
HUBwatch for Digital UNIX Version V4.1, Release Notes

This document contains information not included elsewhere in the HUBwatch for Digital UNIX V4.1 product documentation.

**PLEASE READ THESE NOTES BEFORE INSTALLING OR
USING THE SOFTWARE.**

September 1, 1995

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1 Introduction

Version 4.1 of HUBwatch for Digital UNIX is the third release of the HUBwatch application on Digital UNIX. Version 4.1 of HUBwatch for Digital UNIX provides all the functions of the V4.0 release and adds support for the following network modules:

DECconcentrator 900FH
Digital MultiStack System

The HUBwatch V4.1 software also recognizes the following modules when they are installed in the DEChub 900MS:

DECpacketprobe 90 and 900RR
RouteAbout Access EW and TW
DECswitch 900EE and 900EF contain bridge/routing firmware

HUBwatch displays these modules in the Hub Front Panel window but does not provide management facilities for these modules. However, in the case of the DECpacketprobe 90 and 900RR, HUBwatch has the ability to launch the PROBEwatch application, if available, to manage these modules. In the case of the other devices HUBwatch will launch a TELNET window through which they can be configured.

HUBwatch also contains a firmware upgrade application called HUBloader to upgrade modules, hubs and the GIGAswitch/FDDI. Note that the HUBloader application has its own release notes.

2 User Information

The HUBwatch for Digital UNIX V4.1 user information set consists of both hardcopy and online information.

- The *HUBwatch Installation and Configuration* manual describes how to install and configure HUBwatch software and how to configure the network modules in the DEChub 90 and DEChub 900 MultiSwitch hubs.

Important

Important setup and configuration information about the DEChub 90, the DEChub 900 MultiSwitch, and the DEChub modules is contained in the *HUBwatch Installation and Configuration* manual.

- The *HUBwatch Use* manual describes how to use the HUBwatch graphical user interface and the network module management windows and provides some troubleshooting information.
- The HUBwatch online hyperhelp contains all the information provided in the *HUBwatch Use* manual plus descriptions of the management windows, step-by-step management procedures, context sensitive help for labels and fields on the management windows, and two tutorials for getting started.

Important

HUBwatch for Digital UNIX V4.1 uses hyperhelp files that are common with HUBwatch for OpenVMS VAX V4.1. Therefore, there will be

references to OpenVMS specific information as well as functionality unique to the OpenVMS version (for example, Alarms support) that does not apply to HUBwatch for Digital UNIX.

3 License Requirements

HUBwatch for Digital UNIX requires the HUBWATCH-FOR-OSF license PAK. The PAK must be registered in lmf before HUBwatch can be run.

4 Firmware Requirements

HUBwatch for Digital UNIX, V4.1 software supports the following minimum revision firmware, or the latest available:

DECagent 90	V3.0.1
DECbridge 90/90FL	V3.9
DECbridge 900MX	V1.5.0
DECbrouter 90T1/90T2/90T2a	9.14(1)
DECconcentrator 900MX	V3.1.1
DECconcentrator 900TH	V3.1.1
DECchub 900 MultiSwitch Hub Manager	V4.0.2
DECmau 900TH	V1.2.1
DECmau 900TL	V1.1.0
DECrepeater 90FS	V2.0.0
DECrepeater 90TS	V2.0.0
DECrepeater 90T-16	V1.0
DECrepeater 900FL	V1.1.0
DECrepeater 900SL	V1.1.0
DECrepeater 900TL	V1.1.0
DECrepeater 900FP	V1.1
DECrepeater 900GM	V2.0.0
DECrepeater 900TM	V2.0.0
DECserver 90M	NAS V1.3.
DECserver 90TL	BL44, or NAS V1.3
DECserver 900TM	NAS V1.3, BL80-29
DECserver 900GM	NAS V1.3, BL80-29
DECswitch 900EE	V1.1.1
DECswitch 900EF	V1.5.2
GIGAswitch/FDDI SCP Card	V2.20 DL1.00 BB2.00
GIGAswitch/FDDI Clock Card	V2.10
GIGAswitch/FDDI FGL-2 Line Card ...	V2.20
GIGAswitch/FDDI FGL-4 Line Card ...	V2.00
PEswitch 900TX	V1.1.1
PORTswitch 900CP	V2.1.0
PORTswitch 900TP	V2.1.0
PORTswitch 900FP	V2.0.0
RoamAbout Access Point	V1.0.0

When performing firmware upgrades the following steps are recommended:

1. If you are currently running HUBwatch for Digital UNIX V4.0, go to step 3.
2. Prior to performing firmware upgrades, make any hub configuration changes that are needed using HUBwatch for OSF/1 AXP V3.1.
3. Upgrade to HUBwatch for Digital UNIX V4.1.
4. Using the HUBloader application provided with HUBwatch for Digital UNIX V4.1, upgrade the DECchub 900 MultiSwitch Hub Manager firmware.

5. Again, using the HUBloader, upgrade the DEChub modules.

Important

Releases of HUBwatch typically correspond with module firmware releases. Digital does not recommend using HUBwatch V3.1 with corresponding HUBwatch V4.0/V4.1 firmware releases. Neither should HUBwatch V4.0/V4.1 be used with older corresponding HUBwatch V3.1 firmware releases.

As Digital is continuously improving the quality of the DEChub product family, periodic releases of firmware are planned. To ensure that you have the latest functions and quality of firmware, always plan on using the most current versions of firmware.

Information about the latest firmware releases may be obtained from your local Digital reseller or your local Digital sales office. Information may also be obtained from the INTERNET. Refer to the README document found in the /pub/DEC/hub900 directory at ftp.digital.com.

Firmware updates are customer installable. For automatic notification of new firmware releases, return the Business Reply Card distributed with this product, or send your Name, Title, and Mailing Address to the following INTERNET address:

dechub_notice@lkg.dec.com

Refer to the HUBloader online help for further instructions on upgrading DEChub firmware.

5 Software Requirements

HUBwatch for Digital UNIX V4.1 requires that the following software be installed and operating. To check the subset status on your system use the following command:

```
setld -i
```

- DEC OSF/1 Operating System, V2.0 to V2.2 including the following subsets (* indicates any subset subversion number):
 - OSFBASE2*
 - OSFX11*
 - OSFCLINET2*
 - OSFINET2*
- Digital UNIX Operating System, V3.0 to V3.2 including the following subsets (* indicates any subset subversion number):
 - OSFBASE3*
 - OSFX11*
 - OSFCLINET3*
 - OSFINET3*

6 HUBwatch Files

The following files are provided with HUBwatch for Digital UNIX V4.1.

In directory `/usr/kits/HUBwatch`:

```
Hubloader_gray
Hubloader_salmon
Hubloader_tan
Hubloader_teal
hubloader.release_notes
Hubwatch_gray
Hubwatch_salmon
Hubwatch_tan
Hubwatch_teal
hubwatch.release_notes
hubwatch_agents
hubwatch_fields
hubwatch_mib_master
hubwatch_questionnaire.txt
hubwatch_reg
dcffiles.dat
loaddata.dat
ipndu.trl
sddf.stp
```

The HUBloader resource files are `Hubloader_gray`, `Hubloader_salmon`, `Hubloader_tan` and `Hubloader_teal`. The `dcffiles.dat`, `loaddata.dat`, `sddf.stp` and `ipndu.trl` files are HUBloader utility files. The file `hubloader.release_notes` is the Release Notes file for HUBloader for Digital UNIX V4.1 in ASCII text format.

The file `hubwatch.release_notes` is the Release Notes file for HUBwatch for Digital UNIX V4.1 in ASCII text format (this document). The HUBwatch resource files are `Hubwatch_gray`, `Hubwatch_salmon`, `Hubwatch_tan` and `Hubwatch_teal`. The file `hubwatch_agents` is the HUBwatch agents file template. The file `hubwatch_mib_master` is the HUBwatch MIB variable translation database. The file `hubwatch_questionnaire.txt` is the customer documentation questionnaire for the HUBwatch on-line help. The files `hubwatch_reg` and `hubwatch_fields` are HUBwatch launch files for POLYCENTER NetView for Digital UNIX.

In directory `/usr/kits/HUBwatch/bin`:

```
hubloader
hubwatch
```

The primary HUBwatch and HUBloader images.

In directory `/usr/bin`:

```
hubwatch
hubloader
```

These are softlinks to the images in `/usr/kits/HUBwatch/bin`.

In directory `/usr/kits/HUBwatch/uid`:

```
hub_gsw_gui_filter_sum.uid
hub_gsw_gui_front_panel.uid
hub_gsw_gui_lc_sum.uid
hub_gsw_gui_sys_sum.uid
hub_gui_agent_sum.uid
hub_gui_alarms.uid
hub_gui_brut_counters.uid
hub_gui_brut_port.uid
hub_gui_brut_sum.uid
hub_gui_comm_table.uid
hub_gui_db900.uid
hub_gui_db90_detail.uid
hub_gui_db90_fdb.uid
hub_gui_db90_filter.uid
hub_gui_db90_port_sum.uid
hub_gui_db90_spanning_tree.uid
hub_gui_db90_sum.uid
hub_gui_db90_trfc.uid
hub_gui_dsvr90_sum.uid
hub_gui_dsvr_counters.uid
hub_gui_dsvr_port.uid
hub_gui_dsvr_sum.uid
hub_gui_dsvr_tl_counters.uid
hub_gui_dsvr_tl_port.uid
hub_gui_dsvr_tl_sessions.uid
hub_gui_find.uid
hub_gui_fp_phys_900bezels.uid
hub_gui_fp_phys_90bezels.uid
hub_gui_front_panel.uid
hub_gui_interconn.uid
hub_gui_loader.uid
hub_gui_mod_add_del.uid
hub_gui_poll_int.uid
hub_gui_rpt900_counters.uid
hub_gui_rpt900_dpr.uid
hub_gui_rpt900_port.uid
hub_gui_rpt900_sec.uid
hub_gui_rpt900_sum.uid
hub_gui_rpt90_port.uid
hub_gui_rpt90_sum.uid
hub_gui_sum.uid
hub_gui_tr900th.uid
hub_gui_wc900.uid
hub_msg.cat
icon_browser.uid
```

These are the HUBwatch Motif user interface (UID) files.

In directory /usr/lib/X11/app-defaults:

```
Hubwatch
Hubloader
```

These are the HUBwatch and HUBloader default resource files.

In directory /usr/lib/X11/help:

```
gigaswitch.decw_book
hubwatch.decw_book
hubloader.decw_book
```

These are the Bookreader-based on-line help files. On-line help is invoked through the "Help" pull-down or any of the "Help" push buttons on the management windows.

In directory /usr/man/man1:

hubwatch.1

This is the HUBwatch man page.

6.1 Setting HUBWATCH_LIBRARY

To have HUBwatch and HUBloader applications utilize your agents file, the environment variable HUBWATCH_LIBRARY must be defined. It will be defined as a directory that contains the agents file—hubwatch_agents. For example, suppose the agents file is in /usr/users/hhh.

The syntax for csh users,

```
% setenv HUBWATCH_LIBRARY /usr/users/hhh
```

The syntax for Bourne Shell users

```
$ HUBWATCH_LIBRARY=/usr/users/hhh  
$ export HUBWATCH_LIBRARY
```

6.2 Resource Files

The HUBwatch and HUBloader resource files contain alternate color palettes for the HUBwatch and HUBloader windows. These files are Hubwatch_gray, Hubloader_gray, Hubwatch_salmon, Hubloader_salmon, Hubwatch_tan, Hubloader_tan, Hubwatch_tea and Hubloader_tea. When HUBwatch starts it locates the resource file by first looking for the file "Hubwatch" in the user login directory. If HUBwatch does not find the file, then, by default, it uses /usr/lib/X11/app-defaults/Hubwatch as the resource file. On installation this file is a copy of Hubwatch_tea. To change the resource file copy one of the resource files to the user login directory and rename it to "Hubwatch". Note that for the HUBloader application the same is done with the file "Hubloader." If HUBloader is started from HUBwatch, the HUBwatch default resource file colors will override the HUBloader default resource file colors.

6.3 Agent File

The environment variable HUBWATCH_LIBRARY must be defined in order for HUBwatch to locate the agents file. If an agents file is to be shared among HUBwatch users, then the HUBWATCH_LIBRARY directory should be accessible to all sharing HUBwatch users. Users who will add agents will need write access to that directory and to \$HUBWATCH_LIBRARY/hubwatch_agents.

Note that a template of the agents file is located in /usr/kits/HUBwatch/hubwatch_agents. Because it was put there at installation time, this file is writeable only by root. If you copy this template file to HUBWATCH_LIBRARY, perform a chmod to adjust the file protection accordingly.

7 Warnings, Known Problems, and Restrictions

The following are warnings, known problems, or restrictions for HUBwatch for Digital UNIX V4.1.

7.1 Agent Setup and Configuration Issues

- If a user changes the community name of any agent displayed in the HUBwatch Front Panel window, the HUBwatch application must be restarted.
- If the user changes the community name of the DEChub 900 Hub Manager, then the Hub Manager must be reset with current defaults.
- The DEChub 900 Hub Manager requires a minimum community string length of four characters. HUBwatch allows you to set one character community strings.
- While upgrading the firmware in a DEChub module, do not use HUBwatch (or *any* SNMP manager) to communicate with the module during the firmware upgrade. Doing so could cause the firmware load to fail.

7.2 General HUBwatch Use Issues

- HUBwatch can accommodate agent files that contain a maximum of 255 entries.
- DECconcentrator 900s with V3.0.0 firmware will sometimes report incorrect fan status in the Environmental Summary view. If you receive a fan status of red, upgrade the DECconcentrator firmware and reenter the Environmental Summary view to confirm if the fan is really inoperable.
- HUBwatch cannot distinguish between a DECBrouter 90T2 and a DECBrouter 90T2a because they both use the same sysOID. Therefore, HUBwatch will display a DECBrouter 90T2 for the DECBrouter 90T2a.
- Use caution when connecting twisted-pair wiring in your network.
 - Connecting an Ethernet twisted-pair cable to an FDDI twisted pair network will disrupt Ethernet traffic.
 - Ethernet twisted pair ports on DEC repeater, PORTswitch, and PESwitch modules should be wired to end stations using a straight-through cable. Ethernet twisted pair ports on DECswitch and DECbridge modules should be wired to end stations using a cross-connect cable, or wired to repeaters using a straight-through cable. Consult the installation manuals supplied with the DEC repeater, PORTswitch, PESwitch, DECbridge, and DECswitch devices for more information.
- If the value of either the timeout or retry field is zero, the HUBwatch software uses the default value. For timeout, the default value is 5 seconds. For retry, the default value is 2 retries.
- If you use very large timeout or retry values, the HUBwatch application may appear to hang for long periods of time.
- After pressing either the **Reset** or **Factory** button in many HUBwatch windows, HUBwatch issues a reset or reset-to-factory request to the device, then tries to update the information in the window. Because the device may be still resetting, it is not uncommon for the update SNMP requests to time-out resulting in a "Response timed out" message being posted. This is expected

behavior. To verify the updated contents of the screen you may need to wait up to a minute before pressing the button on the window.

- You cannot use the HUBwatch software to change device passwords for the DECbridge 90, DECbridge 90FL, DECserver 90L and DECserver 90L+ modules after adding the modules. You must first change the password in the module, then add the module. Enter the module password (if used) in the "Current Password" field of the Add Module window. If you set a password in the module and then you fail to enter the current password in the Add Module window, you will not be able to do sets on the module. If this happens, delete the module then use the Add Module window to add it again being sure to enter the current password.
- Note that the HUBwatch agents file restricts the use of comment lines to the beginning of the file. Any full-line comment edited into the file after the first agent entry will be removed whenever HUBwatch updates the file due to agent modification, addition or deletion. However, comments included on the same line with an agent entry will be preserved.
- If HUBwatch polling is enabled for some time, performance degradation in HUBwatch may result. If this problem is seen, exit and restart HUBwatch.
- For any HUBwatch window that uses a paned window (including the DECbridge 90 filter window, the 900-series bridge/switch module summary window, the Repeater Module Summary window, and the Repeater Port Summary window), do not attempt to resize a pane while the watch cursor is displayed. Doing so may result in a HUBwatch crash.
- LEDs are not supported for the RouteAbout Access modules.
- In the Logical Front Panel window, ports are not displayed for the RouteAbout Access EW and TW modules and DECswitches running routing software.
- In the Logical Front Panel window, a module may show up initially with no ports or with insufficient ports. The module may eventually be repainted in its entirety once the LED states are updated. Resizing the window usually causes the missing ports to appear. (This applies to DECbridge 90, DECbridge 90FL, DECrouter 90T's, DECbridge 900MX, DECswitch 900's, PEs switch 900TX modules.)
- If you replace a module in a particular slot with an identical type of module in that same slot, always exit and restart HUBwatch before trying to manage that module.
- When using the Physical Front Panel window, select a module by clicking on an area of the bezel without text. Clicking over text will not select the module.
- For the Find Address function, HUBwatch allocates a fixed size space to store the local system's ARP cache. If the ARP cache size on the local system exceeds this fixed size space, the Find Address function will fail.
- In the window from where the HUBwatch startup command is run you may receive the following warning from Motif. This is just a warning.

X Toolkit Warning: XtRemoveGrab asked to remove a widget not on the list

- When running a number of Motif based applications simultaneously you may have insufficient resources available to run HUBwatch as well. If this is the case, you should exit from one or more of these applications and then restart HUBwatch. If you have insufficient resources, you may receive the following types of warnings from Motif.

```
X Toolkit Warning: Cannot allocate colormap entry for '#---'
X Toolkit Warning: Urm_RealizeColorTable: Couldn't covert RGB color/pixel
X Toolkit Warning: Urm_CW_ConvertValue: Couldn't covert RGB color/pixel
```

7.3 LAN Interconnect and NMS Connectivity Issues

- Only one SNMP manager shall configure the DEChub 900 MultiSwitch backplane LANs at a time.
- It is imperative that older versions of HUBwatch NOT be used with hubs and modules that have been upgraded to the revisions listed above.

If older versions of HUBwatch are used with hubs and modules that have been upgraded to the revisions listed, and if such a hub contains an FDDI tree or 802.5 Token Ring, unpredictable results will be obtained.

- HUBwatch will not automatically disconnect/connect groups on the LAN Interconnect and Expanded LAN Interconnect windows in response to changes in the Group window. After modifications to the Group window the user will need to disconnect/connect the corresponding groups from the appropriate Interconnect windows as a second step.
- In the LAN interconnect window, the first connection made to an FDDI segment is called a "virtual connection". Since FDDI is by nature a point-to-point topology, a single module connected to an FDDI segment does not constitute an FDDI LAN.

Once you have made a virtual connection, you should, without intervening operations, proceed to make a second connection to that same FDDI segment (or delete that virtual connection). Do not perform other LAN interconnect, station configuration, or port switching operations in the intervening time. Failure to heed this warning may result, in some cases, in HUBwatch crashing.

If you cancel the LAN interconnect window with virtual connections, those virtual connections will be lost.

- If virtual connections are present in the LAN interconnect window, a refresh will cause the cursor to change to the "watch cursor" for about 1-2 seconds, and then prematurely change-back to the normal cursor; however, the refresh does not actually complete for another 5-15 seconds. Please be patient, and be careful what you click on during that time.
- This version of HUBwatch (and related DEChub 900 MultiSwitch firmware) supports Auto Healing of FDDI trees and rings. For an explanation of Auto Healing, refer to the HUBwatch Use manual. That manual contains a reference that reads: "For Auto Healing's impact on Ethernet ports, refer to the HUBwatch release notes." What follows is that additional information:
When a patch-in operation occurs, any Ethernet port(s) on the slot being patched-in will be restored to what those port(s) were just before the preceding patch-out operation.

While such a device is patched-out, HUBwatch will only show the FDDI connection as being patched-out. Even if that module had Ethernet connections to the hub backplane, HUBwatch will not illustrate those connections.

- This version of HUBwatch has improved Ethernet loop detection. While enabling loop detection may increase the time it takes to perform port grouping operations, Digital strongly recommends that you keep loop detection enabled.

This version is accurate in foreseeing Ethernet repeater loops. If after being warned that an operation will cause a loop you proceed with the operation, a loop will certainly result. Digital recommends that you never proceed with an operation after being warned of an impending loop, unless you are managing the hub or module out of band.

- After inserting or removing modules in a hub for which the HUBwatch LAN Interconnect window is still invoked, or if the LAN Interconnect window has been opened for an extended period of time, you should first refresh the Front Panel window and then the LAN Interconnect window before performing any LAN interconnect, station configuration, or port switching operations.
- Occasionally the LAN Interconnect window may not accurately reflect the DEChub 900 MultiSwitch hub manager's database. If previously-made connections do not appear in the window, or the window does not match the actual network configuration, then resynchronize the display by pressing the button in the LAN Interconnect window.
- The DECrepeater 90FS and DECrepeater 90TS can only connect to one flexible Ethernet channel and the backplane ThinWire. Multiple DECrepeater 90FS's and 90TS's must be connected to the same flexible Ethernet channel. In order to move a DECrepeater 90FS or DECrepeater 90TS between flexible Ethernet channels it must be disconnected and reconnected.
- In order to use HUBwatch software to manage any 90-series modules (except DECrepeater 90 series modules) installed in the DEChub 900 MultiSwitch, the dedicated Ethernet ThinWire segment on the DEChub 900 MultiSwitch backplane must be reachable over the network from the NMS.
- Before using the Station Configuration window to change a network building block for a port, disconnect that port from the backplane.
- In the LAN Interconnect window, if there are enough LANs to warrant a scroll bar, then pulling down a connector too quickly can cause the screen to oscillate until you release the mouse button. To avoid this problem either enlarge the window so that the scroll bar goes away, or pull down connections slowly.
- In the LAN Interconnect window, moving an FDDI connection is disabled. To move an FDDI connection, first delete the existing connection, then reconnect it to the desired FDDI LAN.
- In the LAN Interconnect window, moving a connection between the ThinWire segment and an Ethernet flexible channel is disabled. To move a connection between the ThinWire and a flexible segment, first delete the existing connection, then reconnect it to the desired Ethernet LAN.
- LAN Interconnect segment names in the LAN interconnect window can now be up to 31 characters in length; (8 characters was the previous maximum).

7.4 Module Specific Issues

7.4.1 DECagent Issues

- The **Apply** or **OK** buttons are not sensitized in the Agent Summary window of the DECagent 90 when the System Name or Location & Contact fields are deleted by double clicking the mouse. In order to delete long text you must always use **Delete**.
- Version 3.0 of the DECagent 90 will support a maximum of forty-eight modules. Previous versions supported a maximum of sixty-four modules.
- In the Agent Summary window, selecting an unsupported Hub Type will default the Hub Type to a 16-slot DEChub 90.

7.4.2 DECbridge/DECswitch/PEswitch Issues

- If the PEs switch 900TX, DECswitch 900EF, or DECbridge 900MX is managed as a standalone device (either in a DEChub ONE or via its own IP address and community string), on some monitors the FDDI button in the "More Information" box in the Bridging Summary window may not appear. If the FDDI More Information button does not appear, resize the Bridging Summary window to make the window wider.
- The Station configuration display icon on the FDDI summary window is not supported for DECbridge, DECswitch and PEs switch modules.
- Be cautious when using the DECbridge 900MX to provide IP services for the hub. If the bridge is in learning mode when it receives SNMP requests from HUBwatch, the requests may be lost and HUBwatch may encounter SNMP timeouts without any real indication of the problem to the user. Because of these timeouts the HUBwatch window that made the requests may be corrupted. If you determine that the window is corrupted, a refresh will bring the window up to date.
- CRC errors are not incremented as an individual counter but are counted as part of alignment errors instead.
- When you use the Hub Manager in OBM (out-of-band management) mode to manage a DEChub 900MS and its installed modules, the LEDs on the DECswitch 900EE and DECswitch 900EF modules that are running routing software are not supported.

7.4.3 DECreepeater/PORTswitch Issues

- When managing other DECreepeater 90FS and 90TS modules in a 8-slot DEChub 90, 16-slot DEChub 90, or Digital MultiStack System via a DECreepeater 90FS or DECreepeater 90TS agent, the managed DECreepeater 90FSs and 90TSs will occasionally disappear in one HUBwatch poll and reappear in another. A refresh of the HUBwatch front panel is usually sufficient to get a full view of the Hub or MultiStack.
- When managing DECreepeater 90FS and 90TS modules in the configurations listed above but using the Out of Band Management port, the problem above is more pronounced. Thus, when using a DECreepeater 90FS or DECreepeater 90TS as a 8-slot DEChub 90, 16-slot DEChub 90, or Digital MultiStack System manager, use the In Band IP Address rather than the Out of Band. The Out-of-Band Management Port can still be used in a stand alone configuration.

- When acting as an agent, if the DECRepeater 90FS and 90TS's Hub Master is currently enabled and the user needs to toggle the Hub Master through the Agent Summary view to disable and then enable again, press the **Reset** button to regain full SNMP management of the Hub or MultiStack.
- If a DECRepeater 90FS or 90TS's Hub Mastership State is disable, HUBwatch will always display the repeater as a standalone module.
- If a DECRepeater 90FS or 90TS acts as an agent and you set its Hub Type in the Agent Summary view, then you must press the **Reset** button for the new Hub Type to take affect. Refreshes of the Agent Summary view before the Reset will display the original Hub Type. Once you perform the reset you should place the repeater in the "Hub Type" you selected and exit and restart HUBwatch. If you select a Hub Type of DEChub 90 and actually place the agent in a MultiStack, then HUBwatch will not be able to connect to the agent. Either place the agent in a DEChub 90 or use the repeater console port to change the Hub Mastership Backplane Configuration to MultiStack and select Reset to Current Settings. Then the agent will begin managing the stack.
- If your DECRepeater 90FS Hardware Revision is v0, it cannot act as a management agent for a hub or stack. You need a DECRepeater 90FS with a Hardware Revision of v1 or greater for this functionality.
- A DEChub 90 will function in a MultiStack or DEChub 90 when the DECRepeater 90FS or DECRepeater 90TS is the agent but will not be displayed by HUBwatch. A future repeater firmware upgrade will correct this problem.
- Pressing the **Factory** button on any proxied repeater will clear out the non-volatile RAM data, but will NOT reset the device. You must then press the **Reset** button to completely reset the device.
- When DECRepeater 90FS and 90TS modules are being managed in a DEChub 90 or 16-slot DEChub 90 using a DECagent 90 as the SNMP agent for the hub, HUBwatch communicates directly to the DECRepeater 90FS and DECRepeater 90TS module's SNMP agent. Because of this, if you use the **Disable** button on the Repeater Module Summary View, you will no longer be able to communicate with the repeater, since all of the repeater ports have been disabled. To correct this via the console port, a factory reset of the module may be required in order to clear the disabled state.
- If a DECRepeater/PORTswitch has only one station off of a port and has seen a packet from that station prior to Auto-address Learning being enabled on the Repeater Security Summary View, the DECRepeater/PORTswitch will not learn the address of that station. The reason for this problem is that Auto-address Learning is triggered off of the Last Source Address Seen Interrupt, which does not get delivered if the Last Source Address Seen has not changed. This is not a problem if there is more than one transmitting station on the port or if a single station is actively using more than one MAC address. To overcome this problem, the DECRepeater/PORTswitch must be reset with current setting after disabling the port with the single station. Then enable Auto-address Learning and enable the port with the single station. It is also possible to reset the DECRepeater/PORTswitch and enable Auto-address Learning and have this work, provided that Auto-address Learning is enabled before the station sends out any packets. This may be a viable solution with a station that transmits data infrequently.

- If you want to have full HUBwatch MIB support for a DECrepeater 90TS or 90FS being managed by a DECrepeater 90TS or 90FS, then you must provide that module with its own IP address and direct HUBwatch to that module directly. By clicking on a DECrepeater 90FS or 90TS in a hub or stack that is managed by a DECrepeater 90FS or 90TS, you will be provided with proxied access to that module and only a subset of HUBwatch MIB support will be available. You can get full HUBwatch support of the DECrepeater 90FS or 90TS that is the hub master, since it has its own IP address and is not being managed via proxy. Features not available via proxied access are:
 - Repeater Summary View
 - Enable/Disable entire repeater
 - Security View Access
 - Security Log Access
 - Dual-port Redundancy Access
 - Performance Information via Speedo Dials
 The button on DECrepeater 90FS/90TS being managed via proxy by a DECrepeater 90FS/90TS.

As a workaround for the button, you can use the button (this will result in a full reset of the module) or manage the DECrepeater 90FS/90TS direct via its own IP address.
 - Repeater Port Summary
 - Security View Access
 - Security Log Access
 - Dual-port Redundancy View Access
 - Performance Information via Speedo Dials
- For PORTswitches 900CP and 900TP only: Repeater ports that are disconnected in the Port Switching window are automatically disabled and cannot be enabled in the Repeater Port Summary window. To enable a port that was disconnected using the Port Switching window, you must open the Port Switching window and connect the port.
- On the Repeater Port Summary window, the connected stations list will be empty when the window is invoked. To populate the table, press the button at the bottom of the window.
- The Internal LAN LEDs displayed on the HUBwatch Main Physical window will only be displayed as blinking by HUBwatch if there is activity on that Internal LAN which is sourced from the PORTswitch. If the only activity on that Internal LAN is sourced entirely from the DEChub 900 backplane, then the PORTswitch's Internal LAN LED for that Internal LAN will show activity, but this state will not be shown by HUBwatch.
- With HUBwatch Polling enabled, the Repeater Summary window does not update either Port Names or Connected Stations. Users should always perform a of a HUBwatch window prior to making a critical decision based on window data.
- The DECrepeater 90FS Dual-Port Redundancy Enabled LED is not currently supported by HUBwatch.
- The Module OK LED is not currently supported by HUBwatch for DECrepeaters and PORTswitches other than the PORTswitch 900CP and PORTswitch 900TP.

- On DECrepeaters and PORTswitches that support Security, there is a limit of either 2 or 4 Authorized Station Addresses per port. If a station is using DECnet, then the station's Ethernet Hardware Address as well as the DECnet Physical Address must be authorized for the station to operate properly.
- On the Repeater Summary window for DECrepeater 90s in a DEChub 900, there are radio buttons for Auto-partition Algorithm, Auto-partition Reconnect Algorithm, and Jam Bits. When these are set and or pressed a "BadValue SNMP response" error will result. This error can be ignored. This error will not occur with the DECrepeater 90T-16.
- The Repeater Summary window will show the AUI port for a DECrepeater 90T-16 when it is present in a DEChub. The AUI port is not physically accessible in this configuration, although the internal port can be managed.
- On the Repeater Security Summary window, the , , and buttons are applied immediately when pressed. There is no need to press or . The Address Learning Status field on this window is not currently updated after being Enabled, Disabled, or Cleared until a refresh of the window is performed by the user. Please note that this refresh will also cause changes to any modifications which were made on the window and were not applied using the button, so you may want to perform any desired changes to the Address Learning Status prior to other modifications.
- On the Repeater Port Details window, the Link Test Admin(istration) Status Enable/Disable Buttons are not properly de-sensitized for the AUI and BP (Backplane) ports of those DECrepeaters and PORTswitches that have ports that support the Link Test Admin(istration) Status feature. Selecting Enable for these ports will result in a "BadValue SNMP response" error message. This error can be ignored.
- The LAN Segment Name Field on Repeater windows is not currently supported.
- The Group Name Field on Repeater windows is not currently supported.
- In some situations involving DECrepeater 90T-16 modules in a DEChub 900, the Administration Status for a port may not be reported as expected immediately after an Enable, Disable, or Enet-Reset. In such cases performing a refresh of the Repeater window after a short while should display the proper status.
- On the Repeater Security Summary window, if the user selects the All Front Panel Ports button and then enables and disables Prevent Eavesdropping, pressing or will result in the enabling of Prevent Eavesdropping (that is, the initial enable value sticks). If the user wishes to disable Prevent Eavesdropping, do not set the Prevent Eavesdropping to enable prior to setting it back to disable, leaving it at its initial value of disable. If Prevent Eavesdropping is enabled and a setting of disabled is desired, exit and re-enter the window.
- On the Repeater Summary window the Station Configuration button is incorrectly sensitized for a DECrepeater 90TS in a DEChub. This feature is only applicable when the DECrepeater 90TS is in a standalone configuration.
- On the Repeater Summary window the MAU type icons for the BP (Backplane) and AUI ports of a DECrepeater 90T-16 do not show up correctly. They show up as 10BaseT type connectors rather than AUI or ThinWire type connectors.

- On the Repeater Security Summary window, if you select a single port or All Front Panel Ports, make changes to the window data, and then select another port or All Front Panel Ports, a pop-up message displays warning you about modifications that have not been applied. Currently this warning pop-up message box does not allow you to cancel changing the selected port(s).
- The Online Help for 900-Series Repeaters states that the Port Table Administration Status "red dashed arrow" icon signifies that the port is enabled but either in dual-port redundancy standby mode or non-operational due to an error. This is correct. However, this icon will also be displayed for a port which is enabled, if the entire repeater has been disabled through management action (that is, `Disable` button on Repeater Summary window). Those ports on the repeater whose Administration Status is set to be disabled, will display the usual disabled port icon ("red open arrow" icon).

The "red dashed arrow" icon is also displayed for an enabled backplane ThinWire port (BP) of a repeater, which has been disconnected from the ThinWire backplane segment of the DEChub 900MS via the LAN Interconnect View.

7.4.4 DECserver Issues

- For the DECserver 90TL, 134 baud is displayed in the speed menus in both the Terminal Server Summary window and the Port Summary window, but it is not a legal speed for the module. Do not select it.
- For the DECserver 90TL, DECserver 90M, DECserver 900TM and DECserver 900GM certain values (such as Port Speed, Parity and Character Size) shown in the Terminal Server Port window are not necessarily the same values displayed by the terminal server LIST PORT command if the port speed is set to Autobaud.
- The DECserver 900TM and 900GM are not manageable in the DEChub 900 MultiSwitch from the HUBwatch application unless the backplane port connector number 1 is on the same LAN as the NMS station, or the server is otherwise reachable over the network from the NMS station.

7.4.5 GIGAswitch/FDDI Issues

Note that this product only supports the GIGAswitch/FDDI. It does not support the GIGAswitch/ATM product.

- Functional support for the GIGAswitch/FDDI has not changed since the HUBwatch for OSF/1 (Digital UNIX) V3.1 release. New functionality incorporated into the V2.2 release of the GIGAswitch/FDDI is not supported through HUBwatch for Digital UNIX V4.1.
- The Logical Front Panel is not supported for the GIGAswitch/FDDI. The Physical Front Panel window is always displayed.
- In the GIGAswitch/FDDI FDDI MAC Summary window, GIGAswitch/FDDI firmware reports the wrong value for the UN DA Flag. Also, the firmware does not correctly support the Restricted Token Timeout function.
- In the GIGAswitch/FDDI Line Card Summary window, the GIGAswitch/FDDI firmware does not currently allow the Restricted Timeout, the Connection Policy or the Timer Setup to be set.

- For the FGL-4 line card, all ports on the module are shown as the same PMD type of the first port of the module. The FGL4 reports the status of the first PMD for all PMDs.

7.4.6 DECswitch/RouteAbout Access Issues

- When a DECswitch with routing code or RouteAbout Access module is installed in a DEChub managed by HUBwatch, double-clicking on the module's bezel in the HUBwatch front panel will invoke a DECterm 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. This will invoke the DECterm, but will not produce a successful TELNET connection. As a workaround, enter the "telnet" command at another DECterm on the workstation, using one of the other IP addresses assigned to the module.

8 Known Errors in the Documentation

The documentation errors are grouped in the following categories:

- HUBwatch Installation and Configuration manual
- HUBwatch Use manual

8.1 Errors in the HUBwatch Installation and Configuration Manual

The following new module is not documented in the manual.

- RoamAbout Access Point

To configure the access point module, use the configuration instructions for the DECbridge 900MX.

8.2 Errors in the HUBwatch Use Manual

The following new module is not documented in the manual.

- GIGAswitch/FDDI FGL-4

For descriptions and management information, refer to the online help.