

How to deploy xdm App Server Container to Azure App Service?

1. Complete the Tutorial of "Install Semarchy xDM on Docker"
<https://www.semarchy.com/tutorials-content/quick-install-docker/#0>
2. Modify the docker-compose.yml, we will be pointing to an existing Azure SQL DB instead of spinning up a postgres DB

```
version: '3.8'

networks:

  semarchy-net:

    driver: bridge

services:

  semarchy-appserver-azure:

    image: semarchy/xdm:latest

    ports:

      - '8088:8080'

    networks:

      - semarchy-net

    healthcheck:

      test: ["CMD", "curl", "-f", "http://semarchy-appserver-azure:8088/semarchy/api/rest/probes/started"]

    environment:

      # Repository connection, pointing to the semarchy-database service.
      # Reconfigure this connection to use a separate database.
      # Azure Database for PostgreSQL
      # Azure SQL Database
      - XDM_REPOSITORY_DRIVER=com.microsoft.sqlserver.jdbc.SQLServerDriver
      -
      XDM_REPOSITORY_URL=jdbc:sqlserver://azuresqldb.database.windows.net:1433;databaseName=sem
      archy_repository
      - XDM_REPOSITORY_USERNAME=semarchy_repository
      - XDM_REPOSITORY_PASSWORD=(Your Password)
      # Repository read-only datasource credentials
      - XDM_REPOSITORY_READONLY_USERNAME=semarchy_repository_ro
      - XDM_REPOSITORY_READONLY_PASSWORD=(Your Password)
      # Setup Token
```

```
# - SEMARCHY_SETUP_TOKEN=mySecretValue

# Add other startup configuration properties below. For example, secrets management
configuration

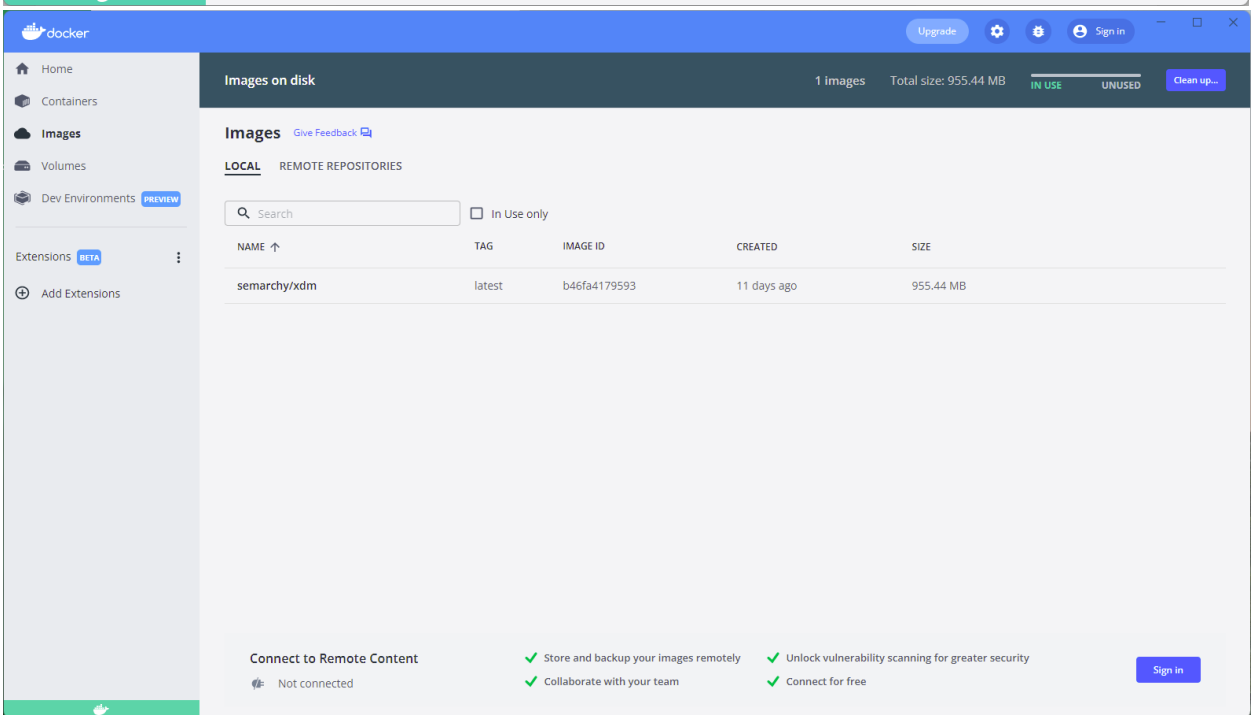
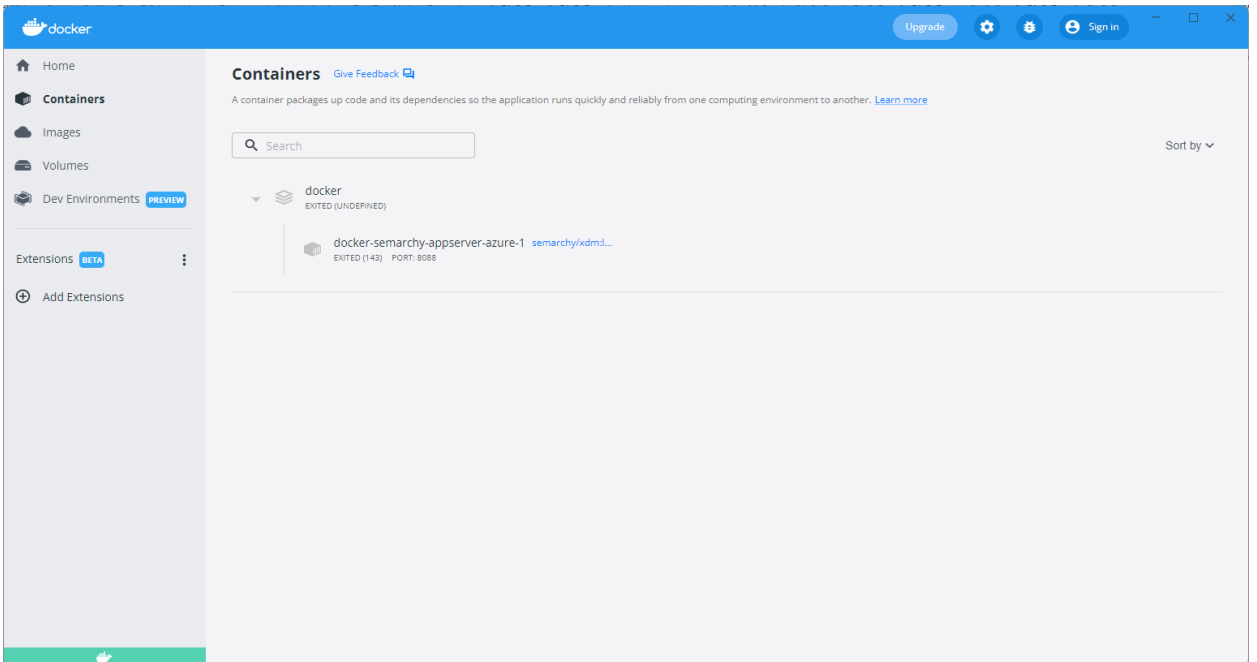
# See http://semarchy.com/doc/semarchy-xdm/xdm/5.3/Install/startup-configuration.html

volumes:

# Volume for additional JAR libraries
- ./additional-libraries:/usr/local/tomcat/additional-libraries
```

3. Run the following command, a docker container and image will be stored in the local docker desktop:

```
docker compose up --attach semarchy-appserver-azure --no-log-prefix
```



4. Create a Container Registry in Azure, say apac4xdm

[Home](#) > [Container registries](#) >

Create container registry ...

Basics Networking Encryption Tags Review + create

Azure Container Registry allows you to build, store, and manage container images and artifacts in a private registry for all types of container deployments. Use Azure container registries with your existing container development and deployment pipelines. Use Azure Container Registry Tasks to build container images in Azure on-demand, or automate builds triggered by source code updates, updates to a container's base image, or timers. [Learn more](#)

Project details

Subscription *	<div>Semarchy Corporate Azure Subscription</div>
Resource group *	<div></div> <div>Create new</div>

Instance details

Registry name *	<div>Enter the name</div> <div>.azurecr.io</div>
Location *	<div>East Asia</div>
Availability zones ⓘ	<div><input type="checkbox"/> Enabled</div> <div>i Availability zones are enabled on premium registries and in regions that support availability zones. Learn more</div>
SKU * ⓘ	<div>Standard</div>

Review + create

< Previous

Next: Networking >

5. Install the Azure Command Line

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

6. Login to Azure Container Registry in Command Prompt

```
C:\>az login
```

```
C:\>az acr login --name apac4registry
Login Succeeded
```

7. Create an Access Keys in Container Registry

The screenshot shows the 'Access keys' page for the 'apac4registry' Container Registry. The left sidebar contains navigation links: Overview, Activity log, Access control (IAM), Tags, Quick start, Events, Settings (highlighted), Access keys (highlighted), Encryption, Identity, Networking, Security, Locks, Services (Repositories, Webhooks, Replications, Tasks, Connected registries (Preview)), Repository permissions (Tokens (Preview), Scope maps (Preview)), and Policies.

The main content area displays the following configuration:

- Registry name: apac4registry
- Login server: apac4registry.azurecr.io
- Admin user: Enabled
- Username: apac4registry
- Access keys table:

Name	Password	Regenerate
password	[password field]	[Regenerate icon]
password2	[password field]	[Regenerate icon]

8. Login to the Container Registry using the Access Keys as passwords

```
C:\>docker login apac4registry.azurecr.io
Username: apac4registry
Password:
Login Succeeded

C:\>docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
semarchy/xdm        latest       4d3c2d55998e     6 days ago      955MB
```

9. Tag the local docker image to Azure Container Registry

```
C:\>docker tag semarchy/xdm:latest apac4registry.azurecr.io/semarchy/xdm

C:\>docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
apac4registry.azurecr.io/semarchy/xdm  latest       4d3c2d55998e     6 days ago      955MB
semarchy/xdm        latest       4d3c2d55998e     6 days ago      955MB
```

10. Push the docker local image onto Azure Container Registry

```
C:\>docker push apac4registry.azurecr.io/semarchy/xdm
```

Then you can see the Repositories of the Azure Container Registry contains those docker image

Home > apac4registry

apac4registry | Repositories ☆ ...

Container registry



Refresh

Overview

Activity log

Access control (IAM)

Tags

Quick start

Events

Settings

Access keys

Encryption

Identity

Networking

Security

Locks

Services

Repositories

Webhooks

Replications

Tasks

Connected registries (Preview)

Repositories ↑↓

[semarchy/xdm](#)

10 . Create the web App for xdm, choose Docker Container

[Home](#) > [App Services](#) >

Create Web App ...

platform to perform infrastructure maintenance. [Learn more](#) ↗

Project Details

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

Subscription * ⓘ

Resource Group * ⓘ [Create new](#)

Instance Details

Need a database? [Try the new Web + Database experience.](#) ↗

Name * .azurewebsites.net

Publish * ☐ Code ☒ Docker Container ☐ Static Web App

Operating System * ☒ Linux ☐ Windows

Region *
 ⓘ Not finding your App Service Plan? Try a different region or select your App Service Environment.

App Service Plan

App Service plan pricing tier determines the location, features, cost and compute resources associated with your app. [Learn more](#) ↗

Linux Plan (East Asia) * ⓘ [Create new](#)

Sku and size * **Premium V2 P1v2**
210 total ACU, 3.5 GB memory

Zero redundancy

Home > App Services >

Create Web App ...

Basics Docker Networking (preview) Monitoring Tags Review + create

Pull container images from Azure Container Registry, Docker Hub or a private Docker repository. App Service will deploy the containerized app with your preferred dependencies to production in seconds.

Options	Single Container
Image Source	Azure Container Registry
Azure container registry options	
Registry *	apac4registry
Image *	semarchy/xdm
Tag *	latest
Startup Command ⓘ	catalina.sh run

11. Configure the App Service Application Settings, here are environment variables needed for Azure SQL Database, refer to the values in your docker-compose.yml file.

Home > App Services > apac4xdm

apac4xdm | Configuration

Search (Ctrl+F) Refresh Save Discard Leave Feedback

Application settings General settings Path mappings

Application settings

Application settings are encrypted at rest and transmitted over an encrypted channel. You can choose to display them in plain text in your browser by using the controls below. Application Settings are exposed as environment variables for access by your application at runtime. [Learn more](#)

+ New application setting Show values Advanced edit

Filter application settings

Name	Value	Source	Deployment slot setting	Delete	Edit
DOCKER_REGISTRY_SERVER_PASSWORD	Hidden value. Click to show value	App Service Config			
DOCKER_REGISTRY_SERVER_URL	Hidden value. Click to show value	App Service Config			
DOCKER_REGISTRY_SERVER_USERNAME	Hidden value. Click to show value	App Service Config			
WEBSITES_ENABLE_APP_SERVICE_STORAGE	Hidden value. Click to show value	App Service Config			
XDM_REPOSITORY_DRIVER	Hidden value. Click to show value	App Service Config			
XDM_REPOSITORY_PASSWORD	Hidden value. Click to show value	App Service Config			
XDM_REPOSITORY_READONLY_PASSWORD	Hidden value. Click to show value	App Service Config			
XDM_REPOSITORY_READONLY_USERNAME	Hidden value. Click to show value	App Service Config			
XDM_REPOSITORY_URL	Hidden value. Click to show value	App Service Config			
XDM_REPOSITORY_USERNAME	Hidden value. Click to show value	App Service Config			

Connection strings

Connection strings are encrypted at rest and transmitted over an encrypted channel.

Make sure setting-up firewall rules on the Azure SQL DB that allows the App Service to connect

Then start the app service and access <https://apac4xdm.azurewebsites.net/semarchy/login.do>