Immutable Infrastructure CI/CD Using Jenkins and Terraform on Azure Virtual Machine Scale Sets

Architecture overview

Azure is a world-class cloud for hosting virtual machines running Windows or Linux. Whether you use Java, Node.js, Go, or PHP to develop your applications, you’ll need a continuous integration and continuous deployment (CI/CD) pipeline to push changes to these virtual machines automatically.

1. Change application source code.
2. Commit code to GitHub.
3. Continuous Integration Trigger to Jenkins.
4. Jenkins triggers a Packer image build to create a VM and stores it as a VM image using Azure Managed Disks.
5. Jenkins triggers Terraform to provision a new Virtual Machine Scale Set using the Azure Managed Disks VM image.
6. Azure Log Analytics collects and analyzes logs.
7. Monitor application and make improvements.

Azure products used in this solution

- Managed Disks
- Virtual Machine Scale Sets
- Visual Studio Code
- Log Analytics

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