



Lab 5: Webapp AWS, CosmosDB, Azure Apps

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IT457 Cloud Computing

3/15/24



1. Cosmos DB - Populate data and query filter

HOME / Microsoft.Azure.CosmosDB-20240309225032 | Overview ⚙️ ...

Deployment

Search << Delete Cancel Redeploy Download Refresh

Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name : Microsoft.Azure.CosmosD... Start time : 3/9/2024, 10:50:44 PM

Subscription : Azure for Students Correlation ID : bd90d1ed-d193-4a24-9c1...

Resource group : rg-msdocs-tables-sdk-demo

> Deployment details

Next steps

Go to resource

```
PS /home/Varun> New-AzCosmosDBTable -Name $cosmosTableName -ResourceName $cosmosResourceName -TableProperties @{
Name      : WeatherData
Id        : /subscriptions/03865a8e-3929-4f14-ab8e-12ebd60eb01d/resourceGroups/rg-msdocs-tables-sdk-
ccounts/cosmos-msdocs-tables-sdk-demo-var/tables/WeatherData
Location  :
Tags      :
Resource  : Microsoft.Azure.Commands.CosmosDB.Models.PSTableGetPropertiesResource
}
```

AzureTablesDemoApplication Home Filter Results

Insert using Table Entity Insert using Expandable Data Insert Sample Data

Weather Data

StationName	ObservationDate	Actions
-------------	-----------------	---------



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Insert using TableEntity



Station Name	<input type="text" value="Weather station name"/>
Date/Time	<input type="text" value="dd-mm-yyyy"/> <input type="text" value="--:--"/>
Temperature	<input type="text" value="Current temperature"/>
Humidity	<input type="text" value="% Humidity"/>
Barometer	<input type="text" value="Atmospheric pressure"/>
Wind Direction	<input type="text" value="CALM"/>
Wind Speed	<input type="text" value="Wind speed"/>
Precipitation	<input type="text" value="Precipitation"/>

[Close](#)[Insert](#)[Upsert](#)

Weather Data

StationName	ObservationDate	Temperature	Humidity	Barometer	WindDirection	WindSpeed	Precipitation	Actions
Ahmedabad	2024-03-09 23:27	33	47	1.2	CALM	25	39	Update Delete
Miami	2021-07-01 15:00 25.56	87	1015.92	SE	12.87	0.0	None	Update Delete
Miami	2021-07-01 18:00 26.11	88	1015.92	ESE	16.09	0.0	None	Update Delete
Miami	2021-07-01 21:00 26.11	88	1015.92	CALM	0.0	0.0	None	Update Delete
Miami	2021-07-02 00:00 26.11	79	1016.6	VARIABLE	4.83	0.76	None	Update Delete
Miami	2021-07-02 03:00 26.11	94	1015.58	CALM	0.0	0.0	None	Update Delete
Miami	2021-07-02 06:00 26.11	88	1015.58	CALM	0.0	0.0	None	Update Delete

Global distribution

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cosmos-msdocs-tables-sdk-demo-var | Replicate data globally ☆ ...
Azure Cosmos DB account

Search

Notifications


Data Explorer

Settings

- Account Level Throughput
- Features
- Replicate data globally
- Default consistency
- Backup & Restore
- Networking
- Connection strings
- Advisor Recommendations
- Identity

Save Discard Manual failover Service-Managed Failover Feedback

Updating



Manual failover

Select a new Write region. The existing Write region will become a Read region.

Tip: Identify all dependent services leveraging this account and ensure that triggering a failover will not jeopardize your production application.

Write region

East US 2

Read regions

Central India

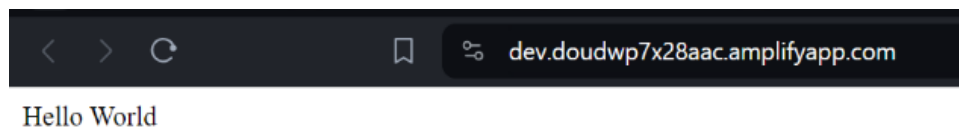
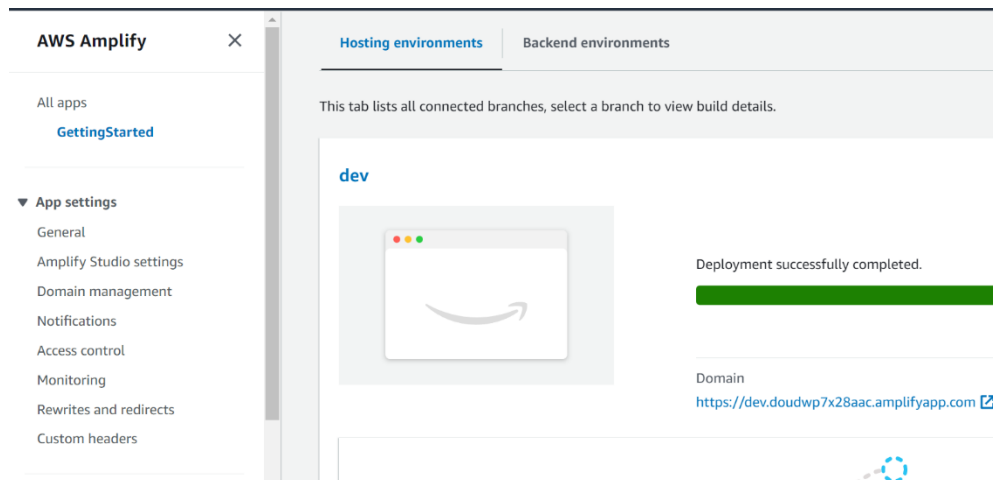
West US

☒ I understand and agree to trigger a failover on my current Write Region.

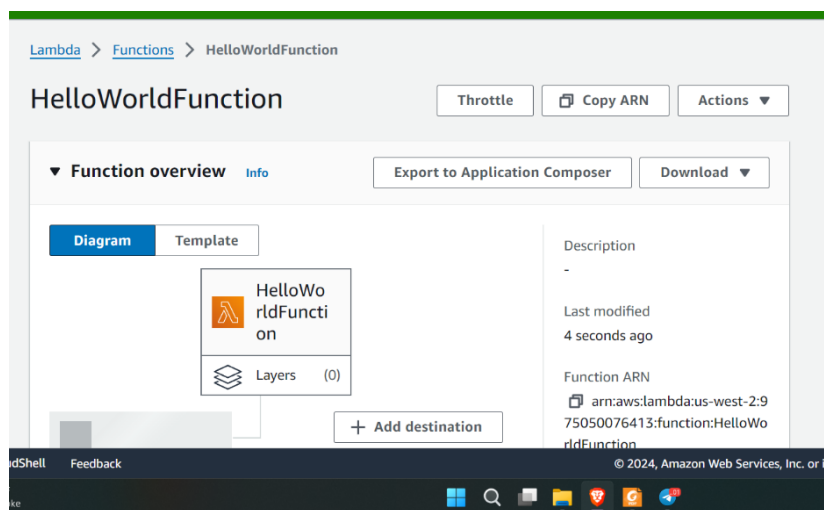
Log transformation

2. Web app in AWS - Deploying a hello world web application

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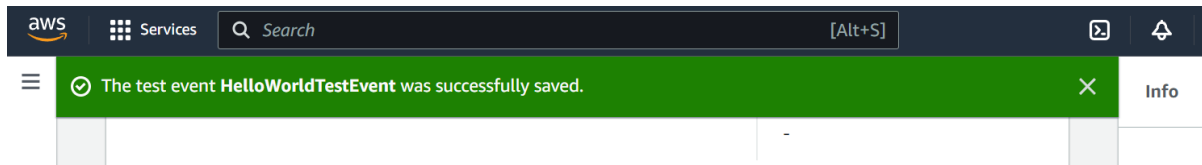
Creating a lambda function for hello world.



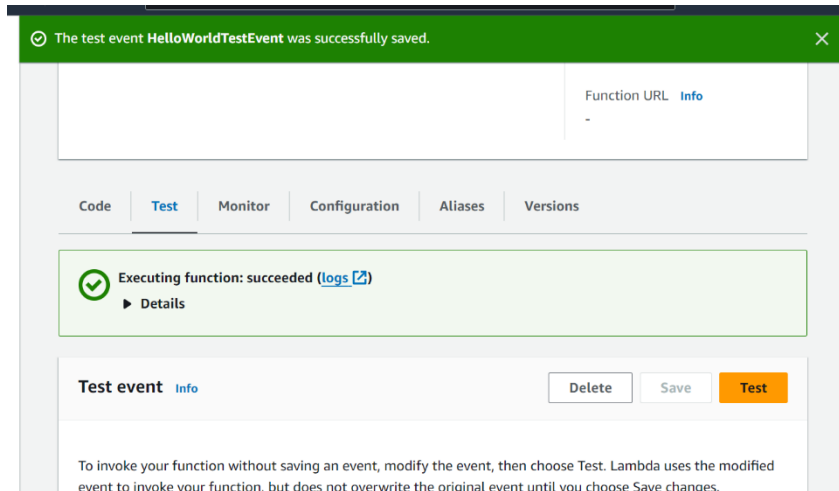
Updating the lambda function and creating test event for lambda function



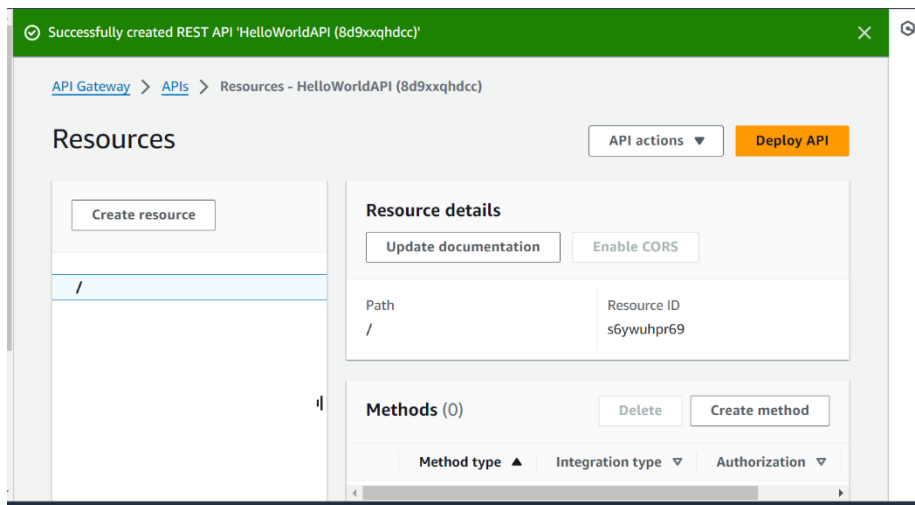
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testing the lambda function



Creating restful api



Adding CORS to the API



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Successfully enabled CORS

Details

- Created **OPTIONS** method.
- Added **200 Method Response with Empty Response Model** to **OPTIONS** method.
- Added **Mock Integration** to **OPTIONS** method.
- Added **200 Integration Response** to **OPTIONS** method.
- Added **Access-Control-Allow-Headers, Access-Control-Allow-Methods, Access-Control-Allow-Origin Method Response Headers** to **OPTIONS** method.
- Added **Access-Control-Allow-Headers, Access-Control-Allow-Methods, Access-Control-Allow-Origin Integration Response Header Mappings** to **OPTIONS** method.
- Added **Access-Control-Allow-Origin Method Response Header** to **POST** method.
- Added **Access-Control-Allow-Origin Integration Response Header Mapping** to **POST** method.

API Gateway > APIs > Resources - HelloWorldAPI (8d9xxqhdcc)

Resources

API actions

Deploy API

Testing the hello world post API

Create resource

/

OPTIONS

POST

Test

/ - POST method test results

Request

/

Latency

221

Status

200

Response body

{"statusCode": 200, "body": "\\Hello from Lambda, Grace Hopper\\\""}

Response headers

Adding policy to allow lambda function to work .

Permissions policies (2) Info

Refresh

Simulate

Remove

Add permissions

You can attach up to 10 managed policies.

Search

Filter by Type

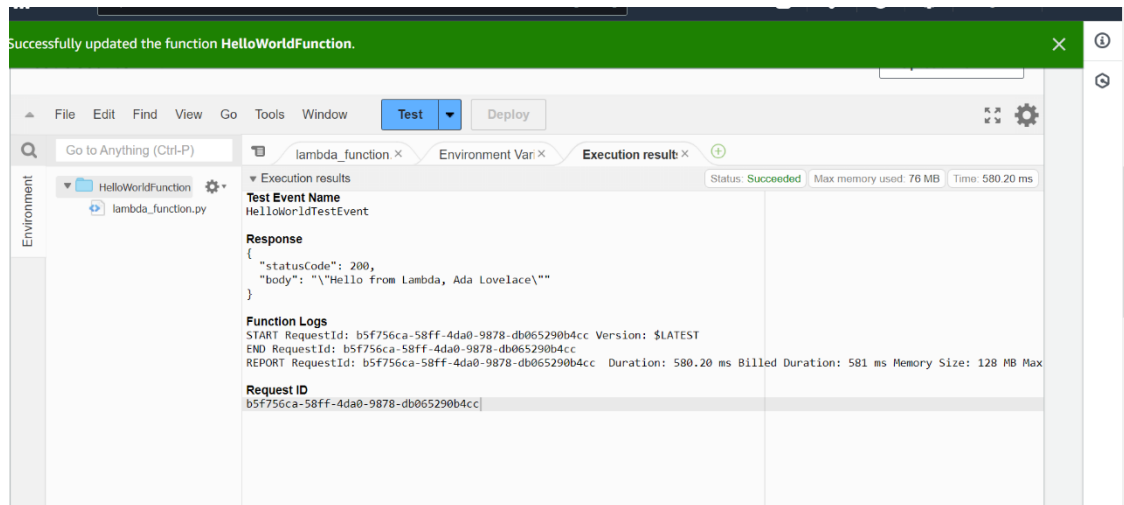
All types

< 1 >

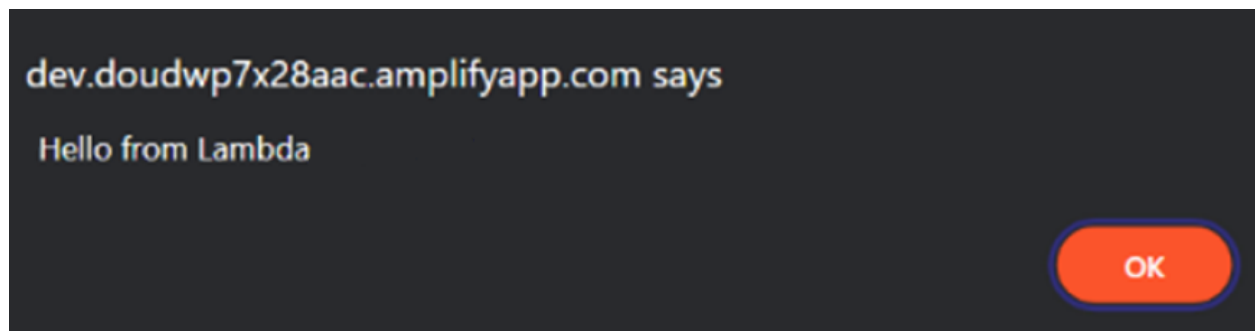
	Policy name	Type	Attached entities
<input type="checkbox"/>	<div><div></div>AWSLambdaBasicExecuti...</div>	Customer managed	1
<input type="checkbox"/>	<div><div></div>HelloWorldDynamoPolicy</div>	Customer inline	0

Testing the updated function.

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Checking the web URL.








Azure App Services


Deploying the app service using MongoDB and NodeJS




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-WebAppDatabase-Portal-938c1927-a60c | Overvi...  ...

«  Delete  Cancel  Redeploy  Download  Refresh

 **Your deployment is complete**



 Deployment name : Microsoft.Web-WebAppDatabase-Portal-938c1927-a60c
Subscription : [Azure for Students](#)
Resource group : [msdocs-expressjs-mongodb-tutorial](#)
Start time : 3/10/2024, 11:34:55 AM
Correlation ID : cb3645b5-0de1-42fb-8c61-147ac51866e3




> Deployment details

▼ Next steps


Deployment action in GitHub


main_msdocs-expressjs-mongodb-var.yml
on: push

 **build** 23s —  **deploy** 11m 5s
<http://msdocs-expressjs-mongodb-var.azu...>

Web app connected to its database and deployed on azure

 **Azure Todo List**
ExpressJS/MongoDB Sample Application

New task 

Current tasks


Task	Created	Action
------	---------	--------

Completed tasks

Task	Created	Completed
------	---------	-----------



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Azure Todo List

ExpressJS/MongoDB Sample Application

New task

Enter new task here

Add task

Current tasks


Task	Created	Action
cloud computing assignment 5	2024-03-10	<div>Complete</div> <div>Delete</div>
insem exam next week (prep 7 subjects)	2024-03-10	<div>Complete</div> <div>Delete</div>
ppt coming up..code it up	2024-03-10	<div>Complete</div> <div>Delete</div>
reade some philosophy book...try out symposium	2024-03-10	<div>Complete</div> <div>Delete</div>
HPC lab	2024-03-10	<div>Complete</div> <div>Delete</div>
modsim lab conclusions	2024-03-10	<div>Complete</div> <div>Delete</div>

Completed tasks

Task	Created	Completed
watch dark	2024-03-10	2024-03-10

App service logs

Home > Microsoft.Web-WebAppDatabase-Portal-938c1927-a60c | Overview > msdocs-expressjs-mongodb-var

 **msdocs-expressjs-mongodb-var** | App Service logs ☆ ...
Web App

Search

«

Save Discard Send us your feedback

Logs

Advisor recommendations

Health check

Dagnostic settings

App Service logs

Log stream

Automation

Tasks (preview)

Export template

Support + troubleshooting

Resource health

Support + Troubleshooting

Application logging ⓘ

Off File System

Quota (MB) * ⓘ

35

Retention Period (Days) * ⓘ

Download logs

FTP/deployment username

No FTP/deployment user set

FTP

ftp://waws-prod-blu-479.ftp.azurewebsites.windows.net/site/wwwroot

FTPS

ftps://waws-prod-blu-479.ftp.azurewebsites.windows.net/site/wwwroot

Updating App Service logs settings

Successfully updated App Service logs settings



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msdocs-expressjs-mongodb-var | Log stream ☆

Web App

Search

Reconnect Copy Pause Clear

Logs

Advisor recommendations

Health check

Diagnostic settings

App Service logs

Log stream

Automation

Tasks (preview)

Export template

Support + troubleshooting

Resource health

Support + Troubleshooting

```
2024-03-10T07:49:01.642480Z if [ -z "$PORT" ]; then
2024-03-10T07:49:01.6431582Z     export PORT=8080
2024-03-10T07:49:01.6852896Z fi
2024-03-10T07:49:01.7035225Z
2024-03-10T07:49:01.7219183Z npm start
2024-03-10T07:49:24.7068648Z npm info using npm@9.6.4
2024-03-10T07:49:24.7255810Z npm info using node@v20.11.0
2024-03-10T07:49:25.3326440Z
2024-03-10T07:49:25.3338599Z > todolist@0.0.0 start
2024-03-10T07:49:25.3522208Z > node ./bin/www
2024-03-10T07:49:25.3615007Z
2024-03-10T07:49:28.5833373Z npm http fetch GET 200 https://registry.npmjs.org/npm 3387ms (cache updated)
2024-03-10T07:49:28.7289440Z npm http fetch GET 200 https://registry.npmjs.org/npm 3497ms (cache updated)
2024-03-10T07:49:49.3266948Z [0mGET /robots933456.txt [33m404 [0m4843.435 ms - 1498[0m
2024-03-10T07:49:49.3631767Z [0mGET /robots933456.txt [0m- [0m- ms - [0m
2024-03-10T07:49:49.4134726Z [0mGET /robots933456.txt [0m- [0m- ms - [0m
2024-03-10T07:49:49.7708733Z [0mGET /robots933456.txt [33m404 [0m374.696 ms - 1498[0m
2024-03-10T07:49:49.8077076Z [0mGET /robots933456.txt [0m- [0m- ms - [0m
2024-03-10T07:49:50.2078004Z [0mGET /robots933456.txt [33m404 [0m390.936 ms - 1498[0m
```

Use Kudu

```
{["id": "c73076ba-7491-4f96-b86f-7bc9950e2395", "status": 4, "status_text": "", "author_email": "N/A", "author": "N/A", "deployer": "GITHUB_ZIP_DEPLOY", "message": "
{\\type\\": \\\"deployment\\\", \\\"sha\\\": \\\"4ecb21d4b1c77b43e4a01e0d3acb70604a8ea9e1\\\", \\\"repoName\\\": \\\"LVarunL/msdocs-nodejs-mongodb-azure-sample-
app\\\", \\\"actor\\\": \\\"LVarunL\\\", \\\"slotName\\\": \\\"Production\\\", \\\"commitMessage\\\": \\\"Add or update the Azure App Service build and deployment workflow
config\\\", \\\"progress\\\": \\\"\\\", \\\"received_time\\\": \\\"2024-03-10T06:31:36.0914461Z\\\", \\\"start_time\\\": \\\"2024-03-10T06:31:37.4332763Z\\\", \\\"end_time\\\": \\\"2024-03-
10T06:41:08.8239114Z\\\", \\\"last_success_end_time\\\": \\\"2024-03-10T06:41:08.8239114Z\\\", \\\"complete\\\": true, \\\"active\\\": true, \\\"is_temp\\\": false, \\\"is_readonly\\\": true, \\\"url\\\": \\\"https://msdocs-
expressjs-mongodb-var.scm.azurewebsites.net/api/deployments/c73076ba-7491-4f96-b86f-7bc9950e2395\\\", \\\"log_url\\\": \\\"https://msdocs-expressjs-mongodb-
var.scm.azurewebsites.net/api/deployments/c73076ba-7491-4f96-b86f-7bc9950e2395/log\\\", \\\"site_name\\\": \\\"msdocs-expressjs-mongodb-var\\\", \\\"build_summary\\\": {\\\"errors\\\": [], \\\"warnings\\\":
[]}]}
```

Index of /wwwroot/

Name	Size	Last Modified
bin/		03/10/2024 06:31:41 +00:00
config/		03/10/2024 06:31:41 +00:00
models/		03/10/2024 06:31:41 +00:00
node_modules/		03/10/2024 06:41:06 +00:00
public/		03/10/2024 06:41:07 +00:00
routes/		03/10/2024 06:41:07 +00:00
views/		03/10/2024 06:41:07 +00:00
app.js	1,977	03/10/2024 06:29:46 +00:00
CHANGELOG.md	135	03/10/2024 06:29:46 +00:00
CONTRIBUTING.md	3,941	03/10/2024 06:29:46 +00:00
LICENSE.md	1,140	03/10/2024 06:29:46 +00:00
package-lock.json	152,081	03/10/2024 06:29:56 +00:00
package.json	480	03/10/2024 06:29:46 +00:00
README.md	453	03/10/2024 06:29:46 +00:00
release.zip	19,579,638	03/10/2024 06:30:44 +00:00

Scaling up the web application



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☒ Hardware ☐ Features

Name	ACU/vCPU	vCPU	Memory (GB)	Remote Storage (GB)	Scale (instance)	SLA
Dev/Test (For less demanding workloads)						
Free F1	60 minutes/day...	N/A	1	1	N/A	N/A
<input checked="" type="checkbox"/> Basic B1	100	1	1.75	10	3	99.95%
Basic B2	100	2	3.5	10	3	99.95%
Basic B3	100	4	7	10	3	99.95%
Production (For most production workloads)						
Premium v3 P0V3	195*	1	4	250	30	99.95%

[Select](#) *ACU/vCPU is an approximation of the SKU's relative performance. [Learn more about pricing](#)

Adding custom domain – (not attaching the entire process images as buying custom domains is not available in student account of Azure.)

[Refresh](#) [Troubleshoot](#)

Please note that it might take up to 10 minutes for App Service Managed Certificate to be issued.

IP address: 20.119.8.42

Custom Domain Verification ID: 98239FD20D45E3E86AE4C485B2BAF03AF001F057B7FCE87...

Filter by keywords [Add filter](#)

1 items

[+ Add custom domain](#) | [+ Buy App Service domain](#) | [Delete](#)

Custom domains	Status	Solution	Binding type	Certificate used
msdocs-expressjs-mongodb-var...	Secured	-	-	-

< Previous Items per page: 50 Page 1 of 1 Next >