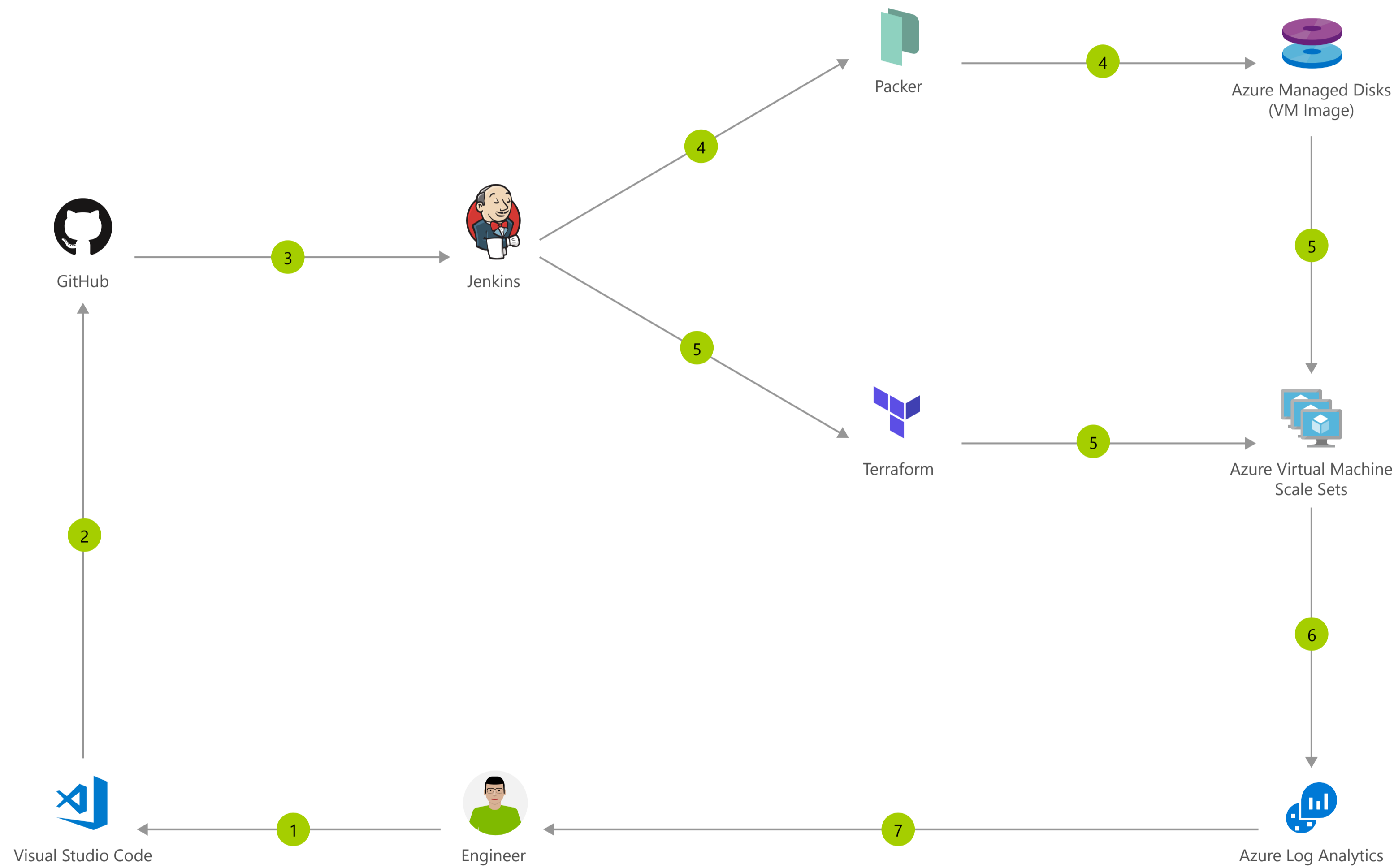# Immutable Infrastructure CI/CD Using Jenkins and Terraform on Azure Virtual Machine Scale Sets

GitHub

3

Jenkins

4 Packer

4 Azure Managed Disks (VM Image)

5

5 Terraform

5 Azure Virtual Machine Scale Sets

6

2

Visual Studio Code

1 Engineer

7 Azure Log Analytics

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

Microsoft

Azure