



Software Product Description

PRODUCT NAME: *Compaq ACMSxp Version 3.2A for Tru64 UNIX Alpha*

SPD 50.66.10

DESCRIPTION

Compaq ACMSxp for *Tru64 UNIX*® is middleware that makes client/server business applications run more reliably, efficiently, and securely. *ACMSxp* works with commercial software products from Compaq and other third party vendors to provide users with a complete and customizable development and runtime environment for transaction processing applications such as order tracking, accounting and billing, shop floor control, and insurance claims processing.

Many of the concepts and features incorporated in *ACMSxp* have evolved from the *Compaq ACMS* TP monitor, which has been available on the *Compaq OpenVMS VAX* platform since 1984. However, *ACMSxp* is a different and separately orderable product that runs on multiple platforms and does not share any common source or binary *ACMS* files. *ACMSxp* has been designed to take advantage of open transaction processing technology, incorporating the latest industry standards for data communications and distributed computing. *ACMSxp* also conforms to widely accepted Spirit and X/Open industry standards for transaction processing.

ACMSxp helps guide users through the entire application development life cycle, including the installation, planning, design, development, testing, implementation, management, and maintenance of complex TP applications. *ACMSxp* provides a high-level structured transaction definition language (STDL) that defines TP application functions and runtime characteristics.

ACMSxp makes efficient use of the operating system and associated hardware resources, making itself particularly suitable for running mission-critical applications that require high throughput and performance.

ACMSxp is closely integrated with the following Compaq layered software products:

- Distributed Computing Environment (DCE) for inter-process and client/server data communication
- *Compaq TP Desktop Connector* for *ACMSxp* for client access to *ACMSxp*
- C language compiler for *Tru64 UNIX Alpha*
- *Compaq COBOL* language compiler for *Tru64 UNIX Alpha*

Because *ACMSxp* is designed to allow for modular implementation as well as development, users can separate and distribute front-end processing (data input/output operations such as forms processing) from back-end processing (data calculations and database storage). In addition, *ACMSxp* allows developers to implement applications using nonstandard terminal or I/O devices (such as barcode readers and ATMs). *ACMSxp* supports the deployment of TP applications in a production environment.

Features

- Application development environment
- Runtime system
- System and application administration
- Front-end/back-end processing
- Database management
- Japanese text data support
- Documentation set

Application Development Environment

The *ACMSxp* development environment is based on a modular approach to application development. When creating an application with *ACMSxp*, programmers can clearly delineate the behaviors of the various functional portions of the application, including user interface capture and display, data calculation, access to data storage, and higher-level transaction block responsibilities.

To support programmers in adhering to this modular approach, *ACMSxp* provides a high-level programming language called the Structured Transaction Definition Language (STD L). STD L is a compiler-based, English-like definition language that replaces lower-level system service calls for most TP application functions. Because the STD L syntax is similar to English, programmers can more easily define the sequence and style in which the various functions of an application occur.

Using STD L, programmers can specify as much or as little application control as they choose, depending on their preferences for configuring the application environments. Some environments require that most of the control occur at the client, with the server dedicated to database access. In this case, relatively little STD L programming is required. Other applications require more stringent control at the server, to provide more sophisticated security, reliability, or availability features. A more robust high-level definition of the application using STD L is warranted in this case.

The basic functional components of STD L are:

- Exchange step definition and invocation for display interaction
- Processing step definition and invocation for database access and general computation activities
- Data resource definition of entities such as servers, tasks, workspaces, and logs
- Transaction demarcation and resource manager recovery specification
- Execution flow control specification such as IF ... THEN ... ELSE and loop statements

Runtime System

ACMSxp, when integrated with other layered products, provides all features required for the execution of TP applications in a distributed environment. The *ACMSxp* runtime system is based on DCE. *ACMSxp* uses DCE for remote procedure call (RPC) communication, naming resolution, threading and security. The runtime system is composed of the following components, which manage applications and control of the runtime system itself:

- Request execution

A request is the execution of a sequence of application procedures that perform work for an *ACMSxp* end user. A request is always executed on behalf of a particular *ACMSxp* end user and is created when the end user invokes an application procedure. When a client performs a remote procedure call, the call is redirected to a backup or secondary server if the intended server is not reachable (due to node failure, for example). This behavior is called failover.

- Exception handling

An exception is the occurrence of an error or other unexpected condition during the execution of a request. Exceptions may be raised by the application of the *ACMSxp* runtime system. When an exception occurs, it is either propagated back to the client that initiated the request, or it is handled at the task level without the client knowing an exception occurred.

- Servers

An *ACMSxp* system has two types of servers; system servers defined by *ACMSxp*, and user-defined application servers. System servers provide *ACMSxp* runtime features and are managed by the *ACMSxp* system. An application server provides a set of application procedures and is managed through *ACMSxp* system administration. The set of application procedures provided by a particular server is defined by an STD L group specification.

- Security

To invoke a server, *ACMSxp* software uses an authorization mechanism. If authorization fails, invocation is rejected. Any authorization failure is logged as a security event.

- RPC communication

The *ACMSxp* runtime environment provides full support for the DCE RPC protocol supplied with the DCE RPC product. The DCE RPC protocol supports full interoperability between *ACMSxp* clients and servers residing in separate address spaces.

- Transactional coordination

The *ACMSxp* runtime environment provides full transactional coordination of resources across all platforms including Windows NT®, *OpenVMS*, and *Tru64 UNIX*.

- Process management

Runtime server process termination is detected by the *ACMSxp* runtime system and may cause the creation of a new server process to replace the terminated one.

System and Application Administration

ACMSxp provides facilities for managing the runtime system environment and includes the following administrative features:

- System configuration

Scripts are provided for creating, deleting, starting, and stopping the TP system. Most management operations can be performed remotely using the ACMSxp GUI.

- Centralized administration

System and application servers can be managed from a central location. This can be done from either the command-line interface or from the GUI (Graphical User Interface) running on the Windows NT platform. The operations that can be performed from one location include: creating, deleting, starting, and stopping servers; showing and modifying attributes of TP systems, servers, and other objects within TP systems.

- Multiple TP systems

A single node can host multiple TP systems. Each TP system and the application components within it are completely isolated from other TP systems on the node. For example, test and production versions of an application can run in separate TP systems on the same node.

- Access control

Access control lists (ACLs) control who can invoke procedures or insert elements into queues at runtime. ACLs can also control who can perform administration operations.

- Event logging

Exceptions and trace information in the runtime environment can be configured to capture events and record them in an event log. A tool is provided for examining the contents of the event log.

- Performance monitoring

ACMSxp performance monitoring software allows you to collect data concerning processing activity within a particular TP system on an as needed basis.

- Selectable Resource Manager (RM) model

Allows the configuration of ACMSxp with or without transactional support. Allows selection of several transaction management configurations depending on the number and type of resource managers being used.

Front-End/Back-End Processing

With the aid of customer-written presentation servers, ACMSxp applications can be developed with a centralized or client/server configuration. Customer-written presentation servers enable customers to interface with client devices or nonstandard devices. ACMSxp routes exchange I/O to the device that originated the request and supplies the device with the context necessary for the customer-written presentation server to access the device.

Database Management

For non-transactional access, ACMSxp supports any database management system that runs on Tru64 UNIX Alpha and can be called from C or COBOL procedures. For transactional access, ACMSxp supports any XA compliant resource managers.

Japanese Text Data Support

ACMSxp for Tru64 UNIX Alpha allows the exchange of Japanese text data across different platforms through the use of code conversion functions.

Documentation Set

ACMSxp for Tru64 UNIX Alpha includes a complete and comprehensive documentation set. ACMSxp concepts and components are explained to new users in a *Software System Overview*. An *STD L Encyclopedia* is provided as a full reference to the STD L language. Additionally, a comprehensive case study demonstrates how ACMSxp applications are designed, developed, and managed, using the example of a reservations processing application.

The ACMSxp for Tru64 UNIX Alpha documentation set consists of the following manuals and online help:

- *ACMSxp Release Notes*

Specific information related to the current version of ACMSxp for Tru64 UNIX Alpha and material added too late for publication in other ACMSxp documents.

- *Getting Started*

A manual containing a step-by-step tutorial for developing a simple ACMSxp application.

- *ACMSxp for Tru64 UNIX Installation Guide*

Description of installation requirements, step-by-step installation instructions, and post-installation tasks, with full examples.

- *Software System Overview*

An overview of the ACMSxp software system, including an introduction to the STD L language and a discussion of related products.

- *STDL Encyclopedia*

The reference material for the STDL application programming interface to the ACMSxp portable transaction processing monitor.

- *ACMSxp Developing and Managing Applications*

A three-part manual describing how to design, develop, and manage a transaction processing application that can be implemented using the ACMSxp portable TP monitor.

- *ACMSxp Help*

A comprehensive help file that describes the STDL language and how to develop and manage ACMSxp applications.

- *ACMSxp Management GUI Help*

A system administration GUI help file that provides information about managing ACMSxp entities through the GUI entity hierarchy window.

CONFORMANCE TO STANDARDS

ACMSxp conforms to formal industry standards set forth by the following standards bodies:

- International Standards Organization (ISO)
- American National Standards Institute (ANSI)

ACMSxp conforms to the following industry specifications:

- Open Software Foundation (OSF) DCE (part of The Open Group)
- Subset of Multivendor Integration Architecture (MIA)
- NMF/Spirit
- X/Open (part of The Open Group)
 - DTP Model
 - XA Interface
 - STDL

HARDWARE REQUIREMENTS

ACMSxp Version 3.2A for Tru64 UNIX is supported on all hardware configurations running Tru64 UNIX Version 4.0D. Reference can be made to the configuration charts listed in the Tru64 UNIX Operating System Software Product Description (SPD 41.61.xx).

Disk Space Requirements (Block Cluster Size = 1):

Disk space required on user disk for installation:	84,000 blocks (43 megabytes)
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The sizes are approximate; actual sizes may vary depending on the user's environment, configuration, and software options.

Memory Requirements:

The minimum memory supported is 128 Megabytes. However, the use of this software in conjunction with increased memory capability improves performance.

SOFTWARE REQUIREMENTS

ACMSxp for Tru64 UNIX Alpha runs on all Alpha machines that use the Tru64 UNIX Alpha operating system. Allowable configurations include: one Alpha processor for centralized configurations; multiple Alpha processors for client/server configurations.

For Tru64 UNIX Alpha workstations or systems that use terminals:

Software required on all Tru64 UNIX Alpha nodes in ACMSxp environment:

- ACMSxp Version 3.2A for Tru64 UNIX Alpha
- Tru64 UNIX Operating System Version 4.0DAS00003-19990208 or higher.
- Compaq DCE Version 3.0 (ECO 1) or higher, Runtime Services for Tru64 UNIX.

Additional software required on at least one node in the OSF/DCE cell:

- Compaq DCE Version 3.0 (ECO 1) or higher, Cell Directory Server for Tru64 UNIX.
- Compaq DCE Version 3.0 (ECO 1) or higher, Security Server for Tru64 UNIX.

Additional software required on all Tru64 UNIX Alpha nodes used for development:

- Tru64 UNIX Alpha Developer's Extension (includes C compiler)
- Compaq DCE Version 3.0 (ECO 1) or higher, Application Developer's Kit for Tru64 UNIX.

SOFTWARE LICENSING INFORMATION

ACMSxp for Tru64 UNIX Alpha is available in either a Development or Runtime license offering. The Development license permits the use of the software to develop, test, and deploy ACMSxp applications. The Runtime license permits the use of the software to test and deploy ACMSxp applications.

Both Development and Runtime license offering are available in two different license types. These license types are Capacity and Concurrent Use:

- The Capacity license offering permits the use of the software on a single system.
- The Concurrent Use license offering permits the use of the software by a single user.

This software is furnished only under a license. For more information about Compaq's licensing terms and policies, contact your local Compaq office.

LICENSE MANAGEMENT FACILITY SUPPORT:

This layered product supports the Tru64 UNIX License Management Facility.

License units for this product are allocated on a Capacity and/or Concurrent Use basis.

Each Concurrent Use license allows any one individual at a time to use the layered product.

For more information on the License Management Facility, refer to the Tru64 UNIX Operating System Software Product Description (SPD 41.61.xx) or the License Management Facility manual of the Tru64 UNIX Operating System documentation set.

OPTIONAL SOFTWARE

- TP Web Connector Version 1.2

Enables seamless web access to business applications running on ACMSxp or ACMS systems. For more information visit the web site located at:

<http://www.software.digital.com/tpwebconnect>

- MICROFOCUS COBOL Version 4.0U1 or higher
- Compaq COBOL Version 2.4 or higher
- Any XA compliant database (i.e. OPENIngres, ORACLE7™ Version 7.3.2 or higher, SYBASE®)

- TP Desktop Connector Version 3.1 for ACMSxp

Enables desktop system users to access ACMSxp applications from the native desktop system environment. For more information visit the web site located at:

<http://www1.digital.com/tpdesktop>

- AltaVista Tunnel

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.

DISTRIBUTION MEDIA

This product is distributed on an individual product CDROM.

This product is also available as part of the Tru64 UNIX Software Product Library on CDROM.

The software documentation for this product is also available as part of the Tru64 UNIX Online Documentation Library on CDROM.

YEAR 2000 READY

This product is Year 2000 Ready.

Year 2000 Ready is defined: "Year 2000 Ready" products are defined by Compaq as products capable of accurately processing, providing, and/or receiving date data from, into and between the twentieth and the twenty-first centuries, and the years 1999 and 2000, including leap year calculations, when used in accordance with the associated product documentation and provided that all hardware, firmware and software used in combination with such products properly exchange accurate date data with the products.

For additional information visit the DIGITAL Brand area on Compaq's Year 2000 Ready web site located at <http://www1.digital.com/year2000/warranty.asp>.

SOFTWARE WARRANTY

This software is provided by Compaq with a 90 day conformance warranty in accordance with the Compaq warranty terms applicable to the license purchase.

ORDERING INFORMATION

Listed below is the ordering information for the *ACMSxp* Development and Runtime offerings.

Development	
Licenses	QL-247A*-**
Media/Documentation	QA-247AA-H8
Documentation Only	QA-247AA-GZ
Product Services	QT-247A*-**

Runtime	
Licenses	QL-248A*-**
Media/Documentation	QA-248AA-H8
Documentation Only	QA-248AA-GZ
Runtime Services	QT-248A*-**

* 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 Compaq office for the most up-to-date information.

SOFTWARE PRODUCT SERVICES

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

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