Deploying the MEAN Stack on MS Azure

Overview

The MEAN (MongoDB-Express-AngularJS-NodeJS) software stack is a popular platform for Web development. Though you can set up a similar environment on Windows or Mac OS X, using a virtual machine (VM) is the most convenient option. Deploying your MEAN VM to the cloud makes things even easier, as you can access your tools via a Web browser wherever you go.
There are many VM service providers that will allow you to provision a virtual machine on your own cloud service with just a few clicks. We'll be using BitNami (http://bitnami.com). You can sign up on BitNami for free and once you load your Azure credentials, it's a simple matter to set up your Azure virtual machine.

> **NOTE**: You can use this same process to deploy any Bitnami VM image on Azure. Bitnami also supports cloud service providers AWS, Google Cloud, Oracle, VMWare, CenturyLink and 1&1. They also have their own cloud hosting service.

You have:

- A MS Azure Account issued by Rasmussen College. DO NOT CREATE A PERSONAL ACCOUNT.

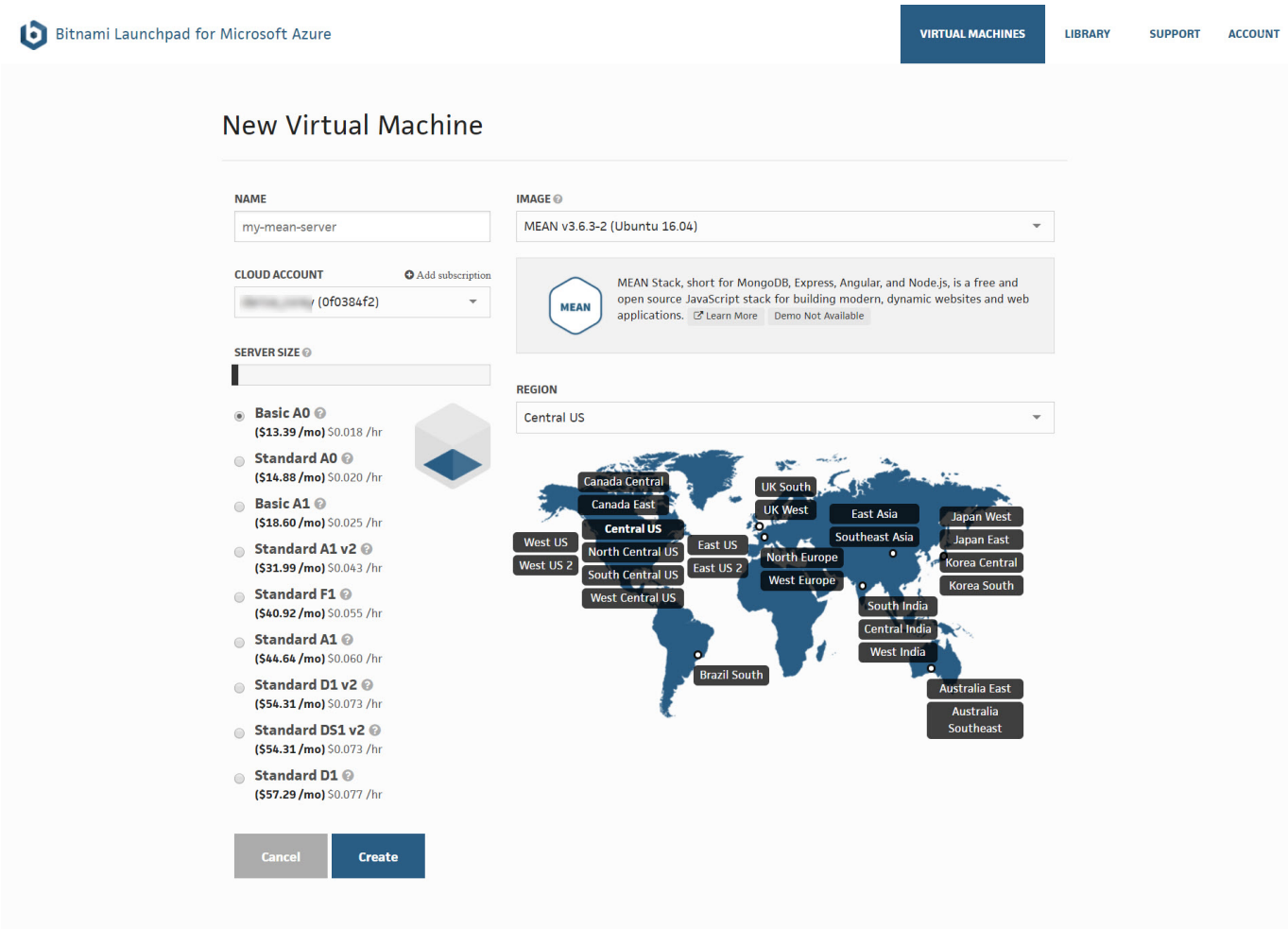
Set up a Free Bitnami Account

- Browse to http://bitnami.com
- Click on `Create Free Account.`
- Once your account is confirmed, go to the Launchpad, select Azure and follow the instructions to link your Bitnami and Azure accounts:

  https://azure.bitnami.com/

Launch Your VM

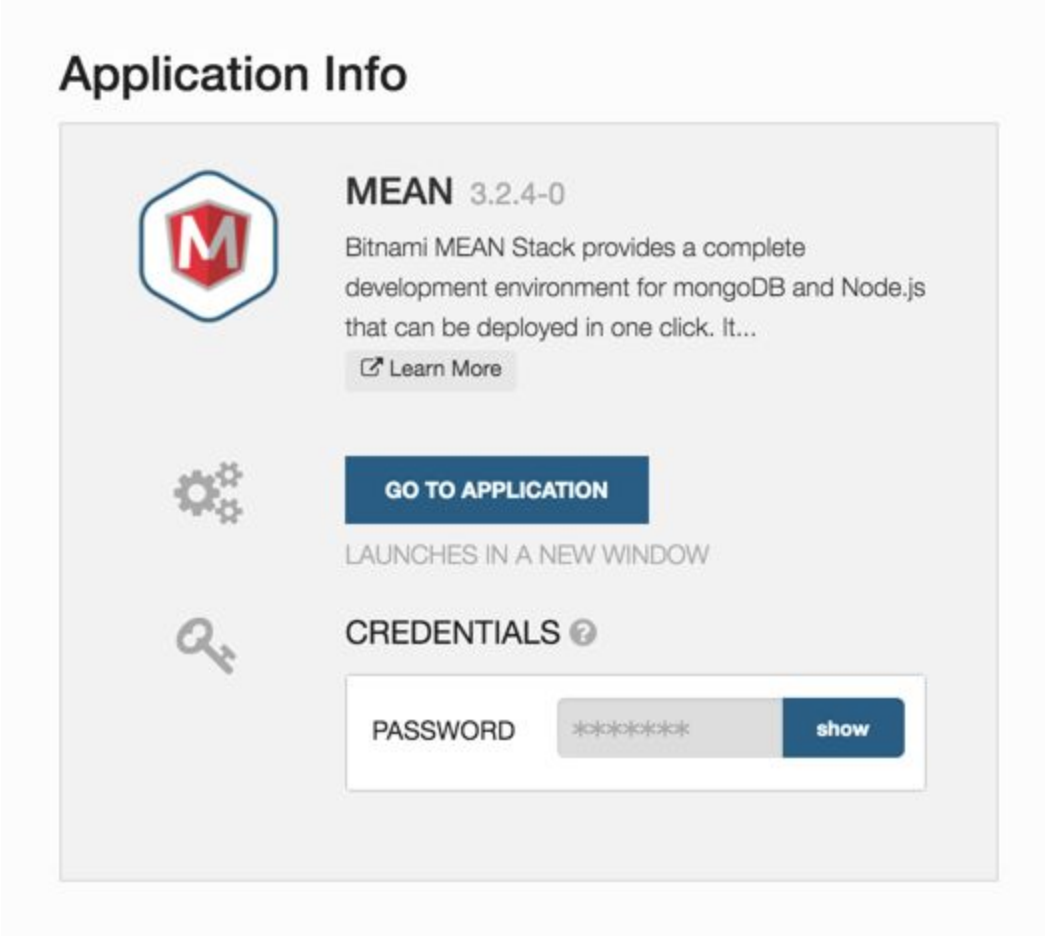
- Browse to your Azure dashboard if you're not there already.
- Search the list of images for "MEAN".
- When you roll your cursor over the VM icon, you will see a Launch button. Click on that.
- You will be taken to the New Virtual Machine page:



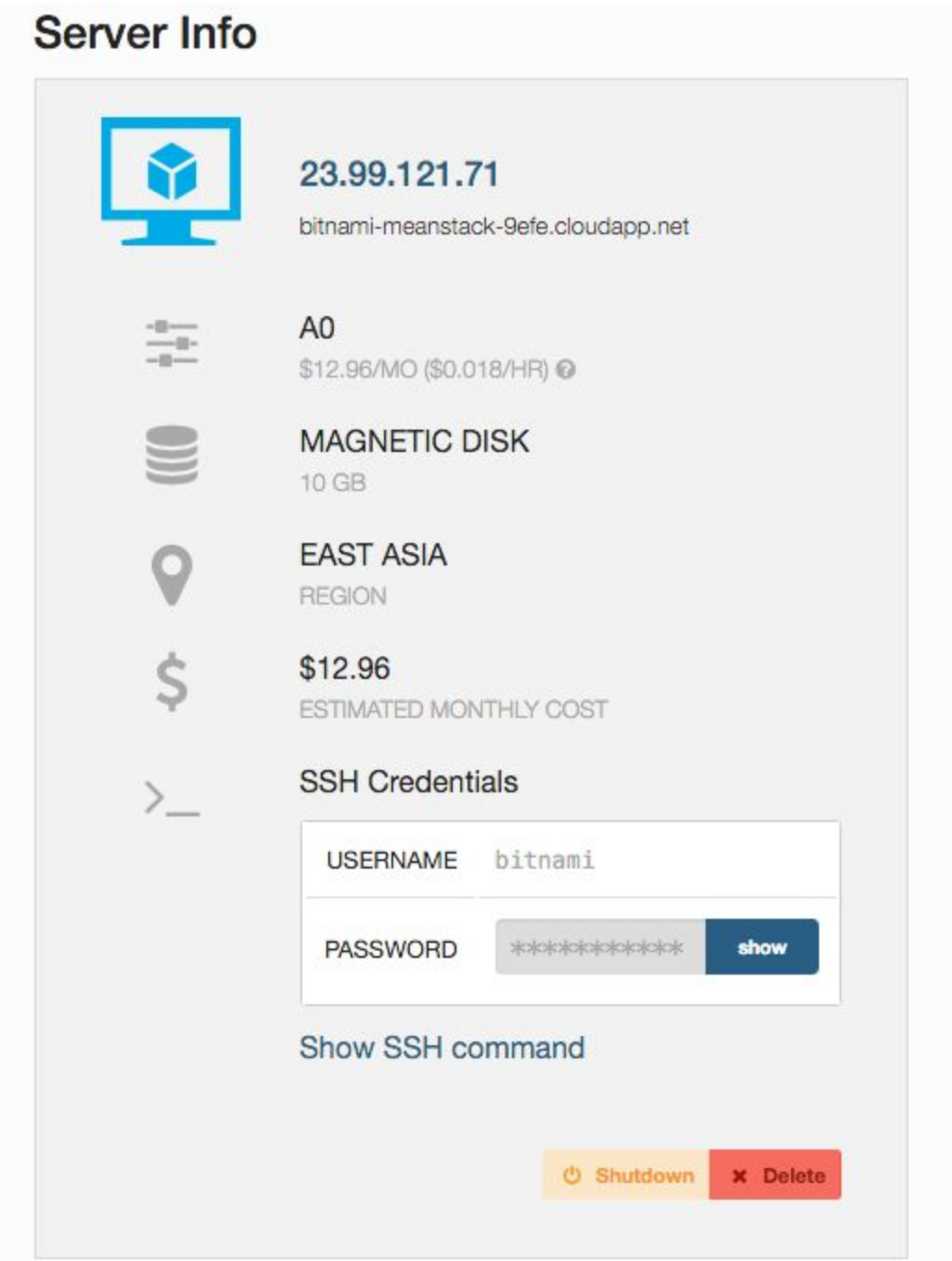
- Give your VM a name and that the subscription is using your Rasmussen Azure account.
- Confirm that you're deploying the right image (MEAN Stack)
- Take the default server size. (You may want to note the usage charges.)
- Select a region that is geographically close. (You can take the default if you want.)
- Once you're satisfied with your setup, click on the Create button.
- There will be a brief "Loading…" page and then you will be redirected to the page for your new VM.

NOTE: You can watch the progress of the build if you wish, but you will receive an email when it's ready if you have something else to do. Also, you don't have to be logged into your Azure account to deploy your VM from Bitnami. You can even manage it from your Bitnami account if you wish.

Once your VM is up and running, the Bitnami launch page will change:



Your Server Info panel will also be updated:

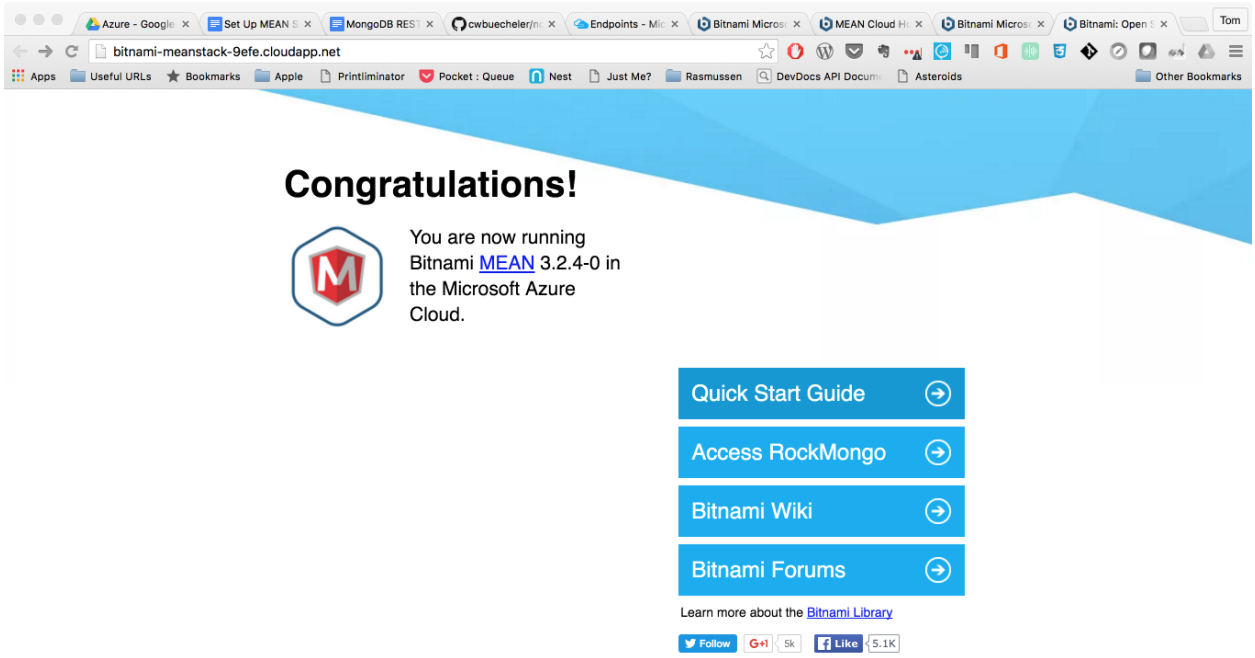


- Note at the bottom your login ID and password for the VM. (Click on show to display the password. Make a note of this.)

Manage Your VM in Azure

- Log into your Azure account if you're not already there.
- You should see your new VM listed under Virtual Machines:

- Note the DNS Name column on the far right. This is your fully-qualified hostname and will remain the same even if the IP address for your VM changes. Use this to connect to your machine remotely.
- Click on the DNS Name to copy it to your clipboard.
- Open a new browser tab or window, type http:// and paste the DNS name in the location bar.
- If everything worked, then you will see your default VM home page:



Log Into Your VM with SSH

SSH (Secure Shell) is a free, cross-platform command line tool that sets up an encrypted connection to a remote host. If you are running Mac OS X or Linux, you already have SSH installed.

There are GUI front-ends to make things easier but I will show the command line tool here.

- Connect to your VM using `bitnami1@<your VM DNS Name>` using the password from your Bitnami VM page.
- You may wish to reset your password to something that's easier to remember. The easiest way to do this is to use the `sudo` tool to temporarily become the administrator:

```
bitnami@bitnami-meanstack-9efe:~$ sudo su
root@bitnami-meanstack-9efe:/home/bitnami1# passwd bitnami1
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@bitnami-meanstack-9efe:/home/bitnami1#
```

- Type `exit` to get back to your user prompt.
- If you don't have any other command line stuff to do, type `exit` or `logout` to disconnect your ssh session.
- At this point you are ready to start working with your VM.