**Module 5**

**Linux server - Deploy, configure, and maintain systems Assignment**

1. The RPM package manager, often referred to simply as RPM, is a software packaging tool used primarily by Linux distributions that follow the Red Hat Package Manager (RPM) format. RPM itself stands for Red Hat Package Manager.

2. yum is a command-line package management utility for Linux distributions that use the RPM package format, such as Red Hat Enterprise Linux (RHEL), CentOS, Fedora, and others. The name yum originally stood for Yellowdog Updater, Modified, reflecting its origins in the Yellow Dog Linux distribution, but over time it has become known more simply as yum.

3. yum list

4. subscription-manager.

5. A repo file, short for repository file, is a configuration file used by package management systems like yum or apt to define the locations from which software packages can be obtained and installed onto a system.

6. The at command is a Linux and Unix command-line utility used to schedule commands or scripts for execution at a specified time in the future.

7. The atd daemon is typically located in the /usr/sbin directory.

8. You can use the atq command followed by the username.

9. You can use the --ignore=<package> option with the yum command to ignore specific packages during installation.

**Module: 6**

**Linux server - Manage basic networking & Security**

1. The ping command in Linux is a network administration utility used to test the reachability of a host on an Internet Protocol (IP) network and to measure the round-trip time for messages sent from the originating host to a destination computer.

2. A prefix often refers to the base directory where a software package or application is installed.

3. In the context of networking and the ping command, the protocol used is ICMP.

4. The Network ID is the unique identifier assigned to a network segment or subnet within an IP address range.

The Broadcast ID, or Broadcast Address, is the address used to send data packets to all devices within a specific network segment simultaneously.

5. In networking, a gateway refers to a networking device or a computer system that acts as an intermediary between devices in different networks.

6. It provides a flexible and granular system of mandatory access controls (MAC) that can enforce strict rules and policies on how processes and users interact with system resources.

7. The primary command used to manage IP addressing and network configuration is nmcli (Network Manager Command-Line Interface).

8. In Red Hat Enterprise Linux (RHEL) and many other Linux distributions, network interfaces (network cards) are typically named using predictable naming conventions rather than generic names like "eth0" or "eth1" that were used in older versions.

9. You can use the nmcli (NetworkManager Command-Line Interface) command to add or create a new network connection.

10. nmcli connection show

**Module 7**

**Linux server -deployment of network services**

1. KVM stands for Kernel-based Virtual Machine. It is an open-source virtualization technology built into the Linux kernel, which allows you to turn Linux into a hypervisor that enables the host machine to run multiple isolated virtual machines (VMs).

2. Virtualization is a technology that allows you to create multiple simulated environments or virtual instances of physical hardware systems, such as servers, storage devices, network resources, and even operating systems.

3. Benefits of Virtualization:

Resource Utilization: Consolidates multiple physical servers into fewer, more efficient virtual machines, reducing hardware costs and energy consumption.

Flexibility and Scalability: Allows for easy provisioning, migration, and scaling of VMs based on changing workload demands.

Fault Isolation and Recovery: Improves system reliability and availability by isolating failures within VMs and enabling quick recovery.

Testing and Development: Provides sandboxed environments for testing applications and deploying new software without impacting production systems.

4. **KVM (Kernel-based Virtual Machine)**

**QEMU (Quick Emulator)**

**5.** Nested virtualization refers to the ability to run a virtual machine (VM) inside another VM.

6. LDAP stands for Lightweight Directory Access Protocol.

7. It is an open-standard protocol used for accessing and maintaining distributed directory information services over an IP network.

8. authconfig-gtk Package.