This month's presenters:





















Registration:

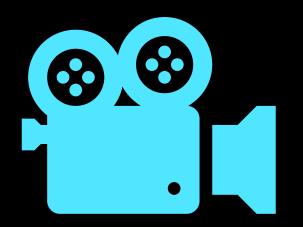
https://aka.ms/ALZ/CommunityCall

Agenda (please add suggestions): https://aka.ms/ALZ/CommunityCallAgenda













This meeting is being recorded







Want to hear about the latest Azure Landing Zone events, news, surveys etc.?

If so, sign up to our mailing list:

aka.ms/alz/notifications/signup

Azure Landing Zones - Notifications - Sign Up







You can also opt out, if registered, by heading to: aka.ms/alz/notifications/optout

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 🥮)











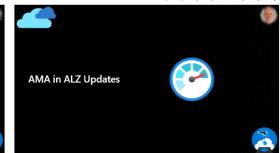
























Implementation Options & Accelerators 📜 🟬







Accelerators 🔀 🚙





Azure Architecture Center

Browse all Architectures

Architecture icons

What's new

Landing zones

Deployment Options

- Design guides
 - ∨ Landing zone implementations
 - Bicep landing zone implementation
 - Terraform landing zone implementation
 - Subscription vending implementation

Cloud operating model roles and responsibilities

The Cloud Adoption Framework describes four common cloud operating models. The Azure identity and access for landing zones recommends five role definitions (Roles) you should consider if your organizations cloud operating model requires customized Role Based Access Control (RBAC). If your organization has more decentralized operations, the Azure built-in roles may be sufficient.

The table below outlines the key roles for each of the cloud operating models.

Role	Decentralized operations	Centralized operations	Enterprise operations	Distributed operations
Azure platform owner (such as the built-in Owner role)	Workload team	Central cloud strategy	Enterprise architect in CCoE	Based on portfolio analysis - see Business alignment and Business commitments
Network management (NetOps)	Workload team	Central IT	Central Networking in CCoE	Central Networking for each distributed team + CCoE
Security operations (SecOps)	Workload team	Security operations center (SOC)	CCoE + SOC	Mixed - see: Define a security strategy
Subscription owner	Workload team	Central IT	Central IT + Application Owners	CCoE + Application Owners
Application owners (DevOps, AppOps)	Workload team	Workload team	Central IT + Application Owners	CCoE + Application Owners

Subscription Vending

Once the platform landing zone is in place, the next step is to create and operationalize application landing zones for workload owners. Subscription democratization is a design principle of Azure landing zones that uses subscriptions as units of management and scale. This approach accelerates application migrations and new application development.

Subscription vending standardizes the process for requesting, deploying, and governing subscriptions, enabling application teams to deploy their workloads faster. To get started, see subscription vending implementation guidance, then review the following infrastructure-as-code modules. They provide flexibility to fit your implementation needs.

Deployment option	Description
Bicep Subscription Vending ☑	The Subscription Vending Bicep module is designed to accelerate deployment of the individual landing zones (aka Subscriptions) within an Azure Active Directory Tenant on EA, MCA & MPA billing accounts.
Terraform Subscription Vending ☑	The Subscription Vending Terraform module is designed to accelerate deployment of the individual landing zones (aka Subscriptions) within an Azure Active Directory Tenant on EA, MCA & MPA billing accounts



Platform

The options below provide an opinionated approach to deploy and operate the Azure landing zone conceptual architecture as detailed in the Cloud Adoption Framework (CAF). It's important to note that, depending upon customizations, the resulting architecture might not be the same for all the options listed below. The differences between the options are how you deploy the architecture. They use differing technologies, take different approaches and are customized differently.

Deployment option	Description
Azure landing zone Portal accelerator	An Azure portal-based deployment that provides a full implementation of the conceptual architecture, along with opinionated configurations for key components such as management groups and policies.
Azure landing zone Terraform accelerator	This accelerator provides an orchestrator module, but also allows you to deploy each capability individually or in part.
Azure landing zone Bicep accelerator	A modular accelerator where each module encapsulates a core capability of the Azure landing zone conceptual architecture. While the modules can be deployed individually, the design proposes the use of orchestrator modules to encapsulate the complexity of deploying different topologies with the modules.

In addition, after deploying the landing zone, you will need to plan to operate it and maintain it. Review the guidance on how to Keep your Azure landing zone up to date.

Application

Application landing zones are one or more subscriptions that are deployed as environments for workloads or applications. These workloads can take advantage of services deployed in platform landing zones. The application landing zones can be centrally managed applications, decentralized workloads, or technology platforms such as Azure Kubernetes Service that host applications.

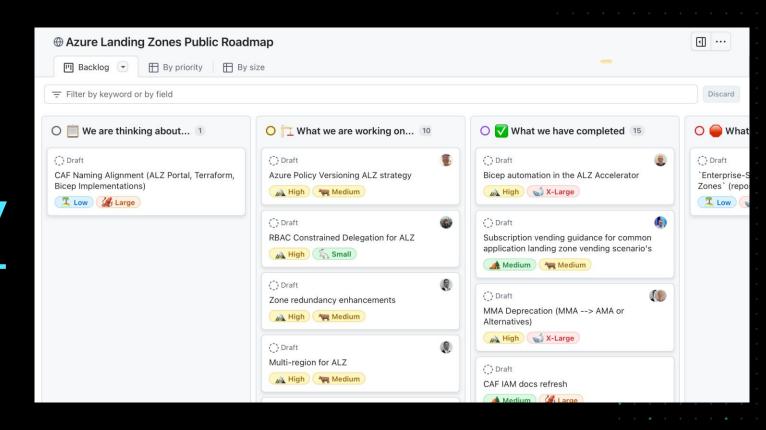
You can use the options below to deploy and manage applications or workloads in an application landing zone.

Application	Description		
AKS landing zone accelerator	An open-source collection of ARM, Bicep, and Terraform templates that represent the strategic design path and target technical state for an Azure Kubernetes Service (AKS) deployment.		
Azure App Service landing zone accelerator	Proven recommendations and considerations across both multi-tenant and App Service Environment use cases with a reference implementation for ASEv3-based deployment		
Azure API Management landing zone accelerator	Proven recommendations and considerations for deploying APIM management with a reference implementation showcasing App Gateway with internal APIM instance backed Azure Functions as backend.		
SAP on Azure landing zone accelerator	Terraform and Ansible templates that accelerate SAP workload deployments using Azure Landing Zone best practices, including the creation of Infrastructure components like Compute, Networking Storage, Monitoring & build of SAP systems.		
HPC landing zone accelerator	An end-to-end HPC cluster solution in Azure using tools like Terraform, Ansible, and Packer. It addresses Azure Landing Zone best practices, including implementing identity, Jump-box access, and autoscale.		
Azure VMware Solution landing zone accelerator	ARM, Bicep, and Terraform templates that accelerate VMware deployments, including AVS private cloud, jumpbox, networking, monitoring and add-ons.		
Azure Virtual Desktop Landing Zone Accelerator	ARM, Bicep, and Terraform templates that accelerate Azure Virtual Desktop deployments, including creation of host pools, networking, storage, monitoring and add-ons.		
Azure Red Hat OpenShift landing zone accelerator	An open source collection of Terraform templates that represent an optimal Azure Red Hat OpenShift (ARO) deployment that is comprised of both Azure and Red Hat resources.		
Azure Arc landing zone accelerator for hybrid and	Arc enabled Servers, Kubernetes, and Arc-enabled SQL Managed Instance see the Jumpstart ArcBox overview.		



ALZ Public Roadmap

aka.ms/ALZ/ Roadmap







ALZ What's New?

aka.ms/ALZ/WhatsNew

Single place to stay up-to-date

∂ Updates

Here's what's changed in Enterprise Scale/Azure Landing Zones:

September 2024

Documentation

- The <u>ALZ Policies</u> and <u>ALZ Deprecated Services</u> documentation has been updated to reflect changes in AMBA. To provide more flexibility for future growth AMBA is transitioning from a single Landing Zone policy initiative and instead is adopting a modular approach by splitting the Landing Zone initiative into the following distinct components (initiatives):
 - Key Management
 - Load Balancing
 - Network Changes
 - Recovery Services
 - Storage
 - VM
 - Web
- Guidance for updating and implementing these changes in existing environments is available on the AMBA website.
- Updated the Azure Monitoring Baseline Alerts (AMBA) integration section in the portal accelerator to include new features exposed by the AMBA solution. To read more on the changes https://azure.github.io/azure-monitor-baseline-alerts/patterns/alz/Whats-New/

NOTE TO CONTRIBUTORS: Due to security compliance requirements, we've made core changes that mean we no longer automatically build the policies, initiatives and roles templates after changes in the src



New Doc

Platform automation and DevOps

Overview

Platform automation
 Subscription vending

Common subscription vending product lines

- > DevOps
- > Development strategy
- > Security considerations



Establish common subscription vending product lines



Take advantage of various product lines

Subscriptions that application teams require to deliver their workloads and services come in many types and styles. Outside of application teams, your organization might have other requirements that necessitate the use of an Azure subscription, such as various compliance and data-handling rules or architecture patterns.

When you decide on your organization's approach to designing and implementing subscription vending, consider asking these questions:

- What other resources should the platform team vend as part of the subscription vending process?
- For each application team, do you deploy multiple subscriptions, such as one per environment, by default?
- For every application, do you peer or connect the spoke virtual network back to your connectivity hubs by default?
- How should you structure role-based access control (RBAC) within each subscription?
- How should you govern and control resources and styles of architecture, or archetypes, that you use within subscriptions?

① Note

Use these examples as a starting point. You can customize and expand these product lines to cater to the needs of your organization.

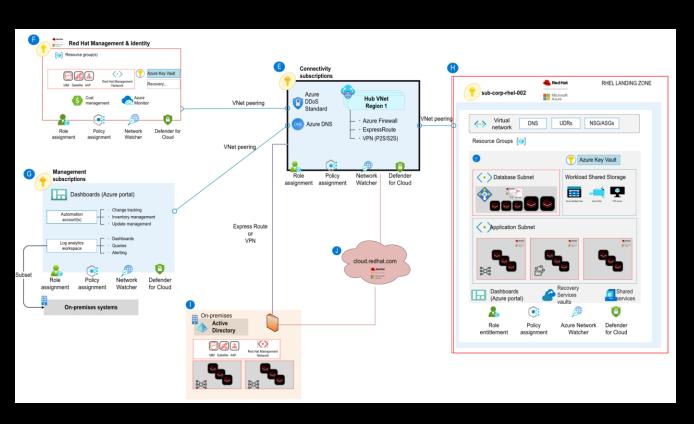
Common product lines for subscription vending include:

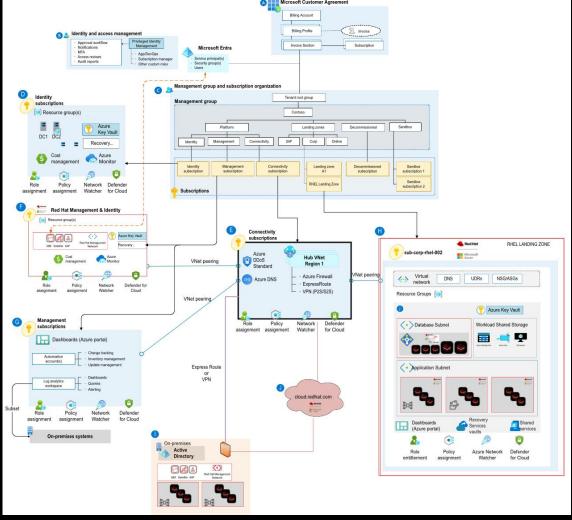
- Corp connected: Workloads that require traditional Layer-3 IP routing connectivity to other applications and on-premises environments via the Connectivity subscription.
- Online: Workloads that connect with other applications through modern connectivity services and architectures, such as Azure Private Link or interaction via exposed APIs or endpoints from each application.
- Tech platform: Workloads that build a platform on which you can build other applications. For example, an Azure Kubernetes Service (AKS) fleet of clusters that an AKS platform team manages can host other applications within its AKS clusters on behalf of other application teams.
- Shared application portfolio: Shared workloads among the same application teams for a common set of closely coupled applications. You don't want to host the applications on their own or with any specific workload.
- Sandbox: An area where application teams can build a proof of concept (PoC) or minimum viable product (MVP) and impose fewer controls, so the team can promote development, invention, and freedom to build the best possible application from the catalog of available Azure services.



New Application Landing Zone Accelerator: RHEL





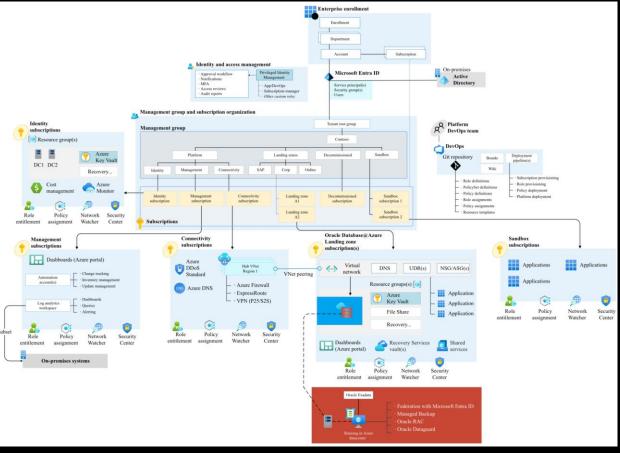


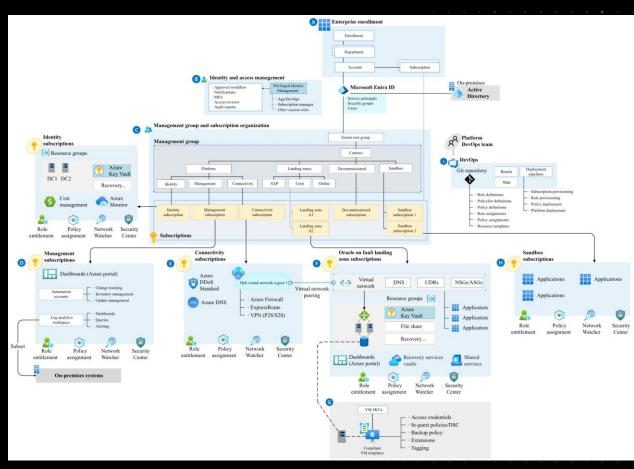




New Application Landing Zone Accelerators: Oracle





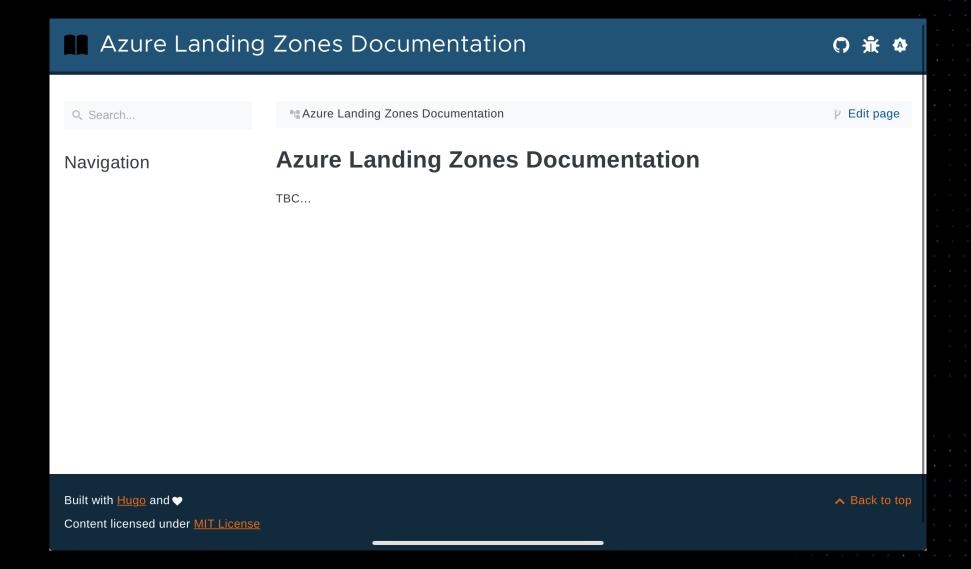






A sneak peak into the future of our wikis









CAF What's New?





Cloud Adoption Framework for Azure

About the Framework

What's new

- > Scenarios
- > Adoption journeys
- > Strategy
- > Plan
- > Ready
- > Adopt
- > Govern
- > Manage
- > Secure
- > Organize
- > Resources

··· / Azure / Cloud Adoption Framework / Get started /



What's new in the Microsoft Cloud Adoption Framework for Azure

Article • 05/09/2024 • 35 contributors

Feedback

In this article

August 2024

July 2024

June 2024

May 2024

April 2024

March 2024

February 2024

January 2024

December 2023

November 2023

October 2023

September 2023

Show less

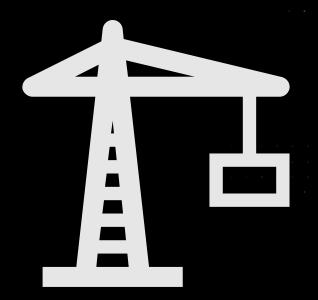
We build the Microsoft Cloud Adoption Framework collaboratively with our customers, partners, and internal Microsoft Teams. We release new and updated content for the framework as it becomes available. These new







A note on upcoming releases

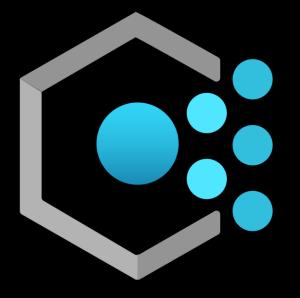








Portal & Policy Refresh Q1FY25 Updates







ALZ Policy News

aka.ms/alz/whatsnew



Policy Refresh Q1 FY25

- Always review "What's New"
- No "breaking" changes!

Enhancing Quality

- Scenario testing
- Policy quality testing

Policy Versioning

- Azure Policy Versioning has landed (preview)
- What is ALZ doing?

Security

- TLS 1.3 support ready in ALZ custom policies, more complicated for built-ins
- Virtual Network Private Subnet auditing
- Various backend security enhancements

Diag Settings

Choice between AllLogs and AuditOnly





ALZ Policy Roadmap

aka.ms/alz/roadmap



Sovereign Clouds

- Have secured access to the sovereign clouds: US Gov and China
- Working to ensure successful deployments in these sovereign clouds (a lot of changes required)





ALZ Portal News

aka.ms/alz/portal

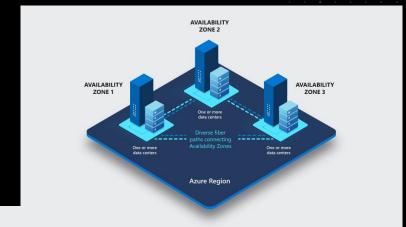


- Workload Specific Compliance
 - Al Ready governance for Al Landing Zones
 - Sentinel
 - Updated portal to new APIs for valid Sentinel deployment
- Big update to AMBA integration
 - Exposing new integration capabilities
 - More choice for what to enable





Resiliency Updates





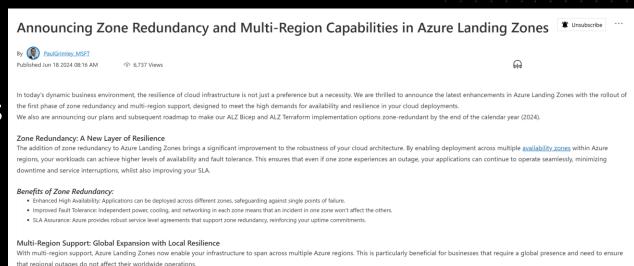




Zone Redundancy Updates



- BLOG: Announcing Zone
 Redundancy and Multi-Region
 Capabilities in Azure Landing Zones
 https://aka.ms/alz/resiliency/blog
- Phased Approach
 - Phase 1 Portal, Bicep and Terraform Accelerators
 zone redundant by default by end of Q2 CY24
 - Phase 2 Bicep and Terraform Modules zone redundant by default <u>Early 2025</u>







Multi-region Updates



- ALZ Portal supports multi-region <u>today</u>
- ALZ Accelerators
 - Bicep releasing imminently
 - Terraform Available today
- ALZ IaC Modules
 - Bicep releasing imminently
 - Terraform releasing imminently
 - Terraform vNext will be available from release





Azure CTO Blog



Achieve agility and scale in a dynamic cloud world

By Mark Russinovich, Chief Technology Officer and Technical Fellow, Microsoft Azure



How to adopt a multi-region cloud strategy with Azure

The Cloud Adoption Framework is proven guidance that's designed to help you create and implement the business and technology strategies necessary for your organization to succeed in the cloud. It provides proven practices, documentation, and tools that cloud architects, IT professionals, and decision makers need to successfully achieve their short and long-term objectives. For organizations that are currently running their workloads from an Azure region, new workloads can be built in any of our Azure regions to leverage the specific benefits such as reduced carbon footprint, more competitive pricing, or advanced Al capabilities.

You can also find more information on how to design and deploy your cloud solutions across multiple Azure regions in the following articles and design areas from the <u>Cloud Adoption Framework</u> and the <u>Well-Architected</u> Framework:

- Plan: Choose the right Azure regions for your landing zone based on your business needs and compliance requirements.
 - · Select Azure regions.
 - Landing zone regions
- Implement: Design and deploy a network topology, security and resources that connects your landing zone regions and supports high availability and scalability.
 - Modify an Azure landing zone architecture to <u>meet requirements</u> across multiple locations.
 - · Networking topology and connectivity
 - Resource organization.
 - · Identity and access management
 - Announcing <u>zone redundancy and multi-region capabilities</u> in Azure landing zones.

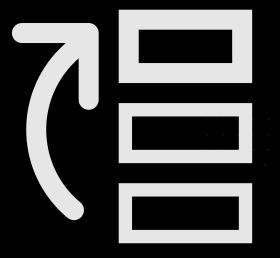
- Azure CTO Mark Russinovich blog -'Achieve agility and scale in a dynamic cloud world'
- Achieve agility and scale in a dynamic cloud world | Microsoft Azure Blog







Help us prioritize new feature/service updates to ALZ





We need your help

Help us prioritize what new features we should work on to make Azure Landing Zones better for you

aka.ms/ALZ/ALZFeatures





AMA in ALZ Updates







MMA was retired on August 31 What are the next steps?



MMA: Data upload

- Cloud ingestion services will gradually reduce support for MMA agents, which may result in decreased support and potential compatibility issues for MMA agents over time.
- Ingestion for MMA will be unchanged until February 1, 2025.

MMA: Installation

• The ability to install the legacy agents will be removed from the Azure Portal and installation policies for legacy agents will be removed. You can still install the MMA agents extension as well as perform offline installations.

- Update guidance for existing ALZ deployments
 - Portal accelerator: <u>http://aka.ms/alz/ama/migration</u>
 - Terraform: [User Guide] Upgrade from v5.2.1 to v6.0.0 · Azure/terraform-azurerm-caf-enterprise-scale Wiki (github.com)
 - Bicep: Release v0.18.0 · Azure/ALZ-Bicep (github.com)
- **Centralized UAMI Policy documentation update**
 - <u>Use Azure Policy to assign managed identities</u>
 (preview) Managed identities for Azure resources |
 Microsoft Learn





AMBA Updates







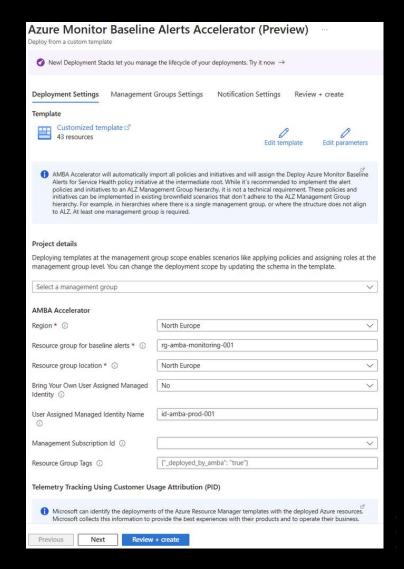
- ALZ Portal Accelerator has been updated
 - Uses latest AMBA-ALZ release
 - Added additional action group capabilities (Webhook, ARM Roles)
 - Resource category alert enablement for Landing Zones

Resource category alert enablement for Landing Zones			
You can selectively enable/disable Azure Monitor Baseline Alerts configuration for resource categories applied to the Landing Zones management group.			
Enable AMBA for Azure Arc-enabled Servers ①	Yes (recommended) No		
Enable AMBA for Key Management Services ①	Yes (recommended) No		
Enable AMBA for Load Balancing Services	Yes (recommended) No		
Enable AMBA for alterations in Network Routing and Security ①	Yes (recommended) No		
Enable AMBA for Recovery Services ①	Yes (recommended) No		
Enable AMBA for Storage Services ①	Yes (recommended) No		
Enable AMBA for Azure Virtual Machines	Yes (recommended) No		
Enable AMBA for Web Services ①	Yes (recommended) No		

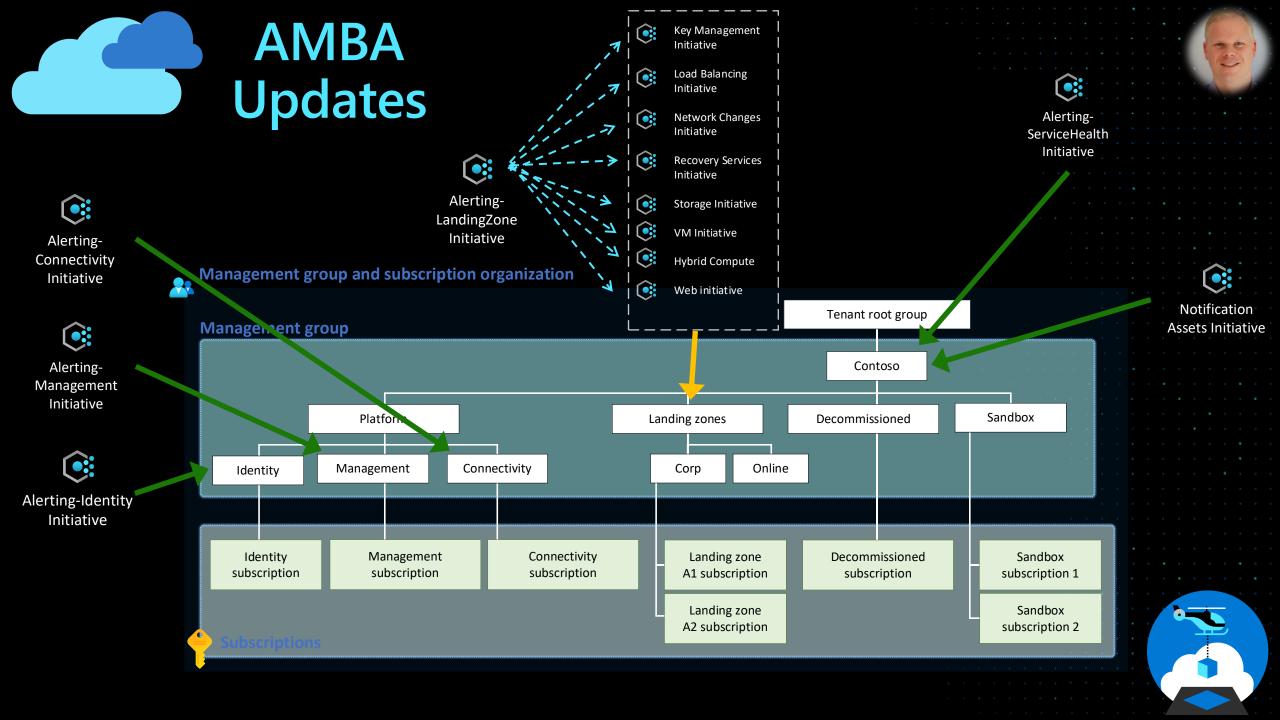




- NEW: AMBA ALZ Portal Accelerator
 - aka.ms/amba/alz/portal









- Threshold override
 - _amba-AvailableMemoryPercentagethreshold-override_
- New alert rules
 - Azure Key Vault Managed HSM
 - Modify Recovery Services vaults to enable new Azure Monitor alerts for Azure Site Recovery
 - Daily Cap threshold alert on a Log Analytics workspace

Updated the disable resource monitoring feature

```
"MonitorDisableTagName": {
     "type": "String",
     "defaultValue":
"MonitorDisable"
    "MonitorDisableTagValues": {
     "type": "Array",
     "defaultValue": [
       "true",
       "Test",
       "Dev",
       "Sandbox"
```





- Quota Alerts
- 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 <u>Wiki</u>
- AMBA for ALZ Terraform
 - We are working on integrating with the Azure-Landing-Zones-Library and updating de module.

- Adding alerts for:
 - Azure Monitor Ingestion limit alert
 - Application Insight Throttling alert
 - Activity Log Alert for deleting Application Insight







ALZ Bicep Updates









v0.19.2 just released!

- Guidance and/or refactor for incorporating multi-region support within networking modules
- Launch of version 2 of the ALZ-Bicep Accelerator
- Networking Enhancements:
 - Add DDoSEnabled toggle for ALZDefaultPolicyAssignments Module
 - Add Firewall Policy SNAT configuration
 - Added support for Active-Active Virtual Network Gateways

- Policy Refresh H2 has been released
 - Built-in policies for diagnostic settings
 - Transition to built-in policies for Azure Monitor Agent (AMA)
 - Sentinel onboarding via onBoardingStates API

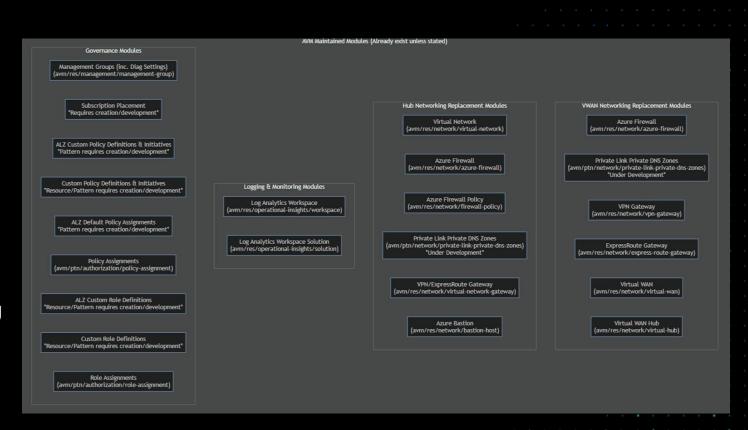






Public Roadmap

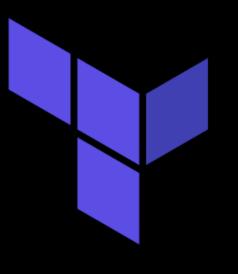
- Multi-region support in the Accelerator framework
- Refactor of ALZ-Bicep with Azure Verified Modules
- October Policy Refresh
- Variety of Bug Fixes:
 - Fix issue with Accelerator V2 with deploying custom modules
 - Missing permissions on data collection rules for policy identities related to AMA
 - General Accelerator v2 Issues and Documentation Enhancements







ALZ Terraform vNext Update

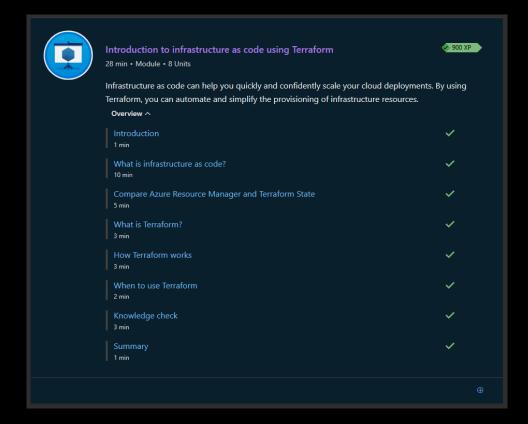






Terraform on Azure Learning Path

- First module released: Introduction to Infrastructure as code using Terraform: <u>aka.ms/tf/fundamentals</u>
- More modules coming soon!



vNext Composition of Azure Verified Modules

Management

avm-ptn-alz

- Management Groups
- Policy
- Role Definitions

avm-ptn-alz-management

- Log Analytics
- Automation Account

Connectivity

Virtual WAN Option

avm-ptn-virtualwan

- Virtual WAN
- Firewalls

Hub and Spoke Virtual Network Option

avm-ptn-hubnetworking

- Hub Virtual Networks
- Peering
- Firewalls

avm-ptn-vnetgatewway

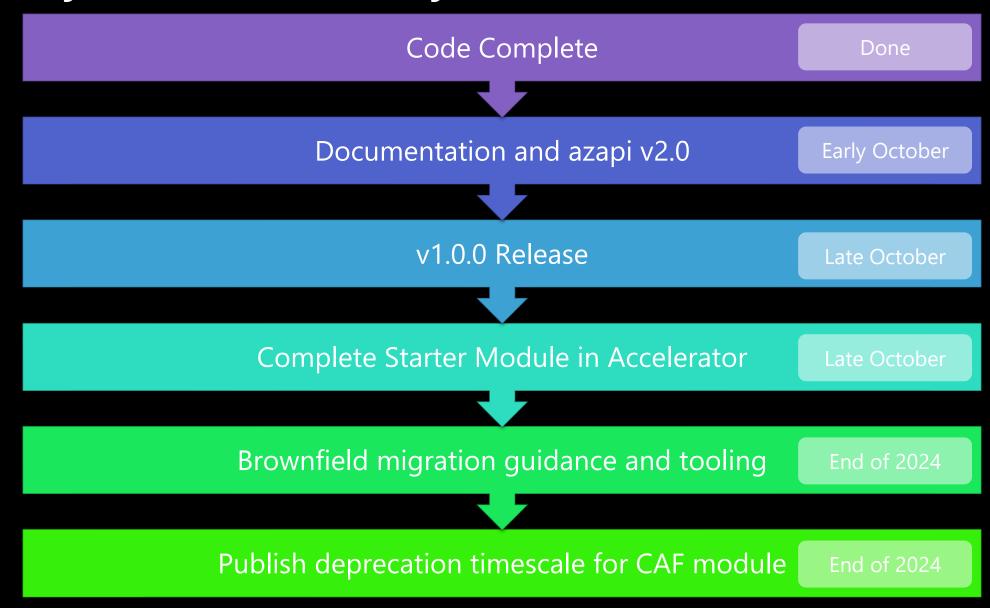
Virtual Network Gateways

avm-ptn-network-private-link-private-dns-zones

Private DNS Zones

Target Timescales

Pathway to v1.0.0 and Beyond







ALZ Bicep & Terraform Accelerator Updates





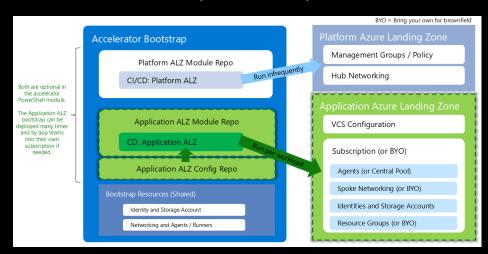
ALZ Accelerators Recent Updates

- Bicep end to end bootstrapping
- Centralised documentation: <u>aka.ms/alz/accelerator/docs</u>
- Input config file by default with multiple starter examples
- Complex types in input files
- Override any variable in input files



ALZ Accelerators Coming Soon!

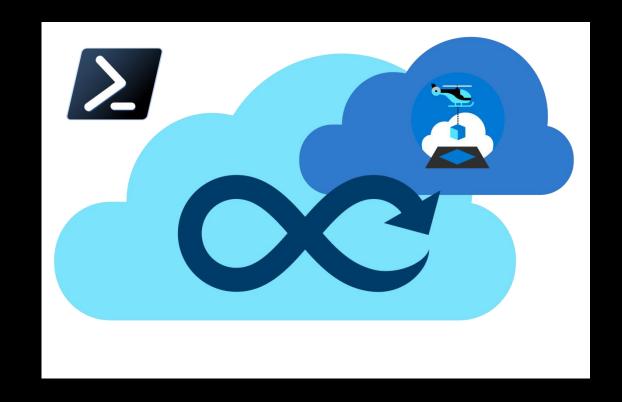
- Multi-region starter modules for Bicep and Terraform. Coming very soon!
- Application landing zones. Targeting end of 2024.
 - Includes and composes AVM Modules for:
 - Agents and Runners
 - Azure Bootstrap
 - GitHub Bootstrap
 - Azure DevOps Bootstrap





ALZ Accelerators Planning

- Removal of UI option?
 - Only support config file as input.
 - Better support for complex data types and overrides.







Azure Landing Zones 29th January 2025 - External Community Call



Registration:

https://aka.ms/ALZ/CommunityCallRegister

Agenda (please add suggestions): https://aka.ms/ALZ/CommunityCallAgenda





Next Community Call will be on 29th January 2025 👍

Rack to an APAC friendly time slot for this occurrence and

Back to an APAC friendly time slot for this occurrence and then the one after will be back to this time slot

Stay tuned to issue #1774 (ALZ/ESLZ Repo)

Recordings will be available at: aka.ms/ALZ/Community





This month's presenters:























Stay up-to-date: https://aka.ms/ALZ/WhatsNew

