CASE STUDY

ADMB Scales Automation and Delivers Faster with Puppet Enterprise

Background
With 60 offices and 1,450 employees, ADMB provides HR, recruitment, payroll, insurance services, child benefit calculation and risk prevention for thousands of organizations across Belgium.

Challenge
Manual configuration of Linux servers was taking up to 24 hours or more as server numbers grew, while setting up and deploying VMs was slow.

Solution
Puppet Enterprise supports ADMB in delivering faster, automated deployment and central management, implementing infrastructure as code to provide a foundation for future growth.

Results
• Adding VMs is automated, faster, simpler, and went from taking a full day to just a few minutes
• More time available for IT staff to improve services and implement new technologies, which helps them keep up with competitors
• Deploying new applications is faster with less opportunity for error.
**Executive Summary**
ADMB needed to overcome the challenge presented by having to manually configure an increasing number of Linux servers, while improving its ability to quickly set up and deploy new VMs. Implementing Puppet Enterprise enabled them to deliver faster, automated deployment and central management as a strong foundation for future growth.

**Client Environment**
- Two data centers, housing five environments
- Red Hat infrastructure
- CentOS
- Oracle Enterprise
- Linux
- Puppet Enterprise
- 260 nodes

**Standardizing and automating configuration delivers consistency and more efficient deployment**
ADMB is a rapidly growing provider of HR, recruitment and payroll services to tens of thousands of entrepreneurs and organizations in Belgium. Its 1,450 employees also provide support and administrative services to start-up companies from its 60 offices across Belgium. Within the organization, a team of 60 developers specialized in creating applications for the customer portal, such as wage calculation tools, which needed to run smoothly to ensure customer satisfaction.

The IT team, made up of 100 professionals, is responsible for the provisioning of these services and applications to all the other departments within ADMB and to its customers. Over time, ADMB experienced significant growth in applications running on Linux servers. The DBA team, which was responsible for the Linux servers, found it increasingly difficult to manage them as well as the databases. With even bigger growth on the horizon, the team needed to find ways to standardize their virtual machines (VMs), and deploy them more rapidly than before.

Tim Veranneman, senior Linux administrator at ADMB, said: “Seeing the expansion in Linux servers and VMs in the pipeline, we knew we needed to act to find ways to move faster and more efficiently. We could have hired two more engineers, but with the average starting salary of a Linux engineer costing 36,000 euros, we decided to look for a solution to streamline the process, standardize the environment and improve the agility of our VM deployment. This has saved us over 72,000 euros a year.”
Puppet offered all the tools ADMB needed. The company decided to kick off a proof of concept (POC) by adding the Puppet NTP module to all its VMs. “We added all of our VMs to Puppet with a small module and then we expanded by adding more modules,” Veranneman revealed. “We had lots of standardizing codes in Puppet and were able to put up more VMs faster as we didn’t have to do all the manual configuration anymore. We could just do a Puppet run and everything was installed.”

While the team had started by writing its own modules during the POC, they soon discovered the Puppet Forge, which has thousands of pre-written modules that can be configured to suit ADMB’s environment. This has saved the team about 20 weeks of development and maintenance. “This meant we could work on amending our code, putting in profiles and making it more readable for our colleagues,” added Veranneman.

**Saving time and effort with Puppet**

Veranneman has been very impressed with the benefits delivered by Puppet Enterprise. “When you put something in Puppet, like the NTP configuration for example, you do that once and you don’t have to worry about it again until the server changes. And then even when it changes, you only have to change it in one place once and it gets distributed to all the servers.”

Using Puppet has saved the team significant time in configuring and deploying VMs. Previously, it could take almost a day to set up, however with Puppet it takes an hour. This is extremely valuable now that the company is deploying more machines than it used to. Veranneman explained: “Today, we have 260 VMs on Linux, last year we only had 200, so we’re growing exponentially.”

The team no longer has to log into each server and write scripts to make any changes. “This has made our lives a lot easier,” Veranneman explained, “and has given us time to make more interesting changes, to focus on deploying new software and automating other things.”
Puppet helps to scale automation broadly and deeply

Puppet has enabled ADMB to automate the process of deploying new services, using default profiles that include all the standard settings that need to be applied. There is less opportunity for errors since things are standardized because the configuration details are already saved with Puppet – the correct user set and passwords, the default Java version, Apache is installed and the firewall configuration has been applied. “There are a lot of things you don’t have to worry about anymore when setting up a VM. Not only does that make it easy to do, it also makes it more secure because everything is managed for us,” Veranneman stated.

Without Puppet, ADMB would have been forced to bring in more engineers to manage the Linux environment. “If you don’t have this kind of system, you need more time to set up the VMs, you need more time to maintain them and to keep the environment standardized,” Veranneman explained. “We have saved thousands of euros, as we haven’t had to recruit any new engineers to manage this process.”

Using Puppet has given the team more time to focus on new projects. It has also given ADMB the agility to compete with much larger organizations. “Our competitors are a lot bigger than us and they are able to use a lot more IT resources than us. We have to keep up with them,” Veranneman said. “Thanks to Puppet, we have more time to implement new technologies and do just that.”

Why Puppet Enterprise?

“When you automate something and you put it in once you don’t have to think about it anymore, so you can look at other ways to develop and improve the product. If we didn’t have Puppet we wouldn’t be able to achieve these changes at the pace we are doing now,” said Veranneman. “We have one view across all of our configuration, and without Puppet we wouldn’t have anywhere near the visibility and manageability we have today.”

Top outcomes of using Puppet Enterprise

- Significant time saved in configuring and deploying servers and VMs
- Much faster speed of deployment of applications and servers
- Continuously enforced and centrally managed configuration provides a more stable environment
- More time for innovation and new projects