

Case Study



Automated Linux Server Deployment at Scale

Ansible

VMware

Azure

RHEL



Deploying in a
Record Time!

THE CLIENT & CHALLENGE

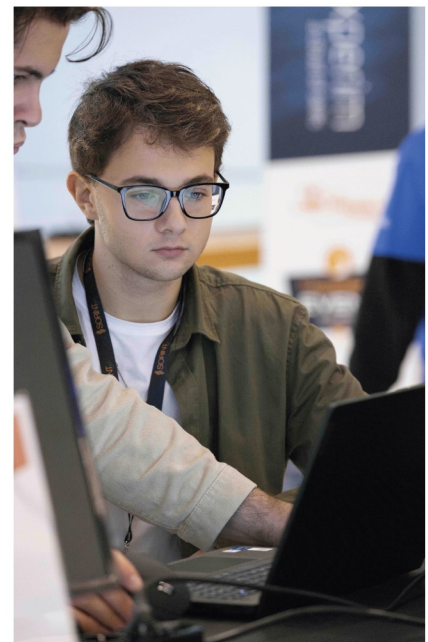
A well known university in Milan is looking to design, using automation tools, a solution that would accelerate the process of creating Linux servers on the following platforms:



Beyond the automated and parameterized creation of servers, the solution needed to manage server hardening, including:

- Configuring and registering the server with Satellite
- Setting up network services (DNS, network)
- Configuring NTP
- Configuring LDAP

Additionally, the solution was required to handle the installation of middleware components: JDK and Tomcat.



TECHNICAL SOLUTION

The proposed solution involved managing the creation of virtual machines (VMs) using Ansible Playbooks. The Ansible Playbooks were executed from a Linux VM, capable of connecting to and interacting with the relevant vCenter(s) and the necessary Azure cloud services for provisioning.

The Ansible Playbook handled the provisioning of VMs on the VMware platform via Kickstart and Template modes. For Azure, VMs were created using one of the templates provided by Cattolica on the provider platform. The supported operating system distributions were Red Hat versions 7, 8, and 9.

The parameters for creating the VMs were included in a YAML "Change Request" file, which will be processed by the Ansible Playbook once completed

The Ansible tasks developed including activities such as:

01

Creating
VM on ESXi using the vmware_guest module

02

Creating
VM on Azure using the Azure AZ Ansible Collection

03

Starting
VMs

04

Verifying
Host status on Satellite via API requests to ensure effective installation

05

Performing
Post-provisioning tasks such as exchanging SSH keys, setting hostname, configuring sudo, NTP, & LDAP

06

Registering
The system with Red Hat Satellite

07

Installing
Optionally additional packages such as JDK & Tomcat

08

Updating
OS packages

09

Rebooting
VMs

BUSINESS OUTCOME

Suspendisse potenti. Duis a quam pharetra, port ititor magna ac, volutpat ante. Sed cursus erat consectetur pellentesque.

Efficiency
Reduced time and manual effort in server creation through Ansible automation

Reliability
Ensured servers meet security and operational standards via hardening tasks

Middleware Deployment
Automated the installation of critical middleware components like JDK and Tomcat to meet application requirements

Flexibility
Supported multiple operating systems (Red Hat 7, 8, 9) and leveraging cloud and on-premises platforms

Scalability
Delivered a repeatable and parameterized solution that adapts to varying infrastructure needs