

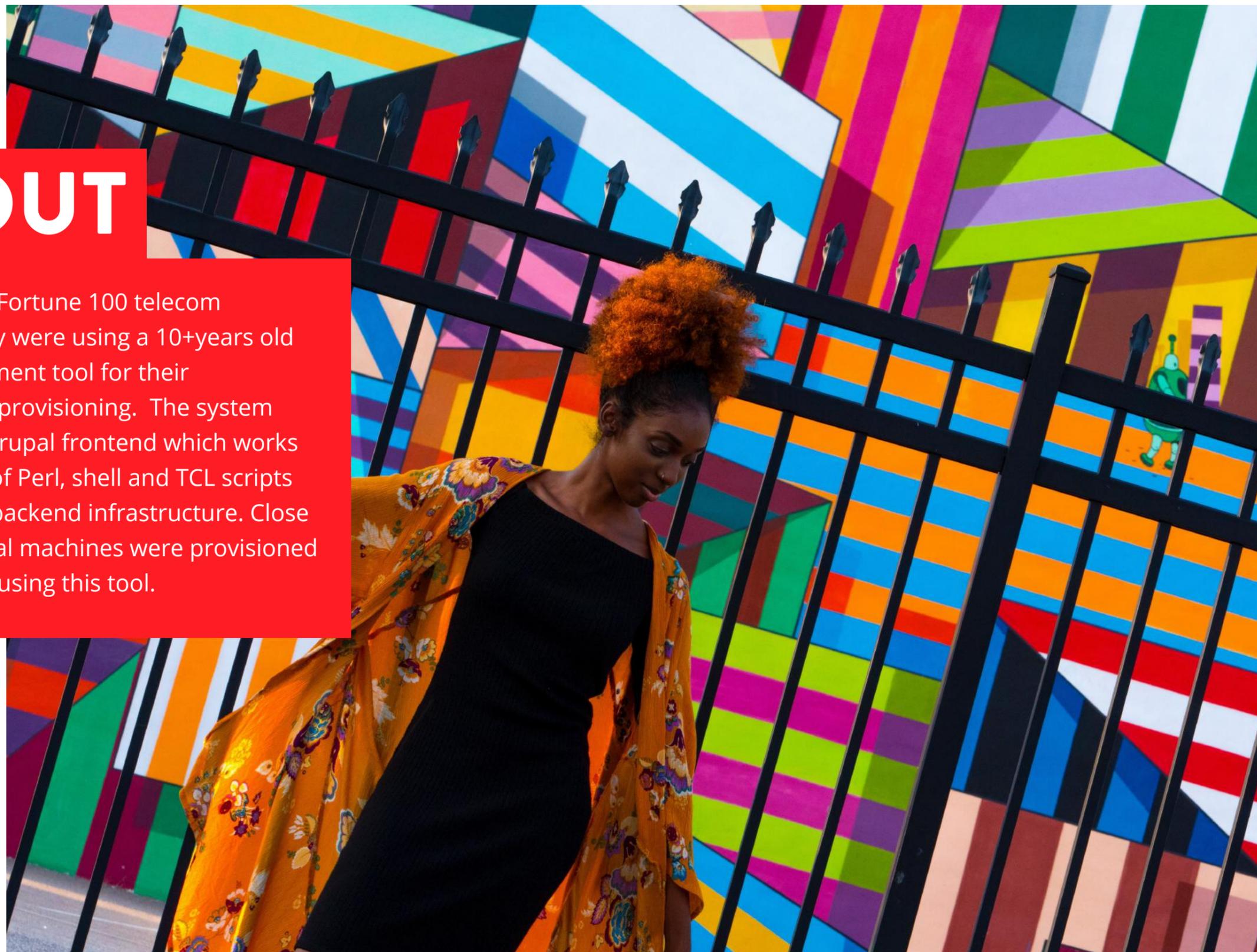


# IAAS DEPLOYMENT/ MANAGEMENT AUTOMATION TOOL



# ABOUT

Customer is a Fortune 100 telecom company. They were using a 10+years old server deployment tool for their infrastructure provisioning. The system consists of a Drupal frontend which works with the help of Perl, shell and TCL scripts on a VMware backend infrastructure. Close to 2200+ Virtual machines were provisioned and managed using this tool.



# CHALLENGE



The old system was built on different Perl, shell and TCL scripts which were unorganized and outdated. Most of the processes which are supposed to run automatically were carried out manually. The system consisted of a central controller, which handled the deployment process. The controller is a Drupal 6 frontend system where, a customer can request and decommission proxies. The TCL scripts used in the controller for template rendering were hard to debug. Pushing configurations to virtual machine is done by downloading an RPM from

controller to VM and then installing it. Adding customised Apache/DNS/MySQL/Squid configurations were done using different sections in drupal which were unorganised, confusing and required little programming knowledge for the customer.

# SOLUTION



A new robust system is introduced with two Drupal installations, one for admin portal and other for customer requests. The customer can request the VM through the customer portal and the admins can approve/deny requests from the admin portal, thereby making the system more versatile. All the TCL scripts have been converted to more easy TPL scripts. The whole VM deployment process is controlled by Camunda, which is a Decision and Workflow Management Platform. In camunda, we could design flows for every process and handle the whole process in a more organised and automated way.

Once the VM request is approved by the

administrator, the deployment process will start and configuration files are generated using Perl scripts and are pushed to the GIT server and a VM will be cloned alongside. For cloning VMs, VMWare APIs are used and a VM will be automatically cloned with IPs necessary for its operation. To push the configuration to the VM, Puppet the configuration management tool is used. The configurations will be automatically pulled from GIT server by the Puppet server and in turn deployed to the VM with a Puppet agent run.

All the necessary packages and configurations are deployed to the VM automatically and the server is added to

Check\_MK for monitoring. For patching before go live, Spacewalk with CentOS security errata is used. Once the VM deployment is completed, an automated email is sent to customer.

# RESULT



**The whole deployment part is fully automated with no human intervention and the management of the VM can also be done with minimum human intervention.**

## **New Controller**

The new updated controllers provide a way more user friendly interface with which a customer can request proxy with minimum effort. The dual controller setup helped to minimise complexity of the system.

## **Tracking the deployment**

Camunda provides a more easy way to track understand the process. It also help to debug and retry failed tasks, thereby decreasing the time to remedy.

## **Backup and Efficient Management of Code**

Pushing code to GIT helped to manage the code and review it easily when needed. This also helps in an event of a complete disaster.

## **Pulling configurations**

Puppet will pull the code from git and deploy it to the VM eliminating the need of creating RPM. The use of puppet will help in automatically reverting any manual configuration changes.

## **Management of deployed proxies**

The VMs during the deployment process will be added to Check\_MK for monitoring. The package management is done using Spacewalk, from where we could push Security patches and other updates and have complete control over the proxies even after a long time.

# RESULT



With PiServe's solution in place, the customer benefited as :

**75 %**

Human intervention avoided

**90%**

Increase in Turn Around time

**90%**

Reduction in incidents that impacts the business

## Technologies Used

Backend

:  Perl  BASH  php

Configuration Management

:  puppet

Frontend

:  Drupal™

Version Control System

:  git

Decision and Workflow Management

:  camunda  
the business process company

Monitoring

:  CHECK\_MK

Infrastructure

:  vmware

Patch Management

:  SPACEWALK

# ABOUT US



PiServe is a leader in Automation, Application Development Support, Infrastructure Management Services and Cloud.

We leverage our experience, knowledge and services to help build trust and confidence in the capital markets and in economies all over the world.

Develop, deploy, and maintain quality IT systems become infeasible in terms of efficacy and cost-effectiveness, choosing the right IT partner can be a game-changer. PiServe has proven expertise and experience to provide you the right IT solution for the right purpose at the right time.



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