Linux Academy

Live! Lab

Create an S3 Bucket with CloudFormation

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Lab Connection Information

- Labs may take up to five minutes to build
- Access to an AWS Console is provided on the Live! Lab page, along with your login credentials
- Ensure you are using the N. Virginia region
- Labs will automatically end once the alloted amount of time finishes

Related Courses

AWS CSA - Associate

Related Videos

CloudFormation Essentials

Building an S3 Bucket with CloudFormation

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CloudFormation is a tool that allows for the automatic deployment of resources within AWS. CloudFormation provides easy version control, as well as ways to quickly restore resources to their production state. Reusable JSON templates allow administrators and developers to deploy various AWS resources through this service.

This lab introduces you to using CloudFormation by performing the simple task of creating an S3 bucket. Please keep in mind, something this small-scale is not the intended scale of traditional CloudFormation projects; CloudFormation is meant to be used for large-scale deployments.

Build the Template

Open your **AWS Console** with the link and credentials provided on the Live! Lab page. Under **Management Tools**, find and and open the **CloudFormation Dashboard**. Also, open your choice of text editor to build the template.

With CloudFormation templates, we have the option to either hard code the name of the S3 bucket we are creating, or provide AWS with parameters to use while naming the bucket. Parameters allow for user input before launching.

In our template, we use parameters to ask the user the name they would like to use for the bucket.

We now need to discern what sort of resource type and properties we need to use to create an S3 bucket. A list of available resource types can be viewed here, with properties unique to the *AWS::S3::Bucket* resource type here.

s3bucket.template

Create a new file in your text editor called *s3bucket.template*. With the template below, we are first setting up the parameters that allow a user to enter a bucket name before creating the bucket.

```
{
    "AWSTemplateFormatVersion" : "2010-09-09",
    "Description" : "Creating an S3 bucket with CloudFormation",
    "Parameters" : {
        "S3BucketName" : {
            "Type" : "String",
            "Description" : "Please enter a bucket name"
        }
    },
    "Resources" : {
        "S3Bucket" : {
            "Type" : "AWS::S3::Bucket",
            "Properties" : {
                "BucketName" : { "Ref" : "S3BucketName" }
            }
        }
    }
}
```

Save the template.

Template Overview

Key items in the template include the AWS::S3::Bucket resource type and the parameters used to specify the bucket name. The S3BucketName parameter allows users to de ne a bucket name, which is then referenced and pulled into the rest of the template code (*"BucketName" :{ "Ref" : "S3BucketName" }*).

So why use parameters? Parameters allow user input. For example, envision building out your entire production environment with a CloudFormation template. You distribute this template to your developers, so they are working in a mirror environment of production. However, your production instances might

be hosted on large EC2 instances, while the developers only need to run micros. There is no reason to increase costs when we can create a parameter that asks the user what EC2 instance size to use.

Uploading the Template

Return to the **CloudFormation Dashboard** and select **Create Stack**.

On the next screen, choose the **Upload a template to Amazon S3** radio button. Upload the *s3bucket.template* file you just created.

Name the **Stack**, and then determine what you want to name your bucket to enter into the **S3BucketName** parameter. Press **Next**.

Add tags if desired. **Next**.

Review your settings, and then select **Create** if everything looks acceptable. Press **Create**, then wait for the status to read *CREATE_COMPLETE*. You can then navigate to the **S3 Dashboard**, and view your newly-created bucket.