business Bulletin Board System, you need a PC and a modem. Set your modem to 8 bits, no parity, 1 stop bit. Dial 978-506-5777 (U.S.A.).

## Using Electronic Mail

The Network Information Center (NIC) of SRI International provides automated access to NIC documents and information through electronic mail. This is especially useful for users who do not have access to the NIC from a direct Internet link, such as BITNET, CSNET, or UUCP sites.

To use the mail service, follow these instructions:

Step	Action
1	Send a mail message to <b>SERVICE@NIC.DDN.MIL</b>
2	In the SUBJECT field, request the type of service that you want followed by any needed arguments.

Usually, the message body is ignored, but if the SUBJECT field is empty, the first line of the message body is taken as the request.

The following example shows the SUBJECT lines you use to obtain DDN NIC documents:

```
HELP
RFC 822
RFC INDEX
RFC 1119.PS
FYI 1
IETF 1IETF-DESCRIPTION.TXT
INTERNET-DRAFTS 1ID-ABSTRACTS.TXT
NETINFO DOMAIN-TEMPLATE.TXT
SEND RFC: RFC-BY-AUTHOR.TXT
SEND IETF/1WG-SUMMARY.TXT
SEND INTERNET-DRAFTS/DRAFT-IETF-NETDATA-NETDATA-00.TXT
HOST DIIS
```

Requests are processed automatically once a day. Large files are broken into separate messages.

© Digital Equipment Corporation, 1997. All rights reserved. Printed in U.S.A.

clearVISN, DEC, DECagent, DECbridge, DEChub, DECreeper, DECserver, OpenVMS, ULTRIX, VMS, DIGITAL and the DIGITAL Logo are trademarks of Digital Equipment Corporation.