Unix for Telecommunications

Portfolio Task – P-Lab-05-Advanced-Apache
Distinction 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. Furthermore, you will learn how to serve and run Common Gateway Interface (CGI) files using Apache.

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 should not attempt this task until you complete the **Pass** level task **P-Lab-04-Advanced-Apache-P**.

IV. SCENARIO

You have been employed to host a second website on your RULE host (following installation, configuration, and hosting of the Armitage Chemicals website at http://armitagechemicals.unix). You are now required to host a second website – "The Aristocrats Family Theatre Restaurant Chain"at http://aristocrats.unix. "The Aristocrats Family Theatre Restaurant Chain" website is not available yet and the company want you to install a temporary page that consists of a single CGI script that shows a count-down until their first restaurant opens. This CGI script is also provided.

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 either http://armitagechemicals.unix or http://aristocrats.unix and receive the respective websites
- Both sites are to be hosted on the same RULE host

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. Install the Web Content

1) Copy the website contents (available on Doubtfire) to your RULE host
2) Install the **Aristocrats** CGI script to the `/usr/local/www/aristocrats.unix/` directory
3) Modify the **index.cgi** script to nominate a proper future opening date for the restaurant

B. DNS Configuration

1) Update your BIND configuration such that the URL `aristocrats.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 `aristocrats.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

C. Configuring "The Aristocrats Family Theatre Restaurant Chain" Virtual Host

1) Add a new virtual host for the **ServerName** `aristocrats.unix` using your configuration for **Armitage Chemicals** as a guide (make sure you specify the correct server directory **and** a unique set of log files)
2) Restart Apache and try to browse to the new virtual host
   - Why didn't this work?
   - Check your log files
3) Research on what changes you need to make to the `aristocrats.unix` virtual host to enable the CGI script to function
4) If it still does not function correctly, check your log files again or ask your lab supervisor for assistance

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 examing 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