CA Workload Automation

Challenge

Workload processing and job scheduling once represented a leading-edge way to manage critical data center functions. However, business has evolved such that scheduling simple tasks on a single platform at a specific time and date is not enough. Rather, your enterprise needs a way to manage:

• Thousands of users

• Thousands of requests for cross-platform processing

• Stringent SLAs

• Intricate interdependencies

• Compliance requirements

• Across an infrastructure assembled from legacy and emerging technologies

• Virtualized pool of resources

• Resource pools in cloud-enabled application infrastructure

Therefore, current strategies for workload processing and job scheduling must evolve into workload automation, to become a critical component of service-driven initiatives.

Opportunity

For more than a decade, CA Technologies, A Broadcom Company, has been providing solutions for managing high volumes of complex, business-critical workloads across the enterprise. CA Workload Automation is distinguished by its breadth of platform coverage, event-based architecture, intelligent resource management, flexible configuration, extent of offered automation and ease of use. It allows you to reduce the complexity and cost of managing application workloads across physical, virtual and cloud resources and accelerate the path to dynamic service delivery.

How can I improve customer experience by reducing the cost and complexity of managing cross-enterprise workloads and accelerating the path to dynamic service delivery?

Re-Envisioning the Workload Automation Experience

Customers, partners and employees put demands on business systems that must be met in a timely and reliable way. Most of these transactions traverse multiple systems and collect data from multiple sources. Yet most businesses are not prepared to manage these and other interdependencies at an enterprise level, making it difficult to coordinate business processes end-to-end. Root-cause analysis and resolution can be very difficult and time-consuming. Some IT resources are at capacity, while others are underutilized—and the result is a higher total cost of ownership (TCO) and lower ROI. To compete, IT must rethink how it manages processes and jobs and move toward real-time automation of business workloads to efficiently respond to real-world business challenges:

• Improve availability of critical business services: Organizations need to effectively manage large volumes of complex, business-critical workloads across multiple applications and platforms. In such complex environments, a single failure can have a significant impact on an organization's capability to deliver goods and services.

• Respond to real time business events: Today's on-demand business world requires real-time information processing. There is little room for error or delays when it comes to processing data and business transactions. To compete, IT must rethink how it manages processes and jobs and move towards real-time automation of workloads to efficiently respond to business events.

• Increase cross-enterprise visibility and control: Business policies and SLAs should drive workload priorities. But without a central point of visibility and control, you can't be certain that production workloads are managed accordingly. It's difficult to manage multi-platform and application dependencies. You can't see potential failure points. You're unable to document regulatory compliance. All of which compromise IT's ability to deliver business services.

• Improve staff productivity: IT spends significant time on redundant or mundane administrative tasks and desires to improve the efficiency of their staff so that they can focus on more value creating activities such new application development.

• Optimize infrastructure utilization: IT needs to improve the efficiency and ROI of the IT hardware and software assets deployed in the data center. This means that you not only need to improve existing server utilization for mainframes and distributed systems but also explore newer options for processing enterprise workloads such as public and private clouds.

Improve the availability of critical cross-enterprise IT workload processes and schedules enterprise-wide by leveraging real-time IT automation, embedded workflows, Web services and dynamic critical path management capabilities.

CA Workload Automation brings dynamic workload visibility to your business, so you are able to see what's happening in real time across all your physical, virtual and cloud environments.

You're looking for an innovative approach to fraud prevention. One that provides a robust means of authentication across portfolios, channels, lines-of-business and geographies. And the flexibility to adapt to your business rules in real time, as well as the ability to combat crucial events, like flash fraud.

Payment Security Suite combines CA leadership in EMV 3-D Secure with real-time fraud risk learning and scoring derived from billions of eCommerce authentication transactions and world-class data models.
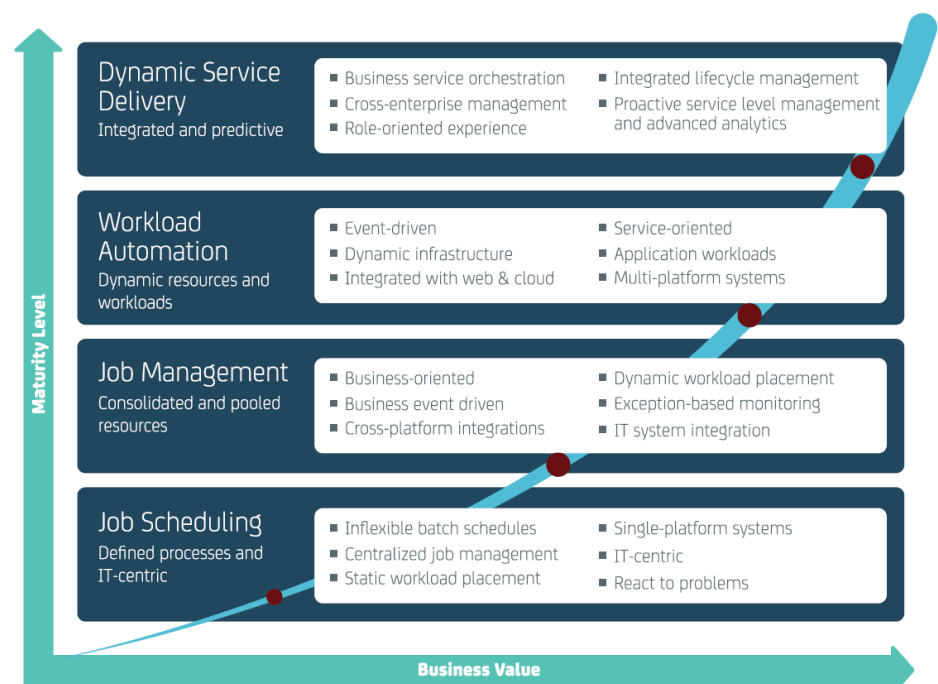
Our patented predictive analytics give you the insights you need to reduce losses as well as false declines. And it is the only solution that delivers true, real-time analysis—in mere milliseconds.

Accelerate Delivery of Dynamic Business Services

Over the years we have seen enterprise workload automation evolve from the mainframe to distributed servers like UNIX and Windows, then to include ERP platforms as well as other operating systems. Newer application delivery models such as Cloud and IT-as-a-Service are further disrupting the space and adding complexity to the underlying infrastructure. Moving from job scheduling methodologies to advanced workload automation, IT must closely examine the exact requirements of the complete workload automation solution as depicted in Figure 1 below.

CA Workload Automation offers a comprehensive, holistic proven approach, which helps you optimize the aspects of business workflow management. It is built on a foundation of technology innovations designed to accelerate and improve delivery of dynamic business services across the enterprise.

Figure 1: Workload Automation maturity levels

Maturity Level		
Dynamic Service Delivery Integrated and predictive	■ Business service orchestration ■ Cross-enterprise management ■ Role-oriented experience	■ Integrated lifecycle management ■ Proactive service level management and advanced analytics
Workload Automation Dynamic resources and workloads	■ Event-driven ■ Dynamic infrastructure ■ Integrated with web & cloud	■ Service-oriented ■ Application workloads ■ Multi-platform systems
Job Management Consolidated and pooled resources	■ Business-oriented ■ Business event driven ■ Cross-platform integrations	■ Dynamic workload placement ■ Exception-based monitoring ■ IT system integration
Job Scheduling Defined processes and IT-centric	■ Inflexible batch schedules ■ Centralized job management ■ Static workload placement	■ Single-platform systems ■ IT-centric ■ React to problems

Business Value

"We were particularly impressed by the ease of use and speed of deployment of CA Workload Automation. Usability was particularly important as we were keen to make the system available to users outside of the IT team to improve transparency of information. Today, CA Workload Automation is used by our Business Intelligence unit to assist them with business analysis."

– Laurent Caroujat, Head of IS Planning, Devanlay

Key Features

Multi-Platform Scheduling
Manage and visualize a business process end-to-end across platforms from a central point of control.

CA Workload Automation supports Mainframe, UNIX, Windows and Linux client/server-based architecture, supports virtually any networking protocol, and can reside on any supported platform. Sophisticated agent technology extends job scheduling capabilities to remote platforms.

Event-Based, Service-Oriented Architecture
CA Workload Automation choreographs workload processing in real time across applications and server platforms based on business policies, changing priorities and triggers that can be as granular as a message, file or database value change. This event-based architecture is designed to offer greater flexibility, capability and reliability than traditional scripting, which is difficult to scale as business needs and IT environments increase in scope and complexity.

Intelligent Resource Management
By identifying and understanding the IT resources required to execute workloads, CA Workload Automation provides intelligent resource management. It evaluates available resources and provisions workloads to enable greater compliance with a defined SLA. This approach improves resource utilization and allows for multiple workloads to be processed and completed while helping to avoid impact to other processes or business services.

Role-Based Administration and Reporting
To improve controls and facilitate regulatory compliance, CA Workload Automation provides role-based administration and reporting. For example, rather than requiring you to wait for an authorized person to log on to a secured production server, CA Workload Automation provides the appropriate access. In this way, problems can be more quickly and efficiently diagnosed and corrected.

Single Definition for Entire Business Workload
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.

Easy to Install, Learn, and Use
CA Workload Automation 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 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.

"Automation enables us to manage our large and very complex job workload across a multi-instance SAP landscape with very few resources and within our limited budgets."

*– Morten Pors Simonsen, Manager of Server Enterprise Global Services at Danfoss*

Seamless Application Integration

Implementing applications in new or existing client/server infrastructures is a significant undertaking and a substantial investment in terms of resources and capital. Integration with CA Workload Automation allows major business applications to be managed with greater reliability and flexibility and to be executed in sync with workflows running in the rest of the enterprise. CA Workload Automation integration brings synergy to applications like SAP® Solution Manager and provides easy CA Workload Automation access to business users with interfaces familiar to them.

SLA-Based Management and Workload Analytics

CA Workload Automation helps organizations to pro-actively monitor and manage their service level agreements before they cause business disruption. CA Workload Automation applies advanced workload analytics in real time to help create an efficient and finely tuned IT environment. Monitoring capabilities of users are enhanced by a consolidated dashboard and graphical views that enable each user to focus on the SLAs relevant to them.

Figure 2: CA Workload Automation intuitive dashboard display—at-a-glance information about the current health of upcoming SLAs and the Critical Path jobs for all SLAs
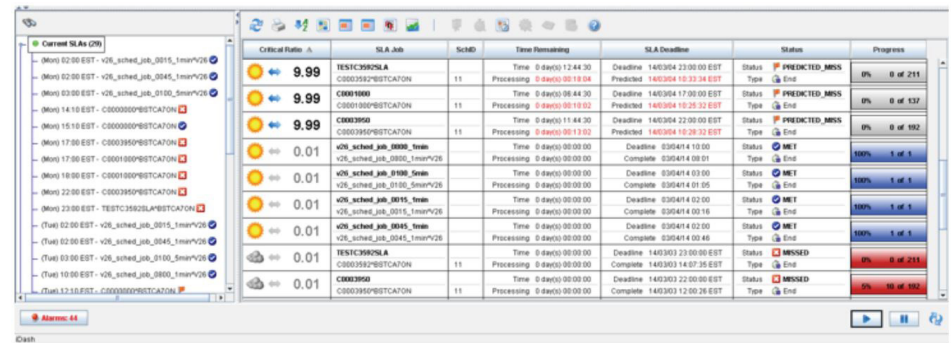
Support for SAP, PeopleSoft and Oracle Applications

By using CA Workload Automation to drive embedded Enterprise Resource Planning (ERP) schedulers and their processes, you gain greater compatibility and consistency across workflows and more granular integration across heterogeneous ERP and/or non-ERP applications. Managing ERP associated workload from a central point also helps to reduce operating costs and improve visibility.

Extensive Job Types and Web Services Interface

CA Workload Automation allows organizations to extend service-oriented design into the development and implementation of other applications. CA Workload Automation Agents allow you to define and run the following job types: Web services HTTP JMX, POJO, JMS Publish, Session Bean, Entity Bean, JMS Subscribe and RMI. The Web services interface enables your programmers to program any software application that is configured to work with Web services to trigger and control workload.

Critical Path Analysis and Forecasting

With workload grouped according to business processes across the enterprise, CA Workload Automation can automatically calculate due times for a business process, based on historical run-time averages. The critical path is displayed in the graphical flowchart with the estimated end time for workload objects. This visual framework provides you with the unique ability to identify and understand the business impact of a job within a job stream. Notification can be provided for overdue jobs, or CA Workload Automation can take other types of actions, such as bypassing less critical jobs.

> "A large financial institution, was able to reduce the process of moving workloads from test and development environments into production from two weeks to just 20 minutes, by implementing workload lifecycle management."

Cloud Bursting

CA Workload Automation enables customers to quickly move and process workloads in different cloud environments when demand for processing spikes. This is made possible through dynamic workload placement, enabling customers to quickly provision and process workloads from a physical infrastructure to a virtualized private cloud or to a public cloud such as Amazon EC2.

Throughput Optimization

CA Workload Automation minimizes delays in processing workload throughout the enterprise, which speeds processing of business data. Architecturally CA Workload Automation can process workload end-to-end much faster than competitive tools because of its advanced architecture.

Fault Tolerance and Recovery

CA Workload Automation provides reliability and fault tolerance at both the job and system level. You can verify that job processing occurred as expected and react to problems before they impact business operations. Reliable, lights-out operations can be achieved with intelligent, automated recovery. This facilitates availability of business systems by enabling jobs to be completed accurately and on time.

Figure 3: Web Based Dashboards allow you to monitor your workload activity. The dasboards provide an interactive analytical overview, and perform basic actions on your applications and jobs.
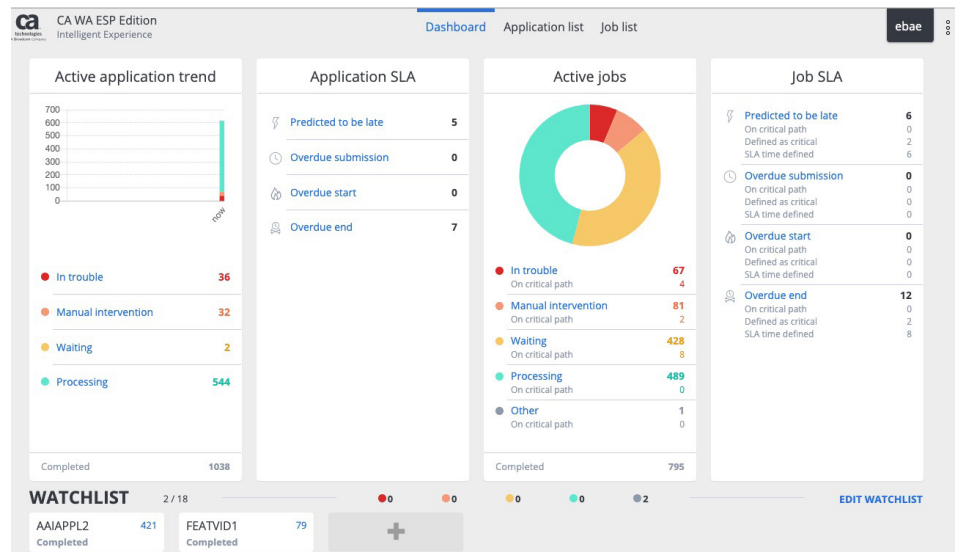
Better Control Costs, Increase Agility, and Improve Service Delivery

CA Workload Automation helps IT to achieve greater levels of efficiency, improve service availability across critical business applications and IT processes, and better manage costs and risks by unifying and simplifying the management of complex workloads across the enterprise.

Increased Productivity and Performance

CA Workload Automation provides a centralized way for you to manage complex application dependencies at the enterprise, server and application level. The ability to orchestrate workload processes in real time contributes to greater productivity and performance of both people and systems across your business.

> "The benefits reaped by using CA Workload Automation are considerable, with 600 operational tasks being eliminated and 40 operational hours being saved daily through automation."
>
> *– Harish Shetty, Executive Vice President-IT at HDFC Bank*

Greater Business Responsiveness

Frequently changing of business processes don't just happen, they must be created. More than ever, that development needs to occur dynamically, and it must be rapid, low-cost and reliable. CA Workload Automation helps provide for rapid application delivery by replacing error-prone scripting and associated support requirements. It also allows you to enhance business responsiveness through real-time automation and dynamic workload placement across physical, virtual and cloud resources.

Manage IT Costs

Improvements in IT operational efficiency impact your ability to manage IT costs—design once and deploy; avoid trivial administrative tasks; reduce the need to find and fix errors to decrease mean-time-to-recovery. CA Workload Automation supports this and more to free resources, allowing you to focus on higher-value activities such as new application development.

Consistent, Reliable Service Delivery

Increased workload volume can translate into greater competition for IT processing resources—a recipe for disaster, or at least cost overruns, if you don't have a way to execute processing based on SLA criteria or business policies. CA Workload Automation delivers with capabilities to manage and set priorities for interconnected jobs from a business-centric viewpoint. End-to-end visibility of production workloads and dependencies, event-based triggering, management by exception, real-time alerting and dynamic critical path management combine to enable timely resolution to the issues that can compromise service availability

The Broadcom Advantage

Broadcom has 30 years of recognized expertise in robust, reliable, scalable, and secure enterprise-class IT management software. Broadcom has made an unparalleled commitment to emerging technologies and IT delivery models such as automation, virtualization, Software-as-a-Service and cloud. Additionally, Broadcom solutions deliver forward-thinking best management technologies garnered through strategic acquisition and developed from within. CA Workload Automation helps to deliver on our 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.

For more information on CA Workload Automation, please visit broadcom. com/products/mainframe/product-portfolio/workload-automation/why-workload-automation.