1.109.1
Customize and use the shell environment

Weight 5

Linux Professional Institute Certification — 102

Geoffrey Robertson ge@ffrey.com
Nick Urbanik nicku@nicku.org

2005 July

Outline

Contents

0.1 Context .......................................................... 1
1 Objective ................................................................ 2
2 Bash Configuration Files .............................. 2
3 Aliases .......................................................... 3
4 Bash functions ............................................... 3
5 License Of This Document .......................... 4

0.1 Context

Topic 109 Shells, Scripting, Programming and Compiling [8]

1.109.1 Customise and use the shell environment [5]
1.109.2 Customise or Write Simple Scripts [3]

1 Objective

Description of Objective

Candidate should be able to customize shell environments to meet users’ needs. This objective includes setting environment variables (e.g. \texttt{PATH}) at login or when spawning a new shell. It also includes writing bash functions for frequently used sequences of commands.

Key files, terms, and utilities include:

\texttt{~/.bash_profile} — sourced when a person logs in
\texttt{~/.bash_login} — sourced when a person logs in if no \texttt{~/.bash_profile}
\texttt{~/.profile} — sourced when a person logs in if no \texttt{~/.bash_profile} or \texttt{~/.bash_login}
\texttt{~/.bashrc} — sourced when a non-login interactive shell starts
\texttt{~/.bash_logout} — sourced when a person logs out
\texttt{~/.inputrc} — allows a user to specify keystrokes for commands

\texttt{function} — (Bash built-in command)
\texttt{export} — make environment variables available to sub processes
\texttt{env} — display environment
\texttt{set} — (Bash built-in command)
\texttt{unset} — (Bash built-in command) — remove any definition of an environment variable

2 Bash Configuration Files

Bash Configuration Files

- When a user logs in to a bash shell the following configuration files are usually executed:

  \texttt{/etc/profile} System wide profile, common to all users and shells
  \texttt{~/.bash_profile} sourced after \texttt{/etc/profile} at login
  \texttt{~/.bashrc} sourced after \texttt{~/.bash_profile} at login

- Note \texttt{~/.bashrc} is executed when any new bash shell is spawned
3 Aliases

Bash Aliases

4 Bash functions

Bash Functions

- Functions work similarly to aliases but allow more complex constructions.
- They have the following syntax:
  $ [ function ] NAME() { COMMAND_LIST; }
- Where
  function Optional tag
  NAME() The name of the function
  COMMAND_LIST The body of the function
- Functions may be stored in ~/.bashrc

Bash Functions

- This simple function prints the current working directory and the list of files in it:
  $ function look() { pwd; ls; }
- This function would be used like this:
  $ look

Bash Functions

$ function look() { pwd; ls; }

$ look()

$ function look() {pwd; ls;}

Bash Functions

- A function that uses a command line argument:
  $ laps () {
    ls -l $1
    ps aux | grep `/usr/bin/basename $1`
  }
- Use the laps() function:

$ laps /usr/sbin/sshd

5 License Of This Document

License Of This Document
Copyright © 2005, 2003 Geoffrey Robertson <ge@ffrey.com> and Nick Urbanik <nicku@nicku.org>.
Permission is granted to make and distribute verbatim copies or modified versions of this document provided that this copyright notice and this permission notice are preserved on all copies under the terms of the GNU General Public License as published by the Free Software Foundation—either version 2 of the License or (at your option) any later version.