

¿Cómo sería la certificación Linux LPIC1-102 para PowerShell? (posible equivalencia entre Linux y PowerShell)

Shells, Scripting and Data Management

->Customize and use the shell environment

->->Key Knowledge Areas:

->->->Set environment variables (e.g. PATH) at login or when spawning a new shell

\$Env:Path

->->->Write Bash functions for frequently used sequences of commands

->->->Maintain skeleton directories for new user accounts

->->->Set command search path with the proper directory

->->->The following is a partial list of the used files, terms and utilities:

->->->.

Set-Location .

Set-Location ..

Set-Location \

->->->source

```
->->->/etc/bash.bashrc
```

```
Get-Location
```

```
->->->/etc/profile
```

```
Get-Location
```

```
->->->env
```

```
$Env:Path
```

```
->->->export
```

```
$Env:Path | Out-File
```

```
->->->set
```

```
$Env:Path
```

```
->->->unset
```

```
$Env:Path
```

```
->->->~/ .bash_profile
```

```
Get-Location
```

```
->->->~/ .bash_login
```

```
Get-Location
```

```
->->->~/ .profile
```

```
Get-Location
```

```
->->->~/ .bashrc
```

```
Get-Location
```

```
->->->~/ .bash_logout
```

```
Get-Location
```

```
->->->function
```

```
->->->alias
```

Get-Alias

->->->lists

->Customize or write simple scripts

->->Key Knowledge Areas:

->->->Use standard sh syntax (loops, tests)

- <http://www.jesusninoc.com/2015/09/29/bucles/>

->->->Use command substitution

"hola" -replace "h","j"

->->->Test return values for success or failure or other information provided by a command

->->->Perform conditional mailing to the superuser

->->->Correctly select the script interpreter through the shebang (!) line

->->->Manage the location, ownership, execution and suid-rights of scripts

->->Terms and Utilities:

->->->for

- <http://www.jesusninoc.com/2015/09/29/bucles/>

->->->while

->->->test

New-Item -Name fichero -WhatIf

->->->if

- <http://www.jesusninoc.com/2015/04/26/sentencia-condicional-if-else/>

->->->read

Read-Host

->->->seq

1..100

->->->exec

1..100 | New-Item -Name \$_ -WhatIf

->SQL data management

- <http://www.jesusninoc.com/2015/12/13/select-into-mysql-database/>
- <http://www.jesusninoc.com/2015/12/14/insert-into-mysql-database/>

->->Key Knowledge Areas:

->->->Use of basic SQL commands

->->->Perform basic data manipulation

->->Terms and Utilities:

->->->insert

->->->update

->->->select

->->->delete

->->->from

->->->where

->->->group by

->->->order by

->->->join

Interfaces and Desktops

->Install and configure X11

->->Key Knowledge Areas:

->->->Verify that the video card and monitor are supported by an X server

->->->Awareness of the X font server

->->->Basic understanding and knowledge of the X Window

configuration file

->->Terms and Utilities:

->->->/etc/X11/xorg.conf

->->->xhost

->->->DISPLAY

->->->xwininfo

- <http://www.jesusninoc.com/2016/03/23/mover-notepad-de-un-a-posicion-de-la-pantalla-a-otra-y-escribir-un-texto-dentro-del-proceso/>

```
[System.Windows.Forms.Cursor]::Position = New-Object  
System.Drawing.Point(502,222)
```

->->->xdpyinfo

->->->X

->Setup a display manager

->->Key Knowledge Areas:

->->->Basic configuration of LightDM

->->->Turn the display manager on or off

->->->Change the display manager greeting

->->->Awareness of XDM, KDM and GDM

->->Terms and Utilities:

->->->lightdm

->->->/etc/lightdm/

->Accessibility

->->Key Knowledge Areas:

->->->Basic knowledge of keyboard accessibility settings
(AccessX)

->->->Basic knowledge of visual settings and themes

->->->Basic knowledge of assistive technology (ATs)

->->Terms and Utilities:

->->->Sticky/Repeat Keys

```
[System.Windows.Forms.SendKeys]::SendWait("{ENTER}")
```

->->->Slow/Bounce/Toggle Keys

->->->Mouse Keys

```
[System.Windows.Forms.Cursor]::Position = New-Object  
System.Drawing.Point(502,222)
```

```
->->->High Contrast/Large Print Desktop Themes  
->->->Screen Reader
```

```
[System.Windows.Forms.Cursor]::Position = New-Object  
System.Drawing.Point(502,222)
```

```
->->->Braille Display  
->->->Screen Magnifier  
->->->On-Screen Keyboard  
->->->Gestures (used at login, for example GDM)  
->->->Orca  
->->->GOK  
->->->emacspeak
```

Administrative Tasks

```
->Manage user and group accounts and related system files
```

- <https://github.com/jesusninoc/PowerShell/blob/master/Usuarios/>

```
->->Key Knowledge Areas:
```

```
->->->Add, modify and remove users and groups  
->->->Manage user/group info in password/group databases  
->->->Create and manage special purpose and limited accounts  
->->Terms and Utilities:  
->->->/etc/passwd  
->->->/etc/shadow  
->->->/etc/group  
->->->/etc/skel/  
->->->chage
```

- >->->getent
- >->->groupadd
- >->->groupdel
- >->->groupmod
- >->->passwd
- >->->useradd
- >->->userdel
- >->->usermod

->Automate system administration tasks by scheduling jobs

- <https://github.com/jesusninoc/PowerShell/tree/master/TareasProgramadas>

->->Key Knowledge Areas:

- >->->Manage cron and at jobs
- >->->Configure user access to cron and at services
- >->->Configure anacron
- >->Terms and Utilities:
- >->->/etc/cron.{d,daily,hourly,monthly,weekly}/
- >->->/etc/at.deny
- >->->/etc/at.allow
- >->->/etc/crontab
- >->->/etc/cron.allow
- >->->/etc/cron.deny
- >->->/var/spool/cron/
- >->->crontab
- >->->at
- >->->atq
- >->->atrm
- >->->anacron
- >->->/etc/anacrontab

->Localisation and internationalisation

->->Key Knowledge Areas:

- >->->Configure locale settings and environment variables
- >->->Configure timezone settings and environment variables
- >->Terms and Utilities:

->->->/etc/timezone

Set-Date

Get-Date

->->->/etc/localtime

->->->/usr/share/zoneinfo/

->->->LC_*

->->->LC_ALL

->->->LANG

->->->TZ

->->->/usr/bin/locale

->->->tzselect

->->->timedatectl

->->->date

->->->iconv

->->->UTF-8

->->->ISO-8859

->->->ASCII

->->->Unicode

Essential System Services

->Maintain system time

->->Key Knowledge Areas:

->->->Set the system date and time

->->->Set the hardware clock to the correct time in UTC

->->->Configure the correct timezone

->->->Basic NTP configuration

->->->Knowledge of using the pool.ntp.org service

->->->Awareness of the ntpq command

->->Terms and Utilities:

- >->->/usr/share/zoneinfo/

- >->->/etc/timezone

Set-Date

Get-Date

- >->->/etc/localtime

- >->->/etc/ntp.conf

- >->->date

- >->->hwclock

- >->->ntpd

- >->->ntpdate

- >->->pool.ntp.org

- >System logging

- >->Key Knowledge Areas:

- >->->Configuration of the syslog daemon

- >->->Understanding of standard facilities, priorities and actions

- >->->Configuration of logrotate

- >->->Awareness of rsyslog and syslog-ng

- >->Terms and Utilities:

- >->->syslog.conf

- >->->syslogd

- >->->klogd

- >->->/var/log/

- >->->logger

- >->->logrotate

- >->->/etc/logrotate.conf

- >->->/etc/logrotate.d/

- >->->journalctl

- >->->/etc/systemd/journald.conf

- >->->/var/log/journal/

- >Mail Transfer Agent (MTA) basics

- >->Key Knowledge Areas:

- >->->Create e-mail aliases

- >->->Configure e-mail forwarding

->->->Knowledge of commonly available MTA programs (postfix, sendmail, qmail, exim) (no configuration)

->->Terms and Utilities:

->->->~/ .forward

->->->sendmail emulation layer commands

->->->newaliases

->->->mail

Send-MailMessage

->->->mailq

Get-Mailbox

->->->postfix

->->->sendmail

->->->exim

->->->qmail

->->->~/ .forward

->->->sendmail emulation layer commands

->->->newaliases

->Manage printers and printing

Out-Printer

->->Key Knowledge Areas:

->->->Basic CUPS configuration (for local and remote printers)

->->->Manage user print queues

->->->Troubleshoot general printing problems

->->->Add and remove jobs from configured printer queues

->->Terms and Utilities:

->->->CUPS configuration files, tools and utilities

->->->/etc/cups/

->->->lpd legacy interface (lpr, lprm, lpq)

Networking Fundamentals

->Fundamentals of internet protocols

- <http://www.jesusninoc.com/2015/11/13/cmdlets-for-tcpip-model-layers/>

->->Key Knowledge Areas:

->->->Demonstrate an understanding of network masks and CIDR notation

->->->Knowledge of the differences between private and public «dotted quad» IP addresses

->->->Knowledge about common TCP and UDP ports and services (20, 21, 22, 23, 25, 53, 80, 110, 123, 139, 143, 161, 162, 389, 443, 465, 514, 636, 993, 995)

->->->Knowledge about the differences and major features of UDP, TCP and ICMP

->->->Knowledge of the major differences between IPv4 and IPv6

->->->Knowledge of the basic features of IPv6

->->Terms and Utilities:

->->->/etc/services

Get-Service

->->->IPv4, IPv6

->->->Subnetting

->->->TCP, UDP, ICMP

->Basic network configuration

- <http://www.jesusninoc.com/2015/11/13/cmdlets-for-tcpip-model-layers/>

->->Key Knowledge Areas:

->->->Manually and automatically configure network interfaces

->->->Basic TCP/IP host configuration

->->->Setting a default route

->->Terms and Utilities:

->->->/etc/hostname

->->->/etc/hosts

->->->/etc/nsswitch.conf

->->->ifconfig

->->->ifup

->->->ifdown

->->->ip

->->->route

->->->ping

->Basic network troubleshooting

- <http://www.jesusninoc.com/2015/11/13/cmdlets-for-tcpip-model-layers/>

->->Key Knowledge Areas:

->->->Manually and automatically configure network interfaces and routing tables to include adding, starting, stopping, restarting, deleting or reconfiguring network interfaces

->->->Change, view, or configure the routing table and correct an improperly set default route manually

->->->Debug problems associated with the network configuration

->->Terms and Utilities:

->->->ifconfig

->->->ip

->->->ifup

->->->ifdown

->->->route

->->->host

->->->hostname

->->->dig

->->->netstat

->->->ping

->->->ping6

->->->tracert

->->->tracert6

->->->tracert

->->->tracpath6

->->->netcat

->Configure client side DNS

- <http://www.jesusninoc.com/2015/11/13/cmdlets-for-tcpip-model-layers/>

->->Key Knowledge Areas:

->->->Query remote DNS servers

->->->Configure local name resolution and use remote DNS servers

->->->Modify the order in which name resolution is done

->->Terms and Utilities:

->->->/etc/hosts

->->->/etc/resolv.conf

->->->/etc/nsswitch.conf

->->->host

->->->dig

Resolve-DnsName

->->->getent

Security

->Perform security administration tasks

->->Key Knowledge Areas:

->->->Audit a system to find files with the suid/sgid bit set

->->->Set or change user passwords and password aging information

->->->Being able to use nmap and netstat to discover open ports on a system

->->->Set up limits on user logins, processes and memory usage

- >->->Determine which users have logged in to the system or are currently logged in
- >->->Basic sudo configuration and usage
- >->Terms and Utilities:
- >->->find
- >->->passwd
- >->->fuser
- >->->lsof
- >->->nmap
- >->->chage
- >->->netstat

Get-NetTCPConnection

Get-NetUDPEndpoint

- >->->sudo
- >->->/etc/sudoers
- >->->su
- >->->usermod
- >->->ulimit
- >->->who, w, last

->Setup host security

->->Key Knowledge Areas:

- >->->Awareness of shadow passwords and how they work
- >->->Turn off network services not in use
- >->->Understand the role of TCP wrappers

->->Terms and Utilities:

- >->->/etc/nologin
- >->->/etc/passwd
- >->->/etc/shadow
- >->->/etc/xinetd.d/
- >->->/etc/xinetd.conf
- >->->/etc/inetd.d/
- >->->/etc/inetd.conf
- >->->/etc/inittab
- >->->/etc/init.d/

->->->/etc/hosts.allow

->->->/etc/hosts.deny

->Securing data with encryption

- <https://www.jesusninoc.com/02/28/seguridad-informatica-con-powershell/>

->->Key Knowledge Areas:

->->->Perform basic OpenSSH 2 client configuration and usage

->->->Understand the role of OpenSSH 2 server host keys

->->->Perform basic GnuPG configuration, usage and revocation

->->->Understand SSH port tunnels (including X11 tunnels)

->->Terms and Utilities:

->->->ssh

->->->ssh-keygen

->->->ssh-agent

->->->ssh-add

->->->/.ssh/id_rsa and id_rsa.pub

->->->/.ssh/id_dsa and id_dsa.pub

->->->/etc/ssh/ssh_host_rsa_key and ssh_host_rsa_key.pub

->->->/etc/ssh/ssh_host_dsa_key and ssh_host_dsa_key.pub

->->->/.ssh/authorized_keys

->->->ssh_known_hosts

->->->gpg

->->->/.gnupg/