Software Product Description

PRODUCT NAME: DECtrace for VMS, Version 1.1 **SPD 25.G1.01**

DESCRIPTION

DECtrace is a VMS layered product that collects and reports on event-based data. This data is helpful for performance analysis, capacity planning, database tuning, error logging, and other areas in which detailed application or layered product specific performance and/or event information is useful. DECtrace event data can be gathered from any VMS layered product or combination of products that contain DECtrace service routine calls. Customers can also put DECtrace event calls in their application code to collect application-specific event and performance data. DECtrace is designed to operate with minimal performance impact on the system and can be used in both development and production environments. DECtrace supports both single-node and VAXcluster environments. It also offers both Full Development and Runtime license options, depending upon the capabilities required. The Runtime option provides a cost-effective means for deploying the DECtrace collection capability throughout the network.

DECtrace considers an event to be an application-defined occurrence. An event can have a start and an end (duration event) or can simply occur (point event). DECtrace allows events within layered products or customer application programs to be defined and data items to be associated with each event. These data items can be resource utilization statistics (for example, CPU time). Additionally, data items specific to the Digital layered product, third party layered product, or customer application can be associated with each event. These facility-specific data items might include information supporting database tuning, application-level error logging, application transaction performance data, and a range of other information logging needs.

DECtrace provides two major components:

- A set of service routines — Calls to these services, representing the application events, are placed within the layered application software.
- The DECtrace administration component — Through the command line interface, the user can register the layered products and layered applications (called facilities), selectively collect from one or more of these facilities, display information about facilities and collections, and later format the data into the DECtrace VAX Rdb/VMS database or RMS file.

DECtrace provides detail, summary, and frequency reports based upon the formatted event data in the DECtrace VAX Rdb/VMS database. Since the event data can be stored in a VAX Rdb/VMS database or an RMS file, users can write customized reports using DATATRIEVE, DECdecision, VAX RALLY, other 4GL tools, or standard 3GL languages such as VAX COBOL. The DECtrace formatted VAX Rdb/VMS database definitions can optionally be stored in VAX CDD/Plus. DECtrace event data can also be used by other applications such as DEC RdbExpert, which optimizes the performance of VAX Rdb/VMS databases.

DECtrace differs from other collectors; it is event based while most other collectors are timer-based. An event-based collector collects data at defined locations in the application code each time that code is executed. Timer-based collectors perform data collection at random places within the code.

DECtrace advantages:

- Provides an easy way to collect and report on the actual resources used for each event.
- Determines the actual frequency of execution of events rather than an average or estimated frequency.
- Provides a flexible mechanism for collecting application specific information, such as which functions are used by whom, how frequently are they executed, as well as any data available to the executing program.
- Collects data from single and multi-user test and production environments allowing one or more collections per node to be active at any given time.

DECtrace does not attempt to analyze or modify the performance of an application. Its function is to collect and report the event data. Interpreting the reports is the responsibility of the user. Descriptions of the DECtrace data collected from Digital Layered products are available in the *Using DECtrace with Digital Products* guide.

For a current list of supported layered products, refer to the System Support Addendum (SSA 25.G1.01-x).

Features

DECtrace allows application or layered product software developers to:

- Define events and data items specific to their software.
- DECtrace service routine calls at appropriate locations in the program source code. These locations are determined by the type of information to be collected and the way it will be used and/or interpreted by the user.

  DECtrace V1.1 provides an LSE template to aid in the coding process.
- Register these application programs with DECtrace.

Collection can be turned on and off from the command line interface.

Users of DECtrace data may be applications developers, applications performance analysts, database administrators, system managers, capacity planners, and others interested in event or performance data. The DECtrace user can:

- Display information about facilities and collections.
- Collect event data and format it into a VAX Rdb/VMS database or RMS file.
- Record the DECtrace formatted VAX Rdb/VMS database definitions into CDD/Plus, if CDD/Plus is installed on the system.
- Merge data from different collection instances.
- Produce default detail, frequency, and summary reports from the Rdb/VMS formatted database.
- Generate customized reports from the VAX Rdb/VMS database or RMS data file using 3GL or 4GL language products.

Note: The capabilities available to the user are dependent upon whether the Full Development or the Runtime license option is installed. A full description of the license types and associated capabilities is found in the *SOFTWARE LICENSING* section of this SPD.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXserver, or VAXstation configuration as specified in the System Support Addendum (SSA 25.G1.01-x).

SOFTWARE REQUIREMENTS

For Systems Using Terminals (No DECwindows Interface):

- VMS Operating System
- VAX Rdb/VMS Runtime License. The Runtime License is required for DECtrace to create and access its administration, history, and formatted databases.

Note: The VAX Rdb/VMS Runtime License is included with VMS V5.1 - V5.4, however, the user needs the VAX Rdb/VMS Runtime media to obtain the software.

Refer to the System Support Addendum (SSA 25.G1.01-x) for availability and required versions of prerequisite/optional software.

ORDERING INFORMATION

Full Development Software Licenses: QL-VW2A*-**
Full Development Software Product Services: QT-VW2A*-**

Runtime Software Licenses: QL-YV4A*-**
Runtime Software Product Services: QT-YV4A*-**

Full Development and Runtime Software Media: QA-VW2AA-**
Full Development and Runtime Software Documentation: QA-VW2AA-GZ

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

A minimum of DECtrace Runtime must be installed on each node from which events will be collected in a VAXcluster configuration. The Full License should be installed wherever DECtrace data formatting and reporting are to take place.

DECtrace Full Development and DECtrace Runtime Licenses may be installed on different nodes of the same VAXcluster configuration.

SOFTWARE LICENSING

Full Development Option

DECtrace Full Development provides a library of DECtrace service routine calls and the ability to:

1. Register facilities
2. Create selection definitions
3. Schedule collections and collect data
4. Format the collected data

5. Create reports using the DECtrace reporting mechanism

Runtime Option

DECtrace Runtime provides a library of DECtrace service routine calls and the ability to:

1. Register facilities
2. Create selection definitions
3. Schedule collections and collect data

The raw data collection files must be formatted by a node with the Full Development DECtrace license installed. The Full Development license is also required to use the DECtrace reporting mechanism to report from the formatted DECtrace database.

This software is furnished under the licensing provisions of the Digital Equipment Corporation's Standard Terms and Conditions.

For more information about Digital 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 and Clusterwide 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 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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