Azure Fundamentals:

Introduction to Azure – Practical Exercises

Overview

This course includes optional practical exercises where you can try out the techniques demonstrated in the course for yourself. This guide lists the steps for the individual practical exercises.

See the **Practical Exercises** > **Overview** page in your course for information about getting started.

You do not need an Azure subscription to complete the first exercise. However, you will need an Azure Subscription to complete the subsequent exercises. If you already have an Azure subscription you can use in a test or practice environment, you can use that, otherwise there are details available on the **Practical Exercises** > **Overview** page to help you set up a free trial account. There is also a step by step video available to walk you through this process at the beginning of the course in the **Welcome** > **Start Here** section, called "**Setting up a Free Microsoft Azure 30-day Trial**"

Practical Exercise: Take an Azure Virtual Data Center Tour

In this exercise you will take a virtual tour of the Microsoft Azure Data Center and see the inner workings of the Microsoft Datacenters. You do not need a Microsoft Azure subscription for this first exercise but you will need one for the subsequent exercises.

1. Open the Azure Data Center virtual tour.
2. Read the accompanying text as you go to familiarize yourself with how the tour will work and Click **Start Tour** and then **Get Started.**
3. Read the introductory help for information about:
    a navigation overview,
    b explore the scenes,
    c getting more information using hotspot information,
    d and exploring the media galleries
4. Start in the Lobby, click the **avatar** icon to begin the virtual tour.
5. On the **Servers** section of the tour, review the narrative and the various hotspots clicking the image gallery associated with each hotspot as you go for more detail. 6. Click and drag the mouse to explore the room with 360 degree views.
7. Notice the environmental conditions in the bottom display bar. Click the **Play** icon to hear a sample of the ambient noise in the room.
8. Click the **white avatar** icon to enter one of the server pods. Notice the temperature change in the pod.
9. On the **Cooling** section of the tour, review the narrative and the various hotspots. Click and drag the mouse to explore the room.
10. Locate and click the **Power** hotspot. Then click **Image Gallery**. In the image gallery, notice the various innovations used to maximize cooling and power efficiency across the Azure Datacenter.
11. On the **Power** section of the tour, review the narrative and the various hotspots. Click and drag the mouse to explore the room.
12. Locate and click on the **Scale** hotspot.

13. Notice the scale of the Azure Datacenter and the measures that Microsoft is taking to improve geo-redundancy.
14. On the **Modular Datacenter** section of the tour, review the narrative and the various hotspots. Click and drag the mouse to explore the room.
15. Locate and click the **Deconstruct an ITPAC** hotspot. Click **Image Gallery**. Notice the ease of expandability and scaling capabilities of the modular Datacenter.
16. On the **Conclusion** section of the tour, review the evolution of the Azure Datacenter and plans moving forward.
17. Close the web page to complete the virtual tour.

Practical Exercise: Explore the Classic Azure Portal

In this exercise you will sign in to the classic Azure Portal and explore the layout, navigation, and basic functionality.

1. Navigate to the classic Azure Portal and sign in.
2. Review the elements of the user interface such as: the sidebar on the left, the command bar at the bottom, the main area, and the account menu in the upper right.
3. On the sidebar, notice how the available services are grouped by type.
4. In the left pane, click **Virtual Machines**.
5. Review the available options for this service, such as: creating a new virtual machine, creating an image, and creating a virtual hard disk (VHD).
6. On the command bar, notice the **New** button for deploying new services.
7. Click **New**.

8. Review the available options for creating a new service such as: type of service, quick create, and create from gallery.
9. Click on the **account menu**. Review the available options such as: sign out, change password, view my bill, and switch to new portal.
10. When you are finished exploring the classic portal, close the web page.

Practical Exercise: Explore the New Azure Portal

In this exercise you will sign in to the new Azure Portal and explore the layout, navigation, and basic functionality. Compare the user experience with the classic Azure Portal. How does it differ from the classic Azure Portal?

1. Navigate to the new Azure Portal and sign in.
2. Review the elements of the user interface such as the Hub menu on the left, the Dashboard in the center, and the menu bar across the top.
3. On the Hub menu, notice the brief list of services shown.
4. Click **More services >**. Review the extended list of available services.
5. Close that service menu blade and click the option at the top to expand the services listed by name or just by icon.
6. Click the **+New** option in the hub menu to see the services listed by category in the **Marketplace** menu.
7. Locate the Active Directory service. Right click Active Directory and choose to **Pin to dashboard**. Return to the dashboard and verify it has been added.
8. On the Hub Menu, click **New** again to open the Marketplace menu and click **See all**.

9. In the **Everything** blade, scroll down through the list of deployable services. Click More in each section to review additional items in each section.
10. Back in the **Marketplace** menu click **Compute** and then type **Windows Server** and notice the options returned, then type **Windows Server 2012** to provide more specific options.
11. Close the blade and notice the icons in the top right hand corner, and click each in turn
    a **Notification** > provides details of tasks and actions performed as well as remaining credit
    b **Portal Settings >**
        i You can change a Theme
        ii You can enable portal functionality
        iii You can change portal language
        iv You can change portal language (notice the currently available list of languages in the drop down box) and regional format settings.
        v Change to a different theme and set the language and regional format to your preferred settings, and click **Refresh.** You can return and apply the default settings later if you wish from this meu
        vi You can also click Switch Directories at the top to expand the account menu to change subscription and account details
    c **Send us Feedback** > this allows you send feedback on your experience to Microsoft.
    d **Support >** this allows you to request help in the subsequent menu, as well as giving you some tips on keyboard shortcuts and other options
    e You can also click your account icon in the top right to access your account and subscription details
12. Finally return to the dashboard menu and locate the Active directory tile you added earlier.
13. Click the three dots at the top of the tile and choose customize and notice the options. Choose different scaling options available for the tile. Chose one then drag and drop the tile to a different area in the dashboard to customize to your preference.
14. When finished customizing, click the three dots again in the tile and choose Done customizing…

15. You can also click the **X** in the tile to remove it from the dashboard.
16. Back on the dashboard notice the options at the top of the dashboard, for new dashboard, edit dashboard, share, fullscreen, clone and delete
17. Click New dashboard, drag some tile items in to it, give it a name and choose time format and other settings and click **Done customizing**.
18. When done customizing click the down arrow at the top of the Dashboard and view the new and default dashboard listed, switch between them. It is possible to have multiple dashboards and associate them with your different needs in different subscriptions.
19. Click Share and notice you can share a dashboard across subscriptions by publishing it to an Azure resource and use Role Based Access Control to determine who has access to it.
20. Also click the other options listed, for editing, full screen, clone and finally once you are finished, delete.
21. Continue to explore the Portal as you wish.

Practical Exercise: Azure Subscriptions

How can you track your Azure subscription(s) to see the ongoing costs, detailed cost breakdowns, and detailed subscription information? In this exercise you will view the burn rate, cost by service, and subscription properties by using the new Azure Portal.

1. Navigate to the new Azure Portal and sign in.
2. On the Hub menu, click **Subscriptions**.
3. Click on your active Azure subscription.
4. Review the Azure subscription blade, which includes the following tiles: Costs by resource, Burn rate, and Costs by service. You can choose to pin one or all of these to your dashboard if you wish to have easy access to this information in the portal.

5. On the Azure subscription blade, click the **Costs by resource** tile. Review the estimated spend per resource for the current month.
6. On the Azure subscription blade, review the **Burn rate** tile.
7. On the Azure subscription blade, click the **Costs by service** tile.
8. In the subscription settings menu on the left, click on **Access control (IAM),** notice the list of users who have access to the subscription details. Click **+ Add** in the top of the menu. Scroll down through the available roles such as **Contributor**, **Reader** etc hover over the little "I" associated with each for an explanation of each role.
9. Back on your subscription IAM blade click the three dots beside your subscription and select **Properties.**
10. IN the Subscription co-admins page click **Manage**. Notice you are brought to the classic portal and can view edit your subscription information here also now.
11. Back in the subscription settings blade scroll down through the available setting options and click on each one as you go to get an idea of what each one contains and the options and information that is available in each, such as **Payment Methods**, **Partner information**, **Resource groups**, **Resources**, **My Permissions, Properties, Usage and Quotas** and the other options.
12. Some items are still link back into the classic portal as that functionality is not yet available in the new portal, however you can achieve most tasks in the New Portal, and between both portals you should be able to get the information and configure as you need.
13. Notice the availability of a **New Support request** option at the end of the menu also.
14. Continue to browse

Practical Exercise: Deploy a New Virtual Machine

In this exercise you will create a new virtual machine with a Resource Manager deployment model.

1. Navigate to the new Azure Portal and sign in.
2. On the Hub menu, click **New**.
3. On the New blade, search for **Windows Server 2016**.
4. In the search results, click **Windows Server 2016 Datacenter**.
5. On the Everything blade select **Windows Server 2016 Datacenter**
6. In the subsequent Windows Server 2016 Datacenter blade lade, notice the default deployment model is set to **Resource Manager**. Click **Create**.
7. On the Create Virtual Machine blade, fill in the following values for basic settings (substituting your information for the user name, subscription, and location) and click **OK**.
   - Name: **SERVER-01**
   - VM disk type: **HDD**
   - User name: **<Your first name>**
   - Password: **Pa$$w0rd12345**
   - Subscription: **<Your subscription>**
   - Resource group: Create a new one named **"Server2016-template"**
   - Location: **<Your location>**
8. On the Choose a size blade, click **View all**. Notice the sizing details in each size available. Some may be greyed out or not be available depending on your subscription type. Click the **A0 Basic** size and then click **Select**.
9. On the Settings blade, review the default options for storage, network, extensions, high availability, and monitoring. Click **OK**.
10. On the Summary blade, review the configuration. Notice a link beside the OK button to download a template and parameters. Click the link and in the Template

window browse through the tabs and options available in the template page as well as down through the template itself. Click Download at the top to down load the template to your local drive. If you have time afterwards you can open and view locally as you wish, then close the Template Window.

11. Back on the Summary blade, make sure validation has passed as per a notification at the top of the blade and then click **OK**.
12. Click the Notification icon in the top right to see notifications of the virtual machine deployment. It should say **Deployment started…**
13. Close the notifications menu
14. Open the Virtual machines blade by clicking **Virtual machines** in the left pane.
15. In the Virtual machines blade, click the server name, **SERVER-01**, for the VM that you deployed. You may need to refresh the console if it has not yet deployed.
16. In the **Server-01** blade, click **Stop** at the top of the blade to stop the VM. This ensures that you don’t consume resources unnecessarily.