

Microsoft Defender for Cloud

Protect your multicloud and hybrid environments

Cloud Security Posture Management
Regulatory Compliance

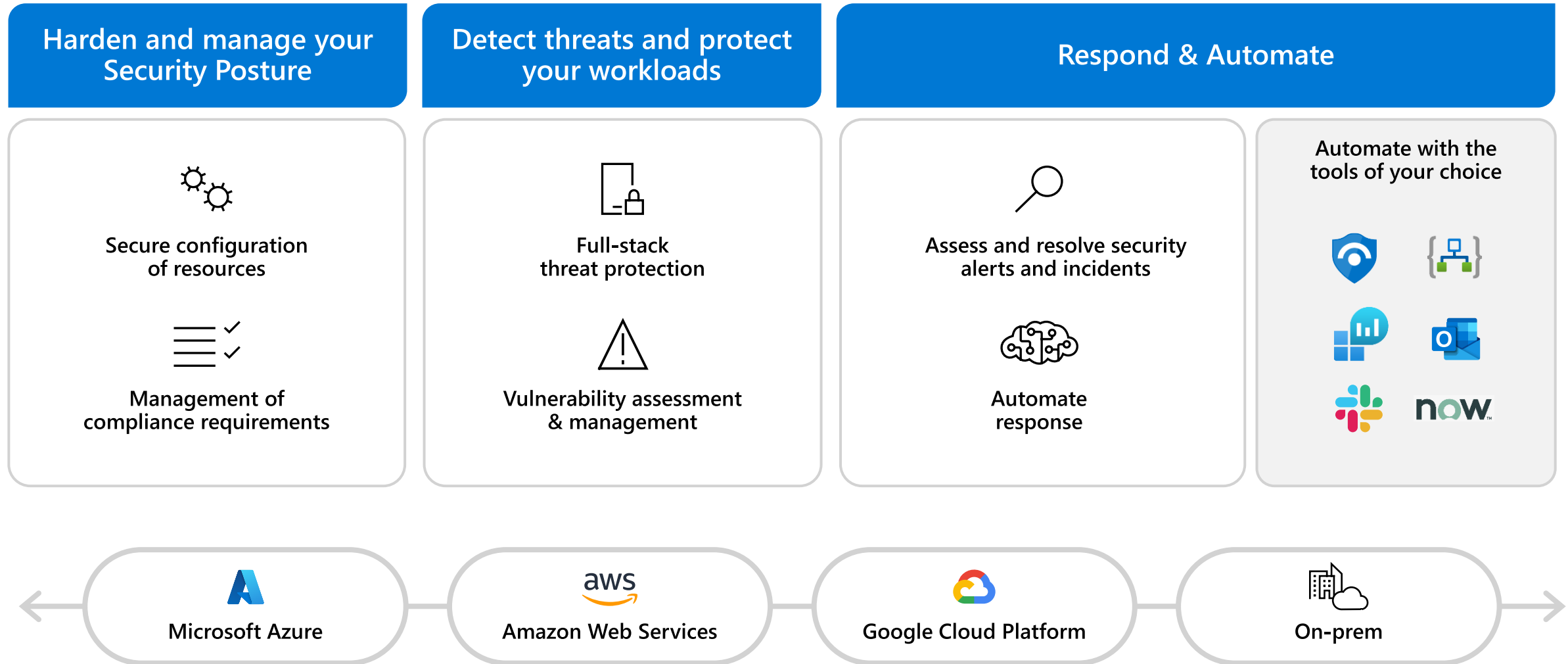
Brian Stockbrugger
Security Architect

GPSUS



Microsoft Defender For Cloud

Cloud native application protection across clouds and on-prem environments



Holistic management of your security posture in the cloud



Resource visibility

View and manage your cloud resource inventory



Secure Score

Understand the bottom line of your security posture, implement recommendations, and monitor over time



Compliance

Ensure your configurations align with key compliance standards and enforce organizational policies



Data security

Identify sensitive data and prioritize critical resources

The security dashboard

Centralized posture view

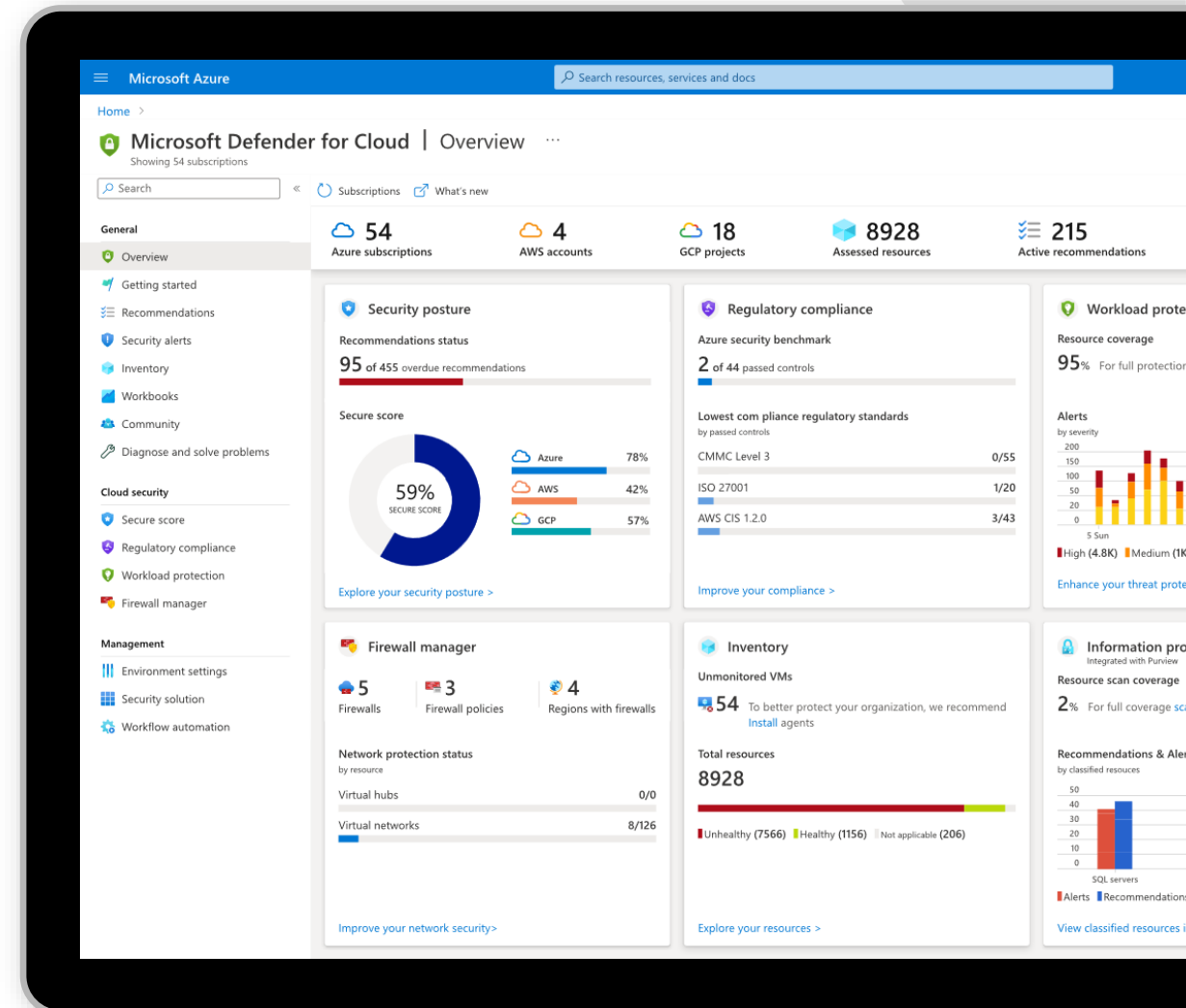
- Your security posture across Azure, AWS, and GCP in one place

Focused views

- Easily access deep dive views for security posture, resource inventory, workload protection, and more

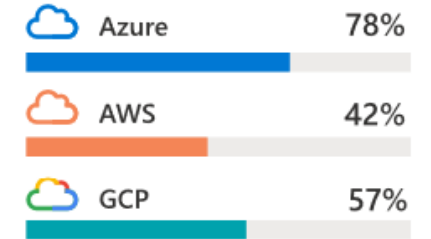
Top insights front and center

- Understand which recommendations to prioritize
- See your most attacked resources and take action

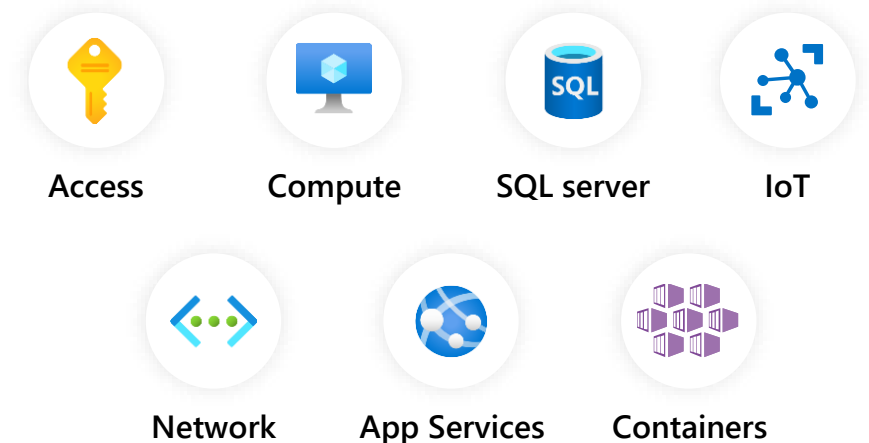


Secure Score

- Assess and implement best practices for security and compliance
- Cover all critical cloud resources across network, access, compute, databases, your service layer and more
- 450+ out-of-the-box recommendations
- Create custom recommendations to meet organizational requirements
- Use "Quick fix" to remediate with a single click or scale enforcement mechanisms to enforce policies to avoid configuration drifts



Evaluated categories

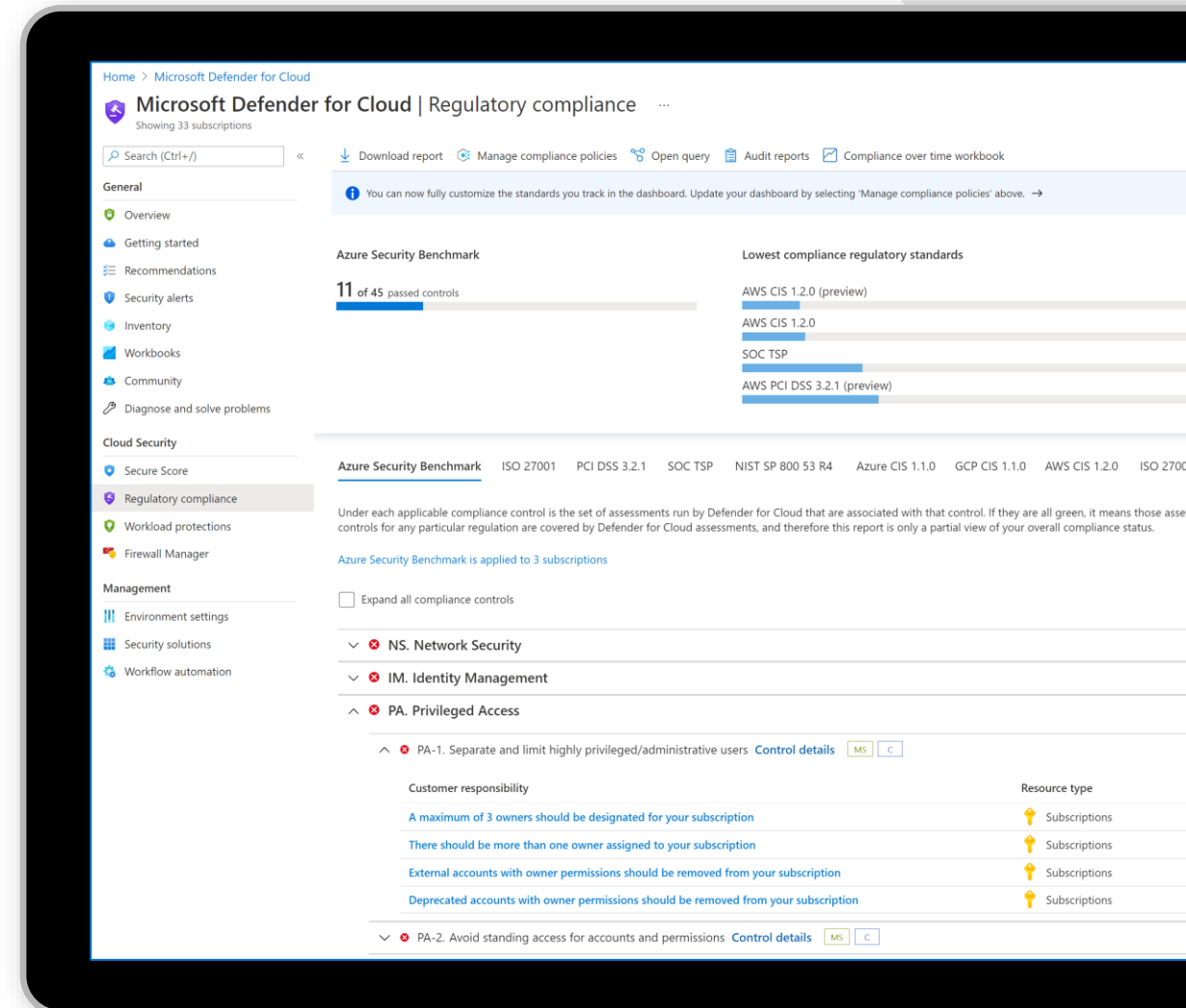


Compliance assessment and management

- Assess and manage your compliance status with a continuous assessment of your cloud resources
- Use industry standards, regulatory compliance frameworks, and vendor provided benchmarks to implement security and compliance best practices
- Create custom recommendations to meet unique organizational needs

Support for:

- ✓ CIS
- ✓ PCI
- ✓ NIST
- ✓ SOC
- ✓ ISO
- ✓ HIPAA
- ✓ Local/National compliance standards
- ✓ Azure Security Benchmark
- ✓ AWS Foundational Security best practices



Azure Security Benchmark

- Azure's own security control framework based on industry standards enables customers to meet their security control requirements in Azure
- Bringing consistency of security capabilities across all Azure Offers using Azure Security Benchmark



Publish

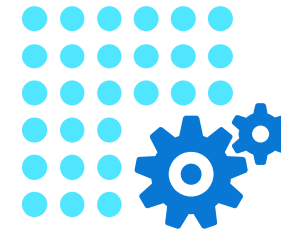
Define and Publish
the Benchmark

[Azure Security
Benchmarks documentation](#)



Standardize

Ensure all Azure
Offers meet the Cloud
Security Benchmark



Monitor

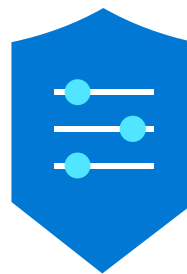
Automate Benchmark
management using
Microsoft Defender for Cloud

Importance of security Benchmarks

- Compliance and security baselines critical for successful cloud migration and adoption



Many organizations rely on the CIS/NIST Controls security best practices to improve their cyber defenses



Compliance controls require that standard security controls are measured via configuration baselines



Security configurations that result in breaches are driving awareness to the requirements

Industry standards



Publish the Benchmark

Making this easier on customers, we've done the translation ourselves

PCI Data Security Standard – High Level Overview

Build and Maintain a Secure Network and Systems	1. Install and maintain a firewall configuration to protect cardholder data 2. Do not use vendor-supplied defaults for system passwords and other security parameters
Protect Cardholder Data	3. Protect stored cardholder data

CIS Controls™ V7.1

Basic

- 1 Inventory and control hardware assets
- 2 Inventory and control software assets
- 3 Continuous vulnerability management
- 4 Controlled use of administrative privileges
- 5 Secure configuration for hardware and software on mobile devices, workstations, and servers
- 6 Maintenance, monitoring, and analysis of audit logs

Foundational

- 7 Email and web browser protections
- 8 Malware defenses
- 12 Boundary defense
- 13 Data protection

Organizational

- 17 Implement a security awareness and training program
- 18 Application software security

Information Technology Laboratory

NATIONAL VULNERABILITY DATABASE

800-53/800-53A

NIST Special Publication 800-53 (Rev. 4)

Security and Privacy Controls for Federal Information Systems and Organizations

Control Families

AC - Access Control
AU - Audit and Accountability
AT - Awareness and Training
CM - Configuration Management
CP - Contingency Planning
IA - Identification and Authentication
IR - Incident Response
MA - Maintenance
MP - Media Protection
PS - Personnel Security
PE - Physical and Environmental Protection
PL - Planning
PM - Program Management
RA - Risk Assessment
CA - Security Assessment and Authorization
SC - System and Communications Protection
SI - System and Information Integrity
SA - System and Services Acquisition

800-53 (Rev. 4)

Security Controls
Low-Impact
Moderate-Impact
High-Impact
Other Links
Families
Search

NVD



Microsoft | Docs Documentation Learn Q&A Code Samples Shows Events

Azure Product documentation Architecture Learn Azure Develop Resources

Docs / Security / Benchmark / Azure Security Benchmark

Filter by title

Azure Security Benchmark

Introduction

Security Controls (v3)

- Overview of Azure security controls
- Network security
- Identity management
- Privileged Access
- Data protection
- Asset management
- Logging and threat detection
- Incident response
- Posture and vulnerability management
- Endpoint security
- Backup and recovery
- DevOps Security
- Governance and Strategy

Security Controls (v2)

Security Controls (v1)

Security baselines for Azure

Resources

Download PDF Retiring

Azure Security Benchmark

Learn how to secure your cloud solutions

About the Azure Security Benchmark

OVERVIEW

Azure Security Benchmark introduction

Overview of Azure security controls

Overview of the Azure security baseline

AI + Machine Learning security baselines

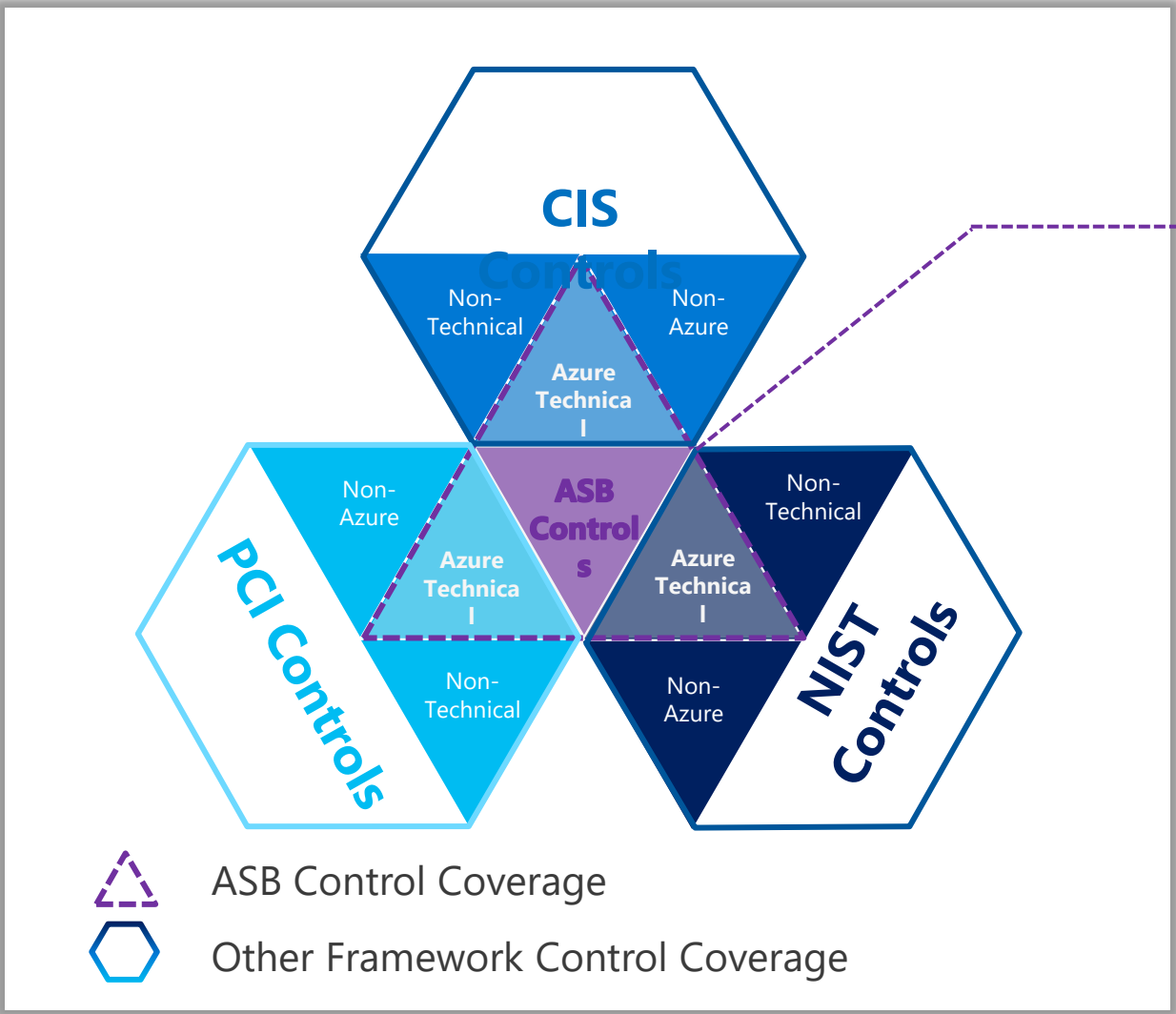
OVERVIEW

Azure Databricks

Azure Machine Learning

Cognitive Services

Current Azure Security Benchmark scope



ASB provides a canonical set of **Azure-centric technical security controls** based on widely used security/compliance control frameworks such as CIS, NIST and PCI.

- Apply Azure Security Benchmark to Azure Services



Security baselines for Azure help you strengthen security through improved tooling, tracking, and security features. They also provide you a consistent experience when securing your environment.

Security baselines for Azure focus on cloud-centric control areas. These controls are consistent with well-known security benchmarks, such as those described by the Center for Internet Security (CIS). Our baselines provide guidance for the control areas listed in the [Azure Security Benchmark](#).

Each recommendation includes the following information:

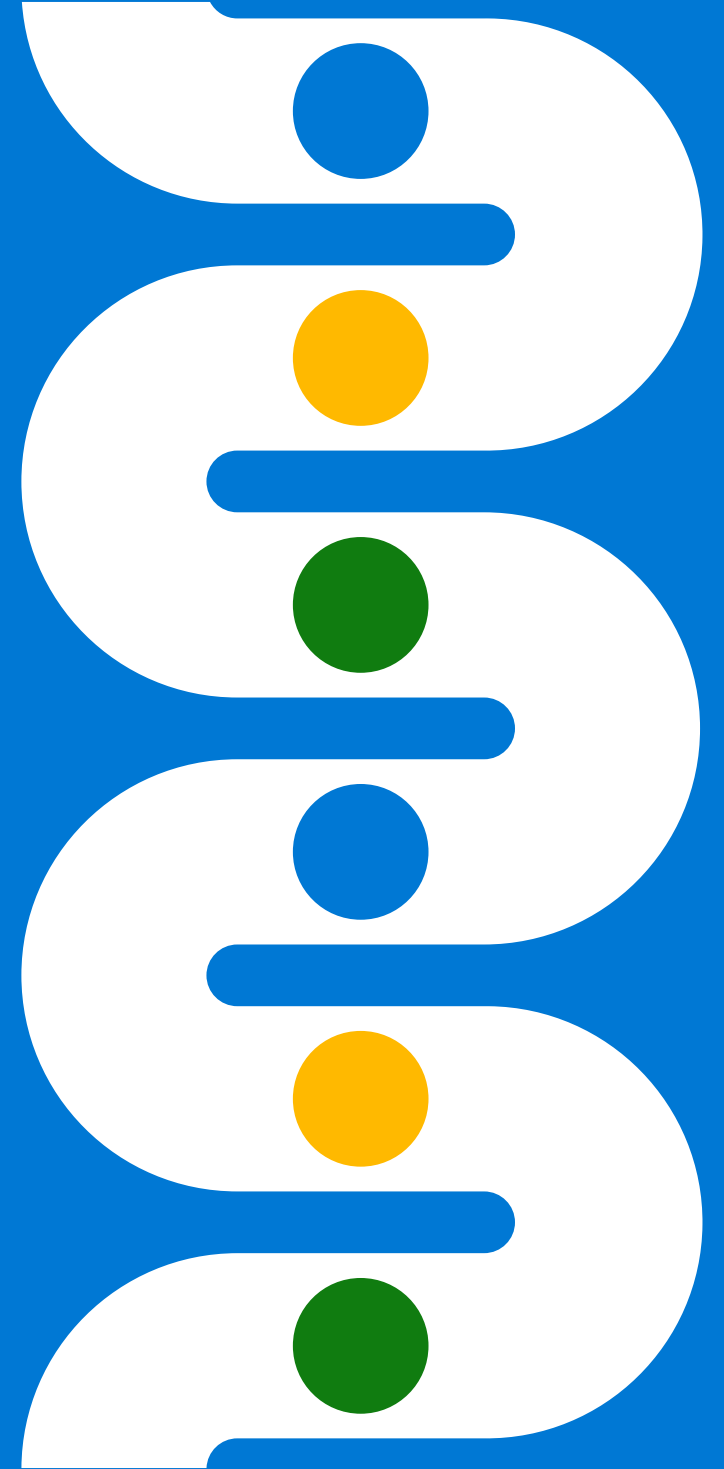
- **Azure ID:** The Azure Security Benchmark ID that corresponds to the recommendation.
- **Recommendation:** Following directly after the Azure ID, the recommendation provides a high-level description of the control.
- **Guidance:** The rationale for the recommendation and links to guidance on how to implement it. If the recommendation is supported by Azure Security Center, that information will also be listed.
- **Responsibility:** Who is responsible for implementing the control. Possible scenarios are customer responsibility, Microsoft responsibility, or shared responsibility.
- **Azure Security Center monitoring:** Whether the control is monitored by Azure Security Center, with link to reference.

All recommendations, including recommendations that are not applicable to this specific service, are included in the baseline to provide you a complete picture of how the Azure Security Benchmark relates to each service. There may occasionally be controls that are not applicable for various reasons—for example, IaaS/compute-centric controls (such as controls specific to OS configuration management) may not be applicable to PaaS services.

We welcome your feedback on the security baselines for Azure services. We encourage you to provide comments in the feedback area below. Or, if you prefer to share your input more privately with the Azure Security Benchmark team, you are welcome to fill out the form at <https://aka.ms/AzSecBenchmark>.

Demo

Regulatory Compliance



Regulatory Compliance

Microsoft Defender for Cloud | Overview

Showing 5 subscriptions

<<

Subscriptions

What's new

General

Overview

Getting started

Recommendations

Security alerts

Inventory

Workbooks

Community

Diagnose and solve problems

Cloud Security

Security posture

Regulatory compliance

Workload protections

Management

Environment settings

Security solutions

Workflow automation

5

Azure subscriptions

6

AWS accounts

6

GCP projects

8176

Assessed resources

635

Active recommendations

Se

Security posture

217/246

Unassigned recommendation

89/116

Overdue recommendations

Secure score

37%
SECURE SCORE

Azure

49%

AWS

30%

GCP

25%

[Explore your security posture >](#)

Regulatory compliance

Azure Security Benchmark

New

10 of 43 passed controls

Lowest compliance regulatory standards by passed controls

ISO 27001:2013

0/17

CMMC Level 3

0/55

Canada Federal PBMM

1/14

[Improve your compliance >](#)

Regulatory Compliance

Regulatory Compliance ...

×

[Download report](#) [Manage compliance policies](#) [Open query](#) [Compliance over time workbook](#) [Audit reports](#)

ⓘ

You can now fully customize the standards you track in the dashboard. Update your dashboard by selecting 'Manage compliance policies' above. →

Azure Security Benchmark

10 of 43 passed controls

Lowest compliance regulatory standards

[Show all 29](#)

ISO 27001:2013

0/17

CMMC Level 3

0/55


SWIFT CSP CSCF v2020

1/14

Canada Federal PBMM

1/14

<



Audit reports

Stay up to date on the latest privacy, security, and compliance-related information for Microsoft's cloud services.

Open

>

●

●

●

●

●

⚙

Is the regulatory compliance experience clear to you? ☐ Yes ☐ No

×

- Azure Security Benchmark V3

PCI DSS 3.2.1

SOC TSP

HIPAA HITRUST

NIST SP 800 53 R4

NIST SP 800 171 R2

UKO and UK NHS

Canada Federal PBMM

SWIFT CSP CSCF v2020

Azure CIS 1.1.0

GCP CIS 1.1.0 (Classic)

AWS CIS 1.2.0 (Classic)

...

Under each applicable compliance control is the set of assessments run by Defender for Cloud that are associated with that control. If they are all green, it means those assessments are currently passing; this does not ensure you are fully compliant with that control. Furthermore, not all controls for any particular regulation are covered by Defender for Cloud assessments, and therefore this report is only a partial view of your overall compliance status.

Azure Security Benchmark is applied to 3 subscriptions

☐ Expand all compliance controls

- ⌵

✖

NS. Network Security
- ⌵

✖

IM. Identity Management
- ⌵

✖

PA. Privileged Access
- ⌵

✖

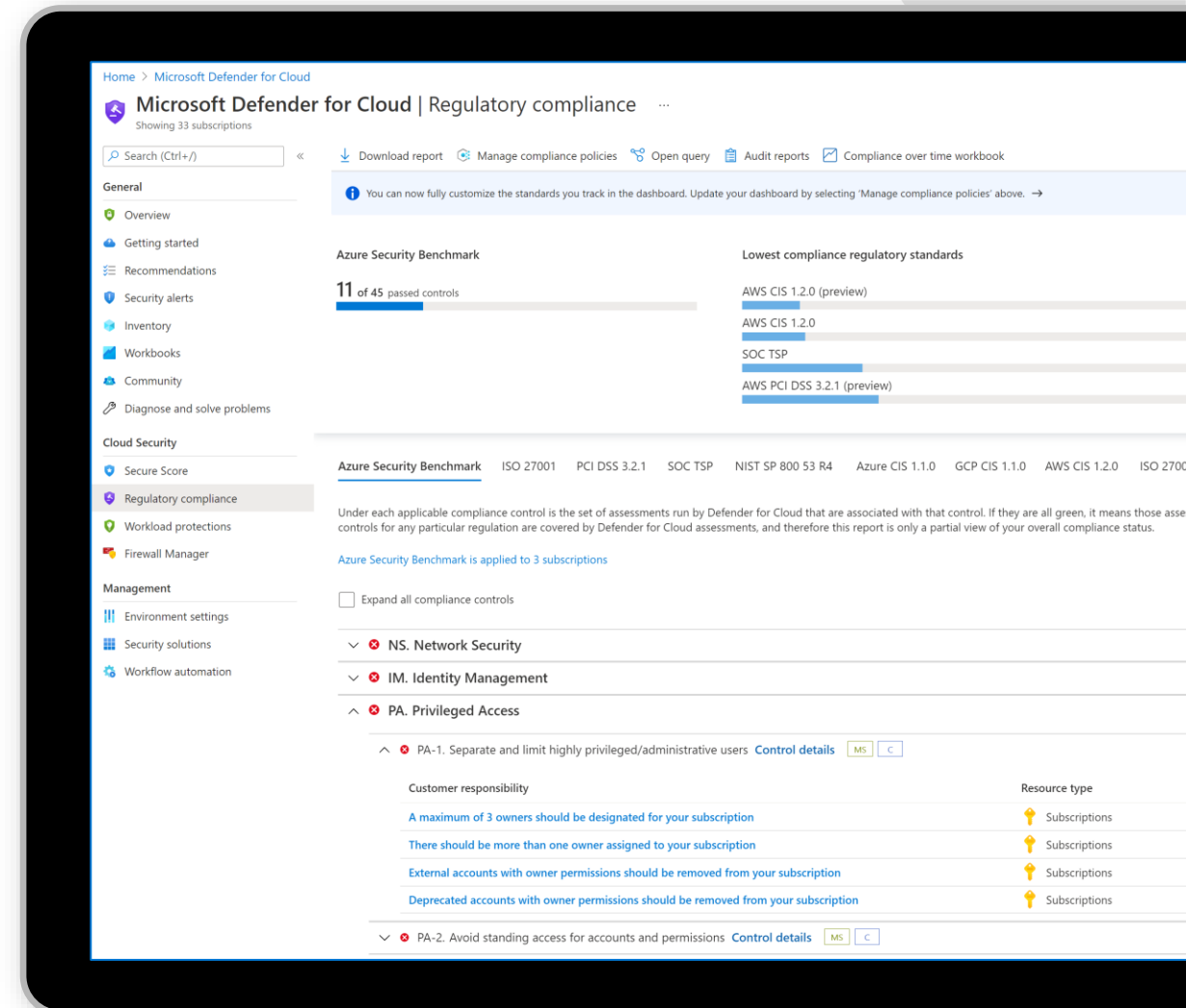
DP. Data Protection

Compliance assessment and management

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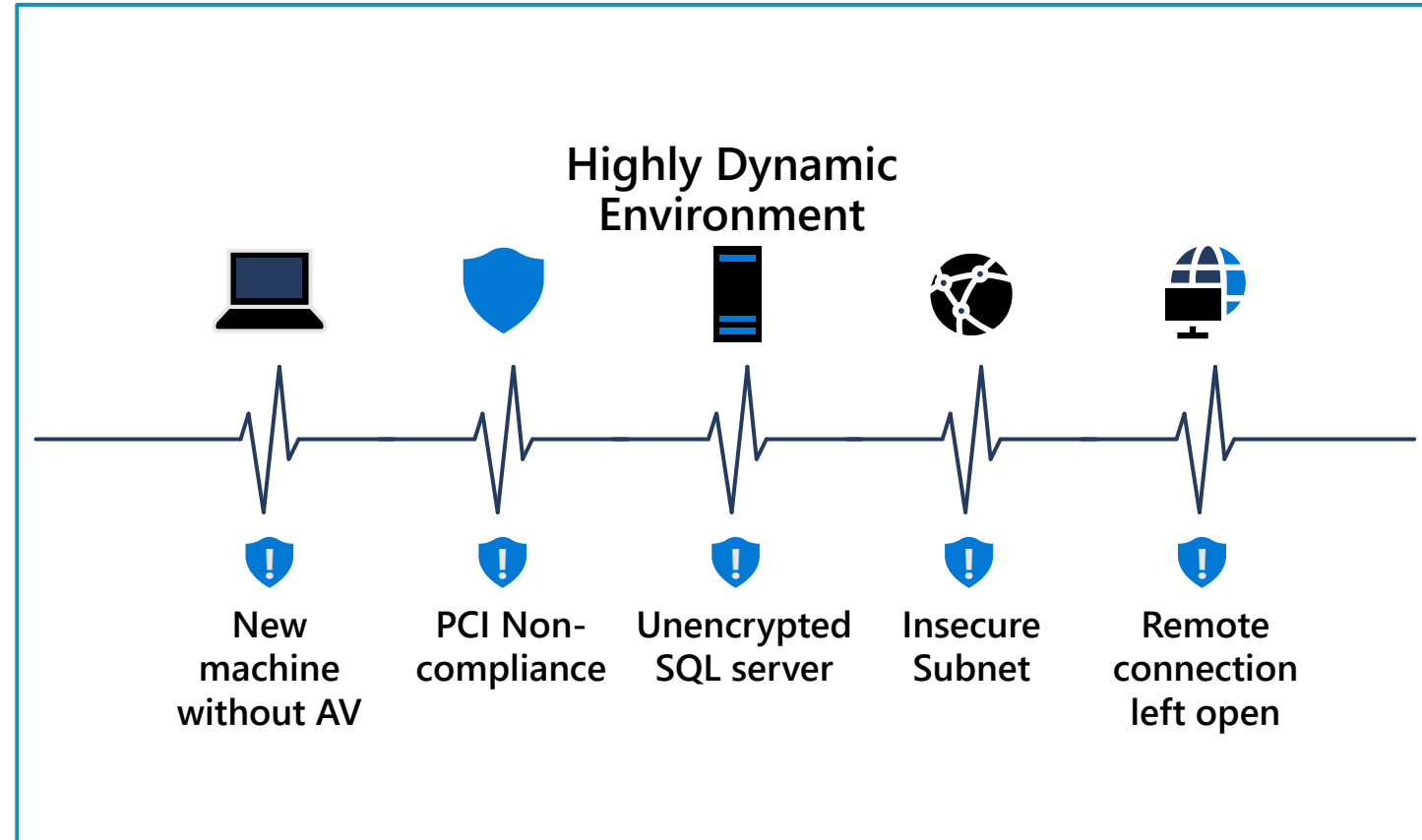
Manage organizational security policies and assess compliance in minutes



Manage security policies at an organizational level

Easily set security policies for subscriptions or management groups

Instantly understand your current policy compliance and review compliance overtime



Editing security policies

You can edit security policies through the Azure Policy portal, via REST API or using Windows PowerShell

There are two specific roles

- Security reader
- Security admin

Microsoft Azure (Preview) Report a bug Search resources, services, and docs (G+)

Home > Microsoft Defender for Cloud > Settings

Settings | Security policy CyberSecSOC

Search (Ctrl+/) << You have limited permissions on this subscription.

Settings

- Defender plans
- Auto provisioning
- Email notifications
- Integrations
- Workflow automation
- Continuous export

Policy settings

- Security policy

Security policy on: CyberSecSOC

initiatives enabled on this subscription

Default initiative

The default initiative enabled on your subscription generates the security recommendations in the **Recommendations** page.

Assignment	Assigned On	Audit policies	Deny policies	Disabled policies	Exempted policies
ASC Default (subscription: d1d8779d-38d7-4f06-91d...	Subscription	191	0	15	0
[Preview]: Enable Monitoring in Azure Security Center	Management ...	192	0	14	0

There are conflicts between some of the applied assignments. [See conflicts](#)

Industry & regulatory standards

Compliance initiatives shown in the **Regulatory compliance dashboard**.

Standard	Description	Status	Action
Azure Security Benchmark	Track Azure Security Benchmark controls in the Compliance Dashboard, based on a recommended set of policies and assessments.	Out of the box	Disable
PCI DSS 3.2.1	Track PCI-DSS v3.2.1:2018 controls in the Compliance Dashboard, based on a recommended set of policies and assessments.	Out of the box	Disable
ISO 27001	Track ISO 27001:2013 controls in the Compliance Dashboard, based on a recommended set of policies and assessments.	Out of the box	Deprecated
SOC TSP	Track SOC TSP controls in the Compliance Dashboard, based on a recommended set of policies and assessments.	Out of the box	Disable
Azure CIS 1.3.0	Track Azure CIS 1.3.0 controls in the Compliance Dashboard, based on a recommended set of policies and assessments.	Manually added	Delete
NIST SP 800-53 R5	Track NIST SP 800-53 R5 controls in the Compliance Dashboard, based on a recommended set of policies and assessments.	Manually added	Delete

Disabling security policies and recommendations

When your security initiative triggers a recommendation that's irrelevant for your environment, you can prevent that recommendation from appearing again

To disable a recommendation, disable the specific policy that generates the recommendation

The screenshot shows the Microsoft Azure (Preview) interface for the 'ASC Default' security initiative. The 'Parameters' tab is selected, displaying a list of policies. The policy 'Audit unrestricted network access to storage accounts' is highlighted with a red box, and its value is set to 'Disabled'. Other policies include 'storage', 'Virtual machines should encrypt temp disks, caches, and data flows between Compute and Storage', 'Storage accounts should be migrated to new Azure Resource Manager resources', 'Secure transfer to storage accounts should be enabled', and 'Azure Defender for Storage should be enabled'.

Microsoft Azure (Preview) [Report a bug](#)

Home > Microsoft Defender for Cloud > Settings >

ASC Default (subscription: d1d8779d-38d7-4f06-91...)

Edit Initiative Assignment

Basics Parameters Remediation Non-compliance messages Review + save

storage ☐ Only show parameters that need input or review

Virtual machines should encrypt temp disks, caches, and data flows between Compute and Storage

Storage accounts should be migrated to new Azure Resource Manager resources * ⓘ

Secure transfer to storage accounts should be enabled * ⓘ

Audit unrestricted network access to storage accounts * ⓘ

Azure Defender for Storage should be enabled * ⓘ

Demo - Regulatory Compliance

Azure Policy

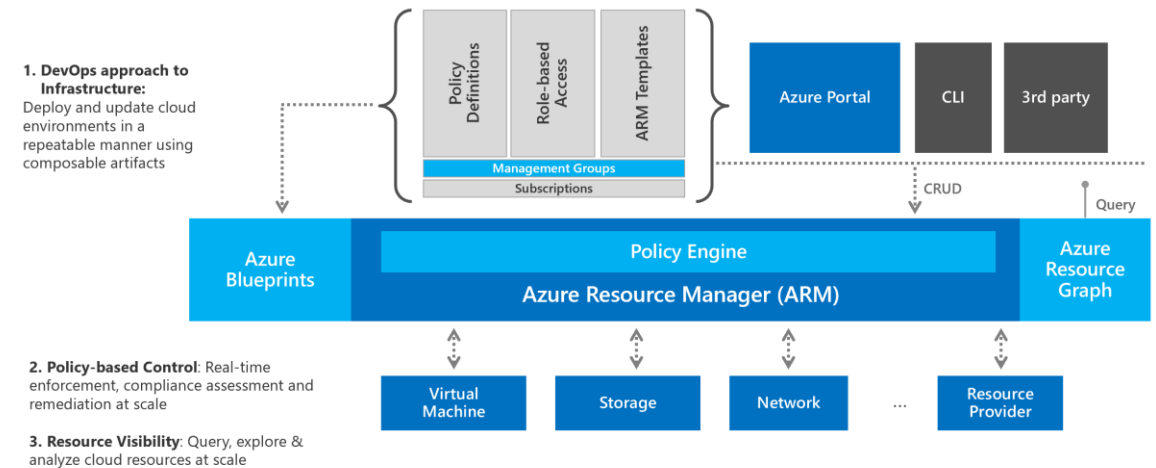
Overview

Azure Policy helps to enforce organizational standards and to assess compliance at-scale. Through its compliance dashboard, it provides an aggregated view to evaluate the overall state of the environment, with the ability to drill down to the per-resource, per-policy granularity. It also helps to bring your resources to compliance through bulk remediation for existing resources and automatic remediation for new resources.

Documentation Link

- [Overview of Azure Policy - Azure Policy | Microsoft Docs](#)

Azure Governance Architecture



Regulatory Compliance built-ins

<https://learn.microsoft.com/en-us/azure/governance/policy/samples/azure-security-benchmark>

- Azure Security Benchmark
- CIS Benchmark 1.3.0
- CIS Benchmark 1.1.0
- CMMC Level 3
- FedRAMP Moderate
- FedRAMP High
- HIPAA HITRUST 9.2
- IRS 1075 September 2016
- ISO 27001:2013
- PCI DSS 3.2.1

Regulatory Compliance built-ins

<https://learn.microsoft.com/en-us/azure/governance/policy/samples/azure-security-benchmark>

- NIST SP800-53 Rev. 5
- NIST SP 800-53 Rev.4
- NIST SP 800-171 R2
- RBI ITF NBFC v2017
- SWIFT CSCF 2021
- Canada Federal PBMM
- RMIT Malaysia
- New Zealand ISM Redistricted v3.5
- UK OFFICIAL and UK NHS

Regulatory Compliance built-ins (Azure Government)

<https://learn.microsoft.com/en-us/azure/governance/policy/samples/gov-azure-security-benchmark>

- Azure Security Benchmark
- CIS Benchmark 1.3.0
- CIS Benchmark 1.1.0
- CMMC Level 3
- DoD Impact Level 4
- DoD Impact Level 5
- FedRAMP Moderate
- FedRAMP High
- IRS 1075 September 2016
- ISO 27001:2013
- NIST SP 800-53 Rev. 5
- NIST SP 800-53 Rev. 4
- NIST SP 800-171 R2

Demo - Azure Policy

Governance Workbooks and Rules (Preview)

Security teams who do not have ability to implement security recommendations can assign owners with due dates to recommendations using Governance rules.

[Home](#) > [Security posture](#) >


Governance report Sub1 ...

Microsoft Defender for Cloud

 Workbooks  Edit      ? Help  Auto refresh: Off

Governance (Preview)

Subscription

Azure-Internal-Sub1 

Security governance in Microsoft Defender for Cloud

Microsoft Defender for Cloud continuously assesses your hybrid and multi-cloud workloads and provides you with recommendations to harden your assets and enhance your security posture. Central security teams often experience challenges when driving the personnel within their organizations to implement recommendations. The organizations' security posture can suffer as a result. We're introducing a brand-new, built-in governance experience to set ownership and expected remediation timeframes to resolve recommendations.

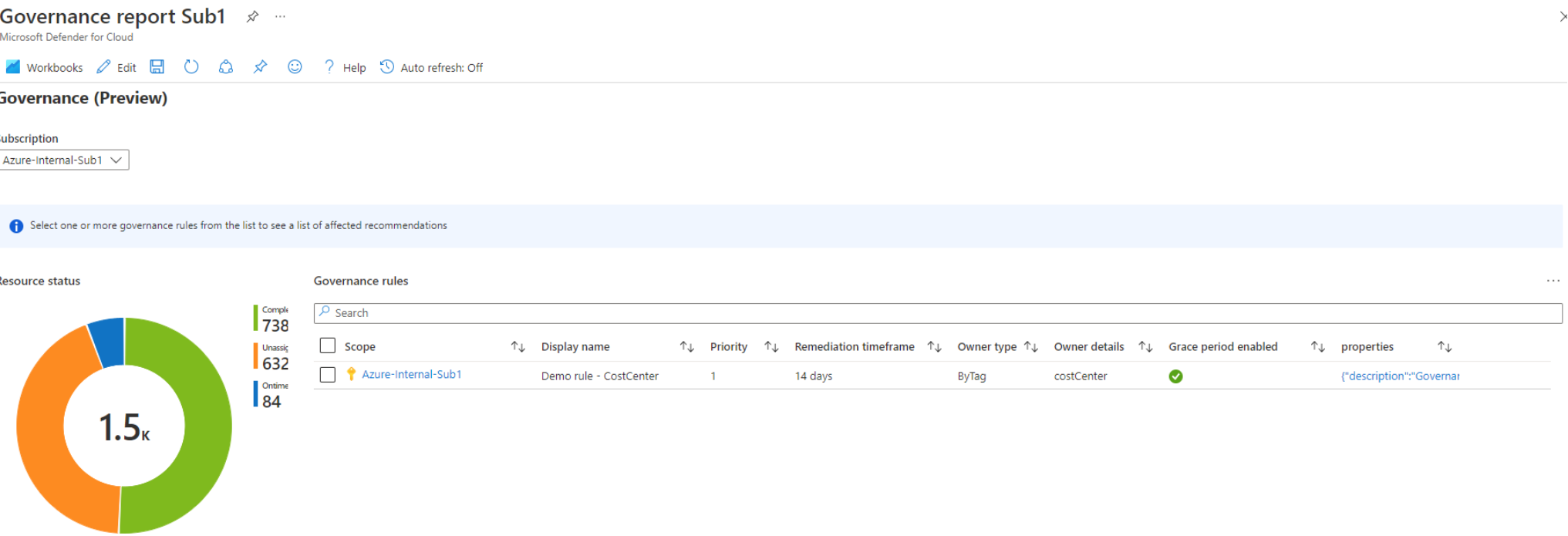
To use this governance report, you need to create security governance rules.

[Learn more >](#)

[Driving your organization to remediate security issues with recommendation governance in Microsoft Defender for Cloud | Microsoft Learn](#)

Governance Workbooks and Rules (Preview)

Governance Workbooks can track rules, ownership, recommendations and remediation status.



Demo of Governance (Preview)

Wrap-up



Resources

MDC

<https://learn.microsoft.com/en-us/azure/defender-for-cloud/defender-for-cloud-introduction>

Security policies, initiatives and recommendations

<https://learn.microsoft.com/en-us/azure/defender-for-cloud/security-policy-concept>

Azure recommendations

<https://learn.microsoft.com/en-us/azure/defender-for-cloud/recommendations-reference>

AWS recommendations

<https://learn.microsoft.com/en-us/azure/defender-for-cloud/recommendations-reference-aws>

Microsoft Defender for Cloud

- Secure and protect resources across the three major cloud providers and hybrid environments in one place

- Ensure secure and compliant configuration of cloud resources

- Detect vulnerabilities and threats to protect against malicious attacks



Strengthen your cloud security posture today



Enable Defender
for Cloud
to assess your
security posture



Fix your top 5
Secure Score
recommendations
today



Start a free trial
to protect your
workloads



Onboard AWS,
GCP and on-prem
workloads with
Azure Arc

To learn more, visit:

aka.ms/DefenderForCloud >>



Thank you