

WAPH-Web Application Programming and Hacking

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Student

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Short-bio: Ian Cannon interests in Reinforcement Learning for Autonomous Control.



Figure 1: Ian's headshot

Repository Information

Repository's URL: <https://github.com/Spiph/WebAppDev>

This is a public repository for Ian Cannon to store all code from the course. The organization of this repository is as follows.

Labs

Hands-on exercises in lectures

- Lab 0: Development Environment Setup

Hello Apache

```
● icannon@ACT3:~/code/cps/web_apps/WebAppDev$ git commit -m "initial commit"
[main (root-commit) 2661a48] initial commit
 2 files changed, 35 insertions(+)
 create mode 100644 images/hello_apache.png
 create mode 100644 labs/lab0/README.md
● icannon@ACT3:~/code/cps/web_apps/WebAppDev$ git status
On branch main
Your branch is based on 'origin/main', but the upstream is gone.
    (use "git branch --unset-upstream" to fixup)

nothing to commit, working tree clean
Git ○ icannon@ACT3:~/code/cps/web_apps/WebAppDev$
```

I already had git set up in my WSL instance so everything worked out there. I learned how to reference images in a different directory - I want to track everything in the images folder for future labs.

Hackations

Hands-on hacking exercises

Individual Projects

Team Project



Apache2 Default Page

Ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```

/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|-- mods-enabled
|   |-- *.load
|   |-- *.conf
|-- conf-enabled
|   |-- *.conf
|-- sites-enabled
|   |-- *.conf

```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`, `a2dissite`, and `a2enconf`, `a2disconf`. See their respective man pages for detailed information.
- The binary is called `apache2` and is managed using `systemd`, so to start/stop the service use `systemctl start apache2` and `systemctl stop apache2`, and use `systemctl status apache2` and `journalctl -u apache2` to check status. `system` and `apache2ctl` can also be used for service management if desired. **Calling `/usr/bin/apache2` directly will not work** with the default configuration.

Document Roots

By default, Ubuntu does not allow access through the web browser to *any* file outside of those located in `/var/www`, **public_html** directories (when enabled) and `/usr/share` (for web applications). If your site is using a web document root located elsewhere (such as in `/srv`) you may need to whitelist your document root directory in `/etc/apache2/apache2.conf`.

The default Ubuntu document root is `/var/www/html`. You can make your own virtual hosts under `/var/www`.

Reporting Problems

Please use the `ubuntu-bug` tool to report bugs in the Apache2 package with Ubuntu. However, check **existing bug reports** before reporting a new bug.

Please report bugs specific to modules (such as PHP and others) to their respective packages, not to the web server itself.

Figure 2: Hello Apache
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