

Azure AVD, Analytics, Governance, Cost - Detailed Reference

Azure AVD, Analytics, Governance, and Cost (Topics 62-71)

Topic 62: Azure Virtual Desktop (AVD)

Desktop/app virtualization. Windows multi-session. No RDS/Citrix licensing needed. Components: Host pool (pooled or personal), Application group, Workspace, Session host, FSLogix (profile containers on Azure Files).

Topic 63: Azure Synapse Analytics

Integrated analytics. SQL (dedicated + serverless), Spark, Pipelines, Studio.

Topic 64: Azure Data Factory

Data integration/ETL. Pipelines, Activities, Datasets, Linked services, Triggers, Integration Runtimes (Azure IR, Self-hosted IR).

Topic 65: Azure Policy

Enforce rules on resources. Effects: Deny, Audit, DeployIfNotExists, Modify, Append, Disabled. Built-in: Allowed locations, Require tags, Enforce HTTPS, SQL audit enabled, VM backup enabled. Initiative: Group of policies assigned together. Remediation: Fix existing non-compliant resources for DINE/Modify. Exemptions: Exclude specific resources. Use sparingly.

Topic 66: Management Groups

Organize subscriptions for governance. Max 6 levels deep. Max 500 MGs. Policy and RBAC cascade downward.

Topic 67: Resource Groups and Naming

RG: Logical container. Shared lifecycle. Locks (Can-Not-Delete, ReadOnly). Naming: {type}-{workload}-{env}-{region}-{###}. Example: vm-web-prod-eastus-001. Tagging: Environment, CostCenter, ApplicationOwner, DataClassification, BusinessUnit.

Topic 68: Deployment Stacks (replaces Blueprints)

Define resources as a managed unit from Bicep/ARM. Deny settings (prevent drift). Delete settings (auto-delete removed resources).

Topic 69: Azure Reservations

1 or 3-year commitment. VMs (~30-60% savings), SQL, Cosmos DB, App Service, Storage, Disks. Scope: Shared, Single subscription, Single RG, Single resource. Exchange: Swap for another reservation. No fee. Cancel: Prorated, fee applies.

Topic 70: Azure Savings Plans

Commit hourly spend on compute. More flexible than reservations. Apply across VMs, App Service, Functions, Container Apps. Up to 45% savings.

Topic 71: Cost Management

Tools: Cost analysis, Budgets, Alerts, Advisor recommendations, Export, Invoices. Common Mistakes: No auto-shutdown, No right-sizing, No reservations, Unattached disks, No storage tiering, No budgets.