

Azure Monitoring alerts setup

Last updated by | Kondareddy Duggireddy | Jun 15, 2022 at 9:32 PM GMT+5:30

First, Create a Virtual Machine(VM) i.e Winodws or Linux.

To monitor CPU and Memory, need to enable Diagnostic settings in Virtual machine.

The screenshot shows the Azure portal interface for a virtual machine named 'Azure-Monitor-1'. The left sidebar contains a search bar with 'diagnd' entered, and a list of navigation options: 'Diagnose and solve problems', 'Monitoring', 'Help', 'Boot diagnostics', 'Performance diagnostics', and 'Support + Troubleshooting'. The 'Monitoring' section is expanded, and 'Diagnostic settings' is highlighted with a red box and a red arrow. The main content area displays the 'Essentials' section for the virtual machine, including details like Resource group, Status (Stopped), Location (East US), Subscription, and various configuration options. A blue banner at the top right contains an advisor message: 'Advisor (1 of 1): Enable virtual machine replication to protect your applications from regional outage'.

To monitor Diskspace, need to enable Insights in Virtual Machine.

The screenshot shows the Azure portal interface for a virtual machine named 'Azure-Monitor-1'. The left sidebar contains a search bar with 'insights' entered, and a list of navigation options: 'Activity log', 'Monitoring', 'Alerts', 'Metrics', and 'Logs'. The 'Monitoring' section is expanded, and 'Insights' is highlighted with a red box. The main content area displays the 'Essentials' section for the virtual machine, including details like Resource group, Status (Stopped), Location (East US), Subscription, and various configuration options. A blue banner at the top right contains an advisor message: 'Advisor (1 of 1): Enable virtual machine replication to protect your applications from regional outage'.

Goto --> Azure Console --> Monitor --> Metrics

Click on Metrics --> Select a scope --> Select Particular Resource, in this case has selected Virtual Machine i.e Azure-Monitor-1 then apply

The screenshot shows the Azure Monitor Metrics page. On the left is a navigation pane with options like Overview, Activity log, Alerts, Metrics, Logs, Service Health, Workbooks, Insights, Applications, Virtual Machines, Storage accounts, Containers, Networks, SQL (preview), Azure Cosmos DB, Key Vaults, Azure Cache for Redis, Azure Data Explorer Clusters, Log Analytics workspaces, Azure Stack HCI (preview), Service Bus (preview), and Insights Hub. The main area displays a chart titled 'Avg Percentage CPU for Azure-Monitor-1'. A 'Select a scope' dialog box is open on the right, showing a list of resource types and locations. The 'Scope' column lists various resources, and the 'Resource type' and 'Location' columns show their respective details. 'Azure-Monitor-1' is selected as the scope. Below the list, it says 'Selected scopes: 1 virtual machine' and shows 'Azure-Monitor-1' as the selected item. The background chart shows a line graph of CPU usage over time, with a peak around 12 PM.

Then Select the whichever Metric want to create Alert.

In this case, have selected Percentage CPU then create an alert.

The screenshot shows the Azure Monitor Metrics page with the 'Avg Percentage CPU for Azure-Monitor-1' chart. The 'Metric' dropdown menu is open, showing a list of metrics including 'Percentage CPU', 'OS Disk Max Burst Bandwidth', 'OS Disk Max Burst IOPS', 'OS Disk Queue Depth', 'OS Disk Read Bytes/Sec', 'OS Disk Read Operations/Sec', 'OS Disk Target Bandwidth', 'OS Disk Target IOPS', and 'Enable guest memory metrics'. 'Percentage CPU' is selected. The chart shows a line graph of CPU usage over time, with a peak around 12 PM. The 'Local Time: Last 24 hours (Automatic - 5 minutes)' is displayed at the top right. The chart title is 'Avg Percentage CPU for Azure-Monitor-1'.

Once click on create new alert, see like below.

Home > Monitor >

Create an alert rule ...

Scope Condition Actions **Details** Tags Review + create

Create an alert rule to identify and address issues when important conditions are found in your monitoring data. [Learn more](#)

+ Select scope

Resource

Hierarchy

Azure-Monitor-1

Visual Studio Enterpr... > Azure-Monitor-Test-...

Already selected scope, select condition then specify the condition and done.

Home > Monitor >

Create an alert rule ...

Scope Condition **Actions** **Details** Tags Review + create

Configure when the alert rule should trigger by selecting a signal and defining its logic.

+ Add condition

Condition name	Time series monitored ⓘ	Estimated monthly cost (USD) ⓘ	
Whenever the average percentage cpu is greater than <logic undefined>1	1	\$ 0.10	
	1	Total \$ 0.10	

Configure signal logic

Chart period ⓘ
Over the last 6 hours

Percentage CPU (Avg)
azure-monitor-1
1.51%

Alert logic

Threshold ⓘ

Static Dynamic

Operator ⓘ
Greater than

Aggregation type ⓘ
Average

Threshold value ⓘ
10 %

Condition preview

Whenever the average percentage cpu is greater than 10%

Evaluated based on

Aggregation granularity (Period) ⓘ
5 minutes

Frequency of evaluation ⓘ
Every 1 Minute

Done

Review + create Previous Next: Actions >

Home > Monitor >

Create an alert rule ...

Scope **Condition** Actions **Details** Tags Review + create

Configure when the alert rule should trigger by selecting a signal and defining its logic.

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Condition name	Time series monitored ⓘ	Estimated monthly cost (USD) ⓘ	
Whenever the average percentage cpu is greater than 10%	1	\$ 0.10	
	1	Total \$ 0.10	

Next, Specify the Action group:

[Home](#) > [Monitor](#) > [Create an alert rule](#) >

Create an action group

[Basics](#) [Notifications](#) [Actions](#) [Tags](#) [Review + create](#)

An action group invokes a defined set of notifications and actions when an alert is triggered. [Learn more](#)

Project details

Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *	Visual Studio Enterprise Subscription - AS
Resource group *	Azure-Monitor-Test-Env

[Create new](#)

Instance details

Action group name *	Monitoring Team
Display name *	Monitoring T

This display name is limited to 12 characters

[Review + create](#)
[Previous](#)
[Next: Notifications >](#)
[Home](#) > [Monitor](#) > [Create an alert rule](#) >

Create an action group

[Basics](#) [Notifications](#) [Actions](#) [Tags](#) [Review + create](#)

Notifications

Choose how to get notified when the action group is triggered. This step is optional.

Notification type	Name	Selected
Email Azure Resource Manager Role	Email	<input checked="" type="checkbox"/>

Please configure the notification by clicking the edit button.

[Rectangular Snip](#)

Email Azure Resource Manager Role

Add or edit an Email Azure Resource Manager Role action

Azure Resource Manager Role	Learn more
Monitoring Contributor	
Enable the common alert schema.	Learn more
Yes	No
OK	

then actions, we can ignore as of now --> tags --> Review and create.

Then mention the details of Alert i.e Alert name and Description.

[Home](#) > [Monitor](#) >

Create an alert rule ...

Scope Condition Actions **Details** Tags Review + create

Project details

Select the subscription and resource group in which to save the alert rule.

Subscription *	<div>Visual Studio Enterprise Subscription - AS</div>
Resource group *	<div>Azure-Monitor-Test-Env</div>

[Create new](#)

Alert rule details

Severity *	<div>3 - Informational</div>
Alert rule name *	<div>CPU LIMIT EXCEEDED</div>
Alert rule description	<div></div>
Enable upon creation	<input checked="" type="checkbox"/>
Automatically resolve alerts	<input type="checkbox"/>

Select the tags if you have any then review and create.

[Home](#) > [Monitor](#) >

Create an alert rule ...

[Scope](#) [Condition](#) [Actions](#) [Details](#) [Tags](#) [Review + create](#)

Project details

Select the subscription and resource group in which to save the alert rule.

Subscription * ⓘ	<div>Visual Studio Enterprise Subscription - AS</div>
Resource group * ⓘ	<div>Azure-Monitor-Test-Env</div>

[Create new](#)

Alert rule details

Severity * ⓘ	<div>3 - Informational</div>
Alert rule name * ⓘ	<div>CPU LIMIT EXCEEDED</div>
Alert rule description ⓘ	<div></div>
Enable upon creation ⓘ	<input checked="" type="checkbox"/>
Automatically resolve alerts ⓘ	<input type="checkbox"/>

Once alert get created, after sometime trigger alerts when CPU Threshold limit exceeded.

Azure: Activated Severity: 3 CPU UTILIZATION

Some content in this message has been blocked because the sender isn't in your Safe senders list. I trust content from azure-noreply@microsoft.com. | [Show blocked content](#)

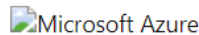


Microsoft Azure <azure-noreply@microsoft.com>

To: Kondareddy Duggireddy



Tue 6/14/2022 9:00 PM



☐ Your Azure Monitor alert was triggered



Azure monitor alert rule CPU UTILIZATION was triggered for Azure-Monitor-1 at June 14, 2022 15:29 UTC.

Rule ID	/subscriptions/4ec16287-a91b-4a08-9e9d-ef48ad50ecd c/resourceGroups/Azure-Monitor-Test-Env/providers/m icrosoft.insights/metricAlerts/CPU UTILIZATION View Rule >
Resource ID	/subscriptions/4ec16287-a91b-4a08-9e9d-ef48ad50ecd c/resourceGroups/Azure-Monitor-Test-Env/providers/M icrosoft.Compute/virtualMachines/Azure-Monitor-1 View Resource >


How to set Memory Exceeded alert:

Goto --> Log analytics workspace --> select Logs --> paste below Memory Query.

```
Perf | where CounterName == "Available MBytes" | where TimeGenerated > ago(15m) | where Computer ==  
"Azure-Monitor-1" | summarize avg = avg(CounterValue) by Computer | where avg > 10
```

APP-WORKSPACE | Logs  

Log Analytics workspace

Search (Ctrl+/) << >> **New Query 1*** x +  Feeds

Agents management
Agents configuration
Custom logs
Computer Groups
Data Export
Linked storage accounts
Network Isolation
Tables (preview)

General
Workspace summary
Workbooks

Time range : Set in query Save Share + New alert rule

```
1 Perf
2 | .where CounterName == "Available MBytes"
3 | .where TimeGenerated > ago(15m)
4 | .where Computer == "Azure-Monitor-1"
5 | .summarize avg := avg(CounterValue) by Computer
6 | .where avg > 10
```

Results Chart

Computer	avg
> Azure-Monitor-1	6,624.067

[Home](#) > [Log Analytics workspaces](#) > [APP-WORKSPACE](#) >

Create an alert rule ...

Scope Condition Actions  Details Tags Review + create

Configure when the alert rule should trigger by selecting a signal and defining its logic.



Define the logic for triggering an alert. Use the chart to view trends in the data. [Learn more](#)

Log query

The query to run on this resource's logs. The results returned by this query are used to populate the alert definition below.

Search query *

```
Perf
| where CounterName == "Available MBytes"
| where TimeGenerated > ago(15m)
| where Computer == "Azure-Monitor-1"
| summarize avg = avg(CounterValue) by Computer
| where avg > 10
```

 This query doesn't return an Azure resource ID column, so the alert will fire on the entire rule scope [Learn more](#)
[View result and edit query in Logs](#) 

Measurement

Select how to summarize the results. We try to detect summarized data from the query results automatically.

Measure ⓘ

Table rows

Review + create

Previous



Next: Actions >

[Home](#) > [Log Analytics workspaces](#) > [APP-WORKSPACE](#) >

Create an alert rule ...

Scope Condition Actions  Details Tags Review + create

An action group is a set of actions that can be applied to an alert rule. [Learn more](#)

 Select action groups  Create action group

Action group name

Contains actions



No action group selected yet

Select action groups

Select up to five action groups to attach to this alert rule.

Subscription ⓘ

Visual Studio Enterprise Subscription - AS

 Search 

Action group name ↑↓	Resource group ↑↓
<input type="checkbox"/> Application Insights Smart Detection	Azure-Monitor-Test-Env
<input type="checkbox"/> Monitoring Team	Azure-Monitor-Test-Env
<input checked="" type="checkbox"/> Network-Alert	Azure-Monitor-Test-Env

[Home](#) > [Log Analytics workspaces](#) > [APP-WORKSPACE](#) >

Create an alert rule ...

[Scope](#) [Condition](#) [Actions](#) **[Details](#)** [Tags](#) [Review + create](#)

Project details

Select the subscription and resource group in which to save the alert rule.

Subscription * ⓘ

Visual Studio Enterprise Subscription - AS

Resource group * ⓘ

Azure-Monitor-Test-Env

[Create new](#)

Alert rule details

Severity * ⓘ

3 - Informational

Alert rule name * ⓘ

Memory Alert

Alert rule description ⓘ

Memory Alert

Region * ⓘ

East US

^ Advanced options

[Review + create](#)

[Previous](#)

[Next: Tags >](#)


Then, add tags if you need to add any and click on Review and Create.





Finally, alert is get triggered.


Below is the email alert triggered screenshot.

Fired:Sev3 Azure Monitor Alert MEMORY EXCEEDED on app-workspace (microsoft.operationalinsights/workspaces) at 6/14/2022 3:36:16 PM

① Some content in this message has been blocked because the sender isn't in your Safe senders list. I trust content from azure-noreply@microsoft.com. | Show blocked content

 Microsoft Azure <azure-noreply@microsoft.com>
To: Kondareddy Duggireddy

    Tue 6/14/22

 Microsoft Azure

Fired:Sev3 Azure Monitor Alert MEMORY EXCEEDED on app-workspace (microsoft.operationalinsights/workspaces) at 6/14/2022 3:36:16 PM

[View the alert in Azure Monitor >](#)

Summary

Alert name	MEMORY EXCEEDED
Severity	Sev3
Monitor condition	Fired
Affected resource	app-workspace
Resource type	microsoft.operationalinsights/workspaces
Resource group	azure-monitor-test-env
Subscription	Visual Studio Enterprise Subscription - AS
Monitoring service	Log Alerts V2

Diskspace utilization alert:

However, we can set up Diskspace alert same way as Memory alert.

Sample Query for DiskSpace:

APP-WORKSPACE | Logs

Log Analytics workspace

New Query 1*

APP-WORKSPACE [Select scope](#) Run Time range: Last 24 hours Save Share New alert rule Export Pin to

Tables Queries Functions

Search Filter Group by: Solution

Favorites

You can add favorites by clicking on the ☆ icon

Azure Monitor for VMs

LogManagement

- Alert
- Event
- Heartbeat

```

1 InsightsMetrics
2 where Namespace == "LogicalDisk" and Name == "FreeSpacePercentage"
3 where Val > 10
4

```

Results

TimeGenerated [UTC]	Computer	Origin	Namespace	Name	Val	Tags
> 6/15/2022, 1:11:20.000 PM	Azure-Monitor-1	vm.azm.ms	LogicalDisk	FreeSpacePercentage	82.4	{\"vm.azm...
> 6/15/2022, 1:11:20.000 PM	Azure-Monitor-1	vm.azm.ms	LogicalDisk	FreeSpacePercentage	87.956	{\"vm.azm...
> 6/15/2022, 12:56:03.000 PM	Azure-Monitor-1	vm.azm.ms	LogicalDisk	FreeSpacePercentage	82.421	{\"vm.azm...
> 6/15/2022, 12:56:03.000 PM	Azure-Monitor-1	vm.azm.ms	LogicalDisk	FreeSpacePercentage	87.956	{\"vm.azm...
> 6/15/2022 1:02:10.000 PM	Azure-Monitor-1	vm.azm.ms	LogicalDisk	FreeSpacePercentage	82.406	{\"vm.azm...

Note: Not only these alerts we can customize any type of alerts depends upon the requirement.

Create the Customize Dashboard:

We can able to create different Metrics graphs in one place.

Custom Dashboard

Private dashboard

New dashboard Refresh Full screen Edit Share Export Clone Assign tags Delete Feedback

Auto refresh : Every 5 minutes

UTC Time : Past 24 hours

