Azure Cost Management Pathway

Getting Started

Organizations identify governing cloud costs as a major concern when adopting cloud technologies. Balancing performance demands, keeping with the pace of adoption, and monitoring cloud services costs can be challenging. This is especially relevant during major organizational transformations that implement cloud technologies such as Azure.

As a major driver to cloud adoption, costs must be strategized, planned, monitored, and optimized. Becoming a cost-conscious cloud organization is not simple and will take many cycles to implement and effective cloud cost management process.

Depicted in the image above, there are three (3) types of stakeholders which must all follow the cost management recommendations for Visibility, Accountability, and Optimization:

1. Management Teams
2. Finance Teams
3. App Teams

Address the paradigm shift to help ensure cloud benefits are realized:
- Cost management must not slow agility.
- The cloud can be cheaper *if managed properly*.
- If the structure/hierarchy is clear, cost management will be straight forward.
- Cloud cost tracking and responsibilities will be spread across many stakeholders – educate stakeholders with the information include in this document.

Customers in the Defense industry should review the Defense CAF Scenario page for understanding how a cloud broker implementation can be followed.

Key Azure Costs Online Resources

Microsoft CAF - Build a cost-conscious organization

Azure Cost Management governance (CAF)
- Cost Management Discipline Overview
- Download Cost Management template
- Cost Management sample cloud policies
- Cost Management discipline improvement
- CAF Cost Management Best Practices
- Azure Cost Management tools
- CAF Getting Started Cost Management

CAF Cost Planning & Adoption
- What is a Digital Estate?
- Align cost models to forecast costs
- Migrate or modernize first?
- Configure Azure files and Azure File Sync
- Configure storage with tools
- Create an Azure Storage account
- Control access to Azure Storage with shared access signatures
- Upload, download, and manage data with Azure_Storage Explorer

Microsoft Resources:
- Build your Tech resilience
- Azure Fundamentals
- Microsoft Azure Blog
- Microsoft Trust Centre | Compliance
- Azure Community Support
- Automate administrative tasks by using PowerShell

Monitor Azure resources
- Configure Azure Monitor
- Configure Azure alerts

FinOps Foundation
- Learn more about What is FinOps?

Microsoft Cost Management & Billing
- What is Cost Management & Billing?
- Start analyzing costs.
- Create and manage budgets.
- Export cost data. **NOTE**: Azure cost data is retained for seven (7) years.
- Act of Azure Cost recommendations.

Cost Management Concepts
- Cost Management Best Practices.
- Understand and work with scopes.
- Plan to manage costs.
- Identify anomalies and unexpected cost changes.
- Manage costs with automation.
- What are Azure Reservations?
- Billing accounts for Microsoft Customer Agreement (MCA).
- Getting started with the Azure Enterprise Agreement (EA) portal.
- Azure security baseline for Cost Management.

Cost Management How-to's
- MCA Administrative roles.
- Manage access to billing information for Azure.
- Assign access to Cost Management data.
- Programmatically create MCA subscriptions.
- View and download your Microsoft Azure invoice.
- Automate actions with budgets.
- Use Azure Monitor/Cost Alerts.
- Use Cost Allocation.
- Troubleshoot billing in Azure Portal.
- Connect with Power BI desktop.
- Analyze costs with Power BI app for EA.
- Cost Management APIs.

Stay updated on Azure Cost Management.

Microsoft Well Architected Framework (WAF)
- Microsoft WAF Overview.

Cost Optimization Pillar
- Overview of the cost optimization pillar.
- Cost Optimization Design Principles.
- Balancing Cost tradeoffs.
- Cost Optimize Hybrid workload.
- Cost Optimize IoT workload.
- Cost Optimize for Oracle workload.
- Get started with sustainable workloads.

Cost Optimization Checklists
- Design for Cost Checklist.
- Provision Cloud Resources for Cost Optimization Checklist.
- Monitoring Costs Checklist.
- Optimize Costs Checklist.
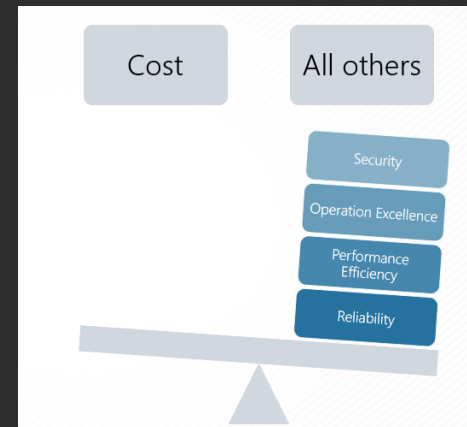
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Baseline Workload Costs

On-premises, architecture is typically provisioned for peak capacity - migrating on-premises to the cloud provides the flexibility of scalability (up/down or in/out). It's critical to understand the initial workloads to realize the full benefits of the cloud and maintain the cost advantage.

1. Understand the Digital Estate and capture planned cloud migration workload values with the free Total Cost of Ownership (TCO)
❑ Review the Microsoft CAF What is a Digital Estate? for more information on the components of a digital estate and how it can be measured.
2. After initial cloud architecture design, estimate monthly Azure resource costs at the Azure Pricing Calculator.
❑ Track the estimated TCO and monthly Azure costs in a document that is available only to the stakeholders with a cost management responsibility.
3. Review the proposed workload architecture and reference documentation to determine if the current rationalization meets the defined business objectives.
❑ Review the Microsoft CAF Cloud Rationalize for more information on rationalization of cloud workloads.
4. Once the workload design has been finalized, update the Cloud Adoption Plan with the design details, key milestones, stakeholders, and skills required.
❑ Review the Microsoft CAF Define a cloud adoption plan for more information on defining your Cloud Adoption Plan.

5. Deploy workload to target Landing Zone with appropriate Resource Tags.
❑ Review the Microsoft CAF What is an Azure Landing Zone? for more information on Landing Zones.
❑ Review Azure Policy Tutorial: Manage tag governance for more information on governing Resource Tags.
6. Following deployment, update all affected budgets with new workload estimates. Review Tutorial - Create and manage Azure budgets for more information on managing Azure budgets.
7. Validate workload costs in the Azure portal by accessing the Cost Analysis feature in the Cost Management & Billing service. Review Quickstart - Explore Azure costs with cost analysis for more information on Azure cost analysis.
❑ NOTE: Cost analysis will depend on the service principal's role (RBAC) and assigned scope. Review Understand and work with Cost Management scopes for more information on cost management scopes.
8. Establish a review process for Azure Cost Management. The Azure Cost Management activitiy is a defined discipline of the Microsoft CAF's Govern phase and a key part of effective cloud governance. Organizational groups, defined roles & tasks, RACI assignments, and optimization cycles are recommended areas for the cloud team to define and utilize for maintaining modern workloads that deliver customer value. Review the Microsoft CAF Cost Management discipline overview for more information on the to Cloud Cost Management approach

Continually Optimize Azure Costs

Microsoft provides frameworks and tools to help understand costs and continually optimize the cloud environment:

• Understand and forecast your costs: Monitor your bill, set budgets, and allocate costs to teams and projects with Microsoft Cost Management.
• Optimize cost from recommendations
• Prevent unexpected charges
• Cost-optimize workloads: Optimize resources and architecture with Azure best practices from Azure Advisor and the Microsoft Azure Well-Architected Framework
• Review Azure Advisor Cost Recommendations
• Save with Azure offers and licensing terms like the Azure Hybrid Benefit and Azure Reservations.

Microsoft Learn:
• Control Azure spending and manage bills with Azure Cost Management and billing learning path
• Azure Fundamentals part 6: Describe Azure cost management and service level agreements (AZ-900)

▶ YouTube   Azure Cost Videos

Azure Cost Management

Microsoft Azure Cost Management YouTube Channel

John Savill's Technical Training: AZ-900 Certification Course - Functionality and Usage of Azure Cost Management

John Savill's Technical Training: Azure Cost Optimization Deep Dive

Cost Management and Optimization Tools Overview

To learn more about each item, follow the included links.

Estimate Cost	Analyze and Manage Costs	Monitor & Govern Costs	Reduce Waste	Purchase Discounts
Total Cost of Ownership (TCO)	Budgets	Hierarchy and Tagging	Azure Advisor	Reservations
Azure Price Calculator	Cost Analysis	Azure Policy	DevTest Subscriptions	Azure Hybrid Benefit
Azure Migrate	Reporting	Automation		