



# Software Product Description

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**PRODUCT NAME:** Advanced Server Version 5.0 for UNIX®

**SPD 61.56.04**

## Description

The Advanced Server for UNIX (ASU) software, formerly known as Advanced Server for DIGITAL UNIX (ASDU), is a Tru64 UNIX layered application that provides seamless interoperability between systems running the Tru64 UNIX operating system software and systems running a Windows operating system software.

The ASU software implements Windows NT Version 4.0 server services such as file, print, security, and management services on a system running the Tru64 UNIX Version 4.0D or later operating system software. The Tru64 UNIX system on which the ASU software is running appears as a Windows NT Version 4.0 server to other Windows systems and to users of Windows systems.

You use Windows commands and utilities to manage the ASU software and to make UNIX based file systems and printers available to Windows users as shares. Windows users access the shares without modification to their PC systems.

Features of the ASU software include:

- Windows domain controller support. You can configure the ASU software as a Windows NT Version 4.0 primary domain controller (PDC), a backup domain controller (BDC), or a member server. In a Windows 2000 environment, you can configure the ASU software as a BDC (when the Windows 2000 domain controller is configured to run in mixed-mode) or as a member server. The ASU software can also act as a PDC to a set of Windows 2000 Professional Workstations.
- Trust Relationships. You can configure the ASU software to participate in a trust relationship.
- Management from Windows Administration Tools. You can create file and printer shares and user accounts by using native Windows NT Version 4.0 administrative tools and by using the Windows 2000 Microsoft Management Console

(MMC) Active Directory Computers and Users snap-in

- Windows NT Security. You can set Windows NT Version 4.0 permissions on disk shares. Users can set NT access control list (ACL) permissions on individual files. Additionally, you can establish Windows NT local and global groups.
- High Availability. You can provide highly available and scalable disk shares, printer shares, and even Windows NT Version 4.0 PDC services using reliable Compaq TruCluster Server software.
- You can use network information service (NIS) to create Tru64 UNIX user accounts.
- Two free user connections.
- Common Internet File System (CIFS) support.
- International language support.
- Year 2000 support.

The ASU software is an evolution of the PATHWORKS for DIGITAL UNIX (Advanced Server) software.

The ASU software provides much of the same functionality as the PATHWORKS software. The most notable differences are that the ASU software supports mixed-case and long file names, installs independently of the NetWare product, and does not support remote boot or PCSA mail.

The ASU software provides a seamless upgrade procedure that allows you to transfer your PATHWORKS domain user account and share databases to ASU.

## Features

### Sharing File Systems

You can make the following file systems mounted on a Tru64 UNIX system on which ASU is installed

available to Windows 95, Windows 98, Windows NT and Windows 2000 users as disk shares:

- Compaq's Advanced File System (AdvFS)
- UNIX File System (UFS)
- Network File System (NFS) - the ASU software provides a utility that automatically exports nonrestricted network file systems as disk shares
- CD-ROM File System (CDFS) read-only

ASU disk shares are based on the Microsoft LAN Manager Extended Server Message Block (SMB) protocols, which enable Windows users to connect to ASU disk shares by using native Microsoft utilities, such as the Windows Explorer. Once connected, the file system that is associated with the disk share appears as a transparent extension to a Windows user's local computing environment.

Other types network users can access files in ASU disk shares. For example, a Tru64 UNIX interactive user can access a text file stored in an ASU disk share.

#### **Sharing Tru64 UNIX Printers**

You can make printers hosted by Tru64 UNIX servers on which the ASU software is installed available to Windows users as printer shares.

Users configure their Windows systems to use ASU printer shares by using Microsoft utilities, such as the Add Printer Wizard. The ASU software stores supported printer drivers for Windows clients in a disk share. The printer drivers are then available for clients to automatically download.

Once configured, the printer appears as a transparent extension to the Windows user's local computing environment.

#### **Tru64 UNIX TruCluster Software Support**

By installing the ASU software on a Tru64 UNIX system running Compaq TruCluster Server software, you can provide highly scalable and available file, print and Windows NT Version 4.0 domain controller services. ASU works with TruCluster Server Version 5.0 or later software in single-instance or multi-instance mode. ASU also supports traditional TruCluster Available Server Environment (ASE) Version 1.6 or higher software.

In TruCluster Server V5.0 single-instance mode, the ASU server runs on only one cluster member at a

time. If the cluster member fails, the ASU server automatically relocates to another cluster member and reconnects clients.

In TruCluster Server V5.0 multi-instance mode, the ASU server runs on multiple cluster members at the same time but appears as one ASU server to clients. The TruCluster software distributes client connections to all cluster members running the ASU software. If a cluster member fails, the TruCluster Server software automatically redistributes its client connections to another cluster member running the ASU software.

#### **Security**

The ASU software provides flexible security by supporting either the Windows NT network security model exclusively, or Windows NT combined with Tru64 UNIX network security models.

The ASU software supports both Windows NT file share level security (including support for Windows NT local and global groups) and Windows NT ACL permissions on individual files.

When using the Windows NT network security model exclusively, only the Windows NT user permissions are checked. Tru64 UNIX user account and file level security are ignored.

When using combined security, users have two accounts; a domain user account that you create and a Tru64 UNIX user account that the ASU software automatically creates.

Two options are provided with the ASU software to coordinate Tru64 UNIX and Windows NT Version 4.0 domain user account passwords:

- Windows NT authentication for Tru64 UNIX. This option installs a Tru64 UNIX security module that enables Tru64 UNIX interactive users to be authenticated by using their domain user account name and password. This option is available only on systems running the Tru64 UNIX Version 5.0 or higher operating system software.
- Tru64 UNIX and domain user account password synchronization. When enabled, this option automatically synchronizes a user's Tru64 UNIX user account password or their UNIX NIS password to their associated domain user account password. Windows users can use the native Windows NT or Windows 95 or 98 password change screen to change their passwords. This option requires that the ASU

server run as the PDC in a Windows NT Version 4.0 domain.

The ASU software provides full Windows NT Version 4.0 domain controller support, including support for the Tru64 UNIX system to be a PDC, BDC, or Member Server in a standalone Tru64 UNIX or mixed Tru64 UNIX and Windows NT environment. When operating in a Windows 2000 domain, you can configure the ASU server as a BDC or a member server

The ASU software also supports Windows NT Version 4.0 trust relationships, allowing you to grant enterprise-wide permissions to access ASU or Windows NT resources in other domains. ASU also supports Windows NT local and global groups to simplify the administration of access to file and printer shares.

The ASU software runs the netlogon service, which eliminates the need for the user to supply a password for each disk or print share connection that they make within a domain.

### **International Language Support**

You can configure the ASU software to display disk and printer share names and ASU user and group names in different languages. For example, if Windows systems are running the French edition of Windows, you can configure the ASU software to display information in French.

The ASU software supports most of the languages that the Tru64 UNIX operating system software supports.

### **Network Transport Support**

The ASU software provides and allows for the use of the following networking transport software:

- NetBIOS for TCP/IP is used over the system's installed TCP/IP transport software for local and wide area networking.
- NetBEUI transport is used exclusively for local area networking.
- NetBIOS for DECnet/OSI is used over the system's installed DECnet/OSI transport software for local and wide area networking.

The ASU software can participate in a routed wide-area TCP/IP network when you configure it to resolve computer TCP/IP names and addresses by using any or all of the following methods:

- A Microsoft WINS Server. You can configure the ASU software as a WINS client.
- A Domain Name Server (DNS).
- An lmhosts file. You edit the lmhosts file on each system to add an entry that includes the NetBIOS name and TCP/IP address for each system with which the ASU server needs to communicate.

### **Administration**

You can administer the ASU software from a Windows system by using the following Windows graphical user interfaces (GUIs):

- User Manager for Domains to create and manage domain user accounts and groups
- Server Manager to create and manage disk shares
- Event Viewer to view ASU events
- Windows 2000 MMC Active Directory Computers and Users snap-in.

You can administer the ASU software using net commands on a system running the Tru64 UNIX Version 4.0D or higher software on which the ASU software is installed.

You can also use the default Tru64 UNIX Motif-based GUI tools (such as dxaccounts, dxfileshare, or dxprint) on a system running the Tru64 UNIX Version 5.0 software on which the ASU software is installed. You can use the Tru64 UNIX SysMan event viewer to view status information about print jobs sent to the ASU server.

### **Installation and Configuration**

You install the ASU software by using the Tru64 UNIX setld installation utility. You configure the ASU software by using the asusetup utility.

Most of the ASU configuration values are stored in a central database called the ASU registry; some are stored in the lanman.ini configuration file. You can view and manage the ASU registry using the Windows NT regedit32 utility or one of the registry editors that the ASU software provides.

### **Hardware Requirements**

The ASU software is supported on Alpha systems as specified in the Tru64 UNIX operating system Version 4.0D or higher Software Product Descriptions (SPD 41.61.xx).

Refer to the Tru64 UNIX operating system SPDs for a complete list of supported systems, components, and peripherals.

### **Memory Requirements**

In addition to the memory needed for the Tru64 UNIX operating system, a minimum of 64 MB of memory is recommended for the ASU software. However, if the ASU software is to be used in an enterprise environment, then the memory requirement is based on the number of clients and shares that the ASU server supports.

A minimum 4 MB of memory is recommended per server process. Each server process can support 1 to 8 clients by default. To minimize the memory requirements, you can configure the ASU software to allow each server process to support more clients, thus requiring fewer server processes.

These memory requirements are minimum requirements only. Memory requirements can vary widely based on the system CPU, the number of clients using the server and their activities, and the other applications running on the system.

### **Disk Space Requirements**

In addition to the disk space requirements for the Tru64 UNIX operating system, a minimum of 40 MB of disk space is required on the system disk for the ASU software.

The ASU disk size requirement may vary depending on the user's system environment, configuration, and software options. Additional disk space may be required to create or expand ASU configuration databases or as user files are created.

### **Network Interface Controller**

The ASU software requires at least one network interface controller.

The ASU software supports all 10/100 Ethernet, FDDI, Token Ring, ATM and Gigabit Ethernet controllers supported by the Tru64 UNIX operating system.

### **Optional Hardware**

The ASU software supports all the printers supported by the Tru64 UNIX operating system Version 4.0D and higher, and for which there is a Windows driver.

## **Software Requirements**

The ASU software requires the Tru64 UNIX operating system software Version 4.0D or higher (SPD 41.61.xx).

### **Optional Software**

The ASU software supports the following optional software:

#### **Tru64 UNIX TruCluster Software**

TruCluster Server Software Version 5.x or higher (SPD 70.79.xx).

TruCluster Production Server Software Version 1.x or higher (SPD 63.92.xx).

TruCluster Available Server Software Version 1.x or higher (SPD 44.17.xx).

### **Network transport software**

DECnet/OSI Version 4.0 for Tru64 UNIX (SPD 41.92.xx)

### **Associated Client Software**

The following software products can access ASU disk and printer shares:

- Windows 2000
- Windows NT Version 3.5, Version 3.51, and Version 4.0
- Windows 95 or Windows 98
- Windows for Workgroups Version 3.11
- PATHWORKS for DOS and Windows Version 6.x or higher (SPD 55.07.xx)
- LAN Manager Version 2.x workstation software for DOS, Windows, and OS/2
- PATHWORKS 32 Version 7.x (SPD 56.33.xx)

## **Growth Considerations**

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

## **Software Licensing**

Provided with the ASU software are two free license connects that are immediately available to use after you install and configure the ASU software. Each

client that connects to the ASU server needs a license.

You purchase additional ASU licenses in the form of a product authorization key (PAK) called ASDU-CONNECT, which you load in to the Tru64 UNIX License Management Facility (LMF). You purchase ASDU-CONNECT PAKs based on the number of clients that you expect to connect to the ASU server. For example, if you expect a maximum of 100 clients to connect to the ASU server, a 100-user license is required for that server.

Each system running the ASU software requires an ASDU-CONNECT PAK. The ASU Version 5.0 server will not accept PATHWORKS server licenses. The next version of the ASU server will not accept PATHWORKS client licenses. For more information on the Compaq licensing terms and policies, contact your local Compaq representative or reseller.

## Ordering Information

The following table lists the quantities and part numbers for ASDU-CONNECT PAKs:

Number of Concurrent Users	New Licenses	Migration License from PATHWORKS
1	QL-5U29M-3B	QL-5U39M-3B
10	QL-5U29M-3C	QL-5U39M-3C
25	QL-5U29M-3D	QL-5U39M-3D
50	QL-5U29M-3E	QL-5U39M-3E
100	QL-5U29M-3F	QL-5U39M-3F
250	QL-5U29M-3G	QL-5U39M-3G
500	QL-5U29M-3H	QL-5U39M-3H
1000	QL-5U29M 3J	QL-5U39M-3J

## Distribution Media and Documentation

The ASU software and online documentation are shipped on the Tru64 UNIX Associated Products Volume 2 CD-ROM.

## Software Product Services

A variety of service options are available from Compaq. For more information, contact your local sales office or distributor.

## Software Warranty

Warranty for this software is provided by Compaq with the purchase of a license for the software as defined in the applicable Compaq's Standard Terms and Conditions.

This information is valid at time of release. Please contact your local sales support office or distributor for the most up-to-date information.

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