Linux Server Configuration: Getting Started

Project Description

In this project you will be deploying the web application that you developed earlier for Project 3: Item Catalog. Udacity and Amazon have provided a virtual server in Amazon's Elastic Compute Cloud (EC2) for you to use for this project. When you complete the project your application will be accessible to the public!

Getting Started

Every configuration step is explained in the course, Configuring Linux Web Servers. Further resources exist on the web, a list of external guides is included at the end of this document.

Perform Basic Configuration

1. Launch your Virtual Machine with your Udacity account and log in. You can manage your virtual server at:
   https://www.udacity.com/account#!/development_environment
2. Create a new user named grader and grant this user sudo permissions.
3. Update all currently installed packages.
4. Configure the local timezone to UTC.

Secure your Server

It is very easy to inadvertently lock yourself out of the server. If this happens you will have to delete your server and start from scratch. Complete these steps before proceeding, and double check every command before running it!

5. Change the SSH port from 22 to 2200
6. Configure the Uncomplicated Firewall (UFW) to only allow incoming connections for SSH (port 2200), HTTP (port 80), and NTP (port 123)

Install your application

7. Install and configure Apache to serve a Python mod_wsgi application

8. Install and configure PostgreSQL:
    a. Do not allow remote connections
    b. Create a new user named catalog that has limited permissions to your catalog application database
9. Install git, clone and set up your Catalog App project (from your GitHub repository from earlier in the Nanodegree program) so that it functions correctly when visiting your server's IP address in a browser. Remember to set this up appropriately so that your .git directory is not publicly accessible via a browser!
10. Your Amazon EC2 Instance's public URL will look something like this: http://ec2-XX-XX-XXX-XXX.us-west-2.compute.amazonaws.com/ where the X's are replaced with your instance's IP address. You can use this url when configuring third party authentication. Please note the the IP address part of the AWS URL uses dashes, not dots.

Additional Functionality

In addition to the basic functions listed above, this project has several opportunities to go above and beyond what is required. These entail configuring more sophisticated server monitoring and security update processes.

If you choose to implement these features note them in the README file included with your project submission. Mention what features you added and how your evaluator should use or verify the feature.

To Submit

Your README.md file should include all of the following:
- The IP address and SSH port so your server can be accessed by the reviewer.
- The complete URL to your hosted web application.
- A summary of software you installed and configuration changes made.
    - Hint: refer to the `.bash_history` files on the server!
- A list of any third-party resources you made use of to complete this project.
- Open your `~/.ssh/udacity_key.rsa` file in a text editor and copy the contents of that file.
- During the submission process, paste the contents of the udacity_key.rsa file into the "Notes to Reviewer" field.

When you're ready to submit your project, click here and follow the instructions.

If you run into any trouble, send us an e-mail at fullstack-project@udacity.com, and we will be more than happy to help you.

Additional Resources

Students have compiled these lists of useful resources, feel free to use these lists and to contribute your own findings!

- Markedly underwhelming and potentially wrong resource list for P5 (This is a good list, despite the title!)
- Project 5 Resources
- P5 How I got through it