

Amazon Web Services (AWS) Batch

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1 AWS Batch Run

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1.1 Create A Batch Job Definition

Before running batch jobs across EC2 Instances, need to create jobs first. These jobs need to specify:

1. computing requirements: memory and cpu: $vCpus = 1$ and $Memory=7168$ for example
2. which container to pull from (ECR): List the image name: `XXXX7367XXXX.dkr.ecr.us-east-1.amazonaws.com/fanconda` for example
3. job role ARN: `arn:aws:iam::710673677961:role/ecsExecutionRole` to allow for proper in and out from and to the container.

These can be registered programmatically by using boto3: [Boto3 Batch Documentation](#)

In the example below, will register a new job definition:

```
import boto3
import yaml
import pprint

# Load YAML file
son_aws_yaml = "C:/Users/fan/fanwangecon.github.io/_data/aws.yml"
fl_yaml = open(son_aws_yaml)
ls_dict_yaml = yaml.load(fl_yaml, Loader=yaml.BaseLoader)
# Get the first element of the yaml list of dicts
aws_yaml_dict_yaml = ls_dict_yaml[0]

# Use AWS Personal Access Keys etc to start boto3 client
aws_batch = boto3.client('batch',
    aws_access_key_id=aws_yaml_dict_yaml['aws_access_key_id'],
    aws_secret_access_key=aws_yaml_dict_yaml['aws_secret_access_key'],
    region_name=aws_yaml_dict_yaml['region'])
```