



Unix for Telecommunications

Portfolio Task – P-Lab-05-Advanced-Apache Pass Level Task

I. INTRODUCTION

In this lab you will extend the skills you learnt from the **BIND** and **Basic Apache** Labs. You will be required to modify your DNS server and Apache configuration to support virtual hosts. You will then tell your lab computer to use your modified DNS server and browse to the specified virtual hosts.

II. PURPOSE

To gain and/or enhance the following practical skills:

- Configure and understand virtual hosting under Apache
- Apply DNS skills learnt from previous lab
- Understand issues relating to service configuration
- Process and respond to server access/error messages in log files

III. PREPARATION

You can prepare for this lab by reviewing some of the Apache documentation on virtual hosts and on CGI scripts. You should also review the corresponding lecture notes.

IV. SCENARIO

You have been employed to host a website on your RULE host. The client is a company called “Armitage Chemicals”. This site should be hosted at <http://armitagechemicals.unix>.

When you complete this lab you should be able to:

- Configure a computer within Swinburne to use your RULE host as the DNS server
- Browse to <http://armitagechemicals.unix> and receive its content

NOTE: *Setting the DNS server on your home Windows-based computer using the VPN to access your RULE host does not work due to a limitation of the Cisco Windows VPN Client. If you are using Windows, it is likely that you will need to complete this lab on-campus.*

V. METHODOLOGY

A. Apache

You will be modifying the Apache configuration from the previous lab to support virtual hosting. Note that this may break the functionality of the **P-Lab-04-Basic-Apache** tasks if they have not already been assessed

B. Install the Web Content

- 1) Copy the website contents (available on Doubtfire) to your RULE host
- 2) Research how to extract the **Armitage Chemicals** website from the provided gzip tarball
- 3) Extract and install the **Armitage Chemicals** website to the directory:
`/usr/local/www/armitagechemicals.unix/`

C. DNS Configuration

- 1) Update your BIND configuration such that the URL `armitagechemicals.unix` resolves to the IP address of your RULE host
Hint: Refer to the BIND Lab handout for help if you have forgotten
Hint: Don't forget to restart the BIND server after you have made any changes
Hint: Make sure you only have one instance of BIND running
- 2) Perform a DNS lookup on your RULE host to confirm your DNS settings for `armitagechemicals.unix`
- 3) Set your local Windows computer to use your RULE host as a DNS server
- 4) Perform the same lookup on your Windows computer to verify that the URL resolves to the IP address of your RULE host

D. Configuring the Armitage Chemicals Virtual Host

- 1) Modify the Apache `httpd.conf` file to include the virtual host configuration file
Hint: The line is commented out somewhere near the end of the file
- 2) Virtual hosts are configured in the file `/usr/local/etc/apache24/extra/httpd-vhosts.conf`
- 3) Add a new virtual host for the **ServerName** `armitagechemicals.unix`
 Ensure you set your Swinburne email address as the administrator
 Create a custom access/error log file for the host
 - `/var/log/armitagechemicals.unix-access_log`
 - `/var/log/armitagechemicals.unix-error_log`
 Set the document root to the directory where the web site is installed
- 4) Restart the Apache server
Hint: run `/usr/local/etc/rc.d/apache24 stop` followed by `/usr/local/etc/rc.d/apache24 start`
- 5) Use your web browser to browse to `http://armitagechemicals.unix`
Hint: You may need to turn off the proxy in your web browser configuration
- 6) If successful, you should be able to see the Armitage Chemicals website

VI. ASSESSMENT

The due date for completion of practical work is **11:00pm**, exactly **six** days after your scheduled class.

Note: The nominated submission day/time holds regardless of whether that day is a non-teaching day or public holiday

A. Self Assessment

You can self-assess your progress at any time via the marking script available at <http://ruleprimary1.caia.swin.edu.au>

B. Completion of task in Doubtfire

Download the PDF output of the marking script from <http://ruleprimary1.caia.swin.edu.au> and submit it to Doubtfire. Your tutor will confirm completion of the lab by examining the rule marking log files on the rule server.

If you complete the task during class beforehand, you may demonstrate completion in class to your tutor.

Note: The downloaded PDF is not evidence of successful completion of the lab, it is a document to demonstrate completion within your portfolio. Your tutor will assess the evidence via either direct confirmation via the marking script or via the log files generated when you run the marking script

C. Tutor Discussion

In order for the submission to be marked as complete, you must discuss your work with the tutor.