

# Scenario 1 – Creating a Storage Account

Microsoft Azure Storage accounts provide scalable, durable cloud storage, backup, and recovery solutions for any data, big or small. It works with the infrastructure you already have to cost-effectively enhance your existing applications and business continuity strategy, and provide the storage required by your cloud applications, including unstructured text or binary data such as video, audio, and images.

## Part A - Creating a General Purpose storage account

### Sign in to the Azure portal



1. In the **Email or phone** field, enter

`user448712@cloudplatimmersionlabs.onmicrosoft.com`

and click **Next**



2. In the **Password** field, enter

`Ahp5^#j=!sZP`

and click **Sign in**



3. In the **Stay signed in?** window, click **No**



4. If a **Welcome to Microsoft Azure** window appears, click **Maybe Later** to skip the tour



5. In the menu on the left, click **+ Create a resource**



6. On the **New** blade in the **Search the marketplace** box, type **storage account** and press **Enter**



7. On the **Everything** blade, select **Storage Account - blob, file, table, queue**



8. On the **Storage account - blob, file, table, queue** blade, click **Create**



9. In the **Subscription** dropdown menu on Basics section, select

**Microsoft Managed Labs Valorem (prod) – 7**



10. In the **Resource group** dropdown, make sure

**rg448712**

is selected



11. Under **INSTANCE DETAILS** on the **Storage account name**, type

**labstoracctgenrg448712**

**Note:** The Storage account name must be unique across all existing storage account names in Azure. It must be 3 to 24 characters long, and can contain only lowercase letters and numbers.



12. In the **Location** drop-down, choose the location that is geographically nearest to you



13. Under **Performance**, verify that **Standard** is selected

**Note:** Standard storage accounts use hard disk drives and provide the lowest cost per GB. They are best for applications that require bulk storage or where data is accessed infrequently. **This setting cannot be changed after the storage account is created.**



14. In the **Account Kind** dropdown menu, select **Storage (general purpose v1)**

**Note:** General purpose storage accounts provide storage for blobs, files, tables, and queues in a unified account. Blob storage accounts are specialized for storing blob data and support choosing an access tier, which allows you to specify how frequently data in the account is accessed. Choose an access tier that matches your storage needs and optimizes costs.



15. In the **Replication** dropdown menu, select **Locally-redundant storage (LRS)**

**Note:** The data in your Azure storage account is always replicated to ensure durability and high availability. Choose a replication strategy that matches your durability requirements. **Some settings cannot be changed after the storage account is created.** Azure Storage replication options include Zone-redundant storage (ZRS classic), Geo-redundant storage (GRS), and Read-Access Geo-redundant storage (RA-GRS). [Learn more](#)



16. Under **Access tier**, select **Hot**

**Note:** Choosing an access tier lets you specify the access pattern for the data residing in a Blob Storage Account. The Hot Access Tier is ideal for frequently accessed data. The Cool Access Tier is optimized for storing less frequently accessed data at a lower cost, like backups. Azure Premium Storage delivers high-performance, low-latency disk support for virtual machines running I/O-intensive workloads. Virtual machine (VM) disks that use Premium Storage store data on solid-state drives (SSDs). You can migrate your application VM disks to Azure Premium Storage to take advantage of the speed and performance of these disks. Azure Blob Storage tiers include **Cool** and **Hot**. [Learn more](#)



17. Click on **Next : Advanced >** to move to Advanced section.



18. In **Advanced** section ,under **Secure transfer required**, leave the default setting (**Disabled**)



19. Select **All networks** under **Allow access from** field.



20. Click **Next : Tags >** to navigate to **Tags**

**Note:** Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. After you apply tags, you can retrieve all the resources in your subscription with that tag name and value. Tags enable you to retrieve related resources from different resource groups. This approach is helpful when you need to organize resources for billing or management. [Learn more](#)

**Note:** we are not creating tags for Storage account in this lab.



21. Click **Next: Review + create >**, you can see a **validation passed** message on top of the blade



22. Click **Create**

**Note:** you can verify the status on the Notifications

## Part B – Blob Storage



1. In the menu on the left, click **+ Create a resource**



2. On the **New** blade in the **Search the marketplace** box, type

**storage account**

and press **Enter**



3. On the **Everything** blade, select **Storage Account - blob, file, table, queue**



4. On the **Storage account - blob, file, table, queue** blade, click **Create**



5. In the **Subscription** dropdown menu on Basics section, select

**Microsoft Managed Labs Valorem (prod) – 7**



6. In the **Resource group** dropdown, make sure

**rg448712**

is selected



7. Under **INSTANCE DETAILS** on the **Storage account name**, type

**labstoracctblobrg448712**

**Note:** The Storage account name must be unique across all existing storage account names in Azure. It must be 3 to 24 characters long, and can contain only lowercase letters and numbers.



8. In the **Location** drop-down, choose the location that is geographically nearest to you



9. Under **Performance**, verify that **Standard** is selected

**Note:** Premium storage is not available for Blob storage accounts. Instead, you will select an **Access tier** later in the configuration.



10. In the **Account Kind** dropdown menu, select **Blob storage** (if the dropdown menu is grayed out, choose **Classic** under **Deployment model** then change it back to **Resource manager** - you should then be able to choose **Blob storage** in the dropdown menu)

**Note:** A Blob storage account is a specialized storage account for storing your unstructured data as blobs (objects) in Azure Storage. Blob storage accounts are similar to your existing general-purpose storage accounts and share all the durability, availability, scalability, and

performance features that you use today including 100% API consistency for block blobs and append blobs. For applications requiring only block or append blob storage, Blob storage accounts are recommended.



11. In the **Replication** dropdown menu, select **Locally-redundant storage (LRS)**

**Note:** The data in your Azure storage account is always replicated locally to ensure durability and high availability. Choose a replication strategy that matches your durability requirements. **Some settings cannot be changed after the storage account is created.** Azure Storage replication options include Zone-redundant storage (ZRS), Geo-redundant (GRS) and Read-Access Geo-redundant (RA-GRS). [Learn more](#). Zone-redundant storage (ZRS) is NOT an available option for Blob storage-based storage accounts.



12. Under **Access tier**, select **Hot**



13. Click on **Next : Advanced >** to move to Advanced section.



14. In **Advanced** section ,under **Secure transfer required**, leave the default setting (**Disabled**)



15. Select **All networks** under **Allow access from** field.



16. Click **Next : Tags >** to navigate to **Tags**

**Note:** Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. After you apply tags, you can retrieve all the resources in your subscription with that tag name and value. Tags enable you to retrieve related resources from different resource groups. This approach is helpful when you need to organize resources for billing or management. [Learn more](#)

**Note:** we are not creating tags for Storage account in this lab.



17. Click **Next: Review + create** >, you can see a **validation passed** message on top of the blade



18. Click **Create**

**Note:** you can verify the status on the Notifications



19. Click **Create**

This completes this scenario. Click **Next** to go to the next scenario.

## Scenario 2 - Premium Storage

Azure Premium Storage delivers high-performance, low-latency disk support for virtual machines running I/O-intensive workloads. Virtual machine (VM) disks that use Premium Storage, store data on solid-state drives (SSDs). You can migrate your application VM disks to Azure Premium Storage to take advantage of the speed and performance of these disks.



1. In the menu on the left, click **+ Create a resource**



2. On the **New** blade in the **Search the marketplace** box, type

**storage account**

and press **Enter**



3. On the **Everything** blade, select **Storage Account - blob, file, table, queue**



4. On the **Storage account - blob, file, table, queue** blade, click **Create**



5. In the **Subscription** dropdown menu on Basics section, select

**Microsoft Managed Labs Valorem (prod) – 7**



6. In the **Resource group** dropdown, make sure

**rg448712**

is selected



7. Under **INSTANCE DETAILS** on the **Storage account name**, type

**labstoracctpremg448712**

**Note:** The Storage account name must be unique across all existing storage account names in Azure. It must be 3 to 24 characters long, and can contain only lowercase letters and numbers.



8. Under **Performance**, select **Premium**

**Note:** Premium storage accounts use solid-state drives and offer consistent, low-latency performance. They can only be used with Azure virtual machine disks, and are best for I/O-intensive applications, like databases. Additionally, virtual machines that use Premium storage for all disks qualify for a 99.9% SLA, even when running outside of an Availability set.



9. In the **Account Kind** dropdown menu, select **Storage (general purpose v1)**



**Note:** General purpose storage accounts provide storage for blobs, files, tables, and queues in a unified account. Blob storage accounts are specialized for storing blob data and support choosing an access tier, which allows you to specify how frequently data in the account is accessed. Choose an access tier that matches your storage needs and optimizes costs.



10. In the **Replication** dropdown menu, select **Locally-redundant storage (LRS)**

**Note:** Premium storage accounts currently only support Locally Redundant Storage (LRS) as the replication option. Three copies of the data are maintained within a single region. For considerations regarding geo-replication when using Premium Storage, see **Snapshots and Copy Blob** in the following article: [Learn more](#)



11. Click on **Next : Advanced >** to move to Advanced section.



12. In **Advanced** section ,under **Secure transfer required**, leave the default setting (**Disabled**)



13. Select **All networks** under **Allow access from** field.



14. Click **Next : Tags >** to navigate to **Tags**

**Note:** Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. After you apply tags, you can retrieve all the resources in your subscription with that tag name and value. Tags enable you to retrieve related resources from different resource groups. This approach is helpful when you need to organize resources for billing or management. [Learn more](#)

**Note:** we are not creating tags for Storage account in this lab.



15. Click **Next: Review + create >**, you can see a **validation passed** message on top of the blade



16. Click **Create**

**Note:** you can verify the status on the Notifications



17. In the menu on the left, click **+ Create a resource**



18. On the **New** blade in the **Search the marketplace** box, type

**windows server**

and press **Enter**



19. On the **Everything** blade, select **Windows Server 2012 R2 Datacenter**



20. On the **Windows Server 2012 R2 Datacenter** blade under **Select a deployment model**, leave the default selection (**Resource Manager**) and click **Create**



21. On the **Basics** tab, under **PROJECT DETAILS** section verify a **Subscription** is listed in the **Subscription** dropdown menu



22. In the **Resource group** dropdown, make sure

**rg448712**

is selected



23. On the **Basics** blade under **Virtual machine name**, type

LABVM01rg448712



24. In the **Region** dropdown menu, select **South Central US**



25. Leave **Windows Server 2012 R2 Datacenter** in **Image** dropdown menu



26. On the **Size** field, click on **Change size**



27. On the **Choose a size** blade, scroll down and select **DS1\_v2 Standard** box and click **Select**

**Note:** For the purposes of this lab, we are choosing a **Dv2**series VM as they are available across all regions. [Learn More](#)



28. Under **User Name**, type

labadmin



29. Under **Password** and **Confirm password**, type

Password2018



30. Under **Select public inbound ports**, leave **None**



31. Under **Already have Windows Server License?** leave the default selection (**No**)

**Note:** Every Windows Server Standard or Datacenter customer with Software Assurance is eligible for the [Azure Hybrid Use Benefit](#). This option lets you use your Windows Server licenses

with Software Assurance for virtual machines at the base compute rate, resulting in up to 40 percent savings or more, across all Azure regions.



32. Click **Next:Disks** > to navigate to **Disks** tab



33. Select **Premium SSD** option from **OS disk type** dropdown menu

**Note:** The SSD option will allow the VM to take advantage of Premium Storage to leverage high-performance storage for I/O-intensive workloads. Azure Premium Storage uses solid-state drives and offers consistent, low-latency performance. [Learn more](#)



34. Click **No** under **Use unmanaged disks**

**Note:** Azure Managed Disks simplifies disk management for Azure IaaS VMs by managing the storage accounts associated with the VM disks. You only have to specify the type (Premium or Standard) and the size of disk you need, and Azure creates and manages the disk for you. [Learn more](#)



1. Click **Next:Networking** > to go to the **Networking** tab



2. Leave default settings for **Virtual network, Subnet and Public inbound ports**



3. Click **Next:Management** > to navigate to **Management** tab



4. Leave the defaults for **Boot diagnostics, Guest OS diagnostics** and **Diagnostics storage account** under the **Monitoring** section

**Note:** Azure Monitor enables you to consume telemetry to gain visibility into the performance and health of your workloads on Azure. The most important type of Azure telemetry data is the metrics (also called performance counters) emitted by most Azure resources. [Learn more.](#)



5. Leave the defaults for **Managed service identity** and **Enable auto-shutdown** under **IDENTITY** and **AUTO-SHUTDOWN** sections respectively



6. Click **Next:Guest config >** to go to the **Guest config** tab



7. In the **Extensions** field, leave the default



8. Click **Next: Tags >** to go to the Tags tab

**Note:** Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. After you apply tags, you can retrieve all the resources in your subscription with that tag name and value. Tags enable you to retrieve related resources from different resource groups. This approach is helpful when you need to organize resources for billing or management. [Learn more.](#)

**Note:** In this scenario we are not creating any tags for categorizing resources.



9. Click **Next: Review + create >** to review the settings and **Create a virtual machine** blade will be displayed with a **Validation passed** message at the top of the blade



10. Click **Create** to deploy the virtual machine that has been configured

This completes this scenario. Click **Next** to go to the next scenario.

## Scenario 3 – Azure Storage Explorer

Azure Storage Explorer allows you to easily work with Azure Storage data in a graphical user interface. The Storage Explorer blade is in preview in the Azure Portal, or available as a standalone application download.



1. In the menu on the left, click **Storage Accounts**



2. Click the name of the storage account that begins with **rg448712** and contains **diag** in the name to expand the menu options



3. Click **Storage Explorer (preview)**



4. Under the storage account that you expanded, click the **Arrow** next to **Blob Containers** to expand the menu options



5. Under **Blob Containers**, click **bootdiagnostics-labvm01-[hex string]**



6. In the right pane, note the files currently stored in this blob container



7. Note the options near the top of the right pane including **Upload, Download, Open, Copy URL, Manage Snapshot, Folder Statistics** and others

**Note:** It may be necessary to click the **... More** button to display additional options.



8. In the right pane, right-click the **LABVM01rg448712.[GUID].serialconsole.log** file and select **Get Shared Access Signature(SAS)** from the popup menu



9. Click the date in the **Start time:** text box and choose yesterday's date



10. Click the time in the **Start time:** text box and adjust the time by one hour



11. Click date in the **Expiry time:** text box and choose tomorrow's date



12. Leave the default selections in the Permissions section

**Note:** The default permissions allow the recipient of the SAS URL to view and download the contents of the container without making changes. If you select Write, the recipient will be able to upload a new version of the selected file to the container. If you select Delete, the recipient will be able to delete the selected file from the container.



13. Click **Create**



14. From this pane, you can copy the full URL to the file which can be used by others to download this file from any browser



15. Click **Close**

## Microsoft Azure Storage Explorer Application

Microsoft Azure Storage Explorer is also available as a standalone application.



1. Review the Storage Explorer website at <http://storageexplorer.com>

**Note:** If you get a certificate error, click **Continue to this webpage (not recommended)**

This completes the lab. Click **Next** to go to the Conclusion.

You have completed the **Azure Storage Accounts** lab which covered the following topics:

- Azure Storage Accounts
- Premium Storage
- Microsoft Azure Storage Explorer

You should now have a basic understanding of the information and steps necessary to deploy and manage Azure Storage account resources.