

Can I Extend the Automation Capabilities of CA Workload Automation Engines to Integrate Enterprise Business Processing in the Application Economy?

Extend the automation capabilities of the CA Workload Automation engines to a wide variety of processing platforms to integrate enterprise business data processing and:

- Minimize the expertise needed to manage the function
 - Removes the complexity and time required to setup
 - Does not require multiple teams to be involved for setup
 - Once the batch job is set up, it will run consistently each time
- Automate system/database/application maintenance
- Enable connections between critical business applications
- Notify when there are issues or exceptions

Executive Summary

Challenge

The application economy brings with it many demands and many opportunities. Innovations, such as cloud computing, mobility and the Internet of Things (IoT), are all driving phenomenal growth in transaction and data volumes. Customers with existing job scheduling systems, or no automated solution, need to look closely at their ability to respond to these critical, real-time business demands. To do this, IT needs the appropriate balance of tools and technology innovations. Perhaps the tools and processes you currently have to extend the automation capabilities of your IT environment are keeping you from being more efficient and more business oriented.

Opportunity

CA Workload Automation can provide the ability to automatically and dynamically drive critical business services that are very visible, such as ATMs, shopping websites, payroll processing and even healthcare systems. Your application should allow for older processing methods to integrate with newer technologies to facilitate a simpler process that can be rapidly implemented. Currently, custom coding or specific integration methods have to be developed to cohesively tie together disparate workload processing objects, which results in added development time, higher overall cost of operation and delays implementation.

Benefits

Being able to control and monitor processes on thousands of individual servers across an enterprise without custom coding can:

- Minimize the expertise needed to manage the function.
- Remove the complexity and time required to setup the function.
- Shorten the delivery time for new business functionality.
- Provide notifications when there are issues or exceptions.
- Allow IT to better service the needs of the business.
- Reduce the costs of managing production workloads.

Section 1: Challenge

Extending CA Workload Automation Capabilities

Whether applications are bought or built, they still have a requirement for job scheduling. Historically, job scheduling and systems management emphasized the management of the various components in the IT infrastructure. Networks, CPU's, databases, controllers, programs, disks and more require management, monitoring and scheduling. Over time, IT personnel realized that focusing strictly on a given component without regard to the applications that these components supported was missing the big picture, which is monitoring and managing the enterprise.

But the goal of a modern job scheduler is to manage the application and not just the underlying components that support it. For many IT organizations, managing and monitoring core business applications, and maintaining service level agreements based on those applications, is the essential service they provide to the rest of the organization. Most packaged applications have some type of API designed for use by programmers, and other technical personnel, that allow the scheduler to communicate directly with the packaged application to launch and monitor jobs.

Your solution must be able to natively integrate the variety of the applications in your IT environment into a comprehensive, seamless process flow. It should let you easily manage external interfaces so one application can efficiently exchange information with all your other applications. It should eliminate the need for custom scripting and routine manual checks between process steps, saving you time and reducing errors.

Section 2: Opportunity

CA Workload Automation Agents

Today's application developers need the basic scheduling capabilities with new job types for the types of environments that enable faster development time. CA Workload Automation Agents allow you to more efficiently design, test and execute enterprise workload processes that are crucial to your business success. They extend the automation capabilities of the CA Workload Automation engines to a wide variety of processing platforms to integrate enterprise data processing. They can give enormous manageability and visibility to your business critical workload processing information, which enhances your exception monitoring and reporting capabilities. They consume very few resources, are simple to install and maintain, using silent install methods or software deployment automation, and include self-maintenance settings. CA Workload Automation Agents reduce dependencies on scripting, coding and creating artificial procedures, decrease complexity, help you fully realize the power of your existing technology investments and give you better end-to-end control and management capabilities of your business data processing.

CA Workload Automation includes various types of agents that enable a vast array of workload objects that go well beyond simple executables to allow you to more efficiently design, test and execute enterprise workload processes that are crucial to your business success. They are data event sensors and integration points to your business applications.

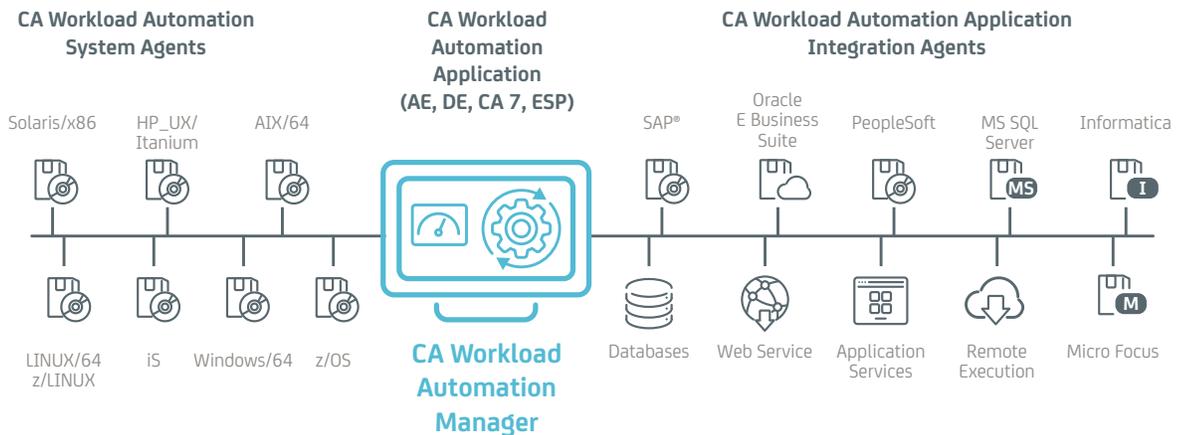
Execution and Monitoring of Various Operating Systems

CA Workload Automation Agents allow customers to integrate workload processing across all leading operating system environments such as UNIX®, Linux®, Windows®, USS, i5/OS™ and HP Integrity NonStop to define, execute, monitor and manage IT automation events. Having a localized agent present on a server gives you extensive monitoring ability to detect services and processes being in a certain state, monitoring for CPU and disk utilization to better balance workload, validate the contents of a file to determine accuracy and even verify the connection to an IP address before trying to FTP data across the network. These agents can manage FTP activity as well as act as the FTP server managing secure FTP transmissions. When added together with traditional workload processing these objects extend the capabilities of workload automation well beyond the traditional job scheduling objects giving you better visibility and manageability as well as allowing you to secure the accessibility to your servers. Standard error and standard output (STDERR and STDOUT) information can be accessed from the managing engine or placed directly in a problem management ticket so resolution can be expedited and security to production servers can be locked down.

CA Workload Automation offers a wide breadth of agents to improve the management of business data at a very granular level and can improve the delivery time for new business functionality.

CA Workload Automation Agents and Application Integrations make it easy to extend the application integration capabilities of your CA Workload Automation engines to a wide variety of processing platforms and integrate your critical enterprise business data processing.

Figure A.
CA Workload Automation Agents and Application Integrations



- Minimize the expertise needed to manage the integrations
 - Remove the complexity and time required to setup and test
 - Remove the need for multiple teams to be involved for setup
 - Enjoy a process that will execute consistently each time
- Automate system/database/application maintenance
- Graphically view and validate dependency connections between critical business applications
- Centralize the monitoring and restarting of all the executions of your enterprise applications

[CA Workload Automation Agent for z/OS](#)

While many customers run the CA Workload Automation engine on the mainframe, there are some customers whose goal is to manage the mainframe workload from a distributed-hosted workload automation engine. The CA Workload Automation Agent for z/OS provides mainframe strength workload automation that is managed and controlled through a distributed-hosted workload engine. The z/OS® agent offers full-scale scheduling features that can execute, monitor and control mainframe workload. It has the unique capability of interfacing with existing legacy mainframe schedulers, even non-CA Technologies products, providing a bridge between the distributed and z/OS workload. The state of the art rerun/restart capabilities of this agent offer an advanced solution designed to manage job recovery including intelligent job rerun/restart, along with JCL analysis and predictive capabilities, all from the distributed based engine.

[Integration with Enterprise Resource Planning \(ERP\) Workload Processing](#)

While ERP solutions usually come with an imbedded scheduling capability, they cannot integrate and manage predecessor/successor relationships outside the realm of the application software. This makes managing the end-to-end process impossible. With an enterprise workload automation solution that has full control of the entire enterprise workload, including the ERP systems, end-to-end management is possible. CA Workload Automation offers support for major ERP systems deployed in the market today.

[CA Workload Automation Agent for SAP](#)

The CA Workload Automation Agent for SAP acts as an interface between CA Workload Automation and SAP's internal scheduling tools (Process Scheduler) as well as providing direct integration with components of SAP, SAP Business Warehouse and SAP NetWeaver. Coupled with CA Workload Automation, all workload activities for both SAP and non-SAP jobs are fully automated and integrated from a single point across the enterprise.

[CA Workload Automation Advanced Integration for SAP](#)

The CA Workload Automation Advanced Integration for SAP provides a simplified, robust scheduling capability with one solution that is tightly integrated with SAP. Users can request, test, schedule and manage the execution of CA Workload Automation AE jobs directly with SAP Solution Manager and SAP Business Warehouse without having to leave the familiar SAP interface. Additionally, it provides enhanced insight into all business processes from a central location of both SAP and non-SAP workloads without having to switch between schedulers to manage and monitor end-to end workloads.

[CA Workload Automation Agent for Oracle E-Business Suite](#)

The CA Workload Automation Agent for Oracle E-Business Suite provides an interface between CA Workload Automation and the Oracle Concurrent Manager. The Concurrent Manager is Oracle's native scheduler that submits jobs and monitors processes within the Oracle environment. The CA Workload Automation agent for Oracle E-Business Suite enables administrators to integrate, monitor and execute Oracle processes across the entire enterprise from a single point of control.

[CA Workload Automation Agent for PeopleSoft](#)

PeopleSoft applications are delivered with an imbedded PeopleSoft Process Scheduler, a built-in scheduler that submits jobs and monitors processes within the PeopleSoft environment. The CA Workload Automation Agent for PeopleSoft provides integration between the Workload Automation solution from CA Technologies and the PeopleSoft Process Scheduler. You can allow your existing production control staff or ERP administrators to use the CA Workload Automation Agent for PeopleSoft to integrate, monitor and execute PeopleSoft processes across the entire enterprise.

Granular Business-Event Sensors

[CA Workload Automation Agent for Databases](#)

This agent provides direct integration with database activity that can allow you to reduce the creation of scripts, files, or other custom code in order to trigger workload processing. The agent can immediately detect and trigger workload based on table, row or value changes. This results in substantial cost savings and frees up valuable cycles for IT staff. The agent can manage workload on DB2®, SQL Server and Oracle databases. It supports the scheduling and execution of stored procedures, with success criteria specified through regular expressions. You can readily retrieve output values generated by the stored procedure. SQL updates and queries can also be initiated. The agent will receive the results and status of SQL queries, and further triggering can be initiated based on the results. These capabilities enable database operations to be tightly integrated as part of an enterprise workload process.

Application Automation Agents

[CA Workload Automation Agent for Application Services and Web Services](#)

These agents provide the basis to evolve batch workloads from static, standalone data center operations to dynamic components that are intrinsic to composite, service-oriented business applications. Integration enables a number of capability extensions, including an increased number of job types and a wider range of business events. This results in added flexibility to the management and execution of batch processes.

To provide an example of how this technology is put to use in a workload environment consider a modern application that is built on J2EE and supported by a relational database backend. For example, a web based application that supports an online business process to order books. With CA Workload Automation, an event sensor can be deployed that will monitor a JMS queue for a specific message, for example a book order. The message is generated through an online application. Once the message is “sensed” by the CA Workload Automation solution the backend process that is stored as a workload is triggered to process the book order and return a completion message through JMS to the application. During the backend process, a database monitor is used to confirm that the order is properly entered into the database table, triggering the JMS message that confirms the book order. This is a very rudimentary example of the capabilities provided for application workload management but gives a perspective of the difference from traditional batch scheduling.

Application Modernization and Migration

[CA Workload Automation Agent for Micro Focus](#)

This agent provides seamless integration between CA Workload Automation and the Micro Focus Enterprise. It helps contribute to the success of mainframe application migration efforts. The CA Workload Automation Agent for Micro Focus provides an interface that enables automation and control of COBOL and JCL Micro Focus jobs. It allows for execution, monitoring and control of batch workloads that are migrated to the Micro Focus Enterprise.

[CA Workload Automation Agent for Informatica PowerCenter](#)

This agent provides seamless integration between CA Workload Automation and the Informatica PowerCenter. It helps run, control and monitor a job defined in your Informatica PowerCenter system. It also supports task-level monitoring, start and restart.

[CA Workload Automation Agent for Microsoft SQL Server](#)

This agent provides seamless integration between CA Workload Automation and Microsoft SQL Server. It helps run, control and monitor a job defined in your Microsoft SQL Server® agent system, including SSID packages. It also supports step-level monitoring, start and restart.

[CA Workload Automation Agent for Remote Execution](#)

This agent executes any command or script on a remote UNIX, Linux, HP Integrity NonStop or OpenVMS system through Secure Shell (SSH2) or Telnet. It is useful for supporting systems not natively supported by the system agent or for supporting systems that run only few or occasional jobs. Because the command is run through SSH2 or Telnet, functionality is limited compared to command jobs run locally through the system agent.

[CA Workload Agent Monitor](#)

This agent monitor displays and exports status and information from a web-based application about all of the agents for all schedulers that are currently available to execute jobs. It supports tens of thousands of CA Workload Automation Agents and hundreds of CA Workload Automation schedulers for CA Workload Automation AE, CA Workload Automation DE, CA Workload Automation ESP Edition and CA Workload Automation CA 7® Edition.

Section 3:

Benefits

The core CA Workload Automation Agent enables the various types of workload objects to be directly integrated as well as immediately initiated to provide instant processing of business data, as well as giving IT a much more complete visualization of the data process that is crucial to managing their business. IT can better manage the processing points and secure the access to the servers, while retaining the necessary access to vital information that allows them to better serve their customers and meet the demands and opportunities driven by the application economy.

The CA Workload Automation solution includes several configuration options for the managing engine to control enterprise workload processing. Customers can choose to use:

- An engine on the mainframe and a separate engine on a distributed server, with a common user interface, but separate data repositories for definitions, history, and audit information.
- A single, highly scalable and reliable engine on the mainframe to manage workload across the enterprise, including all agent workload on various operating systems and applications
- A single, highly scalable, reliable distributed engine that can also manage mainframe processing that either it submits or it can simply track z/OS jobs submitted by another tool

Rather than force you to manage the workload with a single configuration option, CA Technologies allows you to choose the option that best meets your business needs. Customers have relied on CA Technologies workload automation and job scheduling products for years. Now they can extend the processing capabilities across the enterprise and more efficiently and immediately process the mission-critical workload. CA Technologies is redefining and advancing the capabilities of workload automation by providing innovative new capabilities that allow customers to leverage their long-term investment and move their automation strategy forward by exploiting new technologies with proven capabilities.

“CA Workload Automation helps us manage our IT environment in a cost-effective manner. It minimizes downtime, and it is more easily understood by everyone. The server-based agents provide the intelligence and functionality we were previously lacking.”

IT Systems Analyst

Fortune 500 Insurance Company, Source: TechValidate EA4-6BB-21E



“CA Workload Automation is able to work with multiple platforms through its agent technology and is not tied to a specific technology. It is robust and reliable.”

IT Architect

Large Enterprise Retail Company, Source: TechValidate 30E-CA3-EFC

“CA Workload Automation solutions have been critical enablers of mission critical online business strategies and have helped improve business performance in a number of ways, such as improving mission-critical investment ‘readiness to trade’ completion rates from 82 percent to 99.5 percent at a major financial services firm.”

Source: IDC White Paper

Workload Automation Emerges as a Business Innovation Engine in the Era of Cloud, Big Data, and DevOps, May 2015

Section 4:

The CA Technologies Advantage

CA Technologies has more than 30 years of recognized expertise in robust, reliable, scalable, and secure enterprise-class IT management software. CA Technologies has made an unparalleled commitment to emerging technologies and IT delivery models such as automation, virtualization, Software-as-a-Service, and cloud. Additionally, CA Technologies solutions deliver forward-thinking best management technologies garnered through strategic acquisition and developed from within. CA Workload Automation helps to deliver on CA Technologies strategy by automating and controlling workloads in real-time across multi-platform environments. It is designed to help improve the delivery and availability of critical business services and streamline processes.

To learn more about CA Workload Automation Agents visit ca.com/wla and wiki.ca.com.



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CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at ca.com.