



# Monitoring tools

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## Sergio Rubio

- SRE Nivel 3
- 17+ years in IT industry
- Full stack developer



## Important Notes



Identify yourself in Zoom, using your name and last name



Mute your microphone along the course unless you have questions



Raise the hand if you have questions during the session



Focus your questions on the presented topic



Turn off your camera in case of connection issues

## DSA Code of Conduct



Be respectful, there are no bad questions or ideas.



Be welcoming and patient



Be careful in the words that you choose

# Session Goal

## **At the end of this session, you will be able to:**

- Describe the purpose of Azure Advisor
- Describe Azure Service Health
- Describe Azure Monitor, including Azure Log Analytics, Azure Monitor Alerts, and Application Insights

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Introduction to tools that help you monitor your environment and applications

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Describe the purpose of Azure Advisor

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# Introduction








Introduction to features, tools for managing, and deploying resource

## Monitoring tools

Azure provide tools that help you monitor your environment and applications, both in Azure and in on-premises or multi-cloud environments.

### Monitoring

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-  Alerts
-  Metrics
-  Logs
-  Health check
-  Diagnostic settings (preview)
-  App Service logs
-  Log stream



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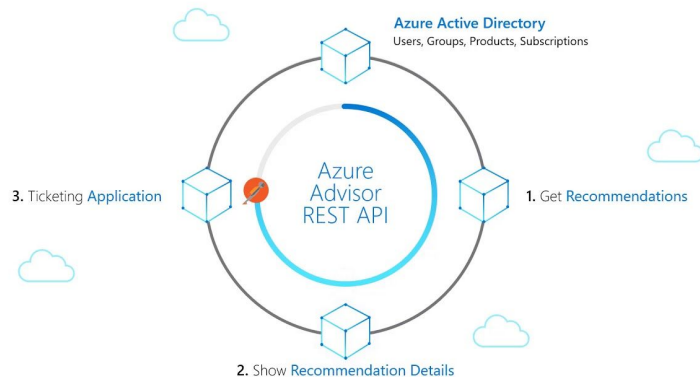
# Azure Advisor

Azure Advisor is designed to help you save time on cloud optimization

## Azure Advisor

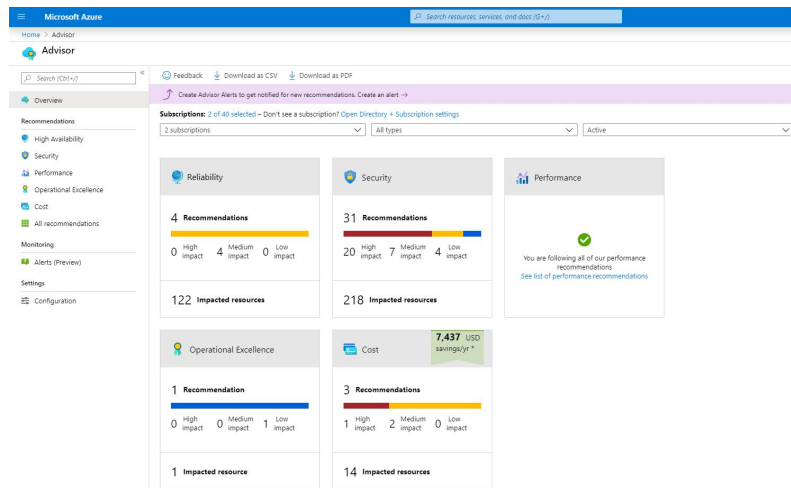
Azure Advisor evaluates your Azure resources and makes recommendations to help improve reliability, security, and performance, achieve operational excellence, and reduce costs.

The recommendations are available via the Azure portal and the API, and you can set up notifications to alert you to new recommendations.



The recommendations are divided into five categories:

- **Reliability** is used to ensure and improve the continuity of your business-critical applications.
- **Security** is used to detect threats and vulnerabilities that might lead to security breaches.
- **Performance** is used to improve the speed of your applications.
- **Operational Excellence** is used to help you achieve process and workflow efficiency, resource manageability, and deployment best practices.
- **Cost** is used to optimize and reduce your overall Azure spending.



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# Azure Service Health



Microsoft Azure provides a global cloud solution to help you manage your infrastructure needs, reach your customers, innovate, and adapt rapidly

## Azure Service Health

Azure Service Health helps you keep track of Azure resource, both your specifically deployed resources and the overall status of Azure. Azure service health does this by combining three different Azure services:

- Azure Status
- Service Health
- Resource Health

The screenshot displays the Azure Service Health interface. The main content area shows a table of service issues. The first issue is for 'Azure Purview - Insights or catalogs not pl...' with a tracking ID of 'TRK-001'. The issue is categorized as 'Potential impact' and 'Issue updates'. Below the table, there is a 'Summary' section for 'TRK-001' which includes a 'To help' section with a link to the issue details, a 'Resolved services' list (Azure Purview), a 'Regions impacted' list (Australia East, Canada Central, Central India, Australia East, North Europe, West US, West Europe, UK South, South Central), and a 'Last update' timestamp of '2021-08-09 08:55:11.037-07:00'. A 'Current Status' section indicates that the deployment has been successful for all impacted regions, with a manual backfill of data, which is currently expected to complete by 11 Aug 2021. The next update will be provided on 11 Aug 2021, or as events occur. A 'Potential impact' section notes that 1 Azure Purview in 1 subscription is affected.

# Azure Status

Is a broad picture of the status of Azure globally. Azure status informs you of service outages in Azure on the Azure Status page. The page is a global view of the health of all Azure services across all Azure regions. It's a good reference for incidents with widespread impact.

The screenshot shows the Microsoft Azure Status page. At the top, it says "Azure status" and "Updated one second ago". Below this, there's a section for "View other issues that might be impacting your services:" with a link to "Go to Azure Service Health". To the right, there are "HELPFUL LINKS" including "Azure status history" and "Get notified of outages that impact you".

Below the links, there's a "Refresh every" dropdown set to "2 minutes" and a legend for status indicators: Good (green circle), Information (blue circle), Warning (yellow triangle), and Critical (red circle).

The main part of the page is a grid with columns for regions: Americas, Europe, Asia Pacific, Middle East and Africa, Azure Government, Azure China, and Jio. Each region has sub-columns for specific geographic areas. The rows list various Azure services, and each cell in the grid contains a colored circle representing the service's status in that region.

PRODUCT AND SERVICE	Americas		Europe	Asia Pacific	Middle East and Africa	Azure Government		Azure China	Jio
	WEST US	EAST US	WEST US	EAST US	WEST US	EAST US	WEST US	EAST US	WEST US
COMPUTE									
Azure VMware Solution by CloudEngine		●			●		●		
Virtual Machines		●	●	●	●	●	●	●	●
SAP HANA on Azure Large Instances		●				●	●		
BankMate Infrastructure		●			●		●		
Azure Virtual Desktop	●								
Virtual Machine Scale Sets		●	●	●	●	●	●	●	●
Azure Functions		●	●	●	●	●	●	●	●
Service Fabric		●	●	●	●	●	●	●	●
Batch		●	●	●	●	●	●	●	●
Cloud Services		●	●	●	●	●	●	●	●
Azure Spring Cloud		●	●	●	●				●
Azure Quantum		●				●			
Azure VMware Solution		●		●	●		●		●
Azure VM Image Builder		●	●			●	●		



## Service Health

It focuses on the Azure services and regions you're using. This is the best place to look for service impacting communications about outages, planned maintenance activities, and other health advisories because the authenticated Service Health experience knows which services and resources you currently use. You can set up alerts to notify you when service issues, planned maintenance, or other changes may affect the Azure services and regions you use.

The screenshot displays the Azure Service Health 'Service issues' page. At the top, there is a search bar and navigation options like 'Save View' and 'Delete View'. Below this, a sidebar lists categories: 'ACTIVE EVENTS' (Service issues (2), Planned maintenance, Health advisories (2), Security advisories (1)), 'HISTORY' (Health history), 'RESOURCE HEALTH' (Resource health), and 'ALERTS' (Health alerts). The main content area features three filter dropdowns: 'Subscription' (3 selected), 'Region' (2 selected), and 'Service' (187 selected). A world map is visible in the background, and a message at the bottom states 'No service issues found' with a link to view issues outside the current filter.

## Resource Health

It provides information about the health of your individual cloud resources, such as a specific virtual machine instance. Using Azure Monitor, you can also configure alerts to notify you of availability changes to your cloud resources.

vm01 | Resource health

Search (Ctrl-F) | Add resource health alert | Diagnose and solve problems

Overview | Overview | Overview

Configuration management (disabled)

Monitoring

Insights

Alerts

Metrics

Diagnostic settings

Logs

Connection monitor (disabled)

Workbooks

Automation

API (Preview)

Tools (Preview)

Export template

Support + Troubleshooting

**Resource health**

Boot diagnostics

Performance diagnostics

Reset password

Restart > Restart

Serial console

Connection troubleshooting

Learning center

New Support Request

There aren't any known Azure platform problems affecting this virtual machine.

What actions can you take?

1. If you're having problems, use the [Troubleshoot tool](#) to get recommended solutions.

Health history Resource health events over the last 4 weeks

Date	Description
08/18/2021	Available
08/17/2021	Available
08/16/2021	Available
08/15/2021	Available
08/14/2021	Available
08/13/2021	Available
08/12/2021	Available
08/11/2021	Available
08/10/2021	1 health event(s)

Reboot initiated from inside the machine (Customer Initiated)

At Tuesday, August 10, 2021, 1:49:50 PM EDT, the Azure monitoring system received the following information regarding your Virtual Machine:

A reboot was triggered from inside the virtual machine. This could be due to a virtual machine operating system failure or as requested by an authorized user or process. The virtual machine will be back online after the reboot completes.

**Recommended Steps**

- Check back here for status updates.
- If you're having problems, use the [Troubleshoot tool](#) to get recommended solutions.

13:49:58 (EDT) View this health? Yes | No

[Download as PDF](#)

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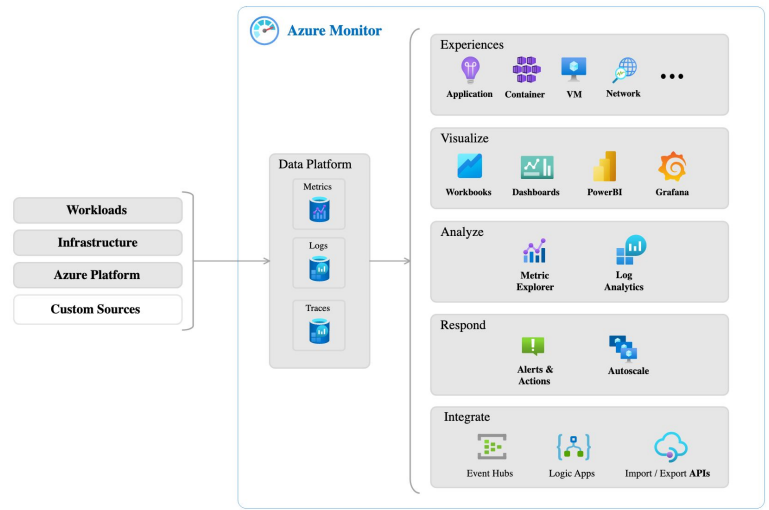
# Azure Monitor



Azure Monitor can monitor Azure resources, your on-premises resources, and even multi-cloud resources

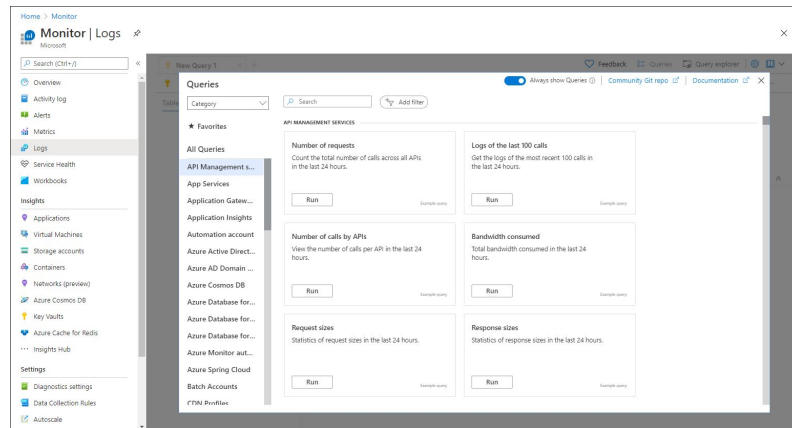
# Azure Monitor

Is a platform for collecting data on your resources, analyzing that data, visualizing the information, and even acting on the results. Azure Monitor can monitor Azure resources, your on-premises resources, and even multi-cloud resources like virtual machines hosted with a different cloud provider.



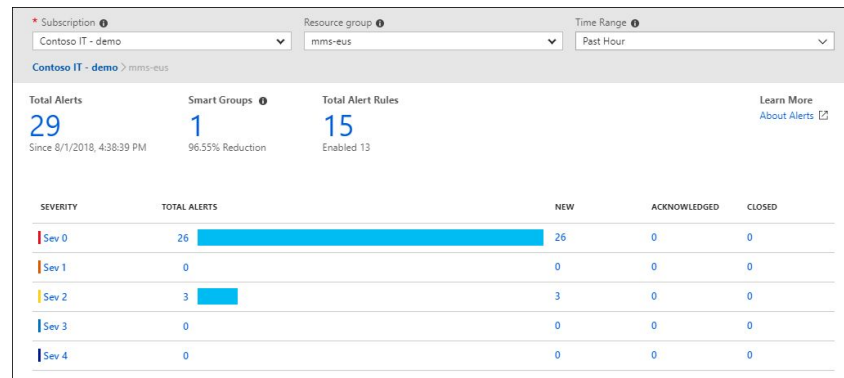
## Azure Log Analytics

Is a tool in the Azure portal to edit and run log queries from data collected by Azure Monitor logs and interactively analyze their results. You can use Log Analytics queries to retrieve records that match particular criteria, identify trends, analyze patterns, and provide various insights into your data.



## Azure Monitor Alerts

Are an automated way to stay informed when Azure Monitor detects a threshold being crossed. You set the alert conditions, the notification actions, and then Azure Monitor Alerts notifies when an alert is triggered. Depending on your configuration, Azure Monitor Alerts can also attempt corrective action.



## Application Insights

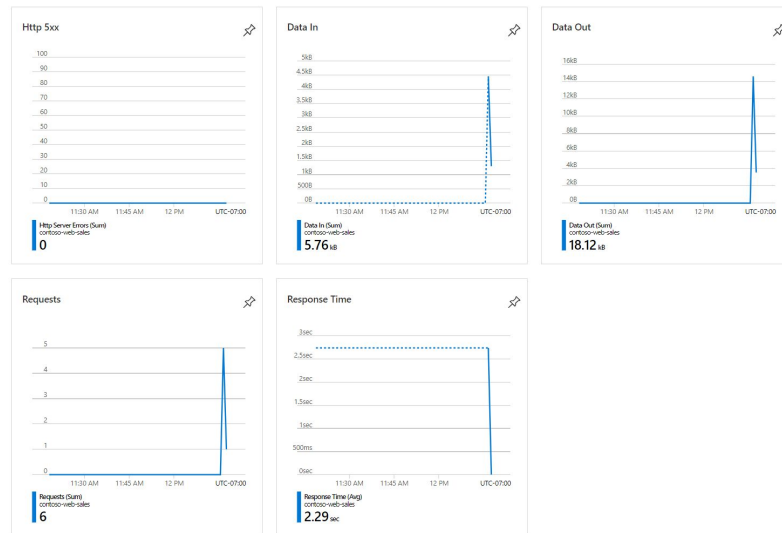
Application Insights is capable of monitoring applications that are running in Azure, on-premises, or in a different cloud environment.

You can either install an SDK in your application, or you can use the Application Insights agent.



Once Application Insights is up and running, you can use it to monitor a broad array of information, such as:

- Request rates, response times, and failure rates
- Dependency rates, response times, and failure rates, to show whether external services are slowing down performance
- Page views and load performance reported by users' browsers
- AJAX calls from web pages, including rates, response times, and failure rates
- User and session counts
- Performance counters from Windows or Linux server machines, such as CPU, memory, and network usage



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# Resources



References of interest:

- [Get started with Azure Advisor](#)
- [Intro to Azure Service Health](#)
- [Monitor the usage, performance, and availability of resources with Azure Monitor](#)

# Q&A





**Thank you**