



Lab 6: Azure Service Bus, Event Hubs, Relay, signalR & Web PubSub.

Akshar Panchani ID- 202101522

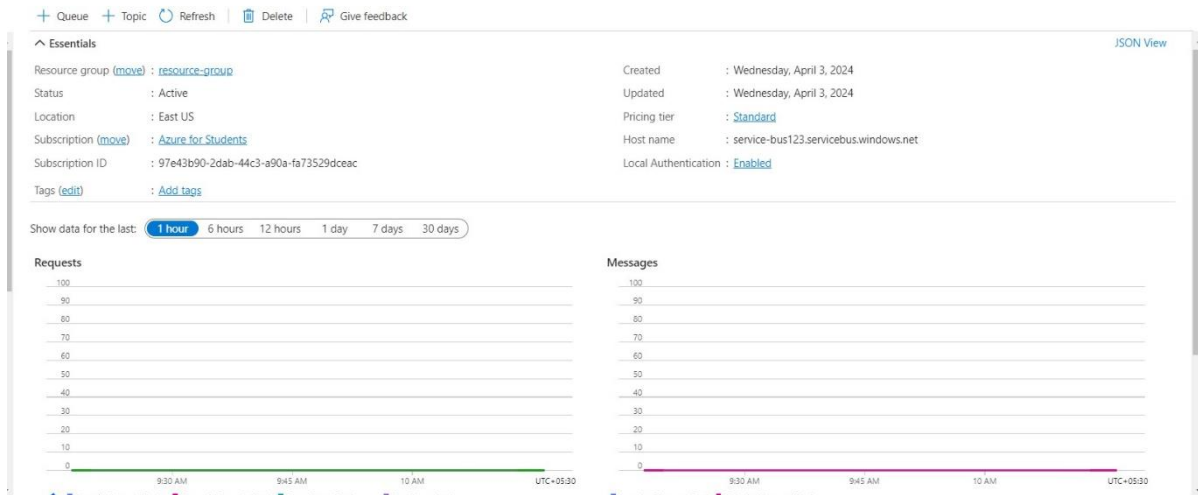
IT457 Cloud Computing

4/1/24



Question1.

Azure Service Bus:



mytopic (service-bus123/mytopic) | Subscriptions

Service Bus Topic

Search: arch + Subscription Refresh Give feedback

view

Access control (IAM)

Diagnose and solve problems

Service Bus Explorer

JSON

Shared access policies

Properties

Links

Search to filter items by name...									Subscriptions
Name	Status	Message count	Active messages	Dead-letter messages	Max delivery count	Client Scoped	Shared	Durable	
S1	Active	0	0	0	3	No	N/A	N/A	1

```
Package Manager Console
Package source: All Default project: TopicSender
Each package is licensed to you by its owner. NuGet is not responsible for, nor does it grant any licenses to, third-party packages. Some packages may include dependencies which are governed by additional licenses. Follow the package source (feed) URL to determine any dependencies.
Package Manager Console Host Version 6.9.1.3
Type 'get-help NuGet' to see all available NuGet commands.
PM> Install-Package Azure.Messaging.ServiceBus
Restoring packages for E:\Acads\Sem 6\IT457 Cloud Computing\ Labs\Lab6\New folder\ServiceBusTopicQuickStart\TopicSender\TopicSender.csproj...
GET https://api.nuget.org/v3-flatcontainer/azure.messaging.servicebus/index.json
OK https://api.nuget.org/v3-flatcontainer/azure.messaging.servicebus/index.json 238ms
GET https://api.nuget.org/v3-flatcontainer/azure.messaging.servicebus/7.17.4/azure.messaging.servicebus.7.17.4.nupkg
OK https://api.nuget.org/v3-flatcontainer/azure.messaging.servicebus/7.17.4/azure.messaging.servicebus.7.17.4.nupkg 21ms
GET https://api.nuget.org/v3-flatcontainer/azure.core.amqp/index.json
GET https://api.nuget.org/v3-flatcontainer/microsoft.azure.amqp/index.json
OK https://api.nuget.org/v3-flatcontainer/azure.core.amqp/index.json 945ms
GET https://api.nuget.org/v3-flatcontainer/azure.core/1.38.0/azure.core.1.38.0.nupkg
OK https://api.nuget.org/v3-flatcontainer/azure.core/1.38.0/azure.core.1.38.0.nupkg 17ms
GET https://api.nuget.org/v3-flatcontainer/system.clientmodel/index.json
OK https://api.nuget.org/v3-flatcontainer/system.clientmodel/index.json 909ms
GET https://api.nuget.org/v3-flatcontainer/system.clientmodel/1.0.0/system.clientmodel.1.0.0.nupkg
OK https://api.nuget.org/v3-flatcontainer/system.clientmodel/1.0.0/system.clientmodel.1.0.0.nupkg 18ms
OK https://api.nuget.org/v3-flatcontainer/azure.core.amqp/index.json 3994ms
GET https://api.nuget.org/v3-flatcontainer/azure.core.amqp/1.3.0/azure.core.amqp.1.3.0.nupkg
OK https://api.nuget.org/v3-flatcontainer/azure.core.amqp/1.3.0/azure.core.amqp.1.3.0.nupkg 17ms
```

Lab- Cloud Computing

```
// number of messages to be sent to the topic
const int numOfMessages = 3;

// The Service Bus client types are safe to cache and use as a singleton for the lifetime
// of the application, which is best practice when messages are being published or read
// regularly.

//TODO: Replace the "<NAMESPACE-NAME>" and "<TOPIC-NAME>" placeholders.
client = new ServiceBusClient(
    "service-bus123.servicebus.windows.net",
    new DefaultAzureCredential());
sender = client.CreateSender("mytopic");

// create a batch
using ServiceBusMessageBatch messageBatch = await sender.CreateMessageBatchAsync();
```

```
E:\Acads\Sem 6\IT457 Cloud ( x + v
A batch of 3 messages has been published to the topic.
Press any key to end the application
|
```



S1 (service-bus123/mytopic/S1) Service Bus Subscription

Search Refresh Delete Give feedback

Overview

Diagnose and solve problems

Service Bus Explorer

Automation

CLI / PS

Tasks (preview)

Export template

Help

Support + Troubleshooting

Essentials

Namespace: [service-bus123](#)

Topic: [mytopic](#)

Status: [Active](#)

Forward messages to: [Disabled](#)

Settings

Max delivery count: [3 \(change\)](#)

Message time to live: [14 DAYS \(change\)](#)

Auto-delete after idle for: [14 DAYS \(change\)](#)

Message lock duration: [1 MINUTE \(change\)](#)

Message Counts

Active: **3 MESSAGES**

Dead-letter: **0 MESSAGES**

Transfer: **0 MESSAGES**

Transfer dead-letter: **0 MESSAGES**

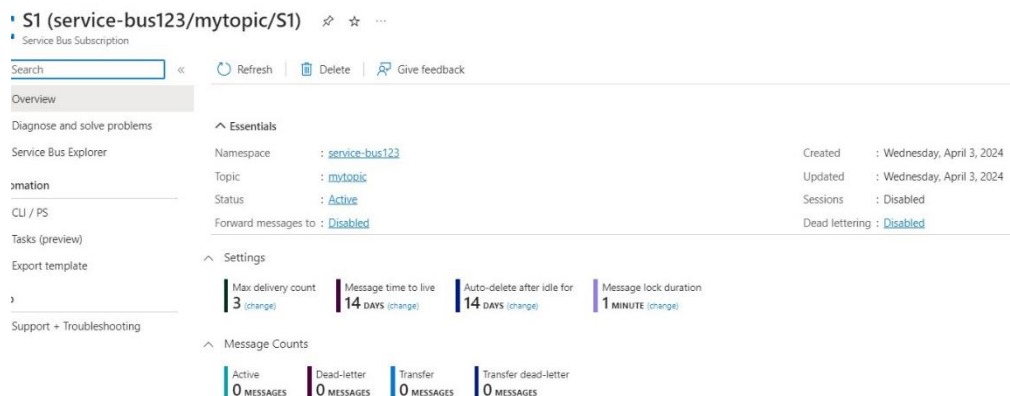
Filters

Lab- Cloud Computing

```

Microsoft Visual Studio Debu
+ v

Wait for a minute and then press any key to end the processing
Received: Message 1 from subscription.
Received: Message 2 from subscription.
Received: Message 3 from subscription.
k
Stopping the receiver...
Stopped receiving messages
  
```



2. Azure Event Hubs:



Lab- Cloud Computing

You can start generating test data with the new Azure Event Hubs Data Generator. Click on this message to try the feature!

Essentials

Resource group (move)	: Resource-group	Created	: Wednesday, April 3, 2024 at 14:18:39 GMT+5:30
Status	: Active	Updated	: Wednesday, April 3, 2024 at 14:18:57 GMT+5:30
Location	: East US	Zone Redundancy	: Enabled
Subscription (move)	: Azure for Students	Pricing tier	: Standard
Subscription ID	: 97e43b90-2dab-44c3-a90a-fa73529dceac	Throughput Units	: 1 unit
Host name	: event-hub123.servicebus.windows.net	Auto-inflate throughput ...	: Disabled
		Local Authentication	: Enabled

Tags (edit) : [Add tags](#)

NAME SPACE CONTENTS: 1 EVENT HUB | KAFKA SURFACE: ENABLED | ZONE REDUNDANCY: ENABLED

Show data for the last: [1 hour](#) [6 hours](#) [12 hours](#) [1 day](#) [7 days](#) [30 days](#)

Requests	Messages	Throughput
100	100	100B
90	90	90B
80	80	80B
70	70	70B
60	60	60B

```
1 using Azure.Identity;
2 using Azure.Messaging.EventHubs;
3 using Azure.Messaging.EventHubs.Producer;
4 using System.Text;
5
6 // number of events to be sent to the event hub
7 int numOfEvents = 3;
8
9 // The Event Hubs client types are safe to cache and use as a singleton for the lifetime
10 // of the application, which is best practice when events are being published or read regularly.
11 // TODO: Replace the <EVENT_HUB_NAMESPACE> and <HUB_NAME> placeholder values
12 EventHubProducerClient producerClient = new EventHubProducerClient(
13     "event-hub123.servicebus.windows.net",
14     "myeventhub",
15     new DefaultAzureCredential());
16
17 // Create a batch of events
```

00 % No issues found Ln: 14 Ch: 16 SPC CR

Package Manager Console

Package source: All Default project: EventHubsSender

Each package is licensed to you by its owner. NuGet is not responsible for, nor does it grant any licenses to, third-party packages. Some packages may include dependencies which are governed by additional licenses. Follow the package source (feed) URL to determine any dependencies.

Package Manager Console Host Version 6.9.1.3

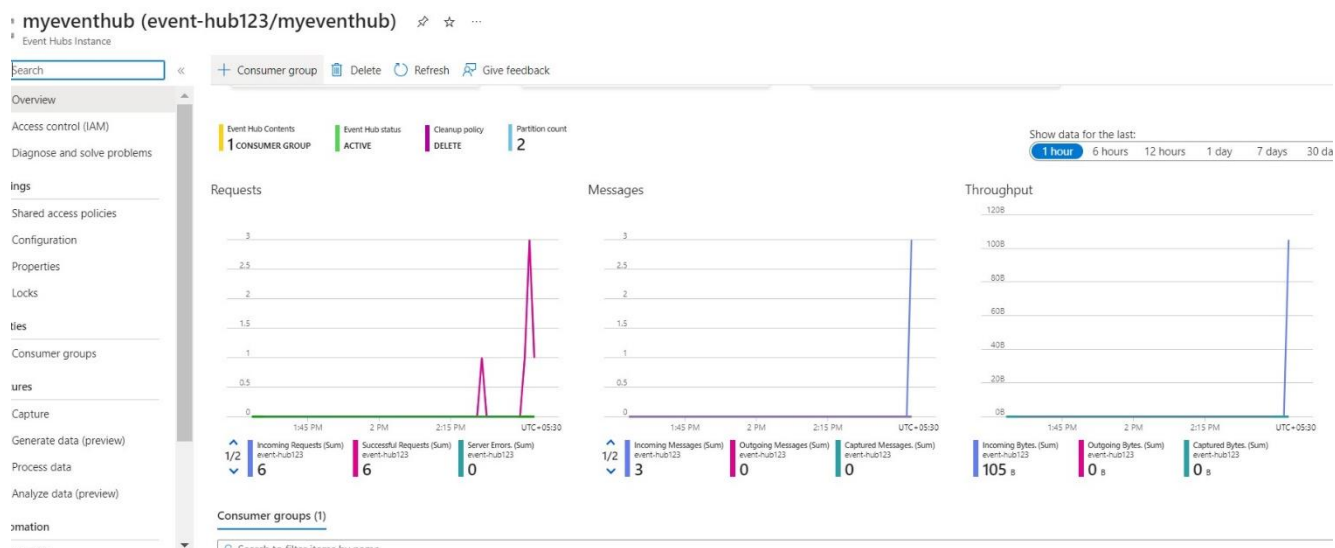
Type 'get-help NuGet' to see all available NuGet commands.

E:\Acads\Sem 6\IT457 Cloud (× + ▾

A batch of 3 events has been published.



Lab- Cloud Computing

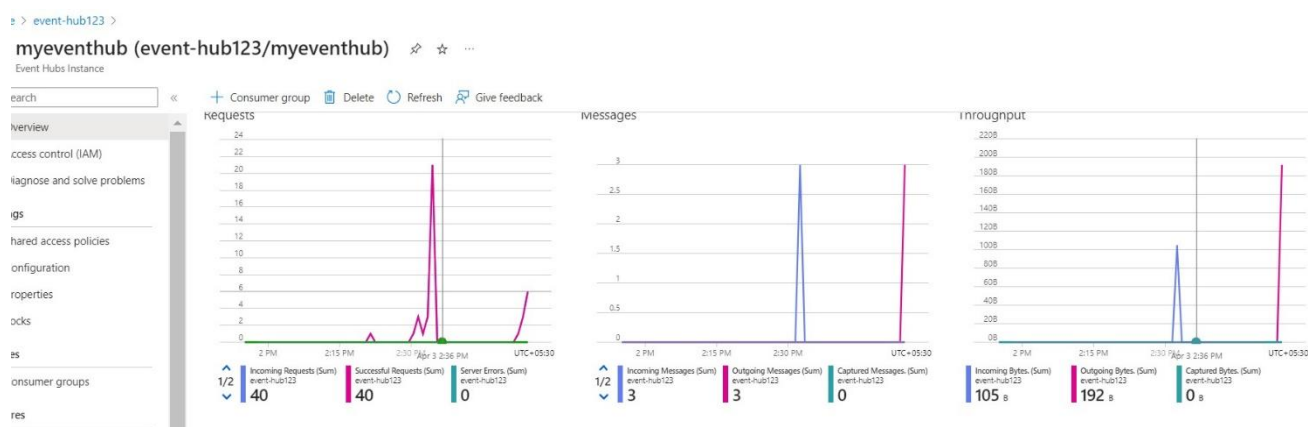


```
Successfully installed 'Microsoft.NETCore.Platforms 5.0.0' to EventHubsReceiver
Successfully installed 'System.IO.FileSystem.AccessControl 5.0.0' to EventHubsReceiver
Successfully installed 'System.Security.AccessControl 5.0.0' to EventHubsReceiver
Successfully installed 'System.Security.Cryptography.ProtectedData 4.7.0' to EventHubsReceiver
Successfully installed 'System.Security.Principal.Windows 5.0.0' to EventHubsReceiver
Executing nuget actions took 174 ms
Time Elapsed: 00:00:00.3636165
PM>
```

Package Manager Console Developer PowerShell Developer Command Prompt

Item(s) Saved

```
Received event: Event 1
Received event: Event 2
Received event: Event 3
```



3. Azure Relay



Lab- Cloud Computing

✓ Your deployment is complete



Deployment name : relay-1
Subscription : Azure for Students
Resource group : rsc_grp

Start time : 4/3/2024, 12:48:16 PM
Correlation ID : c6845cc8-28e4-46dc-847f-efc19ddf22a0

> Deployment details

✓ Next steps

[Go to resource](#)

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6> dotnet new console

Welcome to .NET 8.0!
-----
SDK Version: 8.0.203

Telemetry
-----
The .NET tools collect usage data in order to help us improve your experience. It is collected by Microsoft and shared with telemetry by setting the DOTNET_CLI_TELEMETRY_OPTOUT environment variable to '1' or 'true' using your favorite shell.

Read more about .NET CLI Tools telemetry: https://aka.ms/dotnet-cli-telemetry

-----
Installed an ASP.NET Core HTTPS development certificate.
To trust the certificate, run 'dotnet dev-certs https --trust'
Learn about HTTPS: https://aka.ms/dotnet-https

-----
Write your first app: https://aka.ms/dotnet-hello-world
Find out what's new: https://aka.ms/dotnet-whats-new
Explore documentation: https://aka.ms/dotnet-docs
Report issues and find source on GitHub: https://github.com/dotnet/core
Use 'dotnet --help' to see available commands or visit: https://aka.ms/dotnet-cli
-----
The template "Console App" was created successfully.

Processing post-creation actions...
Restoring F:\Backup\Desktop\SEM6\IT457-CC\Lab6\Lab6.csproj:
  Determining projects to restore...
  Restored F:\Backup\Desktop\SEM6\IT457-CC\Lab6\Lab6.csproj (in 145 ms).
Restore succeeded.
```



Lab- Cloud Computing

```
Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6> cd .\MyConsoleApp\
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp> dotnet add package Microsoft.Azure.Relay
Determining projects to restore...

info : X.509 certificate chain validation will use the default trust store selected by .NET for code signing.
info : X.509 certificate chain validation will use the default trust store selected by .NET for timestamping.
info : Adding PackageReference for package 'Microsoft.Azure.Relay' into project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp\Lab6.csproj'.
info : GET https://api.nuget.org/v3/registration5-gz-semver2/microsoft.azure.relay/index.json
info : OK https://api.nuget.org/v3/registration5-gz-semver2/microsoft.azure.relay/index.json 962ms
info : Restoring packages for F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp\Lab6.csproj...
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.azure.relay/index.json
info : OK https://api.nuget.org/v3-flatcontainer/microsoft.azure.relay/index.json 243ms
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.azure.relay/3.0.1/microsoft.azure.relay.3.0.1.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/microsoft.azure.relay/3.0.1/microsoft.azure.relay.3.0.1.nupkg 24ms
info : GET https://api.nuget.org/v3-flatcontainer/azure.identity/index.json
info : GET https://api.nuget.org/v3-flatcontainer/system.identitymodel.tokens.jwt/index.json
info : GET https://api.nuget.org/v3-flatcontainer/azure.identity/index.json 244ms
info : GET https://api.nuget.org/v3-flatcontainer/azure.identity/1.2.3/azure.identity.1.2.3.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/azure.identity/1.2.3/azure.identity.1.2.3.nupkg 28ms
info : OK https://api.nuget.org/v3-flatcontainer/system.identitymodel.tokens.jwt/index.json 308ms
info : GET https://api.nuget.org/v3-flatcontainer/system.identitymodel.tokens.jwt/6.7.1/system.identitymodel.tokens.jwt.6.7.1.nupkg
info : GET https://api.nuget.org/v3-flatcontainer/azure.core/index.json
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.identity.client/index.json
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.identity.client.extensions.msal/index.json
info : GET https://api.nuget.org/v3-flatcontainer/system.memory/index.json
info : GET https://api.nuget.org/v3-flatcontainer/system.security.cryptography.protecteddata/index.json
info : GET https://api.nuget.org/v3-flatcontainer/system.text.json/index.json
info : GET https://api.nuget.org/v3-flatcontainer/system.threading.tasks.extensions/index.json
info : OK https://api.nuget.org/v3-flatcontainer/system.identitymodel.tokens.jwt/6.7.1/system.identitymodel.tokens.jwt.6.7.1.nupkg 23ms
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.identitymodel.jsonwebtokens/index.json
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.identitymodel.tokens/index.json
info : OK https://api.nuget.org/v3-flatcontainer/microsoft.identity.client/index.json 320ms
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.identity.client/4.16.1/microsoft.identity.client.4.16.1.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/system.security.cryptography.protecteddata/index.json 326ms
info : OK https://api.nuget.org/v3-flatcontainer/system.memory/index.json 331ms
info : GET https://api.nuget.org/v3-flatcontainer/system.security.cryptography.protecteddata/4.5.0/system.security.cryptography.protecteddata.4.5.0.nupkg
info : GET https://api.nuget.org/v3-flatcontainer/system.memory/4.5.3/system.memory.4.5.3.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/microsoft.identity.client.extensions.msal/index.json 352ms
info : OK https://api.nuget.org/v3-flatcontainer/microsoft.identity.client/4.16.1/microsoft.identity.client.4.16.1.nupkg 32ms
info : GET https://api.nuget.org/v3-flatcontainer/microsoft.identity.client.extensions.msal/2.12.0/microsoft.identity.client.extensions.msal.2.12.0.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/microsoft.identitymodel.jsonwebtokens/index.json 288ms
```

```
Program.cs X
Program.cs
1 namespace Server
2 {
3     using System;
4     using System.IO;
5     using System.Threading;
6     using System.Threading.Tasks;
7     using Microsoft.Azure.Relay;
8
9     public class Program
10     {
11         private const string RelayNamespace = "relay-1.servicebus.windows.net";
12         private const string ConnectionName = "contosoehc";
13         private const string KeyName = "RootManageSharedAccessKey";
14         private const string Key = "tU7Fc5ITz2NDK13Vpw+51Ydm19It2jWA+ARmCpHrs=";
15
16         public static void Main(string[] args)
17         {
18             RunAsync().GetAwaiter().GetResult();
19         }
20
21         private static async Task RunAsync()
22         {
23             var cts = new CancellationTokenSource();
24
25             var tokenProvider = TokenProvider.CreateSharedAccessSignatureTokenProvider(KeyName, Key);
26             var listener = new HybridConnectionListener(new Uri(string.Format("sb://{0}/{1}", RelayNamespace, ConnectionName)), tokenProv
27
28             // Subscribe to the status events.
29             listener.Connecting += (o, e) => { Console.WriteLine("Connecting"); };
30             listener.Offline += (o, e) => { Console.WriteLine("Offline"); };
31             listener.Online += (o, e) => { Console.WriteLine("Online"); };
32
33             // Opening the listener establishes the control channel to
34             // the Azure Relay service. The control channel is continuously
35             // maintained, and is reestablished when connectivity is disrupted.
36             await listener.OpenAsync(cts.Token);
37             Console.WriteLine("Server listening");
38         }
39     }
40 }
```




Lab- Cloud Computing

```
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps> dotnet new console
The template "Console App" was created successfully.

Processing post-creation actions...
Restoring F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj:
  Determining projects to restore...
  Restored F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj (in 83 ms).
Restore succeeded.

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps> dotnet add package Microsoft.Azure.Relay
  Determining projects to restore...
info : X.509 certificate chain validation will use the default trust store selected by .NET for code signing.
info : X.509 certificate chain validation will use the default trust store selected by .NET for timestamping.
info : Adding PackageReference for package 'Microsoft.Azure.Relay' into project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : CACHE https://api.nuget.org/v3/registration5-gz-semver2/microsoft.azure.relay/index.json
info : Restoring packages for F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj...
info : CACHE https://api.nuget.org/v3/vulnerabilities/index.json
info : CACHE https://api.nuget.org/v3-vulnerabilities/2024.04.02.05.42.38/vulnerability.base.json
info : CACHE https://api.nuget.org/v3-vulnerabilities/2024.04.02.05.42.38/2024.04.02.17.42.41/vulnerability.update.json
info : Package 'Microsoft.Azure.Relay' is compatible with all the specified frameworks in project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : PackageReference for package 'Microsoft.Azure.Relay' version '3.0.1' added to file 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : Writing assets file to disk. Path: F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\obj\project.assets.json
log : Restored F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj (in 425 ms).
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps>
```

```
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps> dotnet add package Microsoft.Azure.Relay
  Determining projects to restore...
info : X.509 certificate chain validation will use the default trust store selected by .NET for code signing.
info : X.509 certificate chain validation will use the default trust store selected by .NET for timestamping.
info : Adding PackageReference for package 'Microsoft.Azure.Relay' into project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : CACHE https://api.nuget.org/v3/registration5-gz-semver2/microsoft.azure.relay/index.json
info : Restoring packages for F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj...
info : CACHE https://api.nuget.org/v3/vulnerabilities/index.json
info : CACHE https://api.nuget.org/v3-vulnerabilities/2024.04.02.05.42.38/vulnerability.base.json
info : CACHE https://api.nuget.org/v3-vulnerabilities/2024.04.02.05.42.38/2024.04.02.17.42.41/vulnerability.update.json
info : Package 'Microsoft.Azure.Relay' is compatible with all the specified frameworks in project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : PackageReference for package 'Microsoft.Azure.Relay' version '3.0.1' added to file 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : Writing assets file to disk. Path: F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\obj\project.assets.json
log : Restored F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj (in 425 ms).
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps> dotnet add package Microsoft.Azure.Relay
  Determining projects to restore...
info : X.509 certificate chain validation will use the default trust store selected by .NET for code signing.
info : X.509 certificate chain validation will use the default trust store selected by .NET for timestamping.
info : Adding PackageReference for package 'Microsoft.Azure.Relay' into project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : CACHE https://api.nuget.org/v3/registration5-gz-semver2/microsoft.azure.relay/index.json
info : Restoring packages for F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj...
info : CACHE https://api.nuget.org/v3/vulnerabilities/index.json
info : CACHE https://api.nuget.org/v3-vulnerabilities/2024.04.02.05.42.38/vulnerability.base.json
info : CACHE https://api.nuget.org/v3-vulnerabilities/2024.04.02.05.42.38/2024.04.02.17.42.41/vulnerability.update.json
info : Package 'Microsoft.Azure.Relay' is compatible with all the specified frameworks in project 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : PackageReference for package 'Microsoft.Azure.Relay' version '3.0.1' updated in file 'F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj'.
info : Assets file has not changed. Skipping assets file writing. Path: F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\obj\project.assets.json
log : Restored F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj (in 310 ms).
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps>
```



Lab- Cloud Computing

```
Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps> dotnet build
MSBuild version 17.9.6+a4ecab324 for .NET
Determining projects to restore...
All projects are up-to-date for restore.
F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\Program.cs(47,35): warning CS8600: Converting null literal or possible null value to non-nullable type. [F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj]
F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\Program.cs(64,35): warning CS8600: Converting null literal or possible null value to non-nullable type. [F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\MyConsoleApps.csproj]
MyConsoleApps -> F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps\bin\Debug\net8.0\MyConsoleApps.dll

Build succeeded.
    2 Warning(s)
    0 Error(s)

Time Elapsed 00:00:10.93
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps>

Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp> dotnet build
MSBuild version 17.9.6+a4ecab324 for .NET
Determining projects to restore...
All projects are up-to-date for restore.
Lab6 -> F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp\bin\Debug\net8.0\Lab6.dll


Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:07.33
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp>

Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApp> dotnet run
Online
Server listening
New session
Hello from client
Completed

Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\MyConsoleApps> dotnet run
Enter lines of text to send to the server with ENTER
Hello from client
Echo: Hello from client
Completed
Echo: Completed
```

4. Azure SignalR

 Microsoft.SignalRGalleryPackage | Overview ✖ ...

Deployment


Search [] << [X] Delete [X] Cancel [X] Redeploy [X] Download [X] Refresh [X]

Overview

Inputs

Outputs

Template

 Your deployment is complete

Deployment name : Microsoft.SignalRGalleryPackage Start time : 4/2/2024, 10:52:43 PM

Subscription : Azure for Students Correlation ID : e89bcb5c-a2be-4fff-932b-1257fd2bb1a1


Resource group : rsr_grp1

> Deployment details

< Next steps

[Go to resource](#)

Give feedback

 Tell us about your experience with deployment



Lab- Cloud Computing

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func init --worker-runtime node --language javascript --name my-app --model V3
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
Writing package.json
Writing .funcignore
Writing .gitignore
Writing host.json
Writing local.settings.json
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\.vscode\extensions.json
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> |
```

```
local.settings.json X
local.settings.json > {} Values > AzureWebJobsStorage
1 {
2   "IsEncrypted": false,
3   "Values": {
4     "FUNCTIONS_WORKER_RUNTIME": "node",
5     "AzureWebJobsStorage": "DefaultEndpointsProtocol=https;AccountName=rsrgrp1ad80;AccountKey=IbwlAtbDsgbFhAnQxS9MhOYq4t+cSj+XguBmHzt275
6     "AzureSignalRConnectionString": "Endpoint=https://sig1.service.signalr.net;AccessKey=W113d0BqJ4IX8iXBwXaqMgXchM2OzR9MuCF14dOutHI=;Ve
7   }
8 }
```

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func new --template "SignalR negotiate HTTP trigger" --name negotiate
Use the up/down arrow keys to select a template:SignalR negotiate HTTP trigger
Function name: [negotiate] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\negotiate\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\negotiate\function.json
The function "negotiate" was created successfully from the "SignalR negotiate HTTP trigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> |
```

```
function.json X
negotiate > {} function.json > ...
1 {
2   "disabled": false,
3   "bindings": [
4     {
5       "authLevel": "anonymous",
6       "type": "httpTrigger",
7       "direction": "in",
8       "methods": ["post"],
9       "name": "req",
10      "route": "negotiate"
11    },
12    {
13      "type": "http",
14      "direction": "out",
15      "name": "res"
16    },
17    {
18      "type": "signalRConnectionInfo",
19      "name": "connectionInfo",
20      "hubName": "default",
21      "connectionStringSetting": "AzureSignalRConnectionString",
22      "direction": "in"
23    }
24  ]
25 }
```



Lab- Cloud Computing

```
Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func new --name sendMessage --template "Http trigger"
Use the up/down arrow keys to select a template:Http trigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\sendMessage\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\sendMessage\function.json
The function "sendMessage" was created successfully from the "Http trigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app>
```

```
Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func new --name sendMessage --template "Http trigger"
Use the up/down arrow keys to select a template:Http trigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\sendMessage\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\sendMessage\function.json
The function "sendMessage" was created successfully from the "Http trigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func new --name index --template "Http trigger"
Use the up/down arrow keys to select a template:Http trigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\index\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app\index\function.json
The function "index" was created successfully from the "Http trigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func start

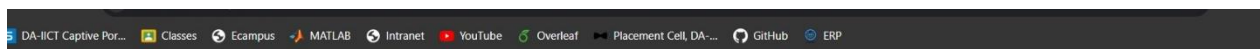
Azure Functions Core Tools
Core Tools Version: 4.0.5611 Commit hash: N/A +591b8aec842e333a87ea9e23ba390bb5effe0655 (64-bit)
Function Runtime Version: 4.31.1.22191

[2024-04-02T17:54:24.890Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T17:54:26.091Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T17:54:31.002Z] Worker process started and initialized.

Functions:

    index: [GET,POST] http://localhost:7071/api/index
    negotiate: [POST] http://localhost:7071/api/negotiate
    sendMessage: [POST] http://localhost:7071/api/messages

For detailed output, run func with --verbose flag.
[2024-04-02T17:54:37.848Z] Host lock Lease acquired by instance ID '0000000000000000000000000000000087D9A888'.
```



Serverless chat

anonymous

Hello



Lab- Cloud Computing

```
Windows PowerShell
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\my-app> func start

Azure Functions Core Tools
Core Tools Version:      4.0.5611 Commit hash: N/A +591b8aec842e33a87ea9e23ba390bb5effe0655 (64-bit)
Function Runtime Version: 4.31.1.22191

[2024-04-02T17:54:24.890Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T17:54:26.091Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T17:54:31.002Z] Worker process started and initialized.

Functions:

    index: [GET,POST] http://localhost:7071/api/index
    negotiate: [POST] http://localhost:7071/api/negotiate
    sendMessage: [POST] http://localhost:7071/api/messages

For detailed output, run func with --verbose flag.
[2024-04-02T17:54:37.848Z] Host lock lease acquired by instance ID '000000000000000000000000000000007D9A888'.
[2024-04-02T17:55:21.234Z] Executing 'Functions.index' (Reason='This function was programmatically called via the host APIs.', Id=647b4529-19b3-41bb-96d807498c)
[2024-04-02T17:55:21.551Z] Executed 'Functions.index' (Succeeded, Id=647b4529-19b3-41bb-a56d-1996d807498c, Duration=373ms)
[2024-04-02T17:55:22.005Z] Executing 'Functions.negotiate' (Reason='This function was programmatically called via the host APIs.', Id=bfd2081-260c-5-36e62368e597)
[2024-04-02T17:55:22.286Z] Executed 'Functions.negotiate' (Succeeded, Id=bfd2081-260c-4f91-bac5-36e62368e597, Duration=282ms)
[2024-04-02T17:55:58.494Z] Executing 'Functions.sendMessage' (Reason='This function was programmatically called via the host APIs.', Id=fcd2951-5667-51f-331868bcadb)
[2024-04-02T17:56:59.413Z] Executed 'Functions.sendMessage' (Succeeded, Id=fcd2951-5667-431d-a51f-331868bcadb, Duration=926ms)
[2024-04-02T17:58:17.534Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T17:58:18.244Z] Worker process started and initialized.
[2024-04-02T17:58:18.261Z] The 'negotiate' function is in error: No trigger binding specified. A function must have a trigger input binding.
[2024-04-02T17:58:24.156Z] Host lock lease acquired by instance ID '000000000000000000000000000000007D9A888'.
[2024-04-02T18:02:26.376Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T18:02:26.566Z] Worker process started and initialized.
[2024-04-02T18:02:32.467Z] Host lock lease acquired by instance ID '000000000000000000000000000000007D9A888'.
[2024-04-02T18:11:09.745Z] File 'C:\Program Files\dotnet\dotnet.exe' is not found, 'dotnet' invocation will rely on the PATH environment variable.
[2024-04-02T18:11:09.922Z] Worker process started and initialized.
[2024-04-02T18:11:15.830Z] Host lock lease acquired by instance ID '000000000000000000000000000000007D9A888'.
```

fun-app | Authentication ☆ ...
Function App

Refresh Troubleshoot Send us your feedback

Events (preview)

Log stream

Functions

App keys

App files

Proxies

Deployment

Deployment slots

Deployment Center

Settings

Configuration

Authentication

Application Insights

Identity

Backups

You can choose an identity provider to manage user identities and authentication flows. Add providers here, edit settings, and decide which provider is handling authentication for your app. [Learn more](#)

Authentication settings Edit

Requiring authentication ensures that requests to your app include information about the caller, but your app may still need to make additional authorization decisions to control access. If unauthenticated requests are allowed, any client can call the app and your code will need to handle both authentication and authorization. [Learn more](#)

App Service authentication	Enabled
Restrict access	Require authentication
Unauthenticated requests	Return HTTP 302 Found (Redirect to identity provider)
Redirect to	Microsoft
Token store	Enabled

Identity provider

+ Add provider

Identity provider	App (client) ID	Learn more	Edit	Delete
Microsoft (fun-app)	93dd77ea-956c-4ebb-a8d5-bb2b2a093a4e	Quickstart	Edit	Delete



Lab- Cloud Computing

Serverless chat

You are logged in [Logout]

Type message here...

aashinav536@gmail.com
Hello, Completed!!!

5. Azure Web PubSub

Home >

Microsoft.AzureWebPubSub | Overview ...

Deployment

Search Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

Your deployment is complete

Deployment name : Microsoft.AzureWebPubSub
Subscription : Azure for Students
Resource group : myResourceGroup

Start time : 4/3/2024, 9:27:21 AM
Correlation ID : 5cd29fae-801a-4f4a-87f2-288a28f5bf20

> Deployment details

> Next steps

[Go to resource](#)

Give feedback

Tell us about your experience with deployment

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func init --worker-runtime javascript --model V3
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
Writing package.json
Writing .funcignore
Writing .gitignore
Writing host.json
Writing local.settings.json
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\.vscode\extensions.json
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> |
```



Lab- Cloud Computing

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func init --worker-runtime javascript --model V3
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
Writing package.json
Writing .funcignore
Writing .gitignore
Writing host.json
Writing local.settings.json
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\.vscode\extensions.json
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func new -n index -t HttpTrigger
Use the up/down arrow keys to select a template:HttpTrigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\index\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\index\function.json
The function "index" was created successfully from the "HttpTrigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app>
```

```
Terminal Help  chat-app
host.json  function.json  JS index.js x

index > JS index.js > ...
1  var fs = require("fs");
2  var path = require("path");
3
4  module.exports = function (context, req) {
5      var index =
6          context.executionContext.functionDirectory + "../index.html";
7      context.log("index.html path: " + index);
8      fs.readFile(index, "utf8", function (err, data) {
9          if (err) {
10              (loading...) (parameter) context: any
11              context
12          }
13          context.res = {
14              status: 200,
15              headers: {
16                  "Content-Type": "text/html",
17              },
18              body: data,
19          };
20          context.done();
21      });
22  };|
```

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func init --worker-runtime javascript --model V3
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
Writing package.json
Writing .funcignore
Writing .gitignore
Writing host.json
Writing local.settings.json
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\.vscode\extensions.json
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func new -n index -t HttpTrigger
Use the up/down arrow keys to select a template:HttpTrigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\index\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\index\function.json
The function "index" was created successfully from the "HttpTrigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func new -n negotiate -t HttpTrigger
Use the up/down arrow keys to select a template:HttpTrigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\negotiate\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\negotiate\function.json
The function "negotiate" was created successfully from the "HttpTrigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app>
```



Lab- Cloud Computing

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func init --worker-runtime javascript --model V3
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
Writing package.json
Writing .funcignore
Writing .gitignore
Writing host.json
Writing local.settings.json
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\.vscode\extensions.json
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func new -n index -t HttpTrigger
Use the up/down arrow keys to select a template:HttpTrigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\index\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\index\function.json
The function "index" was created successfully from the "HttpTrigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func new -n negotiate -t HttpTrigger
Use the up/down arrow keys to select a template:HttpTrigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\negotiate\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\negotiate\function.json
The function "negotiate" was created successfully from the "HttpTrigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func new -n message -t HttpTrigger
Use the up/down arrow keys to select a template:HttpTrigger
Function name: [HttpTrigger] Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\message\index.js
Writing F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app\message\function.json
The function "message" was created successfully from the "HttpTrigger" template.
Did you know? The new Node.js programming model is generally available. Learn how you can try it out today at https://aka.ms/AzFuncNodeV4
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app>
```

```
host.json  function.json negotiate  JS index.js  function.json message X
message > function.json > ...
1
2 {
3   "bindings": [
4     {
5       "type": "webPubSubTrigger",
6       "direction": "in",
7       "name": "data",
8       "hub": "simplechat",
9       "eventName": "message",
10      "eventType": "user"
11     },
12     {
13       "type": "webPubSub",
14       "name": "actions",
15       "hub": "simplechat",
16       "direction": "out"
17     }
18   ]
19 }
```

```
host.json  function.json negotiate  JS index.js negotiate  function.json message  JS index.js message X
message > JS index.js negotiate > ...
1 module.exports = async function (context, data) {
2   context.bindings.actions = {
3     actionName: "sendToAll",
4     data: `[${context.bindingData.request.connectionContext.userId}] ${data}`,
5     dataType: context.bindingData.dataType,
6   };
7   // UserEventResponse directly return to caller
8   var response = {
9     data: "[SYSTEM] ack.",
10    dataType: "text",
11  };
12  return response;
13 }
```



Lab- Cloud Computing

```
Windows PowerShell
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> az storage account create -n stacvr -l EastUS -g myResourceGroup
{
  "accessTier": "Hot",
  "accountMigrationInProgress": null,
  "allowBlobPublicAccess": false,
  "allowCrossTenantReplication": false,
  "allowSharedKeyAccess": null,
  "allowedCopyScope": null,
  "azureFilesIdentityBasedAuthentication": null,
  "blobRestoreStatus": null,
  "creationTime": "2024-04-03T04:09:53.671206+00:00",
  "customDomain": null,
  "defaultToOAuthAuthentication": null,
  "dnsEndpointType": null,
  "enableHttpsTrafficOnly": true,
  "enableNfsV3": null,
  "encryption": {
    "encryptionIdentity": null,
    "keySource": "Microsoft.Storage",
    "keyVaultProperties": null,
    "requireInfrastructureEncryption": null,
  },
  "services": {
    "blob": {
      "enabled": true,
      "keyType": "Account",
      "lastEnabledTime": "2024-04-03T04:09:54.264960+00:00"
    },
    "file": {
      "enabled": true,
      "keyType": "Account",
      "lastEnabledTime": "2024-04-03T04:09:54.264960+00:00"
    },
    "queue": null,
    "table": null
  },
  "extendedLocation": null,
  "failoverInProgress": null,
  "geoReplicationStats": null,
  "id": "/subscriptions/0caa543c-ce81-44d1-8166-7a8e1de95d67/resourceGroups/myResourceGroup/providers/Microsoft.Storage/storageAccounts/stacvr",
  "identity": null,

```

```
Windows PowerShell
  "websiteTimeZone": null,
  "winAuthAdminState": null,
  "winAuthTenantState": null,
  "windowsConfiguredStacks": null,
  "windowsFxVersion": null,
  "xManagedServiceIdentityId": null
},
"slotSwapStatus": null,
"state": "Running",
"storageAccountRequired": false,
"suspendedTill": null,
"tags": null,
"targetSwapSlot": null,
"trafficManagerHostNames": null,
"type": "Microsoft.Web/sites",
"usageState": "Normal",
"virtualNetworkSubnetId": null,
"vnetContentShareEnabled": false,
"vnetImagePullEnabled": false,
"vnetRouteAllEnabled": false,
"workloadProfileName": null
}
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> func azure functionapp publish chat-app-vr
Setting Functions site property 'netFrameworkVersion' to 'v8.0'
Getting site publishing info...
[2024-04-03T04:14:34.739Z] Starting the function app deployment...
Creating archive for current directory...
Uploading 3.29 KB [#####]
Upload completed successfully.
Deployment completed successfully.
[2024-04-03T04:15:03.843Z] Syncing triggers...
Functions in chat-app-vr:
  index - [httpTrigger]
    Invoke url: https://chat-app-vr.azurewebsites.net/api/index
  message - [webPubSubTrigger]
  negotiate - [httpTrigger]
    Invoke url: https://chat-app-vr.azurewebsites.net/api/negotiate
PS F:\Backup\Desktop\SEM6\IT457-CC\Lab6\chat-app> |
```



Lab- Cloud Computing

chat-app-vr | Authentication ☆ ...
Function App

Search « Refresh Troubleshoot Send us your feedback

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)
Log stream
ctions
App keys
App files
Proxies
loyment
Deployment slots

You can choose an identity provider to manage user identities and authentication flows. Add providers here, edit settings, and decide which provider is handling authentication for your app. [Learn more](#)

Authentication settings [Edit](#)

Requiring authentication ensures that requests to your app include information about the caller, but your app may still need to make additional authorization decisions to control access. If unauthenticated requests are allowed, any client can call the app and your code will need to handle both authentication and authorization. [Learn more](#)

App Service authentication	Enabled
Restrict access	Allow unauthenticated requests
Token store	Enabled

Identity provider

+ Add provider

Identity provider	App (client) ID	Learn more	Edit	Delete
Microsoft (chat-app-vr)	9b12d55e-79a3-4eb8-b11e-0e32f79b3017	Quickstart	Edit	Delete

chat-app-vr.azurewebsites.net/api/index?authenticated=true

DA-IICT Captive Por... Classes Ecampus MATLAB Intranet YouTube Overleaf Placement Cell, DA-... GitHub ERP

Azure Web PubSub Serverless Chat App

Type to chat...

[aksharpanchani@outlook.com] Hello, Completed

[SYSTEM] ack.