CA VM:Schedule™ is designed to maximize personnel and computer resources by allowing both end users and data center management to schedule jobs and tasks to run automatically. CA VM:Schedule improves machine utilization through its off-peak scheduling capability which allows balancing the workload across shifts. Automatic scheduling of operations tasks is designed to improve system reliability and reduce operator errors.

Overview

CA VM:Schedule enables end users to schedule and control their own virtual machine’s execution twenty four hours a day. System administrators can also utilize CA VM:Schedule to initiate all kinds of activities on a regular basis. Requests can be scheduled to execute on the CA VM:Schedule service virtual machine or in an end user virtual machine that has been auto-logged. Three levels of full screen menus plus a powerful set of English like line mode commands meet the needs of a wide range of users.

Business value

CA VM:Schedule can help improve machine utilization by allowing end users to perform work during off-peak hours. Resource consumption can be monitored to prevent runaway jobs. CA VM:Schedule improves the reliability of tasks run by operations, and reduces potential operator errors by providing that these tasks are run in a predetermined order at specific times of the day. System security is maintained by verifying passwords when requests are scheduled.
Automate routine tasks and balance workloads between prime and off peak hours

The operation of today’s complex computing environments frequently requires that many tasks be executed routinely at specific times of the day. Furthermore it is desirable to run significantly large jobs at off peak hours so as to not impact interactive users.

CA VM:Schedule provides a way to more easily utilize the entire system. Full screen menus as well as a powerful set of line mode commands allow both the experienced as well as the novice user to schedule work routinely and more efficiently in a secure manner.

Features

Mainframe 2.0

As part of Mainframe 2.0 strategy, CA Technologies has implemented features that will enable your staff to install, deploy, and service your z/VM products from CA Technologies more effectively and quickly.

- **CA Mainframe VM Product Manager** provides a comprehensive suite of tools that automate the deployment of z/VM products from CA Technologies.
  - Deployment of CA VM:Schedule is simplified. Each release can be installed and maintained in a single library, and the single set of product code can be deployed to create multiple executable instances of CA VM:Schedule on the same system.

- **Standard implementation** of IBM VMSES/E (Virtual Machine Serviceability Enhancements Staged/Extended) provides numerous benefits to CA VM:Schedule users.
  - Industry standard procedures are now used to install and service CA VM:Schedule and other z/VM products from CA Technologies, providing a consistent look and feel and increased productivity.
  - Skills already developed to service z/VM itself can be leveraged to service CA VM:Schedule – the procedures and commands will be familiar.
  - Installation of PTF’s is greatly simplified, including the automated inclusion of all necessary prerequisites, providing significant time savings.
What’s new in CA VM:Schedule

- **Infrastructure enhancement:** The use of common code across z/VM products will increase the CA Technologies development team’s effectiveness and agility, enabling CA Technologies to deliver new features and enhancements to our customers more quickly and efficiently.
  - **Directory reader:** Directory look-up procedures have been simplified, which will increase efficiency and reduce errors when servicing your z/VM products from CA Technologies. CA VM:Schedule previously required a link to the object directory volume to gather information needed to schedule jobs. CA VM:Schedule now uses a centralized routine to retrieve information from the CP Object Directory, alleviating the requirement for it to have a link to the object directory volume. This central routine is common to all the z/VM products from CA Technologies that require directory information so updates will now be needed only to this routine instead of to all the individual products when object directory reading needs change.

- **Enhanced security and compliance:** Support for z/VM logon password phrases of up to 200 characters provides greater flexibility to help meet stricter security and compliance requirements. This support allows sites with an external security manager (ESM) that supports password phrases to use LOGON password phrases for CA VM:Schedule command authorization. CA VM:Schedule now also uses DMSPASS/DMSPWCHK IBM routines to perform password verification. This alleviates the need for complicated user exits when ESMs other than CA VM:Secure™ for z/VM are in use.

Key capabilities

- **Flexible scheduling:** CA VM:Schedule provides flexibility to help meet the unique requirements of individual sites. For example, a site can define the start date and length of each quarter. Thus, if a site’s fiscal calendar differs from the standard, CA VM:Schedule enables that site to run quarterly reports that help meet its unique needs.

Users have the option to schedule tasks flexibly:

- At a specific time each day
- Periodically (e.g., hourly, weekly, monthly, etc.)
- On a specific day of the week or month (e.g., the last business day of the month)
- For a specific period (e.g., from 08/01/11 through 11/25/11)
- On specific days (e.g., on Mondays)
- Every “n” days
- For a specific number of executions
— Within a specific timeframe (e.g., within 2 hours)
— Until a specific date
— Quarterly

- **Improve machine utilization:** CA VM:Schedule recovers valuable prime-time CPU resources by balancing the workload across shifts. Jobs can be scheduled to run during off-peak times, maximizing all your resources.

- **Run concurrent operations:** With CA VM:Schedule, any number of user activities (scheduling, querying, canceling, etc.) can occur simultaneously. CA VM:Schedule supports concurrent operation within its service virtual machine.

- **Monitor resource consumption and job requests:** CA VM:Schedule monitors resource consumption and job completion status with its Request Execution Monitor. Upon termination of a scheduled request, the Request Execution Monitor provides information such as return code and execution time. It will also optionally spool the virtual machine’s console log or dump its memory to provide information for problem resolution.

- **Enhance security:** CA VM:Schedule provides comprehensive security within the CP directory by requiring and verifying passwords when requests are received. CA VM:Schedule also records invalid password usage, limiting each virtual machine to a site-specified number of attempts.

- **Schedule maintenance:** A central database of requests helps save operations time and simplifies planning by providing a full report of all schedule requests.

- **Schedule operations tasks:** CA VM:Schedule allows easy periodic scheduling of required operations tasks such as EREP, accounting runs, and backups.

- **Set up optional class structures:** Sites can use CA VM:Schedule to set up ‘classes’ that represent queues of work. Each class includes a limit on the maximum number of active users as well as on the maximum available resources per user.

- **Control scheduled requests:** CA VM:Schedule allows users to maintain control over scheduled requests by giving them the ability to:
  — Query any request for the status, the run time, and the scheduling options
  — Specify when missed requests are to be rescheduled
  — Verify when subsequent requests of a job are scheduled to run, within a site-defined range
  — Cancel any request at any time

Authorized users can also:
— Schedule any program or EXEC for another user
— Execute CMS subset commands and EXECs on the CA VM:Schedule machine
— Transfer ownership of events from one user ID to another, for example, when a user ID has been changed or deleted
— Release jobs based on the successful completion of a previous job
— Control initiation of a job class
— Suspend, resume, or shut down the CA VM:Schedule system

**Automate common operations:** CA VM:Schedule helps save staff time and eliminate the need for management to constantly initiate tasks by automatically performing common operations:
— Hourly checks to help confirm that service virtual machines are running
— Nightly execution of backup runs
— Nightly execution of a series of application accounting system updates during the week
— Regular purging of old spool files
— Preparation of the daily error report of hardware statistics
— Unattended terminal logoff
— Initiation and termination of service virtual machines running guest system control programs
— Running of month-end, quarterly, and annual financial reports
— Nightly update of database files
— Unattended execution of long running tasks in off-peak hours
— Nightly running of tape management utilities

**Customize with user exits:** Sites can customize CA VM:Schedule to meet their unique needs by writing their own user exits in REXX or Assembler Language:
— Security is enhanced with the PASSWORD user exit, which can be used to limit or prevent the issuing of CA VM:Schedule commands for particular user ID’s.
— With the MONITOR user exit, sites can define actions in response to requests exceeding specified resource consumption limits.
— The COMMAND user exit allows sites to prevent certain user ID’s from using some or all of the CA VM:Schedule functions.
— The AUTOLOG user exit provides a means to examine, reject, or modify the CP AUTOLOG command before CA VM:Schedule autologs a virtual machine to initiate a user request.
Ease of use: Easily understood full-screen menus help users to better understand and use CA VM:Schedule quickly. CA VM:Schedule user fluency level selection menu allows users to choose how much information CA VM:Schedule displays. An online HELP facility provides users quick reference information and helps reduce learning time.

Implementation: CA VM:Schedule installs easily and quickly and is implemented as a service virtual machine. Guidelines for selecting appropriate options are provided, as well as a prototype configuration file.

Maintenance: CA VM:Schedule requires no modifications to CP or CMS for installation or use. The CA VM:Schedule database is automatically maintained with the CA VM:Schedule midnight processing feature.

Integration: CA VM:Schedule interacts with other CA VM:Manager™ for Linux on System z products to complement their use in the z/VM data center.

An interface with CA VM:Batch™ enables users to specify exactly when their batch jobs will be eligible to run. By specifying repeat options, users can make their batch jobs repeat on a regular schedule.

CA VM:Schedule can be used to start and stop the service virtual machines of all CA VM: Manager Suite for Linux on System z products.

Sites can schedule CA VM:Tape management reports using CA VM:Schedule.

CA VM:Schedule generates CA VM:Account™ reports according to the site’s timetable.

CA VM:Schedule can be used to schedule the submission of CA VM:Backup™ for z/VM jobs so that system backups are not forgotten. They are automatically performed on a schedule that meets the operational needs of the installation.

Sites can use CA VM:Schedule to automatically run CA Mainframe VM Product Manager DASD analysis utilities, which provide timesaving prescriptive reports.

The CA Mainframe VM Product Manager Generalized Report Writer utility allows you to create your own CA VM:Schedule reports to aid in planning system and project workload.

Delivery approach

CA Services provides a portfolio of mainframe services delivered through CA Technologies internal staff and a network of established partners chosen to help you achieve a successful deployment and get the desired business results as quickly as possible. Our standard service offerings are designed to speed deployment and accelerate the learning curve for your staff. CA Technologies field-proven best practices and training help you lower risk, improve use/adoption and ultimately align the product configuration to your business requirements.
Benefits

By enabling both end users and data center managers to schedule jobs and tasks to run automatically, CA VM:Schedule helps maximize personnel and computer resources. Its off-peak scheduling capability helps balance workloads across shifts to improve resource utilization, and flexible scheduling capabilities enable organizations to adopt customized schedules that meet their individual requirements. Moreover, VM:Schedule helps improve the reliability of tasks run by operations and reduces potential operator errors.

The CA Technologies advantage

CA VM:Schedule maximizes resources by allowing you to schedule jobs and tasks to run automatically and balance workloads during off-peak hours. It is part of the CA VM:Manager Suite for Linux on System z—a comprehensive portfolio of products that provide automated operations, service level management, security, backup and recovery, performance management and storage management for z/VM and Linux on System z environments. In addition to delivering excellent technical and customer support worldwide, CA Technologies continues to have a strong commitment to supporting its z/VM and Linux on System z solutions and will continue to maintain its leadership role by developing and enhancing these solutions, exploiting new technology and responding to customer needs and requirements.