

About Rahul Joshi:

22 Years exp, 15th year as Microsoft certified trainer & AWS Authorized instructor

- Helping customers add Application Modernization capabilities by Replatforming ASP.NET sites to Azure App Services, Rearchitecting of monolithic applications to microservices or containers.
- Reengineering of legacy applications to cloud-native apps with improved user experience.
- Designing cloud strategy, solution design, cloud adoption frameworks, app modernization and cloud migration.
- Develop Proof of Concept by working closely with Microsoft and Amazon Web Services and design frameworks for cloud adoption and Enterprise Architecture, Cloud Infrastructure/ Migrations.
- Responsible for Migration to Microsoft Azure (Brownfield and Greenfield Projects). In-Premise To Cloud Migration and Storage Migration.
- Perform Application Readiness Assessment, an investigation at application level in preparation for cloud deployment, to look at issues that will either block or detract from the application's abilities to fully utilize the cloud, then act on this report to ensure cloud readiness.
- Designing applications for scalability
- Migrating to PaaS & Container Architecture, Migrating from Traditional .NET Application Web Apps

"Executed more than 580+ Trainings engagements on Microsoft Azure for more than 220+ clients"

Google Drive Link:

https://drive.google.com/drive/folders/181ebdbVLk5xpLu5ArR_BFWeM9b3N2x3?usp=sharing

Recording:

Please Note, Post Session Completes Zoom Recording Link will be shared on WhatsApp, Download it from Zoom Directly. It will not be uploaded on Google Drive

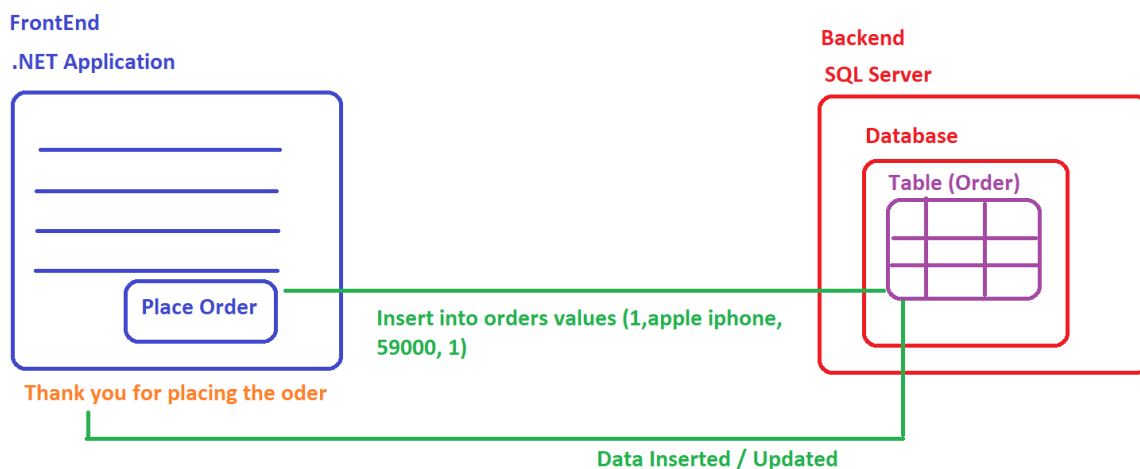
One Note Documentation:

<https://1drv.ms/u/s!Aht-oGFG3XwWgagy2dnZHuXQmk0wkg>

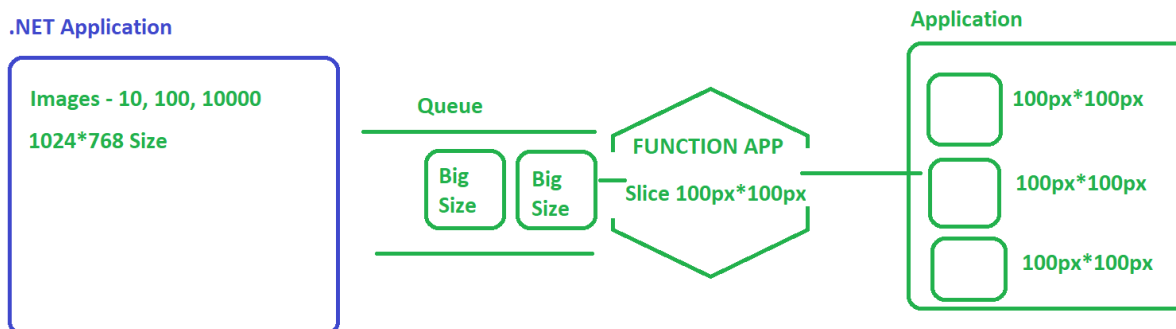
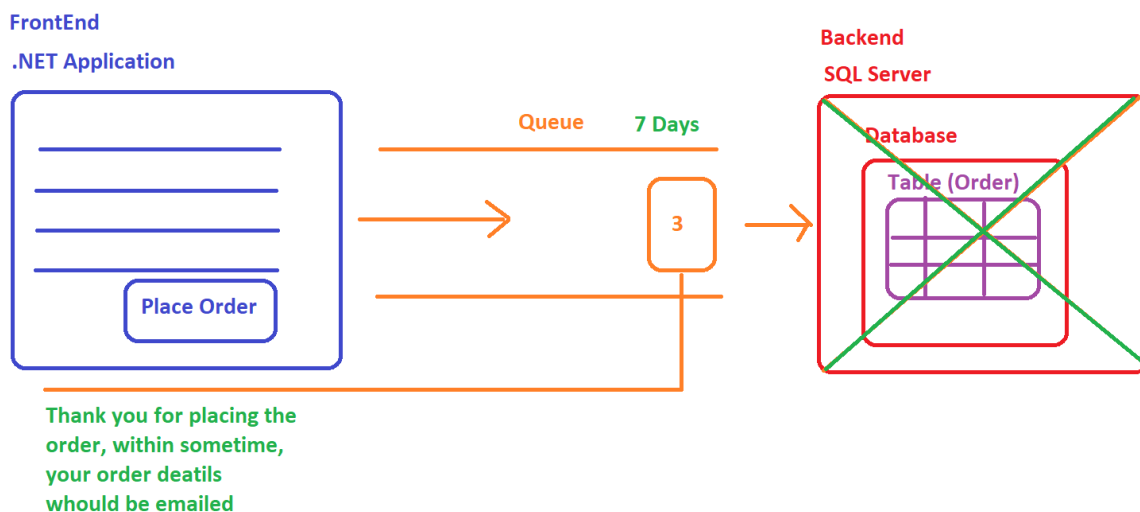
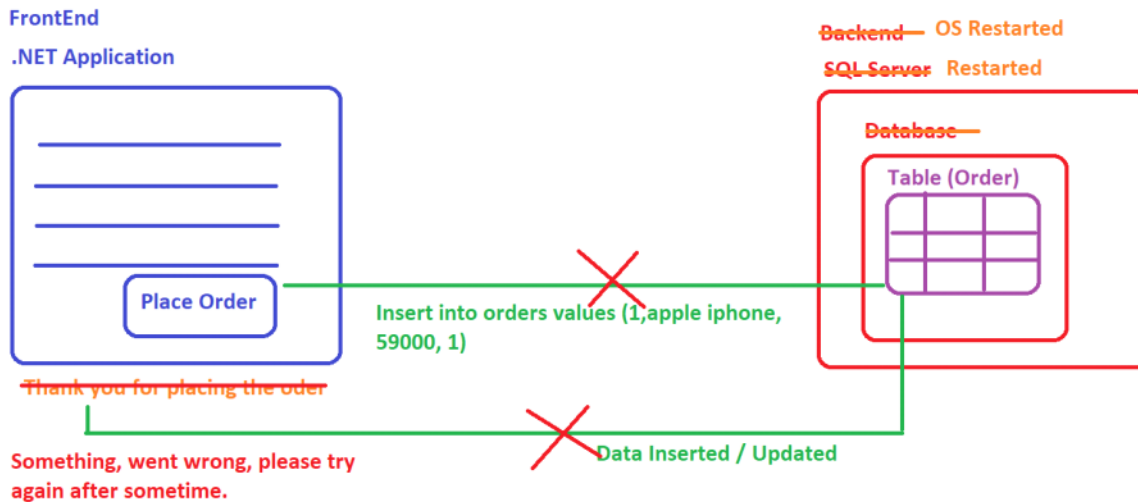
Case Study of Day 6 Continue

3. The customer processes a lot of data, sometimes the end service where data has to be stored is not available due to network issues or downtime, in such case the application throws an error "Please try after sometime", this is leading to customer satisfaction issues, because backend service is down, customer are affected, The customer is looking for a solution where the data can be captured on a temporary basis and when used, can be flushed and thrown away. This should ensure customer satisfaction.

Normal situation



What if the Database goes down



QUEUE (NOT A TRUE FIFO)

SERVICE BUS (TRUE FIFO)

EVENT HUB (TRUE FIFO)

This can Process Millions of Events per second

<https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-azure-and-service-bus-queues-compared-contrasted>

Comparison Criteria	Storage queues	Service Bus queues
Ordering guarantee	No For more information, see the first note in the Additional Information section.	Yes - First-In-First-Out (FIFO) (by using message sessions)

Duplicate detection

No

Yes

(configurable on the sender side)

strahul2108

Storage account

Search (Ctrl+/)

Upload Open in Explorer Delete

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser

Data storage

Containers

File shares

Queues

Tables

Essentials

Resource group (move) : rg-rahuljoshi-training

Location : East US

Subscription (move) : MSDN Platforms

Subscription ID : ee7bab70-0709-444f-9829-7902

Disk state : Available

Tags (edit) : Click here to add tags

Properties Monitoring Capabilities (7) Re

Blob service

Hierarchical namespace Disable

Default access tier Hot

Blob public access Enable

Blob soft delete Disable

Continuous backup Disable

strahul2108 | Queues

Storage account

Search (Ctrl+/)

+ Queue Refresh Delete

Search queues by prefix

Queue

You don't have any queues yet.

+ Queue Refresh Delete

Add queue

Queue name *

orders

OK Cancel

strahul2108 | Queues

Storage account

Search (Ctrl+/)

+ Queue Refresh Delete

Search queues by prefix

Queue

orders

Url

https://strahul2108.queue.core.windows.net/orders

orders Queue

Search (Ctrl+/) Refresh + Add message Dequeue message Clear queue

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Access policy

Metadata

Authentication method: Access key (Switch to Azure AD User Account)

Search to filter items...

Id	Message text
No results	

« Refresh + Add message Dequeue message Clear queue

Add message to queue

Message text *

Insert into orders values(1,'Apple iPhone,58000,1)

Expires in: * 12 Hours

☐ Message never expires

☒ Encode the message body in Base64

OK Cancel

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orders Queue

Search (Ctrl+/) Refresh + Add message Dequeue message Clear queue

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Access policy

Metadata

Authentication method: Access key (Switch to Azure AD User Account)

Search to filter items...

Id	Message text	Insertion time	Expiration time	Dequeue count
74cc4f47-1a7d-4c95...	insert into orders values(1,'Apple iPhone,58000,1)	8/21/2022, 10:45:08 AM	8/21/2022, 10:45:08 PM	0
5e6f47ce-abbf-4021...	insert into orders values(2,'Apple iPhone 13,78000,1)	8/21/2022, 10:45:26 AM	8/21/2022, 10:45:26 PM	0

Storage - Administration - Belongs to Developer

1. Blob Storage - Store File - Containers - Store Data
2. Table - NO-SQL data
3. File Share - All Community People, Can Share Data
4. Queue - Process it 1 by 1, close FIFO manner

.NET Developers - Tables, Queues and Blob Storage

aws.amazon.com/sqs/

aws

Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Customer Enablement Events

Amazon SQS Overview Features Pricing Getting Started Resources FAQs

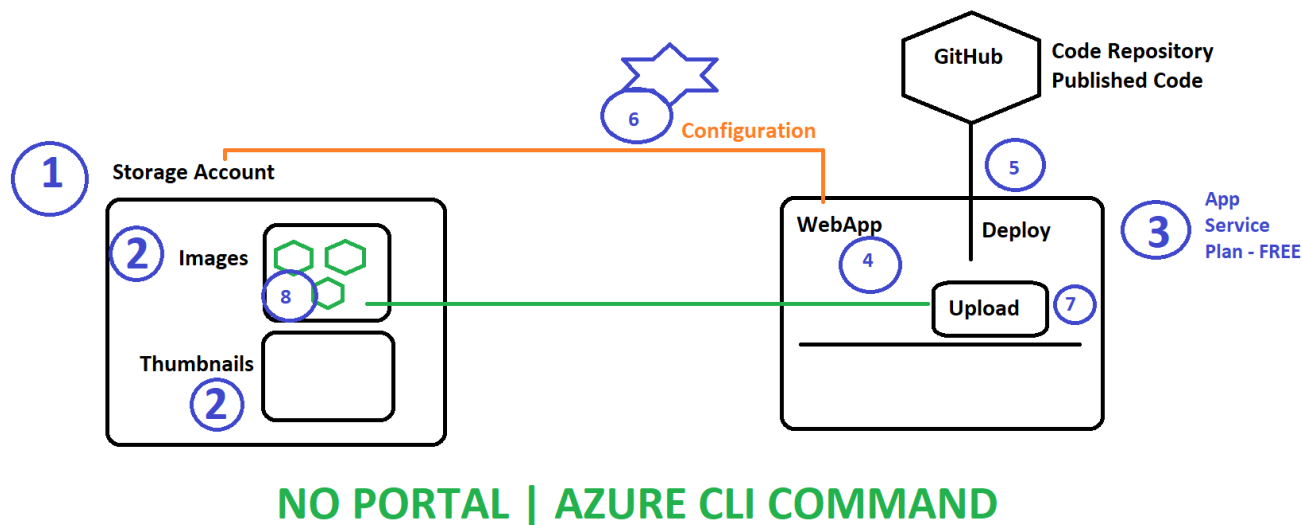
Amazon Simple Queue Service

Fully managed message queues for microservices, distributed systems, and serverless applications

Get started for free

Case Study

The customer has a website, which has an option to upload images. The developers have already written the DOTNET Application is kept on GitHub, this application is a working example. So, you have create a WebApp in Azure and on this WebApp, you have deploy the .NET Source Code from GitHub. The customer also says whatever images are uploaded from the WebApp, has to be Stored in the Storage Account and storage account will have two containers "Images" and "Thumbnails". So, This is the 1st part of the example, where the customer wants to see 2 Services "WebApp" and "Storage" Interact with each other. Day 4 was "WebApp" and Day 5 was "Storage" both these topics have to come together in this example.



What is Azure CLI?

<https://docs.microsoft.com/en-us/cli/azure/what-is-azure-cli>

The Azure Command-Line Interface (CLI) is a cross-platform command-line tool to connect to Azure and execute administrative commands on Azure resources. It allows the execution of commands through a terminal using interactive command-line prompts or a script.

For interactive use, you first launch a shell such as cmd.exe on Windows, or Bash on Linux or macOS, and then issue a command at the shell prompt. To automate repetitive tasks, you assemble the CLI commands into a shell script using the script syntax of your chosen shell, and then you execute the script.

CLI Command Reference, All commands and their samples are given in this document. This is a Golden Document

<https://docs.microsoft.com/en-us/cli/azure/reference-index?view=azure-cli-latest>

All Azure CLI Commands start with AZ, followed by the name of the service, you wish to configure

az advisor
az afd
az ai-examples
az aks
az alias
az ams
az apim
az appconfig
az appservice
az arcappliance
az arcdata
az aro
az artifacts
az attestation

For Example, if you select az appservice, then it gives you more configuration related to App Service

az appservice plan create	Create an app service plan.
---------------------------	-----------------------------

Azure CLI

Copy

```
az appservice plan create --name
    --resource-group
    [--app-service-environment]
    [--hyper-v]
    [--is-linux]
    [--location]
    [--no-wait]
    [--number-of-workers]
    [--per-site-scaling]
    [--sku {B1, B2, B3, D1, F1, FREE, I1, I1v2, I2, I2v2, I3, I3v2, P
    [--tags]
    [--zone-redundant]
```

Examples

Create a basic app service plan.

Azure CLI

Copy

Try It

```
az appservice plan create -g MyResourceGroup -n MyPlan
```

Create a standard app service plan with four Linux workers.

Set a subscription to be the current active subscription.

Azure CLI

复制

```
az account set --subscription
```

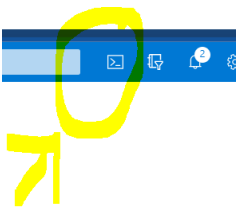
Required Parameters

--subscription -s

Name or ID of subscription.

Subscription name ↑↓	Subscription ID ↑↓
MSDN Platforms	ee7bab70-0709-4f4f-9829-790225dc5be4
Pay-As-You-Go	100ba01e-8a54-4a5e-a8f6-67c3cd8a97c8

To Execute the commands in Azure, you can start Cloud Shell



You have no storage mounted

×

Azure Cloud Shell requires an Azure file share to persist files. [Learn more](#)
This will create a new storage account for you and this will incur a small monthly cost. [View pricing](#)

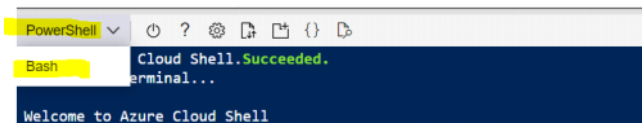
* Subscription

MSDN Platforms

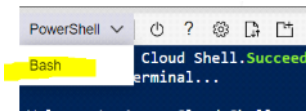
[Show advanced settings](#)

Create storage

Close



Powershell is for Windows
Bash - Cross Platform - Windows & Linux



Azure CLI Commands can only run in BASH, if you use Powershell, then only Powershell commands can be run.

My Drive > Microsoft Azure Master Batch 3 > Data	
Name ↑	Owner
IP Address Range.xlsx	me
WebApp & Storage With Git.txt	me

az group create --name myResourceGroup --location centralus

```
Bash
rahul [ ~ ]$ az group create --name myResourceGroup --location centralus
{
  "id": "/subscriptions/ee7bab70-0709-4f4f-9829-790225dc5be4/resourceGroups/myResourceGroup",
  "location": "centralus",
  "managedBy": null,
  "name": "myResourceGroup",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
```

JSD N output

blobStorageAccount="strahulimagethumb" (For Examples which you do, give this name as unique name)

```
rahul [ ~ ]$ blobStorageAccount="strahulimagethumb"
```


Why Variables are important, because you can re-use the value in code below. By mistake, if the Cloud Shell, gets disconnected, then all the variables are lost, you need to create those variable again


az storage account create --name \$blobStorageAccount --location centralus \
--resource-group myResourceGroup --sku Standard_LRS --kind StorageV2 --access-tier hot

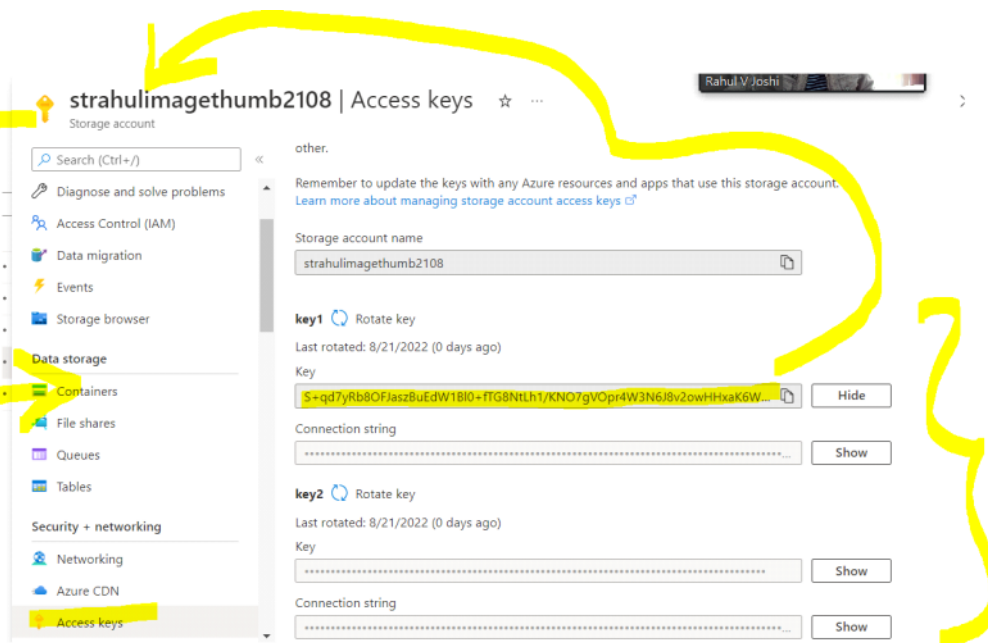


```
Bash
rahul [ ~ ]$ az storage account create --name $blobStorageAccount --location centralus \
--resource-group myResourceGroup --sku Standard_LRS --kind StorageV2 --access-tier hot
```

```
rahul [ ~ ]$ blobStorageAccount="strahulimagethumb2108"
rahul [ ~ ]$ az storage account create --name $blobStorageAccount --location centralus \
--resource-group myResourceGroup --sku Standard_LRS --kind StorageV2 --access-tier hot
{
  "accessTier": "Hot",
  "allowBlobPublicAccess": true,
  "allowCrossTenantReplication": null,
  "allowSharedKeyAccess": null,
  "allowedCopyScope": null,
  "azureFilesIdentityBasedAuthentication": null,
  "blobRestoreStatus": null,
```



 strahulimagethumb2108	Storage account	StorageV2	myResourceGroup	Central US
---	-----------------	-----------	-----------------	------------

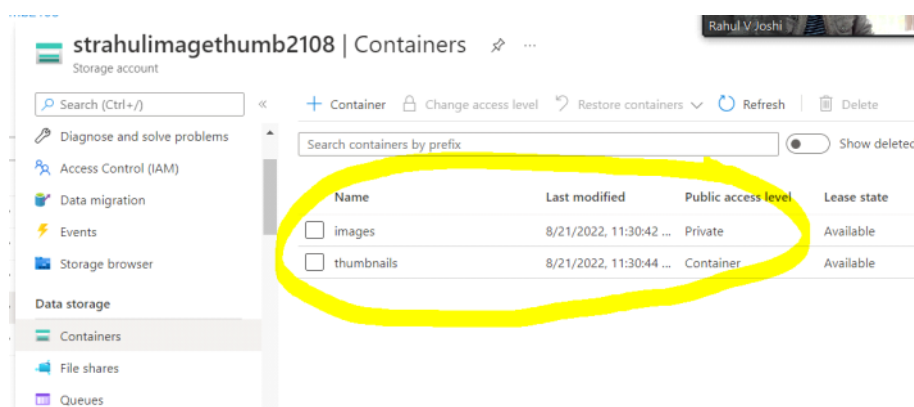


```
blobStorageAccountKey=$(az storage account keys list -g myResourceGroup \
-n $blobStorageAccount --query "[0].value" --output tsv)
```

```
raahul [ ~ ]$ blobStorageAccountKey=$(az storage account keys list -g myResourceGroup \
-n $blobStorageAccount --query "[0].value" --output tsv)
raahul [ ~ ]$
```

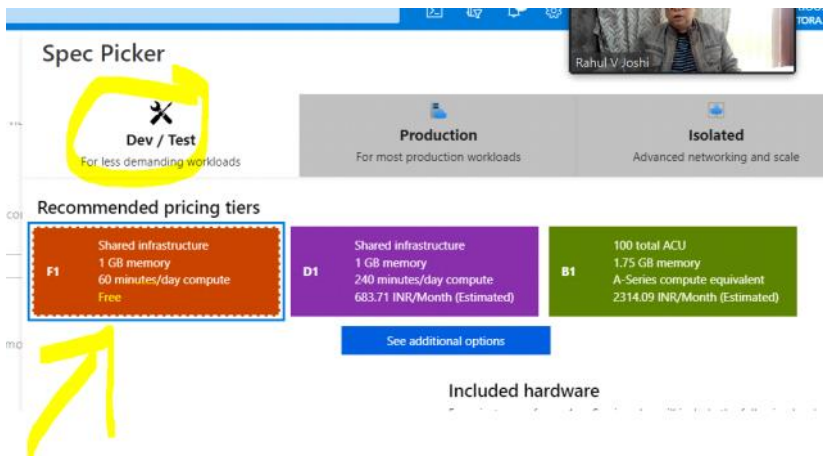
```
az storage container create --name images \
--account-name $blobStorageAccount \
--account-key $blobStorageAccountKey
az storage container create --name thumbnails \
--account-name $blobStorageAccount \
--account-key $blobStorageAccountKey --public-access container
```

```
{
  "created": true
}
{
  "created": true
}
```



```
az appservice plan create --name myAppServicePlan --resource-group myResourceGroup --sku Free
```

```
Bash
raahul [ ~ ]$ az appservice plan create --name myAppServicePlan --resource-group myResourceGroup --sku Free
{
  "elasticScaleEnabled": false,
  "extendedLocation": null,
  "freeOfferExpirationTime": null,
  "geoRegion": "Central US",
  "hostingEnvironmentProfile": null
```

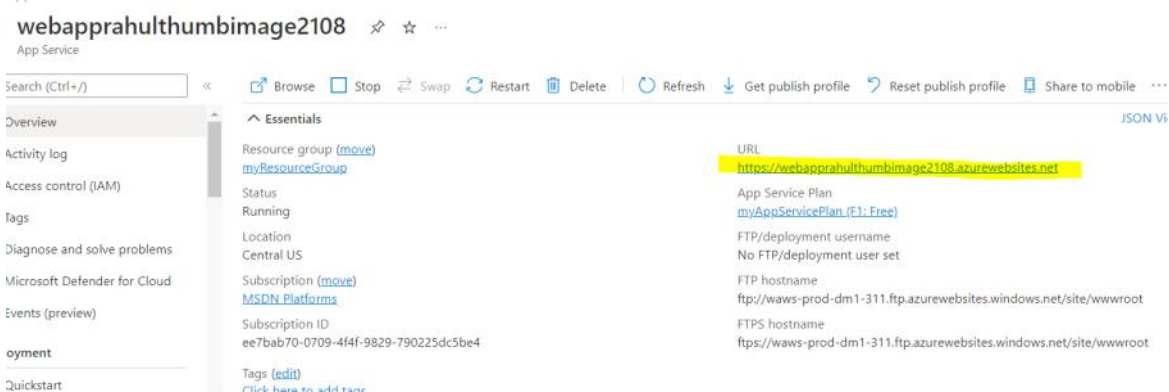
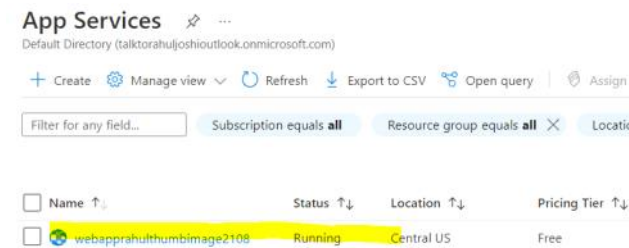



webapp="webapprahulthumbimage2108"

```
Bash
rahu1 [ ~ ]$ webapp="webapprahulthumbimage2108"
rahu1 [ ~ ]$
```

az webapp create --name \$webapp --resource-group myResourceGroup --plan myAppServicePlan

```
rahu1 [ ~ ]$ webapp="webapprahulthumbimage2108"
rahu1 [ ~ ]$ az webapp create --name $webapp --resource-group myResourceGroup --plan myAppServicePlan
{
  "availabilityState": "Normal",
```





Your web app is running and waiting for your content

Your web app is live, but we don't have your content yet. If you've already deployed, it could take up to 5 minutes for your content to show up, so come back soon.



Supporting Node.js, Java, .NET and more

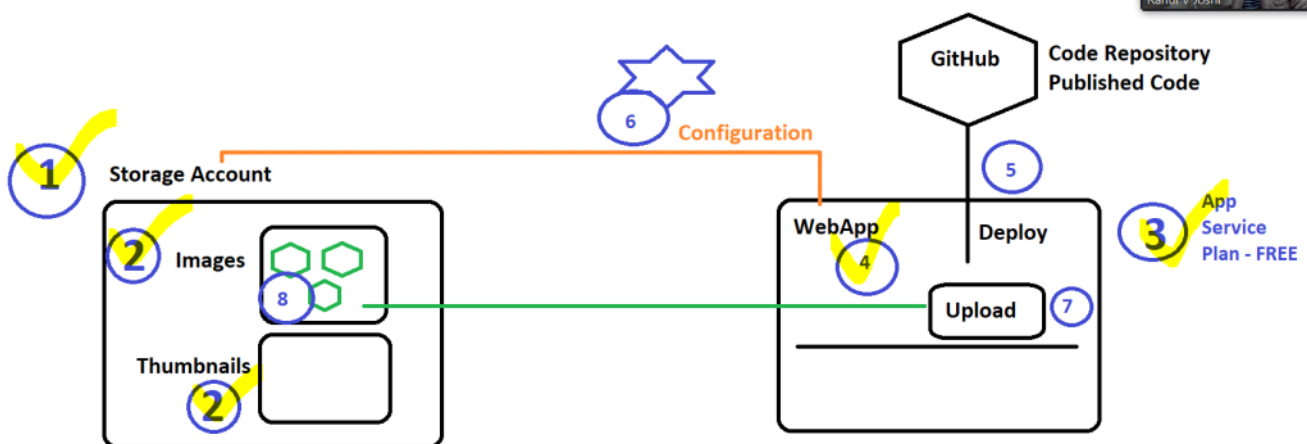
Haven't deployed yet?
Use the deployment center to publish code or set up continuous deployment.

Deployment center

Starting a new web site?
Follow our Quickstart guide to get a web app ready quickly.

Quickstart

Rahul V Joshi



NO PORTAL | AZURE CLI COMMAND

Now, the time has come to Deploy on the WebApp, in our example, the source code is in GitHub and we need to get that source code and deploy it on our WebApp. Let us see GUI vs Shell.

webappprahulthumbimage2108 | Deployment Center ☆ ...

App Service

Search (Ctrl+/) Save Discard Browse Manage publish profile Sync Leave Feedback

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)

Deployment
Quickstart
Deployment slots
Deployment Center

Settings
Configuration
Authentication

Settings Logs FTPS credentials

You're now in the production slot, which is not recommended for setting up CI/CD. [Learn more](#)

Deploy and build code from your preferred source and build provider. [Learn more](#)

Source

Select code source

- Continuous Deployment (CI/CD)
 - GitHub
 - Bitbucket
 - Local Git
 - Azure Repos
- Manual Deployment (Push)
 - External Git
 - OneDrive
 - Dropbox

webappprahulthumbimage2108 | Deployment Center ☆ ...

App Service

Search (Ctrl+/) Save Discard Browse Manage publish profile Sync Leave Feedback

Overview
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Settings
Configuration
Authentication
Application Insights
Identity

Settings * Logs FTPS credentials

You're now in the production slot, which is not recommended for setting up CI/CD. [Learn more](#)

Deploy and build code from your preferred source and build provider. [Learn more](#)

Source External Git

Building with App Service Build Service. [Change provider.](#)

External Git

If your code is not on GitHub or Bitbucket, you can use this option to manually sync your code from the repository. When you sync your repository, App Service will pull your code, build your application, and deploy it to your web app.

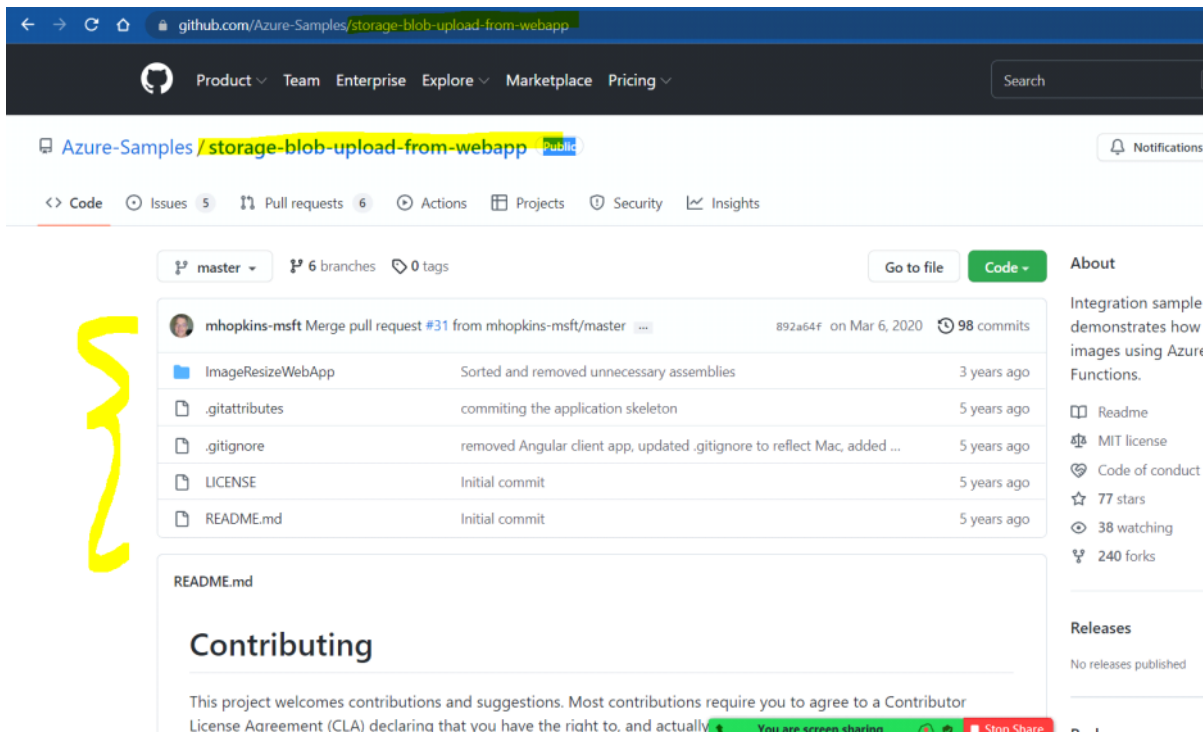
Repository https://github.com/Azure-Samples/st...

Branch master

Repository Type ☒ Public ☐ Private

Command

```
az webapp deployment source config --name $webapp --resource-group myResourceGroup \
--branch master --manual-integration \
--repo-url https://github.com/Azure-Samples/storage-blob-upload-from-webapp
```



github.com/Azure-Samples/storage-blob-upload-from-webapp

Product Team Enterprise Explore Marketplace Pricing

Search

Azure-Samples / storage-blob-upload-from-webapp

Code Issues 5 Pull requests 6 Actions Projects Security Insights

master 6 branches 0 tags

Go to file Code

About

Integration sample demonstrates how images using Azure Functions.

Readme MIT license Code of conduct 77 stars 38 watching 240 forks

Releases


No releases published

Contributing

This project welcomes contributions and suggestions. Most contributions require you to agree to a Contributor License Agreement (CLA) declaring that you have the right to, and actually, You are screen sharing Stop Share

Developers Write the Logic, the Code and deploy the code on GitHub and can make Public Repository, so people like us, can directly use the source code, without writing a new .NET Application. This saves Times, as we don't have to use any tool to develop or .NET Application and then learn to deploy, this is ready-made code by the community, we are just using it.

```
Bash
rahu1 [ ~ ]$ az webapp deployment source config --name $webapp --resource-group myResourceGroup \
--branch master --manual-integration \
--repo-url https://github.com/Azure-Samples/storage-blob-upload-from-webapp
Running ..
```



```
Bash
rahu1 [ ~ ]$ az webapp deployment source config --name $webapp --resource-group myResourceGroup \
--branch master --manual-integration \
--repo-url https://github.com/Azure-Samples/storage-blob-upload-from-webapp
{
  "branch": "master",
  "deploymentRollbackEnabled": false,
  "githubActionConfiguration": null,
  "id": "/subscriptions/ee7bab70-0709-4f4f-9829-790225dc5be4/resourceGroups/myResourceGroup/providers/Microsoft.Web/sites/sourcecontrols",
  "isGitHubAction": false,
  "isManualIntegration": true,
  "isMercurial": false,
  "kind": null,
  "location": "Central US",
  "name": "webappprahulthumbimage2108",
  "repoUrl": "https://github.com/Azure-Samples/storage-blob-upload-from-webapp",
  "resourceGroup": "myResourceGroup",
  "type": "Microsoft.Web/sites/sourcecontrols"
}
rahu1 [ ~ ]$
```



```
raahul [ ~ ]$ az webapp config appsettings set --name $webapp --resource-group myResourceGroup \
--settings AzureStorageConfig__AccountName=$blobStorageAccount \
AzureStorageConfig__ImageContainer=images \
AzureStorageConfig__ThumbnailContainer=thumbnails \
AzureStorageConfig__AccountKey=$blobStorageAccountKey
[
{
  "name": "WEBSITE_NODE_DEFAULT_VERSION",
  "slotSetting": false,
  "value": "~14"
},
{
  "name": "AzureStorageConfig__AccountName",
  "slotSetting": false,
  "value": "strahulimagethumb2108"
},
{
  "name": "AzureStorageConfig__ImageContainer",
  "slotSetting": false,
  "value": "images"
},
{
  "name": "AzureStorageConfig__ThumbnailContainer",
  "slotSetting": false,
  "value": "thumbnails"
},
{
  "name": "AzureStorageConfig__AccountKey",
  "slotSetting": false,
```

AzureStorageConfig__AccountName
AzureStorageConfig__ImageContainer
AzureStorageConfig__ThumbnailContainer
AzureStorageConfig__AccountKey

These 4 variables are in the .NET Application which we deployed from GitHub, which means, when the website is open and when you upload the images from the WebApp and click upload button, all these 4 variables will be read, and based on the value of the variable the images will be uploaded in the images container.

Name	Value	Source	Deployr
AzureStorageConfig__AccountKey	Hidden value. Click to show value	App Service Config	
AzureStorageConfig__AccountName	Hidden value. Click to show value	App Service Config	
AzureStorageConfig__ImageContainer	Hidden value. Click to show value	App Service Config	
AzureStorageConfig__ThumbnailContainer	Hidden value. Click to show value	App Service Config	

webappraahulthumbimage2108 | Configuration

App Service

Search (Ctrl+J)

Refresh Save Discard Leave Feedback

Deployment slots

Deployment Center

Settings

Configuration

Authentication

Application Insights

Identity

Backups

Custom domains

TLS/SSL settings

Click here to upgrade to a higher SKU and enable additional features.

Filter application settings

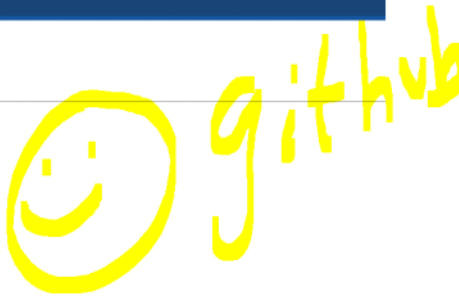
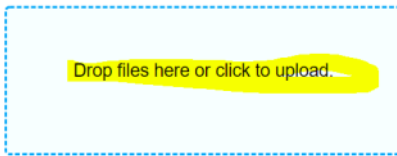
Name	Value	Source	Deployment slot se
AzureStorageConfig__AccountKey	5+qd7yRb8OFJaszBuEdW1BI0+ftG8NLI*	App Service Config	
AzureStorageConfig__AccountName	strahulimagethumb2108	App Service Config	
AzureStorageConfig__ImageContainer	images	App Service Config	
AzureStorageConfig__ThumbnailContainer	thumbnails	App Service Config	
WEBSITE_NODE_DEFAULT_VERSION	Hidden value. Click to show value	App Service Config	

Connection strings

Run the Application and upload the image and see if the image is stored in the images container

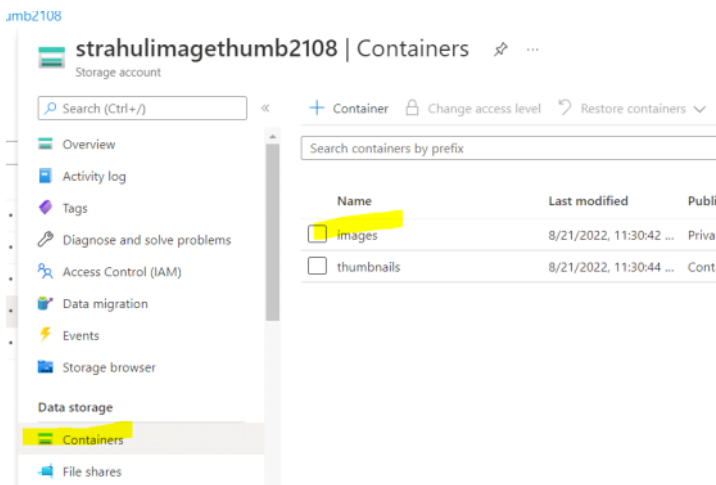
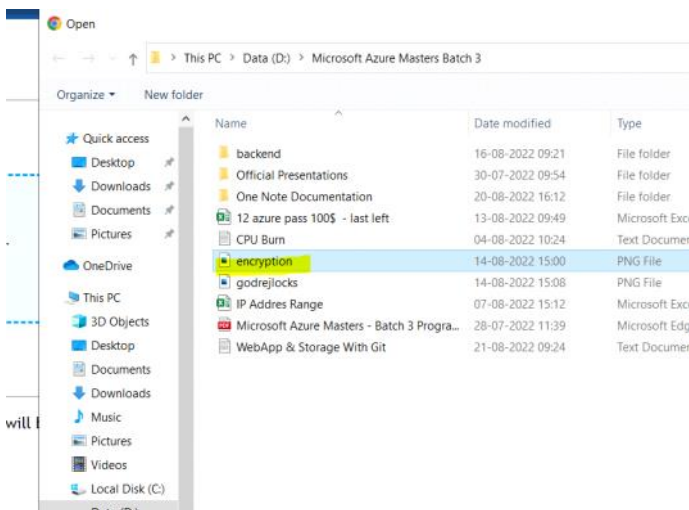
ImageResizer

Upload photos



Generated Thumbnails

This app has no official privacy policy. Your data will be uploaded to a service in order produce a picture. Your images will be public o



images ...
Container

Search (Ctrl+/) « Upload Change access level Refresh Delete Change tier Acc

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

Authentication method: Access key (Switch to Azure AD User Account)

Location: images

Search blobs by prefix (case-sensitive)

Add filter

Name	Modified	Acc
encryption.png	8/21/2022, 11:57:40 A...	Hot

home / storage accounts / storageimages2108 / Containers /

images ...
Container

Search (Ctrl+/) « Upload Change access level Refresh Delete Change tier Acqui

Overview

Diagnose and solve problems

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Authentication method: Access key (Switch to Azure AD User Account)

Location: images

Search blobs by prefix (case-sensitive)

Add filter

Name	Modified	Access
encryption.png	8/21/2022, 11:57:40 A...	Hot (lr
godrejlocks.png	8/21/2022, 11:58:43 A...	Hot (lr

If the Code in GitHub does go under change, how can we Sync the code once again even if it is manually

webapprahulthumbimage2108 | Deployment Center ☆ ...

App Service

Search (Ctrl+/) « Save Discard Browse Manage publish profile Sync Leave Feedback

Settings Logs FTPS credentials

Deploy and build code from your preferred source and build provider. [Learn more](#)

Source External Git [Disconnect](#)

External Git

Repository <https://github.com/Azure-Samples/storage-blob-upload-from-webapp>

Branch [master](#)

Build

Build provider App Service Build Service

Runtime stack

Are you sure you want to redeploy?

Performing a redeploy operation will cancel any existing deployment operation in progress and create a new one.

OK Cancel