

Module 3: Using Cloud Manager to Deploy Cloud Volumes ONTAP

Exercise 2: Grant Azure Permissions to Cloud Manager

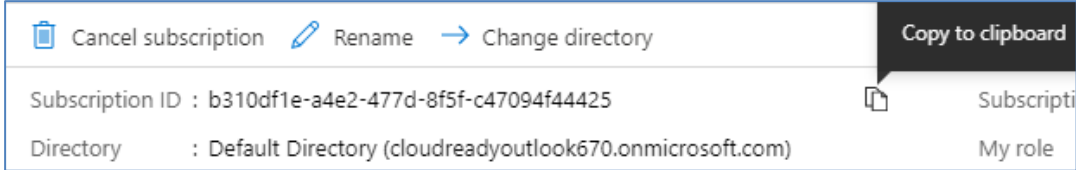
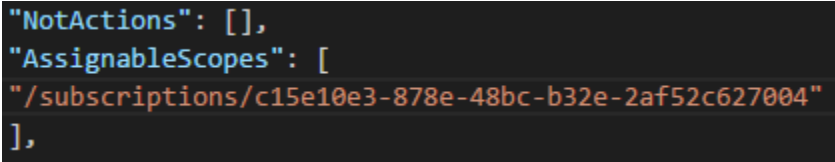
In this exercise, you prepare Cloud Manager to launch Cloud Volumes ONTAP, this includes granting the appropriate Azure permissions to Cloud Manager.

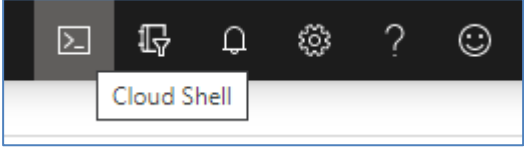

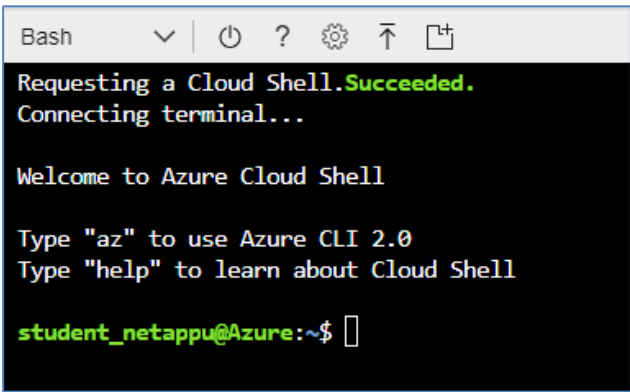
Objectives

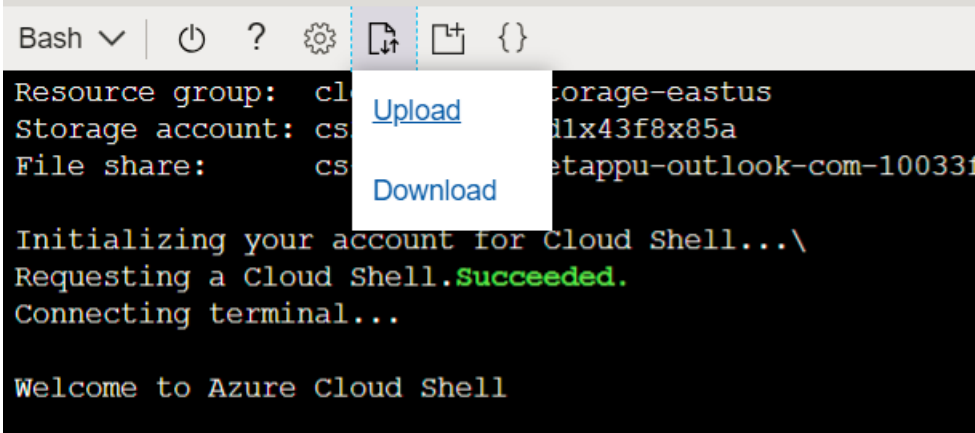
This exercise focuses on enabling you to do the following:

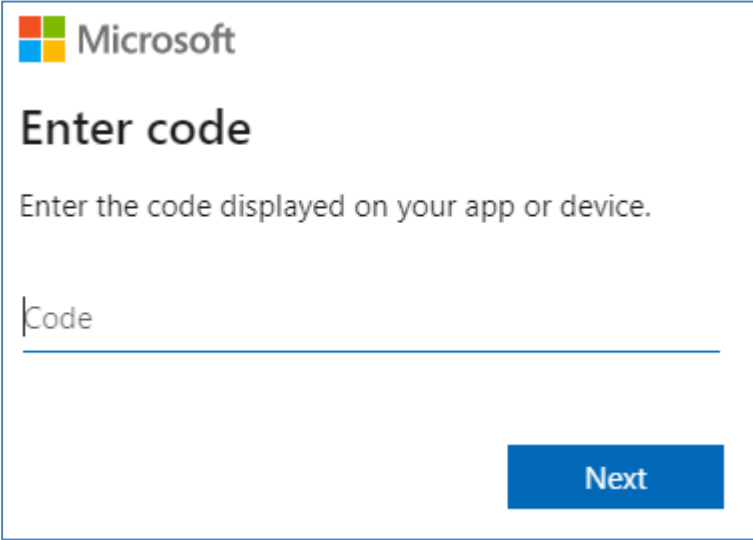
- Grant Azure permissions to Cloud Manager.

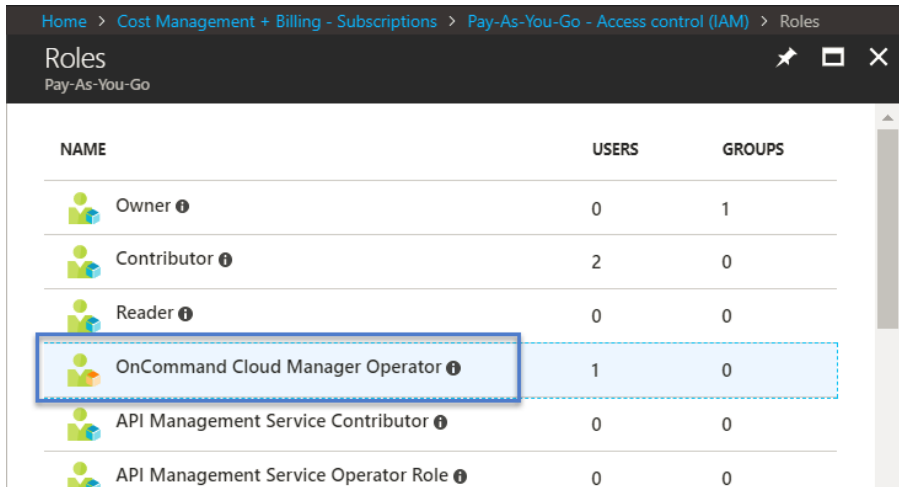


















Task 1: Create a Custom Role

Step	Action
1-1	In the Azure portal, navigate to Home > Subscriptions .
1-2	<p>In the Subscriptions pane, click your subscription. Copy your Subscription ID.</p> 
1-3	Record your subscription ID: _____
1-4	Open a new tab in the web browser to https://occm-sample-policies.s3.amazonaws.com/Policy_for_cloud_Manager_Azure_3.7.4.json
1-5	A new browser tab opens. Save the .json file on your computer (Policy_for_Cloud_Manager_Azure_3_7_4.json).
1-6	Open the file with your favorite editing tool.
1-7	<p>Scroll down to the AssignableScopes field, and enter the following line:</p> <pre>"/subscriptions/<your Azure account subscription id recorded earlier>"</pre> 
1-8	Save your edited file.

Step	Action
1-9	<p>Go to the Azure portal, and click the Cloud Shell icon.</p> 
1-10	<p>At the bottom of the screen, a new Azure interface appears. Click Bash.</p> 
1-11	<p>In the You have no storage mounted dialog box, click Create Storage.</p>
1-12	<p>Verify that a CLI interface appears.</p> <p>Note: It can take several minutes for the storage account to be created and the cloud shell to become operational.</p> 

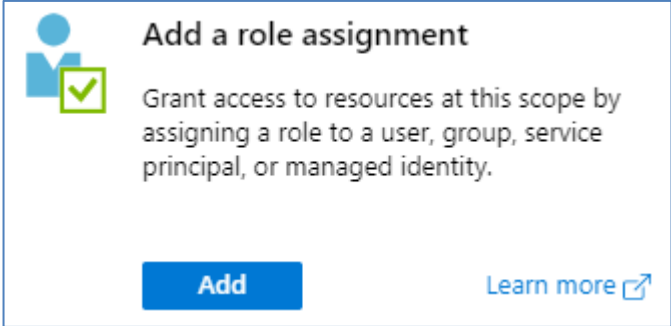
Step	Action
1-13	<p>In the Cloud Shell toolbar, click the upload/download file icon and then select Upload.</p> 
1-14	<p>Upload the Policy_for_Cloud_Manager_Azure_3_7_4.json file that you downloaded to your laptop or jump host.</p>
1-15	<p>Verify that the file was uploaded:</p> <pre>~\$ ls</pre> <p>Example output:</p> <pre>clouddrive Policy_for_Cloud_Manager_Azure_3_7_4.json</pre>
1-16	<p>Log in to your Azure account:</p> <pre>~\$ az login</pre>


Step	Action
1-17	<p>Follow the instructions returned from the command to authenticate:</p> <p>(Example instruction:</p> <p>To sign in, use a web browser to open the page <code>https://microsoft.com/devicelogin</code> and enter the code <code>BHXUR243Y</code> to authenticate.)</p> <ol style="list-style-type: none"> Open a browser tab, and enter <code>https://microsoft.com/devicelogin</code> Enter the code that you received. Click Next Complete the steps to sign in to your Azure account. 
1-18	<p>Return to the Cloud Shell and verify that you were logged in to your Azure account. You are now logged in.</p> <p>Example truncated output:</p> <pre>{ "cloudName": "AzureCloud", "id": "c15e12e3-888e-45bc-b14e-1af53ac627004", "isDefault": true, "name": "Pay-As-You-Go", "state": "Enabled", "tenantId": "985d61ed-98db-4d30-8f7c-f85ae16b244a", "user": { "name": "student_netappu@outlook.com", "type": "user" } }</pre>
1-19	<p>Create the role:</p> <pre>~\$ az role definition create --role-definition <path to azure cloud manager policy></pre> <p>Example command: <code>az role definition create --role-definition Policy_for_Cloud_Manager_Azure_3_7_4.json</code></p>








Step	Action																														
1-20	<p>In the command response, verify that the role is created for your subscription.</p> <pre>{ "assignableScopes": ["/subscriptions/b310df1e-a4e2-477d-8f5f-c47094f444",], "description": "OnCommand Cloud Manager Permissions" "id": "/subscriptions/b310df1e-a4e2-477d-8f5f-c47094", "name": "55b70a43-eb78-437f-948c-fb46584936e4", "permissions": [{ "actions": ["Microsoft.Compute/disks/delete", "Microsoft.Compute/disks/read", "Microsoft.Compute/disks/write", "Microsoft.Compute/locations/operations/read", "Microsoft.Compute/locations/vmSizes/read", "Microsoft.Resources/subscriptions/locations/r", "Microsoft.Compute/operations/read",</pre>																														
1-21	<p>View the role in the Azure portal:</p> <ol style="list-style-type: none">Return to the Azure portal.Click on Subscriptions.In the Subscriptions section, click the row with your subscription.In the Subscription blade, click the menu option Access control (IAM).At the top of the Access control (IAM) blade, click Roles.Verify that you see the OnCommand Cloud Manager Operator role.  <table><tr><td colspan="3">Home > Cost Management + Billing - Subscriptions > Pay-As-You-Go - Access control (IAM) > Roles</td></tr><tr><td colspan="3">Roles</td></tr><tr><td colspan="3">Pay-As-You-Go</td></tr><tr><th>NAME</th><th>USERS</th><th>GROUPS</th></tr><tr><td> Owner ⓘ</td><td>0</td><td>1</td></tr><tr><td> Contributor ⓘ</td><td>2</td><td>0</td></tr><tr><td> Reader ⓘ</td><td>0</td><td>0</td></tr><tr><td> OnCommand Cloud Manager Operator ⓘ</td><td>1</td><td>0</td></tr><tr><td> API Management Service Contributor ⓘ</td><td>0</td><td>0</td></tr><tr><td> API Management Service Operator Role ⓘ</td><td>0</td><td>0</td></tr></table>	Home > Cost Management + Billing - Subscriptions > Pay-As-You-Go - Access control (IAM) > Roles			Roles			Pay-As-You-Go			NAME	USERS	GROUPS	 Owner ⓘ	0	1	 Contributor ⓘ	2	0	 Reader ⓘ	0	0	 OnCommand Cloud Manager Operator ⓘ	1	0	 API Management Service Contributor ⓘ	0	0	 API Management Service Operator Role ⓘ	0	0
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 API Management Service Operator Role ⓘ	0	0																													

Task 2: Assign the Role to the Cloud Manager virtual machine

In this task, you deploy Cloud Volumes ONTAP and create a volume with NFS access.

Step	Action
2-1	Open the Subscriptions service and then select the subscription in which you want to deploy Cloud Volumes ONTAP systems.
2-2	Click Access Control (IAM) .
2-3	Click + Add .
2-4	<p>For the Add a role assignment, click Add.</p> <div><p>The dialog box titled "Add a role assignment" features a blue icon of a person with a green checkmark. The text inside reads: "Grant access to resources at this scope by assigning a role to a user, group, service principal, or managed identity." At the bottom, there is a blue "Add" button and a "Learn more" link with an external link icon.</p></div>

Step	Action
2-5	<p>For the Add role assignment, do the following:</p> <ol style="list-style-type: none"> For the Role, select OnCommand Cloud Manager Operator. For the Assign access to, select Virtual Machine. For the Subscription, select your subscription. For the Select, type in cloud, then click on the CloudManager row. Click Save. <div data-bbox="300 493 1135 1661"> <h3>Add role assignment</h3> <p>Role ⓘ</p> <p>OnCommand Cloud Manager Operator ⓘ</p> <p>Assign access to ⓘ</p> <p>Virtual Machine</p> <p>Subscription *</p> <p>Azure subscription 1</p> <p>Select ⓘ</p> <p>cloud</p> <div>  <div> CloudManager /subscriptions/b310df1e-a4e2-477d-8f5f-c47094f44... </div> </div> <p>Save Discard</p> </div>

Step	Action																									
2-6	<p>On View role assignments, click View.</p> <div><div></div><div><h3>View role assignments</h3><p>View the users, groups, service principals and managed identities that have role assignments granting them access at this scope.</p><div>ViewLearn more</div></div></div>																									
2-7	<p>Verify you see Cloud Manager added to the Access Control list, with a type of Virtual Machine.</p> <div><div>2 items (1 Users, 1 Virtual Machines)</div><table><tr><th><input type="checkbox"/></th><th>Name</th><th>Type</th><th>Role</th><th>Scope</th></tr><tr><td></td><td colspan="4">OnCommand Cloud Manager Operator</td></tr><tr><td><input type="checkbox"/></td><td> CloudManager /subscriptions/b310df1e-a4e2-4...</td><td>Virtual Machine</td><td>OnCommand Cloud Manager Operator ⓘ</td><td>This resource</td></tr><tr><td colspan="5">Owner</td></tr><tr><td><input type="checkbox"/></td><td> Andrew Devore cloud_ready_outlook.com#EXT#...</td><td>User</td><td>Owner ⓘ</td><td>This resource</td></tr></table></div>	<input type="checkbox"/>	Name	Type	Role	Scope		OnCommand Cloud Manager Operator				<input type="checkbox"/>	 CloudManager /subscriptions/b310df1e-a4e2-4...	Virtual Machine	OnCommand Cloud Manager Operator ⓘ	This resource	Owner					<input type="checkbox"/>	 Andrew Devore cloud_ready_outlook.com#EXT#...	User	Owner ⓘ	This resource
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End of Exercise