



# Software Product Information

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**PRODUCT NAME: clearVISN VLAN Manager  
Version 2.2 - Windows Suite**

**9033109  
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## **Description**

clearVISN VLAN Manager is a network management application for configuring and managing DIGITAL's implementation of Virtual Local Area Networks (VLANs) and LAN Emulation (LANE) clients. The application can be run on any of the following platforms:

- Microsoft® Windows® 95 and Windows® 98
- Windows NT™ on an Intel® PC
- Windows NT V4.0 on a DIGITAL Alpha PC

clearVISN VLAN Manager consists of two executable applications:

- VLAN Manager for configuring port-based VLANs across the VNbus or across FDDI
- ELAN Manager for configuring Emulated LANs (ELANs) across an ATM connection

Within the VLAN application, DECswitch-based VLANs and VNswitch-VLANs are treated separately, since the VLAN tags are not compatible. VLAN Manager pulls the switch devices from the clearVISN Database, but helps enforce the VLAN tagging distinction by keeping separate VLAN databases for DECswitches and for VNswitches. The graphical user interface (GUI) allows you to configure VLANs over FDDI trunks using the DECswitch 900EF, DECbridge 900MX, DECswitch 900FO, and PEs switch 900TX devices. You can also configure VLANs among VNswitch 900 modules located in the same DIGITAL MultiSwitch 900 hub.

clearVISN VLAN Manager does not replace MultiChassis Manager functionality; rather, it provides a logical approach to setting up VLANs and adding specific switch ports to any desired VLAN.

VLAN Manager includes a wizard that guides you through the task of creating a VLAN configuration, including adding switches, creating members, configuring member groups, and configuring VLANs. You have the option of performing all of these tasks, or selecting those individual tasks you want to perform (for example, just adding switches).

VLANs are configured or modified offline using VLAN Manager and are saved in a database of one or more configurations. You can then load any one of the VLAN configurations from the database to one or all DIGITAL VLAN-capable switches either immediately, or at a later time.

## **Using clearVISN VLAN Manager**

Each database configuration includes a list of switches, members (named switch ports), member groups, VLANs, and VLAN groups. A particular VLAN database contains a list of all switches that have at least one port that is a member of a VLAN. If a switch is included in a configuration database and none of its ports are members of a VLAN, then all ports on the switch are members of the default VLAN.

A Member is the name of a user or device associated with a particular port. An example of a user is an individual by the name of John Doe who uses a PC connected to port 2. An example of a device is an image server named Image Server Five connected to port 3. Similarly, a device could be a repeater connecting a number of individual users. Assigning Member names to ports makes it easier to keep track of users and devices when you have to add, move, or change Member port assignments.

You associate a Member with a switch port when you create the Member. Alternatively, you can associate a named Member with a switch port by dragging and dropping it on the port in a subsequent operation. Each Member can be assigned to only one VLAN at a time. You can add a Member to a VLAN by associating the Member with a switch port that is either already assigned to a VLAN, or that you assign later. When you add a new switch to the VLAN configuration, each of its ports are unnamed Members, that is, they are assigned a default Member name in the format switch name: port number.

A Member Group is a logical grouping of Members associated with a VLAN. Assigning Members to a group makes it easier for you to move or change the VLAN to which a group of Members is assigned. Rather than reassigning each Member to a VLAN, you can do so for the whole Member Group. You associate Members with a Member Group either while creating the group, or in a subsequent operation using the drag and drop method. You can then place the group on a VLAN. As with a Member, a Group can only be assigned to one VLAN at a time. Associating one Member of a Group to a VLAN automatically associates all Members of the Group to the VLAN.

A VLAN Group is an administrative aid that allows the network administrator to link related VLANs together within the VLAN Manager hierarchy. Examples of VLAN groups include the following:

- All VLANs managed by a single network administrator
- The set of VLANs used by one part of an organization
- VLANs that can be externally wired together on an FDDI ring

clearVISN VLAN Manager uses the Simple Network Management Protocol (SNMP) to communicate with the switches. Once you have defined the VLAN membership in the database, and selected load, clearVISN VLAN Manager sends the SNMP Set commands in a set-up mode, then prompts you to send a final command to have every switch apply the change. The switches maintain this configuration in nonvolatile memory. clearVISN VLAN Manager has a test feature to quickly compare the consistency among all switches in the database.

## Supported Devices

### DECswitch VLANs

clearVISN VLAN Manager supports VLANs over FDDI for the DECswitch 900EF, the DECswitch 900FO, the DECbridge 900MX, and the PEs switch 900TX. Each Ethernet port on these devices can be assigned to a VLAN; the FDDI port is not assignable. Rather, it is considered a trunk port. When a packet, arriving on an Ethernet port does not have a destination on another port of the same switch, it is tagged and sent out the FDDI port. Tagged packets are sent across the FDDI backbone to all of the switches located elsewhere on the FDDI LAN. Each switch examines the tag, and, if one or more ports on the switch belong to that VLAN, the switch forwards the packet out those ports. If a GIGAswitch/ FDDI is used as the FDDI backbone, the tagged packets are passed transparently to the switch(es) attached to the GIGAswitch/FDDI port where the destination address is found. End node and server devices attached directly to the FDDI ring or GIGAswitch/FDDI can be members of the default VLAN only.

### VNswitch VLANs

Within a DIGITAL MultiSwitch 900 chassis, all VNswitches can participate in common VLANs. This is done by tagging across the VNbus. If you set up Virtual Secure Domains (VSDs) in clearVISN MultiChassis Manager, then you can have VLAN Manager learn the VSD configuration for each VNswitch. The operation of VLAN Manager for VNswitch VLANs is just like that for DECswitches; you can drag and drop ports or members into member groups or into VLANs. The member groups can be dropped into VLANs, and the VLANs can be dropped into VLAN groups.

### ELAN Manager

ELAN Manager allows you to build emulated LANs using VNswitch 900EA's and a GIGAswitch/ ATM or ATMswitch 900. The GIGAswitch or ATMswitch provides the LAN Emulation Server (LES) and Broadcast Unknown Server (BUS) services for the emulated LAN. ELAN Manager supports LANs conforming to the 802.3 standard.

Each emulated LAN is comprised of the following four components defined by the ATM Forum Technical Committee's LAN Emulation Over ATM specification:

- LAN Emulation Client (LEC)
- LAN Emulation Configuration Server (LECS)
- LAN Emulation Server (LES)
- Broadcast and Unknown Server (BUS)

After specifying an IP Address and Community String for an ATM switch and LECS, ELAN Manager will learn from the LECS any ELANs already registered. Creating another ELAN in ELAN Manager is as simple as entering a name and description for the new ELAN and accepting the defaults for admin status, LAN type, and timeouts. ELAN Manager automatically creates and initializes a LES and a BUS for the new ELAN. It also registers the ELAN with the LECS if the "Register with configuration server" check box is selected. The administrative status of the new ELAN is set to disabled by default. You can change the status at any time by right clicking the mouse over an ELAN and clicking in the appropriate Enable or Disable box.

The status of each ELAN is displayed in a tree, so that you can check the BUS, LES, and client status for each. Components that are not working properly are shown in red. You can save a copy of the ELAN tree (but not the color-coded status) at any time to a file for record keeping. You can view information about each BUS and LES such as properties and counters. You can also view properties for each client.

## Hardware Requirements

- Intel® Pentium 200MHz or higher performance IBM®-compatible PC
- Color monitor with 800 x 600 resolution
- Minimum 64 MB RAM
- CD-ROM drive
- Minimum 100 MB of disk space
- Mouse or other pointing device supported by Windows
- 32-bit Ethernet Network Interface Card (NIC)

The following Alpha processors running Windows NT 4.0 are supported using FX!32:

AlphaStation	200, 250
AlphaServer	400, 1000, 2000, 2100
DECpc AXP 150	
DEC 2000 Server	

## Other Hardware Required

- DECswitch 900EF, 900FO, DECbridge 900MX, or PEs switch 900TX
- VNswitch 900EE, EF, EX, EA, XX, LL, FF, FX
- VNswitch 900CC, CG, GV (only supported if the swtypeinfo.dat file patch is copied into the VLAN Manager directory after installation. The patch is located on the clearVISN\_Windows/VLAN\_Patch directory on the CD-ROM.)

This list comprises the requirements for running the Windows Suite applications standalone. The requirements may be greater if you are running the Windows Suite with other network applications. Refer to your documentation for the hardware requirements of those applications.

## **Software Requirements**

One of the following operating systems:

- Microsoft Windows 95, Windows 98, or Windows NT V4.0 - Intel
- Microsoft Windows NT V4.0 - Alpha (with FX!32 translator)

## **Consolidated Firmware**

Firmware in supported devices must be at the latest revision levels. Although the Consolidated Firmware Kit for the DIGITAL devices is included on the clearVISN CD-ROM, it can also be obtained through the Cabletron Web Page at the following address:

*<http://www.cabletron.com/dnpg/dr/hubs/firmware/>*

## **Optional Software**

Other Cabletron applications include:

- Stack Manager
- MultiChassis Manager
- Recovery Manager
- Fault Policy Manager
- Traffic Policy Manager
- RMON Manager

## **Growth Considerations**

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

## **Distribution Media**

CD-ROM

## **Ordering Information**

**Note:** The clearVISN CD-ROM contains all the applications and documentation. You need to order only one copy of QA-5FVAB-X8. You must purchase additional QM licenses for each user of the application.

clearVISN VLAN Manager license only:

QM-4YFAA-BA

clearVISN VLAN Manager upgrade license: QM-4YFAA-BB  
CD-ROM and documentation: QA-5FVAB-X8

## **Software Product Services**

Provided by Compaq Computer Corporation, and available through Compaq:

New Version License Service: QT-4YFAA-TA  
Media and Documentation Delivery Service: QT-5FVAB-E8  
Installation: QT-4YFAA-I9  
Telephone Support: QT-4YFAA-ZA

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## **Year 2000 Information**

For Year 2000 information, refer to the Cabletron web page:

*<http://www.cabletron.com/year-2000>*

## **Software Warranty**

Warranty for this software product is provided by Compaq with the purchase of a license for the product as defined in the license agreement.

The previous information is valid at the time of release. Contact your local Cabletron office for the most up-to-date information.

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