The Business Case for IT Automation

Puppet Enterprise automates configuration and ongoing management of your machines and the software running on them, across physical and virtual machines, on premise or in the cloud. The result is that you spend less time fighting fires and more time deploying great software.

puppet labs

Puppet Enterprise Business Case

Common Challenges Facing IT Today

Speed & Agility: The pace at which business is conducted continues to accelerate. Nowhere is this felt more strongly than in Information Technology. IT professionals are under tremendous pressure to not only effectively administer applications and systems but also understand and embrace new technologies while rapidly responding to new business demands. Yet most IT managers feel they are not satisfied with the rate at which IT responds to business needs.

Productivity: IT professionals face three primary challenges in terms of productivity. One, the number of systems they manage is increasing at a tremendous rate. Two, the complexity and volume of resources per system is growing. Three, they spend more than 50% of their time on basic administrative tasks. The days of scaling system administrators linearly with the count of servers they manage are over due to the emergence of on-demand, programmatic infrastructure such as virtual machines and cloud computing, like Amazon Web Services.

Reliability: Business demands that systems not only adapt flexibly and rapidly but also perform flawlessly.The harsh reality is that delivering this level of service is extremely difficult. For example, plug a new system in the network, and within days you can experience configuration drift whereby configurations become different in some way over time resulting in each system developing its own personality, causing instability and making repair work extremely difficult. Configuration drift accounts for 99% of the reasons why disaster recovery and high availability systems fail. Unidentified configuration drift exposes an organization to high risk of data loss and extended outages. Costs of outages can be extraordinarily high, averaging $72,000/hour.

Insight: Understanding the impact of a change in your environment is critical, especially since IT is expected to avoid system outages (see Reliability) and minimize downtime. To do so IT needs to understand the root cause of the outage in order to prevent similar future occurrences. Manual reviews are time consuming, expensive and not very effective (e.g., 3 out of 4 disaster recovery tests fail). Using individual scripts to search for configuration gaps in the environment is another approach – this gets unwieldy as gaps are discovered and the volume of scripts to manage grows.

The Need for Automation

In the face of these challenges, manual, one-off and traditional approaches of the past no longer work. The tools of the past were born before virtualization and the cloud. A new approach is needed, one that requires new practices, processes and tools. This serves as an impetus for automating the management of IT infrastructure. One example of a new orientation and approach to automation is the DevOps movement. Regardless of the practice, though, it's clear that leading IT professionals and the vendors that serve them are inventing new ways to automate and drive IT agility and efficiency.

Driving IT Speed & Agility: The speed and agility so many companies lack is elusive because it requires investment in streamlining systems. Eliminating regional variations of the same application. Reducing their number. Virtualizing servers. Provisioning quickly and consistently. Recovering from errors faster. And streamlining isn't sexy. Deferring the IT investment that increases agility isn't a way to curb costs – it's a means of subsidizing inefficiency. It used to be that a company would decide to implement a new business process and then cobble together the systems to make it work. But that's not possible any longer. The systems must be nimble enough to accommodate new business processes as they come along, immediately. The distinction between business and technology is vanishing. Technology was once a tool that facilitated business functions, but now it's embedded in every aspect of the business. Separating technology from the business process it enables is no longer appropriate.

Competing for Business: The Consumerization of IT, the rise of the cloud and unrelenting business demands for new technology has led to the rapid proliferation of new and exciting technologies that are not supported or administered by IT. Rather than lament these dynamics, IT can take on a competitive mindset.

For example, in the face of cloud-based apps, IT can automate dynamic provisioning, create self-service, app store interfaces through which business managers can distribute the apps they own, and provide backup, security and other insurance policies to save the day when there's a big problem. IT needs to continually look for ways to help business get what they want (when they want) even when going outside IT, direct to vendors. This mindset will go a long way toward showing business managers that IT knows how to help expand their abilities as they evaluate and utilize new applications.

A Way Forward with Puppet Enterprise

Puppet Enterprise automates configuration and ongoing management of your machines and the software running on them, across physical and virtual machines, on premise or in the cloud. The result is that you spend less time fighting fires and more time deploying great software. From Puppet Apps to Puppet Server Reporting, Puppet Enterprise gives you a whole set of additional out-of-the-box capabilities for tackling IT automation challenges that go beyond configuration management, all the while leveraging the Puppet approach that more than 20,000 organizations rely on.

The Value of Puppet Enterprise

Puppet Labs is committed to delivering new levels of speed, productivity, reliability and insight for our customers. With our flagship product, Puppet Enterprise, we have helped our customers capture 10x-100x improvements in speed, productivity, reliability and insight.

Speed & Agility: IT is being pressured to deliver new services in weeks or days (rather than months). Puppet Labs is driven to compress this further to hours or even minutes. By automating many of the routine tasks of administration, your staff can concentrate on providing business value by delivering services demanded by the various business units more rapidly and reliably.

Puppet Enterprise also improves the velocity of delivery of new business services by ensuring that development, QA, staging, & production environments are all consistent. The resulting improvement in the ability to reliably test new services, combined with a predictable and stable infrastructure, increases the confidence in the release process and ultimately provides increased business value.

- Sony saw a >100% increase in deployed applications while keeping headcount constant.
- Costco dropped the time required to deploy apps from development to production from 4 weeks to only 3 hours.

Benefits / Key Performance Indicators:

- Improved velocity of delivery of new business services
- Higher levels of value delivery
- IT viewed as strategic resource/partner

"Puppet has been a success on so many levels for us, from configuration enforcement to using it for mass change. Because we deliver a service to internal customers, the biggest surprise is how much Puppet has helped them, rather than just our own internal group. By improving the efficiency of our IT infrastructure, Puppet allows us to deliver our service faster, and with higher quality."

Joe Allen, Director of Operations, Citrix Online

Productivity: Puppet Labs understands that in business today, you are expected to do more with the same (or less). Adding headcount to solve problems is not always an option. Puppet Enterprise allows you to efficiently manage a large number of systems with a limited number of administrators, allowing your infrastructure to grow without having to add headcount.

- Google manages over 50,000 systems with Puppet Enterprise. Each System Administrator manages up to 5,000 systems.
- TransUnion System Administrators can manage over 180 servers each. (Previously they were limited to 19 each when using BMC Bladelogic).

Benefits / Key Performance Indicators:

- Improved staff efficiency
- Higher levels of morale

"At TransUnion, Puppet's rollout has been very cost-effective. The IT department's server-to-admin ratio is now up to 250:1, compared to another part of the organization that uses a large commercial vendor's solution where it is 35:1. Assuming $100,000 per year for a learned Linux admin, automating their infrastructure with Puppet saves our organization between $1 and $1.5 million per year in systems administrator salaries."

Ed Bailey, TransUnion, Open Systems Architect

Reliability: Using Puppet Enterprise you can reliably distribute system administration tasks by ensuring that a consistent framework is utilized (avoiding configuration drift), remediating any deviations from a known good state by reverting back to the intended state, eliminating large numbers of unique hand-built scripts and tools that are poorly documented and put you at risk when turnover occurs.

Benefits / Key Performance Indicators:

- Meet and exceed SLAs
- Increase Mean Time Between Failure (MTBF)

Insight: When things go wrong, it is imperative that immediate and accurate information is available to assess changes in environments, conduct root cause and direct rapid remediation. But true insight is delivered when system degradation is eliminated and outages are prevented altogether. In order to meet growing demand, networks must scale dynamically and cloud infrastructure create new nodes on the fly. Puppet Enterprise enables dynamic, real-time discovery of inventory data such as resources, packages and software on nodes as well as their current state. So administrators always have a current, accurate source-of-truth.

Puppet Enterprise comes equipped with reporting capabilities that allows you to quickly understand and act on changes occurring in your infrastructure. Now you can know what changed, where and how. Develop a clear sense of scope of changes and take specific action in order to improve service levels.

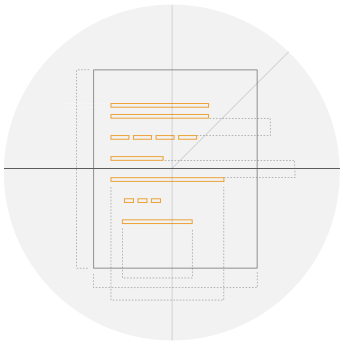
Benefits / Key Performance Indicators:

- Reduced Mean Time to Repair (MTTR)
- Reduced risk of data loss
- Discover & close security vulnerabilities

What's Different About Puppet Enterprise?

Puppet Enterprise's approach to IT automation is fundamentally different from prior generations of IT management solutions because it enables IT teams to treat infrastructure-as-code. This approach allows IT teams to define the desired state of their infrastructure building blocks, compose these building blocks into complete stacks, and then, using these compositions as blueprints, automatically provision infrastructure and maintain its consistency according to the compositions.

Define

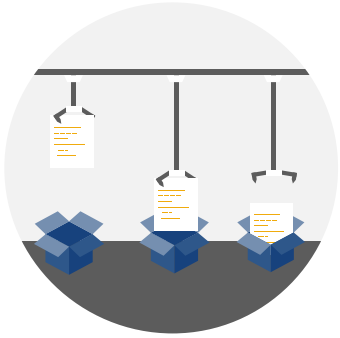


"Ensure Apache is installed, configured, and running"

Compose

"Ensure a LAMP stack on top of RHEL"

Automate



"Stand-up a LAMP-on-RHEL stack on 100 nodes, and then enforce configuration"

The immediate benefits of this approach include:

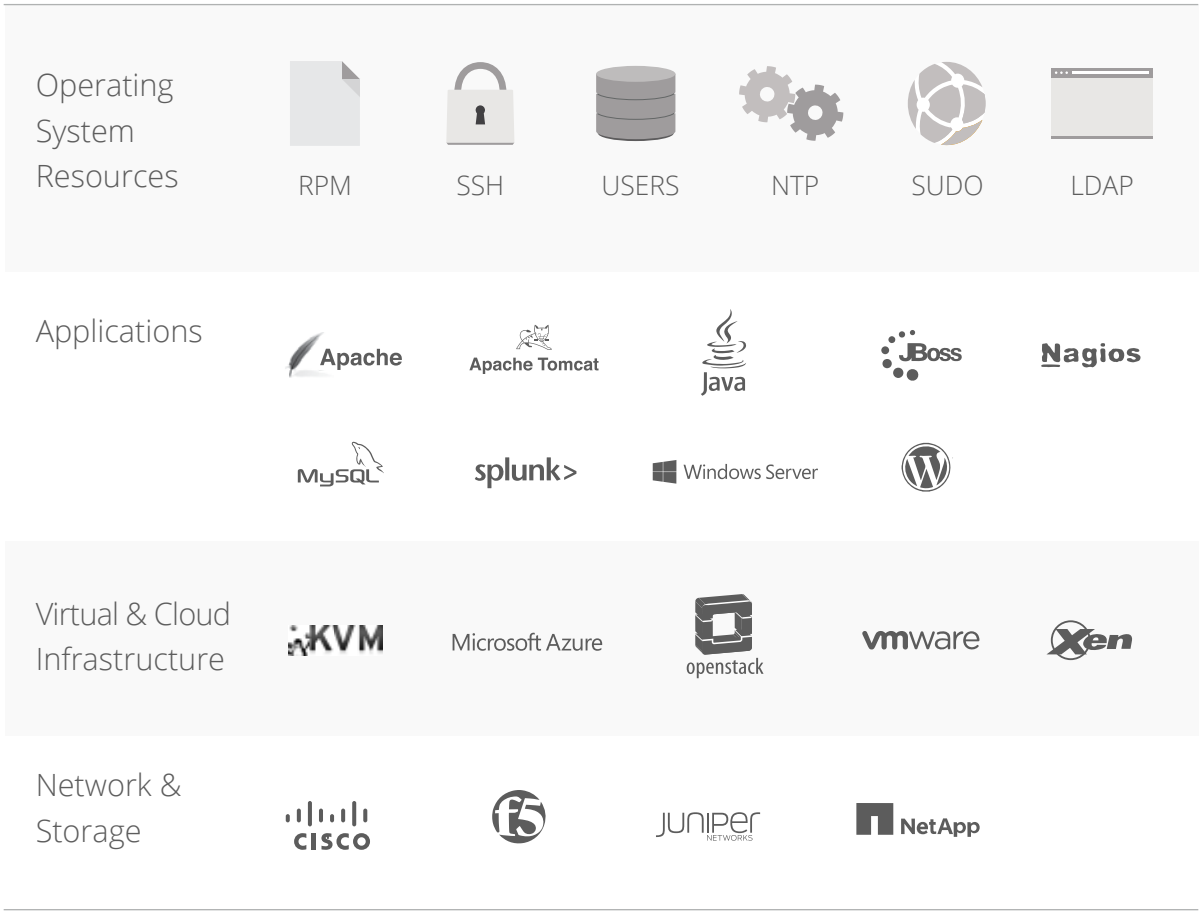
- Automation of repetitive, menial tasks,
- Elimination of configuration drift,
- Centralized management – change a single definition file, all nodes get updated,
- Write definitions once and reuse again and again and again,
- Complete visibility into the state and rate-of-change of the infrastructure and applications.

Benefit from a Vibrant Ecosystem

Puppet Enterprise customers benefit from a vibrant ecosystem that includes a thriving community of practitioners willing to share battle-tested modules on the Puppet Forge and best practices in the Puppet Community. Puppet also has deep partnerships with data center vendors that matter to IT, like VMWare, Cisco, and EMC, plus a complete set of training and services to ensure success.

Puppet Forge

Puppet Forge is a repository of 2,800+ pre-built automation solutions (modules). These are free community contributed pre-built modules for automating tasks such as setting up a database, web server, or mail server. Get the most out of your investment in Puppet Enterprise without re-inventing the wheel.



The Puppet Enterprise Ecosystem

Puppet Enterprise is more than just packaged software. Puppet Labs surrounds Puppet Enterprise with an ecosystem of product integrations, support, maintenance, learning, professional services and partners to ensure customers get the highest return (and lowest risk) for their investment.

Product Integrations: Because of the disruptive impact of Puppet Enterprise and our rapid growth in user adoption, many leading players have integrated their solutions with ours.

Support & Maintenance: Enterprise-class support is included with a subscription to Puppet Enterprise: issue resolution, feature enhancement priority requests, and best practices advice. Subscription customers always have access to the latest and greatest releases and updates.

Education: Puppet Labs has a variety of learning resources available for all skill sets. Whether you are just getting started or are an expert system administrator or developer, Puppet Labs has you covered with a free, downloadable VM of Puppet Enterprise, on-demand and in-classroom workshops, and professional and developer Puppet certification.

Professional Services: Puppet Labs Professional Services are designed to help assess your current levels of IT automation and augment your own internal capabilities. They also can deliver highly customized services and on-site training.

Partners: Puppet Labs has established partnerships with leading Resellers and System Integrators. These Puppet Partners provide professional services or consulting to help Puppet customers set up and maintain their Puppet Enterprise deployments. These partners regularly work on implementation and deployment projects, advice and guidance on implementing DevOps techniques and processes and also offer training in the markets they serve.

Proven Technology

Puppet Enterprise is trusted by thousands of organizations worldwide to help them achieve IT management excellence. Representative customers include:

About Puppet Labs

Puppet Labs, Inc. is the leader in IT automation. Puppet Labs software provides system administrators the operational agility, efficiency and insight they need to proactively manage dynamic infrastructure, scaling from tens of servers to thousands, both on-premise and in the cloud. Thousands of the world's leading organizations use Puppet Labs software to configure and manage their IT infrastructure, including Bank of America, Cisco, Citrix, eBay, NYSE, PayPal, Salesforce.com and WebEx. Based in Portland, Oregon, Puppet Labs employs more than 320 people. The company is backed by investors Kleiner Perkins Caufield & Byers, Google Ventures, VMware, Cisco, True Ventures, Radar Partners, and Emerson Street Partners.
To learn more, please visit www.puppetlabs.com.