

## This month's presenters:



# Azure Landing Zones

5<sup>th</sup> November 2025 - External Community Call



**Registration:**

[aka.ms/ALZ/CommunityCall](https://aka.ms/ALZ/CommunityCall)

**Agenda (please add suggestions):**

[aka.ms/ALZ/CommunityCallAgenda](https://aka.ms/ALZ/CommunityCallAgenda)

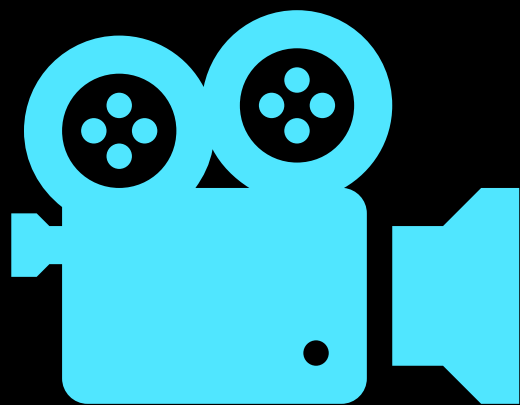




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*Also, this event will be recorded and shared publicly with others, including Microsoft's global customers, partners, employees, and service providers. The recording may include your name and any questions you submit to Q&A.*



**This meeting is being recorded**



# Before we get started...



At any point, if you have a question please put it  
in the chat!



*(we have members of the team here to help 🧐)*

Also we may stop and discuss your  
question/point at that time, we want this to be  
an open discussion with all of you 😊






ALZ Bicep - Azure Verified Modules for Platform Landing Zones (ALZ) Bicep



Terraform Azure Verified Modules for Platform Landing Zones (ALZ) | Updates



ALZ Library Overview & Deep Dive



ALZ IaC Accelerator Updates



Portal & Policy Refresh H1 FY26 Updates





ALZ MS Learn & Other Updates



Sovereign landing zone



AMBA-ALZ Updates  
[aka.ms/amba/alz](https://aka.ms/amba/alz)



AI Landing Zone Accelerator for AI Apps & Agents






# ALZ Bicep - Azure Verified Modules for Platform Landing Zones (ALZ) Bicep






# ALZ-Bicep | Updates



- Release of [v0.23.1](#)!
    - Networking related enhancements and bug fixes
      - Add Virtual Network Gateway UDT with allowed values for clarity
      - Support for additional DNS zones beyond the defaults.
  - Some other updates from other releases as of the last community call:
    - Updated policy set and assignments for the second half of FY25
    - Sidecar network to support additional VWAN topologies
    - Now allow individual policies to be set to DoNotEnforce.
-  See full release notes from all releases [here](#)!





# Azure Verified Modules for Platform Landing Zones (ALZ) Bicep | Update

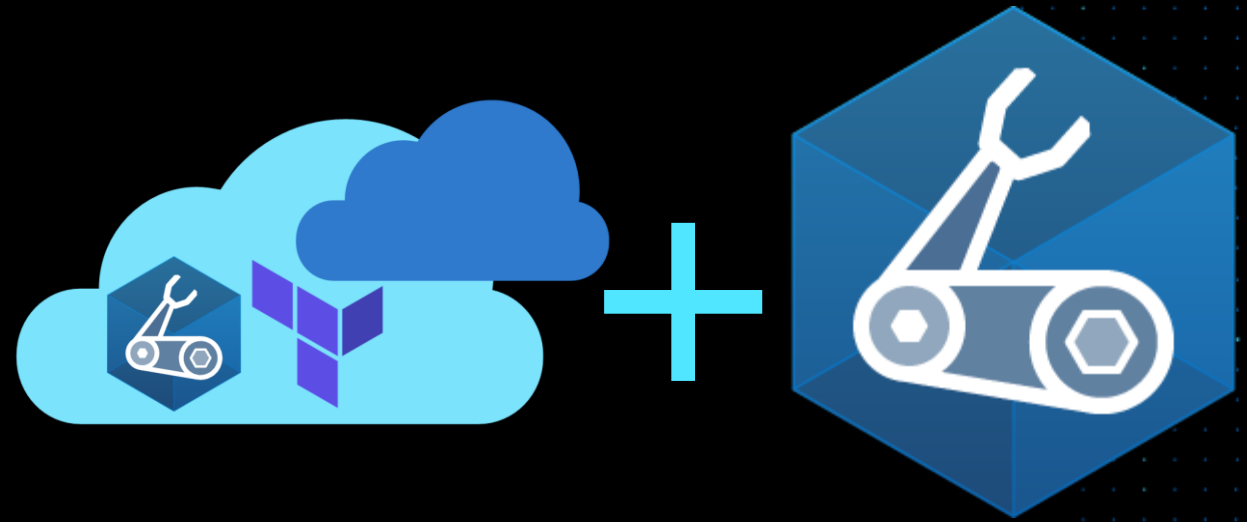


## Release Coming Soon – In final prep for public preview

- Modular & Extensible Design: Flexible customization logic enables tailored and reusable deployments
- Strong Typing with UDTs: Safer, more consistent parameter validation through User Defined Types (UDTs)
- Network Flexibility: All networking properties available as defined in AVM — no longer restricted by hard-coded values
- Deployment Stacks Integration: Centralized lifecycle management, consistent clean-up, and streamlined lifecycle operations
- Native Bicep Advantages: Clean syntax, composable modules, built-in validation, etc.
- Preview Module: [avm/ptn/alz/empty](https://github.com/Azure/terraform-azurerm-modules/tree/main/ptn/alz/empty) — foundation for ALZ accelerator pattern development (["Max" Test Case](#))



Demo







# Terraform Azure Verified Modules for Platform Landing Zones (ALZ) | Updates



# caf-enterprise-scale module deprecation



## DEPRECATION NOTICE

This module is now in extended support mode and will be archived on August 1, 2026.

### Current Status

- **Extended Support Period:** This module is now in extended support for one year (until August 1, 2026)
- **Support Scope:** During this period, we will provide quality updates (e.g. bug fixes) and policy library updates only
- **No New Features:** No new features or functionality will be added to this module

### Migration Path

We strongly recommend that all users migrate to the new **Azure Verified Modules** approach for Azure Landing Zones. This new approach provides:

- Enhanced reliability and testing
- Improved modularity and flexibility
- Better alignment with Azure best practices
- Ongoing feature development and support

**Further reading:** Please read our recent [blog](#)

**Migration Guide:** Please visit [aka.ms/alz/tf/migrate](https://aka.ms/alz/tf/migrate) for detailed migration guidance and resources.

### Timeline

- **Now - August 1, 2026:** Extended support (quality and policy updates only)
- **August 1, 2026:** Repository will be archived and no further updates will be made



# Terraform State Importer Tool

A generic golang tool that can help with importing Terraform state for any Azure (azurerm or azapi) based Terraform Module, including AVM

- Guides you through the process of mapping resources and attributes
- Generates `import` blocks
- **Guidance for caf-enterprise-scale users (Azure Landing Zones):**  
[aka.ms/alz/tf/migrate](https://aka.ms/alz/tf/migrate)
- Tool: [aka.ms/tf/migrate/tool](https://aka.ms/tf/migrate/tool)



# Terraform State Importer Tool

## Stage 1 – Setup

- Target subscriptions and / or management groups
- KQL queries
- Exclusions
- Custom mappings where name alone is not sufficient
- Create the Target Terraform Module

## Stage 2 – Resource Mapping

- Run the tool
- Examine the issues.csv
- Fix resource names in the target Terraform module
- Repeat ↻
- For any unmatched resources decide:
  - Ignore
  - Delete
  - Delete / Recreate
- Save resolved-issues.csv

## Stage 3 – Attribute Mapping

- Run the tool with the resolved-issues.csv
  - Generates import blocks
  - Generates 'delete' blocks
- Examine the filtered plan file
- Update any attributes of resources that need to match prior settings
- Repeat ↻

**Run: ``terraform apply``**



# Policy Versioning (built-in)

- The ALZ provider now understands policy versions and fetches all built-in versions from Azure
- You can specify a wildcard in your version property of your assignment (or policy set)
- You MUST allow wildcard for PATCH versions, e.g. 1.0.\*
- Versions:
  - Provider: v0.20.0
  - Module: v0.14.0

```
"properties": {  
  "description": "Denies deployment",  
  "displayName": "Deny the deployment",  
  "policyDefinitionId": "/providers/microsoft.management/policy/definitions/1",  
  "definitionVersion": "2.*.*",  
  "enforcementMode": "Default",  
  "nonComplianceMessages": [  
    {  
      "message": "Deployment is denied",  
      "severity": "Error",  
      "details": {}  
    }  
  ]  
}
```

# Other things



Schema validation  
toggle

Can change API  
versions

Random UUIDs for  
role assignment  
names

User-Assigned  
Managed Identity  
now working for  
policies\*




Minimum  
Terraform version  
of 1.12

Experimental  
OpenTofu support  
for 1.10



# Module Consolidation and Explicit Variables

Child modules merged into submodules and deprecated

- [avm-ptn-alz-connectivity-hub-and-spoke-vnet](#)
  -  avm-ptn-hubnetworking
  -  avm-ptn-vnetgateway
- [avm-ptn-alz-connectivity-virtual-wan](#)
  -  avm-ptn-virtualwan





# Module Consolidation and Explicit Variables

Connectivity modules now have comprehensive explicit variable declarations

- [avm-ptn-alz-connectivity-hub-and-spoke-vnet](#)
- [avm-ptn-alz-connectivity-virtual-wan](#)
- Some variables have been de-nested
- More options have been added
- All Virtual WAN options exposed in the main variable
- Enabled flags move up a layer and grouped together







# Module Consolidation and Explicit Variables

Connectivity modules now have simpler interface

- [avm-ptn-alz-connectivity-hub-and-spoke-vnet](#)
- [avm-ptn-alz-connectivity-virtual-wan](#)
- IP ranges auto calculated if not supplied
- Availability zones looked up and set automatically
- Resource names templated and set automatically

```
module "platform_landing_zone_connectivity" {
  source = "Azure/avm-ptn-alz-connectivity-hub-and-spoke-vnet/azurerm"
  version = "0.14.6"
  hub_virtual_networks = {
    primary = {
      location          = "uksouth"
      default_parent_id = "/subscriptions/00000000-0000-0000-0000-000000000000/resourceGroups/rg-hub-uksouth-001"
    }
    secondary = {
      location          = "ukwest"
      default_parent_id = "/subscriptions/00000000-0000-0000-0000-000000000000/resourceGroups/rg-hub-uksouth-001"
    }
  }
}
```



# ALZ Library Overview & Deep Dive





# Why and What

- Separation of business logic and data (module + policies)
- Hosted at `Azure/Azure-Landing-Zones-Library` on GitHub
- Library members inside `platform/` directory
- Tagging in the form of `platform/member@YYYY.MM.P`
- Docs: [Azure Landing Zones Library Documentation](#)

# Library resources





# Library references

- Specified as provider configuration
- Two types:
  - Azure-Landing-Zones-Library path and reference (git tag)
  - Custom URL or local path
- Processed in order! So put dependent libraries first
- Implicit dependencies
  - `alz_library_metadata.json` can contain dependencies, which are processed first

```
provider "alz" {  
  library_references = [  
    {  
      path = "platform/alz"  
      ref  = "2024.07.5"  
    },  
    {  
      custom_url = "${path.root}/lib"  
    }  
  ]  
}
```


# This is the same



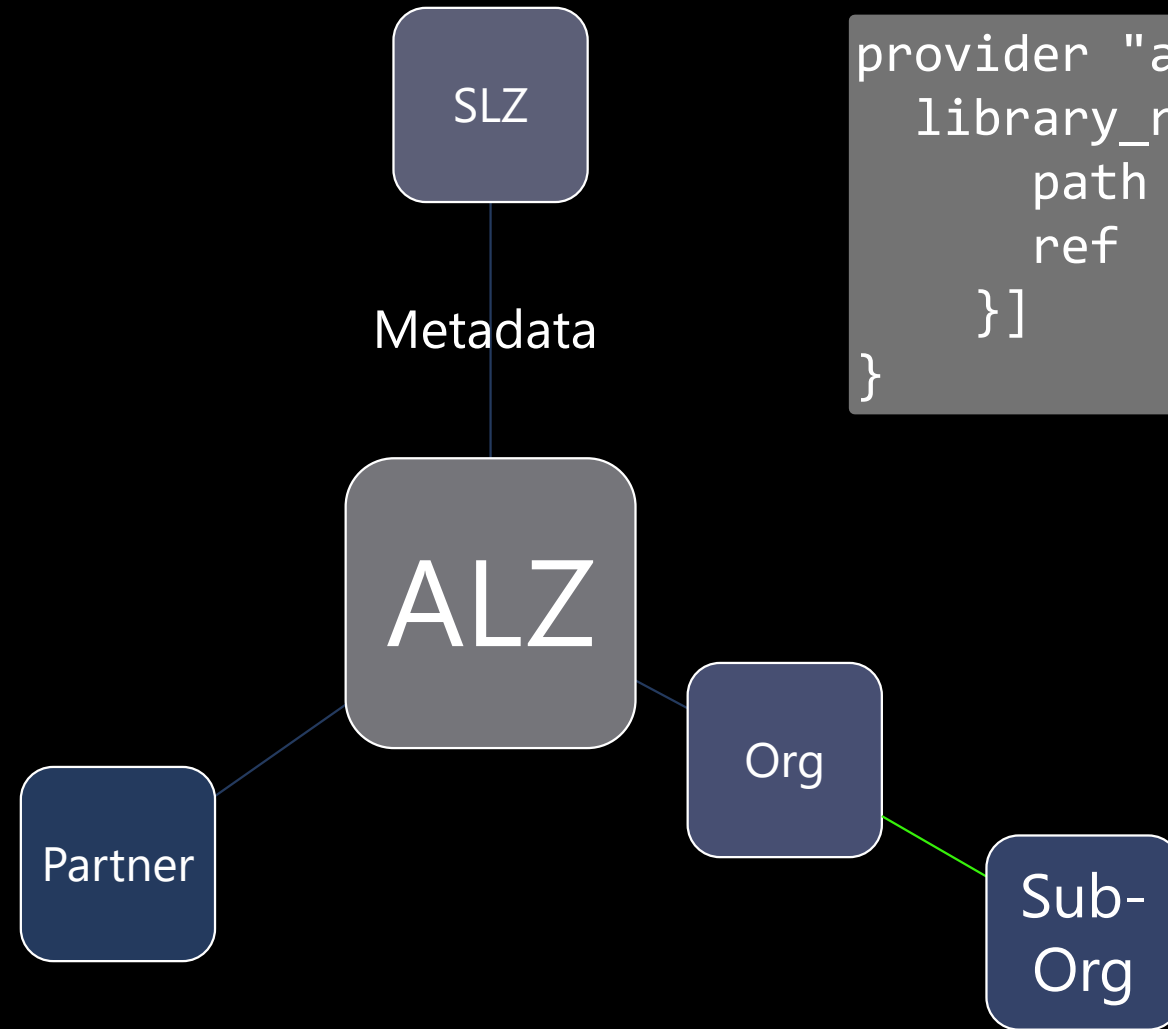
```
provider "alz" {  
  library_references = [  
    {  
      path = "platform/alz"  
      ref  = "2025.09.3"  
    },  
    {  
      custom_url = "${path.root}/lib"  
    }  
  ]  
}
```

```
provider "alz" {  
  library_references = {  
    custom_url = "${path.root}/lib"  
  }  
}
```



-  lib
- alz\_library\_metadata.json

# Composition



```
provider "alz" {  
    library_references = [{  
        path = "platform/slz"  
        ref  = "2025.09.0"  
    }]  
}
```



# ALZ IaC Accelerator Updates





# Security Management Group

- Separate management group and subscription for Sentinel
- Added to Bicep and Terraform Accelerators





# Terraform Sovereign landing zone option

- Existing separate starter module deprecated
- Updates to the SLZ library
- Addition of new option and pre-templated lib files

## Azure Landing Zones Documentation

Search...

### Navigation

- Bootstrap
- Accelerator
  - User Guide
  - Starter Modules
    - Bicep - Complete
    - Terraform - Azure Verified Modules for Platform Landing Zone (ALZ)
    - Scenarios
    - Options
      - 1 - Customize Resource Names
      - 2 - Customize Management Group Names and IDs
      - 3 - Turn off DDOS protection plan
      - 4 - Turn off Bastion host
      - 5 - Turn off Private DNS zones
      - 6 - Turn off Virtual Network Gateways

\* Azure Landing Zones Documentation/Accelerator/Starter Modules/Terraform - Azure Verified Modules for Platform Landing Zone (ALZ)/Options/15 - Implement Sovereign Landing Zone (SLZ) controls

Edit page

## 15 - Implement Sovereign Landing Zone (SLZ) controls

The Sovereign Landing Zone (SLZ) is a compliance-focused implementation designed for regulated industries that demand high data sovereignty. It incorporates specific controls and configurations to meet stringent regulatory requirements. The SLZ policies can be reviewed here:

- [Sovereignty Baseline - Global Policies](#)
  - Applied at the root management group level
- [Sovereignty Baseline - Confidential Policies](#)
  - Applied at the Confidential Corp and Confidential Online management group levels

The steps to follow are:

- Copy the SLZ lib files over the top of your existing lib folder. This will add the necessary configuration files to enable the SLZ management groups and policies.

```
$tempFolderName = "~/accelerator/temp"
New-Item -ItemType "directory" $tempFolderName
$tempFolder = Resolve-Path -Path $tempFolderName
git clone -n --depth=1 --filter=tree:0 "https://github.com/Azure/alz-terraform-accelerator"
cd $tempFolder

$libFolderPath = "templates/platform_landing_zone/examples/slz/lib"
git sparse-checkout set --no-cone $libFolderPath
git checkout

cd ~
Copy-Item -Path "$tempFolder/$libFolderPath" -Destination "$accelerator/config" -Recurse -Force
```



# Terraform Explicit Variables



Accelerator starter module updated with explicit variables

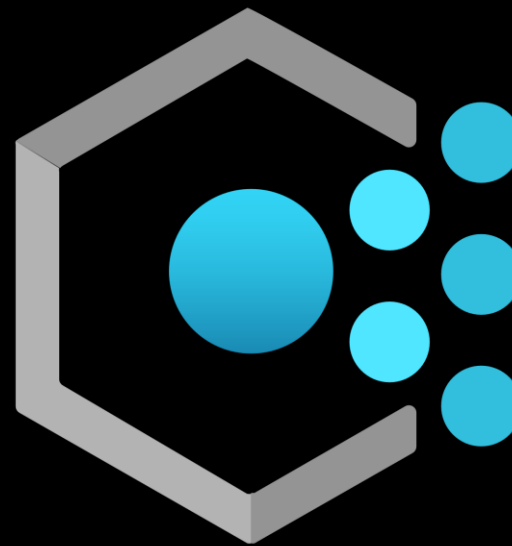
- [alz-terraform-accelerator](#)

```
31 variable "hub_virtual_networks" {
32   type = map(object({
33     enabled_resources = optional(object({
34       firewall          = optional(any, true)
35       firewall_policy   = optional(any, true)
36       bastion           = optional(any, true)
37       virtual_network_gateway_express_route = optional(any, true)
38       virtual_network_gateway_vpn         = optional(any, true)
39       private_dns_zones                   = optional(any, true)
40       private_dns_resolver                = optional(any, true)
41     }), {})
42
43     default_hub_address_space = optional(string)
44     default_parent_id         = optional(string)
45     location                  = string
46
47     hub_virtual_network = optional(object({
48       name                  = optional(string)
49       address_space         = optional(list(string))
50       parent_id             = optional(string)
51       route_table_name_firewall = optional(string)
52       route_table_name_user_subnets = optional(string)
53       bgp_community         = optional(string)
54       ddos_protection_plan_id = optional(string)
55       dns_servers           = optional(list(string))
56       flow_timeout_in_minutes = optional(number, 4)
57       mesh_peering_enabled   = optional(bool, true)
58       peering_names          = optional(map(string))
59       routing_address_space  = optional(list(string), [])
60       hub_router_ip_address  = optional(string)
61       tags                   = optional(map(string))
62     })
63   })
64 }
```





# Portal & Policy Refresh H1 FY26 Updates





# ALZ Portal News

[aka.ms/alz/portal](https://aka.ms/alz/portal)



- Security MG and Sub
  - \*NEW\* Security subscription required for full deployment

## COMING SOON

- Networking
  - Add support for Azure Bastion for all network topologies
  - Add support for Azure Private DNS Resolver for all network topologies (needs last mile config)
  - Added VWAN provisioning of sidecar network (needed for Bastion & Private DNS)
  - All Firewall SKUs now deploy with management NIC in the AzureFirewallManagementSubnet
- Standardizing resource group naming (CAF aligned)
- Remove support of non-public regions





# ALZ Policy News

[aka.ms/alz/whatsnew](https://aka.ms/alz/whatsnew)

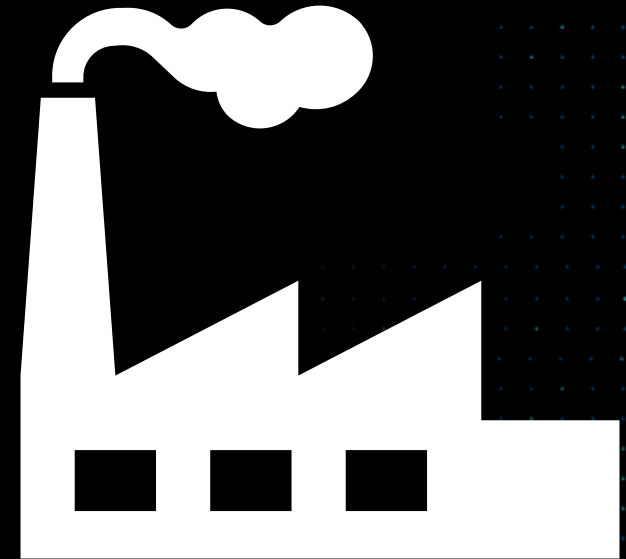


- Policy Refresh H1 FY26 (In Progress)
  - Changing to 6 month release due to limited changes/resources
  - Community driving updates – keep the requests coming
- General updates
  - Defender (ASC) Contacts policy updated to support new attack path option (Critical)
  - Guardrails-SQL – added SQL/MI policy to enforce Entra ID only auth
  - Updated the optional FileServices-InsecureSmb policies to support Files deployed with maximum compatibility
  - Quality workflow updates

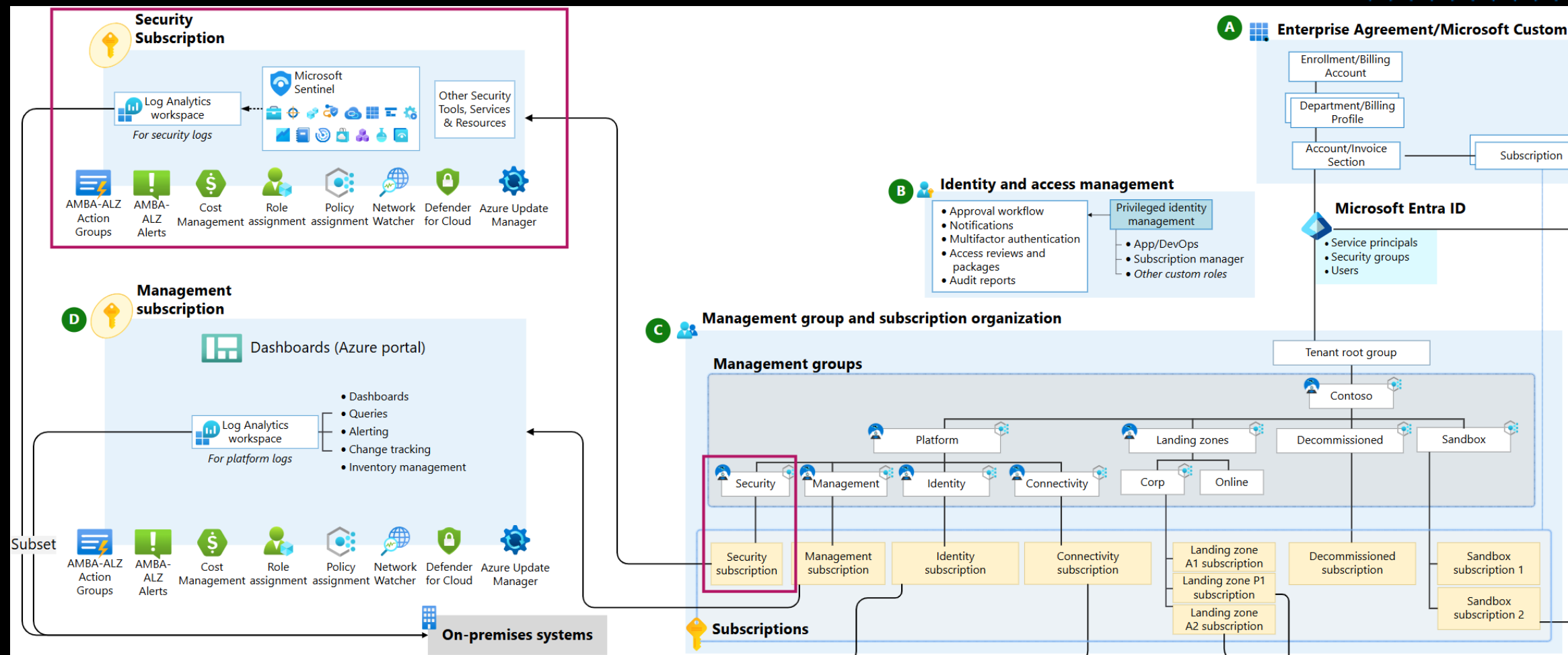




# ALZ MS Learn & Other Updates



# Security Subscription & Management Group added +



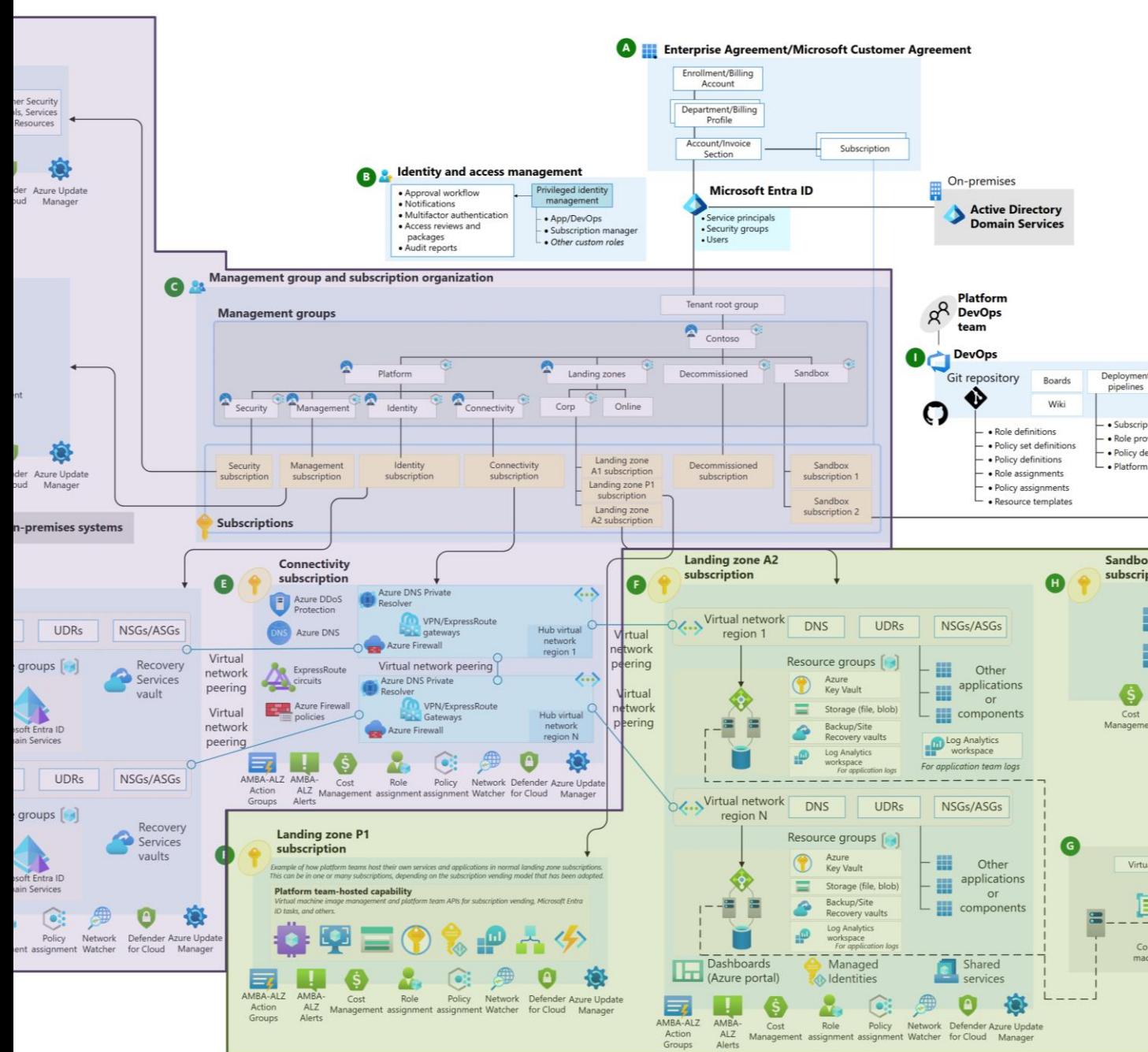


# Platform vs Application Clarity



*"An Azure landing zone consists of one platform landing zone and one or more application landing zones. It's worth explaining the function of both in more detail."*

[Learn more](#)



# Terminology to use going forward



## Platform landing zone (singular)

- Management Groups & Policies
- Resource organization
- Shared services subscriptions (management, connectivity, security, identity)

## Application landing zones (plural)

- Where application teams deploy, host and run their workloads and services
- Inherit Azure Policies from Management Group hierarchy
- Utilize shared services subscriptions

# AI in Azure landing zones clarity 🔥



A common question is whether you need a dedicated AI landing zone alongside your Azure landing zone. The answer is that you don't need a separate AI landing zone. Instead, you use the existing Azure landing zone architecture to deploy AI workloads into application landing zones. The Azure landing zone design areas and principles are sufficient to support AI workloads, as they provide the necessary foundation for governance, security, and management for applications and workloads that both include AI and non-AI components and services.

You can integrate AI services into your application landing zones without needing a separate AI landing zone. The Azure landing zone architecture, design principles, and design areas, such as identity and access management, network topology and connectivity, security, and governance, are already designed to accommodate all workloads, including those that involve AI.

From the perspective of Azure landing zones, AI is just another workload or service that can be deployed, governed, and secured within one or more application landing zone subscriptions, just like any other application, workload, or service, by the platform team by utilizing the existing Azure landing zone architecture, principles, and design areas.

For more information on AI adoption in Azure, see the [AI adoption scenario](#). For specific focus on AI workloads and landing zones, see [Establish an AI foundation](#).

Learn more



# Azure Landing Zone Design Principles | Refreshed

- Enable Autonomy for Innovation and Transformation
- Security and Compliance By-Default
- Governance At-Scale with Sustainable Cloud Engineering

[Learn more](#)



Subscription Democratization



Policy Driven Governance



Single Control and Management Plane



Application Centric and Archetype-Neutral



Azure Native Design and Platform Roadmap Alignment

# What we are/have been working on...



## Product & Service Updates

- AVNM
- Service Groups
- Default outbound access
- Private DNS Resolver
- Multi-Region Private DNS Zones Guidance
- Much more...

ALZ Bicep -> Azure Verified  
Modules for Platform Landing  
Zones (ALZ) – Bicep 

Security Management Group 


Policy updates & versioning 


GitHub Issue Management &  
Consolidation 

Simplifying the ALZ Accelerator 

Retire the ALZ Portal Accelerator 

Microsoft Sovereign Cloud & SLZ 

Microsoft Defender for Cloud  
integrated in Sub Vending  
modules 

NAT Gateway integrated into Sub  
Vending modules 







# Sovereign landing zone



# Sovereign landing zone (SLZ)

The platform landing zone - built on Azure landing zone (ALZ)- empowering organizations to enforce sovereignty controls in the public cloud



## Variant of Azure landing zone (ALZ)

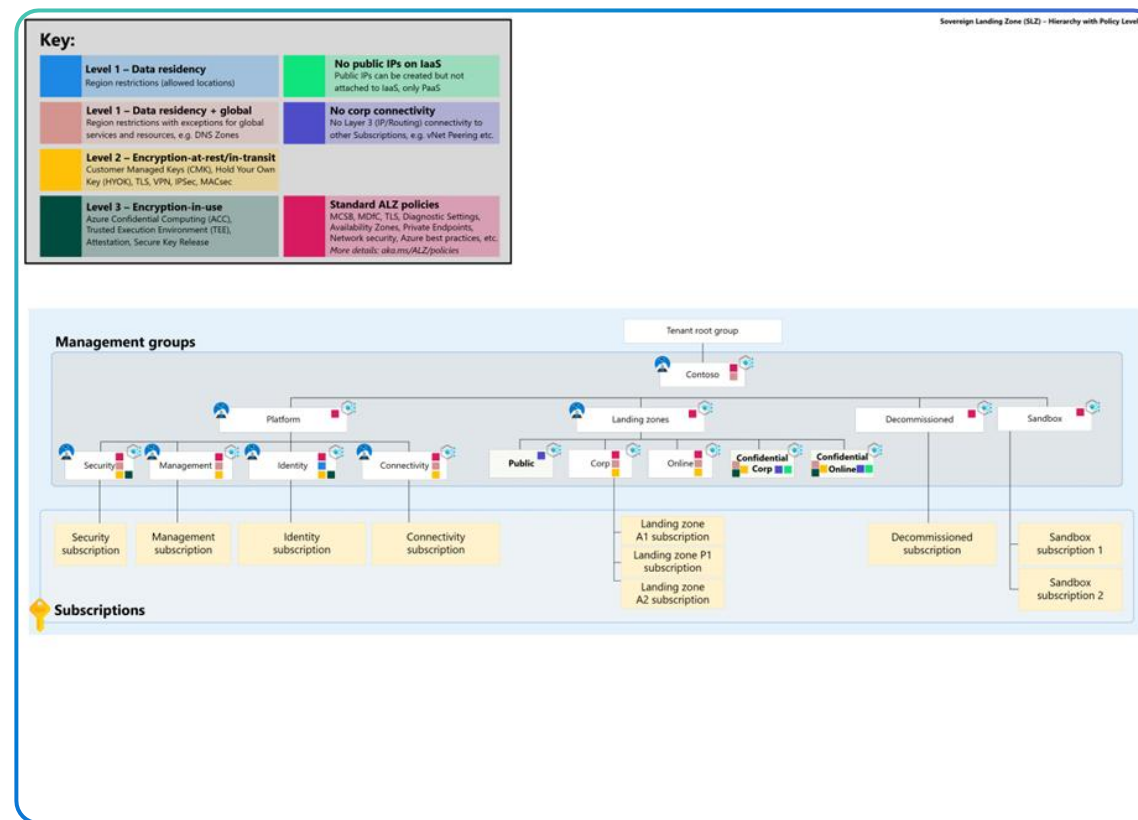
- Builds on top of already well-established ALZ architecture, guidance, tooling, and best-practices.
- Expands Management Group hierarchy to support sovereign requirements – following tailoring guidance.
- Allows existing ALZ consumers to adopt SLZ easily with existing tooling without having to restart from scratch.

## Accelerates enforcing Level 1, 2, & 3 controls

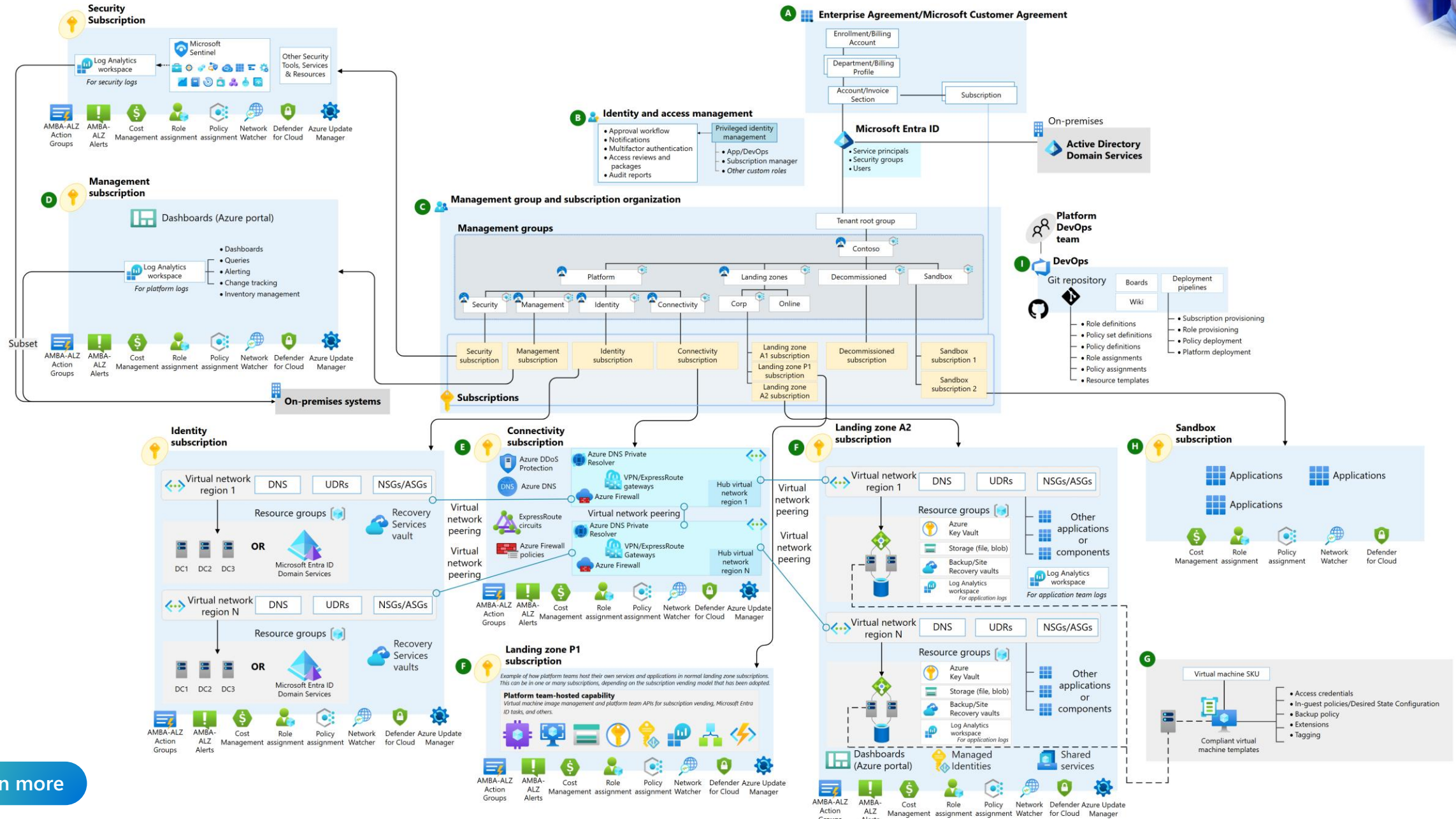
- Provides Microsoft maintained Azure Policy definitions, initiatives, and default assignments upon the Management Group hierarchy to enforce sovereign controls
- Provides guidance on Azure Key Vault Managed HSM placement in architecture

Sovereign landing zone is **available now**  
*\*Terraform only today. Bicep in development*

[Learn more](#)

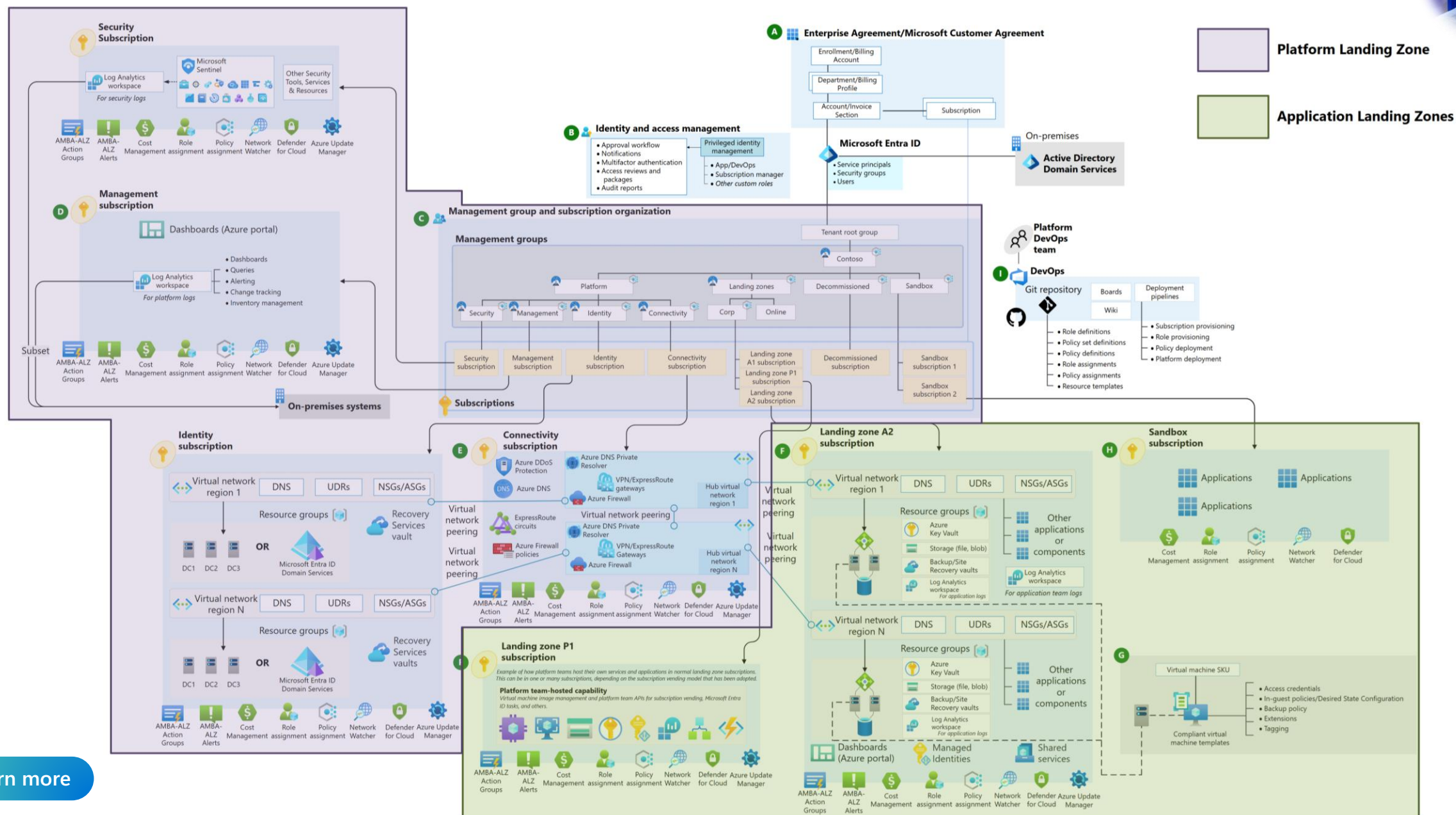


# First, a refresh on the Azure landing zone architecture



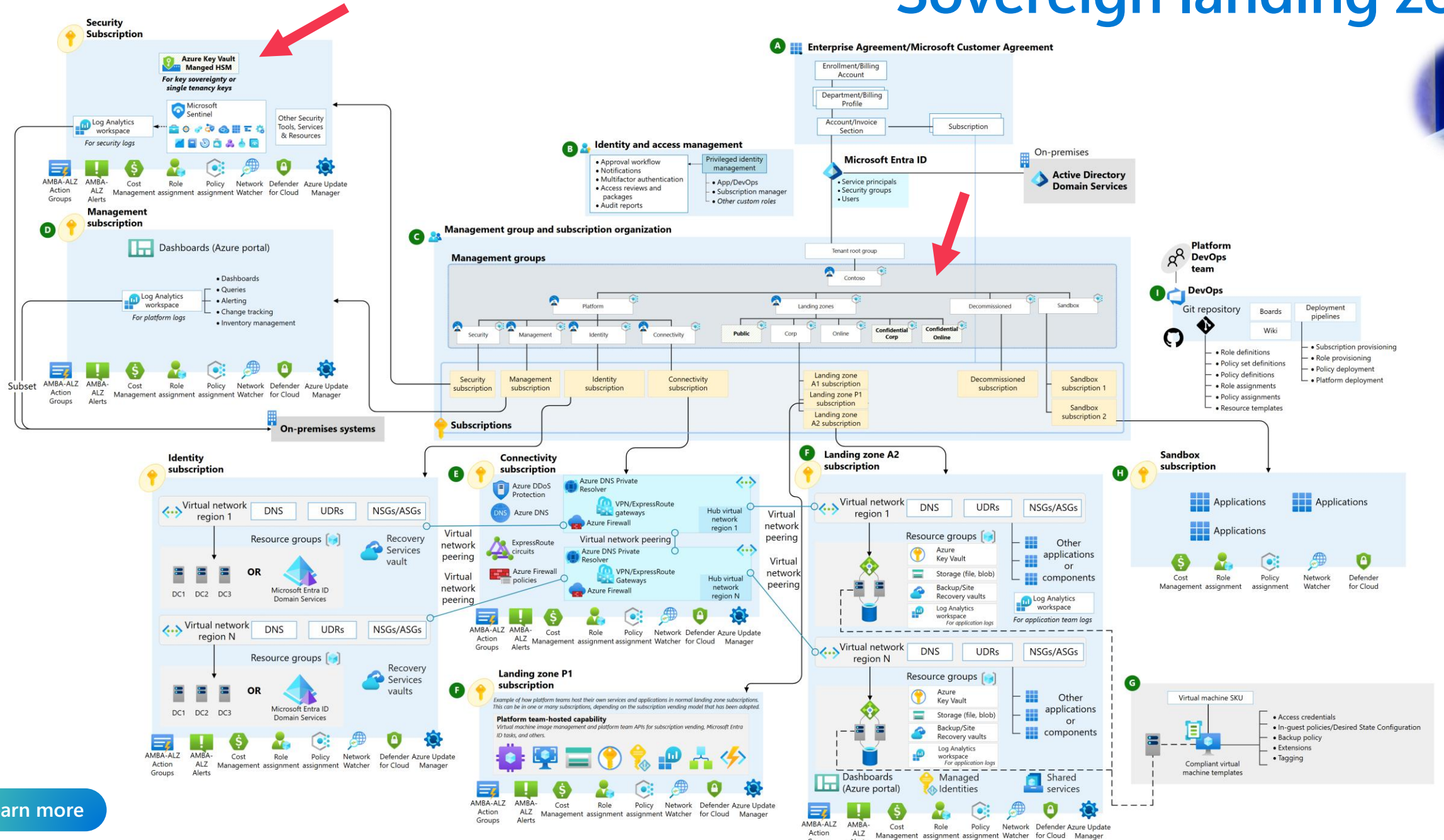


# Platform vs Application landing zones



Learn more

# Sovereign landing zone

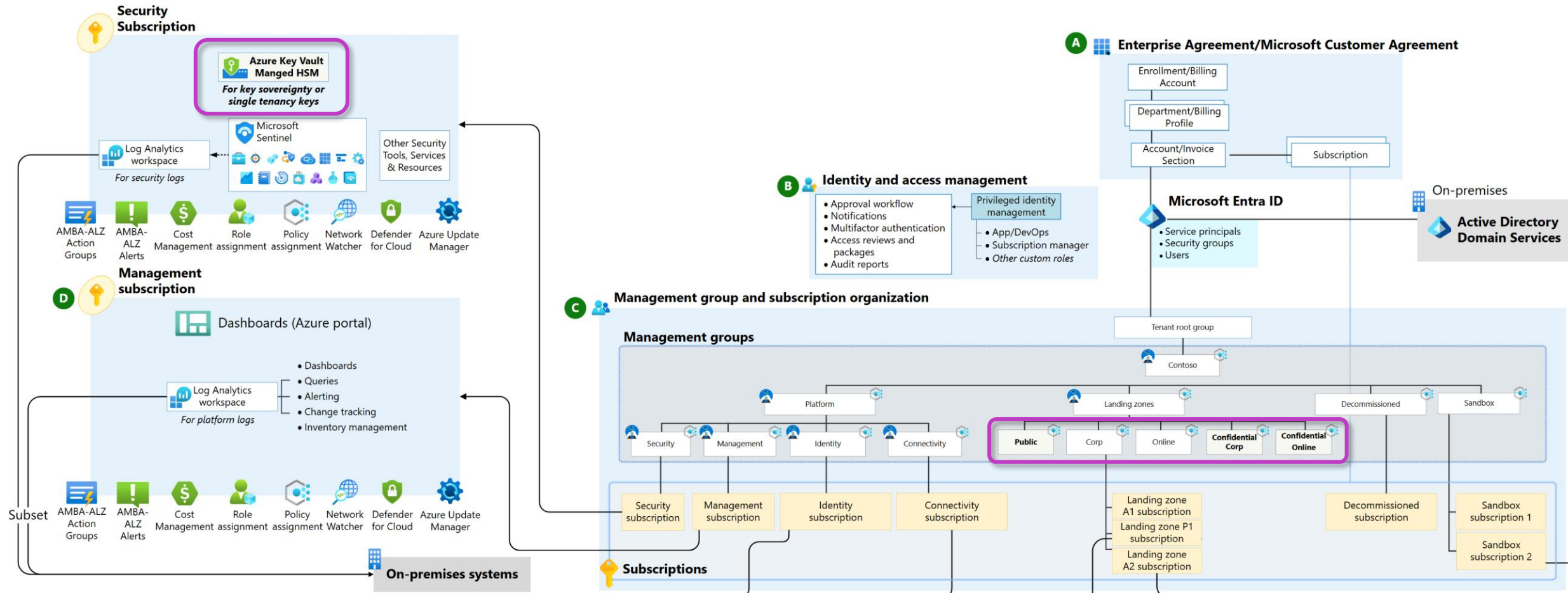


Learn more





# Sovereign landing zone differences from ALZ



[Learn more](#)

# Policy Initiatives for L1, L2, & L3



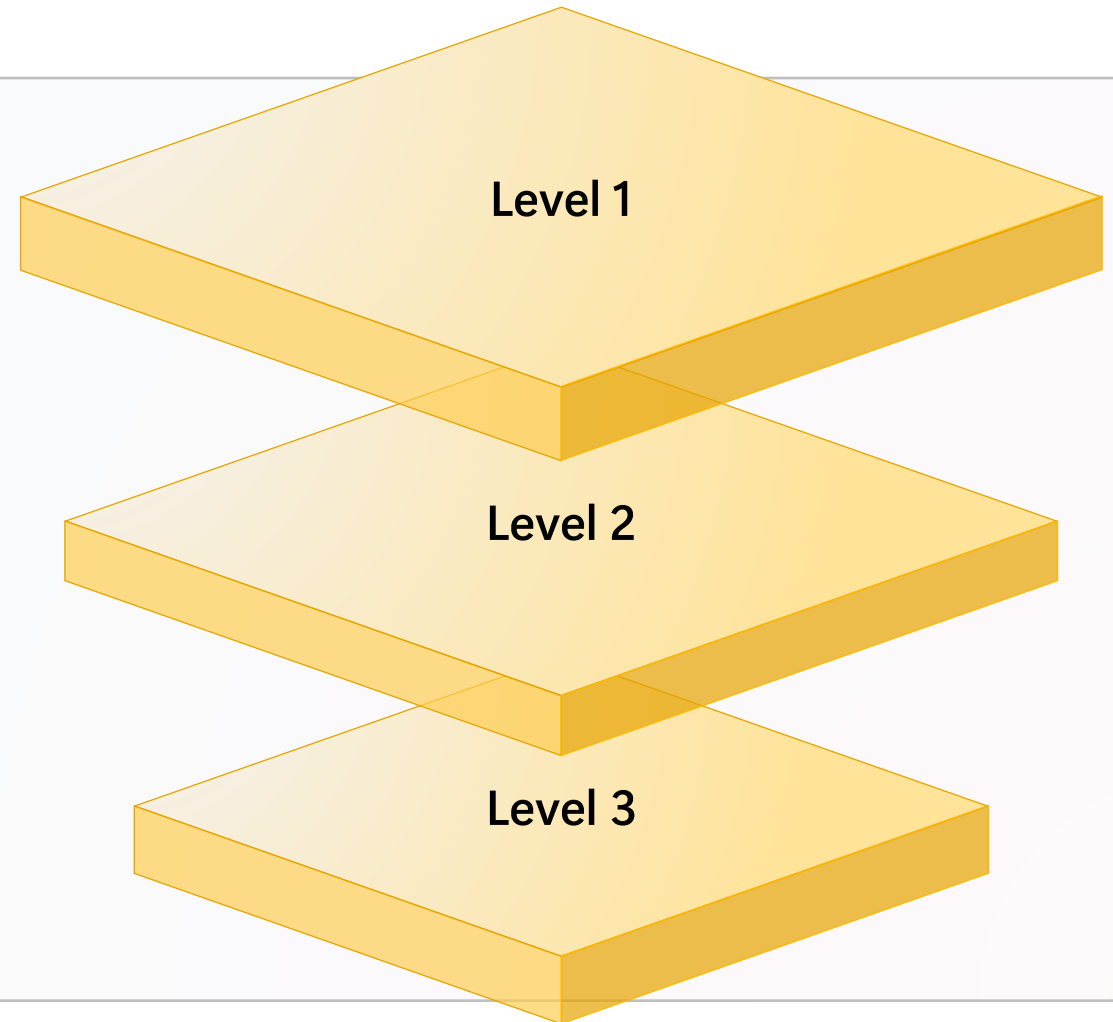
## Azure Policy enforces controls across all levels

- **Level 1:** Residency checks and region restrictions.
- **Level 2:** TLS version enforcement, CMK enforcement, HSM enforcement.
- **Level 3:** Azure Confidential Computing policies.

Combine these into policy initiatives for consistent governance.

[Learn more about Controls & Principles in Sovereign Public Cloud](#)

[Learn how Sovereign landing zone implements these in Azure](#)

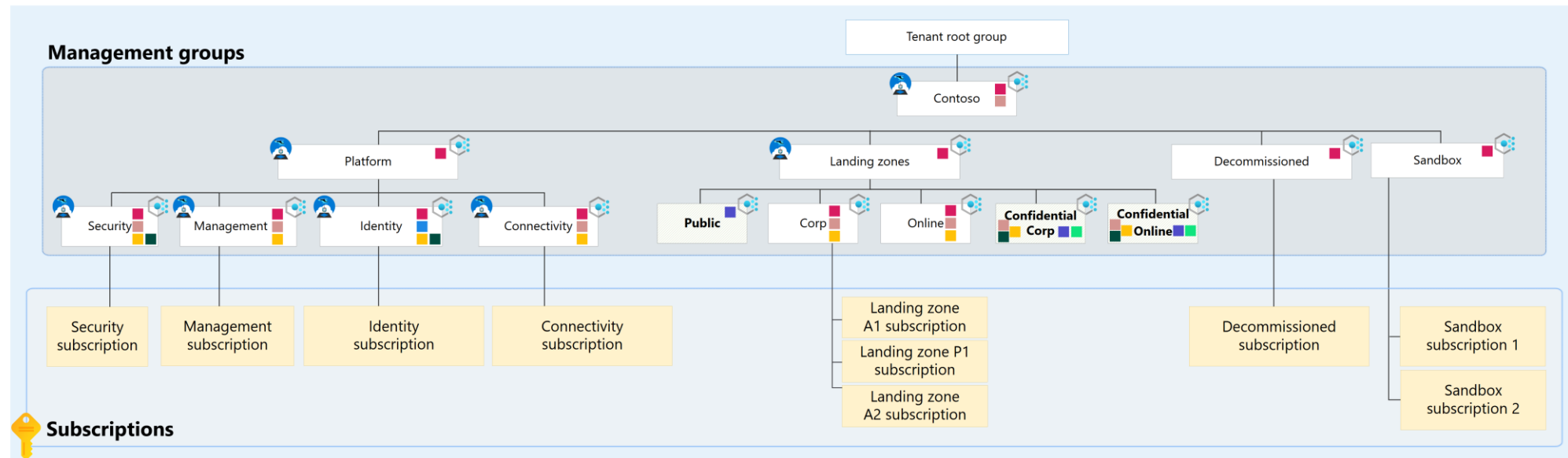


# How SLZ accelerates L1, L2, & L3



<b>Key:</b>	
<b>Level 1 – Data residency</b> Region restrictions (allowed locations)	<b>No public IPs on IaaS</b> Public IPs can be created but not attached to IaaS, only PaaS
<b>Level 1 – Data residency + global</b> Region restrictions with exceptions for global services and resources, e.g. DNS Zones	<b>No corp connectivity</b> No Layer 3 (IP/Routing) connectivity to other Subscriptions, e.g. vNet Peering etc.
<b>Level 2 – Encryption-at-rest/in-transit</b> Customer Managed Keys (CMK), Hold Your Own Key (HYOK), TLS, VPN, IPsec, MACsec	
<b>Level 3 – Encryption-in-use</b> Azure Confidential Computing (ACC), Trusted Execution Environment (TEE), Attestation, Secure Key Release	<b>Standard ALZ policies</b> MCSB, MDfC, TLS, Diagnostic Settings, Availability Zones, Private Endpoints, Network security, Azure best practices, etc. <i>More details: aka.ms/ALZ/policies</i>

- SLZ uses Azure Policy and management groups to enforce sovereign controls at scale.
- Workloads are classified to apply Level 1, 2, and 3 data protection controls.
- Policy initiatives ensure compliance for residency, encryption, and confidential computing.
- Architecture is flexible for tailoring policies to organizational data classifications.



Learn more

Microsoft Ignite

# Join me at Microsoft Ignite in San Fransico!

November 17-21, 2025



**Jack Tracey**

Azure Landing Zone & Azure Verified Modules  
Technical Lead



# AMBA-ALZ Updates

[aka.ms/amba/alz](https://aka.ms/amba/alz)





# AMBA Updates

[aka.ms/amba/alz/whatsnew](https://aka.ms/amba/alz/whatsnew)



- New features and alerts:
  - Adoption of the **\*new\*** built-in Service Health alert policy
  - Adoption of the **\*new\*** least privileged “Monitoring Policy Contributor” built-in Azure role
  - Promoted the following alerts to GA:
    - Activity Log Route Table Delete Alert
    - Activity Log Routes Delete Alert
  - Official documentation guide for [deploying AMBA-ALZ using Terraform](#)
- New Connectivity initiative - Part #2 initiative including **\*12 new\*** alerts
- **6** bugs fixed
- Documentation improvements








# AMBA Roadmap



[aka.ms/ambalroadmap/alz](https://aka.ms/ambalroadmap/alz)

- AMBA for ALZ Bicep
  - AMBA is not yet integrated into the ALZ-Bicep repository, However, this integration is underway and will soon be available. If you wish to deploy AMBA now, please see this [Wiki](#)
- Investigating Lighthouse support for ALZ pattern
- Additional documentation for:
  - AMBA-ALZ alerts testing





# AMBA Roadmap

[aka.ms/amba/roadmap/alz](https://aka.ms/amba/roadmap/alz)



AMBA Public Roadmap

By Status By priority By effort + New view

pattern:alz

**Backlog** 1 Estimate: 0

This item hasn't been started

Draft

Deploy with Bicep

Medium X-Large ALZ

+ Add item

**In Progress** 2 Estimate: 0

This is actively being worked on

Draft

Documentation Update: How to test AMBA-ALZ alerts

Medium Medium ALZ

Draft

Investigate Lighthouse support for ALZ pattern

Medium Medium ALZ

+ Add item

**Completed** 25 Estimate: 0

This has been completed

Draft

Add alerts for Route and Route Table delete

Urgent Medium ALZ

Draft

Arg query optimization

Urgent Large ALZ

Draft

BUG: Resource group name customization in AMBA-ALZ Portal deployment is not honored

Urgent Medium ALZ

Draft

BUG: Policy definitions in AMBA-Connectivity2 policy initiative never get to Compliant

Urgent Medium ALZ

Draft

+ Add item

**Parked** 1 Estimate: 0

Draft

Azure Monitor Ingestion limit alert

Medium Medium ALZ

+ Add item





# AI Landing Zone Accelerator for AI Apps & Agents





## Overview

An AI landing zone accelerator helps your team progress from proof-of-concept to scalable production environments faster by automating infrastructure setup using best practices from the Cloud Adoption Framework (CAF) and Well-Architected Framework (WAF).



# AI landing zones



**Design  
Framework**



**Reference  
Architectures**



**Extensible  
Implementations**

# Design Checklist



Security

Identity

Compute

Data

Reliability

Networking

Governance

Monitoring

Cost Optimization

Platform  
Automation

Resource  
Organization

Operational  
Excellence

Performance  
Efficiency

# Extensible Implementations



Terraform

Bicep

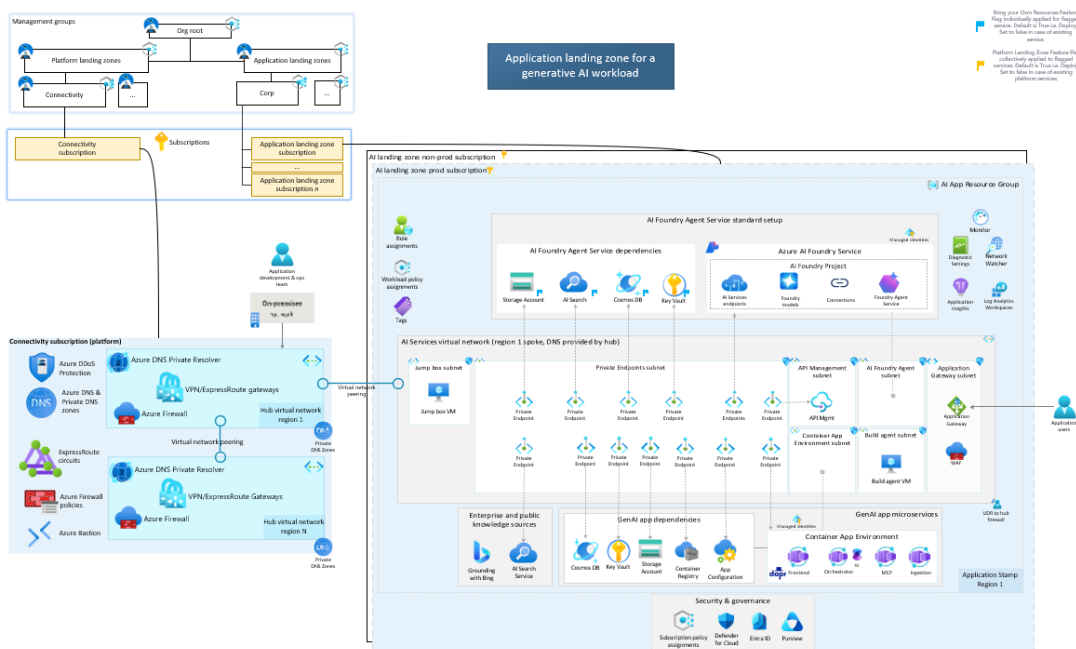
Portal – Coming Soon



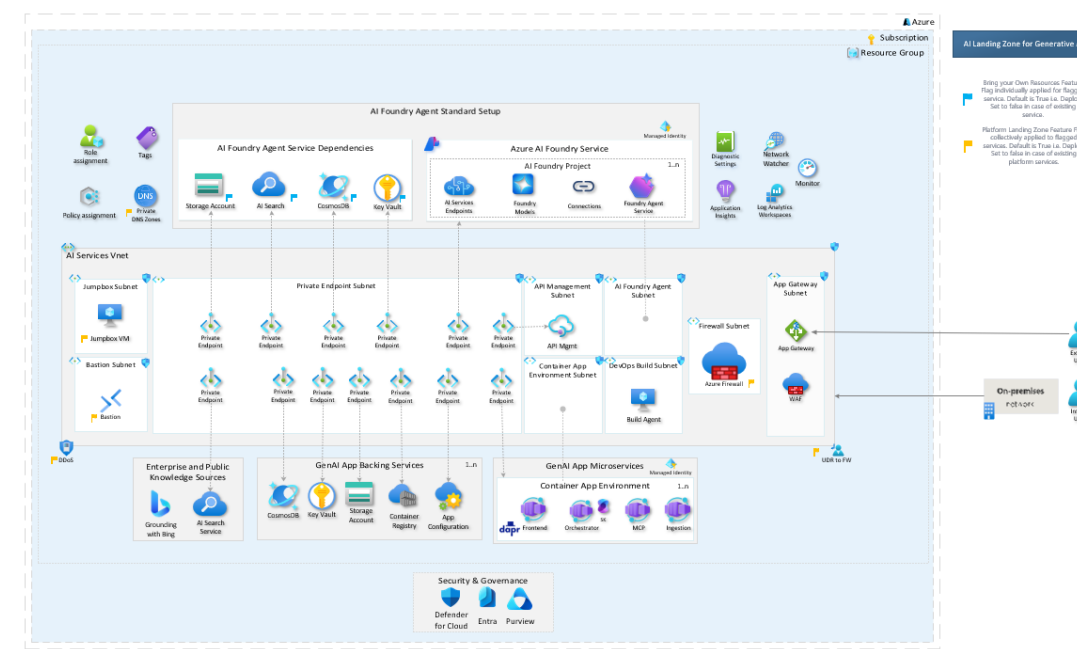
# Reference Architectures

## Enterprise-Scale and Production Ready to accelerate AI use cases

### AI Landing Zone with Platform Landing Zone



### AI Landing Zone without Platform Landing Zone







# AI Landing Zone Accelerator



Authoritative resources for accelerating your app migration and modernization journey.

# Explore AI Landing Zones



AI Landing Zone



[aka.ms/AILZ](https://aka.ms/AILZ)

## This month's presenters:



Thank You! 🙌



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# Q & A 🤔

*(yes, we are as shocked as you  
that we have time for this 😊)*

