LineUp

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Beta Release:
Production Setup Instructions

Production Server Setup Instructions

These instructions will walk you through setting up a public server to host the LineUp website. Once the server is setup, deploying the latest version is easy. If you already have a server setup, skip to the Production Deployment Instructions.

These instructions have been adapted from a CSE 481k Spring 2014 project:
SMS Immunization Manager
Group members: Jenny Kang, Isaac Reynolds, Jackson Roberts, Nicholas Shahan

Required Software

The following software will be installed by a script that is run later in these instructions.

- Apache Web Server http://httpd.apache.org
- modwsgi https://code.google.com/p/modwsgi
- Rysnc
- SQLite3 http://www.sqlite.org
- Python 2.7.6 https://www.python.org
- Python Package Index (pip) http://pip.readthedocs.org/en/latest
- Flask 0.10.1 http://flask.pocoo.org
- Git http://git-scm.com

Starting an Amazon EC2 instance

These instructions assume you already have an Amazon Web Services account. If you do not you will need to go to the site and create one. The instructions walk you through setup of a single micro instance which can be run free of charge but the account setup does require that you provide a credit card regardless.

Options on the same page or pane are grouped together.

1. Open up the EC2 dashboard for the US-West (Oregon) availability zone.
2. Click Launch Instance
3. Choose the host operating system ‘Ubuntu Server 14.04 LTS (PV)’, with 64 bit selected.
4. Check that the Instance Type is micro (unless you wish to provision a larger instance)
5. Click ‘Next: Configure Instance Details’
6. Select ‘No Preference’ for the launch subnet.
7. Leave monitoring, user data, public IP, IAM role, shutdown behavior and tenancy in their default state.
8. Enable termination protection.
9. Select the default Kernel and RAM Disk IDs
10. click ‘Next: Add Storage’
11. Use the default storage device configuration, unless you have some specific reason to change it (e.g. would like to provision more disk space, and are allowed to).
12. Click ‘Next: Tag Instance’
13. Don’t add any tags.

14. Click ‘Next: Configure Security Group’
15. Either create a new security group that allows SSH connections (this is the default security group settings), or use an existing security group that you know to be configured correctly. Add inbound HTTP access as well.
16. Click ‘Review and Launch’.
17. Click ‘Launch’
18. Either generate a new keypair, or use an existing one. This keypair should only be used for our 403 project, and not for any personal EC2 instances you may have, since you may need to share it with other team members.
19. Make sure you have downloaded the keypair as a .pem file. Pace this file into your home directory and run chmod 400 on the file.

Viewing provisioned EC2 instances (if needed)

1. Open the EC2 Management Console for the US-West availability zone.
2. Click on the Instances link in the menu on the left
3. To view details about an instance, click on it in the table. This data includes
    a. The internal and external IP of the instance
    b. The domain name provided by Amazon for the instance
    c. Links to modify or terminate the instance.

Accessing an EC2 instance as root

This should only be used if individual user accounts are unavailable or broken. **Whenever possible, use sudo to impersonate root instead of logging in as a root user.**

From the folder where you have placed your keypair file run the following command to ssh command to connect to your EC2 instance:

```
sudo ssh -i ~/.ssh/[keypair name].pem ubuntu@[instance domain or IP]
```

The root user is also accessible, however its use is discouraged. Ubuntu Server comes pre-configured with an ubuntu user that is a sudoer.

Configuring user permissions

Create an individual user

```
sudo adduser [username]
```

You will be prompted for a password, name, and other miscellaneous information that can be left blank.

Add a user to sudoers

```
sudo adduser [username] sudo
```

This adds the given user to the group ‘sudo’, which is configured to grant root access to its members. **Do not manually edit /etc/sudoers unless absolutely necessary.**

Enable SSH password authentication

By default, EC2 instances are configured to reject password authentication for SSH, and require a key pair instead. Though more secure, this is inconvenient and overkill for our needs. To enable password authentication:

1. Open `/etc/ssh/sshd_config` and set PasswordAuthentication to ‘yes’.
2. Reload sshd’s configuration data by running `sudo service ssh reload`

Once SSH password authentication has been enabled, log out of the ubuntu user and into your personal user. **Use your personal user when accessing the server unless you have a specific reason for using ubuntu or root. To do this:**

1. logout
2. ssh [username]@[ip address of your EC2 instance]

Note: No development should be done on the production server. Do not make changes to a repository and push from the production server. All changes should be pushed from a development environment.

Download the install script (note that this is a single line, though it appears on several)

```
wget https://raw.githubusercontent.com/Line-Up-Admin/CSE-403-Spring2014/beta_release/prodSetup/install.sh
```

This command downloads the beta_release install script into the current directory. This is the most recent release.
Run it with prod argument

```
sudo bash install.sh prod
```

This script will install several the following files as well as place any necessary config files in the appropriate locations.

Production Update Instructions

These instructions will guide you through the deployment of a new software release. You will need ssh access to the production server.

ssh into the production server:
ssh [username]@[ip address of your EC2 instance]

If a new release is available, you can get the latest install script from the latest release version. The latest release version should be filled in for [release] in the following command.
`wget https://raw.githubusercontent.com/Line-Up-Admin/CSE-403-Spring2014/[release]/prodSetup/install.sh`

This script will sync your production deployment with the latest release, and restart your apache server to start serving the new release.