

Software Product Description

PRODUCT NAME: UniTree™ Version 1.0 for DEC OSF/1®
AXP Systems

SPD 46.36.00

DESCRIPTION

UniTree is a hierarchical file and storage management system that migrates files between magnetic disks and robotic mounted magnetic tapes based upon local system administrator settings. UniTree's distributed, client/server-based family of message-passing software modules cooperate to provide automatic and transparent file and storage management for networked, heterogeneous (multivendor) computing environments. Its modular, object-oriented architecture offers versatile implementation for diverse and rapidly changing demands in a growing open-systems marketplace.

The UniTree architecture accommodates dynamic, rapidly expanding systems with large data storage requirements. The UniTree central file server transparently extends the client computer disk by hierarchical storage management to provide the user with an apparently unlimited disk capacity. Hierarchical storage management (HSM) is the ability for software to make decisions based on well defined policy about what constitutes active and inactive data. HSM further provides the ability to move the inactive data out of the system with no action being taken by the end user. Finally, HSM provides visibility to the files regardless of whether they reside on disk or tape.

UniTree is scalable, allowing it to be used effectively on AXP systems including workstations, servers, and mainframes. It is designed to manage many terabytes of data and can accommodate large file sizes (larger than 2 GB). UniTree has an option to create multiple, redundant copies of files (e.g., when long-term data integrity is a requirement). These copies may be maintained on separate storage devices or on separate volumes.

UniTree is also a systematic family of tools for managing large data libraries in any size of computing environment, from local area network to supercomputer center. In its simplest form, UniTree provides a client/server architecture with a single central file server, and user access via standard NFS and FTP access methods. The UniTree Central File Manager (UCFM) is the UniTree subsystem that implements this basic architecture.

The following robotic tape storage devices are currently supported with UniTree.

- StorageTek 4400 ACS Automated Tape Library
- TL210-BA (SpectraLogic) 8mm Tape Carousel
- Metrum RSS48 and RSS600 VHS Tape Libraries

Features

- Automatic and transparent file migration between magnetic disks and robotic mounted tape media
- Increased online storage by transparently extending the client system disk
- Scalability via nine license capacities ranging from 60GB to 10TB
- Important but infrequently accessed data stored on less expensive media
- Standard NFS and FTP interfaces
- File migration policies determined by the System Administrator
- Automatic multiple file copy capability (administrator selectable for 1 to 16 copies)
- Compliant with the IEEE Mass Storage Reference Model, Version 4

HARDWARE REQUIREMENTS

Processor and/or hardware configurations as specified in the System Support Addendum (SSA 46.36.00-x).

SOFTWARE REQUIREMENTS

- DEC OSF/1 Operating System, V1.3

Refer to the System Support Addendum (SSA 46.36.00-x) for availability and required versions of prerequisite /optional software.

DOCUMENTATION

Online ConDist Documentation in Bookreader format:

- *UniTree for OSF/1 User's Guide*
- *UniTree for OSF/1 Installation/Administration Guide*
- Manpages via the standard *man* utility

Hardcopy Documentation

- *UniTree for OSF/1 User's Guide, AA-PWZSA-TE*
- *UniTree for OSF/1 Installation/Administration Guide, AA-PWZTA-TE*
- *UniTree for OSF/1 Reference Pages Guide, AA-PX90A-TE*
- UniTree for OSF/1 Documentation Kit, QA-0QJAA-GZ

ORDERING INFORMATION

Software Licenses: UniTree is licensed by the amount of secondary storage required (i.e., the amount of online and off line tape to be managed). The license sizes are as follows:

QL-0Q0A9-AA 60GB of secondary storage data
QL-0Q1A9-AA 140GB of secondary storage data
QL-0Q2A9-AA 280GB of secondary storage data
QL-0Q3A9-AA 560GB of secondary storage data
QL-0Q4A9-AA 900GB of secondary storage data
QL-0Q5A9-AA 1.4TB of secondary storage data
QL-0Q6A9-AA 2.5TB of secondary storage data
QL-0Q7A9-AA 5.0TB of secondary storage data
QL-0Q8A9-AA 10TB of secondary storage data

Software Upgrade Licenses:

QL-0Q9A9-AA Upgrade from 60GB to 140GB
QL-0QAA9-AA Upgrade from 140GB to 280GB
QL-0QBA9-AA Upgrade from 280GB to 560GB
QL-0QCA9-AA Upgrade from 560GB to 900GB
QL-0QDA9-AA Upgrade from 900GB to 1.4TB
QL-0QEA9-AA Upgrade from 1.4TB to 2.5TB
QL-0QFA9-AA Upgrade from 2.5TB to 5.0TB
QL-0QGA9-AA Upgrade from 5.0TB to 10TB

Software Media Kit

- QA-054AA-H8 CD-ROM with online documentation

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

License Management Facility Support

This layered product supports the OSF/1 License Management Facility.

License units for this product are allocated on an Unlimited System Use based on the UniTree tertiary file system size licensed. The UniTree file system size is determined by the total amount of data managed by UniTree on tape media. UniTree managed tape media may be located within the robotic library, or located external to a robotic library handled by an operator. Disk cache capacity is not factored into the file system license size and may be sized as needed with no impact on the UniTree license size.

For more information on the License Management Facility, refer to the DEC OSF/1 Operating System Software Product Description (SPD 41.61.xx) or the *Guide to Software Licensing* in the DEC OSF/1 Operating System documentation set.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from Digital. For more information, contact your local Digital office.

SOFTWARE WARRANTY

Warranty for this software product is provided by Digital with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

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System Support Addendum

PRODUCT NAME: UniTree™ Version 1.0 for DEC OSF/1®
AXP Systems

SSA 46.36.00-A

HARDWARE REQUIREMENTS

Processors Supported

AXP: DEC 3000 Model 400S
DEC 3000 Model 400
DEC 3000 Model 500S
DEC 3000 Model 500X
DEC 3000 Model 500
DEC 4000 Model 600
DEC 7000 Model 600
DEC 10000 Model 600

Processors Not Supported

AXP: DEC 3000 Model 300
VAX: VAX, MicroVAX, and VAXstation
DEC: DECstation and DECsystem

Other Hardware Required:

A robotic media library is required for automated storage management. If a robotic media library is not attached, all media mounts must be performed by an operator. The StorageTek robot may be *shared* with other client systems, but the system administrator must ensure that other client systems will not use tape media assigned for UniTree management. The TL210 and Metrum robots must be allocated to UniTree and cannot be shared with other applications. UniTree also requires that two or more disks (all partitions) be dedicated to the UniTree application. These disks will not be configured into the OSF file system. The total number and size of the disks depend on site specific requirements.

Robotic Connection Requirements:

- StorageTek 4400 Automated Cartridge System (ACS): In order to connect a DEC OSF/1 system *data path* to the StorageTek 4480-M20 Control Unit, a TC44 STI-to-FIPS60 adapter is required. Currently, this is only supported via a connection through an HSC (90/60/70/40) to a Computer Interconnect (CI) port on the host system.

- TL210-BA (SpectraLogic) 8mm Tape Carousel: The TL210-BA Tape Carousel includes the base robot which holds up to 40 TKZ8X (5.0GB) tapes, required bar code reader, and two internal TKZ09 tape transports. The *data path* to the host system is via SCSI and requires a dedicated SCSI bus. Either the host system *external* SCSI bus, or use of a PMAZB-AA (Turbochannel to Dual SCSI Bus Adapter) is acceptable. The robotic *control path* is connected to one of the host system *tty* serial ports (normally /dev/tty00). The TL210-BA is only supported on host systems that can provide a SCSI bus connection and *tty* serial port connection.
- Metrum RSS48 and RSS600 Robots: The Metrum RSS48 robot includes the base robot which holds up to 48 *data-grade* T-120 (14.5GB) or T-160 (18.0GB) tapes, required bar code reader, and two internal RSP-2150 tape transports. The Metrum RSS600 robot includes the base robot which holds up to 600 *data-grade* T-120 (14.5GB) or T-160 (18.0GB) tapes, required bar code reader, and two to five internal RSP-2150 tape transports. The *data path* to the host system is via SCSI and requires a dedicated SCSI bus. If there are more than three RSP-2150 Tape Transports used, two dedicated SCSI buses are recommended for performance reasons. Either the host system *external* SCSI bus, or use of a PMAZB-AA (Turbochannel to Dual SCSI Bus Adapter) is acceptable. The robotic *control path* is connected to one of the host system *tty* full-handshake serial ports (normally /dev/tty01). The Metrum RSS48 and RSS600 robots are only supported on host systems that can provide a SCSI bus connection and *tty* serial port connection.

Bar code labels for each tape media are required and must be purchased separately, in addition to the tape media. Bar code labels for use with the StorageTek 4400 ACS family must be six character *Tri-Optic* compatible. Bar code labels for use with the TL210-BA must be eight character *Exabyte-Style* compatible. Bar code labels for use with the Metrum RSS48 and RSS600 robots must be 13 character *Metrum* compatible.

Disk Space Requirements

For AXP-Based Systems:

Disk space required for installation:

Root file system:	3 MB
Other file systems:	usr 75 MB var 0 MB

Disk space required for use (permanent):

Root file system:	3 MB
Other file systems:	usr 75 MB var 0 MB

These counts refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration, and software options.

SOFTWARE REQUIREMENTS

DEC OSF/1 Operating System V1.3 or higher

DOCUMENTATION

Online ConDist Documentation in Bookreader format:

- *UniTree for OSF/1 User's Guide*
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Hardcopy Documentation

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- *UniTree for OSF/1 Reference Pages Guide*, AA-PX90A-TE
- UniTree for OSF/1 Documentation Kit, QA-0QJAA-GZ

GROWTH CONSIDERATIONS

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

DISTRIBUTION MEDIA

This product is only available as part of the OSF/1 Consolidated Software distribution on CD-ROM (QA-054AA-H8 Software media (CD-ROM) with online documentation).

ORDERING INFORMATION

AXP-Based Systems:

Software Licenses:

UniTree is licensed by the amount of secondary storage required (i.e., the amount of online and off line tape to be managed). The license sizes are as follows:

QL-0Q0A*^{**} 60GB of secondary storage data
QL-0Q1A*^{**} 140GB of secondary storage data
QL-0Q2A*^{**} 280GB of secondary storage data
QL-0Q3A*^{**} 560GB of secondary storage data
QL-0Q4A*^{**} 900GB of secondary storage data
QL-0Q5A*^{**} 1.4TB of secondary storage data
QL-0Q6A*^{**} 2.5TB of secondary storage data
QL-0Q7A*^{**} 5.0TB of secondary storage data
QL-0Q8A*^{**} 10TB of secondary storage data

Software Upgrade Licenses:

QL-0Q9A*^{**} Upgrade from 60GB to 140GB
QL-0QAA*^{**} Upgrade from 140GB to 280GB
QL-0QBA*^{**} Upgrade from 280GB to 560GB
QL-0QCA*^{**} Upgrade from 560GB to 900GB
QL-0QDA*^{**} Upgrade from 900GB to 1.4TB
QL-0QEA*^{**} Upgrade from 1.4TB to 2.5TB
QL-0QFA*^{**} Upgrade from 2.5TB to 5.0TB
QL-0QGA*^{**} Upgrade from 5.0TB to 10TB

Software Media: QA-054AA-H8

Software Documentation: QA-0QJAA-GZ

* Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

The above information is valid at time of release. Please contact your local Digital office for the most up-to-date information.

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