

Control-M Is Free: The Economic Benefits of Workload Automation

Transform IT into an operational profit center that drives value throughout your business



Table of Contents

1 EXECUTIVE SUMMARY

2 THE IMPACT OF WORKLOAD AUTOMATION ON THE ECONOMICS OF IT

3 DELIVER MORE VALUE THROUGH ITSM

3 SUPPORT IT GOVERNANCE WHILE MAXIMIZING PROFIT

4 SHORTEN THE DEVELOP-AND-DEPLOY CYCLE

CONCLUSION

Executive Summary

IT is traditionally viewed as a cost center—a necessary expense with a negative bottom-line impact—but this doesn't have to be the case. Workload automation makes it possible for IT to reduce costs rather than just incur them, deliver positive return on investment, and become a profit center that improves the business's bottom line.

This white paper discusses how IT organizations can use Control-M and workload automation to deliver economic benefits throughout the organization. The analysis begins with the cost reduction from automating critical IT processes, which in itself is enough to deliver a complete return on investment (ROI). We then explore additional value generated

throughout the organization, including the ability to:

- Manage business services based on their business impact to deliver more value through IT service management (ITSM)
- Maintain compliance with regulatory mandates and management frameworks while maximizing profits
- Improve design and shorten the develop-and-deploy cycle to speed time to value (TTV)

Drawn from real-world use cases and metrics, the paper provides essential insight to help IT leaders make the shift from cost center to profit center for their businesses.



THE IMPACT OF WORKLOAD AUTOMATION ON THE ECONOMICS OF IT

The analysis in this paper is based on a simple definition familiar to any introductory business student: Profit is the financial benefit realized when the amount of revenue gained from a business activity exceeds the expenses, costs, and taxes needed to sustain the activity. While businesses typically think of it in terms of goods and services sold to customers, this isn't the only way to generate profit. A business can also increase its profitability by reducing the internal costs involved in providing these products. In our case, we'll examine the financial gains delivered through workload automation, compared with the costs of implementing automation, to show the resulting bottom-line impact.

The costs and benefits of manual methods, schedulers, and workload automation

Consider a simple, routine business process: the generation of a daily sales report. There are several ways to approach this, each with differing cost implications. The most costly method of execution is to have a staff member run the required program manually. Following a multi-step process, the analyst must log on to a console, call up the appropriate menu or script, set runtime parameters, execute the code, wait for it to complete, and verify its success. The IT organization might not perceive this approach as fatally flawed, but it has two significant drawbacks:

- **Accuracy:** For organizations creating the run sheet manually, even a simple human error, such as a typographical mistake, a skipped task, or an out-of-sequence job, can cause a cascading negative effect that takes valuable time to troubleshoot and correct.
- **Cost:** While it might take only five minutes or so to create each report—assuming that all goes as planned—these minutes add up day by day, department by department, to become a considerable labor expense. In my own organization, we perform routine tasks like sales reports roughly 40,000 times each day. Even if it took an analyst a single minute to complete each task manually, and they performed flawlessly for 24 hours per day, I would need to spend \$30,000 each day on analysts, or \$10 million per year. This would impose an onerous tax on the organization's bottom-line profitability.

The costs and risks associated with manual execution lead organizations to migrate to some form of scheduling system. On the most basic level, this might involve a built-in scheduler. In addition to being notoriously difficult to maintain and update, these schedulers offer strictly limited functionality. Relying on the code itself to provide feedback to the user, they lack a built-in method to notify IT whether their own service is even functioning. As a result, someone must verify that the task—in this case, a sales report—has been performed as required each day. To do so, a staffer must log into a console, connect to the system, and view the appropriate screen to see that the report was created and delivered properly. This shouldn't take more than a few minutes, but as described above, these unnecessary minutes can translate into millions of wasted dollars when multiplied across each of several thousand daily tasks.

As an alternative to built-in schedulers, some IT organizations turn to a Cron-type scheduler—an approach with similar disadvantages. Although the utility is available at no cost, its usage all too easily incurs new costs anyway. While Cron makes it possible to schedule and automate jobs in the environment, it is failure-prone, difficult to maintain, and ill-suited for security and compliance audits. Just as significantly, Cron lacks a method to sequence jobs, relying instead on date and time, an approach that limits flexibility and control.

Ultimately, savvy IT organizations make the move to true workload automation, where parameters are set once and generated perfectly at runtime, and timing and sequence are guaranteed. The only time staff members engage with the system is in the event of a delay or failure, in which event they receive an immediate alert so they can respond appropriately.

The everyday math of automation

The elimination of routine human interaction can have a powerful impact on bottom-line profitability, as a simple example illustrates. In my own data center, our fully sunk cost for an analyst is between \$0.51–\$0.97 per minute, with the higher figure reflecting everything from salary, benefits, and training to power consumption and PC replacement. Using this as our baseline, our daily sales report would cost from \$3.00–\$5.00 per day to generate manually. This isn't a bad price to generate a business-critical item, but as described earlier, when incurred tens of thousands of times each it can easily amount to \$10 million in annual expense for a large company like mine.

With workload automation, that \$10 million in labor costs disappears almost entirely. By eliminating the need for analysts to engage with most of these tasks directly, I can dramatically shrink the number of people I need to support these operations. In fact, the total annual cost for my data center staff, including analysts, supervisors, scheduler, administrators, and managers—combined with the deposit for the Control-M workload automation solution we use—is well under \$1 million. In other words, a \$1 million investment yields \$9 million in net savings that go straight to the bottom line.

This isn't the limit of the available ROI, either. The power of Control-M allows me to scale its automation workload upward without the need to increase staffing. Just in my current environment, I could easily increase the number of automated tasks by a factor of 4–5 without additional headcount. Meanwhile, the tool facilitates audit and compliance, eases version control, simplifies the maintenance of the job schedule, and helps IT create and integrate new workflows more quickly.

The example of my own organization illustrates the title of this white paper; due to its ability to repay its own cost several times over each year, Control-M is effectively free to customers. It also shows how the dramatic savings generated through workload automation can have a real impact on the profitability of the business as a whole—especially when its use is expanded beyond basic sequenced automation and scheduling of routine business processes. Indeed, any task or object in your environment that can be manipulated with a programmatic tool can be automated, such as the creation of LDAP users, the instantiation of virtual servers, and the addition or removal of storage. By integrating your datacenter infrastructure management tools, you can even automate or coordinate downtimes to minimize their duration and effect. In the next sections, we'll explore these broader use cases in more depth.

DELIVER MORE VALUE THROUGH ITSM

Much of the value and economic benefit of workload automation comes when you move beyond basic scheduling to ITSM—a capability far beyond the scope of a built-in or Cron-type scheduler. A full-featured workload automation solution like Control-M makes it simple to map items on a run sheet to specific service level agreements (SLAs), manage and escalate negative events according to their business impact, and more.

Using a batch impact management (BIM) capability, Control-M can easily map workflows to a business service and SLA objectives with a single job, and then discover, track, and report on the performance of the service automatically. By analyzing the jobs in the service path, the solution can report on any failures or delays that might cause an SLA to be missed. In the event of a problem, Control-M can map the service and isolate the critical path jobs into a working view that lets IT manage the scenario interactively by changing the job or creating a workaround to ensure that the SLA is achieved. In the worst case that the SLA objective will be missed, stakeholders can be alerted proactively and briefed by IT on the cause, resolution path, and time to resolution.

Additional plugin modules let IT connect Control-M to a large variety of applications and databases and integrate them easily and directly into processing, which can significantly decrease the time needed to deliver a finished product in the daily process.

SUPPORT IT GOVERNANCE WHILE MAXIMIZING PROFIT

A critical challenge for IT is to help the business maximize profit while meeting demanding regulatory and operational requirements. IT organizations today operate under multiple layers of governmental oversight, IT governance, emerging technologies, and ever more complicated demands from our businesses. As IT faces increasing pressure to accelerate its delivery of solutions to meet the challenges of the business, IT must also comply with diverse regulations, elaborate change and configuration management process and procedures, and tight constraints on budget and staffing. Meanwhile, application developers, business units, infrastructure support, and operational management teams struggle to coordinate their efforts as each follows its own preferred approach. The overall management framework to be followed has shifted over the years from Total Quality Management to ISO-6000 to Six Sigma to ISO-9000, and now to ITIL.

Regardless of methodology or framework, everything IT does has a lifecycle. We begin with discovery of a problem or need. Then we define the desired outcome. We design the project and engage resources to carry out the project plan. Finally, we integrate it into the enterprise. At this point, we generally move on to the next problem or business need. Ideally, we would monitor, analyze, and optimize production over time, but in practice this rarely happens unless there's a problem of some kind. More often, the system remains untouched until the inevitable retirement or upgrade date.

Control-M provides a reliable, flexible, and comprehensive toolset to help IT maximize profit and still maintain compliance, as we can see in two key points of convergence between government regulations and the organization's management framework.

The first point of convergence is security. Who has access to systems and data? How do we track their activities? Who has the keys to the kingdom and where are they kept? Providing security at both the presentation layer and the scheduling engine layer, Control-M enables fine-grained control of access to the scheduling system as well as the ability to audit and report easily on every user action. Control-M also does not require that users have OS-level access to any of the systems that it is installed on, or even to any server it executes tasks on. This makes compliance to nearly any security requirement simple, effective, and available for audit.

The end result is another point of convergence. From a regulatory perspective, auditors will always want to know what happened regarding a specific job or business service. In operational terms, at the end of the development lifecycle, IT needs to know that the deployment and integration was successful. Again, we have a two-tier result set. The first is the Control-M log, which reports on the activities of the workload management, including whether the task ran, where and when, and whether it was successful. An alert-handling toolset allows IT to provide follow-up details on what happened to complete the record. The second tier consists of the capture of the output of the task itself, which provides a record of the task's activity.

In these ways, Control-M facilitates both the front and the back of compliance and regulatory mandates by providing verifiable security, auditing, and logs of activity.

SHORTEN THE DEVELOP-AND-DEPLOY CYCLE

By using Control-M as a workflow manager, IT can reduce the amount of code that needs to be written, create a more flexible workflow, and increase its ability to resolve and work around problems. If the job progression is modular enough, IT can work around issues so that one problematic job or service won't necessarily impact every other service as well.

Additional capabilities to streamline development include:

- **Context-aware job streams:** The Control-M interface allows users to design robust workflows with a drag-n-drop graphic user interface (GUI) that provides the appropriate context forms for every type of job. This allows developers to create job streams that are able to react to events, notify on various issues, and initiate other sequences as needed
- **Codeless workflows:** There is no need to code for transferring files; encryption and decryption are built into the workflow via the tool. Determining the presence or deletion of a file doesn't need to be coded either. Workflows can be self-healing as Control-M has inherent event-based capability.
- **Security:** Control-M makes it possible to isolate development, test, and production from each other through both system isolation and user security isolation. Users have only the amount of access they need based on environment. Every significant action can be tracked and audited; versions can be managed at each step of the design process without interfering with individual productivity.
- **Batch impact management:** By using less code and more jobs to manage workflow logic, IT can reduce development time while making every phase of the operation more transparent and robust, and shortening time to resolve issues that arise. The number of jobs in a workflow does not hamper the ability to manage it as a service; batch impact management (BIM) maps automatically regardless of number of jobs, complexity of connections, or type of job.

Once services have been deployed, a web interface lets non-IT users log in to easily view the status of the services their work involves. A finance manager doesn't need to know how Control-M works to check whether the "Daily General Ledger Service" is in shape; the marketing manager doesn't need to know Control-M to discover that the "Daily Special Service" completed successfully; and the merchandise manager doesn't need to know Control-M to know if the "Daily Inventory Load" is on time. All that's needed is for developers to set up the workflows, name the service as specified by the business, and create a BIM service with the necessary rules. From there, IT can deliver the services the business needs, more quickly and effectively than ever before.

CONCLUSION

As businesses seek every opportunity to improve profitability, workload automation can transform IT from a cost center into a powerful driver of economic advantage. Control-M enables IT to deliver a positive bottom-line impact while operating within any regulatory or IT governance structure. By replacing error-prone manual methods and low-level schedulers with full-featured workload automation, Control-M can deliver \$9 million in savings through a \$1 million investment in a typical large organization, repaying its cost many times over. Leveraged more broadly throughout the organization, the solution facilitates ITSM and business impact management (BIM) to help IT support critical business services more effectively. Security and auditing capabilities aid compliance with IT standards and governmental regulations. Design and deployment capabilities help IT bring services online more quickly and securely. Effectively cost-free for IT in light of its dramatic return on investment, and able to drive new value throughout the business, Control-M makes IT a profit center for the first time.



FOR MORE INFORMATION

To learn more about Control-M Workload Automation,
please visit bmc.com/control-m

BMC is a global leader in innovative software solutions that enable businesses to transform into digital enterprises for the ultimate competitive advantage. Our Digital Enterprise Management solutions are designed to fast track digital business from mainframe to mobile to cloud and beyond.

BMC – Bring IT to Life

BMC digital IT transforms 82 percent of the Fortune 500.



BMC, BMC Software, the BMC logo, and the BMC Software logo, and all other BMC Software product and service names are owned by BMC Software, Inc. and are registered or pending registration in the US Patent and Trademark Office or in the trademark offices of other countries. All other trademarks belong to their respective companies. © Copyright 2007, 2008, 2009, 2014-2017 BMC Software, Inc.

