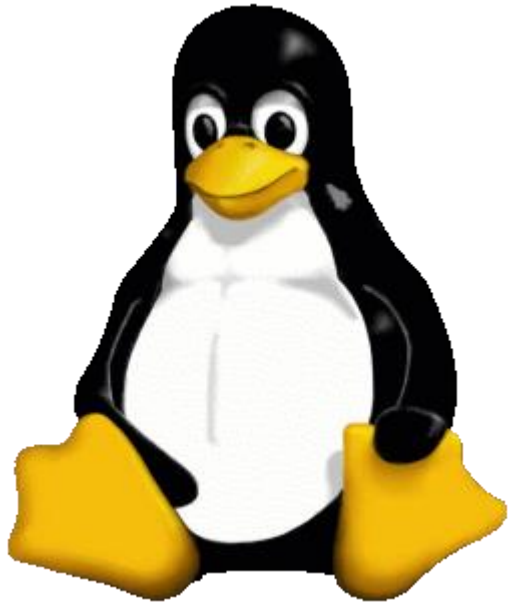
GNU/Linux

Linux Bash shell

vs

Windows power shell



Lesson 9-2

By Dr.
Amir

Linux vs Windows

When we talk about Linux to Windows users, they usually panic and feel their loved operating system in threat.

When we talk about Windows Operating system to Linux users, they feel discussed that their professional operating system compared with a toy.

However for system administrators it is different

Linux shell vs Windows power shell

For those completely unfamiliar with the subject, **bash** is the **command shell** and scripting language for the majority of **Linux** systems whereas **PowerShell** is the **command shell** and scripting language for the majority of **Windows** systems

The philosophy

Linux bash shell provide output as string, but Windows powershell's output is object.

Perhaps the reason lay on the time and era of computer science. Bash is buildup on Unix systems where administrator as an designer and owner of the system has all rights.

Windows powershell is developed during the time automation and centralized control was more important. Therefore as an administrator you have some controls on objects, but they have their own property and rules determined by the system. Administrator is basically someone managing a pre-designed system

Does power shell give us power?

In the Windows environment, PowerShell abstracts the details of the APIs and presents you with a rich object-oriented scripting environment, complete with built-in discoverability and help.

It makes it easier to use for cost of reduce power and creativity. As an administrator you will be part of Microsoft team of development. Without them, you will not be able to perform as an Administrator with absolute power.

Bash shell

Bash Shell is a Unix Shell and command-line language written by **Brian Fox** and developed by the **GNU project**. It was first released in **1989**. Its version is also available for the **Windows 10 operating system** and a default user shell in solaris 11. It also runs on any version of the **UNIX operating system**.

Power shell

Windows PowerShell is an automated command-line shell and associated scripting language created by **Microsoft**. It is designed especially for the System administrators and enables them to perform a task on remote and local windows system through full access to COM and WMI.

It was introduced in **2006** with its first version **PowerShell 1.0**.

Comparison

PowerShell

1. PowerShell is a command shell and associated scripting language for the majority of windows operating system.

2. PowerShell was introduced in 2006 with its first version.

3. It treats input and output as an object.

4. The user interface of PowerShell is a graphical command-line interface CLI.

5. It can execute on any version of Windows from Window 97 to Windows 10.

Bash Shell

2. Bash is the command shell and scripting language for the majority of the Linux operating system.

2. Bash shell was introduced in 1989.

3. It always accepts input and output as a text structure.

4. The user interface of Bash shell is a text-based command-line interface.

5. It is mainly prepared for Linux and Unix operating system from the first day

Comparison

Description	Bash	PowerShell
List files and folders	ls	Ls, Get-childItem
Change directory	cd	Set-childItem
Show Working directory	pwd	Get-Location
Clear the Screen	Clear	cls, clear
To copy a file	cp	Copy-Item
To remove or delete a file	rm	Remove-Item, ri, rmdir, rd, del, rm
To print a string	echo "string"	Write-host "string" OR echo "string"
To create a New text file	touch <filename.txt>	New-Item <filename.txt>

In general

- you have to understand that Windows and Linux, from an administrator point of view, are very different - Bash and PowerShell are also very different, although both try to solve the same set of problems.
- Linux is a file and text-based system. Everything is a file and commands emit only text. Windows is an API system - you have to use a raft of APIs to manage the environment.