

Building modern applications that align with 12-factor methods

Part 1 - Initial setup instructions

To complete this workshop, you will use an AWS Cloud9 environment as your IDE. In the instructions that follow, we describe the steps required to set up your AWS Cloud9 environment and get ready to implement the workshop.

Note: You must have a default VPC in the region you will run the workshop in. If you do not have a default VPC, please create one by following the instructions at <https://docs.aws.amazon.com/vpc/latest/userguide/default-vpc.html#create-default-vpc>

1. Log on to your AWS account using the provided information.
2. On the AWS Console, click **Services** and type **cloud9** and then press enter.
3. Click **Create environment**



4. For **Environment name** type TollRoadGantryIDE
5. For **Description** type:

Cloud-based IDE for setting up and developing the toll gantry system

Name environment

Environment name and description

Name
The name needs to be unique per user. You can update it at any time in your environment settings.

Limit: 60 characters

Description - Optional
This will appear on your environment's card in your dashboard. You can update it at any time in your environment settings.

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Limit: 200 characters

Cancel
Next step

- Click **Next step**
- On the **Configure settings** page, in the **Environment Settings** panel, select *Create a new instance for environment (EC2)*
- For **Instance type** select *t2.small (2 GiB RAM + 1 vCPU)*
- Click **Next step**

Step 2
Configure settings

Step 3
Review

Environment settings

Environment type [Info](#)
Choose between creating a new EC2 instance for your new environment or connecting directly to your server over SSH.

☒ **Create a new instance for environment (EC2)**
Launch a new instance in this region to run your new environment.

☐ **Connect and run in remote server (SSH)**
Display instructions to connect remotely over SSH and run your new environment.

Instance type

☐ **t2.micro (1 GiB RAM + 1 vCPU)**
Free-tier eligible. Ideal for educational users and exploration.

☒ **t2.small (2 GiB RAM + 1 vCPU)**
Recommended for small-sized web projects.

☐ **m4.large (8 GiB RAM + 2 vCPU)**
Recommended for production and general-purpose development.

☐ **Other instance type**
Select an instance type.
t2.nano

Cost-saving setting
Choose a predetermined amount of time to auto-hibernate your environment and prevent unnecessary charges. We recommend a hibernation settings of half an hour of no activity to maximize savings.
After 30 minutes (default)

IAM role
AWS Cloud9 creates a service-linked role for you. This allows AWS Cloud9 to call other AWS services on your behalf. You can delete the role from the AWS IAM console once you no longer have any AWS Cloud9 environments. [Learn more](#)

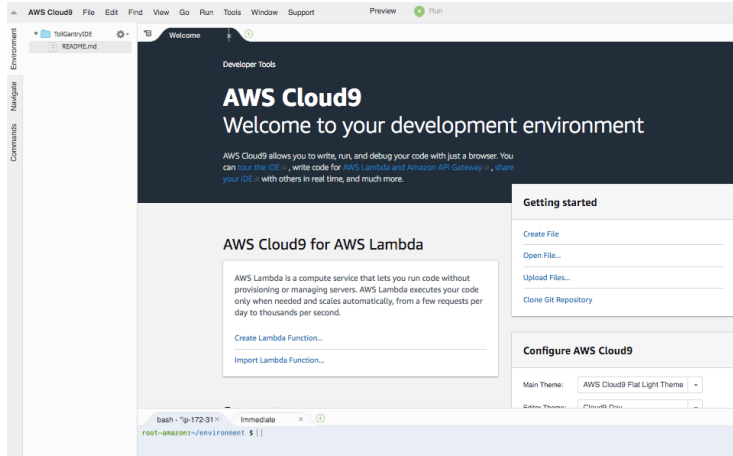
AWSServiceRoleForAWSCloud9

► **Network settings (advanced)**

Cancel
Previous step
Next step

- Review the environment name and settings and click **Create environment** to proceed.

Your new AWS Cloud9 environment will be created automatically, and will take a moment to complete. When it is finished, you will see the IDE in your browser:



Note: Now that now that your IDE is set up, all other tasks for this workshop will be executed on the AWS Cloud9 environment. Do not run the following instructions on your local laptop - instead, run them in the AWS Cloud9 IDE.

11. In the IDE, locate the *bash* terminal in the bottom panel. Run the following command to retrieve and execute a pre-prepared shell script, that will perform the following tasks:
 - Upgrade to the latest version of SAM CLI
 - Upgrade to the latest version of AWS CLI
 - Download the workshop bundle

```
curl -s -L http://bit.ly/2C3EC7P | sh
```

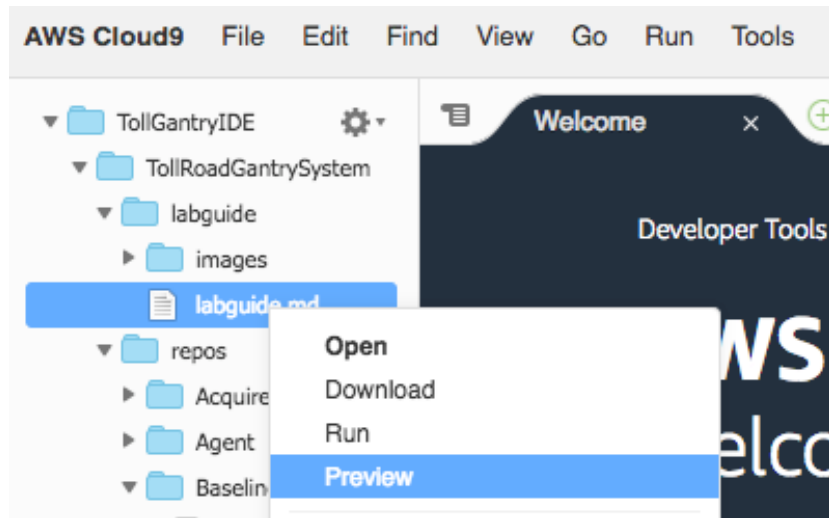
12. We have created a bundle containing the skeleton of the system you are going to implement as part of this lab today. The bundle includes the step-by-step instructions you will follow once you reach the end of this primer document. During the bundle installation process (which you will run on the AWS Cloud9 IDE) you will be asked a series of questions, prompting you to provide data input.

Note: Follow the questions carefully to ensure you provide the correct details.

Note: If you are using a shared account, you must ensure you use a unique project name.

```
sam init --location ~/environment/12FactorWorkshop.zip
```

13. When the bundle customisation is complete, open the lab guide contained in the bundle to start the workshop. You can find the lab guide in the labguide folder of the project. Locate the file, right-click and choose **Preview**:



You're ready to ***Go Build!***