Defence

1. How do virtual machines work

Virtual machine is a software that behaves like an actual computer. The process is managed by a hypervisor that manages the virtual machine’s resources.

1. Difference between Rocky and Debian

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| Rocky | Debian |
| Based on Red Hat Enterprise Linux (RHEL) and is community supported | Developed and maintained by a team of volunteers |
| More stable and reliable but may not have the latest features / updates (10-year update cycle) | Less stable but has newer features / updates |
| Uses rpm as its package manager | Uses apt-get as its package manager |

1. Purpose of virtual machines
   1. To run multiple operating systems on a single physical computer
   2. To test software on an operating system without affecting the host operating system
   3. To run potentially risky or malicious software in an isolated environment without affecting the host computer.
   4. To save money by allowing a single physical computer to be used for multiple purposes.
2. The difference between apt and aptitude

Apt (Advanced Package Tool) and aptitude are two different package managers for Linux Operating systems. Both are used on Debian based systems.

* 1. Apt is newer and more user friendly compared to aptitude.
  2. Aptitude automatically resolves dependencies (installs the required dependencies for any software package when it is installed) while apt does not.
  3. Aptitude has a text-based interface while apt has a more user-friendly interface that allows users to search for packages and install them.

1. What is APPArmor

AppArmor (Application Armor) is a Linux security module that allows administrators to specify security policies for individual applications. It is designed to protect applications and their data from security vulnerabilities and attacks.

1. How does LVM work

LVM stands for Logical Volume Manager, and it is a system for managing and organizing disk storage in a computer. It provides a way to create, resize, and merge disk partitions, known as "logical volumes", in a more flexible and convenient way than traditional methods.

LVM allows you to easily manage your disk space and make the most of the storage capacity on your system. For example, you can create a large logical volume and then divide it into smaller ones as needed, or you can merge multiple logical volumes together to create a larger one. LVM is a useful tool for managing disk storage, especially on systems with large amounts of disk space.

1. What is UFW and why is it used

UFW (short for Uncomplicated Firewall) is a firewall management tool for Linux operating systems. It is designed to be easy to use and configure, making it a good choice for users who are new to firewalls or do not have a lot of experience with networking.

UFW is used to control the incoming and outgoing network traffic on a Linux system. It allows administrators to define rules that specify which traffic is allowed and which is blocked.

One of the main advantages of UFW is that it is easy to use and configure. It has a simple command-line interface, and it comes with pre-defined rules for common services, such as SSH and HTTP. This makes it a good choice for users who want to quickly set up a basic firewall without a lot of technical knowledge or expertise.

1. What is SSH and why is it used

SSH (short for Secure Shell) is a network protocol that allows users to securely connect to and manage remote computer systems.

SSH provides a secure and encrypted connection between the local and remote systems, protecting the transmitted data from being intercepted or modified by unauthorized parties. It also allows users to authenticate themselves using a variety of methods, including passwords, keys, and certificates.

1. What is cron

Cron is a scheduling utility in Linux and Unix-like operating systems that allows users to schedule tasks to be automatically performed at specified intervals.

One of the main advantages of using cron is that it allows users to automate repetitive tasks, freeing up their time for other tasks. It is also useful for running tasks on a regular basis, such as performing backups or sending reports.