Practical: Publishing an image to AWS ECR

Reading and navigating the AWS documentation and user guides is critical to your success with cloud technologies.

In this activity, you will follow the AWS user guide for *pushing a Docker image to an Amazon ECR private repository*.

Publish to ECR

Step 1: Install the AWS CLI

The guide makes reference to using the AWS command-line interface.

To install the AWS CLI in your Ubuntu 24.04 EC2 instance, run the following commands:

```
sudo apt install unzip
curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "a
wscliv2.zip"
unzip awscliv2.zip
sudo ./aws/install
```

Step 2: Sign in the CLI

Now that the CLI is installed, you need to connect it with our cloud account.

Run the following:

```
$ aws configure sso  --use-device-code
```

The configuration must match these details:

```
SSO session name (Recommended): default
SSO start URL [None]: https://d-97671c4bd0.awsapps.com/start/#/
SSO region [None]: ap-southeast-2
SSO registration scopes [sso:account:access]: sso:account:access
```

Given you are doing this from the shell, at some point, you will need to open **https://device.sso.ap-southeast-2.amazonaws.com/ (https://device.sso.ap-southeast-2.amazonaws.com/)** on your personal computer and enter a code provided to you in the shell.

Be sure to finish it off like this:

```
The only AWS account available to you is: 901444280953
Using the account ID 901444280953
CLI default client Region [None]: ap-southeast-2
CLI default output format [None]:
CLI profile name [CAB432-STUDENT-901444280953]: default
```

The SSO session will expire eventually. The CLI will instruct you to renew the session when needed. It will provide you with instructions.

Step 3: Create a repository in ECR

Following this guide: **Creating an Amazon ECR private repository to store images (https://docs.aws.amazon.com/AmazonECR/latest/userguide/repository-create.html)**

Your repository must be private.

Be sure to name your repository starting with your username, like `n1234567-my-awesome-repo` so it identifies you.

You do not need to turn on any features. Simply name your repository.

Step 4: Push an image to ECR

Following this guide: **Pushing a Docker image to an Amazon ECR private repository (https://docs.aws.amazon.com/AmazonECR/latest/userguide/docker-push-ecr-image.html)**

In step 1 of the guide, it instructs you to run a command. We have filled in the blanks for you:

```
aws ecr get-login-password --region ap-southeast-2 | docker login --username AWS --password-stdin 901444280953.dkr.ecr.ap-southeast-2.amazonaws.com
```

If you have multiple profiles configured for the AWS CLI then you will need to add an appropriate `--profile` option to the `aws` portion of the command, before the `|`. See **AWS Command Line Interface (https://canvas.qut.edu.au/courses/20367/pages/aws-command-line-interface)** for more information about profiles. **You may find tht you need to add `--profile default` even if you only have one profile.**

Alternatively, you could have fetched the commands from the ECR console after creating your repository. There is an orange button labelled as "View push commands". All of the commands needed to push to ECR are listed in the modal that appears.

After tagging your built image and pushing it to ECR, go back to the console and refresh the list of images in your repository.

Step 5: Pulling an image from ECR

Read the following guide: **Pulling an image to your local environment from an Amazon ECR private repository (https://docs.aws.amazon.com/AmazonECR/latest/userguide/docker-pull-ecr-image.html)**