

# Move Azure single instance VMs from regional to zonal target availability zones

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This article provides information on how to move Azure single instance Virtual Machines (VMs) from a regional to a zonal configuration within the same Azure region.

## Important

Regional to zonal move of single instance VM(s) configuration is currently in *Public Preview*.

## Prerequisites

Ensure the following before you begin:

- **Availability zone regions support:** Ensure that the regions you want to move to are supported by Availability Zones. [Learn more](#) about the supported regions.
- **VM SKU availability:** The availability of VM sizes, or SKUs, can differ based on the region and zone. Ensure to plan for the use of Availability Zones. [Learn more](#) about the available VM SKUs for each Azure region and zone.
- **Subscription permissions:** Check that you have *Owner* access on the subscription containing the VMs that you want to move. The first time you add a VM to be moved to Zonal configuration, a [system-assigned managed identity](#) (formerly, Managed Service Identify (MSI)) that's trusted by the subscription is necessary. To create the identity, and to assign it the required role (Contributor or User Access administrator in the source subscription), the account you use to add resources needs Owner permissions on the subscription. [Learn more](#) about Azure roles.
- **VM support:** Check that the VMs you want to move are supported. [Learn more](#). Check supported VM settings.
- **Subscription quota:** The subscription must have enough quota to create the new VM and associated networking resources in target zonal configuration (in same region). If the subscription doesn't have enough quota, you need to [request additional limits](#).

- **VM health status:** The VMs you want to move must be in a healthy state before attempting the zonal move. Ensure that all pending reboots and mandatory updates are complete.

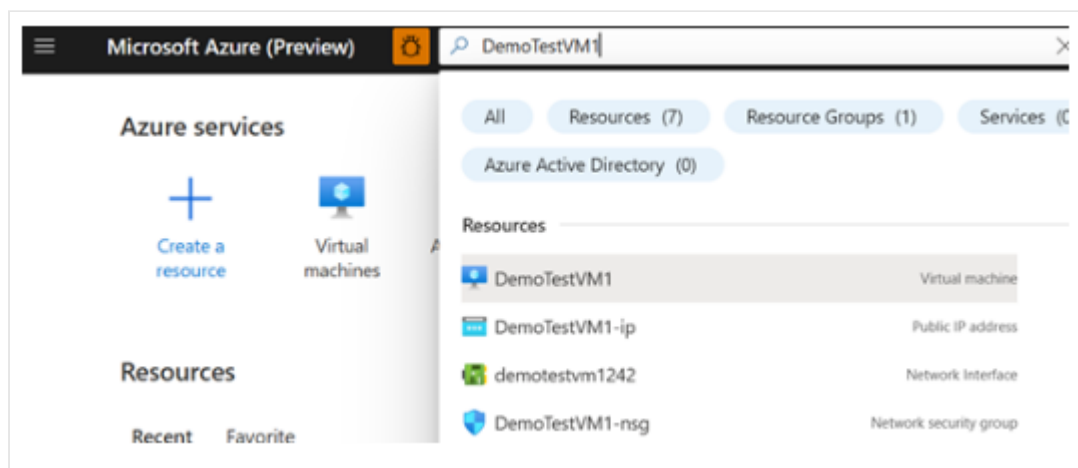
## Select and move VMs

To select the VMs you want to move from Regional to Zonal configuration within same region, follow these steps:

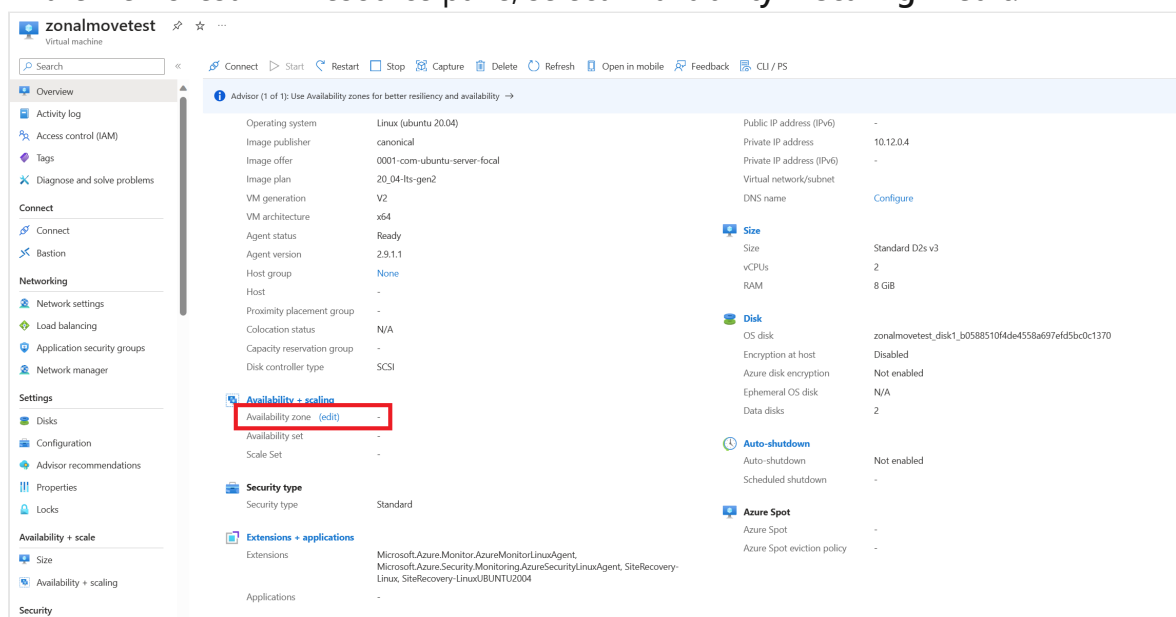
### Select the VMs

To select the VMs for the move, follow these steps:

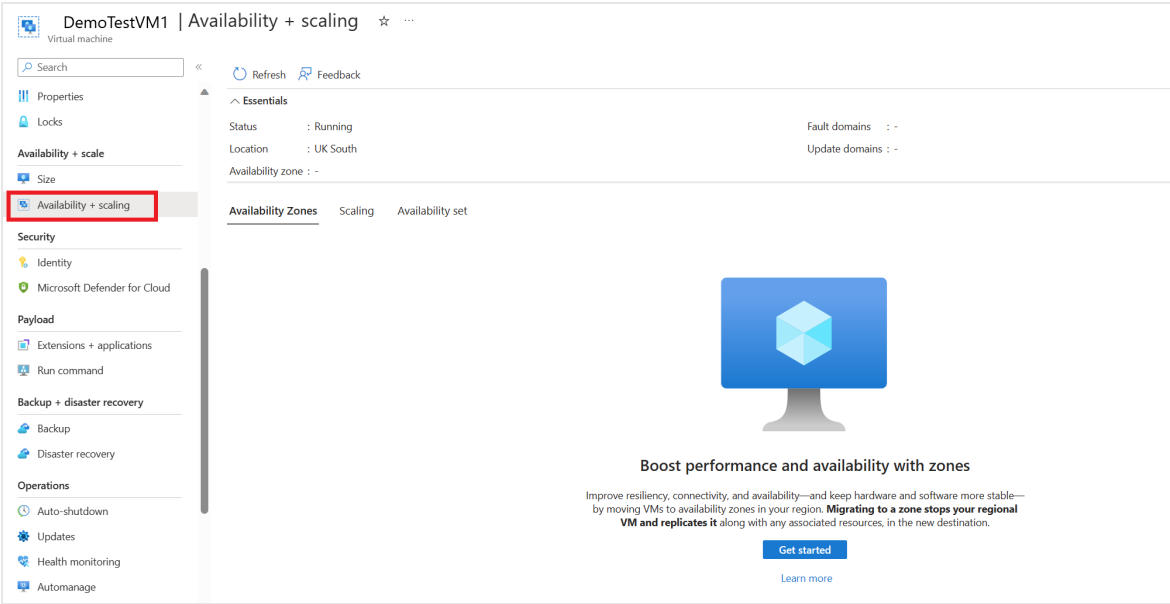
1. On the [Azure portal](#) , select the VM. In this tutorial, we're using **DemoTestVM1** as an example.



2. In the DemoTestVM1 resource pane, select **Availability + scaling** > **edit**.



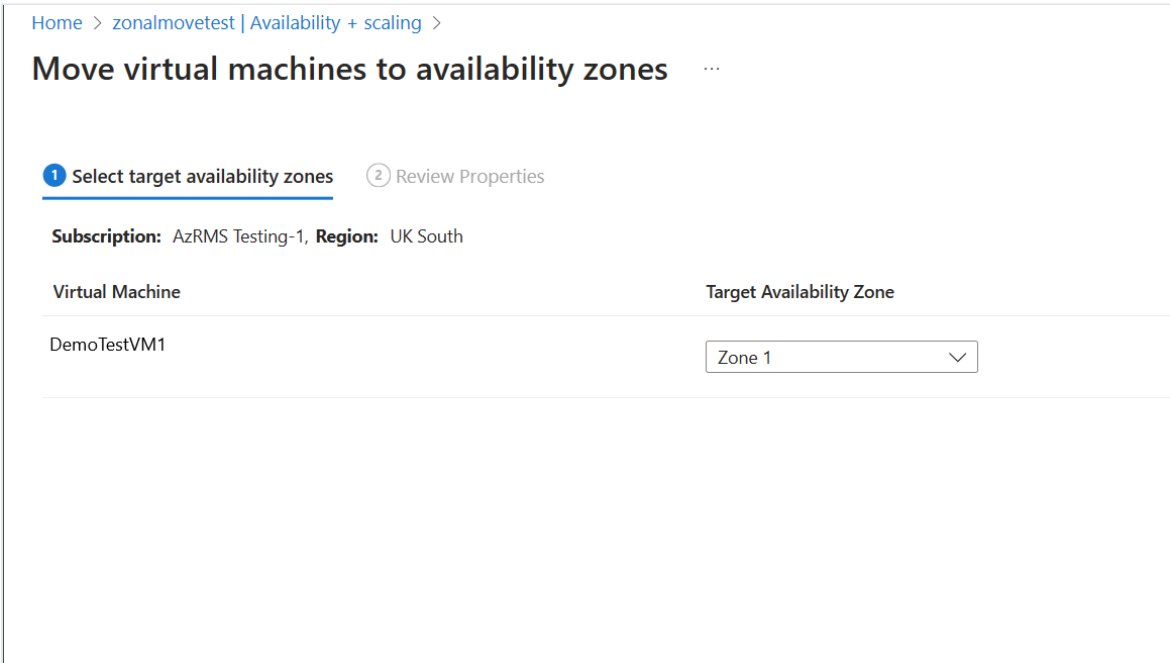
Alternatively, in the **DemoTestVM1** overview plane, you can select **Availability + scale** > **Availability + scaling**.



## Select the target availability zones

To select the target availability zones, follow these steps:

1. Under **Target availability zone**, select the desired target availability zones for the VM. For example, Zone 1.



**i Important**

If you select an unsupported VM to move, the validation fails. In this case, you must restart the workflow with the correct selection of VM. Refer to the [Support Matrix](#) to learn more about unsupported VMs type.

2. If Azure recommends optimizing the VM size, you must select the appropriate VM size that can increase the chances of successful deployment in the selected zone. Alternatively, you can also change the zone while keeping the same source VM size.

Home > one >

### Move virtual machines to availability zones

[Select target availability zones](#) [Review Properties](#)

Subscription: AzRMS Testing-1, Region: South Central US

**Warning:** For the current selection VM size: Standard\_DC1ds\_v3 in the selected availability zone: Zone 1, Azure detected there are other VM size and zone recommendations that may lead to a higher chance of successful deployment. To deploy seamlessly, choose a different VM size in the same availability zone or select a different availability zone with corresponding recommended VM size.

Virtual Machine	Target Availability Zone	VM Size
one	Zone 1	Standard_D2ds_v5

VM size shows the list of available sizes in the corresponding availability zone and are sorted in descending order by closest match to source VM size.

3. Select the consent statement for **System Assigned Managed Identity** process then select **Next**.

[Home](#) > [zonalmovetest](#) | [Availability + scaling](#) >

## Move virtual machines to availability zones

1 Select target availability zones

2 Review Properties

**Subscription:** AzRMS Testing-1, **Region:** UK South

Virtual Machine	Target Availability Zone
DemoTestVM1	<div>Zone 1</div>

☒ I am granting permissions to create [System Assigned Managed Identity](#) on my behalf to access the resources in the subscription AzRMS Testing-1. \*

Previous

Next

The MSI authentication process takes a few minutes to complete. During this time, the updates on the progress are displayed on the screen.

## Review the properties of the VM

To review the properties of the VM before you commit the move, follow these steps:

1. On the **Review properties** pane, review the VM properties.

### VM properties

Find more information on the impact of the move on the VM properties.

The following source VM properties are retained in the target zonal VM by default:

Property	Description
VM name	Source VM name is retained in the target zonal VM by default.
VNET	By default, the source VNET is retained and target zonal VM is created within the same VNET. You can also create a new VNET or choose an existing from target zonal configuration.
Subnet	By default, the source subnet is retained, and the target zonal virtual machine is created within the same subnet. You can create a new subnet or choose an existing from target zonal configuration.
NSG	Source NSG is retained by default and target zonal VM are created within the same NSG. You can create a new NSG or choose an existing from target zonal configuration.
Load balancer (Standard SKU)	Standard SKU Load balance supports target zonal configuration and are retained.
Public IP (Standard SKU)	Standard SKU PIP supports target zonal configuration and are retained.

The following source VM properties are created in the target zonal VM by default:

Property	Description
VM	A copy of the source VM is created in the target zonal configuration. The source VM is left intact and stopped after the move. Source VM ARM ID is not retained.
Resource group	By default, a new resource group is created as the source resource group can't be utilized. This is because we're using the same source VM name in the target zone, it is not possible to have two identical VMs in the same resource group. However, you can move the VM to an existing resource group in the target zone.
NIC	A new NIC is created in the target zonal configuration. The source NIC is left intact and stopped after the move. Source NIC ARM ID is not retained.
Disks	The disks attached to the source VM are recreated with a new disk name in the target zonal configuration and is attached to the newly created zonal VM.
Load balancer (Basic SKU)	Basic SKU Load balance won't support target zonal configuration and hence isn't retained. A new Standard SKU Load balancer is created by default.

Property	Description
	However, you can still edit the load balancer properties, or you can select an existing target load balancer as well.
Public IP (Basic SKU)	Basic SKU Public IPs won't be retained after the move as they don't support target zonal configurations. By default, a new Standard SKU Public IP is created. However, you can still edit the Public IP properties or you can select an existing target Public IP as well.

2. Review and fix if there are any errors.
3. Select the consent statement at the bottom of the page before moving the resources.

Home > vmtest1 >

Move virtual machines to availability zones

Select target availability zones

Review Properties

Subscription: AzureUS Testing-1 Region: Central US

Review and configure VM properties. [Learn more](#)

vmtest1

Property	Source Resource Value	Target Resource Value	Info	Issues
Name	vmtest1	<input type="text" value="vmtest121"/> <a href="#">Configure</a>	Source VM name is retained <a href="#">?</a> Selected Availability Zone: 1 VM Size: Standard_D2s_v3	-
NIC	vmtest1234	<input type="text" value="new-vmtest1234"/> <a href="#">Configure</a>	New NIC is created along with the zonal VM <a href="#">?</a>	-
Public IP Address	vmtest1-ip	<input type="text" value="new-vmtest1-ip"/> <a href="#">Configure</a>	New public IP address is created for new zonal VM <a href="#">?</a>	-
Virtual network/subnet	vmtest1-vnet	<input type="text" value="new-vmtest1-vnet-101"/> <a href="#">Configure</a>	Source VNet and subnet are retained and supported in zonal configuration <a href="#">?</a>	-
Network Security Group (attached to VNET)	name-2d81e96220vmtest1-vnet	<input type="text" value="NSG-32b1e96220vmtest1-vnet"/> <a href="#">Configure</a>	Source NSG is retained and supported in zonal configuration <a href="#">?</a>	-
Network Security Group (attached to NIC)	vmtest1-nsg	<input type="text" value="vmtest1-nsg"/> <a href="#">Configure</a>	Source NSG is retained and supported in zonal configuration <a href="#">?</a>	-

☐ I understand that source VM(s) will be stopped during the process to avoid data loss. There will be a brief downtime of few minutes and copy of VM(s) will be created in the target zone. [Learn more](#)

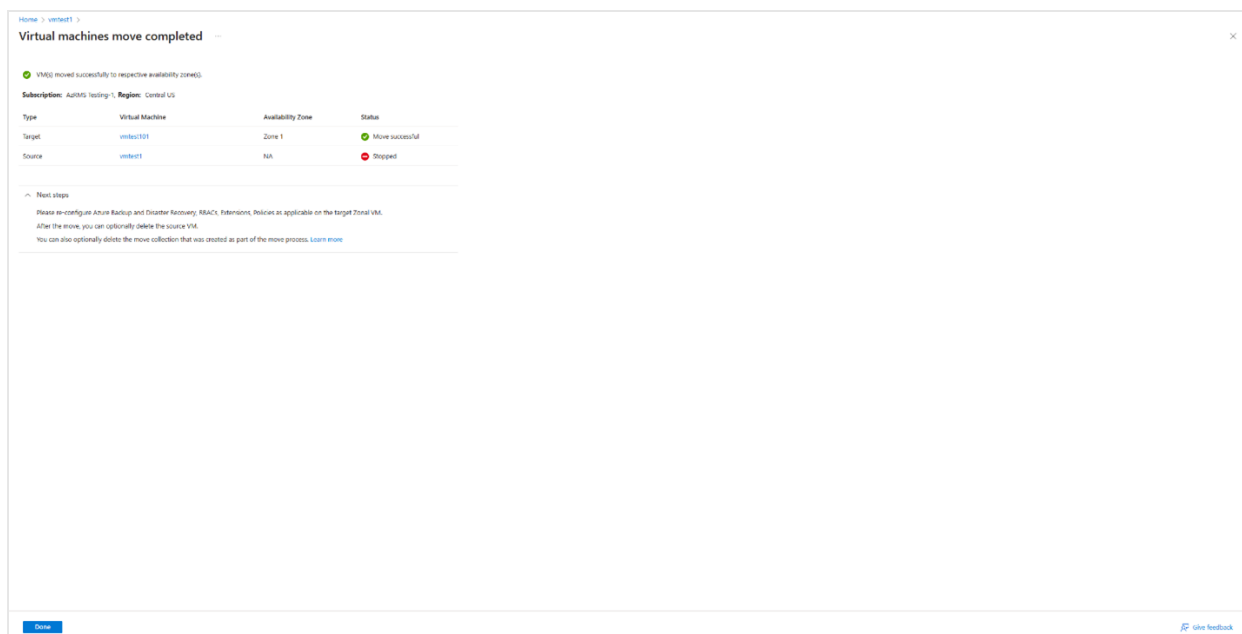
Previous

Move

[Give feedback](#)

# Move the VMs

Select **Move** to complete the move to Availability zones.



During this process:

- The source virtual machine is stopped hence, there's a brief downtime.
- A copy of the source VM is created in the target zonal configuration and the new virtual machine is up and running.

## Configure settings post move

Review all the source VM settings and reconfigure extensions, RBACs, Public IPs, Backup/DR etc. as desired.

## Delete source VM

The source VM remains in a stopped mode after the move is complete. You can choose to either delete it or use it for another purpose, based on your requirements.

## Delete additional resources created for move

After the move, you can manually delete the move collection that was created.

To manually remove the move collection that was made, follow these steps:

1. Ensure you can view hidden resources as the move collection is hidden by default.
2. Select the Resource group of the move collection using the search string *ZonalMove-MC-RG-SourceRegion*.
3. Delete the move collection. For example, *ZonalMove-MC-RG-UKSouth*.



**Note**



The move collection is hidden and must be turned on to view it.

## Next steps

Learn how to move single instance Azure VMs from regional to zonal configuration using [PowerShell](#) or [CLI](#).