Using Published DSpace Images on AWS Fargate

This approach is not recommended

It is fairly easy to start DSpace containers in AWS Fargate. AWS Fargate does not permit command line execution within a container, so regular DSpace command line tasks cannot be run.

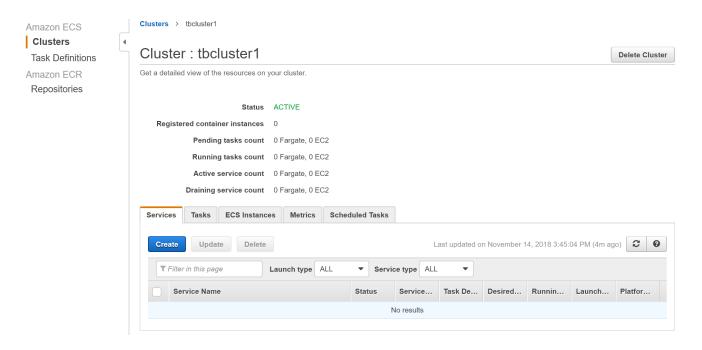
See https://stackoverflow.com/questions/52310447/is-it-possible-to-ssh-into-fargate-manged-container-instances/52310862#52310862

I verified this limitation in a conversation with an AWS Developer Advocate.

- Create an ECS Cluster (specify Fargate when creating the cluster)
- Create a Task Definition named "dspace" using "awsvpc" mode
- dspace container
- dspacedb container
- Select "Run Task" to start your task within the cluster you created.
- Customize the Security Group then Click "Run Task".
- Select the running task in order to get its IP address
- Get the public IP address
- Open ip-address:8080/xmlui
- Outstanding Issues

This page describes how to run DSpace docker images on AWS Elastic Container Service (ECS) using AWS Fargate.

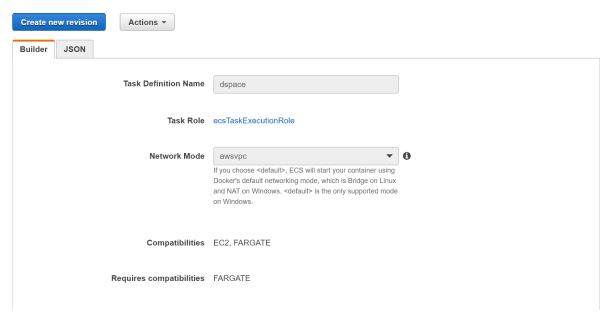
Create an ECS Cluster (specify Fargate when creating the cluster)



Create a Task Definition named "dspace" using "awsvpc" mode

Task Definition: dspace:11

View detailed information for your task definition. To modify the task definition, you need to create a new revision and then make the required changes to the task definition



The Task Definition will contain 2 containers "dspace" and "dspacedb"

Task execution IAM role This role is required by tasks to pull container images and publish container logs to Amazon CloudWatch on your behalf. If you do not have the ecsTaskExecutionRole already, we can create one for you. Task execution role ecsTaskExecutionRole Task size The task size allows you to specify a fixed size for your task. Task size is required for tasks using the Fargate launch type and is optional for the EC2 launch type. Container level memory settings are optional when task size is set. Task size is not supported for Windows containers

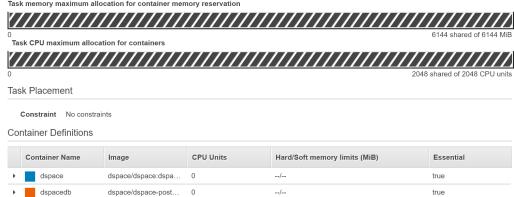
Task memory (MiB) 6144

Task CPU (unit) 2048

dspace/dspace-post...

0

Task memory maximum allocation for container memory reservation



true

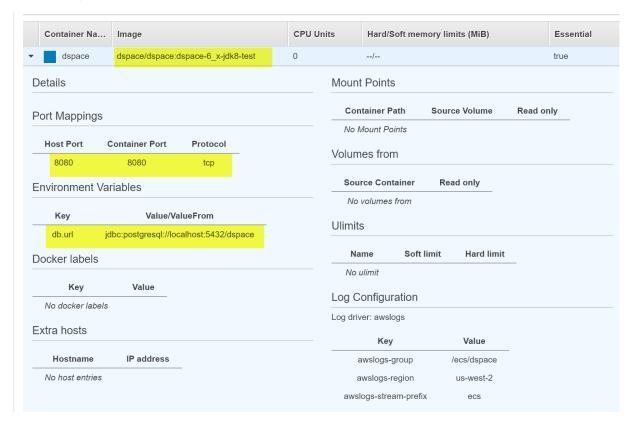
dspace container

This container will be built from dspace/dspace.

The awsvpc networking does not allow containers to be addressed by hostname, so a localhost reference must be used for the database.

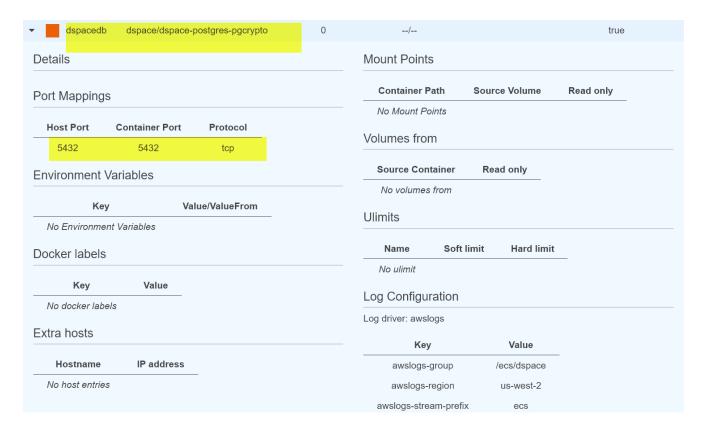
Fortunately, DSpace 6+ allows environment variables to override dspace.cfg and local.cfg settings. Note the override for db.url.

Port 8080 is exposed.



dspacedb container

This container will be built from dspace/dspace-postgres-pgcrypto

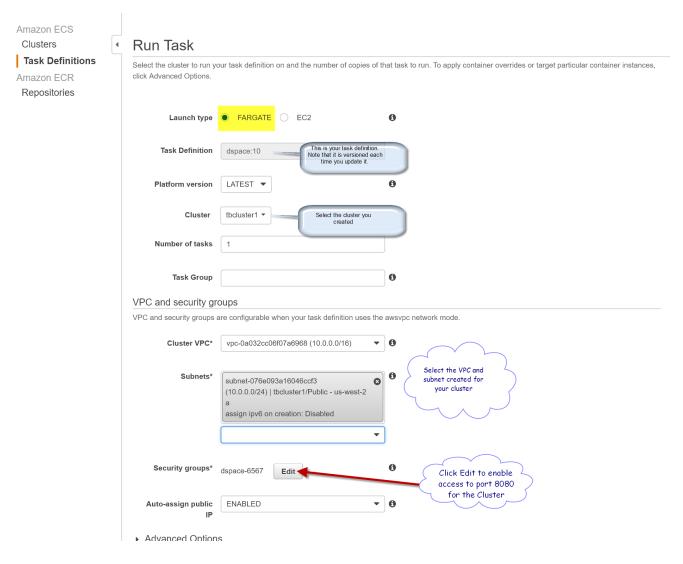


Select "Run Task" to start your task within the cluster you created.

Specify the Fargate launch type.

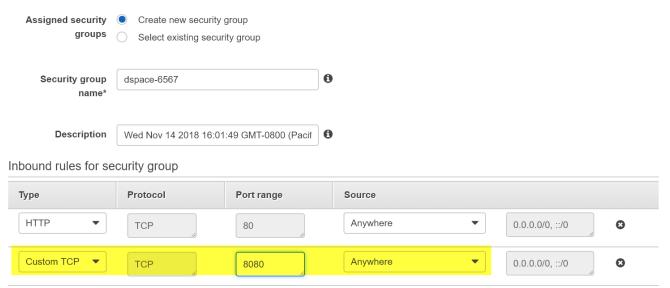
Select the VPC and Subnet associated with your cluster.

Click to Edit the Security Group so that port 8080 will be accessible.



Customize the Security Group then Click "Run Task".

Add rule

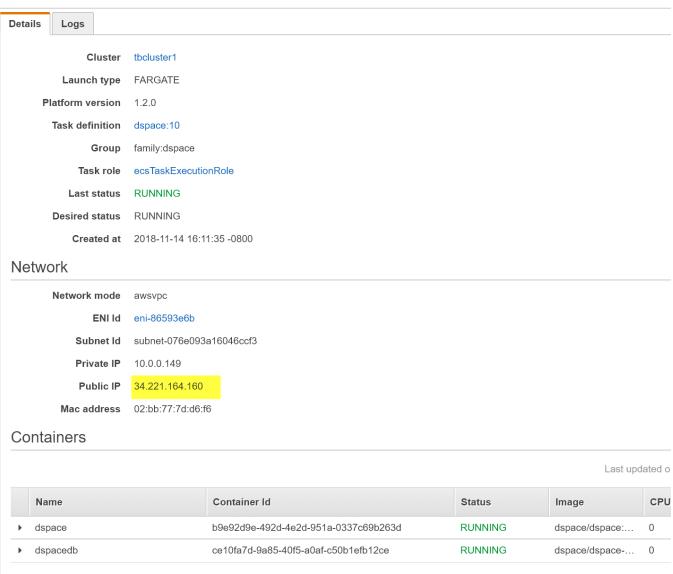


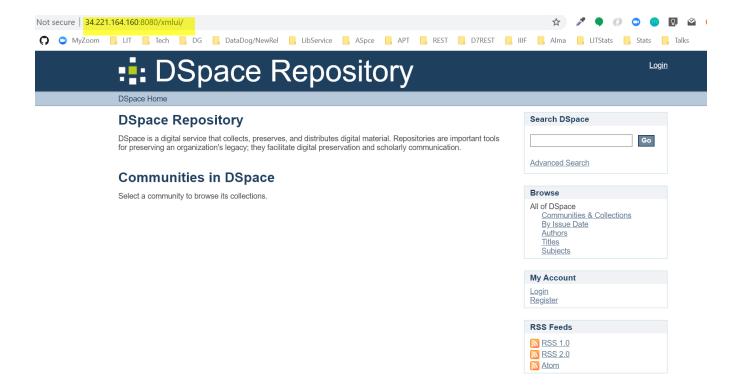
Select the running task in order to get its IP address



Get the public IP address

Task: 03db2c99-2faa-4f6a-827f-586263a6db3f





Outstanding Issues

Currently, we use docker exec to configure administrative permissions and to ingest content within a DSpace instance.

With Fargate deployment, it is unclear how to connect to an ECS container and issue commands within the container.

• https://github.com/aws/amazon-ecs-cli/issues/143