AWS – CodeDeploy

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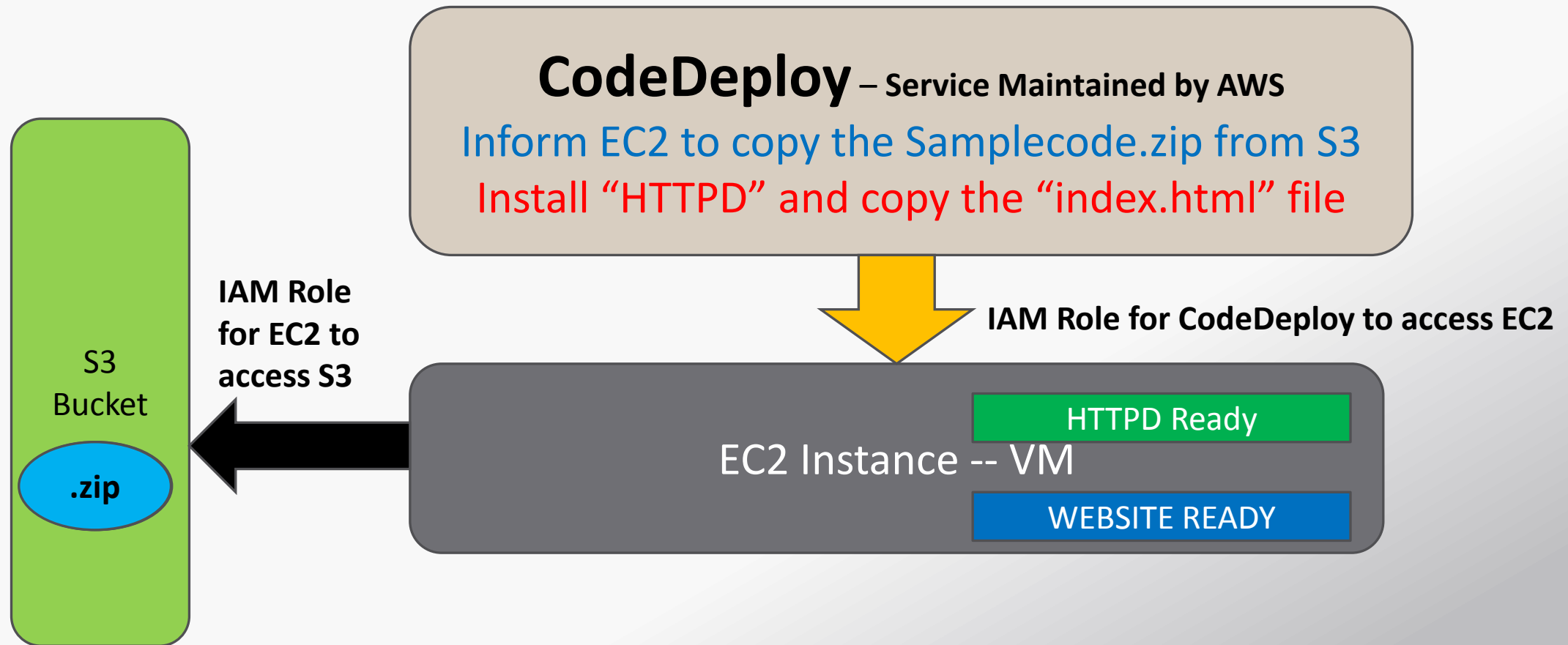
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Why CodeDeploy

1. Easy to integrate

2. Available Everywhere

3. Scaled for Biggest Customers

Concepts of CodeDeploy

- Codedeploy is an tool to automate deployments inside multiple EC2 instance or Autoscaled Instance or onPrem Datacenter

Lab Scenario of Codeploy

CodeDeploy **– Service Maintained by AWS**

Inform EC2 to copy the Samplecode.zip from S3

Install "HTTPD" and copy the "index.html" file

IAM Role for CodeDeploy to access EC2

IAM Role for EC2 to access S3

S3 Bucket

.zip

EC2 Instance -- VM

HTTPD Ready

WEBSITE READY

amazon webservices™

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Steps for CodeDeploy

- Have the Virtual Machines Ready.
- Install the Codedeploy Agent on the Virtual Machines.
  - **Codedeploy Agent installation file is Different for Different Regions**
- Get the Sample Code's Ready and upload it to S3.
  - S3 bucket should have **"Versioning"** Enabled.
  - The Sample Code zip file should be "**Public**"
- Create the required IAM policy Roles.
  - For EC2/Autosacling instance to access the S3 bucket where the sample code's are stored
  - For CodeDeploy to access the EC2/Autoscaling instance
- Create the CODEDEPLOY rule

Install/Start Codedeploy Agent on EC2

#!/bin/bash

sudo su

yum install -y ruby

yum install -y wget

cd /home/ec2-user

wget https://aws-codedeploy-us-east-1.s3.amazonaws.com/latest/install

chmod +x ./install

 ./install auto

service codedeploy-agent start

service codedeploy-agent status

Note:-- Refer the below link for Codedeploy agent for different Regions

https://docs.aws.amazon.com/codedeploy/latest/userguide/codedeploy-agent-operations-install.html

Output of CodeDeploy Agent

```
post hook : 1
Check if there is a codedeployagent config file.
Start codedeploy-agent in post hook if this is a first install.
Installing codedeploy-agent auto-update cron in '/etc/cron.d/codedeploy-agent-update'...
Installing codedeploy-agent auto-update cron in '/etc/cron.d/codedeploy-agent-update'...Complete
  Verifying  : codedeploy-agent-1.0-1.1518.noarch

Installed:
  codedeploy-agent.noarch 0:1.0-1.1518

Complete!
I, [2018-08-27T13:43:50.791369 #4318]  INFO -- : Update check complete.
I, [2018-08-27T13:43:50.791456 #4318]  INFO -- : Stopping updater.
[root@ip-10-20-3-122 ec2-user]# sudo service codedeploy-agent status
The AWS CodeDeploy agent is running as PID 4393
[root@ip-10-20-3-122 ec2-user]#
```

Incase if you running the commands on the "user data" options while the Launch of the Instance,
Check the output with below
cat /var/log/cloud-init-output.log

Example – Roles – EC2 Access to S3

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Action": [
                "s3:Get*",
                "s3:List*"
            ],
            "Effect": "Allow",
            "Resource": "arn:aws:s3:::<bucket-name where the sample code is stored>/*"
        }
    ]
}
```

Example – Roles – Codeploy to access EC2

- IAM Role for Codedeploy to access EC2 instance.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "VisualEditor0",
            "Effect": "Allow",
            "Action": [
                "ec2:*"
            ],
            "Resource": "*"
        }
    ]
}
```

Sample Code on S3

Use the below Sample code for CodeDeploy

https://s3.amazonaws.com/vishwa19820715/SampleApp_Linux-2.zip

Code-Deploy Stage

1. Create EC2/on Prem Machines Group

2. Deploy the code on the Group.

Troubleshooting

1. Make sure the right Roles are applied to EC2/Autoscaling and Codedeploy.

2. Make sure the Codedeploy agent is running, if yes, then restart the service
   1. Ex: -- service codedeploy-agent restart

3. If the deployment is still failing, create an new APPLICATION DEPLOYMENT.

4. Make sure the ZIP file is public with bucket Versioning Enabled.