RED HAT® ANSIBLE® Automation

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COMPETITIVE REVIEW

COMPARING RED HAT ANSIBLE AUTOMATION AND PUPPET ENTERPRISE

INTRODUCTION

Your business is a digital business. Technology is your innovation engine, and delivering your applications faster helps you be successful. Historically, delivering applications required a lot of manual effort, complicated coordination, and repetitive tasks. Automation frees people up to focus on efforts that help deliver more value to the business by speeding application delivery time and building on a culture of success.

An enterprise-wide automation strategy has to benefit the individual first before the success spreads to the group. When the automation language is simple, it can be easily shared and adopted.

In this competitive review, we compare Red Hat® Ansible® Automation and Puppet Enterprise automation offerings.

RED HAT ANSIBLE AUTOMATION

Red Hat Ansible Automation automates your entire IT infrastructure, using the expertise and knowledge already existing in your teams.

Ansible Automation is used by thousands of organizations globally to help them automate IT tasks, such as configuration management, provisioning, workflow orchestration, application deployment, and life-cycle management. Ansible Automation is easy to adopt across the entire enterprise—from networks, servers, and security and compliance to cloud, infrastructure, and DevOps and continuous integration/continuous delivery (CI/CD).

ANSIBLE AUTOMATION IS SIMPLE

• The language of Ansible Automation is easy to read. No special coding skills are needed. Your staff can start automating immediately.

• You do not need to install agents on servers, deploy expensive management appliances, or change your existing infrastructure.

• Ansible Automation uses standard communication mechanisms already in place on enterprise networks, such as secure shell (SSH) and Windows Remote Management (WinRM).

• No agents are required to be added to standard builds.

> **"**Our automated processes are enabled in Ansible Tower. Now, even individuals who don't have knowledge about a different operating system or network device are enabled to manage and fix things that are completely outside of their comfort zone. They don't have to enter things manually or follow a guide. It's already written and automated for them.**"**
>
> LEAD ARCHITECT,
> MANAGED SERVICE PROVIDER[1]

ANSIBLE AUTOMATION IS POWERFUL

- Automate your Linux and Windows environments, your network, your clouds, and your applications. Ansible Automation brings these pieces together.

- Do more than just configuration management server by server. Orchestrate your entire IT landscape.

- Use Ansible Automation modules to automate existing tools, programs, and scripts under one umbrella.

RED HAT ANSIBLE TOWER

Part of the Red Hat Ansible Automation product family, Red Hat Ansible Tower is an enterprise framework for controlling, securing, and managing your automation with a user interface (UI) and a representational state transfer (RESTful) application programming interface (API). It integrates with your existing IT stack and brings it together in an automated fashion. Ansible Tower provides the control, knowledge, and delegation to help your organization automate your entire IT landscape and your critical business processes.

CONTROL

- Automate your enterprise IT landscape. Focus on automation jobs and their results, instead of single, isolated nodes.

- Manage your automation at scale. Assign resources to cover heavy duty teams or set up distant nodes to integrate your remote datacenter.

- Integrate via the API. Enhance your existing, established tools by joining them with Ansible Tower.

- Automate with the business processes of your enterprise — instead of maintaining divisions.

KNOWLEDGE

- Have one central place to command the automation.

- Review results. See who accessed what, which automation worked on what piece of IT, and analyze the results.

- Gain a window into your IT landscape with a detailed history of each step of automation.

DELEGATION

- Bring together separate teams. Let your developers use automation, but ensure proper access rights and secure passwords.

- Provide automation as self-service tasks to other groups.

- Chain multiple automation pieces together via workflows.

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1 *Red Hat-commissioned study conducted by Forrester Consulting,* "*The Total Economic Impact of Red Hat Ansible Automation.*" *June 2018.*

PUPPET ENTERPRISE

Two main differences separate Ansible Automation and Puppet Enterprise: complexity and integration.

COMPLEXITY

Before you start automating your infrastructure, Puppet wants you to first provide a detailed description of your present infrastructure and how you want it to be in the future. Creating that description or model requires a large investment of time to analyze and implement the individual components to get it right before any real automation is started.

As organizations look to expand automation across an enterprise, the individuals who have the needed expertise are rare and expensive. The more an organization has these divisions, the greater the difficulty to adopt Puppet across the enterprise – though this cross-departmental automation offers the greatest rewards to an organization.

Additionally, the infrastructure description itself has to be written in Puppet's native language, which is closely related to the programming language, Ruby. Before any automation can begin, internal teams or external consultants must be trained in this language, which can take weeks. As a result, companies using Puppet tend to have small, dedicated teams of experts running the automation, which prevents enterprise-wide automation of technical business processes.

INTEGRATION

For Puppet, automation is focused on the automated node – and is based on a set of automated servers. And the web interface to Puppet, the Puppet Enterprise console, is node-centric. However, in the journey to an automated enterprise, this approach should only be the first step. Automation needs to integrate the servers and virtual machines (VMs) with the applications running on top, with internal and external services and cloud platforms. An automated IT landscape requires the integration of all components in combined workflows, but Puppet lacks this requirement as it mainly focuses on nodes.

Also, the main Puppet infrastructure and automation model requires that agents run on managed environments. The agent and all of its dependencies – around 20 packages on Red Hat Enterprise Linux® – needs to be installed on every target node, requiring additional security checks and rules. Additionally, having an agent makes it hard to incorporate objects which cannot run agents: be it third-party web services, be it your application APIs or networking devices where a Puppet agent is not available or not allowed to run. Even when this agent-centric approach was softened a bit as Puppet introduced Bolt, an agent-less task runner, the general approach of Puppet and the corresponding tooling is still solely focussed on managed nodes and not on automated infrastructure.

According to the Forrester Total Economic Impact Study, Red Hat Ansible Tower provides powerful automation to simplify and manage IT systems:[2]

- ROI of 146%, calculated by 3-year benefit vs. cost.

- Payback in less than 3 months

KEY DIFFERENTIATORS

TABLE 1. HIGH-LEVEL COMPARISON OF RED HAT ANSIBLE AUTOMATION AND PUPPET ENTERPRISE.

DIFFERENTIATOR	RED HAT ANSIBLE AUTOMATION	PUPPET ENTERPRISE*
Ease of use	Simplicity. Integration across IT landscape.	Complexity. Focus on separate nodes.
Team structure	Multiple cross-functional teams working together efficiently	Segmented, isolated teams, usually repurposed from operations
Approach to automation	Integration of all components	Management mainly of server instances
Time required to onboard	Hours to a few days, with little training required	Multiple days to several weeks, with extensive training required beforehand
Language architecture	Human-readable descriptions that require no special coding skills to read, accelerating start time	Native language that is closely related to programming and requires training, adding time before automation can start

Note: Puppet does not provide public pricing information.

Most organizations have already invested in automating parts of their infrastructure with legacy tools such as BMC TrueSight or CA Technologies Automic, or with more modern tools from the typical DevOps tools, which may include Puppet for configuration automation. We do not recommend replacing technologies that are working for your organization. Ansible Modules are available for many technologies, including several that deploy the Puppet Agent for your existing Puppet environment. Ansible Automation can help you get even more from your existing investments. It is often the glue between existing pockets of automation.

If you need to integrate existing Puppet infrastructure, or need to use existing legacy tools and their APIs certain tasks, Ansible Automation can help.

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2 Red Hat-commissioned study conducted by Forrester Consulting, *"The Total Economic Impact of Red Hat Ansible Tower spotlight."* July 2018.

SUMMARY

We encourage organizations to look at Ansible Automation for enterprise automation, which can include:

- Networks

- Servers

- Cloud

- Infrastructure

- Applications

- Services

Ansible Automation can be used across entire IT teams – from systems and network administrators to developers and managers. It helps you automate all of your business process, instead of just pockets of IT.

ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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