Microsoft

Microsoft Azure Administrator

Exam Ref AZ-104

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4. Next, register the server with the Storage Sync Service, as shown in Figure 2-39.

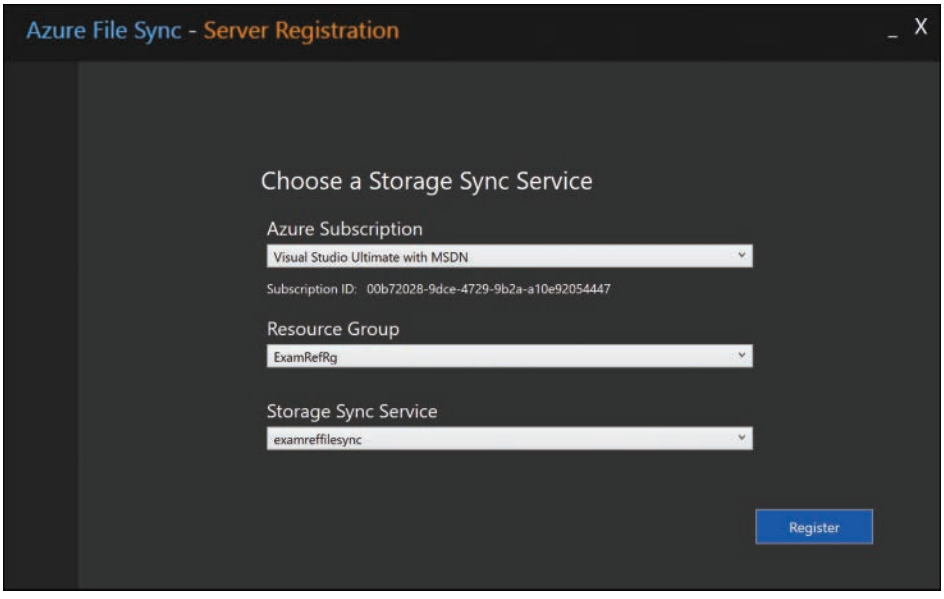

FIGURE 2-39 Registering the server with the Storage Sync Service

Adding a server endpoint

After the server is registered, you must navigate back to the sync group in the Azure portal and click **Add Server Endpoint**. In the **Registered Server** drop-down menu, you will find all the servers that have the agent installed and associated with this sync service.

Enable cloud tiering to only store frequently accessed files locally on the server while all your other files are stored in Azure Files. This is an optional feature that is configured by a policy.

> ***MORE INFO*** **CLOUD TIERING OVERVIEW**
>
> **You can learn more about configuring cloud tiering at *https://docs.microsoft.com/azure/storage/files/storage-sync-cloud-tiering*.**

Figure 2-40 shows the blade in the Azure portal to add the server endpoint. Ensure that you are only syncing the location to one sync group at a time and that the path entered exists on the server.

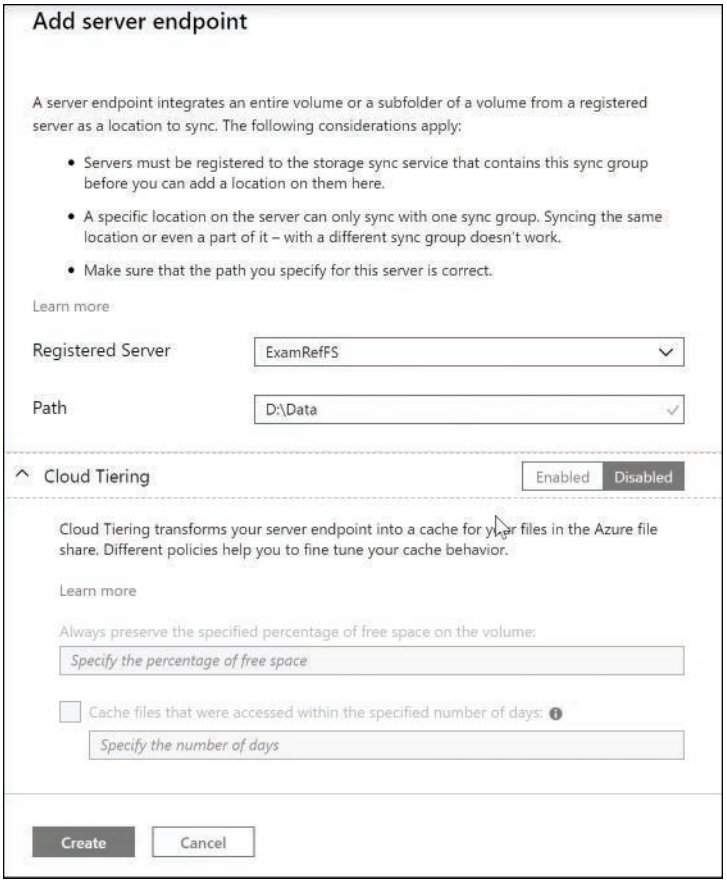

FIGURE 2-40 Adding a server endpoint to the Azure Storage Sync Service.

Monitoring synchronization health

Open the sync group in the Azure portal. A health indicator is displayed by each of the server endpoints; green indicates a healthy status. Click the endpoint to see stats such as the number of files remaining, size, and any resulting errors, as shown in Figure 2-41

MORE INFO **TROUBLESHOOTING AZURE FILE SYNC**

Keep up with the latest issues and learn more about troubleshooting Azure File Sync at *https://docs.microsoft.com/azure/storage/files/storage-sync-files-troubleshoot*.

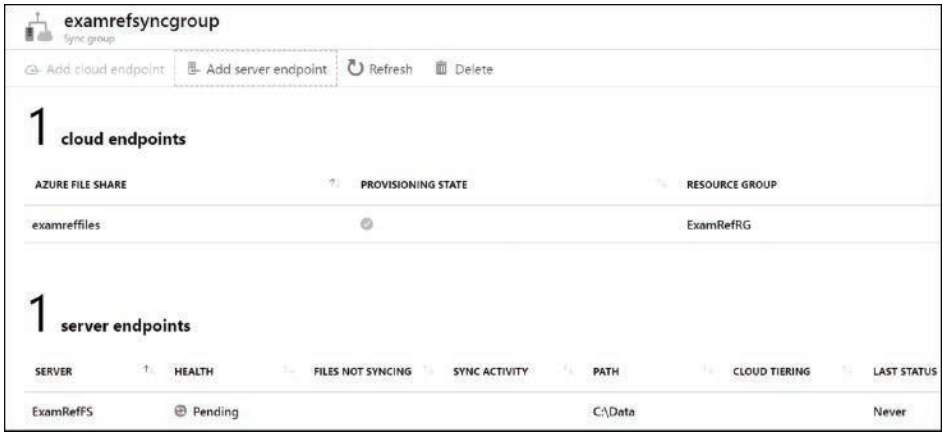

FIGURE 2-41 Monitoring the health of a new server endpoint

Configure Azure Blob Storage

This section describes the key features of the blob storage provided by each storage account. Azure Blob Storage is used for large-scale storage of arbitrary data objects, such as media files, log files, and so on.

Blob containers

Figure 2-42 shows the layout of the blob storage. Each storage account can have one or more blob containers and all blobs must be stored within a container. Containers are similar in concept to a hard drive on your computer, in that they provide a storage space for data in your storage account. Within each container, you can store blobs, much as you would store files on a hard drive. Blobs can be placed at the root of the container or organized into a folder hierarchy.

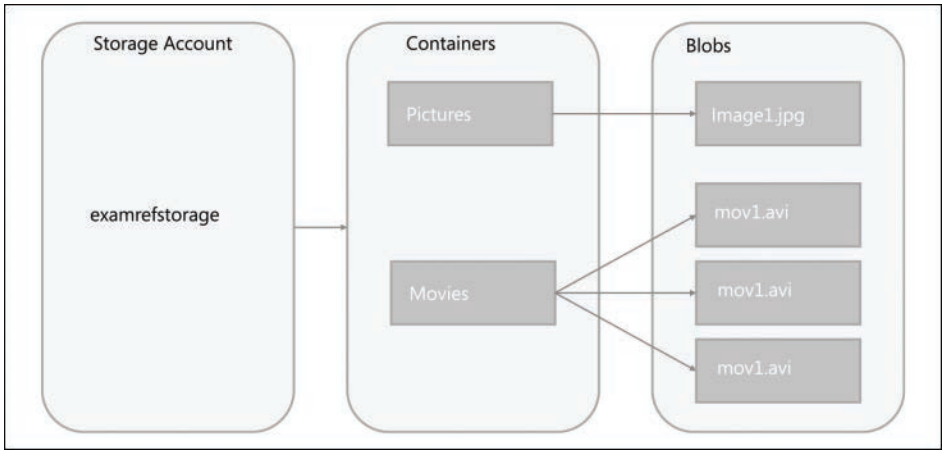

FIGURE 2-42 Azure storage account entities and hierarchy relationships

Each blob has a unique URL. The format of this URL is as follows: `https://[account name].blob.core.windows.net/[container name]/[blob path and name]`.

Optionally, you can create a container at the root of the storage account, by specifying the special name `$root` for the container name. This allows you to store blobs in the root of the storage account and reference them with URLs such as: `https://[account name].blob.core.windows.net/fileinroot.txt`.

Understanding blob types

Blobs come in three types, and it is important to understand when each type of blob should be used and what the limitations are for each.

- **Page Blobs.** Optimized for random-access read and write operations. Page Blobs are used to store virtual disk (VHD) files which using unmanaged disks with Azure virtual machines. The maximize Page Blob size is 8 TB.
- **Block Blobs.** Optimized for efficient uploads and downloads, for video, images, and other general-purpose file storage. The maximum Block Blob size is slightly more than 4.75 TB.
- **Append Blobs.** Optimized for append operations. Updating or deleting existing blocks in the blob is not supported. Up to 50,000 blocks can be added to each Append Blob, and each block can be up to 4MB in size, giving a maximum Append Blob size of slightly more than 195 GB. Page Blobs are most commonly used for log files.

Blobs of all three types can share a single blob container.

EXAM TIP

The type of the blob is set at creation and cannot be changed after the fact. A common problem that might show up on the exam is if a `.vhd` file was accidently uploaded as a Block Blob instead of a Page Blob. The blob must be deleted first and reuploaded as a Page Blob before it can be mounted as an OS or data disk to an Azure VM.

MORE INFO **BLOB TYPES**

You can learn more about the intricacies of each blob type here: *https://docs.microsoft.com/rest/api/storageservices/understanding-block-blobs--append-blobs--and-page-blobs*.

Managing blobs and containers (Azure portal)

You can create and manage containers through the Azure portal, Azure Storage Explorer, third-party storage tools, or through the command-line tools. To create a container in the Azure management portal, open a storage account by clicking **All Services** > **Storage Accounts**, and then choosing your storage account. Within the storage account blade, click the **Blobs** tile, and then click the **+ Container** button, as shown in Figure 2-43. See Skill 2.1 for more information on setting the public access level.

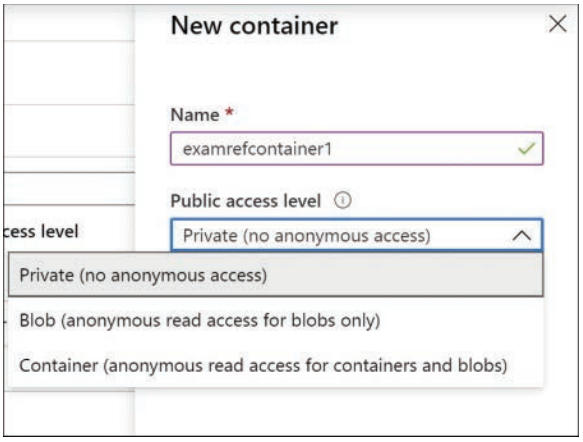

FIGURE 2-43 Creating a container using the Azure management portal

After a container is created, you can also use the portal to upload blobs to the container, as demonstrated in Figure 2-44. Click the **Upload** button in the container and then browse to the blob to upload. If you click the **Advanced** button, you can select the blob type (Blob, Page, or Append), the block size, and optionally, a folder to which the blob is to be uploaded.

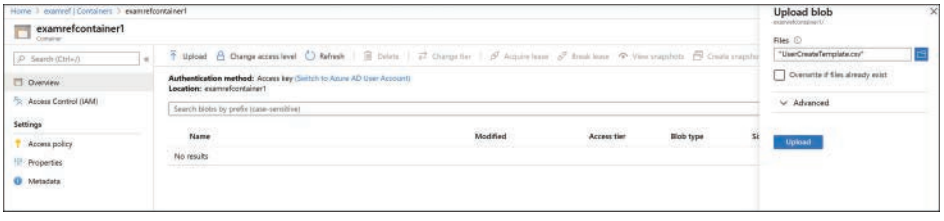

FIGURE 2-44 Uploading a blob to a storage account container

MORE INFO **MANAGING BLOB STORAGE WITH POWERSHELL**

The Azure PowerShell cmdlets offer a rich set of capabilities for managing blobs in storage. You can learn more about their capabilities here: *https://docs.microsoft.com/azure/storage/blobs/storage-how-to-use-blobs-powershell*.

MORE INFO **MANAGING BLOB STORAGE WITH THE AZURE CLI**

The Azure CLI also offers a rich set of capabilities for managing blobs in storage. You can learn more about their capabilities here: *https://docs.microsoft.com/azure/storage/common/storage-azure-cli*.

Managing blobs and containers (Storage Explorer)

Azure Storage Explorer provides rich functionality for managing storage data, including blobs and containers. To create a container, expand the **Storage Accounts** node, expand the storage account you want to use, and right-click the **Blob Containers** node. This will open a new menu item where you can create a blob container, as shown in Figure 2-45.

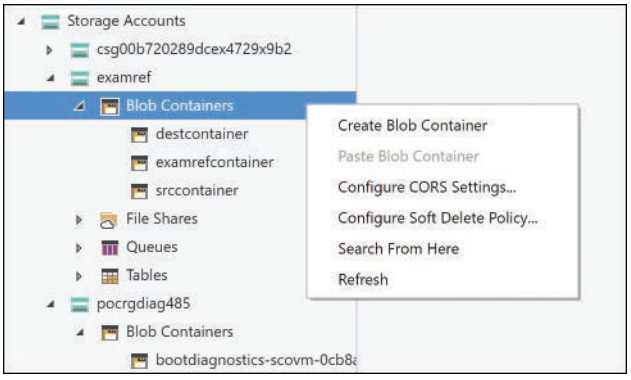

FIGURE 2-45 Creating a container using the Azure Storage Explorer

Azure Storage Explorer provides the ability to upload a single file or multiple files at once. The **Upload Folder** feature provides the ability to upload the entire contents of a local folder, re-creating the hierarchy in the Azure Storage Account. Figure 2-46 shows the two upload options.

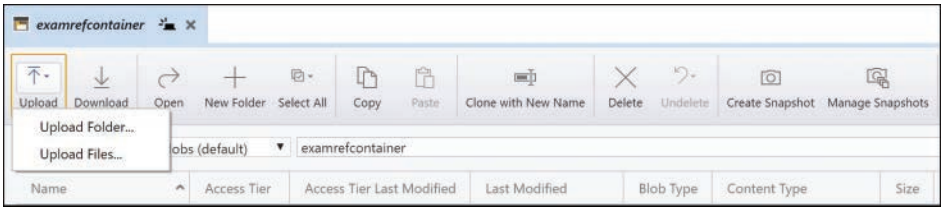

FIGURE 2-46 Uploading files and folders using Azure Storage Explorer

Soft Delete for Azure Storage blobs

The default behavior of deleting a blob is that the blob is deleted and lost forever. Soft Delete is a feature that allows you to save and recover your data when blobs or blob snapshots are deleted even in the event of an overwrite. This feature must be enabled on the Azure Storage account, and a retention period must be set for how long the deleted data is available (see Figure 2-47).