Sharing Capacity Reservation Group across Subscriptions-Private Preview v1.0

IMPORTANT: **Sharing Capacity Reservation Group** is currently in PREVIEW. See the [Supplemental Terms of Use for Microsoft Azure Previews](https://azure.microsoft.com/en-us/support/legal/preview-supplemental-terms/)  for legal terms that apply to Azure features that are in beta, preview, or otherwise not yet released into general availability.

Overview:

Sharing of deployed resources across subscriptions is a new area for Compute that would allow Capacity Reservation Group to be shared across subscriptions.

For example, if Sub A created a CRG X and shared with Sub B and gave read/deploy rights to subscription B, subscription B will be able to deploy VM R in CRG X given it is within the same VM SKU and region/zone:

Graphical user interface, application, PowerPoint

Description automatically generated

Azure will provide basic functionality that supports the key scenarios, some of which are summarized below:

* **Scenarios:**

1. **Resource Reuse:**

Customers can maximize utilization even during scale-in of primary apps. Customers with ODCR for DR can now use reservations for lower priority workloads including non-production, test and run-to-completion jobs hosted in separate subscriptions.

Diagram

Description automatically generated

1. **Centralized Capacity:**

Customers can have the same persona to manage both quota and reserved capacity across subscriptions for the app environments they support.

Diagram

Description automatically generated

1. **Scaling/Sharding:**

At-scale customers using multiple subscriptions for a single application environment can have a single group of reserved capacity.

Diagram

Description automatically generated

1. **ISV customer isolation:**

SaaS providers that host VMs for specific customers can manage supporting resources more centrally while keeping their customers isolated in their own subscriptions. Resources include quota and reserved capacity. Customers get streamlined access in a more dynamic way that better fits their customer usage patterns.

Diagram

Description automatically generated

* **Capacity Reservation Group sharing requirements:**

Capacity Reservation Groups (CRGs) can be shared between subscriptions. The deployed VMs must match one of the Capacity Reservations in the Capacity Reservation groups on SKU, location, and zone if applicable.

Consider the example represented by the diagram:

* Ava creates and manages Capacity Reservation Groups in Subscription A.
* Bob creates and deploys Virtual Machines in Subscription B. Sal performs the same actions in Subscription Dev.
* The goal is for Ava to share CRG X with Subscription B such that Bob can deploy VMs using CRG X.

Graphical user interface, diagram

Description automatically generated

Step 1: share CRG X

1. A rights administrator in Subscription B must grant Ava CRG write permissions to Subscription B. The specific access required is Microsoft.Compute/capacityReservationGroups/share/action.
2. Ava must then update the “sharing profile” of CRG X to include Subscription B.

At this point, CRG X and all member Capacity Reservations are visible to Subscription B.

Step 2: grant user access to CRG X

1. A rights administrator in Subscription A must grant Bob read and deploy rights to CRG X.

The specific access rights are Microsoft.Compute/capacityReservationGroups/read and Microsoft.Compute/capacityReservationGroups/deploy.

1. Bob can now add CRG X as the capacityReservationGroup property on Virtual Machines. The usual rules on the VM matching a Capacity Reservation apply. From the diagram, VM R must match either CR Y or CR Z.

Note that Bob was not granted write permissions to CRG X. Bob is not allowed to create more reservations in CRG X, change reserved quantities, or make any other changes to the definition of CRG X.

* **Usage patterns:**

1. Grant access to specific Capacity Reservation Groups – this was accomplished in the example above
2. Grant access to all Capacity Reservation Groups in a subscription – follow the same steps, except instead of granting Bob rights to just CRG X, create a custom role for the CRG read and deploy rights. In Subscription A, add Bob to the custom role.
3. Grant access to all subscriptions in a management group – for the initial release of sharing across subscriptions, this is best accomplished using Azure Template Specs to set permissions and update the CRG sharing profiles. See <https://learn.microsoft.com/en-us/azure/azure-resource-manager/bicep/template-specs>.

* **Summary of key design considerations:**
  + Usage Control: Customer has control over sharing of CRG
  + Discoverability: Customer using shared objects must be able to find them
  + Manageability: Customers have the option to set an object’s share policy and then it operates automatically as their object set changes
  + At scale: System can manage large sets of objects in a streamlined way

**Customer experience of CRG sharing:**

* **CRG creation with sharing profile**:
* User Ava needs to have Microsoft.Compute/capacityReservationGroups/share/action permission to be able to share CRG with Sub B
* User Ava will populate CRG X with Subscription B in “sharingProfile”

A diagram of a diagram

Description automatically generated

* **Shared CRG usage:**

User Bob must have read and deploy rights to be able to deploy VM A in shared CRG X

Diagram

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* **Deletion of CRG:**
* Only CRG owners have ability to delete the CRs and CRG if no VMs are associated with CRs
* A shared CRG cannot be deleted if there are VMs using or referencing it from any subscription
* Un sharing with Sub B will happen as part of shared CRG deletion process

A diagram of a group of blue squares with yellow x and red x

Description automatically generated

* **Billing:**

If a shared VM is deployed to CRG/CR, the VM usage will be emitted to billing with the associated CR. The billing engine will behave as it does today– bill the subscription hosting the VM for the usage and deduct the usage from the corresponding CR based on the compute usage stream associating the VM and CR.

CRG owner subscription pays: unused CR

VM owner subscription pays: $VM+$storage+$network

VMs deployed in shared reservation are eligible for RIs owned by subscription that created the CRG if the RI is for entire enrollment. Scoped RIs won’t apply if the subscription deploying VM is in a target outside of the RI scope as part of Private Preview. If subscription deploying VM has an RI, the billing engine would behave as it does today.

* **Quota:**

If the contributor subscription (Sub B) is deploying VM in shared CRG owned by Sub A, quota will be deducted from both subscriptions.

For example, if sub A created a CR of DS1\_v2 with 1 instance, quota will be deducted by 1 vCore from Sub A. If Sub B is deploying a VM of DS1\_v2 to the CR of Sub A, quota will be deducted from Sub B by 1 vCore.

**Enable Preview Access**

To participate in private preview, your subscription must be registered with afec for sharing listed. To ensure your subscription is registered to enable the feature, please fill in the Private Preview Sign up form: [CRG Sharing Private Preview Sign Up Form](https://forms.office.com/Pages/ResponsePage.aspx?id=v4j5cvGGr0GRqy180BHbR5P8Ebc4Hg5DnPLwjgZ9SlVUQlA1SjcxTU5NOFZGMFFEVlhXWFA0U1JPMy4u)

**Limitations/Restrictions for sharing:**

Private preview limitations:

* The feature enabled only for few regions.
* Each subscription used in testing must be enabled by Microsoft. A minimum of 2 subscriptions (CRG creation and CRG sharing target) will be needed.
* REST API, Azure templates, PowerShell and CLI support are available. Azure Portal support will come later.

Known issues:

* Reserved Instance discounts are still applied based on the context of the Virtual Machine. If the VM using a shared CRG is from a subscription outside RI scope, then RI discounts will not be applied. This will be addressed in a future release. If needed, a workaround is to test with two subscriptions in the same management group and then use management group scope for the Reserved Instances.
* Reprovisioning of VMSS VMs with cross sub CRG not supported [In case zone goes down]
* List CRG API has known issue of not returning the correct response for shared CRG if there is no local CRG created in the subscription making the API call. To ensure the API returns the right response, please make sure you have created a local CRG in the subscription making the API call. Alternatively, you can also use ARG to query the list of shared CRGs.

Limitations by design:

* Sharing works with an explicit list of target subscriptions. Azure does not support wildcard or tenant level sharing.
* Maximum number of subscriptions a CRG can be shared with is 100
* Sharing is per Capacity Reservation Group which grants access to all member Capacity Reservations. Individual Capacity Reservations cannot be shared.
* Resource move scenarios are not supported. Attempting a resource move may cause errors on future resource updates.

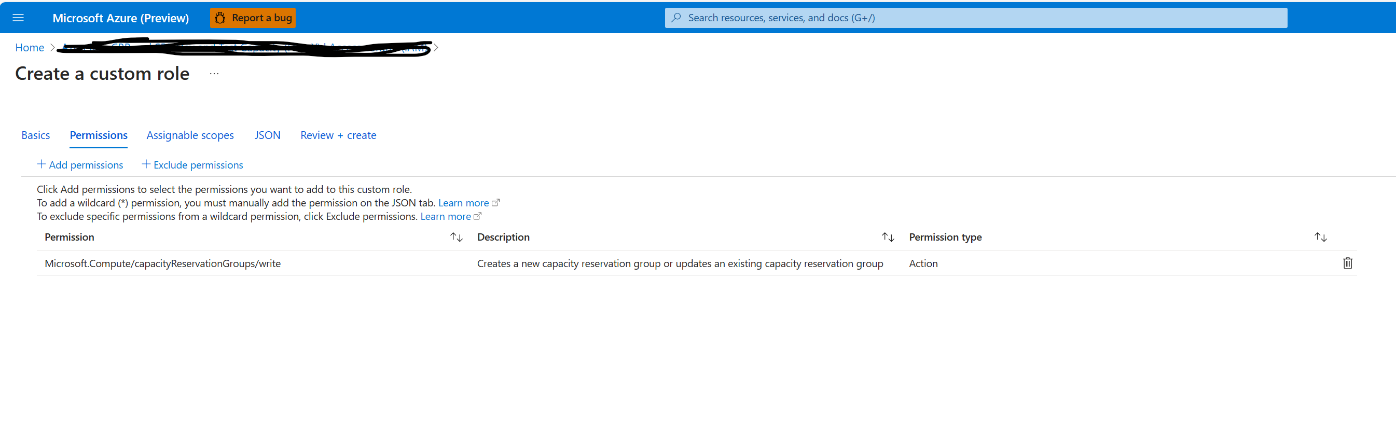
**Customer guidance for using Sharing CRG feature:**

* Create CRG with sharing profile:

**RBAC access:**

Before a CRG can be shared with a subscription, the CRG owner needs to have “Microsoft.Compute/capacityReservationGroups/share/action” permission to be able to share CRG with cross Subscription.

You can create a custom role to add this permission to the user or give owner/contributor rights for example:



Please refer to Azure RBAC links below for more information related to role assignment:

[Azure RBAC documentation | Microsoft Learn](https://learn.microsoft.com/en-us/azure/role-based-access-control/)

[Steps to assign an Azure role - Azure RBAC | Microsoft Learn](https://learn.microsoft.com/en-us/azure/role-based-access-control/role-assignments-steps)

Once Sub A CRG owner has CRG/write permission, he/she can create CRG with sharing profile.

**ARM Template:**

**Creating Shared CRG using Template:**

* Go to: [Home - Microsoft Azure](https://ms.portal.azure.com/#home)
* Search for “Deploy a Custom Template”
* Click “Build your own template in Editor”
* Copy paste Template format given in links below for regional and zonal CRG
* Edit the values of CRG Name, Region and Subscription IDs in “Sharing Profile” section of template

**Create Regional Shared CRG:**

[Create Regional Shared CRG Template](https://github.com/Azure/capacityreservationsharing/blob/main/SharedCRG_Regional_Template.json)

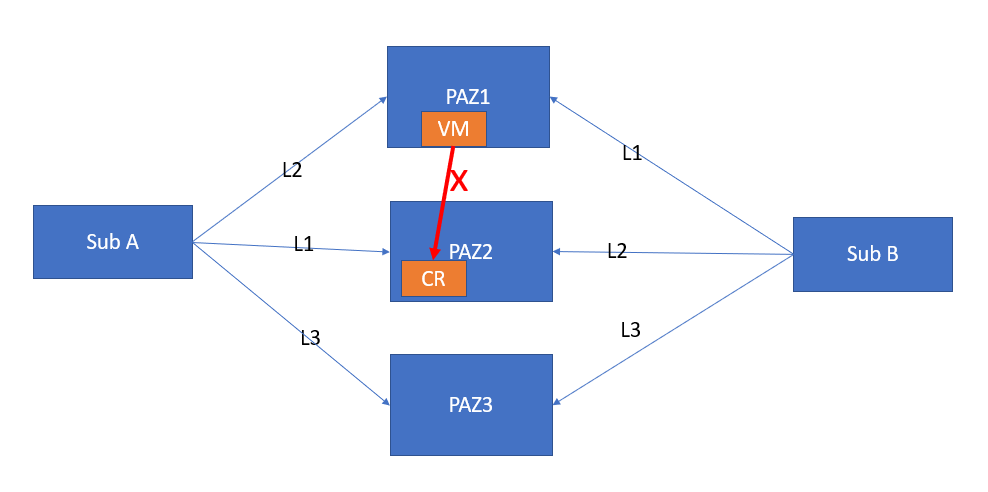
**Create Zonal Shared CRG:**

[Create Zonal Shared CRG Template](https://github.com/Azure/capacityreservationsharing/blob/main/CRG_Zones_SharingProfileTemplate.json)

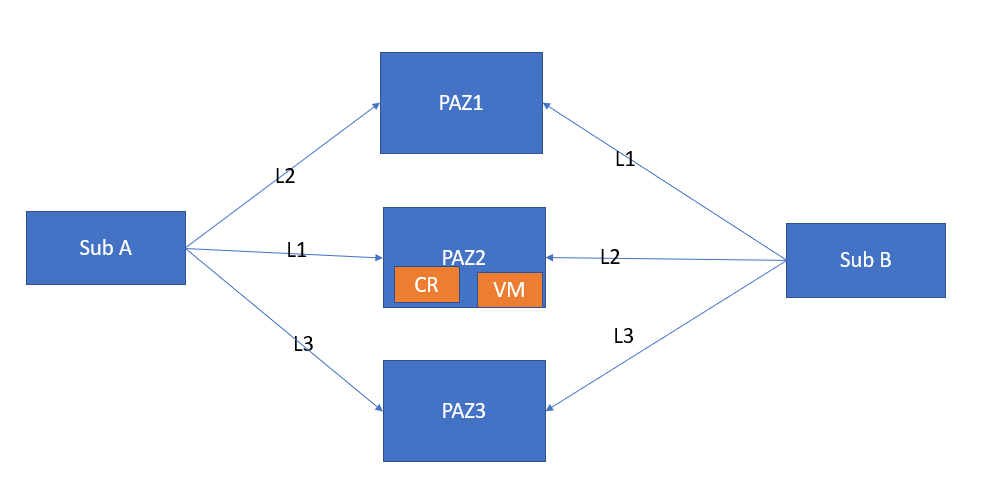
To check the zone mapping for the subscriptions using sharing feature use below link to identify physical and logical zones for the subscriptions:

[Subscriptions - List Locations - REST API (Azure Resource Management) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/resources/subscriptions/list-locations?view=rest-resources-2022-12-01&tabs=HTTP#code-try-0)

For example, sub A has created CR in physical zone PAZ2 has logical zone as L1. If Sub B has a VM in PAZ1 (corresponding L1 is logical zone), VM cannot be associated with CR (as shown below) unless CR and VM match the same Physical zone.



CR and VM must be in same Physical zone (PAZ2 in this example as below) for VM to be associated with CR.



**API:**

To create a Capacity Reservation group, construct the following PUT request on Microsoft.Compute provider:

PUT https://management.azure.com/subscriptions/{subscription-id}/resourceGroups/myResourceGroup/providers/Microsoft.Compute/capacityReservationGroups/myCapacityReservationGroup?api-version=2024-03-01

In the request body, include the following parameters.

{

  "location": "westus",

  "tags": {

    "department": "finance"

  },

  "zones": [

    "1"

  ],

  "properties": {

    "sharingProfile": {

      "subscriptionIds": [

        {

          "id": "/subscriptions/{subscription-id1}"

        },

        {

          "id": "/subscriptions/{subscription-id2}"

        }

      ]

    }

  }

}

This example is to create shared CRG in zone 1 of Region West US.

To learn more, go to Azure Compute REST API commands:

[Capacity Reservation Groups - Create Or Update - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservation-groups/create-or-update?view=rest-compute-2024-03-01&tabs=HTTP)

**CLI:**

Create a Capacity Reservation group with sharing profile using az capacity reservation group create. The following example creates a shared capacity reservation group in the West Europe location:

az capacity reservation group create -n ReservationGroupName -g MyResourceGroup  --sharing-profile "subscriptions/xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx" "subscriptions/yyyyyyyy-yyyy-yyyy-yyyy-yyyyyyyyyyyy" -l westEurope

To learn more, go to Azure CLI commands:

[az capacity reservation group | Microsoft Learn](https://learn.microsoft.com/en-us/cli/azure/capacity/reservation/group?view=azure-cli-latest#az-capacity-reservation-group-create)

**Powershell:**

Create a shared Capacity Reservation group with New-AzCapacityReservationGroup. The following example creates a shared Capacity Reservation group in the East US location.

New-AzCapacityReservationGroup -ResourceGroupName myRG -Location eastus -Name myCapacityReservationGroup -SharingProfile "/subscriptions/xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx", "/subscriptions/yyyyyyyy-yyyy-yyyy-yyyy-yyyyyyyyyyyy"

To learn more, go to Azure PowerShell commands:

[New-AzCapacityReservationGroup (Az.Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/powershell/module/az.compute/new-azcapacityreservationgroup?view=azps-11.5.0)

To learn more on how to create a Capacity Reservation, go to:

[Create a Capacity Reservation in Azure - Azure Virtual Machines | Microsoft Learn](https://learn.microsoft.com/en-us/azure/virtual-machines/capacity-reservation-create?tabs=portal1%2Cpowershell2%2Cpowershell3)

**Adding subscriptions to sharing profile:**

To add a new subscription to share to the sharing profile, the previous shared subscriptions need also be passed in the new subscription add request. If the request has any subscriptions removed, it will mean customer would like to unshare C-RG with the removed subscription.

**Un-sharing CRG with a subscription from Sharing Profile:**

To un share CRG with a subscription from Sharing profile, the subscription must be removed from sharing profile.

For example, if you have shared with 2 subscriptions as below (just showing properties section for example):

"properties": {

"sharingProfile" :

{

"subscriptionIds" : [

{

"id": "/subscriptions/SubscriptionID1"

},

{

"id": "/subscriptions/SubscriptionID2"

}

]

}

}

To remove sub ID2 in above example, sharing profile would look like below:

"properties": {

"sharingProfile" :

{

"subscriptionIds" : [

{

"id": "/subscriptions/SubscriptionID1"

} ]

}

}

Please Note: Un-sharing of CRG with cross subscription ID will be allowed while a VM or VMSS from cross subscriptions remain associated with CRG. Once un-sharing happens, any VM or VMSS from un-shared subscription previously associated to CRG would fail to associate on deallocation or reallocation.

**API:**

To remove a subscription from the sharing profile of an existing Capacity Reservation group, construct the following PUT request on Microsoft.Compute provider.

Below example removes subscription ID3 from sharing profile to an existing Capacity Reservation group called “myCapacityReservationGroup” that was shared with 3 subscription IDs:

PUT https://management.azure.com/subscriptions/{subscription-id}/resourceGroups/myResourceGroup/providers/Microsoft.Compute/capacityReservationGroups/myCapacityReservationGroup?api-version=2024-03-01

{

  "location": "westus",

  "tags": {

    "department": "finance"

  },

  "zones": [

    "1"

  ],

    "properties": {

    "sharingProfile": {

      "subscriptionIds": [

        {

          "id": "/subscriptions/{subscription-id1}"

        },

        {

          "id": "/subscriptions/{subscription-id2}"

        }

      ]

    }

  }

}

To learn more, go to Azure Compute REST API commands:

[Capacity Reservation Groups - Create Or Update - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservation-groups/create-or-update?view=rest-compute-2024-03-01&tabs=HTTP)

**CLI:**

You can remove a subscription ID from the sharing profile of an existing Capacity Reservation group  using “az capacity reservation group update” with following command:

Below example removes 2 subscription IDs from sharing profile of an existing Capacity Reservation  that was shared with 3 subscription IDs:

az capacity reservation group update -n ReservationGroupName -g MyResourceGroup  --sharing-profile "subscriptions/yyyyyyyy-yyyy-yyyy-yyyy-yyyyyyyyyyyy"

To learn more, go to Azure CLI commands:

[az capacity reservation group | Microsoft Learn](https://learn.microsoft.com/en-us/cli/azure/capacity/reservation/group?view=azure-cli-latest#az-capacity-reservation-group-update)

**Powershell:**

You can remove a subscriptions ID from the sharing profile of an existing capacity reservation group using  “Update-AzCapacityReservationGroup”

The following example is to remove 2 subscriptions IDs from the sharing profile of an existing capacity reservation group named myCapacityReservationGroup that was shared with 3 subscriptions IDs.

Update-AzCapacityReservationGroup -ResourceGroupName myRG -Name myCapacityReservationGroup -SharingProfile "/subscriptions/xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"

To learn more, go to Azure Compute REST API commands:

[Update-AzCapacityReservationGroup (Az.Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/powershell/module/az.compute/update-azcapacityreservationgroup?view=azps-11.5.0)

**ARM Template:**

To un share CRG with a subscription from Sharing profile, the subscription has to be removed from sharing profile.

For example, if the Capacity Reservation Group owner has shared the CRG with 2 subscriptions as below (just showing properties section for example):

"properties": {

"sharingProfile" :

{

"subscriptionIds" : [

                        {

                          "id": "/subscriptions/SubscriptionID1"

                        },

                        {

                          "id": "/subscriptions/SubscriptionID2"

                        }

]

}

}

To remove "id": "/subscriptions/SubscriptionID1"out of the two subscriptions listed in the sharing profile above, the below “properties”  template needs to be deployed:

"properties": {

"sharingProfile" :

{

"subscriptionIds" : [

                        {

                          "id": "/subscriptions/SubscriptionID1"

                        } ]

}

}

**Un-sharing a CRG with all subscription:**

To remove all subscriptions from the sharing profile of an existing Capacity Reservation group, construct the following PUT request on Microsoft.Compute provider.

Below example removes all subscriptions from sharing profile to an existing Capacity Reservation group called “myCapacityReservationGroup”

**API:**

PUT https://management.azure.com/subscriptions/{subscription-id}/resourceGroups/myResourceGroup/providers/Microsoft.Compute/capacityReservationGroups/myCapacityReservationGroup?api-version=2024-03-01

{

  "location": "westus",

  "tags": {

    "department": "finance"

  },

  "zones": [

    "1"

  ],

    "properties": {

    "sharingProfile": {

      "subscriptionIds": []

    }

  }

}

To learn more, go to Azure Compute REST API commands:

[Capacity Reservation Groups - Create Or Update - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservation-groups/create-or-update?view=rest-compute-2024-03-01&tabs=HTTP)

**CLI:**

You can remove all subscription ID from the sharing profile of an existing Capacity Reservation group using “az capacity reservation group update” with following command:

Below example removes all subscription IDs from sharing profile of an existing Capacity Reservation  that was previously shared with one or more subscription IDs:

az capacity reservation group update -n ReservationGroupName -g MyResourceGroup  --sharing-profile

To learn more, go to Azure CLI commands:

[az capacity reservation group | Microsoft Learn](https://learn.microsoft.com/en-us/cli/azure/capacity/reservation/group?view=azure-cli-latest#az-capacity-reservation-group-update)

**Powershell:**

You can remove all subscriptions ID from the sharing profile of an existing capacity reservation group using  “Update-AzCapacityReservationGroup”

The following example is to remove all subscriptions IDs from the sharing profile of an existing capacity reservation group named myCapacityReservationGroup that was shared with one or more subscriptions IDs.

Update-AzCapacityReservationGroup -ResourceGroupName myRG -Name myCapacityReservationGroup -SharingProfile ""

To learn more, go to Azure Compute REST API commands:

[Update-AzCapacityReservationGroup (Az.Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/powershell/module/az.compute/update-azcapacityreservationgroup?view=azps-11.5.0)

**ARM Template:**

[capacityreservationsharing/SharedCRG\_UnshareAll\_Template.json at main · Azure/capacityreservationsharing (github.com)](https://github.com/Azure/capacityreservationsharing/blob/main/SharedCRG_UnshareAll_Template.json)

Using shared CRG:

For cross subscription to be able deploy VMs in shared CRG, user needs to be given read/deploy rights by CRG Subscription. RBAC role example: owner, contributor etc. Please refer to below RBAC documentation for guidance:

[Azure RBAC documentation | Microsoft Learn](https://learn.microsoft.com/en-us/azure/role-based-access-control/)

[Steps to assign an Azure role - Azure RBAC | Microsoft Learn](https://learn.microsoft.com/en-us/azure/role-based-access-control/role-assignments-steps)

Once user has been granted read/deploy right, VMs can be created in shared CRG by cross subscription.

**Associate or create a single VM with shared CRG:**

Single VM can be deployed in shared CRG using ARM template/Posh/CLI/API. Please refer to[Associate a virtual machine to a Capacity Reservation group - Azure Virtual Machines | Microsoft Learn](https://learn.microsoft.com/en-us/azure/virtual-machines/capacity-reservation-associate-vm?tabs=powershell1%2Capi2%2Capi3)

Portal option is not available for association with shared CRG.

**Remove VM from Shared CRG:**

Can be deployed using ARM template/Posh/CLI/API. Please refer to[Remove a virtual machine association from a Capacity Reservation group - Azure Virtual Machines | Microsoft Learn](https://learn.microsoft.com/en-us/azure/virtual-machines/capacity-reservation-remove-vm?tabs=api1%2Capi2)

* **View shared CRG usage:**

Capacity Reservation Group and Capacity Reservation usage can be viewed using the link below:

**API:**

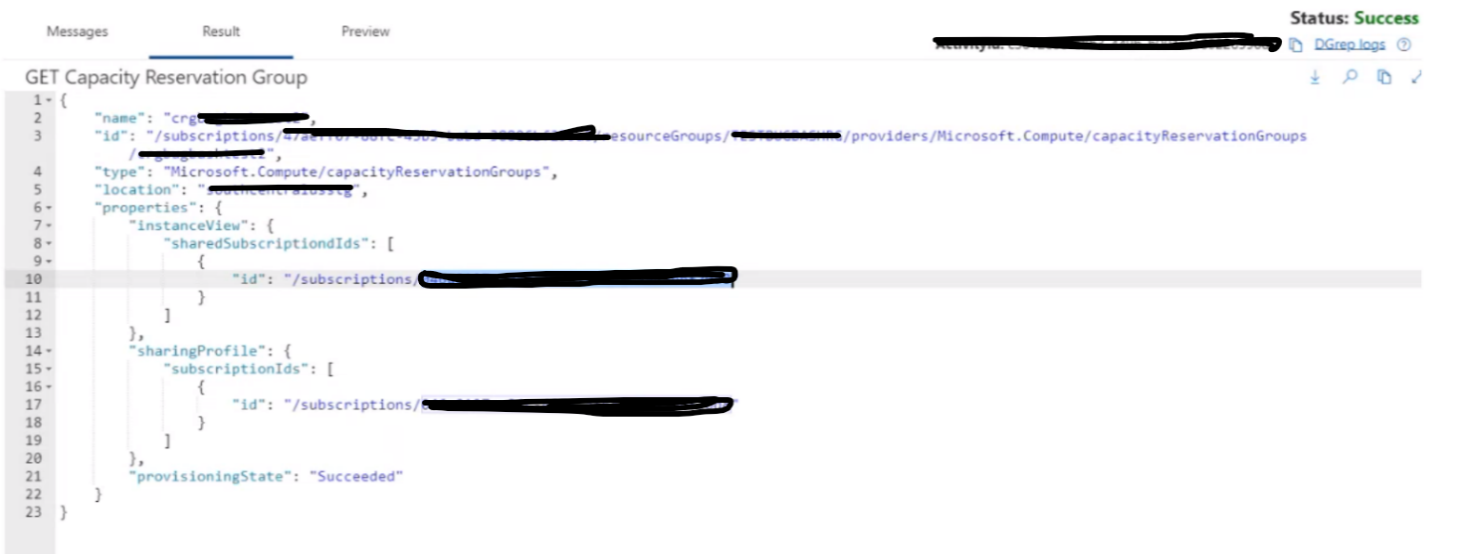
[Capacity Reservation Groups - Get - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservation-groups/get?view=rest-compute-2023-07-01&tabs=HTTP)

[Capacity Reservations - Get - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservations/get?view=rest-compute-2023-07-01&tabs=HTTP&tryIt=true&source=docs#code-try-0)

[Create a Capacity Reservation in Azure - Azure Virtual Machines | Microsoft Learn](https://learn.microsoft.com/en-us/azure/virtual-machines/capacity-reservation-create?tabs=portal1%2Capi1%2Capi2)

In the GET CRG, we will see the same subscription ids being populated in both sharing profile and goal state. The subscription id in “sharingProfile” means goal state and “sharedSubscriptionIds” says the CRG was successfully shared with this subscription.

In this scenario, we were able to successfully share this capacitation group with this specific subscription.



**CLI:**

[az capacity reservation group | Microsoft Learn](https://learn.microsoft.com/en-us/cli/azure/capacity/reservation/group?view=azure-cli-latest#az-capacity-reservation-group-show)

**Powershell:**

[Get-AzCapacityReservationGroup (Az.Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/powershell/module/az.compute/get-azcapacityreservationgroup?view=azps-11.5.0)

[Capacity Reservation Groups - Get - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservation-groups/get?view=rest-compute-2023-07-01&tabs=HTTP)

**View VM or VMSS association with Instance View for Shared CRG:**

<https://learn.microsoft.com/en-us/azure/virtual-machines/capacity-reservation-associate-vm>

**View the list of Capacity Reservation Groups:**

The list of all Capacity Reservation Groups that are created locally or shared with by other subscriptions, can be viewed for a given subscription. Extra parameter 'resourceIdsonly' needs to be passed to view the shared Capacity Reservation Groups.

**Capacity Reservation Groups-List by Subscription ID**

The Capacity Reservation Groups list by subscription ID API can be used to view the capacity reservation groups created locally or shared with the subscription. Extra parameter 'resourceIdsonly' needs to be passed to view the shared Capacity Reservation Groups.

**Note:**   
There is a known issue of this API not giving the right response if there is no CRG created in the region the subscription making the call to get the list of shared CRGs in that region. To get the correct response, please ensure you have a local CRG created in the subscription making the API call.

**API:**

* Enables fetching Resource Ids for all capacity reservation group resources shared with the subscription

GET [https://management.azure.com/subscriptions/{subscriptionId}/providers/Microsoft.Compute/capacityReservationGroups?api-version=2023-09-01&resourceIdsOnly=sharedwithsubscription](https://management.azure.com/subscriptions/%7bsubscriptionId%7d/providers/Microsoft.Compute/capacityReservationGroups?api-version=2023-09-01&resourceIdsOnly=sharedwithsubscription)

* Enables fetching Resource Ids for all capacity reservation group resources shared with the subscription and created in the subscription:

GET

[https://management.azure.com/subscriptions/{subscriptionId}/providers/Microsoft.Compute/capacityReservationGroups?api-version=2023-09-01&resourceIdsOnly=All](https://management.azure.com/subscriptions/%7bsubscriptionId%7d/providers/Microsoft.Compute/capacityReservationGroups?api-version=2023-09-01&resourceIdsOnly=All)

* Enables fetching Resource Ids for all capacity reservation group resources created in the subscription

GET

[https://management.azure.com/subscriptions/{subscriptionId}/providers/Microsoft.Compute/capacityReservationGroups?api-version=2023-09-01&resourceIdsOnly=CreatedInSubscription](https://management.azure.com/subscriptions/%7bsubscriptionId%7d/providers/Microsoft.Compute/capacityReservationGroups?api-version=2023-09-01&resourceIdsOnly=CreatedInSubscription)

**To learn more, go to:**

[Capacity Reservation Groups - List By Subscription - REST API (Azure Compute) | Microsoft Learn](https://learn.microsoft.com/en-us/rest/api/compute/capacity-reservation-groups/list-by-subscription?view=rest-compute-2023-10-02&tabs=HTTP)

**CLI:**

* Enables fetching Resource Ids for all capacity reservation group resources shared with the subscription and created in the subscription:

 az capacity reservation group list --resource-ids-only all

* Enables fetching Resource Ids for all capacity reservation group resources created in the subscription

az capacity reservation group list --resource-ids-only CreatedInSubscription

* Enables fetching Resource Ids for all capacity reservation group resources shared with the subscription

az capacity reservation group list --resource-ids-only SharedWithSubscription

To learn more, refer to:

[**https://learn.microsoft.com/en-us/cli/azure/capacity/reservation/group?view=azure-cli-latest#az-capacity-reservation-group-list**](https://learn.microsoft.com/en-us/cli/azure/capacity/reservation/group?view=azure-cli-latest#az-capacity-reservation-group-list)

**Powershell:**

* Enables fetching Resource Ids for all capacity reservation group resources shared with the subscription and created in the subscription:

Get-AzCapacityReservationGroup -ResourceIdsOnly All

* Enables fetching Resource Ids for all capacity reservation group resources created in the subscription

Get-AzCapacityReservationGroup -ResourceIdsOnly CreatedInSubscription

* Enables fetching Resource Ids for all capacity reservation group resources shared with the subscription

Get-AzCapacityReservationGroup -ResourceIdsOnly SharedWithSubscription

To learn more, refer to:

<https://learn.microsoft.com/en-us/powershell/module/az.compute/get-azcapacityreservationgroup?view=azps-12.3.0#-resourceidsonly>

**Azure Resource Graph**

The Azure Resource Graph can be used to view the list of all Capacity Reservation Groups that are created locally in or shared with a given subscription.

**Portal:**

To view the capacity reservation group list, go to [**Azure Resource Graph Explorer - Microsoft Azure**](https://ms.portal.azure.com/#view/HubsExtension/ArgQueryBlade)and try this query.

* Enables fetching Resource IDs for all capacity reservation group resources shared with subscription ID 1 and created within subscription ID 1.

resources

|where type == "microsoft.compute/capacityreservationgroups"

|where properties["sharingProfile"] contains "{subscriptionId1}" or subscriptionId == "{subscriptionId1}"

|project name, id

* Enables fetching Resource IDs for all capacity reservation group resources shared with subscription ID 1:

resources

|where type == "microsoft.compute/capacityreservationgroups"

|where properties["sharingProfile"] contains "{subscriptionId}"

|project name, id

**Powershell:**

* Enables fetching Resource IDs for all capacity reservation group resources shared with subscription ID 1 and created in subscription ID 1.

$query = @"

resources

| where type == "microsoft.compute/capacityreservationgroups"

| where tostring(properties["sharingProfile"]) contains "{subscriptionId1}" or subscriptionId == "{subscriptionId1}"

| project name, id

"@

$result = Search-AzGraph -Query $query

$result

* Enables fetching Resource IDs for all capacity reservation group resources shared with subscription ID 1.

$query = @"

resources

| where type == "microsoft.compute/capacityreservationgroups"

| where tostring(properties["sharingProfile"]) contains "c1a24fcd-16ab-441b-882c-f90560a72600"

| project name, id

"@

$result = Search-AzGraph -Query $query

$result

**CLI:**

Enables fetching Resource IDs for all capacity reservation group resources shared with subscription ID 1 and created in subscription ID 1:

az graph query -q "resources| where type == 'microsoft.compute/capacityreservationgroups'| where tostring(properties['sharingProfile']) contains '{subscriptionId1}' or subscriptionId == '{subscriptionId1}'| project name, id"

Enables fetching Resource IDs for all capacity reservation group resources shared with subscription ID 1:

az graph query -q "resources| where type == 'microsoft.compute/capacityreservationgroups'| where tostring(properties['sharingProfile']) contains '{subscriptionId1}'| project name, id"

* **Deleting CRG**

Deletion of CRG will cause un-sharing the CRG with shared subscriptions.

Deletion of shared CRG will fail if:

* VMs associated to CRG
* CRs in CRG have not been deleted

**Feedback & Reporting Issues**

For reporting issues and feedback, please reach out to capres@microsoft.com.