



WHY ENTERPRISE AUTOMATION  
IS THE KEY TO CLOUD STRATEGY

SUCCESS

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What IT Ops Wishes Cloud Architects Knew About Enterprise Automation

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# INTRODUCTION

The cloud is fast becoming the platform of choice to power almost every enterprise application, from ERP and CRM to data pipelines and emerging services based on artificial intelligence, and everything in between. Whether you opt for public, private, or hybrid cloud approaches, cloud infrastructures and SaaS applications boost flexibility, security, and cost efficiency.

However, success with cloud strategy is not a given.

As your organization embraces the cloud, you must consider how your automated processing and overall service levels will be affected. With every cloud provider offering an integrated automation solution, the result is a proliferation of point solutions that lack integration and result in the familiar “islands of automation.”

This lack of unified visibility and coordinated orchestration makes the management of workloads ever more challenging for IT Ops teams and impacts critical business services.

Enterprise automation can help harness the speed and agility of the cloud by:

- **Providing observability across hybrid and multi-cloud environments**
- **Safeguarding operational control**
- **Preventing vendor lock-in**
- **Ensuring Business and IT service levels are optimized**
- **Maintaining security, governance, and compliance**

This eBook explores how enterprise automation can help organizations optimize their cloud strategy and unify visibility and control – and ultimately speed digital transformation.



**The benefits of cloud adoption are plentiful—but they aren’t guaranteed. To realize a maximum gain from these services, you need an effective enterprise automation strategy that’s optimized for workloads running on premises and across multiple clouds.**

# 70%+

**stated that the use of multiple cloud automation solutions caused significant challenges including compliance, delays to delivery, and difficulties with troubleshooting.<sup>1</sup>**

<sup>1</sup> Dimensional Research, “Why Companies Lose Efficiency and Compliance with Cloud Automation Solutions,” July 2023, URL: <https://enterprise-software.broadcom.com/multi-cloud-challenges-automation-solution>



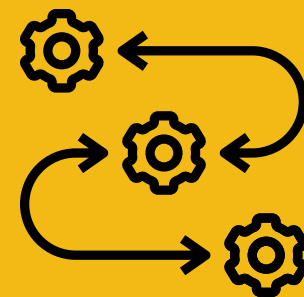
# OBSERVABILITY FOR HYBRID, MULTI-CLOUD ENVIRONMENTS

As you deploy with different cloud providers, it's natural to accept their automation capability as the default position. After all, it's easy to implement and is either free or less expensive than a dedicated enterprise automation solution. It seems to be the smart move.

**Except it's not. Here's why:**

- That dedicated cloud automation service only provides sufficient functionality to run the process. You will be able to see a screen with a particular process running—but not a lot more.
- These views are basic, showing the steps that need to execute but nothing about what service delivery is expected: Is there an SLA (Service Level Agreement) attached to it? Is the process running late? What are the dependencies to processes in other cloud-native tools or on-premises applications?
- Point automation tools create islands of automation, disrupting visibility and offering a fragmented, disconnected picture of the cloud environment and automation running on it. Operations teams are working with their hands tied, constantly scanning multiple screens to understand every scenario, unable to assess the impact of problems or prevent them. Cloud teams need visibility to upstream and downstream technologies to maintain the service delivery required by the business.

As you spread processing across an ever-increasing number of platforms and providers, the ability to rapidly visualize the current situation and anticipate downstream results is more critical than ever. Failure here can result in an increased cost of operations, more late deliveries causing business outages, and reputational damage to the business.



**Automatic Automation provides a unified view of all automated processes, regardless of whether they are deployed on-premises, in the cloud, or via microservices like Kubernetes. It integrates with all the technologies you use, offers a standardized way to design workflows, and provides consistent operational controls to manage in-flight activities.**

## 67%

**lack end-to-end visibility for automated processes across all environments from public cloud to private cloud and legacy.<sup>2</sup> The cause of this lack of visibility is too many tools which presents many issues.**

**59% say they spend extra time building the automation**

**52% indicate reporting is more difficult**

**52% report encountering operational problems**

**49% experience increased costs**

**46% indicate troubleshooting is more difficult**

**41% say it is more challenging to ensure compliance**

**37% contend with delays in delivery**

**32% experience over-provisioning**

<sup>2</sup> Dimensional Research, "How Too Many Tools Obscure Automation Issues," December 2023, URL: <https://enterprise-software.broadcom.com/how-too-many-tools-obscure-automation-issues>



# SAFEGUARD OPERATIONAL CONTROL

In today's cloud-first climate, automation strategy must change to meet ever-changing business needs. The larger your operational footprint, the more critical it is that you ensure complete, agile operational control.

In a world of infinite server racks, maintaining control also means knowing where what processes run, how servers work together, etc. An overarching automation layer can provide the glue to create a common layer on distributed infrastructure and helps you see implications faster.

## Control Operational Cost

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When you lift and shift your applications to a cloud server, you find out that what was once a paid-for server is now variable and pay-as-you-go whenever that server is active. What if you could just use the cloud instance when it was required and keep it inactive the rest of the time? Enterprise automation provides the capability to handle situations just like this. The server could be started when needed and then immediately stopped once the work is complete – you only pay for the time you need it. This could be done with no human interaction, with configuration based on a variety of conditions.

Another challenge is managing costs with cloud providers' cost-per-execution model. What happens when the work needs input or data from external systems? A popular idea to address this is to run the process at predetermined intervals 'x' minutes apart to ensure the scenario is covered. This can lead to hundreds of chargeable executions per day that do nothing. Orchestrating these processes with enterprise automation allows you to monitor for external input and run the process only when it is required.

## Maintain Operational Control with Flexibility

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As your organization embraces cloud services, you need to maintain operational control whether you are part of the cloud team, IT operations, or dedicated to the workload. At the same time, you need flexibility for portability between cloud vendors.

You can abstract the API to the cloud provider's automation technology, and leverage future cloud solutions by changing that abstraction—not rebuilding your processing from scratch. From a business perspective, you execute the same workflow—and that workflow integrates with each cloud provider's automation platform. With this approach, automation does not change when you move a service between providers.

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**Abstracting away the individual cloud providers' capabilities into the Automic Automation management console creates an efficient operational model that delivers high-quality services with extreme agility for a heterogeneous environment — and avoids long-term cloud vendor lock-in, reduces operational costs and improves service delivery.**

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# ENSURE BUSINESS AND IT SERVICE LEVELS ARE MET

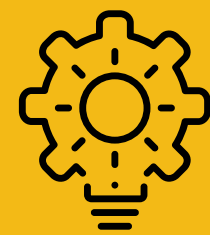
Your organization has invested heavily in defining, managing, and improving the automated processes you deliver to the business. SLAs help ensure that services delivered are reliable and predictable, and SLA compliance must be maintained.

SLAs define the delivery timelines you expect, laying out the metrics by which service is measured and remedies or penalties in the event commitments are missed. SLAs are a critical component of any cloud contract. The challenge becomes who manages these SLAs when they sit across cloud providers.

When processing is segmented into distinct cloud vendor automation platforms, there is no central visibility and no critical path across the process. This jeopardizes your ability to maintain or improve our SLAs.

With business processes increasingly made up of tasks that have dependencies across on-premises, SaaS, and hybrid public/private cloud infrastructures, it is even more critical to have end-to-end monitoring and visibility into SLA delivery.

It's not just a matter of recording SLA delivery. Organizations need advanced mechanisms that enable them to predict outcomes and proactively alert them to risks in delivering services, providing sufficient time to enact a resolution before there's an impact on SLAs and the business.



**Automic Automation provides SLA monitoring and critical path analytics to help you optimize business processing and improve service delivery. With it, you move from reactive to proactive monitoring to resolve issues before they have an impact on the business.**

# 88%

**state that SLA breaches have a significant impact on customer satisfaction.<sup>3</sup>**

<sup>3</sup>Dimensional Research, "How Too Many Tools Obscure Automation Issues," December 2023, URL: <https://enterprise-software.broadcom.com/how-too-many-tools-obscure-automation-issues>



# MAINTAIN SECURITY, GOVERNANCE, AND COMPLIANCE

## Traceability is essential.

Understanding who took what action, where, and when is critical to proving compliance and avoiding disruptions by regulatory authorities.

## Establishing Change Control and Traceability

Granular, role-based control over access and actions is a great start for a compliance strategy. However, the information concerning governance and compliance in every execution needs to be centralized. This means gaining visibility into each execution, including who was involved, when it happened, and what the outcome was, and recording the information in one dedicated repository. Without consolidation, a solid foundation for governance and auditory compliance submissions is missing.

## Enterprise Automation Streamlines Auditing and Control

With each cloud provider holding audit and compliance information locally, you will need to create custom processes to centralize insights when using the cloud provider's automation service. This includes combining execution statistics, logs, access rights, and human interactions with the jobs.

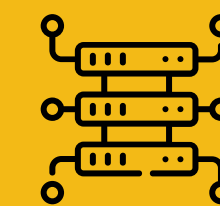
It could take days or even weeks to assemble everything required for audit and governance control. Even then, auditors may be concerned that the insights were correlated manually and not collected at the source.

By contrast, enterprise automation automatically centralizes this information. It's responsible for requesting the execution and is therefore the point of audit. Enterprise automation will also recover and record job outputs and human interactions with the job as part of standard processing.

# 49%

stated using more than one automation solution makes compliance more difficult.<sup>4</sup>

<sup>4</sup> Dimensional Research, "Why Companies Lose Efficiency and Compliance with Cloud Automation Solutions," July 2023, URL: <https://enterprise-software.broadcom.com/multi-cloud-challenges-automation-solution>



**Automic Automation centrally stores the activities and outcomes of automation and enables granular role-based access controls. With these capabilities, you gain full change control evidence and the traceability required for auditing and compliance, across your on-premises, private cloud, and public cloud environments.**



# DRAWING IT ALL TOGETHER

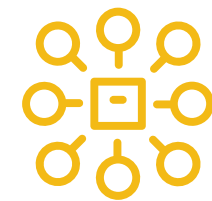
## The True Cost of Free

Today, there are a wide range of offerings. Whether it is AWS Batch, Azure Scheduler, Google Workflow, or one of many others, there is a cost implication from choosing these basic, “free” scheduling services. Following are just a few of the ways these tools can cost your business:



### Fragmented operations.

While every cloud provider offers basic functions to automate their technology, these islands of automation fragment the operational view, ultimately creating inefficiency and increasing the lag time in adopting new technologies.



### Brittle intra-app connections.

Building the connection points between applications in the cloud is time-consuming. Further, these connections can often be brittle, leaving the business exposed to issues over the long term.



### Risks of missed SLAs.

As the execution of workloads grows increasingly fragmented, organizations run the increased risk of missed SLAs, which can introduce a range of business penalties, ranging from fines to eroding customer loyalty.



### High governance costs.

After implementing these add-ons, the cost of establishing the required security, audit, and compliance controls can be high.

Basic scheduling services supplied by a cloud provider may not appear as a line item on the invoice,

**but there will be a price for both operations and the business.**



## Why Enterprise Automation is Essential

By contrast, using enterprise automation to automate cloud processing enables you to maintain a solid foundation for operational excellence, eliminate disconnected business processing, and manage a gradual transition to the cloud.

### Automatic Automation Delivers



One place to monitor and control all your workloads



Secure role-based access with centralized audit, compliance, and reporting



Analytics for all your workloads to improve SLA delivery



Intelligent alerting and dynamic critical path visibility to speed resolution



Increased operational and cost efficiency



Accelerated time to market for new technologies

Abstracting away the individual cloud providers' automation capability creates an efficient operational model that fuels the delivery of high-quality services with unparalleled agility—and

**helps you avoid long-term cloud vendor lock-in.**



# AUTOMIC AUTOMATION FOR THE CLOUD

The cloud is our new reality, representing the cornerstone for sustained innovation, enhanced customer experience, agility, improved cost control, and much more. Your ability to maximize this potential depends on how you manage your workload automation in a hybrid, multi-cloud world.

Automic Automation lets you embrace the cloud and at the same time maintain service levels. With enterprise automation, you can effectively establish a manager-of-managers approach employing a unified tool to govern several disparate cloud scheduling and workflow orchestration solutions. This way, you can gain end-to-end business process visibility across all your cloud and on-premises workloads.

## Cloud Integrations

Automic Automation has a broad range of integrations that span multiple cloud providers.



### AWS

Integrates with many AWS solutions, including AWS Lambda, Amazon Simple Storage Service (Amazon S3), Amazon EventBridge, AWS Glue, AWS Step Functions, and more.



### Azure

Integrates with many Azure solutions, including Azure Blob Storage, Azure Data Factory, Azure Event Grid, Azure Synapse, and more.



### Google Cloud

Integrates with many Google Cloud services, including Google Cloud Storage, Google Cloud BigQuery, Google Cloud Composer, Google Cloud Data Fusion, Google Cloud Dataflow, and more.



### Others

Integrates with ERP solutions in the cloud like Oracle and SAP, as well as other tools including Informatica, Apache Airflow, Cloud Foundry, Kubernetes, etc

## Integration Factory

To better support our customer's unique requirements, the Broadcom Integration Factory's dedicated team continuously delivers integrations that meet our customers' evolving requirements, objectives, and cloud implementations. Our **Integration Factory team** operates with customers top-of-mind, releasing integrations independent of the workload products' release cycles to match the speed of cloud services' innovation.

## Find All Our Cloud Integrations at the Automation Marketplace

At Broadcom's **Automation Marketplace**, you can find and download cloud integrations for our Automic Automation and other Broadcom workload automation solutions like AutoSys and dSeries. With these integrations, your organization can easily support the cloud technologies in use—without writing any integration code of your own.



# ABOUT AUTOMIC AUTOMATION

Automic Automation gives you the agility, speed, and reliability required for effective workload automation. From a single platform, Automic unifies and simplifies workload automation and orchestration centrally across your hybrid cloud environment with the capabilities you need to accelerate your digital transformation. Automic Automation is available in three deployment options so you can choose the deployment model that works best for your business.



## Automic SaaS

With the same proven features as the Automic Automation on-premises solution, Automic SaaS allows you to manage TCO and free resources so you can focus on service delivery, not platform and infrastructure administration.



## Automic Automation Kubernetes Edition

A deployment option that gives you the same functionality as a regular on-premises system. Container-based systems have flexible deployment options and greatly reduce operational complexity while providing freedom to design and manage Automic using an on-premises, hybrid, or public cloud infrastructure



## Automic Automation On-premises

An award-winning, enterprise-scale workload automation solution available on-premises, giving you full control over infrastructure, software, and administration. Infrastructure and Automic teams can work hand in hand for provisioning, networking, etc. with a short communication path.

Broadcom's Workload Automation portfolio is used by more than

**60% of the Fortune 100 and 2000 customers globally**



# ABOUT BROADCOM

**Broadcom Inc. is a global infrastructure technology leader built on 50 years of innovation, collaboration, and engineering excellence.**

Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops, and supplies a broad range of semiconductor, enterprise software, and security solutions. Broadcom's category-leading product portfolio serves critical markets, including cloud, data center, networking, broadband, wireless, storage, industrial, and enterprise software. Our solutions include service provider and enterprise networking and storage, mobile device and broadband connectivity, mainframe, cybersecurity, and private and hybrid cloud infrastructure. Broadcom is a Delaware corporation headquartered in Palo Alto, CA.

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