digital™

Software Product Description

PRODUCT NAME: DIGITAL DECintact, Version 3.0 **SPD 29.58.06**

DESCRIPTION

The DIGITAL™ DECintact™ product provides a foundation for building simple and complex transaction processing applications on one or more systems under the OpenVMS™ operating system. The DECintact product runs as a collection of services and several processes under the OpenVMS operating system. DECintact supports either single-threaded (per-process) or multithreaded (server) application program design methodologies. Multiple versions of the DECintact product can execute at the same time and share the same physical memory, while remaining completely independent. The DECintact product offers the following major facilities:

- Front-end services
- Database services
- Two-phase commit
- Oracle TRACE Option™for Rdb support
- LSE templates
- Security and menu dispatching
- File management and restart/recovery
- Queue management
- Network management

Front-end Services

The DIGITAL DECintact product supports DIGITAL DECforms™ forms or DIGITAL DECintact forms within DECintact terminal-based applications. A single system menu can display multiple applications, some using DECforms and some using DECintact forms. However, a single application can not mix forms products.

DIGITAL DECforms Forms

Access to DECforms services is available through a set of DECintact routines. For more information on DECforms, refer to the DECforms Software Product Description (SPD 29.90.xx).

DIGITAL DECintact forms

DECintact forms supports VT100™, VT200™, VT300™ and VT400™ (in VT200 emulation mode) series terminals as though they were intelligent block-mode terminals. Programmers create screen forms interactively through the Terminal Forms Editor (TFE). Forms are virtual in length, and multiple forms can be windowed on a single terminal. Fields on a form have video and edit attributes, which are handled by the terminal management facility. A user-written edit routine facility exists, which allows character, field, and form editing to be augmented by the programmer. The ability to print a hard copy of the screen is a built-in service of the terminal management facility.

Database Services

The DECintact product allows multithreaded applications to access synchronous resource managers such as Oracle Rdb™ and Oracle CODASYL DBMS™. Also included are facilities to monitor/configure this environment (that is, control the number of server pool instances, and monitor overall server pool throughput).

Two-Phase Commit

Utilizing the DECdtm™ component of the OpenVMS operating system, the DECintact product can coordinate distributed transactions to perform atomic updates to multiple and different resource managers that are DECdtm compliant (for example, Oracle Rdb, Oracle CODASYL DBMS and DECintact queues).

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Oracle TRACE Option for Rdb Support

The DECintact product allows the collection of performance event data by Oracle TRACE at two levels. The first level allows the collection of performance event data from within the DECintact code. The second level involves allowing application programmers to insert Oracle TRACE calls into their application code.

LSE Templates

The DECintact product provides LSE DECintact routine templates to allow programmers to generate DECintact applications more quickly and accurately.

Security and Menu Dispatching

The DECintact product provides a comprehensive security and menu system. A mechanism for establishing security profiles for local/remote users and terminals is provided. The DECintact product makes use of a hierarchical menu system that permits references to both lower-level menus and to menu functions directly invoking applications. All menu items can be protected, and users are shown only those items for which they have proper entitlement. Hours of operation, password expiration, transaction audit, and response-time reports are among the features of the DECintact security system.

File Management

DIGITAL's Record Management Services (RMS™) is used for file and record access. The DECintact File Management facility improves upon its use of the RMS facility by supporting shared relative files, logically deleted records, and implicit file openings. The DECintact product also supplies its own hash file access support, which provides a high performance method of inserting and retrieving records. All record operations are considered atomic for the purposes of restart/recovery.

There are two options for recovery of RMS files: DECintact Recovery and RMS Journaling. Both coordinate with DECdtm (Two-Phase Commit) to provide both recovery-unit journaling and after-image journaling. DECintact users can choose either recovery method (DECintact or RMS Journaling) on a file by file basis.

DECintact Recovery

This service is provided as part of the base DECintact product.

RMS Journaling

This is an optional service. For information on RMS Journaling, refer to the RMS Journaling Software Product Description (SPD 27.58.xx).

Queue Management

The DECintact product provides a comprehensive set of routines that support the creation of disk-based and memory-based queues. A queue consists of items that are priority ordered with up to 65,000 priority classes per queue. Queue items may be inserted FIFO or in priority order and are removed either FIFO or atomic for the purposes of restart/recovery. All disk-based queues are fully recoverable. The DECintact product supports remote queues, queue sets, multiple queue insertions, enqueue-level threshold alarms, and proof and reconciliation statistics.

Network Management

The DECintact product supports explicit and implicit remote access at the menu-item level and uses DECnet™ facilities for intersystem communications. Network access is supported at two levels: peer-to-peer and front-end-to-host. Peer-to-peer access allows users with sufficient entitlement to invoke applications remotely on another participating DECintact system. Front-end-to-host access provides a transparent method of off-loading forms management (including both built-in and user-written validation) and menu level security from a host onto a front-end system. A front-end system also offers automatic host failure rollover in the event that a CPU within a host cluster system fails.

OpenVMS Cluster™ Features

The DECintact product supports the building of simple, as well as complex, OpenVMS Cluster applications. All DECintact file accesses, as well as all disk-based queue operations, use the OpenVMS distributed lock manager to arbitrate cluster wide system resources. The DECintact system support of OpenVMS Cluster features, in conjunction with its own restart/recovery strategies, can be used to simplify the implementation of high availability applications.

Development Option

The DECintact Development Option provides all features of the product for development and deployment of an application.

Run-Time Option

As a subset of the Development Option, the DECintact Run-Time Option allows existing, developed applications to be run in a production environment under an alternate license. This option does not provide the facilities for developing applications.

Remote-Access Option

As a subset of the Run-Time Option, the Remote-Access Option provides the ability to off-load the Terminal Management Facilities in a distributed application environment, to ''remote'' or ''front-end'' systems under an alternate license.

Conformance to Standards

Standards Industry Practice Conformance

There are no relevant formal standards, industry specifications or practices, certificates or conformance documents to which DECintact adheres or conforms.

HARDWARE REQUIREMENTS

DECintact Version 3.0 for OpenVMS is supported on all hardware configurations referenced in the OpenVMS Operating System for Alpha and VAX, Version 7.1, Software Product Description (SPD 25.01.xx).

- Disk Space Requirements (Block Cluster Size = 1):
- Requirements on OpenVMS VAX
  - Disk space required for installation: 52,000 blocks (26,624 KB)
  - Disk space required for permanant use: 46,000 blocks (23,552 KB)
- Requirements on OpenVMS Alpha
  - Disk space required for installation: 85,000 blocks (43,520 KB)
  - Disk space required for permanant use: 75,000 blocks (38,400 KB)

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.

OPTIONAL HARDWARE

Any device supported by the prerequisite software.

SOFTWARE REQUIREMENTS

For Systems Using Terminals (No DECwindows Interface):

OpenVMS Operating System V6.2 and above.

For Workstations Running Windows interface

OpenVMS Operating System V6.2 and above.
DECwindows Motif™ for OpenVMS V1.2x.

In addition to these requirements, DECnet for OpenVMS V7.1 (or DECnet-PLUS for OpenVMS V7.1) is required for the Remote-Access Option.

OPTIONAL SOFTWARE

Software	OpenVMS VAX	OpenVMS Alpha
DIGITAL DECforms	1.3-2.2	2.2
DECnet for OpenVMS	7.1	7.1
DECnet-PLUS for OpenVMS	7.1	7.1
Oracle TRACE Option for Rdb for OpenVMS	2.2	2.2
DEC BASIC™ for OpenVMS	3.8	1.2
DEC C for OpenVMS	5.5	5.5
DEC COBOL™ for OpenVMS	5.4	2.4
Oracle CDD/Repository™	4.2A-7.0	5.3;6.1A;7.0
Oracle CODASYL DBMS	5.1-7.0	5.1-7.0
DEC/MMS for OpenVMS	12.1	12.1
DEC/Test Manager for OpenVMS	12.1	12.1
DEC Fortran™ for OpenVMS	6.5	7.1
DEC Language-Sensitive Editor	4.3	4.3
DEC Pascal for OpenVMS	5.5	5.5
PL/I for OpenVMS	3.5	4.1
Oracle Rdb	5.1-7.0	5.1-7.0
Volume Shadowing™ for OpenVMS	7.1	7.1

DISTRIBUTION MEDIA

- TK50 Streaming Tape (VAX only)
- CD-ROM

The software for DECintact for OpenVMS is available as part of the OpenVMS Software Product Library CD-ROM (VAX and Alpha).

The documentation for DECintact for OpenVMS is available as part of the OpenVMS Online Documentation Library on CD-ROM (VAX and Alpha).

ORDERING INFORMATION

VAX Part Numbers:

License Type	Part Number
Development System	QL-VF1A*-**
Run-Time, Unlimited Use	QL-VF2A*-**
Remote Access, Unlimited Use	QL-VF3A*-**
Development System Media	QA-VF1AA-H5
Run-Time Media	QA-VF2AA-H5
Remote Access Media	QA-VF3AA-H5

Service Offering	Part Number
Development System	QT-VF1A*-**
Run-Time	QT-VF2A*-**
Remote Access	QT-VF3A*-**

Alpha Part Numbers:

License Type	Part Number
Development System	QL-5N6A*-**
Run-Time, Unlimited Use	QL-5N5A*-**
Remote Access, Unlimited Use	QL-5N4A*-**

Service Offering	Part Number
Development System	QT-5N6A*-**
Run-Time	QT-5N5A*-**
Remote Access	QT-5N4A*-**

Documentation:(Platform independent)

Documentation Only	Part Number
Development System	QA-YF1AA-GZ
Run-Time	QA-YF2AA-GZ
Remote Access	QA-YF3AA-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.

SOFTWARE LICENSING

Licensed by Digital Equipment Corporation from Advanced Systems Concepts.

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 OpenVMS License Management Facility. License units for this product are allocated on an Unlimited System Use basis.

For more information on the License Management Facility, refer to the OpenVMS Operating System for Alpha and VAX Software Product Description (SPD 25.01.xx) or the License Management Facility manual of the OpenVMS 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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