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✓ 100 XP

Describe Microsoft Defender for Cloud

6 minutes

Defender for Cloud is a monitoring tool for security posture management and threat protection. It monitors your cloud, on-premises, hybrid, and multicloud environments to provide guidance and notifications aimed at strengthening your security posture.

Defender for Cloud provides the tools needed to harden your resources, track your security posture, protect against cyber attacks, and streamline security management. Deployment of Defender for Cloud is easy, it's already natively integrated to Azure.

Protection everywhere you're deployed

Because Defender for Cloud is an Azure-native service, many Azure services are monitored and protected without needing any deployment. However, if you also have an on-premises datacenter or are also operating in another cloud environment, monitoring of Azure services may not give you a complete picture of your security situation.

When necessary, Defender for Cloud can automatically deploy a Log Analytics agent to gather security-related data. For Azure machines, deployment is handled directly. For hybrid and multicloud environments, Microsoft Defender plans are extended to non Azure machines with the help of Azure Arc. Cloud security posture management (CSPM) features are extended to multicloud machines without the need for any agents.

Azure-native protections

Defender for Cloud helps you detect threats across:

- Azure PaaS services – Detect threats targeting Azure services including Azure App Service, Azure SQL, Azure Storage Account, and more data services. You can also perform anomaly detection on your Azure activity logs using the native integration with Microsoft Defender for Cloud Apps (formerly known as Microsoft Cloud App Security).
- Azure data services – Defender for Cloud includes capabilities that help you automatically classify your data in Azure SQL. You can also get assessments for potential vulnerabilities across Azure SQL and Storage services, and recommendations for how to mitigate them.

- Networks – Defender for Cloud helps you limit exposure to brute force attacks. By reducing access to virtual machine ports, using the just-in-time VM access, you can harden your network by preventing unnecessary access. You can set secure access policies on selected ports, for only authorized users, allowed source IP address ranges or IP addresses, and for a limited amount of time.

Defend your hybrid resources

In addition to defending your Azure environment, you can add Defender for Cloud capabilities to your hybrid cloud environment to protect your non-Azure servers. To help you focus on what matters the most, you'll get customized threat intelligence and prioritized alerts according to your specific environment.

To extend protection to on-premises machines, deploy Azure Arc and enable Defender for Cloud's enhanced security features.

Defend resources running on other clouds

Defender for Cloud can also protect resources in other clouds (such as AWS and GCP).

For example, if you've connected an Amazon Web Services (AWS) account to an Azure subscription, you can enable any of these protections:

- Defender for Cloud's CSPM features extend to your AWS resources. This agentless plan assesses your AWS resources according to AWS-specific security recommendations, and includes the results in the secure score. The resources will also be assessed for compliance with built-in standards specific to AWS (AWS CIS, AWS PCI DSS, and AWS Foundational Security Best Practices). Defender for Cloud's asset inventory page is a multicloud enabled feature helping you manage your AWS resources alongside your Azure resources.
- Microsoft Defender for Containers extends its container threat detection and advanced defenses to your Amazon EKS Linux clusters.
- Microsoft Defender for Servers brings threat detection and advanced defenses to your Windows and Linux EC2 instances.

Assess, Secure, and Defend

Defender for Cloud fills three vital needs as you manage the security of your resources and workloads in the cloud and on-premises:

- Continuously assess – Know your security posture. Identify and track vulnerabilities.
- Secure – Harden resources and services with Azure Security Benchmark.
- Defend – Detect and resolve threats to resources, workloads, and services.

Continuously Assess

Know your security posture. Identify and track vulnerabilities.

Secure

Harden resources and services with Azure Security Benchmark.

Defend

Detect and resolve threats to resources, workloads, and services.

Continuously assess

Defender for cloud helps you continuously assess your environment. Defender for Cloud includes vulnerability assessment solutions for your virtual machines, container registries, and SQL servers.

Microsoft Defender for servers includes automatic, native integration with Microsoft Defender for Endpoint. With this integration enabled, you'll have access to the vulnerability findings from Microsoft threat and vulnerability management.

Between these assessment tools you'll have regular, detailed vulnerability scans that cover your compute, data, and infrastructure. You can review and respond to the results of these scans all from within Defender for Cloud.

Secure

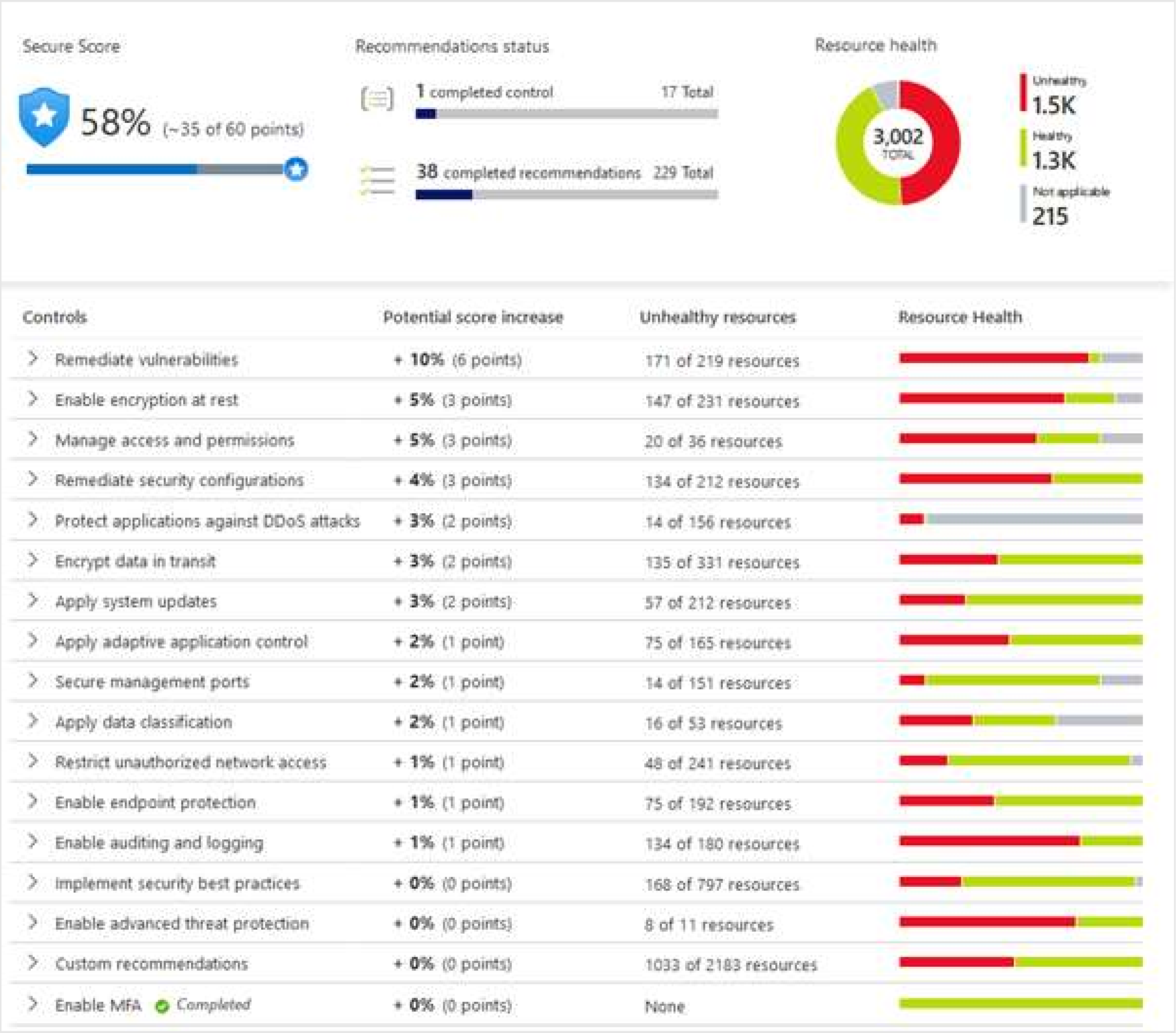
From authentication methods to access control to the concept of Zero Trust, security in the cloud is an essential basic that must be done right. In order to be secure in the cloud, you have to ensure your workloads are secure. To secure your workloads, you need security policies in place that are tailored to your environment and situation. Because policies in Defender for Cloud are built on top of Azure Policy controls, you're getting the full range and flexibility of a world-class policy solution. In Defender for Cloud, you can set your policies to run on management groups, across subscriptions, and even for a whole tenant.

One of the benefits of moving to the cloud is the ability to grow and scale as you need, adding new services and resources as necessary. Defender for Cloud is constantly monitoring for new resources being deployed across your workloads. Defender for Cloud assesses if new resources are configured according to security best practices. If not, they're flagged and you get a prioritized list of recommendations for what you need to fix. Recommendations help you reduce the attack surface across each of your resources.

The list of recommendations is enabled and supported by the Azure Security Benchmark. This Microsoft-authored, Azure-specific, benchmark provides a set of guidelines for security and compliance best practices based on common compliance frameworks.

In this way, Defender for Cloud enables you not just to set security policies, but to apply secure configuration standards across your resources.

To help you understand how important each recommendation is to your overall security posture, Defender for Cloud groups the recommendations into security controls and adds a secure score value to each control. The secure score gives you an at-a-glance indicator of the health of your security posture, while the controls give you a working list of things to consider to improve your security score and your overall security posture.



Secure Score

58% (~35 of 60 points)

Recommendations status

1 completed control 17 Total

38 completed recommendations 229 Total

Resource health

3,002 TOTAL

Unhealthy 1.5K

Healthy 1.3K

Not applicable 215

Controls	Potential score increase	Unhealthy resources	Resource Health
Remediate vulnerabilities	+ **10%** (6 points)	171 of 219 resources	
Enable encryption at rest	+ **5%** (3 points)	147 of 231 resources	
Manage access and permissions	+ **5%** (3 points)	20 of 36 resources	
Remediate security configurations	+ **4%** (3 points)	134 of 212 resources	
Protect applications against DDoS attacks	+ **3%** (2 points)	14 of 156 resources	
Encrypt data in transit	+ **3%** (2 points)	135 of 331 resources	
Apply system updates	+ **3%** (2 points)	57 of 212 resources	
Apply adaptive application control	+ **2%** (1 point)	75 of 165 resources	
Secure management ports	+ **2%** (1 point)	14 of 151 resources	
Apply data classification	+ **2%** (1 point)	16 of 53 resources	
Restrict unauthorized network access	+ **1%** (1 point)	48 of 241 resources	
Enable endpoint protection	+ **1%** (1 point)	75 of 192 resources	
Enable auditing and logging	+ **1%** (1 point)	134 of 180 resources	
Implement security best practices	+ **0%** (0 points)	168 of 797 resources	
Enable advanced threat protection	+ **0%** (0 points)	8 of 11 resources	
Custom recommendations	+ **0%** (0 points)	1033 of 2183 resources	
Enable MFA ✓ *Completed*	+ **0%** (0 points)	None	

Defend

The first two areas were focused on assessing, monitoring, and maintaining your environment. Defender for Cloud also helps you defend your environment by providing security alerts and advanced threat protection features.

Security alerts

When Defender for Cloud detects a threat in any area of your environment, it generates a security alert. Security alerts:

- Describe details of the affected resources
- Suggest remediation steps
- Provide, in some cases, an option to trigger a logic app in response

Whether an alert is generated by Defender for Cloud or received by Defender for Cloud from an integrated security product, you can export it. Defender for Cloud's threat protection includes fusion kill-chain analysis, which automatically correlates alerts in your environment based on cyber kill-chain analysis, to help you better understand the full story of an attack campaign, where it started, and what kind of impact it had on your resources.

Advanced threat protection

Defender for cloud provides advanced threat protection features for many of your deployed resources, including virtual machines, SQL databases, containers, web applications, and your network. Protections include securing the management ports of your VMs with just-in-time access, and adaptive application controls to create allowlists for what apps should and shouldn't run on your machines.

Next unit: Knowledge check

Continue >