



EUROPEAN CLOUD SUMMIT 2024

Enable compliant development with Azure



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EUROPEAN CLOUD SUMMIT



run_oevents



CoreView dox⁴²



EasyLife³⁶⁵

resco

veeam

adesso
business.
people.
technology.



ASCENT

BCC



devoteam

empowerID

FPT[®] Software

glueck■kanja

Jabra^{GN}

kaspersky

LightningTools[®]

nintex

Rencore

ShareGate:

Spot
by NetApp

SysCloud

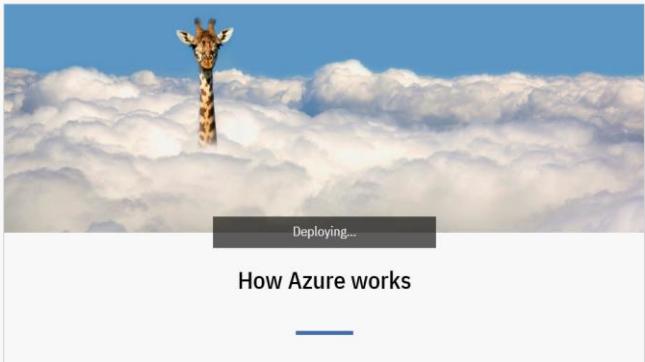
Syskit

WEBCON[®]
LOW-CODE, BUT BETTER.

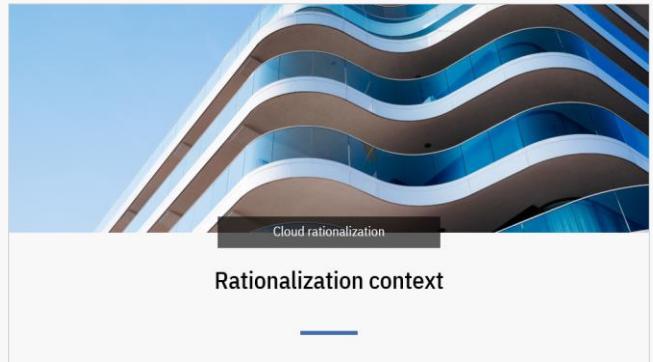


EUROPEAN CLOUD SUMMIT

Agenda



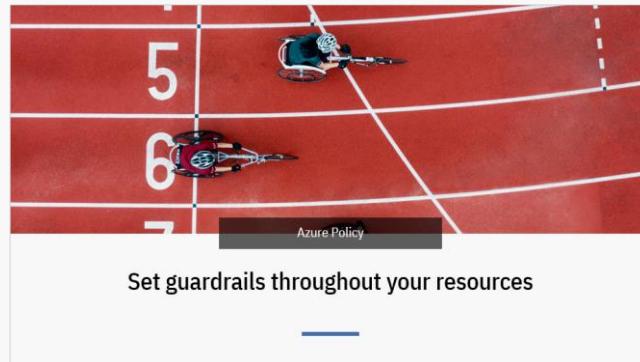
How Azure works



Rationalization context



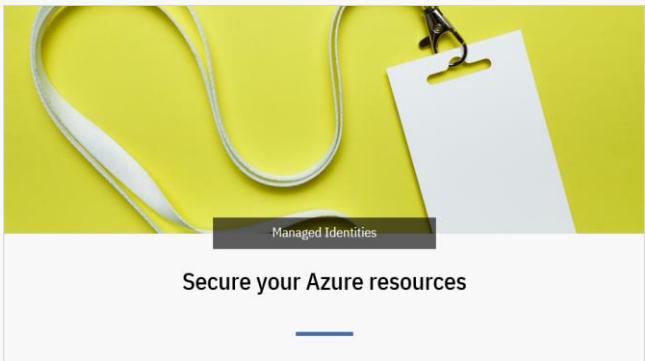
Microsoft Cloud Adoption Framework (CAF) for Azure



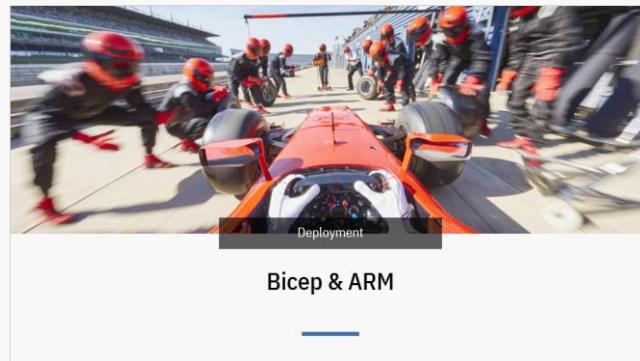
Set guardrails throughout your resources



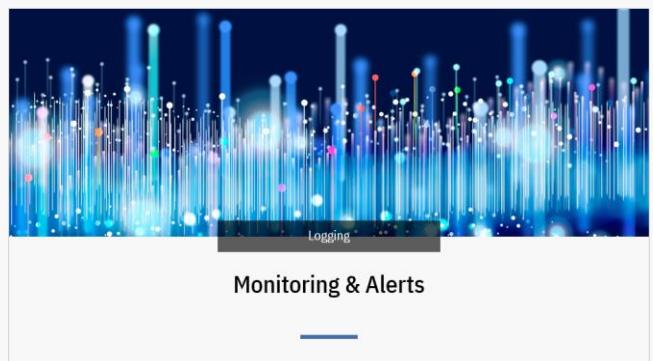
Requirements and challenges



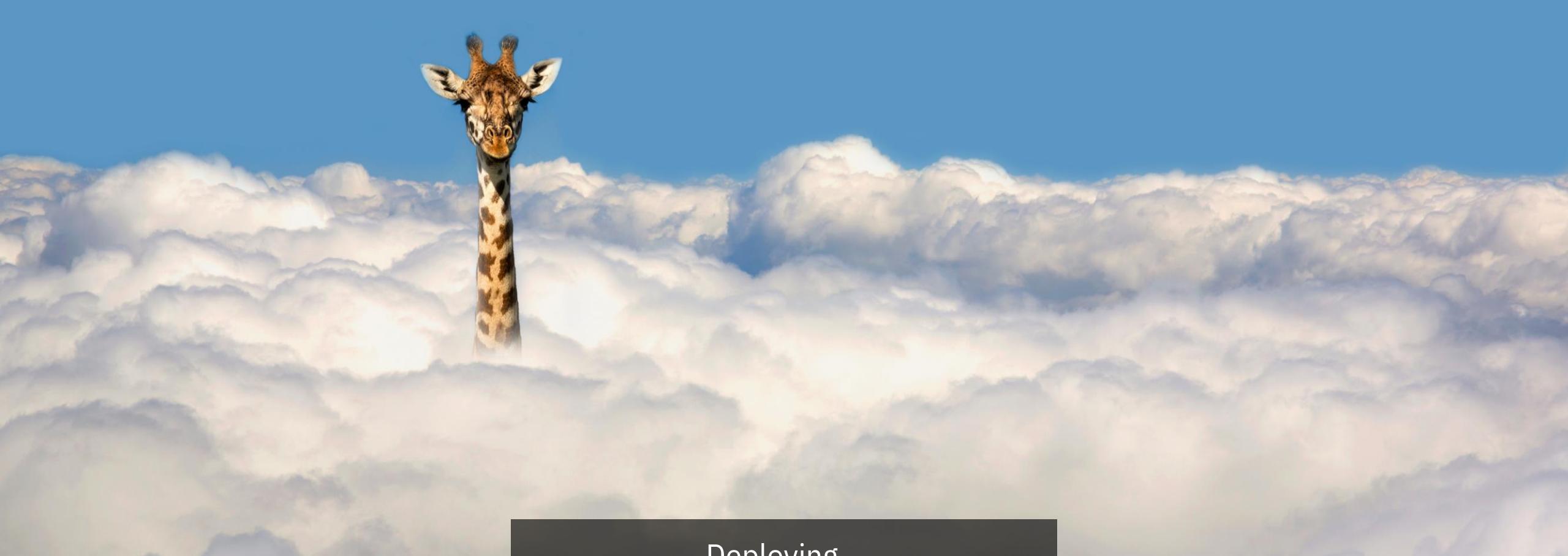
Secure your Azure resources



Bicep & ARM



Monitoring & Alerts

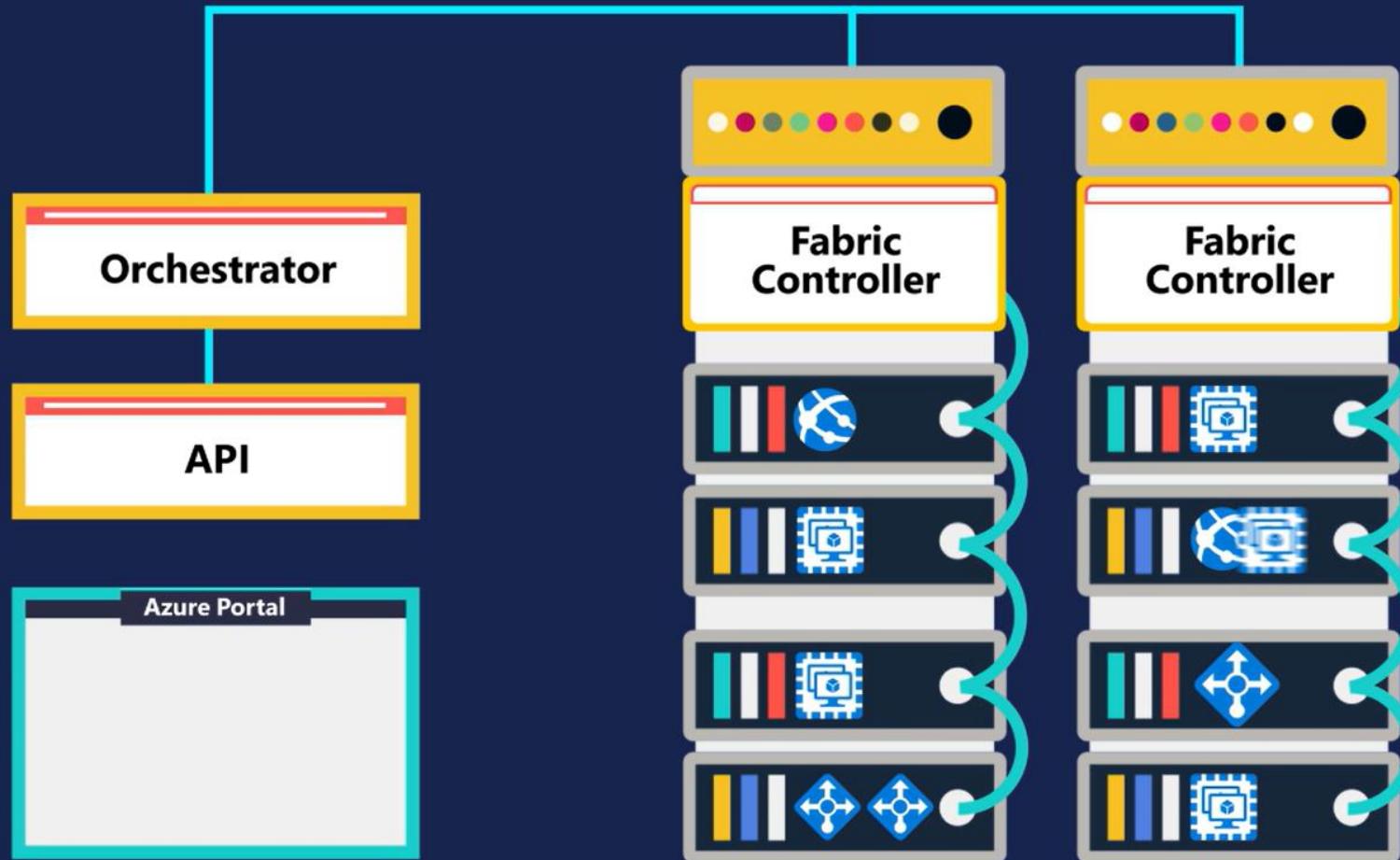


Deploying...

How Azure works

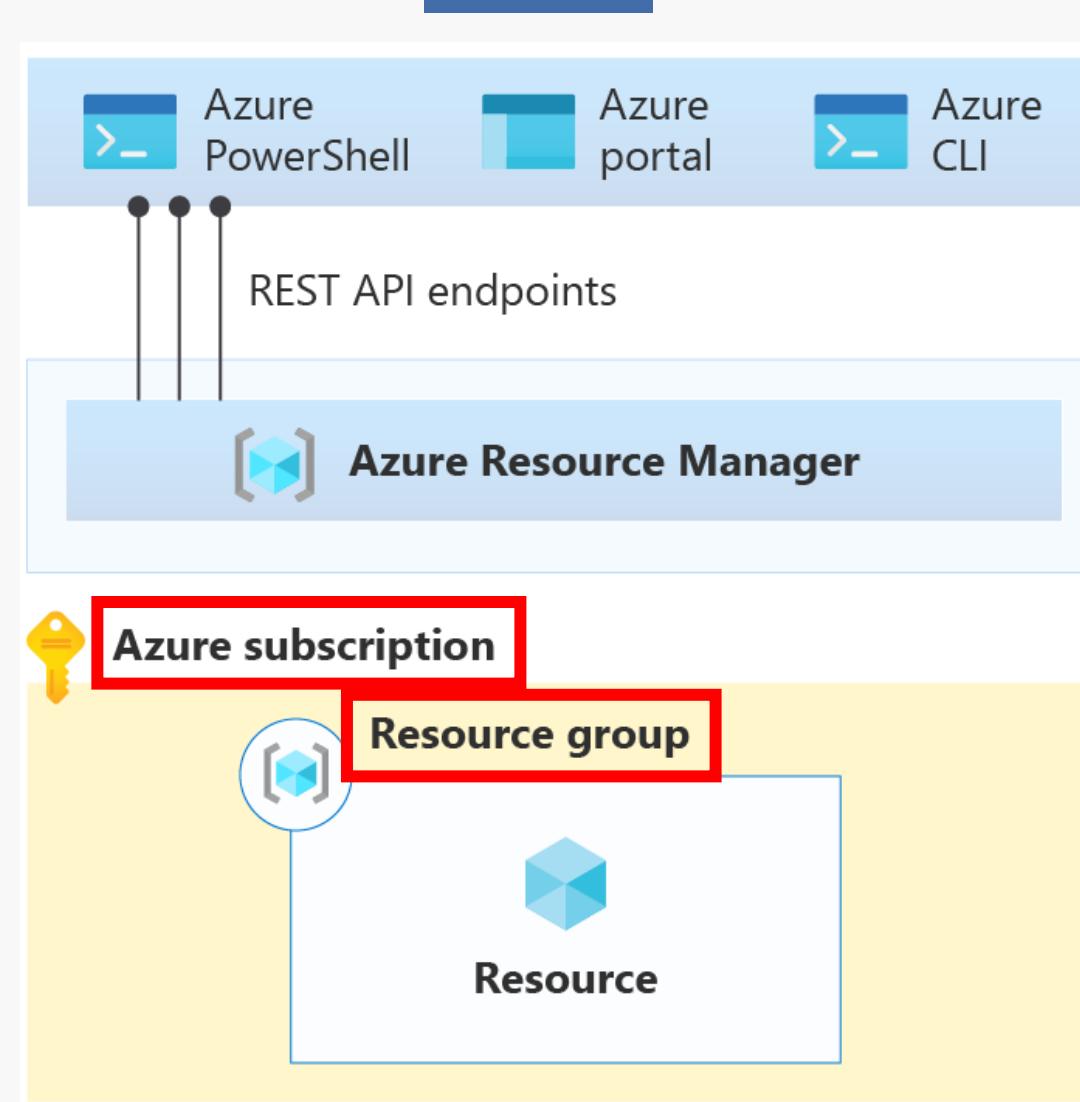


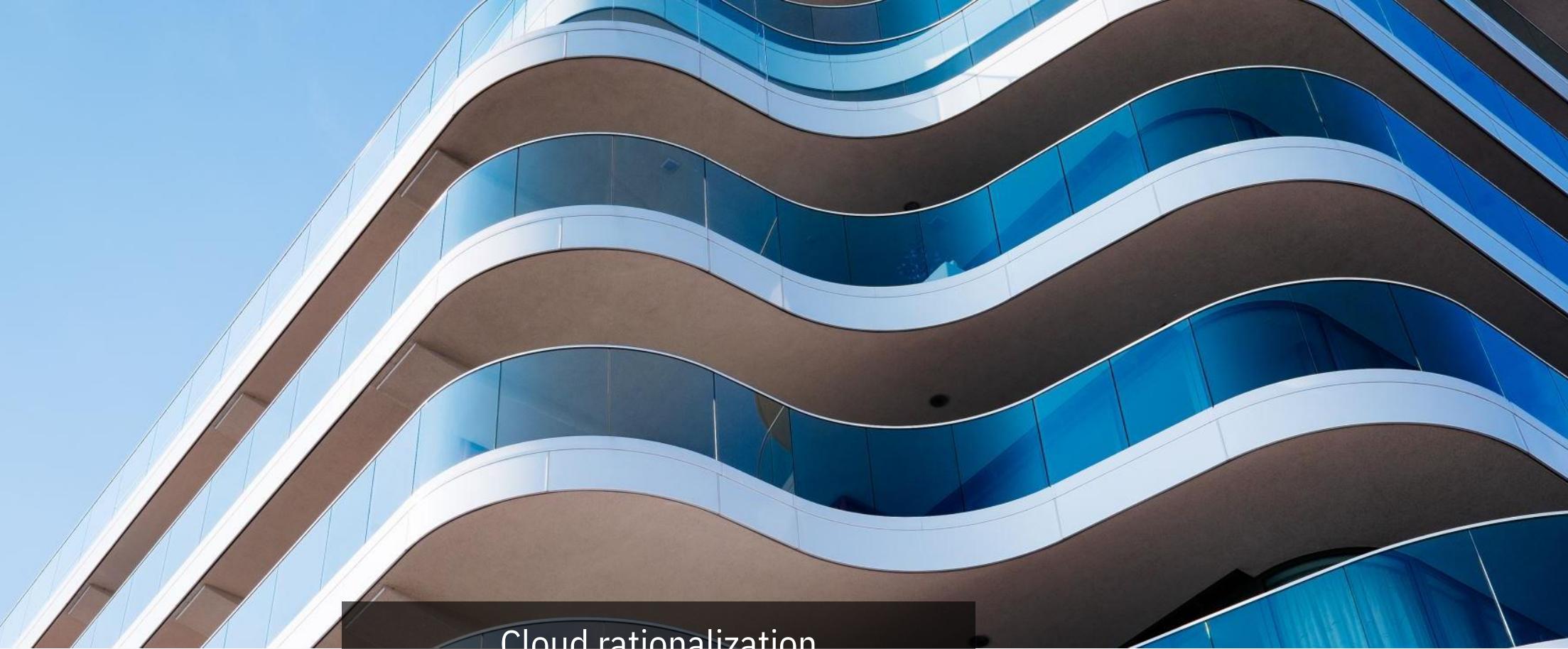
How Azure works





What does it mean for IT management





Cloud rationalization

Rationalization context



Azure compliance documentation

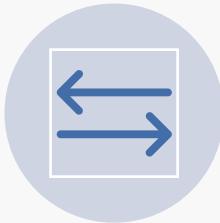
<https://learn.microsoft.com/en-us/azure/compliance/>

The screenshot shows the Azure Compliance Documentation page. At the top, there's a navigation bar with links for Azure, Products, Architecture, Develop, Learn Azure, Troubleshooting, Resources, Portal, and Free account. The main title is "Azure compliance documentation". Below it, a sub-section title is "Compliance offerings". There are eight cards arranged in a grid:

- Global**: ISO 20000-1, ISO 22301, ISO 27001, ISO 27017, ISO 27018, ISO 27701, ISO 9001, WCAG.
- Financial services**: 23 NYCR Part 500 (US), AFM and DNB (Netherlands), AMF and ACPR (France), APRA (Australia), CFTC 1.31 (US), EBA (EU), FCA and FRA (UK), FIEC (US), FINMA (Switzerland).
- Automotive, education, energy, media, and telecommunication**: CDSA, DPP (UK), FACT (UK), US CCPA.
- Global**: ISO 20000-1, ISO 22301, ISO 27001, ISO 27017, ISO 27018, ISO 27701, ISO 9001, WCAG.
- Financial services**: FINRA 4511 (US), FISC (Japan), FSA (Denmark), GLBA (US), KNF (Poland), MAS and ABS (Singapore), NBB and FSMA (Belgium), OSFI (Canada).
- Regional - Americas**: Argentina PDPA, Canada privacy laws, Canada Protected B, US CCPA.
- Financial services**: OSPAR (Singapore), PCI 3DS, PCI DSS, RBI and IRDAI (India), SEC 17a-4 (US), SEC Regulation SCI (US), SOX (US), TruSight.
- Regional - Asia Pacific**: Australia IRAP, China GB 18030, China DJCP (MLPS), China TCS.
- US government**: CIS, CMMIC, CNSSI 1253, DFARS, DoD IL2, DoD IL4, DoD IL5, DoD L6, DoE 10 CFR Part 810, EAR, FedRAMP, FIPS 140.
- US government**: ICD 503, IRS 1075, ITAR, JSIG, NDAA, NIST 800-161, NIST 800-171, NIST 800-53, NIST 800-63, NIST CSF, Section 508 VPATs, StateRAMP.
- Healthcare and life sciences**: ASIP HDS (France), EPS (US), GxP (FDA 21 CFR Part 11), HIPAA (US), HITRUST, MARS-E (US), NEN 7510 (Netherlands).
- Regional - EMEA**: EU Cloud CoC, EU EN 301 549, ENISA IAF, EU GDPR.



Cloud rationalization with the 5 R's



Rehost
Lift and shift migration



Refactor
Reduce the operational costs by using PaaS



Rearchitect
If some aging applications aren't compatible with cloud providers



Rebuild
For apps unsupported with the current business processes. Create a new code base to align with a cloud-native approach



Replace
Sometimes SaaS applications can provide all the necessary functionality



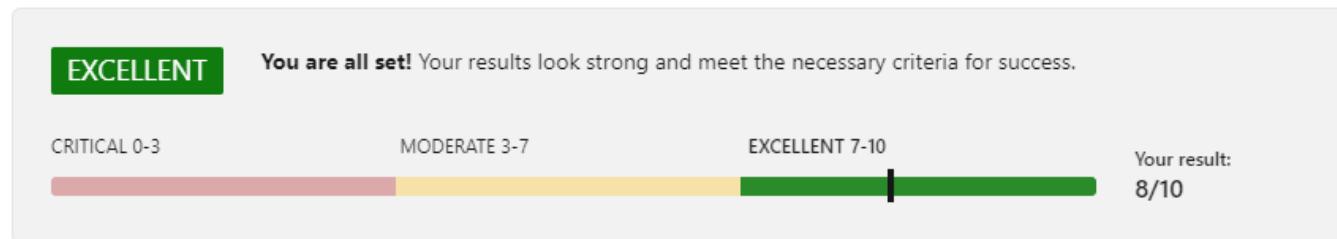
Strategic Migration Assessment and Readiness Tool (SMART)

<https://aka.ms/smartzool>

Understanding your SMART results

Based on your responses, the following results show your migration readiness across seven areas. The areas are chronological. Particularly focus on early phases, like business strategy, before moving on. Explore the recommendations to create your action plan and address gaps.

Your overall results



Categories that influenced your results



You can find out how to improve on individual categories by reviewing the [recommendations](#) below in the report.

[Export to CSV](#)

Improve your results

Our recommendations for improving your results are organized by category below.

Recommendations Unanswered

Filter By- All

	A
1	Column1
2	Strategic Migration Assessment and Rea
3	
4	Understanding your SMART results
5	Your overall results
6	Business strategy
7	Planning
8	Migration plan
9	Technical skilling
10	Landing zone
11	Governance
12	Management
13	
14	Recommended next steps
15	Migration checklist
16	Azure migration and modernization cen
17	Microsoft Cloud Adoption Framework
18	
19	Category
20	Business strategy
21	Planning
22	Planning
23	Planning
24	Migration plan
25	Migration plan
26	Migration plan
27	Migration plan
28	Landing zone
29	Landing zone
30	Landing zone
31	Landing zone
32	Governance
33	Governance
34	Governance
35	Governance
36	Governance
37	-----
38	
39	Category
40	Business strategy

Business strategy	EXCELLENT	1 recommended action	Show more ^
Planning	EXCELLENT	3 recommended actions	Show more ^
Migration plan	EXCELLENT	4 recommended actions	Show more ^
Technical skilling	EXCELLENT	0 recommended actions	Show more ^
Landing zone	EXCELLENT	4 recommended actions	Show more ^
Governance	MODERATE	5 recommended actions	Show less ^
Results breakdown			Your result: 6/11
CRITICAL 0-4	MODERATE 4-7	EXCELLENT 7-11	
5 recommended actions			
<input type="checkbox"/> Recommendations	Priority	Notes	
Learn about Azure Cost Management and Billing.	0	Add a Note 	
Learn about Azure Governance Visualizer (AzGovViz).	0	Add a Note 	
Review the Cloud Adoption Framework governance methodology.	0	Add a Note 	
Learn more at the FinOps Foundation.	0	Add a Note 	
Learn how to incorporate Microsoft Defender for Cloud.	0	Add a Note 	

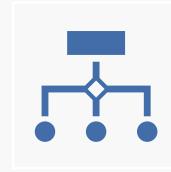
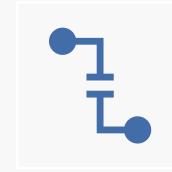


Azure CAF

Microsoft Cloud Adoption Framework (CAF) for Azure



Start with Azure landing zones for modern application platforms



Guidance
The Cloud Adoption Framework guides the creation of all Azure environments using Azure landing zones.

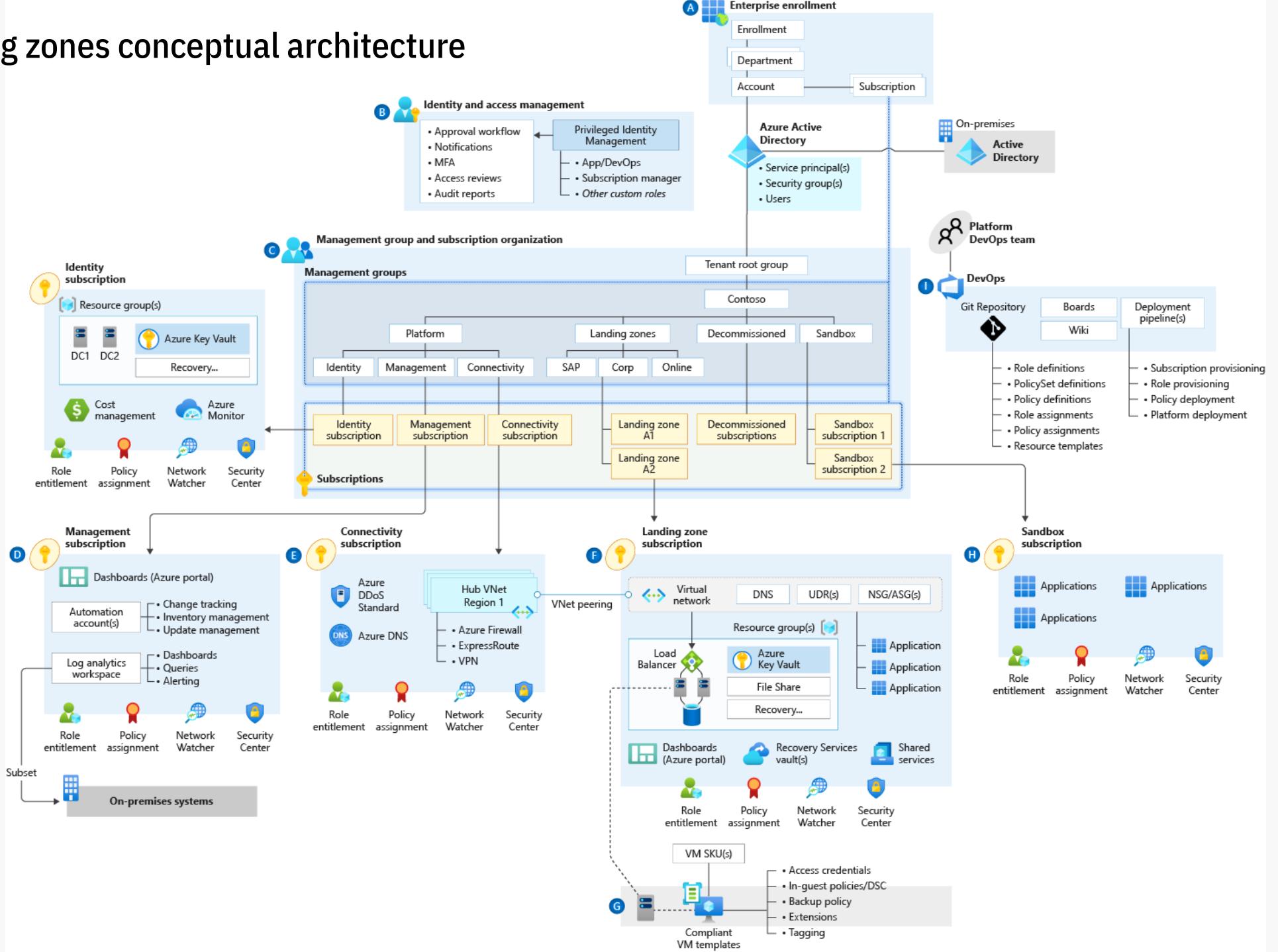
Start (somewhere)
With Azure landing zones, you can start with a small implementation and expand over time.

Strategy
Management groups and subscriptions are used to assign policies to the resources underneath them.

Separation
Subscriptions are the management boundary for governance and isolation of resources.

Standardization and Automation
Require developers to follow defined processes for deploying the hosts.

Azure landing zones conceptual architecture





More resources

- Cloud Governance
<https://learn.microsoft.com/en-us/assessments/b1891add-7646-4d60-a875-32a4ab26327e/>
- Cloud adoption antipatterns
<https://learn.microsoft.com/en-us/azure/cloud-adoption-framework/antipatterns/antipatterns-to-avoid>
- Azure compliance
<https://learn.microsoft.com/en-us/azure/compliance/>
- SMART Tool
<https://aka.ms/smarttool>



Management Groups

Name	Type	ID
▼ [User] Tenant Root Group	...	Management group
> [Key] 3 subscriptions		
[User] 2Disable	...	Management group
▼ [User] atwork root	...	Management group
[Key] MCPP Subscription	...	Subscription
> [User] PLAYGROUND	...	Management group
> [User] PROD	...	Management group

5

6

7

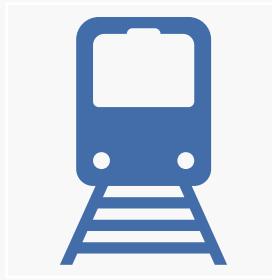


Azure Policy

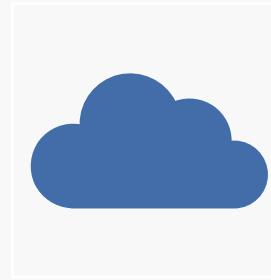
Set guardrails throughout your resources



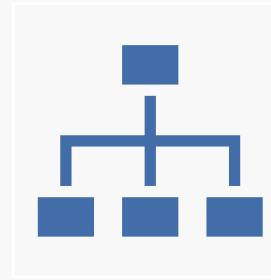
Best practices for working with Azure Policies to ensure effective governance, security, and compliance



Azure Policy
Implement proper guardrails
and assess compliance across
the organization.



Use RBAC
Remember that Azure Policy
should not be used for tasks
better handled by role-based
access control (RBAC).



Define
It's essential to align policies
with your organization's
specific needs and
compliance requirements.



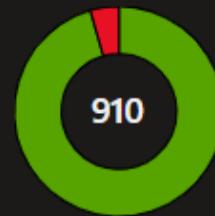
Azure Policies samples

Overall resource compliance ⓘ

96%

870 out of 910

Resources by compliance state ⓘ



870 - Compliant
40 - Non-compliant

Non-compliant initiatives ⓘ

0

out of 0

Non-compliant policies ⓘ

6

out of 10

Name ↑

Scope ↑

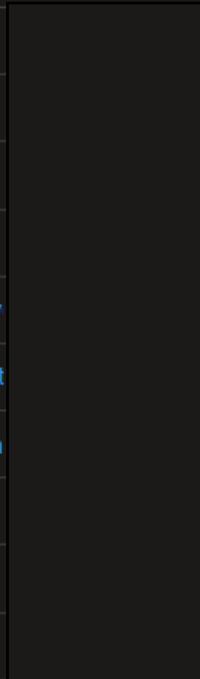
Compliance state ↑

Resource compliance ↑

Non-Compliant Re... ↓

Non-compliant pol...

ATW: Deploy Diagnostic Settings for Logic Apps to Log Analytics		
ATW: App Service apps should use the latest TLS version		
ATW: App Service Enforce HTTPS		
ATW: Storage Account Require TLS 1.2		
ATW: Storage accounts should have the specified minimum TLS v		
ATW: Deploy - Configure diagnostic settings for Azure Key Vault t		
ATW: Azure SQL Database should be running TLS version 1.2 or n		
ATW: Audit SQL Database without elastic pool		
ATW: Function apps should use the latest TLS version		
ATW: Function apps should only be accessible over HTTPS		



✖ Non-compliant	92% (321 out of 348)	27	1
✖ Non-compliant	89% (83 out of 93)	10	1
✖ Non-compliant	99% (109 out of 110)	1	1
✖ Non-compliant	99% (307 out of 308)	1	1
✖ Non-compliant	99% (307 out of 308)	1	1
✖ Non-compliant	99% (68 out of 69)	1	1
✓ Compliant	100% (4 out of 4)	0	0
✓ Compliant	100% (69 out of 69)	0	0
✓ Compliant	100% (19 out of 19)	0	0
✓ Compliant	100% (19 out of 19)	0	0



Best practices for working with Azure Policies to ensure effective governance, security, and compliance



Use a Naming Convention for Policies

Consistently name your policies to make them easily identifiable and organized. A clear naming convention helps manage and maintain policies efficiently.



Block the Creation of Public IP Addresses

Set up an Azure Policy to prevent accidental creation of public IP addresses. This ensures that only authorized resources can have public endpoints.



Control Network Security Groups (NSGs)

Block NSGs from being applied to subnets directly. Instead, manage NSGs at the network interface or virtual machine level. This provides better control over network security.



Enforce Tagging Standards

Use Azure Policy to enforce tagging standards for resources. Tags help categorize and organize resources, making it easier to manage and track them.



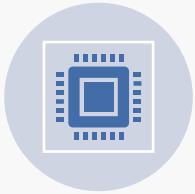
Audit and Remediate Unused Resources

Regularly audit and remediate unused network interfaces, disks, or virtual machines. Azure Policy can help identify and enforce cleanup actions.



Monitor Changes to Critical Resources

Implement policies that monitor changes to critical resources. Detect unauthorized modifications promptly and take necessary actions.



Implement Just-in-Time (JIT) Access

Use Azure Security Center to enforce JIT access for virtual machines. This restricts access to specific time windows, reducing exposure to potential threats.



Azure Policies useful links

- Azure Policy Recommended Practices
<https://techcommunity.microsoft.com/t5/core-infrastructure-and-security/azure-policy-recommended-practices/ba-p/3798024>
- Insights and release/change tracking on Azure Governance capabilities
<https://www.azadvertiser.net/>
- Policies included in Azure landing zones reference implementations
<https://github.com/Azure/Enterprise-Scale/wiki/ALZ-Policies>
- Azure CAF Policies
<https://github.com/Azure/Enterprise-Scale>



Azure Blueprints

- Simplify largescale Azure deployments by packaging key environment artifacts
- Can contain Azure Resource Manager templates, role-based access controls, and policies, in a single blueprint definition.

 **Important**

On July 11, 2026, Blueprints (Preview) will be deprecated. Migrate your existing blueprint definitions and assignments to [Template Specs](#) and [Deployment Stacks](#). Blueprint artifacts are to be converted to ARM JSON templates or Bicep files used to define deployment stacks. To learn how to author an artifact as an ARM resource, see:

- [Policy](#)
- [RBAC](#)
- [Deployments](#)



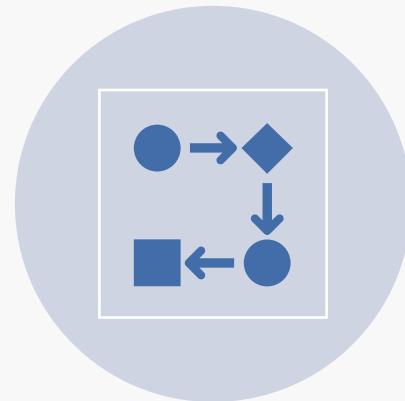
Requirements and challenges



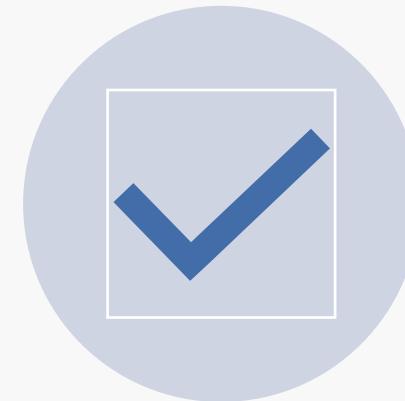
App Governance - Requirements and challenges



CLOUD APPS CAN BE A
STARTING POINT FOR
PRIVILEGE ESCALATION
LATERAL MOVEMENT
EXFILTRATION OF DATA

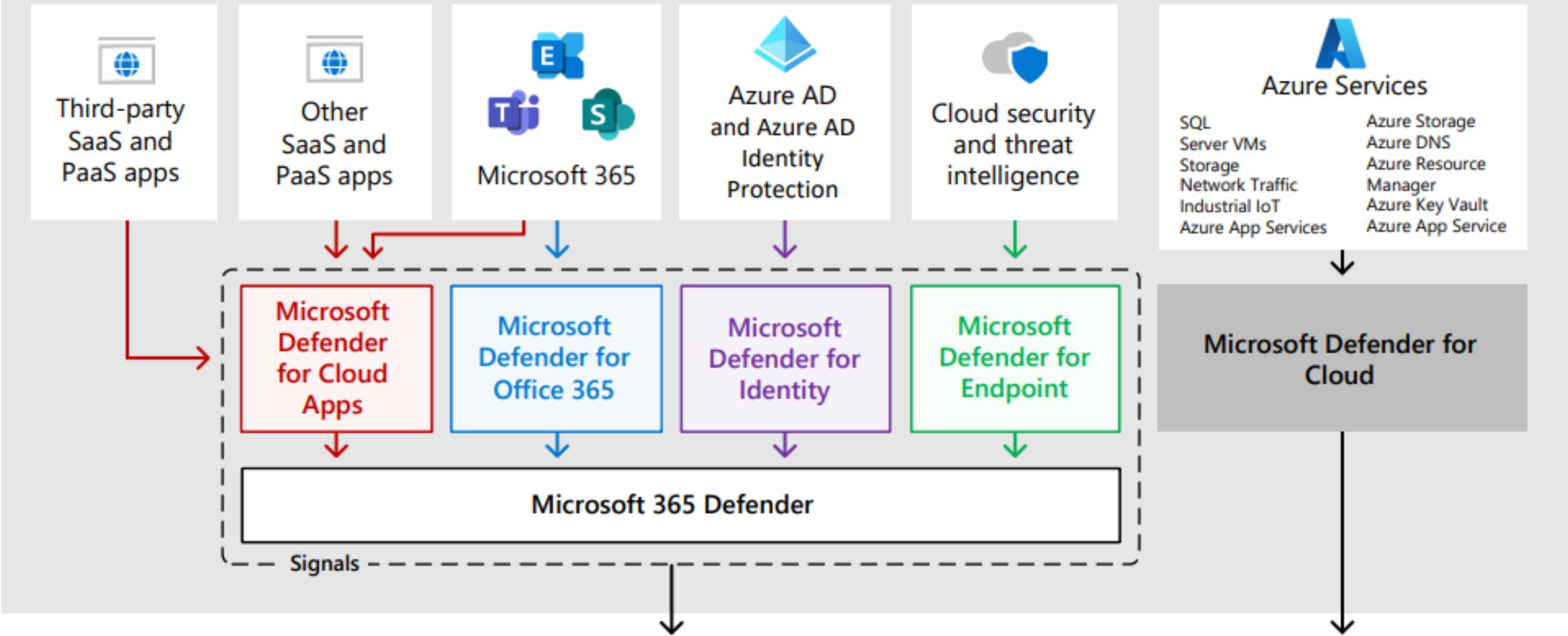


ALL OR NOTHING DOES NOT
WORK
STAY CURRENT
START SMALL (BUT START)



APP GOVERNANCE
VISIBILITY
REMEDIATION
GOVERNANCE

Your subscriptions in the Microsoft cloud



Microsoft 365 Defender portal



Signals from sign-ins, Windows 11 or 10 desktops, and Office 365 and other cloud apps feed

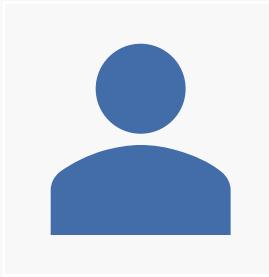
Azure Security Center



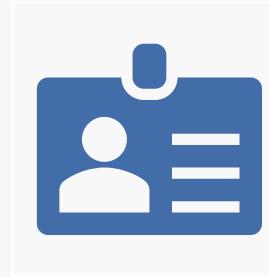
Signals from Azure services



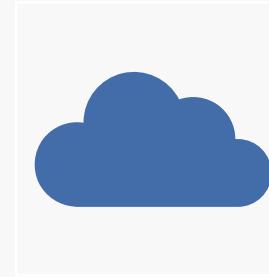
App protection



App governance
provides detailed information
about an app's activity at the
API level.



Entra ID
provides foundational app
metadata and detailed
information on sign-ins to
apps.



Defender for Cloud Apps
provides app risk information.

- Home
- Incidents & alerts
- Hunting
- Action center
- Threat analytics
- Secure score
- Learning hub
- Endpoints
- Search
- Device inventory
- Vulnerability management
- Partners and APIs
- Evaluation & tutorials
- Configuration management
- Email & collaboration
- Investigations
- Explorer
- Submissions
- Review
- Campaigns
- Threat tracker
- Attack simulation training
- Policies & rules
- Cloud apps

App governance

[Learn more about app governance](#)

Overview Apps Alerts Policies

Apps

70 apps in Microsoft 365 [ⓘ](#)

30 overprivileged apps [ⓘ](#)

56 highly privilege apps [ⓘ](#)

[View all apps](#)

Alerts

3K unresolved alerts

22 threat alerts

3K policy alerts

[View all alerts](#)

Latest alerts

	Generated	Severity	Alert name	Source
10/28	■■■■■ Low	Policy [Sumit] Over...	Policy	
10/28	■■■■■ Medium	Policy DemoPolicyT...	Policy	
10/28	■■■■■ Medium	Policy Overprivileg...	Policy	
10/28	■■■■■ Medium	Policy Overprivileg...	Policy	
10/28	■■■■■ Low	Policy Increase in a...	Policy	
10/28	■■■■■ Low	Policy Overprivileg...	Policy	
10/28	■■■■■ Low	Policy Overprivileg...	Policy	
10/28	■■■■■ Medium	Policy Custom poll...	Policy	
10/28	■■■■■ Medium	Policy DemoPolicyT...	Policy	

[View all alerts](#)

Data usage (preview)

Total data usage

125 GB

100 GB

75 GB

50 GB

25 GB

0 GB

July August September October

Data usage by resource type

75 GB

50 GB

25 GB

0 GB

July August September October

File Email

App categories [ⓘ](#)

All apps Highly privileged Overprivileged Unverified publisher App-only permissions New apps

App	Certification	Consent type	Privilege level	Data usage	Last modified
PostmanGraph	NA	Admin (88)	■■■■■ High	0 B	Aug 2, 2021 2:59 AM
AadAuditPipelineApp	NA	Admin (88)	■■■■■ High	0 B	Oct 4, 2021 3:52 PM
MaliciousApp	NA	Admin (88)	■■■■■ High	0 B	Oct 7, 2021 9:38 AM

Optimize app governance with policies

Secure app permissions

Find and stop apps that have unused permissions or permissions that might be too powerful.

[Create policy](#)



App governance

 What's new  Learn more

Get in-depth visibility and control over OAuth apps integrated with Azure Active Directory, Google, and Salesforce.

 We've automatically turned on app governance. [Learn more about our data security and privacy practices](#)

 Starting June 1, 2023, management of unused apps, unused credentials, and expiring credentials will only be available to app governance customers with Microsoft Entra Workload Identities Premium. [Try Workload Identities](#) 

[Overview](#) [Azure AD](#) [Alerts](#) [Policies](#)

Apps

207 apps found 

44 overprivileged apps 

41 highly privileged apps 

[View all apps](#)

Incidents

4 unresolved incidents

3 threat incidents

1 policy incidents

[View all incidents](#)

Latest incidents

Last Activity	Severity	Incident name	Source
5/14/2024	 Medium	High volume of email...	Detection
5/5/2024	 Medium	App metadata associ...	Detection
1/16/2024	 Medium	Unusual activity from...	Policy
12/11/2023	 Medium	App metadata associ...	Detection



Create rule

Select conditions

We will apply the policy to app

App details

+ Add condition ▾

- App registration age
- Certification
- Publisher verified
- Application permissions
- Delegated permissions
- Highly privileged
- Non-Graph API permissions
- Overprivileged
- Data usage
- Data usage trend
- API access
- API access trend
- Number of consenting users
- Increase in consenting users
- Priority account consent giver
- Names of consenting users
- Roles of consenting users
- Services accessed
- Error rate

Search

Learn more about policies



Save

Cancel



Cloud Hub	Enabled	Yes	Mixed	Admin	atwork GmbH	Jul 17, 2023 7:03 AM
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- Home
- Incidents & alerts
- Hunting
- Action center
- Threat analytics
- Secure score
- Learning hub

- Endpoints
- Search
- Device inventory
- Vulnerability management
- Partners and APIs
- Evaluation & tutorials
- Configuration management

- Email & collaboration
- Investigations
- Explorer
- Submissions
- Review
- Campaigns
- Threat tracker
- Attack simulation training

App governance

[Overview](#) [Apps](#) [Alerts](#) [Policies](#)
[Filter](#) [Save the query](#) [Reset](#) [Filters](#)

Category: [All apps](#)

App name	Added on	Last modified	Consent type	Data usage (preview)
AadAuditPipelineApp	3/7/2020	10/4/2021	Admin (88)	0 B (0%)
Adobe Sign for Micro...	8/3/2021	8/4/2021	User (1)	0 B (0%)
alfalfa4	9/3/2020	7/15/2021	Admin (88)	0 B (0%)
app	8/12/2020	7/7/2021	Admin (88)	0 B (0%)
appadracarbTecnicas	8/10/2021	8/10/2021	Admin (88)	0 B (0%)
appadracarbTecnicas1	8/10/2021	8/10/2021	Admin (88)	4.18 GB (-64.4%)
Audit Log Generator	2/22/2021	7/7/2021	Admin (88)	0 B (0%)
AuditGapClientApp	3/16/2021	7/7/2021	Admin (88)	0 B (0%)
AuditLogsConnector	3/24/2021	8/2/2021	Admin (88)	0 B (0%)
AZ500 app1	8/10/2021	9/22/2021	Admin (88)	4.83 GB (0%)
callingapp	7/29/2020	7/7/2021	Admin (88)	0 B (0%)
Cloud Sync	8/27/2020	7/7/2021	User (1)	0 B (0%)
Contoso File Parser	7/27/2021	9/27/2021	Admin (88)	0 B (0%)
Contoso Organizer	4/1/2021	7/7/2021	User (1)	0 B (0%)



Contoso Organizer

[Details](#) [Data usage \(preview\)](#) [Users](#) [Permissions](#)

App name Contoso Organizer **App ID** 043768e9-2b46-4bee-9d73-0ee5b140a2dd [View in Azure AD](#)

Added on	4/1/2021	Last modified	7/7/2021
App status	Enabled	Last action	-
Publisher verification	Contoso	Certification	Not certified Learn more about Microsoft 365 certification
Learn more about publisher verification		Learn more about Microsoft 365 certification	

- Activity (1)
- Chat (1)
- Teams
- Calendar
- Calls
- Files
- ...
- Apps
- Help

Join or create a team 

Teams

Your teams

-  Digital Initiative Public R... 
-  SOC Team 
-  Contoso 
-  Mark 8 Project Team 

General

- Design** 
- Digital Assets Web**
- Go to Market Plan**
- Research and Development**

-  Retail 
- General** 
- NC460 Sales**
-  Sales and Marketing 
- General**
- Monthly Reports** 

 Join or create a team**General**

Posts

Files

Wiki

Milestones Meet 

Almost there ...

Milestones needs your permission to use the following. Please allow the permissions to proceed.



Office 365 Users

admin@M365x24046415.onmicrosoft.com

Switch account

Signed in [View permissions](#)**Allow****Don't Allow**



Home

Incidents & alerts

Hunting

Actions & submissions

Threat analytics

Secure score

Learning hub

Trials

Assets

Identities

Endpoints

Device inventory

Vulnerability management

Partners and APIs

Evaluation & tutorials

Incidents

Email notification

New incidents queue

Most recent incidents and alerts

Export

Search for name or ID

Filter

Customize columns

1 Week

Filters: Status: New +1

Severity: High +2

Service sources: App governance Policy +1

<input type="checkbox"/>	Incident name	Incident Id	Tags	Severity	Investigation state	Categories
<input type="checkbox"/>	App with numerous errors	703		Medium	1 investigation states	Suspicious activity
<input type="checkbox"/>	App made unusual email searches activities	685		Medium	1 investigation states	Collection



Policy template Name and severity Scope and conditions Actions Status Review and finish

Choose a policy template

Create your policy from a template or choose "Custom" to start from scratch. You'll be able to add conditions and specify actions.

Category

Usage

Permissions

Certification

Activity

Custom

Template

Overprivileged app

New app with non-Graph API permissions

New highly privileged app

Next**Cancel**

- [...](#)
- [Explorer](#)
- [Review](#)
- [Campaigns](#)
- [Threat tracker](#)
- [Exchange message trace](#)
- [Attack simulation training](#)
- [Policies & rules](#)
-
- [Cloud apps](#) ^
- [Cloud discovery](#)
- [Cloud app catalog](#)
- [OAuth apps](#)
- [App governance](#)
- [Files](#)
- [Activity log](#)
- [Governance log](#)

Cloud Discovery



Win10 Endpoint Users

Last 30 days

Actions



Updated on May 30, 2023, 4:05 PM

[Dashboard](#) [Discovered apps](#) [Discovered resources](#) [IP addresses](#) [Users](#) [Devices](#)

Apps	IP addresses	Users	Devices
391	188	16	14

Traffic
224.9 GB ↑ 44.8 GB
↓ 180.0 GB

App categories ◀ 1-5 of 40 ▶ Traffic ↓

Sanctioned Unsanctioned Other

Collaboration 57.5 GB

Hosting services 38.5 GB

Webmail 20.9 GB

Cloud storage 12.3 GB

Risk I... Categories by Traffic ↓

Traffic

from

high risk

apps

Traffic

Discover...

of 391 >

All categories ▼

Traffic ▼



	Microsoft SharePoint		53.4 GB
	Azure CDN Edge ...		34.7 GB
	Microsoft Exchange...		20.9 GB
	Microsoft OneDrive...		12.2 GB
	Garmin		9.7 GB
	Netflix		9.2 GB
	CloudFlare		9.1 GB
	Microsoft Online S...		9.0 GB
	Azure DevOps Ser...		7.1 GB
	GitHub		5.3 GB
	Adobe		5.3 GB
	Fastly		5.0 GB
	Microsoft Support		4.4 GB

Top e...

User ✓

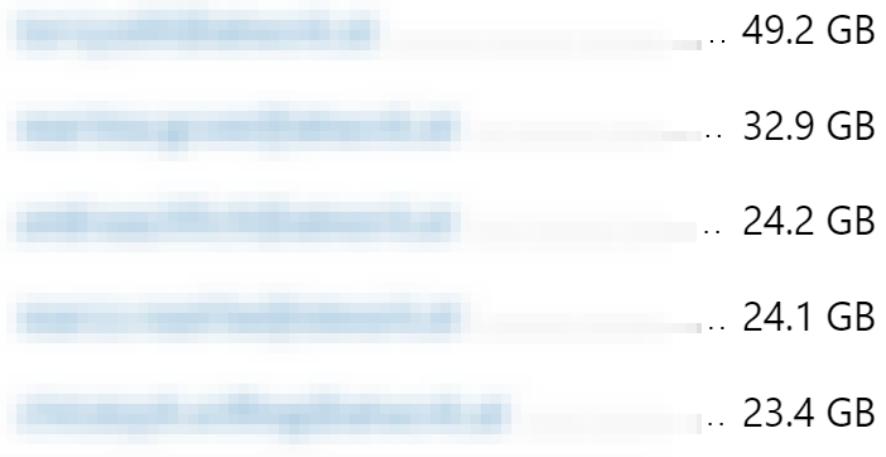
by

Traffic ✓



User

Total



Apps headquart...

All categories ▾

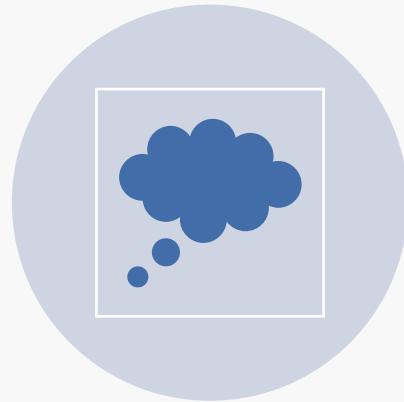




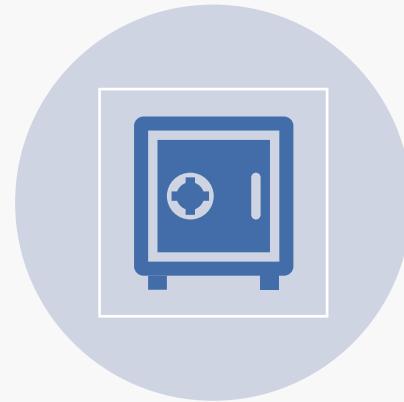
Moving workloads and data to the cloud?



CUSTOMER:
“THE (PUBLIC) CLOUD IS NOT
SAFE.”



CONSULTANT:
“AZURE IS SECURE BY DEFAULT.”



MICROSOFT:
“WE HAVE ENTRA ID, AZURE
SECURITY CENTER, KEY VAULT,
VNETS, BASTION, WAF, & MANY
MORE SERVICES...”



Managed Identities

Secure your Azure resources





Azure Key Vault & Managed Identities

- The safe place to store credentials and secrets like certificates and connection strings.
- Use Managed identities if possible

I can use Managed Identities when...

As a developer, I want to build an application using

Source:

Azure Resources

Azure VMs
Azure App Services
Azure Functions
Azure Container instances
Azure Kubernetes Service
Azure Logic Apps
Azure Storage
....

that accesses

Target:

Any target that supports Azure Active Directory Authentication:

- Your applications
- Azure Services:

- Azure Key Vault
- Azure Storage
- Azure SQL...

without having to manage any credentials!

For example, I want to build an application using **Azure App Services** that accesses **Azure Storage** without having to manage any credentials.

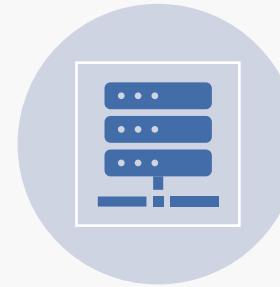


Managed Identity types – when use what?



System-assigned

Tied to the lifecycle of that service instance.
Only that Azure resource can use this identity to request tokens from Azure AD.



User-assigned

Managed identity as a standalone Azure resource managed separately from the resources that use it.
Assign it to one or more instances of an Azure service



Azure Logic Apps

- Perfect for no/low code business processes
- Secure connections + Managed Identity + Key Vault



Azure Logic Apps: Secure the trigger

LogicAppGetUsersManagedIdentity | Workflow settings X

Logic app

Search (Ctrl+ /) Save Discard

Development Tools

- Logic app designer
- Logic app code view
- Versions
- API connections
- Quick start guides

Settings

- Workflow settings Any IP
- Authorization

Access control configuration

Allowed inbound IP addresses

Restrict calls to triggers in this logic app to the provided IP ranges. IP addresses can be either IPv4 or IPv6 and accepts range and bitmask range formats.

Trigger access option

Any IP

Restrict calls to get input and output r Any IP
range and bitmask range formats.

IP ranges for contents Only other Logic Apps

input the valid IP ranges, format like x.x.x.x/x or x.x.x.x-x.x.x.x

Specific IP ranges



Automation Accounts & more

Apps & Scripts Security & Deployment



Automation Accounts

- Migrate your PowerShell scripts to the cloud
- Secure the access
(Connections, Managed Identity, Key Vault, Firewall)



Create a self-signed certificate with Powershell

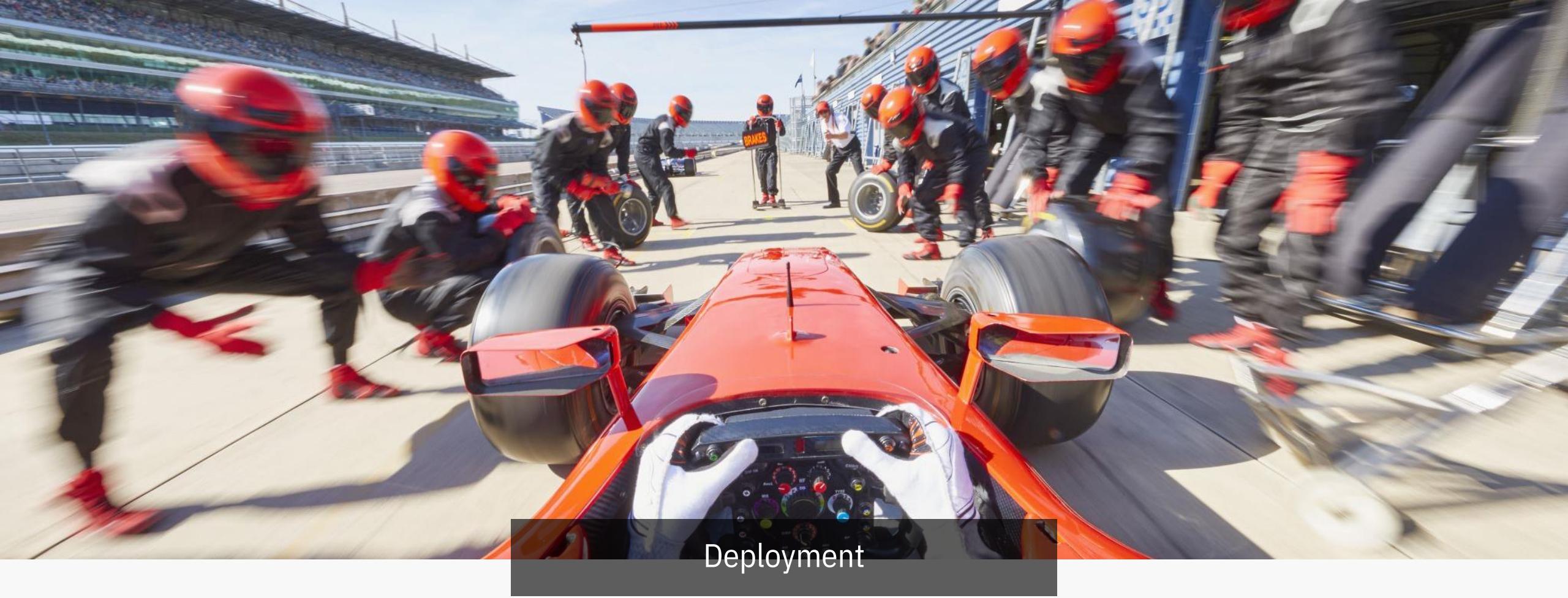
```
# Certificate (PFX)
$cert = New-SelfSignedCertificate
    -NotAfter $(Get-Date).AddYears($certYears)
    -Type SSLServerAuthentication
    -FriendlyName 'MyAuthCert'
    -Subject 'CN=MyCompany'
    -CertStoreLocation 'Cert:\CurrentUser\My'
    -KeySpec KeyExchange
```



Access Key Vault from App config settings

```
@Microsoft.KeyVault(SecretUri=https://  
m365conf.vault.azure.net/secrets/secret1/)
```

<https://docs.microsoft.com/en-us/azure/app-service/app-service-key-vault-references>



Deployment

Bicep & ARM



Build ARM template from a bicep script

The screenshot shows the Visual Studio Code interface. On the left is the Explorer sidebar with icons for File Explorer, Search, Problems (with 8 items), and others. The main area shows a folder structure under 'SECUREAPPS' with 'ARM' expanded, containing files like '00-Prerequisites', '01-ProvisionTeam', '02-InviteGuest', '03-ReportGuests', '04-ReportTeams' (which is expanded to show '04-ReportTeams-SPO-WF.json', '04-ReportTeams-SPO.bicep', '04-ReportTeams-SPO.main.bicep', and '04-ReportTeams-SPO.main.json'). A context menu is open over the '04-ReportTeams-SPO.main.bicep' file, listing options: Stop Web Preview Server (Alt+D), Open to the Side (Ctrl+Enter), Open With... (Shift+Alt+R), Reveal in File Explorer, Open in Integrated Terminal, Build ARM Template (Ctrl+Shift+B, highlighted with a blue background and a cursor icon), Generate Parameters File, Insert Resource... (Ctrl+K I), Restore Bicep Modules (Force) (Ctrl+M R), and Deploy Bicep File...

File Edit Selection View Go Run ... ← → 🔍 Secure

EXPLORER

SECUREAPPS

- ARM
 - 00-Prerequisites
 - 01-ProvisionTeam
 - 02-InviteGuest
 - 03-ReportGuests
 - 04-ReportTeams
 - 04-ReportTeams-SPO-WF.json
 - 04-ReportTeams-SPO.bicep
 - 04-ReportTeams-SPO.main.bicep**
 - 04-ReportTeams-SPO.main.json

Stop Web Preview Server Alt+D

Open to the Side Ctrl+Enter

Open With... Shift+Alt+R

Reveal in File Explorer

Open in Integrated Terminal

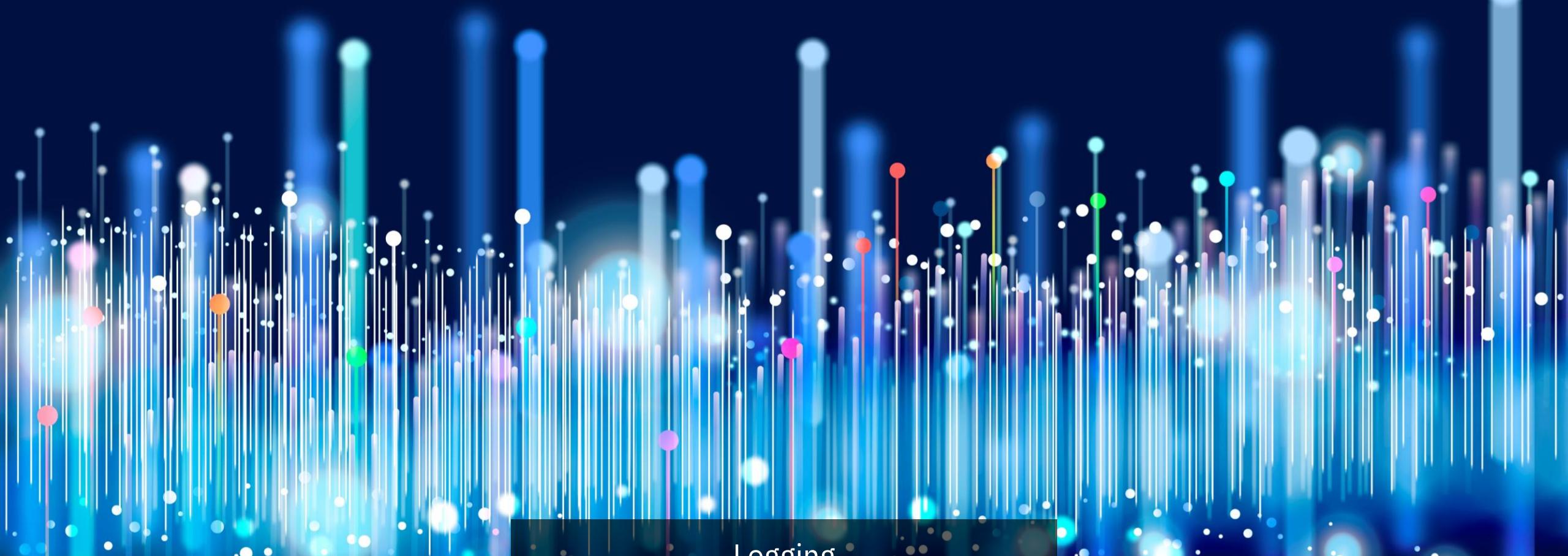
Build ARM Template Ctrl+Shift+B

Generate Parameters File

Insert Resource... Ctrl+K I

Restore Bicep Modules (Force) Ctrl+M R

Deploy Bicep File...



Logging

Monitoring & Alerts

Errors - collabsu... * ×



collabsummit

Select scope

Run

Time range : Set in query



Save



Share



New alert rule



Export



Pin to



Feedback

Queries



```
1 // Errors
2 AzureDiagnostics
3 where TimeGenerated > ago(30d)
4 where resource_resourceGroupName_s == "RG-CollabSummit"
5 where Category == "WorkflowRuntime"
6 where resource_workflowName_s == "GetUsers"
7 where status_s == "Failed"
8 order by TimeGenerated desc
9
```

Results

Chart



TimeGenerated [Amsterdam, Berlin, Bern, Rome, Stockholm, UTC]	ResourceId	Category	ResourceGroup	SubscriptionId
> 5/23/2023, 10:46:17.001 AM	/SUBSCRIPTIONS/0C5D1D4F-64E3-47A0-ACE1-25494A794C...	WorkflowRuntime	RG-COLLABSUMMIT	0c5d1d4f-64e3-47a0-ace1-254...
▼ 5/23/2023, 7:20:20.795 AM	/SUBSCRIPTIONS/0C5D1D4F-64E3-47A0-ACE1-25494A794...	WorkflowRuntime	RG-COLLABSUMMIT	0c5d1d4f-64e3-47a0-ace1-254...
TenantId	1633320f-2c09-4824-a4aa-f3b1281626ba			
TimeGenerated [UTC]	2023-05-23T05:20:20.795587Z			
ResourceId	/SUBSCRIPTIONS/0C5D1D4F-64E3-47A0-ACE1-25494A794CBF/RESOURCEGROUPS/RG-COLLABSUMMIT/PROVIDERS/MICROS...			
Category	WorkflowRuntime			
ResourceGroup	RG-COLLABSUMMIT			
SubscriptionId	0c5d1d4f-64e3-47a0-ace1-25494a794cbf			
ResourceProvider	MICROSOFT.LOGIC			
Resource	08585167876653891612922812729CU42			
ResourceType	WORKFLOWS/RUNS			
OperationName	Microsoft.Logic/workflows/workflowRunCompleted			
Level	Error			
status_s	Failed			



Staying compliant and secure in Azure



Secure your Enterprise applications with Azure



IDENTIFY
YOUR USE
CASES



USE BUILT-IN
SERVICES &
AZURE
ADVISOR



ALWAYS
CONSIDER
PAAS



APPS
(MANAGED
IDENTITIES,
CERTIFICATES
, ...)



KEY VAULT
FOR SECRETS



USE BUILT-IN
FUNCTIONALI
TY
(AUTOMATION
ACCOUNTS,
CONNECTIONS
, ...)



LOGGING &
MONITORING /
ALERTS



Best practises

- Secure your Entra ID (MFA, MFA, MFA 😊)
- Zero Trust
- Secure your Azure subscriptions
- Implement the Azure Cloud Adoption Framework (CAF)
- Work with Azure policies (best on Management Groups)
- Use a central code repository
- Use Build and Deploy Pipelines in Azure DevOps (or GitHub Actions, or other CI/CD pipelines)
- Train your users / developers how to use the deployment processes
- Automate as much as possible
- Have monitoring & alerting tools in place (Security is not a permanent state, but a living process)

THANK YOU, YOU ARE AWESOME ❤

PLEASE RATE THIS SESSION
IN THE MOBILE APP.



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