



## **DMAP MSFT Marketplace Docker Installation Guidelines**

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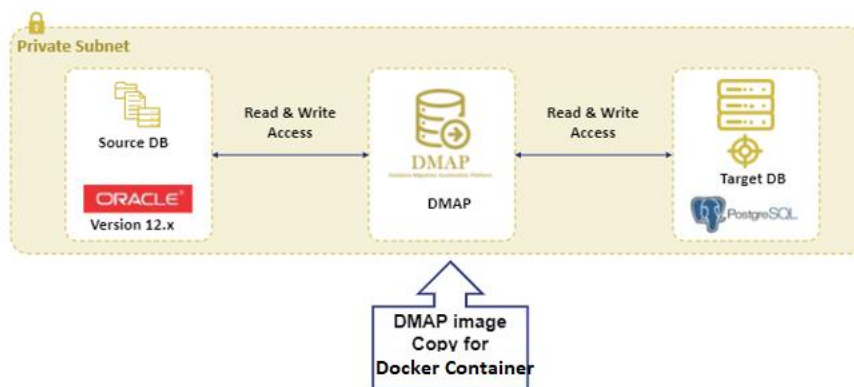
## 1. Introduction

This document explains how user can setup DMAP docker image available in Azure Marketplace in Azure Container Registry (ACR) and create a container from it in Azure Container Instances (ACI) or in user's workstation to run DMAP.

## 2. Overview of DMAP

DMAP will help to accelerate the database schema conversion process from Oracle to PostgreSQL through progressive automation of stored procedures, functions, SQL queries, business logic and custom schema constructs beyond the standard conversion tools provided by public cloud platforms.

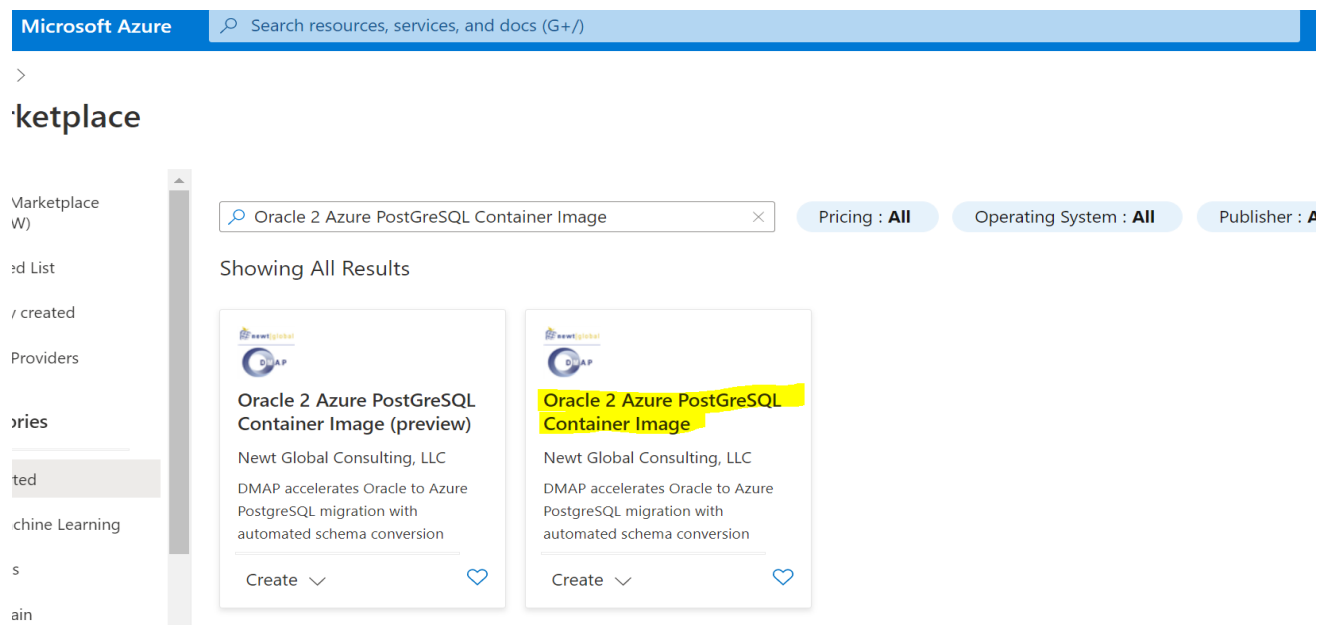
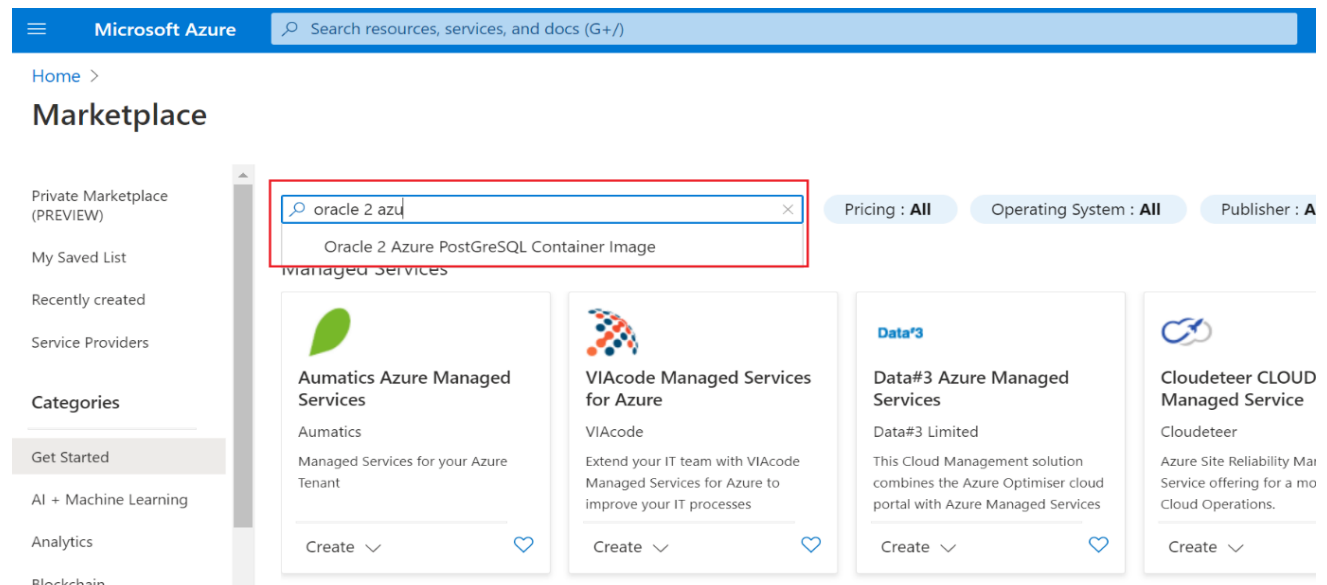
Below is the Deployment Architecture of DMAP.



Source Oracle DB and target PostgreSQL DB should both exist, and they are configured in DMAP application to run the automated conversion.

### 3. Create Azure Container Registry (ACR)

To create Azure Container Registry for DMAP, Login to Azure portal and go to Azure Marketplace. Search for “**Oracle 2 Azure PostGreSQL Container Image**” as shown below.




Microsoft Azure Search resources, services, and docs (G+/)

Home > Marketplace >

## Oracle 2 Azure PostgreSQL Container Image

Newt Global Consulting, LLC



### Oracle 2 Azure PostgreSQL Container Image

Newt Global Consulting, LLC

[Save for later](#)

[Create](#)

[Overview](#) [Plans](#) [Usage Information + Support](#)

Azure offers solutions to migrate on-prem licensed Oracle RDBMS to Azure PostgreSQL. But the enterprise users may have to overcome an expensive & tedious process of converting database schema to the target database schema seamlessly. Newt Global addresses this issue through its proven automation platform "DMAP". This accelerates the database schema migration process through progressive automation. Enterprises can eliminate licensing cost through migration of their licensed RDBMS to Opensource Azure PostgreSQL DMAP converts stored procedures, functions, SQL queries, business logic and custom schema constructs beyond the standard conversion tools provided by public cloud platforms. Automation through DMAP helps in saving significant time and effort needed in database migration.

Click on **Create** button, that will take you to "Subscribe" page. Enter all required details on "Subscribe" page and click on **Subscribe** button to create a new or update an existing Azure Container Registry with the DMAP image.

Microsoft Azure Search resources, services, and docs (G+/)

Home > Marketplace > Oracle 2 Azure PostgreSQL Container Image >

## Subscribe

Oracle 2 Azure PostgreSQL Container Image

Subscription \*

Pay-As-You-Go

Azure Container Registry \*

☒ Create new ☐ Use existing

MSFTDMAPREGISTRY

Resource group \*

MSMK\_DMAP

[Create new](#)

Location \*

East US

Tag \*

latest

☐ Auto-update ⓘ

ⓘ Deploying an Azure container registry will incur charges. See pricing details [here](#)

### Offer + plan details

Oracle 2 Azure PostgreSQL Container Image - DMAP Container Plan 1

by Newt Global Consulting, LLC

[Terms of use](#) | [privacy policy](#)

Microsoft Azure
Search resources, services, and docs (G+/)

Home > Marketplace > Oracle 2 Azure PostgreSQL Container Image >

## Subscribe

Oracle 2 Azure PostgreSQL Container Image

---

**Terms of use**

By clicking "Subscribe", I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s). I agree that Microsoft may share my contact information and transaction details (including usage volume) with the provider of the offering(s).

**By clicking Create, you give Microsoft permission to use or share your account information so that the provider or Microsoft can contact you regarding this product and related products.**

**Contact details**

Name

Primary email address \*

✖ Required field.  
✖ Must be a valid e-mail.

Primary phone number \*

✖ Required field.

**Note:** Above images depicts sample inputs for reference.

Next, go to “**Container registries**” services to verify that the container registry has been created.

Microsoft Azure
Search resources, services, and docs (G+/)

Home >

## Container registries


Newt Global Consulting, LLC

+ Add
Edit columns
Refresh
Assign tags

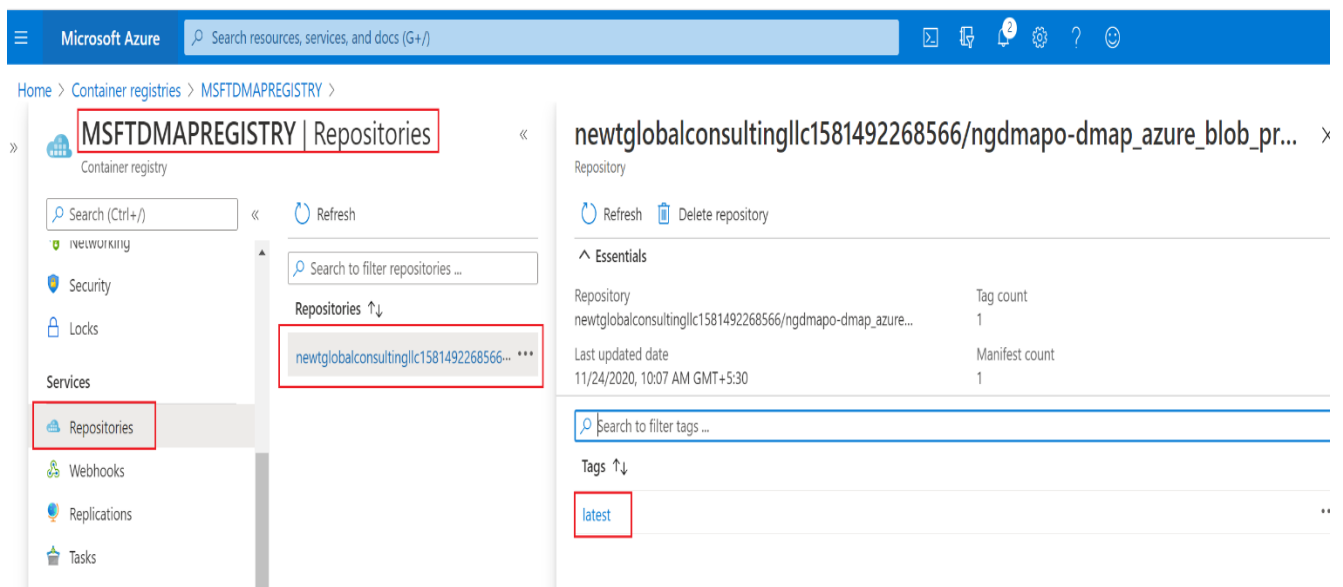
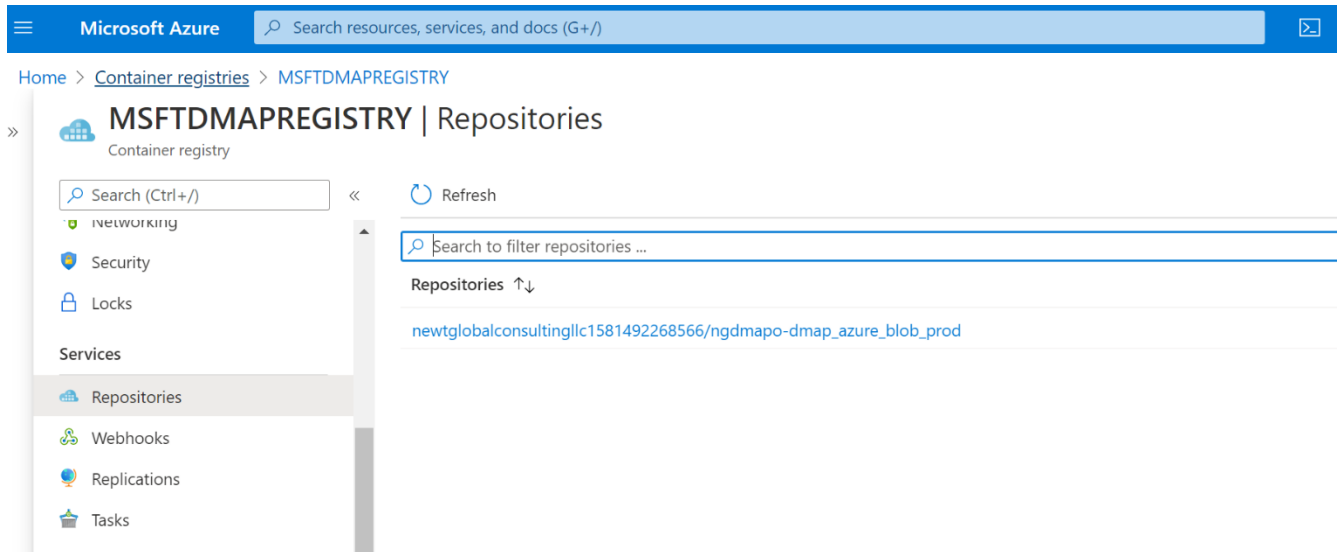
*i* Build, Run, Push and Patch containers in Azure with ACR Tasks

**Subscriptions:** Pay-As-You-Go

Filter by name...
All resource groups
All locations
All tags

<input type="checkbox"/>	Name ↑↓	Type ↑↓	Resource group ↑↓	Location ↑↓
<input type="checkbox"/>	 MSFTDAPREGISTRY	Container registry	MSMK_DMAP	East US

Select the registry and verify that Repository contains the DMAP image.



**Note:** Above images depicts sample registry, repositories and docker image with latest tag.

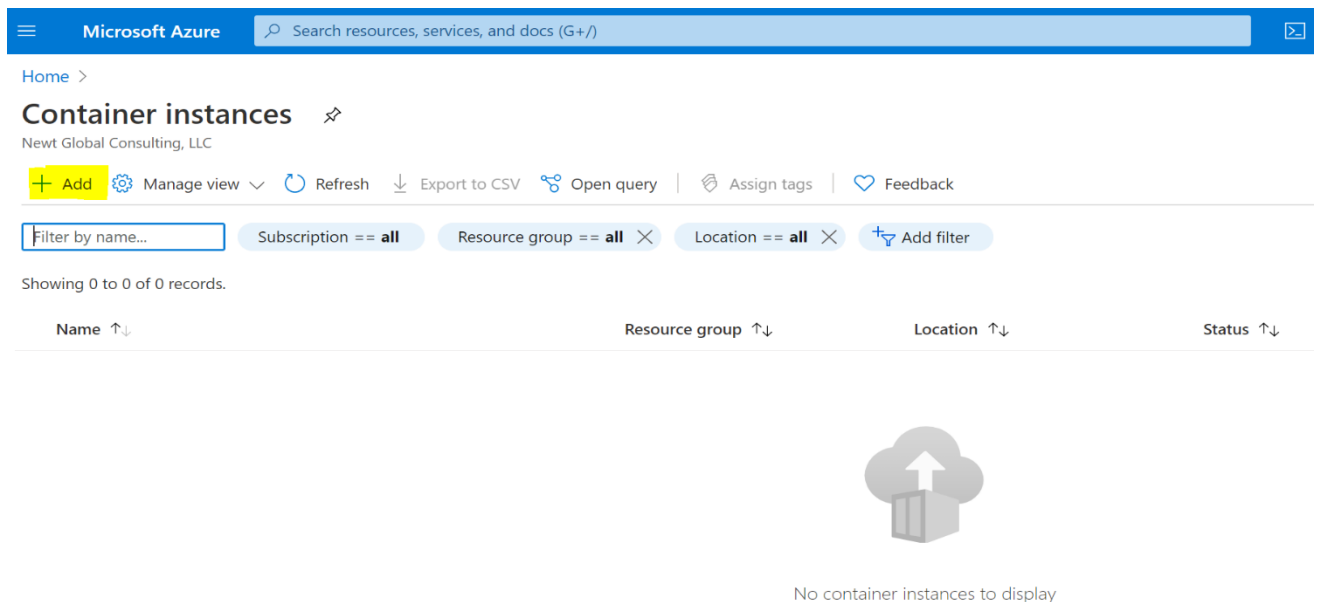
## 4. DMAP Container Creation

DMAP Docker image is installed and configured in a docker container running on one of the following:

- Container running in Azure container instances services
- Container running in user's workstation

### 4.1 Creating Container using Azure Container Instances (ACI)

To create container using ACI, go to “**Container Instances**” services and click **Add** button.



In the “**Create container instance**” page, enter all required details to create the container.



Home > Container instances >

## Create container instance

Basics Networking Advanced Tags Review + create

Azure Container Instances (ACI) allows you to quickly and easily run containers on Azure without managing servers or having to learn new tools. ACI offers per-second billing to minimize the cost of running containers on the cloud.

[Learn more about Azure Container Instances](#)

### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ

Resource group \* ⓘ  [Create new](#)

### Container details

Container name \* ⓘ

Region \* ⓘ

Home > Container instances >

## Create container instance

Container name \* ⓘ

Region \* ⓘ

Image source \* ⓘ ☐ Quickstart images ☒ Azure Container Registry ☐ Docker Hub or other registry

Registry \* ⓘ    
 ✖ Admin user must first be enabled for this registry in order to access the image during the container instance creation. [Learn about the admin user in ACR.](#)

Image ⓘ

Image tag ⓘ

OS type

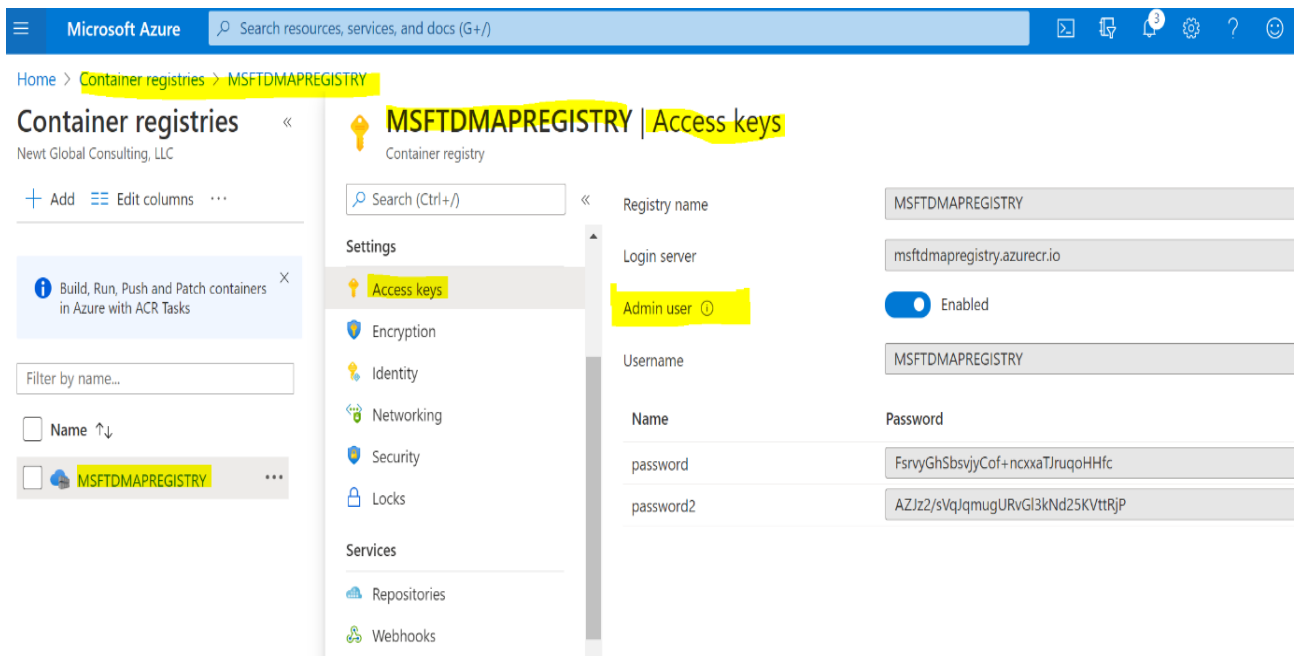
Size \* ⓘ  [Change size](#)

Some important fields to enter are:

- **Container name** – Enter the name of the container

- **Image source** – Select source from where image will be used to create the container. Select Azure Container Registry.
- **Registry** – Specify the name of the registry. To resolve error that “Admin should be enabled for this registry to download image and create ACI”, go to registry and enable Admin. See below image to enable admin user.
- **Image** – Select an image
- **Image tag** – Enter tag name
- **Size** – Configure no. of CPU cores and Memory in GB for the container

See below image to enable admin user.



The screenshot shows the Microsoft Azure portal interface. The breadcrumb navigation is 'Home > Container registries > MSFTDAPREGISTRY'. The main heading is 'Container registries' for 'Newt Global Consulting, LLC'. A sidebar on the left shows 'Access keys' selected under 'Settings'. The 'Access keys' section is highlighted in yellow. The 'Admin user' toggle is also highlighted in yellow and is currently 'Enabled'. The 'Registry name' is 'MSFTDAPREGISTRY', the 'Login server' is 'msftdapregistry.azurecr.io', and the 'Username' is 'MSFTDAPREGISTRY'. The 'Password' field is empty, and the 'password2' field is 'AZJz2/sVqJqmugURvGI3kNd25KVttRjP'.

Microsoft Azure

Search resources, services, and docs (G+ /)

Home > Container instances >

Create container instance

Container details

Container name \*

msftdmaptest01

Region \*

(US) East US

Image source \*

☐ Quickstart images
 ☒ Azure Container Registry
 ☐ Docker Hub or other registry

Registry \*

MSFTDMAPREGISTRY

Image \*

newtglobalconsultingllc1581492268566/ngdmapo-dmap\_azure\_blob\_prod

Image tag \*

latest

OS type \*

☒ Linux
 ☐ Windows

Size \*

1 vcpu, 1.5 GiB memory, 0 gpus

Change size

Review + create

< Previous

Next : Networking >

Change container ...

Configure the resource requirements for your container. The available values are based on region, OS type, and networking options.

Learn more about resource requirements in ACI

Number of CPU cores \*

4

1-4

Memory (GiB) \*

16

0.5-16

GPU type (Preview) \*

None

Ok

Discard

Microsoft Azure

Search resources, services, and docs (G+ /)

Home > Container instances >

Create container instance

Container details

Container name \*

msftdmaptest01

Region \*

(US) East US

Image source \*

☐ Quickstart images
 ☒ Azure Container Registry
 ☐ Docker Hub or other registry

Registry \*

MSFTDMAPREGISTRY

Image \*

newtglobalconsultingllc1581492268566/ngdmapo-dmap\_azure\_blob\_prod

Image tag \*

latest

OS type \*

☒ Linux
 ☐ Windows

Size \*

4 vcpus, 16 GiB memory, 0 gpus

Change size

Review + create

< Previous

Next : Networking >

After entering all the required information, click on **“Networking”** button. In this section, enter DNS name (domain name used in the URL) and enable ports (8080 and 5002) to access DMAP from a workstation using web browser.

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Microsoft Azure
Search resources, services, and docs (G+/)

Home > Container instances >

## Create container instance

Basics
**Networking**
Advanced
Tags
Review + create

Choose between three networking options for your container instance:

- **'Public'** will create a public IP address for your container instance.
- **'Private'** will allow you to choose a new or existing virtual network for your container instance. This is not yet available for Windows containers.
- **'None'** will not create either a public IP or virtual network. You will still be able to access your container logs using the command line.

Networking type ☒ Public ☐ Private ☐ None

DNS name label  ☒ .eastus.azurecontainer.io

Ports

Ports	Ports protocol
8080	TCP
5002	TCP

Review + create
< Previous
Next : Advanced >

Microsoft Azure
Search resources, services, and docs (G+/)

Home > Container instances >

## Create container instance

☒ Validation passed

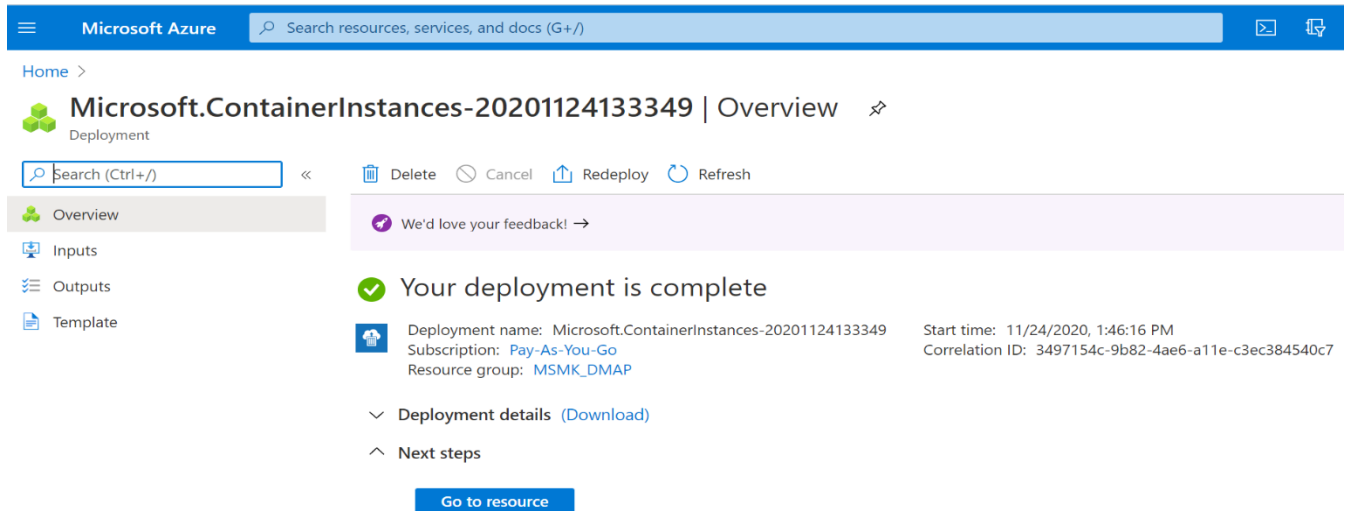
Basics
Networking
Advanced
Tags
**Review + create**

**Basics**

Subscription	Pay-As-You-Go
Resource group	MSMK_DMAP
Region	East US
Container name	msftdmaptest01
Image type	Private
Image registry login server	msftdmapregistry.azurecr.io
Image	msftdmapregistry.azurecr.io/newtglobalconsultingllc1581492268566/ngdmapo-dmap_azure_blob_prod:latest
Image registry user name	MSFTDMAPREGISTRY
OS type	Linux
Memory (GiB)	16
Number of CPU cores	4
GPU type (Preview)	None

Create
< Previous
Next >
[Download a template for automation](#)

Finally, select **“Review + Create”** and then click on **“Create”** button to complete the container creation.



Microsoft Azure | Search resources, services, and docs (G+)

Home > Microsoft.ContainerInstances-20201124133349 | Overview

Deployment

Search (Ctrl+)

Delete Cancel Redeploy Refresh

We'd love your feedback! →

**✓ Your deployment is complete**

Deployment name: Microsoft.ContainerInstances-20201124133349 Start time: 11/24/2020, 1:46:16 PM  
 Subscription: Pay-As-You-Go Correlation ID: 3497154c-9b82-4ae6-a11e-c3ec384540c7  
 Resource group: MSMK\_DMAP

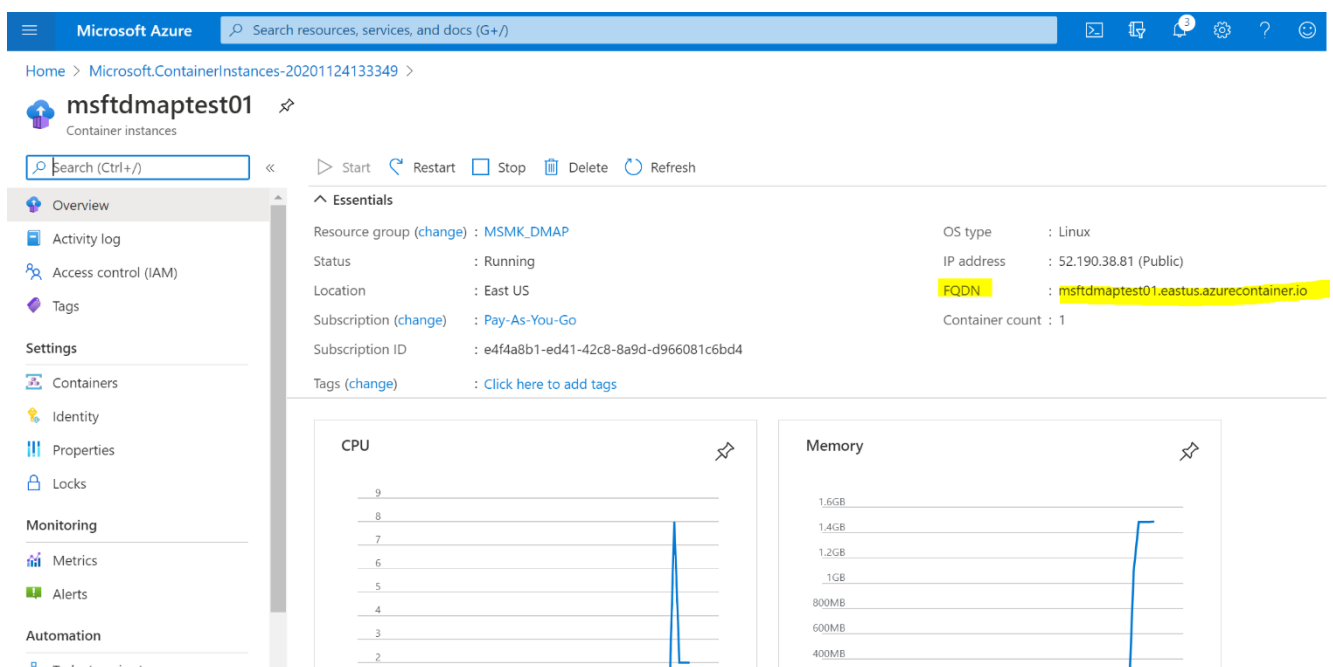
Deployment details (Download)

Next steps

Go to resource

#### 4.1.1 Verify container in Azure Container Instances (ACI)

To verify the newly created container, go to **“Azure Container Instances”** services and select the container name.



Microsoft Azure | Search resources, services, and docs (G+)

Home > Microsoft.ContainerInstances-20201124133349 > msftdmaptest01

Container instances

Search (Ctrl+)

Start Restart Stop Delete Refresh

Overview

Activity log

Access control (IAM)

Tags

Settings

Containers

Identity

Properties

Locks

Monitoring

Metrics

Alerts

Automation

Tasks (required)

Essentials

Resource group (change) : MSMK\_DMAP OS type : Linux  
 Status : Running IP address : 52.190.38.81 (Public)  
 Location : East US FQDN : msftdmaptest01.eastus.azurecontainer.io  
 Subscription (change) : Pay-As-You-Go Container count : 1  
 Subscription ID : e4f4a8b1-ed41-42c8-8a9d-d966081c6bd4  
 Tags (change) : Click here to add tags

CPU

Memory

Note down the **FQDN** detail as shown in the above image to access DMAP from the workstation.

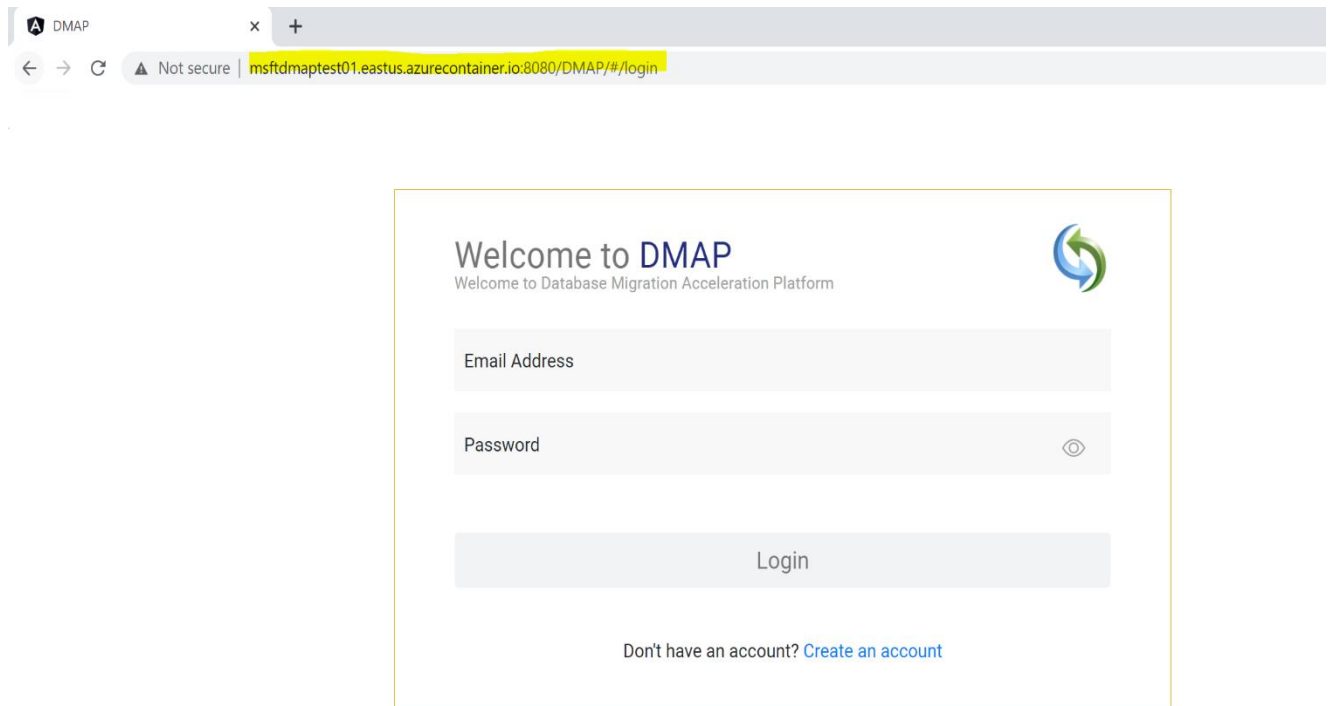
#### 4.1.2 Accessing DMAP

##### Login

Open Google Chrome web browser from your workstation. Next, enter below URL in web browser to access DMAP:

- `http://<<FQDN>>:8080/DMAP`

Enter username and password to login. If you do not have username and password setup yet, then refer to **APPENDIX** to create user account and activate license.



DMAP

Not secure | msftdmaptest01.eastus.azurecontainer.io:8080/DMAP/#/login

Welcome to DMAP  
Welcome to Database Migration Acceleration Platform

Email Address

Password

Login

Don't have an account? [Create an account](#)

## 4.2 Creating Container in User's Workstation

### 4.2.1 Pre-requisites

Please make sure below pre-requisites are fulfilled to install DMAP and use it.

- The following hardware configuration is required to successfully run DMAP:
  - 64-bit processor with [Second Level Address Translation \(SLAT\)](#).
  - Minimum 8GB of system RAM. Recommend memory is 16 GB or more.
  - BIOS-level hardware virtualization support must be enabled in the BIOS settings.
  - For Windows platform, please install on Windows 10 or above and ensure that Hyper-V is enabled in Windows Features. You can search for “**Turn Windows features on or off**” in windows search box to enable it.
- Have Azure account to be able to access Azure Container Registry to download DMAP docker image.
- Below URL should be whitelisted and accessible from the Docker Container in which DMAP will be installed.
  - Access to Azure Container Registry and permission to PULL images.
  - URL to download the DMAP backend and GUI services after DMAP container is started.  
<https://msmkdmapdisks.blob.core.windows.net/dmapprodexe>
  - Licensing server which DMAP connects to check if user is authorized to run Assessment and Conversion.  
<https://api.cryptlex.com/v3>
- Ports 8080, 5002 should be opened.
- Google Chrome browser to access DMAP.

### 4.2.2 Installation Procedure

Follow below installation procedure to complete installation of DMAP.

- Download docker software from docker official website (based on your operating system) and install it, if not installed already.
- Install Azure CLI utility from <https://docs.microsoft.com/en-us/cli/azure/install-azure-cli> , if not installed already.

- Make sure you have access to Azure Container Registry (ACR) with permission to PULL images with roles that are assigned any one of the following:

**Owner, Contributor, Reader, AcrPush, AcrPull** or custom role.

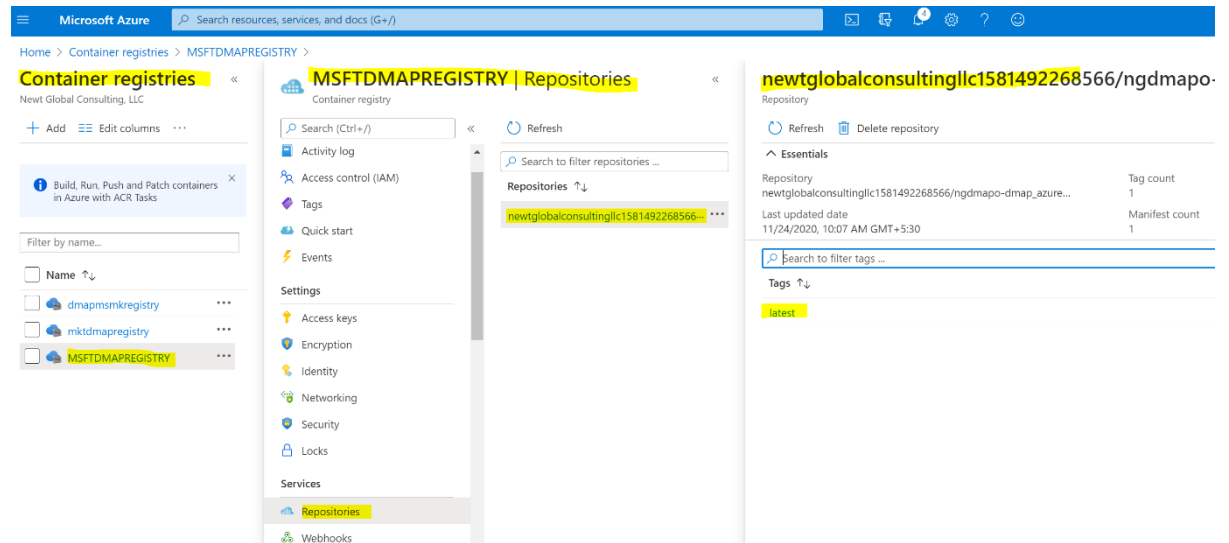
- Open terminal or command prompt and run below command.  
`az login`

This will take you to browser and prompt to enter Azure login credentials. Once successfully logged in, command prompt will show success message.

- Next, run below command.  
`az acr login --name <??azure_container_registry_name??>`

This will verify your ACR access. Once successfully logged in, command prompt will show success message.

`<??azure_container_registry_name??>` is name of the azure container registry in which DMAP docker image has been pulled into from Marketplace. This was setup while creating **Azure Container Registry** in section 3. For reference, see below image.

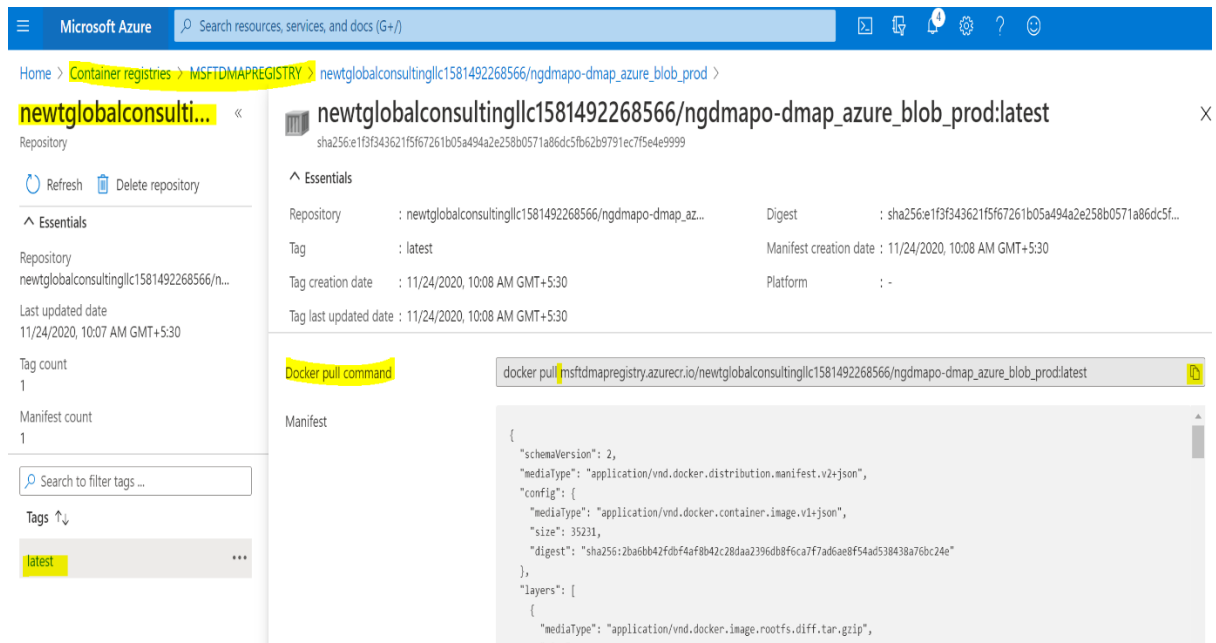


- After successfully logging into ACR, run the below to pull the DMAP docker image.  
`docker pull <??image_name??>:<??tag??>`  
a. `<??image_name??>` - name of the docker image



b. `<??tag??>` - tag name

Above values can be referenced from the azure portal. Or simply click on the **copy** icon to copy the entire pull command and execute it on your terminal or command prompt.



- To check the image is pulled from docker registry, run the below command to view the list of all the downloaded images.

`docker images`

- To create a container and run the DMAP image in container first time, run the below command.

`docker run -d -it -p 5002:5002 -p 8080:8080 --name=dmap_c <??downloaded_docker_image_name??>:<??tag??>`

- `<??downloaded_docker_image_name??>` - name of the downloaded docker image
- `<??tag??>` - tag name

Above values can be retrieved by executing command `docker images` which lists down downloaded docker images with details such as name, tag and so on.

- To start the DMAP container (if this is not the first time), run below command.  
`docker start dmap_c`

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- To stop the DMAP container (if this is not the first time), run below command. Please do not stop the container, if you are using the DMAP.

`docker stop dmap_c`

**Note:** `dmap_c` is the name of the container, you can give any name of your choice.

- When DMAP container is started, it will download fresh binary files for GUI and backend services for the first time. In subsequent runs, it checks if a newer version is available and downloads it from Azure BLOB storage. So, depending upon speed of your internet, please wait for 5 – 15 minutes for DMAP to download these files and then proceed to next step to open the login page.

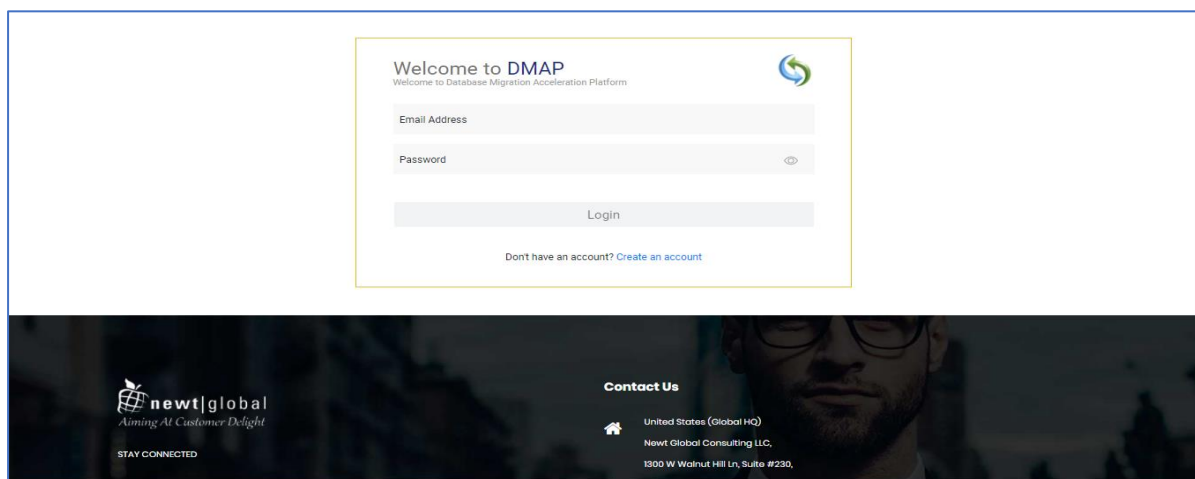
### 4.2.3 Accessing DMAP

#### Login

Open Google Chrome web browser from your workstation. Next, enter below URL in web browser to access DMAP:

- `http://localhost:8080/DMAP`

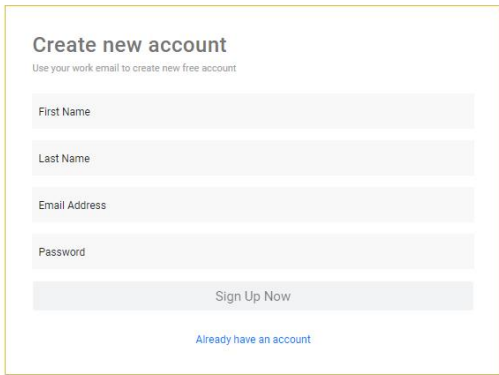
Enter username and password to login. If you do not have username and password setup yet, then refer APPENDIX to create user account and activate license.



## 5. Appendix

### 5.1 Create Account

First time user is required to create a new account by clicking **“Create an account”** link on the Login page. Only one user account is allowed per DMAP container. For additional users (if license permits), please install and setup DMAP separately on their workstations.



**Create new account**  
 Use your work email to create new free account

First Name

Last Name

Email Address

Password

Sign Up Now

[Already have an account](#)

After signing up, enter the email id in the **“Email Address”** and password in the **“Password”** text box of login page. Ensure that email id is entered in a valid email format and click on **“Login”** button.

After successful login, user will be directing to buy license page. To buy a license or renew the license, you must contact DMAP sales team. DMAP sales team details will be shown on the license activation page. **Or alternatively you can enter the license key of Trial license of DMAP if you have one.**

### 5.2 Activate License

For the first time user, user needs to enter License key and accept the License Agreement.

## Welcome to DMAP

Welcome to Database Migration Acceleration Platform

No active license found.

Please contact to our sales team on [dmap@newtglobalcorp.com](mailto:dmap@newtglobalcorp.com) or call us on **+1-410-980-1366** (North America), **+91-9944-221842** (Rest of the World) or visit our website ([click here](#)) to start a trial license or to buy a license.

Enter License key

You must accept [DMAP license policy](#) to use this application

☐ Accept License Agreement ☐ Decline License Agreement

Activate Licensee

**Note:** Trial or Commercial license will be shared and explained separately by sales team. You can reach out to Sales team through email ([dmap@newtglobalcorp.com](mailto:dmap@newtglobalcorp.com)) or call us on +1-410-980-1366 (North America), +91-9944-221842 (Rest of the World) or by visiting our website (<https://newtglobal.com/platform-enquiry>) to submit below enquiry form with your request.

Next, click on **Activate License** button which will direct you to **Get Started with Migration** Page. To use DMAP, please refer to the User Guide provided to you.

## 6. Support

For immediate assistance, please contact below during US or India hours as indicated below:

### **Sumeet Sawhney (Irving, TX)**

Phone: +1 937 750 7549

Email: [sumeets@newtglobalcorp.com](mailto:sumeets@newtglobalcorp.com)

### **Debendra Kumar Saha (Chennai, India)**

Phone: +91 9823 05 0763

Email: [debendrak@newtglobalcorp.com](mailto:debendrak@newtglobalcorp.com)