eBook

LogicMonitor

The Ultimate Guide to Monitoring & Automation for MSPs

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Chapter 1: Automation: an imperative for MSPs

In an era of nonstop change, the managed services market has continued to thrive. Digital transformation is building momentum, and CIOs are looking to managed service providers to help them achieve their key business outcomes. According to Gartner, the IT services segment, including consulting and managed services, is expected to reach $1.3 trillion in 2022, up 7.9% from 2021.[1]

For providers who can deliver the agility, performance, and experience their clients expect, the managed services space remains a lucrative opportunity. But operating increasingly complex, hybrid infrastructures is becoming more difficult. New challenges continue to emerge, from evolving market needs, outages and cyberattacks to employee attrition and lack of resources.

To differentiate your organization in a competitive market, you need to develop, test, and deploy new services quickly, and automate onboarding for clients. MSPs also need the ability to rapidly scale services when needs change, learn and improve processes as they go, and discover and solve future issues before they impact customers—preferably with little or no human intervention.

Comprehensive monitoring and IT automation can deliver the speed, agility, and efficiencies MSPs need to compete and stay profitable. In this ebook, we'll demonstrate how monitoring and IT automation can help MSPs overcome today's challenges and unleash new efficiencies to drive down costs and expedite customer value creation.

We'll explore some of the different types of IT automation and their application in the DevOps cycle, AI/ML, and Infrastructure as Code (IaC) tools, and MSP workflows. Additionally, well will evaluate the pros and cons of IT automation and place it in context with human resource concerns. Finally, we'll provide some tips for choosing the right automation platform for your organization.

The path to automation

There are a number of things driving automation trends. For MSPs, the path to automation is led by the platforms and the people who manage and operate them.

Platforms are steadily becoming more diverse and dynamic, with MSPs maintaining a combination of on-prem, private, and public cloud environments. Additional environments such as IaaS, PaaS, new networking technologies, DevOps, and infrastructure as code provisioning add to the complexity.

According to Gartner, more than 80% of public cloud managed and professional services deals will require both hybrid cloud and multi-cloud capabilities from the provider by 2025, up from less than 50% in 2020.[2]

[1] IT Spend Forecast, 4Q21 Update: Where Next? [Gartner], 2022

[2] Magic Quadrant for Public Cloud Infrastructure Professional and Managed Services, Worldwide [Gartner], 2020

MSPs are powered by people

It's up to people to keep these complex platforms running. MSPs rely on trained staff to keep businesses operating, but significant turnover has impacted the industry in recent years, with open positions taking months to fill. MSPs are investing in talent retention through various means, including increased salaries as well as flexible work models.

However, those skilled employees still end up spending close to 40% of their week working on manual and repetitive routine tasks, according to LogicMonitor's survey of 600 MSP leaders in nine global markets across North America, EMEA and APAC.[3] An overwhelming 88% of MSP leaders say these tasks frequently prevent their engineers from spending time on innovation or advancing strategic goals or initiatives for their customers.

On top of juggling multiple customers with limited resources, MSPs are also suffering from tool sprawl. To support their customer environments, MSPs on average use 10 different tools for monitoring, log aggregation and application performance monitoring (APM).

A changing threat landscape

Along with the inherent challenges of people and platforms, MSPs face constant change from business and technology trends. Security has always been a high concern for modern IT organizations and service providers, and the threat landscape is continuing to evolve. According to a recent LogicMonitor survey, 88% of MSPs say their customers have been affected by cyberattacks in the last two years.[3]

Even as concerns about cyberattacks continue to mount, MSPs admit they still don't have the tools to effectively manage these security challenges. The frequency and breadth of these attacks suggest a new approach is needed to automate and streamline monitoring and mitigate risk.

Given the prevalence of security risks, MSPs are implementing a variety of strategies and safeguards to better protect their customers from cyberattacks. 43% of MSPs are turning to increased network monitoring as a solution, while 40% are enabling multi-factor authentication (MFA).

Customer needs are evolving

As MSPs scale and win more customers, they must also adjust to changes in customers' needs. Digital transformation has accelerated, as customers move more data to the cloud, deploy innovative new use cases like IoT, and shore up their risk against cyberattacks.

Customers across industries are ramping up spending, both with their MSP and on other business goals, as they focus on keeping critical business operations available while supporting remote workers. To meet these evolving demands, MSPs need to be agile in the solutions they deliver. Robust automation is key to helping MSPs quickly deploy and support the innovative services they need to remain competitive.

Mergers and acquisitions introduce challenges and opportunities

Mergers and acquisitions (M&A) are common in the MSP space, as large providers rush to acquire smaller companies to extend their geographic or market reach. For MSPs looking to scale their services, M&As are an attractive option, enabling them to move into new markets more rapidly and build on the in-house expertise that already resides in the company they acquire.

However, integrating new business processes and platforms as part of a merger can be difficult and time-consuming, resulting in large amounts of manual work for ITOps teams. Automation can provide a powerful tool to help merging companies fully integrate business operations and promote efficient processes to gain a competitive advantage. By automating IT across the combined companies, organizations can reduce repetitive manual tasks, allowing their teams to focus on building revenue and better serving customers.

MSPs can respond to all of these trends and challenges in a variety of ways. Without an intentional shift, they will likely end up building on siloed technology and using fragmented, tactical, low-maturity automation methods, such as scripting of sub-processes. As an alternative, modern MSPs are implementing a cultural shift and adopting a more strategic approach based on lean IT methodologies, using agile processes that are focused on the customer's value stream. Many are also embracing a DevOps approach to service development, to respond to market needs faster and deliver the features and capabilities customers demand.

Modern MSPs seeking to lead the market will need to invest in solutions that give their engineers the resources they need to innovate, monetize and stay competitive, which means eliminating rote tasks that hinder scalability. Investing in automation frees up valuable time for innovation and advancing strategic goals or initiatives on behalf of end customers.

[3] The Next-Gen Managed Service Provider [LogicMonitor], 2021

Chapter 2: What is monitoring and IT automation?

For MSPs seeking to minimize risk and future-proof their organizations, monitoring and IT automation are increasingly top of mind. Monitoring provides insight and context into what's happening in the environment, through metric, log and application data. It gives you the ability to see what's coming and respond to issues before they impact your customers. IT automation builds on that context, enabling you to create repeated software processes that reduce or eliminate manual or human-initiated IT tasks. This in turn enables MSPs, DevOps teams, and ITOps teams to offload tasks, save time, and free up resources.

IT automation takes a variety of forms, but almost always involves software that triggers a repeated sequence of events to solve common business problems. For example, an MSP could automate the process of transferring a file, enabling it to move from one system to another with no human intervention. Automation could also be used to auto-generate network performance reports on a regular basis.

Nearly all medium to large-sized IT-focused organizations use some level of automation to facilitate system and software processes. Regardless of their size, the most successful MSPs invest heavily in the latest tools and technologies to automate a vast range of tasks and processes to increase operational efficiency and scale their business.

The Production, Agricultural, and Manufacturing sectors were the first industries to adopt IT automation. However, this technology has since extended to niches such as healthcare, Finance, Retail, Marketing, Services, and more. Now, IT-focused companies like MSPs and enterprise vendors can incorporate automation into their workflows to grow their businesses exponentially.

Developers code these programs to execute a sequence of instructions that trigger specific events from specific systems at specific times. For example, automation could be utilized to leverage data from a customer relationship management system (CRM) to automatically generate a report every morning. Users of those programs can then customize instructions based on their specific requirements.

The benefits of IT automation are clear, and global business leaders are eager to put it in place. According to a recent World Economic Forum survey, 50 percent of business leaders plan to accelerate the automation of repetitive tasks within their companies.[4]

According to the LogicMonitor survey, MSP leaders estimate an average of 39% of their manual processes have been automated.[5] These leaders also believe another 41% could be automated given the opportunity it presents to help scale their operations and uplevel their competitiveness and capabilities.

For MSPs, IT automation can be tremendously effective in making the jobs of network engineers, monitoring engineers, service delivery managers, and other professionals easier. In the next chapter, we'll explore why MSPs use IT automation, and the outcomes it can deliver for you and your end customers.

[4] The Future of Jobs Report [World Economic Forum], 2020

[5] The Next-Gen Managed Service Provider [LogicMonitor], 2021

Chapter 3: Why do MSPs use IT automation?

For MSPs, managing increasingly complex, cloud-powered infrastructures is becoming more challenging all the time. Whether you're a systems or network engineer responding to an outage on the front lines, or a service delivery manager overseeing onboarding or the customer experience, it's likely you spend too much time resolving tactical issues.

In our previous chapter, we discussed how automation can help power smarter resource utilization by minimizing the need for working on manual and repetitive routine tasks. Beyond saving resources, automation can lead to a host of other benefits. In a recent survey, participants cited improved time efficiency (42%), reduced errors (34%), and increased profits (33%).[6]

Automating for efficiency and outcomes

MSPs and other IT-focused businesses use automation for numerous reasons:

- **It makes life easier for tech teams.** Engineers and technicians at MSPs no longer have to manually execute tasks like network performance analysis, data security management, or reporting. Automation can take care of these for them, so they can better apply their efforts to other tasks—and focus on more strategic projects to stay better engaged and satisfied in the workplace.
- **It makes life easier for non-tech teams.** Employees across all departments within an IT-focused organization benefit from automation because they can carry out responsibilities on software and systems with less manual work. For example, administrative employees in an MSP can generate payroll reports without manually entering information into a computer by hand.
- **It helps CIOs and executives scale their businesses** because other employees like engineers and MSP professionals can complete jobs with minimum effort. Automation frees up tech resources and removes as much manual IT work as possible, allowing IT-centered organizations to improve their margins and grow.
- **It helps CIOs and executives fulfill client-focused objectives** by improving service delivery. Automation can advance productivity across an organization, to deliver better service level agreement (SLA) outcomes. With the right automation solution, they can reduce manual work for tech teams as much as possible, so businesses can grow and carry out responsibilities more efficiently. Organizations are able to deliver a superior customer experience by mitigating the risk of business interruption.
- **It allows MSPs and other IT companies, especially smaller ones, to survive in ever-competitive environments.** By automating processes, these enterprises can stay competitive with larger rivals that have more tech resources and reduced manual labor.
- **It allows for improved profitability** in IT companies. For example, MSPs can onboard more customers without hiring additional technical staff, because automated systems delegate tasks and resources seamlessly.
- **It reduces costs for IT companies** by saving time and improving operational efficiencies. By freeing up resources, enterprises can focus on generating more sales and revenue. As a result, CIOs and executives have more money to spend on labor and can add highly-skilled IT professionals to their tech teams.

95% of MSP leaders agree that automation is the key to unlock innovation and strategic goals.[6]

In short, automation can deliver a serious competitive advantage by helping expedite customer value creation, eliminate IT waste, and optimize IT operations. This empowers you to capitalize on market opportunities faster than your rivals.

[6] The Next-Gen Managed Service Provider [LogicMonitor], 2021

Chapter 4: Different types of IT automation

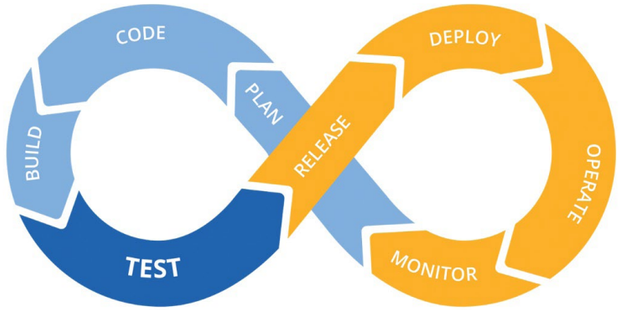
Automation is not a one-size-fits-all solution. MSPs have a wide variety of teams and processes, each focusing on a specific part of the business. That means the options for automation can be as diverse as the organizations that it will support. For many organizations, the question will not be simply whether they should automate, but what they should automate.

Automating the processes that power MSPs

Here are some examples of different types of automation, with overviews of the possible applications.

Automating the DevOps cycle

MSPs are increasingly adopting a DevOps approach to software development. Through building, testing, and releasing changes rapidly, frequently, and more reliably, the principles behind DevOps will help your business adjust to the needs of the market. Adopting a DevOps approach helps build and roll out the technology and features you need faster, for a better customer experience that can give you a competitive edge.



The sections of the DevOps “infinity loop” cycle are fairly standardized, but you can choose the tools for each section or phase based on your own specific preference and need, so there is no standard set of DevOps tools to deploy, operate, and monitor.

One of the first steps to automation in DevOps is moving beyond a “hero culture” based on select, hard-working employees. Automating your business beyond one person or team and developing a programmatic process allows you to develop a multitude of successful services and scale them as needed. Remove obstructions from systems, so that they can work seamlessly together. Combine efforts and provide everything from documentation, training, and implementation to allow best practices to exist and evolve with longevity. Shift your internal and external work to focus on automated processes.

Templating and blueprints

Automation using templating and blueprints is a powerful way to complement DevOps automation, and power additional market agility. You can automate templates and blueprints that promote the successful rollout of services, such as network security and data center administration.

Artificial intelligence and machine learning

For MSPs, artificial intelligence (AI) automates repetitive jobs for engineers and IT staff, reduces the human error associated with manual labor, and allows companies to carry out tasks 24 hours a day.

Machine learning (ML) can complement AI by utilizing algorithms and statistics to find real-time trends in data. This intelligence is a valuable resource for MSPs, DevOps, and ITOps teams. It helps your employees stay agile and discover context-specific patterns over a wide range of IT environments, while significantly reducing the need for case-by-case investigations. You can enable your systems and processes to learn and improve as you go by providing inputs to other tools throughout your systems.

Infrastructure as Code (IaC) tools

Automation can enhance the capabilities of Infrastructure as Code (IaC) tools, to further boost your agility. For example, using tools like HashiCorp Terraform, you can automate infrastructure provisioning. Tools like Red Hat Ansible and Chef can be utilized to automate configuration.

Workflow and technology integration

Automation allows companies to integrate technology with workflows, to complete day-to-day tasks more effectively with the latest hardware and software. For example, automating server management can improve your service level management workflows, which proves useful if clients expect a particular amount of uptime.

Some leading workflow automation and orchestration tools include Stackstorm, SaltStack infrastructure automation, and VMware vRealize Automation for provisioning across clouds and data centers.

Auto-discovery

Automated applications like the LogicMonitor Collector, which runs on Linux or Windows servers within an organization's infrastructure, use monitoring protocols to track processes with no manual configuration. They enable users to discover network changes and network asset changes automatically. For example, they might automatically discover what needs to be monitored as part of the Continuous Deployment phase of the CI/CD pipeline.

Auto-scaling

Automation lets you monitor components like device clusters or a VM in a public cloud and scale resources up or down as necessary. Effective monitoring is key because it informs the operational need to dynamically scale up by adding more memory, storage, or CPU power, as well as scale-out by adding more VMs, Kubernetes clusters, and/or worker nodes.

Automated remediation and problem resolution

Hardware and software can saddle companies like MSPs with all kinds of problems (downtime, system errors, security vulnerabilities, alert storms, etc.). Automation, however, can identify and resolve infrastructure and system issues with little or no human effort.

Automated onboarding

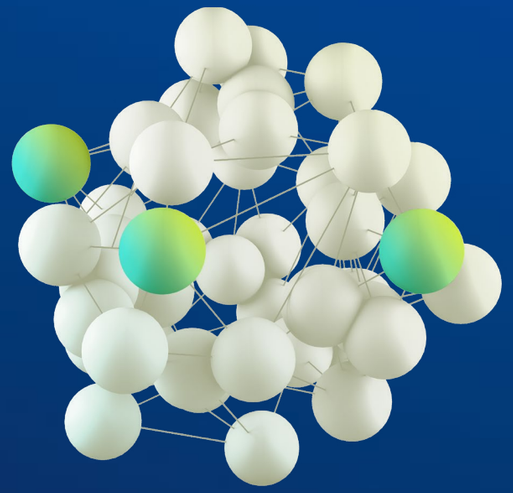
Onboarding is a fundamental part of the customer experience and can be a slow, time-consuming process. Fortunately, automating client onboarding can eliminate tedious tasks like cloning dashboards, creating group directory structures, setting up reports, and configuring access roles. All of these tasks are laborious and prone to human error when executed manually, but automation can make them consistent, faster, and more efficient.

See how LogicMonitor helps MSPs automate customer onboarding and save time:

Sogeti reduced customer onboarding time by 90%

Retune reduced customer onboarding time from 80 hours to 1

Although IT automation can help make many of your key processes more agile, efficient, and accurate, it does require careful planning and consideration. In our next chapter, we'll explore some of the pros and cons of automation that you'll want to consider before moving forward.



Chapter 5: IT monitoring and automation pros and cons

We've discussed some of the primary use cases for automation and monitoring in MSP environments, and some of the processes they can improve. Like any strategic initiative, these processes offer a variety of advantages, as well as potential issues that you should consider before moving forward. In this chapter, we'll discuss some pros and cons of automation for MSP professionals.

Benefits

Together, IT monitoring and automation can help you achieve the business outcomes you need to compete better and faster in a highly demanding marketplace. Benefits include:

Enhanced productivity

Improving the overall observability and automating your environment can help you improve workflows, making them more efficient while enabling employees to work more productively. Enhanced productivity also means more business agility, faster innovation, and more rapid service delivery.

Improving the efficiency of DevOps and other processes helps you make better use of your technologies and workforce, and also positions you to free up valuable IT resources to focus on more strategic initiatives that drive innovation and business growth.

Better customer outcomes

Delivering a superior customer experience is a key differentiator in the MSP space. Automating key processes like customer onboarding and issue resolution can help you gain a serious competitive edge. Automation and monitoring can help you improve SLAs, deliver faster, more consistent services, and unlock higher-quality outputs from development teams.

Enhanced monitoring can help your technical teams achieve faster mean time to resolution (MTTR). It provides insights regarding anomalies, trends, and problem root causes while enabling your team to zero in on resources that play a key role in outages and performance issues.

Automation can also help you focus more resources on customer service and support, so you can strengthen customer satisfaction and nurture stronger relationships and loyalty over the long term.

Reduced total cost of ownership, enhanced profitability

Costs are always a concern for any organization, and automation provides some compelling opportunities for savings. While many of their tasks have already been automated, MSP leaders believe that far more routine work could be automated in the future.

Surveys show that MSPs have already automated an average of 39% of tasks in their engineers' workweek, and estimate an additional 41% of tasks that could be automated.[7]

Not only would further automation save valuable staff time, but it would also reduce the risk of human error and could ultimately increase profits. For example, it can help organizations onboard more customers without adding headcount. You can divert the money you save back into service delivery to create a positive feedback loop. In many cases, automation is the best way for smaller MSPs to stay competitive and survive.

[7] The Next-Gen Managed Service Provider [LogicMonitor], 2021

Concerns and considerations

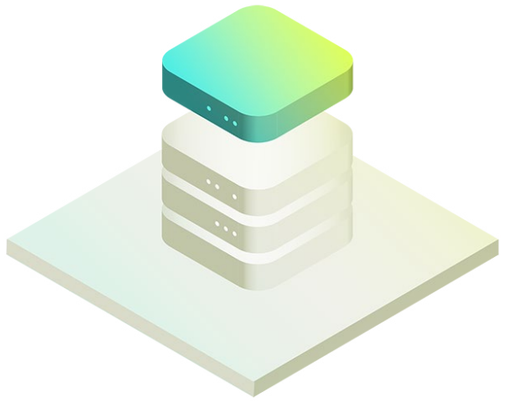
While the benefits of automation are clear, implementation of automation might be intimidating, especially when MSPs are under-resourced. Fortunately, with some up-front planning, good internal communication, and the right technology partner, you can address these concerns early in the process to streamline your implementation of automation and monitoring.

Upfront time and effort to invest in automation

Automation requires an initial cost investment, as well as an investment of time from engineers to set it up. That's why it's a good idea to choose a cost-effective automation platform that generates an ongoing return on investment.

Configuration can be challenging

It can be difficult for some team members to adopt automation technologies. Selecting a simplified tool for automation is the best course of action for making the transition easier.



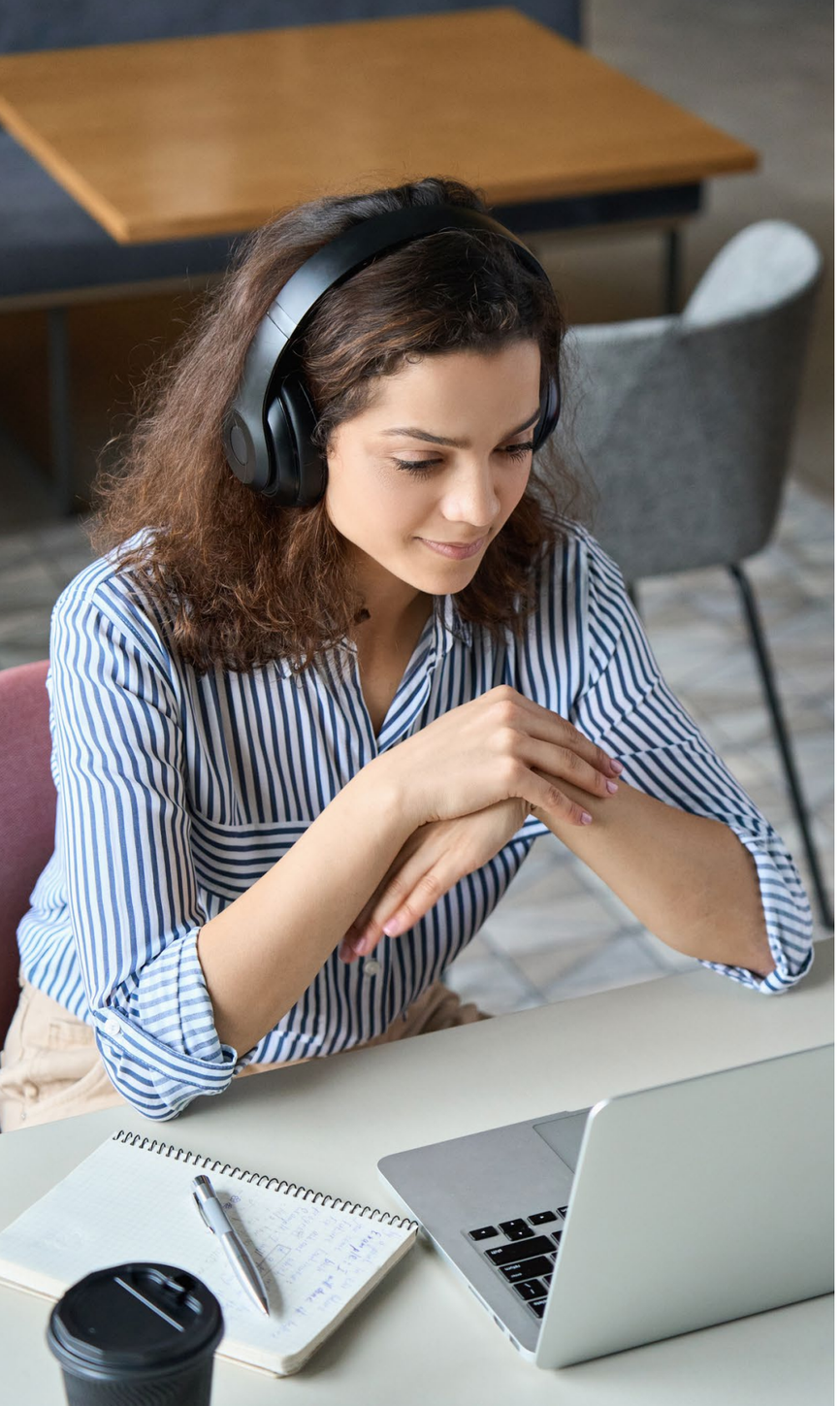
Chapter 6: Will IT automation replace jobs?

There's a misconception that IT automation will cause job losses, but MSPs have little to worry about. That's because automation tools don't work in silos. The technical professionals on your team need to customize automation tools based on their organizational requirements, stakeholder needs, and end-customer demands.

MSPs that use ML, for example, need to define and determine the algorithms that identify real-time data trends. ML models might generate data trends automatically, but MSPs still need to select the data sets that feed those models.

It's important to remember that robots can free up employees to focus more on strategic initiatives. Even if automation takes over the responsibilities of a specific team member within an IT organization, your HR team can upskill or re-skill that employee instead of replacing them.

According to LogicMonitor's Future of the MSP Industry Research Report, 96% of MSPs said that investing in automation is worthwhile because it allows IT teams to focus on more strategic tasks and initiatives. By training employees who currently carry out manual tasks, your executives can develop a stronger, higher-skilled workforce and still benefit from IT automation.



Chapter 7: Choosing the monitoring platform that enables IT automation

We've explored some of the benefits of automation and monitoring for MSPs, and approaches to incorporating it into your processes and company culture. In this chapter, we'll present some key considerations for choosing the right platform to support your initiative.

Determining the scope of your project

Before you dive into the details of specific technologies and solutions, step back and define the extent of your initiative. The most direct approach is to "start where you are." Don't attempt to move your organization from zero automation to a fully automated one in a single transformation project.

If you're relatively new to automation and monitoring, start with a small, manageable initiative that will enable you to try out some ideas, measure and evaluate results, and apply lessons learned to future phases. Many automation tasks will require scripting knowledge, so be sure to consider whether your resources are aligned to the effort. After taking stock of where you stand, you can choose the automation and monitoring approaches that best align with your business needs and your customers. Some initial tasks to focus on could include:

Update and patch management for customers

Customer systems require constant care and maintenance to meet SLAs, ensure compliance, and ensure the best possible experience. Automation can help you check for out-of-date systems and download patches and updates after hours. You will want to prioritize some of these tasks, such as immediately applying important security patches or other critical enhancements. To maximize your agility, automate and schedule as many steps as possible for patching across your customers' systems.

Expedite onboarding

Onboarding has an immediate impact on the customer experience, and making a strong impression during this process can set the tone for your relationships with clients. Consider building out a set of scripts that can expedite the process of bringing new customers into your billing systems. Start by mapping out your existing processes, then identify repetitive or manual steps, and discuss how they could be automated. Automation can help you expedite everything from server configuration to user account setups, to monitoring tasks like endpoint detection. Automation can also help you determine whether devices are running outdated software that requires updates, as well as ensure that all required applications have been installed for the customer.

Workforce management

MSPs are dynamic environments, and studies show that significant turnover has impacted the industry in the last 12 months, with open positions taking months to fill.

More than half of MSPs (55%) have experienced significant employee turnover in the last 12 months, with Ireland (71%), Singapore (61%), the US & Canada (61%), and the UK (57%) impacted the most.[8]

When an employee leaves, you'll need to maintain security and compliance, ensuring that they no longer have access to old systems and data that could put the company at risk. You can automate scripts to deactivate email access, shared storage systems, HR records, financial systems, and other proprietary internal resources. Every role is different, so some manual steps will be required for offboarding, but automation can save you time on some of the basic tasks.

Keeping your team motivated

Automation represents a major shift for many organizations, and some employees may resist the concept, even if it does not result in job loss. Incorporating incentives into your initiative can help encourage adoption and provide a better outcome.

You may want to offer financial incentives or additional time off. Automation could also be more formally incorporated as part of job descriptions, or performance reviews, where employees who successfully automate away their workload get promoted or assigned to projects to find automation opportunities with other processes or value streams. What's important is not necessarily the scripts themselves, but encouraging your technical teams to think about tasks and processes that could be automated or improved. It's all about encouraging a lean company culture of continuous improvement, agility, and operational excellence.

Avoid limited proprietary solutions

Flexibility is important for MSPs, so as you consider various automation solutions, consider how they align with your workforce. You don't have to be fully DevOps to use automation, but you should weigh the risks of deploying proprietary automation solutions that lock you into a single vendor solution—or that require IT skills that aren't readily available.

If you're not able to go to LinkedIn and find hundreds to thousands of IT people who can operate the automation tools, you could be taking unnecessary risks. Focus on lean IT, and continuous improvement, where automation tools facilitate the pursuit of perfection.

MSPs are always looking for efficiencies to drive down costs, including when looking at a new or replacement tool. Successful data-driven IT teams require technology that scales just as their business does and provides the organization and its customers value.

When considering a solution, consider a cloud-based hybrid infrastructure monitoring platform that is capable of automating your tasks. The solution should provide:

- Comprehensive functions in an all-in-one monitoring platform to support your DevOps and ITOps teams at all your sites
- Complete, 360-degree visibility of utilization, network performance, resource consumption, cloud instances, and other critical metrics
- Full observability of technologies and resources such as servers, data centers, and cloud-based environments
- The ability to identify problems with legacy tools before they happen
- Real-time reports and forecasts that reduce internal costs, improve SLA outcomes, and power engineers and other IT professionals
- An "out-of-the-box" solution that does not require additional hardware maintenance or technical resources

Why MSPs Choose LogicMonitor

- Reduce overheads and manual labour by automating your customer onboarding
- Immediately implement monitoring best practices with 2,500+ pre-build monitoring templates and dashboards
- Rapidly reduce MTTR with intelligent alerting

TRY IT FREE

[8] The Next-Gen Managed Service Provider [LogicMonitor], 2021

Chapter 8: Conclusion

IT automation and monitoring have revolutionized the IT sector, reducing the manual responsibilities that, for years, have plagued the industry. By increasing the visibility and agility of your operations, your technical teams no longer need to enter network performance data into multiple systems, physically inspect servers, or manually onboard customers. Automation takes care of the hard, time-consuming work, freeing your IT professionals to focus on more critical, engaging, and rewarding tasks.

By incorporating a cloud-based infrastructure monitoring platform into your organization, you can improve productivity, enhance workflows, optimize the use of IT resources, and reduce costs over time. Simultaneously, you can deliver a better overall client experience, promote better business outcomes, and build customer loyalty over the long term.

About LogicMonitor®

LogicMonitor®'s SaaS-based observability and IT operations data collaboration platform helps ITOps, developers, MSPs and business leaders gain visibility into and predictability across the technologies that modern organizations depend on to deliver extraordinary employee and customer experiences. LogicMonitor seamlessly monitors everything from networks to applications to the cloud, empowering companies to focus less on troubleshooting and more on innovation. For more information, visit www.logicmonitor.com.

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