Simple Rest Service

AWS CodeBuild

nano | 1a

Big Picture

Step 3: Prerequisites

❧ python 3.x
`brew install python`

https://www.saintlad.com/install-python-3-on-mac/

❧ aws cli 1.16.x
`pip3 install awscli`

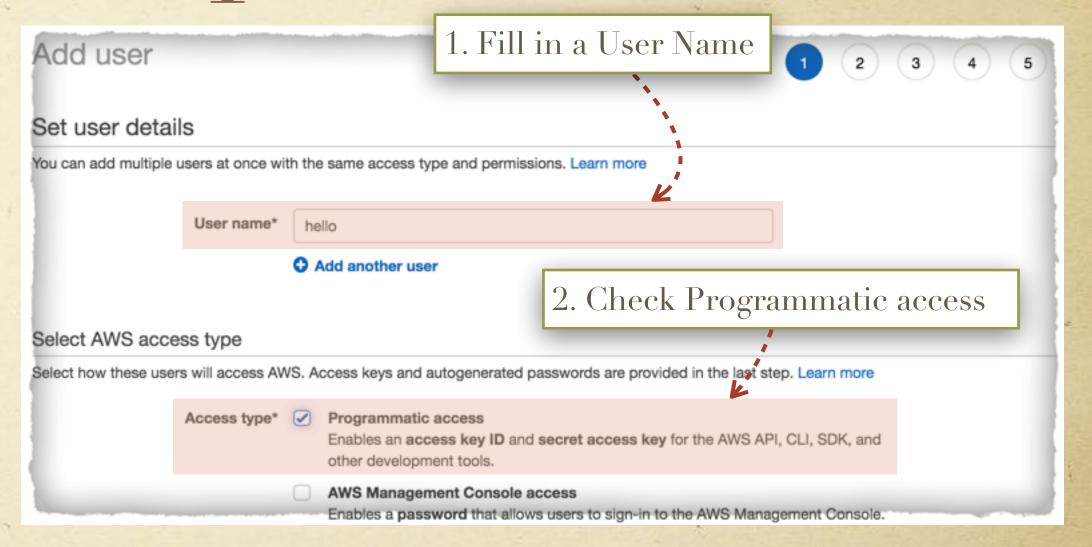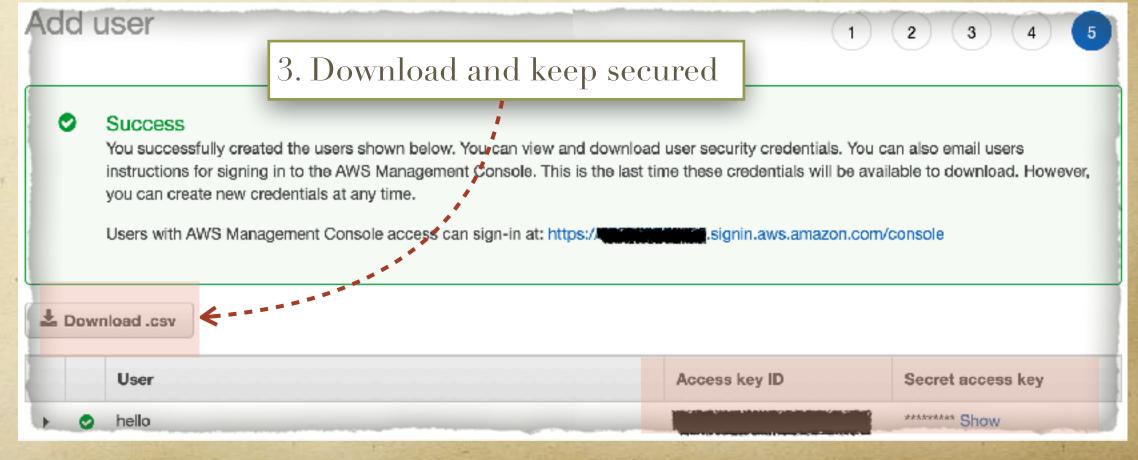https://docs.aws.amazon.com/cli/latest/userguide/install-macos.html

❧ aws user

```
With Programmatic access
iam:PassRole, iam:CreateRole, ecr:*, codebuild:*
inline policies
```

❧ aws role

```
AWSCodeBuildDeveloperAccess policy
CloudWatchLogsFullAccess policy
ecr:* inline policy
```

Add user

1. Fill in a User Name

① ② ③ ④ ⑤

Set user details

You can add multiple users at once with the same access type and permissions. Learn more

User name* | hello

➕ **Add another user**

2. Check Programmatic access

Select AWS access type

Select how these users will access AWS. Access keys and autogenerated passwords are provided in the last step. Learn more

Access type* | ☑ **Programmatic access**
Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

☐ **AWS Management Console access**
Enables a **password** that allows users to sign-in to the AWS Management Console.

Add user

① ② ③ ④ ⑤

3. Download and keep secured

✓ **Success**

You successfully created the users shown below. You can view and download user security credentials. You can also email users instructions for signing in to the AWS Management Console. This is the last time these credentials will be available to download. However, you can create new credentials at any time.

Users with AWS Management Console access can sign-in at: https://██████████.signin.aws.amazon.com/console

⬇ Download .csv

User		Access key ID	Secret access key
▶ ✓	hello		******** Show

Step 3a: Prerequisites

Users > hello

Summary

		Delete user	?

User ARN   arn:aws:iam::▓▓▓▓▓▓▓▓:user/hello
Path   /
Creation time   2019-07-07 12:58 EDT

Permissions | Groups | Tags | Security credentials | Access Advisor

▾ Permissions policies

ℹ **Get started with permissions**
This user doesn't have any permissions yet. Get started by adding the user to a group, copying permissions from another user, or attaching a policy directly. Learn more

Add permissions   ⊕ Add inline policy

4. Add inline policy

Create policy

A policy defines the AWS permissions that you can assign to a user, g

Visual editor	**JSON**

```
1 ▾ {
2        "Version": "2012-10-17",
3 ▾      "Statement": [
4 ▾          {
5              "Sid": "VisualEditor0",
6              "Effect": "Allow",
7 ▾          "Action": [
8                  "iam:PassRole",
9                  "iam:CreateRole",
10                 "ecr:*",
11                 "codebuild:*"
12             ],
13             "Resource": "*"
14         }
15     ]
16 }
17
```

5. Add IAM, ECR and CodeBuild

Create policy

6. Name inline policy

Review policy

Before you create this policy, provide the required information and review this policy.

Name*   ecr-codebase-policy

Maximum 128 characters. Use alphanumeric and '+=,.@-_' character

Summary

🔍 Filter

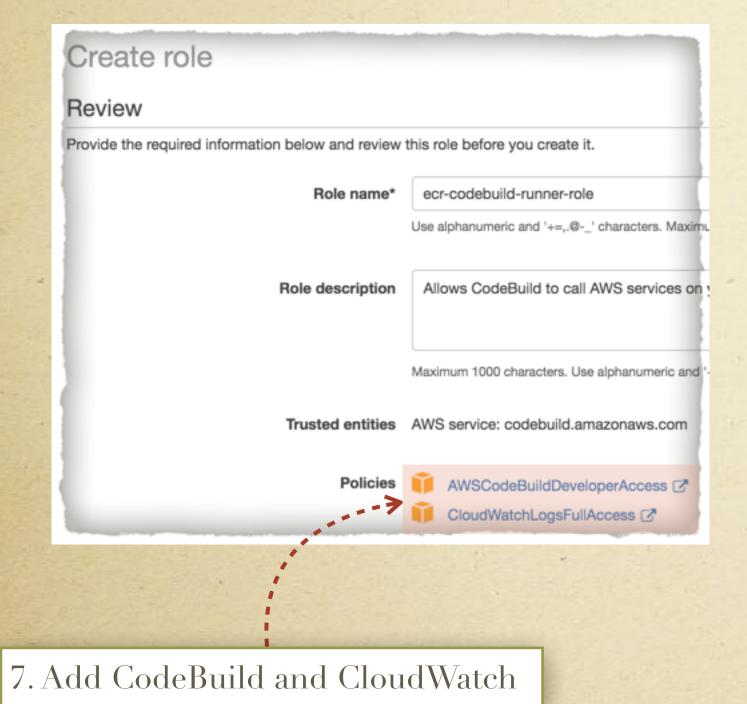| Service ▾	Access level
Allow (3 of 184 services) Show remaining 181	
CodeBuild	Full access
Elastic Container Registry	Full access
IAM	Limited: Write

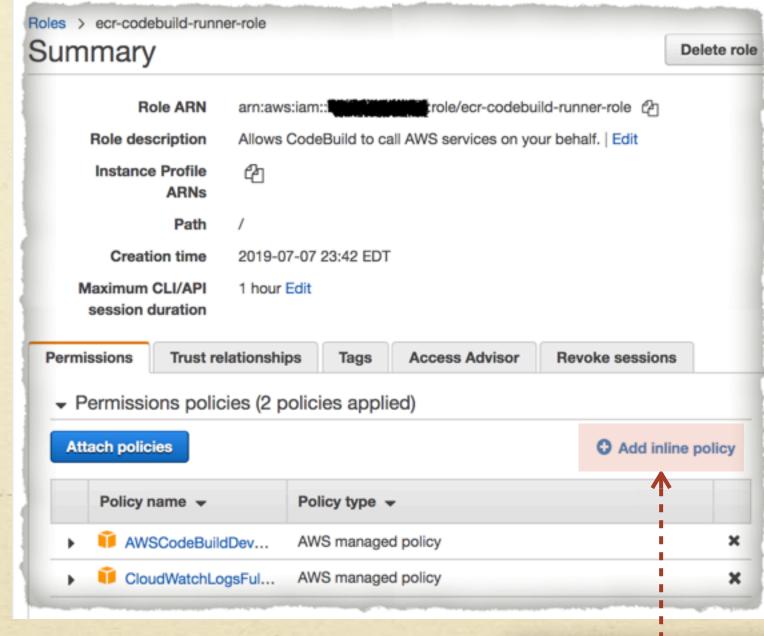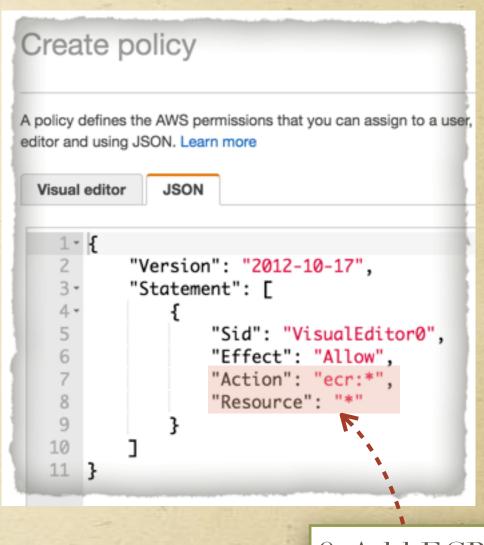```
nano skill bash> aws ecr describe-repositories
{
    "repositories": []
}
nano skill bash> █
```
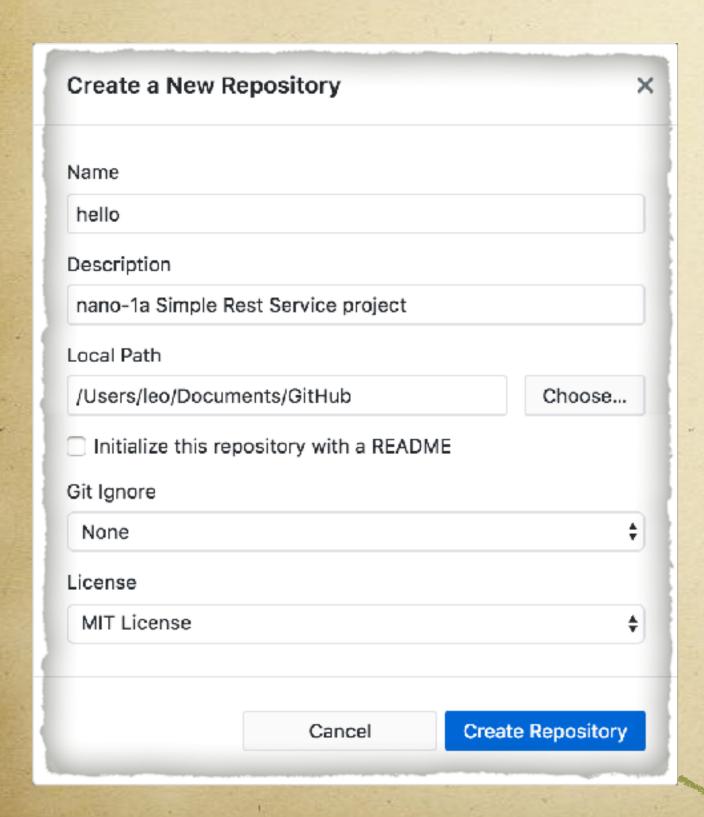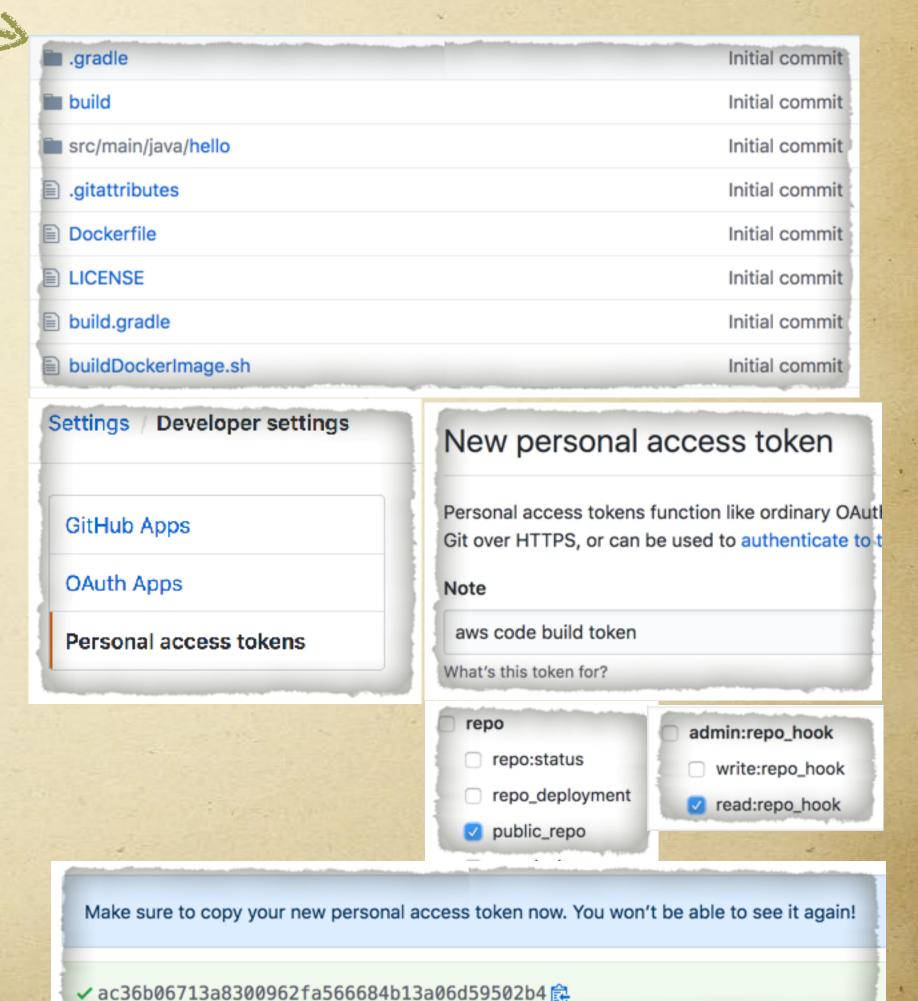
# Step 3b: Prerequisites



7. Add CodeBuild and CloudWatch

8. Add inline policy

9. Add ECR

# Step 3c: Prepare the Source Code

```
[nano skill bash> mv hello ..
nano skill bash> 
```

Create a New Repository   ✕

Name

hello

Description

nano-1a Simple Rest Service project

Local Path

/Users/leo/Documents/GitHub   Choose...

☐ Initialize this repository with a README

Git Ignore

None   ⬍

License

MIT License   ⬍

Cancel   **Create Repository**

Publish Repository   ✕

GitHub.com   GitHub Enterprise Server

Name

hello

Description

nano-1a Simple Rest Service project

☐ Keep this code private

Cancel   **Publish Repository**

10. Make repository Public

View on GitHub

☁ **Publish repository**
Publish this repository to GitHub

📁 .gradle   Initial commit
📁 build   Initial commit
📁 src/main/java/hello   Initial commit
📄 .gitattributes   Initial commit
📄 Dockerfile   Initial commit
📄 LICENSE   Initial commit
📄 build.gradle   Initial commit
📄 buildDockerImage.sh   Initial commit

Settings   **Developer settings**

GitHub Apps

OAuth Apps

Personal access tokens

New personal access token

Personal access tokens function like ordinary OAuth
Git over HTTPS, or can be used to authenticate to t

Note

aws code build token

What's this token for?

☐ repo   admin:repo_hook
  ☐ repo:status   ☐ write:repo_hook
  ☐ repo_deployment   ☑ read:repo_hook
  ☑ public_repo

Make sure to copy your new personal access token now. You won't be able to see it again!

✓ ac36b06713a8300962fa566684b13a06d59502b4 📋

Step 4: ECR + Code Build

- Add BuildSpec.yml

- Create ECR Repository

- Add Code Build Project

  - Link source from GITHUB

- Add Webhook for GITHUB

Test Use-cases

Default Greeting

```
expected='{"id":1,"content":"Hello, World!"}'
actual=$(curl -s "http://localhost:8080/greeting")
```

Customer Greeting

```
expected2='{"id":2,"content":"Hello, User!"}'
actual2=$(curl -s "http://localhost:8080/greeting?name=User")
```