EVT Automates CI/CD Pipeline for Leading Auto Manufacturer to Create Amazon Machine Images for User Workspaces

EXPERTS IN DEVOPS, IMPLEMENTATION AND AUTOMATION

BACKGROUND

A leading automobile manufacturing company wanted to streamline management of specialized virtual desktop images used by its R&D and Design Engineering teams. Workstations were using customized versions of CAD, CATIA, CAE and other applications in research, development and manufacturing processes. The company planned to create Amazon Machine Images (AMIs) for its user workspaces that would be easily accessible, consistently configured, regularly updated with current patches and security fixes, and made available on a central Virtual Desktop Infrastructure (VDI) and High Performance Computing (HPC) platform.

CHALLENGE

An EVT enterprise customer, the company was adopting a centralized HPC and VDI portal for its engineers to leverage and spin up virtual workstations with applications. The application lifecycle management process administered the installation, configuration and testing of applications using a combination of on-prem tooling and manual processes that struggled to provide cloud-native AMIs for the new portal.

SOLUTION

Drawing on its deep expertise with dev ops and automation, EVT implemented a Continuous Integration and Continuous Deployment (CI/CD) pipeline to automate the creation of AMIs for its user workspaces. EVT developed the pipeline in stages including (1) Code Repository (all code related to the installation, configuration, and testing of applications was stored in a central repository leveraging GitHub, Packer and Ansible to automate the app packaging); (2) Build (import of standard company image, application layering and creation of image artifacts stored in S3); (3) Test (automated pipeline testing on the artifacts to ensure that the installation, configuration and app testing was successful); (4) Deployment (the pipeline deployed the artifacts to EC2 instances which were used to create the AMIs for the user workspaces; (5) Release (the pipeline released the AMIs to the cloud engineering portal for easy access); and (6) Monitoring (the pipeline monitored the AMIs for changes and triggered the appropriate action, i.e., patching and updates).

OUTCOME

With the successful implementation of the CI/CD pipeline and automation of the AMI creation process for user workspaces, EVT developed IT infrastructure improvements that reduced the time and effort required to manage automation of the installation, configuration, testing and patching of applications, increased productivity of the company's R&D and auto manufacturing processes and improved the security of the user workspaces.

UTILIZING DEVOPS AND AUTOMATION TO SCALE AND INCREASE PRODUCTIVITY