Tasks: Introduction to Azure and Cloud Concepts

Overview

This document contains 3 tasks associated with the INE course "*Introduction to Azure and Cloud Concepts*". These tasks provide hands-on experience critical to understanding the topics in this course. The tasks are presented as a set of requirements - not detailed steps. In most cases the content video has a demonstration that should give you enough information to complete the task. In cases where there isn't a demonstration in the content video, or you still need some help, there is a solution video for each task at the end of the course.

To complete the hands-on tasks, you will need an Azure subscription that you own and can use for development purposes. **Do not perform tasks in a production Azure subscription.** If you do not have a development subscription available, you can create a trial subscription by navigating to https://azure.microsoft.com/free. You will need to provide a credit card for identification but the card will not be charged. The trial account has a $200 credit good for 30 days and 30 day access to many free services.

Clean up

There is a clean up section at the end of each task that describes how to remove all changes made during the task. The tasks do not overlap so you do not need to remove resources when you are done, however resources do accrue charges and there are certain limits such as the number of VMs per subscription that may impact tasks if you are not cleaning them up when you complete them. Some tasks will use the same set of resources and thus you may not want to clean up those until you have finished all related tasks. These are identified in the task cleanup section.

Early release

These tasks are "early release" and there may be some typos or other issues. If you run into any issues, please e-mail them to twallace@ine.com.

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Task: Using Azure Management Tools

Video: Azure Management Tools

Estimated time: 10 minutes

Goal

The goal of this task is to become familiar with the Azure portal and how to use it to manage resources. You will log in to the Azure portal, create resources, manage resources, and delete resources in the task.

Pre-requisites

1. A non-production Azure subscription

Requirements

1. Requirement 1: Log in to the Azure portal
2. Requirement 2: Create a resource group
3. Requirement 3: Manage a resource
4. Requirement 4: Delete a resource group

Pre-requisite setup

There is no pre-requisite setup required for this task.

Requirement 1: Log in to the Azure portal

For this requirement you will log into the Azure portal at https://portal.azure.com and view several "blades". Once you have logged in, use the left-hand navigation to open the following:

- All services
- All resources
- Resource groups
- Virtual networks

Note: if this is a new subscription, there will be no resources or resource groups.

Requirement 2: Create a resource group

For this requirement you will provision a resource group and populate it with resources. You will use different "blades" to verify the resources. To complete the requirement:

1. Provision a resource group named **task-tools-rg** in a region near you.
2. Provision a route table named **tools-rt** in the **task-tools-rg** resource group using the same region as the resource group. Accept defaults for all other settings.
3. Provision a virtual network named **tools-vnet** in the **task-tools-rg** resource group using a different region than the resource group. Accept defaults for all other settings,

4. Open the following from the left navigation:
   - All resources
   - Resource groups
   - Virtual networks

*Note: Use the **All services** view for any blades that do not appear on the left navigation.*

Requirement 3: Manage a resource

For this requirement you will modify a setting for the **tools-vnet** virtual network. You will add a subnet to the virtual network that will support connecting via a Bastion host. You will not provision the bastion host. To complete this requirement:

- Open the blade for the **tools-vnet** virtual network in the Azure portal.

- Navigate to the address space of the blade.

- Add the **192.168.0.0/24** address space and save changes.

- Navigate to the subnets space of the blade.

- Add a subnet with the following settings:

Setting	Value
Name	**AzureBastionSubnet**
Address range	**192.168.0.0/24**

Use defaults for all other settings.

Requirement 4: Delete a resource group

For the last requirement you will delete the **task-tool-rg** resource group. Delete the resource group and then use **All resources** to verify that the resources have been deleted.

Note: It may take a few minutes for the resource group to fully delete.

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Task: Azure Cost Management Tools

Video: Azure Cost Management Tools

Estimated time: 10 minutes

Goal

The goal of this task is to become familiar with the cost management tools available with Azure. You will utilize the Azure cost advisor and the Azure cost management capabilities of the Azure portal.

Note: if you are using a new subscription, there may not be any data available for the cost tools.

Pre-requisites

1. A non-production Azure subscription*

*For this task, you can use any subscription. If you choose to use a production subscription you will see real cost analytics. However, be sure not to make any changes to a production subscription while performing this task.

Requirements

1. Requirement 1: Use the cost advisor
2. Requirement 2: Use Azure cost management

Pre-requisite setup

There is no pre-requisite setup required for this task.

Requirement 1: Use the cost advisor

For this task, you will open the Azure task advisor and note any recommendations made by the advisor. You will also familiarize yourself with the elements monitored by cost advisor. To complete this task:

- Log in to the Azure portal at https://portal.azure.com.
- Navigate to the cost advisor blade and observe any recommendations. If this is a new subscription there will likely not be any recommendations.
- Click the link on the cost advisor to view the documentation on what the cost advisor monitors.

Requirement 2: Use Azure cost management

For this requirement you will observe the tools available with the Azure cost management interface. To complete this requirement:

- Navigate to the cost management blade in the Azure portal
- Use the cost analysis view to determine the following:
  - The resource with the most accrued charges in the current month

- The location with the most accrued charges in the current month

Hint: The charts on the cost management dashboard can be changed to show different information.

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Task: Create an Azure Support Ticket

Video: Azure Support

Estimated time: 5 minutes

Goal

For this task you will create and submit a service request. You will request a quota increase for the number of virtual machines that can be provisioned in a specific region.

Pre-requisites

1. A non-production Azure subscription

Requirements

1. Requirement 1: Create a support ticket

Pre-requisite setup

There is no pre-requisite setup required for this task.

Requirement 1: Create a support ticket

For this task you will submit a support ticket to increase the number of Standard_Dv3 size virtual machine instances that can be provisioned in the East US. To complete this task:

- Log in to the Azure portal at https://portal.azure.com.

- Create a support ticket using the portal with the following settings:

Setting	Value
Issue type	**Service and subscription limits**
Subscription	**<your subscription>**
Quota type	**Compute-VM**
Locations	**East US**
Types	**Standard**
Series	**Dv3**
New vCPU limit	**15***
Contact	**E-mail**

Note: Quota limit requests are processed automatically.

If your quota is higher than 15 already, request an increase of 1

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