Week 5 Core Cloud Services -Manage services with the Azure Porta

Introduction

- platform that provides the compute, storage, and networking resources needed to build cloud-hosted applications. - create and manage all

your Azure resources.



- You will learn:

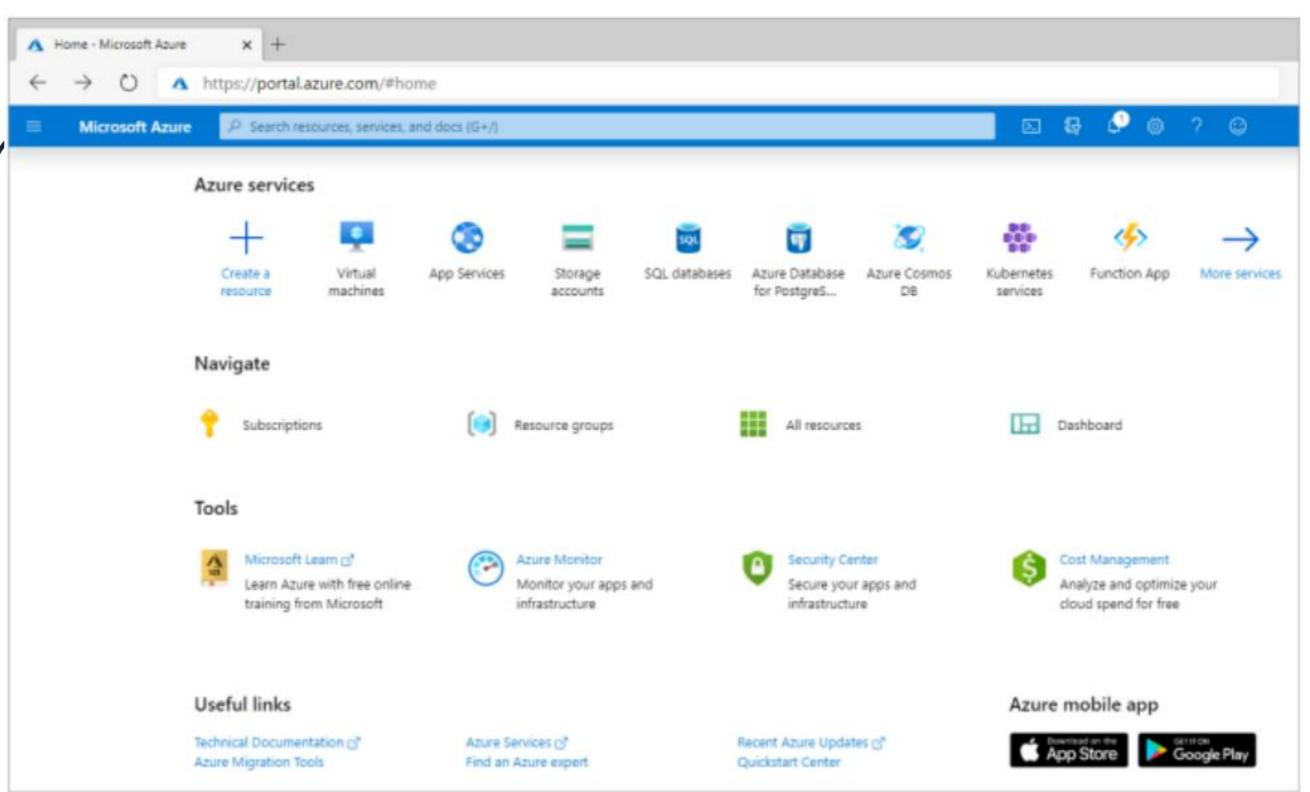
- Learn about Azure management options
- Navigate the Azure portal
- Customize the dashboard

Azure Management Option

- configure and manage Azure using a broad range of tools and platforms.
- tools available for the command line, language-specific Software Development Kits (SDKs), developer tools, tools for migration, and many others.
- Tools commonly used for day-to-day management:
 - Azure Portal
 - Azure PowerShell and Azure Command-Line Interface (CLI)
 - Azure Cloud Shell
 - Azure mobile app

Azure Portal

- create, manage, and monitor any available Azure services
- dashboard provide highlevel details
- customize the dashboard by moving and resizing tiles, and displaying
- portial sloesn't provide any way to automate repetitive tasks



Azure PowerShell

- cross-platform version of PowerShell that runs on Windows, Linux, or macOS.
- E.g.
- Azure PowerShell provides the New-AzVM command that creates a virtual machine for you inside your Azure
- Creating administration scripts and using automation tools is a powerful way to optimize your workflow.

```
New-AzVM `
-ResourceGroupName "MyResourceGroup" `
-Name "TestVm" `
-Image "UbuntuLTS" `
```

Azure CLI

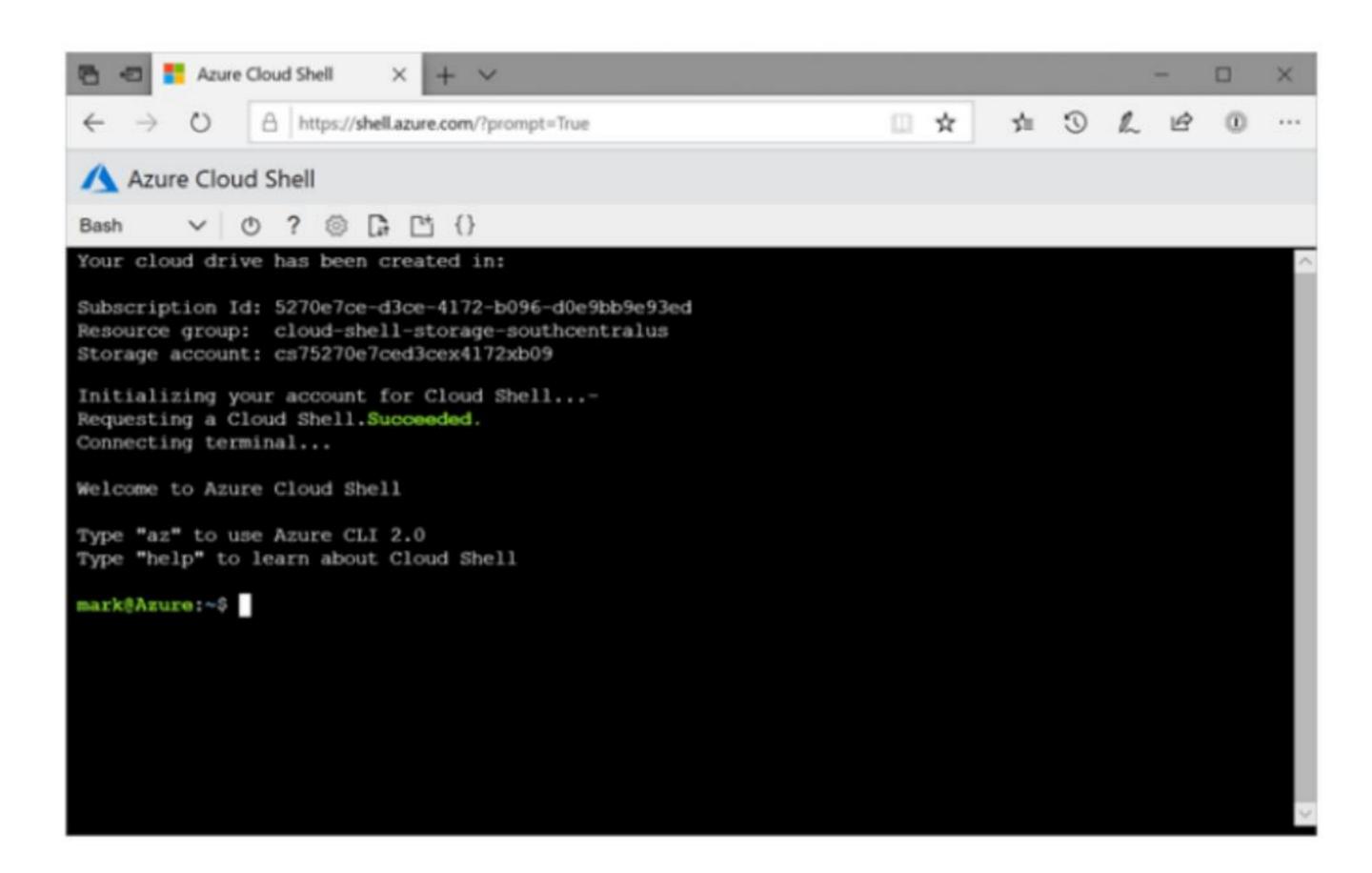
- cross-platform commandline program
- Cross-platform means that it can be run on Windows,
- Eiguto ereateQSVM, you would open a command prompt window, sign in to Azure using the command az login, create a resource group, then use a command such as:

```
az vm create \
    --resource-group MyResourceGroup \
    --name TestVm \
    --image UbuntuLTS \
    --generate-ssh-keys \
    ...
```

Azure Cloud Shell

- allow to switch between the two shells, and both support the Azure CLI and Azure PowerShell

- Bash defaults to the Azure CLI with the az command pre-installed and PowerShell Core within Linux with pwsh command.



Azure Cloud Shell



Develop Tools_{NET}

Core

- Python
- Java
- Node.js
- Go



Edito

rs code (Cloud Shell Editor)

- vim
- nano
- emacs

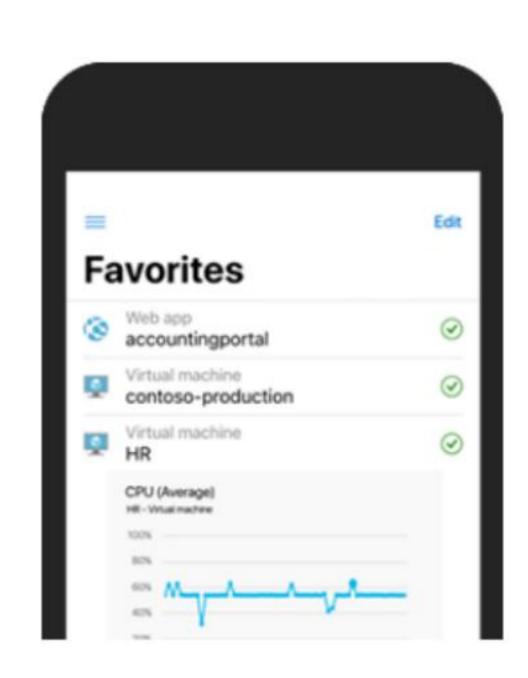


Other

- maven
- make
- npm

Azure Mobile App

- allows you to access, manage, and monitor all your Azure accounts and resources from your phone



- or tablet the current status and important metrics of your services
 - Stay informed with notifications and alerts about important health issues
 - Quickly diagnose and fix issues anytime, anywhere
 - Review the latest Azure alerts
 - Start, stop, and restart virtual machines or web apps
 - Connect to your virtual machines
 - Manage permissions with role-based access control (RBAC)

Other Options

- Azure SDKs for a range of languages and frameworks, and REST APIs
 - manage and control Azure resources programmatically.

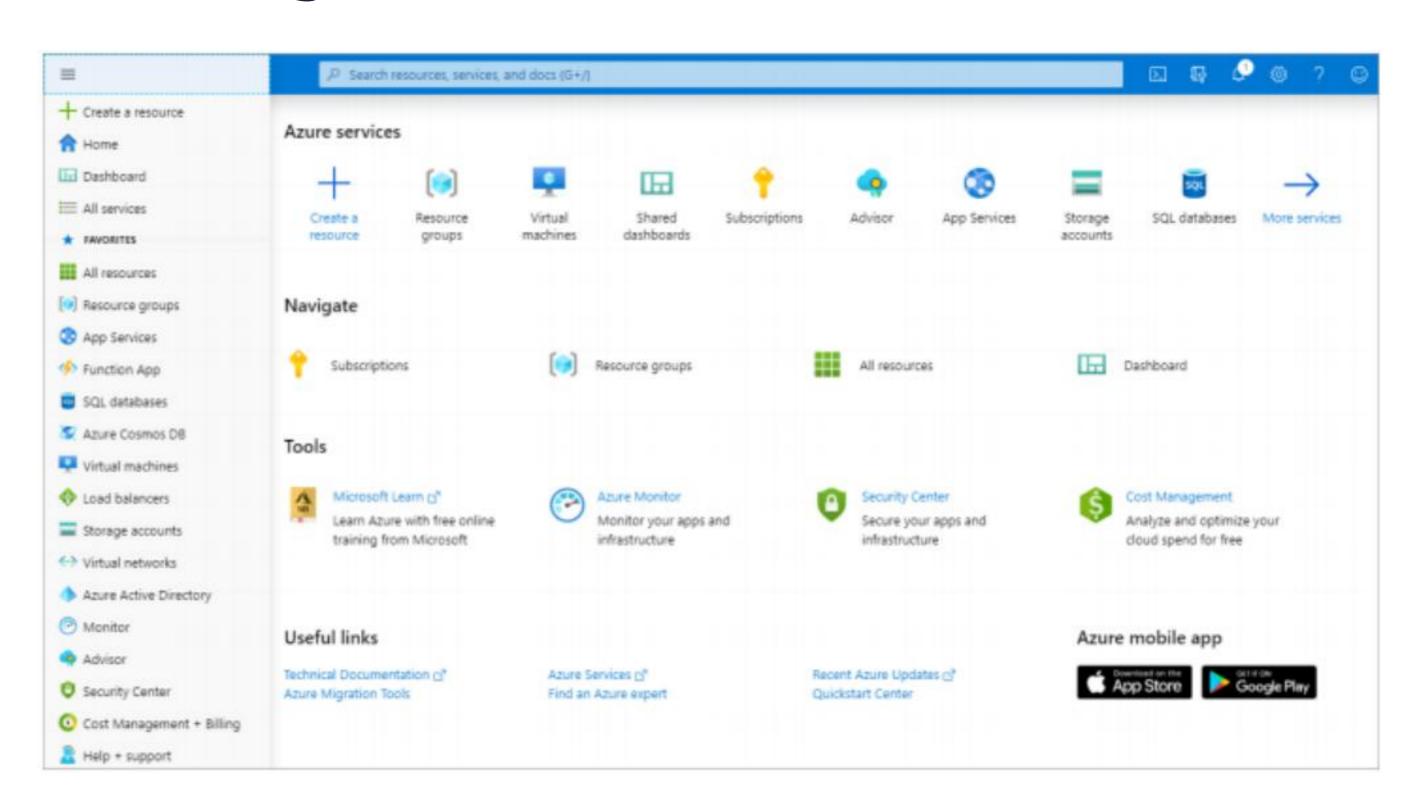
Week 5

Navigate the portal



Azure Portal Layout

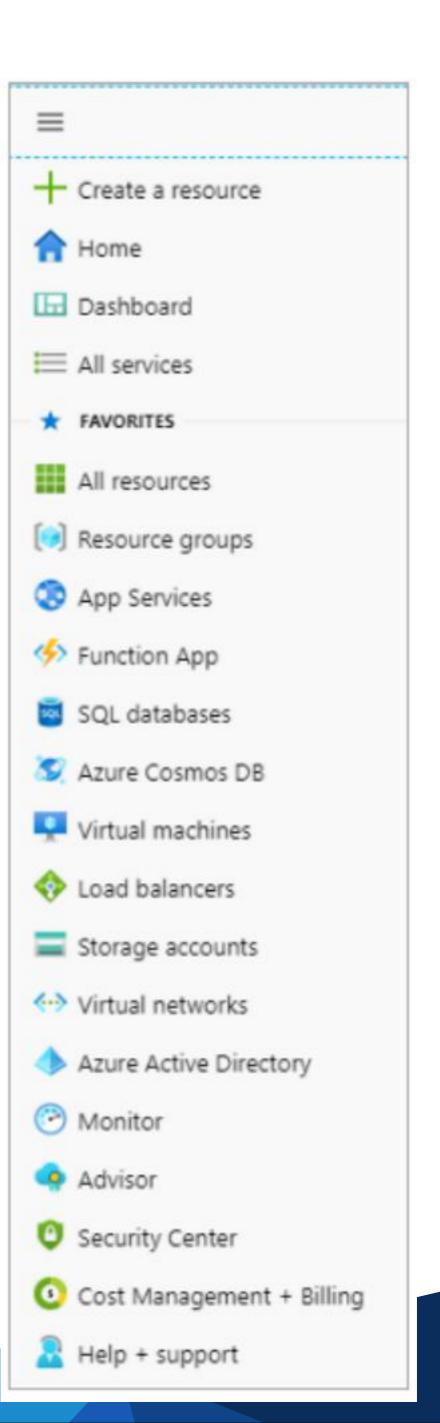
- primary graphical user interface (GUI) for controlling Microsoft
- Earry out the majority of management actions in the portal



Azure Portal Layout

Resource Panel

- left-hand sidebar of the portal which lists the main resource types.
- customize this with the specific resource types you tend to create or administer most often.



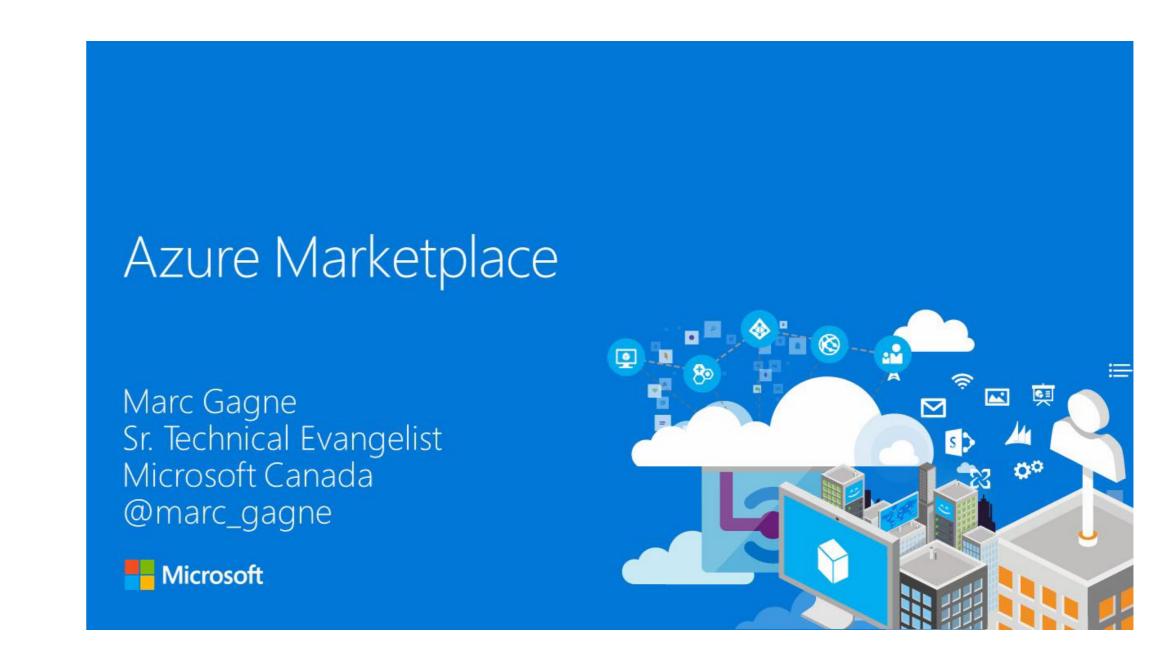
What is Azure Marketplace?

- where you start when creating new

resources in Azure.
- allows customers to find, try, purchase, and provision applications and services

- can provision end-to-end solutions quickly and reliably, hosted in your own Azure

- Microsoft Partners also use it as a launch point for all joint Go-To-Market activities.



Configuring settings in Azure Prostly the status bar at the top-right of the screen.

Cloud Shell

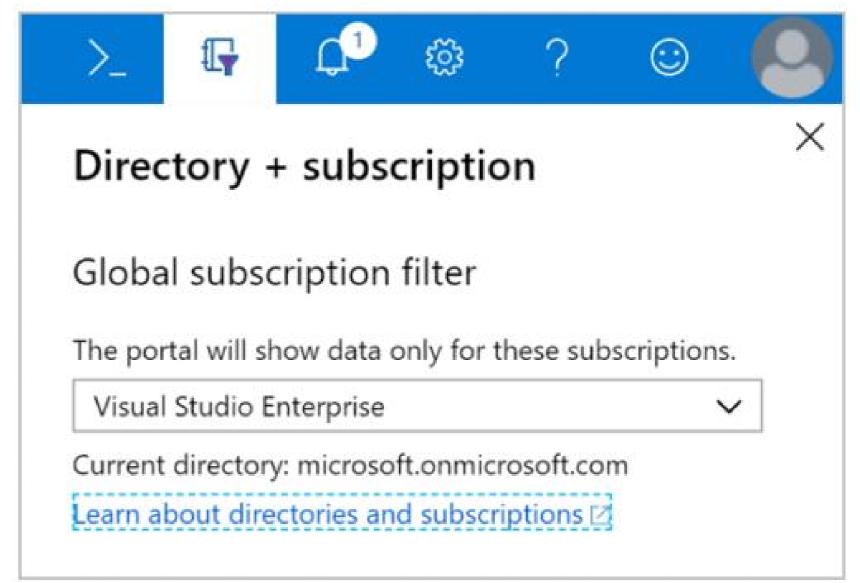
- select the Cloud Shell icon (>_), you create a new Azure Cloud Shell session.
- control and administer all of your Azure resources in the current subscription through a command-line interface built right into the portal.

Configuring settings in Azure

Protot and

subscription
- select the Book and Filter icon to
show the Directory + subscription

- AABws you to have more than one subscription associated with one
- dans ethans ge between subscriptions.



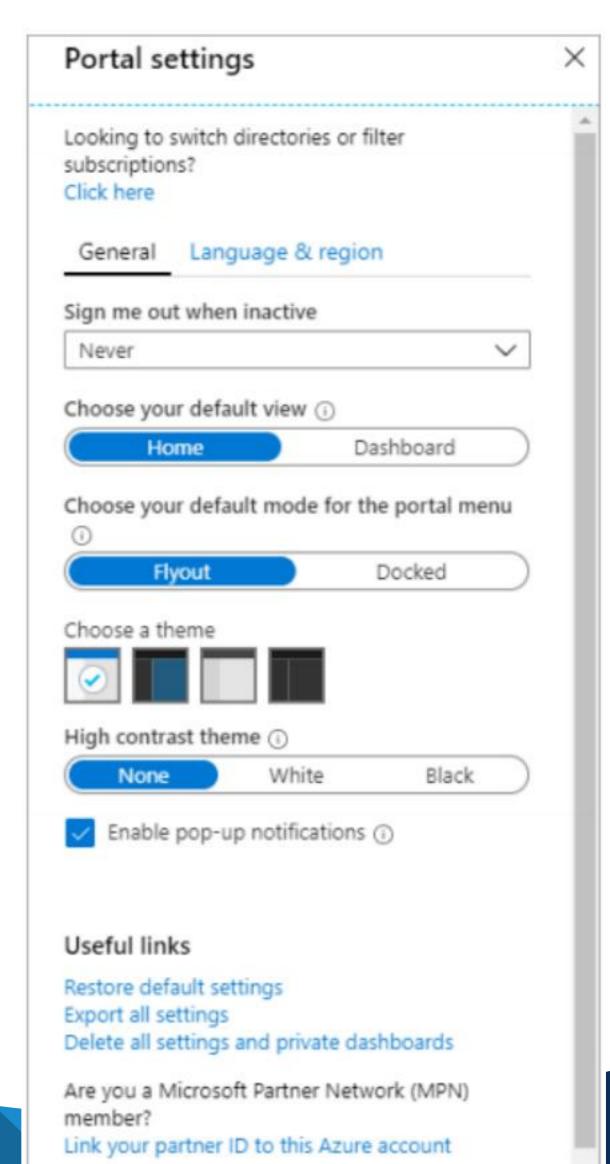
Configuring settings in Azure Portal

Notification

- Selecting the bell icon displays the Notifications pane.
- lists the last actions that have been carried out, along with their status.

Configuring settings in Azure Portal settings Looking to switch directories or filter subscriptions?

- Select the gear icon to change the Azure portal settings.
- Settings include:
 - Inactivity sign out delay
 - Default view when you first sign in
 - Flyout or docked option for the portal menu
 - Color and contrast themes
 - Toast notifications (to a mobile device)



Configuring settings in Azure Per sta

- Select the question mark icon to show the Help
- portion include:
 - Help + Support
 - What's new
 - Azure roadmap
 - Launch guided tour
 - Keyboard shortcuts
 - Show diagnostics
 - Privacy statement

Help & Support options

- can access billing, quota, and subscription-management

- check the status and details of your support request, by going to Help > Help +support > All support requests.

Configuring settings in Azure Recorateale

- smiley face icon opens the Send us
- feedbeckdpark.to Microsoft about Azure.

Profile settings

- Sign in with another account, or sign out entirely
- View your account profile, where you can change your
- Præskogdur permissions
- View your bill
- Update your contact information
- Cost Management + Billing Invoices page that helps you analyze where Azure is generating costs.

Configuring settings in Azure

Rucelatiaar

- free service built into Azure
- high availability, security, performance, operational excellence, and cost.

With the help of Azure

- Advisor: Get proactive, actionable, and personalized best practices recommendations.
- Improve the performance, security, and high availability of your resources as you identify opportunities to reduce your overall Azure costs.
- Get recommendations with proposed actions inline.

Exercise 1

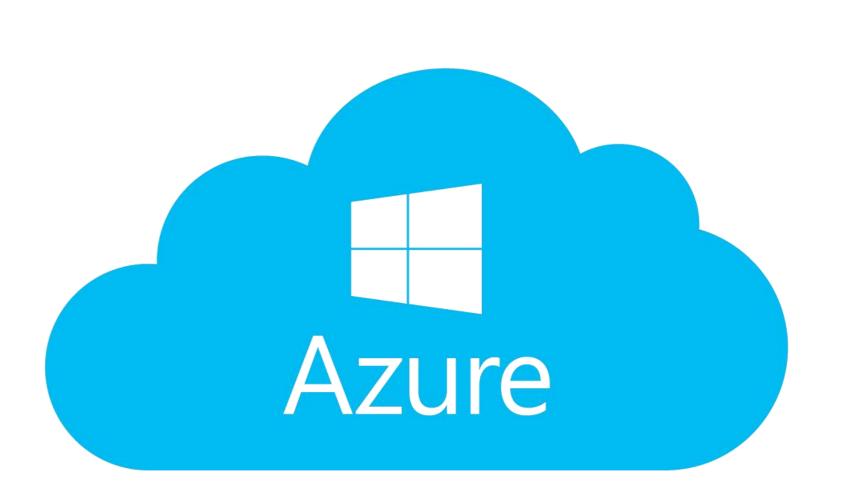
Work with panes



Excercise 1 - Explore the Marketnlace

Marketplace 1. Let's start by touring how to create a resource. On the home page, select Create a resource.

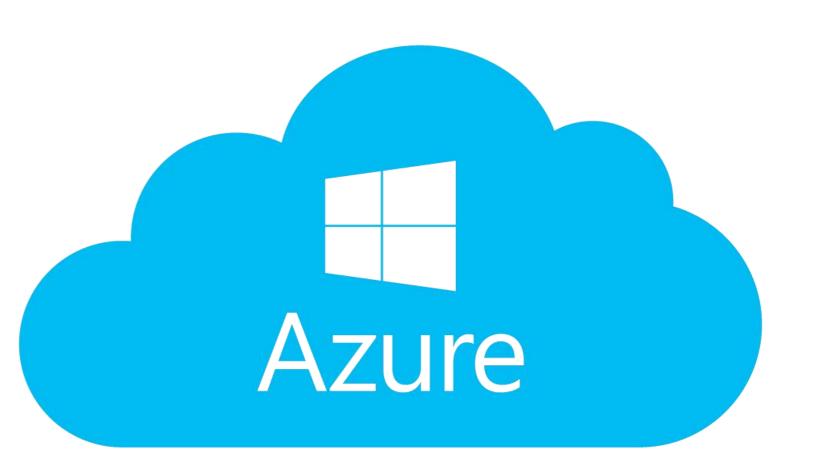
2. A pane labeled New appears and displays a list of categories on the left-hand side, labeled Azure Marketplace. you can expand this list to see everything in the Marketplace pane with the See all link next to the heading.



Excercise 1 - Explore the

Marketplace
3. Selecting any of items in the Azure
Marketplace list will show popular services
for that category on the right of the New
Beacan select on the See all link for a more
comprehensive list.

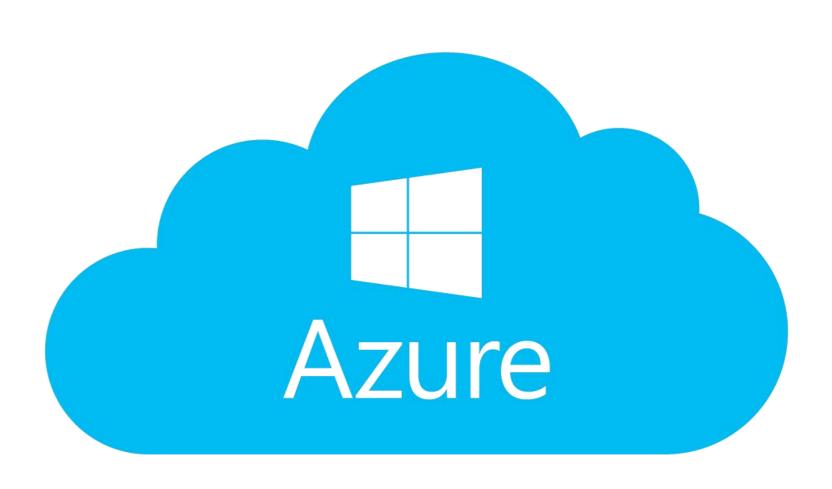
4. Returning to the New pane, select on Get started and you should see a list on the right side of the pane that includes services such as Windows Server 2016 Datacenter, Ubuntu Server VM, SQL Database, and so on.



Excercise 1 - Explore the Marketplace

Optional:

5. select Quickstarts + tutorials under Windows Server 2016 Datacenter and, in the new browser window, look through the Windows VM tutorials.



Excercise 1 - View Resources

- 1. Under Azure Marketplace, select

 Compute to show more compute options on
 the right side of the pane, such as Red Hat
 Enterprise, Reserved VM Instances, Web
 app for Containers, and so on.
 2. To the right of Featured, select See all. The full list of available VM services now appears.
- 3. Select Windows Server under the Operating Systems section. On screens with limited horizontal space for the pane, you may have to scroll right and select the See More link to find the Windows Server option.

Excercise 1 - View Resources

- 4. Select the drop-down list to see all of the Windows Server images available.
- 5. Select the X at the top right-hand corner to close the Windows Server window.
- 6. Select the X on the previous Marketplace window. You should now see the New pane again.

Excercise 1 - Filter Result

- 1. Type virtual machine into the search box and hit Enter.
- 2. Select Compute. You see a filtered list of Compute services related to virtual machine images.
- 3. Select any of the results that interest you to learn more about that service, including how to get started. Select the X in the corner to explore a different service. When you're done, move to the next step.

Excercise 1 - Filter Result

4. Select the X in the right-hand end of the search box. The X button will erase your search term but does not reset any of the drop-down filters you've set. You can either reset those filters manually, or close the Marketplace pane with the X icon in the upper right corner and reopen it. When you are finished trying out the search and filtering options, move on Selectethexx step he top right-hand corner to close the Marketplace pane. Now you will see the New pane once again.

6. Select the X at the top right-hand corner to close the New pane.

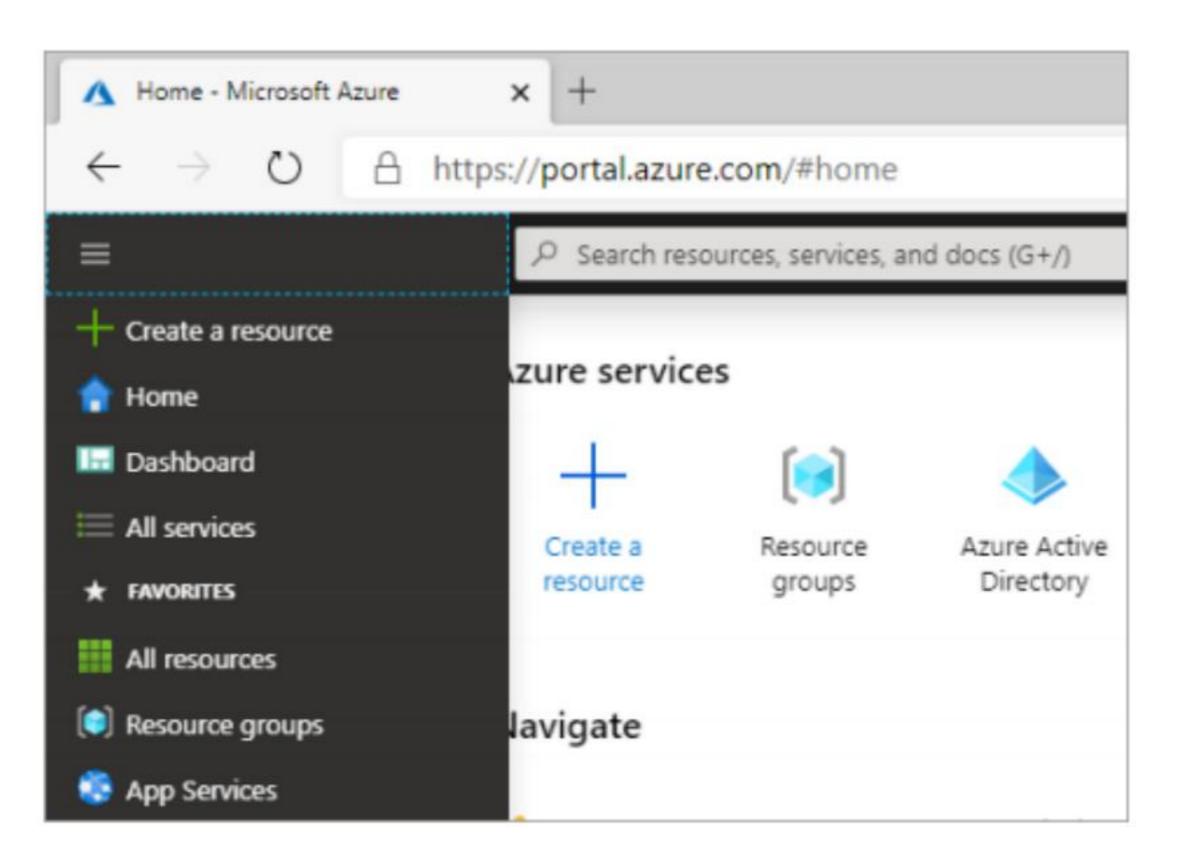
Exercise 2

Use the Azure Portal



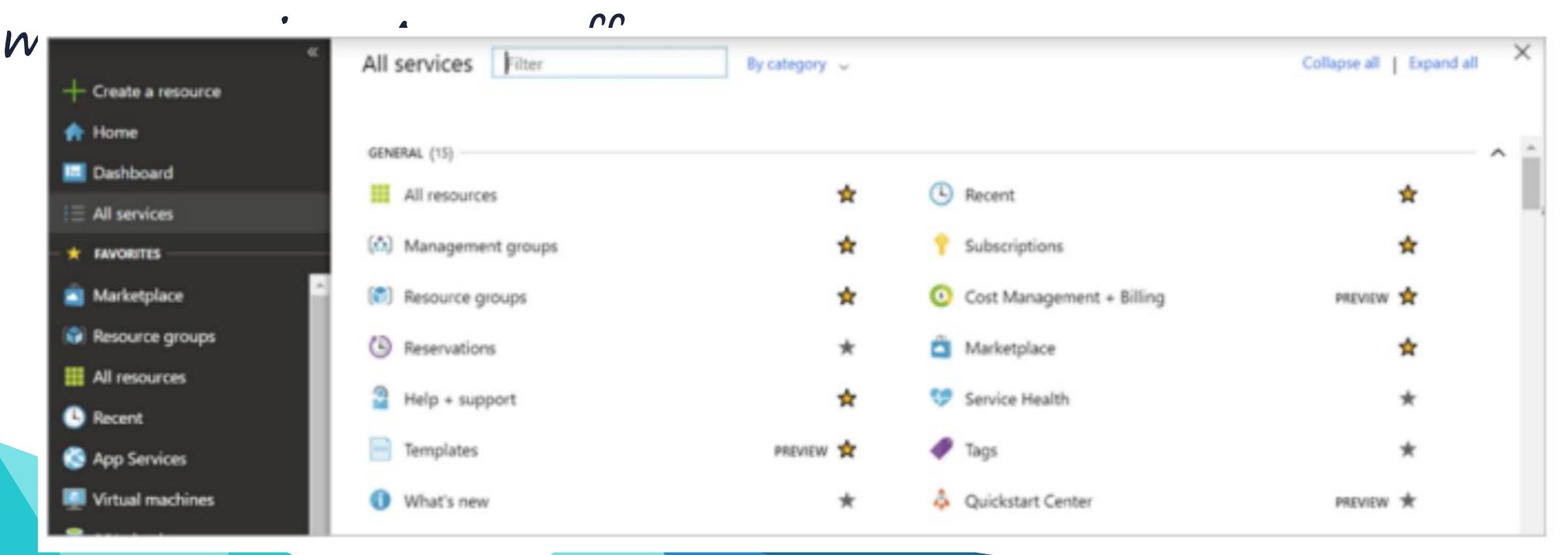
Exercise 2 - Use the Azure Rocktad

1. On the top left-hand side of the Azure portal, select Show portal menu.



Exercise 2 - Use the Azure Riomtias

2. Select All services. Take a couple of minutes to scroll down the list to see how



Exercise 2 - Use the Azure Riomtias

- 3. You can search for services through the filter box.
- 4. Select Virtual machines. If you don't see it, use the filter box. The Virtual Machines pane appears. You haven't created any virtual machines so there are no results.
- 5. Select + Add. The Create a virtual machine pane appears.

Exercise 2 - Use the Azure Riomtal

- 6. Select the X in the top right-hand corner to close the Create a virtual machine pane.
- 7. Select the X in the top right-hand corner to close the Virtual machines pane.
- 8. Select on Microsoft Azure on the top left-hand side to get back to the home page.

Exercise 2 - Use the Azure Rartial shell

- allows you to use a command-line interface (CLI) to execute commands in your Azure subscription.
- choose either a Bash or PowerShell environment
- change the shell at any time through the language drop-down on the left side of the shell.
- there are a variety of management and programming to Azure command-line tools (Azure CLI, AzCopy, etc.)
 - Languages / Frameworks including .NET Core, Python, and Java
 - Container management support for Docker, Kubernetes, etc.
 - Code editors such as vim, emacs, code, and nano

Exercise 2 – Use the Azure

Biockotypahd



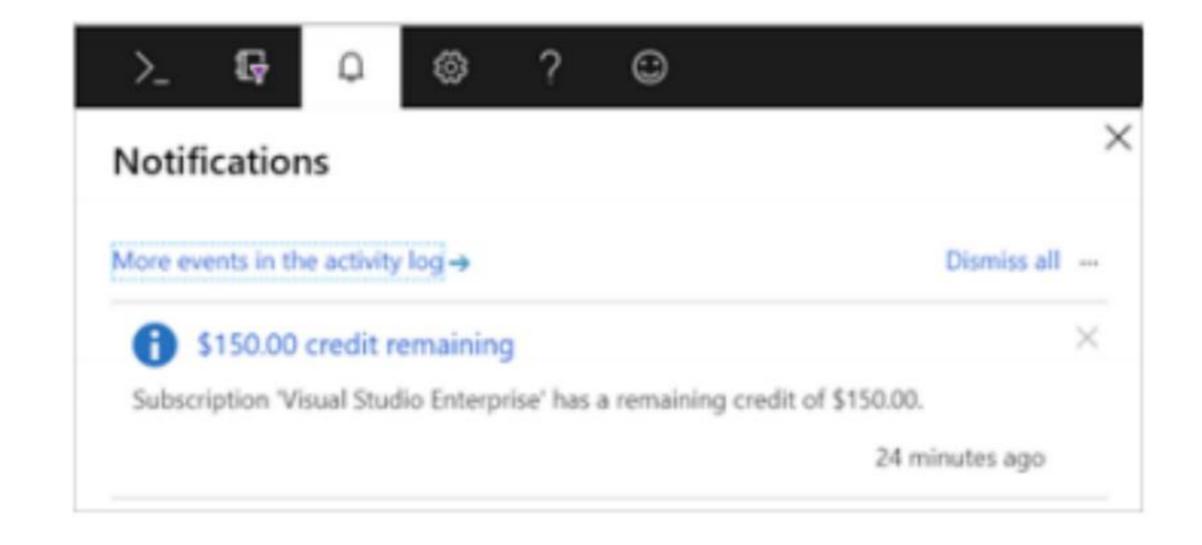
Subscription

1. Select the Directory + Subscription (book and filter) icon to show the Directory + subscription pane.

- switch between multiple subscriptions or directories.
- 2. Select the X in the top right-hand corner to close the Directory + subscription pane.

Exercise 2 - Use the Azure Roofectear's pane

1. On the icon bar menu bar, select the Notifications (bell) icon. This window lists any pending notifications.



Exercise 2 - Use the Azure Roofectearls pane

2. If any notifications appear, hover your mouse over one of them. Select the X that appears in that notification to dismiss it. 3. Select **Dismiss all**. You should have no notifications showing.

4. Select the X in the top right-hand corner to close the Notifications pane.

Exercise 2 - Use the Azure Bewikgt @

- 1. Select the Settings (cog) icon to open the Portal settings pane, showing the General settings by default.
- 2. Drop down the Sign me out when inactive setting, and select After one hour.
- 3. Under Choose a theme, select the different colored themes and observe the changes to the portal UI. Leave it set to the one you like the best.
- 4. Under High contrast theme, try the three different options.

Exercise 2 - Use the Azure Bewirgt @

- 5. Select Enable pop-up notifications. When this option is checked, notifications will appear as pop-up "toast"-style notifications. They will still show up in the Notifications (bell) icon as well.
- 6. Select the Language & region tab in the settings. Select Language and pick Español, and then select the Apply button. If a Translate this page dialog box appears, close the box. The whole portal is now in Spanish.
- 7. To revert back to English, select the Settings (cog) icon in the top menu bar and switch to the Idioma y región settings. Select Idioma and pick English. Select the Aplicar button. The portal returns to English.

Exercise 2 - Use the Azure Reputal

- 1. Select the Help (?) icon to show the Help pane.
- 2. Select the Help + support button.
- 3. In the Help + support pane, under Support, select New support request, you would fill in the information in each of the following sections, and then select Create to lodge the issue.
 - Basics: the issue type
 - Problem: severity of the problem, a summary and description, and any additional information
 - Contact information: preferred contact method and the information associated with this contact method

Exercise 2 - Use the Azure Reputal

4. You can view the status of your support requests by selecting on All support requests.

What's News and other information
1. Select the Help icon and select What's new.

2. Review the features that have recently been released. Also note and explore the other Help menu options, such as:

- Azure roadmap
- Launch guided tour
- Keyboard shortcuts
- Show diagnostics
- Privacy statement

Exercise 2 – Use the Azure Rhats webs and other information

- 3. Select the X in the top right-hand corner to close the Help pane.
- 4. Close the What's new pane. You should now be back to the Dashboard.

Exercise 2 - Use the Azure Peakatkal

pane

- 1. Select the Feedback (smiley face) icon to open the Send us feedback pane.
- 2. Type your impressions of Azure in the Tell us about your experience box, select the box that says Microsoft can email you about your feedback, and select Submit Feedback.
- 3. A Feedback sent message will appear, and then close. You should now be back at the Dashboard.

Exercise 2 - Use the Azure Projetal

Settings. Select on your name in the top right-hand corner of the portal. Options include:

- Sign in with another account, or sign out entirely
- View your account profile, where you can change your password
- Submit an idea
- Check your permissions
- View your bill
- Update your contact information

Some of these items do not appear unless you select the "..." icon.

Exercise 2 - Use the Azure Braintal

- Settings. "..." then View my bill to navigate to the Cost Management + Billing Invoices page, which helps you analyze where Azure is generating costs.
- 3. If you're using your own account and not sandbox, you can select a subscription from the drop-down list.
- 4. Select a billing period.
- 5. Note the service costs and check them against what you expect for your current subscription.

Exercise 2 - Use the Azure Prairetal

Settings. Select the X in the top right-hand corner to close the Costs by service pane.

- 7. Select the X in the top right-hand corner to close the Cost Management + Billing Invoices page.
- 8. You should now be back on the home page.

Azure Portal Dashboards

Week 5



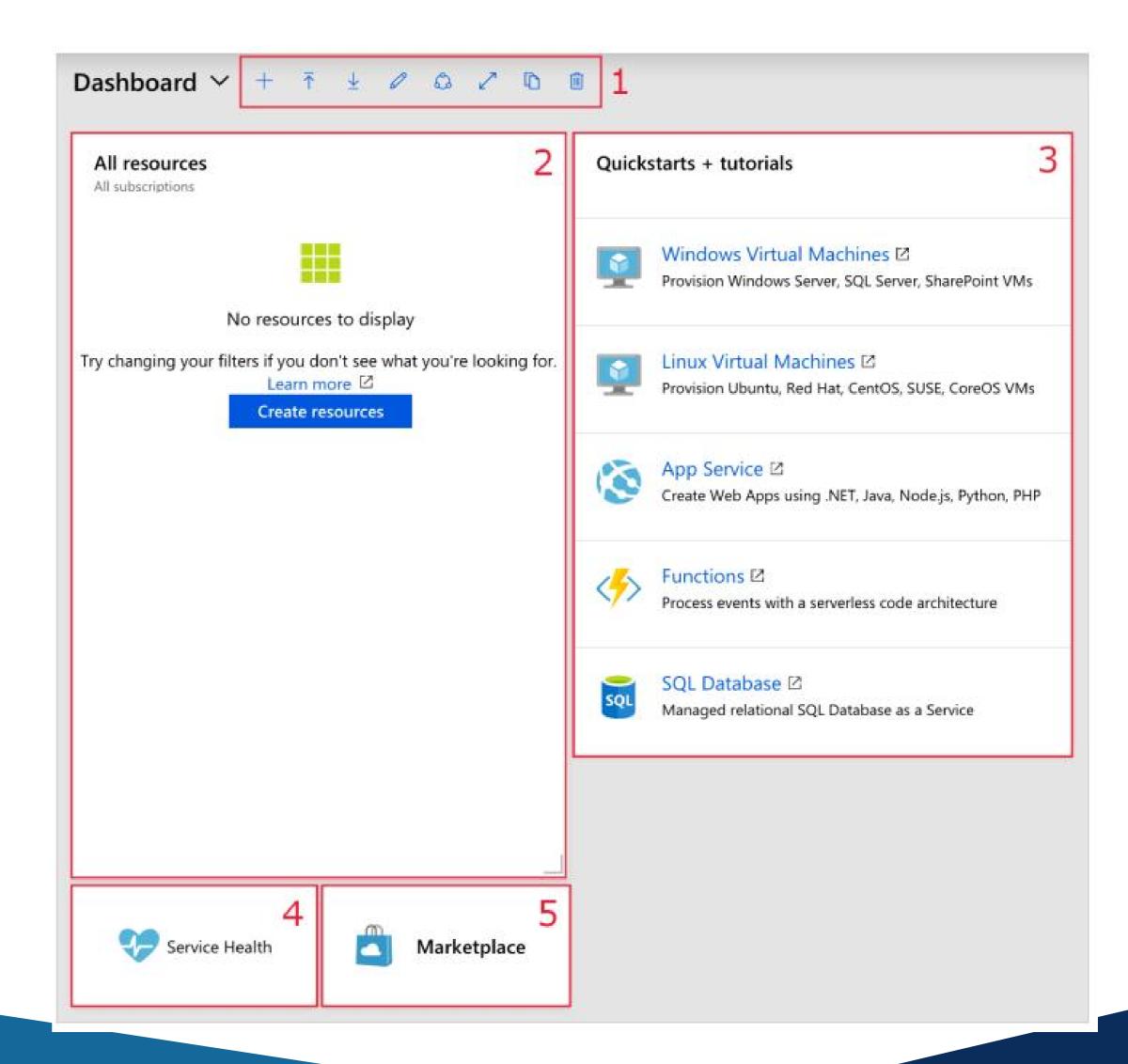
What is Dashboard?

- customizable collection of UI tiles displayed in the
- Attlyerpowerd, and position tiles to create the exact view you want
- Multiple dashboards are supported
- considerable flexibility regarding how you manage
- Austramize the portal between your production and development environments within the portal
- stored as JavaScript Object Notation (JSON) files
- Azure stores dashboards within resource groups

Explore the default dashboard

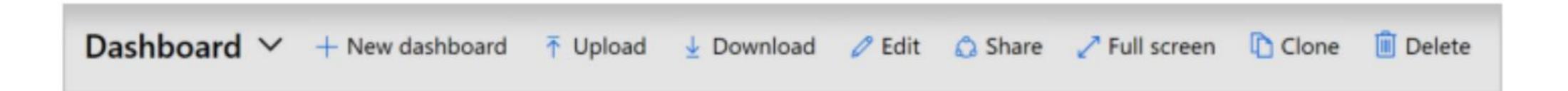
- When you log into the portal for the first time and select Dashboard from the portal menu, you are presented with this dashboard containing five tiles. Dashboard Controls

 - 2. All resources file
 - 3. Quickstarts + tutorials tile
 - 4. Service Health tile
 - 5. Marketplace tile



Creating and managing dashboard are the controls that

- enable you to create, upload, download, edit, and share a dashboard.
- Also can switch a dashboard to full screen, clone it, or delete it.



Select dashboard

- the far left of the toolbar is the Select Dashboard
- basabbands that robu create will initially be private

Create a new dashboard

- create a new dashboard by click New dashboard.
- add, remove, and adjust tiles the way you like.

Upload and Download

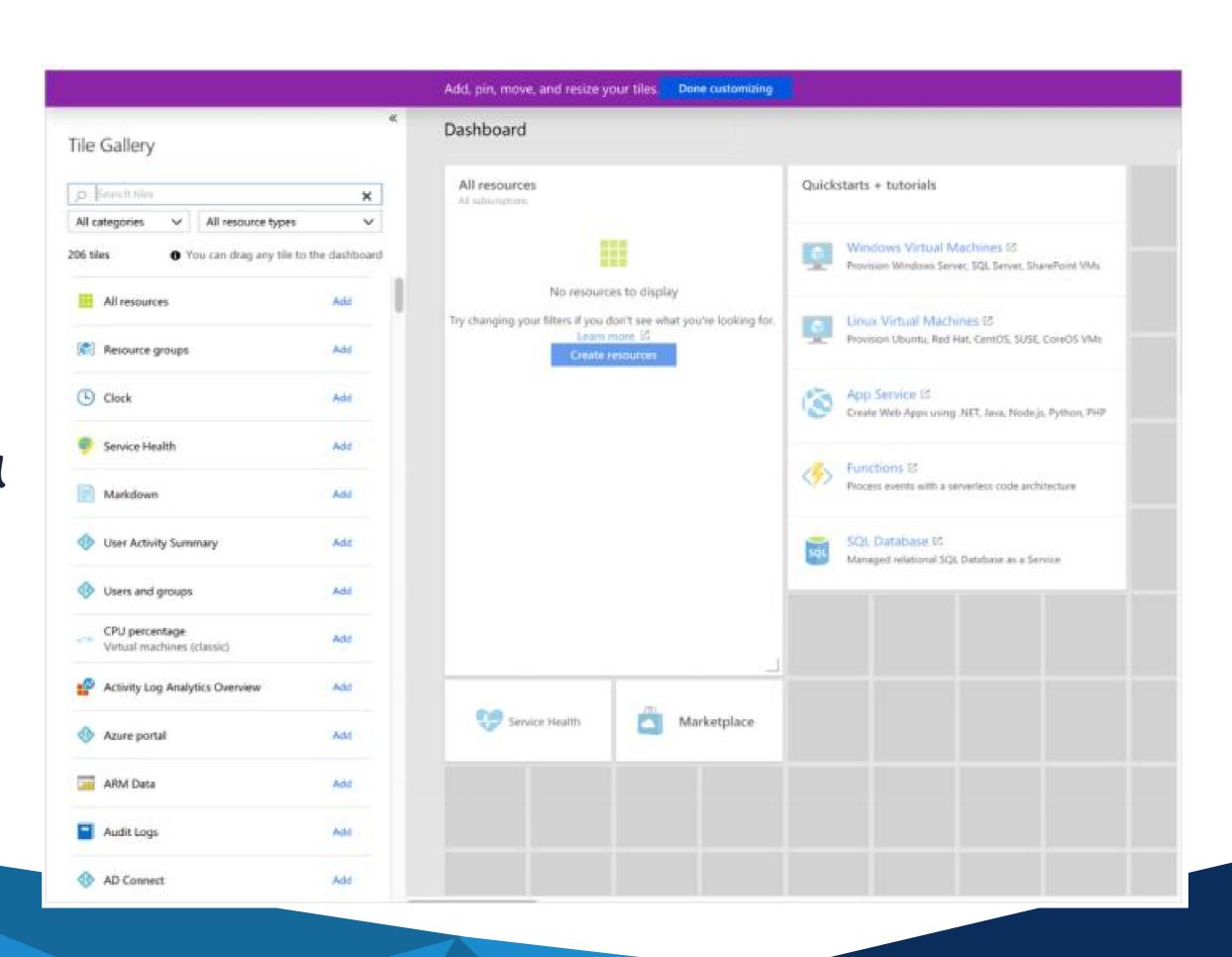
- The Upload and Download buttons enable you to download your current dashboard as a JSON file

Edit a dashboard using the

Pashboard can be edit by downloading the

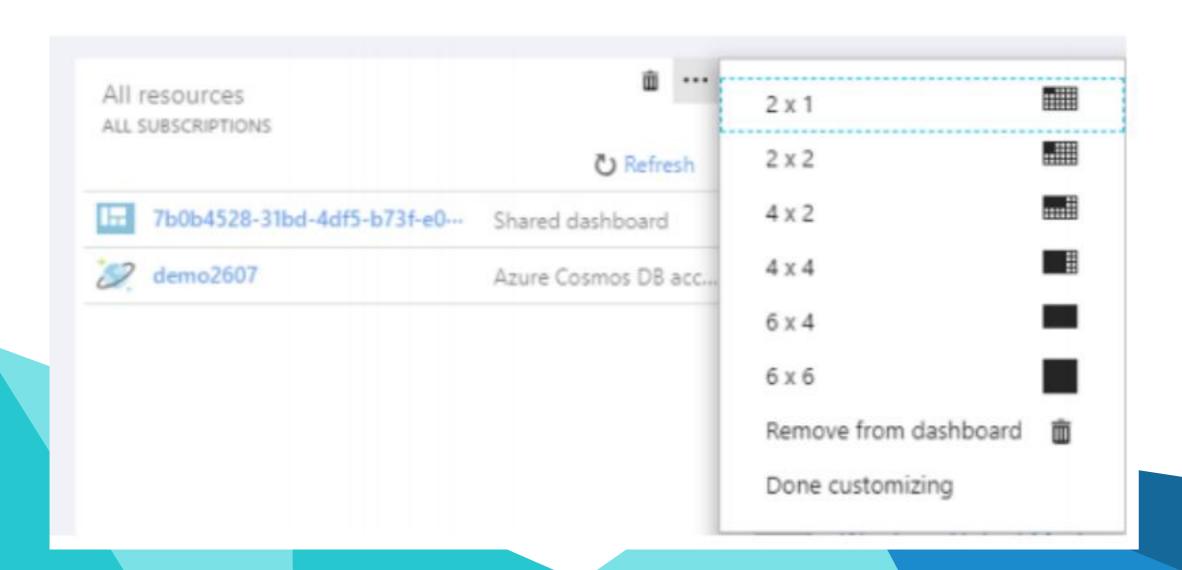
- JSON file - can switch to editing mode in several ways:

- Click the Edit (pencil icon) button.
- Right-click on the dashboard background area and select **Edit**.
- Right-click on a tile and a menu will appear with edit options.
- Hover over a tile on the dashboard a ... menu will appear on the ton/right



Edit a dashboard using the Phanget file sizes

- edit tiles with a gray bottom right-hand corner by dragging the corner indicator.



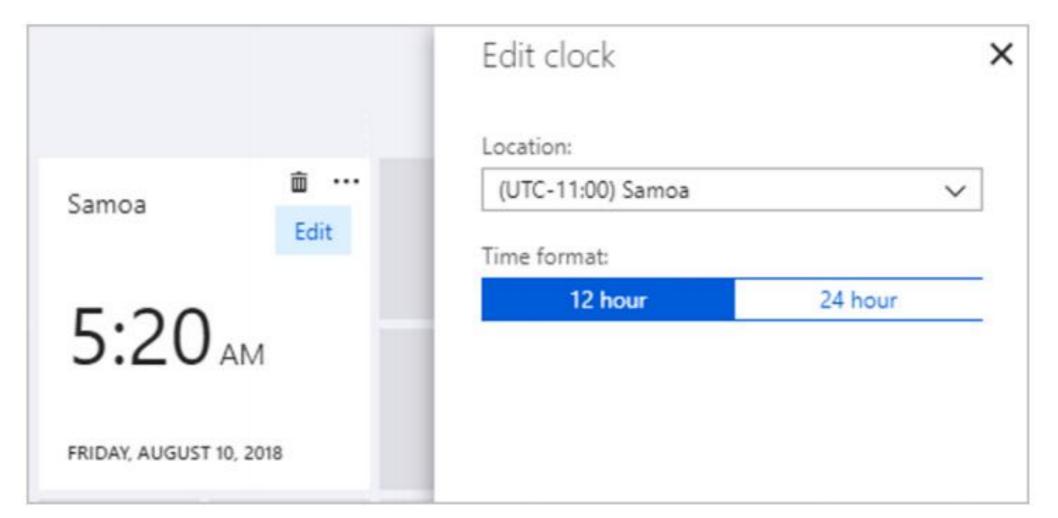


- right-click into the contextual menu and specify the size you want.

Edit a dashboard using the

Phanget Ae

settings - Some tiles have editable settings.



Accepting your edits

- When you have arranged the tiles as you want them, either click Done customizing or rightclick and then click Done customizing.

Edit a dashboard by changing the JSON file

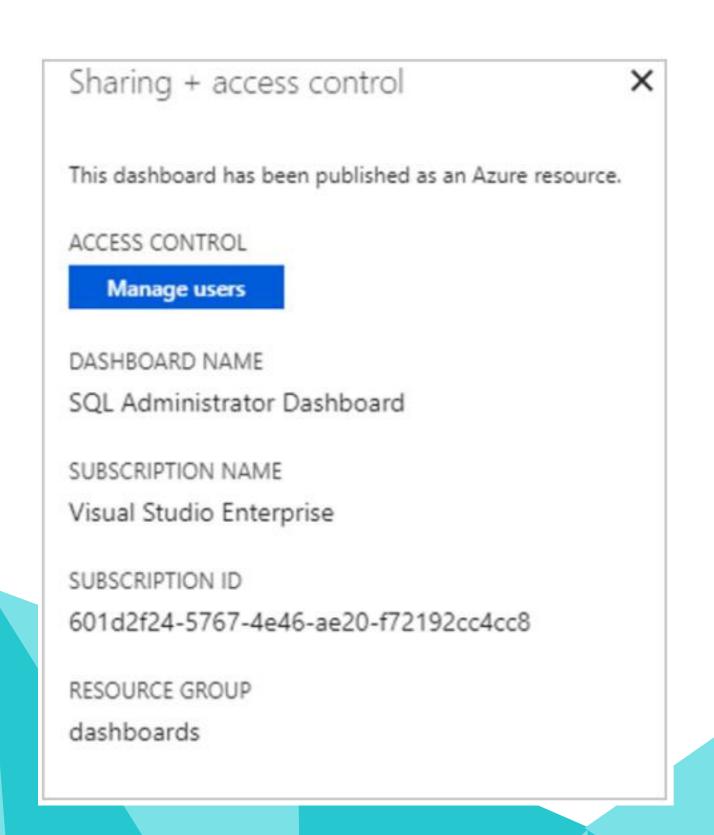
- provides more options for changing settings
- cannot see the changes until you upload the file back into Azure.

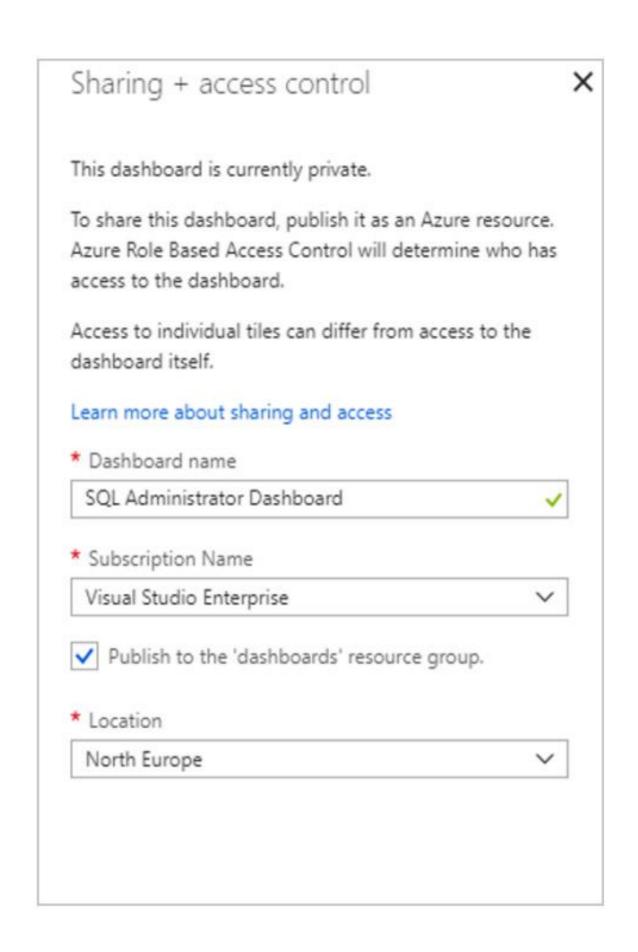
Reset a

districts the deshboard background and select Reset to default state to reset the dashboard to default state

```
"position": {
  "name": "resourceType",
   "value": "Microsoft.Resources/resources",
   "isOptional": true
  "name": "kind",
  "isOptional": true
 type": "Extension/HubsExtension/PartType/BrowseAllResourcesPinnedPart"
```

Share or unshare a dashboards. Share or unshare a dashboards for use an existing resource group) in which to store shared dashboards.

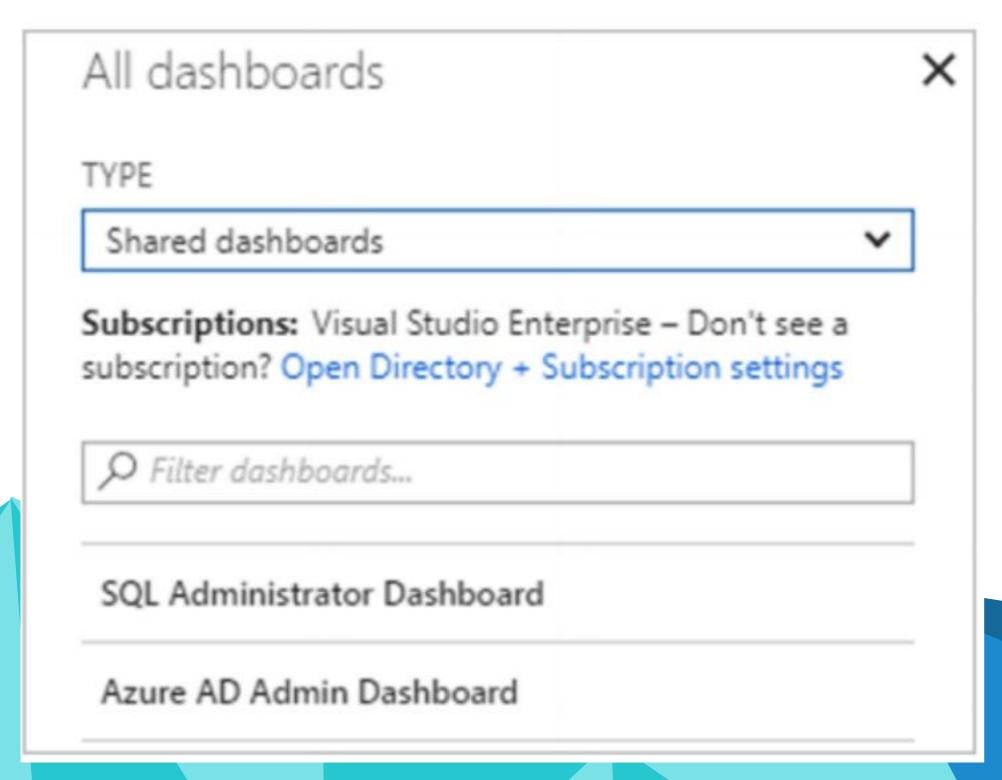


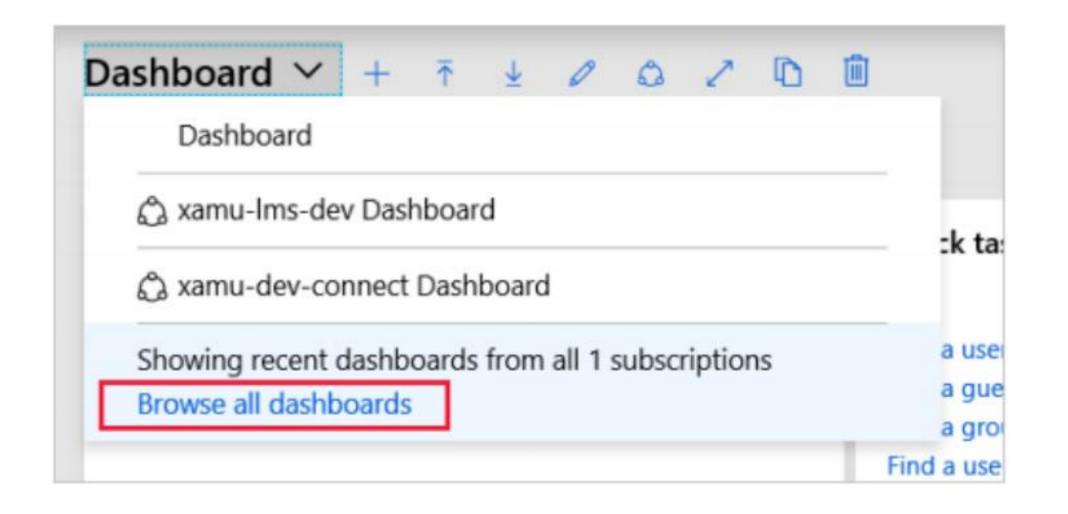


- When you have shared the template, you will see a second Sharing + access control pane.

Share or unshare a dashboard

- To switch to a shared dashboard, you click on the list of dashboards, and then click Browse all dashboards.





- You will now see the All dashboards pane, with the names of any shared dashboards displayed. Just click on a dashboard to apply it to the Azure portal.

Display a dashboard as a full

- SCICE CHAFull screen button to display your current dashboard without any browser menus, if you want the
- presest the elso every brakleskate it Full Screen next to the Dashboard name at the top of the screen.

Clone a dashboard

 Cloning a dashboard creates an instant copy called "Clone of <dashboard name>" and switches to that copy as the current dashboard

Delete a dashboard

- removes a dashboard from your list of available dashboards

Exercise 3

Customize the dashboard



Create New Dashboard

1. In the Azure portal M, from the top left-hand side, select Show portal menu > Dashboard

- 2. Select the New Dashboard
- 3. In the center pane, change My Dashboard to Customer Dashboard

Add and Configure the Clock

1. In the tile gallery, drag the clock onto the workspace. Place it on the top right of the available space.

- 2. On the Edit clock pane, change the Location to Pacific Time (US & Canada).
- 3. Under Time format, select 24 hour.
- 4. Select Done.
- 5. Repeat the preceding four steps, except select Eastern Time (US & Canada). You should now have two clocks, one showing the time on the West Coast, the other on the East Coast.

Resize a Tile

- 1. Under Tile Gallery, drag an All resources tile and drop it onto the top left-hand side of the new dashboard workspace.
- workspace. 2. Hover over the new All resources tile and select the ellipsis icon (...); then select the 6x6 size.
- 3. Select the gray corner on the bottom right-hand side of the tile, and resize the tile to 3.5 squares vertically by six horizontally. When you finish resizing, the tile adjusts to 4x6. In the Tile Gallery, drag the Resource Groups tile onto the workspace. Place it underneath the All resources tile.

Resize a Tile

- 5. In the Tile Gallery, select the Metrics chart tile, and drag it onto the workspace. Place it to the right of the All resources tile.
- 6. Continue to add the following tiles, rearranging them to fit:
 - Help + SupportQuick Tasks

 - Marketplace
- 7. When you have added these tiles, select Done customizing. The Customer Dashboard should appear.

Clone a Dashboard

- 1. Select the Clone button.
- 2. Rename the dashboard from Clone of Customer Dashboard to Azure AD Admin Dashboard.
- 3. On the Resource Groups tile, select the Remove from dashboard trash can icon to delete this tile.
- 4. From the Tile Gallery, add the following tiles:
 - Organization Identity
 - Users and Groups
 - User Activity Summary
- 5. Reposition the tiles as necessary, and then select Done customizing.

Share a Dashboard

- 1. From the Azure AD Admin dashboard, select the **Share** button at the top. **The Sharing and access control** panel that appears.
- 2. Uncheck the Publish to the 'dashboards' resource group checkbox.
- 3. Select the resource group [sandbox resource group name] from the Resource group dropdown.
- 4. Select Publish.

Resize a Tile

5. Close the Sharing + access control pane.

6. After a short while, a Shared dashboard will appear in the All resources tile on your dashboard.

7. Repeat steps 1 to 3 to share the Customer Dashboard.

Edit a dashboard.json file

- 1. Select Download.
- 2. Open a file explorer on your computer and navigate to where your web browser downloaded the dashboard, typically a Downloads folder.

 3. Find the Customer Dashboard.json file and open it in a
- text editor.
- 4. In your editor, look for the text ClockPart.
- 5. On the first occurrence of ClockPart, change the previous position > rowSpan value to 1.

Edit a dashboard.json file

- 6. On the second occurrence of ClockPart, also change the previous position > rowSpan value to 1.
- 7. On the second occurrence of ClockPart, change the position > y value from 2 to 1.
- 8. Save the Customer Dashboard.json file and close your code editor.
 9. On the Azure dashboard, select **Upload**.
- 10. In the Open dialog box, browse to the Downloads folder, and double-click Customer Dashboard.json. The clocks have resized to one row high, and the bottom clock has moved up one row..

Select a Shared Dashboard

- 1. Select the down arrow next to Customer Dashboard.
- 2. Select Browse all dashboards.
- 3. On the All dashboards pane, under TYPE, select Shared dashboards. 4. Select Customer Dashboard.
- 5. Close the All dashboards pane.

The clocks have returned to their original size.

Switch to Full screen

1. Select the down arrow next to Customer Dashboard.

There is now another Customer Dashboard, without the shared symbol next to it. Select that version of Customer Dashboard, and the clocks become small again.

- 2. Switch back to the shared Customer Dashboard.
- 3. Select the Full Screen button. The browser menus and bars have all disappeared.
- 4. Select the Exit Full Screen to return to the standard screen.

Unshared a Dashboard

- 1. Select the Unshare button. The Sharing + access control pane appears.
- pane appears. 2. Select the Unpublish button.
- 3. In the confirmation message box, select OK.
- 4. Select the down arrow next to Customer Dashboard.
- 5. Select Browse all dashboards.
- 6. On the All dashboards pane, under TYPE, select Shared dashboards.
- 7. Close the All dashboards pane.

Unshared a Dashboard

- 5. Select Browse all dashboards.
- 6. On the All dashboards pane, under TYPE, select Shared dashboards.

Customer Dashboard no longer appears in the list of available dashboards.

7. Close the All dashboards pane.

Delete a Dashboard

- 1. Ensure that the Azure AD Admin dashboard is selected.
- 2. Select the Delete button.
- 3. In the Confirmation message box, select the checkbox to confirm that this dashboard will no longer be visible, and then select OK.

Reset a Dashboard

- 1. Ensure that Customer Dashboard is selected.
- 2. Select Edit.
- 3. Right-click on the workspace, and select Reset to default state.
- 4. In the Reset dashboard to default state message box, select Yes.

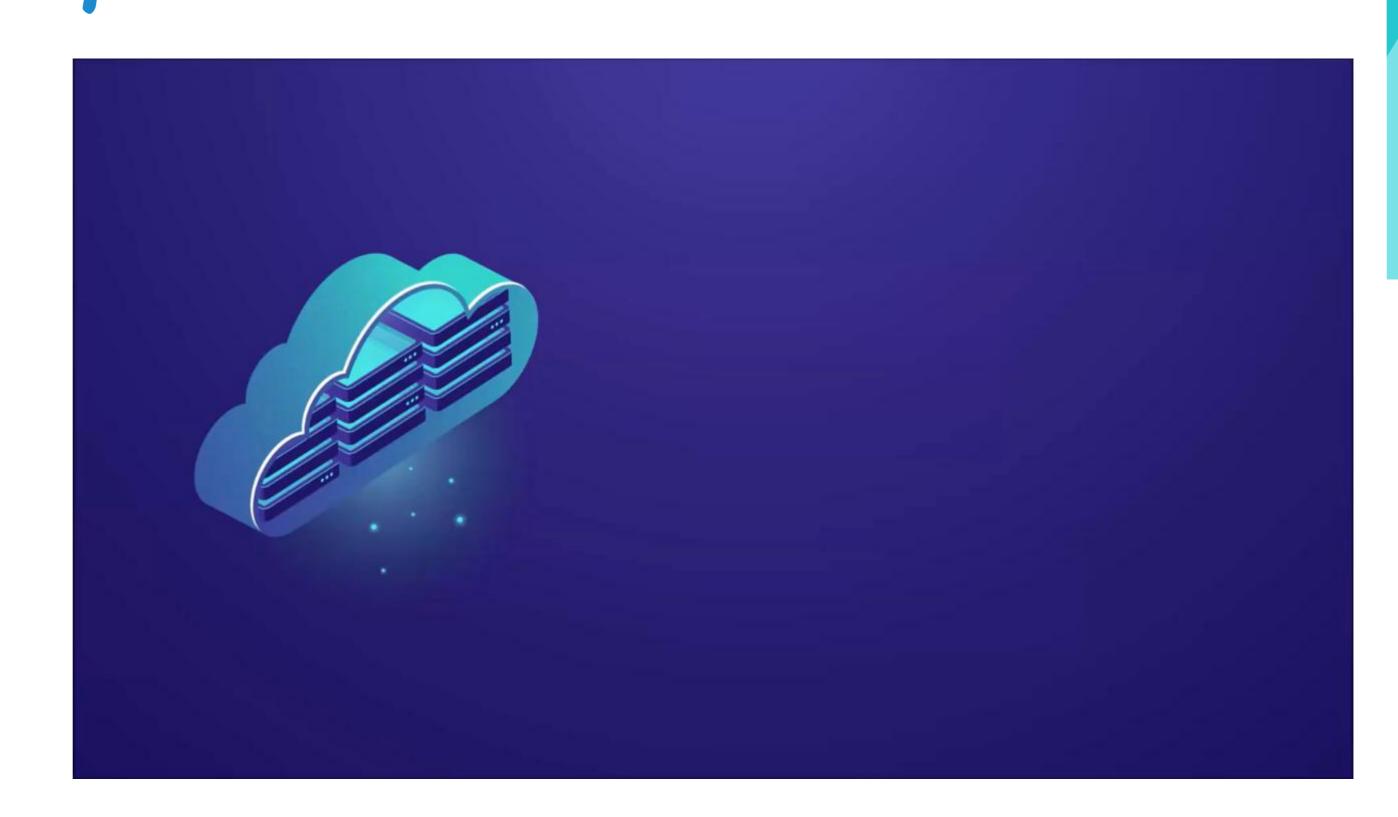
The Customer Dashboard has reset to its default tiles.

Reset a Dashboard

- 5. Select Done customizing.
- 6. Select your name at the top right of the portal.
- 7. Select Sign out.
- 8. Close your browser.

Week 5

Access public and private preview features



Access public and private preview features

- test beta and other pre-release features, products, services, software, and regions.
- common areas you will see previews for include:
 - New storage types
 - New Azure services, such as Machine Learning enhancements
 - New or enhanced integration with other platforms
- available under certain terms and conditions that are specific to each particular Azure preview.
- release is referred to as General Availability (GA) as once a feature has been evaluated and tested successfully.



Access public and private preview features

Features preview categories

There are two types of previews available:

- Private Preview
 - available to specific Azure customers for evaluation
 - puriposonly and issued directly by the product team.
- Public Preview
 - available to all Azure customers for evaluation purposes.
 - turned on through the preview features page.

Access public and private preview features

Finding preview features

learn about preview features through the preview features page access a preview feature

- select its entry on this page and learn more about how
- find Azure preview features in the portal
 - Sign in to Azure portal.
 - Select Create a resource in the resources panel to open the New pane.
 - Enter the word preview into the search box at the top of the New pane.
 - A list of available preview features is displayed, with the word (preview) next to each one.

Azure Portal preview features

Another preview area you can try is the next version of the Azure portal. Use the URL

https://preview.portal.azure.com - provide performance, navigation, and accessibility improvements to the Azure portal interface.

- It will be branded with Microsoft Azure (Preview) in the top

Provide feedback on preview

featquittesedback through the "smiley" face icon on the portal - by posting ideas and suggestions on the Azure portal Feedback Forum.

Get notified about GA release

"What's New" link on the help menu (?) provides a list of recent updates

- recent updates - use the Azure Updates page which provides additional information and features including:
 - Which updates are in general availability, preview, or development.
 - Browse updates by product category or update type, by using the provided dropdown lists.
 - Search for updates by keyword by entering search terms into a text-entry field.
 - Subscribe to get Azure update notifications by RSS.

Week 5

Summary



Summary

- You have learned how to sign into Azure using an Azure account
- You reviewed the features of the Azure portal and its customization options.

- You created, customized, and shared a dashboard Check your knowledge

- 1. An Azure dashboard is stored as which type of file? Answer: B
- a. XML b. JSON
- c. PNG

Azure dashboards are stored as JSON files, which allow them to be uploaded and downloaded to share with other member the Azure directory.

Check your knowledge

- 2. Azure Advisor provides advice on which of these topics:
- a. Creating an Azure account
- b. Best Practices and security for your services
- c. Using the Azure portal effectively
- 3. True or false: Azure Cloud Shell is an interactive, browser-accessible shell for managing Azure resources?

Answer: B
Azure Advisor is a free
service built into Azure
that provides
recommendations on high
availability, security,
performance, and cost.

Answer: A

a. True b. False Azure Cloud Shell is an interactive shell for managing Azure resources. You can control and administer all of your Azure resources in the