

# Compaq Advanced Server V7.3 for OpenVMS

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## Release Notes

**March 2001**

The Compaq *Advanced Server V7.3 for OpenVMS 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.

<b>Revision/Update Information:</b>	This document supersedes the Advanced Server V7.2A for OpenVMS Release Notes.
<b>Operating System:</b>	OpenVMS Alpha Version 7.3, 7.2-1
<b>Software Version:</b>	Advanced Server V7.3 for OpenVMS

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The Compaq Advanced Server for OpenVMS documentation set is available on CD-ROM.

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# Preface

The *Compaq Advanced Server for OpenVMS Release Notes* include information about the distribution kit, software features and usage guidelines, the latest problem fixes, 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 Advanced Server for OpenVMS system administrator. It assumes you have:

- A basic understanding of a PC LAN network
- A basic understanding of managing the Compaq *OpenVMS* operating system
- Access to the Advanced Server for OpenVMS documentation

## Document Structure

This manual contains the following chapters:

- Chapter 1 contains information about the Advanced Server for OpenVMS software kit.
- Chapter 2 describes the main features of the Advanced Server for OpenVMS software.
- Chapter 3 provides guidelines for using the Advanced Server for OpenVMS software.
- Chapter 4 describes the problems corrected in Advanced Server V7.3 for OpenVMS.
- Chapter 5 describes restrictions in the Advanced Server for OpenVMS software.

## Related Documents

The Release Notes supplement the following manuals:

<b>Document</b>	<b>Description</b>
<i>Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide</i>	Explains how to install and configure Advanced Server software.
<i>Compaq Advanced Server for OpenVMS Concepts and Planning Guide</i>	Provides an overview of and introduction to the Advanced Server software and associated networking concepts for system administrators and operators.
<i>Compaq Advanced Server for OpenVMS Server Administrator's Guide</i>	Explains how to manage and customize the Advanced Server software.
<i>Compaq Advanced Server for OpenVMS Commands Reference Manual</i>	Provides command syntax descriptions for all ADMINISTER commands and NET command equivalents.
<i>Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses</i>	Describes the License Server software and how to manage Advanced Server licenses.

The following table lists related OpenVMS documents.

<b>OpenVMS Document</b>	<b>Description</b>
<i>OpenVMS Version 7.3 New Features and Documentation Overview</i>	Describes the new features and related release notes of the OpenVMS Alpha system software.
<i>OpenVMS Alpha Version 7.3 Upgrade and Installation Manual</i>	Describes how to install the OpenVMS Alpha system software.
<i>OpenVMS System Manager's Manual</i>	A task-oriented guide (in two volumes) to managing an OpenVMS system; describes how to set up the required system services
<i>OpenVMS Guide to System Security</i>	Describes OpenVMS security features, including procedures for enabling external authentication.
<i>OpenVMS System Management Utilities Reference Manual</i>	A reference guide (in two volumes) to the utilities and tools used in managing an OpenVMS system.
<i>OpenVMS License Management Utility Manual</i>	Explains how to load and manage license Product Authorization Keys (PAKs)
<i>OpenVMS Guide to Extended File Specifications</i>	Describes Extended File Specifications on OpenVMS, including how to set up and enable the ODS-5 file system.
<i>OpenVMS Connectivity Developer's Guide</i>	Contains COM for OpenVMS, OpenVMS Registry, and OpenVMS Events information.
<i>Compaq C Run-Time Library Utilities Reference Manual</i>	Describes utilities that help you manage localization and time zone data for international software applications.

For additional information about the OpenVMS products and services, access the following OpenVMS 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:

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## How To Order Additional Documentation

Use the following World Wide Web address to order additional documentation:

<http://www.openvms.compaq.com/>

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



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## Distribution Kit

The Advanced Server V7.3 for OpenVMS software kit supports OpenVMS Alpha systems. The kit name is:  
CPQ-AXPVMS-ADVANCEDSERVER-V0703--1.PCSI





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## Features of Advanced Server for OpenVMS

The Advanced Server for OpenVMS (often referred to as the Advanced Server) implements networking functions that are compatible with a Windows NT Server. The Advanced Server for OpenVMS offers easy access to OpenVMS file and printer services from Windows desktops, using native Microsoft products and utilities such as Windows Explorer. The Advanced Server for OpenVMS 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 PATHWORKS for OpenVMS (Advanced Server). Some of the main features provided by the Advanced Server for OpenVMS include:

- LAN Manager V3.0 technology (same as Windows NT V4.0)
- OpenVMS Alpha Version 7.3 (and 7.2-1) support, including support of the following and much more:
  - OpenVMS Registry
  - OpenVMS infrastructure changes for external authentication and the distributed common object module (COM for OpenVMS), as implemented beginning with OpenVMS Version 7.2.
  - Extended File Specifications and ODS-5 (On-Disk Structure 5) disk volumes
- Trusted domains
- Wide Area Domain, Windows Internet Name Service (WINS) integration over TCP/IP
- Full browser functionality
- Windows NT management APIs
- 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
- The comprehensive ADMINISTER command-line interface
- Password synchronization between OpenVMS and Advanced Server systems
- User account lockout
- Support for DECnet and DECnet-Plus, TCP/IP, and NetBEUI

This chapter includes the following information:

Topic	Section Number
New Features Provided by Advanced Server V7.3 for OpenVMS	2.1
Overview of Advanced Server for OpenVMS Features	2.2
Differences Between Advanced Server V7.3 for OpenVMS and PATHWORKS V6.0D for OpenVMS (Advanced Server)	2.3

## 2.1 New Features Provided by Advanced Server V7.3 for OpenVMS

The main new features provided by Advanced Server V7.3 for OpenVMS include the following:

- Support of Windows 2000
- Improved performance of the file server and, in particular, of security account replication, brought about by moving the functionality previously performed by the PWRK\$LMMDN process into the PWRK\$LMSRV process. The PWRK\$LMMDN process no longer exists.
- Improved performance for access of ODS-5 sequential and VFC files.
- Improved handling of security information on files and directories
- Enhanced interoperation between the Advanced Server and Windows NT
- Support for management of Advanced Server printers from Windows NT
- 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
- Support of 8-bit extended character sets, including the Euro currency symbol.
- Dynamic cluster load balancing for the Advanced Server in wide area network (WAN) environments
- DNS support for resolving NetBIOS names
- Member server support, which allows the Advanced Server to participate in Windows 2000 native-mode (pure) domains
- Support for use of the POLYCENTER Software Installation (PCSI) utility

### 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 2.1.11, 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 Advanced Server for OpenVMS Server Administrator's Guide*. For problems related to Windows 2000 support that were corrected with Advanced Server V7.3 for OpenVMS, see Section 4.4, Windows 2000 Related Problems. For related restrictions, see Section 5.5, Windows 2000 Related Restrictions.

### **2.1.2 Domain Database Replication and Network Logon Performance Improvement**

The Advanced Server for OpenVMS 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\$LMMDN 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 responsibility for network logon validation and SAM database replication from the PWRK\$LMMDN process to the PWRK\$LMSRV process streamlines the operations by eliminating the interprocess communication that was required between the PWRK\$LMMDN process and the PWRK\$LMSRV process. The PWRK\$LMMDN process no longer exists, as noted in Section 3.12, PWRK\$LMMDN Process and Startup File Replaced.

### **2.1.3 Improved Performance for Access of Sequential and VFC Files**

With previous versions of the Advanced Server, when a file on an ODS-2 or ODS-5 volume was opened for the first time, the server had to read the entire file to determine the correct file size. On ODS-5 volumes, the Advanced Server now uses file-size calculations maintained by RMS for RMS sequential and VFC (variable length with fixed-length control) files. This reduces the number of I/Os and the file-open time when the Advanced Server opens a file for the first time.

This benefits especially those sites where OpenVMS RMS application files (sequential or VFC) are provided for Advanced Server users at regular intervals, such as overnight to make the files accessible to PCs the next day. Compaq recommends that such sites store the RMS files on ODS-5 volumes and disable high-water marking to optimize I/O throughput. (High-water marking is a security feature set by default when a volume is initialized to guarantee that users cannot read data they have not written.)

### **2.1.4 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 Advanced Server V7.3 for OpenVMS, 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 Advanced Server V7.3 for OpenVMS compensates for the OpenVMS inconsistencies and handles security information more efficiently and in conformance with the behavior of Windows NT.

The Advanced Server V7.3 for OpenVMS also provides 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 for OpenVMS introduces a new OpenVMS Registry parameter value, **STORE\_SECURITY\_ACES**, to limit the security information that is 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 the file server's handling of file security information, the PWRK\$FIXACE utility, and the STORE\_SECURITY\_ACES parameter, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*. For information about the relevant ACE problems fixed in Advanced Server V7.3 for OpenVMS, see Section 4.2.1, Files Inherit Wrong or Inappropriate ACEs, and Section 4.2.2, Cannot Create File on Disk Because of Insufficient Space for Index Header Blocks.

### 2.1.5 Enhanced Interoperation Between the 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 an Advanced Server for OpenVMS prior to V7.3, 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 Advanced Server for OpenVMS prior to V7.3, 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 V7.3 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.

Advanced Server V7.3 for OpenVMS has made adjustments to interoperate better in environments that include Windows NT. The 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 Advanced Server will accept the node status response, ignoring the 18 extra bytes.

### 2.1.6 Support for Management of Advanced Server Printers from Windows NT

Previous to V7.3 of the Advanced Server for OpenVMS, print queues and print shares could only be managed locally by using the ADMINISTER command-line interface. Print queues and shared printers could not be managed remotely from Windows NT, with the exception of limited actions on print jobs, such as pausing and deleting them.

The Advanced Server V7.3 for OpenVMS can now allow administrators, print operators, and server operators on a Windows NT Server or workstation to add and manage printers defined on the Advanced Server. These Windows NT users can manage and conceptualize printers in Windows NT-familiar terms — they manage printers, print queues, printer ports, and the associated parameters defined in each printer’s OpenVMS Registry entry.

You must reconfigure the server to change the default so that Advanced Server printers can be managed from Windows NT. By default, print queues and print shares on the Advanced Server are managed locally by use of the ADMINISTER command-line interface. The PWRK\$CONFIG configuration facility gives the following new configuration option:

10. Enable NT style printing:

---

**Note**

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Depending on the processor upon which your Advanced Server runs, the number of printers served might affect performance of printer management actions. For example, if your server runs on a relatively small processor and serves a hundred or more printers, actions that require enumerating the printers could take a long time. (Note that for some actions, printer enumeration is not obvious.) Windows NT fails to display an hourglass, causing the printer action to appear hung. Before enabling Windows NT printer management, contact Compaq customer support for more information.

Once you enable Windows NT printing, Compaq recommends that you do not attempt to reconfigure the server to return to the server’s local management style (the ADMINISTER command interface). If you do, the printers will be unusable. You will have to perform several, time-consuming tasks to make printers functional again. For more information, contact Compaq customer support.

---

The remote management of printers defined on the Advanced Server, referred to as the Advanced Server's Windows NT-compatible printers, includes the following features:

- Simple management of Advanced Server shared printers by using the Windows NT print services dialog boxes.
- When adding a printer to the Advanced Server, the Windows NT Add Printer Wizard installs the required drivers for the printer on the server; these drivers are provided by the administrator (such as from the Windows NT installation CD-ROM). When a client is set up to use the printer, these drivers are available for downloading. Administrators can store the latest drivers for the printers on the Advanced Server. When new drivers are distributed, administrators have to update a single location only. When client users set up printers to use from their workstations, they are able to download the appropriate printer driver automatically.
- Use of Windows NT access permissions for Advanced Server shared printers.

For more information on configuring Windows NT management support for Advanced Server printers, refer to the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*. For more information on managing Advanced Server printers from Windows NT, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

### 2.1.7 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 Advanced Server V7.3 for OpenVMS 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.

An alias file name is also created for any file whose real name contains any extended character set characters with code point values of 128 through 255 (hexadecimal 80 through FF). This is done even when the real filename is MS-DOS-compatible (has the 8.3 format and all the characters are valid in MS-DOS file names). The Advanced Server V7.3 for OpenVMS 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, or if any extended character set character in the real name does not map to the client code page. Otherwise, the Advanced Server returns the file's real name to the MS-DOS client. For more information on support of extended character sets, see Section 2.1.8, Support of Extended Character Sets and the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*. For more information on support of alias file names, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

### 2.1.8 Support of Extended Character Sets

Previous to V7.3 of the Advanced Server for OpenVMS, the only character set other than ASCII supported by the file server on OpenVMS systems was the 8-bit ISO Latin-1 character set (ISO-8859-1).

A client computer that supports Unicode, or which is configured to use a code page that is not related to a Western European language, can create files with characters in the file name that are not part of the ISO Latin-1 character set. However, any Advanced Server for OpenVMS previous to V7.3 could not store files using these file names.

The latest version of the Advanced Server for OpenVMS can now support certain Unicode characters or extended character sets that are foreign to the Western European languages. The characters that the Advanced Server for OpenVMS can support at any time depend on the language configured for the server. Each language is associated with one of the ISO-8859 character sets supported by the Advanced Server. Each ISO-8859 character set supports one or more languages.

You can configure any one of over 40 languages. Most of the Western European languages provide support for the Euro currency symbol.

For an up-to-date list of languages that are officially supported by the Advanced Server, refer to the Software Product Description (SPD).

The languages and their associated ISO-8859 character sets are a subset of the Unicode (UCS-2) character sets supported on OpenVMS ODS-5 disk structures. You configure the Advanced Server to support one, and only one, language at a time.

Support of the extended character set characters makes available a broader set of characters for objects manageable by the Advanced Server, including file names, user names, group names, and file and print share names. Each character set also applies to text strings (such as descriptions) that users can specify when managing any of these objects. Windows NT-compatible Advanced Server printer description and location fields support all Unicode characters. These characters are not supported in computer names, alias names, domain names, and trusted domain names.

For restrictions related to support of Unicode and extended character sets, see Section 5.3.11, Server Language Restrictions. For more information on Unicode and extended character sets, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

The latest version of the Advanced Server for OpenVMS now provides two new ADMINISTER commands: the SET MODE command, which allows you to determine how extended character set characters with values of hexadecimal 80 (128) or higher are handled for input and output, and the SHOW MODE command, which displays the current input and output modes in effect.

For more information, refer to the *Compaq Advanced Server for OpenVMS Commands Reference Manual* or invoke the ADMINISTER online Help.

### **2.1.9 Dynamic Cluster Load Balancing for the Advanced Server in WANs**

Previous to this release, 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.

With the new release of the Advanced Server, dynamic cluster load balancing is now 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).

For information about enabling dynamic load balancing in WANs, see Section 3.8, *Setting Up Dynamic Cluster Load Balancing in WANs*.

### **2.1.10 DNS Support for Resolving NetBIOS Names**

Previous to this release, the Advanced Server for OpenVMS used WINS, broadcast name query, and LMHOSTS for name resolution, but not DNS. With this release, the Advanced Server for OpenVMS 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 Advanced Server for OpenVMS 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.

### **2.1.11 Member Server Support**

The Advanced Server V7.3 for OpenVMS gives you the option of configuring the server as a member server instead of a primary domain controller (PDC) or backup domain controller (BDC). Configuring the Advanced Server for OpenVMS as a member server allows the Advanced Server for OpenVMS to 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 for OpenVMS as a member server. You cannot use the ADMINISTER SET COMPUTER/ROLE command to change an Advanced Server for OpenVMS 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 Advanced Server for OpenVMS Server Administrator's Guide*. For information on restrictions relating to the member server role, see Section 5.9.4, *Member Server Role Restrictions*.

### **2.1.12 Support for Use of the POLYCENTER Software Installation Utility**

With this release, you use the POLYCENTER Software Installation (PCSI) utility to install the Advanced Server for OpenVMS.

The PCSI utility allows you to install several software products (including the Advanced Server for OpenVMS) with a single command. It also allows you to remove products from the OpenVMS system.



Furthermore, with the implementation of PCSI, the Advanced Server installation procedure has been enhanced in several ways:

- If a reboot is necessary, PCSI gives you the option of delaying it indefinitely, such as when you need to configure or change more settings before rebooting.
- Installations on multiple system disks have better support.
- Scripts and messages have been improved and include better support for installations on clusters.

## 2.2 Overview of Advanced Server for OpenVMS Features

This section describes some of the main features provided by the Advanced Server for OpenVMS.

### 2.2.1 Windows NT Domain Services

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

Advanced Server for OpenVMS can participate in the domain as a Master Browser or Backup Browser.

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

- Windows NT Server
- Advanced Server for OpenVMS
- PATHWORKS for OpenVMS (Advanced Server)
- Clients running Windows NT and Windows 2000 server administration tools.

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

### 2.2.2 File and Print Services

Advanced Server for OpenVMS supports the Windows NT-compatible Server Message Block (SMB) file and print protocols.

### 2.2.3 Client Support

Advanced Server for OpenVMS supports connections from the following types of clients:

- Windows NT
- Windows 95, Windows 98, and Windows 2000
- Windows for Workgroups
- PATHWORKS 32

## 2.2.4 Extended File Specifications Support

OpenVMS V7.2-1 features support Extended File Specifications, providing the following capabilities to OpenVMS Alpha systems, and helping ensure Advanced Server compatibility with a wide variety of clients and legacy applications attempting to share server resources. The benefit to the Advanced Server client computers depends on the type of client, as noted below.

- Deep directories, similar to Microsoft Windows NT. Previous versions of OpenVMS support a maximum of eight directory levels.

Deep directories allow network clients to use hierarchical storage of directories and files on the OpenVMS disk similar to the client-based disk. They are also of benefit to applications developers who are porting applications from other environments that have support for deep directories.

- Extended file names (using ODS-5). Support of extended file names is an optional feature originally provided with the OpenVMS V7.2 operating system that extends OpenVMS file name capabilities to more closely match those of contemporary Windows computers. With this functionality, OpenVMS Alpha systems support long file names (up to 243 characters including the version number), and add ISO Latin-1 characters to the supported character set.

For more information, refer to the *OpenVMS Guide to Extended File Specifications*.

## 2.2.5 Transport Support

Advanced Server for OpenVMS supports the three transports listed below, in the order listed:

1. TCP/IP
2. NetBEUI
3. DECnet-Plus (or DECnet Phase IV)

### 2.2.5.1 TCP/IP Support

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

- Compaq TCP/IP Services for OpenVMS, V5.0 or higher. (The latest supported version is recommended. For the latest supported version, refer to the Advanced Server for OpenVMS Software Product Description (SPD).)
- MultiNet for OpenVMS, from Process Software LLC
- TCPWARE for OpenVMS, from Process Software LLC

For information about using TCP/IP products with Advanced Server for OpenVMS, see Section 3.6, Using TCP/IP Products with the Advanced Server.

#### 2.2.5.1.1 WINS Support for Resolving NetBIOS Names in a Wide Area Network

The Advanced Server can act as a Windows Internet Name Service (WINS) client, allowing the 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 the Advanced Server, refer to the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide* and the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

### 2.2.5.1.2 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 Advanced Server for OpenVMS Server Installation and Configuration Guide* and the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

### 2.2.5.2 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).

### 2.2.5.3 DECnet Support

Advanced Server for OpenVMS supports DECnet and DECnet-Plus as supported by the OpenVMS operating system V7.2-1 and higher.

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#### Note

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

- The Advanced Server system
  - The client that wants to use the mail server
- 

## 2.2.6 PostScript Printing Support

The Advanced Server for OpenVMS supports all PostScript printers supported by OpenVMS. Selected PostScript printers may optionally need the DECprint Supervisor for OpenVMS (DCPS) software to provide access through the OpenVMS queuing system over DECnet or TCP/IP. For information about installing the DCPS software, refer to the appropriate documentation.

## 2.2.7 Management Interfaces

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

### 2.2.7.1 ADMINISTER Command-Line Interface

Advanced Server for OpenVMS includes the Advanced Server for OpenVMS command-line interface (ADMINISTER commands).

ADMINISTER commands can be used to remotely manage Windows NT Server, PATHWORKS for OpenVMS (Advanced Server), and Advanced Server for OpenVMS servers. For more information about how to use the 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 useful for new users, enter the following command:

```
$ 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
```

### 2.2.7.2 Windows NT Server Administration Tools

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

The Advanced Server for OpenVMS 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

These tools are available in the PWUTIL share after you install, configure, and start the Advanced Server for OpenVMS.

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

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#### Note

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Windows 2000 file and print server-related tools, which are available as part of the Windows 2000 server.

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### 2.2.7.3 Windows 2000 File and Print Server Tools

The Advanced Server can be managed from a Windows 2000 server using tools related to file and print servers, available as part of the Windows 2000 server.

### 2.2.8 Advanced Server for OpenVMS Licensing

The Advanced Server for OpenVMS follows the PATHWORKS V6 for OpenVMS simplified license management model. Both the License Server and License Registrar are provided with the Advanced Server for OpenVMS software, and a License Manager utility is also provided for managing Advanced Server licenses.

The License Server included with the Advanced Server for OpenVMS will not issue or manage PATHWORKS for OpenVMS (NetWare) licenses. If you have clients using NetWare networking software, maintain the existing version of the License Server on a different system from the one that is running Advanced Server for OpenVMS.

Advanced Server for OpenVMS requires all clients to be appropriately licensed to access resources on the server. See Section 3.10.1, License Enforcement, for more information about setting up licensing.

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

### 2.2.9 External Authentication Support

The OpenVMS operating system includes 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.

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

For more information about implementing external authentication, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*. For information on installing the external authentication images, refer to the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*.

## 2.3 Differences Between Advanced Server V7.3 for OpenVMS and PATHWORKS V6.0D for OpenVMS (Advanced Server)

Table 2-1 summarizes the differences between the Advanced Server V7.3 for OpenVMS and PATHWORKS V6.0D for OpenVMS (Advanced Server) products.

**Table 2–1 Differences Between PATHWORKS V6.0D for OpenVMS (Advanced Server) and Advanced Server V7.3 for OpenVMS**

<b>Feature</b>	<b>PATHWORKS V6.0D for OpenVMS (Advanced Server) Support</b>	<b>Advanced Server V7.3 for OpenVMS Support</b>
OpenVMS version:	Alpha Versions 7.3, 7.2-1, and 6.2 VAX Versions 7.3, 7.2, and 6.2	Alpha Versions 7.3 and 7.2-1
System type:	VAX and Alpha	Alpha only
TCP/IP for OpenVMS version:	<ul style="list-style-type: none"> <li>• Versions 5.0A or higher on OpenVMS Versions 7.3 and 7.2-1</li> <li>• Versions 4.2 and 4.1 on OpenVMS Version 6.2</li> </ul>	Version 5.0A or higher on OpenVMS Versions 7.3 and V7.2-1
License required:	One of the following: <ul style="list-style-type: none"> <li>• PWLMXXXCA06.00</li> <li>• PWLMXXXCA07.02</li> <li>• PWLMXXXCA07.03</li> </ul>	PWLMXXXCA07.03
Installation options:	<ul style="list-style-type: none"> <li>• PATHWORKS Advanced Server</li> <li>• Standalone License Server</li> <li>• Upgrade utility only</li> <li>• External authentication images only (except on OpenVMS V6.2)</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Server for OpenVMS</li> <li>• Standalone License Server</li> <li>• Standalone external authentication images</li> <li>• Both standalone License Server and standalone external authentication</li> </ul>
Server configuration parameters repository:	LANMAN.INI file	OpenVMS Registry
XQP+	Must be enabled	Enabled automatically on OpenVMS Version 7.2-1 and higher

(continued on next page)

**Table 2–1 (Cont.) Differences Between PATHWORKS V6.0D for OpenVMS (Advanced Server) and Advanced Server V7.3 for OpenVMS**

<b>Feature</b>	<b>PATHWORKS V6.0D for OpenVMS (Advanced Server) Support</b>	<b>Advanced Server V7.3 for OpenVMS Support</b>
Member server	Not supported	Supported
File systems:		
	<ul style="list-style-type: none"> <li>• ODS-2 (On-Disk Structure 2)</li> <li>• ODS-5 (as an ODS-2 disk volume)</li> </ul>	<ul style="list-style-type: none"> <li>• ODS-2</li> <li>• ODS-5 (with Extended File Specifications support)</li> </ul>
Extended character support for file names:	Limited support for ISO Latin-1 character set only	Support for all characters in the ISO-8859-x character sets associated with the languages that are fully supported by the server, as documented in the SPD
Unicode characters or extended character sets foreign to the Western European languages	Not supported	Supported (Unicode characters supported are those contained by the supported extended character sets)
Windows NT Printer Management	Not supported, except minor tasks such as management of print jobs	Supported
DNS Name Resolution	Not supported	Supported
Software Installation utility	VMSINSTAL	POLYCENTER Software Installation utility
Alias file names	Not supported	Supported





## Guidelines for Using the Advanced Server for OpenVMS Software

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

### 3.1 Disk Space Requirements

The installation software calculates the system disk space required for installation.

Table 3-1 lists the approximate 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 . . .
Complete Advanced Server	150,000
Standalone License Server	30,000
Standalone external authentication images	5,000
Standalone License Server and external authentication images	35,000

Note that if the available space is barely enough to install the kit, you might see messages similar to these during the installation:

```
%PCSI-E-WRITEERR, error writing
DISK$AXP072:[VMS$COMMON.][SYSEXE]DEC-AXPVMS-VMS-
V0702-1.PCSI$DATABASE;1
-RMS-F-FUL, device full (insufficient space for allocation)
%PCSI-E-CLOSEOUT, error closing
DISK$AXP072:[VMS$COMMON.][SYSEXE]DEC-AXPVMS-VMS-
V0702-1.PCSI$DATABASE;1 as output
-RMS-F-FUL, device full (insufficient space for allocation)
%PCSI-E-S_OPFAIL, operation failed
%PCSIUI-E-ABORT, operation terminated due to an unrecoverable error
condition
```

The software installation procedure (PCSI) has completed its task of installing the product, but does not have space to record its success. Compaq recommends that you make additional space available and install the product again.

## 3.2 Server Installation

Advanced Server for OpenVMS provides a single installation procedure, using the POLYCENTER Software Installation (PCSI) utility, that allows you to choose one of the following installations:

- The complete Advanced Server for OpenVMS software (includes the License Server and external authentication images)
- Standalone License Server only
- Standalone external authentication images only
- Both the standalone License Server and the external authentication images

### 3.2.1 Installation Requirements and Restrictions

The Advanced Server for OpenVMS requires an OpenVMS Alpha operating system, Version 7.2-1 or higher.

Consider the following restrictions related to server installation:

- You cannot install the Advanced Server for OpenVMS software on a VAX system.
- You cannot run the PATHWORKS for OpenVMS (Advanced Server) on cluster members of the same cluster that is running the Advanced Server for OpenVMS. All cluster members must run the same version of the file server.
- The OpenVMS Registry does not support mixed-OpenVMS-version clusters. Therefore, all cluster members upon which the Advanced Server for OpenVMS or the OpenVMS Registry Server runs must run the same version of OpenVMS Alpha, either Version 7.3 or 7.2-1. If you are currently running the Advanced Server for OpenVMS in a cluster, and you want to upgrade to OpenVMS Version 7.3, you must upgrade all the cluster members that will run the Advanced Server or the OpenVMS Registry Server to OpenVMS Version 7.3 at the same time. Compaq realizes that this might be inconvenient to some customers and is addressing the issue. Contact your Compaq Support Center for current status.
- You cannot run the PATHWORKS for OpenVMS (NetWare) server on the same system or cluster as the Advanced Server for OpenVMS. You must uninstall the NetWare server before installing the Advanced Server for OpenVMS.
- In general, before starting the Advanced Server in a cluster, all the nodes of the cluster have to be rebooted.

Refer to the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide* for more information.

## 3.3 Configuring the Advanced Server

The Advanced Server provides several 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.
- The PWRK\$REGUTL utility for managing parameters stored in the OpenVMS Registry that affect the behavior of the Advanced Server.

### 3.3.1 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, or member server)
  - Computer name
  - Server cluster alias
  - Server announcement string
  - Server language
  - Printer management mode (locally, using the ADMINISTER interface, or remotely, using Windows NT print services)

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 Advanced Server for OpenVMS software, refer to the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*. For restrictions regarding member servers joining a domain, see Section 5.9.4, Member Server Role Restrictions.

### 3.3.2 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 OpenVMS Registry.

Use the following command to start the Configuration Manager:

```
$ ADMINISTER/CONFIGURATION
```

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

### 3.3.3 Modifying Server Parameters Stored in the OpenVMS Registry

The Advanced Server for OpenVMS software relies on the OpenVMS Registry to store and reference server parameters. The OpenVMS Registry is similar to the Windows NT Registry.

To manage server-specific configuration parameters that are stored in the OpenVMS Registry, you can use the PWRK\$REGUTL utility. These parameters 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.

The PWRK\$REGUTL utility is available to use after you install the Advanced Server software. The program is found at:

```
SYS$SYSTEM:PWRK$REGUTL.EXE
```

If your process has included the Advanced Server command definitions in the PWRK\$DEFINE\_COMMANDS.COM file, or if you have defined the REGUTL command, you can start the PWRK\$REGUTL utility by entering the REGUTL command. To define the REGUTL command and start the utility, enter the following commands at the OpenVMS command prompt:

```
$ REGUTL ::= $SYS$SYSTEM:PWRK$REGUTL.EXE
$ REGUTL
REGUTL>
```

As shown, the PWRK\$REGUTL utility responds by displaying the REGUTL> prompt.

To use PWRK\$REGUTL to access the OpenVMS Registry, your process must have one of the following:

- OpenVMS SYSPRV system privileges
- REG\$UPDATE right identifier associated with the user account

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#### Note

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You can use the OpenVMS REG\$SCP utility as well as PWRK\$REGUTL to manage parameters in the OpenVMS Registry. However, Compaq recommends that you use PWRK\$REGUTL to manage server configuration parameters, because it has built-in knowledge of keys and values used by the Advanced Server, including the attributes of the data, such as minimum, maximum, and default values.

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For more information on the OpenVMS Registry and how to manage server parameters, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*. For information on starting the OpenVMS Registry, refer to the *Compaq Advanced Server for OpenVMS Server Installation and*

*Configuration Guide*. For more information on setting up and managing the OpenVMS Registry, refer to the *OpenVMS System Manager's Manual* or the *OpenVMS Connectivity Developer's Guide* (included in the OpenVMS Documentation CD-ROM).

### 3.3.3.1 LANMAN.INI Parameters Are Migrated to the OpenVMS Registry When Upgrading from PATHWORKS for OpenVMS

If you are upgrading a system from a previous PATHWORKS for OpenVMS product to Advanced Server for OpenVMS, the parameters and settings in the existing LANMAN.INI file are migrated to the OpenVMS Registry when you run the PWRK\$CONFIG.COM configuration procedure after installation. In specific, the PWRK\$CONFIG.COM procedure invokes the SYSSUPDATE:PWRK\$MIGRATE\_INI.COM file to perform a "one time" setup of the registry and migration of the parameters. After the migration is complete, the LANMAN.INI file is retained but not used. A parameter is set in the OpenVMS Registry indicating that the server parameters have been migrated. As long as this parameter exists and has a non-NULL value, subsequent invocations of the PWRK\$MIGRATE\_INI.COM file will skip over the migration process.

You can view this parameter in the registry using the following commands:

```
$ REGUTL ::= $SYS$SYSTEM:PWRK$REGUTL
$ REGUTL SHOW VALUE * LanmanIniMigrated
```

### 3.3.3.2 Values of Parameters as Set in the OpenVMS Registry at Startup

The Advanced Server startup procedure records a list of all Advanced Server parameters that are set in the OpenVMS Registry. You can use this list as a reference if you should ever need the latest parameter values. The list is stored in the following location, where *nodename* is the name of your server node:

```
PWRK$PARAMS:PWRK$REGISTRY_PARAMS_ nodename .LIS
```

## 3.4 Synchronizing Advanced Server Configuration Parameters

The Advanced Server requires that the following server configuration parameters, which are stored in the OpenVMS Registry, always match the corresponding information in the Advanced Server Security Account Manager (SAM) database:

- **DomainName**
- **ComputerName\_ nodename**
- **AliasName** (applies to OpenVMS Clusters only)

These parameters are initially defined when you run the PWRK\$CONFIG configuration procedure, as described in the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*. The configuration procedure stores the information that you provide, both in the OpenVMS Registry and in the SAM database.

If the information stored in these two locations becomes inconsistent, the Advanced Server will not operate properly, and the following problems can occur:

- If the **ComputerName\_ nodename** or **AliasName** parameter do not match the corresponding information in the SAM database, the server might start but will encounter problems communicating with other computers (clients and servers) in the network.

- If the **DomainName** value in the OpenVMS Registry has data that does not match the domain name in the SAM database, neither the configuration procedure nor the startup procedure will complete:

- If the configuration procedure (PWRK\$CONFIG.COM) determines that the **DomainName** parameter does not match the domain name in the SAM database, it displays the following messages and terminates:

```
$ @SYS$UPDATE:PWRK$CONFIG.COM
Advanced Server V7.3 for OpenVMS Configuration Procedure
.
.
.
Enter disk device name where the Advanced Server data files will be
stored [PWRK$]:
Checking to see if OpenVMS Registry Services are available...
Verifying SAM database files...
The SAM database is too corrupt to check or repair.

%PWRK-F-SAMCHECK Error initializing Sam database files
```

- If the startup procedure (PWRK\$STARTUP.COM) determines that the **DomainName** parameter does not match the domain name in the SAM database, it displays the following messages and terminates:

```
$ @SYS$STARTUP:PWRK$STARTUP.COM
The file server will use DECnet, NetBEUI, TCP/IP.
Advanced Server mail notification will use DECnet.
Process NETBIOS created with identification 00000143
Process PWRK$NBDAEMON created with identification 00000145
Process PWRK$KNBDAEMON created with identification 00000147
Process PWRK$LICENSE_R created with identification 00000149
Checking to see if OpenVMS Registry Services are available...
%PWRK-F-INCOMPLETE, Advanced Server for OpenVMS has not been
completely configured
-PWRK-I-CONFIG, please execute @SYS$UPDATE:PWRK$CONFIG.COM
```

To solve these problems, you must modify the data settings for the mismatched parameters in the OpenVMS Registry to match the corresponding information in the SAM database.

### 3.4.1 Restoring Registry Parameters

Server configuration information in the OpenVMS Registry can be inadvertently changed or deleted. It is also possible for registry information to be unavailable to the Advanced Server. If the required parameters listed above are not available or do not match the information in the SAM database, you must restore the parameters to the OpenVMS Registry. To accomplish this:

1. Make sure registry services are available to the Advanced Server. The configuration procedure (PWRK\$CONFIG.COM) and the startup procedure (PWRK\$STARTUP.COM) attempt to start the OpenVMS Registry Server.

The OpenVMS Registry control program (REG\$CP.EXE) allows you to access information in the OpenVMS Registry. Use the LIST command to display information in the registry database. If registry information is displayed, the registry services are available. For information about setting up and enabling registry services, refer to the *OpenVMS System Manager's Manual* or the *OpenVMS Connectivity Developer's Guide* (included in the OpenVMS Documentation CD-ROM).

Note that Compaq recommends that you use PWRK\$REGUTL to manage server configuration parameters, because it has built-in knowledge of keys and values used by the Advanced Server, including the attributes of the data, such as minimum, maximum, and default values.

2. Restore the server configuration information in the OpenVMS Registry, using the server configuration parameter management utility PWRK\$REGUTL.EXE. PWRK\$REGUTL allows you to display and modify server configuration parameters in the OpenVMS Registry. It controls parameter modification, ensuring that parameter names are entered properly and that specified values are within valid ranges. For information about using the PWRK\$REGUTL utility, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

For example, to restore the **DomainName** parameter in the OpenVMS Registry, use the PWRK\$REGUTL utility as shown in the following example. Be sure to enter the domain name exactly as it was initially specified the last time the configuration procedure (PWRK\$CONFIG.COM) was run.

```
$ REGUTL ::= $SYS$SYSTEM:PWRK$REGUTL.EXE
$ REGUTL
REGUTL> SET VALUE * DomainName domain-name /CREATE/FORCE
```

Set the values of the required parameters (**DomainName**, **ComputerName\_nodename**, and **AliasName** (for OpenVMS Clusters), entering the names exactly as they were specified when the Advanced Server was last configured. The values at startup of all Advanced Server parameters in the OpenVMS Registry are listed in the following file, where *nodename* is the name of your server node:

```
PWRK$PARAMS:PWRK$REGISTRY_PARAMS_nodename.LIS
```

Once you have set the values of the required parameters, run the PWRK\$CONFIG.COM configuration procedure to restore the remaining server configuration parameters. If the configuration procedure fails to complete successfully after this procedure, call your Compaq support specialist for assistance.

### 3.5 Automatic Shutdown During Server Startup

If the PWRK\$STARTUP.COM procedure, or the associated PWSTART command defined in the command definition file SYSSSTARTUP:PWRK\$DEFINE\_COMMANDS.COM, is invoked without parameters specified, the procedure does not automatically shut down the server. 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
```

PWRK\$STARTUP.COM has been revised to accept a P1 parameter of RESTART, which shuts down a server before restarting. The PWRK\$DEFINE\_COMMANDS.COM file contains a command, PWRESTART, that invokes PWRK\$STARTUP.COM with RESTART as the P1 parameter.

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 Using TCP/IP Products with the Advanced Server

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

- Compaq TCP/IP Services for OpenVMS, V5.0A or later (required for dynamic cluster load balancing in WANs)
- MultiNet for OpenVMS, from Process Software LLC
- TCPWARE for OpenVMS, from Process Software LLC

To use Advanced Server for OpenVMS with TCP/IP, see the basic instructions in the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*.

### 3.7 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).

### 3.8 Setting Up Dynamic Cluster Load Balancing in WANs

The following section describes how to set up dynamic cluster load balancing when Compaq's TCP/IP Services for OpenVMS, V5.0A or later, is in use. For setting up this feature when the Multinet for OpenVMS or TCPWare for OpenVMS products are in use, refer to the appropriate product documentation.

To set up dynamic cluster load balancing in WANs, observe the following:

- Neither LMHOSTS nor WINS can provide dynamic load balancing with cluster-alias name resolution. For this feature, you must enable DNS for NetBIOS name resolution. The Advanced Server clients will then be able to use DNS for resolving the cluster alias. To correctly resolve the Advanced Server cluster alias and gain the benefits of cluster load balancing, all clients and servers should enable NetBIOS name resolution using DNS.



- If you are currently using WINS or LMHOSTS to resolve NetBIOS names, you must remove any static entries for the cluster alias in the LMHOSTS file and the local hosts file on clients and servers and any static entries in the WINS database on WINS servers that might be used by clients, or else the DNS load balancing feature will not work. WINS should still be the primary resource for resolving names.
- You must configure the TCP/IP Services for OpenVMS load broker. When configuring the load broker, the following load broker parameters are important regarding load balancing:

- **max-members**

The **max-members** parameter specifies the maximum number of IP addresses to be returned to the DNS name server in each dynamic update. Be sure to set this parameter to a value that is anywhere from one-third to one-half of the number of cluster members running the Advanced Server. The load broker will then send the DNS server a list of that number of servers on the cluster that have the least loads of all the server cluster members. The DNS server uses the list to answer clients' queries in round-robin fashion. Do NOT set the parameter to the actual number of cluster members running the Advanced Server; otherwise, the load broker will send the DNS server a list of all the server cluster members — even the most heavily loaded members — and load balancing will not be accomplished.

- **polling-interval**

The **polling-interval** parameter specifies the time interval between polls to the cluster members. The default is 30 seconds.

- **dns-refresh**

The **dns-refresh** parameter specifies how often the DNS information for a given DNS cluster name is refreshed. The default is 30 seconds. If you want to quickly pick up changes in the system load (reported by metric servers), set **dns-refresh** to a smaller number. This parameter should be set in conjunction with the **polling-interval** parameter — when you change one, you should most likely change the other. Though both parameters default to the same value, the value of the **dns-refresh** parameter should be greater than or equal to that of the **polling-interval** parameter. It is unproductive to refresh more often than you poll. Again, for more details, refer to the *TCP/IP Services for OpenVMS Management* guide.

For information on configuring the load broker, refer to the *TCP/IP Services for OpenVMS Management* guide.

The *Compaq Advanced Server for OpenVMS Server Administrator's Guide* lists the basic steps to follow for enabling dynamic cluster load balancing in WANs. Note that the *Compaq Advanced Server for OpenVMS Server Administrator's Guide* erroneously states that the cluster alias name should be registered at the authoritative DNS (BIND) name server for the cluster. You should make sure it is not registered at the DNS server. The cluster name is associated with the IP addresses of all cluster members that are running the Advanced Server. If the addresses of the cluster members are added to the DNS database, round-robin load balancing will be in effect instead of dynamic load balancing.

The *Compaq Advanced Server for OpenVMS Server Administrator's Guide* also recommends that you remove all entries for the cluster alias from the LMHOSTS file of all clients and servers. It fails to mention that you should also remove all entries for the cluster alias from the local hosts file.

## 3.9 The Advanced Server in an OpenVMS Cluster

The documentation now includes enhanced and expanded information on installing and managing the Advanced Server in an OpenVMS Cluster, and on licensing considerations in cluster environments. The following list summarizes some of the most important considerations for servers in an OpenVMS Cluster. Refer to the appropriate documentation for more information.

### 3.9.1 Installation and Configuration Considerations

- Advanced 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), a backup domain controller (BDC), or a member server. 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.
- 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.
- The OpenVMS Registry does not support mixed-OpenVMS-version clusters. Therefore, all cluster members upon which the Advanced Server for OpenVMS or the OpenVMS Registry Server runs must run the same version of OpenVMS Alpha, either Version 7.3 or 7.2-1. If you are currently running the Advanced Server for OpenVMS in a cluster, and you want to upgrade to OpenVMS Version 7.3, you must upgrade all the cluster members that will run the Advanced Server or the OpenVMS Registry Server to OpenVMS Version 7.3 at the same time. Compaq realizes that this might be inconvenient to some customers and is addressing the issue. Contact your Compaq Support Center for current status.
- 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.
- In general, before starting the new Advanced Server in a cluster for the first time, reboot all the server cluster members upon which a previous version of the Advanced Server (Advanced Server for OpenVMS or PATHWORKS for OpenVMS) had been running.
- 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)
  - Rightlist file (RIGHTSLIST.DAT)
  - Advanced Server data directory location (PWRK\$COMMONROOT:)
  - OpenVMS Registry database location (SYS\$REGISTRY:)

Compaq recommends that the OpenVMS Registry be configured to run the Registry Server on every Advanced Server node in the cluster. In this way, OpenVMS Cluster failover will help ensure that registry services are available to the file server.
- 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. In mixed-architecture OpenVMS Clusters with the Advanced Server for OpenVMS running on the Alpha members, the VAX members can still use external authentication. For details about setting up external authentication in OpenVMS Clusters, refer to the *Compaq Advanced Server for OpenVMS 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 enable cluster load balancing for service requests from WAN clients outside the server cluster's LAN, you need to remove the static multihomed entry from each client's WINS database (if clients are 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. For more information on setting up load balancing, first see Section 3.8, Setting Up Dynamic Cluster Load Balancing in WANs; then refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide* for an overview of the basic requirements and steps for setting up load balancing, and the *TCP/IP Services for OpenVMS Management* guide for 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.

### 3.9.2 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.
- The Advanced Server cluster alias is stored in the OpenVMS Registry as value **AliasName**. Use the PWRK\$CONFIG configuration procedure to modify the cluster alias. To display the current Advanced Server cluster alias, as defined in the OpenVMS Registry, use the following command:

```
$ REGUTL SHOW VALUE * ALIASNAME
```

For more information about using REGUTL, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

- 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** value in the OpenVMS Registry. You can restrict device availability using the **NoAutoshare** value. 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. Use the REGUTL utility to modify these values, which are stored in the following key:

```
SYSTEM\CurrentControlSet\Services\AdvancedServer\ShareParameters
```

- All Advanced Servers in the same cluster will automatically share the same language (they share the same registry database).

### 3.9.3 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 3.10, Licensing Support.

## 3.10 Licensing Support

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

### 3.10.1 License Enforcement

Advanced Server for OpenVMS 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 an Advanced Server for OpenVMS server.

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

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

To access Advanced Server for OpenVMS resources, clients currently using client-based licenses to access PATHWORKS file servers must upgrade their licenses. Clients requesting PWLMXXXCA06.00 licenses need to be upgraded to request PWLMXXXCA07.03 licenses. For more information about licensing and upgrading licenses, see Section 3.10.2, Loading or Upgrading to PWLMXXXCA07.03 Licenses, and refer to the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*.

### 3.10.2 Loading or Upgrading to PWLMXXXCA07.03 Licenses

Note that if you are loading or upgrading to PWLMXXXCA07.03 client access licenses, the License Server will assign any PWLMXXXCA07.02 licenses first, if they are loaded and available. Remember that a PWLMXXXCA07.03 license is required to access the Advanced Server V7.3 for OpenVMS. Compaq recommends that you remove the PWLMXXXCA07.02 licenses from the system and/or modify the clients to explicitly request PWLMXXXCA07.03 licenses. For more information, refer to the *Compaq Advanced Server for OpenVMS Guide to Managing Advanced Server Licenses*.

### 3.10.3 Client License Support

Compaq supports PATHWORKS 32 client license software on Windows 95, Windows 98, Windows NT V4, 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).

### 3.10.4 Windows 2000 Clients Sources for Client License Software

Windows 2000 clients can obtain client license software either from the PATHWORKS 32 distribution kit, the PWLICENSE share, or from Compaq customer support. To enable clients to access the PWLICENSE share and install the client licensing software, make sure that server-based licensing is enabled.

## 3.11 PWRK\$MONITOR and CMT Tools Replaced by PWRK\$PWMON Utility

Though the images for the PWRK\$MONITOR utility and the client-based Configurator, Monitor, and Tuner (CMT) tools are still included in the Advanced Server for OpenVMS kit, these utilities can no longer be used with the Advanced Server for OpenVMS.

The new PWRK\$PWMON utility now gathers and displays the data collected by the server. Unlike PWRK\$MONITOR, PWRK\$PWMON is not invoked automatically at startup. It is invoked from the command line. The PWRK\$PWMON utility is provided for use by Compaq customer support.

### 3.12 PWRK\$LMDMN Process and Startup File Replaced

Advanced Server products prior to V7.3 use the PWRK\$LMDMN process to validate logons and replicate the domain security accounts database. Beginning with Advanced Server V7.3 for OpenVMS, the PWRK\$LMSRV process provides this functionality instead. As noted in Section 2.1.2, 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.

### 3.13 File Renaming Utility for Long File Names with Multiple Periods

Files created on an Advanced Server V7.2 for OpenVMS server and that have long names that include multiple periods are likely to be inaccessible by clients of an Advanced Server V7.3 for OpenVMS. These are files on an ODS-2 volume that have names that exceed 40 characters in length when the periods are encoded. Advanced Server V7.2 for OpenVMS servers use a method to parse file names that differs from the method that both Advanced Server V7.3 for OpenVMS servers and PATHWORKS V6 Advanced Servers use. Use the PWRENAME utility to rename such files so that they can be accessed by clients. PWRENAME is defined in the command definition file SYSS\$STARTUP:PWRK\$DEFINE\_COMMANDS.COM.

To invoke the command, enter the following line:

```
$ PWRENAME filespec
```

where *filespec* is the name of a specific file or the name of a device or directory. If you specify the name of a file, the utility operates on that specific file only. If you specify a device, the utility operates on all files on the device. If you specify a directory, the utility operates on all files in the specified directory.

Use any of the following qualifiers:

Qualifier	Description
/LOG= <i>logfile_name</i>	Specifies a file to log the output. By default, output is sent to SYSS\$OUTPUT.
/[NO]RENAME	With the RENAME qualifier, the utility renames each file whose name exceeds the 40 character limit. This is the default. With the NORENAME specifier, the utility outputs the list of files that exceed the 40-character limit, but does not rename them.
/[NO]VERBOSE	With the VERBOSE qualifier, the utility outputs the names of all files examined. This is the default. Use the /NOVERBOSE qualifier to prevent such output.





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## Problems Corrected in Advanced Server V7.3 for OpenVMS

This chapter describes problems resolved by software changes made in Advanced Server V7.3 for OpenVMS. 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	4.1
File Access/Printing Problems	4.2
ADMINISTER Command Problems	4.3
Windows 2000 Related Problems	4.4
Transport Problems	4.5
Cluster-Related Problems with Advanced Servers	4.6
Browser Problems	4.7
PATHWORKS Advanced Server Interaction with DEC Rdb (Oracle) Problems	4.8

### 4.1 Server Problems

This section describes the file server problems corrected in Advanced Server V7.3 for OpenVMS.

#### 4.1.1 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.2 “Yikes” Error Message Logged in PWRK\$LMSSRV Log File

**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\$LMSSRV log file:

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

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.3 External Authentication to a Windows NT Server Fails with Password Exceeding 12 Characters

**Problem:**

When OpenVMS users who have accounts enabled for external authentication attempt to log in to a trusted domain on a Windows NT V4.0 server that has Service Pack 4, if they enter a password that exceeds 12 characters, the authentication fails.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.4 Advanced Server Crashes with ACCVIO at XIOCTL Routine

**Problem:**

The Advanced Server might crash with an access violation in the module XIOCTL, routine smbntXioctl. A traceback similar to the following would be seen in the PWRK\$LMSSRV log file:

```
image module routine . . . rel PC abs PC
PWRK$LMSSRV XIOCTL smbntXioctl . . . 0000000000022BD0 0000000000618BD0
PWRK$LMSSRV NTTRANS smbnttrans . . . 0000000000024A34 000000000061AA34
PWRK$LMSSRV SMBWORK smbwork . . . 0000000000018BDC 000000000060EBDC
PWRK$CSSHR_V7 MTS MTS$CONTEXT_SWITCH
. . . 0000000000000104 00000000004B3164
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.5 The File Server Leaks Memory When Handling RegSetValue Calls

**Problem:**

When processing requests from client applications such as RegEdt32 that require setting string values, the file server allocates extra memory. In versions prior to Advanced Server V7.3 for OpenVMS, this memory does not get freed. If many of these set string value requests are made, or if large string values are being set, the file server could eventually run out of memory because of this problem.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS. The file server now frees this memory.

#### 4.1.6 Server Crashes Randomly, Often When in an LMFREE or LMMALLOC Routine

**Problem:**

The server crashes, often in an LMFREE or LMMALLOC routine. It crashes at any time after connecting to the OpenVMS Registry. A traceback similar to the following would be seen in the PWRK\$LMSRV log file:

```
image  module  routine  . . .  rel PC      abs PC
PWRK$LMAPISHR MALDEBUG lmfree . . . 0000000000022BD0 0000000000618BD0
PWRK$LMSRV SSIGNON_PROC process_acme_message_3
. . . 0000000000024A34 000000000061AA34
.
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.7 PWRK\$LMSRV Crashes with Access Violation Processing a GET SECURITY DESCRIPTOR SMB Message for a Named Pipe

**Problem:**

The PWRK\$LMSRV process might crash with an access violation in module PFS\$OPS, routine PFS\_getpathid, when processing a GET SECURITY DESCRIPTOR SMB message, and the file in question is a named pipe. A traceback similar to the following will be logged in the PWRK\$LMSRV log file:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=0000000000000180, PC=00000000003F5224, PS=0000001B
%TRACE-F-TRACEBACK, symbolic stack dump follows
image      module  routine      line  rel PC      ...
PWRK$CSSHR_V7 PFS$OPS PFS_getpathid 20626 0000000000009EE4 ...
PWRK$LMSRV           0 000000000012C95C ...
PWRK$LMSRV           0 000000000012B204 ...
.
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.8 Shares With Names 12 Characters in Length Might Be Displayed with a Random Character at Position 13

**Problem:**

If the name of a share has exactly 12 characters, sometimes the share name is displayed by the client with a random character appended at character position 13.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.9 PWRK\$LSMRV or PWRK\$LMDMN Crashes with “resume\_0: too many thread resumes” Error

**Problem:**

An error related to interprocess communications (IPC) is not handled correctly, causing a thread in the server to be resumed (activated) too many times. The error message logged is similar to the following:

```
resume_0: too many thread resumes for 0024A2E0 (resume_pending=4)
some suspend/resume information may have been lost which may
cause future error(s)
```

This condition might cause the PWRK\$LSMRV or PWRK\$LMDMN<sup>1</sup> process to crash.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.10 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\$LSMRV 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.11 Certain Clients Are Unable to Change a Password on an Advanced Server

**Problem:**

When clients such as PATHWORKS for MS-DOS, MS-DOS workstations, or any workstations prior to Windows NT V4 issue the net password command to change a password on the Advanced Server, the attempt fails. This occurs when the Advanced Server is a backup domain controller in the same subnet as the client, and the Advanced Server primary domain controller is in another subnet. When the client issues a net password, a message is broadcast to the network seeking a primary domain controller to perform the password change. The query is ignored by the primary domain controller, and the password change request fails.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

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<sup>1</sup> PWRK\$LMDMN no longer exists in Advanced Server V7.3 for OpenVMS and later versions of the Advanced Server.

#### 4.1.12 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
PWRK$CSSHR_V7 LIBIPC mbreaddoneast 000000000000084C FFFFFFFF8049F044
                                0000000000000000 FFFFFFFF8049F044
```

**Solution:**

Although this problem is not due to an Advanced Server bug, the Advanced Server V7.3 for OpenVMS 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 that caused the problem.

#### 4.1.13 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.14 Access Denied to Non-Administrators Group Users Attempting to Use Windows NT Management Tools

**Problem:**

Users not belonging to the Administrators group might be denied access when using Windows NT management tools, such as the Windows NT Explorer and User Manager for Domains tools.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.15 Partial Synchronization Failure with First Time Startup in New Domain

**Problem:**

When the Advanced Server starts up for the first time in a new domain, a partial synchronization of the Local Security Authority (LSA) database is attempted and fails, but then a full synchronization of the database completes successfully. Following is an example of the event messages logged (the events are displayed in reverse order):

```
I 02/24/99 12:26:17 PM NETLOGON None          5717  N/A    PHL232
NET5717: The full synchronization replication of the LSA database
         from the domain controller \\NT216 completed successfully.

W 02/24/99 12:26:15 PM NETLOGON None          5716  N/A    PHL232
NET5716: The partial synchronization replication of the LSA database
         from the domain controller \\NT216 failed.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.16 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.17 BDC Servers Experience High CPU Utilization and Replication Traffic

**Problem:**

The PWRK\$LMMSRV 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.18 PWRK\$LMMSRV Crashes in Module UXREDIR, Routine TCON

**Problem:**

When the file server is communicating with another file server to complete an action, PWRK\$LMMSRV crashes in module UXREDIR, routine TCON. A traceback similar to the following would be seen in the PWRK\$LMMSRV 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.19 Advanced Server Crashes with ACCVIO in Image PWRK\$PCMSHR

**Problem:**

The Advanced Server can crash due to an ACCVIO in image PWRK\$PCMSHR, module PCM\_BUFFER, at routine PCM\_read\_data. A traceback similar to the following would be seen in the PWRK\$LMSRV log file:

```
image  module  routine  . . .  rel PC      abs PC
PWRK$PCMSHR PCM_BUFFER pcm_read_data
. . . 0000000000022BD0 0000000000618BD0
PWRK$CSSHR_V7 PFS$OPS  PFS_read
. . . 0000000000024A34 000000000061AA34
PWRK$LMSRV  READ  comread  . . . 0000000000018BDC 000000000060EBDC
.
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.20 Advanced Server Crashes with ACCVIO at Routine APIEXCEPT

**Problem:**

The Advanced Server might crash due to an ACCVIO at routine APIEXCEPT.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.21 Advanced Server Crashes with ACCVIO in Image PWRK\$LMRPCSHR

**Problem:**

The Advanced Server might crash due to an ACCVIO in image PWRK\$LMRPCSHR. A traceback similar to the following would be seen in the PWRK\$LMSRV log file:

```
image  module  routine  . . .  rel PC      abs PC
PWRK$LMRPCSHR
. . . 0000000000022BD0 0000000000618BD0
PWRK$LMRPCSHR
. . . 0000000000024A34 000000000061AA34
PWRK$LMRPCSHR
. . . 0000000000018BDC 000000000060EBDC
PWRK$CSSHR_V7 MTS  MTS$CONTEXT_SWITCH
. . . 0000000000000104 00000000004B3164
.
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.22 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 due to an ACCVIO in the PTRMAP module at various routines. (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      abs PC
PWRK$LMSRV PTRMAP  putptr   47806  00000000000005F0 00000000001A...
PWRK$LMSRV PPS_JOBS PPS_open 53650  00000000000004F4 000000000018...
PWRK$LMSRV OPEN   open_printer 70538  0000000000000734 000000000011...
PWRK$LMSRV OPEN   openX_open2 71064  00000000000016D4 000000000011...
PWRK$LMSRV OPEN   smbopenX    70938  0000000000001190 000000000011...
PWRK$LMSRV SMBWORK smbwork     64843  0000000000001794 000000000010...
```

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 Advanced Server V7.3 for OpenVMS.

### 4.1.23 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 Advanced Server V7.3 for OpenVMS.

### 4.1.24 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.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS. 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:

Alpha Kits	Platform
VMS72_F11X-V0200	OpenVMS V7.2



Alpha Kits	Platform
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.

#### 4.1.25 External Authentication Fails with 15-Character Domain User Name

**Problem:**

Attempts to log on to an OpenVMS account for which external authentication is enabled are denied if the user enters a user name 15 characters in length. The following error message is displayed, where user-id is the user identification:

```
(user-id) does not exist or is invalid
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.26 Cannot Create a Share to an ISO-9660 or High Sierra CD-ROM Device

**Problem:**

Attempts to create a share to a device that has an ISO-9660 or High Sierra CD-ROM mounted might fail.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.27 PWRK\$LM\$SRV 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\$LM\$SRV 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
...              ...              ...
OPEN             file_exists       ...  002EDF6F  002EDF6F
OPEN             NT_openX_open2   ...  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 Advanced Server V7.3 for OpenVMS.

#### 4.1.28 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 Advanced Server V7.3 for OpenVMS.

#### 4.1.29 External Authentication for User Account in a Trusted Domain Fails

**Problem:**

When a user with an account in a trusted domain attempts to log on to an OpenVMS account for which external authentication is enabled, the user's attempted logon might fail. The problem typically occurs when many logons are occurring simultaneously.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.30 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 Advanced Server V7.3 for OpenVMS. The crash and the extraneous informational messages should no longer occur.

#### 4.1.31 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 Advanced Server V7.3 for OpenVMS. Various ECOs, patch kits, and recommendations from Compaq, for earlier releases of the Advanced Server, provided a fix for this problem that interlocked the PWRKSSHUTDOWN.COM procedure with stopping the NetLogon service. The new fix provided with the Advanced Server V7.3 for OpenVMS does not include the interlocking of NetLogon in PWRKSSHUTDOWN.COM. It is no longer necessary to interlock stopping the NetLogon Service with PWRKSSHUTDOWN.COM. Any such customized changes can be removed.

#### 4.1.32 PWRK\$LMSSRV Crashes in Module PFS\$OPS, Routine PFS\_setextattr

**Problem:**

Under some circumstances, when the file server is attempting to create ACEs (access control entries) for a file or directory, the server crashes due to an ACCVIO in the PFS\$OPS module, routine PFS\_setextattr. A traceback similar to the following would be seen in the PWRK\$LMSSRV log file:

```
%SYSTEM-F-ACCVIO, access violation, reason mask=00, virtual
address=000000000000
0003, PC=0000000000438EE8, PS=0000001B
%TRACE-F-TRACEBACK, symbolic stack dump follows
  image      module      routine      . . .  rel PC          abs PC
PWRK$CSSHR_V7 PFS$OPS  PFS_setextattr
                                                0000000000011708 0000000000438EE8
PWRK$CSSHR_V7 PFS$OPS  PFS_copyfile 00000000000044C8 000000000042BCA8
PWRK$LMSSRV  MVCP   treecopy   0000000000000624 000000000012E8B4
.
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.33 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 4.1.17, BDC Servers Experience High CPU Utilization and Replication Traffic, the PWRK\$LMSSRV 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:**

These problems are resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.34 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\$LSMRV log file:

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

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

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.35 Server Crashes in ODS2NewASUSecurityAce

**Problem:**

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

```
image      module      routine      . . . rel PC      abs PC
PWRK$FSLIB_ODS2  ODS2$LIB      ODS2NewASUSecurityAce
                                00000000000026AC 000000000A0AF7C
PWRK$FSLIB_ODS2  ODS2$LIB      ODS2SetASUSecurity
                                000000000000294C 000000000A0B21C
.
.
.
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.36 “release\_secure\_channel\_lock failed” Error Occurs, with Replication Failure

**Problem:**

The following error message is recorded in the PWRK\$LSMRV log file:

```
release_secure_channel_lock failed , R0 status 00002124
```

This error typically occurs during replication of the SAM databases and is followed by SAM database replication failures.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### 4.1.37 PWRK\$LMMSRV Process crash in RPCBIND/rpc\_\_binding\_free

**Problem:**

The PWRK\$LMMSRV 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\$LMMSRV crash.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### 4.1.38 PWRK\$LMMSRV Crashes with “Buffer Insane” Messages

**Problem:**

The PWRK\$LMMSRV process might crash with error messages similar to the following in the PWRK\$LMMSRV log file:

```
14-JUL-2000 10:11:59.38 20200268:03B55A40 Data in buffer insane!
PANIC: aborting from module AS$BLD_ROOT:[AS.UTIL.SRC]GC.C:1 at line 437!
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### 4.1.39 SAM Corruption Issues Addressed

**Problem:**

Previously, it was possible for the SAM database to become corrupt. 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\$LMMSRV 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
. . . 0000000000000F8 0000000000D9AD8
.
.
.

```

- 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 Advanced Server V7.3 for OpenVMS. 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 SYSS\$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 Advanced Server V7.3 for OpenVMS 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.

#### 4.1.40 Interdomain Trust Stops Working

**Problem:**

In earlier releases of the Advanced Server, secure channels for interdomain trust relationships would stop functioning during periods of heavy channel traffic. In addition, during server startup, if no domain controllers were available on the trusted side of the channel, the communication channel would not be initialized.

**Solution:**

These problems are resolved in Advanced Server V7.3 for OpenVMS. When a channel stops functioning because of heavy traffic, the server software will reopen the communication channel. When a channel does not get initialized because domain controllers in the trusted domain are not available, the server software will initialize the channel when the domain controllers become available.

#### 4.1.41 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$LMSRV SSIGNON_COM receive_comp_handler
                        23651 000000000000A58
PWRK$LMSRV SSIGNON_COM ssignon_work 24150 000000000001828
.
.
.
```

**Solution:**

These problems are resolved in Advanced Server V7.3 for OpenVMS.

#### 4.1.42 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$LMSRV SSIGNON_COM receive_comp_handler
                        23651 000000000000A58
PWRK$LMSRV SSIGNON_COM ssignon_work 24150 000000000001828
.
.
.
```

**Solution:**

These problems are resolved in Advanced Server V7.3 for OpenVMS.

## 4.2 File Access/Printing Problems

This section describes file access and printing problems corrected in Advanced Server V7.3 for OpenVMS.

### 4.2.1 Files Inherit Wrong or Inappropriate ACEs

**Problem:**

When creating a subdirectory, OpenVMS copies both the parent directory's access control permissions (A) and inheritable permissions (B) correctly. However, when creating a nondirectory file, OpenVMS also copies the parent directory's access permissions (A) (along with its inheritable permissions (B)) to the new file. Hence, the parent's directory access control permissions (A) are erroneously interpreted as the new file's access control permissions. The correct behavior is to have the parent's inheritable permissions interpreted as the file's access control permissions.

For an overview on file security information and the handling of directory permissions and ACEs by the Advanced Server, OpenVMS, and Windows NT systems, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS. Directory access control permissions (A) are no longer propagated to the created file's access control permissions. In the case of files created by the Advanced Server, only the parent directory's inheritable permissions (B) are propagated as the file's access control permissions.

In the case of files created by other OpenVMS applications, neither the parent directory's inheritable permissions nor its access control permissions are propagated to the file. Instead, the parent's inheritable permissions are propagated to the file at the time the file is accessed by the Advanced Server.

Furthermore, when the Advanced Server accesses a file with access permissions wrongly propagated from the parent directory, the server ignores those access permissions. Instead, the server interprets the proper access permissions — those that were propagated to the file as inheritable permissions. These permissions become the file's access control permissions.

To fix existing ACEs that have incorrect security information, use the utility PWRK\$FIXACE.EXE. To delete ACEs, you can use the PWRK\$DELETEACE utility. For more information, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*.

#### **4.2.2 Cannot Create File on Disk Because of Insufficient Space for Index Header Blocks**

**Problem:**

An attempt to create a new file in a shared directory can fail because not enough index header blocks are available to store "PATHWORKS" ACEs. Disk space on the disk volume appears sufficient for creating the file, but the file creation fails because the disk volume's index file is full. This problem can be exacerbated by the OpenVMS-related problem reported in Section 4.2.1, Files Inherit Wrong or Inappropriate ACEs. For example, when directory-specific and inherit-only ACEs are propagated inappropriately to a new file's descriptor, these ACEs consume more index blocks and disk space.

**Solution:**

While attempts to create shared files on disk volumes that have insufficient space for creating index header blocks will still fail, the fixes reported in Section 4.2.1, Files Inherit Wrong or Inappropriate ACEs, significantly reduce the frequency and likelihood of such failures in Advanced Server V7.3 for OpenVMS.

#### **4.2.3 Creators of Files in Shared Directories Do Not Inherit Ownership and Might Lose Access to the Created File**

**Problem:**

Ownership of a file created by the Advanced Server was set to the parent directory's owner instead of the file's creator. This is caused when the Advanced Server requests that OpenVMS propagate the parent directory's ownership and other security information to the created file.

**Solution:**



This problem is resolved in Advanced Server V7.3 for OpenVMS. Advanced Server file servers no longer rely on OpenVMS for propagating ownership information to newly created files. The file server always writes explicit ownership information for a new file (or directory) at creation, so that the file creator is guaranteed ownership. The creator retains ownership privileges, unless those changes are explicitly modified by the owner or a member of the Administrators group.

#### **4.2.4 File Name Prompt Does Not Appear When Printing to a Windows NT Shared Printer That Is Set to Print to Port FILE:**

**Problem:**

When printing to a print share that is set up on a Windows NT print server that has "FILE:" enabled as the printer port (the FILE: property is located under the Ports tab for the printer's properties), the file server does not always prompt for a file name, as it should.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### **4.2.5 Attempts to Copy a Read-Only File onto an Existing Shared File Results in "Access Denied" Error**

**Problem:**

In versions of the Advanced Server prior to V7.3, an attempt to copy a read-only file onto a share to replace an existing file that is not read-only produces the following results:

- An "Access Denied" error
- The target file is made read-only, behavior that does not emulate Microsoft behavior, as is intended

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS. The file is copied correctly. To maintain compatibility with Microsoft operating systems, the read-only attribute is not applied to the resulting file.

#### **4.2.6 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 Advanced Server V7.3 for OpenVMS.

#### **4.2.7 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 Advanced Server V7.3 for OpenVMS.

#### 4.2.8 “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 Advanced Server V7.3 for OpenVMS. 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.

#### 4.2.9 Clients Cannot Access Files with Long File Names Containing Multiple Periods

**Problem:**

Certain Advanced Server V7.2 for OpenVMS server files on ODS-2 disk volumes are not accessible if they were created on a PATHWORKS V6 server and have long file names with multiple periods. On ODS-2 volumes, file names are restricted to 39 characters in the file name and 39 in the extension. The Advanced Server V7.2 for OpenVMS incorrectly changed the way it parses file names. The Advanced Server V7.3 for OpenVMS now parses file names the same way that PATHWORKS V6 servers do.

**Solution:**

This problem is addressed in Advanced Server V7.3 for OpenVMS. The new PWRENAME utility is available to rename such files, as described in Section 3.13, File Renaming Utility for Long File Names with Multiple Periods. Note that you can also solve this problem by converting your disk to ODS-5 (for instructions, refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide*).

#### 4.2.10 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 Advanced Server V7.3 for OpenVMS.

#### 4.2.11 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 Advanced Server V7.3 for OpenVMS.

#### 4.2.12 Directory Might Appear Empty Even When It Is Not

**Problem:**

Attempts to display the contents of a shared directory will fail if the directory contains a file with no file name and extension, such as “.;1”.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### 4.3 ADMINISTER Command Problems

This section describes ADMINISTER command problems corrected in Advanced Server V7.3 for OpenVMS.

#### 4.3.1 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 Advanced Server V7.3 for OpenVMS.

#### 4.3.2 OpenVMS Users Not Logged on to the Network Cannot Use the ADMINISTER SEND Command

**Problem:**

The SEND command should not require network logon if specified in the following format, without qualifiers (one exception is the /SERVER=*server-name* qualifier, if *server-name* is the local server):

```
SEND computer-name message
```

However, attempts to use the SEND command in this way without network logon produce the following message:

```
%PWRK-E-LOGONREQUIRED, you must be logged on to perform the requested operation
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### 4.3.3 ADMINISTER Commands Act on Nonexistent, Hidden Shares As If the Shares Exist

**Problem:**

If the name of a nonexistent, hidden share is specified with the ADMINISTER SHOW SHARE command (the names of hidden shares end with a dollar sign, such as F\$ or TAR\$), an error message should indicate that the specified share does not exist. Instead, the SHOW SHARE command displays the share along with a blank description, as in the following example in which the nonexistent share name is xyz\$:

```
$ ADMINISTER SHOW SHARE XYZ$
Shared resources on server "SUTTLE":
Name           Type           Description
-----
XYZ$           Directory
```

In addition, if such a share name is specified with the ADMINISTER MODIFY SHARE command, it produces a message indicating an internal error as in the following example:

```
$ ADMINISTER MODIFY SHARE XYZ$ /LIMIT=7
%PWRK-E-ERRMODSHARE, error modifying share "XYZ$"
-LM-E-NERR_INTERNALER, an internal error has occurred
```

This command should produce a message indicating that the share does not exist.

**Solution:**

These problems are resolved in Advanced Server V7.3 for OpenVMS.

### 4.3.4 ADD TRUST Command Fails

**Problem:**

When using the ADD TRUST command to add a trust, if you omit the domain name in the command line, the ADMINISTER user interface prompts you for the domain name, and after you enter the domain name, it prompts you for the password. If you enter a password that includes lowercase characters, spaces, or other nonalphanumeric characters and do not enclose the password in quotation marks, the password is handled incorrectly. First, it displays the password you entered. The password should not be displayed. Second, it should prompt you to verify the password you entered, but it does not. Finally, your attempt to add the trust fails with an error message stating that an invalid password was entered, as shown in the following example:

```
LANDOFOZ\TINMAN> ADD TRUST /TRUST
_domain name: KANSAS
_password: hayfield
This might take some time, do you wish to continue? [YES or NO] (YES) :
%PWRK-E-ERRADDTRUST, error adding trust between domains "KANSAS" and
"LANDOFOZ"
-LM-E-ERROR_INVALID_P, invalid password specified
```

**Solution:**

These problems are resolved in Advanced Server V7.3 for OpenVMS.

#### 4.3.5 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 Advanced Server V7.3 for OpenVMS.

#### 4.3.6 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 Advanced Server V7.3 for OpenVMS.

#### 4.3.7 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 Advanced Server V7.3 for OpenVMS.

#### 4.3.8 SHOW FILES /PERMISSIONS Command Brings “The RPC server is unavailable” Error

**Problem:**

When file names in a share contain non-standard 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-ERRGETFILEEACC, 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 Advanced Server V7.3 for OpenVMS.

#### 4.3.9 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.

For a information about restrictions pertaining to taking ownership, see Section 5.6.8 and Section 5.10.3.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### 4.3.10 SHOW USER Command Enhanced to Display Several Additional Fields

**Problem:**

The ADMINISTER SHOW USER display with either the /FULL or /ACCOUNTS qualifier now includes the following fields:

```
Last Log On: 08/23/00 05:07 PM
Password Last Set: 06/30/00 11:03 AM
Password Changeable: 06/30/00 11:03 AM
Password Expires: 09/11/00 11:03 AM
```

**Solution:**

This enhancement is included in Advanced Server V7.3 for OpenVMS.

#### 4.3.11 SHOW FILES with Wildcards Issued Against a Large Directory Might Fail

**Problem:**

Attempts to list a directory containing many files might fail with one of the following error messages:

```
%PWRK-E-SEARCHFAIL, error searching for \\LP33\LPC1\*.*
-LM-E-ERROR_GEN_FAILU, general failure
```

```
%PWRK-E-SEARCHFAIL, error searching for "\\SMILE\TEST2\S*.*"
-LM-E-ERROR_NOUNICODE, no unicode translation
```

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### **4.3.12 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 Advanced Server V7.3 for OpenVMS.

#### **4.3.13 REGUTL SHOW PARAMETERS With Wildcards Displays Subset of All Data That Can Be Displayed**

##### **Problem:**

Using the REGUTL command SHOW PARAMETERS with a wildcard (such as, SHOW PARAMETERS \* \*) does not display all parameters that fit the wildcard specification. It displays only those server parameters equivalent in name to the parameters originally defined in the PATHWORKS V6 (Advanced Server) software (the LANMAN.INI file). In other words, the SHOW PARAMETERS command cannot display all the server-related registry data that can be set. In specific, the command omits the LanmanIniMigrated parameter in the following key:

```
SYSTEM\CurrentControlSet\Services\AdvancedServer\Parameters
```

This parameter was added as part of the Advanced Server for OpenVMS software and is foreign to PATHWORKS V6.

##### **Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### **4.4 Windows 2000 Related Problems**

This section describes problems related to the interaction with Windows 2000, corrected in Advanced Server V7.3 for OpenVMS.

#### **4.4.1 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 Advanced Server V7.3 for OpenVMS.

#### **4.4.2 Windows 2000 Clients Might Be Unable to Delete Shared Files**

**Problem:**

Windows 2000 clients might be unable to delete files from the top level of an Advanced Server share. An error is received, such as one that indicates that the source file cannot be read or path cannot be found.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### **4.4.3 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 Advanced Server V7.3 for OpenVMS. The Windows 2000 specific attributes in the data is safely ignored.

#### **4.4.4 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 zeroes.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### **4.4.5 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 Advanced Server V7.3 for OpenVMS.

#### **4.4.6 Windows 2000 Clients Must Use Server-Based Licensing**

**Problem:**

Client-based licensing software components cannot be installed on a Windows 2000 client.

**Solution:**



This problem is resolved in Advanced Server V7.3 for OpenVMS. Windows 2000 clients can obtain client license software either from the PATHWORKS 32 distribution kit, the PWLICENSE share, or from Compaq customer support. To enable clients to access the PWLICENSE share and install the client licensing software, make sure that server-based licensing is enabled.

#### **4.4.7 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 Advanced Server V7.3 for OpenVMS.

### **4.5 Transport Problems**

This section describes problems related to the use of transport protocols with the Advanced Server, corrected in Advanced Server V7.3 for OpenVMS.

#### **4.5.1 Advanced Server Loses Its Name Registration in Windows NT WINS Server Database**

**Problem:**

If the Windows NT WINS Server Renewal Interval becomes less than the four-day default, then the Advanced Server participating as a WINS client can lose its name registration in the Windows NT WINS Server database. This can happen because the Advanced Server continues to update its name registration using the default four-day interval and not the shorter interval indicated by the WINS Server. When the registration update does not occur within the new Renewal Interval period, the Advanced Server is removed from the WINS database.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

#### **4.5.2 System Crashes in the PWIP\_CALLUP Routine**

**Problem:**

The PWIPDriver might, on rare occasions, send the file server a message that is meant for a session that is no longer active; in other words, the stream for the session is already closed or in the process of being closed and, as a result, some of the data structures have been reinitialized. When the server tries to process this message, the system crashes in module PWRK\$STREAMSOS\_V7, with a failing PC in routine PWIP\_CALLUP\_C.

**Solution:**

This problem is resolved in Advanced Server V7.3 for OpenVMS.

### 4.5.3 System Crashes in PWRK\$STREAMSOS\_V7

#### **Problem:**

While trying to remove a nonexistent element from an internal timer queue, the Advanced Server can cause a system crash with 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 Advanced Server V7.3 for OpenVMS.

### 4.5.4 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 Advanced Server V7.3 for OpenVMS.

### 4.5.5 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 Advanced Server V7.3 for OpenVMS.

### 4.5.6 Call to KNBNQ\_UNSET\_TIMER in the PWRK\$LMMCP Process Might Cause OpenVMS to Crash

#### **Problem:**

While the PWRK\$LMMCP is executing, 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 Advanced Server V7.3 for OpenVMS.

## 4.6 Cluster-Related Problems with Advanced Servers

This section describes problems relating to servers participating in OpenVMS Clusters. These problems have been corrected in Advanced Server V7.3 for OpenVMS.

### 4.6.1 With Open File Caching, PWRK\$LMSSRV Hangs with Deadlock

**Problem:**

The Advanced Server might hang in the following situation:

- An Advanced Server 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 Advanced Server V7.3 for OpenVMS.

### 4.6.2 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 Advanced Server V7.3 for OpenVMS.

### 4.6.3 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 Advanced Server V7.3 for OpenVMS, 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 Advanced Server V7.3 for OpenVMS. 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.

## 4.7 Browser Problems

This section describes problems with the Browser service corrected in Advanced Server V7.3 for OpenVMS.

### 4.7.1 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 Advanced Server V7.3 for OpenVMS.

## 4.8 PATHWORKS Advanced Server Interaction with DEC Rdb (Oracle) Problems

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

### 4.8.1 PATHWORKS Advanced Server Is Incompatible with Certain Versions of Oracle

**Problem:**

Oracle versions prior to V7.3.3 are incompatible with the Advanced Server for OpenVMS 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 Advanced Server V7.3 for OpenVMS. A previous restriction against Oracle versions prior to V7.3.3 has been lifted.

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## Restrictions and Problems in Advanced Server V7.3 for OpenVMS

This chapter describes restrictions and problems found in the Advanced Server for OpenVMS software. The restrictions and problems are described in the sections indicated in the following table:

Restriction/Problem Type	Section Number
Installation and Configuration Restrictions	5.1
OpenVMS Registry Restrictions	5.2
File Server Restrictions	5.3
User Interface Restrictions	5.4
Windows 2000 Related Restrictions	5.5
Printing/Print Management Restrictions	5.6
Event Logging Restrictions	5.7
Browser Restrictions	5.8
Domain Management Restrictions	5.9
Remote Management Restrictions	5.10
Transport Restrictions	5.11
OpenVMS Cluster Restrictions	5.12
Advanced Server with DEC Rdb (Oracle) Restrictions	5.13
Documentation Problems	5.14

### 5.1 Installation and Configuration Restrictions

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

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

**Problem:**

The Advanced Server for OpenVMS cannot participate in a domain with a server running PATHWORKS (LAN Manager) V5.0C. The V5.0C server incorrectly generates a name conflict when the Advanced Server for OpenVMS 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 (LAN Manager).

### 5.1.2 Advanced Server May Fail at Startup If SYLOGIN.COM Executes with Errors

The 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, the Advanced Server startup hangs.

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

### 5.1.3 Advanced Server Fails to Start If Any Processes Are Running the ADMINISTER 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
```

### 5.1.4 Server Type Version Number Might Not Be Updated During Downgrade

#### **Problem:**

The server type of the Advanced Server V7.3 for OpenVMS (as indicated by the ADMINISTER SHOW COMPUTERS command, for example), is Advanced Server Version 4.0 for OpenVMS (the previous version was 3.51). If you upgrade an Advanced Server from an earlier version to Version 7.3, and later downgrade to the previous version again, the server type version number might not be correct. If this happens, the version number will still be displayed as 4.0 when it should be 3.51.

#### **Solution:**

You have to manually set the version number to make it correct. For instructions, contact Compaq customer support.

### 5.1.5 Ignore Recommendations to Terminate Deinstall (PRODUCT REMOVE)

#### **Problem:**

During the deinstallation procedure (PRODUCT REMOVE), errors might be encountered, followed by a message recommending that the procedure be terminated.

#### **Solution:**

Disregard this message and continue the procedure.

### 5.1.6 Installation Procedure Erroneously Refers to a Feature That Has Not Yet Been Released

The installation procedure displays the following text:

For complete information about the reasons a reboot might be necessary and how to avoid unnecessary reboots, see the Installation and Configuration Guide.

The *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide* does describe conditions when a reboot is needed; however, at this time, the guide does not document how to avoid unnecessary reboots. Compaq's goal is to minimize the need to reboot your OpenVMS systems, and inclusion of such information is important to meeting that goal. Compaq is working to address this situation in future releases.

#### **Solution:**

As documented in the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*, the installation procedure does help you avoid some unnecessary reboots, such as by allowing you to delay a required reboot until you complete any further installation or configuration tasks that would be expedient to finish before rebooting.

### 5.1.7 Cannot Join a Domain if the PDC has Restricted Anonymous Access

#### **Problem:**

The Advanced Server cannot be configured as a BDC or a member server if the PDC restricts anonymous access. Anonymous access is restricted if the OpenVMS Registry on the primary domain controller 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 attempting 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:**

If acceptable for your security environment, allow anonymous access to the PDC by setting the PDC's RestrictAnonymous value to 0 during the time that the Advanced Server is being configured to join the domain. Compaq realizes that this might be inconvenient to some customers and is addressing the issue. Contact your Compaq Support Center for current status.

## 5.2 OpenVMS Registry Restrictions

This section describes restrictions relating to the Advanced Server and the OpenVMS Registry.

### 5.2.1 Changes to Incorrect Parameter Data Types in the Registry Do Not Take Effect

**Problem:**

Using the OpenVMS REG\$CP utility or the Window NT RegEdt32 utility, if you define a value in the registry with an incorrect data type, PWRK\$REGUTL does not detect and correct the value's data type. An invalid data type can prevent readers of the value's data from properly accessing the data in the registry.

**Solution:**

Use PWRK\$REGUTL to create file server parameters in the OpenVMS Registry. This assures they are created with the appropriate data type.

### 5.2.2 Changes Made to OpenVMS Registry Event Log Settings Do Not Take Effect

**Problem:**

Several values stored in the OpenVMS Registry are used for storing and displaying event log information. These values are stored in the following key and its subkeys:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog
```

When you attempt to change these settings, the change will not take effect. For example, if you attempt to change the location of the file to which events are logged, the events are still logged to the original file location.

### 5.2.3 The “^” Character Does Not Get Encoded in Parameter Values

**Problem:**

When the “^” character is specified as part of a parameter value, the value is stored in the OpenVMS Registry with only those characters that precede the “^” character. For example, if you specify computer name M\_76~^.\_P when configuring a server, the name gets stored in the OpenVMS Registry as M\_76~. For related restrictions, see Section 5.9.4.4, Problems Using Certain Characters for a Member Server Computer Name or Cluster Alias Name, and Section 5.3.11, Server Language Restrictions.

**Solution:**

Do not use the “^” character in parameter values.

## 5.3 File Server Restrictions

This section describes restrictions in the file server.

### 5.3.1 Advanced Server May Issue Incorrect BlobCache Warning Messages

**Problem:**

Sometimes the Advanced Server will incorrectly report that the sum of the databases has exceeded the recommended maximum percentage of data cache size, indicating that the cache size should be increased, when the cache size may not need to be increased.

**Solution:**

The warning messages may be ignored if the percentage reported in the warning message does not exceed 100% and does not increase once the file server is running (that is, after server startup).



Note that the solution applies only to “BlobCache Warning” messages. Do not ignore “BlobCache Error” messages.

### 5.3.2 Advanced Server Supports a Maximum Path Length of 512 Characters

The Advanced Server for OpenVMS supports a maximum OpenVMS physical path length of 512 characters. Though unlikely, this limitation may limit the length of a file name that can be created by a file server client. ODS-5 disk volumes can support file names of up to 243 characters in length.

The OpenVMS physical path length includes all the characters necessary to represent the fully specified OpenVMS device, directory path, and file name. For example, if “MyShare” is an Advanced Server share defined with the OpenVMS directory specification “Users\$:[Users.Mine],” and the Users\$ device resolves to “\$1\$DKA100:,” then the fully specified OpenVMS physical path used to access file “MyFile.Txt” in the top level directory of share “MyShare” is the following path (32 characters in length):

```
$1$DKA100:[Users.Mine]MyFile.Txt
```

### 5.3.3 Advanced Server Does Not Support File Access from Macintosh Clients

Files created on the Advanced Server system by Macintosh clients (using the PATHWORKS for Macintosh server) cannot be open and read by Advanced Server clients.

### 5.3.4 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 or the container file 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 file uploading.

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

### 5.3.5 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 the 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 internal caches to operate effectively.

### 5.3.6 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
```

### 5.3.7 “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.

### 5.3.8 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.

### 5.3.9 Do Not Use “DEV” as a Share Name

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

### 5.3.10 Limit to Number of Directory Levels

**Problem:**

The number of levels of directories (nested directories) that can be created in a directory tree are limited. Attempts to create a subdirectory too deep in the directory tree will fail. For example, tests have resulted in failures on ODS-5 volumes when attempting to create subdirectories approximately 60 levels deep.

**Solution:**

The problem occurs because for each nested directory created, superfluous ACEs are inherited by the parent directory’s ACL. As each new directory is created deeper in the directory structure, the ACL increases in size until it reaches a limit. Two workarounds are:

1. Use a Windows NT client to view the security permissions on the directory in which the failure occurred, and then select OK. No actual change to security is necessary — just use Windows NT to view security permissions for the

directory, preserving the exact security that already exists. Windows NT automatically removes duplicate ACEs.

2. Change the STORE\_SECURITY\_ACES parameter in the OpenVMS Registry from its default value to disable propagation of security information to files and directories created in directories. Refer to the *Compaq Advanced Server for OpenVMS Server Administrator's Guide* for more information.

### 5.3.11 Server Language Restrictions

This section describes restrictions related to the various languages and ISO-8859 extended character sets that can be configured on the Advanced Server. For related restrictions, see Section 5.9.4.4, Problems Using Certain Characters for a Member Server Computer Name or Cluster Alias Name, and Section 5.2.3, The ^ Character Does Not Get Encoded in Parameter Values.

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#### Note

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You can configure any one of over 40 languages. For an up-to-date list of languages that are officially supported by the Advanced Server, refer to the Software Product Description (SPD).

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#### 5.3.11.1 ODS-2 Encoded File Names Must Be Converted Before Configuring a New Server Language

##### **Problem:**

If your disk volume includes ODS-2 file names with escape-encoded characters (characters that are in the format `__XX`), and you configure a new server language (that is, other than the default (English (USA))), the escape-encoded characters will not be interpreted as expected.

##### **Solution:**

Before configuring a language other than the default (English (USA)), you must first convert the volume to ODS-5, and then convert all the file names, using the PWCONVERT command (which invokes the file name conversion utility). Refer to the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide* for more instructions.

#### 5.3.11.2 Entering Extended Character Set Characters in Single-Byte ISO-8859 Form Can Result With Wrong Data

##### **Problem:**

If the Advanced Server and OpenVMS are set to different languages, and you enter extended character set characters in their raw form (single-byte ISO-8959 value), OpenVMS will uppercase the extended character set characters incorrectly, and the wrong data will be provided to the Advanced Server.

##### **Solution:**

When you enter the single-byte ISO-8859 characters, enclose them in quotation marks.

### 5.3.11.3 Relative and Indexed Files with Names Containing Extended Character Set Characters Are Inaccessible

**Problem:**

Relative or indexed files stored on the server, whose names include extended character set characters (other than those supported by the default character set, ISO-8859-1), are inaccessible by clients of the server. Clients will not be able to create or modify such file shares on the server.

**Solution:**

Rename these files manually from OpenVMS so that the names do not include extended character set characters.

## 5.4 User Interface Restrictions

This section describes restrictions in the management interfaces.

### 5.4.1 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.

### 5.4.2 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.

### 5.4.3 Directory File (Folder) Name Length Restrictions on ODS-2 Disk Volumes

**Problem:**

The length of a directory file (or folder) name is limited to 39 characters on ODS-2 disk volumes. 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 on ODS-2 disk volumes, or move the share to an ODS-5 disk volume to use the extended file naming capabilities of ODS-5 disk volumes. Upgrade the file server to Advanced Server for OpenVMS and use the extended file naming capabilities of ODS-5 disk volumes.

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

#### 5.4.5 Mouse Selection Highlights Entire Screen

**Problem:**

Under certain circumstances, the entire screen is highlighted when you select a button using the mouse input device.

**Solution:**

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

#### 5.4.6 Advanced 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 will fail with an “insufficient privileges” error message.

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

The source of the problem, however, 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.

### 5.4.7 Server Description (SrvComment) Restriction

**Problem:**

The ADMINISTER SET COMPUTER/DESCRIPTION command accepts a maximum string length of 256 characters for the server description. However, some file servers, including the Advanced Server for OpenVMS file server, allow a limit of 48 characters for the string.

If the Advanced Server description string is set to a string that is over 48 characters in length, the description string is truncated to 48 characters.

### 5.4.8 Cannot Delete Stale Host Mappings

**Problem:**

If no server domain controller for a trusted domain is accessible by the Advanced Server, attempts to remove host mappings to the trusted domain's users with the ADMINISTER REMOVE HOSTMAP command fail, unless you specify the /HOSTUSER qualifier to remove all user account mappings to a specified OpenVMS user name. The following example shows what happens when specifying the REMOVE HOSTMAP command to remove a host mapping to user account THEO in the trusted domain KANSAS:

```
LANDOFOZ\\TINMAN> REMOVE HOSTMAP KANSAS\THEO
%PWRK-E-ERRGETUSRGRP, error getting information for user or group
"KANSAS\THEO"
-PWRK-E-USRGRPNOTFND, the user or group cannot be found
```

**Solution:**

To delete the host mapping, specify the /HOSTUSER qualifier to delete all mappings to the OpenVMS user account with the specified user name, as in the following example:

```
LANDOFOZ\\TINMAN> REMOVE HOSTMAP KANSAS\THEO/HOSTUSER
%PWRK-S-HOSTMAPSREM, mappings to host user "THEO" removed
```

### 5.4.9 SAVE EVENTS Command to Windows NT Server Fails

**Problem:**

When issuing the ADMINISTER SAVE EVENTS command to save the Advanced Server events log file of a remote Windows NT Server, the command fails with the error message shown below. The command works successfully against a remote Compaq OpenVMS Advanced Server.

```
%LM-E-ERROR_BAD_PATHN, bad pathname
```

**Solution:**

Do not use the ADMINISTER SAVE EVENTS command to save event log files of remote Windows NT Servers. Use the Windows NT Event Viewer.

### 5.4.10 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 or later, 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 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.

#### 5.4.11 Specifying a User Password Shorter Than the Minimum Length Produces Unexpected Error Message

**Problem:**

When you specify a password for a user account, such as when adding a user account or changing the user password, if the password is shorter than the minimum length, you get a different error message than was returned in previous versions of the Advanced Server. The following is an example showing a message returned with the current version of the Advanced Server:

```
LANDOFOZ\\TINMAN> ADD USER SCARECROW/PASSWORD=PWD_4 -
_LANDOFOZ\\TINMAN> /FLAGS=NOPWDEXPIRED
%PWRK-E-ERRADDUSER, error adding user "SCARECROW"
-LM-E-NERR_BADPASSWOR, the password parameter is invalid
```

Previous versions return other messages.

**Solution:**

To display the default minimum password length, use the SHOW ACCOUNT POLICY command. Use the SET ACCOUNT POLICY/PASSWORD\_POLICY command to modify the minimum length.

#### 5.4.12 Local Group Names Limited to 20 Characters in Length

**Problem:**

With Windows NT, the maximum length of local group names is 256 characters. The ADMINISTER user interface allows a maximum of 20 characters. If a local group name is created from Windows NT with a length exceeding 20 characters, and you try to execute an ADMINISTER command with that name specified in the command line, you will see an error message such as the following:

```
%PWRK-E-INVUSRGRPNAME, invalid user or group name
"Local Group CAD-Admin"
-PWRK-E-VALLENGHTH, a name must be 1 to 20 characters in length
```

**Solution:**

For managing local group names exceeding 20 characters in length, use the Windows NT management tools.

#### 5.4.13 MODIFY USER Commands Do Not Set Password as Expired

**Problem:**

In earlier versions of the Advanced Server, when issuing either of the following ADMINISTER commands to change a password, the password would be set as expired, so that a new user would have to set a new password.

```
MODIFY USER user-name/PASSWORD="passwd"
MODIFY USER user-name/PASSWORD="passwd" /FLAGS=PWDEXPIRED
```

However, with this release of the Advanced Server, when either of these commands is issued, the password is not set as expired.

**Solution:**

To set the password as expired, first change the password (with the first command listed above), and then issue the MODIFY USER command to set the user account password to expired:

```
MODIFY USER user-name /FLAGS=PWDEXPIRED
```

The latter command, issued on its own, will set the password as expired.

## 5.5 Windows 2000 Related Restrictions

This section describes restrictions related to support of Windows 2000.

### 5.5.1 Cannot Establish a Trust with 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.

### 5.5.2 In Windows 2000 Mixed-Mode Domain, ADMINISTER ADD USER and COPY USER Commands Fail

#### **Problem:**

When the Advanced Server participates in a Windows 2000 mixed-mode domain, and the account policy sets a minimum length for user account passwords, attempts to add or copy a user account with the ADMINISTER ADD USER or COPY USER command fail with the following error message, even when the password specified for the user account is longer than the minimum length:

```
password too short or found in history list
```

#### **Solution:**

Add or copy the user accounts from a Windows 2000 system that has administrator access to the domain.



## 5.6 Printing/Print Management Restrictions

This section describes restrictions in printing or managing print queues.

### 5.6.1 Restriction for Print Share Names with Unicode Extended Characters

**Problem:**

OpenVMS queue names support any uppercase and lowercase letters, digits, the underscore (\_), and dollar sign (\$)). When you create a print share on the Advanced Server, specifying Unicode characters other than the above-listed supported characters (specified in the format `^Uxxxx`, where `xxxx` is the 16-bit code for the character), or specifying other characters that OpenVMS does not support for queue names, the Advanced Server creates an OpenVMS queue using the standard ODS-2 format for these characters: `__XX`, where `XX` is the 8-bit code in the server character set.

**Solution:**

OpenVMS restricts the length of queue names to 31 characters. Because the Advanced Server must use the standard ODS-2 four-character substitution in the queue name for each unsupported character in the print share name, restrict the length of Advanced Server print share names accordingly. For example, seven characters is the maximum length for a print share name consisting entirely of unsupported characters.

### 5.6.2 Cannot Rename Print Share or Print Queue

**Problem:**

You cannot rename a print share or print queue that is located on the Advanced Server. If you use Windows NT to try to rename a shared printer that is defined on the Advanced Server, the printer name will revert to the original name. No error messages are displayed. Likewise, the Advanced Server ADMINISTER command-line interface as well as OpenVMS do not allow renaming of print shares or print queues.

**Solution:**

To rename a shared printer or a print queue, you need to delete it and create it again with the new name.

### 5.6.3 Cannot Move Print Job Position 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.

### 5.6.4 ADMINISTER REMOVE PRINT QUEUE Fails to Delete a Routing Print Queue

**Problem:**

If you attempt to delete an 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 Advanced  
Server
```

The second message is misleading — the print queue may have been created using the Advanced Server. The routing queue is not deleted if it has been defined to print to a print 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.

### 5.6.5 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.

### 5.6.6 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:**

This is a restriction of the Advanced Server. By enabling and using Windows NT-style printer management, this restriction is removed.

### 5.6.7 Windows NT Printer Management Restrictions

The following restrictions apply to the Windows NT management of Advanced Server shared printers:

- With Windows NT printer management enabled, Compaq recommends managing printers defined on the Advanced Server only from Windows NT. In specific, do not use the following ADMINISTER commands:
  - ADD SHARE/PRINT
  - REMOVE PRINT QUEUE
  - SET PRINT QUEUE

You can still use the following ADMINISTER commands, and all other ADMINISTER commands not related directly to printer management:

ADD PRINT QUEUE  
CONTINUE PRINT QUEUE  
PAUSE PRINT QUEUE  
SHOW PRINT QUEUES

- Depending on the processor upon which your Advanced Server runs, the number of printers managed might affect performance of printer management actions. For example, if your server runs on a relatively small processor and manages a hundred or more printers, actions that require enumerating the printers could take a long time. (Note that for some actions, printer enumeration is not obvious.) Windows NT fails to display an hourglass, causing the printer management window to appear hung. Before enabling Windows NT printer management, contact Compaq customer support for more information.
- Once you enable Windows NT printing, Compaq recommends that you do not attempt to disable it (returning to the server's local management style for printers — the ADMINISTER command interface). If you do, the printers will be unusable. You will have to perform several, time-consuming tasks to make printers functional again. For more information, contact Compaq customer support.
- The length of the name of a Windows NT manageable printer must not exceed 12 characters.
- The name of the printer must not be the same as the name of the OpenVMS execution queue selected from the list of printer Ports during printer creation.
- Advanced Server shared printers cannot be renamed from Windows NT. For more information, see Section 5.6.2, Cannot Rename Print Share or Print Queue.
- To view changes to print jobs, you must select the Refresh item from the View menu for the print queue.
- You cannot adjust the scheduling properties of Advanced Server printers (this property is normally accessed from the Windows NT printer's Properties window, under the Scheduling tab).
- You cannot set the Take Ownership security property (see Section 5.6.8, Ownership/Access Restrictions to Print Share with Group Everyone Set for No Access).
- Upgraded printers (that is, printers or print shares that were already defined on an Advanced Server when Windows NT print management was enabled) cannot be managed with all the management functionality available for printers that were added to the server by Windows NT print services. Note, for example, that you cannot use Windows NT to add an upgraded server shared printer to another workstation.

To gain full Windows NT printer management functionality for these printers, delete their associated queues and shares, and add the printers using Windows NT print services.

## 5.6.8 Ownership/Access Restrictions to Print Share with Group Everyone Set for No Access

### **Problem:**

If you add an Advanced Server shared printer to your local Windows NT workstation, and then use Windows NT to give the printer's built-in group Everyone the No Access permission, you should be able (as the Administrator or owner) to access the printer to change the permissions. However, when you click on the Permissions button in the printer properties window, access is denied. You get the following error message:

```
Operation could not be completed. Access is denied.
```

This also happens when managing network printers in a pure Windows NT environment.

In addition, you cannot take ownership of the Advanced Server shared printer. If you click on the Ownership button, you receive a message that you do not have permission to view the current owner but you can overwrite the owner. When you choose to overwrite the owner, you receive the following message:

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

Because Advanced Server ADMINISTER commands are disabled when Windows NT printer management is enabled, you cannot change the permissions of an Advanced Server shared printer.

For a related restriction, see Section 5.10.3.

### **Solution:**

Delete the shared printer from your local Windows NT workstation. Now, when you access the Permissions button, you get the following message:

```
You do not have access to this printer; only the security tab  
will be displayed.
```

You can then change the access permissions of the printer from a Windows NT Server that serves the printer's domain, and then add the printer again to your local workstation.

So, to prevent this problem from occurring with network printers that you plan to manage from your local Windows NT workstation, make sure these printers are not added to that workstation.

## 5.7 Event Logging Restrictions

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

### 5.7.1 Event in Browser Function Not Reported Properly

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 reports 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.

## 5.7.2 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 files using the ADMINISTER CLEAR EVENTS command.

## 5.7.3 Unable to Set the Event Logging Setting

### **Problem:**

When you use Windows NT 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."

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

### **Problem:**

After the Advanced Server Browser MORELOG parameter 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.

## 5.8 Browser Restrictions

This section describes restrictions related to the Browser service.

### 5.8.1 Browser State Is Not Distributed on an OpenVMS Cluster

#### **Problem:**

Performing an ADMIN 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.

## 5.8.2 Browser Problems When LAN Broadcasts Domain or Server Names That Contain Certain Non-ASCII Characters

### **Problem:**

If the Advanced Server V7.3 for OpenVMS is the master browser of a domain and receives an announcement of a domain or a server whose name contains certain non-ASCII characters, the browser cannot supply information about servers or domains on the LAN. In addition, the Browser service of any backup browser in the domain will not start (it will hang in the "Start Pending" state). The event log on the backup browser will contain many failure messages stating that it could not retrieve the list of domains from the master browser, and one message stating that the failure has happened too many times. The following is an example of the error messages logged:

```
W 03/06/01 10:11:00 AM BROWSER   None           8022   N/A   SNOW
The browser was unable to retrieve a list of domains from the browser
master
\\NEASTR on the network \Device\NetBT_DC21X41.The data is the error
code.
Data:
    0000: 59 04 00 00 00 00 00 00    Y.....

E 03/06/01 10:11:01 AM BROWSER   None           8032   N/A   SNOW
The browser service has failed to retrieve the backup list too
many times on transport
\Device\NetBT_DC21X41.The backup browser is stopping.
Data:
    0000: 59 04 00 00 00 00 00 00    Y.....
```

### **Solution:**

Stop the Browser service on the Advanced Server V7.3 for OpenVMS. One of the other servers in the domain (including any Advanced Server for OpenVMSs prior to V73 and any PATHWORKS for OpenVMS servers) will take over the role of Master Browser. After that, domain and server information will be delivered correctly.

## 5.9 Domain Management Restrictions

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

### 5.9.1 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.

## 5.9.2 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 the Advanced Server software:

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

## 5.9.3 Attempts to Promote BDC Might Fail

### **Problem:**

If you have a Windows NT 4.0 domain controller with Service Pack 4 or later in the domain, you will see the following messages during certain actions, such as synchronization of domain controllers or during promotion of an Advanced Server domain controller to a primary domain controller. These messages are seen on the Advanced Server when it attempts to start the NetLogon service on the Windows NT 4.0 system.

```
-LM-E-UIC_SYSTEM, a system error has occurred  
-LM-E-ERROR_ACCESS_DE, insufficient privileges for attempted  
operation
```

When the Windows NT system attempts to start the NetLogon service, the following two event messages might be seen there:

```
Error 005: Access is denied.
```

```
Failed to authenticate with \\server-name, a Windows NT  
domain controller for domain domain-name
```

The first message is recorded at the Windows NT system as event ID 7023. The second message includes the server and domain names, and is recorded as event ID 3210.

### **Solution:**

Use the Windows NT 4.0 domain controller to initiate the activity (such as synchronization or promotion).

## 5.9.4 Member Server Role Restrictions

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

### 5.9.4.1 Limitations When Joining a Domain as a Member Server Without Specifying Domain Administrator Information

#### **Problem:**

When you configure the Advanced Server as a member server (using PWRK\$CONFIG.COM), you are given the option of supplying a user name and password of an existing domain administrator account to join the domain. If you choose not to supply this information, the configuration procedure succeeds, but you are left in a state that makes it impossible to manage your member server

while logged into accounts in the domain. For example, if you attempt to add a share using the ADMINISTER utility, you will receive this error:

```
SQUAWK.DOM\TCMON> ADD SHARE TOOLS SYS$SYSDEVICE:[TOOLS]
%PWRK-E-ERRADDSHARE, error adding share "TOOLS"
-LM-E-ERROR_NETWORK_A, network access is denied
```

You will still have the ability to administer the domain objects, such as users, groups, trusts, and so forth.

**Solution:**

Compaq recommends that you specify a domain administrator user name and password when joining a domain as an Advanced Server member server. If this is not practical, you can manage the server by logging into an account in the member server's local database.

#### 5.9.4.2 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.

#### 5.9.4.3 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 PWRKSCONFIG.COM configuration procedure aborts, leaving the user at the OpenVMS DCL prompt.

```
%PWRK-F-MAKEMACH, error creating machine account
PWRK-I-RESTORE, restoring original settings
$
```

**Solution:**

Make sure the user has administrator privileges.

#### 5.9.4.4 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, in the computer name on a non-clustered server, or in the Advanced Server cluster alias name on a clustered server, any special ASCII characters. 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 extended character set characters are not supported in computer names, alias names, domain names, and trusted domain names. Note also 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
```

For related restrictions, see Section 5.2.3, The ^ Character Does Not Get Encoded in Parameter Values, and Section 5.3.11, Server Language Restrictions.

**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.

#### 5.9.4.5 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.

## 5.10 Remote Management Restrictions

This section describes restrictions relating to remote management of the Advanced Server for OpenVMS product.

### 5.10.1 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.

**5.10.2 “Add Workstations to Domain” Right Does Not Appear in List of Rights Available to Windows NT Clients Using User Manager**

When a Windows NT client using User Manager selects Policies → User Rights, the list of rights fails to include the “Add Workstations to Domain” right. (This occurs only when the Advanced Server is a primary domain controller.)

**5.10.3 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 4.3.9. For a related restriction, see Section 5.6.8.

**Solution:**

Use the Advanced Server ADMINISTER TAKE FILE OWNERSHIP command.

**5.11 Transport Restrictions**

This section describes restrictions involving transports supported by the server.

**5.11.1 DEFZA FDDI Controller Is Not Supported with Advanced Server for OpenVMS****Problem:**

The DEFZA FDDI controller is not supported with Advanced Server for OpenVMS.

**Solution:**

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

**5.11.2 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 message:

```
%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:<sup>2</sup>, then in the NCL script SYSS\$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
```

### 5.11.3 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 are a maximum length of 14 characters.

## 5.12 OpenVMS Cluster Restrictions

This section describes restrictions involving servers in an OpenVMS Cluster.

### 5.12.1 Two or More Advanced Servers in an OpenVMS Cluster Must All Be in the Same Subnet

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

### 5.12.2 Server Parameter Hidden Causes Browser to Fail to Announce Itself

#### **Problem:**

OpenVMS Cluster configurations that were upgraded from PATHWORKS V5 for OpenVMS (LAN Manager) may exhibit the following behavior. Under 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 as follows:

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

With the Advanced Server for OpenVMS, these parameters are stored in the OpenVMS Registry as follows:

- Value **Hidden** in registry key  
SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters
- Value **AliasHidden** in registry key  
SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters

<sup>2</sup> 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 settings for these Advanced Server for OpenVMS parameters in the OpenVMS Registry behave differently. The Browser service included with the Advanced Server for OpenVMS interprets the **Hidden** value setting and fails to announce the availability of the browser on the network.

**Solution:**

Compaq recommends making sure that the **Hidden** value is not set to “yes” when you start the Advanced Server for OpenVMS.

### 5.12.3 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.
```

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.

### 5.12.4 After Upgrading the Advanced Server, PWRK\$CONFIG Must Be Run Before Changing the Cluster State

**Problem:**

If you are upgrading the Advanced Server from a previous Advanced Server for OpenVMS or PATHWORKS V6 for OpenVMS (Advanced Server) product, and at the same time, you change the cluster state of your server system (from a standalone to a cluster system, or vice versa), PWRK\$CONFIG will fail.

**Solution:**

You can change the cluster state and reconfigure the previous version of the server (before upgrading), or upgrade to V7.3 and, afterward, change the cluster state.

## 5.13 Advanced Server with DEC Rdb (Oracle) Restrictions

This section describes restrictions involving interaction with DEC Rdb (Oracle).

### 5.13.1 Advanced Server Fails to Start Correctly on Systems Running DEC Rdb (Oracle)

**Problem:**

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

## 5.14 Documentation Problems

This section describes documentation errors or inaccuracies that are in the Advanced Server for OpenVMS documentation.

### 5.14.1 Installation Guide Erroneously States That PWRK\$PWMON Performs Logging

In Appendix E of the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*, the descriptions for the files PWRK\$CMTLIBSHR.EXE, PWRK\$CMT\_LM.EXE, and PWRK\$CMTSHR.EXE state that these images are no longer usable and that the PWRK\$PWMON utility now performs logging. The PWRK\$PWMON utility does not actually perform logging but rather displays data collected by the server.

### 5.14.2 Installation Guide Provides Misleading Information about TCP/IP and Multiple Adapters

In Section 3.11.2 of the *Compaq Advanced Server for OpenVMS Server Installation and Configuration Guide*, a note states the following:

If TCP/IP is running on multiple network adapters, and you select one of those adapters for use by the Advanced Server, make sure the adapter you select corresponds to the first adapter listed in the TCP/IP local hosts database.

This is wrong. The correct information is as follows:

If TCP/IP is running on multiple network adapters (interfaces), and you select one of those adapters for use by the Advanced Server, make sure that the adapter you select corresponds to the first IP address for the host in the TCP/IP local hosts database, as seen by executing the following command

```
$ TCPIP SHOW SHOST hostname
```

To ensure that the selected adapter is the first one listed in the local hosts database, you have to do the following:

- Remove all entries for the local host from the local hosts database
- Rerun the TCPIP configuration procedure TCPIP\$CONFIG.COM to remove and then add again all the interfaces, making sure that the interface you want Advanced Server for OpenVMS to use is the first interface added. Define the logical PWRK\$KNBDAEMON\_DEVICE to point to the selected adapter.

### 5.14.3 Administrator's Guide Erroneously Advises Registering Cluster Alias Name at DNS Server

Section 2.4.4.3 of the *Compaq Advanced Server for OpenVMS Server Administrator's Guide* states that, as one of the conditions to enable dynamic load balancing using TCP/IP Services for OpenVMS, the server cluster alias name should be registered at the authoritative DNS (BIND) name server for the cluster as a cluster alias name (that is, as having multiple A resource records for a single host name). This is wrong. If you are running Version 5.0 or later of TCP/IP Services for OpenVMS, you should make sure that the cluster alias name is NOT already registered as a cluster alias name.

The *Compaq Advanced Server for OpenVMS Server Administrator's Guide* also recommends that you remove all entries for the cluster alias from the LMHOSTS file of all clients and servers. It fails to mention that you should also remove all entries for the cluster alias from the local hosts file.

For more information, see Section 3.8, Setting Up Dynamic Cluster Load Balancing in WANs.