

Accton

Making Partnership Work

AccView[®]

Advanced Manager for OpenView NNM[®] **User Guide**



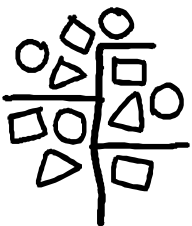


Making Partnership Work

User Guide

AccView® Advanced Manager for OpenView NNM

*SNMP-Based Network Management Software for
OpenView NNM under Windows NT, HP/UX and Solaris*



Copyright © 2000 by Accton Technology Corporation. All rights reserved.

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of Accton Technology Corporation.

Accton makes no warranties with respect to this documentation and disclaims any implied warranties of merchantability, quality, or fitness for any particular purpose. The information in this document is subject to change without notice. Accton reserves the right to make revisions to this publication without obligation to notify any person or entity of any such changes.

Accton

International Headquarters

No. 1 Creation Road III,
Science-based Industrial Park
Hsinchu 300, Taiwan, R.O.C.
Phone: 886-3-5770-270
FAX: 886-3-5770-267
Internet: support@accton.com.tw

USA Headquarters

6 Hughes
Irvine, CA 92618
Phone Numbers -
Sales: 800-926-9288
Support: 888-398-4101 or 949-707-4847
RMA: 800-762-4968
FAX: 949-707-2460

Accton is a trademark of Accton Technology Corporation. Other trademarks or brand names mentioned herein are trademarks or registered trademarks of their respective companies.

SW6130
150399-102
E112000-R02

Accton

Licence Agreement

The Purchaser MUST read this agreement before using the software provided in this package. As used in this Agreement the terms "You", "Your", "LICENSEE", and "Purchaser" refer to the licensee of the SOFTWARE and accompanying written materials in this package, as described below. If you do not agree to the terms of this License Agreement, return the package, unused, to the point of purchase for a refund of any license fee which you paid.

1. Grant of license

Accton, Inc. grants to you a non-exclusive right to use one copy of the program (hereinafter the "SOFTWARE"). The SOFTWARE is provided by Accton on CD-ROM. Accton also grants to you a non-exclusive right to use the programs on the enclosed CD-ROM (hereinafter the "SOFTWARE") on one local area network. Accton reserves all rights not expressly granted to the LICENSEE.

2. Ownership of license

All SOFTWARE, and each copy thereof, remains the property of Accton and/or one or more of its licensors. This license is not a sale of any SOFTWARE, or of any copy. You disclaim forever any rights of ownership in any SOFTWARE, or in any copy. The only rights that you obtain with respect to any SOFTWARE are those expressly set forth in this License Agreement.

3. Copy restriction

You acknowledge that the SOFTWARE and accompanying written materials are copyrighted and entitled to protection under the copyright laws of nations where the SOFTWARE is installed, and under international conventions. Except for the copying of SOFTWARE as expressly permitted in the next sentence, you may not copy any SOFTWARE or accompanying written materials, or any portion of any of them, or remove any copyright or proprietary notice from any of them; and you agree not to allow any other person or entity to do so. Subject to these restrictions, you may make copies of the SOFTWARE solely for backup purposes.

4. Use restriction

As the LICENSEE, you may physically transfer the SOFTWARE from one computer to another within a licensed local area network. You may not distribute copies of the SOFTWARE or accompanying written materials to others. Furthermore, the LICENSEE is not permitted to modify, disassemble, reverse or de-engineer, or create any derivative works based on the SOFTWARE.

5. Transfer restrictions

This SOFTWARE is licensed only to you, the LICENSEE, and may not be transferred to anyone without prior written consent of Accton. Any authorized transferee of the SOFTWARE shall be bound by the terms and conditions of this Agreement. In no event may you transfer, assign, rent, lease, sell or otherwise dispose of the SOFTWARE on a temporary or permanent basis except as expressly provided herein.

6. Termination

This license agreement is effective until terminated by Accton. This license may be terminated without notice by SMC if the LICENSEE fails to comply with any provision of this license. Upon termination, it is the LICENSEE's obligation to destroy the written materials and all copies of the SOFTWARE. Further use of the SOFTWARE components will be in violation of this license.

Limited Warranty

Limited Warranty

The Warranty Period for the media on which the SOFTWARE is recorded is for 5 years from the date of its delivery to the original user as evidenced by a receipt.

You must give Accton prompt written notice within the Warranty Period of any warranty claim. Conditioned on your providing prompt written notice to Accton within the Warranty Period, Accton shall, as your sole and exclusive remedy, repair or replace media not conforming to this warranty, or accept return of any such nonconforming media. The election of whether to repair, replace, or refund shall be Accton's, in its sole discretion.

EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE IN THIS LIMITED WARRANTY SECTION, THERE ARE NO WARRANTIES, EITHER EXPRESS OR IMPLIED. THE SOFTWARE IS PROVIDED AS IS, WITH ALL FAULTS. ACCTON DISCLAIMS AND EXCLUDES ANY AND ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AGAINST INFRINGEMENT AND THE LIKE, AND ANY AND ALL WARRANTIES ARISING FROM ANY ACKNOWLEDGE THAT YOU ARE NOT RELYING ON ACCTON'S SKILL OR JUDGEMENT TO SELECT OR FURNISH SUITABLE GOODS.

PRODUCTS AND SERVICES PROVIDED BY ACCTON ARE NOT DESIGNED, INTENDED OR AUTHORIZED FOR USE IN ANY LIFE SUPPORT OR OTHER APPLICATION WHERE PRODUCT FAILURE COULD CAUSE OR CONTRIBUTE TO PERSONAL INJURY OR SUBSTANTIAL PROPERTY DAMAGE. IF YOU APPLY ANY PRODUCT OR SERVICE PURCHASED OR LICENSED FROM ACCTON TO ANY SUCH UNINTENDED OR UNAUTHORIZED USE, YOU SHALL INDEMNIFY AND HOLD ACCTON, ITS AFFILIATES AND THEIR RESPECTIVE SUPPLIERS, HARMLESS AGAINST ALL CLAIMS, COSTS, DAMAGES AND EXPENSES ARISING, DIRECTLY OR INDIRECTLY, OUT OF ANY SUCH UNINTENDED OR UNAUTHORIZED USE, EVEN IF SUCH CLAIM ALLEGES THAT ACCTON OR ANY OTHER PERSON OR ENTITY WAS NEGLIGENT IN DESIGNING OR MANUFACTURING THE PRODUCT.

Limitation of Liability and Damages

IN NO EVENT SHALL ACCTON BE LIABLE FOR INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES; OR FOR LOST PROFITS, SAVINGS OR REVENUES OF ANY KIND; OR FOR ANY ACTUAL DAMAGES IN EXCESS OF \$100,000; REGARDLESS OF THE FORM OF ACTION, WHETHER BASED ON CONTRACT; TORT; NEGLIGENCE OF ACCTON OR OTHERS; STRICT LIABILITY; BREACH OF WARRANTY; OR OTHERWISE; WHETHER OR NOT ANY REMEDY IS HELD TO HAVE FAILED OF ITS ESSENTIAL PURPOSE, AND WHETHER OR NOT ACCTON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

About this Guide

Welcome to the AccView Advanced Manager for HP OpenView NNM. This guide describes how to manage various Accton network products using AccView's device management modules or RMON Manager. It describes the procedures for installing and using this program under the Windows NT, HPUX and Solaris operating systems. Detailed instructions on how to use every module make it easy for you monitor and control Accton's network devices under the OpenView NNM network management system.

General Manual Coverage

This manual is your guide to using AccView to manage all your network resources. It covers the following topics:

Introduction	Chapter 1
Software Installation	Chapter 2
Getting Started	Chapter 3
Device Management	Chapter 4

Note: For detailed information on using the RMON Manager, see the "AccView RMON Manager User Guide."

Conventions Used in this Manual

This manual uses a variety of editorial and typographical conventions to help you locate and interpret information easily. These conventions are:

italics Italicized words refer to keyboard keys you have to press, menu options you have to select to invoke an action, or a section in this manual or another manual you can consult for reference.

For example: select *Help* from the menu bar and then click on *Contents*.

Courier New Words shown in Courier New typeface are used to represent screen displays, filenames, or commands you must enter to initiate an action.

Additional References

System Help

Help files may be accessed directly from the AccView Advanced Manager via on-line help. To get help, select *Help* from the menu bar and then click on *Contents*. Last-minute information regarding this software has been recorded in the **README.TXT** file.

About this Guide

Table of Contents

Chapter 1: Introduction	1-1
General Description	1-1
Management Functions	1-2
Application Interface	1-2
Features of the Advanced Manager	1-2
Chapter 2: Installation	2-1
Installing under Windows NT	2-1
System Requirements	2-1
Software Installation	2-2
Files Modified or Created	2-2
Installing under HP-UX	2-3
System Requirements	2-3
Software Installation	2-3
Files Modified or Created	2-5
Starting a Device Management Application	2-6
Removing AAM from HP-UX 10.20	2-7
Installing under Solaris	2-8
System Requirements	2-8
Software Installation	2-8
Files Modified or Created	2-11
Starting a Device Management Application	2-11
Removing AAM from Solaris	2-12
Chapter 3: Getting Started	3-1
Setting Up Device Components	3-1
Modifying Existing Objects	3-3
Enabling Device Management	3-3
Enabling the RMON Manager	3-4
Chapter 4: Device Management	4-1
Management Overview	4-1
Getting Started	4-2
Before You Begin	4-2
Accessing the Software	4-2
Command Interface for the EH3512A/24A	4-3

Table of Contents

Appendix A: Specifications	A-1
Appendix B: CodeBase Sub-License Agreement	B-1
Appendix C: Product Support Services	C-1
Glossary	
Index	

Chapter 1

Introduction

The AccView Advanced Manager for OpenView Network Node Manager (NNM) is specifically designed to support the efforts of technical staff responsible for network management and maintenance. This software provides a user-friendly interface for managing various Accton network devices with HP OpenView NNM under Windows NT, HPUX and Solaris.

Note: At the time this manual was completed, this software supported the EH1500, EH3512, EH3512A/24A, ES3508 and ES3508A. For a full list of the network devices currently supported by this software, see the readme.txt file on the CD-ROM.

The Advanced Manager allows you to monitor the activity on any hub, switch, or designated port, and automatically respond if the traffic load exceeds predefined parameters or excessive errors are detected. It provides all the tools needed to monitor the network and make the changes required to avoid major crises ahead of time.

The Advanced Manager is based on SNMP network management protocol, providing graphic-based interactive management of Accton's intelligent Ethernet hub and switch systems. The device modules display the front panels of the managed device showing port status, and provide functional control for its ports and other advanced features. It also displays detailed graphic charts of network statistics via the RMON Manager.

General Description

Simply by opening your network map and invoking various Accton hub or switch objects, specific management interfaces and system information can be readily accessed. Interface statistics and traffic load can then be readily displayed.

You can use the RMON Manager to define specific thresholds, and issue trap messages warning you of abnormal conditions. (See the RMON Manager User Guide.) The Advanced Manager's device modules (Chapter 4) can then be used to keep the network functioning despite problems such as broadcast storms or device failures. You can use these modules to shut down malfunctioning ports, switch to backup systems, or reconfigure network connections; and then restore system parameters back to normal values after component problems have been resolved or the traffic falls off.

Management Functions

This software provides state-of-the-art utilities which allow you to perform the following management tasks -

- Monitor significant events and statistics. The Advanced Manager provides access to common MIB variables, as well as specific parameters for Accton devices. Network statistics can be displayed for a wide range variables.
- Using the RMON Manager, you can collect network statistics or analyze network traffic. You can also define thresholds for parameters based on specific criteria or traffic loading, and then warn the network manager of potential system problems, or subsequently use the Advanced Manager's device modules to disable/isolate a malfunctioning port or device.

Application Interface

The Advanced Manager is designed as an add-on product for HP's OpenView NNM. Specific requirements depend on your operating system:

- Windows NT (4.0 or above / OpenView NNM 5.0 or above)
- HP 9000 workstation (running HP-UX 10.20 / OpenView NNM 6.11 or above)
- Sun workstation (running Solaris 2.5.1 or above / OpenView NNM 6.1 or above)

In addition to these basic requirements, you will need an additional 10 MB of disk space to install AccView's Advanced Manager. For a detailed listing of the requirements for OpenView NNM, refer to the appropriate HP OpenView NNM manual.

The Advanced Manager can be fully integrated into OpenView NNM as part of its management console, or can be invoked as stand-alone software. Management actions normally occur via the OpenView NNM network map, through which you activate the appropriate software module by opening a menu for the concerned device. By sending commands across the network, you can directly manage Accton's intelligent hubs or switches.

Features of the Advanced Manager

The Advanced Manager includes the following features:

- Uses Simple Network Management Protocol (SNMP).
- Integrated as part of the HP OpenView NNM console.
- Easy to install and user-friendly.
- Manages Accton's intelligent hubs and switches by monitoring device status on line.
- Provides detailed information on device parameters, such as statistics for the overall SNMP agent, device component status, and network interface configuration/statistics.

- Isolate or reattach hubs/switches, and enable or disable ports.
- Displays real-time graphical statistics for various counters including network traffic. Monitors the status and traffic load of devices, such as displaying the number of incoming, outgoing and discarded frames.
- The RMON Manager provides detailed statistics and analysis tools from all 9 RMON groups under Windows NT. It also allows you to set adjustable threshold values in devices, and inform system administrators of events via trap reports. However, note that only the Statistics Group is supported by the RMON Manager under HP-UX and Solaris, and that the screen displays are built entirely on applications provided by the HP Openview NNM.
- Management controls are displayed with graphic and text-oriented windows. Commands are accessed via logically grouped menu functions and an intuitive user interface.

Introduction

Chapter 2

Installation

This chapter describes setup procedures for AccView's Advanced Manager software under Windows NT, HP-UX and Solaris.

Installing under Windows NT

The Advanced Manager can be readily installed under Windows NT. The setup program will guide you through this step-by-step procedure.

System Requirements

Before installing the Advanced Manager, please review these minimum requirements for a network management station.

Hardware:

- PC with an Pentium-133 CPU and 32MB memory
- CD-ROM drive
- hard drive with at least 20 MB free disk space
- VGA adapter and display
- mouse
- network adapter

Software:

- Microsoft Windows NT 4.0 or above
- HP OpenView NNM 5.0 or above

If you frequently use multiple applications, you may need a more powerful environment to run the Advanced Manager along with other applications. Otherwise, you may not be able to take advantage of the full range of management capabilities. Advanced system requirements include:

- Personal computer with a Pentium-150 processor (or higher)
- Local hard disk with a minimum of 30 MB free disk space
- SVGA color monitor with accelerated video adapter
- Minimum 64 MB of memory (RAM)

Note: Although the Advanced Manager uses about 10 MB of disk space, additional disk space is required for user files.

Installation

Software Installation

The setup program will install the Advanced Manager from CD-ROM. This program decompresses files and copies them to a location you specify on your hard disk. During installation you will be prompted to assign the program group.

Note: Install HP OpenView NNM on your platform before installing this package. You will be asked to provide your OpenView directory during the installation process for the Advanced Manager.

Installation steps:

1. Start Windows.
2. Use the NNM Services Stop command  to stop all HP OpenView NNM background processes, if any. (This has the same effect as executing "ovstop" from the command line.)
3. Insert the Advanced Manager installation CD-ROM in your drive.
4. Change the directory to 'WinNT' on the CD-ROM.
4. Type SETUP in the dialog box.
5. Click on OK to start SETUP.
6. Follow the on-screen instructions to install the software.

Files Modified or Created

In order to manage Accton's network devices under OpenView NNM, the installation program modifies some of the NNM files, and creates other files which are then stored in different subdirectories of NNM. If you have installed NNM under the default directory "C:\OpenView", then the following NNM files will be modified:

- oid_to_type file is modified to provide the Network Node Manager with a mapping from OID to Accton's object type and other attributes. The full path is:
C:\OpenView\Conf\oid_to_type.
- oid_to_sym file is modified to provide applications with a mapping from OID to Accton's symbol class and type. The full path is:
C:\OpenView\Conf\C\oid_to_sym for OpenView 5.0, or
C:\OpenView\Conf\oid_to_sym for OpenView 5.01 and above.
- trapd.conf file is modified to provide applications with a mapping from Accton's trap events to a user defined string. The full path is:
C:\OpenView\Conf\C\trapd.conf.

And the following Accton-specific files will be created for NNM:

- accton_fields file is added to C:\OpenView\Fields\C directory.
- accton_reg file is added to C:\OpenView\Registration\C directory.
- accton_connector file is added to C:\OpenView\Symbols\C directory.
- Device modules such as eh3524a.ico files are added to the C:\OpenView\Bitmaps\C directory.

Installing under HP-UX

The Advanced Manager can be readily installed under HP Unix (HP-UX). The setup program will guide you through this step-by-step procedure.

System Requirements

Before installing the Advanced Manager, please review these minimum requirements for a network management station.

Hardware:

- HP 9000 workstation
- CD-ROM drive
- hard drive with at least 10 MB free disk space
- VGA adapter and display
- mouse
- network adapter

Software:

- HP-UX 10.20
- HP OpenView NNM 6.1 or above

If you frequently use multiple applications, you may need a more powerful environment to run the Advanced Manager along with other applications. Otherwise, you may not be able to take advantage of the full range of management capabilities.

Software Installation

You must first decompresses program files for Advanced Manager (AAM) from CD-ROM into a temporary directory on your hard disk. Then use the install program to copy these files to the OpenView NNM directory and make necessary changes to the OpenView NNM system files.

Note: Install HP OpenView NNM on your platform before installing this package. You will be asked to provide your OpenView directory during the installation process for the Advanced Manager.

To install AAM in HP-UX 10.20,

1. Log in as the root, and mount the CD-ROM.
2. Start the **SAM** (System Administration Manager).
3. Double click the "**Software Management**" icon in SAM.
4. Double click the "**Install Software to Local Host**" icon.

Installation

5. When the graphic interface for swinstall appears, it should include a dialog box titled **"Specify Source (hostname)."** If it does not appear, please select the menu items **"Actions,"** then **"Change Source"** from the menu bar. When the dialog box appears, you need to specify the following items:

- a. In the **"Source Depot type"** field, set the combo box to **"Local Tape."**
- b. In the **"Source Depot path"** field, specify ***/where/the/depot/file/is.***

example: `/cdfs/sw6130.depot` or `/users/ckhsu/sw6130/sw6130.depot`

After these two steps, click the OK button in the dialog box.

6. After a while, the list window will display the following item.

Marked?	Name	Revision	Information	Size	Architecture	Category
AAM	1.1	AccView	Advanced Manager	14272	S7700/S800_HP	UX_10.20 network_management

If you do not see this item in your list window, make sure that you followed the preceding steps and that you have the correct AAM depot file.

Highlight the list item with your mouse, and click the menu item **"Actions"** -> **"Mark for Install."**

After this, you will see a dialog box titled **"Error(hostname)."** The swinstall program is just warning you that NNM 6.1 needs to be installed. Go ahead and press the **OK** button.

The "Marked?" field in list window will now display "Yes."

Marked?	Name	Revision	Information	Size	Architecture	Category	
Yes	AAM	1.1	AccView	Advanced Manager	14272	S7700/S800_HP	UX_10.20 network_management

7. Select the menu item **"Actions"**->**"Install (analysis)."** Then a dialog box titled **"Install Analysis (hostname)"** will appear. If you have successfully installed NNM 6.1 in HP-UX, the OK button in this dialog box will be enabled after a while. Press the OK button, and when HP-UX asked you to confirm your choice, press the Yes key. Now you will see a dialog box titled **"Install Window (hostname)".**
8. Press Done in the **"Install Window (hostname)"** dialog box.
AAM has now been installed in your system.

Note: The default full path name for OpenView NNM is `/opt/OV`. The recommended directory for installing the Advanced Manager is `/opt/OV/AccView`. For easier access to the AM directory, include it in the path environment variable in your `.cshrc` file.

This manual assumes that you are running under the C shell. If you are using a different system command processor, then please make the necessary adjustments to the instructions provided in this manual.

Files Modified or Created

The installation program modifies some of the OpenView NNM files and creates other files which are then stored in different subdirectories of the OpenView NNM. If you have installed the OpenView manager in the default path /opt/OV, the following NNM files will be modified:

- oid_to_type is modified to /etc/opt/OV/share/conf/oid_to_type.
This file provides the Node Manager with a mapping from OID to the object type and other attributes.
- oid_to_sym is modified to /etc/opt/OV/share/conf/oid_to_sym.
This file provides applications with a mapping from OID to default symbol class and type.
- oid_to_label is modified to /etc/opt/OV/share/conf/oid_to_label.
This file provides applications with a mapping from OID to a user defined label.
- trapd.conf is modified to /etc/opt/OV/share/conf/C/trapd.conf.
This file provides applications with a mapping from trap events to a user defined string,

And the following Accton-specific files will be created for NNM:

- accton-fields file is added to the /etc/opt/OV/share/fields/C directory.
- accton-reg file is added to the /etc/opt/OV/share/registration/C directory.
- accton-Connector file are added to /etc/opt/OV/share/symbols/C directory.
- es.* (e.g., eh.20.p) bitmap files are added to the /etc/opt/OV/share/bitmaps/C directory, including 1500eh.*, 3508aes.*, 3508es.*, 3512eh.*, 3524aeh.*, 3526f.*.
- .cshrc file contains an additional entry that defines the variable DEVICEDB.
This variable refers to the directory where the Advanced Manager is installed.
- /AM is a new directory which contains files and directories used to invoke the Advanced Manager.

Installation

Starting a Device Management Application

Before you start AAM's device management application, make sure you have set the following environment variables in your system shell.

```
EMSHOME  
ETHERHUB1500  
ETHERHUB3512  
SWITCHHUB3508  
CHEETAH SWITCH3508A  
CHEETAHUB3524A
```

If you have not set these variables in your environment, set them now by typing the following command for the C shell:

```
% source /opt/OV/AccView/config/aam.envvars.csh
```

or the following command for the Shell or K shell:

```
$ ./opt/OV/AccView/config/aam.envvars.sh
```

You can start an AAM device management application by either of these means:

- You can start it directly from the command line by just typing

```
$app_name ip_address
```

- If you start OpenView NNM, it will automatically discover any manageable Accton devices on your network. Just double click on any Accton device in the network map to launch the AAM management application.

Removing AAM from HP-UX 10.20

1. In SAM, double click the **"Software Management"** icon.
2. Double click the **"Remove Software"** icon.
3. Double click the **"Remove Local Host Software"** icon.
4. Now you will see the graphic interface for swremove.
Click the item with the following information:

Marked?	Name	Revision	Information	Size	Architecture	Category
	AAM	1.1	AccView Advanced Manager	14272	S7700/S800_HPUX_10.20	network_management

Select **"Actions"**->**"Mark for Remove"** from the menu.

5. Select **"Actions"**->**"Remove"** from the menu. When the dialog box titled **"Remove Analysis (hostname)"** appears, press **OK**. Then press the **Yes** button to confirm.

The files modified include the following items:

1. append /opt/OV/AccView/config/accoid_to_type
to /etc/opt/OV/share/conf/oid_to_type
2. append /opt/OV/AccView/config/accoid_to_sym
to /etc/opt/OV/share/conf/oid_to_sym
3. append /opt/OV/AccView/config/accoid_to_label
to /etc/opt/OV/share/conf/oid_to_label
4. append /opt/OV/AccView/config/acctrpd.cconf
to /etc/opt/OV/share/conf/C/trapd.conf
5. append /opt/OV/AccView/config/aam.envvars.csh
to /etc/csh.login
and /etc/skel/.cshrc
6. append /opt/OV/AccView/config/aam.envvars.sh
to /etc/profile
and /etc/skel/.profile

After uninstalling AAM, you need to manually remove the appended contents of the files mentioned above.

Installing under Solaris

The Advanced Manager can be readily installed under Solaris. The setup program will guide you through this step-by-step procedure.

System Requirements

Before installing the Advanced Manager, please review these minimum requirements for a network management station.

Hardware:

- Sun SPARC workstation
- CD-ROM drive
- hard drive with at least 10 MB free disk space
- VGA adapter and display
- mouse
- network adapter

Software:

- Solaris 2.5.1 or above
- OpenWindows Version 3.0 or later,
or OSF/Motif window manager or CDE desktop
- HP OpenView 6.1 or above

If you frequently use multiple applications, you may need a more powerful environment to run the Advanced Manager along with other applications. Otherwise, you may not be able to take advantage of the full range of management capabilities.

Software Installation

You must first decompresses program files for Advanced Manager (AAM) from CD-ROM into a temporary directory on your hard disk. Then use the install program to copy these files to the OpenView NNM directory and make necessary changes to the OpenView NNM system files.

Note: Install HP OpenView NNM on your platform before installing this package. You will be asked to provide your OpenView directory during the installation process for the Advanced Manager.

To install AAM in Solaris,

1. Log in as the root.
2. Mount the CD-ROM (if the system started up without Volume Management).
3. Change to the directory that includes the AAM depot file.

For example, suppose the AAM depot file is in /export/home/ckhsu/sw6130, then at the shell prompt use the **cd** command to change directories:

Example: # **cd /export/home/ckhsu/sw6130**

4. After you change to the AAM depot directory, enter the “pkgadd” command with the “d ./sw6130.depot” option. (pkgadd resides in /usr/sbin directory.)

Example: # **pkgadd -d ./sw6130.depot**

After you issue this command, you will see the following message on the screen:

The following packages are available:

1 ACCTONaam AAM (AccView Advance Manager)
(sparc) Release 1.2

Select package(s) you wish to process (or 'all' to process all packages). (default: all) [?,??,q]:

At this time, just press **Return** or specify **1** and then press **Return**.

After a while, you will see the following message:

Processing package instance <ACCTONaam> from </export/home/ckhsu/sw6130/sw6130.depot>

AAM (AccView Advance Manager)
(sparc) Release 1.2
Accton Technology Inc.

Accton Technology Inc. Before you start to install Accton AAM(AccView Advanced Manager), please read the manual first to ensure you understand what will happen after you install this software and what files will be modified after you install and what things you need to do before you install this software.
--

Please input the path where HP OpenView NNM is installed
==>[/opt/OV]

Installation

Please input the directory where the HP OpenView NNM 6.1 is installed. If it is installed at the default directory, just press the Return key, and the system will find it. Then, you will see the following messages.

Checking OV NNM files ...

Found ovw ...

Found xnmevents ...

HP OpenView NNM is installed at /opt/OV ...

AccView Advanced Manager will be installed into /opt/OV/AccView

The selected base directory </opt/OV/AccView> must exist before installation is attempted.

Do you want this directory created now [y,n,?,q]

Now please input “y” and then press **Return**. You will see the following.

Using </opt/OV/AccView> as the package base directory.

Processing package information.

Processing system information

Verifying disk space requirements.

Checking for conflicts with packages already installed.

Checking for setuid/setgid programs.

This package contains scripts which will be executed with super-user permission during the process of installing this package.

Do you want to continue with the installation of <ACCTONaam> [y,n,?]

Now please input “y” and then press **Return**. You will see the package is now installing. Wait for about 30 seconds, you will see the following output at screen.

Updating procedure is now over.

Installation of <ACCTONaam> was successful.

Now AAM is successfully installed in Solaris.

Files Modified or Created

The additional files created and files modified are the same as for HP-UX - see page 2-5.

Starting a Device Management Application

Before you start AAM's device management application, make sure you have set the following environment variables in your system shell.

```
EMSHOME  
ETHERHUB1500  
ETHERHUB3512  
SWITCHHUB3508  
CHEETAH SWITCH3508A  
CHEETAHUB3524A
```

If you have not set these variables in your environment, set them now by typing the following command for the C shell:

```
% source /opt/OV/AccView/config/aam.envvars.csh
```

or the following command for the Shell or K shell:

```
$ . /opt/OV/AccView/config/aam.envvars.sh
```

- You can start it directly from the command line by just typing

```
$app_name ip_address
```

- If you start OpenView NNM, it will automatically discover any manageable Accton devices on your network. Just double click on any Accton device in the network map to launch the AAM management application.

Installation

Removing AAM from Solaris

1. Log in as root.
2. You can remove the AccView Advanced Manager in the X Environment via the admintool, or by directly removing AAM at the command line.
3. Removing AAM in the X environment:
 - a. Start **admintool** in the X Environment. (Issue admintool at the shell prompt.)
 - b. Select "**Browse**" --> "**Software**" from the menu.
 - c. Select "**Application Software**" from the combo box.
 - d. Highlight "**AAM (AccView Advanced Manager)**" in the list box.
 - e. Select "**Edit**" --> "**Delete**" from the menu. Then you will see a popup dialog box asking for confirmation.

Push the "**Delete**" button.
 - f. Finally, when you see a popup window for uninstalling AAM, answer the question, and then Solaris will remove it automatically.
4. Removing AAM at the command line.
 - a. At the shell prompt, issue the following command, and then press Return.

pkgrm ACCTONaam

Then you will see the following information display on the screen:

The following package is currently installed:

ACCTONaam AAM (AccView Advance Manager)
(sparc) Release 1.2

Do you want to remove this package?

- b. Just press "**y**" and then the Return key, and Solaris will automatically remove AAM.

The files modified include the following items:

1. append /opt/OV/AccView/config/accoid_to_type
to /etc/opt/OV/share/conf/oid_to_type
2. append /opt/OV/AccView/config/accoid_to_sym
to /etc/opt/OV/share/conf/oid_to_sym
3. append /opt/OV/AccView/config/accoid_to_label
to /etc/opt/OV/share/conf/oid_to_label
4. append /opt/OV/AccView/config/acctrapped.cconf
to /etc/opt/OV/share/conf/C/trapped.conf
5. append /opt/OV/AccView/config/aam.envvars.csh
to /etc/csh.login
and /etc/skel/.cshrc
6. append /opt/OV/AccView/config/aam.envvars.sh
to /etc/profile
and /etc/skel/.profile

After uninstalling AAM, you need to manually remove the appended contents of the files mentioned above.

Installation

Chapter 3

Getting Started

Welcome to AccView's Advanced Manager for Accton's manageable hubs and switches. The Advanced Manager is a powerful network management product that provides detailed device management functions, along with a sophisticated graphic interface. This chapter describes how to integrate the Advanced Manager into OpenView NNM under Windows NT.

The procedures described for using the Advanced Manager under Windows NT are very similar to that used under the HP-UX and Solaris environments. However, before running the Advanced Manager under Unix, check the list of environment settings for the variable DEVICEDB as shown below:

1. Issue the source command

```
/> source .cshrc
```

2. Type setenv on the command line:

```
/> setenv
```

3. The line DEVICEDB= /AM should appear in the list. If you cannot find this variable, add it to the .cshrc file:

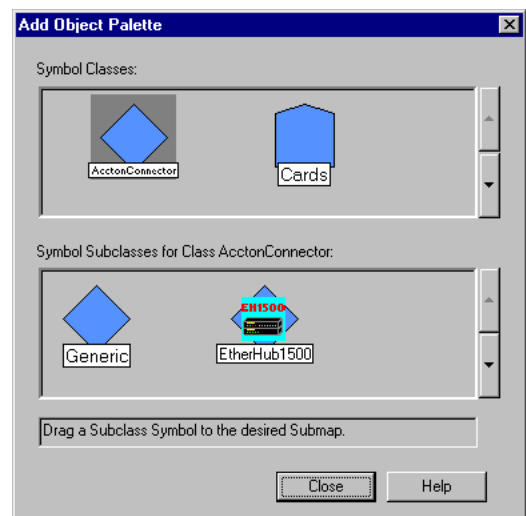
```
/> setenv DEVICEDB /AM
```

4. And then issue the source command again to verify the change.

Note: The value of DEVICEDB should be the directory where the Advanced Manager resides. It is very important that the environment variable DEVICEDB is properly defined. Otherwise, the Advanced Manager will not function properly.

Setting Up Device Components

1. Double-click on the HP OpenView NNM icon to bring up the network management console.
(Under Unix, you can invoke the Advanced Manager either from the OpenView NNM or by typing AM at the Unix command line.)
2. From the NNM console open the Edit menu, and drag the pointer down to Add Object...
3. Select AcctonConnector from Symbol Classes.



Getting Started

4. Scroll down through the Symbol SubClasses until you find the icon for the Accton device you want to manage (such as the EH3524A).
5. Drag the device icon onto your map.
6. The Add Object dialog box will appear. Fill in the required parameters as described under Adding an Object in chapter 4 of HP's OpenView manual "Using Network Node Manager."
- Note that Symbol Type, Label and Behavior refer to the device symbol; while Object Attributes, Selection Name and Comments refer to the actual object.
7. Specify a Label for the device symbol.
8. Set Behavior to "Execute." The Add Object dialog box will display an alternate menu as shown here. It also includes submenus for each of the Object Attributes selections, and a Set Selection Name dialog box for the IP address.
9. Set the Application Action for the selected device.

Add Object

Symbol Type: EtherHub1500

Label:

Display Label: ☒ Yes ☐ No

Behavior: ☐ Explode ☒ Execute

Application Action:

- AccView Advanced Manager : ExecCheetahSwitch3508A
- AccView Advanced Manager : ExecCheetahHub3524A
- AccView Advanced Manager : ExecEtherHub1500

Selection:

Target Objects: ☒ Self ☐ None ☐ Create list

Object Attributes:

- Capabilities
- General Attributes
- IP Map

Set Object Attributes...

Selection Name:

Set Selection Name...

Comments:

OK Cancel Help

10. To make the object accessible to OpenView's NNM, open Object Attributes for IP Map, and enter a Hostname, IP Address, and Subnet Mask.
11. To make the object accessible to the Advanced Manager, you must specify the IP address under Set Selection Name.

Note: Under Unix, the Name and IP Address of the managed device must also be defined in `/etc/hosts` exactly as it is here. Otherwise, the definition in the Add Object window will not be accepted.

After creating an object, the NNM lists information extracted from the agent's MIB. This information can be displayed by selecting Object Properties from the devices's pull-down menu, and then selecting Capabilities, General Attributes or IP Map from the Attributes list. (Refer to Field Definitions for Add Object Dialog Box on the next page.)

12. After you have finished editing the Add Object dialog box, double-click on the object you just created to start the Advanced Manager.
13. Enter the community string in the Advanced Manager dialog box to verify your access privileges, and press the OK button. The Advanced Manager will then open the device management window for the selected object (see Chapter 4).

Note: The Advanced Manager can also be invoked as an independent application. Under Windows NT, just select the required application from the Start/Programs menu. Under Unix, just enter `/> etherhub <hostname>` at the command line, where hostname indicates the name of the device.

Field Definitions for Add Object Dialog Box

Parameter	Description
Symbol Type	Symbol class and subclass for the selected object. Refer to the Add Object palette.
Label	Label you define for the selected object.
Behavior	The system's response to double-clicking can be defined as <i>Explode</i> or <i>Execute</i> . Set Behavior to <i>Execute</i> and select the appropriate Advanced Manager application from the Application Action list. Be sure Target Objects is set to "Self." This will allow you to directly invoke the Advanced Manager by double-clicking on this map object. However, also note you can also invoke the Advanced Manager by clicking on the map object with your mouse, opening the AccView menu, and then selecting the appropriate device management module.
Object Attributes	Capabilities - Determine object functionality and the corresponding menu items that are enabled. The capabilities list for any Accton object is True for these items – <i>isAccton</i>, <i>isNode</i>, <i>isConnector</i>, <i>isIP</i>, and <i>isSNMPSupported</i>. Hubs also display True for <i>isHub</i> and <i>isRepeater</i>, and switches display True for <i>isSwitch</i>. General Attributes - Provide a listing of application specific attributes for the Advanced Manager. This listing should be True for <i>isSNMPSupported</i>, and also list the <i>Accton</i> device management module as the <i>SNMPAgent</i> and <i>Accton</i> as the <i>Vendor</i>. IP Map - Enter the Hostname, IP Address and Subnet Mask. After initial configuration, the IP Map displays object characteristics based on information extracted from the agent's MIB.
Selection Name	This name is used to enable the appropriate device management module by the Advanced Manager. And it is used OpenWindows to identify each object in the database. If you do not provide a name, the object's Label is used by default.
Comments	Any additional information you want to provide for the selected object.

Modifying Existing Objects

Enabling Device Management

If your network map already includes any of Accton's manageable devices (such as the EH1500, EH3512, EH3512A/24A, ES3508 or ES3508A), then you need to take the following steps to enable the Advanced Manager's device management utilities:

1. Find the object on your network map that represents a manageable Accton product.
2. Right-click on the object and select Symbol Properties. Change Behavior to "Execute." Choose the appropriate ApplicationAction, such as "AccView Advanced Manager: ExecEtherHub3524A." Then add it to the Target Objects as the target of the application.
3. Right-click on the object and select Object Properties, and set the Selection Name to the object's IP address if not already configured that way. You must provide an IP address, not a host name, for the Advanced Manager to properly access the device.



Getting Started

Enabling the RMON Manager

If your network map includes any third-party devices that support RMON, you can take the following steps to enable the Advanced Manager's RMON utilities:

1. Find the object on your network map that supports RMON.
2. Right-click on the object and select Symbol Properties. Change Behavior to "Execute."
Choose the appropriate ApplicationAction, such as "AccView Advanced Manager: ExecRMON."
Or, if you only want to enable a specific RMON group, select that application, such as "AccView Advanced Manager: ExecRmStats." Then add it to Target Objects as the target of the application.
4. Right-click on the object and select Object Properties, and set the Selection Name to the object's IP address if not already configured that way. You must provide an IP address, not a host name, for the Advanced Manager to properly access the device.

Chapter 4

Device Management

This chapter describes how to use the device modules provided in the AccView Advanced Manager. Since these modules are functionally similar, only the management software for Accton's dual-speed CheetaHub Power-3512A/24A stackable hub system is described as an example. Detailed information about specific modules is included in the on-line help.

These modules use Simple Network Management Protocol (SNMP) to manage Accton's intelligent hubs and switches. They are designed to run under HP's OpenView Network Node Manager (NNM), but can also be invoked as stand-alone applications directly under Windows or Unix.

Management Overview

Once you have installed the Advanced Manager, the devices it recognizes as manageable will be displayed on the NNM network map by a unique icon similar to this - . Just double click on this icon to invoke the Advanced Manager. The device module for the EH3512A/24A can perform any of the following tasks: [Configuration](#) [Performance](#) [Fault](#) [Security](#) [Accounting](#) [Help](#)

Configuration

- Display network configuration, including IP settings and BootP options
- Configure RMON settings, including activating RMON for 10/100 Mbps segments
- Display hardware and firmware versions for the repeater board and agent module
- Monitor on-line status of hubs and ports, or enable/disable any port
- Download new agent firmware to the agent module
- Assign backup ports

Performance

- Display network statistics for the selected segment or port, including counter, increment and rate

Fault

- Designate IP management stations that will receive trap messages

Security

- Set the community strings used to control management access
- Configure intrusion control for any port

Accounting

- Display system information, including device description, contact person, and location

Help

- Display detailed help information

Getting Started

This section describes how to start the Advanced Manager. It also tells what the program can do.

Before You Begin

The Advanced Manager device modules run under HP's OpenView Network Node Manager (NNM). This manual assumes that you are thoroughly familiar with the Network Node Manager. If necessary, please refer to the HP OpenView user guide, Using Network Node Manager.

Accessing the Software

The standard way to access a device management module is to first open the NNM platform, open the network map containing the device you want to manage, and double click on the target icon.



If your map has not yet been defined, then first add the required device to the map, verifying that you have the correct address as described in Chapter 3. For more detailed information on setting up your network map refer to the NNM user's guide.



Adjust the parameters displayed in the Advanced Manager dialog box for program initialization, as required. Depending on your environment, you may need to modify any of the following items.

- Community name describing the administrative relationship between SNMP entities.
- Polling Interval between sending requests.

Press OK to confirm your selections and open the device management window as shown in the following example.

AccView Advanced Manager

Protocol:

Target Address:

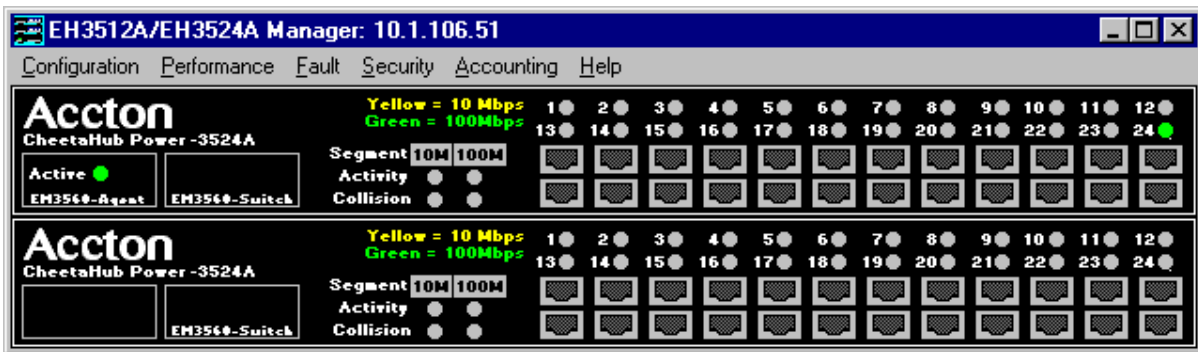
Community: public

Polling Interval: 5 sec.

Timeout: sec.

Retries:

OK Cancel



- Notes:**
1. This example shows a dual-speed stack containing two hubs.
 2. Menu options displayed at half intensity are inactive, and cannot be used for the selected object.

Command Interface for the EH3512A/24A

The main menu for all the device management modules shows a graphical representation of the device or stack you want to monitor. A real-time display of the target object includes the base unit (for each hub in the stack), management modules, and optional switch modules. Note that the sequence in which the hubs are displayed depends on the cabling sequence.

1. LEDs are lit to reflect the real-time status of the actual LEDs on the units being monitored.
2. Select the overall system by deselecting all components, a hub, port, or agent module by clicking on its graphic representation, or an active segment by clicking on the segment label.
3. Double-click on any segment label or port to invoke the corresponding statistics window.

The Advanced Manager provides a menu bar above the stack display. The following table describes each menu and the associated commands.

Menu	Description
<i>Configuration</i>	
System Configuration	Configures IP parameters, including address, subnet mask, gateway, and default bootup IP.
RMON Configuration	Enables/disables RMON for 10 or 100 Mbps segments; attaches Agent Module to 10 or 100 Mbps segment.
Hub Configuration	Displays hardware/firmware version for hub.
SNMP Module Configuration	Displays hardware/firmware version, serial number, MAC address, and bootup option for agent.
Port Configuration	Disables/enables any port; and sets communication mode to 10 or 100 Mbps, or auto-negotiation. Also displays last source address, number of address changes, auto-partition status, link status, and speed of the current connection.
Backup Port Configuration	Allows you to specify up to 15 backup ports.
Code Update	Downloads new firmware version from the specified FTP server to update the Agent Module over the network.
<i>Performance</i>	
Segment Statistics	Displays network performance for the selected 10 or 100 Mbps stack segment.
Port Statistics	Displays network performance for the selected port.
<i>Fault</i>	
IP Trap Receivers	Specifies network management stations that are to receive trap messages from this device.
<i>Security</i>	
Community	Specifies community strings used to control SNMP access.
Intrusion Control	Restricts port access to a specific MAC address, or a to list of MAC addresses using auto-learn.
<i>Accounting</i>	
System Information	Displays system description, MIB object ID, system uptime, and other contact information.

Note: By default, OpenView NNM enables most common SNMP events. All you need to do is specify your management station as a trap receiver in the managed device. However, if the management station is in a different IP segment, then the appropriate IP gateway will have to be defined in the management device. Also note that if you have disabled any of the default settings in Event Configuration for OpenView NNM, you may need to re-enable these settings to receive trap messages.

Appendix A

Specifications

The AccView Advanced Manager is designed to manage Accton products under HP's OpenView NNM. It also provides a 9-group RMON management utility that can be used for any network device that supports RMON (RFC 1757).

Product Overview

- Runs under OpenView NNM in Microsoft Windows NT, HP-UX, and Solaris
- Provides device management for Accton products that include an SNMP agent
- Provides RMON management for any devices that support RFC 1757

Features and Specifications

AccView Advanced Manager	
Architecture	
Scalable, modular design	Open device management and RMON modules
User Interface	
PC	Windows NT 4.0 or above / OpenView NNM 5.0 or above
HP 9000 workstation	HP-UX 10.20 / OpenView NNM 6.1 or above
Sun workstation	Solaris 2.5.1 or above / OpenView NNM 6.1 or above
Device Management	
Full control over Accton devices	Provides detailed system and port configuration; basic statistics for device, segment or port; trap management; SNMP configuration; and system information
RMON Management	
Full 9-group RMON	Statistics, History, Hosts, Host Top N, Matrix, Alarms, Events, Filter, Capture
Trap Management	
Device traps reported to OpenView NNM	SNMP traps configured for the device can be displayed and handled in OpenView NNM
MIB Management	
Accton device MIBs can be managed directly in OpenView NNM	Device MIBs can be loaded into OpenView NNM, and viewed or managed using NNM's MIB Browser

Specifications

System Requirements		AccView Advanced Manager
PC	Software	Microsoft Windows NT 4.0 (or later) HP OpenView NNM 5.0 or above
	Hardware	Pentium-133, 32 MB RAM, 20 MB hard disk space*, CD-ROM drive, VGA color monitor, mouse, network adapter
HP 9000 workstation	Software	HPUX 10.20 HP OpenView NNM 6.1 or above
	Hardware	HP 9000 workstation, 64 MB RAM, 20 MB hard disk space*, CD-ROM drive, VGA color monitor, mouse, network adapter
Sun SPARC workstation	Software	Solaris 2.5.1 or above OpenWindows Version 3.0 or later, or OSF/Motif window manager HP OpenView 6.1 or above
	Hardware	Sun SPARC workstation, 64 MB RAM, 20 MB hard disk space*, CD-ROM drive, VGA color monitor, mouse, network adapter

* Disk space required to install AccView is about 20 MB using a local or network hard disk. User files (configuration settings, data logs, etc.) will vary depending on your network configuration and statistical tracking requirements.

Appendix B

CodeBase Sub-License Agreement

The AccView Advanced Manager for Windows NT uses code from Sequiter Software Inc. This section contains a statement of agreement between Sequiter Software Inc. and the CodeBase 6.0 LICENSEE (Accton) concerning sub-licensing (specifically for software used in the file C4DLL.DLL). All the terms and conditions in this agreement are imposed upon the CodeBase 5.0 DLL SUB-LICENSEE (i.e., the party purchasing the software described in this manual).

This legal document is an agreement between you, the CodeBase 5.0 DLL SUB-LICENSEE, and the CodeBase 5.0 LICENSEE (hereinafter referred to as the "Agreement").

You are not being "sold" any Sequiter Software Inc. software. Instead, you are being granted the right to use Sequiter Software Inc. software through this license agreement. Sequiter Software retains all ownership of its software including all copies of its software.

1. Definitions

Software

This is the Sequiter Software Inc. computer programs contained in the CodeBase 5 software package or any computer programs containing parts of the computer programs in this package. These programs could be represented any form: in print, as electronic source code, as compiled object modules, as a library file, a dynamic link library, or an executable program.

Executable Software

This is a form of the Software which can be executed by the DOS, Microsoft Windows or OS/2 software packages.

Distributable Software

This is the Executable Software except for the CodeReporter executable program.

DLL Software

This is a dynamic link library form of the Software which is executed indirectly under the DOS, Microsoft Windows or OS/2 software packages. It includes Microsoft Windows and OS/2 dynamic link library forms of the software. For the purpose of this license agreement, other forms of the Software which are executed indirectly, such as the an AutoCad ".EXP" form of the Software, are also considered to be DLL Software.

CodeBase 5.0 DLL Sub-License Agreement

2. Sub-License

You may use the DLL Software with, and only with, the Distributable Software provided by the CodeBase 5 LICENSEE. You may not use the DLL Software for any other purpose. Specifically, you agree not to use the DLL Software for the purposes of developing or creating Executable Software.

3. Transfer Restrictions

The DLL Software is sub-licensed to you, and may not be transferred to anyone without the prior consent of the CodeBase 6.0 DLL LICENSEE. Any authorized transferee of the sub-license shall be bound by the terms of this agreement.

4. Disclaimer

The DLL Software is provided “as is” without any kind of warranty. It is your responsibility to determine whether the DLL Software is suitable for your purpose.

5. Miscellaneous

This agreement is governed by the laws of the Province of Alberta, Canada. The CodeBase DLL SUB-LICENSE consents to jurisdiction in the province of Alberta, Canada.

Appendix C

Product Support Services

Accton is an international corporation that offers worldwide technical support. Many of these services are available 24 hours a day.

To help us serve you more effectively, please have the following information available before calling Accton:

- A list of files in your AccView Advanced Manager directory –
NT: C:\AccView Advanced Manager 1.2
HP-UX or Solaris: /opt/OV/AccView
- Detailed information about your network adapter

Questions from the Support Staff

Be prepared to answer the following questions.

Questions	Example
Version of AccView Advanced Manager you are using?	1.2
Network adapter: manufacturer and model?	Cheetah PCI Adapter (EN1211TX/WOL)
Exact wording of any error messages you may have seen?	Packet Driver not loaded
Step-by-step description of what happened and what you were doing when the problem occurred?	1. Double-clicked on AccView Advanced Manager icon 2. Saw error message
Description of the actions you have taken to correct the problem?	Re-booted computer
Anything else we should know about your computer or installation?	Computer soaked by Great Flood of '99

Contact Information

Accton

FOR TECHNICAL SUPPORT, CALL:

From U.S.A. and Canada: (Monday thorough Friday, 8:30 AM - 8:00 PM Pacific Time)
888-398-4101 or 949-707-4847; 949-707-2460 (Fax)

From Asia (8:00 AM - 5:30 PM UK Greenwich Mean Time)
886-3-5770-270; 886-3-5770-267 (Fax)

INTERNET

E-mail addresses:	support@accton.com.tw
Driver updates:	http://www.accton.com/support.html
World Wide Web:	http://www.accton.com/
FTP Site:	ftp.accton.com.tw

Product Support Services

Glossary

AccView

AccView is a complete network management platform. AccView is composed of a core program and group of related modules. AccView is a complete network management product with modules for managing Accton and third-party SNMP devices.

AccView Advanced Manager

Software used to manage Accton devices in under OpenView NNM. Also includes an RMON manager that can access all 9 RMON groups for any device that supports RMON.

Address

Identification of entities in a communication protocol.

BOOTP (Boot Protocol)

BOOTP is a popular protocol that runs on top of the UDP/IP stack. BOOTP is used by devices to discover their own IP address.

Bandwidth Utilization

The percentage of packets received over time as compared to overall bandwidth.

Broadcast Packet

A packet transmitted to all nodes attached to the network.

Community

A character string embedded in SNMP messages that's used to authenticate the access rights of the service requester.

Connection

A logical binding between two or more users of a service.

Ethernet

A 10 Mbps baseband LAN that uses a bus configuration and CSMA/CD.

Ethernet Frame

A packaging structure for Ethernet data and control information. It consists of the destination address, source address, field length, data, pad, and a frame check sequence.

Glossary

Gateway

A synonym for router in internet protocol (IP). A gateway connects several IP networks. It builds a routing database by exchanging information with other gateways or with information input by the network administrator. It relays IP data packets between connected networks.

IP Address

A 32-bit quantity representing a point of attachment to the Internet. It is usually represented by four 8-bit integers separated by dots. Each decimal integer represents a byte in an IP address. The IP address is divided into a network part and a host part. For example, 192.9.211.151. See Appendix E for more information on Internet and IP addresses.

IPX

Internetwork Packet Exchange is a NetWare protocol providing datagram message delivery.

LAN (Local Area Network)

A group of interconnected computers and other devices.

MAC Address

Media Access Control address that represents a unique physical address for each port in a local area network.

Map

A network diagram showing devices managed in OpenView NNM.

MIB

An acronym for Management Information Base. It is a set of objects that contain information about the device. Note that MIB-2 is simply a subordinate component of the overall MIB.

Netmask

The netmask divides a network into logical subnets. This number uses a binary representation to include or exclude address. For example, these netmasks correspond to various internet classes:

Class A:	255.0.0.0
Class B:	255.255.0.0
Class C:	255.255.255.0

NMS (Network Management Station)

The computer used to run network management software, e.g., OpenView NNM or AccView Advanced Manager.

OpenView NNM (Network Node Manager)

A comprehensive network management tool that runs under Windows NT or Unix. It supports automated network mapping and event management for a broad range of third-party network devices.

Packet

The unit of data transfer over a local area network. For Ethernet, it includes the number of preamble bits, the start of frame delimiter, the destination and source addresses, the data to be transferred, and the error correction code.

Protocol

A set of rules that allows computers to communicate with one another, specifying the format, timing, sequencing, and error-checking for data transmission.

Retries

The number of times the AccView Advanced Manager attempts to communicate with a device before quitting. Also see timeout.

RMON (Remote Monitoring)

RMON provides comprehensive network monitoring capabilities. It eliminates the polling required in standard SNMP, and can set alarms on a variety of traffic conditions, including specific errors types.

SNMP (Simple Network Management Protocol)

The application protocol offering network management services in the Internet suit of protocols.

Subnet

A LAN segment which may be reached through a gateway.

Subnet Mask

A decimal number (four integers) which specifies the logical network subnet of the terminal. A typical subnet mask is 255.255.255.0. Also see Netmask.

Timeout

The elapsed time (in seconds) that the AccView Advanced Manager waits for a response from a device.

TFTP (Trivial File Transfer Protocol)

A file-transfer protocol for downloading files.

Index

C

CodeBase 6.0 DLL B-1

D

device management 4-1

F

features 1-2, A-1

I

installation

HPUX 2-3

Solaris 2-8

Windows NT 2-1

O

OpenView NNM

configuring objects 3-1

enabling RMON 3-4

modifying objects 3-3

P

product support C-1

S

specifications A-1

sub-license agreement B-1

support services C-1

system requirements 2-1, 2-3, 2-8

