

- 3. **Security and Compliance**
- 4. **Monitoring and Operations**
- 5. **Data Protection and Business Continuity**
- 6. **Automation and Scalability**
- 7. **Cost Management**

1. **Infrastructure Setup and Management**

In the realm of Azure operations, mastering the art of infrastructure setup and management forms the cornerstone of efficient cloud computing. The "Azure Ops Technical Checklist" dives deep into two pivotal areas: leveraging Azure Resource Manager (ARM) for Infrastructure as Code (IaC) and optimizing Azure Storage solutions. These elements are not just tasks; they are strategic practices that propel operational efficiency and resource optimization to new heights.

Automate with Azure Resource Manager (ARM): ARM stands as the backbone of Azure's infrastructure deployment and management, enabling you to define, deploy, and manage resources in a consistent, repeatable manner using templates. This IaC approach not only streamlines the provisioning of resources but also ensures that your infrastructure is version-controlled and replicable across environments, reducing manual errors and enhancing productivity.

- [Deploy and manage Resources in Azure with ARM templates](#)

Optimize Azure Storage: Azure Storage offers a scalable, durable, and secure solution for your data, whether it's unstructured blobs, files, queues for messaging, or NoSQL tables. Optimizing these storage options ensures that your applications have the right balance of performance, cost, and scalability, tailored to your specific needs.

- [Connect and app to Azure Storage](#)

- Infrastructure Setup and Management**

2. **Virtual Machines (VMs) Management and Optimization**

Efficiently managing and optimizing Azure Virtual Machines (VMs) is essential for running scalable, reliable applications in the cloud. The "Azure Ops Technical Checklist" emphasizes the importance of proper VM setup, performance tuning, and security measures.

Efficient VM Deployment: Utilize Azure Resource Manager templates to automate the creation and configuration of VMs, ensuring consistency and reducing manual effort.

- [Deploy a Windows Virtual Machine in Azure](#)

VM Performance Optimization: Regularly review and adjust VM sizes and settings based on actual usage metrics to ensure optimal performance and cost savings.

- [Optimize your Azure VM Performance](#)

- Virtual Machines (VMs) Management and Optimization**

3. Security and Compliance

Securing your Azure environment and ensuring compliance with industry standards and regulations are non-negotiable aspects of cloud operations. The checklist guides through securing resources, managing identities, and enforcing policies.

Implement Azure Network Security: Protect your infrastructure with Azure Network Security Groups and Azure Firewall to control inbound and outbound traffic.

- [Implement Virtual Network Connectivity](#)

Manage Access with Microsoft Entra: Use Azure AD to manage user identities and access permissions, incorporating multi-factor authentication for enhanced security.

- [Secure MS Entra users](#)

- Security and Compliance**

4. Monitoring and Operations

Maintaining visibility into your Azure resources' performance and operational health is critical. Azure Monitor and Azure Security Center provide the tools needed to monitor, diagnose, and respond to infrastructure issues and security threats.

Set Up Azure Monitor: Implement comprehensive monitoring across applications, data, and infrastructure to track performance and operational health.

[Introduction to Azure Monitor](#)

Utilize Microsoft Defender for Endpoint: Get unified security management and advanced threat protection across your Azure resources.

[Protect against threats with Microsoft Defender for Endpoint](#)

Monitoring and Operations

5. Data Protection and Business Continuity

Ensuring your data is protected and your business can continue operating in the face of disruptions is paramount. Azure offers solutions like Azure Backup and Azure Site Recovery to safeguard your data and applications.

Implement Azure Backup: Protect your data against loss and corruption by implementing Azure Backup solutions for your Azure resources.

[Protect your Azure Infrastructure with Azure Backup](#)

Azure Site Recovery for Disaster Recovery: Set up and manage disaster recovery for Azure VMs and on-premises servers to ensure business continuity.

[Design your Azure Infrastructure for Disaster Recovery with Azure Site Recovery](#)

Data Protection and Business Continuity

6. Automation and Scalability

Automation and scalability are key to managing Azure resources efficiently, ensuring that your infrastructure can adapt to changing demands without manual intervention.

Azure Automation for Repetitive Tasks: Streamline operations by automating repetitive and complex tasks with Azure Automation, reducing the risk of human error and freeing up time for more strategic work.

Automate Azure tasks using PowerShell

Implement Autoscaling: Ensure your applications can handle increases in load without manual scaling by implementing Azure's autoscaling features. This ensures cost-efficiency and performance optimization.

Automatically scale Azure resources

Automation and Scalability

7. Cost Management

Effective cost management in Azure helps ensure that you're maximizing the value of your cloud investment, avoiding unnecessary expenses, and optimizing resource utilization.

Azure Cost Management and Billing: Monitor, analyze, and optimize your Azure spending with Azure Cost Management. Gain insights into your spending trends and identify opportunities for cost savings.

Predict costs and optimize spending for Azure

Review and Resize Resources Regularly: Periodically assess your resource utilization and adjust sizes or scale settings to match your current needs, ensuring you're not over-provisioning or underutilizing resources.

Optimize workload costs with Azure

Cost Management

If you're facing challenges, such as not having an Azure account, lacking a subscription, or being hesitant to enter your credit card details due to concerns, here are three bonus links to explore. Microsoft provides a Sandbox environment where you can create, deploy, and modify Azure resources absolutely for FREE. These sandboxes allow direct hands-on experience without any cost or commitment, offering a risk-free opportunity to dive into Azure's capabilities.

BONUS :

- Create a storage account using the Azure portal**
- Create a Windows virtual machine**
- Create a static HTML web app by using Azure Cloud Shell**

The best way to predict the future is
to invent it.

— Alan Kay —



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