

# Day 4 of 100 Days Challenge – Virtual Machines on AWS & Azure

## Introduction

This session focuses on creating and managing **Virtual Machines (VMs)** on **AWS** and **Azure**, exploring both manual processes and automation tools.

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## Key Learnings

### Virtual Machines in Cloud Computing

- Software-based replicas of physical systems.
- Enable efficient and scalable resource management in the cloud.

### Creating VMs on AWS

1. Access the AWS console and choose an Amazon Machine Image (AMI).
2. Configure the instance type, key pairs, and security group.
3. Launch the EC2 instance.

### Creating VMs on Azure

1. Access the Azure portal and select OS, size, and region.
2. Configure security settings and manage users via GitHub integration.
3. Launch and manage the VM.

## Automation Tools

- **AWS CLI & Boto3 (Python SDK):** Automate EC2 instance creation.
  - **Terraform:** Multi-cloud infrastructure-as-code.
  - **Azure CLI:** Automate VM creation on Azure.
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## Best Practices

- Automate VM management for efficiency and error reduction.
  - Regularly update your skills to stay ahead in cloud automation.
  - Align tools with your organizational and technical requirements.
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## Conclusion

Cloud-based VMs enable scalable, cost-efficient infrastructure management. Automation tools like **Terraform**, **CloudFormation**, and **Azure CLI** empower DevOps teams to optimize workflows.

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