Software Product Description

PRODUCT NAME: DEC RdbExpert for VMS, Version 1.0 **SPD 31.72.00**

DESCRIPTION

DEC RdbExpert is a DECwindows and command-line-based expert system database tuning tool that is designed to reduce the time and effort required to produce tuned VAX Rdb/VMS physical database storage designs. DEC RdbExpert is intended to help database designers and administrators during the initial design and subsequent maintenance phases of database development. DEC RdbExpert should expand the tuning capabilities of less experienced database administrators while improving overall DBA tuning productivity.

DEC RdbExpert gathers information of importance encompassing logical level input related to physical design. DEC RdbExpert bases its design recommendations on this logical schema information, as well as the system environment, database record volumes, and transaction workload information. DEC RdbExpert makes extensive use of import functions which enables users to quickly provide the required data. For example, DEC RdbExpert can import DECtrace transaction workload data captured directly from running VAX Rdb/VMS databases for use in the design process, thus creating designs based upon the actual workload executing against existing databases. The DBA then reviews this input and modifies it where necessary to ensure that it is an accurate reflection of the actual run-time requirements.

DEC RdbExpert generates storage designs in the form of the SQL Data Definition Language statements for VAX Rdb/VMS. It also generates executable storage design creation procedures as well as the VAX Rdb/VMS RMU/LOAD and UNLOAD scripts used to unload existing data and reload it into the redesigned database. In addition, DEC RdbExpert generates design reports to educate the DBA about the design process and the database tuning rules.

The DEC RdbExpert knowledge base is cognizant of the VAX Rdb/VMS database system internals, tuning rules, and run-time optimizer heuristics. DEC RdbExpert uses this knowledge to help the DBA arrive at the performance tuned design.

Features

DEC RdbExpert provides a DECwindows interface, taking advantage of the advanced user interface capabilities of that environment. DEC RdbExpert also provides a full-function, command-line interface for non-DECwindows environments.

Using DEC RdbExpert, a database designer/administrator can:

- Import VAX Rdb/VMS database schemas into the DEC RdbExpert design repository
- Enter the database transaction workload information by one or more of the following methods:
  - — Using workload information captured by DECtrace
  - — Through a text file containing the VAX SQL like Physical Design Language (PDL) created by the DBA
  - — Through SQL MODULE language files
  - — Through the DECwindows interface
- View and edit the workload data modifying or entering cycle, frequency, and importance information for the various workload elements of the database applications, that is, applications, programs, and transactions with their accompanying data manipulation language (DML) requests
- Enter the database volume and occurrence information by one or more of the following methods:
  - — From the VAX Rdb/VMS root file and tables
  - — Through a text file containing the volume information created by the DBA
  - — Through the DECwindows interface
- Apply volatility ratings - how frequently the data is added, modified, or deleted, to the schema at both the relation (record) and column (field) levels
- Define system environment for the target database
- Catalog multiple logical designs, each with one or more physical designs associated with it

- Generate the design reports that identify the input assumptions and design information for the recommended parameters and database design as well as educate the user regarding the design rules and choices
- Create VAX Rdb/VMS physical designs consisting of SQL physical DDL, and creation and run-time parameters, as well as the .COM procedure to execute these designs
- Create RMU/UNLOAD - LOAD scripts to unload and load the VAX Rdb/VMS data into the redesigned databases

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXserver, or VAXstation configuration as specified in the System Support Addendum (SSA 31.72.00-x).

SOFTWARE REQUIREMENTS

For Systems Using Terminals (No DECwindows Interface):

- VMS Operating System
- VAX Rdb/VMS (Run-Time Option)

  The Run-Time software is required for DEC RdbExpert to create and access its physical design repository.

For Workstations Running DECwindows:

- VMS Operating System (and necessary components of VMS DECwindows).
- VAX Rdb/VMS (Run-Time Option)

  The Run-Time software is required for DEC RdbExpert to create and access its physical design repository.

Refer to the System Support Addendum (SSA 31.72.00-x) for availability and required versions of prerequisite/optional software and for information regarding components of VMS DECwindows.

ORDERING INFORMATION

Software Licenses: QL-VFJA*-**
Software Media: QA-VFJA*-**
Software Documentation: QA-VFJAA-GZ
Software Product Services: QT-VFJA*-**

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

SOFTWARE LICENSING

This software is furnished under the licensing provisions of Digital Equipment Corporation's 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 VMS License Management Facility.

License units for this product are allocated on a CPU-capacity basis.

For more information on the License Management Facility, refer to the VMS Operating System Software Product Description (SPD 25.01.xx) or the License Management Facility manual of the VMS Operating System documentation set.

For more information about Digital's licensing terms and policies, contact your local Digital office.

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: DEC RdbExpert for VMS, Version 1.0 **SSA 31.72.00-A**

HARDWARE REQUIREMENTS

Processors Supported

VAX: VAXft 3000-310,
VAX 4000 Model 300,
VAX 6000 Model 200 Series,
VAX 6000 Model 300 Series,
VAX 6000 Model 400 Series,
VAX 6000 Model 500 Series

VAX 8200, VAX 8250, VAX 8300, VAX 8350, VAX 8500, VAX 8530, VAX 8550, VAX 8600, VAX 8650, VAX 8700, VAX 8800, VAX 8810, VAX 8820, VAX 8830, VAX 8840, VAX 9000-210, VAX 9000-410

VAX-11/730, VAX-11/750, VAX-11/780, VAX-11/785

MicroVAX: MicroVAX II, MicroVAX 2000, MicroVAX 3100, MicroVAX 3300, MicroVAX 3400, MicroVAX 3500, MicroVAX 3600, MicroVAX 3800, MicroVAX 3900

VAXstation: VAXstation II, VAXstation 2000, VAXstation 3100 Series, VAXstation 3200, VAXstation 3500, VAXstation 3520, VAXstation 3540

VAXserver: VAXserver 3100, VAXserver 3300, VAXserver 3400, VAXserver 3500, VAXserver 3600, VAXserver 3602, VAXserver 3800, VAXserver 3900, VAXserver 4000 Model 300

VAXserver 6000-210, VAXserver 6000-220, VAXserver 6000-310, VAXserver 6000-320, VAXserver 6000-410, VAXserver 6000-420, VAXserver 6000-510, VAXserver 6000-520

Processors Not Supported

MicroVAX I, VAX-11/725, VAX-11/782, VAXstation I, VAXstation 8000

Processor Restrictions

- All processors require mass storage units to backup and restore established databases.
- All processors require a specified minimum memory (refer to the following chart).
- All processors require a device for installation of the software (refer to the following chart).

  Magnetic Tape = One 9-track, 1600 BPI Magnetic Tape
- Certain processors have other requirements (refer to the following chart).

System	Minimum Memory	Installation Device	Other Requirements
VAX-11/750	8	Magnetic tape	ECO level 3 or later
VAX-11/780 or VAX-11/785	12	Magnetic tape	ECO level 4 or later (VAX-11/780) WCS microcode version 123 or later
VAX 82xx	12	Magnetic tape	
VAX 83xx	12	Magnetic tape	
VAX 8974 and VAX 8978	12 (per processor)	Magnetic tape	
All other supported VAX Systems	12	Magnetic tape or TK50 tape drive	

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Block Space Requirements (Block Cluster Size = 1)

Disk space required for installation:	17,000 blocks (8,704K bytes)
Disk space required for use (permanent):	10,600 blocks (5,427K bytes)

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.

CLUSTER ENVIRONMENT

This layered product is fully supported when installed on any valid and licensed VAXcluster* configuration without restrictions. The *HARDWARE REQUIREMENTS* sections of this product's Software Product Description and System Support Addendum detail any special hardware required by this product.

* V5.x VAXcluster configurations are fully described in the VAXcluster Software Product Description (29.78.xx) and include CI, Ethernet, and Mixed Interconnect configurations.

SOFTWARE REQUIREMENTS

For Systems Using Terminals (No DECwindows Interface):

- VMS Operating System V5.2 - V5.4
- VAX Rdb/VMS (Run-Time Option) V3.1 - V4.0

  The Run-Time software is required for DEC RdbExpert to create and access its physical design repository.

For Workstations Running DECwindows:

- VMS Operating System V5.4 (and necessary components of VMS DECwindows)
- VAX Rdb/VMS (Run-Time Option) V3.1 - V4.0

  The Run-Time software is required for DEC RdbExpert to create and access its physical design repository.

VMS Tailoring

For VMS V5.x systems, the following VMS classes are required for full functionality of this layered product:

- VMS Required Saveset
- Network Support
- VMS Workstation Support

For more information on VMS classes and tailoring, refer to VMS Operating System (SPD 25.01.xx).

OPTIONAL SOFTWARE

Certain versions of these products depend upon a specific version of the Operating System. Refer to the System Support Addendum of the product in question to determine which version is necessary.

- VAX Rdb/VMS Version 3.1 - V4.0 interactive or development software

  The VAX Rdb/VMS interactive or development software is required to implement the DEC RdbExpert suggestions.
- DECtrace for VMS Version 1.0

  DECtrace can optionally collect database transaction workload information directly from running VAX Rdb/VMS database for use by DEC RdbExpert in generating enhanced physical designs.

  Note: Application programs do NOT have to be coded with DECtrace procedure calls to make use of this functionality.

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

Tape: 9-track 1600 BPI Magtape (PE), TK50 Streaming Tape

This product is also available as part of the VMS Consolidated Software Distribution on CDROM.

ORDERING INFORMATION

Software Licenses: QL-VFJA*-**
Software Media: QA-VFJA*-**
Software Documentation: QA-VFJAA-GZ
Software Product Services: QT-VFJA*-**

* Denotes variant fields. For additional information on 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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