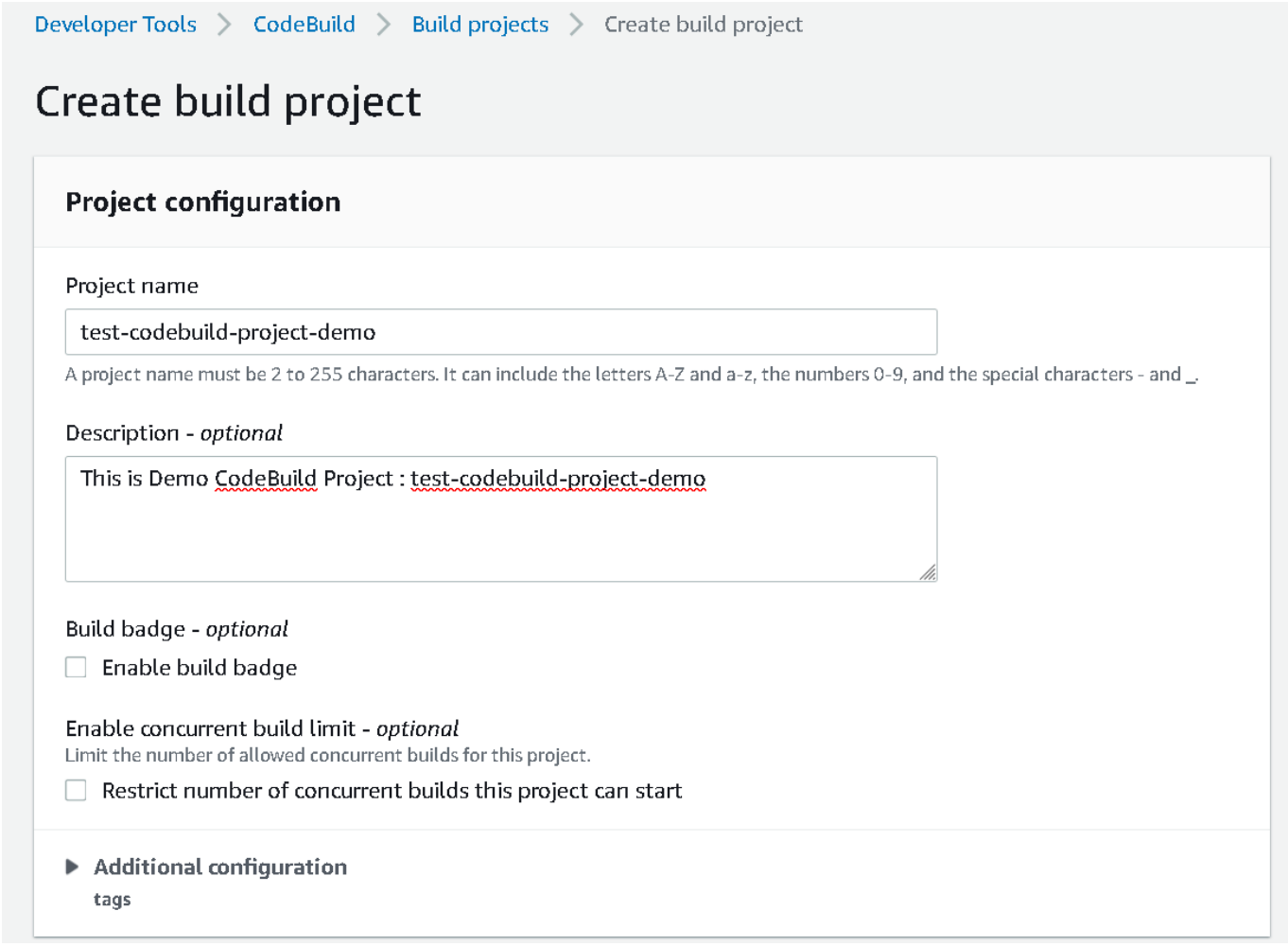
Table of Contents

Create a build project (No Source)

- Navigate to CodeBuild Service and **Create a Project**
- Specify Configuration for below mentioned sections:

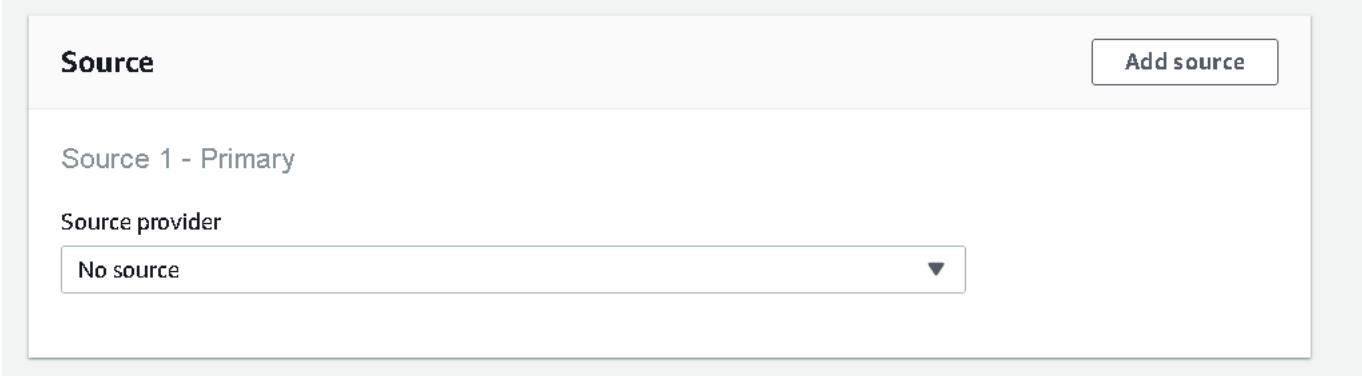
Project configuration

- **Project name**
  - Enter a name for this build project. Build project names must be unique across each AWS account.
- **Description**
  - Enter an optional description of the build project to help other users understand what this project is used for
- **Build badge**
  - Select Enable build badge to make your project's build status visible and embeddable. `Keep Default Option`.
- **Enable concurrent build limit** (Optional)
  - This is used to limit the number of concurrent builds for this project. `Keep Default Option`.



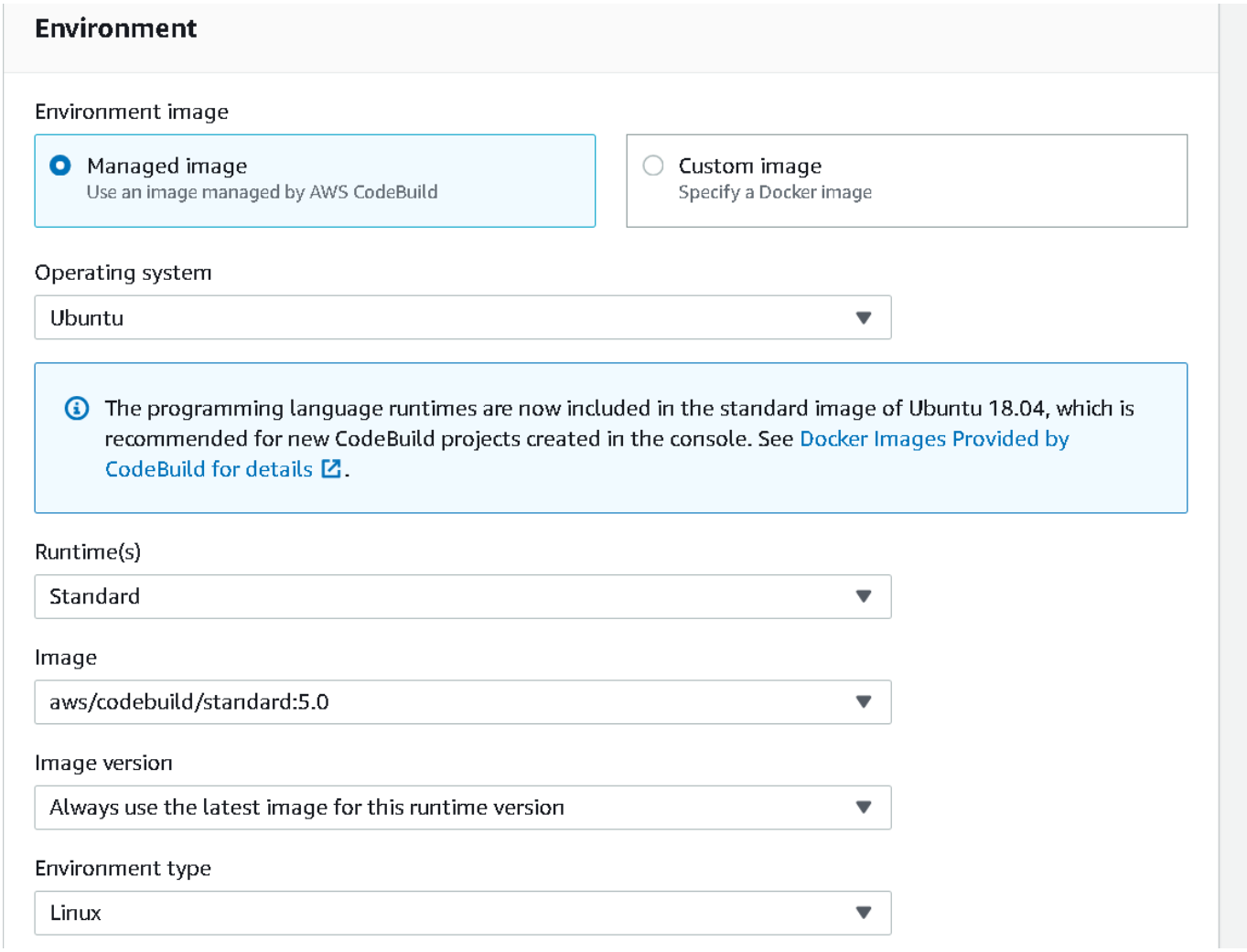
Source

- Choose the source code provider type. For now select : `No Source`

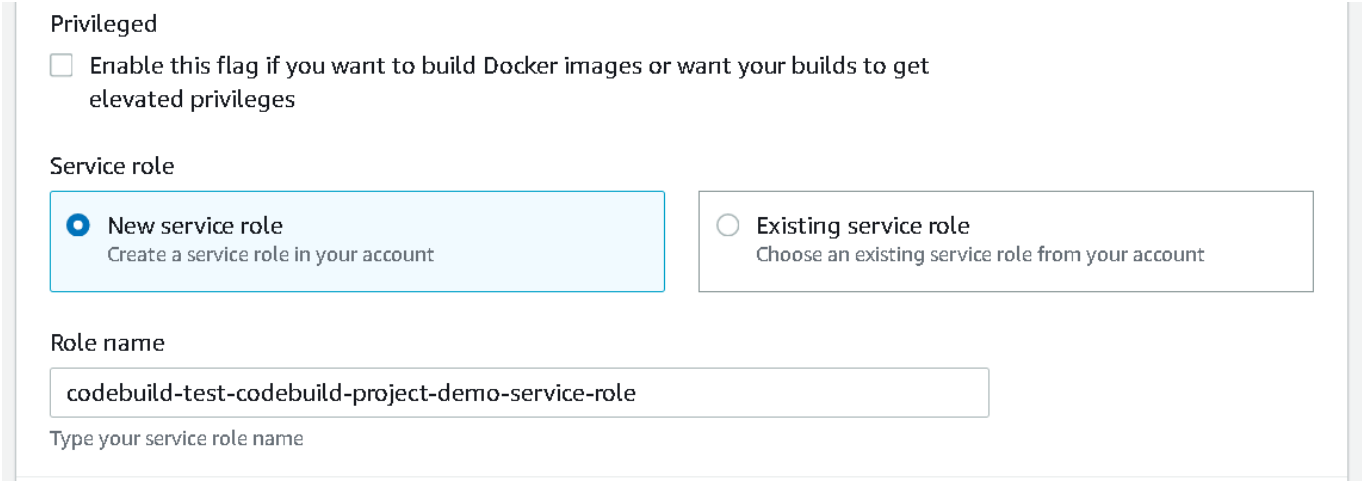


Environment

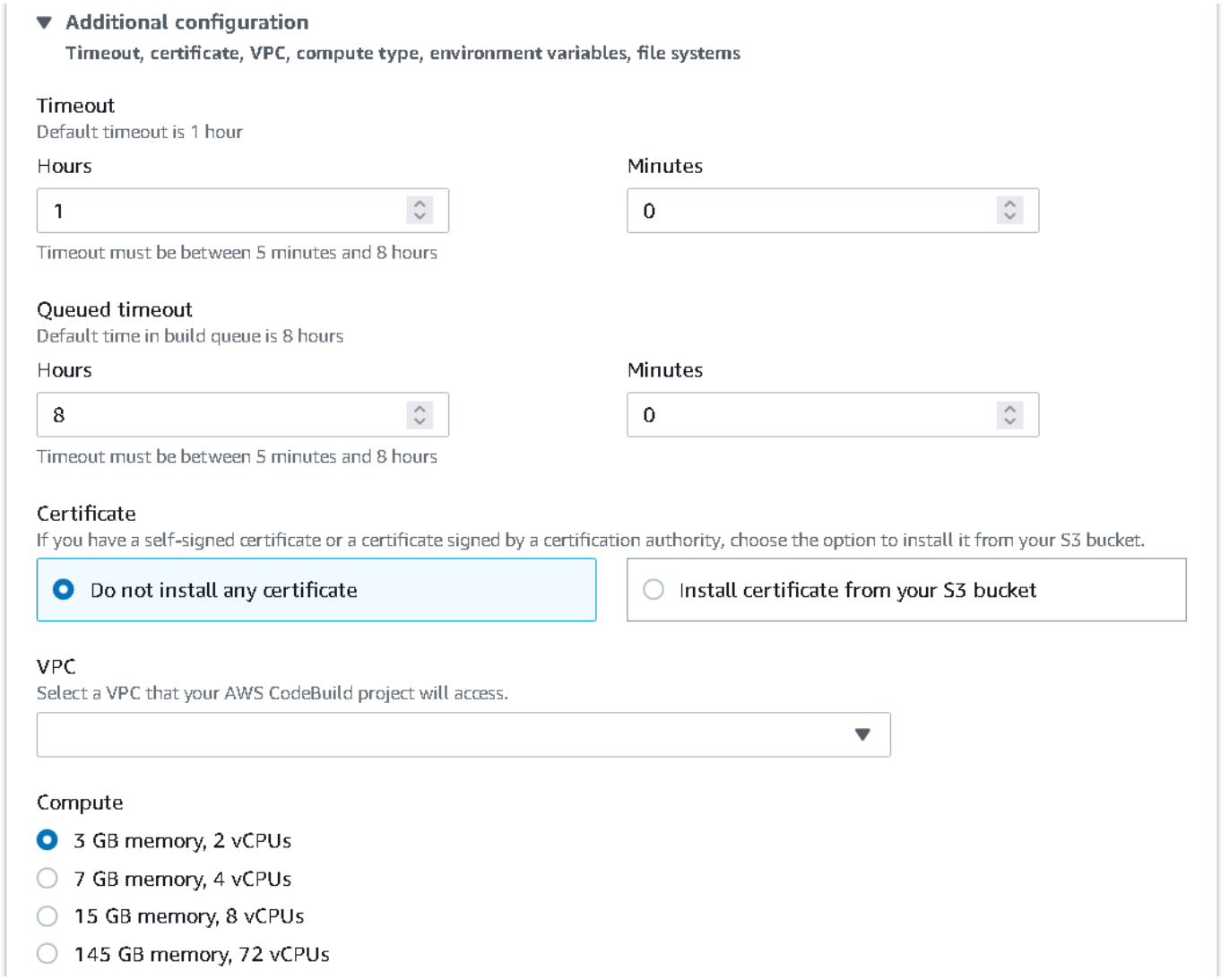
- **Environment image**
  - To use a Docker image managed by AWS CodeBuild, choose **Managed image**, and then make selections from **Operating system** as *Ubuntu*, **Runtime(s)**, **Image** as *aws/codebuild/standard:5.0*, and **Image version**.



- **Privileged**
    - Select Privileged only if you plan to use this build project to build Docker images. This option will be explored later.
- **Service role**
    - Here CodeBuild Project will require a IAM Role with Trust Relationship Document having `codebuild.amazonaws.com`.
    - This Service Role will be attached to CodeBuild Project and the Build Execution will have IAM Permissions as per the Policy attached to this Service Role.
    - Do one of the following:
        - If you do not have a CodeBuild service role, choose **New service role**. In **Role name**, enter a name for the new role
        - If you have a CodeBuild service role, choose **Existing service role**. In **Role ARN**, choose the service role

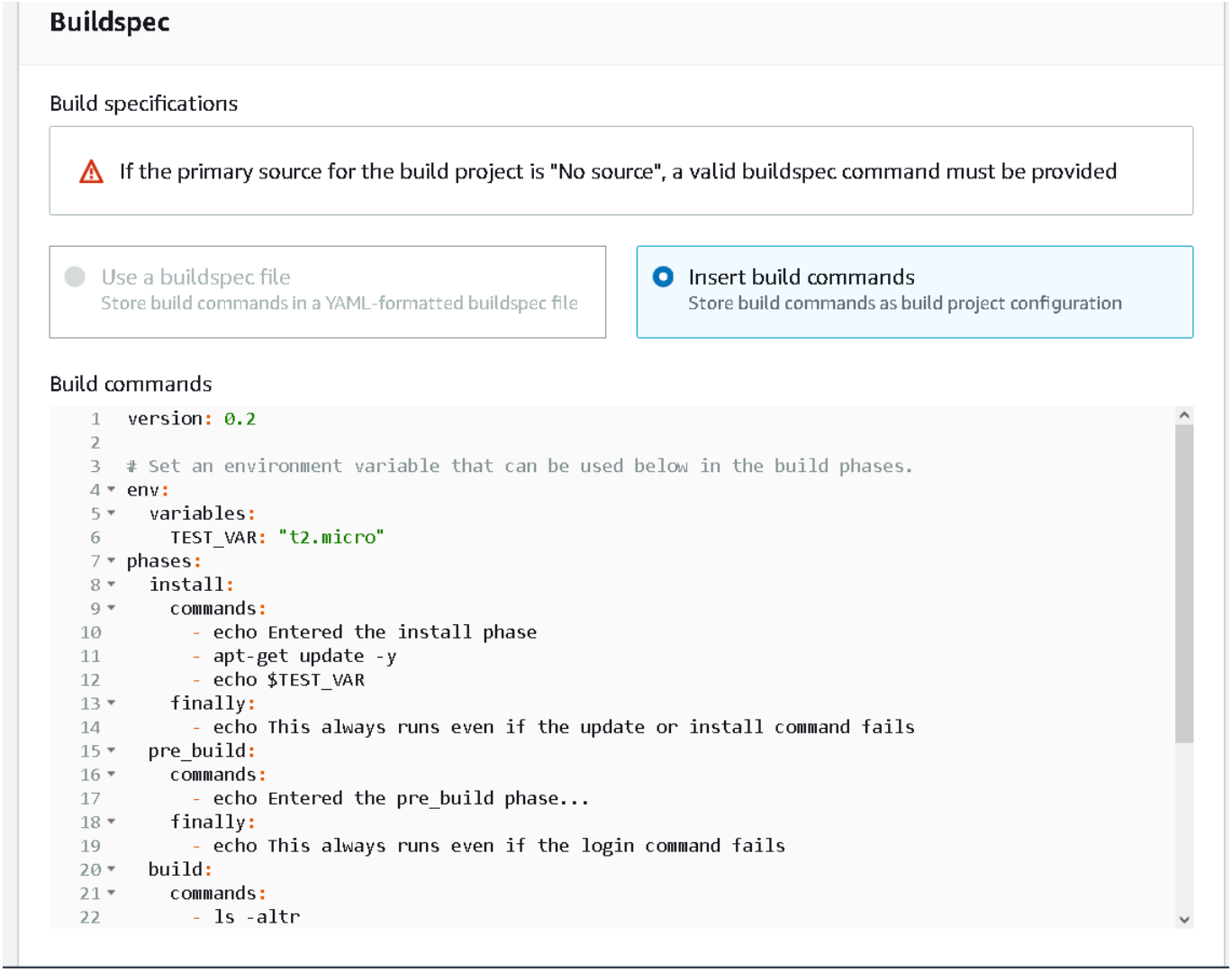


- **Additional Configuration**
  - **Timeout**
    - Specify a value between 5 minutes and 480 minutes (8 hours) after which CodeBuild stops the build if it is not complete.
  - **VPC**
    - Do Not Select any VPC.
  - **Compute**
    - Select **3 GB memory, 2 vCPUs** which comes under Free Tier Limit.
  - **Environment variables**
    - Keep this blank as of now



Buildspec

- **Build specifications**
  - The build specification is a **YAML file** that lets you choose the commands to run at each phase of the build.
  - As we have selected **No Source**, select **Insert build commands**
    - Enter commands you want to run during the build phase.
    - Use the `buildspec-sample.yml` file content to test the Execution Build.



Artifacts

- Artifacts are files generated by Build Execution and can be stored on S3 Bucket.
- Select *No Artifacts* as of now.

Logs

- CodeBuild Execution Logs are stored in CloudWatch Log Group.
- Once above options are configured, select `Create Build Project`

Artifacts

Add artifact

Artifact 1 - Primary

Type

No artifacts

You might choose no artifacts if you are running tests or pushing a Docker image to Amazon ECR.

▶ **Additional configuration**
Cache, encryption key

Logs

CloudWatch

☑ **CloudWatch logs - *optional***
Checking this option will upload build output logs to CloudWatch.

Group name

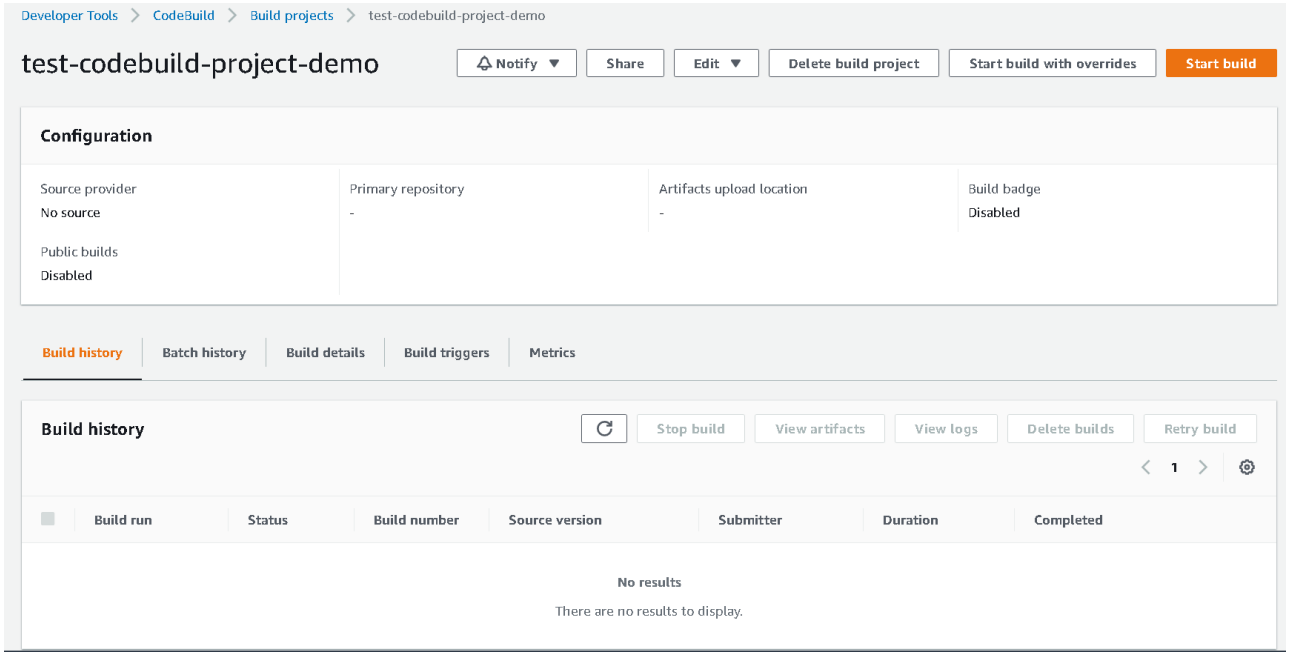
Stream name

S3

☐ **S3 logs - *optional***
Checking this option will upload build output logs to S3.

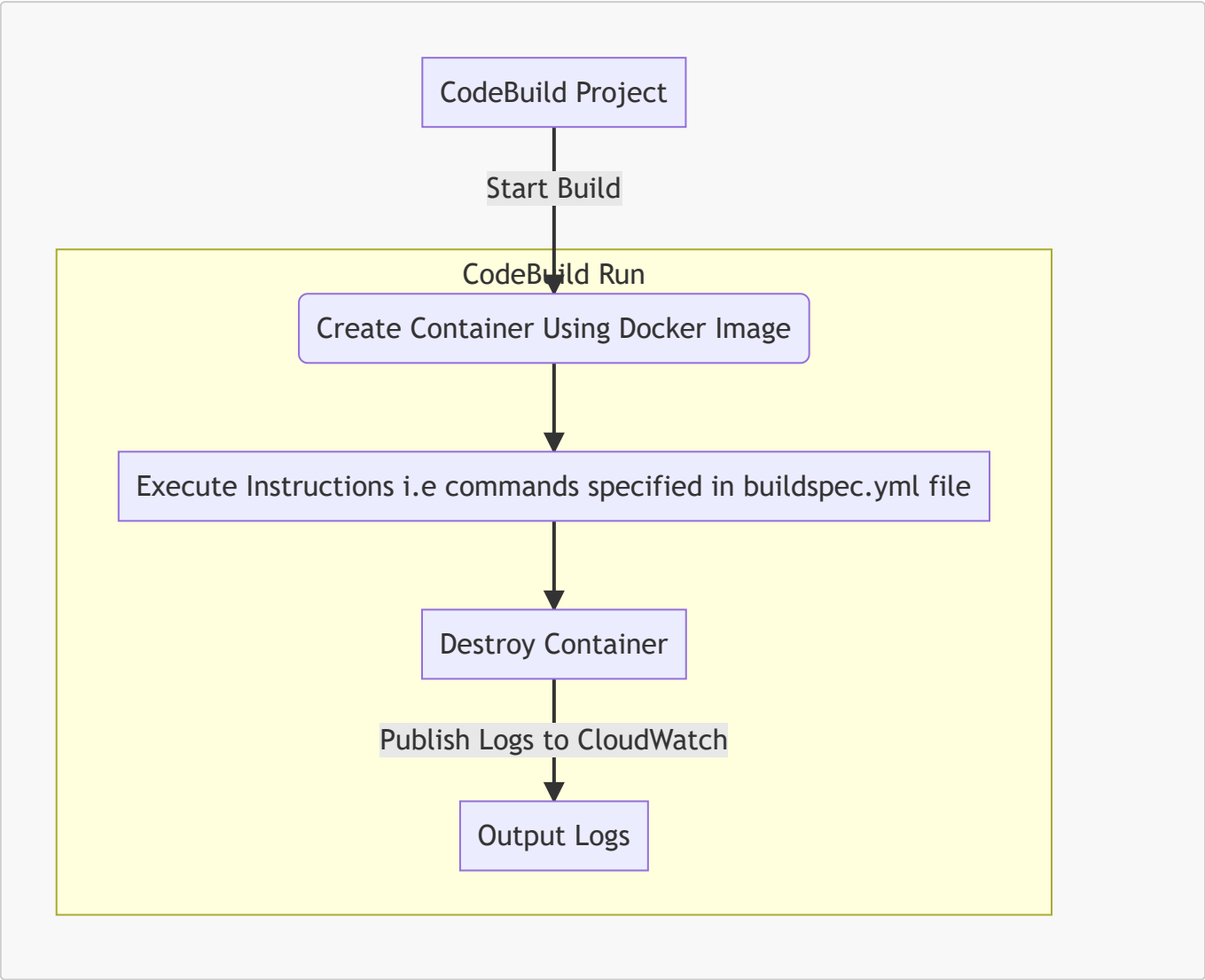
Cancel | **Create build project**

- Navigate to Build Project that is created and execute the same.

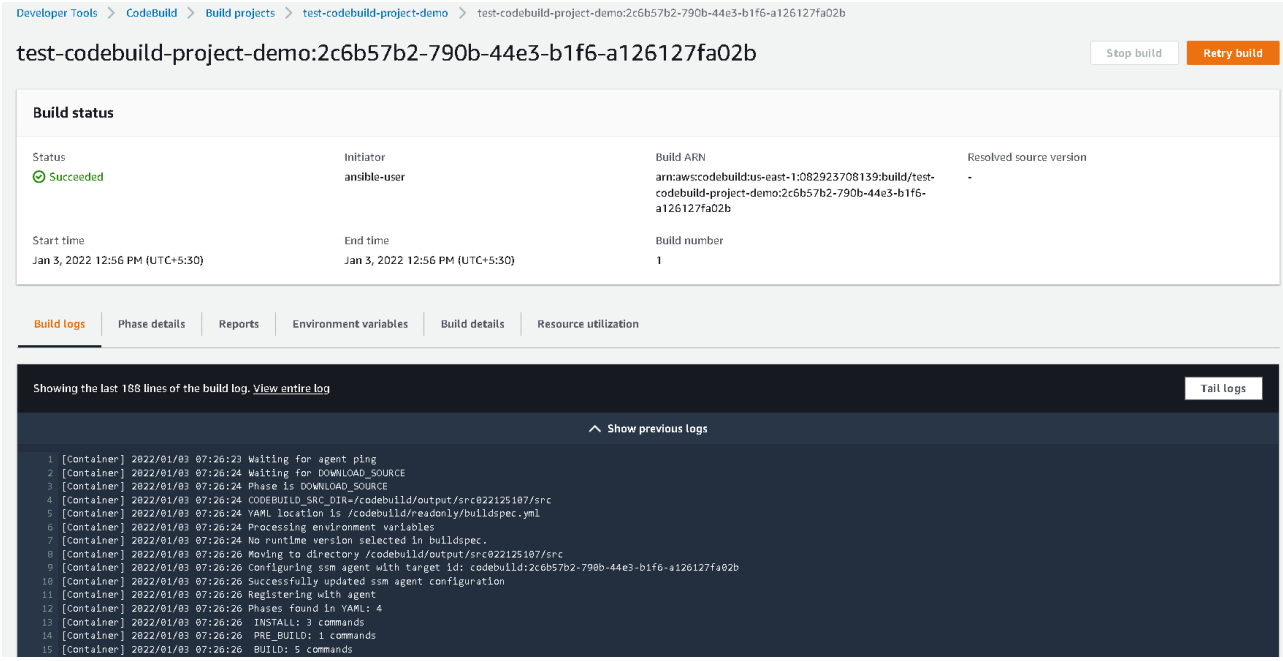


CodeBuild Project Execution:

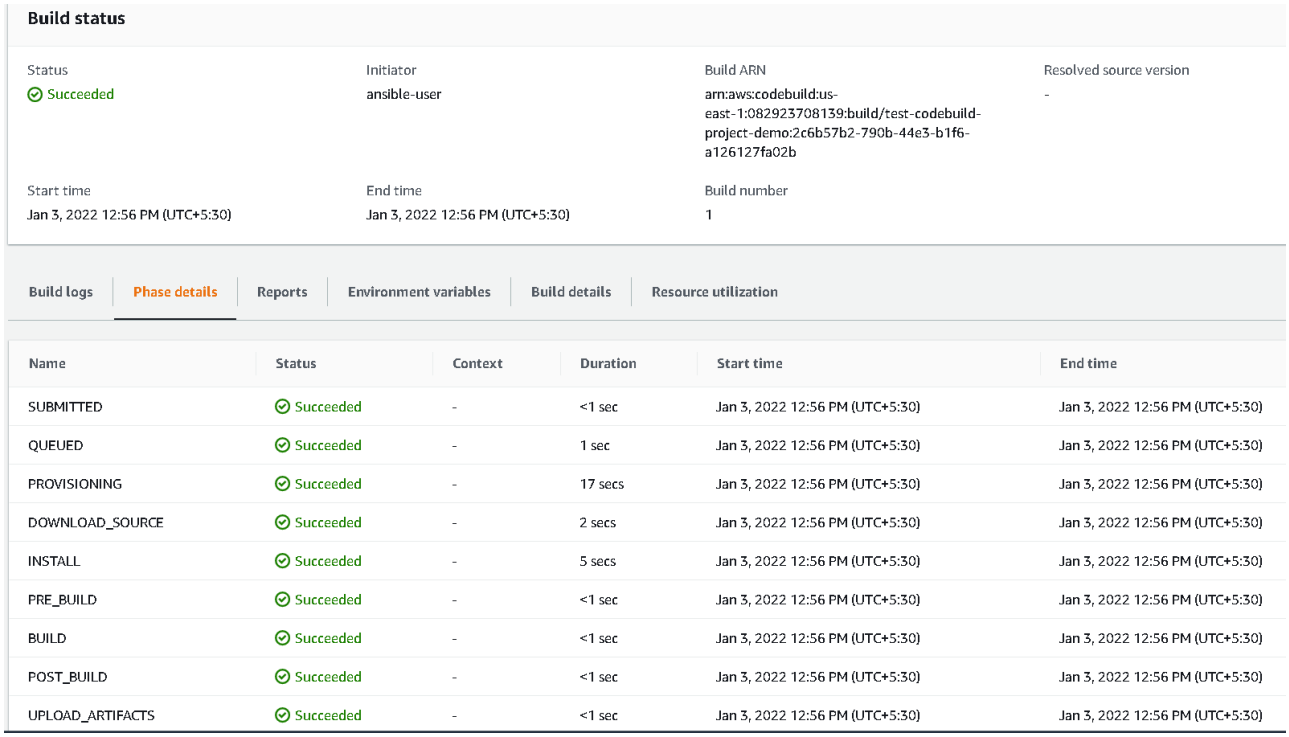
- Navigate to CodeBuild Project that was created, and Select `Start Build` to execute the CodeBuild Run and verify build details along with phases information.



- Build Execution Logs are stored in CloudWatch Log Group



- Build Execution Phase Details shows the details of individual phases that are executed.



Build status

Status	Initiator	Build ARN	Resolved source version
Succeeded	ansible-user	arn:aws:codebuild:us-east-1:082923708139:build/test-codebuild-project-demo:2c6b57b2-790b-44e3-b1f6-a126127fa02b	-

Start time	End time	Build number
Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)	1

Build logs | Phase details | Reports | Environment variables | Build details | Resource utilization

Name	Status	Context	Duration	Start time	End time
SUBMITTED	Succeeded	-	<1 sec	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
QUEUED	Succeeded	-	1 sec	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
PROVISIONING	Succeeded	-	17 secs	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
DOWNLOAD_SOURCE	Succeeded	-	2 secs	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
INSTALL	Succeeded	-	5 secs	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
PRE_BUILD	Succeeded	-	<1 sec	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
BUILD	Succeeded	-	<1 sec	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
POST_BUILD	Succeeded	-	<1 sec	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)
UPLOAD_ARTIFACTS	Succeeded	-	<1 sec	Jan 3, 2022 12:56 PM (UTC+5:30)	Jan 3, 2022 12:56 PM (UTC+5:30)

- Modify the buildspec commands to use `aws cli` commands and execute the Build Project Again.
- If there is an Error that the Build is `Failed`, troubleshoot the logs displayed for that specific Build Number and check for IAM Role Permissions.