HP OpenView DTC Manager

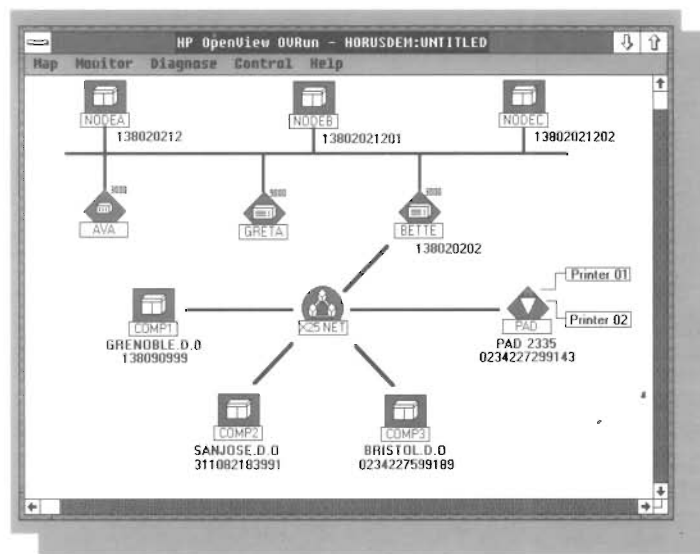## Technical Data

**Product Number
D2355A**

GENERAL DESCRIPTION

The HP OpenView DTC Manager, based on the HP OpenView Windows Workstation, is the network management tool for locally or remotely managing the HP Datacommunications and Terminal Controller family of products (DTC48/3000, DTC48/9000, DTC16/3000), and downloading the DTC software.

The HP OpenView DTC Manager is used in environments where access to multiple systems is needed. The HP OpenView DTC Manager is also necessary in situations where X.25 access from DTCs is desired.

Using the HP OpenView DTC Manager, the network administrator can easily and quickly configure up to 30 DTCs in a flexible manner, centrally isolate and resolve problems occurring on DTCs, and secure access of information; these features help the network administrator greatly increase the network uptime. In addition, the HP OpenView DTC Manager reduces learning time of users by providing an easy-to-use graphical interface based on HP OpenView Windows.

For detailed information on the other products mentioned above, please refer to the HP OpenView Windows datasheet, the DTC48/3000, DTC48/9000, DTC16/3000 Terminal Access datasheets, and the DTC48/3000, DTC16/3000 X.25 Network Link datasheets.

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BENEFITS AND FEATURES

Increase Network uptime:

- Up-to-date online status on each DTC managed by HP OpenView DTC Manager
- Configurable event logging, and X.25 tracing facilities
- Automatic alarm report displayed on the network map, in case of critical or catastrophic events
- Centralized point of configuration and control of local and remote DTCs from the same HP OpenView Workstation (an HP OpenView Workstation is required on the remote site to download DTC software)
- Simple and quick transfer of DTC control from one workstation to another on the same LAN
- On-line configuration of most DTC parameters
- Central point of DTC software update to ensure network consistency

Increase network administrator productivity and reduce costs of operation:

- Easy-to-use, intuitive graphical user interface, based on HP OpenView Windows, and on-line help facility, which reduces learning time of the network administrator, and simplifies the day-to-day management of DTCs.
- Access to the HP 3000 console ports from the same PC as the HP OpenView DTC Manager, through the use of the "AdvanceLink for Windows" software
- Remote management facility eliminates the need for a trained network administrator at the remote site

Protects access to information:

- Password access to the HP OpenView Manager functions
- Puts security on all X.25 access carried out from a DTC (system-to-system and terminal-to-system access)
- Configuration of the terminal switching capability per physical port

FUNCTIONAL DESCRIPTION of HP OPENVIEW DTC MANAGER

The HP OpenView DTC Manager, based on HP OpenView Windows, is delivered on floppy discs and is loaded on to the HP OpenView Windows Workstation. The discs contain the DTC function software, as well as the DTC management software. The workstation, on the HP Vectra PC, must be equipped with the appropriate software and hardware as specified below in the "Product Operational Requirements" section.

The HP OpenView DTC manager centrally downloads and updates the Terminal Access software for the DTC48/3000, DTC48/9000, and DTC16/3000, and the X.25 Network Access software for the DTC48/3000 and DTC16/3000. Any mix of DTC products can be managed by one single PC.

The HP OpenView DTC Manager also manages these DTCs. Using the network map feature of HP OpenView Windows, DTCs and systems can be easily labelled and identified. Easy-to-use OpenView standard menus allow quick access to extensive DTC management functions, including configuration, and problem isolation and resolution of the DTCs.

The HP OpenView DTC Manager is the destination for all alarms, event information, and memory uploads from the DTCs. The HP OpenView DTC Manager also redownloads the DTC software when a powerfail recovery occurs. For these reasons, we recommend that the HP OpenView DTC Manager application remains running at all times. We also recommend the HP OpenView Workstation be dedicated to network management tasks. Other MS-Windows applications may also be run at the same time; however, they should be able to share the PC's CPU resources with concurrent applications, and not access the PC LAN interface.

Note: One or several DTCs must be ready for use on the Ethernet/IEEE 802.3 LAN before DTC monitoring and control is enabled.

DTC Configuration

Using HP OpenView DTC Manager, the network administrator can create and modify DTC configuration files offline, and modify them online. The online configuration facility increases network uptime, as the DTCs are still functioning while parameters are made effective.

Part of the configuration of the HP 3000 Series 900 host deals with Terminal Access and X.25 Access, and some parameters must be set on both the host, as well as on the HP OpenView DTC Manager (e.g. printer parameters, X.25 node names). Therefore, these parameters will only take full effect and be enabled once they are also configured on the HP 3000 Series 900 host side.
Please refer to the manuals "Configuring Systems for Terminals, Printers and Other Serial Devices" (P/N 32022-90004), and "Using the Node Management Services Utilities" (P/N 36922-90008) for a detailed list of those parameters.

From the workstation, the network administrator can configure the following parameters:
(when specified, parameters can also be configured online)

- DTC box characteristics (802.3 address, IP address, node name, user interface time-out, user prompt, and welcome message). The user interface timeout, user prompt and welcome message can be configured online.

- DTC asynchronous port characteristics (terminal/printer/host name, line speed, parity, parity sensing, device attached, modem behaviour, automatic connection enabled or not, switching and extended capabilities, default destination or IP address, initialization string for printers). All can be configured online.

- X.25 connection characteristics (level 1, 2, 3 access)

- X.25 system-to-system access, and PAD access characteristics (switching information, security and access lists). All can be configured online.

In addition, the network administrator can save time on DTC configuration by using the ability to copy and paste entire DTC configurations (with the exception of the 802.3 and IP addresses, and DTC node name).

The XL system console port can also be accessed from the HP OpenView Windows Workstation where the HP OpenView DTC Manager resides , by running the "AdvanceLink for Windows" software on the same PC, and using a serial link connected to the console port. When doing so, the network administrator should know the following:

- running functions of AdvanceLink for Windows will slow down any DTC download in progress, and vice versa
- when using functions in both of these applications at once, one of the functions could be aborted, and would therefore require to be re-triggered
- terminal emulation access will be slower than normal terminal access, due to the Windows execution environment

Using this facility will save the network administrator's time and ensure greater consistency of configuration: by configuring on the same screen all the DTC characteristics from HP OpenView DTC Manager plus the specific DTC characteristics that need to be set on the XL host, the network administrator will quickly check any mismatch of configuration.

Note: An additional serial connection should be purchased to run "AdvanceLink for Windows" on the HP OpenView Windows Workstation. This software should be executed whilst carrying out an HP OpenView DTC Manager function.

Problem isolation and resolution

Extensive management functions are available on HP OpenView DTC Manager to help the network administrator quickly and centrally isolate and resolve problems occurring on DTCs:

- All the events occurring on the DTCs can be logged in a file on the workstation. This file includes information identifying the DTC where the event originated. Logging of DTC events can be filtered according to five classes of security.
This is set for each DTC individually during its configuration. Catastrophic events are always logged. Printing and backup facilities are provided to keep a copy of all, or a range of the events logged, for future analysis.

- When a DTC is in a critical or catastrophic state, the corresponding DTC symbol on the network map turns red, quickly alerting the network administrator of the problem: the DTC remains red until the error is corrected and the map is refreshed.

- On-line control of terminal access connections and PAD support connections is provided through the "Show Connections" facility. it gives a list of the established connections between the selected DTC ports, and the respective hosts or other DTC ports.
In the same way, on-line control of the X.25 system-to-system connections is provided through the "X.25 Site Management" facility. This facility gives a list of all systems which are currently using the selected X.25 link on a LAN with details on the X.25 system-to-system connection.

- On-line diagnosis of a selected DTC is provided via two facilities: the "Show Status" command, which returns detailed information about the status and configuration of a selected object (e.g. terminal/printer port, PAD access); and the "Self test" command, which enables the network administrator to run diagnostic tests on the CPU board, the terminal and printer access ports, or the X.25 boards of a selected DTC. Note that while a self-test is running the object being tested is unavailable.

- Tracing facilities on the X.25 functionality of DTC/3000 are provided, to help the network administrator or the HP support team analyse in detail the errors occurring on a specific X.25 link. Traces are stored in one trace file. This file can be displayed in a scrollable window at any time, once the trace is stopped, and part or all of it can be printed.

Note: only one trace per OpenView Windows Workstation can be running at any one time.

- In the case of a DTC functioning incorrectly, the network administrator may want to reset the functions of the DTC, to return them to a normal state of function. To do so, he/she can use the "Reset" command provided by HP OpenView DTC Manager. This command is used to reset any board in the DTC, a single terminal or printer access port, a single logical channel, or the entire DTC. In case of the reset of a terminal or printer access port, the corresponding connections on the target HP 3000 Series 900 system can also be reset.

Note : resets are disruptive to the object which is reset. Also, X.25 and PAD support must be explicitly re-started using the "X.25 Start/ Stop" command after a DTC CPU or X.25 board reset.

Remote Management of DTCs

The remote management facility allows the network administrator to control remote DTCs from the local workstation running HP OpenView DTC Manager via a remote OpenView Workstation , also running HP OpenView DTC Manager. This is done via a serial modem dial-up link to the remote workstation. The Hayes compatible modems, such as the SmartModem 1200 (HP 92205A) and 2400 (HP 92205B), and the Multitech 224 modem, are supported for this configuration.

Using the remote management facility, the network administrator can save operation costs, as all the functionality of the remote workstation is available locally (with the exception of the backup/restore facility):
the network administrator can reconfigure remote DTCs online and offline, perform resets and uploads, monitor events and traces, and does not need a trained network administrator at the remote site.

Note: maps of the remote DTC network can only be done at the remote site.

Increase uptime of DTC control through HP OpenView DTC Manager

- In order to provide maximum uptime of DTC control, the network administrator can easily carry on regular backups of the DTC management files (configuration files, event log files, trace files and upload files) through the "Backup" and "Restore" commands of HP OpenView DTC Manager.
The typical disc-space requirements are given in the "Product Operational Requirements" section.

Note: DTC control is stopped whilst executing the "Backup" and "Restore" commands.

- If the HP OpenView Workstation requires maintenance, or if, in the case of large networks, the network administrator wants to rationalise the management of the DTCs and transfer the control of DTCs to another workstation, he/she can do it easily through HP OpenView DTC Manager, without affecting DTCs.
Please refer to the manual "Using OpenView DTC Manager" (P/N D2355-90001) for detailed information on this feature.

- The powerfail recovery facility on the DTC is available on the direct-connect (terminal, printer, host) sessions, for which switching is not allowed. It is not available on the X.25 system and PAD access connections.

In the same way, after a power failure on the HP OpenView Windows Workstation, HP Open-View DTC Manager can automatically recover (after a proper configuration of the Autoexec.bat file). Power failure and recovery on the HP OpenView DTC Manager is transparent to the DTCs it manages. Please refer to the manual "Using OpenView DTC Manager" (P/N D2355-90001) for detailed information on this feature.

PRODUCT REQUIREMENTS

LAN environment

- Hewlett-Packard supports the following LAN devices for transferring data across a LAN between a DTC, an HP 3000 Series 9000 system or an HP 9000 Series 800 system, and the HP OpenView Windows Workstation:
  - HP Repeater (HP 92223A)
  - HP ThinLAN Hub (HP 28645A)
  - HP 10-10 LAN bridge (HP 28648A)
  - HP EtherTwist Hub (HP 28684A)
  - HP EtherTwist Hub Plus (HP 28688A)

Hewlett-Packard has tested the following devices for data transfer between a DTC, an HP 3000 Series 900 system, an HP 9000 Series 800 system and the HP OpenView Windows Workstation. Some restrictions might apply. Please consult your local HP Sales Representative for more information:
  - Vitalink TransLAN III and 350
  - Siecor EOT-322 Fiber Optic Transceiver

Note: the HP 10-10 LAN Bridge and the Vitalink devices should not be used if the LAN is heavily loaded and losing 1 % of its large (1500 bytes) packets, as this could result in re-download of DTC software, lost of X.25 trace and uploads.
If such an environment exists, please consult your local HP representative.

HP OpenView DTC Manager is supported on ThinLAN, ThickLAN, and EtherTwist networks. The Following LAN interfaces are required:

- for ThinLAN connection :
  - HP ThinLAN PC Adapter Card (HP 27250A) or
  - HP ThinLAN Card (HP 50927F)

- for ThickLAN connection :
  - HP ThinLAN PC Adapter Card (HP 27250A) and HP ThinLAN Hub (HP 28645A) or
  - HP ThinLAN Card (HP 50927F) and HP ThinLAN Hub (HP 28645A)

- for EtherTwist connection:
  - HP EtherTwist PC Link (HP 27245A) or
  - HP ThinLAN PC Adapter Card (HP 27250A) and HP EtherTwist MAU (HP 28685A) or
  - HP ThinLAN Card (HP 50927F) and HP EtherTwist MAU (HP 28685A)

Hardware

- Up to 30 DTCs can be managed by a single HP OpenView Windows Workstation.

- HP OpenView DTC Manager is supported only on the ES/12, 286/12, QS/16, QS/16S, QS/20, RS/16, RS/20, RS/25 HP PCs.

Software

- HP 3000 Series 900 Computer software: MPE/XL Release 2.0 or later
- HP 9000 Series 800 Computer software: HP-UX Release 7.0 or later ARPA
- Services/9000
- HP OpenView Windows software: version 3.0
- MS-DOS software: versions 3.2, 3.3 or 4.01
- Microsoft Windows software: 2.11
- HP OpenView DTC Manager software: version 3.0 or later

All MS-Windows applications running on the PC, including HP OpenView DTC Manager, must be able to fit within the 640 KBytes of DOS conventional memory and the 2 MBytes of DOS expanded memory.

Typical PC memory left

PC memory left depends on the HP OpenView DTC Manager functions activated. When no function is activated 0.2 MByte conventional memory is left.

Commonly activated functions Minimum conventional memory left

- DTC configuration   140 KBytes
- Start/Stop X.25 connection 180 KBytes
- DTC reset   150 KBytes
- Start X.25 trace   170 KBytes
- Show Connections   150 KBytes

Typical disc-space requirements

- HP OpenView DTC Manager code: up to 1.8 MBytes
- DTC software download code: 1.4 MBytes
- Configuration files for one DTC, loaded with six
- asynchronous serial interface boards: 26 kBytes
- Configuration files for one DTC48/3000, loaded with three
- asynchronous serial interface boards and three X.25 boards: up to 152 kBytes
- Event log files (up to 3 permanent): up to 0.5 Mbyte each
- Trace file (up to 1): up to 1 Mbyte
- Asynchronous board upload: 33 kBytes
- X.25 board upload6: 1.6 MBytes
- whole DTC upload: up to 5.5 MBytes

Typical DTC software download time (after DTC selftest):

- DTC with three asynchronous serial less than 1 minute interface boards
- DTC with three X.25 boards less than 2 minutes

INSTALLATION AND SUPPORT POLICY

Hewlett-Packard will provide first-time installation of the HP D2355A OpenView DTC Manager. It is a customer responsibility to ensure that the HP OpenView Windows Workstation (HP 32054A) or equivalent is set up ready for this installation. It is also a customer responsibility to install updates to the HP OpenView DTC Manager.

The manual supplied with the product, "Using OpenView DTC Manager" should be used as a reference during installation.

To install the HP D2355A OpenView DTC Manager, HP is responsible for the following:

- Powering up the HP OpenView Windows Workstation to perform the self-test, verifying the I/O address and interrupt channel of the LAN card, and logging the LAN card address.

Connecting the HP OpenView Windows Workstation to the ThinLAN cable, to the EtherTwist cable, or to the ThinLAN Hub for ThickLAN connection, and loading the HP OpenView DTC Manager Software.

- Creating a network map and adding a DTC icon for each DTC via the OpenView DTC Manager. For each DTC, configuring the DTC CPU board and using the default values to configure all Asynchronous Connector cards.

- Ensuring that each DTC is downloaded properly.

If the customer wants to use an existing ES/12, 286/12, QS or RS HP PC as the HP OpenView Windows Workstation, it is the customer's responsibility to assemble and configure the PC hardware and software, such that HP can install the HP OpenView DTC Manager software. HP can perform these services along with the DTC product installation billable to the customer at HP time-and-materials rates.

Note for DTC/3000 customers: Device-specific configuration when migrating from host-based to PC-based DTC management is not a part of the HP installation/configuration responsibilities.

HP effort spent on problems which are not caused by HP installation and configuration activities is considered HP Consulting Support and is billable to the customer at normal HP time-and-materials rates.

SUPPORT SERVICES

HP also offers a number of support services. With the purchase of these support services, customers are entitled to free updates of HP OpenView DTC Manager software. In addition to support for the HP OpenView DTC Manager itself, each support service is also valid for any amount of terminal switching or X.25 access in up to 30 DTCs managed by the HP OpenView DTC Manager. Customers will appreciate this extensive coverage.

The support services available for the HP OpenView DTC Manager are as follows:

H2024A + T00 #0L7
OpenView Teamline Support

H2025A + H00 #0L7
OpenView ResponseLine Support

H2026A + L00 #0JT
HP BasicLine Vectra

H2027A + S00 #0JT
HP Software Materials Vectra

Order H2027A + S00 #0JT plus one of the other three services listed.

Note that ResponseLine and TeamLine require a Hayes-compatible modem for remote support.

Hayes-compatible modems supported with the HP OpenView DTC Manager include the following products:
HP 92205A
HP 92205B
Multitech 224

Additional support services are available from HP; for more information, please contact your local HP representative.

ORDERING INFORMATION

Ordering the HP OpenView Windows Workstation hardware or software:

HP 32054A - HP OpenView Windows Workstation
The HP OpenView Windows Workstation is a specially configured HP Vectra, with PC software already installed. Included in this workstation are the MS-DOS, MS-Windows, HP OfficeShare, HP OpenView software, and a ThinkJet printer. It contains the required PC hardware and software necessary to run the HP OpenView DTC Manager on a ThinLAN network.

Option ABA-ABZ
(MUST ORDER)
One localization option MUST be specified

Option 001
Configure HP OpenView Workstation for ThickLAN. Provides an HP ThinLAN Hub for ThinLAN to ThickLAN connection.

Option 004
(MUST ORDER)
Configures HP OpenView Windows Workstation for HP OpenView DTC Manager.

Note: Option 002 for serial link connections is not currently supported with the HP OpenView DTC Manager.

For detailed information on the hardware and software provided in the HP OpenView Windows Workstation, please refer to the datasheet of this product.

Ordering the HP OpenView DTC Manager software:

HP D2355A
HP OpenView DTC Manager Software to download, configure, control, monitor and diagnose one or multiple DTCs.

DOCUMENTATION

Available with the HP OpenView DTC Manager
(HP D2355A):
Using OpenView DTC Manager (P/N D2355-90001)
Quick Reference Guide for Terminal Users (P/N D2355-90002)

For documentation available on the DTC hardware, the terminal/printer and X.25 access functions of the DTC, please refer to the DTC48/3000, DTC48/9000, DTC16/3000 terminal access datasheets, and the DTC48/3000, DTC16/3000 X.25 Network Link datasheets (HP 2345A, HP 2346A/B/C/D/E/F/G, HP 2340A, HP 2343A/C/D).

For documentation available on the HP OpenView Windows Workstation (HP 32054A), please refer to the datasheet of this product.