Linux - Scripting

# General

## What are shell scripts

Shell scripts are used to automatically run commands in the machines shell, allowing for quick automation of what can be long, complex tasks.

Shell scripts can be flexible, accepting different parameters to do different things, they can also be run on demand, such as in a cron job.

## Syntax

Shell scripts are plain text files which start which a shebang. A shebang starts with'#! and defines which program to perform the script in, the program can be any scripting langague.

For example, a bash script would have the following at the top of the file:

#!/bin/bash

Whereas a ruby script may start with:

#!/usr/bin/ruby

The following text in the file is simply in the scripting langauge which has been picked.

Parameters can be passed into the script by appending them to the tail of the command. They will be be accessible in the script as $ values, numbered in order passed to the script, starting with 0.

## Create

Create a plaintext file with the shebang of the langauge and fill with the commands to be run.

Since shell scripts are executed make sure the permissions allow for execution:

chmod +x <filename>

Run the script with the current user by simply calling it by path:

./<filename>

Once happy with the script, it can be added to the current $PATH by moving it to /usr/local/bin and ensuring it has a unique name.

## Resources

<https://linuxconfig.org/bash-scripting-tutorial>

<https://tldp.org/HOWTO/Bash-Prog-Intro-HOWTO.html>