

Implement Monitoring

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Task 1: Use a template to provision an infrastructure.

Deploy a custom template:

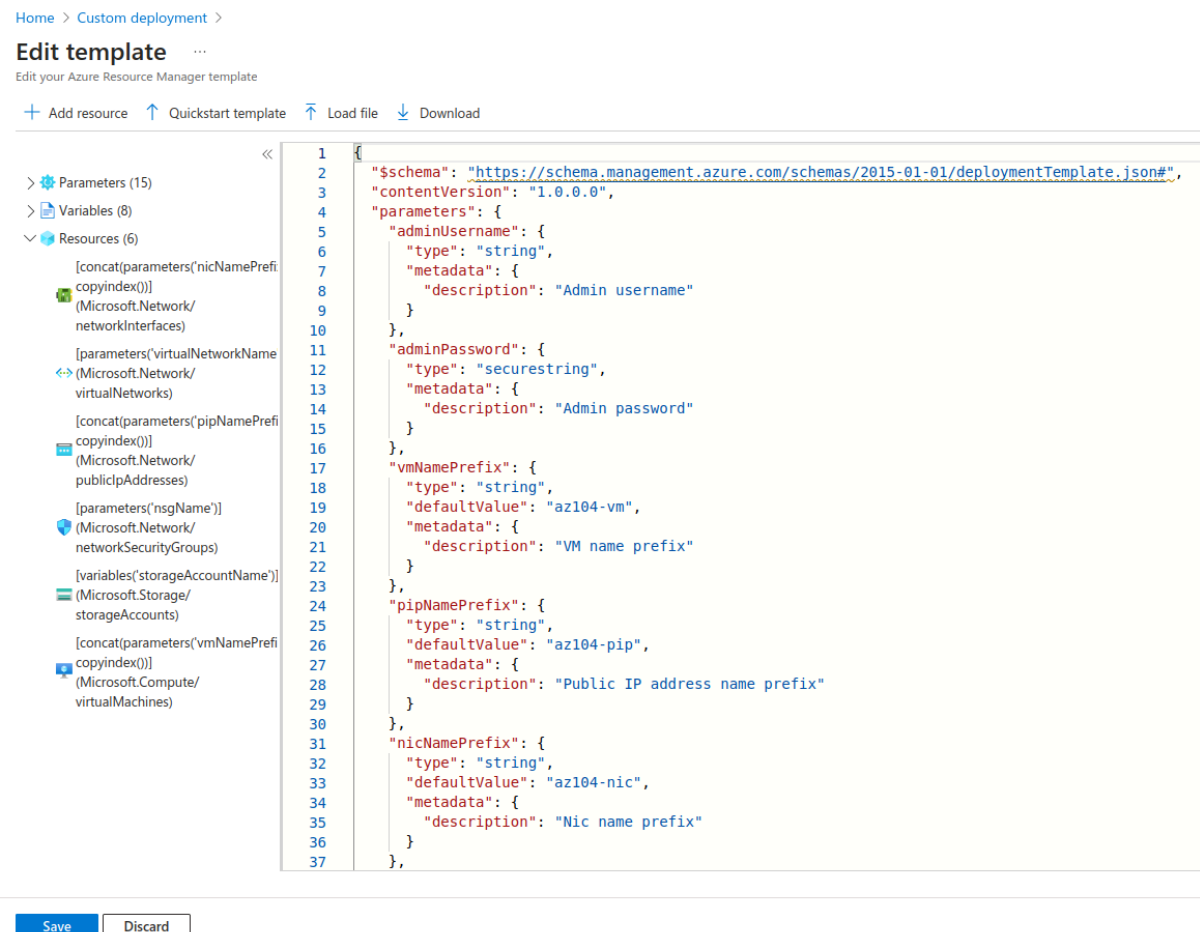


Figure 1. Deploying custom template .

Configure Azure Monitor for virtual machines:

[Home](#) >

Custom deployment

Deploy from a custom template

New! Deployment Stacks let you manage the lifecycle of your deployments. Try it now →

6 resources

[Edit template](#) [Edit parameters](#) [Visualize](#)

Project details

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

Subscription * ⓘ

Resource group * ⓘ [Create new](#)

Instance details

Region * ⓘ

Admin Username * ⓘ ✓

Admin Password * ⓘ ✓

Vm Name Prefix ⓘ ✓

Pip Name Prefix ⓘ ✓

Nic Name Prefix ⓘ ✓

Image Publisher ⓘ ✓

Image Offer ⓘ ✓

Image SKU ⓘ ✓

Vm Size ⓘ ✓

Virtual Network Name ⓘ ✓

[Previous](#) [Next](#) [Review + create](#)

Figure 2. Review.

[Home](#) > [Monitor](#) | [Virtual Machines](#) >

Insights

[Resource Group Monitoring](#) [Azure Monitor](#) [Diagnose and solve problems](#) [Refresh](#) [Monitoring configuration](#) [Provide Feedback](#)

Get more visibility into the health and performance of your VMs

With an Azure virtual machine you get host CPU, disk and up/down state of your VMs out of the box. Enabling additional monitoring gives you more visibility into the health and performance of your VMs. You will be billed based on the amount of data ingested and your data retention settings. It can take between 15 minutes and 1 hour for data to appear in the Azure Monitor.

The map data set collected with Azure Monitor for VMs is intended to be infrastructure data about the VMs. For more information, please [click here](#).

[Enable](#)

Having difficulties enabling Azure Monitors for VMs? [Troubleshoot](#)

Have more questions?

[Learn more about virtual machine monitoring](#)
[What is VM Insights?](#)
[Learn more about pricing](#)
[Support Matrix](#)
[FAQ](#)
[Update Azure Agent](#)

Monitoring configuration

VM Insights now supports data collection using the Azure Monitor Agent and data collection rules.

Subscription *

Data collection rule ⓘ [Create New](#)

MSVM-DefaultWorkspace-0cfe2870-d256-4119-b0a3-16293ac11bdc-EUS

Guest performance	Enabled
Processes and dependencies (Map)	Disabled
Log Analytics workspace	DefaultWorkspace-0cfe2870-d256-4119-b0a3-16293ac11bdc-EUS

This will also enable System Assigned Managed Identity, in addition to existing User Assigned identities (if any).
Note: Unless specified in the request, the machine will default to using System Assigned identity. [Learn More](#)

Currently, only resources in certain regions are supported. [Learn More](#)

[Configure](#) [Cancel](#)

Figure 3. Monitoring configuration.

Task 2: Create an alert.

Alerts:

Home > Monitor | Alerts >

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
No resource selected yet	

Review + create Previous Next: Condition >

Select a resource

Browse Recent

Resource types All resource types Locations All locations

Search to filter items...

Resource	Resource type	Location
<input type="checkbox"/> P4-Real Hands-On Labs	Subscription	-
<input checked="" type="checkbox"/> 1-853290d9-playground-sandbox	Resource group	-
<input type="checkbox"/> az104-nic0	Network Interface	East US
<input type="checkbox"/> az104-nsg01	Network security group	East US
<input type="checkbox"/> az104-pip0	Public IP address	East US
<input type="checkbox"/> az104-vm0	Virtual machine	East US
<input type="checkbox"/> az104-vm0_disk1_Ac16443e8ba430cb1eb6f16...	Disk	East US
<input type="checkbox"/> az104-vnet	Virtual network	East US
<input type="checkbox"/> az104112qqcqrcah7ymi	Storage account	East US

Metric and Log signals might not be available if the scope includes multiple resources.

Refine scope

Resource type Select a resource type Location Select a location

Selected resources 1 scope

1-853290d9-playground-sandbox Resource group -

Apply Cancel Clear all selections

Figure 4. Creating an alert Selecting a resource.

Home > Monitor | Alerts >

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.

Signal name * Select a signal

[See all signals](#)

Review + create Previous Next: Actions >

Select a signal

Delete Virtual Machine Signal type: All Signal source: All

Signal name	Signal source
Activity log	
Delete Virtual Machine (Virtual Machines)	Administrative
Delete Virtual Machine and Virtual Machine scale sets in a Azure Fleet resource (Fle...	Administrative
Delete Virtual Machine Associated Network Security Group (Virtual Machine Associ...	Administrative
Delete Virtual Machine Extension (Virtual Machine Extensions)	Administrative
Delete Virtual Machine Image (Virtual Machine Image)	Administrative
Delete Virtual Machine in a Virtual Machine Scale Set (Virtual Machine in Scale Set)	Administrative
Delete virtual machine pools. (Virtual Machine Pools)	Administrative
Delete Virtual Machine run command (Virtual Machine RunCommands)	Administrative
Delete Virtual Machine Scale Set (Virtual Machine Scale Sets)	Administrative
Delete Virtual Machine Scale Set Extension (Virtual Machine Scale Set Extensions)	Administrative
Delete Virtual Machines in a Virtual Machine Scale Set (Virtual Machine Scale Sets)	Administrative
Delete virtual machines. (Virtual machines)	Administrative

Apply Cancel

Figure 5. Selecting a signal.

Create an alert rule ...

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

Signal name * ⓘ

📄 Delete Virtual Machine (Virtual Machines) ▼

[See all signals](#)

Chart period

Over the last 6 hours ▼

No data available

☒ Select all

☒ Critical

☒ Error

☒ Warning

☒ Informational

☒ Verbose

All selected ▼

[View events in Azure Monitor - Activity Log](#) 📄

Status ⓘ

All selected ▼

 Event initiated by ⓘ

* (All services and users) ▼

[Add event initiator](#)

Condition preview

Whenever the Activity Log has an event with Category='Administrative', Signal name='Delete Virtual Machine (Virtual Machines)'

Figure 6. Selecting event level.

Create an alert rule ...

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

Signal name * ⓘ

Delete Virtual Machine (Virtual Machines) ▼

[See all signals](#)

Chart period

Over the last 6 hours ▼

No data available

activityLogHistoryBarSeries

2 AM

[View events in Azure Monitor - Activity Log](#) ↗

Alert logic

Event Level ⓘ

All selected ▼

Status ⓘ

All selected ▼

- ☒ Select all
- ☒ Failed
- ☒ Started
- ☒ Succeeded

Event initiated by ⓘ

* (All services and users) ▼

[Add event initiator](#)

Condition preview

Whenever the Activity Log has an event with Category=

ne (Virtual Machines)'

[Review + create](#)

[Previous](#)

[Next: Actions >](#)

Figure 7. Selecting status.

Task 3: Configure action group notifications.

Create action group:

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

Create 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 ⓘ	P4-Real Hands-On Labs
Resource group * ⓘ	1-853290d9-playground-sandbox
	Create new
Region *	Global

Instance details

Action group name * ⓘ	Alert the operations team
Display name * ⓘ	AlertOpsTeam

The display name is limited to 12 characters

Figure 8. Creating an action group.

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

Create action group ...

Basics **Notifications** Actions Tags Review + create

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

Notification type ⓘ	Name ⓘ	Selected ⓘ
Email/SMS message/Push/Voice	VM was deleted	

Please configure the notification by clicking the edit button.

Email/SMS message/Push/Voice

Add or edit Email/SMS message/Push/Voice action

<input checked="" type="checkbox"/> Email	
Email *	vladyslav.kulavets.r.2022@ipnu.ua
<input type="checkbox"/> SMS (Carrier charges may apply)	
Country code	1
Phone number	
<input type="checkbox"/> Azure mobile app notification	
Azure account email ⓘ	
<input type="checkbox"/> Voice	
Country code	1
Phone number	
Enable the common alert schema. Learn more	
<input type="radio"/> Yes <input checked="" type="radio"/> No	
OK	

Figure 9. Selection of the notification method.

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 actions
- ☐

 Use quick actions (preview)
Select one or more of the quick actions.
- ☒

 Use action groups
Add an existing action group or create a new one.
- ☐

 None

Action groups

Action group name	Contains actions	
Alert the operations team	1 Email	×
Manage action groups		

Figure 10. Actions.

[Home](#) >

Create an alert rule ...

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

Scope

Resource  P4-Real Hands-On Labs >  1-853290d9-playground-sandbox

Condition

Condition preview

Whenever the Activity Log has an event with Category='Administrative', Signal name='Delete Virtual Machine (Virtual Machines)'

Actions

Action group name

Contain actions

Alert the operations team

1 Email 

Details

Project details

Subscription P4-Real Hands-On Labs
Resource group 1-853290d9-playground-sandbox
Region global

Alert rule details

Alert rule name VM was deleted
Alert rule description A VM in your resource group was deleted
Enable upon creation ☒

Create

Previous

Figure 11. Review.

Task 4: Trigger an alert and confirm it is working.

Virtual machines:










<input checked="" type="checkbox"/> Name ↑↓	Subscription ↑↓	Resource group ↑↓	Location ↑↓	Status ↑↓	Operating system ↑↓	Size ↑↓	Public IP address ↑↓	Disks ↑↓	Update status ↑↓
<input checked="" type="checkbox"/>  az104-vm0	P4-Real Hands-On Labs	1-853290d9-playgrou...	East US	Running	Windows	Standard_D2s_v3	4.227.219.135	1	Enable periodic assess... ⋮
<div> Pin to dashboard  Add to favorites  Edit tags  Open in mobile  Start  Restart  Stop  Delete</div>									

Figure 12. Deleting VM.

Delete Resources

×

The selected resources along with their related resources and contents will be permanently deleted. If you are unsure of the selected resource dependencies, navigate to the individual resource page to perform the delete operation. More details of the resource dependencies are available in the manage experience.

Resources to be deleted (1)

Name	Resource type	
az104-vm0	VirtualMachine	Remove

☐ Apply force delete for selected Virtual machines and Virtual machine scale sets ⓘ

Enter "delete" to confirm deletion *

delete

DeleteCancel

Figure 13. Deleting VM.

Notifications



[More events in the activity log →](#)

[Dismiss all](#)

Executed delete command on 1 selected items



Succeeded: 1, Failed: 0, Canceled: 0.

a few seconds ago

Figure 14. Notification.

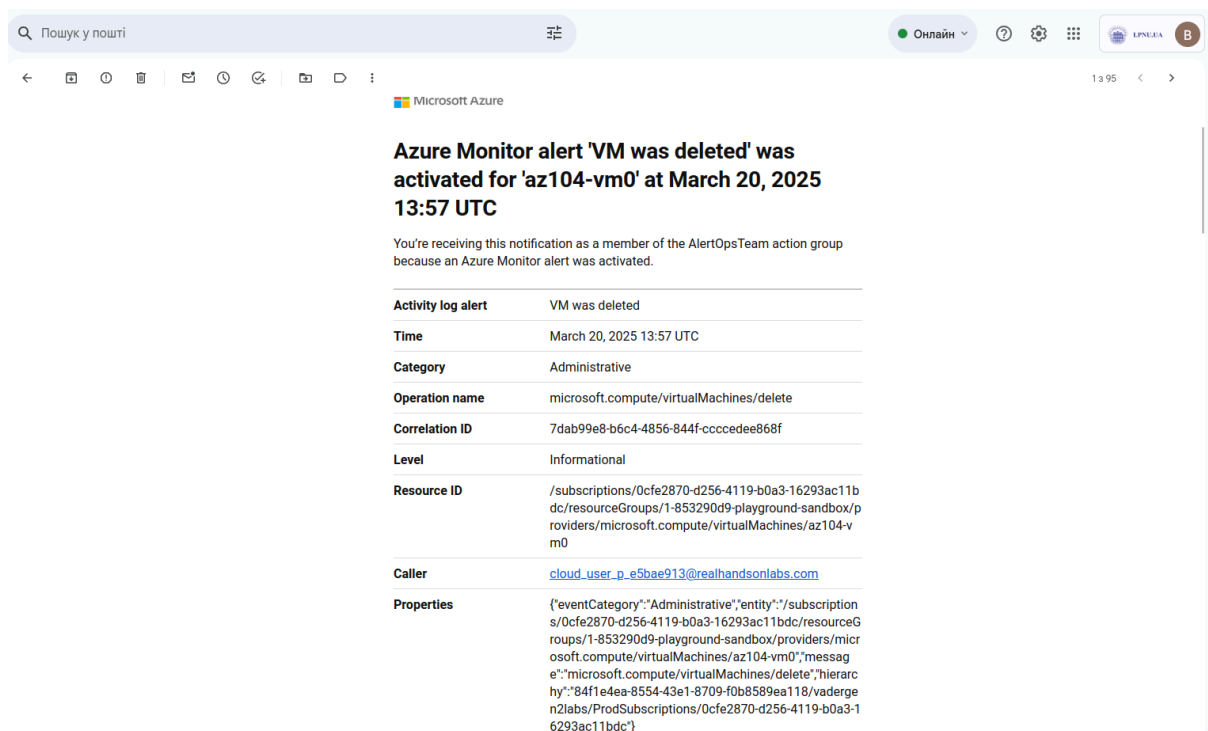


Figure 15. Notification in email.

Task 5: Configure an alert processing rule.

Alert processing rules:

ng specific actions to certain types of alerts.

Resource types

All resource types

Search to filter items...

Scope	Resource type	Location
<input type="checkbox"/> P4-Real Hands-On Labs	Subscription	-
<input checked="" type="checkbox"/> 1-853290d9-playground-sandbox	Resource group	-
<input type="checkbox"/> Alert	Activity log alert rule	Global
<input type="checkbox"/> Alert the operations team	Action group	Global
<input type="checkbox"/> az104-nic0	Network Interface	East US
<input type="checkbox"/> az104-nsg01	Network security group	East US
<input type="checkbox"/> az104-pip0	Public IP address	East US
<input type="checkbox"/> az104-vm0_disk1_4cf16443e8ba4d0cb1eb6f16...	Disk	East US
<input type="checkbox"/> az104-vnet	Virtual network	East US
<input type="checkbox"/> az104112qqcqcrqh7jmi	Storage account	East US
<input type="checkbox"/> VM was deleted	Activity log alert rule	Global

Selected scopes 1 scope

1-853290d9-playground-sandbox Resource group -

Apply Cancel Clear all selections

Figure 16. Selecting alerts.

We have the same time slot with Kuwait, better than choosing Minsk

Microsoft Azure

Search resources, services, and docs (G+)

Home > Monitor | Alerts > Alert processing rules >

Create an alert processing rule

Scope Rule settings **Scheduling** Details Tags Review + create

Define when you'd like to apply this rule.

Apply the rule

☐ Always

☒ At a specific time

☐ Recurring

Start 03/20/2025 10:00 PM

End 03/21/2025 7:00 AM

Time zone (UTC+03:00) Kuwait, Riyadh

Preview From 03/20/2025 at 10:00 PM to 03/21/2025 at 7:00 AM (UTC+03:00 Kuwait, Riyadh)

Figure 17. Creating an alert processing rule.

Home > Monitor | Alerts > Alert processing rules >

Create an alert processing rule

...

ScopeRule settingsSchedulingDetailsTagsReview + create

Here's a summary of your alert processing rule.
When you review it, keep our [Privacy statement](#) in mind.

Scope

Resource

P4-Real Hands-On Labs >

1-853290d9-playground-sandbox

Rule settings

Rule type

Suppress notifications

Scheduling

Apply the rule

At a specific time

Schedule

From 03/20/2025 at 10:00 PM to 03/21/2025 at 7:00 AM (UTC+03:00 Kuwait, Riyadh)

Details

Subscription

P4-Real Hands-On Labs

Resource group

1-853290d9-playground-sandbox

Name

Planned Maintenance

Description

Suppress notifications during planned maintenance.

Enable rule upon creation

☒

Create

Previous

Figure 18. Review.

Task 6: Use Azure Monitor log queries.

Monitor:

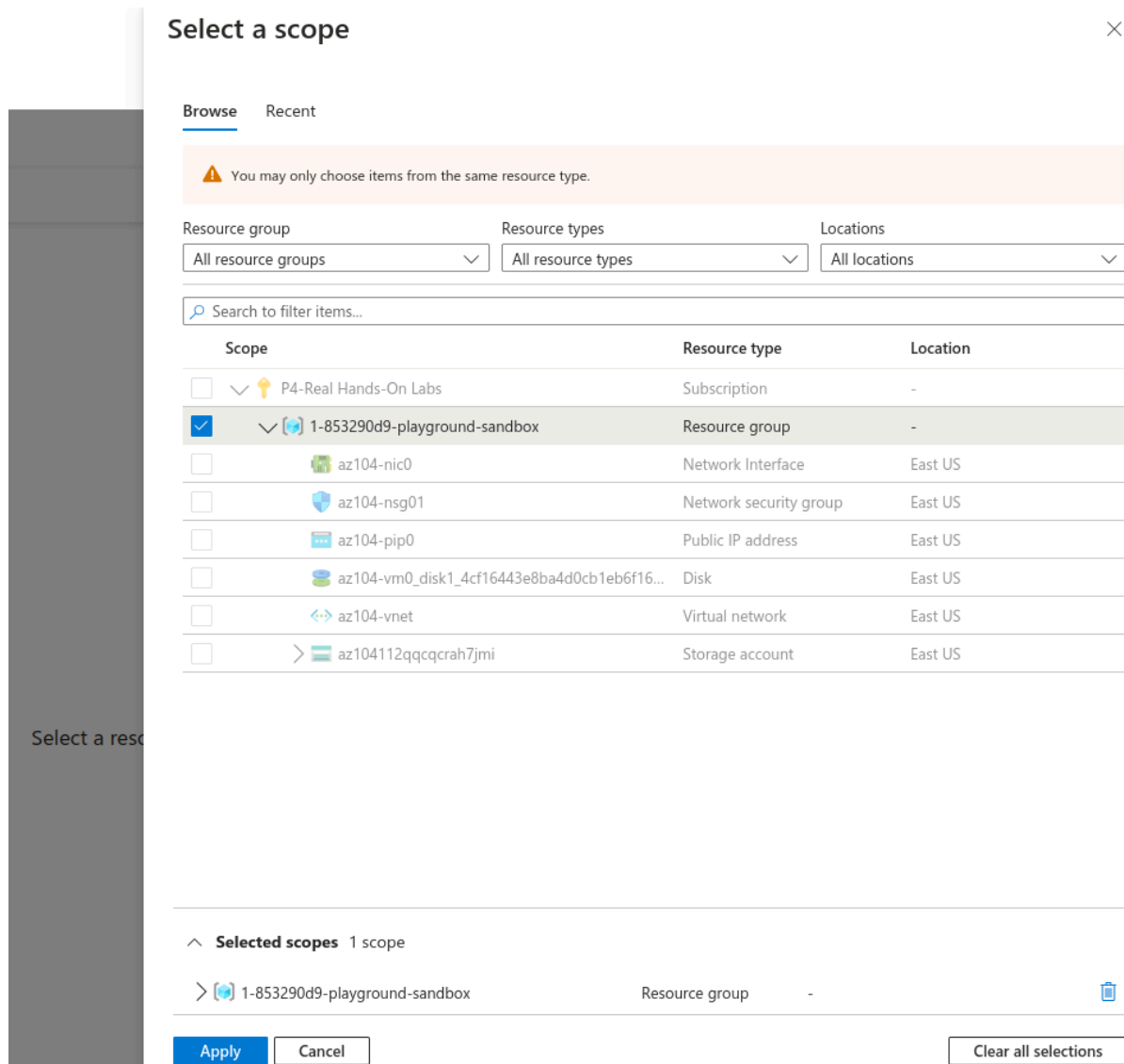


Figure 19. Selecting a scope.

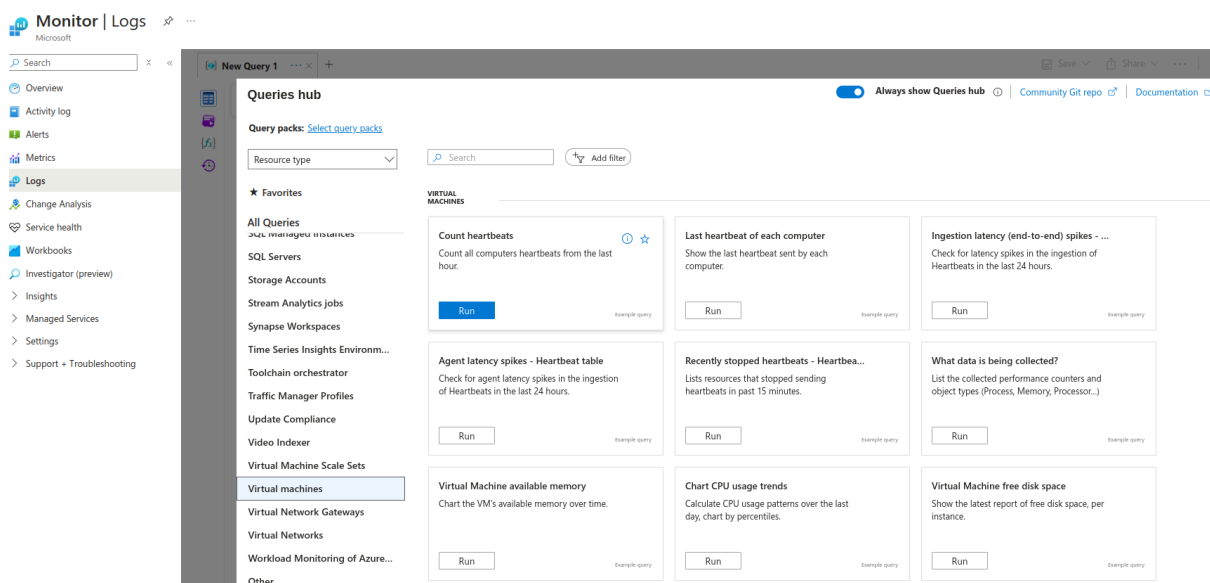


Figure 20. Found count heartbeats.

does not allow to change the code in KQL mode:

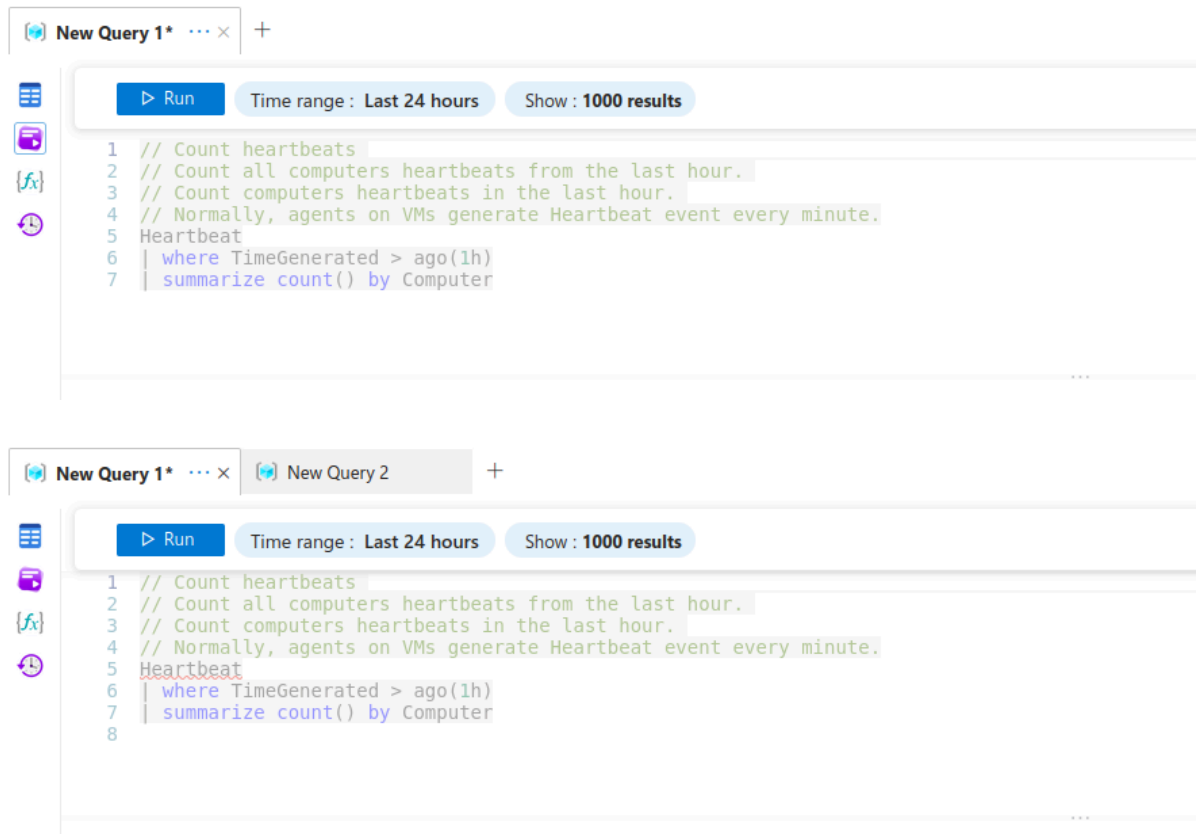


Figure 21. KQL mode.