Create your Jumbox

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### **Configure your AWS jumpbox**

The best practices to deploy any kind of infrastructure indicates that we will have to have a Jumpbox (or bastion) virtual machine instance running in our IaaS to safely and comfortably run all the necessary commands to deploy our BOSH and Cloud Foundry instances.

#### Generate an Access Key and Secret Key

1. Go to your AWS Console
2. Click in your username at the menu
3. Select “Security credentials”
4. If asked, click on “Continue to Security Credentials”
5. Click on the “+” symbol at the “Access Keys” row
   1. Click on “Create a New Access Key”
   2. Click on “Download Key File”
   3. Click on “Close”
6. Have it readily available, you will need this file later.

#### Create an EC2 instance

1. Go to your [AWS Console](https://console.aws.amazon.com/?nc2=h_m_mc)
2. Go to the EC2 Dashboard
3. Click on “Launch Instance”
   1. In the “Choose AMI” step, click on “Select” at the **Ubuntu Server 16.04 LTS AMI row.**
   2. In the “Choose Instance Type” step, select the “General purpose / t2.micro” type and click on “Next: Configure Instance Details”
   3. In the “Configure Instance”, select:
      1. Network: Your (default) VPC
      2. Subnet: No preference
      3. Auto assign Public IP: Use subnet setting (Enable)
      4. Click on “Next” Add Storage
   4. In the “Add Storage” step, set the size to 30 GB and click on “Next: Add Tags”
   5. In the “Add Tags” step, add the following tags:
      1. Key: Name / Value: cf\_training\_jumpbox
      2. Click on “Next: Configure Security Group”
   6. In the “Configure Security Group” step, create a **new** security group:
      1. Security group name: cf\_training\_jumpbox\_sg
      2. Description: Security group for CF Training Jumpbox
      3. Make sure that port 22 is open for CIDR: 0.0.0.0/0
      4. Click on “Review and Launch”
   7. In the “Review” step, click on “Launch”
   8. When asked to “Select an existing key pair or create a new key pair”:
      1. Select “Create a new key pair”
      2. Use the name: cf\_training\_jumpbox
      3. Click on “Download Key Pair”
      4. Once you have the “cf\_training\_jumpbox.pem” file downloaded, click on “Launch Instances”
4. Go to your EC2 Dashboard and click on “Running Instances”
5. Wait for the instance to be up and running (Instance state: running)

#### Connect to your Jumpbox

##### If your OS is Linux/MacOS

1. Open a terminal
2. Copy the “cf\_training\_jumpbox.pem” file to the ~/.ssh/ directory
3. Run:
   1. chmod 400 ~/.ssh/cf\_training\_jumpbox.pem
4. Now you can connect using the Public DNS name or the IPv4 Public IP assigned by AWS:
   1. ssh -i ~/.ssh/cf\_training\_jumpbox.pem ubuntu@{your\_ip\_address}

##### If your OS is Windows

1. You need to have an SSH client for Windows, such as [Putty](http://www.putty.org/)
2. You will have to download and install a PEM file converter. Putty comes with PuttyGen, a great tool to convert a PEM file into a Putty private Key
   1. Load the PEM file
   2. Click on “Save private key”
   3. Choose a name
   4. Save it
3. Open Putty and connect to your Jumpbox, using the Public DNS name or the IPv4 Public IP assigned by AWS. Username is “ubuntu”. Select the imported key in the left pane tree at SSH > Auth > Private key file for authentication.

### Create the basic environment & install tools

In your Jumpbox:

# Create the working directory

mkdir ~/deployment

#Install basic packages  
sudo apt-get update  
sudo apt-get -y install gnupg2 git unzip tree

# Install RVM, a Ruby version management software  
gpg2 --recv-keys 409B6B1796C275462A1703113804BB82D39DC0E3  
\curl -sSL https://get.rvm.io | bash -s stable  
source /home/ubuntu/.rvm/scripts/rvm  
# Test that RVM is running correctly  
rvm help  
# Install Ruby 2.2.0  
rvm install 2.2.0

# Install bundler package manager  
gem install bundler

# Install the BOSH CLI V2  
curl -o bosh\_cli\_v2 -J -L https://s3.amazonaws.com/bosh-cli-artifacts/bosh-cli-2.0.40-linux-amd64  
sudo install -m0755 bosh\_cli\_v2 /usr/local/bin/bosh  
rm bosh\_cli\_v2

# Install spiff  
curl -o spiff\_linux\_amd64 -J -L <https://github.com/cloudfoundry-incubator/spiff/releases/download/v1.0.7/spiff_linux_amd64>  
sudo install -m0755 spiff\_linux\_amd64 /usr/local/bin/spiff  
rm spiff\_linux\_amd64

# Install the CF CLI  
curl -o cf\_cli.deb -J -L 'https://cli.run.pivotal.io/stable?release=debian64&source=github'  
sudo dpkg -i cf\_cli.deb  
rm cf\_cli.deb

# Install Terraform  
curl -o ~/deployment/terraform.zip -J -L 'https://releases.hashicorp.com/terraform/0.9.11/terraform\_0.9.11\_linux\_amd64.zip'  
unzip ~/deployment/terraform.zip -d ~/deployment/  
sudo install -m0755 ~/deployment/terraform /usr/local/bin/terraform  
rm ~/deployment/terraform\*