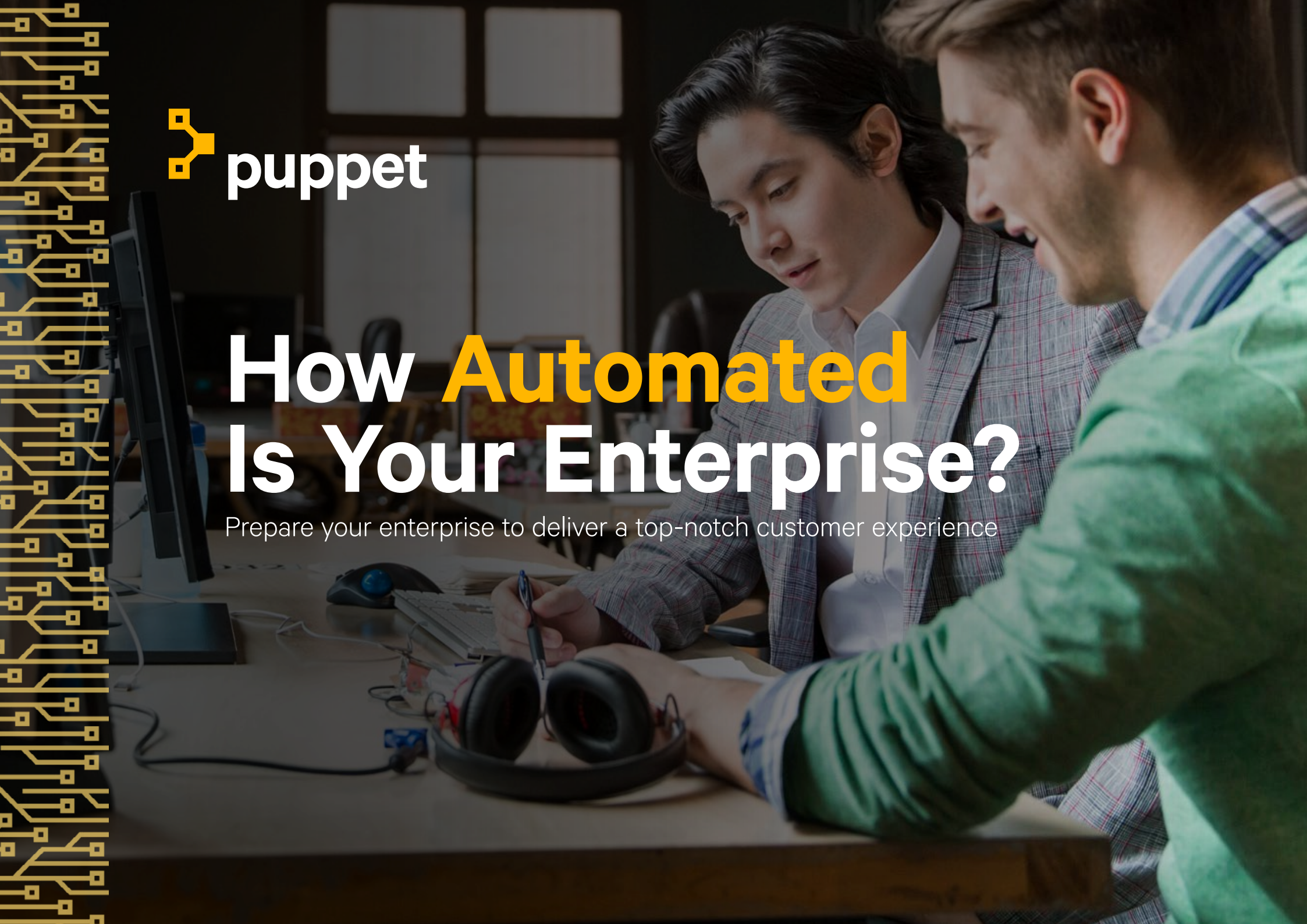

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How Automated Is Your Enterprise?

Prepare your enterprise to deliver a top-notch customer experience

Contents

IT automation is more than a technology trend

Staying competitive requires acting like a born-in-the-cloud software company. IT organizations must deliver better software, faster. Automation has become more than a trend — it's a requirement to stay relevant with today's customers.

These cloud-nimble, agile companies, many of which are DevOps pioneers, have set a high bar for customer experience. These same customers now expect the same high-quality experience from every other company they do business with (including yours). Companies willing to embrace and master this breadth and depth of IT automation can drive significant business value and compete just like the DevOps leaders.

Getting to this kind of business agility means more than just automating a few parts of your organization's software lifecycle. It requires building the tooling and culture that will break down automation silos across your teams and your business. This pervasive automation is the foundation of any modern DevOps initiative.

What is pervasive automation?

Pervasive automation is the concept of scaling IT automation broadly and deeply across the entire enterprise. From how applications and infrastructure are developed, configured, built, tested and deployed, pervasive or widespread automation can unlock efficiencies and standardization that drives significant business value.

Imagine all of your IT teams embracing full automation of how they build and deploy applications and provision, configure and manage the infrastructure they run on. It's what "always ready to ship" looks like.

While it's impossible to get to an absolutely automated state (there's always some new server or software added somewhere), the journey to get as close as possible means leveraging the latest DevOps and automation practices across your organization.

How to start your journey

Use this ebook to start tackling the challenges ahead for any enterprise on their path toward pervasive automation. We'll cover the current challenges of embracing new technology, how automation can benefit different roles in the company, and then explore how to answer the question of how automated your enterprise is. We'll answer questions like such as:

1. **Do you know what your IT organization has?**
2. **How does your enterprise automate broadly and deeply at scale?**
3. **What cultural and technological practices are in place to break down silos between Dev and Ops?**

Answering these questions can help identify how far along your enterprise is on the journey and how much work remains to gain more of a competitive edge.

Notable challenges on the road to pervasive automation

1

Embracing newer technologies and their complexities

2

Solving the “one of everything” problem

3

Knowing that everyone has a role to play (and a voice in the matter)

1 Embracing newer technologies and their complexities

The data center days are in the rearview mirror for some enterprises as they begin migrating to the cloud to utilize its speed and elasticity. Even IT organizations running hybrid infrastructures understand that automation of infrastructure management and application delivery is the only way to move at the scale and speed that their business requires.

Born-in-the-cloud companies succeed at navigating the complexities of cloud, containerization and other newer technologies because, for the most part, they have streamlined automation from start to finish. They operate with a DevOps culture to automate infrastructure management, automate releases and democratize insights across teams.

We're at a point now where infrastructure and applications can be managed similarly with common tools. In short, it's all software. This is an incredible advantage as this unity and simplicity across software development and delivery allows the entire IT organization to adapt to change, move quickly, and not be bogged down by technology or technical debt or unallocated legacy systems.

2 Solving the “one of everything” problem

On the other hand, the long-term success of enterprises might mean that there’s quite the colorful history of technologies sitting around from over the years — or even decades. In short, the team might have one of everything: one of every operating system, database type, tooling, storage products — the list goes on. And as the IT landscape increases in complexity, so too does the difficulty of simplifying and rationalizing software tool chains. Whether through growth or acquisition, the amount of IT estate to wrangle and the growing number of resources to inventory and manage is only going to grow more complex, not less.

The promise of the cloud, simplicity, scalability, and elasticity can also lead to complexities. The proliferation of newer technologies, like containers and serverless adds new kinds of infrastructure to implement, metrics to measure, and analyses to run to make business sense of these tools and services.

A popular IT idiom is that an organization is as fast as its slowest component. Breaking down automation silos and educating all teams to adopt and measure a unified automation approach pushes all teams to work toward innovating and serving customers in as agile a manner as possible.

3 Knowing that everyone has a role to play (and avoice in the matter)

Historically, DevOps has been the culture and tooling that connects development, operations, security and networks teams to work more collaboratively. The results of these efforts include faster software iteration and delivery, increased agility, and responsiveness to security and compliance needs at the speed that users expect. All of the above delivers increasing value to the business.

The requirement of embracing end-to-end automation adds more voices to the choir: line of business leaders and technology leaders must have the means to understand the vastness of their IT estate as well as have the means to measure and benchmark automation success.

Are your teams ready for the benefits and challenges of automation at scale? Chances are you're not sure. That's why you need to get the insights and perspectives of the following roles to start building toward an answer.

Action Item: Talk to your teammates

Team to consult	Question to answer	Possible risk of avoiding the question
Developers	How do current and potential automation practices affect the ways the development teams meet their deadlines and produce the best, high-quality software possible?	Continuing to operate in silos, not sharing information, and not operating as efficiently and agile as your teams potentially can.
Operations	How do existing practices around automation help operations teams run and maintain software without heroic efforts or wasted nights and weekends?	Ignoring wasted hours on software maintenance that can have harmful effects to your operation team's performance and morale.
Security	How will adopting new technologies (like cloud and containers) affect compliance and enforcement of security practices and the speed in which teams resolve vulnerabilities?	Exposing fast-moving, newer tools and technologies to security risks and not having governance policies in place to protect them.
Business leaders	How do business leaders adopt automation to speed up their time to value, how quickly they release new features, and how they benchmark the successes of their interactions with technology	Continuing to run IT as a reactive "order taking" department rather than positioning it as a value-driving business asset.

Three ways to start your journey to pervasive automation

With the understanding of how cutting-edge companies have changed the playing field for any and every company, and the current challenges at hand, it's time to explore the first steps toward staying competitive for the long haul.

1

Answering "What does my IT organization currently have?"

2

Answering "How does my enterprise automate broadly and deeply at scale?"

3

Answering "How are my teams breaking down silos and advancing DevOps practices?"

1 Answering "What does my IT organization currently have?"

What kinds of VMs, operating systems, databases, and network devices are we running? What about the software that these systems run? What's actually running in your containers? Do your teams have the means to actively discover new IT resources — whether traditional, cloud, or containers — and take immediate action on them?

These are a few of many questions that developers, operations, and security types of leaders and practitioners will likely want to know as they prepare to migrate to the cloud, want to better wrangle IT infrastructure or lower its costs, operate apps and services more reliably, or identify ways to become more compliant to ever-changing security and information governance policies.

Action item: Embracing end-to-end automation requires a discovery tool that spans on-prem, cloud, and hybrid infrastructure and systems to get an accurate accounting of what your IT estate contains. And it needs the integration back to an overall infrastructure and software management tool to take action to bring resources under management.

2 Answering "How does my enterprise automate broadly and deeply at scale?"

From infrastructure management to continuous integration/ continuous delivery to application release automation, how are DevOps, site reliability, and security teams handling automation across the organization? How do these teams govern security and compliance requirements at the scale?

Automating broadly and deeply

IT automation needs to evolve from the processes of a single silo into a perspective that embraces broad inclusion of multiple business and IT domains as well as deep penetration into all resources and processes within each domain.

Automating broadly means applying automation best practices across multiple IT and business domains. This includes infrastructure and application configuration management, IT resource provisioning, build processes, release processes, testing and QA, security, compliance, and other critical parts of your IT organization.

Automating deeply means applying best practices to all the resources and processes within that domain. It's both the application of DevOps principles and tools to enable your teams to automate and solve for consistency, simplification, and standardization of those practices.

To support both the breadth and depth of automation, your IT teams will need a platform that helps them adapt to the shifting nature of enterprise IT at scale. This platform should include vendor neutrality and a rich set of integrations to cater to various use cases throughout your IT organization.

This platform should also include task-based and model-driven automation to enforce the desired state of your configurations and enable teams to remediate unexpected changes via automation or ad hoc tasks across all software. It also empowers teams to automate ways to proactively respond to future changes to infrastructure and adapt to new business challenges.

Action item: Utilize a platform to wrangle and track configuration drift across the entirety of your IT estate at scale. This allows your teams to automate broadly and deeply, with both a model or task-driven approach, without worrying about technology bloat or lag while maximizing the return on investment from new processes and technologies.

3 Answering "How are my teams breaking down silos and advancing DevOps practices?"

Automation is prevalent, but is being done in silos, even at the most cutting edge of companies. Software development, build and release teams are all using different tools with various amounts of automation or manual handoffs daily. Some teams are also spending significant amounts of time integrating these tools with other teams — time that doesn't have to be spent if you're using an automation process that solves for depth and breadth.

Without one tool or platform to give teams visibility into their entire delivery pipeline, these siloed automation processes will continue. This runs counter to DevOps teams and cultures that want to iterate and improve at the pace, frequency, and quality that drives real business value.

Action item: Start with identifying manual processes in the software delivery lifecycle, prioritizing ones that are most painful, and then consider tooling that helps bridge the gap between each of these teams. Seek a solution that focuses on visibility throughout the delivery lifecycle, its governance, and the ability to integrate with your existing toolchain. Ideally, this solution should support both traditionally packaged and containerized applications.

Automation is the new competitive edge

So, how automated is your enterprise? If you aren't satisfied with the answer in your head, it's time to take action. It's time to start the journey toward pervasive automation.

Staying competitive in any industry requires acting like a born-in-the-cloud software company. Companies like Google, Facebook and Netflix, ones that pioneered the culture and best practices of DevOps, have now raised the bar beyond just excellence in software. They're raising the standards and changing expectations of customer experience.

This level of service stems from software development, build and release teams having frequent, iterative processes supported by automation. This drives tighter, faster feedback loops that fuel quicker innovation to customers. These customers can respond to these changes quicker, giving teams the insights to improve software even further — a virtuous cycle that promotes better, faster software practices in order to build a top-notch customer experience.

Take the next step toward pervasive automation

The path to pervasive automation is clear. Are you ready to begin your journey?
Puppet's product portfolio helps you achieve pervasive automation no matter where you are in your journey.

puppet Discovery™

Puppet Discovery gives you complete visibility into your infrastructure, so you know what you have and what to automate next.

Learn more at puppet.com

puppet Enterprise

Puppet Enterprise eliminates manual work from your infrastructure management and software delivery process so you can deliver great software quickly

Learn more at puppet.com

puppet Pipelines™

Puppet Pipelines gives you end-to-end continuous delivery and release automation for your entire software delivery lifecycle, from the time your developers commit application code to the deployment of those apps wherever

Learn more at puppet.com

Get in touch today to learn more.

Puppet is driving the movement to a world of unconstrained software change. Its revolutionary platform is the industry standard for automating the delivery and operation of the software that powers everything around us. More than 40,000 companies — including more than 75 percent of the Fortune 100 — use Puppet's open source and commercial solutions to adopt DevOps practices, achieve situational awareness and drive software change with confidence. Headquartered in Portland, Oregon, Puppet is a privately held company with more than 500 employees around the world.

Learn more at puppet.com.