2023 Global State of IT Automation Report

IT Automation and Orchestration Benchmarks for IT Ops, DevOps, CloudOps, and DataOps Teams

stonebranch

Table of Contents

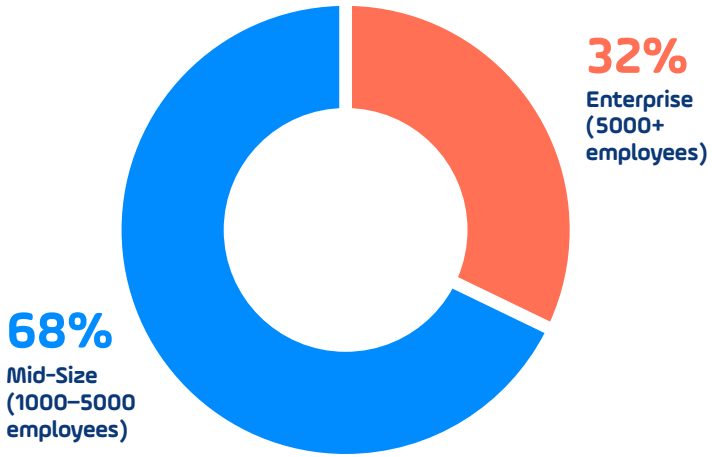
Demographics and methodology

Stonebranch, in collaboration with Censuswide, conducted a survey of 439 IT automation professionals to gather insights on their automation priorities and obstacles in their respective organizations.

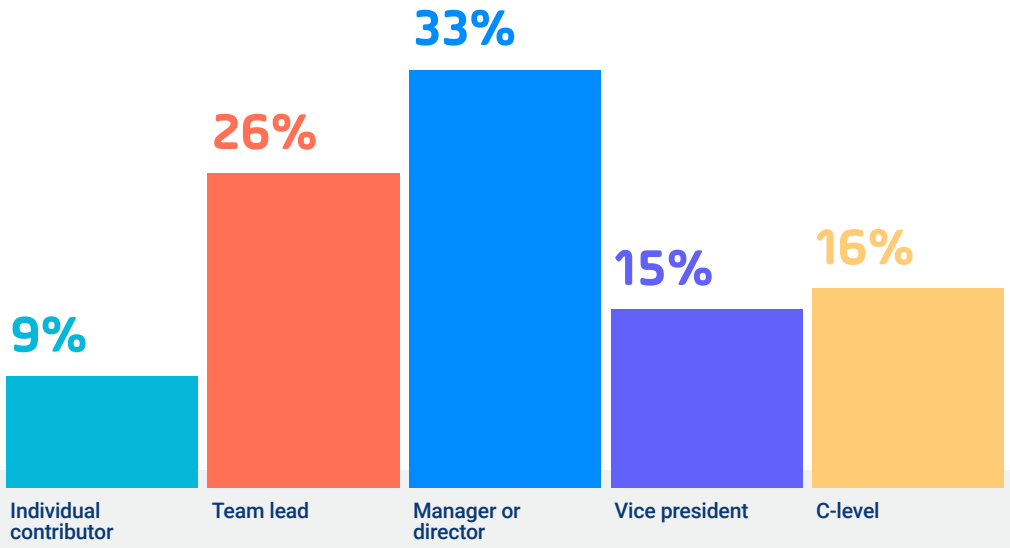
The findings in this report are based on a comprehensive online survey carried out globally in January 2023, and participants were selected through a stringent, multi-step screening process to ensure that only relevant respondents were included. The survey participants held positions in IT Operations, Data Operations, Cloud Operations, Platform Operations, IT Service Management, and Application Development, and worked for organizations with over 1,000 employees.

Censuswide adheres to and is comprised of members of the Market Research Society, which operates based on the ESOMAR principles.

Participant Company Size



Respondents by Seniority



Demographics and methodology

Respondents by Region

Executive summary

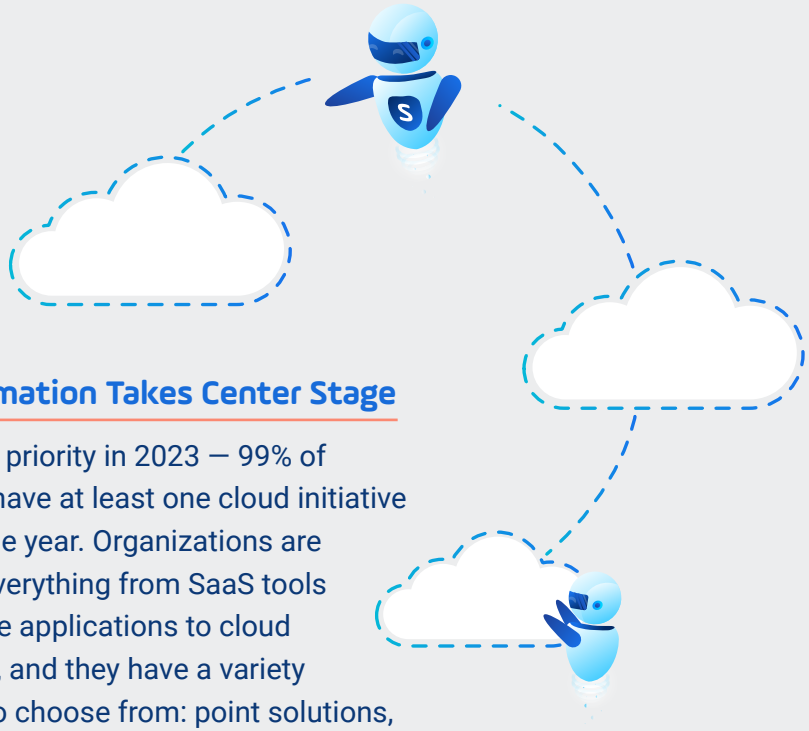
Top Takeaways from the 2023 State of IT Automation Report

Organizations have been busy evolving how and where they apply IT automation and orchestration technologies. Cloud is fundamentally different that traditional on-premises systems. Cloud requires an automation-first approach to effectively control costs, ensure security, and optimize performance.

Spawning from a mix of on-premises and growing cloud usage is the Hybrid IT environment — which is more pervasive, and complex, than ever. IT Ops, cloud, data, and developer teams are focused on using automation technologies to help connect workflows, drive efficiencies, and control costs.

Stonebranch recently partnered with Censuswide to survey a diverse group of IT automation professionals. Their responses offer valuable insights into the challenges and opportunities that organizations face as they continue to adapt both emerging and established automation platforms to their IT and business processes.

Here are a few of the most significant insights gathered from our research:



1. Cloud Automation Takes Center Stage

Cloud is a top priority in 2023 — 99% of respondents have at least one cloud initiative planned for the year. Organizations are automating everything from SaaS tools to cloud-native applications to cloud infrastructure, and they have a variety of solutions to choose from: point solutions, enterprise-wide orchestration platforms, and everything in between. While most organizations have used a mix of automation technologies in the past, there is keen interest in replacement technologies that can break down silos of automation between applications spanning hybrid IT environments.

2. Multi-Cloud Environments are on the Rise

Multi-cloud environments allow organizations to leverage the strengths of different cloud platforms to meet their unique needs. 82% of those surveyed have automated processes across multi-cloud environments. As an example, moving data in real-time to keep up with the demands from internal line-of-business users and external customers. These processes hinge on the ability to centrally orchestrate a mix of automation and data transfer solutions.

3. Data Pipeline Orchestration Strategies are Evolving

Cloud automation and data pipeline orchestration are tightly intertwined. Data-centric tools were one of the first areas to go mainstream in the cloud, yet many enterprise data operations and sources still reside on-premises. Transferring data between these tools and environments is a common and pressing need. Data and operations teams face additional challenges scaling their pipelines to keep up with the ever-growing appetites of their stakeholders. As such, data teams are trying a variety of approaches, from custom scripts to enterprise orchestration tools to inbuilt job schedulers.

4. Self-Service Automation is Booming

Historically, IT automation access has been limited to and controlled by IT operations teams. In 2023, we see a sizable shift toward self-service automation — 92% of respondents empower end-users from data, cloud, development, and line-of-business teams to execute their own workflows, tools, and processes. This user growth is most dramatic for tech-focused teams, with data teams experiencing 2x growth and developers seeing a 4x increase year-over-year. Democratization of automation has another benefit: it frees up IT teams to work on other priorities.

5. Automation has Evolved into Orchestration

Automating on-premises servers and mainframes is straightforward, but orchestrating processes that span between on-premises and cloud environments is more complex. In response, organizations are enhancing their capabilities in 2023: 81% of respondents plan to grow their automation program and 86% plan to replace or add a new platform to support orchestration.

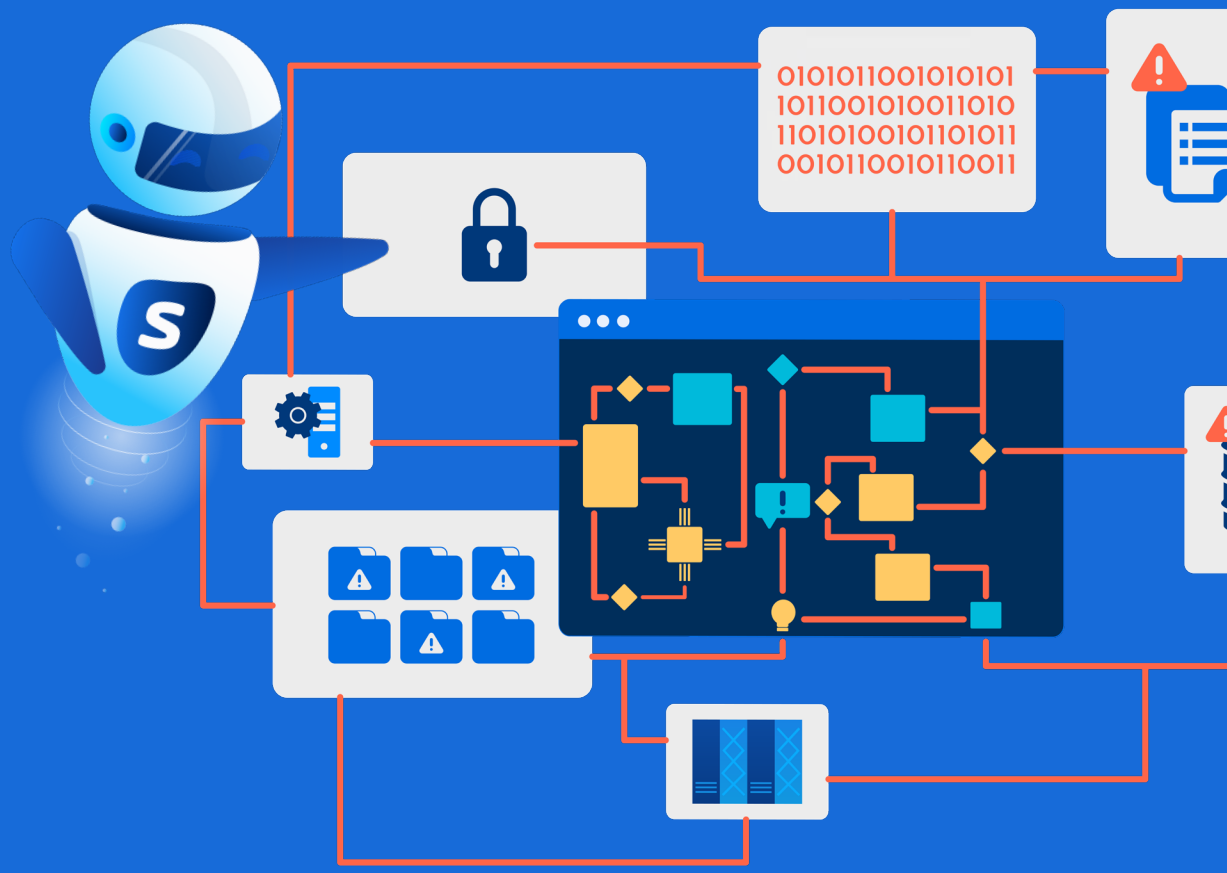
6. Centralized Automation Teams Drive Best-Practice Adoption Throughout the Enterprise

A central IT automation team serves as the hub for best practices, monitoring, improvement, and planning of automation in an organization. 77% of those surveyed have such a team, which typically consists of 26-50 members. This kind of centralized management — typically supported by a modern orchestration platform — helps cascade preferred tools and best practices throughout the enterprise.

7. Service Orchestration and Automation Platforms (SOAPs) have Grown in Popularity

Existing automation solutions are too siloed to effectively connect cloud, on-premises, container, and mainframe systems. 40% of respondents reported that their current tools are either unable to connect or have limited connections to cloud/SaaS technologies through APIs. In response, organizations are adopting the next evolution of workload automation (WLA): service orchestration and automation platforms (SOAPs). SOAPs enable organizations to centrally manage and integrate workflows across the entire enterprise, regardless of system, environment, or application.

IT Automation



Automation programs will continue to grow in 2023

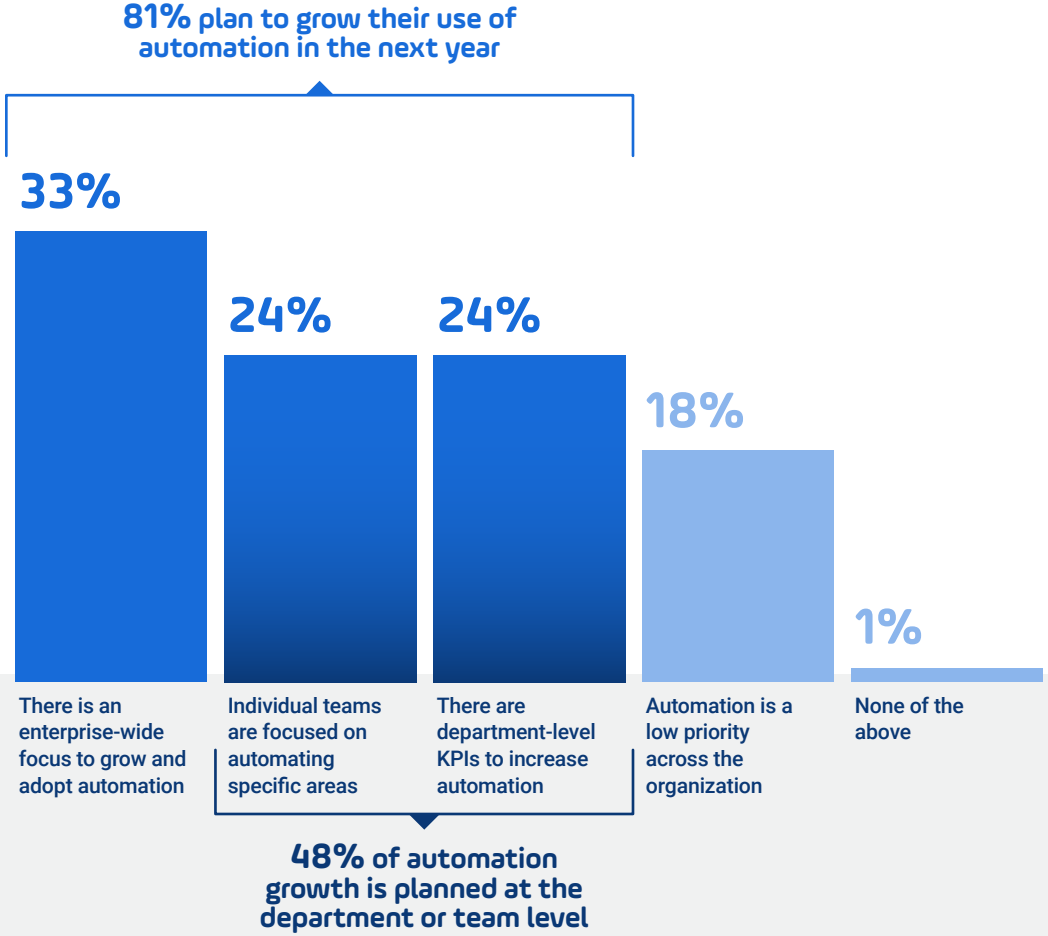
81% of respondents plan to grow their automation program over the next 12 months.

An overwhelming number of organizations plan to invest in automation in 2023.

A third of organizations have an **enterprise-wide focus** on growing and adopting automation technologies.

Additionally, nearly half of all automation growth is prioritized at the team or department level — which illustrates how **deeply automation is ingrained** into day-to-day KPIs.

Planned Growth and Adoption of Automation Technologies in 2023



Cloud automation is the top priority in 2023

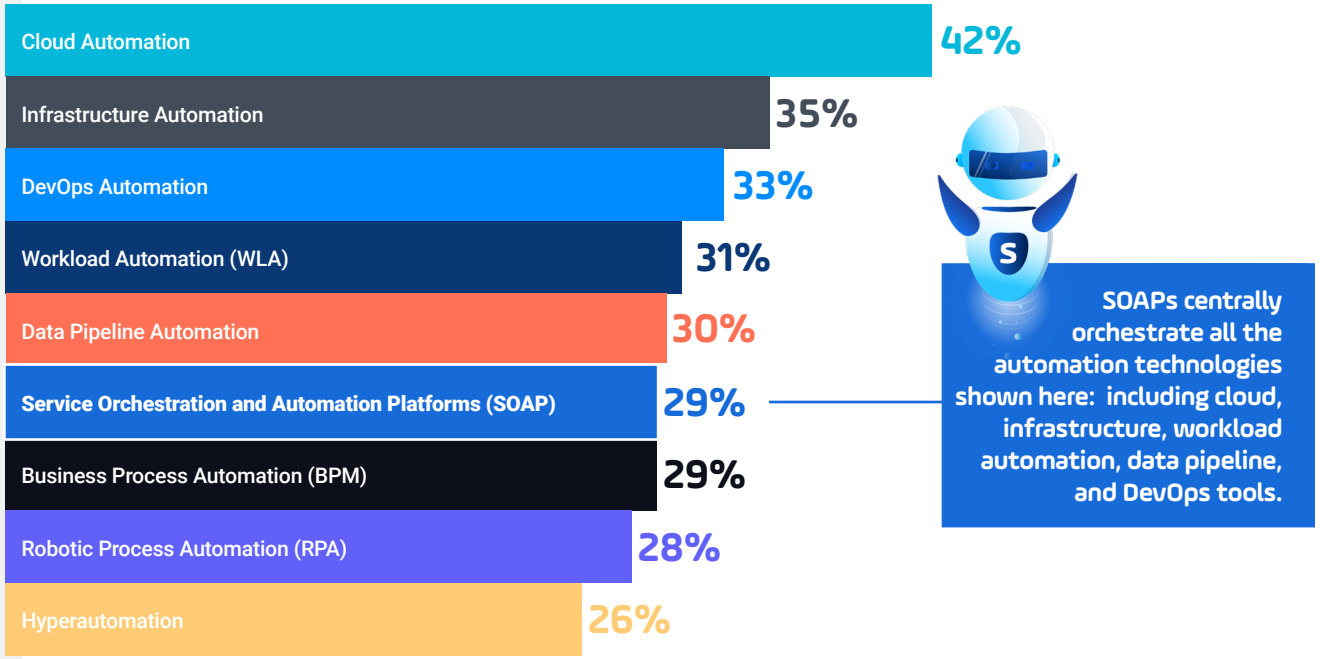
42% of respondents plan to invest in cloud automation — and that's only half the story.

While cloud automation is the most popular standalone investment category, the reality is that most other categories all contain some form of cloud — whether it be infrastructure or applications requiring orchestration.

Service orchestration and automation platforms (SOAPs) are the modern alternative to workload automation (WLA).

Gartner coined SOAP as the next evolution of WLA in 2020. It's a relatively new automation category, yet it has already gained significant traction due to its ability to centrally orchestrate just about all the other automation categories on this list.

Top Automation Technology Investment Priorities in 2023



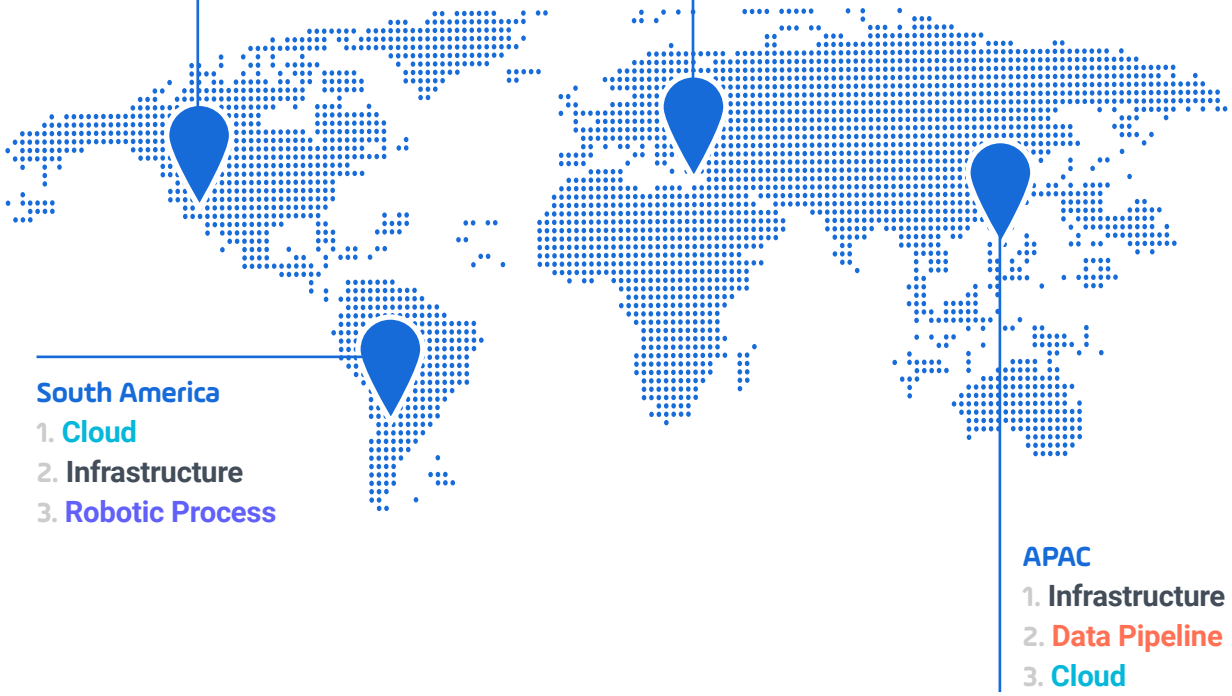
Nearly 40% of respondents said their automation tools either can't connect to or only connect to some cloud/SaaS-based technologies via API.

Cloud and infrastructure automation programs rank among the top-three investment priorities for all regions.

It's no surprise. Organizations are navigating an increasingly complex web of systems and applications that need to connect workflows and share data.

Industry Challenge: Not all automation solutions can bridge the gap between cloud, container, on-prem, and mainframe systems.

Top Automation Technology Investment Priorities in 2023, by Region



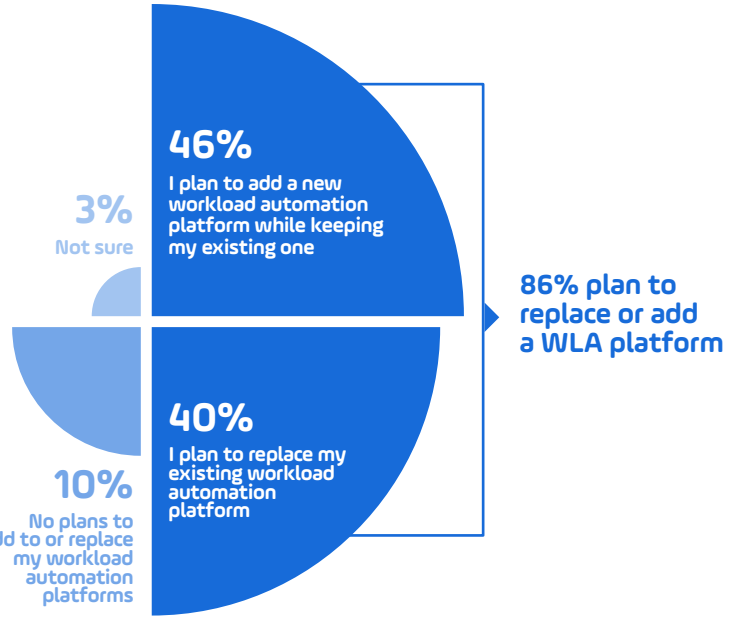
WLA is being replaced by SOAP

86% of respondents plan to replace or add a new workload automation platform.

There has been a seismic shift in the workload automation (WLA) market, a technology historically focused on legacy mainframe and distributed server automation. Many WLA tools have evolved into the service orchestration and automation platform (SOAP) category to meet the demands of automating cloud, big data pipelines, and DevOps toolchains.

However, not all WLA tools have made the leap to SOAP. There are still many legacy WLA tools in use that are unable to reach the cloud. This accounts for the need to either replace these tools entirely or add tools that add hybrid IT functionality.

Planned Replacement of Workload Automation Technologies in 2023



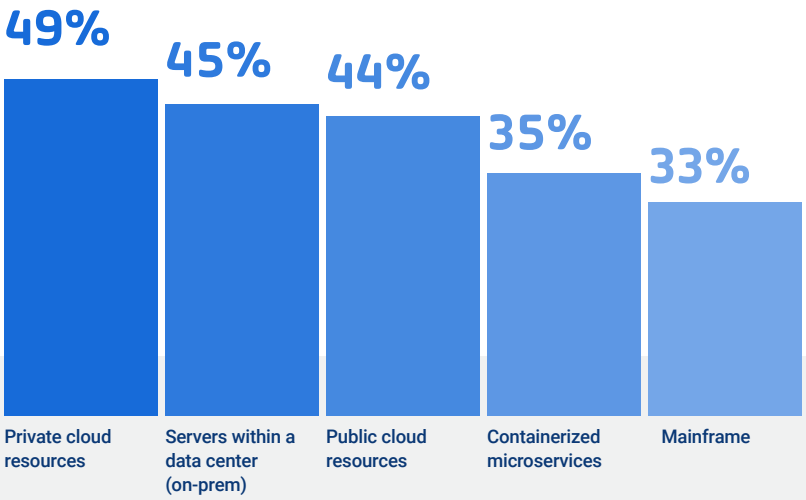
> "By year-end 2025, 80% of organizations currently delivering workload automation will be using SOAPs to orchestrate workloads across IT and business domains."
>
> – Gartner

Orchestration is a fundamental component of hybrid IT success

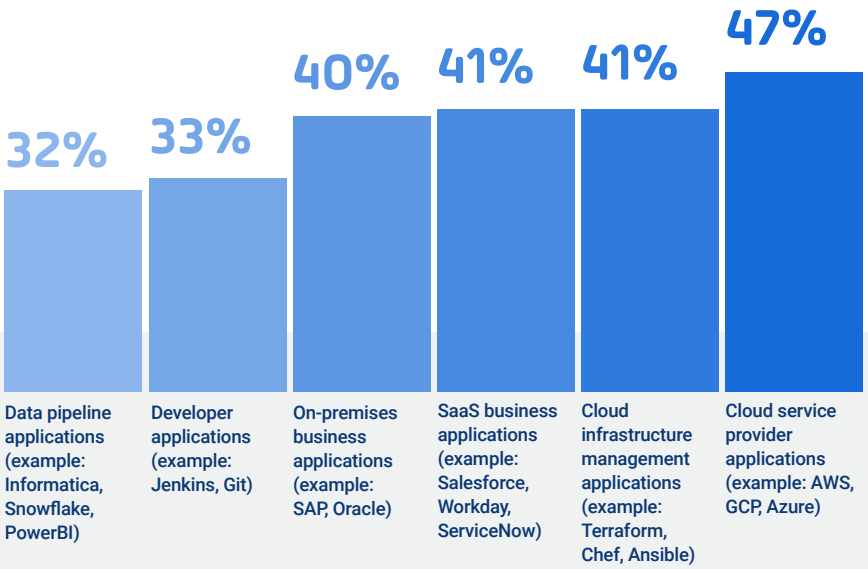
As organizations face the challenges of hybrid IT, the importance of orchestrating automated IT processes across various environments is evident.

Today, automation across cloud environments and containerized microservices have surpassed traditional mainframes. This shift highlights the crucial role that orchestration plays in ensuring the success of hybrid IT environments.

IT Environments Automated in 2023



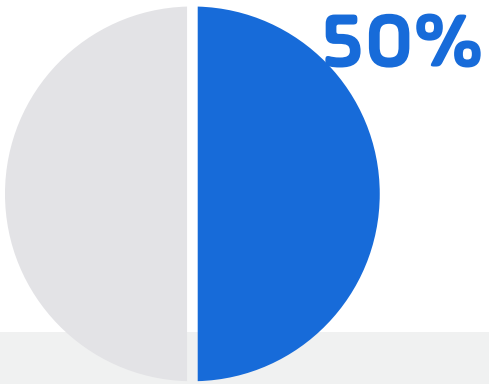
Applications Automated in 2023



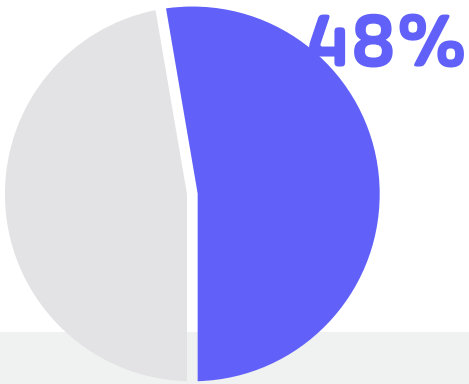
Function, cost, and customer service are also motivators for change

Of the 86% of respondents who plan to make changes to their workload automation (WLA) toolset, they're almost equally driven by functionality, cost reduction, and customer service.

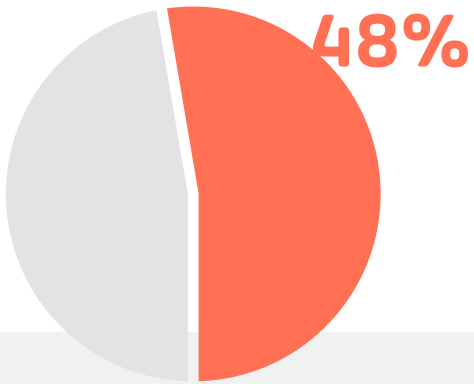
Motivations to Change Workload Automation Toolset in 2023



Need more functionality / more modern solution



Need to reduce cost

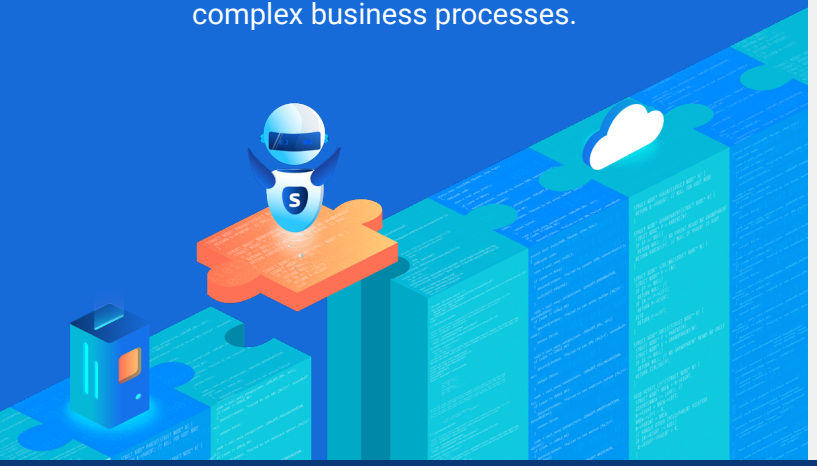


Need better customer service

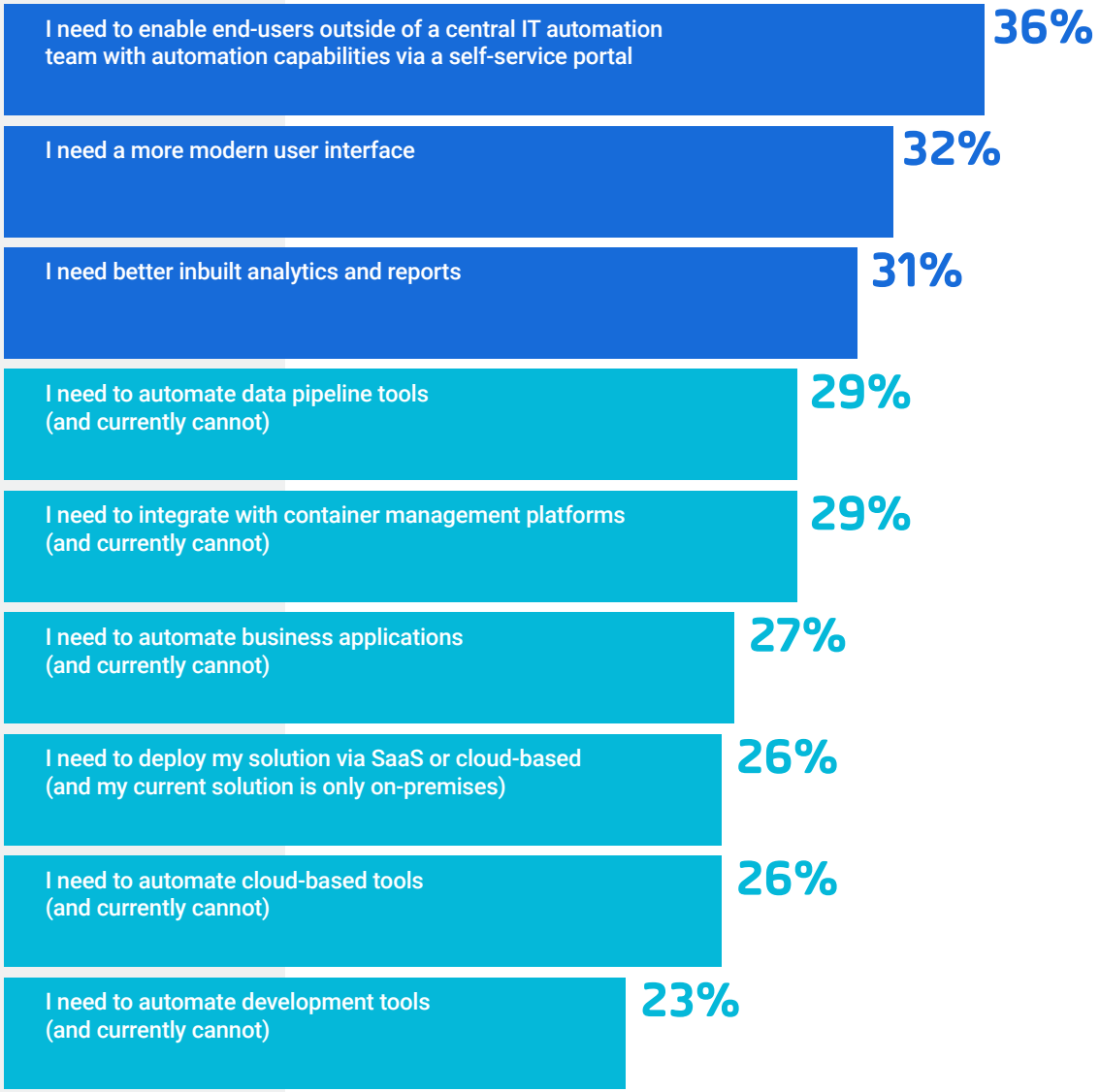
36% For those who listed functionality as their key driver, 36% of respondents say the ability to provide self-service automation is a primary reason for a new platform.

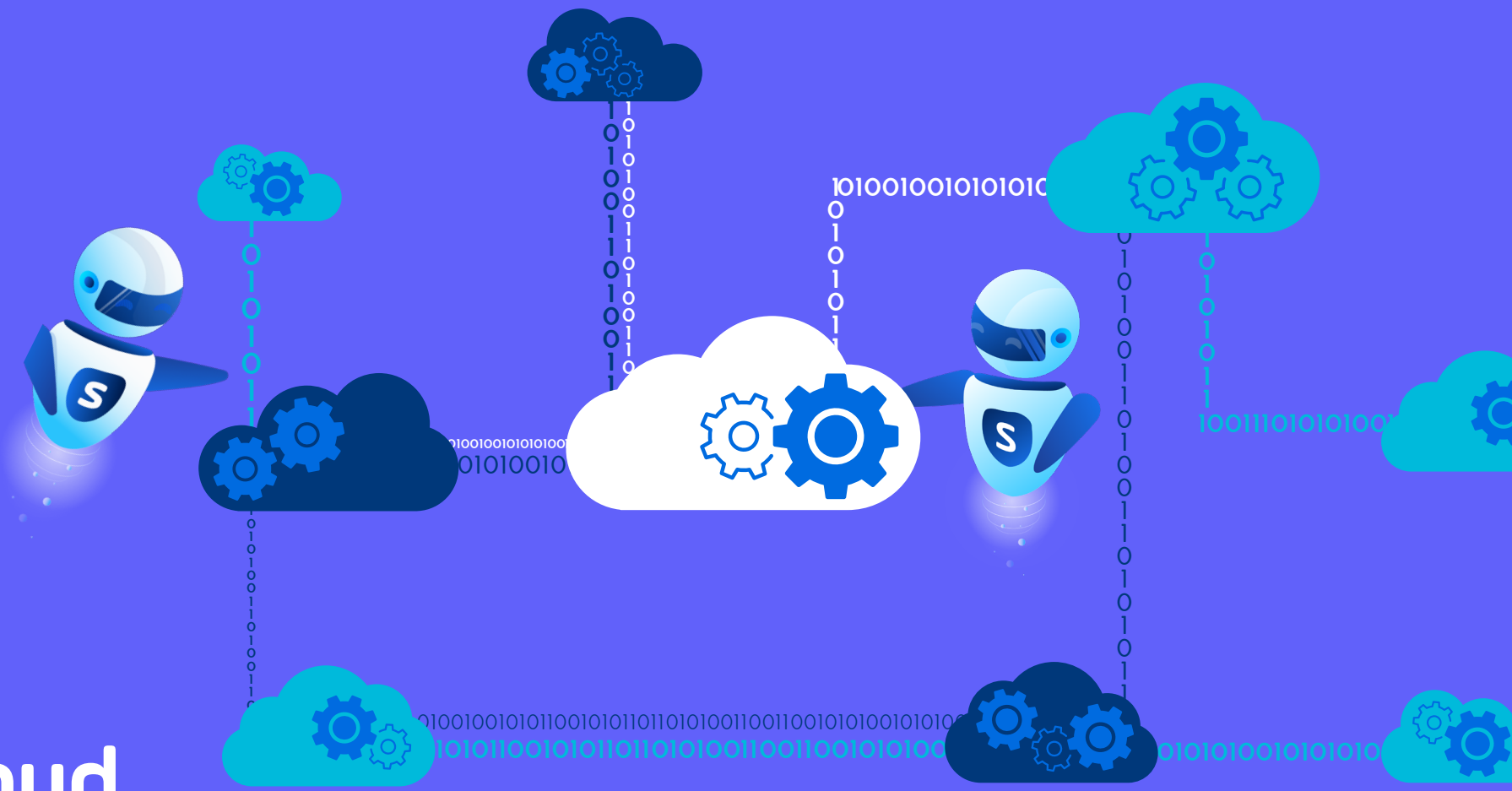
The first three categories — self-service, analytics, modern UX — are all about making automation more accessible, easier to analyze, and simpler to use for IT and business users alike.

Organizations can rapidly deploy new capabilities by automating them. When that happens, citizen automators can be empowered to trigger even the most complex business processes.



Features and Capabilities Sought in a Modern IT Automation Platform





Cloud Orchestration

Cloud automation gains permanence

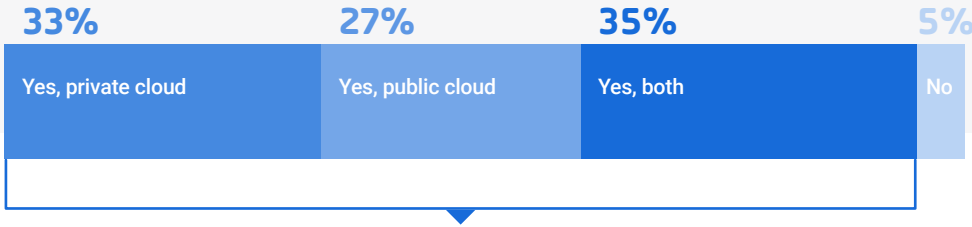
Cloud usage rose by three points over last year — the vast majority of organizations use public and private clouds to run their daily tasks.

As people become more familiar with the cloud, they're changing how they automate processes. 44% of respondents have moved to a SaaS-based license for their WLA/SOAP, or plan to soon.

This year, permanent production jobs climbed two spots to become the top automation priority, while ad hoc environment creation dropped from first to fourth place.

This shows that companies are moving from just testing and piloting the cloud to using it in their day-to-day operations.

Use of Cloud Resources to Run Scheduled Jobs in 2023



95% of respondents are using cloud resources to run scheduled jobs.

95% of respondents are using public and/or private cloud resources to run scheduled jobs.

Cloud Automation Priorities

Rank	2022	2023
1	Ad hoc creation of dev/test environments	Permanent production jobs
2	Additional capacity for peak times	Additional capacity for peak times
3	Permanent production jobs	Ad hoc cloud bursting
4	Ad hoc cloud bursting	Ad hoc creation of dev/test environments
5	Low priority jobs	Low priority jobs

Costs, security, and performance are top cloud concerns

Respondents have overcome their integration challenges, while cost management has become the primary concern.

In 2022, integration challenges topped the list of reasons not to place jobs in the cloud, while cost management was not a major concern. This year, priorities have shifted.

Respondents have built out the integrations they needed and gained cloud experience along the way.

What hasn't changed is security concerns. It remains the second-most cited reason in 2023.

"Cost control in the cloud is like when your kid turns the water hose on and lets it run. You don't realize it's running until you get your water bill. That's why it's so important to automate cloud deployments and terminations. You don't want to just leave the water running."

— Peter Baljet, Stonebranch CTO

Top Reasons Not to Place Jobs in the Cloud

Rank	2022	2023
1	Lack of integration of automation platform with cloud platform	Cost management / cost control
2	Security / compliance concerns	Security / compliance concerns
3	Lack of experience with the cloud	Performance concerns
4	Difficulty in transferring data to the cloud	Difficulty in transferring data to the cloud
5	Performance concerns	Lack of experience with the cloud
6	Cost management / cost control	Lack of integration of automation platform with cloud platform

Multi-cloud environments are ubiquitous

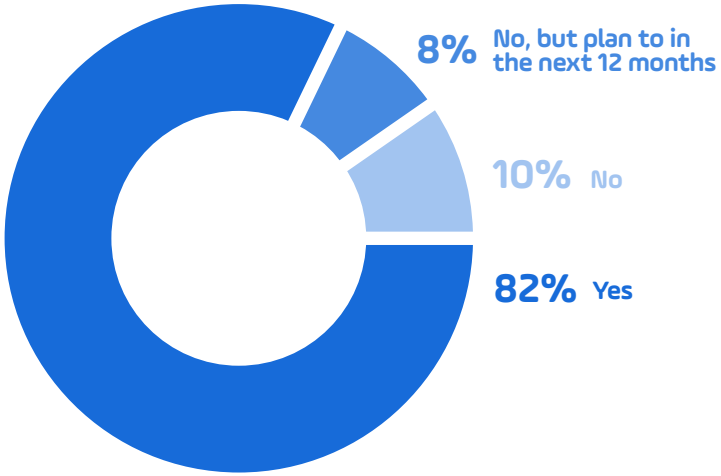
82% of respondents automate the transfer of data between cloud environments.

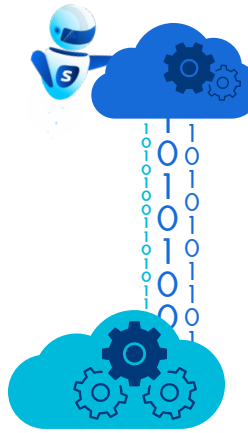
With organizational data spread across multiple clouds, seamless and efficient data transfer is critical.

78% of respondents use multiple public clouds, and private clouds follow a similar trend: 79% use multiple private clouds.

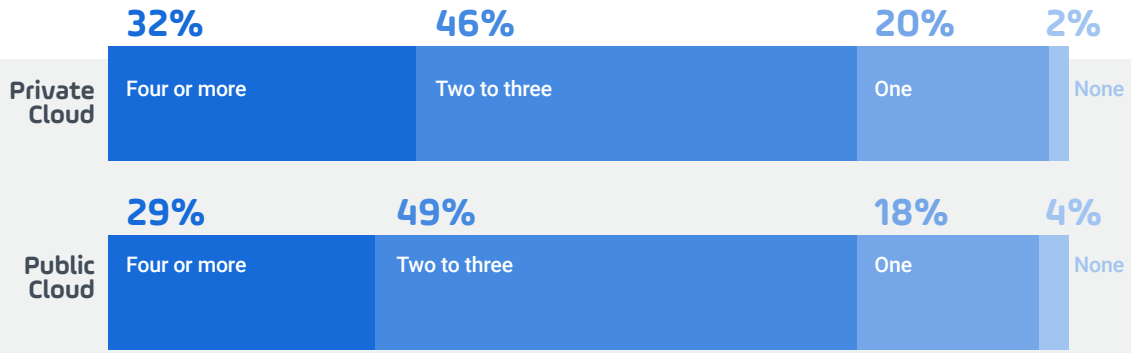
Multi-cloud environments allow organizations to leverage the strengths of different cloud platforms to meet their unique needs.

Do You Automate Data Transfers Between Multiple Public Cloud Providers?





Number of Private and Public Cloud Providers Used in 2023



Cloud responsibilities extend beyond CloudOps teams

96% of respondents have responsibility for at least some cloud operations, compared to 91% in 2022.

Despite the expansion of cloud responsibilities, only **53% indicate that their organization has a centralized CloudOps team.**

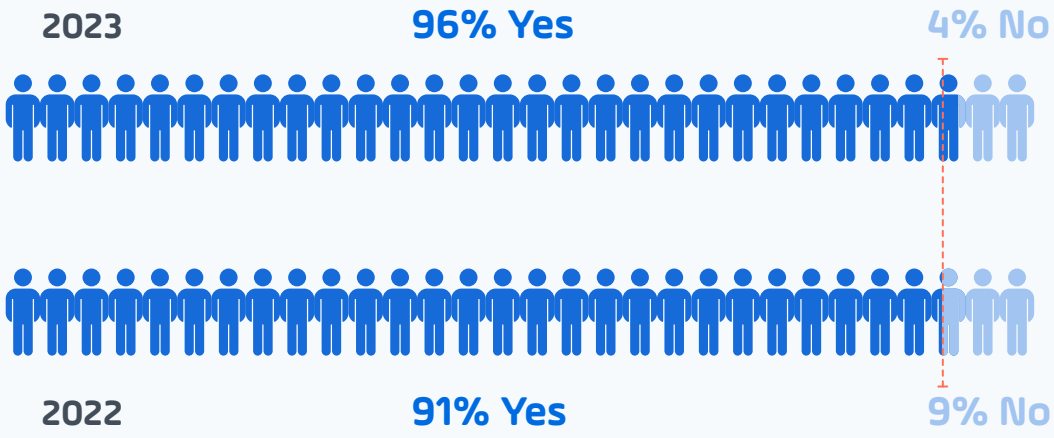
In other words, more teams are in the cloud, and the responsibilities are spread more widely across the business.

Overall, these findings indicate that organizations are taking a strategic approach to managing and operating their cloud environments.

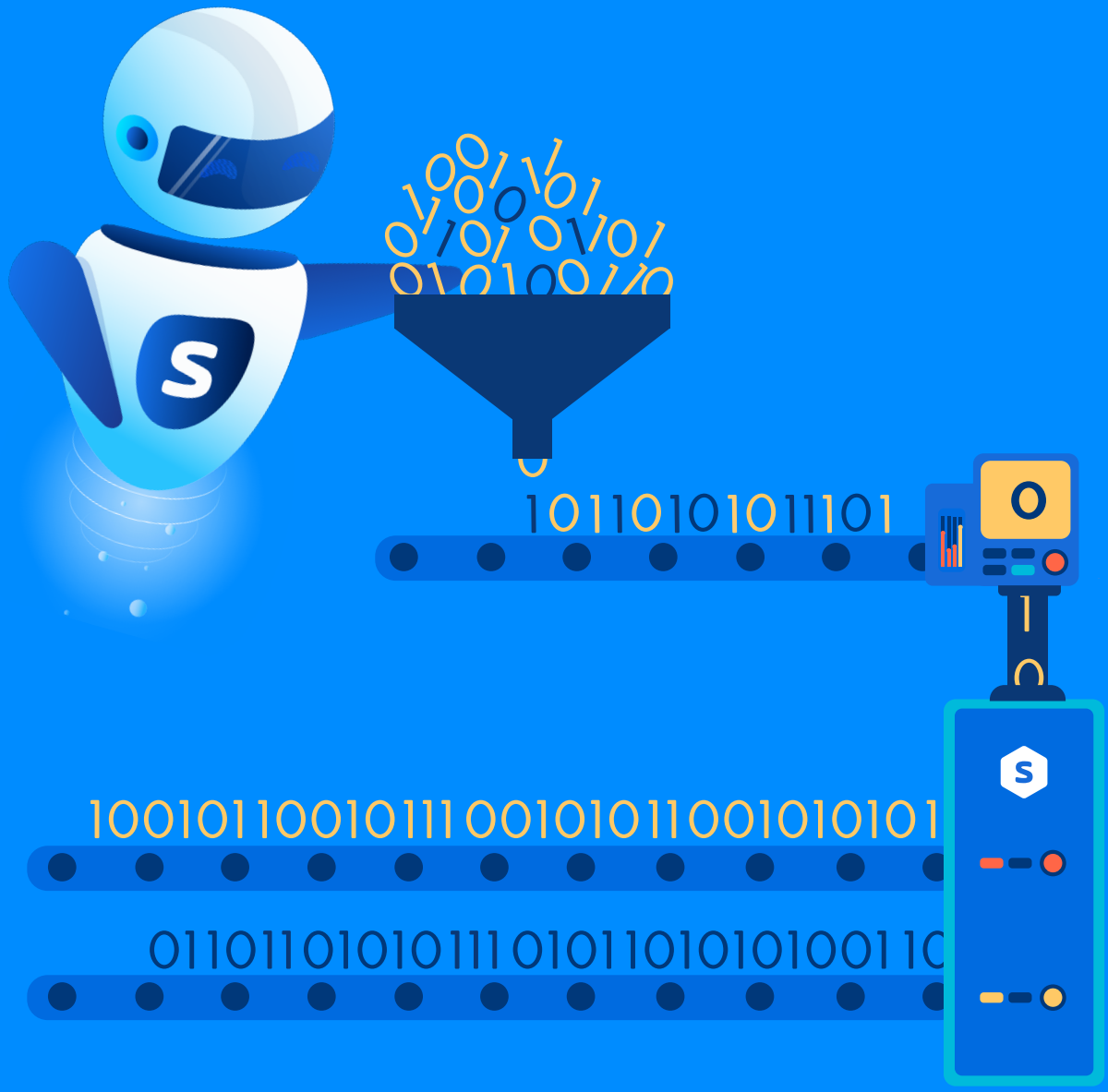
"Everyone has some responsibility for the cloud because everyone needs it for something different. DevOps teams are spinning up dev and test environments. DataOps teams are spinning up data management landing zones. This is the key driver for the democratization of cloud responsibilities, as well as the democratization of automation."

— Peter Baljet, Stonebranch CTO

Are You or Your Team Responsible for Any Cloud Operations?



Data Pipeline Orchestration



Data automation strategies are still evolving

Ultimately, everyone is doing a little of everything.

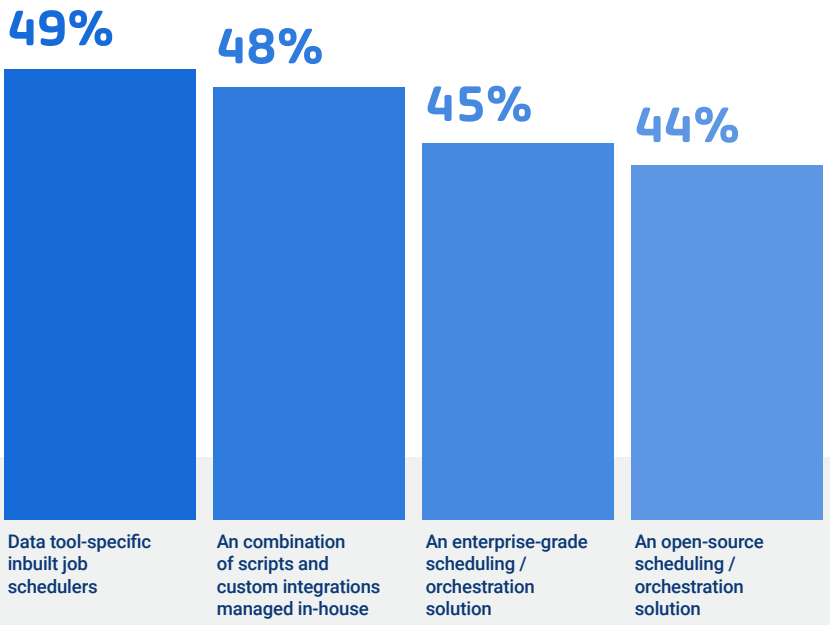
Data teams are using all of the approaches available to them, including inbuilt data-tool schedulers, scripts and custom integrations, enterprise orchestration solutions, and open-source apps. No standard approach has emerged yet, so experimentation abounds.

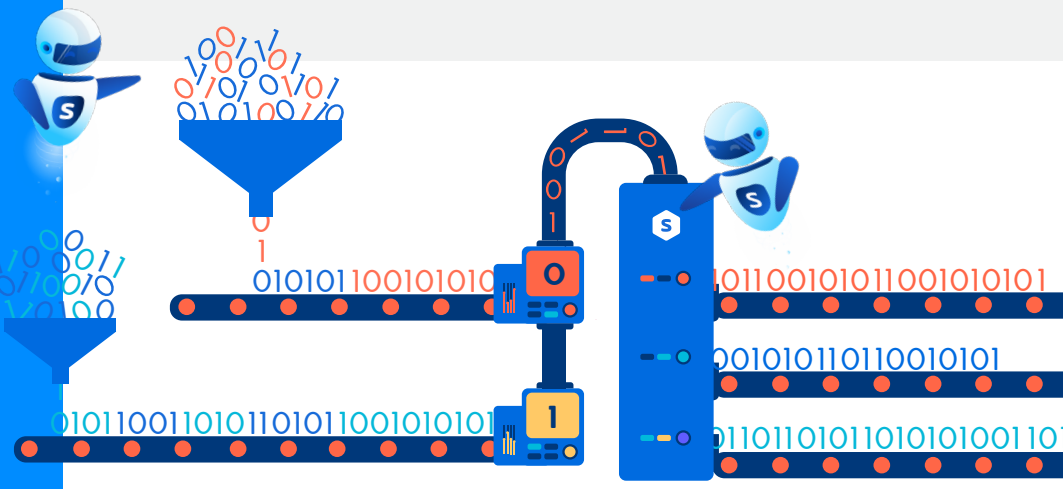
Nevertheless, preferences have shifted slightly. In 2022, custom scripts and integrations were the most widely adopted data automation strategy. This year, inbuilt data-tool schedulers have edged them out.

The inbuilt schedulers available in popular data tools are often easier to use and require less technical expertise than custom scripts. This makes it possible for more people within an organization to automate their data processes.

However, as the number of data-specific tools continues to grow, organizations may find themselves needing a more comprehensive, centralized solution — such as a service orchestration and automation platform (SOAP) — to manage and monitor data processes.

Data Automation Approaches in 2023





IT Automation | Cloud Orchestration
Data Pipeline Orchestration | IT/Business Alignment

Updates to source data are frequent and intentional

Similar to last year, source data is most likely to be updated in quarterly or monthly intervals in 2023.

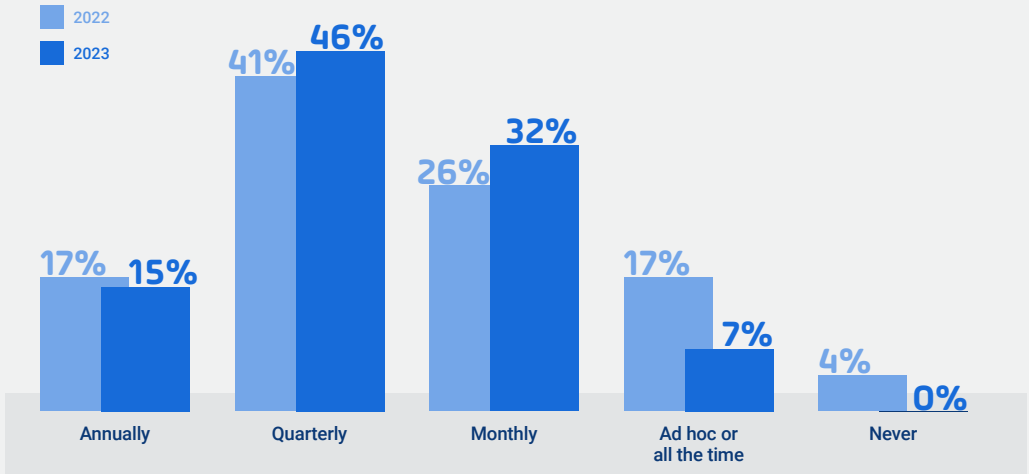
However, organizations are much more intentional about these updates in 2023 — **ad-hoc updates went from 17% to 7%**. Even better, there are no respondents in 2023 who never update their source data.

These findings indicate a more proactive approach to maintaining the accuracy and relevance of source data.

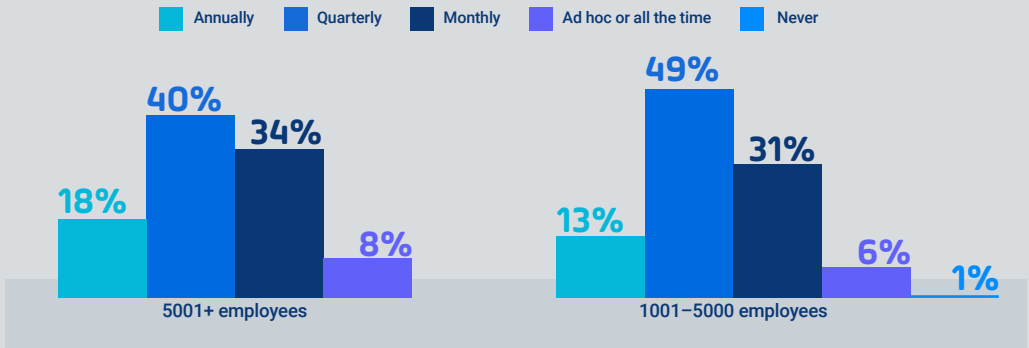
"I'm not surprised to see fewer ad-hoc updates, which are often performed manually. As more data teams automate and orchestrate their data pipelines, they're finding that it's easier to refresh their data more frequently."

— Peter Baljet, Stonebranch CTO

Frequency of Source Data Updates



By organization size:
mid-size organizations (1000–5000 employees) are significantly more likely to make quarterly updates. Enterprises (5001+ employees) are more balanced between quarterly and monthly updates.



IT/Business Alignment

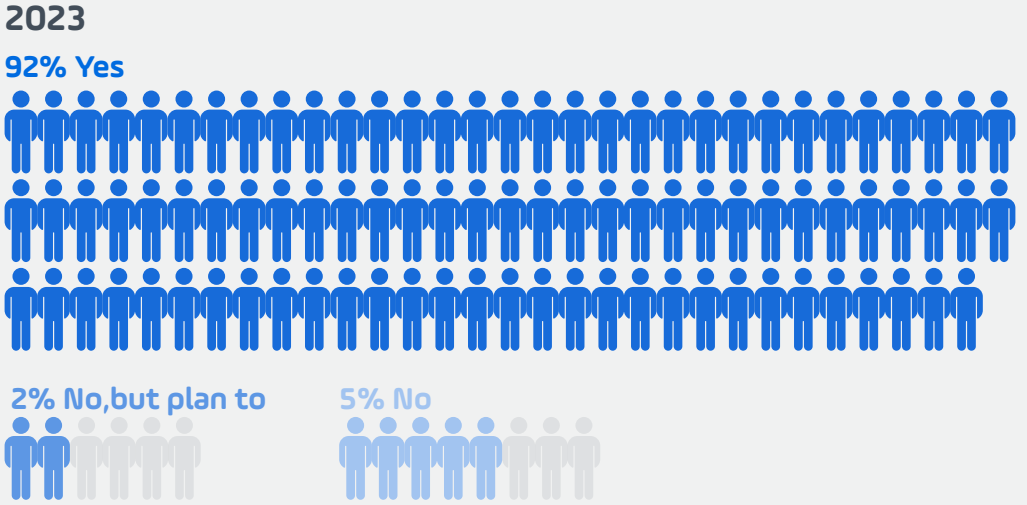
Self-service automation is booming

92% of respondents offer self-service automation to their organizations, compared to 84% in 2022.

It's clear that organizations are looking for ways to improve efficiency and streamline processes. Self-service automation provides an accessible and user-friendly solution.

What is self-service automation?
Self-service automation lets people in an organization execute tasks and workflows without being dependent on IT. This type of automation helps people control their own processes, reduces manual work, and boosts efficiency — for the end-user and the IT team.

Do You Offer Self-Service Access to Your Workload Automation or Service Orchestration and Automation Platform?



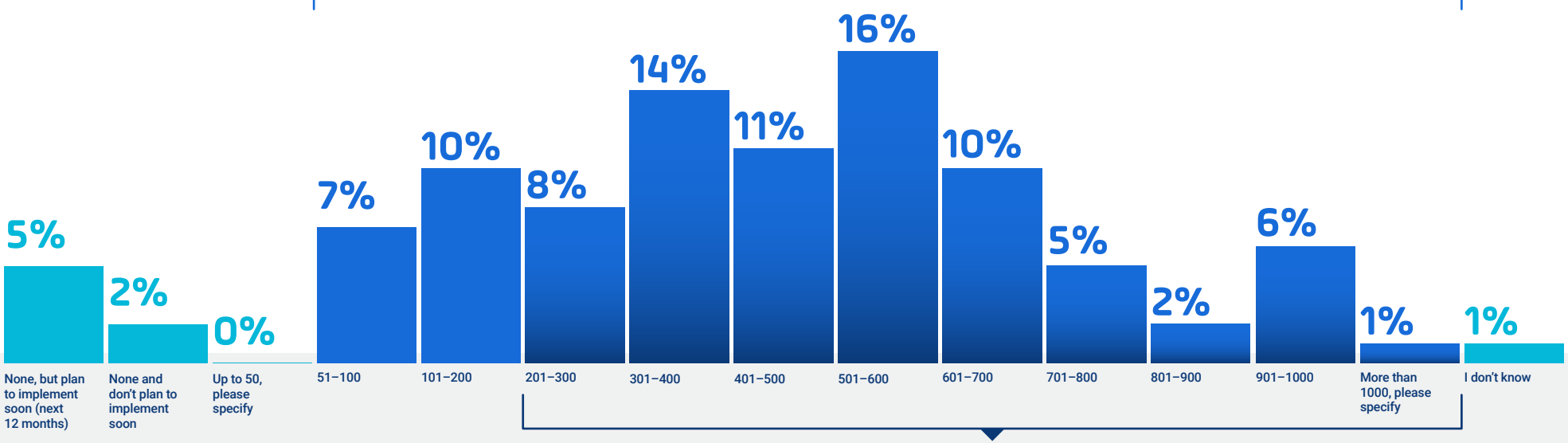
Self-service automation is booming

75% of people said they have 200+ end-users in 2023, compared to 18% last year.

The increasing availability and affordability of self-service automation tools make it easier for organizations to adopt this approach.

Prevalence of Self-Service Automation in 2023

92% of respondents offer self-service automation to their organizations



75% have 200+ self-service users throughout the business

Self-service automation empowers end-users throughout the business

Self-service automation has doubled for data teams and quadrupled for developers.

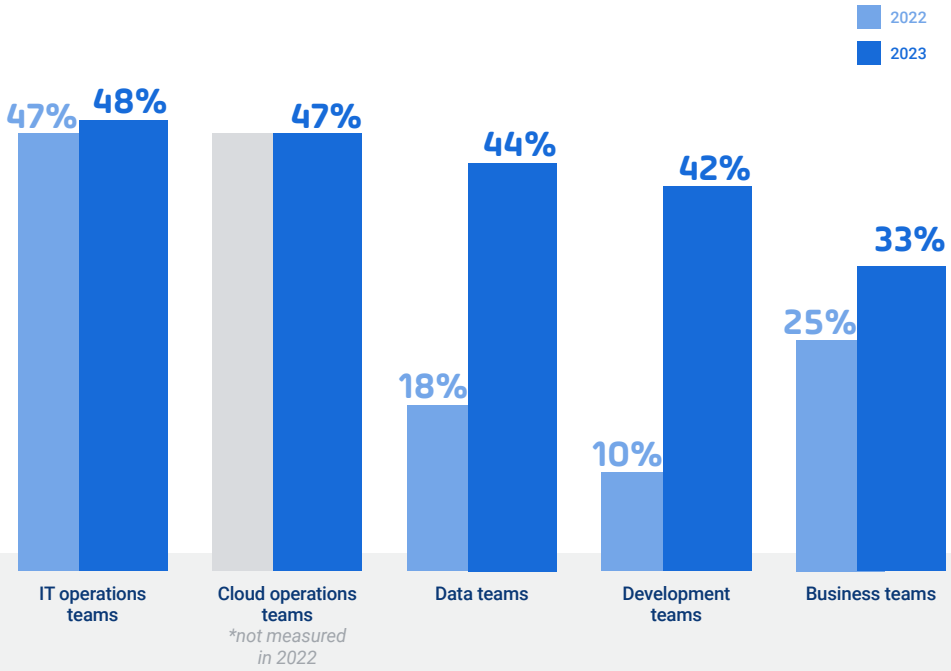
The explosive growth in the number of citizen automators across all functions indicates that self-service automation is rapidly becoming a mainstream solution.

In the past, employees had to wait for IT requests to be completed before they could continue their work. This could lead to delays, missed deadlines, and decreased productivity. But with self-service automation, IT teams are freed up to focus on strategic responsibilities.

"My favorite automations are the ones that take 'waiting on IT' out of the equation. Recently, our Senior Cloud Engineer automated the process to provision product environments. This 60-step process, which once took at least two business days to complete, now only takes 15 minutes — and it has zero chance for human error. That's what I like to see."

— Peter Baljet, Stonebranch CTO

Self-Service Automation End-User Roles

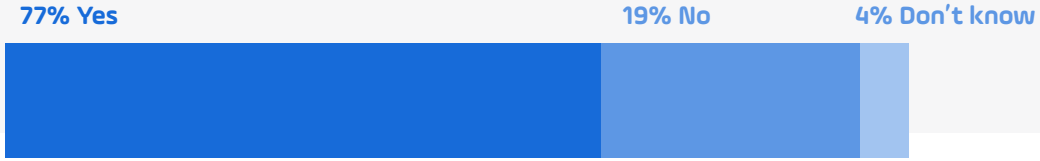


Most organizations have a centralized IT automation team

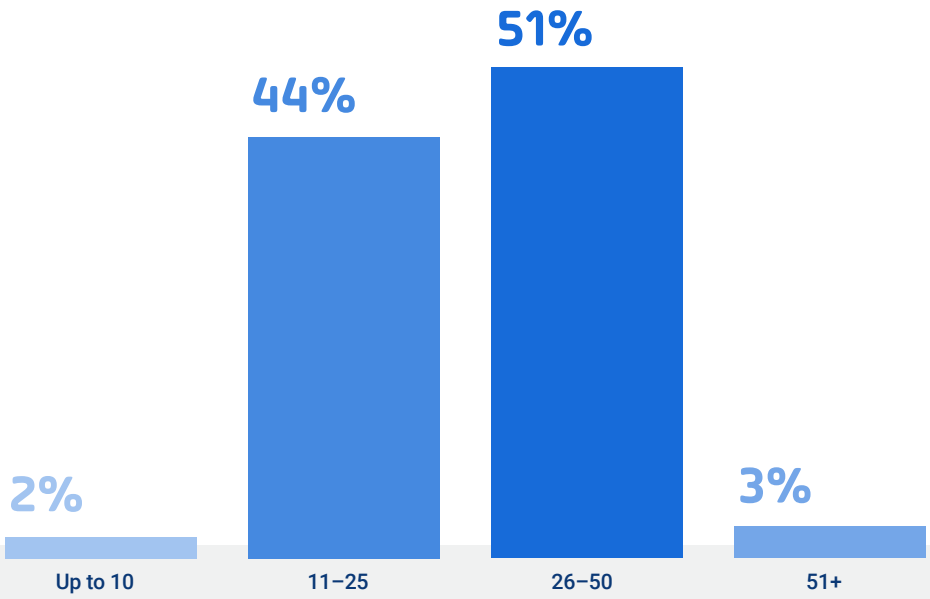
77% of respondents report having a centralized IT automation team. Most teams globally have 26–50 members.

Centralized IT automation teams establish an organization's center of excellence for automation best practices, maintenance/monitoring, continuous improvement, and strategic planning.

Do You Have a Centralized IT Automation Team?



Size of Centralized IT Automation Teams



Conclusions and Recommendations

With the rise of multi-cloud environments and evolving data operations strategies, transitioning from automation to orchestration has become a critical component to ensure the technological success of today's enterprise.

Without orchestration, hybrid IT success cannot be fully realized. If you're among the 86% who plan to make changes to their workload automation toolset in 2023, consider these recommendations in your preparations:

Prioritize platforms that can orchestrate tasks across multiple applications and environments, whether cloud-based or on-prem.

Modern orchestration platforms are equipped to handle the complexities of hybrid IT environments and automate end-to-end enterprise processes. This helps streamline operations, break down automation silos, and ultimately leads to the improvement and re-imagining of best practices.

Bring together IT, cloud, data, development, and business teams to understand the workflows and integrations required to fully enable self-service automation.

Drive collaboration by blending traditional automation with IT and business use cases. Business processes typically span multiple automation tools and system integrations that require central orchestration.

By offering a centralized orchestration platform, you enable collaboration, observability, security, and governance — all while enabling automation-as-a-service.

Implement event-driven automation to manage cloud costs effectively and run automation in real-time.

Event-driven automation makes workflows run in real-time by triggering automated tasks based on system events. However, it can also lead to overconsumption if not properly managed.

Fortunately, when managed properly, event-driven automation helps ensure cloud resources are only consumed when needed. By automatically executing tasks in response to specific events or triggers, organizations can auto-scale infrastructure — automatically shut down (or scale down) non-critical resources and spin up resources as demand increases.

By treating orchestration as a critical enabler of IT and business value, organizations can leverage orchestration platforms to improve the overall efficiency and effectiveness of their operations while also creating new opportunities for growth and competitiveness.

About Stonebranch and Censuswide

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Stonebranch builds IT orchestration and automation solutions that transform business IT environments from simple IT task automation into sophisticated, real-time business service automation. No matter the degree of automation, the Stonebranch platform is simple, modern, and secure. Using the Stonebranch Universal Automation Platform, enterprises can seamlessly orchestrate workloads and data across technology ecosystems and silos. Headquartered in Atlanta, Georgia, with points of contact and support throughout the Americas, Europe, and Asia, Stonebranch serves some of the world's largest financial, manufacturing, healthcare, travel, transportation, energy, and technology institutions.

CENSUSWIDE
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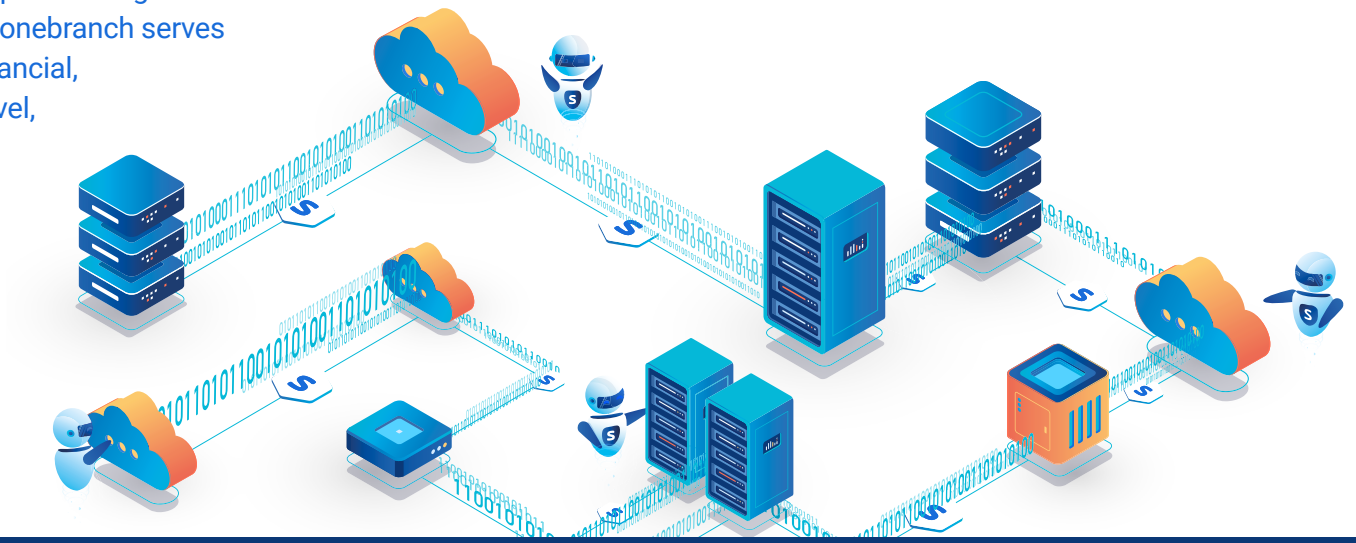
Censuswide is an international market research consultancy headquartered in Clerkenwell, London. Their dedicated and passionate teams are experts across various areas, including healthcare, corporate, international, and consumer research. Censuswide abides by and employs members of the Market Research Society, which is based on the ESOMAR principles.



2023
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