

CA Workload Automation ESP Edition



CA Workload Automation ESP Edition enables a business-centric approach to managing the flow of work on multiple systems. By responding to business events rapidly and randomly, mapping workload processes to service level agreements, allocating resources based on infrastructure status, and proactively managing performance, it supports your ability to reduce time-to-market on new business functionality and operational costs.

Overview

Business operates in real time and users expect immediate results. There is little room for error or delays when it comes to processing data and business transactions. For all the challenges of managing legacy and emerging technologies as one, you must ensure an agile, self-managed, business-centric IT environment. This means you must proactively manage interdependencies associated with thousands of requests for multi-platform processes that span your enterprise at any point in time.

Business value

CA Workload Automation ESP Edition exploits mainframe power to manage a dynamic business-event driven workload automation solution that:

- Increases operational efficiency
- Improves productivity
- Increases availability of critical business services
- Reduces costs and lowers risk
- Enables dynamic processing of random workload with low overhead

Features

Mainframe 2.0

CA Workload Automation ESP Edition has adopted key Mainframe 2.0 features that are designed to simplify your use of CA Workload Automation ESP Edition and enable your staff to install, deploy and maintain it more effectively and quickly.

- **CA Mainframe Software Manager:** CA Mainframe Software Manager™ (CA MSM) automates CA Workload Automation ESP Edition deployment and maintenance and removes SMP/E complexities.
 - The [Software Acquisition Service](#) enables you to easily move product installation packages and maintenance from CA Support Online directly to your mainframe environment and prepare them for installation.
 - The [Software Installation Service](#) standardizes CA Workload Automation ESP Edition installation, which includes a new, streamlined Electronic Software Delivery (ESD) method that allows CA Workload Automation ESP Edition to be installed using standard utilities. This service also provides standardized SMP/E product installation and maintenance via APARs and PTFs, and simplifies SMP/E processing through an intuitive graphical user interface and an intelligent installation wizard.
 - The [Software Deployment Service](#) enables you to easily deploy CA Workload Automation ESP Edition in your mainframe environment.
- **CA MSM Consolidated Software Inventory (CSI):** updates and infrastructure improvements add flexibility to CA MSM processing of CSIs and enable CA MSM to more effectively utilize CPU and system memory.
- **Installation Verification Program (IVP) and Execution Verification Program (EVP):** As part of qualification for inclusion in the set of mainframe products from CA Technologies released every May, CA Workload Automation ESP Edition has passed stringent tests performed through the IVP and EVP to find and resolve interoperability problems prior to release. These programs are an extension of our ongoing interoperability certification initiative launched in May 2009.
- **Best Practices guide:** This guide provides information on CA Workload Automation ESP Edition installation, initial configuration and deployment to shorten the learning curve for staff who are responsible for the installation and management of this product.
- **Health Checker:** The Mainframe 2.0 Health Checker provides CA Workload Automation ESP Edition Health Checks that execute under the IBM Health Checker for z/OS.

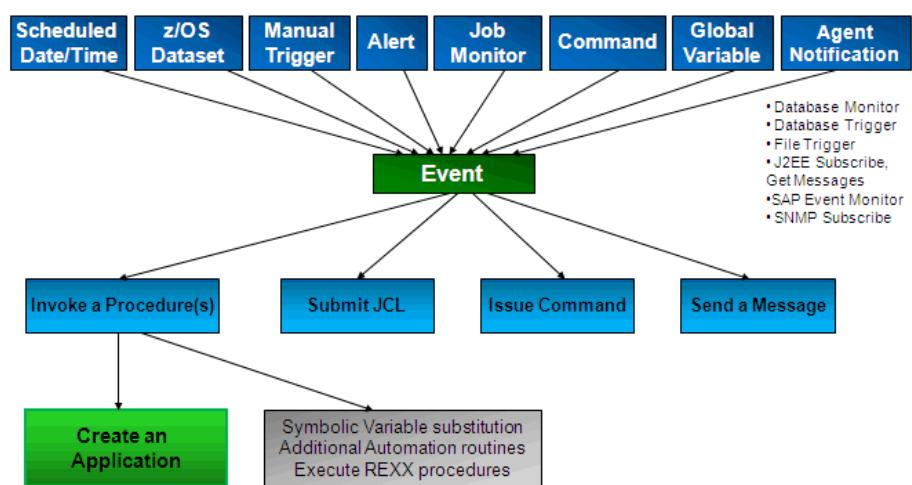
What's new

Manage business-driven work dynamically, efficiently, reliably, and now randomly: Beyond the necessary batch reports and system back-ups, your ability to effectively compete in today's environment requires immediate response to customer demands for products and services. Legacy batch job schedulers and application-specific job management tools must make way for coordinating and orchestrating enterprise workload as a complete business process, as well as allowing you to bring this process into your active workload based on random business activities. Processing the workload entails more than running scripts, JCL and other executables, you must ensure workload is triggered on a timely basis and is in sync with other critical services that feed data and keep your business running.

- **Dynamic, random, business-driven workload automation:** CA Workload Automation ESP Edition provides centrally-hosted, enterprise-wide, dynamic business-driven workload automation that readily scales to business demands, even when there are random needs for processing. This solution began as more than job scheduling—it was architected for general purpose automation, beyond just cross-platform scheduling. In a scalable, reliable and stable environment, CA Workload Automation ESP Edition dynamically initiates workload processes using passive event sensor technology to execute workload immediately and quickly so you can meet your service level agreements (SLAs). This technology enables CA Workload Automation ESP Edition to ONLY bring in the workload when and if it needs to execute, rather than loading all potential workload into the active files and incurring additional overhead, and the risk of missing a trigger if the activity volumes are too high. Workloads are intuitively managed and automatically adjusted based on real-time infrastructure status, available computing resources and service priorities.

FIGURE A.

Workload automation triggers



- **Predictive and proactive to support timely, appropriate response:** CA Workload Automation ESP Edition helps you manage your systems by pro-actively providing alerts on potential problems. Advanced automation features enable dynamic triggers, pre-emptive problem correction, and pro-active environmental cleanup, while providing a user-friendly interface that helps you “manage by exception” and quickly assess downstream business impact. CA Workload Automation ESP Edition provides the visibility, accessibility and manageability of your enterprise-wide workload so that you can more effectively and efficiently meet the needs to the business you support, whether it be banking, retail, education, government, etc.
- **Single point of control, “single pane of glass”, even a single definition for an entire business workload:** CA Workload Automation ESP Edition provides a simple-to-learn automation platform you can easily install—or convert to from other vendor’s solutions. From its single interface, users in either Application Development or Data Center Operations can define, monitor, control, manage and integrate workloads regardless of the processing platform, which simplifies management and reduces operational costs. Intuitive dependency features allow you to define one single business process, regardless of run frequencies or variations in processing from day to day. Using variable substitution, workload can be designed with “test” naming standards and moved to various pre-production environments and finally production, with NO manual changes between

environments, enabling more thorough testing prior to production, and elimination of customer impacts. View and monitor the workload as a logical business process rather than a listing of unrelated processes/jobs on multiple platforms. Grouping logically related processes together allows your staff to visualize the processing as it relates to supporting the business.

Key capabilities

- **Agent technology enables end-to-end automation:** CA Workload Automation ESP Edition works with CA Workload Automation Agent (formerly CA ESP System Agent) technology to control and monitor processes across hundreds or thousands of individual servers across the enterprise. Both the workload definition and monitoring can be done from a single point of control without additional staff overhead, skills gaps or compromised performance.
- **CA Workload Automation ESP Edition Agents:** They are lean, non-invasive and reliable. They can randomly and consistently trigger business-driven applications that extend and optimize business processes for end-to-end automation. They reduce or eliminate reliance on excessive scripting, application coding and manual procedures, while providing more coverage to system activities, relative to the business processing, across the enterprise.
- **Workload lifecycle management capabilities:** CA Workload Automation ESP Edition definitions are stored in files that can be placed under the control of a software change management system. Customers have integrated with CA Endevor® Software Change Manager or other tools to move definitions through the development phases, with the proper approvals, and then into production. Symbolic variable substitution eliminates changes between environments as testing continues through QA and on into production. Even customers with dozens of similar applications can condense their definitions and thereby minimize their maintenance, reducing the operating expenses and even accelerating development time. Cross-application visualization allows you to see other business areas that might be affected by a failure or delay in processing.
- **Cross-platform support:** CA Workload Automation ESP Edition leverages the power of the mainframe to manage workload processing in the same manner regardless of whether workloads are running across legacy mainframe or distributed systems, ERP Applications, J2EE middleware, databases, application services, etc. CA Workload Automation ESP Edition allows you to directly connect workload objects in a single definition, rather than creating multiple iterations due to differences in run frequencies. There is no need to create “dummy” files or jobs and transmitting them across platform boundaries to connect workload dependencies. This can reduce the definitions and their ongoing maintenance and increase the operating efficiencies by enabling a common staff to define and manage workload enterprise-wide.

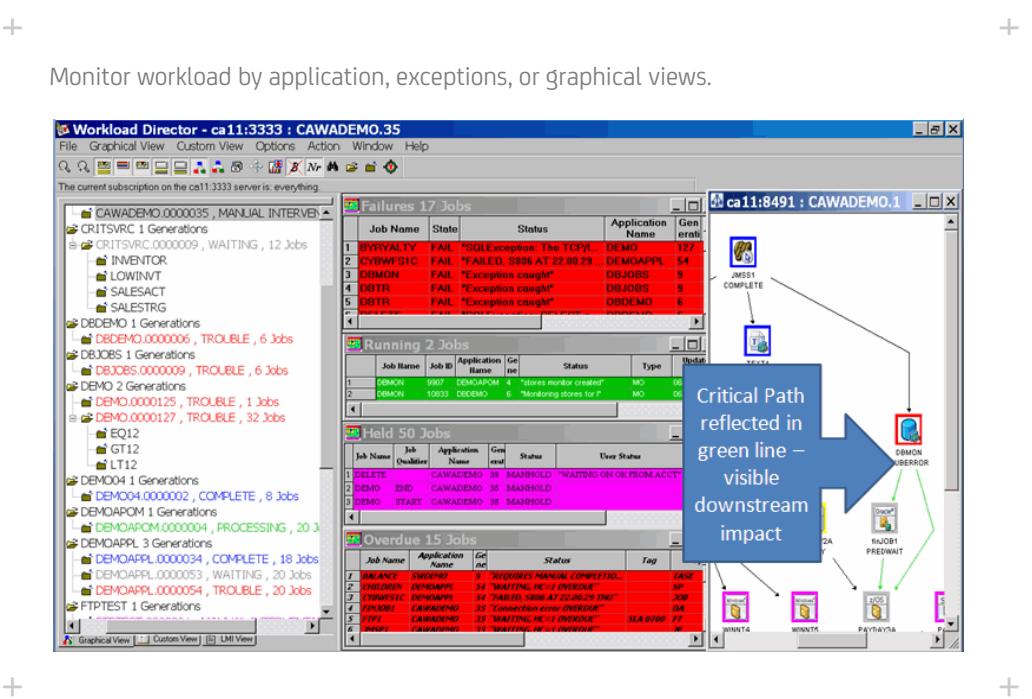
- **Un-interrupted availability and business recoverability:** CA Workload Automation ESP Edition includes a high-availability option to ensure un-interrupted business processing capability. It monitors and manages itself (self-healing and self-optimizing), but can also send notifications when unrecoverable problems occur. Extensive capability to validate workload definitions prior to production processing ensures the viability of production runs and can be used during the application development life-cycle to aid in quality assurance. Non-stop applications and systems availability (CA Workload Automation High Availability EE) ensures you never have to deal with unscheduled outages and can more effectively manage rolling maintenance upgrades to operating systems. Enhanced job recovery and error prediction capabilities are part of the optional CA Workload Automation Restart Option for z/OS Schedulers (formerly ESP Encore[®]) and can reduce mean-time-to-repair failed workload, faster cleanup of residual data, improve restart success rate for a single job, or even multiple jobs in a business process. Having the ability to back-out and rerun an entire application in its entirety has saved our customers days of recovery time.
- **Throughput optimization:** CA Workload Automation ESP Edition minimizes delays in processing workload throughout the enterprise, which speeds processing of business data. Architecturally CA Workload Automation ESP Edition can process workload end-to-end much faster than competitor's tools because of its advanced architecture.
- **Proactive alerts and faster resolution:** Enable real-time customized alerts on the progress of enterprise-wide workload processing. Exceptions in processing can initiate automatic notification via email, pagers, problem management tickets, etc. Trouble-shooting information can be automatically retrieved upon impact and provided to staff to view, analyze and resolve the situation quickly, thereby minimizing the potential impact and decreasing the mean-time-to-repair (MTTR).
- **Critical path analysis and forecasting:** With workload grouped according to business processes, across the enterprise, CA Workload Automation ESP Edition can automatically calculate due-times for an entire business process according to your Service Level agreements, using the appropriate historical run time averages. A real-time critical path is dynamically calculated and visible in a graphical flowchart, as well as calculating estimated end times for each workload object that is not complete. Notification can be provided for failed or overdue jobs, or CA Workload Automation ESP Edition can take automatic action as specified in the Business Service Management section below.
- **Business service management:** Critical workloads are identified in real time and resources are automatically allocated (or reallocated) as needed through the combination of CA Workload Automation and CA Workload Automation Service Governor EE (formerly CA ESP Service Governor). Immediately, automation routines take action to get the business process back on track, according to your business priorities. In some situation, you may need

to dynamically allocate resources, like initiators to ensure provisioning of the necessary system resources to meet service goals. Workload can be automatically rerouted to other systems, and distributed workload could be balanced according to server utilization as well.

- **Resource optimization:** Reduction in reruns, abends and other spoilage translates into better use of hardware resources for productive work. CA Workload Automation ESP Edition has an advanced Resource Manager which coordinates workload according to real resources as well as abstract resources. Threshold resources can avoid overloading a system, depletable resources can allow you to execute more orderly system shutdown procedures, renewable resources can allow you to more efficiently process workload that shares resources. Automatic workload balancing across servers better manages and exploits server capacity and can more efficiently use the purchased capacity, avoiding additional cost.
- **Service-enablement:** Expose mainframe processes/data as services to business applications without recoding. You can now service-enable legacy applications through event-triggering using new Web Services integration to CA Workload Automation ESP Edition, reducing development time on new integrations.
- **Process business data immediately:** Schedule load concepts restrict job schedulers to date/time triggers, meaning business data was processed overnight and results reported the next day, at best. Today's business requires immediate workload processing capabilities to remain competitive. CA Workload Automation ESP Edition allows processing to be triggered by real business data, like file arrival, entries in a database table, forms being completed on websites, etc. enabling workload processing to initiate immediately.
- **Support merger/acquisition activity:** CA Workload Automation ESP Edition has allowed customers to absorb workload volumes and integrate new workload from mergers/acquisitions more efficiently so that ongoing operating costs are reduced. CA Services can even provide assistance in converting to CA Workload Automation ESP Edition from other industry tools using a proven methodology, to consolidate definitions and save on operating costs and capital expenditures.
- **ITIL® enablement:** CA Workload Automation ESP Edition helps you achieve ITIL compliance in the key area of ICT Infrastructure Management, the foundation for IT Service Management.
- **Cross application processing dependencies:** Many customers have workload processing that intertwines from one area of the business to another, for example Payroll and Benefits. CA Workload Automation ESP Edition allows you to logically separate applications into manageable workload processes, but still address downstream impact by having visibility and manageability across application boundaries. You can manage the entire process from end to end including peripheral applications that are also related. In large shops, there

could be thousands of intertwined workload objects that you can organize into smaller, more logical business processes.

- **Application automation using application services job types:** As workload types are expanding into emerging technologies, the CA Workload Automation Agent for Application Services allows you to define and integrate the following workload types:
 - Session Bean
 - Entity Bean
 - HTTP
 - JMX-MBean Create Instance
 - JMS Publish
 - JMX-MBean Operation
 - JMS Subscribe
 - JMX-MBean Remove Instance
 - JMX-MBean Attribute Get
 - JMX-MBean Subscribe
 - JMX-MBean Attribute Set
 - OJO (Plain Old Java Object)
 - RMI (Remote Method Invocation)
- **Bi-directional Web Services capabilities:** CA Workload Automation Agent for Web Services allows you to define and integrate the following workload types:
 - Web Service
 - POJO (Plain Old Java Object)
- **CA product integrations:** CA Workload Automation can now directly integrate with:
 - CA AutoSys Workload Automation
 - CA Workload Automation Restart for z/OS Schedulers(formerly CA 11)
 - CA JCLCheck™ Workload Automation
 - CA OPS/MVS® Event Management and Automation
 - SOA Web Services—to initiate and stop work, hold and release work, set conditions, and send notifications

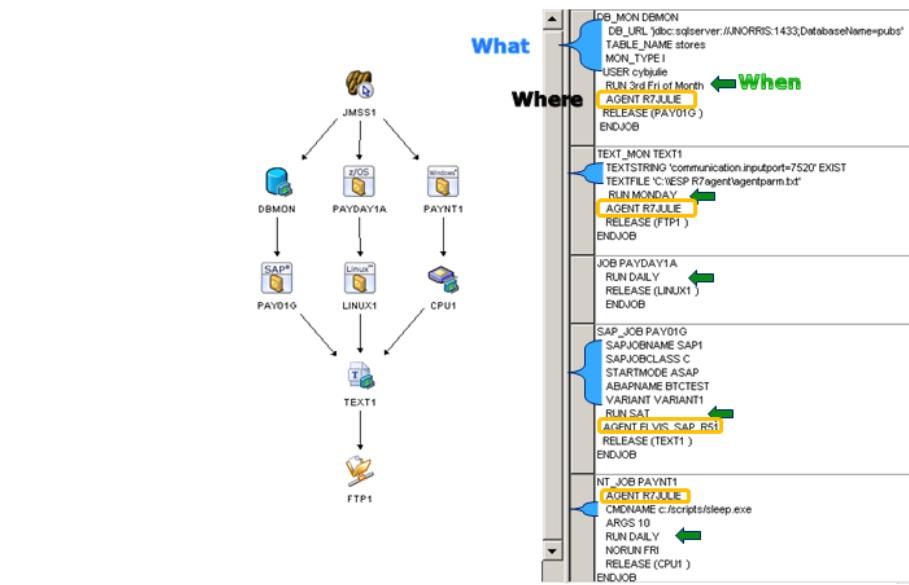
FIGURE 2.
CA Workload Automation workstation interface


- **Lower operational expenses, capital expenses and help improve service to the business:**
CA Workload Automation ESP Edition is an advanced automation solution to dynamically initiate workload based on business demands. Its business-centric approach to managing your enterprise ensures your ability to visualize, control and optimize enterprise workflows, which can be triggered by virtually any event.
- **Easy to install, learn and use:** CA Workload Automation ESP Edition helps your organization reduce the time-to-market for new applications by enabling automation from the initial design of the application, through the testing and execution of the production application. Skills can be easily extended to enable a mainframe-centric staff to absorb new workload types by simply knowing **WHAT** to run, **WHEN** to run it, and **WHERE** to run it. By service-enabling legacy applications, it dynamically creates new business functionality in minimal time for low-cost, rapid time-to-market of new offerings—creating a significant business advantage.

FIGURE 3.

Simplifying enterprise workload automation

Simple as What, When, Where



As a single-definition, single-solution, cross-platform engine for workload automation, CA Workload Automation ESP Edition simplifies the management of your complex enterprise workload processing. Platform expertise is less critical, scheduling product knowledge is minimal, and the learning curve is very short. Increased visibility also reduces the need for platform-assigned staff—you can readily see and understand summaries and job flow views across the enterprise without having intimate knowledge of all the operating systems. With advanced built-in automation capabilities, manual tasks, clerical effort and human errors are reduced, which frees operation staff for higher profile value-add projects.

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 mainframe best practices and training help you lower risk, improve use/adoption and ultimately align the product configuration to your business requirements.

The CA Technologies advantage

CA Technologies has 30 years of recognized expertise in robust, reliable, scalable, and secure enterprise-class IT management software. CA Workload Automation ESP Edition is a key component of the Mainframe 2.0 initiative from CA Technologies to change the way the mainframe is managed forever by helping you maximize the value of our mainframe products and by providing a simplified experience and innovative solutions that deliver value quickly and flexibly.