Compaq PATHWORKS V6.1 for OpenVMS (Advanced Server)

Release Notes

October 2001

The Compaq PATHWORKS V6.1 for OpenVMS (Advanced Server) Release Notes include information about the distribution kit, software features and usage guidelines, the latest problem fixes, fixes from preceding product versions, and restrictions. These Release Notes supplement the product documentation. Always read the Release Notes before you start the product installation.

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Preface

The Compaq *PATHWORKS V6.1 for OpenVMS (Advanced Server)* Release Notes include information about the distribution kit, software features and usage guidelines, the latest problem fixes, documentation errors, and restrictions.

These Release Notes supplement the product documentation. Always read the documentation as well as the product Release Notes.

Intended Audience

These Release Notes are intended for the PATHWORKS for OpenVMS (Advanced Server) system administrator. It assumes you have:

*   A basic understanding of a PC LAN network

*   A basic understanding of OpenVMS system management

*   Access to the PATHWORKS for OpenVMS (Advanced Server) documentation

Document Structure

This manual contains the following chapters:

*   Chapter 1 contains information about the PATHWORKS for OpenVMS (Advanced Server) software kit.

*   Chapter 2 describes the main features of the PATHWORKS for OpenVMS (Advanced Server) software.

*   Chapter 3 provides guidelines for using the PATHWORKS for OpenVMS (Advanced Server) software.

*   Chapter 4 lists the problems resolved by software changes made in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server). These changes also apply to PATHWORKS V6.1 for OpenVMS (Advanced Server).

*   Chapter 5 lists the problems resolved by software changes made in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server). These changes also apply to PATHWORKS V6.1 for OpenVMS (Advanced Server).

*   Chapter 6 lists the problems resolved by software changes made in PATHWORKS V6.1 for OpenVMS (Advanced Server).

*   Chapter 7 describes restrictions in the PATHWORKS for OpenVMS (Advanced Server) software.

Related Documents

The Release Notes supplement the following manuals:

Document	Description
Compaq PATHWORKS for OpenVMS (Advanced Server) Server Migration Guide	Explains how to upgrade a PATHWORKS V5 for OpenVMS (LAN Manager) server to PATHWORKS V6 for OpenVMS (Advanced Server).
Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide	Explains how to install and configure PATHWORKS Advanced Server software.
Compaq Advanced Server for OpenVMS Concepts and Planning Guide	Provides an overview of and introduction to the PATHWORKS for OpenVMS (Advanced Server) software and associated networking concepts for system administrators and operators.
Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide	Explains how to manage and customize the PATHWORKS for OpenVMS (Advanced Server) software.
Compaq Advanced Server for OpenVMS Commands Reference Manual	Provides command syntax descriptions for all ADMINISTER commands and NET command equivalents.
Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses	Describes the License Server software and how to manage PATHWORKS for OpenVMS (Advanced Server) licenses.

The following table lists related OpenVMS documents.

OpenVMS Document	Description
OpenVMS Version 7.x New Features and Documentation Overview	Describes the new features of the OpenVMS software and an overview of the documentation that supports it
OpenVMS Alpha V7.x Upgrade and Installation Guide	Describes how to install the OpenVMS Alpha system software.
OpenVMS VAX V7.x Upgrade and Installation Guide	Describes how to install the OpenVMS VAX system software.
OpenVMS System Manager's Manual	A task-oriented guide to managing an OpenVMS system.
OpenVMS Guide to System Security	Describes OpenVMS security features, including procedures for enabling external authentication.
OpenVMS System Management Utilities Reference Manual	A reference guide to the utilities and tools used in managing an OpenVMS system.
OpenVMS License Management Utility Manual	Explains how to load and manage license Product Authorization Keys (PAKs).

For additional information about OpenVMS products and services, access the following World Wide Web address:

`http://www.openvms.compaq.com/`

Reader's Comments

Compaq welcomes your comments on this manual. Please send comments to either of the following addresses:

Internet	**openvmsdoc@compaq.com**
Mail	Compaq Computer Corporation OSSG Documentation Group, ZKO3-4/U08 110 Spit Brook Rd. Nashua, NH 03062-2698

How To Order Additional Documentation

Visit the following World Wide Web address for information about how to order additional documentation:

`http://www.openvms.compaq.com/`

If you need help deciding which documentation best meets your needs, call 800-282-6672.

1
Distribution Kit

The PATHWORKS V6.1 for OpenVMS (Advanced Server) software kit includes support for both OpenVMS VAX and OpenVMS Alpha systems and consists of the following BACKUP savesets.

Saveset Name	OpenVMS System
PWRK061.A	VAX and Alpha
PWRK061.B	VAX
PWRK061.C	Alpha
PWRK061.D	VAX
PWRK061.E	Alpha

2

Features of PATHWORKS for OpenVMS (Advanced Server)

PATHWORKS for OpenVMS (Advanced Server) — known also as the PATHWORKS Advanced Server, and often referred to as the Advanced Server — is an OpenVMS layered application and network operating system that is compatible with the Microsoft networking technology. PATHWORKS for OpenVMS (Advanced Server) implements networking functions that are compatible with a Windows NT Server. PATHWORKS for OpenVMS (Advanced Server) offers easy access to OpenVMS file and printer services from Windows desktops, using native Microsoft products and utilities such as Windows Explorer. PATHWORKS for OpenVMS (Advanced Server) combines the networking strengths and rich application set of Windows NT with the proven availability, scalability, and security of OpenVMS. It incorporates much of the code and functionality of Advanced Server for UNIX (Tru64 UNIX), as well as Advanced Server for OpenVMS. The latest version of this software supports:

- LAN Manager V3.0 technology
- OpenVMS Alpha Versions 7.3, 7.2-1, and 6.2, and OpenVMS VAX Versions 7.3, 7.2, and 6.2
- Trusted domains
- Wide Area Domain, Windows Internet Naming Service (WINS) integration over TCP/IP
- Full browser functionality
- Windows NT management APIs
- Support of member server role
- The following Windows 2000 support:
  - Support of Windows 2000 clients
  - As a backup domain controller or member server, support of Windows 2000 domain controllers in a Windows 2000 mixed-mode domain
  - As a member server, support of Windows 2000 domain controllers in a pure (native) Windows 2000 domain
- Enhanced compatibility with legacy applications, with support of alias file names
- Support of DNS for resolving NetBIOS names
- The PATHWORKS comprehensive ADMINISTER command line interface
- Password synchronization between OpenVMS and Advanced Server systems
- User account lockout

This chapter includes the following information:

Topic	Section Number
New Features Provided by PATHWORKS V6.1 for OpenVMS (Advanced Server)	2.1
Overview of Advanced Server Features	2.2
Differences Between PATHWORKS V5 for OpenVMS (LAN Manager) and PATHWORKS V6 for OpenVMS (Advanced Server)	2.3
Unsupported PATHWORKS V5 for OpenVMS (LAN Manager) Features	2.4

2.1 New Features Provided by PATHWORKS V6.1 for OpenVMS (Advanced Server)

The main new features provided by PATHWORKS V6.1 for OpenVMS (Advanced Server) include the following:

- Support of Windows 2000

- Member server support, which allows the Advanced Server to participate in Windows 2000 native-mode (pure) domains

- Automatic creation of alias file names for files with names that are not compatible with file name conventions used by MS-DOS and legacy PC applications

- DNS support for resolving NetBIOS names

- For performance gains, availability of a logical to expedite management of server-based licences for clients attempting to connect to the file server

2.1.1 Windows 2000 Support

The Advanced Server provides the following Windows 2000 support:

- Support of Windows 2000 clients

- Support of Windows 2000 domain controllers in the same domain as the Advanced Server

  The Advanced Server can participate in pure (native) Windows 2000 domains as a member server (for more information on member server support, see Section 2.1.2, Member Server Support). The Advanced Server can participate in Windows 2000 mixed-mode domains as a backup domain controller or member server. (A Windows 2000 mixed-mode domain contains at least one Windows 2000 domain controller plus one or more Windows NT or Compaq Advanced Server domain controllers.)

For more information about Windows 2000 domain support, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

2.1.2 Member Server Support

The PATHWORKS Advanced Server now gives you the option of configuring the server as a member server instead of a primary domain controller (PDC) or backup domain controller (BDC). As a member server, the Advanced Server can participate in a native-mode Windows 2000 environment (a domain in which all domain controllers are Windows 2000 systems). Windows NT member servers can also participate along with Advanced Server member servers in native-mode Windows 2000 environments.

Member servers rely on domain controllers for authenticating credentials of users requesting access. Any domain controller can authenticate domain user requests to member server resources.

The PWRK$CONFIG.COM configuration procedure allows you to define the role of the Advanced Server as a member server. You cannot use the ADMINISTER SET COMPUTER/ROLE command to change an Advanced Server domain controller to a member server role (or vice versa) — you must use PWRK$CONFIG. (This restriction is similar but less restrictive to that of Windows NT, which requires the software to be reinstalled to change a domain controller to a member server, or vice versa.)

For more information on member server support, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*. For information on restrictions relating to the member server role, see Section 7.8.5, Member Server Role Restrictions.

2.1.3 Support of Alias File Names

To enable compatibility with legacy applications (such as MS-DOS) whose file naming conventions are more restricted than those used by the Advanced Server, the PATHWORKS Advanced Server now creates MS-DOS-compatible alias file names for shared files whose names do not conform to the MS-DOS format. As a result, client applications that must use, or choose to use, the MS-DOS format for file names, can access these shared files on the server by using the file's associated alias file name. Clients can use either the real file name or the alias file name to access the file, depending on the client's file system.

The PATHWORKS Advanced Server returns a file's alias name, instead of the real file name, to an MS-DOS client only if the real name is not MS-DOS compatible. Otherwise, the Advanced Server returns the file's real name to the MS-DOS client. For more information on support of alias file names, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

2.1.4 DNS Support for Resolving NetBIOS Names

Previous to this release, the PATHWORKS Advanced Server used WINS, broadcast name query, and LMHOSTS for name resolution, but not DNS. With this release, the PATHWORKS Advanced Server can use DNS for name resolution as well. To enable DNS name resolution, use Configuration Manager and select the Transport Configuration Parameters screen, as documented in the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

If you select the DNS option, the Advanced Server will use the currently configured DNS server as a last resort (that is, if all other methods fail to resolve a NetBIOS name). WINS should still be the primary resource for resolving names.

2.1.5 Server-Based License Management for Performance Gains

As documented in the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*, you can set the logical PWRK$LR_DISABLE_CLIENT_PING systemwide in the PWRK$LICENSE_R_START.COM to cause the License Registrar to assign a server-based license immediately to a client attempting to connect to the file server instead of first checking for client-based licenses. This can improve performance.

2.2 Overview of Advanced Server Features

Some major features provided by the PATHWORKS Advanced Server are described in the following sections.

2.2.1 Dynamic Cluster Load Balancing in Wide Area Networks

Previous to PATHWORKS V6.0C for OpenVMS (Advanced Server), WAN clients used WINS or LMHOSTS to resolve the cluster alias name, based on a static source of address information. From request to request, the cluster alias name was resolved to the same server node in the cluster, regardless of the load.

Now, dynamic cluster load balancing is available for service requests from WAN clients that are outside the server cluster's LAN. This dynamic cluster load balancing mechanism for WAN environments is provided by Compaq TCP/IP Services for OpenVMS V5.0A (or later), and uses a Domain Name System (DNS) server to resolve the cluster alias name, instead of WINS or LMHOSTS. This DNS name server must support dynamic updates (Berkeley Internet Name Domain (BIND) server, Version 8.1.1 or later).

––––––––––––––––––––––––––––– **Note** –––––––––––––––––––––––––––––

You can set up dynamic cluster load balancing using TCP/IP Services for OpenVMS Version 4.2 (supported on OpenVMS Version 6.2 systems); however, Compaq recommends using TCP/IP Services for OpenVMS, Version 5.0A or later, which means you would need to upgrade any OpenVMS Version 6.2 systems.

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For information about enabling dynamic load balancing in WANs, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide.*

2.2.2 Support for OpenVMS V6.2 Alpha and VAX Systems to Facilitate Migration of PATHWORKS V5 for OpenVMS (LAN Manager) Server Users

To facilitate the migration of PATHWORKS V5 for OpenVMS (LAN Manager) server users to the PATHWORKS Advanced Server product, the PATHWORKS V6.1 for OpenVMS (Advanced Server) is supported on OpenVMS V6.2 Alpha and VAX systems. Functionality and features of the PATHWORKS Advanced Server can vary slightly according to the OpenVMS operating system it runs on, as noted in Table 2–1.

Table 2–1 PATHWORKS V6.1 for OpenVMS (Advanced Server) Support Variations Between OpenVMS V6.2 and Later Versions of OpenVMS

Feature	OpenVMS V6.2	OpenVMS V7.2 and Later
External Authentication	Not supported. See Section 3.13, Guidelines for External Authentication.	Supported.
External Authentication Images only installation	Not supported.	Supported.

(continued on next page)

Table 2–1 (Cont.) PATHWORKS V6.1 for OpenVMS (Advanced Server) Support Variations Between OpenVMS V6.2 and Later Versions of OpenVMS

Feature	OpenVMS V6.2	OpenVMS V7.2 and Later
Images	Uses *_V6.EXE; for example, PWRK$CSSHR_V6.EXE common services shareable image.	Uses *_V7.EXE; for example, PWRK$CSSHR_V7.EXE common services shareable image.
Date/Time	A delta-time restriction exists which, for example, affects file creation dates. An ECO is available to remove the restriction: refer to Section 3.18.1, Patch Required for Servers Running on OpenVMS V6.2.	No similar restriction
Time Zone Setup	Optional.	Required. See *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*.
XQP+	Must be enabled explicitly by users. Refer to Section 3.19, Enabling XQP+ Support.	Enabled automatically on V7.2 or later. Must be enabled explicitly by users on V7.1. Refer to Section 3.19, Enabling XQP+ Support.
TCP Support	Compaq TCP/IP Services for OpenVMS V4.2. For other TCP/IP products, see the *Advanced Server V7.3 for OpenVMS and PATHWORKS V6.1 for OpenVMS (Advanced Server) Software Product Description*.	Compaq TCP/IP Services for OpenVMS V5.0, 5.0A, and 5.1 or later. For details on versions supported per platform, as well as information on other TCP/IP products, see the *Advanced Server V7.3 for OpenVMS and PATHWORKS V6.1 for OpenVMS (Advanced Server) Software Product Description*.
ODS-5 devices	Not supported.	Supported as ODS-2 devices on OpenVMS Alpha V7.2 and later.

2.2.3 Domain Database Replication and Network Logon Performance Improvement

The PATHWORKS for OpenVMS (Advanced Server) software has been streamlined to improve the performance for network logons and domain security accounts database (also referred to as SAM database) replication. Formerly, these operations were performed by the PWRK$LMDMN process. The server now uses the PWRK$LMSRV process to perform them. The PWRK$LMSRV process is responsible for communicating with the data cache that contains the SAM database. Moving the responsiblity for network logon validation and SAM database replication from the PWRK$LMDMN process to the PWRK$LMSRV process streamlines the operations by eliminating the interprocess communication that was required between the PWRK$LMDMN process and the PWRK$LMSRV process. The PWRK$LMDMN process no longer exists, as noted in Section 3.11, PWRK$LMDMN Process and Startup File Replaced.

2.2.4 Improved Handling of File and Directory Permissions

The file server is designed to handle access permissions in conformance with the behavior of Windows NT. Previous to PATHWORKS V6.0C for OpenVMS (Advanced Server), certain OpenVMS behaviors caused discrepancies. For example, when files were created in a shared directory, they inherited inappropriate or wrong access permissions from the parent directory. The PATHWORKS V6.0C for OpenVMS (Advanced Server) and higher versions compensate for the OpenVMS inconsistencies and now handles security information more efficiently and in conformance with the behavior of Windows NT.

The PATHWORKS V6.0C for OpenVMS (Advanced Server) and higher versions also provide a new utility, PWRK$FIXACE, that can help resolve security problems that arise because of inappropriate permissions on files. The utility removes inappropriate security information and compresses the valid security information to optimize disk storage.

In addition, the Advanced Server now supports the new STORE_SECURITY_ACES LANMAN.INI parameter value that you can use to limit the security information propagated to files created in directories. This can help optimize the usage of disk space (at the expense of runtime performance).

For more information on enhancements to the file server's handling of file security information, the PWRK$FIXACE utility, and the STORE_SECURITY_ACES parameter, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

2.2.5 Enhanced Interoperation Between the PATHWORKS Advanced Server and Windows NT

In some instances, Microsoft Windows NT does not strictly conform to Request for Comments (RFCs) 1001 and 1002. Most notably, the lack of conformance occurs when clients fail to resolve names by either WINS or broadcast, and use DNS for resolving NetBIOS names as a last resort. When Windows NT resolves a NetBIOS name by using DNS, the subsequent sequence of actions differs from the actions taken following the normal methods of name resolution (by either WINS or broadcast).

When Windows NT has resolved a NetBIOS name to an IP address by using a DNS server, it does the following:

1. Windows NT attempts to PING the resolved IP address to determine whether the node is up.

2. If the PING is successful, Windows NT sends a node status request for the NetBIOS name "*....<15>". This is a wildcard name; however, it is an invalid NetBIOS name according to RFCs 1001 and 1002.

    If Windows NT does not get a node status response, it assumes the server is down and stops attempting to establish a session. This will happen with a PATHWORKS Advanced Server prior to V6.0C, because such a server rejects the node status request as an invalid NetBIOS name.

3. If Windows NT receives a valid node status response, the response includes a list of NetBIOS names owned by the node. Windows NT assumes that the first name ending in "0x20" (the server service) in the list is always the file server name. Windows NT uses this name in its attempt to establish a session with the server.

However, with the PATHWORKS Advanced Server prior to V6.0C, the first name returned in a node status response that ends in "0x20" is either "PWRK$Lxxxxxx" (License Server) or "xxxxxxCMTSERVER" (CMT server), but never the file server name.

Another way in which Windows NT does not strictly adhere to RFCs 1001 and 1002 is in how it responds to a node status request. When an Advanced Server user enters the following command, where *nt-host* is the NetBIOS name of a Windows NT host, the Advanced Server sends a node status request to the specified Windows NT host:

```
$ NBSHOW KNBSTATUS nt-host
```

The Windows NT host replies to this command with a node status response. However, an Advanced Server prior to V6.0C discards the returned node status response because the packet size of the response does not conform to RFC 1001/1002 expectations: the response includes 18 extra, undefined bytes.

PATHWORKS V6.0C for OpenVMS (Advanced Server) and higher versions have made adjustments to interoperate better in environments that include Windows NT. The PATHWORKS Advanced Server now:

- Responds to Windows NT node status requests for name "*....<15>" as Windows NT expects, even though the name specified in the query is an invalid NetBIOS name according to RFC 1001 and 1002.

- Always returns the file server name as the first name in the NetBIOS name list that is returned as part of the node status response.

- No longer discards a node status response from Windows NT, even if it has 18 extra bytes of undefined information. The PATHWORKS Advanced Server will accept the node status response, ignoring the 18 extra bytes.

2.2.6 Windows NT Domain Services

The PATHWORKS Advanced Server allows you to run the server as the primary domain controller (PDC) or the backup domain controller (BDC) in a Windows NT-compatible domain.

The PATHWORKS Advanced Server can participate in the domain as a Master Browser or Backup Browser.

The PATHWORKS Advanced Server supports the ability to be managed remotely from:

- Windows NT Server
- PATHWORKS Advanced Server
- Advanced Server for OpenVMS
- Clients running Windows NT Server administration tools

For information about remote server management, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

2.2.7 Installation and Configuration

PATHWORKS Advanced Server provides a single installation procedure that allows you to install any of the following:

- PATHWORKS Advanced Server software (includes the Upgrade utility, external authentication images, and the License Server)

Note

The NetWare server software is not provided with PATHWORKS V6.1 for OpenVMS (Advanced Server). If the NetWare software is present on your system, you must deinstall it before installing PATHWORKS V6.1 for OpenVMS (Advanced Server). To use PATHWORKS V6.1 for OpenVMS (Advanced Server), users of the NetWare server software must migrate clients to a TCP/IP or NetBEUI networking solution.

- Upgrade utility only
- License Server only
- External Authentication images only (on OpenVMS Version 7.1 and later systems)

2.2.7.1 Upgrade Utility

The PATHWORKS Advanced Server provides a separately installable Upgrade utility. Use this Upgrade utility to upgrade the server's user, group, and share information from PATHWORKS V5 for OpenVMS (LAN Manager) to PATHWORKS V6 for OpenVMS (Advanced Server) while the server continues to run. This allows you to plan and upgrade shares, user accounts, and security in preparation for the PATHWORKS Advanced Server installation, without interrupting file and print services.

Note

The separately installable Upgrade utility is offered only if the PATHWORKS V6 for OpenVMS (Advanced Server) installation procedure detects the presence of PATHWORKS V5 for OpenVMS (LAN Manager)

For more information about how to use the Upgrade utility, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Migration Guide*.

2.2.8 File and Print Services

PATHWORKS Advanced Server supports the Server Message Block (SMB) V3.0 file and print protocols compatible with Windows NT.

2.2.9 Client Support

PATHWORKS Advanced Server supports connections from the following types of clients:

- Windows NT
- Windows 95 and Windows 98
- Windows for Workgroups

- PATHWORKS 32

2.2.10 Transport Support

PATHWORKS Advanced Server supports the same types of transports as does PATHWORKS V5 for OpenVMS (LAN Manager), but selects them in the following order, which differs from the order used by the PATHWORKS V5 for OpenVMS (LAN Manager) server:

1. TCP/IP

2. NetBEUI

3. DECnet-Plus (or DECnet Phase IV)

2.2.10.1 TCP/IP Support

The Advanced Server provides transparent support for the following TCP/IP network transport products:

- Compaq TCP/IP Services for OpenVMS

- MultiNet for OpenVMS, from Process Software LLC

- TCPWARE for OpenVMS, from Process Software LLC

For information about which versions of Compaq TCP/IP for OpenVMS are supported on each OpenVMS platform, refer to the latest *Advanced Server V7.3 for OpenVMS and PATHWORKS V6.1 for OpenVMS (Advanced Server) Software Product Description.* For information about using TCP/IP products with PATHWORKS Advanced Server, refer to Section 3.17, Using TCP/IP Products with PATHWORKS Advanced Server.

2.2.10.1.1 WINS Support for Resolving NetBIOS Names in a Wide Area Network

The PATHWORKS Advanced Server can act as a Windows Internet Name Service (WINS) client, allowing the PATHWORKS Advanced Server to use WINS services to resolve NetBIOS names in a Wide Area Network (WAN) configuration. For information about setting up WINS services for PATHWORKS Advanced Server, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide.*

2.2.10.1.2 DNS Support for Resolving NetBIOS Names in a WAN

The Advanced Server can use DNS services to resolve NetBIOS names in a Wide Area Network (WAN) configuration. For information about setting up DNS services for the Advanced Server, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide* and the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide.*

2.2.10.2 NetBEUI Support

The Advanced Server for OpenVMS provides the NetBEUI transport. NetBEUI is recommended only for use in small LAN-only environments (approximately 50 nodes or less).

2.2.10.3 DECnet Support

The Advanced Server supports DECnet and DECnet-Plus as supported by the OpenVMS operating system on which the server runs. For more information, refer to the PATHWORKS V6.1 for OpenVMS (Advanced Server) SPD.

_____ **Note** _____

The PATHWORKS mail server works only if DECnet is running on both of the following:

- The PATHWORKS server
- The client that wants to use the mail server

2.2.11 XQP+ Support

The PATHWORKS Advanced Server supports the enhanced OpenVMS file system, also known as XQP+. Table 2–2 describes the features of XQP+.

Table 2–2   Features of XQP+

Feature	Description
Multithreading	Lets the server perform up to eight concurrent OpenVMS file system operations.
Improved concurrency	Lets the OpenVMS file system increase the number of file create operations that can be processed in parallel on one disk.
Asynchronous cache writes (write-back caching)	Lets the server return control to the client before completing certain OpenVMS file system operations. This improves the response time needed to access files from the server. On ODS-2 disks, only PATHWORKS servers can use write-back caching. All other applications use writethrough caching. ACP_WRITEBACK is a dynamic parameter.
Multiblock bitmap reads	Reduces time spent allocating disk space.

By default, XQP+ is installed with OpenVMS; no special installation of XQP+ is necessary. However, on OpenVMS Version 7.1 and 6.2 systems, you must specifically enable its features, using the SYSGEN utility to change the appropriate parameter values, as explained in Section 3.19, Enabling XQP+ Support. On OpenVMS Version 7.2 or later systems, the SYSGEN parameter values are already set appropriately to enable the XQP+ features. In addition, patches might be required for your system, as indicated in Section 3.18, Patches Required for Running the Advanced Server.

2.2.12 PostScript Printing Support

The PATHWORKS Advanced Server supports the DECprint Supervisor for OpenVMS (DCPS) family of layered products, which runs on OpenVMS VAX and Alpha systems to provide access through the OpenVMS queuing system to selected PostScript printers.

2.2.13 Management Interfaces

The following sections describe the management interfaces provided with the PATHWORKS Advanced Server.

2.2.13.1 ADMINISTER Command Line Interface

PATHWORKS Advanced Server includes the ADMINISTER command line interface. ADMINISTER commands are designed to replace the LAN Manager server Net commands on OpenVMS.

ADMINISTER commands can be used to remotely manage a Windows NT Server or a PATHWORKS Advanced Server. For more information about how to use the new command line interface, refer to the *Compaq Advanced Server for OpenVMS Commands Reference Manual* or invoke the ADMINISTER online Help.

For example, to get information about the ADMINISTER ADD USER command, enter the following command after you start PATHWORKS Advanced Server:

```
$ ADMINISTER HELP NEW_USER
```

The following command displays an overview about using the ADMINISTER user interface:

```
$ ADMINISTER HELP NEW_USER

NEW_USER

    Welcome to the ADMINISTER command line user interface. The
    ADMINISTER command line interface is a comprehensive utility for
    managing domains and servers in a network of compatible servers.

    You can invoke the interface in one of two ways:

    o  Enter the command ADMINISTER, then press Return. This invokes
       the interface in subsystem mode. This is shown by the prompt
       DOMAIN\\SERVER>, where DOMAIN and SERVER are the default
       names of the domain and server you will be administering.
       Initially, DOMAIN is the name of the domain to which your
       local computer belongs, and SERVER is the name of your local
       computer. Once in subsystem mode, you can execute commands by
       entering subcommands, keywords, parameters, and qualifiers. To
       return to DCL, type EXIT or press Ctrl/Z.

    o  Enter commands one at a time from DCL level. You enter the
       ADMINISTER command followed on the same line by keywords,
       parameters, and qualifiers, then press Return. After the
       command is completed, control returns to DCL.


  Additional information available:

  Case_Sensitivity      UNC
```

2.2.13.2 Windows NT Server Administration Tools

As any other domain controller in a Windows NT domain, the PATHWORKS Advanced Server can be managed from a Windows NT Server or from a client running Windows NT server administration tools.

The PATHWORKS Advanced Server software kit includes the Windows NT Server administration tools, which can be installed on computers running any of the following operating systems:

- Windows for Workgroups
- Windows 95 and Windows 98

- Windows NT Workstation

The Windows NT server administration tools are available in the PWUTIL share after you install, configure, and start the PATHWORKS Advanced Server.

The SRVTOOLS directory contains a subdirectory for each type of client computer (Windows 95 tools are usable with Windows 98 clients). Refer to the README.TXT file in the subdirectory for instructions on installing the software on the client computer.

Refer to the Windows NT Server product documentation or use online Help for more information about how to use Windows NT Server administration tools.

2.2.14 Account Lockout

The Windows NT account lockout feature supported by the Advanced Server allows administrators to have user accounts locked automatically after a specified number of failed attempts to log in (that is, after the user has entered the specified number of invalid passwords). Three ADMINISTER commands have been enhanced to accommodate the account lockout functionality:

- SET ACCOUNT POLICY to enable or disable lockout capabilities
- SHOW ACCOUNT POLICY to display lockout settings
- MODIFY USER to unlock a locked out user account

For more information on setting up the lockout policy for user accounts, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

If you are upgrading a PATHWORKS V6 for OpenVMS (Advanced Server) product, when you configure the PATHWORKS Advanced Server, the PWRK$CONFIG.COM procedure upgrades the V6.0 Security Account Manager (SAM) user account databases to a format that supports the account lockout feature.

2.2.15 PATHWORKS Advanced Server Licensing

The PATHWORKS Advanced Server provides a simplified license management model. Both the License Server and License Registrar are provided with the PATHWORKS Advanced Server software, and a License Manager utility is also provided for managing PATHWORKS Advanced Server licenses. If you use client-based licensing, you must run the License Server.

PATHWORKS Advanced Server requires all clients to be appropriately licensed to access resources on the server. See Section 3.12.1, License Enforcement, for more information about setting up client-based licensing.

For additional information about PATHWORKS licensing, refer to the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*.

2.2.16 External Authentication Support

OpenVMS Version 7.1 and higher versions include support for external authentication. This feature allows the OpenVMS system manager to set up a user account for which login authentication is based on a security mechanism other than OpenVMS security.

PATHWORKS Advanced Server software participates with the operating system to provide the ability to use the PATHWORKS Advanced Server user authentication mechanism to authenticate OpenVMS user logons. This allows users to log in at the OpenVMS login prompt using the PATHWORKS Advanced Server user name and password. In addition, it provides automatic password synchronization for user accounts.

For additional details about external authentication, see Section 3.13, Guidelines for External Authentication, in these Release Notes. For more information about implementing external authentication, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide* and the *OpenVMS Guide to System Security*.

2.2.17 Support of ODS-5 Devices

The Advanced Server on OpenVMS Alpha V7.2 (or later) supports ODS-5 devices as ODS-2 devices.

2.2.18 Optional Support for Eight-Bit Characters in File Names

The Advanced Server provides an optional feature that allows file names to contain the lowercase international characters, such as:

é
ï
ö
ô

Characters must be encoded using the ISO Latin-1 character set (ISO-8859-1). When this feature is enabled, users on Windows 95, Windows 98, and Windows NT client computers can create and browse file names that contain these types of characters. File names are stored in the directory share using these characters, so the files can be accessed by these file names using the PATHWORKS Advanced Server.

Restrictions

Because Windows for Workgroups and MS-DOS computers do not recognize these types of characters, files with file names containing these characters will not be accessible by these client computers.

This feature does not provide support of eight-bit characters in the names of shares and user accounts.

Enabling this Feature

This feature is disabled by default. To enable it, define a systemwide logical using the following command:

```
$ DEFINE/SYSTEM PWRK$TEMP_VMSSERVER_CODE_PAGE "88591"
```

For the feature to take effect, you must restart the server after entering this command. You can add this command to the following file, to ensure this feature is always enabled:

```
SYS$STARTUP:SYLOGICALS.COM
```

2.3 Differences Between PATHWORKS V5 for OpenVMS (LAN Manager) and PATHWORKS V6 for OpenVMS (Advanced Server)

This section lists some of the general differences between the PATHWORKS Advanced Server product and the PATHWORKS LAN Manager product.

- The PATHWORKS Advanced Server Administrator user account is similar to the PATHWORKS LAN Manager ADMIN user account. The Administrator user account is created automatically when you install and configure PATHWORKS Advanced Server.

- The PATHWORKS LAN Manager server provides a single operator privilege level. The PATHWORKS Advanced Server provides several Operator groups. To designate a user account to be an operator, add the user account to one of the following PATHWORKS Advanced Server Operator groups:

  - Server Operator group (similar to LAN Manager Operator)

  - Print Operator group (similar to LAN Manager Operator)

  - Account Operator group (differs from the LAN Manager Operator in that members of this group cannot modify the Administrator user account, the Administrator group, or the Server Operator group).

- The PATHWORKS Advanced Server supports domain trust relationships. This allows users to access resources in another domain without having an account there. The trust relationships must be established by administrators in both domains.

- The PATHWORKS Advanced Server users are members of local groups and global groups. PATHWORKS LAN Manager users are members of global groups only. Local groups are used by the PATHWORKS Advanced Server to allow users from trusted domains to access resources in the local domain.

- The PATHWORKS license management software and licensing subsystem have been improved in PATHWORKS V6 for OpenVMS. For more information, refer to the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*.

- The PATHWORKS Advanced Server supports the same transports as does the PATHWORKS LAN Manager server, but selects them in a different order. (Refer to Section 2.2.10, Transport Support.)

- The PATHWORKS Advanced Server software includes the Browser service, which allows the PATHWORKS Advanced Server system to function as a master browser in the domain. The Browser service is not included in PATHWORKS V5 for OpenVMS (LAN Manager).

Of course, there are many more differences between the PATHWORKS LAN Manager server software and the PATHWORKS Advanced Server software. Refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Migration Guide* for information about upgrading from PATHWORKS V5 for OpenVMS (LAN Manager) to PATHWORKS V6 for OpenVMS (Advanced Server).

2.4 Unsupported PATHWORKS V5 for OpenVMS (LAN Manager) Features

The following features of PATHWORKS V5 for OpenVMS (LAN Manager) are not supported with PATHWORKS Advanced Server:

- Share-Level Security

  The PATHWORKS Advanced Server does not support share-level security. It manages access to all resources through user-level security. Therefore, share passwords are not required under PATHWORKS Advanced Server. User accounts are granted access to resources based on their user account information and group membership.

- Standalone Server Domain Role

  The PATHWORKS Advanced Server does not support the Standalone server domain role.

  A PATHWORKS Advanced Server must be either a primary domain controller, a backup domain controller, or a member server in a Windows NT or PATHWORKS Advanced Server domain. In Windows 2000 mixed-mode domains, the PATHWORKS Advanced Server can be a backup domain controller or member server. In a Windows 2000 native-mode domain, it must be a member server.

- FAT Volumes

  The FAT (File Access Table) file system is not supported by the PATHWORKS Advanced Server. To continue to provide FAT file access to clients, maintain the PATHWORKS V5 for OpenVMS (LAN Manager) server on a separate system.

- Backward Compatibility Mode

  The PATHWORKS Advanced Server software does not support Backward Compatibility mode. This mode was used to ease the migration from PATHWORKS V4.*x* for VMS to PATHWORKS V5 for OpenVMS (LAN Manager).

- Net Commands

  The Net commands are not supported by the PATHWORKS Advanced Server. They are replaced by the ADMINISTER commands. A Net command interpreter accepts and translates most Net commands to the equivalent ADMINISTER command. You can use the ADMINISTER command NET/TRANSLATE to see the ADMINISTER command that is supplied for each translated Net command.

  For more information about the translation of LAN Manager Net commands to PATHWORKS Advanced Server ADMINISTER commands, refer to the *Compaq Advanced Server for OpenVMS Commands Reference Manual*.

- Remote Boot Service

  The PATHWORKS Advanced Server does not support the Remote Boot service.

  If clients depend on remote booting, you must maintain the PATHWORKS V5 for OpenVMS (LAN Manager) server on a separate system.

- NetWare Server

The NetWare server is no longer supported by PATHWORKS Advanced Server products.

3

Guidelines for Using PATHWORKS Advanced Server Software

Always read the product documentation prior to using the software. This chapter describes additional guidelines for using the PATHWORKS Advanced Server software.

3.1 Disk Space Requirements

The installation software calculates the system disk space required for installation. The installation software needs room on the system disk to unpack the savesets containing the software options requested by the installer. The installation procedure calculates the needed space based on the sizes of the savesets to be unpacked, adding an additional 4500 blocks needed for the unpacking process. (The actual space occupied by the PATHWORKS Advanced Server software after installation and configuration might be less, but additional room is needed on the installation device to run the configuration procedure (PWRK$CONFIG).)

Table 3–1 lists the amount of free disk space on the OpenVMS system disk that is required during the installation procedure.

Table 3–1   Minimum Disk Space Requirements for Installation

To install these components . . .	You need this number of blocks on an Alpha system . . .	You need this number of blocks on a VAX system . . .
PATHWORKS Advanced Server	160,000[1]	131,000[1]
Standalone License Server	160,000	131,000
External authentication images only	160,000	131,000
Upgrade utility only	45,500	30,500

[1]The disk space requirements shown include provision for the integrated License Server.

3.2 Upgrading a Version 5 Member Server or Standalone Server

To upgrade a PATHWORKS V5 for OpenVMS (LAN Manager) member server or standalone server, run the Upgrade utility. (If the upgrade fails, see the note in Section 7.2.1, Upgrade Fails with an RMS-W-RTB Error.) By default, the Upgrade utility configures the PATHWORKS V6.1 server role as a backup domain controller (BDC). You can change the role after the upgrade completes. To change the role to a primary domain controller (PDC), use the PWRK$CONFIG.COM configuration procedure (first configuration run only) or the ADMINISTER

SET COMPUTER/ROLE command. To change the role to a member server, you must use the PWRK$CONFIG.COM configuration procedure. For more information on using the Upgrade utility, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Migration Guide*. For more information on using the PWRK$CONFIG.COM configuration procedure, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*. You can find information on the ADMINISTER SET COMPUTER command in the *Compaq Advanced Server for OpenVMS Commands Reference Manual* or through the ADMINISTER command online Help.

3.2.1 Upgrading File Security

Files with security specified entirely according to PATHWORKS V5 for OpenVMS (LAN Manager) security can be upgraded by the Upgrade utility. As an alternative, you can enable the Advanced Server to perform dynamic security upgrades of the files when they are accessed by the server. Compaq recommends letting the Upgrade utility perform the file security upgrade, especially if you are upgrading a BDC or standalone server to a member server.

When a member server performs dynamic security upgrade of PATHWORKS V5 for OpenVMS (LAN Manager) files, it upgrades the security ACE for a user or group by first looking in the member server's local Security Account Manager (SAM) database for the security identifier (SID) of the user/group. If the member server does not find the user/group in the local SAM, it then looks for the SID in the SAM on the primary domain controller (PDC). When it finds the SID, it creates an upgraded (Version 6.0) security descriptor and applies it to the file. All built-in users and groups, such as Administrator and Administrators, are located in the member server's local SAM database. So the SIDS of built-in users and groups will be from the local SAM database.

As an example, all Version 5 security ACEs for the Version 5 user ADMIN (where the Version 5 user ADMIN is upgraded to the Version 6 user Administrator during the User upgrade) will be upgraded using the SID from the member server's local SAM database.

3.3 Server Installation in OpenVMS Clusters with Multiple System Disks

When installing the Advanced Server on an OpenVMS Cluster member, you must shut down the server and, possibly, reboot the systems running the server, if both of the following conditions are true:

- Two or more Alpha systems, or two or more VAX systems, use multiple system disks

- The Advanced Server is already running on one or more cluster members booted from a system disk other than the one on which the installation is occuring

To avoid having to reboot the systems that are already running the Advanced Server, the system administrator can deassign the logical name (PWRK$REBOOT_REQUIRED) that forces the reboot to occur on each affected node, as follows:

```
$ DEASSIGN/SYSTEM PWRK$REBOOT_REQUIRED
```

3.4 Configuring the Advanced Server

The Advanced Server provides the following configuration utilities:

- The PWRK$CONFIG.COM configuration procedure for determining the initial setup and configuration parameters. The procedure also allows you to start the Advanced Server. You can use the procedure to reconfigure the server at a later time.

- The Configuration Manager for managing server-specific configuration parameters that affect the environment in which the Advanced Server operates. The PWRK$CONFIG.COM configuration procedure gives you the option of invoking the Configuration Manager, or you can invoke it manually with the ADMINISTER/CONFIGURATION command at the OpenVMS DCL prompt.

In addition, the LANMAN.INI file stores server parameters that affect the behavior of the Advanced Server but not, for the most part, file server resource consumption.

3.4.1 Initial Server Configuration Procedure

The PWRK$CONFIG.COM configuration procedure allows you to:

- Perform basic on-disk structure setup
- Modify server system environment parameters (using the Configuration Manager)
- Start the Advanced Server
- Modify initial server configuration parameters that determine, for example:
  - Domain administrator account information
  - Domain name
  - Whether to run the License Server
  - Whether to enable certain services (Timesource, Alerter, and Netlogon)
  - Server role (primary or backup domain controller)
  - Computer name
  - Server cluster alias
  - Server announcement string

You run the PWRK$CONFIG.COM configuration procedure after installing the Advanced Server. You may run it again at a later time if you want to reconfigure the Advanced Server. For more information about installing and configuring the PATHWORKS for OpenVMS (Advanced Server) software, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*.

3.4.2 Modifying Server System Environment Parameters

To manage server-specific configuration parameters that determine the system environment in which the server operates, you can use the Configuration Manager, a character-cell user interface. These parameters are, for the most part, directly or indirectly related to the environment in which the Advanced Server operates, such as the server's usage of OpenVMS system resources and physical memory. Examples of these parameters include the server's client capacity, the size of its data cache, and which network transports it should use. The parameters modified by the Configuration Manager are not stored in the LANMAN.INI file.

Use the following command to start the Configuration Manager:

```
$ ADMINISTER/CONFIGURATION
```

Refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide* for more information about using the Configuration Manager.

3.4.3 LANMAN.INI Parameters

The LANMAN.INI configuration file stores parameters that affect the behavior of the Advanced Server but not, for the most part, file server resource consumption. Examples of these parameters include the name for the Advanced Server on the network, its cluster alias, values that specify how the Advanced Server deals with Browser activity, values that affect network logon, and values that define the shares created automatically by the Advanced Server.

When the PATHWORKS Advanced Server is installed, the LANMAN.INI file contains values for certain keywords. Other keywords, and the titles of the sections to which they belong, are added when you run the Configuration Manager or edit the LANMAN.INI file. If a keyword does not appear in the file (or is commented out with a semicolon), it is set to its default value.

Before you change any keywords in the LANMAN.INI file, you should understand the relationship between the LANMAN.INI file entries and server parameter default settings. All server parameters have default settings.

With certain exceptions, you can edit the LANMAN.INI file to set keywords to values other than the server defaults. Server parameter defaults do not appear in the LANMAN.INI file. A value assigned to any keyword in the LANMAN.INI file always supersedes the default value for that keyword.

The keywords whose value you cannot change by editing the LANMAN.INI file are:

- domain
- listenname
- pwrkalias

To change these parameters, use the PWRK$CONFIG.COM configuration command procedure.

When you want to set the value of a keyword to something other than the default, you must edit the LANMAN.INI file, locate or add the appropriate section title in the file, and then add the desired *keyword=value* entry. For more information, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

3.5 Startup of the Advanced Server

Beginning with PATHWORKS V6.0C-ECO1, when you invoke the PWRK$STARTUP procedure, or use the PWSTART command defined in the command definition file SYS$STARTUP:PWRK$DEFINE_COMMANDS.COM, the PWRK$STARTUP script no longer stops the file server if it is running. Instead, it reports PATHWORKS is running and continues. PWRK$STARTUP.COM issues the following message and exits with a status of 1 if the file server is already running:

```
PWRK-I-RUNNING, Advanced Server is already running on this node
```

If you would like the PWRK$STARTUP procedure (or PWSTART command) to stop the server automatically, use the PWRESTART command (contained in the PWRK$DEFINE_COMMANDS.COM file). PWRESTART invokes PWRK$STARTUP with RESTART as the P1 parameter, which shuts down the server before restarting.

So, to shut down and restart a file server, use one of the following:

- PWSTOP command, followed by PWSTART
- PWRESTART command
- PWSTART RESTART command

If the server is already running, a message will indicate so. If it is not running, it will start.

3.6 Shutting Down the OpenVMS System with the Advanced Server

Before shutting down the OpenVMS system, Compaq recommends that you first stop the Advanced Server.

3.7 Guideline for File Share Description Strings

Compaq recommends that the description (comment) strings defined for file or directory shares be limited to at most 32 characters in length. Strings exceeding that limit are not cached by the file server, and therefore, for each server transaction, must be accessed from disk, at the expense of server performance.

3.8 Startup THREAD Resume Error Message

When the server starts up, a "THREAD\resume" error message might appear, as in the following example:

```
24-JAN-2000 15:16:03.40 20400137:AST_LVL   THREAD\resume_0: threadinit
has not been called!!
24-JAN-2000 15:16:03.41 20400137:AST_LVL     results of the execution
of this function are unpredictable!!
```

The condition being reported is benign and does not affect the operation of the file server. You can safely ignore this error message.

3.9 "LANMAN.INI Has an Unknown Keyword" Messages in System Event Log

The system event log might include "LANMAN.INI Has an Unknown Keyword" error messages such as the following:

```
T Date     Time         Source    Category    Event  User    Computer
- -------- ------------ --------- ----------- ------ ------- ----------
W 02/15/99 10:32:15 AM SERVER    None         6123   N/A     ALP010
ASU6123: LANMAN.INI has an unknown keyword [vmsserver] hostpasswordsync.
```

These messages might indicate that the LANMAN.INI file includes outdated parameters (for example, PATHWORKS V5 parameters that are no longer valid with PATHWORKS V6 and later versions), or that the parameters are misspelled.

To prevent these messages from appearing again, modify the LANMAN.INI file to correct the spelling of misspelled parameters and to remove any outdated parameters.

3.10 The Advanced Server in an OpenVMS Cluster

The following list summarizes some of the most important considerations for servers in an OpenVMS Cluster. Refer to the appropriate documentation for more information.

3.10.1 Installation and Configuration Considerations

- PATHWORKS for OpenVMS (Advanced Server) servers running in an OpenVMS Cluster share the same copy of the user accounts and shares databases and assume a single role, either a primary domain controller (PDC) or a backup domain controller (BDC). They operate as a single entity identified by the Advanced Server cluster alias name.

- The Advanced Server cluster alias is transport independent. The DECnet cluster alias name is used by the DECnet transport only. OpenVMS Clusters running TCP/IP may have a cluster alias defined for the purpose of providing failover for Network File System (NFS) clients (this cluster alias is referred to as the TCP/IP cluster impersonator name). Compaq strongly recommends that the Advanced Server cluster alias not be the same as the TCP/IP cluster impersonator name.

- If you plan to use the TCP/IP transport, ensure that all cluster members on which the Advanced Server will run are in the same TCP/IP subnet.

- Do not use the name of the domain as the Advanced Server cluster alias; if they are the same, the NetLogon service will fail to start.

- On each cluster member that you want to use as a file and print server, run the Advanced Server configuration command procedure (PWRK$CONFIG.COM) before you start the server. This ensures that each node has its appropriate parameters set and enough resources to run the server. You can then use the SYSMAN utility to start the server on all cluster members.

- All cluster members that will run the Advanced Server must share a common:
  - System user authorization file (SYSUAF.DAT)
  - Rightslist file (RIGHTSLIST.DAT)

– Advanced Server data directory location (PWRK$COMMONROOT:)

- On an OpenVMS Cluster with multiple system disks, all nodes on which you plan to run the Advanced Server must use the same disk device (PWRK$COMMONROOT:, as noted previously) to store and access Advanced Server data files. Using separate disks on separate cluster members is strictly prohibited.

- If you are using external authentication, Compaq recommends that you set up external authentication software on all the nodes in the cluster. You can set up external authentication support on nodes that do not run Compaq OpenVMS file servers. For details about setting up external authentication in OpenVMS Clusters, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*.

- You can run the License Server on an OpenVMS Cluster with the Advanced Server, where cluster failover provides increased availability. (Cluster failover also provides increased availability for the Advanced Server file server.)

- To gain the benefits of load balancing and failover, clients should connect to the Advanced Server using the Advanced Server cluster alias. *Failover* occurs when the node to which the client is connected becomes unavailable; the client is reconnected (using the Advanced Server alias) to the cluster member that is least loaded.

  The Advanced Server does not dynamically register the Advanced Server cluster alias with the WINS server. Therefore, you should define a static multihomed entry for the Advanced Server cluster alias in the WINS database. In addition, define a static entry for the Advanced Server cluster alias in the LMHOSTS file of each client that will access the server but is not using WINS. To gain the benefits of load balancing and failover using DNS, you might have to remove the static multihomed entry for the server Advanced Server cluster alias from each client's WINS database (if Windows 95, Windows 98, and Windows NT clients aer configured to use both WINS and DNS for NetBIOS name resolution, they first query the WINS server to resolve the name); likewise, remove any static entries for the server cluster alias from the LMHOSTS file and local hosts file on any clients that will access the Advanced Server and have DNS enabled for name resolution on those clients. For more information on setting up load balancing, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*. Refer to the *Compaq TCP/IP Services for OpenVMS Management* guide for more details on configuring the required TCP/IP Services for OpenVMS software.

- Other domain controllers (including the PDC) that are not in the same subnet as the Advanced Server cluster must add an entry for the Advanced Server cluster alias to their LMHOSTS file. This assumes they are not using other methods (WINS or DNS) for resolving NetBIOS names. For domain operations, all the domain controllers in the cluster operate as a single domain controller identified by the Advanced Server cluster alias name, rather than by the specific computer names of the individual cluster members. However, because the LMHOSTS file does not offer any means for mapping multiple IP addresses to a single NetBIOS name, the entry for the Advanced Server cluster alias must be mapped to the IP address of one specific server cluster member. If the Advanced Server is stopped on that cluster member, you must modify the LMHOSTS file on all clients and servers to map the cluster alias name to the IP address of a cluster member on which the

Advanced Server is still running. On systems running a Microsoft Windows operating system, the NetBIOS name cache must also be reloaded using the command NBTSTAT -R (capital R required).

Due to the LMHOSTS limitations noted above, it is difficult (and perhaps unmanageable) to gain the benefits of load balancing and failover using an LMHOSTS file.

3.10.2 Management Considerations

- To perform administrative functions on a particular cluster member, you must connect to that member by using its specific node name, rather than the cluster alias.

- Use the PWRK$CONFIG configuration procedure to modify the cluster alias.

- OpenVMS disk devices mounted clusterwide are offered to users as shared devices (autoshares) by all server nodes in an OpenVMS Cluster system. Devices mounted on a specific server (not clusterwide) are accessible to users connected to that server only. You can make a device available clusterwide by using the **AutoShare** keyword in the LANMAN.INI file. You can restrict device availability using the **NoAutoshare** keyword. In addition, you can control the devices to be automatically shared on a single node in the cluster, using the **Autoshare_***nodename* and **NoAutoshare_***nodename* values.

3.10.3 Licensing Considerations

- The client license product authorization keys (PAKs) must be loaded on the system that runs the License Server. In an OpenVMS Cluster, the PAKs must be loaded in a shared license database available to all cluster members.

- When registering and loading a new Advanced Server license PAK on an OpenVMS Cluster, use the LICENSE REGISTER command on one node of the cluster to register the PAK and then use the LICENSE LOAD command on each cluster member to load the licenses on that cluster member. This ensures that Advanced Server license components running on any member of the cluster will be able to detect the new licenses.

- When using server-based licenses for access to file and print services in an OpenVMS Cluster environment, Compaq recommends that clients connect to the cluster using the Advanced Server cluster alias, if this option is available. Clients connecting using the alias consume one server-based license for each connection to a different cluster member. Clients connecting directly to specific cluster members consume one server-based license for each connection to a different cluster member. A client can map multiple drives and printers to a single server while consuming a single server-based license.

- As noted, you can run the License Server on an OpenVMS Cluster with the Advanced Server, taking advantage of cluster failover in the event that license services terminate on the node running the active License Server. Normally, the License Server process (PWRK$LICENSE_S) is started on every node of the OpenVMS Cluster that starts the file server, but only one License Server process is active at any one time. The other License Server processes remain dormant until an event, such as system shutdown or a system failure, causes the active License Server process to stop. When the active License Server

stops, one of the dormant License Servers becomes active and continues to provide license services to clients.

In most cases, Compaq recommends that you run the License Server on all nodes of the cluster that run the file server, for maximum availability. The exception is the case where the License Server will serve licenses to WAN clients. Then you will want to limit the License Server to running on one node of the cluster. For more information, refer to the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*.

For additional information on licensing, see Section 3.12, Licensing Information.

3.11 PWRK$LMDMN Process and Startup File Replaced

PATHWORKS for OpenVMS (Advanced Server) versions prior to V6.0C use the PWRK$LMDMN process to validate logons and replicate the domain security accounts database. Now the PWRK$LMSRV process provides this functionality instead. As noted in Section 2.2.3, Domain Database Replication and Network Logon Performance Improvement, this serves to streamline the operation of the Advanced Server, especially during replication.

The PWRK$LMDMN process and its associated startup command file (PWRK$LMDMN_STARTUP.COM) are no longer part of the software kit and are not installed with the software.

3.12 Licensing Information

This section covers important licensing guidelines that either have not been documented before or need special consideration.

3.12.1 License Enforcement

PATHWORKS for OpenVMS (Advanced Server) requires that clients accessing server resources be appropriately licensed. To conform to this requirement, one of the following must be true:

- The client must present a client-based license before each attempt to connect or reconnect to a PATHWORKS for OpenVMS (Advanced Server) server.

- The PATHWORKS for OpenVMS (Advanced Server) must have a server-based license available to assign to an unlicensed client attempting to use services of the PATHWORKS for OpenVMS (Advanced Server).

In both cases, the minimum license required to access PATHWORKS for OpenVMS (Advanced Server) services is the Client Access license PWLMXXXCA07.03 or higher, or an equivalent client virtual license. This license can be used as either a client-based license or a server-based license.

3.12.2 Configuring the License Server to Upgrade Client License

As noted in the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*, the License Server does not perform license upgrades by default. You can configure a License Server to upgrade licenses automatically. For example, configured appropriately, the License Server will automatically upgrade a PATHWORKS V5 for OpenVMS (LAN Manager) client license request or a PATHWORKS V6 Advanced Server license request to a PWLMXXXCA07.03 license. The *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses* describes configuring the License Server by editing the License Server start-up command file

SYS$STARTUP:PWRK$LICENSE_S_START.COM to include the logical name definition for the PWRK$LS_V7_ACCESS_UPGRADE logical.

Be sure to define the logical before the following RUN command:

```
$ RUN SYS$SYSTEM:PWRK$LICENSE_SERVER
```

The License Server uses the default lookahead version limit (or the logical PWRK$LICENSE_VERSION_LIMIT) to determine the highest license version to seek.

For more information, refer to the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*.

3.12.3 Client License Support

Compaq supports PATHWORKS 32 client license software on Windows 95, Windows 98, Windows NT 4.0, and Windows 2000 clients. For your convenience, unsupported PATHWORKS licensing software for other clients remain available on the Advanced Server kit (in specific, PATHWORKS licensing software for DOS and Windows 3.1, and PATHWORKS licensing software for Protected Mode Windows for Workgroups LAN Manager clients).

3.13 Guidelines for External Authentication

The following sections describe various guidelines for setting up and using external authentication. External authentication is supported on OpenVMS systems Version 7.1 and higher. To ensure that external authentication works properly, Compaq recommends that all systems be upgraded to Version 7.1 or higher.

A cluster member that is not running the complete Advanced Server can be configured to authenticate logon requests from network users if it has access to external authentication software on a shared cluster system disk. If it does not have access to external authentication software on a shared cluster system disk, you can enable external authentication on that system by copying only the external authentication images to the system disk, following the steps given in the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*.

External authentication allows the OpenVMS system manager to set up an OpenVMS user account for which login authentication is verified by the Advanced Server domain security. External authentication allows the Advanced Server to do the user authentication for both Advanced Server domain user and OpenVMS user accounts.

External authentication is an option for users who have both OpenVMS and Advanced Server domain user accounts. It is not required. User host mapping provides the link between these two accounts, as described in the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*.

With external authentication, users get automatic password synchronization between their OpenVMS account and their corresponding Advanced Server domain account. The passwords are synchronized whenever a user logs in to the OpenVMS account, provided that an Advanced Server domain controller is available to service the request. Externally authenticated users are considered to have a single password and are not subject to OpenVMS password policies, such as password expiration, password history, and minimum and maximum password length restrictions. Users are, however, subject to the Advanced Server domain user account policy that is defined. All other OpenVMS account

restrictions remain in effect, such as disabled accounts, time restrictions, and quotas. For information on enabling external authentication, refer to the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*. For information about setting up the system and enabling OpenVMS user accounts for external authentication, refer to the *OpenVMS Guide to System Security*.

3.14 Certain Clients Can Log On Using Only One Transport

On clients that use the LANMAN.INI file, the file might contain the WRKNETS keyword in the WORKSTATION section. This keyword specifies the network transports that the client can use and the order in which they are used. On Enhanced Redirector clients, these network transports are represented by local area network adapter (LANA) numbers.

The NET LOGON command works over LANA0 only, regardless of how many transports are loaded on the client. This might affect the client's ability to log on to a domain. For example, if a client runs both NetBEUI and DECnet, and WRKNETS associates NetBEUI with LANA0, NET LOGON fails if NetBEUI is not running on the server. If the domain logon fails, the client can still connect to servers but must provide a password for each session established.

To avoid this problem, do one of the following:

- Enable all of the transports that are common to both the server and client.

- Change the WRKNETS parameter to load a common server-client transport on LANA0 (for more information, refer to the client product documentation).

3.15 Installing Optional Server Administration Tools

As noted in the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*, the Advanced Server provides optional client-based server administration tools that allow you to manage the server from Windows 98, Windows 95, Windows for Workgroups, or Windows NT clients. These tools are available in the PWUTIL share after installing, configuring and starting the server.

The SRVTOOLS directory in the PWUTIL share contains a subdirectory for each type of client computer. Refer to the README.TXT file in the appropriate subdirectory for instructions on installing the software on the client computer.

――――――――――――――――――― **Note** ―――――――――――――――――――

The subdirectories for the Windows NT platforms do not include a README.TXT file. In addition, attempts to install the server administration tools for a Windows NT platform, using the SETUP.BAT installation file provided in the corresponding Windows NT subdirectory, will fail (the SETUP.BAT file in either \\SERVER\PWUTIL\SRVTOOLS\WINNT or \\SERVER\PWUTIL\SRVTOOLS\WNT40). Error messages will indicate that certain .DLL files could not be found. Therefore, they are not copied to the target directory. These .DLL files were omitted from the Windows NT subdirectories because they are not needed by Windows NT. So, the workaround for this problem is to remove from the SETUP.BAT file the line that copies the .DLL files and the error-check line that follows it. Or, instead of using the SETUP.BAT file to install the tools, manually

copy all the tools files from the subdirectory to the Windows NT target directory.

Refer to the Windows NT Server documentation or use online Help for more information about how to use Windows NT server administration tools.

3.16 RMS Protections

RMS sets protection on files and directories based on user identification codes (UICs). As described in the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Administrator's Guide*, the user's UIC determines which categories a user belongs to (System, Owner, Group, World). RMS assigns file protections for each of these categories. The default protections for files and directories are listed in Table 3–2.

The RMS protections associated with a share definition are used to set RMS protections on new files or directories created within that share. When an object (file or directory) in that share is replaced with an object of the same name from another share, the original object's protections are inherited by the object replacing it.

The default values for the directory protections and file protections are listed in Table 3–2, Default Values for RMS File and Directory Protections:

Table 3–2 Default Values for RMS File and Directory Protections

Protections	RMS Protection Codes
Directory	S: RWED, O: RWED, G: RWED, W: RE
File	S: RWD, O: RWD, G: RWD, W:R

The administrator can change the RMS protection on a specific share by using the ADMINISTER MODIFY SHARE command with the /HOST_ATTRIBUTES qualifier to set the file and directory protections. For example:

```
$ ADMINISTER MODIFY SHARE share-name -
_$ /HOST_ATTRIBUTES=(DIRECTORY_PROTECTION=(O:WRE,G:WR,W:R), -
_$ FILE_PROTECTION=(O:WRED, G:WR, W: R))
```

Note that granting write access to a category will automatically grant it delete access as well.

_____ **Note** _____

Because share data (such as host attributes) is cached when the first client accesses the share, the changes made to share protections are not reflected until either all users are disconnected from the share or the Advanced Server is restarted.

_____

3.17 Using TCP/IP Products with PATHWORKS Advanced Server

PATHWORKS Advanced Server provides transparent support for the following TCP/IP network transport products:

- Compaq TCP/IP Services for OpenVMS. Version 5.0A or later is recommended and required for dynamic cluster load balancing in WANs. (You can set up dynamic cluster load balancing using TCP/IP Services for OpenVMS Version 4.2 (supported on OpenVMS Version 6.2 systems); however, Compaq recommends using TCP/IP Services for OpenVMS, Version 5.0A or later, which means you would need to upgrade your OpenVMS Version 6.2 systems.) For the software versions supported for each OpenVMS platform, refer to the PATHWORKS V6.1 for OpenVMS (Advanced Server) SPD.

- MultiNet for OpenVMS, from Process Software LLC

- TCPWARE for OpenVMS, from Process Software LLC

To use PATHWORKS Advanced Server with TCP/IP, do the following:

1. Install and, if necessary, configure the TCP/IP product.

   On an OpenVMS VAX system, you should increase the number of interrupt stack pages (INTSTKPAGES) to 10 or more to help eliminate system startup warnings and crashes.

2. Start the TCP/IP transport and the PATHWORKS IP driver. The procedure depends on which TCP/IP product you use. For more information, refer to the documentation that comes with your TCP/IP product.

3. Configure PATHWORKS Advanced Server to use TCP/IP: run ADMIN/CONFIG, select Transports, and check the TCP/IP box to enable the use of the TCP/IP transport.

4. Start the PATHWORKS Advanced Server. Enter the following OpenVMS command, or add it to the system startup procedure:

   ```
   $ @SYS$STARTUP:PWRK$STARTUP
   ```

3.18 Patches Required for Running the Advanced Server

The first two sections describe patches required for servers running on OpenVMS Version 6.2 and V7.1, respectively. The third sections describes patches required for XQP support.

3.18.1 Patch Required for Servers Running on OpenVMS V6.2

OpenVMS versions prior to V7.1 have a documented delta-time restriction that might cause a serious error in the PATHWORKS for OpenVMS software, such as wrong file creation dates beginning on or around 19-MAY-1997. Digital Equipment Corporation provided ECOs (Engineering Change Orders) that remove the delta-time restriction.

If you are running the PATHWORKS V6.1 for OpenVMS (Advanced Server) on OpenVMS Version 6.2, Compaq requires that you install the appropriate ECO, as follows (ECO versions are minimum recommended levels):

Table 3–3   OpenVMS Operating System Versions and ECO Kit Names

For these versions of OpenVMS:	Install this ECO kit:
OpenVMS Alpha Version 6.2, including:	ALPY2K02_062
– V6.2	
– V6.2-1H1	
– V6.2-1H2	
– V6.2-1H3	
OpenVMS VAX Version 6.2	VAXY2K02_062

3.18.2 Patch Required for Servers Running on OpenVMS Version 7.1

If the PATHWORKS V6.1 for OpenVMS (Advanced Server) is running OpenVMS Version 7.1, then DEC C RTL patch ALPACRT08_071 (Alpha) or VAXACRT09_071 (VAX), or higher versions of these patches, must be installed.

Compaq also recommends that F11BXQP patch ALPY2K01_071 (Alpha) or VAXY2K01_071 (VAX), or higher versions of these patches, be installed.

3.18.3 Patches Required for XQP Support

You are required to install the following patches on your system. If your Advanced Server participates in an OpenVMS Cluster, these patches must be installed on all cluster members, even those that do not run the Advanced Server.

Note

These are the lastest patches as of this current release. Compaq recommends that you keep your patches up to date. Keep track of new patches and implement them as appropriate.

Table 3–4   Minimum-Level Patches Required Per Operating System Version

VAX Kits	Platform
VAXF11X06_062	OpenVMS V6.2
VAXF11X05_071	OpenVMS V7.1
VAXF11X03_072	OpenVMS V7.2

Alpha Kits	Platform
ALPF11X05_062	OpenVMS V6.2
ALPF11X06_071	OpenVMS V7.1
VMS712_F11X-V0100	OpenVMS V7.1-2
VMS72_F11X-V0200	OpenVMS V7.2
VMS721_F11X-V0300	OpenVMS V7.2-1
VMS721H1_F11X-V0100	OpenVMS V7.2-1H1

3.19 Enabling XQP+ Support

By default, XQP+ is installed with OpenVMS; no special installation of XQP+ is necessary. XQP+ is enabled automatically on OpenVMS Version 7.2 or later systems. However, on OpenVMS Version 6.2 and 7.1 systems, you must specifically enable it by setting the SYSGEN parameters listed in Table 3–5 to the values indicated in the third column. The functions provided by these parameters are described in more detail in Section 2.2.11, XQP+ Support.

Table 3–5 SYSGEN Parameter Settings to Enable XQP+

Parameter	XQP+ Function	Setting to Enable	Default
XQPCTLD1	Controls multithreading (used only by PATHWORKS servers)	8	0 (multithreading disabled)
XQPCTL2	Controls improved concurrency	1	0 (improved concurrency disabled)
ACP_ WRITEBACK	Enables asynchronous cache writes (write-back).	1	1 (the value 0 disables write-back)

If the PATHWORKS Advanced Server participates in an OpenVMS Cluster, the values of these SYSGEN parameters should be the same on all cluster members, regardless of whether all cluster members run PATHWORKS.

4

Problems Corrected in PATHWORKS Advanced Server V6.0C-ECO1

This chapter describes problems resolved by software changes made in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server). These software changes will also be included in future ECOs and in PATHWORKS V6.1 for OpenVMS (Advanced Server). The problems are describd in the sections indicated in the following table:

Problem Type	Section Number
Installation and Configuration Problems	4.1
Server Problems	4.2
File Access/Printing Problems	4.3
ADMINISTER Command Problems	4.4
Cluster-Related Problems with Advanced Servers	4.5
PATHWORKS Advanced Server Interaction with DEC Rdb (Oracle) Problems	4.6

4.1 Installation and Configuration Problems

This section describes installation problems corrected in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.1.1 Backup Domain Controller Cannot Be Added to a Windows 2000 Domain

Problem:

When configuring a backup domain controller (using PWRK$CONFIG) in a domain that is running a Windows 2000 primary domain controller, an error occurs (reported from the PWRK$MAKEMACH configuration tool), preventing the computer from being added to the domain.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2 Server Problems

This section describes the file server problems corrected in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.1 File Created by a Windows Client Might Not Be Truncated Correctly

Problem:

If a client (such as Windows NT, Windows 95, or Windows 98) creates a new file in a share, the file server allocates blocks for the file but does not release this space. For example, if on the OpenVMS server you set the default directory to that of the server share and use the OpenVMS DIR/SIZE=ALL command, specifying the name of the new file, and the Advanced Server allocates 33 blocks for the file, the resulting display, and all subsequent directory displays, will show "0/33" as the number of blocks allocated for the file. As a result of this problem, disk space is consumed more quickly.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.2 Operations on a Share That Includes a File with a Large Number of Versions Cause a "Yikes" Error to be Logged

Problem:

When interacting with a shared directory that contains a large number of versions of a given file, the file server logs the following message in the PWRK$LMSRV log file:

```
17-MAY-2000 13:48:16.68 20200282:01292B30 ODS2GetNextDirEntry: Yikes,
expected more data blocks!
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.3 PWRK$FIXACE Utility Might Fail with ACCVIO

Problem:

In some conditions, the PWRK$FIXACE utility fails with an ACCVIO.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.4 Advanced Server Crashes in mbreaddoneast Routine (LIBIPC)

Problem:

Third-party software can erroneously post a message into an Advanced Server mailbox. This can result in the following type of crash:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=0000000000000000, PC=FFFFFFFF8049F044, PS=0000001B

  image     module     routine   . . .  rel PC           abs PC
                                         0000000000000000 FFFFFFFF8049F044
PWRK$CSSHR_V7  LIBIPC  mbreaddoneast 000000000000844C 00000000003C6C5C
```

Solution:

Although this problem is not due to an Advanced Server bug, the PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server) resolves the problem by detecting the erroneous message and then ignoring it. The Advanced Server does not crash. Instead, it logs the following warning message:

```
9-NOV-1999 11:24:42.58 202003DA:AST_LVL  IPCerr\\mbreaddoneast.5836
 Unexpected mailbox message received from PID 0x202003E2, will be
 ignored
```

The process id (PID) can be used to find the process which caused the problem.

4.2.5 NetBIOS Message Hangs Operator Terminal

Problem:

When the NetBIOS process has a heavy workload, and it sends a message to an operator-enabled terminal, the message might cause the terminal to hang until the operator enters the Ctrl/Y sequence.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.6 Windows 2000 PDC Fails During Replication to Advanced Server BDC

Problem:

In a domain with a Windows 2000 primary domain controller and one or more OpenVMS Advanced Server backup domain controllers, attempts to replicate from the Windows 2000 PDC to an OpenVMS Advanced Server BDC fail (replication is incomplete). The failure is indicated in the Windows 2000 PDC event log. The cause of the failure is Windows 2000-specific attributes in the data that is sent during the replication process.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server). The Windows 2000-specific attributes in the data are safely ignored.

4.2.7 Excessive Event 5719 Messages Logged on all Backup Domain Controllers in a Domain

Problem:

In a domain with a large number of backup domain controllers (BDCs), the following message might be logged on all the BDCs in the domain. The PDC is unable to handle the number of requests it is receiving from its BDCs.

```
E 07/09/00 10:55:28 AM NETLOGON None 5719 N/A HYRES2
NET5719: No domain controller for the domain LANDOFOZ is available.
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.8 PWRK$LMSRV Crashes in Module UXREDIR, Routine TCON

Problem:

When the file server is communicating with another file server in order to complete an action, PWRK$LMSRV crashes in module UXREDIR, routine TCON. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=0000000000000020, PC=00000000002BD13C, PS=0000001B
%TRACE-F-TRACEBACK, symbolic stack dump follows
  image       module     routine   . . .   rel PC          abs PC

PWRK$LMAPISHR  UXREDIR  tcon          00000000000024CC 00000000002BD13C
PWRK$LMAPISHR  UXREDIR  redolinks     00000000000045A4 00000000002BF214
PWRK$LMAPISHR  UXREDIR  newsrv        0000000000004D4C 00000000002BF9BC
 .
 .
 .
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.9 PWRK$LMSRV Process Crashes in PTRMAP

Problem:

When the user account policy includes forced logoff of users who exceed the maximum logon hours specified for their accounts, the Advanced Server might crash with an ACCVIO in the PTRMAP module. (You can enable forced logoff of users by using the /FORCE_DISCONNECT qualifier with the ADMINISTER SET ACCOUNT POLICY command.)

A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
image        module   routine     line     rel PC      ...
PWRK$LMSRV  PTRMAP   putptr      47806 00000000000005F0 ...
PWRK$LMSRV  PPS_JOBS PPS_open    53650 00000000000004F4 ...
PWRK$LMSRV  OPEN     open_printer 70538 0000000000000734 ...
PWRK$LMSRV  OPEN     openX_open2 71064 00000000000016D4 ...
PWRK$LMSRV  OPEN     smbopenX    70938 0000000000001190 ...
PWRK$LMSRV  SMBWORK  smbwork     64843 0000000000001794 ...
```

A similar crash, in the same module, can be seen if users have logon hours specified, even if forced logoffs are not enabled.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.10 System Crashes in PWRK$STREAMSOS_V7

Problem:

While trying to remove a non-existent element from an internal timer queue, the Advanced Server can cause a system crash with the characteristics similar to the following:

```
Current Process:    PWRK$KNBDAEMON
Current Image:      DSA0:[SYS0.SYSCOMMON.][SYSEXE]PWRK$KNBDAEMON.EXE;1
Failing PC:         FFFFFFFF.854226C0  KNBNQ_UNSET_TIMER_C+00198

Failing Instruction:
    KNBNQ_UNSET_TIMER_C+00198:      LDQ_U        R16,#X001F(R1)
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.2.11 Incomplete Directory Listings

Problem:

When viewed from various clients, directory listings might fail to show all the files in the directory. The directory cache inadvertently stops before the entire cache contents for the directory are processed. This occurs most often on heavily accessed directories. The missing contents were those files that would be at the end of the directory listing.

If a file is created in the directory, the directory listing will then show the entire contents correctly. If the directory cache is disabled, the problem is not seen and the contents are correct.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server). Note that incomplete directory listings can also be caused by XQP problems. To address these problems, the latest patches related to XQP should be installed. At a minimum, the following patch levels should be installed:

VAX Kits	Platform
VAXF11X06_062	OpenVMS V6.2
VAXF11X05_071	OpenVMS V7.1
VAXF11X01_072	OpenVMS V7.2

Alpha Kits	Platform
ALPF11X05_062	OpenVMS V6.2
ALPF11X06_071	OpenVMS V7.1
VMS712_F11X-V0100	OpenVMS V7.1-2
VMS72_F11X-V0200	OpenVMS V7.2
VMS721_F11X-V0100	OpenVMS V7.2-1

4.2.12 Windows NT Workstation User Unable to Log In - NET5722 Errors

Problem:

Occasionally, when a Windows NT workstation boots, an authentication failure occurs. Event logs reveal event NET5722 message, such as in the example that follows. In addition, the workstation user might not be able to log on to the workstation.

```
E 02/15/99 05:03:03 PM NETLOGON  None        5722  N/A    CAMBDG
NET5722:  The session setup from the computer BSTN1 failed to
authenticate.
 The name of the account referenced on the security database is
 BSTN1$.
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.3 File Access/Printing Problems

This section describes file access and printing problems corrected in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.3.1 "Access Denied" Error Messages Received Sporadically

Problem:

When clients attempt to access Advanced Server resources, they might sporadically receive "Access Denied" errors, but still acquire access. In certain circumstances, the "Access Denied" errors could also result in the Advanced Server stalling. For example, an excessive number of "Access Denied" errors occur, and the Alerter service is unable to send alert messages to one or more alert recipients (user accounts listed by the AlertNames parameter), causing the Advanced Server to stall.

Solution:

This problem of receiving sporadic "Access Denied" messages is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server). To avoid the problem of the Advanced Server stalling because of the Alerter service, keep the number of user accounts receiving alerts to a minimum, and make sure that those user accounts that should receive alerts are always logged onto the domain.

4.3.2 Users with Logons Restricted to One Workstation Cannot Print to Shared Printers on Other Workstations

Problem:

If a user is restricted to logon to a domain from only one workstation, the user cannot print to a shared printer on another workstation.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.3.3 Unlocked User Account Denied Access, Event 1909 Logged: "Account Locked Out"

Problem:

After a user account has been locked out and then is unlocked again (for example, when the account lockout duration is exceeded or the system administrator manually unlocks the account), the user should once again be allowed to log on to the domain in question. However, the user might be denied access, with event log message 1909 stating that the account is locked out.

This problem occurs when the Advanced Server is a backup domain controller (BDC) and is unable to detect that the account had been unlocked again. After the account was unlocked, if a partial synchronization occurs, but not a full synchronization, the Advanced Server still does not receive the status change information as it should. The problem is resolved after a full synchronization.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4 ADMINISTER Command Problems

This section describes ADMINISTER command problems corrected in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.1 REMOVE SHARE Command Fails with Share Name That Has Trailing Spaces

Problem:

Attempts to remove a share whose name has one or more trailing spaces fail. For example, a user adds a share, specifying a space as the last character of the share name, such as in the following example:

```
LANDOFOZ\\TINMAN> ADD SHARE "TORNADO " USER1:[TORNADO_FILES]
```

Attempts to remove that share fail with either of the following commands:

```
REMOVE SHARE "TORNADO "

REMOVE SHARE TORNADO
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.2 Logon Denied After Adding a User Account or Changing a Password in a Domain with a Windows 2000 Primary Domain Controller

Problem:

After using the ADMINISTER interface to add a user or modify a user password in a domain with a Windows 2000 PDC, it is not possible to log on as that user: an "Invalid username or password" message is displayed.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.3 SHOW COMPUTERS Command Displays Inconsistent Information from Servers in Different Subnets of the Same Domain

Problem:

In domains that include subnets, performing an ADMINISTER SHOW COMPUTERS command on Advanced Servers located in different subnets will return inconsistent information. From one subnet in the domain, certain computers might be shown as available, while from another subnet, the same computers are shown as unavailable.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.4 Once Permissions Are Removed from a File or Directory, Owner Cannot Change Permissions

Problem:

If an owner of a file or directory removes all permissions from that file or directory (for example, by using the ADMINISTER SET FILE /PERMISSION=REMOVE command), although the owner cannot access that file or directory, the owner should still be able to change the permissions on it. However, using the ADMINISTER command interface, the owner cannot change permissions on the file or directory from which permissions were removed. Furthermore, an error message states (incorrectly) that "directory permissions" cannot be specified if the path specification is a file.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.5 Time Values in SHOW Command Displays Fail to Roll Over Past 23 Hours

Problem:

Time values indicating the total number of hours, such as those indicating the duration of a session connection, fail to roll over at the 24th hour. For example, in the following SHOW SESSIONS command, the connection time for the Administrator account is displayed as 1 29:01 instead of 2 05:01:

```
LANDOFOZ\\TINMAN> SHOW SESSIONS

User Sessions on server "TINMAN":

Connected Users     Computer          Opens   Time      Idle      Guest
-----------------   --------------    -----   --------  --------  -----
ADMINISTRATOR       TINMAN_176            3   1 29:01   0 00:00   No
SCARECROW           TINMAN_149            0   0 21:18   0 18:19   No

  Total of 2 connected users
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.6 SHOW FILES /PERMISSIONS Command Brings ''The RPC server is unavailable'' Error

Problem:

When file names in a share contain Danish characters, repeated executions of the ADMINISTER command SHOW FILES *sharename* /PERMISSIONS can result in messages such as the following examples. In addition, the permissions might be displayed incorrectly for the files.

```
%PWRK-E-ERRGETFILEACC, error getting access information for
"\\SPC21\AMST\O'.TXT"

-LM-E-RPC_S_SERVER_UN, The RPC server is unavailable
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.4.7 Advanced Server Removes Host Mappings Unexpectedly When User Account Name Resolution Fails with SHOW HOSTMAP Command

Problem:

When executing the SHOW HOSTMAP command, if the Advanced Server is unable to resolve user account names, it unexpectedly removes the associated host mappings. This is most likely to occur if OpenVMS users are host mapped to trusted domains, and the Advanced Server is unable to communicate with domain controllers in the trusted domain.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server). The host mappings are preserved.

4.5 Cluster-Related Problems with Advanced Servers

This section describes problems relating to servers participating in OpenVMS Clusters. These problems have been corrected in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.5.1 With Open File Caching, PWRK$LMSRV Hangs with Deadlock

Problem:

The Advanced Server might hang in the following situation:

- An Advanced Server (any version, from V5.0F-ECO2 to the latest) runs on at least two nodes in an OpenVMS cluster

- Open file caching is disabled

- Frequent file open and close operations are being performed by multiple clients

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

4.6 PATHWORKS Advanced Server Interaction with DEC Rdb (Oracle) Problems

This section describes problems with the PATHWORKS Advanced Server interacting with Oracle (DEC Rdb) software.

4.6.1 PATHWORKS Advanced Server Is Incompatible with Certain Versions of Oracle Database Software

Problem:

Oracle versions prior to V7.3.3 are incompatible with the PATHWORKS Advanced Server due to Oracle's use of termination mailboxes. This incompatibility results in server crashes similar to the following:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=0000000000000000, PC=FFFFFFFF8049F044, PS=0000001B

  image    module    routine    . . .  rel PC          abs PC
                                      0000000000000000 FFFFFFFF8049F044
PWRK$CSSHR_V7  LIBIPC  mbreaddoneast 000000000000844C 00000000003C6C5C
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO1 for OpenVMS (Advanced Server).

5

Problems Corrected in Advanced Server V6.0C-ECO2/V6.0D

This chapter describes problems resolved by software changes made in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server). These software changes will also be included in future ECOs and in PATHWORKS V6.1 for OpenVMS (Advanced Server). The problems are describd in the sections indicated in the following table:

Problem Type	Section Number
Server Problems	5.1
File Access/Printing Problems	5.2
Transport Problems	5.3
Event Logging Problems	5.4
Cluster-Related Problems with Advanced Servers	5.5
Browser Problems	5.6

5.1 Server Problems

This section describes the file server problems corrected in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.1 PWRK$LMSRV Crashes During Client Operation Invoking NetLogon

Problem:

When a client performs an operation that invokes the NetLogon service (such as when a user attempts to log on to the server), and the client sends the wrong pipe name, the server crashes in module OPEN, routine file_exists. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
...
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=00000021, PC=002EDF6F, PSL=03C00000
%TRACE-F-TRACEBACK, symbolic stack dump follows
module name     routine name              ...   rel PC    abs PC

                                          ...   002EDF6F  002EDF6F
OPEN            file_exists               ...   000000C7  000872FF
OPEN            NT_openX_open2            ...   00000338  00088694
NTCREATE        smbntcreateX              ...   000001C4  0009F1B0
SMBWORK         smbwork                   ...   00000DE8  0007ECA4
                                          ...   002BB885  002BB885
MTS$MAIN        main                      ...   00000029  00029995
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.2 BDC Servers Experience High CPU Utilization and Replication Traffic

Problem:

The PWRK$LMSRV process on a backup domain controller (BDC) server might consume a high percentage of the CPU time during replication of domain security (SAM) databases. In this case, the replication traffic is excessive, and the server event log includes unexpected entries 5716, 5717, 5718, and 5719, depending on the replication process being performed.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.3 Using OpenVMS Security Mode, READALL Privilege Is Ignored

Problem:

When the PATHWORKS server is configured to use the Advanced Server and OpenVMS security model, the OpenVMS READALL privilege is ignored.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.4 Client Directory Listings Incomplete

Problem:

When viewed from various clients, such as Microsoft Windows Explorer, directory listings might fail to show all the files in the directory. In some cases, the missing contents are those files that would be at the end of the directory listing. The directory cache might inadvertently stop before the entire cache contents for the directory are processed. This seems to occur most often on heavily accessed directories. For example, the problem might occur when a substantial number of subdirectories and files are added to the same directory. The problem might also occur with directories that are accessed by multiple clients. After the contents of a directory that has been cached are changed (for example, from OpenVMS or another client, or after a ZIP file is unpacked), the directory listing might be incomplete.

This symptom is similar to that described in Section 4.2.11, Incomplete Directory Listings, but the underlying problem differs.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server). Note that incomplete directory listings can also be caused by XQP problems. To address these problems, the latest XQP related patches must be installed. At a minimum, the following patch levels should be installed:

VAX Kits	Platform
VAXF11X06_062	OpenVMS V6.2
VAXF11X05_071	OpenVMS V7.1
VAXF11X01_072	OpenVMS V7.2

Alpha Kits	Platform
ALPF11X05_062	OpenVMS V6.2
ALPF11X06_071	OpenVMS V7.1
VMS712_F11X-V0100	OpenVMS V7.1-2
VMS72_F11X-V0200	OpenVMS V7.2
VMS721_F11X-V0100	OpenVMS V7.2-1

If your Advanced Server participates in an OpenVMS Cluster, these patches must be installed on all cluster members, even those that do not run the Advanced Server.

5.1.5 SAM Database Becomes Corrupted After Shutdown

Problem:

If the server shuts down while updates to the SAM database are in progress, the SAM database might become corrupted, especially when update activity is high, such as during a full replication or when using scripts to add or remove a large number of users.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server). Various ECOs, patch kits, and recommendations from Compaq, for earlier releases of the Advanced Server, provided a fix for this problem that interlocked the PWRK$SHUTDOWN.COM procedure with stopping the NetLogon service. The new fix provided with the PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server) does not include the interlocking of NetLogon in PWRK$SHUTDOWN.COM. It is no longer necessary to interlock stopping the NetLogon Service with PWRK$SHUTDOWN.COM. Any such customized changes can be removed.

5.1.6 SAM Corruption Issues Addressed

Problem:

Previously, it was possible for the SAM database to become corrupt in other situations other than that discussed in the preceding note. The causes were many and various, but always resulted in similar symptoms, which included the following:

- SAM database replication would fail during partial synchronizations or full synchronizations, or both

- Attempts to issue any of the following ADMINISTER commands while the server is running fail, with the "LM-E-ERROR_GEN_FAILU general failure" error message being displayed:

  – SHOW COMPUTERS

  – SHOW GROUPS/FULL

- SHOW TRUSTS

- SHOW USERS/FULL

- When the server attempts to access any objects stored in the SAM database (such as computers, groups, trusts, and users), it crashes. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
  image     module     routine   . . .   rel PC          abs PC
PWRK$LMRPCAPISHR  SERTL  RtlLengthSecurityDescriptor
                                 . . . 0000000000000BD8 0000000000730978
PWRK$LMSRV  SECDESCR  PegSamrSetSecurityObject
                                 . . . 0000000000001904 00000000001FDF24
PWRK$LMSRV  SAMRPC  SamrSetSecurityObject
                                 . . . 00000000000000F8 00000000000D9AD8
 .
 .
 .
```

- Even if the database is corrupted, the preceding symptoms still might not appear. To test the database, enter the following SAMCHECK command while the server is not running. (Note that SAMCHECK is an unsupported tool.) This example shows the expected output for a sound database.

```
$ SAMCHECK -s

No corruption was detected in the SAM database.
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server). Note that it is still possible for SAM corruption to occur. The most common cause is improperly shutting down the Advanced Server. To avoid SAM corruption, always use the SYS$STARTUP:PWRK$SHUTDOWN.COM shutdown procedure whenever stopping the Advanced Server and also prior to shutting down the OpenVMS system.

Various ECOs, patch kits, and recommendations from Compaq, for earlier releases of the Advanced Server, provided a fix to prevent the SAM corruption problem resulting from improperly shutting down the Advanced Server. The fix interlocked the PWRK$SHUTDOWN.COM procedure with stopping the NetLogon service. The new fix provided with the Chapter 5 does not include the interlocking of NetLogon in PWRK$SHUTDOWN.COM. It is no longer necessary to interlock stopping the NetLogon Service with PWRK$SHUTDOWN.COM. Any such customized changes can be removed.

5.1.7 Server Crashes with Access Violation in DirRecycleDirectory

Problem:

The file server might crash due to an ACCVIO while a directory is being accessed by more than one client. For example, it might crash in the DIRRecycleDirectory routine of the ODS2$DIRCACHE module. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
   image    module    routine   . . .  rel PC         abs PC
PWRK$FSLIB_ODS2  ODS2$DIRCACHE  DIRRecycleDirectory
                                0000000000002928 000000000A9A9F8
PWRK$FSLIB_ODS2  ODS2$DIRCACHE  DIRMaintenance
                                0000000000003F40 0000000000A9C010
 .
 .
 .
```

In addition, one or more "dce on purgatory queue without bit lit" messages might be logged in the PWRK$LMSRV log file.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.8 Server Crashes in ODS2NewASUSecurityAce

Problem:

The server might crash due to an ACCVIO in module ODS2$LIB, routine ODS2NewASUSecurityAce. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
   image    module    routine   . . .  rel PC         abs PC
PWRK$FSLIB_ODS2  ODS2$LIB       ODS2NewASUSecurityAce
                                00000000000026AC 0000000000A0AF7C
PWRK$FSLIB_ODS2  ODS2$LIB       ODS2SetASUSecurity
                                000000000000294C 0000000000A0B21C
 .
 .
 .
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.9 PWRK$LMSRV Crashes in Routine ssignon_gethostmap

Problem:

When using external authentication with the Advanced Server, the PWRK$LMSRV.EXE crashes. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
   image    module    routine   line   abs PC
PWRK$LMSRV  SSIGNON_PROC  ssignon_gethostmap
                            88482    0000000000000984
PWRK$LMSRV  SSIGNON_PROC  process_acme_message
                            88828    00000000000019DC
PWRK$LMSRV  SSIGNON_COM   receive_comp_handler
                            23651    0000000000000A58
PWRK$LMSRV  SSIGNON_COM   ssignon_work   24150  0000000000001828
 .
 .
 .
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.10 Client Application Displays "Device-specific Error Has Occurred"

Problem:

Seagate Backup Exec gets the message "a device-specific error has occurred" when backing up to a PATHWORKS share. This problem occurs because an OpenVMS path specification, rather than an MS-DOS path specification, is being returned in response to the "Transact 2 Query File Info" message. This problem might also occur with other client applications.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.11 PWRK$LMSRV Process crash in RPCBIND/rpc__binding_free

Problem:

The PWRK$LMSRV process might crash in image PWRK$LMRPCSHR with a process traceback that shows an ACCVIO in RPCBIND/rpc__binding_free, called from CNSRV AbortAssociation, following a series of IPC error messages regarding a full or closing pipe such as:

```
IPCerr\RPC-56B8\CLOSE.3129 :#373717 [invalid pipe end) failure writing
EOF
   Status = 2264 (0x8D8), %SYSTEM-W-MBFULL, mailbox is full
IPCerr\RPC-56B8\freepd.3332 can't free write IOSB 0x081CCC18
IPCerr\RPC-3778\SEND.2320 }#2929674 [invalid pipe end)  sendmsg error
```

These error messages might also be seen without a corresponding PWRK$LMSRV crash.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.12 PWRK$LMSRV Process Crashes in Routine CheckMsgAuthenticator

Problem:

The server might crash with an ACCVIO in routine CheckMsgAuthenticator. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
  image     module     routine    line   . . .    abs PC
PWRK$LMSRV  SSIGNON_PROC  CheckMsgAuthenticator
                             108897 0000000000004698
PWRK$LMSRV  SSIGNON_PROC  process_acme_message
                             106887 0000000000001490
PWRK$LMSRV  SSIGNON_COM   receive_comp_handler
                             23651  0000000000000A58
PWRK$LMSRV  SSIGNON_COM   ssignon_work   24150  0000000000001828
 .
 .
 .
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.13 BDC Servers Experience High CPU Utilization and Replication Traffic, or ADMINISTER Commands Fail with "RPC Server Is Unavailable" Errors

Problem:

One or both of two problems might occur:

- As reported in Section 5.1.2, BDC Servers Experience High CPU Utilization and Replication Traffic, the PWRK$LMSRV process on a backup domain controller (BDC) server might consume a high percentage of the CPU time during replication of domain security (SAM) databases. In this case, the replication traffic is excessive, and the server event log includes unexpected entries 5716, 5717, 5718, and 5719, depending on the replication process being performed.

- ADMINISTER commands fail with the following error message:

  ```
  -LM-E-RPC_S_SERVER_UN, The RPC server is unavailable
  ```

  Note that this error message does not necessarily indicate the problem being documented here; it might also appear when the RPC server is indeed unavailable.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.1.14 PWRK$LMSRV Process Crashes in Module THREAD

Problem:

The Advanced Server might crash with the following error messages and traceback in the PWRK$LMSRV log file:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=0000000000000030, PC=000000000041B560, PS=0000001B
%TRACE-F-TRACEBACK, symbolic stack dump follows
image           module  routine        line   rel PC
PWRK$CSSHR_V7   THREAD  resume_0        16861 0000000000008520
PWRK$CSSHR_V7   THREAD  threadresumelast
                                        12759 0000000000003E0C
PWRK$CSSHR_V7   WORKQ   WorkQ_queue_work_safe
                                         9556 0000000000000DC8
PWRK$CSSHR_V7   WORKQ   WorkQ_queue_work
                                         9453 0000000000000B0C
PWRK$LMTASKSHR  QUEUE   queue_put       14706 00000000000000E4
PWRK$CSSHR_V7   LIBIPC  mbreaddoneast
                                        32735 0000000000008EC4
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.2 File Access/Printing Problems

This section describes file access and printing problems corrected in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.2.1 Windows 2000 Backup Fails to Advanced Server Share

Problem:

A Windows 2000 backup fails when attempting to write to an Advanced Server share.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.2.2 Files Remain Open

Problem:

When a user with less than Full Control Access to a file views the security on that file, the file might be left in an "open" state. Subsequent attempts to delete or rename the file would fail.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.3 Transport Problems

This section describes problems related to the use of transport protocols with the Advanced Server, corrected in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.3.1 Call to KNBNQ_UNSET_TIMER in the PWRK$LMMCP Process Might Cause OpenVMS to Crash

Problem:

While in PWRK$LMMCP, during a call to the KNBNQ_UNSET_TIMER routine, the server might cause OpenVMS to crash with the following system bugcheck information:

```
Bugcheck Type: INVEXCEPTN, Exception while above ASTDEL
Current Process: PWRK$LMMCP Current Image:
AXPA$DKC0:[SYS0.SYSCOMMON.][SYSEXE]PWRK$LMMCP.EXE
Failing PC: FFFFFFFF.884386D0 KNBNQ_UNSET_TIMER_C+00198
Failing PS: 00000000.00000804
Module: PWRK$STREAMSOS_V7 Offset: 0006E6D0
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.3.2 System Hangs or Crashes with a Spinwait Bugcheck

Problem:

When the server is not able to send out a message over its transport, it will start a retry mechanism. This retry mechanism could cause the OpenVMS operating system to become overloaded with high IPL fork requests, causing the system to hang or crash in PWRK$STREAMSOS with a CPU spinwait bugcheck.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.3.3 System Crashes in Routine RcvUDSthand

Problem:

The system might crash due to an ACCVIO in routine RcvUDSthand of module STREAMSUB in the sharable library PWRK$SHREAMSSHR, with the following bugcheck:

```
Bugcheck Type: SSRVEXCEPT, Unexpected system service exception
VMS Version: V7.1-1H1
Current Process: PWRK$LMBROWSER
Current Image: $1$DKB0:[SYS0.SYSCOMMON.][SYSEXE]PWRK$LMBROWSER.EXE;5
Failing PC: FFFFFFFF.800086E8 OTS$MOVE_C+000B8
Failing PS: 10000000.00000003 Module:
SYS$BASE_IMAGE Offset: 000066E8
```

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.4 Event Logging Problems

This section describes problems related to event logging functions of the server, corrected in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.4.1 Client Event Logs Fill with Many Event 3012 Errors

Problem:

Some client applications may cause the event log on Windows NT clients to become full with Event 3012 entries when the user attempts to open files with names greater in length than the MS-DOS standard 8.3 format.

A status returned by PATHWORKS was more severe than necessary which caused the client to log an error in its event log.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.5 Cluster-Related Problems with Advanced Servers

This section describes problems relating to servers participating in OpenVMS Clusters. These problems have been corrected in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.5.1 Multiple Servers Perform Replication in a Cluster

Problem:

In a cluster, only one cluster member should actually participate in replication of the SAM databases — the server that holds the PWRK$DMN_UAS lock. In some circumstances, no cluster member holds the lock, which results in all cluster members participating in replication. When multiple members attempt to replicate the database simultaneously, the replication fails.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.5.2 BDC Loses Connection to PDC; Unable to Participate in Replication

Problem:

In WAN environments in which the Advanced Server runs in a cluster as a Backup Domain Controller (BDC), and the primary domain controller (PDC) is on a different LAN segment than that of the cluster BDC, the remote PDC might resolve the cluster alias to the wrong cluster BDC member. As a result, the cluster BDC is unable to participate in replication of the SAM database.

The system manager might notice user account modifications are not being replicated to the cluster BDC. Users might notice password updates do not take effect. Partial synchronization messages for the cluster BDC might be missing from the event log.

The cause of the problem can be explained as follows: in such environments, prior to PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server), it was necessary to ensure that a WINS or LMHOSTS entry for the Advanced Server cluster alias points to the cluster member with the active daemon (typically the member where the server was first started; it is the member that holds the PWRK$DMN_UAS lock, and so is the only member that can process replication operations). If the WINS or LMHOSTS entry is not set to the cluster member with the active daemon, the remote PDC will resolve the cluster alias to the wrong cluster BDC member, preventing the cluster from being able to participate in replication.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server). It is still necessary to define an LMHOSTS entry for the Advanced Server cluster alias; however, that entry can point to any cluster member that is running the NetLogon service, whether the member has an active or inactive daemon. When the PDC announces SAM database updates (by means of a pulse message), if that announcement gets to a cluster node with an inactive daemon, the message is forwarded to the cluster member with the active daemon. Then, replication will take place appropriately.

5.6 Browser Problems

This section describes problems with the Browser service corrected in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

5.6.1 Browser Fails to List Entire List of Servers or Domains

Problem:

In large domains, or in networks with many domains, clients using an Advanced Server backup Browser do not receive the complete list of the servers or domains.

Solution:

This problem is resolved in PATHWORKS V6.0C-ECO2 for OpenVMS (Advanced Server) and PATHWORKS V6.0D for OpenVMS (Advanced Server).

6

Problems Corrected in PATHWORKS Advanced Server V6.1

This chapter describes problems resolved by software changes made in PATHWORKS V6.1 for OpenVMS (Advanced Server). These software changes will also be included in future ECOs. The problems are described in the sections indicated in the following table:

Problem Type	Section Number
Server Problems	6.1
File Access/Printing Problems	6.2
ADMINISTER Command Problems	6.3
Transport Problems	6.4
Event Logging Problems	6.5
Windows 2000 Related Problems	6.6
Miscellaneous Problems	6.7

6.1 Server Problems

This section describes the file server problems corrected in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.1 Files Created by Windows 95 or Windows 98 Clients Have Wrong Timestamp

Problem:

Files created from Windows 95 and Windows 98 clients in shared directories are given incorrect timestamps for their creation date. When viewing file properties, the time displayed for the creation date would be off by one or more hours, depending on the timezone of the server.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.2 Advanced Server Hangs and Logs "Server allocating 10 more queue elements" Messages

Problem:

The Advanced Server hangs because it is attempting to process multiple VFC files at the same time. The PWRK$LMSRV log file records several "Server allocating 10 more queue elements" messages and a message indicating that the data cache is saturated and should be increased in size.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.3 Server Crashes with ACCVIO in Routine FIDGetCache

Problem:

The server might crash with an access violation (ACCVIO) in module ODS2$FIDCACHE, routine FIDGetCache. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=00000000010
%TRACE-F-TRACEBACK, symbolic stack dump follows
image         module       routine        line  rel PC
PWRK$FSLIB_ODS2 ODS2$FIDCACHE FIDGetCache      32276 ...01C94
PWRK$FSLIB_ODS2 ODS2$FIDCACHE ODS2GetFIDCache  33962 ...06714
PWRK$FSLIB_ODS2 ODS2$FILE     ODS2LookupFile   30532 ...00DC8
PWRK$FSLIB_ODS2 ODS2$FILELIB  ODS2GetDirectory 27678 ...00AF4
PWRK$FSLIB_ODS2 ODS2$FILE     ODS2LookupPath   30408 ...00AB0
PWRK$FSLIB_ODS2 ODS2$FILE     ODS2LookupFile   30506 ...00D2C
PWRK$FSLIB_ODS2 ODS2$LIB      ODS2Stat         34009 ...02AEC
```

In addition, the log file would contain many informational messages from the FID cache and ThreadLock/Unlock routines.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server). The crash and the extraneous informational messages should no longer occur.

6.1.4 Numerous Locks on a Resource Accumulate, Causing PWRK$LMSRV or the System to Crash

Problem:

The PWRK$LMSRV process might gradually become overloaded with multiple locks on a single resource, causing the system enqueue limit quota (ENQLM) to be exceeded. As a result, either the PWRK$LMSRV process might crash or an OpenVMS lock manager problem might cause the system to crash. The locks have a name beginning with "PWRK$om", such as PWRK$om_0093EA0002000100.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.5 PWRK$LMSRV Crashes with ODS2ReadRMS Errors

Problem:

The PWRK$LMSRV process crashes with the following error messages in the PWRK$LMSRV log file previous to the crash:

```
ODS2ReadRMS: failed to rewind file,  status 000000
ODS2ReadRMS: failed to get record, status [various RMS codes]
```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.6 PWRK$LMSRV Crashes with Access Violation in Module ODS2$LIB

Problem:

The PWRK$LMSRV process might crash with an access violation in the module ODS2$LIB, in routine ODS2NewASUSecurityAce. A traceback similar to the following would be seen in the PWRK$LMSRV log file:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=0000000006FDC004, PC=FFFFFFFF808BF9A4, PS=0000001B
%TRACE-F-TRACEBACK, symbolic stack dump follows
  image     module     routine   . . .   rel PC         abs PC
                                  FFFFFFFF808BF9A4 FFFFFFFF808BF9A4
 PWRK$FSLIB_ODS2  ODS2$LIB  ODS2NewASUSecurityAce
                                  00000000000026AC 0000000000C2D0DC
 PWRK$FSLIB_ODS2  ODS2$LIB  ODS2SetASUSecurity
                                  000000000000294C 0000000000C2D37C
 PWRK$FSLIB_ODS2  ODS2$OPS  ODS2_setsecurity
                                  00000000000117C0 0000000000BF97C0
 .
 .
 .
```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.7 PWRK$Monitor Crashes While Attempting to Output an OpenVMS Error Message (932)

Problem:

The PWRK$MONITOR process might crash in module cmtsvrmonsys while writing out a dump file and attempting to include an OpenVMS error message (status code 932). The log file will include the following information:

```
  29-MAY-2001 13:32:47.73 21200233:00243DD8      PFS_CACHE_IMAGE
: PWRK$PCMSHR
  1-JUN-2001 11:07:48.17 21200233:002481E8 In module
<cmtsvrmonsys>, in function <MonitorServer>
  1-JUN-2001 11:07:48.29 21200233:002481E8      Message Text:
Error returned from sys$getjpi()
  1-JUN-2001 11:07:48.30 21200233:002481E8      Status Code: 932
 .
 .
 .
```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.8 Partial Synchronizations Require Excessive Time to Complete

Problem:

When the Advanced Server is the primary domain controller (PDC), partial synchronizations that require more than one update message to be sent from the PDC to the BDC might take an inordinate amount of time to complete.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.1.9 "release_secure_channel_lock failed" Error in Server Log and 5716 Event in Event Log

Problem:

Multiple users of the secure communication channel that is formed between a BDC and its PDC arbitrate for the channel using an OpenVMS lock. In previous versions of the Advanced Server, the arbitration did not always work successfully, and the channel would break temporarily.

Two side effects of this include:

1. The following message recorded in the server log:

    ```
    "release_secure_channel_lock failed, R0 status = 00002124"
    ```

2. The following events recorded in the event log:

    ```
    I 11/21/00 02:32:14 PM NETLOGON  None   5717   N/A  MOLD
    I 11/21/00 02:32:12 PM NETLOGON  None   5715   N/A  MOLD
    W 11/21/00 02:31:09 PM NETLOGON  None   5716   N/A  MOLD
    I 11/21/00 02:31:08 PM NETLOGON  None   5715   N/A  MOLD
    ```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.2 File Access/Printing Problems

This section describes file access and printing problems corrected in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.2.1 Certain Applications Might Fail When Attempting to Display Files on ODS-5 Disk Volumes

Problem:

Certain MS-DOS applications attempting to enumerate files in an Advanced Server share directory residing on an ODS-5 volume will fail if the file names are in lowercase. These same applications work fine on an ODS-2 volume.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.3 ADMINISTER Command Problems

This section describes ADMINISTER command problems corrected in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.3.1 The Password of a Newly Created Account Is Not Expired by Default

Problem:

By default, a user account is created with an expired password. The user must enter a new password at first logon. (To remove the need for users to reset their passwords at first logon, use the /FLAGS=(NOPWDEXPIRED) qualifier with the ADD USER command.) However, a previous version of the Advanced Server for OpenVMS product is not setting the password of a newly created account as expired. Thus, when first logging in, a new user would not have to reset the account password, as expected.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.3.2 ADMIN/ANALYZE Command Loops with Error Messages

Problem:

When a non-privileged user invokes the ADMINISTER/ANALYZE command, an error message will be displayed repeatedly until the user presses CTRL/C to cancel the command. The following example shows the repeated error message that might be seen:

```
$ ADMIN/ANA/SINCE

  ::::::::::: PATHWORKS Error Log Report :::::::::::
           DATE: 21-SEP-2001 16:01:51.33
PCSLVB\acquire_lvb_lock: unexpected VMS status error! (000028F4)
PCSLVB\acquire_lvb_lock: unexpected VMS status error! (000028F4)
PCSLVB\acquire_lvb_lock: unexpected VMS status error! (000028F4)
PCSLVB\acquire_lvb_lock: unexpected VMS status error! (000028F4)
    .
    .
    .
```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.3.3 Administrator Cannot Take File Ownership

Problem:

Once all permissions are removed from a shared directory, an administrator, using the ADMINISTER TAKE FILE OWNERSHIP command, is not able to take ownership of the directory or of files in the directory. No messages are displayed. However, if the administrator uses the SHOW FILES command, an "insufficient privileges for attempted operation" error message is displayed.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.4 Transport Problems

This section describes problems related to the use of transport protocols with the Advanced Server, corrected in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.4.1 15-Character Alias Name Truncated in Claimed NETBIOS Name

Problem:

When a user specifies a cluster alias name 15 characters in length, one of the two associated NETBIOS names that get claimed is truncated to 14 characters. This is the name that ends with "\0x00" in the last byte and is used for datagrams.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.5 Event Logging Problems

This section describes problems related to event logging functions of the server, corrected in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.5.1 Displaying Application Event Log Files Fails to Display Events Data

Problem:

The ADMINISTER command SHOW EVENTS/FULL displays details about events. Both the ADMINISTER command and the NT Event Viewer give you the description of the event (the text associated with an event ID). There is also optional data included with some events that helps with troubleshooting problems. This information is not available from the ADMINISTER command.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.6 Windows 2000 Related Problems

This section describes problems related to the interaction with Windows 2000, corrected in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.6.1 Attempts to Add a User Fails

Problem:

Adding a user in a mixed-mode Windows 2000 domain fails if the PDC's user account policy specifies a minimum password length, even when the password specified is long enough. Messages would be seen as in the following example:

```
LANDOFOZ\\TINMAN> add user smith/pass="ilikethisstuff"
%PWRK-E-ERRADDUSER, error adding user "SMITH"
-LM-E-NERR_PASSWORDHI, password too short or found in history list
```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.6.2 Windows 2000 Clients See Blank Date Fields for Shared Files

Problem:

When users of a Windows 2000 client view the properties of a shared file with an unknown file extension, the date fields are blank. In addition, the last four date fields stored in the UNKNOWN=%X80 ACE are all zeros.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.6.3 DCL SET PASSWORD Command Fails in Windows 2000 Mixed-Mode Domain

Problem:

If the host server for authentication is a BDC in a mixed-mode Windows 2000 domain, the DCL SET PASSWORD command fails when attempted by an OpenVMS user marked for external authentication, and the hostmapped server user's password was last updated using the ADMINISTER MODIFY USER/PASSWORD command. The following example shows the error messages returned:

```
$ SET PASSWORD  Return
Old password:            Return
New password:            Return
Verification:            Return
%SET-I-SNDEXTAUTH, Sending password request to external authenticator
%SET-E-EXTPWDERR, Password could not be set by external authenticator
-SYSTEM-F-AUTHFAIL, authorization failure
-ACME-E-UNSPECIFIED, general error, see secondary status for details
```

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.6.4 Roaming User Profiles Cannot Be Saved on the Advanced Server

Problem:

In a Windows 2000 terminal server environment, roaming user profiles cannot be saved on the Advanced Server. When a user logs out from a terminal session, error messages indicate that the file could not be copied or the file could not be found, and that the roaming profile could not be updated.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server). However, for profiles stored on a PATHWORKS for OpenVMS (Advanced Server) share, bear in mind the limitations of the ODS-2 disk volume structure, which does not support long directory names (longer than 32 characters). See Section 7.5.2, Restriction on Roaming User Profiles.

6.6.5 Access Denied When Copying a Subfolder of a Directory Tree Using the Windows 2000 Xcopy Command

Problem:

Using the xcopy command on a Windows 2000 client to copy a directory tree to a PATHWORKS share might result in an "Access Denied" error immediately after creating a subdirectory. This problem does not occur on Windows NT or Windows 98 clients.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server).

6.7 Miscellaneous Problems

This section describes miscellaneous problems pertaining to the PATHWORKS Advanced Server.

6.7.1 Advanced Server Supplies Obsolete Version of File Used by eXcursion

Problem:

The Advanced Server supplies an obsolete version of SYS$COMMON:[SYSEXE]PCX$SERVER.COM. The file is used by eXcursion.

Solution:

This problem is resolved in PATHWORKS V6.1 for OpenVMS (Advanced Server). The current version of the file is correctly installed in SYS$COMMON:[SYSEXE]. You can find the correct version on the PATHWORKS 32 distribution kit as file PCX_SERV.COM, or contact your Compaq customer support center.

7

Restrictions in PATHWORKS V6.1 for OpenVMS (Advanced Server)

This chapter describes restrictions in the PATHWORKS V6.1 for OpenVMS (Advanced Server) software. The restrictions are described in the sections indicated in the following table:

Problem Type	Section Number
Installation and Configuration Restrictions	7.1
Upgrade Restrictions	7.2
File Server Restrictions	7.3
User Interface Restrictions	7.4
Windows 2000 Related Restrictions	7.5
Printing/Print Management Restrictions	7.6
Event Logging Restrictions	7.7
Domain Management Restrictions	7.8
Browser Restrictions	7.9
Transport Restrictions	7.10
PATHWORKS Advanced Server in an OpenVMS Cluster Restrictions	7.11
PATHWORKS Advanced Server Interaction with DEC Rdb (Oracle) Restrictions	7.12

7.1 Installation and Configuration Restrictions

This section describes restrictions in the installation and configuration of the PATHWORKS Advanced Server software.

7.1.1 PWRK$CONFIG and PWRK$SETINI Command Procedures Fail After Domain Name Change Failure

Problem:

The command procedures PWRK$CONFIG.COM and PWRK$SETINI.COM may fail if there has been a previous failure in trying to change the domain name, and your server is going to be a backup domain controller (BDC) in the new domain.

To change your domain name, you must run either the PWRK$SETINI.COM or PWRK$CONFIG.COM command procedure. If the command procedure that you run fails to communicate with the primary domain controller (PDC), then the next time you run either command procedure, it will fail. The command procedure fails while trying to verify the security accounts (SAM) database files. It fails because the name of the domain in PWRK$LANMAN.INI does not match

the name of the SAM account database file. The name in LANMAN.INI will have the new domain name, and the name of the SAM accounts file will have the original name.

Solution:

If the PWRK$CONFIG.COM command procedure fails to communicate with the PDC, then after running either of the command procedures, delete all versions of the file PWRK$LMDATAFILES:PWRK$UPG_DOMAINS.DAT.

Next, make sure the domain name in PWRK$LANMAN.INI is the original name (the name that existed before you tried to change it). If it is not the original name, then edit the file, delete the new name, and replace it with the old name. Make sure you type it in uppercase.

7.1.2 PATHWORKS Advanced Server Cannot Coexist with PATHWORKS V5.0C for OpenVMS (LAN Manager) Server

Problem:

The PATHWORKS Advanced Server cannot share a domain with a server running PATHWORKS for OpenVMS (LAN Manager) V5.0C. The V5.0C server incorrectly generates a name conflict when the PATHWORKS Advanced Server claims a group name that is used by both servers.

Solution:

To correct this problem, upgrade the PATHWORKS V5.0C server to PATHWORKS V5.0C ECO1, or a later version of PATHWORKS V5 for OpenVMS (LAN Manager).

7.1.3 PATHWORKS Advanced Server May Fail at Startup Time If SYLOGIN.COM Executes with Errors

PATHWORKS Advanced Server process startup depends on successful execution of OpenVMS logins and logouts.

If your sites make use of SYLOGIN.COM to achieve cluster-member specific logon setup, and SYLOGIN.COM encounters errors, PATHWORKS Advanced Server startup hangs.

When this problem occurs, process startup either fails to generate log file messages or fails to complete.

7.1.4 Advanced Server Fails to Start If Any Processes Are Running the ADMININSTER Command Line Interface

Problem:

If you attempt to start the Advanced Server while a process is running the ADMINISTER command line interface, the startup may fail and a message similar to the following is displayed:

```
%PWRK-F-INSGBLSECTS, system has only 53 free global sections
-PWRK-I-REQGBLSECTS, PATHWORKS requires a minimum of 75

  The system does not have enough free global sections to use
  PATHWORKS.
  Please see the Installation Guide on how to increase the number of
  global sections by modifying the SYSGEN parameter GBLSECTIONS.
```

Solution:

Have any process that is running the ADMINISTER command line interface exit from the program. To determine which processes are running the ADMINISTER command line interface, use the following commands:

```
$ SHOW DEVICE/FILES SYS$SYSTEM: /OUT=TMP.TMP
$ SEARCH TMP.TMP PWRK$MANAGER.EXE
```

7.1.5 PWRK$CONFIG Fails to Move the PATHWORKS On-Disk Structure

Problem:

On OpenVMS V7.1 systems, if the PATHWORKS on-disk structure contains directories more than eight levels deep, the PWRK$CONFIG procedure cannot move the on-disk structure to another disk because of an OpenVMS RMS restriction. This restriction does not apply to OpenVMS V7.2 or later systems.

Solution:

Before running the PWRK$CONFIG procedure to move the PATHWORKS on-disk structure, either delete directories that are greater than eight levels deep, or rename them so that the standard OpenVMS BACKUP command invoked by PWRK$CONFIG can move them correctly.

7.1.6 Cannot Join a Domain if the PDC (Windows NT or Windows 2000) Has Restricted Anonymous Access

Problem:

The Advanced Server cannot be configured as a BDC or a member server if the PDC (Windows NT or Windows 2000) restricts anonymous access. Anonymous access is restricted if the registry on the PDC has the following value:

```
Key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\LSA
Value Name: RestrictAnonymous
Data Type: REG_DWORD
Value: 1
```

In this case, when you attempt to configure the Advanced Server to join the domain, you will see this error message:

```
PWRK-F-COMERR, error communicating with the primary domain controller
Error getting domain name
```

Solution:

Allow anonymous access to the PDC by setting the PDC's RestrictAnonymous registry value to 0 during the time the Advanced Server is being configured to join the domain. You can reset the parameter to a non-zero value immediately after the server joins the domain. Note that the PDC has to be rebooted after each change to the registry value in order for the change to take effect.

For a related restriction regarding restricted anonymous access, see Section 7.5.1, Restricted Anonymous Access on Windows 2000 Server Affects External Authentication.

7.1.7 Authentication Fails After Attempt to Synchronize with a PDC Using a Windows NT Server with Service Pack SP5

Problem:

Windows NT Servers with Service Pack SP5 or greater have changed the way they perform the Synchronize with Primary Domain Controller function initiated from the Windows NT Server Manager. The synchronization attempt can result in problems such as described in the following sequence of events:

1. To initiate the synchronization, the user selects a specific BDC member instead of the cluster alias from the list in the Server Manager window.

2. After the user selects Synchronize With Primary Domain Controller from the Computer menu, Windows NT with Service Pack SP5 sends a "set secret" RPC to reset the $MACHINE.ACC secret. Windows NT with Service Pack SP3, for example, does not do this; it will query, but not set, the secret.

3. As a result, Windows NT with SP 5 resets the machine account in its own database; the account in this case is NOT the alias account.

4. Thus, the Advanced Server local machine account secret password no longer matches the alias machine account password on the PDC, which results in failures when attempting to authenticate with the PDC. These attempts fail with the following event:

```
NET3210:  Failed to authenticate with <PDC>
```

Solution:

To avoid this problem, when selecting the server from the list in the Server Manager Window, select the cluster alias of a specific BDC member name. Then choose Synchronize With Primary Controller from the Computer menu. If you already selected a specific BDC (instead of the cluster alias for that BDC) from the Server Manager Window, and the local and PDC machine accounts no longer match, this solution will resynchronize the accounts.

7.1.8 PATHWORKS Does Not Start When PWRK$ROOT Device Is Mounted as Allocated

Problem:

When the PWRK$ROOT device is mounted as an allocated device, which occurs when the /SYSTEM or /CLUSTER qualifiers are not used with the MOUNT command, PATHWORKS will not start and no error messages are logged to indicate that it failed to start or why it failed to start.

Solution:

Make sure the PWRK$ROOT device is mounted systemwide or clusterwide, specifying the /SYSTEM or /CLUSTER qualifier with the MOUNT command.

7.2 Upgrade Restrictions

This section describes restrictions relating to the PWRK$V6UPGRADE.COM Upgrade utility.

7.2.1 Upgrade Fails with an "RMS-W-RTB" Error

Problem:

Under rare circumstances, the PWRK$V6UPGRADE.COM utility might fail with the following error message:

```
%RMS-W-RTB, 512 byte record too large for user's buffer
```

Solution:

Invoke the Upgrade utility by specifying the entire path for the command file name (that is, do not omit the ".COM" extension), such as in the following example, which assumes the default directory is SYS$UPDATE:.

```
$ @PWRK$V6UPGRADE.COM
```

7.3 File Server Restrictions

This section describes restrictions in the file server.

7.3.1 OpenVMS File Names with a Dot at Position 40 Are Not Displayed Properly from the Client

Problem:

If a file created natively on an OpenVMS system has a dot at position 40 of its file name, the dot does not appear in the file name when viewed from a client.

Solution:

If you want a file that is created on an OpenVMS system to be viewed correctly from the client, give the file a name that does not have a dot at position 40.

When performing an operation from the client on an OpenVMS file that has a dot at position 40 of its name, treat the file as if it has no dot. When you view a file created on the client, a dot at position 40 in the file's name is displayed, and you can perform any other operations on that file as you normally would, including the dot in the file name.

7.3.2 You Cannot Map to an OpenVMS Search List

Problem:

You cannot map a share to a search list. In other words, you cannot map to devices or directories using such a search list name as the path device or directory name.

Solution:

Do not use a search list as the path device name. You must map to a specific device.

7.3.3 Premature Disk Full Conditions

Problem:

The file server may receive a disk full message when thousands of free blocks remain on the device, because the file server's open file cache holds newly created or extended files open for about five seconds after the client closes them. Because files are allocated in extent-size chunks, that space is unavailable for other operations until the files are actually closed.

Solution:

To avoid these messages, make sure that at least 1 MB of free space is available on the device at all times.

If this does not work, add the following to the PWRK$COMMON:PWRK.INI file to lower the default file extent quantity. Create this file if necessary. Note, however, that this will significantly affect the performance of the file server.

```
[ODS2]
    create_quantity = 1
    extend_quantity = 1
```

7.3.4 DECram Performance Problem

Problem:

DECram performance is inadequate when the disk is mounted using the /NOCACHE qualifier.

Solution:

Do not use the /NOCACHE qualifier when mounting a RAM disk that PATHWORKS Advanced Server will access. If you omit the /NOCACHE qualifier from the MOUNT command, the XQP+ cache is enabled for the RAM disk, allowing the PATHWORKS internal caches to operate effectively.

7.3.5 Access Denied to Files Restored from Backup of Another System

Problem:

When a directory is backed up from one system and restored on another, stale group ACEs may still be attached to the files that are restored. These ACEs may cause the file server to deny access to users even though they have access to the parent directory.

Solution:

To correct the problem, delete the ACLs on the files after they are restored, using the following DCL command:

```
$ SET ACL/DELETE filename
```

7.3.6 "XCCB Not in Use" Errors in LMMCP Log File

Problem:

When an attempt is made to exceed the maximum number of sessions that the server is configured for, the operation fails (as expected) and the following error message appears in the PWRK$LMMCP_*nodename*.LOG file:

```
...specified XCCB not in use!
```

Solution:

You can ignore this error message.

7.3.7 Do Not Use "DEV" as a Share Name

The name "DEV" is reserved. Do not specify "DEV" as the name of a share.

7.4 User Interface Restrictions

This section describes restrictions in the management interfaces.

7.4.1 Alias Name Not in Browse List When Using DECnet Transport Only

Problem:

In an OpenVMS Cluster, the Advanced Server alias name is not seen by the browser if DECnet is the only transport configured. The ADMINISTER SHOW COMPUTER display shows the alias, but it marks it as unavailable. Although the alias is marked as unavailable, you can still connect to shares using the alias name.

Solution:

Use the Configuration Manager (ADMINISTER/CONFIGURE command) to configure the Advanced Server to use either TCP/IP or NetBEUI in addition to DECnet.

7.4.2 Server Description (SrvComment) Restriction

Problem:

The maximum length for the server description string is 256 characters. (You can define this string using the SET COMPUTER/DESCRIPTION command, or with the SrvComment keyword in the LANMAN.INI file.)

If the server comment is set to a string of greater than 48 characters, the new server comment will not be fully displayed.

The comment displayed will contain only the first 48 characters of the comment string. The remainder of the comment string is truncated and is not displayed.

7.4.3 Server Acting as a BDC Will Not Allow Changes to Share Permissions Until Synchronized with PDC

Problem:

If a new user or group is added to the domain, an attempt to set permissions on an object (for example, a file) for the newly added user or group may result in an error message, such as:

```
%PWRK-E-ERRMODSHAREPERM, error modifying permissions for share "QUIP"
-LM-E-NOTALLMAPPED, one or more user or group names were not found
```

Solution:

Synchronize the BDC with the PDC before adding permissions for the new user or group.

7.4.4 Directory File (Folder) Name Length Restrictions

Problem:

The length of a directory file (or folder) name is limited to 39 characters. The length is further restricted if the name includes dots, spaces, or other characters that cannot be represented in OpenVMS file names. In general, each instance of these characters reduces the maximum length by four characters. Regular file names (nonfolder names) can have up to 77 characters in the client file name, unless the name includes dots, spaces, or other non-OpenVMS characters.

Solution:

Limit the length of directory and file names accordingly, or upgrade the file server to Advanced Server for OpenVMS and use the extended file naming capabilities of ODS-5 devices.

7.4.5 Mouse Selection Highlights Entire Screen

Problem:

Under certain circumstances, when you use a character-cell user interface, such as ADMIN/LICENSE, the entire screen is highlighted when you select a button using the mouse input device.

Solution:

When this occurs, press Ctrl/W to clear the screen, then select the button again.

7.4.6 When a User Account Is Created Without a Password, an Encrypted Password is Supplied

Problem:

If you use the ADMINISTER command COPY USER to create a new user account, and you omit the /PASSWORD qualifier, the new user account is created with an encrypted password.

Solution:

Use the MODIFY USER command to set the password for the new user account.

7.4.7 File Server Unable to Resolve Job Logical Translation as Part of a File Specification

Problem:

If you use a job logical as part of a file specification for any ADMINISTER command, the operation will fail. The file server does not support using a job logical as part of a file specification. Using a job logical as part of a file specification to an ADMINISTER command results in an error, where the error message may not be explicit about the cause of the problem.

For example, the following command line will fail with an "insufficient privileges" error message.

```
$ ADMIN SAVE EVENT SYS$LOGIN:EVT_BACKUP.EVT
```

The source of the problem is not the privilege level of the user; rather, it is the use of the SYS$LOGIN job logical.

Solution:

Do not use job logicals in file specifications in the ADMINISTER command line.

7.4.8 ADMINISTER SHOW SERVICES Command Fails When Directed to Windows NT Server with Service Pack 4

Problem:

When you issue the SHOW SERVICES command to display services on a Windows NT Server that has Service Pack 4, the command fails with the following error:

```
%PWRK-E-ERRGETSVCS, error getting service information
-LM-E-ERROR_MORE_DATA, additional data is available
```

Solution:

This is problem is due to the specified Windows NT software. The SHOW SERVICES command works when directed to earlier versions of the Windows NT Server and to any PATHWORKS or Advanced Server for OpenVMS servers.

7.5 Windows 2000 Related Restrictions

This section describes restrictions related to support of Windows 2000.

7.5.1 Restricted Anonymous Access on Windows 2000 Server Affects External Authentication

Problem:

When a Windows 2000 server has the registry value for RestrictAnonymous set to 2, it will not validate authentication requests from domain controllers in another domain trusted by the Windows 2000 server's domain. For example, when a user with an account in the Windows 2000 domain attempts to log in to an OpenVMS system, using external authentication, and the system is in a domain trusted by the Windows 2000 server, the Advanced Server for OpenVMS or PATHWORKS for OpenVMS (Advanced Server) server running on that OpenVMS system requests the Windows 2000 server to authenticate that user, but the Windows 2000 server will fail to do so. Additional limitations will result, such as the SET PASSWORD command at the OpenVMS DCL prompt failing to work for an externally authenticated user, when that command is sent to the Windows 2000 server. However, the Advanced Server ADMINISTER SET PASSWORD command will work.

The RestrictAnonymous value in the registry appears as follows:

```
Key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\LSA
Value Name: RestrictAnonymous
Data Type: REG_DWORD
Value: 2
```

Solution:

Allow anonymous access at the Windows 2000 server (value of RestrictAnonymous set to 0). You can avoid the restriction described in this note by setting the value of RestrictAnonymous to 1; however, as noted in Section 7.1.6, Cannot Join a Domain if the PDC (Windows NT or Windows 2000) Has Restricted Anonymous

Access, this will prevent any Advanced Server from being configured in the Windows 2000 domain as a BDC or member server.

You can reset the parameter to a non-zero value immediately after the server joins the domain. Note that the PDC has to be rebooted after each change to the registry value in order for the change to take effect.

For more information on the restriction when RestrictAnonymous is set to 2, see the Microsoft article at the following location:

```
http://support.microsoft.com/support/kb/articles/q246/2/61.asp
```

7.5.2 Restriction on Roaming User Profiles

Problem:

Usage of roaming user profiles that will be stored on a PATHWORKS for OpenVMS (Advanced Server) share is limited by the restrictions imposed by the ODS-2 disk structure. Names of folders (such as desktop folder or subfolders created in the My Documents folder) to be stored at the profile path destination must not exceed 32 characters in length; otherwise, the server's attempt to store the folder name as a directory on the PATHWORKS share will fail. Folder names that include spaces or nonalphanumeric characters (characters not included in the standard character sets) impose further limits on the length of the name: each such character takes up four characters on the volume. (These limitations apply equally to PATHWORKS ODS-5 disk volumes: the PATHWORKS for OpenVMS (Advanced Server) treats ODS-5 volumes as ODS-2 volumes.)

Solution:

If the structure of the roaming user profiles requires support of folder names exceeding 32 characters in length, Compaq recommends that you upgrade your server to Advanced Server for OpenVMS to take advantage of the ODS-5 disk volume structure and directory features.

7.6 Printing/Print Management Restrictions

This section describes restrictions in printing or managing print queues.

7.6.1 Cannot See Print Job Name from Client

Problem:

Client computers do not display print job names.

Print jobs submitted from client computers are not displayed from the Print Manager with the print job name.

Solution:

No action; this is a restriction of PATHWORKS Advanced Server.

7.6.2 Cannot Move Print Job Postion In Queue from Client

Problem:

If the user of a client computer attempts to use the Print Manager to move a print job to a different position in the print queue, the operation fails.

Solution:

Use the ADMINISTER command SET PRINT JOB to move the print job within the print queue.

7.6.3 Client Cannot Purge Print Queues

Problem:

Client platforms, such as Windows NT and Windows 95, include a function to purge the print queue of print jobs in their print manager. This function fails to purge the print jobs in the queue on an Advanced Server file server. If a client user logged on with sufficient privileges to purge the print queue (full or manage documents privilege), attempts to purge the print queue, an error message is returned indicating insufficient privileges to perform the operation.

Solution:

The client user can remove the jobs from the queue by selecting with the mouse all of the jobs in the queue and then using the delete key.

7.6.4 Windows NT Print Manager Fails to Display PATHWORKS Advanced Server Printers

Problem:

When you attempt to display the printers on the PATHWORKS Advanced Server from the Windows NT server administration Print Manager, using the Server Viewer, you will not see the printers offered by the PATHWORKS Advanced Server.

Solution:

Display the list of printers using the PATHWORKS ADMINISTER command SHOW PRINT QUEUE.

7.6.5 ADMINISTER REMOVE PRINT QUEUE Fails to Delete a Routing Print Queue

Problem:

If you attempt to delete a PATHWORKS Advanced Server print queue using the ADMINISTER command REMOVE PRINT QUEUE, the command fails with the following error message:

```
%PWRK-E-QUEGENERR, error removing print queue "queue-name"
at server "\server-name"

%PWRK-I-QUENOTPW, This queue may not have been created by PATHWORKS
```

The second message is misleading: the print queue may have been created using the PATHWORKS Advanced Server. The routing queue is not deleted if it has been defined to print to a printer queue that is set up to print to a virtual port (such as an LTA device).

Solution:

Use the OpenVMS DCL command DELETE/QUEUE to delete the print queue.

7.7 Event Logging Restrictions

This section describes restrictions in the event logging and auditing functions of the PATHWORKS Advanced Server.

7.7.1 Event in Browser Function Is Not Reported Properly

Problem:

When the Browser stops, the ADMINISTER SHOW EVENTS command does not display the event. The Windows NT Event Viewer reports the event but does not identify the Browser. Instead, it identifies the node name. For example:

```
6108  The BAGELS service has stopped.
```

BAGELS is the node name. Instead, the event source (Browser) should be identified.

The event source improperly identified by the 6108 event message should be the Browser.

7.7.2 Certain Event Code Descriptions Do Not Appear in ADMINISTER SHOW EVENTS Display

Problem:

After the server parameter MORELOG in the [BROWSER] section of the LANMAN.INI file is set to YES, descriptions are not provided for several event types in the ADMINISTER SHOW EVENTS display. Instead, the following message is displayed:

```
I xxxx - The description for Event ID (xxxx)
in Source (BROWSER) could not be found
```

The message displays the Event ID number for the event (*xxxx*).

Solution:

Use the Windows NT Event Viewer to display the event log.

7.7.3 Event Log Files Fail to Overwrite When Full

Problem:

The server does not support overwriting event messages when the event log files become full. However, the server generates an Alert message indicating the log file is full.

Solution:

You must manually clear the event log file by using the ADMINISTER CLEAR EVENTS command.

7.7.4 Unable to Set the Event Logging Setting

Problem:

When you use Windows NT server administration tools to alter the event logging setting, and you choose the option "Do Not Overwrite Events (Clear Log Manually)," the server incorrectly reflects the setting as "overwrite events older than 365 days."

7.8 Domain Management Restrictions

This section describes restrictions in managing domains and servers in domains.

7.8.1 Additions or Deletions of Trusts on One Cluster Node Are Unknown to the Other Cluster Nodes Until NetLogon Restart

Problem:

If a trust relationship is added or deleted on a cluster node, it will not be known to the other cluster nodes until after they restart NetLogon.

Solution:

After adding or removing a trust relationship to a cluster node, restart the NetLogon service clusterwide by issuing the following commands on any one cluster member running PATHWORKS:

```
$ ADMINISTER STOP SERVICE NETLOGON
$ ADMINISTER START SERVICE NETLOGON
```

7.8.2 Error When Displaying Advanced Server Domains from a Windows NT Server Manager

Problem:

When using the Windows NT Server Manager to display directory replication information about an Advanced Server, the following error message might be displayed:

```
 The data is invalid
```

Solution:

This error message indicates that an Advanced Server does not support replication.

7.8.3 A BDC Cannot Be Removed from the Domain If It Has Been Promoted To Be a PDC in Another Domain

Problem:

If you reconfigure a backup domain controller (BDC) from one domain to become a primary domain controller (PDC) of another domain, you cannot remove the computer name from the original domain.

Solution:

Delete the computer name in the original domain database during scheduled downtime of the new PDC.

7.8.4 Cannot Add a Trust to a Windows 2000 Domain by Means of Remote Administration

Problem:

The Windows 2000 server does not allow trusts to be added from a non-Windows 2000 computer. Therefore, you cannot add a trust to a Windows 2000 domain by means of remote administration of that domain (such as after using the ADMINISTER SET ADMINISTRATION command to specify the Windows 2000 domain, or after logging on to the Windows 2000 domain, or using the /DOMAIN qualifier in the ADD TRUST command).

Solution:

To add a trust to a Windows 2000 domain, do the operations required on the Windows 2000 domain directly from a Windows 2000 server in that domain. For the operations required on the Advanced Server domain to establish the trust, you can still use the ADD TRUST command, directly or remotely.

For example, assume users of your Advanced Server domain LANDOFOZ want to access resources in Windows 2000 domain TOPEKA. To set up a trust relationship so that TOPEKA trusts LANDOFOZ domain users:

1. Log on to domain LANDOFOZ and enter the following command to add TOPEKA to the list of domains permitted to trust LANDOFOZ:

   ```
   LANDOFOZ\\TINMAN> ADD TRUST TOPEKA/PERMITTED
   ```

2. Then, use the Windows 2000 facilities to make LANDOFOZ a trusted domain for TOPEKA.

7.8.5 Member Server Role Restrictions

The following restrictions apply to configuring and managing the Advanced Server in the member server role.

7.8.5.1 Restriction Connecting to Member Server Share from External Domain

Problem:

You cannot connect to a member server share from any computer outside the domain, using the same user name and password for both domains.

Solution:

From Windows NT, use the "Connect as..." feature, supplying the user name and domain name.

7.8.5.2 User with "Add Workstations to Domain" Rights Cannot Add Member Server to Domain

Problem:

Any user with administrator privileges can add a BDC, member server, or workstation to a domain. Normally, a user with "Add workstations to domain" rights can add a member server or workstation to a domain (but not a BDC); however, in this release, a user with "Add workstations to domain" rights cannot add an Advanced Server member server to a domain. A message such as the following is displayed when such a user attempts to add an Advanced Server member server to a domain. The PWRK$CONFIG.COM configuration procedure aborts, leaving the user at the OpenVMS DCL prompt.

```
%PWRK-F-MAKEMACH, error creating computer account

PWRK-I-RESTORE, restoring original settings

$
```

Solution:

Make sure the user has administrator privileges.

7.8.5.3 Problems Using Certain Characters for a Member Server Computer Name or Cluster Alias Name

Problem:

When you configure a member server, problems might result if you specify any special ASCII characters in the computer name on a non-clustered server, or in the Advanced Server cluster alias name on a clustered server. The special ASCII characters are those characters other than the following:

A to Z, a to z, 1 to 9, $ (dollar sign), _ (underscore), - (dash)

The - (dash) is considered a special character if it is the first or last character of the name. Note that the following characters should never be used in a computer name, domain name, or cluster alias name, and they will not be allowed by the configuration procedure.

" / \ [ ] : | < > + = ; , ? *

After you configure the server using such names, if you attempt to change these names, the PWRK$CONFIG configuration procedure will fail. The following error will be displayed during the PWRK$CONFIG procedure, where *pdc-name* is the name of the domain's PDC:

```
Confirming domain name with <pdc-name>
Successfully retrieved domain name from <pdc-name> ...

%PWRK-F-MAKEMACH, error creating machine account
```

Solution:

You should avoid using these characters if possible. If you have used these characters and later need to change the name, contact Compaq customer support for detailed instructions to correct the situation.

7.8.5.4 You Must Restore Explicit Host Maps When Changing the Role of a Server to or from a Member Server

Problem:

When you change the role of your server from a BDC to a member server, or vice versa, any explicit host mappings are lost.

Solution:

To prevent the host mappings from being lost, follow these steps prior to making the role change:

1. Display the host mappings, using the ADMINISTER SHOW HOSTMAP command, and record the existing host mappings.

2. Change the server role.

3. Restore the explicit host mappings, using the ADMINISTER ADD HOSTMAP command.

7.8.6 Windows NT Explorer Error on Attempt to Take Ownership of Shared File or Directory

Problem:

Once all permissions are removed from a shared directory, an administrator, using Windows NT Explorer, is not able to take ownership of the directory or of files in the directory. The following message is displayed:

```
Windows NT error 0xc002002e occurred.
```

The problem occurs because the Windows NT client sends a request to the Advanced Server that is not supported. The Advanced Server returns an error code to the client. The Windows NT error reported above occurs because Windows NT misinterprets the server error code response.

For a related problem fixed with Advanced Server V7.3 for OpenVMS, see Section 6.3.3.

Solution:

Use the Advanced Server ADMINISTER TAKE FILE OWNERSHIP command.

7.9 Browser Restrictions

This section describes restrictions related to the Browser service.

7.9.1 Browser State Is Not Distributed on an OpenVMS Cluster

Problem:

Performing an ADMINISTER STOP SERVICE BROWSER command on one node in an OpenVMS cluster should stop browsers on all nodes of a cluster. However, it only stops the browser service on the node where the command was issued.

Solution:

To stop the browser service on a cluster, issue the STOP SERVICE BROWSER command on each node of the cluster.

7.10 Transport Restrictions

This section describes restrictions related to the use of transports with the PATHWORKS Advanced Server.

7.10.1 DEFZA FDDI Controller Is Not Supported with PATHWORKS Advanced Server

Problem:

The DEFZA FDDI controller is not supported with PATHWORKS Advanced Server.

Solution:

Use the newer DEFTA controller, which is supported and provides better performance.

7.10.2 NetBIOS Fails to Start, Dumps Invalid Media Address

Problem:

If an Advanced Server on a DECnet-Plus system does not have a Phase IV address set up for the circuit to be used by the NetBIOS process, the NetBIOS process fails to start. The NetBIOS log file will include the following error:

```
%NB-F-SIGFAIL, Startup - error initializing ethernet controller
-SYSTEM-F-IVADDR, invalid media address
```

Solution:

When the Advanced Server is running on a system that is running DECnet-Plus, a DECnet Phase IV address must be set, and it must be enabled on the routing circuit of the device that the NetBIOS process will use. For example, if the Advanced Server is running on a system with DECnet-Plus and is going to use the FDDI device FWA0:[2], then in the NCL script SYS$STARTUP:NET$ROUTING_STARTUP.NCL, include the following:

```
SET NODE 0 ROUTING PHASEIV ADDRESS = 13.1012
SET NODE 0 ROUTING PHASEIV PREFIX = 49::
SET NODE 0 ROUTING CIRCUIT FDDI-0 ENABLE PHASEIV ADDRESS = TRUE
SET NODE 0 ROUTING CIRCUIT CSMACD-0 ENABLE PHASEIV ADDRESS = FALSE
```

7.10.3 Communication Device Names Must Not Begin with an Underscore

Problem:

The names of devices defined by use of the logical names PWRK$NETBEUI_DEVICE, PWRK$KNBDAEMON_DEVICE, and NETBIOS$DEVICE must not start with an underscore (_); otherwise, the PWRK$KNBDAEMON will not start, and other processes will start, but they will not operate properly.

For more information about defining communications devices, see the *Compaq PATHWORKS for OpenVMS (Advanced Server) Server Installation and Configuration Guide*.

Solution:

When you use any of these logical names to define a network device, do not begin the device name with an underscore.

7.10.4 A 15-Character Alias Name Causes NETLOGON Not to Start

Problem:

When a user specifies a cluster alias name 15 characters in length, NETLOGON does not start. No error message is recorded in the event log. Attempts to start NETLOGON manually with the ADMINISTER START SERVICE NETLOGON command also fail (the service startup times out).

Solution:

Make sure cluster aliases do not exceed 14 characters in length.

7.11 PATHWORKS Advanced Server in an OpenVMS Cluster Restrictions

This section describes restrictions involving PATHWORKS Advanced Server participating in OpenVMS Cluster environments.

7.11.1 Using the Windows NT Server Manager to Promote a Clustered BDC

Problem:

When using the Windows NT Server Manager to promote a backup domain controller (BDC), if you select a cluster member name instead of the cluster alias, the operation will fail with the following error message:

```
Error 2249 occurred, this replicant database is outdated,
synchronization is required.
```

---

[2] By default, the server uses the Ethernet device. To designate that the server use a non-Ethernet device, define a system logical name NETBIOS$DEVICE to point to the device (in this case, to FWA0:).

The cluster's system event log will include several messages similar to the following message:

```
NET3210, Failed to authenticate with "CLUSTER ALIAS
NAME".
```

Solution:

Use the cluster alias rather than the cluster member name when promoting a BDC.

7.11.2 SRVHIDDEN Parameter Causes Browser to Fail to Announce Itself

Problem:

OpenVMS Cluster configurations that are upgraded from PATHWORKS V5 for OpenVMS (LAN Manager) may exhibit the following behavior.

With PATHWORKS V5 for OpenVMS (LAN Manager), it is possible to set server configuration parameters in a way that presents the PATHWORKS cluster alias to the clients, but not the names of the individual nodes in the cluster. The configuration settings can be included in the LANMAN.INI file:

- In the [SERVER] section: **srvhidden=yes**
- In the [VMSSERVER] section: **pwrkaliashidden=no**

These settings do not function the same way with PATHWORKS Advanced Server. The Browser service included with PATHWORKS Advanced Server interprets the **srvhidden** parameter setting and fails to announce the availability of the browser on the network.

Solution:

Compaq recommends making sure that the **srvhidden** parameter is not set to "yes" when you start the PATHWORKS Advanced Server.

7.11.3 Two or More PATHWORKS Advanced Servers in an OpenVMS Cluster Must All Be in the Same Subnet

Problem:

Two or more PATHWORKS Advanced Servers in an OpenVMS Cluster must all be in the same TCP/IP subnet. You cannot have multiple PATHWORKS Advanced Servers in the same cluster participating in different TCP/IP subnets.

7.12 PATHWORKS Advanced Server Interaction with DEC Rdb (Oracle) Restrictions

This section describes restrictions in PATHWORKS Advanced Server interaction with DEC Rdb (Oracle).

7.12.1 PATHWORKS Advanced Server Fails to Start Correctly on Systems Running DEC Rdb

Problem:

PATHWORKS Advanced Server fails to start correctly on systems that are also configured to run DEC Rdb (Relational Database) software, because of the way that Rdb uses the systemwide login command procedure SYLOGIN.COM and the way that PATHWORKS Advanced Server creates processes.

Solution:

To correct this problem:

1. Remove the following line in the system login procedure SYLOGIN.COM:

```
$ @DECRDB$SETVER.COM
```

2. Replace it with the following lines:

```
$ SET NOON
$ @DECRDB$SETVER.COM
$ SET ON
```