Software Product Description

PRODUCT NAME: DECscheduler for VMS, Version 1.1 **SPD 32.19.01**

DESCRIPTION

DECscheduler for VMS is a distributed scheduling application that automates the execution of repetitive production jobs on VMS Systems. A job is a DCL command file or a VMS command string. DECscheduler for VMS separates information which specifies how jobs should be run from the jobs themselves. It automatically takes care of the job re-scheduling calculation, completion notification, etc. A scheduled job can run when constraints on its execution are met. There are two types of constraints; the time must be LATER than the job's scheduled time, and all jobs that the job "depends on" must be completed with a successful status later than the last time the job completed. A job can depend on up to 16 other jobs, which can be within a VAXcluster or on remote nodes of a wide area DECnet network.

Job database information can be easily accessed through DCL commands. Most commands can also work remotely over the network, allowing centralized control of distributed applications.

DECscheduler for VMS has full VAXcluster failover capabilities. Jobs can be divided into steps. Interrupted jobs can be restarted automatically at the current step on another node in the VAXcluster or restricted to a single node. An installation modifiable load-balancing procedure can be invoked at execution time to select the VAXcluster node for job execution.

The product includes an event logging/reporting facility which can be used to produce job reports.

Features

- Choice of three user interfaces - DCL, DECwindows or menu-driven.
- Customizable fiscal calendar.
- Ability to predict future run schedules and resource usage, based on historical run data.
- Callable interface.
- Modifiable system load balancing.
- Executes repetitive jobs without the need for command files.
- Jobs can be synchronized with up to 16 other jobs within the network. The user interface shows which job dependencies have been satisfied and which are still pending.
- Notifies the user of job termination via VAXmail or terminal messages.
- Provides date/time (calendar and fiscal) and node/cluster run specifications for jobs. Jobs run automatically at regular intervals or restricted to run on certain days of the week.
- Provides a job recovery/restart mechanism. Interrupted jobs can be automatically restarted at the current step on another node in the VAXcluster (the user interface displays the step currently executing).
- Capability to schedule jobs remotely via the LAN or WAN. Most commands work remotely over the network.
- Sets time limits for jobs. Notifies user when a job has exceeded the designated execution time. It can also notify the user if a job failed to start by a deadline, after the scheduled time.
- Commands can operate on multiple jobs. Jobs can be specified by Group and Type as well as by name. Jobname, Group and Type are strings up to 40 characters in length. The user interface supports the use of wildcards. For example, the DCL command:

  ```
  $ SCHED RUN A*/GROUP=%O*/TYPE=*
  BACK/USER=*S*/CONFIRM
  ```

  would prompt for the running of all jobs in the local VAXcluster with names that begin with the letter "A", a type that ends in "BACK", a group with "O" in the second character position, owned by users with an "S" in their VMS username.
- Prefunctions and postfunctions can automatically run before and after the job.
- Ability to specify parameters or override job defaults (node, output file) on the run command.
- Three levels of job status display - from a one line summary to full display.

- Job reporting facility.
- Customizable log file for each DECscheduler node which provides DECscheduler event logging, diagnostics, full VMS accounting records, and seven additional activity records.

Restrictions

A job cannot have different sets of dependencies depending upon the day of week. The work-around is to duplicate the job and its dependencies using the $ SCHED COPY command.

Batch job procedures may need to be modified slightly. Logic relating to job re-scheduling and operator notification can be removed. The mode of processes run by DECscheduler for VMS is "OTHER". DECscheduler for VMS considers the completion status of the last DCL command in a command file to be the completion status of the job. Sometimes jobs have error handling logic which is invoked upon an error and which may have to be changed to exit with the proper status. A job's exit status determines whether jobs that depend on it will be run.

Day restrictions for cyclic jobs with dependencies sometimes do not produce the desired behavior when production spans day boundaries. Usually these problems can be solved by modifying the time calculation algorithm for the specific jobs using the /USE_NEXT qualifier.

Documentation

The DECscheduler Documentation Set consists of:

- *DECscheduler for VMS Installation*
- *DECscheduler for VMS User Information*
- *DECscheduler for VMS Programming*

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 32.19.01-x).

SOFTWARE REQUIREMENTS

Operating System

VMS Operating System

Layered Product

DECnet-VAX (end-node)

DECforms Runtime License (for menu-driven interface)

Refer to the System Support Addendum for availability and required versions of prerequisite/optional software (SSA 32.10.01-x).

ORDERING INFORMATION

Software Licenses: QL-YLLA*-**
Software Media: QA-YLLA*-**
Software Documentation: QA-YLLAA-GZ
Software Product Services: QT-YLLA*-**

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The DECscheduler for VMS 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 VMS Operating System documentation set.

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