**Unix Project Proposal**

**Section 00002 & 00001**   **By Nicolas, Jodel & Earl**

**420-321-VA UNIX**  **Semester 2**

**License:**



**1. Project description/goals: (one paragraph/sentence outlining what you aim to achieve)**

Setup a reliable Server that enables an auto-deployment system for Linux Server websites that reliably updates the website every time a commit is pushed to the git repository. It does this while also monitoring the server’s status to ensure consistent performance. The solution will support automatic website deployment via Git, log generation, and email notifications in case of backup failure.

**2. Platform of choice: (desktop, server, Raspberry Pi)**

A Linux-based virtual server (Debian or Ubuntu) will be used as the target platform for auto deployment and monitoring services.

**3. Demonstration plan: (virtual machine (which hypervisor?), a laptop, Raspberry Pi)**

The project will be demonstrated by using a Virtual Private Server, allowing easy testing and presentations without the need for additional hardware.

This demonstration will show automation in action in terms of updating the website, monitoring system performance, send an email alert for where and when the changes were made.

**4. Requirements: (go over the list above and describe how you are planning to accomplish each one (or justify, say, why it is not relevant for the project you have in mind). You can skip this point if you are developing a contribution-geared project.)**

* VPS:
  + We will use “LunaNode” to Setup our VPS.
* System Monitoring:
  + Monitoring scripts will check service is running (e.g., Nginx) and report updates.
* Email Notification on Failure:
  + When the web server gets updates an email notification will be sent.
* Automatic Updates:
  + Scrip will manage code deployment and update the website.

**5. Major technical solutions compared: (could be changed later but describe what you are aiming to compare at this point. For a contribution-type project, here you’ll describe the project(s) you have in mind, and the type of contributions available.)**

* Nginx vs Apache
* Custom scripts vs githooks
* Email tools: mailutils vs msmtp
* Monitoring strategies: Custom Bash scripts vs using Monit

**6. Timeline: (make a 3-week plan, considering that the presentation will happen at the end of the last week (it is OK if the plan changes later, but it is still important to have a timeline for guidance))**

Week 1:

* Make a plan to start the project
* Create tasks and assign them
* Research about the topic
* Think about the tools we will use
* Start looking into VPSs and Domain names

Week 2:

* Setup VPS
* Create monitoring scripts and test email alerting
* Document installation guide logic
* Research about firewalls and server security

Week 3:

* Have complete implementation of automation
* Have full server with website running
* Have email log functionality.
* Polish documentation (README, INSTALL, LICENSE)
* Rehearse and present the final project with live demo
* Final touches to the project.

**7. Team composition: (list team members or justify why you need to work by yourself)**

**Group Members:**

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