

SELECTING A WORKLOAD AUTOMATION TOOL



BASED ON ACTUAL USER
EXPERIENCES & OPINIONS

ABSTRACT

Workload Automation (WLA) is absolutely critical to running an effective IT operation. Most large IT departments run hundreds (if not thousands) of automated jobs every day. The tooling and practices used can make a big difference in terms of operating costs, staff productivity, business service levels and competitive advantage. This paper reviews selection criteria for WLA tools based on reviews by real users on IT Central Station, and it explores how to find a solution that fits an IT department's particular set of requirements.

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INTRODUCTION

Workload Automation (WLA) is, as its name suggests, about getting computer workloads to occur on their own, without involving a human being. Examples include backups and integration between legacy systems and ERP. Sometimes also called “Digital Business Automation” or even “Batch Processing” for those of us with a few grey hairs, WLA is an absolutely essential part of IT operations. Large IT departments may run hundreds or even thousands of automated jobs every day. If these tasks were manual, there would be no economical way to cope with them.

How an IT department approaches WLA will have a big impact on how well the automation helps with cost cutting and team productivity. This paper reviews selection criteria for WLA tools based on reviews by real users on IT Central Station. It also explores how to find a WLA solution that fits an IT department’s particular set of requirements.

What is Workload Automation?

Understanding how WLA works and why it’s necessary requires an appreciation of two scarce resources in most IT organizations: personnel and compute/network capacity. There are seldom enough people to get all the work done in the IT department, and generally there’s pressure to reduce headcount or grow the task list. This makes WLA attractive to IT managers.

Compute and network capacity are also limited, particularly during peak hours. Compute and network-intensive tasks like database replication will put performance pressure on compute and network resources if they must be carried out when the bulk of users are accessing systems. Instead, if they can be pushed off to night or weekend hours, then such resource-intensive processes won’t interfere with regular business activities.

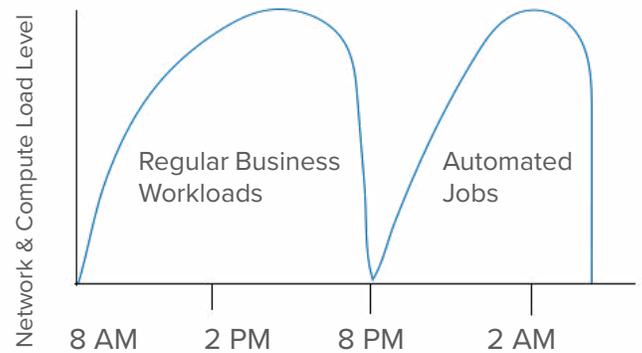


Figure 1 - Workload automation enables IT departments to shift workloads to times of day when network, compute, databases and storage are not in heavy use - thus avoiding slow-downs for business operations.

WLA is the solution. WLA software schedules, runs, manages and automates your business workloads and processes. A human user instructs the WLA solution to execute the tasks according to a schedule, but the software takes it from there. For instance, if an admin wants to execute a database stored procedure every night, he or she only has to publish the job once automating the frequency at which the job will run. The WLA platform will then execute the stored procedure nightly on its own after that.

Selection Criteria for WLA Tools

WLA tools are judged by potential savings and IT department productivity gains. Other benefits sought by companies buying WLA include security, the reduction of manual work which at times may have to be reworked and the accelerated process by which updates and applications can be rolled into production. A [Systems Engineer](#) at a tech vendor with 1,000+ employees explained that his WLA tool “helped automate workloads, which would have taken hours and hours of effort and resources. The tool increased the quality and efficiency of work performed with minimal manual effort as possible. It also reduced cost to the company by ensuring timely/effective/error-free delivery of tasks.”

Exactly what will contribute to productivity or cost cutting depends on many factors. To understand what matters, consider the viewpoints of the many IT Central Station members who work in roles where WLA is a core part of their jobs. As experienced users of WLA solutions, they can suggest selection criteria for these types of tools. Factors that have affected their choice of WLA tools include stability, reporting, user-friendliness, self-service capabilities, integration and centralization of control.

STABILITY AND SCALABILITY

Automated solutions that run unattended overnight need to be stable. Administrators do not like to come to work in the morning and find batch workloads half-finished due to a stability issue. As a result, stability is a prominent selection factor for a WLA solution. A [Business Service Management Architect](#) at a tech consulting company with 1,000+ employees praised

his WLA tool by saying, “We have not encountered any stability issues. [It] is very stable in any version.”

The [Systems Engineer](#) and Control-M Admin at the tech vendor said, “[The WLA tool] has provided a really stable and effective platform to automate workloads. One of our clients used [the WLA solution]

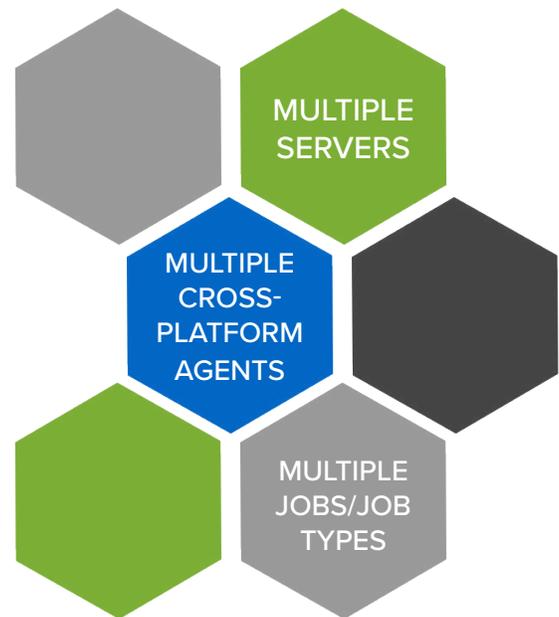


Figure 2 – Users prefer WLA tools that can work with multiple server types, cross-platform agents and job types.

to execute multiple scripts in distributed systems and mainframe environments, which in turn ensured proper functioning of equipment, updating data, BI reports, etc. over their multiple stores and distribution center. Another client I worked with required mainly files to be transferred to third parties/vendors/internal businesses. In all cases, [it] was able to deliver it flawlessly, and also with add-on security features such as SSH connections and PGP encryption.”

Similarly, a WLA solution has to scale well. Requirements and use cases can change quickly, especially as companies reorganize, merge and so forth. A tool acquired for X amount of workloads may

be expected to shift into doing 10X without much notice to the team.

A [Senior Consultant](#) at a tech services company commented on his tool in this regard, saying, “We did not encounter any scalability issues. [It] can handle multiple servers, multiple cross-platform agents, and a large number of jobs easily.” The [Business Service Management Architect](#) at a tech consulting company with 1,000+ employees said, “[My tool] is an easy-to-run, scalable, robust platform or architecture tool.” A [Control-M Analyst](#) at a tech services company with 1,000+ employees said, “We did not really encounter any scalability issues; it is very scalable, especially with agentless technology.”

ABILITY TO DOCUMENT RUNS/ REPORTING/NOTIFICATIONS OF SCHEDULING ISSUES

Given the large volume of jobs running at most organizations, the reporting, notifications about scheduling and documenting of runs figures into the selection criteria for a WLA tool. According to a [Control-M Developer](#) at a retailer with 1,000+

users in monitoring their schedules, and developers with building schedules that interface with many technologies.” He particularly liked his solution’s reporting utility, which enabled him to generate reports for the business that track batch performance.

A [Senior Consultant](#) at a tech services company liked his WLA tool’s ability to forecast and show deadlines, with alerts, ahead of schedule overruns. This gave him the ability to plan ahead and work through potential workload bottlenecks before they became problems. A [Production Control Manager](#) at a large health, wellness and fitness company noted that, “The automated notification in a case of an error has helped us a lot in reducing downtime and erasing errors.”

A [Graduate Student Research Assistant](#) at a university with 1,000+ employees noted, “We had to run a few thousand scripts on a daily, weekly, monthly, semiannual, and annual basis. Without this tool, scheduling would have been really difficult. This tool also helps in documenting the runs, which would further enable us to check for defects.” A [Middleware Analyst](#) at a financial services firm felt that his WLA tool had improved his organization because, “It has given

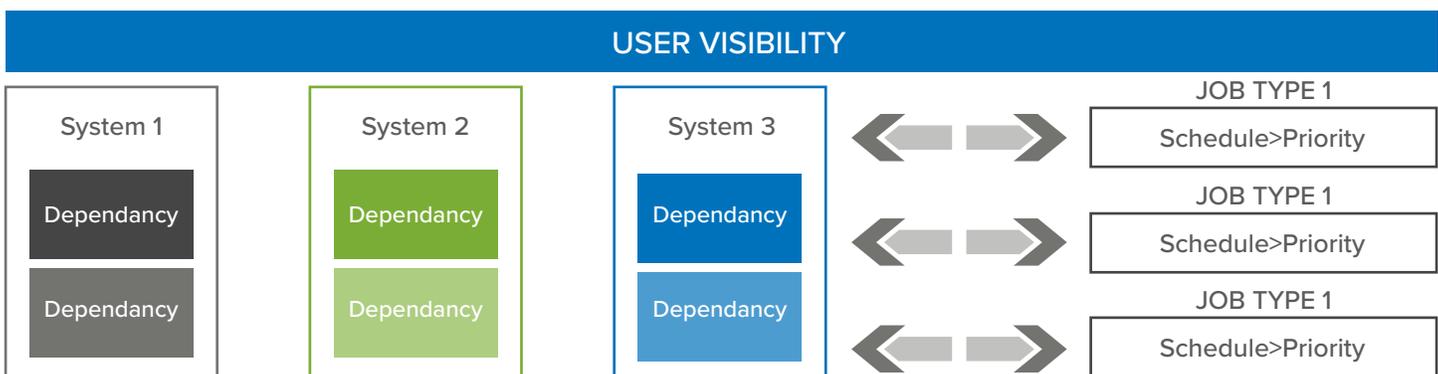


Figure 3 - Users want visibility across multiple systems (and any dependencies within them) and multiple job workflows.

employees, his tool is effective because it “has a huge number of features and utilities that assist

the organization visibility into how various applications relate to and depend on one another.”

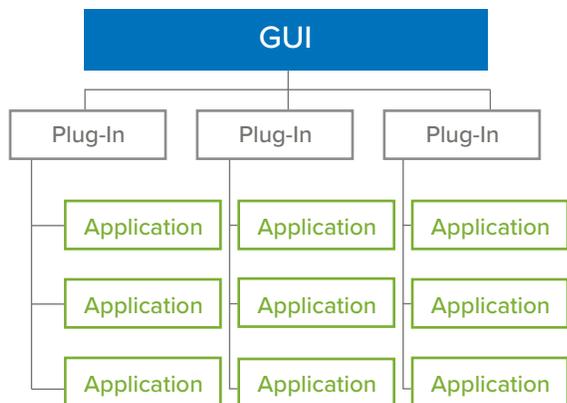


Figure 4 - The WLA GUI should ideally provide seamless access to multiple applications through a plug in architecture..

USER-FRIENDLY GUI

A user-friendly GUI helps team productivity, as the [Senior Consultant](#) at a tech services company found. He said, “Before implementing [our WLA solution], our FTP related jobs were triggered using scripts. With [our WLA solution], these jobs can be triggered using modules already integrated into it, reducing team effort.”

A [Technical Lead](#) at a tech company stated, “The GUI is very user friendly and also plugin [i.e. templates] are available for almost all of the widely used applications.” A [Senior IT Specialist](#) at a financial services firm with 1,000+ employees was similarly pleased with his WLA tool’s “user-friendly interface.” A [Technical Consultant](#) at a software company likes his tool’s job management functionality. “The GUI is also user friendly,” he added. A [Consultant](#) at a tech services company with 1,000+ employees echoed this sentiment, calling his WLA solution, “an awesome product in the automation area, very robust and user friendly.”

The GUI is directly related to user productivity. The [Senior Consultant](#) at a tech services company pointed out that, “A GUI with various filter options that allows you to manage jobs from one screen.” The [Control-M Developer](#) at a retailer praised his WLA tool’s GUI,

saying, “Your batch is managed by a single tool, allowing you to monitor your entire flow.” He added, “Great GUI. Easy to navigate. Customizable. Status at a glance.” A [Control-M Analyst](#) at a tech services company remarked, “The GUI interface is exceptional, beating any of the competitors’ products I have used.”

SELF-SERVICE

It’s inefficient for a WLA solution to require a specially-trained administrator to set up an automated job. This will create backlogs in job processing as the pool of qualified admins inevitably strains to keep up with demand for automated file transfers and so forth. As a result, self-service is a valued featured and selection criterion for WLA solutions.

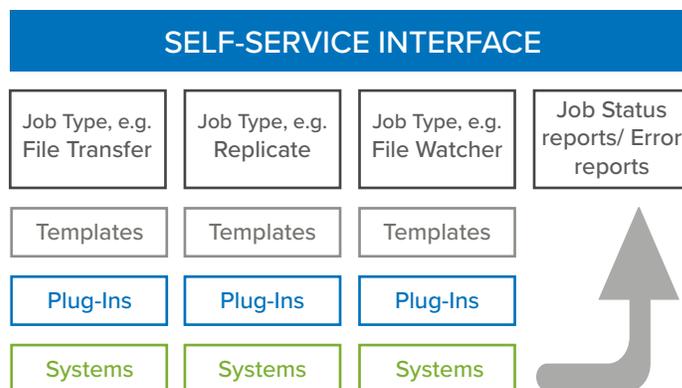


Figure 5 – A WLA tool with a self-service interface should provide simple access to multiple job types and associated templates and plug-ins – as well as integrated reporting on job statuses.

As a [Control-M Workload Admin](#) at a financial services firm with 5,000+ employees put it, “My [WLA] product is intuitive, you can start working with it and figure out the basics pretty quickly. The built-in modules (examples: File Transfer, Database, File Watcher etc.) help eliminate custom built scripts which accomplish the same thing.”

He added that his organization benefited from “the availability of the Self-Service plug-in. The non-

scheduling IT users or business users will actually be able to have insight into their automated job flows which is a feature that we never had before.” A [Senior IT Specialist](#) at a financial services firm also weighed in, saying he felt his tool’s self-service portal was a valuable feature for his organization.

A [Middleware Analyst](#) at a financial services firm expanded on the scope of self-service features that benefit an IT organization. He liked that his WLA tool had “the ability to view a history of jobs/tasks that have run: This makes troubleshooting a breeze.” He also praised its “ability to proactively forecast the runtime of a workflow: Managing SLA expectations and proactively generating alerts when the SLA won’t



Figure 6 - A WLA tool should connect with a wide variety of systems, including legacy z/OS as well as standard databases platforms and web services.

be met.” He also felt that his tool’s ability to proactively forecast the runtime of a workflow enables him to manage SLA expectations and proactively generate alerts when the SLA won’t be met.

INTEGRATION, PLUGINS AND CROSS-PLATFORM SUPPORT

A WLA solution must integrate with other systems. Yet, not all WLA solutions integrate easily or affordably.

Some require professional services engagements and custom development to realize effective integration. In other cases, integrations can be rigid and costly to modify. The provisioning of pre-built, tested plugins for various applications is considered quite helpful in this regard.

A [Senior Consultant](#) at a tech services company was pleased with his tool’s “integration with applications such as Oracle, SAP, FTP, Hadoop, JMS, and many others.” A [Control-M Analyst](#) at a tech services company remarked, “The range of job types and integration with other products such as Hadoop, SAS, databases, etc. is very useful.” This comment reveals the breadth of workloads that get automated. In his case, he is using his WLA tool for Big Data (Hadoop), business intelligence (SAS), databases and so forth.

An [IT Consultant](#) at a tech consulting company with 1,000+ employees liked that he had integration with different modules like Web Service (WS) and Advanced File Transfer (AFT). Overall, he felt that his organization had improved because, “We use [the WLA tool] to reduce the development time of the automations, using the modules.”

Integration capabilities affect costs as well. A [Middleware Analyst](#) at a financial services firm said that his WLA tool “has reduced scripting and coding time down to almost zero with the out-of-the-box plugins.” Reducing coding time translates into savings. In a further cost-reducing move, the [Production Control Manager](#) at a health, wellness and fitness company suggested that WLA buyers “Ask for packages and bundles, so you might get more plugins for one price.”

Cross-platform operation is another important variant of integration that is prized by IT Central Station members who use WLA tools. A [Senior IT Specialist](#) at a financial services firm liked that his “Central

MASTER SCHEDULER

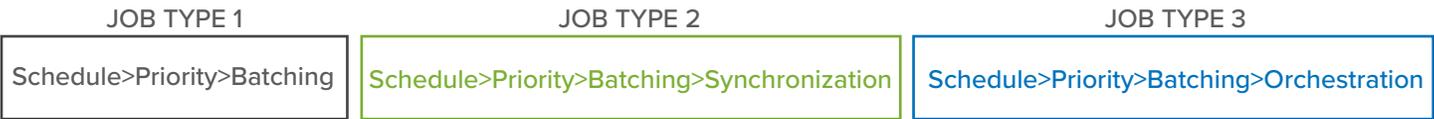


Figure 7 - A master scheduler gives the WLA user a single point of control and visibility over multiple workflow schedules.

scheduler tool provides automation of cross platform and batch processing. It has agents for iSeries [AS/400], Z/Os and Unisys 2000.” He noted that “not all central scheduler tools have agents for iSeries, z/ OS and UNISYS 2000. These are valuable features because I don’t have to use many tools and I have one central tool for all platforms.”

CENTRALIZED CONTROL/SINGLE-SCHEDULING PLATFORM

Given how many different systems are affected by WLA, it’s considered very helpful if a WLA solution offers a central point of control for the majority of workloads. A [Master Scheduler](#) at a tech company with 1,000+ employees commented that, “Ninety percent or more of the batch processing is now centralized into a single scheduling platform. This helps the support teams so that they only need to

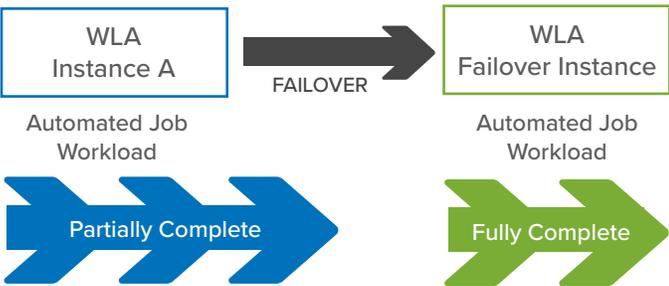


Figure 8 - An effective failover architecture will enable a job workload to be completed automatically by the failover instance if the primary instance goes down.

go to one group for scheduling and monitoring the batch processing. The operations support staff only has one platform where they can monitor almost all of

our batch processing.”

The [Control-M Developer](#) at a retailer explained his appreciation for centralized control in the context of a cross-platform use case. He said, “A Linux job can be dependent on a Windows job, which can be dependent on many other flavors of hardware/software. Your batch is therefore managed by a single tool, allowing you to monitor your entire flow.”

An [Assistant Director](#) at a financial services firm with 1,000+ employees, who executes more than 30,000 jobs through a single window, added, “It provides a single point of control for the entire organization’s batch processing, helping to shorten the batch processing window and achieve a ‘manage-by-exception’ operation environment. At my current organization, our batch processing requirement is too technically diversified and has to be supported 24/7.”

Control over versions makes a difference when automating thousands of jobs. According to a [Technical Support Representative](#) at a tech vendor with 10,000+ employees, “It is much easier to move and copy schedules. Versioning allows for quick restoration when an error is found.” The [Middleware Analyst](#) at a financial services firm likes that his tool gives him a mass update option. He said, “This feature allows for multiple fields of job definitions to be updated based on certain search criteria, with a very user-friendly interface.”

HIGH AVAILABILITY AND FAILOVER

High availability (HA) is an attractive feature for a WLA solution. In addition to reducing hassles and time spent remediating system failures, the capability offers business benefits as well. Many batch workloads are crucial to the organization. For example, if a file volume is not copied over to a second device, and the original file becomes corrupted, that may have an impact on business operations.

Recognizing the value of HA in WLA, the [Business Service Management Architect](#) at a tech consulting company said he likes, “High availability through software, supported by an Oracle RAC with ASM, is a valuable feature. In operation, it is fantastic.” A [Senior Consultant](#) at a small tech consulting company noted that, “Automatic failover allows for active-passive high availability. If the [WLA] application were to fail on one server, it would automatically start up and continue processing on the backup (failover) server.” He added that his tool comes with automatic failover and HA “out of the box.”

SUPPORT

Vendor support matters, too. The [Systems Engineer](#) and Control-M Admin at a tech vendor expressed satisfaction with his WLA vendor’s support, saying, “Technical support is excellent. They have a great support team.” He added that he particularly liked his vendor had a special program for migrating from legacy WLA systems. Both the [Control-M Workload Admin](#) at a financial services firm and an [Operations Specialist](#) at a hospitality company with 1,000+ employees were also impressed with the level of support they received.

The [Business Service Management Architect](#) at a tech consulting company with 1,000+ employees said

simply, “Technical support is the best.” The [Middleware Analyst](#) at a financial services firm commented, “I find the level of technical support to be exceptional. Whether it is a small query or a large problem, you will always get a timely response and often one of the support staff members will be present on-site.” The [Control-M Analyst](#) at a tech services company said, “Support has been very good in my experience.” A [Senior Consultant](#) at a small tech consulting company concluded, “Technical support is 10 out of 10; support is available around the clock, 24/7.”

CONCLUSION

Choosing a solution for WLA involves balancing a number of factors, many of which are likely to be unique to one's specific organization. The goal is always the same, however, to make the IT department as productive as possible while delivering on service levels to the business. Members of IT Central Station who work with WLA thus recommend looking for WLA solutions that are stable and scale well.

They highlight selection criteria such as centralized control, ease of use, a good GUI, reporting, self-service, and integration. Cross-platform operation is critical, especially if it can be implemented without excessive resource use. They expect WLA solutions to be highly available as well.

Each department will have to gauge for itself how to weight these parameters for their particular situation. In some cases, people and practices are more important than tooling. However, it should be helpful understanding how experienced WLA professionals look at their options before making a purchase decision.

ABOUT IT CENTRAL STATION

User reviews, candid discussions, and more for enterprise technology professionals.

The Internet has completely changed the way we make buying decisions. We now use ratings and review sites to see what other real users think before we buy electronics, book a hotel, visit a doctor or choose a restaurant. But in the world of enterprise technology, most of the information online and in your inbox comes from vendors but what you really want is objective information from other users. IT Central Station provides technology professionals with a community platform to share information about enterprise solutions.

IT Central Station is committed to offering user-contributed information that is valuable, objective and relevant. We validate all reviewers with a triple authentication process, and protect your privacy by providing an environment where you can post anonymously and freely express your views. As a result, the community becomes a valuable resource, ensuring you get access to the right information and connect to the right people, whenever you need it.

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