

**HP D2355A OpenView DTC Manager**

**Release 14.2  
Installation and Upgrade Guide**



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## History

The following list shows the dates of each edition of the manual, with the corresponding OpenView DTC Manager software release. Note that new software updates may occur between manual releases, so the software you receive with this manual may have a later version number. The version number given below corresponds to the earliest software release for which this manual is valid.

<b>Edition Number</b>	<b>Date</b>	<b>Software version number</b>
Edition 1	June 1991	<i>from</i> A.10.50
Edition 2	October 1991	<i>from</i> A.12.00
Edition 3	April 1992	<i>from</i> A.12.10
Edition 4	February 1993	<i>from</i> A.14.00
Edition 5	July 1993	<i>from</i> A.14.10
Edition 6	August 1994	<i>from</i> A.14.20

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## Conventions

<b>Bold</b>	Bold text is used for all on-screen text seen by the user in the OpenView Windows environment.
type	Type text is used to represent user input to the screen in the OpenView Windows environment, and all text appearing on terminals operating in text mode.
<i>Italic</i>	Italic text is used for emphasis and for the titles of documents.

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**Caution** The caution sign denotes a hazard. It calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the product. Do not proceed beyond a caution sign until the indicated conditions are fully understood and met.

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**Note** A note indicates an important point.

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## Naming Conventions

The following table lists the abbreviations used in this manual for certain products.

Name used in this manual	What it means
The workstation	The combination of the PC, the stack of supporting software, and the DTC Manager software.
The DTC Manager	The HP OpenView DTC Manager software. Note that this is not the same as the workstation.
OpenView	HP OpenView Windows/DOS
DTC 16 DTC 16iX DTC 16MX DTC 16RX DTC 16TN DTC 48 or DTC 48/3000 DTC 72MX DTC ARPA Telnet Express	HP 2340A HP J2062A HP J2063A HP J2064A HP J2060A HP 2345A/B HP J2070A HP 2344A
HP 3000/900	HP 3000 Series 900 systems
HP 9000	HP 9000 Series 700/800 systems
DTC Memory Upgrade Kit	HP 2348A

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## Other Manuals

The following manuals are relevant to installing DTC Manager 14.2 and migrating from earlier releases of DTC Manager. See *Using HP OpenView DTC Manager* for a full list of documentation.

- *HP OpenView Windows 7.2 SNMP Platform User's Guide* (5961-9883)
- *DTC Planning Guide* (D2355-95017)
- *Using HP OpenView DTC Manager* (D2355-90001)
- *DTC Technical Reference Manual* (5961-9820)

See *Using HP OpenView DTC Manager* for information on configuring and managing DTCs, the *DTC Planning Guide* for information on planning the use of DTCs in the network, and the *DTC Technical Reference Manual* for more technical information.

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## Before You Start

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HP OpenView DTC Manager is a software product that runs on a PC. Other software, including MS-DOS, Microsoft Windows, and the network layer software, must be installed on the PC and configured correctly for DTC Manager to run: this software is called the *software stack* or the *supporting software*. The entire software stack, including DTC Manager 14.2, can be purchased ready-installed on a PC (HP 32054F option 201). Alternatively, you can install or upgrade the software using the instructions in this guide.

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## Before You Upgrade

- Note the PC's IP address and computer name.
- Back up all the essential information on the PC, including the DTC configuration files. See *Using HP OpenView DTC Manager* for information.

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## Before You Install for the First Time

- Make sure the PC hardware has been set up and all cards have been installed.
- Make sure you have all the software you need. See chapter 8 (page 39) for software and hardware requirements.
- *For new PCs only* – make sure the hard disk has been configured and partitioned. We recommend that you partition the disk as one large drive, rather than two or more smaller drives.
- Install MS-DOS, Microsoft Windows, and the network layer software, if they have not already been installed.

## *Overview of Installation*

- Obtain a valid IP address for the PC.
- Obtain a valid computer name for the PC, if your network uses computer names. See the FTP software documentation for more information.

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## **Overview of Installation**

The installation procedure can be summarized as follows:

- Install or upgrade the supporting software (see Chapter 2).
- Install or upgrade DTC Manager (see Chapter 3).
- Reset each DTC.
- If you have added any new DTCs, add an icon for each new DTC, and configure it using Initialize Automatic Configuration (see Chapter 5).

## Installing or Upgrading the Supporting Software

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This chapter gives guidelines for installing or upgrading the following software needed to run DTC Manager:

- MS-DOS (see page 4)
- Microsoft Windows (see page 5)
- FTP network software (see page 7)
- OpenView Windows (see page 9)

It is important to install the software in the correct order, as above.

For further details, you should refer to the documentation supplied with these products.

## **Installing or Upgrading MS-DOS**

To install or upgrade MS-DOS on your PC, follow the instructions provided with the MS-DOS software.

We recommend that MS-DOS is installed in the directory C:\DOS, and strongly recommend that you use MS-DOS 5.0 or a later version.

See page 44 for more information on software compatibility.

## **Installing or Upgrading Microsoft Windows**

If you are *not* using an HP Personal Computer, read the READ.ME file supplied on the Microsoft Windows diskettes for information that may affect the installation of the software.

### **Which Version of Microsoft Windows?**

The DTC Manager requires Microsoft Windows 3.1 or 3.11, or Microsoft Windows for Workgroups 3.11.

We strongly recommend that you use Windows for Workgroups 3.11.

See page 44 for more information on software compatibility.



## **Installing or Upgrading Windows for Workgroups**

The installation procedure is as follows:

1. Put the Windows for Workgroups diskette 1 in drive A.  
Type a : \set up and press Enter.
2. Follow the instructions displayed on the screen.
3. If you are installing Windows for Workgroups for the first time, enter the name for the directory that is to store the Windows for Workgroups software, when prompted. We recommend that you use the default directory C:\WINDOWS.  
If you have a previous version of Windows or Windows for Workgroups, we recommend that you choose **Upgrade** and not **Install in a different directory**.
4. When the files have been copied, you are asked if you want to modify AUTOEXEC.BAT and CONFIG.SYS now or later.  
Choose **Make modifications now**.  
Reply YES when you are asked if you want to save the changes to AUTOEXEC.BAT and CONFIG.SYS.

When Windows for Workgroups has been installed, click on **Network Setup** in the Network window to check that your network driver has been discovered. It may be an Advanced Micro Devices AM2100 or any HP LAN Adapter.

If the installation program has not discovered the driver, click on **Drivers, Add Adapter**. Choose the name of your driver, and click on **Setup**.

If the driver has been discovered but is incorrectly configured, select the driver, click on **Drivers**, then **Setup**, and modify as necessary.

The interrupt value should normally be 5, but it depends on your internal hardware configuration. If you have no other cards in your PC, use the value 5 and ignore any warning messages.

## Installing FTP PC/TCP Network Software

### Before installation

Make sure you have the following information *before* you start to install the network software.

- The PC's IP address.
- The type of LAN card installed in the PC.
- The PC's computer name. This identifies the PC to the network. If you intend to access the PC using nodenames, you must enter a valid, unique value, otherwise you can use the default value.

Make sure that the LAN card is connected to the LAN or to a terminator before installing the network software. If the card is not connected, the network software installation may fail.

### Installation

The installation procedure when you are running Windows for Workgroups 3.11 is as follows. If you are running Windows 3.1 or 3.11, see also Appendix A.

- Run the SETUP program on the first installation diskette. This may be done by using **File, Run** from the Program Manager, or by double-clicking on SETUP.EXE from the File Manager.
- Choose the default directory for installation.
- In the Driver Installation window, choose **NDIS for Ethernet**.
- In the IP Configuration window, fill in the PC's IP address, the subnet mask (if any), and the IP address of your Domain Name Server (if any).
- In the DNS Configuration window, you must supply a computer name and note it for future use. It will be the name by which your computer will be identified on the network. You must also supply the domain part of the ARPA name, and the IP address of the Domain Name Server (if any).
- Answer Yes - Modify to overwrite your existing configuration files.

## *Installing FTP PC/TCP Network Software*

- The network software files will now be installed, and you will need to remove the first diskette and replace it with the second when prompted.
- Exit from Windows. At this point, if you were previously using ARPA or ARPA/NS network software, you should remove some lines from AUTOEXEC.BAT and CONFIG.SYS before rebooting.
  - From AUTOEXEC.BAT, delete the sections starting with @REM \*\*LMX\*\* top and finishing with @REM \*\*LMX\*\* bot. These lines may be marked “Do not Remove”, but you should ignore that warning.
  - From CONFIG.SYS, remove the DEVICE = lines containing references to NEMM.DOS, TCPDRV.DOS, and PCMPDRV.DOS.
- Reboot the PC, and watch the screen carefully, to catch any error messages that might appear.

## **Checking PC/TCP installation**

To check that PC/TCP has been correctly installed, execute a PING from DOS or Windows with a known IP address (see page 34).

## Installing HP OpenView Windows

To use DTC Manager 14.2, you must also install or upgrade to OpenView Windows 7.2. Earlier versions of OpenView Windows are not compatible with DTC Manager 14.2.

See page 44 for more information on software compatibility.

1. Put the OpenView Windows diskette 1 in drive A:.

If you are not running Windows:

type `win a:\setup` and press Enter.

If Microsoft Windows is running:

choose **Run** from the **File** menu and enter `a:\setup`.

2. Choose to install OpenView Windows. In the HP OpenView Applications window, choose **SNMP over TCP/IP Communication**. You should not need to install any other options or SNMP features for DTC Manager.

The installation ends by creating the OpenView group window.



## **Installing and Upgrading DTC Manager**

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This chapter explains how to install or upgrade to DTC Manager 14.2 using the DTC Manager installation software.

The DTC Manager installation software checks that the other software on the PC is correct for DTC Manager, and verifies that there is enough memory and disk space. If any of DTC Manager's requirements are not met, the installation software displays an error message. If everything is correct, the installation software installs DTC Manager 14.2.

## Running the DTC Manager Installation Software

1. To install DTC Manager, you must run the SETUP program on the installation diskette.
2. Insert the DTC Manager installation diskette 1 into a diskette drive (assumed to be A: in this example).

From the Windows Program Manager, select Run from the File menu, type a: \setup, then press Enter. Alternatively, from the Windows File Manager, double-click on the SETUP.EXE file on the installation diskette.

Follow the instructions displayed on the screen. The online help for the installation explains the information needed.

Exit Microsoft Windows, remove the diskette and reboot the PC when told to do so.

3. If you are adding a new DTC to the network, you must add the appropriate DTC icon to the map and then use the DTC Manager's **Initialize Automatic...** function to prepare the DTC's configuration. See chapter 5 (page 15) for instructions on adding icons and configuring the DTC.
4. If you are upgrading from an earlier release of DTC Manager, and you have just upgraded the memory in one or more DTC 48/3000s at the same time, then you must also update the network map. See chapter 6 (page 29) for information on how to continue.
5. To use the DTC Manager 14.2 functionality, reset each existing DTC by switching it off then on again.

Refer to the DTC Manager online help and to *Using HP OpenView DTC Manager* for information about configuring terminals and printer connections. The chapters "Configuring Terminal Ports" and "Configuring Printer Ports" contain detailed examples of configuring printer and terminal connections to HP 3000/900 and HP 9000 systems.

## **Configuring the Ready-Installed DTC Manager**

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If you buy the ready-installed DTC Manager, all the software has been installed, and most parameters have been configured by Hewlett-Packard. However, you have to configure certain networking parameters according to the network you are using. This chapter explains how to configure these parameters.



## **Configuring the IP Address and Computer Name**

When you switch on the PC, DTC Manager will start. To configure it:

1. Choose the WinConf icon from the FTP group window.
2. Choose Basic Configuration and fill in the IP address, the computer name, and the other parameters in that window.
3. Exit from the configuration program.
4. Exit from Windows and reboot the PC.

See chapter 5 (page 15) for information on configuring and testing basic connections. See *Using HP OpenView DTC Manager* for detailed information on configuring DTCs.

## Configuring DTCs

---

This chapter gives a quick guide to configuring the DTC for the first time, and testing terminal and printer ports.

The basic steps are as follows:

- Install the DTC and connect it to the LAN.
- Log on to DTC Manager.
- Create a new map or modify an existing map.
- Add an icon for the DTC.
- Choose **Configure DTC, Initialize Automatic Configuration** from the **Control** menu to download a default configuration to the DTC.
- Test that the DTC works.
- Configure any ports that need a configuration different from the default.

See *Using HP OpenView DTC Manager* for detailed information on configuring the DTC.

See the Microsoft Windows documentation for information on using Windows. The Windows help system also contains a tutorial for people who have never used Windows before.

## Configuring the DTC

### Installing the DTC

Refer to the documentation that came with the DTC for details of how to install it and connect devices.

<b>DTC</b>	<b>Manual</b>	<b>Part number</b>
DTC 48	HP 2345A Datacommunications and Terminal Controller Installation and Service Manual	D2345-90021
HP ARPA Telnet Express	ARPA Telnet Express Installation Manual	D2344-90011
DTC 16	HP 2340A Datacommunications and Terminal Controller Installation and Service Manual	D2340-90001
DTC 16iX DTC 16MX DTC 16TN	HP J2060A/J2062A/J2063A HP DTC 16xx Family Installation Guide	5959-4986
DTC 72MX	HP J2070DTC 72MX Communication Server Installation Guide	J2070-90001

## Logging on to the DTC Manager

You must logon to DTC Manager before creating the map and icon. If you are not logged on, DTC Manager will not be able to use the icons you create to manage DTCs.

1. Choose **Local DTC Manager ...** from **Log On ...** in the **Control** menu.
2. Enter the manager password. The default is **DTC**.

## Creating a Network Map

You must create a network map, or modify an existing one, before you can add DTC icons.

To create a new map, follow these instructions.

1. Choose **New Map** from the **File** menu.  
A new map called *untitled* is displayed.



2. Choose **Save Map as ...** from the **File** menu and enter a name for the map.

## Adding a DTC Icon to the Map

You must use the correct icon for the type of DTC; if the icon is incorrect, DTC Manager will be unable to manage the DTC.

1. Choose **Add** from the **Edit** menu, then select **Component**.
2. Select the correct icon for the type of DTC.
3. Enter the name of the DTC in the **Describe** window.  
The icon is added to the map.
4. Save the changes by choosing **Save Map** from the **File** menu.

## Configuring the DTC

### Automatic Configuration of the DTC

**Initialize Automatic** downloads a default configuration to the DTC that should work in most situations. If necessary, the DTC can be reconfigured later.

1. Choose the icon you have just added to the map.
2. Choose **Initialize Automatic ...** from **Configure** in the **Control** menu.
3. Enter the following information:
  - **DTC's nodename.** You must supply a nodename that meets the naming conventions used on your LAN.
  - **DTC's LAN address.** The DTC's LAN address is marked on a label on the DTC.

DTC 16iX DTC 16MX DTC 16TN DTC 16 HP ARPA Telnet Express	on a label on the rear of the DTC
DTC 48 DTC 48/3000	on a label inside the front cover
DTC 72MX	on the LAN board

- **DTC's IP address.** You must supply a unique IP address for the DTC if you will be using it for connections to ARPA systems or for extended switching connections. See *Using HP OpenView DTC Manager* for more information.
4. Choose **OK** to save the information.
  5. Switch the DTC on.

## Testing a Terminal Port

This section contains an overview of configuring and testing a terminal connection. You should refer to the documentation that came with the DTC for detailed information on testing the DTC.

1. Connect a terminal to a DTC port. The terminal must be configured for the default port values:

- 9600 baud
- 8 bits / no parity
- no check parity
- XON/XOFF enabled.

2. Switch on the terminal and press Enter.

The default DTC prompt should be displayed: DTC>.

3. If a system is available on the LAN and you know its IP address or nodename, try to connect to it by entering one of the following commands at the DTC prompt:

```
connect <IP address>
```

```
connect <system name>
```

You should be connected to the system.

### Reconfiguring Ports

The default values downloaded to the DTC will work for most types of terminal connection.

See *Using HP OpenView DTC Manager* for detailed information on configuring the DTC's ports.

## Testing a Printer Connected to an HP 3000/900 System

### DTC Configuration

Set the port as a printer port as follows.

1. Select the DTC's icon, select **Configure DTC** from the **Control** menu, then select **Dynamic**.
2. Choose the port to configure, and select **Printer** from the **Change Port Type ...** menu.
3. Leave all the other printer port values as the defaults.
4. Save the configuration.

### NMMGR Configuration

This section gives an overview of the configuration of the HP 3000/900 to access the printer. The instructions assume that this is not the first time NMMGR has been run on the system, and hence that certain values have already been configured. If NMMGR is being run for the first time on the system, or if you need more information on configuration, see *Configuring Systems for Terminals, Printers and Other Serial Devices* (32022-61000).

1. Run NMMGR.PUB.SYS.
2. Press **Open Config (F3)** to open the Main screen.
3. Answer **Y** to the question "Are you using OpenView DTC Manager?".
4. Press **Save Data (F6)** to save the data.
5. Press **DTS (F1)** to display the Host Configuration screen.
6. Accept the default values for **DTSLINK** and **number of non-nailed terminals**.
7. Check the LANIC path is correct.
8. Press **Save Data (F6)** to save the data.

## Testing a Printer Connected to an HP 3000/900 System

9. Press **Go to DTC (F1)** to display the DTC Configuration Selection screen.
10. Choose the type of DTC.  
The DTC Configuration screen is displayed.
11. Enter the DTC's name and nodename, exactly as you configured them in DTC Manager.
12. Enter the card type for each card in the DTC with nailed devices (printers are accessed using nailed devices).
13. Press **Save Data (F6)** to save the data.
14. Enter the number of the card to configure in the **To configure a card ...** field and choose **Config Card (F4)**.
15. Assign an ldev number and a profile to the nailed device.

The ldev can be any number between 0 and 2175 that is not already assigned to a nailed device, or used by the system. The following profiles are suggested:

	<b>suggested profile</b>
<b>Printer without status checking</b>	PR18D96
<b>HP printer with status checking</b>	PR22D4

For example:

<b>ldev</b>	<b>profile</b>
100	PR18D96
101	PR22D4
102	PR22D4

16. Press **Save Data (F6)** to save the data.
17. Press **Validate Link/DTS (F5)** to validate the configuration.
18. Exit NMMGR.
19. Reboot the system.



### *Testing a Printer Connected to an HP 3000/900 System*

20. When the ISL> prompt is displayed, enter

```
ISL> START NORECOVERY
```

21. Reboot the DTC.

### **Testing the Printer Configuration**

To test the printer connection, you need a file that can be printed. If there is not already one on the system, create one using an editor such as TDP.

1. Enter the following commands to test the printer.

```
: file prt;dev=lpl  
: fcopy from=file_name; to = *prt
```

Where *file\_name* is the name of the file to print.

## Testing a Printer Connected to an HP 9000/800 System

The following software must be installed on the HP 9000/800:

- HP-UX 8.0 or later
- ARPA Services or Internet Services
- HP DTC Device File Access (DDFA).

DDFA must have been installed according to the instructions that come with it, to ensure that the configuration file templates are in the correct directories for the following instructions. See *DTC Device File Access Utilities and Telnet Port Identification* (B1014-90012) for detailed information on DDFA.

### DTC Configuration

To set the port as a printer port, follow these instructions.

1. Select the DTC's icon, choose **Configure DTC** from the **Control** menu, then choose **Dynamic**.
2. Select the port to configure, and choose **Printer** from the **Change Port Type ...** menu.
3. Leave all the other printer port values as the defaults.
4. Save the configuration.

### DDFA Configuration

Configure DDFA on the HP 9000 as follows. These instructions assume that the following files exist on the system.

```
/etc/ddfa/dp
/etc/ddfa/pcf
```

If the files `/etc/ddfa/dp` and `/etc/ddfa/pcf` do not exist, proceed as follows.

1. Create the directory `/etc/ddfa` if it does not exist.

## Testing a Printer Connected to an HP 9000/800 System

2. Copy the following files into /etc/ddfa.

```
/etc/newconfig/ddfa/dp  
/etc/newconfig/pcf
```

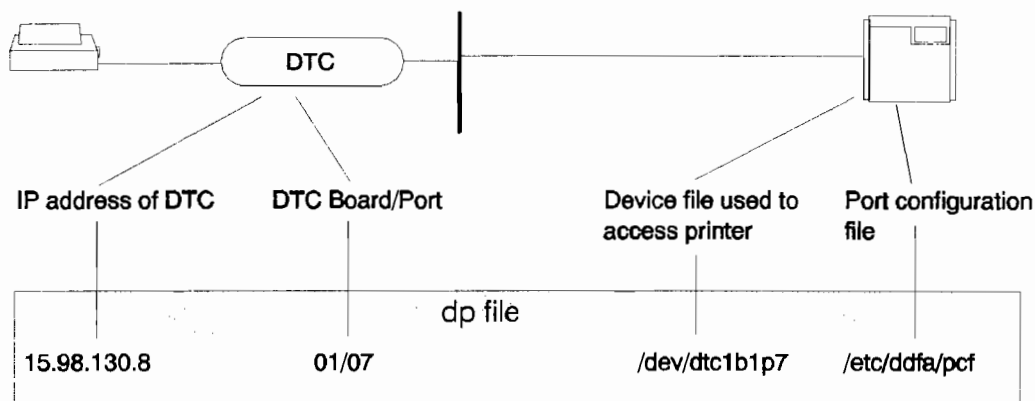
For further information, refer to *DTC Device File Access Utilities and Telnet Port Identification* (B1014-90012).

### Edit the File /etc/ddfa/dp

Use a text editor such as the Vue text editor or vi to edit the file /etc/ddfa/dp.

Follow the template at the top of the file /etc/ddfa/dp, and add the following information on a new line of the file.

```
<DTC IP address> <board/port> <device file name> <port config file>
```



- **DTC IP address**

The IP address of the DTC is the first entry in the line.

- **DTC board and port**

Enter the numbers of the DTC board and port to which the printer is connected. The format is **board/port**, and the / is obligatory. There must be no spaces between **board** and / and between / and **port**.

For a DTC 16TN, the board must be 1 or 01.

■ **Device file name**

Enter the name of the device file that will be used to access the printer.

We recommend that the name contains the DTC's name and the board and port number to make it easy to identify the printer connected. For example, /dev/dtc1b1p7.

■ **Port configuration file**

Enter the name of the port configuration file used to configure the printer.

The default file /etc/ddfa/pcf will be correct for most applications and printers. If you need to change the values, see *DTC Device File Access Utilities and Telnet Port Identification (B1014-90012)*.

When you have added the information, save the dp file.

### Execute the dp parser

Execute the dedicated port parser (dpp) by entering the following command.

```
# /etc/dpp /etc/ddfa/dp -k
```

This will check the dp file is correct, and start the ocd daemon.

## Printer Configuration

This section explains how to configure a printer using SAM. Refer to the HP-UX documentation if you want to configure the printer manually using the **lpadmin** commands.

These steps are for an HP-UX 9.0 system on an HP 9000 Series 800 system. The process may differ depending on the version of HP-UX.

1. Choose **Printers / Plotters** from the SAM main menu.
2. In the **Printer / Plotter Manager** screen, choose **Actions -> Local Printer Plotter**.

If you are using a character mode terminal the menu bar must be on to use the actions option. The function key **F4** toggles the menu bar on and off.

## *Testing a Printer Connected to an HP 9000/800 System*

3. Choose **Add Printer/Plotter Requiring Nonstandard Device File**.
4. Complete the **Add Printer** screen as follows:

<b>Printer name</b>	Assign a name to the printer.
<b>Printer model/interface</b>	With this field selected, press the Enter key. A list of models is displayed. Choose the printer model corresponding to your printer.
<b>Printer device file name</b>	Enter the printer device file that you entered in the file <code>/etc/ddfa/dp</code> file for the DTC printer port.
5. Complete the other fields as required.
6. Exit from SAM.

## **Testing the Printer**

Use the `lp` command to verify that the printer configuration works.

1. Enter `lp -d<printer name> /etc/ddfa/dp` and press Enter.

## **If You Are Upgrading to DTC Manager 14.2**

---

This chapter contains the following information for people who are upgrading to DTC Manager 14.2 from an earlier version:

- upgrading a DTC 48/3000 to a DTC 48
- updating the network map
- updating DTCs without icons

## Upgrading a DTC 48/3000 to a DTC 48

If you are upgrading from an earlier release of DTC Manager, you may have to upgrade the memory in your DTCs.

You *must* upgrade the memory in:

- every DTC 48/9000 that has not yet been upgraded: the section “Checking DTC 48s for Memory Upgrades”, below, explains how to tell if a DTC has been upgraded
- any DTC 48/3000 that has not been upgraded, and for which you require all the functionality provided by DTC Manager 14.2

You do *not* need to upgrade the memory in:

- DTC 16  
DTC 16TN  
DTC 16iX  
DTC 16MX  
DTC 72MX  
HP ARPA Telnet Express
- a DTC that has already been upgraded
- a DTC 48/3000 that will only be used in the HP 3000 environment or for back-to-back connections (extended switching); see the *DTC Planning Guide* for more information on extended switching connections

### Checking DTC 48s for Memory Upgrades

Use the following method to check whether a DTC has had a memory upgrade. Use the DTC’s diagnostic mode to check the part numbers of the ROMs on the card in slot 0 and on the processor card.

1. Connect a terminal to port 0 of board 0 of the DTC, then switch on the DTC and hold down Ctrl-P while it boots. The terminal will enter the DTC’s online diagnostic mode.
2. Enter V to display the version number screen.

3. Check the part numbers displayed on the screen. If the part number of the ROM on the Serial Interface Card in slot 0 is **02345-80135** and the processor card ROMS are **02345-80156** and **02345-80166**, you know that a memory extension card has already been fitted.

If you have upgraded the memory in one or more DTC 48s, you must update the network map to take account of the changes. If you do not update the network map, the DTC Manager continues to manage the upgraded DTC 48 as a DTC 48/3000. The DTC Manager automatically updates the configuration and network map for all other types of DTCs.

## **Updating the Network Map and the DTC Configuration**

With OpenView running, take the following steps to update the network map and the DTC configuration.

1. Make a backup of the DTC configuration files.
2. While running DTC Manager, note the label of the DTC 48/3000 to be upgraded, then delete its icon.
3. Choose **Add, Component** from the **Edit** menu to add a new DTC 48 icon to the map.
4. Use **Describe** to label it. Use exactly the same label that was used for the icon you have just deleted.
5. Choose **Configure, Static** from the **Control** menu. Reply **Yes** when asked to confirm migration.
6. Reconfigure the parameters as required. Even if you do not wish to change any parameters, you must select a board or port and click on **Configure**, then click on **OK** in the Device Configuration window.
7. Exit static configuration as usual, using the **Done** button, and save your configuration as the permanent configuration.
8. Download the new configuration to the DTC (switch the DTC off and then on again, or choose **Reset LAN board** from the **Control** menu).
9. Save the new map.



## **Updating DTC Configurations Without Icons**

It is possible to manage a DTC without having an icon for it on the map, by using QuickMap. If you have an old configuration backed up, which contains DTCs managed without icons, you must follow the instructions provided below to update the configurations:

1. Restore the files from the backup using the appropriate tool, for example, the DTC Manager **Restore** facility in **DTC Manager Options** in the **File** menu.
2. Close the DTC Manager and Microsoft Windows, so that you return to the MS-DOS prompt.
3. Type `dtcmgr` and press Enter.  
A message is displayed that lists the DTCs that do not have icons.
4. Press Enter to dismiss the message.
5. Create an icon for each icon-less DTC configuration you have restored.

## Solving Installation Problems

---

This chapter explains how to deal with certain problems that may occur during the installation or upgrade process, and contains additional information for specific PC configurations and usages.

- You do not have enough disk space for DTC Manager (see page 32).
- You suspect that you have a problem with the supporting software:

FTP software (see page 34)

MS-DOS (see page 35)

Microsoft Windows (see page 36)

HP OpenView (see page 36).

- You have upgraded OpenView (see page 37).
- You need to identify the type of LAN card in the PC (see page 38).



## **Not Enough Disk Space**

If you do not have enough disk space on your PC, you should remove files that are no longer needed before you start to install or update any of the software. You require at least 3 Mbyte of spare disk space to upgrade to DTC Manager 14.2.

See page 43 for more information on disk space requirement.

If you are upgrading any of the software in the stack, refer to the documentation that accompanies it for its disk space requirements.

If you do not have enough space to upgrade to DTC Manager 14.2, follow these guidelines.

- Do *not* remove the files AUTOEXEC.OV or \*.ODM.
- Run CHKDSK /F or another disk checking utility to detect and fix lost sectors and other problems on the disk.
- See the MS-DOS documentation for information on which MS-DOS files can be deleted.
- See the Microsoft Windows documentation for information on which Microsoft Windows files can be deleted, for example, you could delete any Microsoft Windows accessories that are not required.

Microsoft Windows 3.1 includes a tool that enables you to delete safely applications you do not need.

Open the **Windows Setup** icon and select **Add/Remove Windows Components ...** from the **Options** menu. Remove the components you do not need, for example games and wallpapers. See the Microsoft Windows online help for more information.

- See the chapter “Managing the OpenView Workstation” of *Using HP Openview DTC Manager* for information on which DTC Manager files can be deleted.
- You can also remove old files from the directories C:\DTCMGR\UPLOAD and C:\DTCMGR\MONITOR, if you are sure that none of them are needed for diagnosing problems.

- Delete all the files in the temporary directory pointed to by the MS-DOS environment variables TMP and TEMP.
- If TMP and TEMP are not set, create a directory for temporary files, for example C:\TMP, then edit AUTOEXEC.BAT to set the TMP and TEMP variables, and to delete the contents of the directory when the PC boots. For example, create the directory C:\TMP, then add the following lines to AUTOEXEC.BAT.

```
set tmp=c:\tmp  
set temp=c:\tmp  
del c:\tmp\*.*
```

- To give maximum disk space, first back up all the files from the PC's hard disk, then repartition the disk so that all the disk space is allocated to drive C:. Refer to the MS-DOS documentation for instructions on repartitioning the hard disk.
- Delete all the TIFF files in \OV\BKGROUND that are larger than 1 Mbyte.

After you have removed the files, you may find it useful to run a disk management tool that defragments the files on the hard disk to improve the disk performance, such as the DOS 6 Defragmenter tool. If you do not have DOS 6, see your software supplier for information on other similar tools.

---

**Warning** DTC Manager has not been tested with disk compression tools such as the MS-DOS 6 DoubleSpace.  
You can use such tools with DTC Manager at your own risk.

---

## **Checking the Supporting Software**

If DTC Manager does not work correctly, the first step is to verify that the supporting software is working correctly.

### **Problems with the FTP Network Software**

#### **To Check that the FTP Software is Correctly Installed**

To test the network software, take the following steps:

1. Note down an IP address from your network. This IP address must correspond to a node that supports the PING diagnostic, for example, an HP-UX system or an HP MPE/iX system with PING.
2. Choose WPING from the FTP window. Type in the IP address you noted in step 1. The number of requests sent and received should be equal. If not, you may have a problem with your network (or you may have entered a wrong IP address).

If the test is unsuccessful, you should retry several times, as other factors, such as LAN traffic, can stop PING getting a response. If you do not get a response after several attempts:

- Make sure that you are using a valid IP address.
- Are there any error messages when you reboot the PC?
- Check the network software installation and configuration. The network software installation can be tested by pinging the IP address of the PC you are configuring. This ping is routed internally by the network software and never gets as far as the LAN card, but it does help to indicate whether the network software is working correctly.
- Make sure that you have declared the type of your LAN card correctly during configuration.

See the FTP network software documentation for more information.

## Checking that MS-DOS is Installed Correctly

In general, if you were able to load the rest of the software, MS-DOS is probably installed correctly. The following procedure will help to verify this, but will not tell you that it is correctly configured.

1. Type `ver` and press Enter. The version number of the MS-DOS installed on the PC is displayed.
2. Type `chkdsk` and press Enter. Details such as the disk's volume name, the date it was created, disk space usage and memory information are displayed.

The results of the two commands depend on the version of MS-DOS, and how the PC has been configured, but should look something like this:

If the two commands do not produce the expected results, you must correct the installation of MS-DOS. Refer to the documentation supplied with MS-DOS for information.

```
C:\WINDOWS>ver
MS-DOS Version 6.00

C:\WINDOWS>chkdsk

Volume MS-DOS_5  created 10-06-1992 11:02a
Volume Serial Number is 1AC1-7C77

83716096 bytes total disk space
 81920 bytes in 3 hidden files
 112640 bytes in 38 directories
66752512 bytes in 1718 user files
16769024 bytes available on disk

 2048 bytes in each allocation unit
40877 total allocation units on disk
 8188 available allocation units on disk

651264 total bytes memory
623552 bytes free

C:\WINDOWS>
```

## **Checking Microsoft Windows is Installed Correctly**

Proceed as follows to check that Microsoft Windows is correctly installed.

1. At the MS-DOS prompt, type `WIN` and press Enter to start Microsoft Windows.
2. Choose **Help** to display the Help Menu.
3. Choose **About Program Manager** to display information about Microsoft Windows.
  - The version number should be **3.1**.
  - The mode should be **386 Enhanced**.
  - The Free System Resources should be **70%** or higher.

If the version number, mode and free resources are correct, you can assume that Microsoft Windows is installed correctly and proceed with the next step of the DTC Manager installation. If the version number, mode or free resources are not correct, you must correct the Microsoft Windows installation. Refer to the documentation provided with Microsoft Windows.

## **Checking HP OpenView Windows is Installed Correctly**

Proceed as follows to check that OpenView Windows is correctly installed.

1. With Microsoft Windows running, start OpenView by choosing the OVWIN icon.
2. Choose **Add** from the **Edit** menu.
3. Select any symbol from the components in the Add window, then point and click anywhere in the map area (the large area on the left of the screen). The symbol appears in the map area.

If OpenView starts and you can create new symbols, you can assume that OpenView Windows is installed correctly.

## **If You Upgrade OpenView Windows**

You must re-install the network map symbols used by DTC Manager from the DTC Manager master disks if you upgrade your workstation with a new version of OpenView Windows *after you have installed DTC Manager*.

1. Close Microsoft Windows and return to the MS-DOS prompt.
2. Place the DTC Manager diskette labeled OVDTCMGR1 in drive A:.
3. Type `win a:wsetup` and press Enter.
4. Choose **Install HP OpenView DTC Manager Additional Tools**.
5. Choose **Re-initialize a proper running environment**.
6. Reboot the PC to run DTC Manager.

The appropriate configuration files are updated, if necessary, to correctly run DTC Manager.

7. Remove the diskette from drive A:, and reboot the PC.





## Recognizing Your LAN Card Type

### Look at the LAN Card

If you do not know which LAN card you have, the LAN card manufacturer may have provided diagnostics software that will identify the card. Otherwise, you must open the PC and look at the card itself. The LAN card *may* have an identifying label or mark in either of the following places.

- Look at the metal plate that is used to hold the card inside the PC. There may be a label on the plate that identifies the card type.
- Look at the card itself, to see if the name is printed or marked.

# Hardware and Software Requirements

---

## Hardware Requirements

You can use any PC as the DTC Manager 14.2 workstation, provided that it:

- has an Intel 386 or 486 processor (we recommend a 486)
- has at least 4 Mbytes of RAM in addition to base memory (we recommend 8 Mbytes)
- has all additional RAM set as extended memory
- is compatible with Hewlett Packard PCs
- supports the software specified on page 44
- has sufficient free disk space for the DTC Manager code, and for uploads and configuration files (see page 43 for more information)

These requirements apply to PCs running only DTC Manager. If you want to run other OpenView applications at the same time, you may need to have increased memory and disk space, and are recommended to use a 486-based PC.

If the performance of the workstation is critical to the operation of your network, use a 486-based PC with a minimum of 8 Mbyte RAM.

## **Software Requirements**

To install DTC Manager 14.2 successfully, you must have the correct versions of each of the layers of software. Do not start to install unless you have the correct software for each layer. The following software is required:

- MS-DOS 5.0, 6.0, or 6.2
- Microsoft Windows for Workgroups 3.11 (strongly recommended), or Microsoft Windows 3.1 or 3.11
- FTP PC/TCP network software
- OpenView Windows 7.2

The DTC Manager installation software verifies that you have the correct versions of each software layer before it installs the DTC Manager software. If there are any problems, the installation routine will not proceed with the installation of the DTC Manager software.

### **MS-DOS 6, DoubleSpace and MemMaker**

DTC Manager 14.2 has been tested with DOS 6 and works correctly. However, it has not been fully tested with MemMaker, or with DoubleSpace or other disk compression utilities; and it is not guaranteed to work in conjunction with these products.

## Hardware for HP Vectra PCs

The following Hewlett Packard hardware has been tested with DTC Manager. See your local HP representative for information about ordering.

	<b>HP 386 or 486 PCs</b>
<b>Monitor and graphics card</b>	VGA or SuperVGA
<b>LAN card</b>	HP ThinLAN (HP 27252 A) HP ThickLAN (HP 27252 A) HP EtherTwist (HP 27247 B) internal EtherTwist or ThinLAN card.
<b>Mouse</b>	HP mouse
<b>Memory</b>	At least 4 Mb RAM (8Mb recommended) in addition to base memory
<b>Hard disk</b>	85 Mbyte or larger hard disk  See page 43 for more information
<b>Printer</b>	See "Printers" (page 42) for more information

## **LAN Interface Card**

DTC Manager is supported on ThinLAN, ThickLAN and EtherTwist networks. The LAN interface card must be configured to use I/O address 300 (hex) and interrupt level 5 (some PCs, for example Compaq PCs, may also use interrupt level 3).

This may involve setting switches on the card: see the documentation supplied with the card for more information. If you do not set the correct interrupt level in the network layer software, DTC Manager 14.2 will not work until you have corrected it.

---

## **Printers**

Any printer that can be driven by the Microsoft Windows THINKJET.DRV printer driver can be used, for example:

- HP ThinkJet
- HP QuietJet.
- DeskJet.

The printer must be configured to use:

- the parallel interface and cable HP 24542D
- the port LPT1.

## Disk Space Requirements

The DTC Manager can support up to 150 DTCs. The following table gives estimates of the disk space requirements for different numbers of DTCs, though the actual space required will depend greatly on the configurations involved. Processor, memory and disk requirements are also given.

Note that these figures are NOT definitive, and are given for guidance only.

Number of DTCs	50	100	150
CPU recommended	486		
Memory	Base + 8Mb		
Code	10 Mb	13 Mb	16 Mb
Other software	38 Mb	38 Mb	38 Mb
Uploads and traces	17 Mb	34 Mb	51 Mb
Total disk space	65 Mb	85 Mb	105 Mb
Size of hard disk	80 Mb	160 Mb	160 Mb

The following assumptions have been made in calculating the figures:

Code = PC code + download + configuration files.

Other software = all PC software except DTC manager.

Uploads and traces = two 1 Mbyte traces are on the disk, and 5% of the installed DTCs have a DTC upload stored on the PC.

## DTC Compatibility Matrix

The following table shows the versions of software required for the versions of DTC Manager that are currently supported.

<b>DTC Manager</b>	<b>14.0</b>		<b>14.1</b>		<b>14.2</b>
<b>OpenView</b>	B.01.01		B.01.01		7.2
<b>MS Windows</b>	3.0a	3.1	3.0a	3.1	WFWG 3.11 Win 3.1
<b>Network</b>	ARPA B.02.00 ARPA B.03.00 ARPA/NS 2.5	ARPA B.03.00 ARPA/NS 2.5	ARPA B.02.00 ARPA B.03.00 ARPA/NS 2.5	ARPA B.03.00 ARPA/NS 2.5	PC/TCP or other Winsock NDIS software
<b>MS DOS</b>	4.01 5.0	5.0	4.01 5.0	4.01 5.0 6.0	5.0 6.0 6.2

*DTC Compatibility Matrix*

The following table shows the versions of software required for earlier versions of DTC Manager.

<b>DTC Manager</b>	<b>6.0</b>		<b>10.5</b>		<b>12.0</b>	<b>12.1</b>	
<b>OpenView</b>	3.0	4.0	4.0		A.04 A.05	A.04 A.05	
<b>MS Windows</b>	2.11	2.11 3.0	3.0		3.0a	3.0a	3.1
<b>Network</b>	OfficeShare		Office Share B.01	Office Share B.02	ARPA B.02.00	ARPA B.02.00 ARPA B.03.00	ARPA B.03.00
<b>MS DOS</b>	3.2 3.3 4.01		3.2 3.3 4.01	4.01	3.2 3.3 4.01 5.0	3.3 4.01 5.0	5.0



## Obtaining Software

You can upgrade existing software or buy new versions. You can obtain Microsoft software direct from Microsoft or from your local software supplier. Some Microsoft software is also available from HP.

The DTC Manager 14.2 Upgrade Kit gives you all the correct versions of software for upgrading existing workstations. It is particularly suited to customers who do not have an HP support contract.

The following table shows the part numbers of software available from HP. Contact your local HP sales office for more information.

<b>Software</b>	<b>HP part number</b>
OpenView Windows 7.2	HP 32048E
DTC Manager 14.2	HP D2355A
DTC Manager Upgrade Kit	HP D1824F option 201

## **Installing FTP PC/TCP with Windows 3.1**

---

The installation procedure for use with Windows 3.1 or Windows 3.11 has the following extra steps in addition to those used for Windows for Workgroups (see page 7). You should also read the README.TXT file on the DTC Manager installation diskettes for further information and advice.

- In the Add NDIS Entries window, SETUP will add entries to CONFIG.SYS and PROTOCOL.INI.
- In the PC/TCP Setup window, you must choose an NDIS driver. It should be an HP LAN Adapter or Advanced Micro Devices AM2100.

In addition, you must edit and change the following files:

- In AUTOEXEC.BAT, delete the sections starting with @REM \*\*LMx\*\* top and finishing with @REM \*\*LMx\*\* bot. These lines may be marked “Do not Remove”, but you may ignore that warning.

- In CONFIG.SYS, you should find four lines similar to the following:

```
DEVICE=D:\HPNET\DRIVERS\PROTMAN\PROTMAN.DOS /I:D:\HPNET
DEVICE=D:\HPNET\HPNETDRV\HPLAN.DOS
DEVICE=D:\HPNET\HPNETDRV\NEMM.DOS
DEVICE=D:\HPNET\HPNETDRV\TCPDRV.DOS /I:D:\HPNET
```

Comment out these lines by placing REM at the start of each line.

In the FTP section below, you should find a line similar to the following:

```
DEVICE = C:\PCTCP
```

This line is incomplete, and must be altered to give the full pathname of the HPLAN.DOS driver. HPLAN.DOS is one of the old drivers mentioned in the lines you have just commented out. You can copy the HPLAN.DOS file to your PCTCP directory, in which case the line should now read:

```
DEVICE = C:\PCTCP\HPLAN.DOS
```

Finally, locate your old PROTOCOL.INI file, and copy it to your PCTCP directory.

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