

Azure Scenarios - Complex

Scenario 31: Healthcare HIS Platform — Greenfield

A mid-size healthcare provider (12 hospitals, 18,000 employees) needs to deploy a Hospital Information System on Azure IaaS. The app is n-tier monolithic (IIS + Java + Oracle RAC + PACS + Mirth Connect). HIPAA/HITRUST compliance required. 99.95% SLA. Budget: \$85K/month for Phase 1 (2 hospitals). Hybrid identity with on-prem AD. Hub-spoke with zero trust. DR in secondary region.

Keywords to google: Azure healthcare, HIPAA Azure, Oracle RAC on Azure, PACS Azure, hub-spoke healthcare, zero trust Azure, Azure for health

Scenario 32: Enterprise Landing Zone for 50 Subscriptions

A large enterprise needs an Azure landing zone for 50 subscriptions. Requirements: centralized networking team manages hub/firewalls/ExpressRoute, app teams self-serve spoke subscriptions within guardrails, baseline policies (allowed regions, required tags, encryption), shared services (Key Vault, Log Analytics, Sentinel) in hub, connectivity to 3 on-prem data centers via ExpressRoute.

Keywords to google: Azure landing zone, enterprise-scale architecture, platform subscriptions, connectivity subscription, management subscription, Azure landing zone accelerator

Scenario 33: Multi-Region Active-Active Financial Platform

A financial services company needs an application deployed in East US and West Europe simultaneously: users route to nearest region via Front Door, failover in <30 seconds if one region goes down, database consistent across regions (no data loss), session state survives failover.

Keywords to google: Azure Front Door active-active, Azure SQL active geo-replication, Cosmos DB multi-region write, Azure Cache for Redis, session state management

Scenario 34: AVS Landing Zone with HCX Migration

A company has 500 VMware VMs on-premises. They want to move to Azure VMware Solution as a first step. Requirements: ExpressRoute connectivity to on-prem and native Azure, HCX for workload migration, NSX-T network segmentation, backup to Azure-native vault, access to Azure PaaS via private endpoints.

Keywords to google: Azure VMware Solution, AVS private cloud, ExpressRoute Global Reach, HCX migration, NSX-T segments, AVS backup

Scenario 35: Lift-and-Shift Migration from AWS to Azure

A company has 80 EC2 instances and 10 RDS databases on AWS. They want to migrate everything to Azure IaaS. Applications include: web servers, app servers, Oracle databases, MySQL databases. Need: assessment first, then phased migration with minimal downtime, hybrid connectivity during migration.

Keywords to google: Azure Migrate AWS, agent-based migration, AWS to Azure assessment, DMS for MySQL/Oracle, multi-cloud migration

Scenario 36: Zero Trust Network for SaaS Company

A SaaS company hosts a multi-tenant application on Azure. They need: zero trust network architecture, micro-segmentation between all tiers, WAF on all public endpoints, no management ports open (Bastion only), all PaaS services via Private Endpoints, centralized firewall inspection, DDoS protection.

Keywords to google: Zero trust Azure, Azure Firewall Premium, TLS inspection, IDPS, Private Endpoints, Azure Bastion, WAF, DDoS Standard

Scenario 37: SAP HANA on Azure

A manufacturing company is deploying SAP S/4HANA on Azure. Requirements: certified HANA VM sizes, high availability within region, DR in paired region, ANF or premium storage for data, backup with 30-day and 7-year retention, ExpressRoute connectivity to on-prem SAP, SAP-specific monitoring.

Keywords to google: SAP on Azure, SAP HANA certified VMs, Azure NetApp Files SAP, SAP HA Azure, Azure Site Recovery SAP, SAP monitoring Azure

Scenario 38: Multi-Cloud Architecture (Azure + AWS)

A company's primary cloud is Azure, but they acquired a company running on AWS. They need: unified identity (Entra ID for both), network connectivity between Azure and AWS, centralized monitoring across both clouds, governance with Azure Arc for AWS resources.

Keywords to google: Azure Arc multi-cloud, Entra ID AWS SSO, Azure-AWS VPN, Azure Monitor multi-cloud, cross-cloud networking

Scenario 39: Azure Virtual Desktop for 5,000 Users

A global company wants to deploy AVD for 5,000 remote workers. Requirements: pooled multi-session for 4,000 task workers, personal desktops for 1,000 power users, FSLogix profiles on Azure Files Premium, image management with Shared Image Gallery, conditional access policies, cost optimization with auto-scaling host pools.

Keywords to google: Azure Virtual Desktop, AVD host pools, FSLogix, Azure Files Premium, Shared Image Gallery, AVD scaling plans, Conditional Access AVD

Scenario 40: Microservices on AKS with Full Security

A company is migrating their monolithic application to microservices on AKS. Requirements: private cluster (no public API server), Entra ID workload identity, network policies for pod-to-pod traffic, Key Vault CSI driver for secrets, ingress controller with WAF, container image scanning, monitoring with Container Insights.

Keywords to google: AKS private cluster, workload identity, network policies Calico, Key Vault CSI, AGIC WAF, Defender for Containers, Container Insights

Scenario 41: Data Platform with Synapse and Data Factory

A retail company needs a modern data platform: ingest data from 15 sources (on-prem SQL, SaaS APIs, blob storage), ETL/ELT with Data Factory, data warehouse in Synapse dedicated SQL pool, real-time analytics with Synapse Spark, Power BI dashboards, data governance with Purview.

Keywords to google: Azure Synapse Analytics, Data Factory ETL, Synapse SQL pool, Synapse Spark, Microsoft Purview, Power BI Azure

Scenario 42: IoT Platform for Manufacturing

A factory has 5,000 sensors generating telemetry every 5 seconds. Requirements: ingest millions of events/day via IoT Hub, real-time anomaly detection with Stream Analytics, store raw data in Data Lake, process with Databricks, dashboards in Power BI, device management and provisioning, edge computing for low-latency decisions.

Keywords to google: Azure IoT Hub, Device Provisioning Service, Stream Analytics, Azure Databricks, Azure Data Lake, IoT Edge, Digital Twins

Scenario 43: RAG Application with Azure OpenAI

A legal firm wants an AI assistant that answers questions based on their internal documents (50,000 PDFs). Requirements: document ingestion and indexing, vector search for semantic retrieval, Azure OpenAI for generation, access control per document, no data used for model training, Private Endpoints for all services.

Keywords to google: Azure OpenAI, RAG architecture, Azure AI Search, vector search, document cracking, content filtering, Private Endpoints OpenAI

Scenario 44: Compliance-Driven Landing Zone (PCI DSS)

A payment processing company needs an Azure environment compliant with PCI DSS. Requirements: isolated network with no internet egress without inspection, encryption everywhere (CMK), dedicated HSM for key management, continuous compliance monitoring, audit logging with 7-year retention, restricted admin access via PIM.

Keywords to google: PCI DSS Azure, Azure Key Vault HSM, Azure Firewall Premium TLS inspection, Microsoft Purview compliance, PIM, Customer Lockbox

Scenario 45: Global E-Commerce Platform

An e-commerce company serves 1M daily visitors across 5 regions. Requirements: Front Door for global routing with WAF, App Service for web tier, Azure SQL with geo-replication for product catalog, Cosmos DB for shopping cart (multi-region write), Redis Cache for session state, CDN for static assets, auto-scale based on traffic.

Keywords to google: Azure Front Door WAF, App Service auto-scale, Azure SQL geo-replication, Cosmos DB multi-region, Azure Cache for Redis, Azure CDN

Scenario 46: Lift-and-Shift from On-Prem Hyper-V to Azure

A government agency has 200 Hyper-V VMs running on-premises. They must migrate to Azure within 12 months. Requirements: assessment and right-sizing, phased migration by application tier, hybrid connectivity during migration (S2S VPN initially, ExpressRoute later), compliance with government security standards, minimal downtime per workload.

Keywords to google: Azure Migrate Hyper-V, agentless Hyper-V migration, VPN Gateway S2S, ExpressRoute, Azure Government, migration wave planning

Scenario 47: Enterprise Security Operations Center

A financial institution needs a comprehensive security operations center on Azure. Requirements: Sentinel SIEM with all data sources, automated incident response playbooks, threat intelligence integration, vulnerability management with Defender for Cloud, PIM for all admin access, conditional access with device compliance, continuous compliance monitoring for ISO 27001 and SOC 2.

Keywords to google: Microsoft Sentinel enterprise, SOAR playbooks, threat intelligence, Defender for Cloud, PIM, Conditional Access, compliance dashboards

Scenario 48: Multi-Tenant SaaS Architecture

A SaaS company needs to build a multi-tenant application on Azure. Requirements: tenant isolation (data, compute, network), shared platform services, per-tenant billing, auto-scale per tenant, custom domains per tenant, centralized management with tenant-specific configurations, GDPR compliance with data residency.

Keywords to google: Azure multi-tenant SaaS, tenant isolation, Azure AD multi-tenant, per-tenant billing, SaaS architecture patterns, GDPR Azure

Scenario 49: Azure Stack HCI for Edge Manufacturing

A manufacturing company has 5 factories with unreliable internet. They need: local compute at each factory for real-time quality control (ML inference), Azure Arc management from central Azure, data sync to Azure when connected, AKS on HCI for containerized workloads, consistent security policies across all sites.

Keywords to google: Azure Stack HCI, Azure Arc, AKS on HCI, edge computing, disconnected operations, Azure IoT Operations

Scenario 50: Complete Cloud Transformation Program

A large enterprise (5,000 employees, 1,000 servers) is moving entirely to Azure over 18 months. Design the complete program: landing zone, identity, networking, governance, migration waves, modernization roadmap, operations model, security framework, cost management, and organizational change management.

Keywords to google: Azure CAF, cloud transformation program, landing zone design, migration wave planning, Azure governance, cloud operating model, organizational change management

End of 50 Azure Architecture Scenarios