



Infrastructure and Architecture Roles

Microsoft Learn role descriptions (AZ-104, AZ-700, AZ-802, AZ-140, AZ-305), Cloud Adoption Framework roles, public job ads, as of 2026 | Cloud admin, cloud engineer, network engineer, hybrid admin, end-user computing, solutions architect, FinOps: tasks, tools, certifications, KPIs

[Azure](#) [Careers](#) [AZ-104](#) [AZ-305](#) [AZ-700](#)

👤 Six roles at a glance

Cloud administrator
Keeps subscriptions secure, available, backed up and within budget
ASSOCIATE

A DAY IN THE ROLE

- Grant access with RBAC and PIM
- Patch, back up and right-size VMs
- Answer alerts and Service Health notices

KEY SKILLS

Entra IDRBAC and PolicyVNETs and NSGs

BackupMonitor

TYPICAL TOOLS

portalaz CLIaz PowerShellLog Analytics

FROM sysadmin, service desk
NEXT Cloud engineer, Network engineer

Cloud engineer
Turns infrastructure into reviewed, repeatable code
ASSOCIATE+

A DAY IN THE ROLE

- Write Bicep or Terraform modules
- Run pipelines to deploy environments
- Automate fixes with Functions or runbooks

KEY SKILLS

IaCGitCI/CDNetworkingScripting

TYPICAL TOOLS

BicepTerraformGitHub Actions

Azure Pipelines

FROM cloud admin, developer
NEXT Platform engineer, Architect

Azure network engineer
Connects sites, clouds and users privately, fast and securely
ASSOCIATE

A DAY IN THE ROLE

- Plan address space and hub-spoke
- Run VPN, ExpressRoute and Virtual WAN
- Debug routes and DNS for private endpoints

KEY SKILLS

BGProutingDNSAzure Firewall

load balancing

TYPICAL TOOLS

Network WatcherAzure Firewall Manager

az network

FROM network engineer on premises
NEXT Network architect, Security engineer

Hybrid Windows administrator
Runs Windows Server and Active Directory across datacenter and Azure
ASSOCIATE

A DAY IN THE ROLE

- Onboard servers to Azure Arc
- Sync identities with Entra Connect
- Protect workloads with Azure Backup and Site Recovery

KEY SKILLS

AD DSGroup PolicyHyper-VPowerShell

Arc

TYPICAL TOOLS

Windows Admin CenterAzure ArcEntra Connect

FROM Windows sysadmin
NEXT Cloud admin, Identity admin

End-user computing engineer
Delivers secure desktops and apps to any device
SPECIALTY

A DAY IN THE ROLE

- Size AVD host pools and scaling plans
- Manage FSLogix profiles on Azure Files
- Package apps with MSIX app attach

KEY SKILLS

AVDWindows 365IntuneFSLogix

TYPICAL TOOLS

AVD InsightsIntune admin center

FROM desktop engineer
NEXT Cloud architect

Solutions architect
Designs solutions that meet requirements at the right cost and risk
EXPERT

A DAY IN THE ROLE

- Run requirement and design workshops
- Write ADRs and diagrams
- Review IaC and Well-Architected findings

KEY SKILLS

Trade-offsBCDRIdentity designCost

Communication

TYPICAL TOOLS

draw.io / Visiopricing calculator

Well-Architected Review

FROM senior engineer
NEXT Principal / enterprise architect

📊 Certifications and KPIs per role

Role	Certifications (2026)	KPIs a manager watches
Cloud administrator	AZ-104; + AZ-900 optional	patch compliance %, backup success %, MTTR, cost vs budget
Cloud engineer	AZ-104 → AZ-400; GH-200	% of resources deployed by IaC, lead time for changes, drift findings
Network engineer	AZ-104 → AZ-700	connectivity uptime, latency, firewall rule hygiene, change failures
Hybrid Windows admin	AZ-802 (was AZ-800 + AZ-801), AZ-104	Arc coverage %, patch latency, AD health, restore tests passed
End-user computing	AZ-140, MD-102	logon time, session density per host, cost per user
Solutions architect	AZ-104 + AZ-305; AZ-700 or SC-100	designs approved, Well-Architected risks closed, cost forecast accuracy
FinOps practitioner	AZ-900 / AZ-104 + FinOps Certified Practitioner (FinOps Foundation)	% cost allocated by tags, commitment coverage and utilisation, savings realised

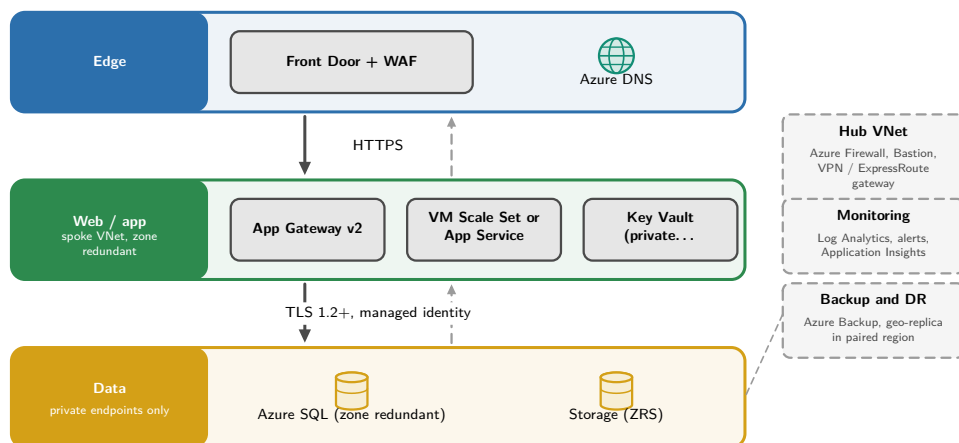
Admin → engineer	learn Bicep or Terraform, Git and one pipeline tool; rebuild your admin tasks as code
Engineer → network	BGP, DNS, Azure Firewall, Private Link, Virtual WAN; AZ-700
Engineer → architect	Well-Architected pillars, BCDR, identity design, cost; AZ-305 and design write-ups
Hybrid admin → cloud admin	Arc, Entra ID, Azure Backup and Site Recovery; AZ-104

🔗 Typical tasks and the commands behind them

Task	Who	Command or tool
Give a team Contributor on a resource group	admin	az role assignment create --assignee <group-id> --role Contributor -g rg-app
Find VMs without backup	admin	Backup center → 'Protectable items', or Azure Policy 'Azure Backup should be enabled for VMs'
Resize a VM	admin	az vm resize -g rg -n vm1 --size Standard_D4s_v5 (reboots)
Check effective routes of a NIC	network	az network nic show-effective-route-table -g rg -n nic1 -o table

Test reachability VM → IP:port	network	az network watcher test-connectivity --source-resource vm1 --dest-address 10.1.0.4 --dest-port 443
Onboard a server to Arc	hybrid	azcmagent connect --resource-group rg-arc --location westeurope
Deploy a landing-zone module	engineer	az deployment sub create -l westeurope -f main.bicep -p prod.bicepparam
Preview the change before de- ploying	engineer	az deployment group what-if -g rg -f main.bicep
Cost by tag for last month	FinOps	Cost analysis grouped by tag costcenter, or az costmanagement query / exports to storage

The reference design every infrastructure interview asks you to draw



TIP

Keep a work journal of incidents, migrations and cost savings with dates and numbers: it becomes your CV bullets and your STAR interview stories.

How architects are evaluated

Design-review scorecard used in architect interviews (example)

Criterion	Weight	Weak 1 pt	Adequate 2 pt	TARGET Strong 3 pt
Requirements	20%	jumps to services	lists functional needs	asks for SLA, RTO/RPO, users, data, budget first ✓
Reliability	20%	single region, no zones	zones but no DR plan	zones + tested DR matched to RTO/RPO ✓
Security	20%	public endpoints, keys in code	private endpoints, Key Vault	Zero Trust: managed identity, CA, least privilege, logging ✓
Cost	20%	no estimate	calculator estimate	estimate + scaling + commitments + tags ✓
Communication	20%	no diagram	diagram only	diagram + ADRs with trade-offs ✓

Total weight: 100% · Weighted score: 2.6 / 3

vCPU quota needed for failover

FORMULA $Q = N \times v \times (1 + h)$

WHERE

- Q = regional vCPU quota to request for the VM family (vCPUs)
- N = VMs that must run in the region after failover (VMs)
- v = vCPUs per VM size (D4s_v5 = 4) (vCPUs)
- h = headroom for scale-out and redeloys (0-1)

WORKED

N = 40
v = 4
h = 0.25
 $Q = 40 \times 4 \times (1 + 0.25)$
Q = 200 vCPUs

RESULT Q = 200 vCPUs

READ IT Ask for 200 vCPUs of the Dsv5 family in the DR region before the disaster: quota requests can take days in busy regions.

MISTAKES

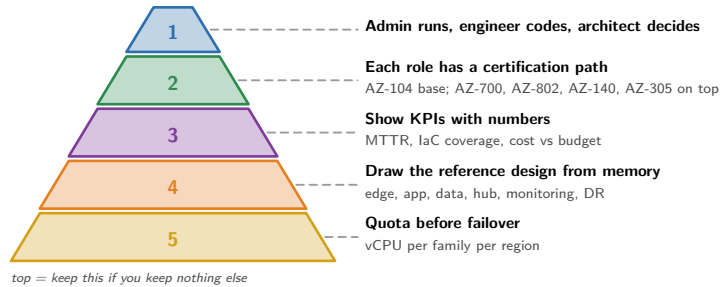
- Quotas are per subscription, per region and per VM family, plus a total regional vCPU quota
- Spot and low-priority quotas are separate
- Check with `az vm list-usage -l <region> -o table`

INTERVIEW QUESTION

'Walk me through how you would migrate a 3-tier app to Azure.' Strong answer: assess with Azure Migrate (dependencies, sizing), choose per tier (rehost VMs vs App Service vs Azure SQL Managed Instance), design landing zone and networking first, secure with private endpoints and managed identities, plan cut-over with Database Migration Service and DNS TTLs, measure with SLOs and a rollback plan.

🚩 Recap and self-test

Statement	True	False
1. AZ-305 alone grants the Solutions Architect Expert badge → AZ-104 (Administrator Associate) is also required.	☐	☒
2. Network engineers in Azure need BGP → ExpressRoute, VPN with BGP, Route Server and Virtual WAN exchange routes with BGP.	☒	☐
3. In 2026 the hybrid Windows admin path has two exams → AZ-802 replaces AZ-800 + AZ-801.	☐	☒
4. az deployment group what-if changes resources → It previews creates, modifications and deletions without applying them.	☐	☒
5. AZ-140 targets Azure Virtual Desktop → Specialty: plan, implement and manage AVD host pools, profiles, apps and security.	☒	☐



Q1 Command to see the effective routes on a NIC?

A `az network nic show-effective-route-table -g <rg> -n <nic>.`

Q2 Which tool previews a Bicep deployment's changes?

A `az deployment group what-if` (or `New-AzResourceGroupDeployment -WhatIf`).

Q3 Which certification fits an AVD engineer?

A AZ-140 Azure Virtual Desktop Specialty (with MD-102 for Intune).

Q4 Command to connect an on-premises server to Azure Arc?

A `azcmagent connect --resource-group <rg> --location <region>` (generated by the Arc onboarding script).

Q5 Three KPIs for a cloud administrator?

A Patch compliance, backup success rate, MTTR (plus cost vs budget).

Q6 What is an ADR?

A Architecture decision record: one decision with its context, options and consequences.

Q7 Where do you check vCPU usage against quota?

A `az vm list-usage -l <region> -o table` or Subscriptions → Usage + quotas.

Q8 Which external certification complements FinOps work?

A FinOps Certified Practitioner from the FinOps Foundation.