IT STREAM
IT Academy &
Professional solutions

LİNUX ADMİNİSTRATOR

SYLLABUS

1. **Understand and use essential tools**
   - Access a shell prompt and issue commands with correct syntax
   - Use input-output redirection (>, >>, |, 2>, etc.)
   - Use grep and regular expressions to analyze text
   - Access remote systems using SSH
   - Log in and switch users in multiuser targets
   - Archive, compress, unpack, and uncompress files using tar, star, gzip, and bzip2
   - Create and edit text files
   - Create, delete, copy, and move files and directories
   - Create hard and soft links
   - List, set, and change standard ugo/rwx permissions
   - Locate, read, and use system documentation including man, info, and files in /usr/share/doc

2. **Create simple shell scripts**
   - Conditionally execute code (use of: if, test, [], etc.)
   - Use Looping constructs (for, etc.) to process file, command line input
   - Process script inputs ($1, $2, etc.)
   - Processing output of shell commands within a script

3. **Operate running systems**
   - Boot, reboot, and shut down a system normally
   - Boot systems into different targets manually
   - Interrupt the boot process in order to gain access to a system
   - Identify CPU/memory intensive processes and kill processes
   - Adjust process scheduling
   - Manage tuning profiles
   - Locate and interpret system log files and journals
   - Preserve system journals
   - Start, stop, and check the status of network services
   - Securely transfer files between systems

4. **Configure local storage**
   - List, create, delete partitions on MBR and GPT disks
   - Create and remove physical volumes
   - Assign physical volumes to volume groups
   - Create and delete logical volumes
   - Configure systems to mount file systems at boot by universally unique ID (UUID) or label
   - Add new partitions and logical volumes, and swap to a system non-destructively

5. **Create and configure file systems**
   - Create, mount, unmount, and use vfat, ext4, and xfs file systems
   - Mount and unmount network file systems using NFS
   - Configure autofs
   - Extend existing logical volumes
   - Create and configure set-GID directories for collaboration
   - Diagnose and correct file permission problems

6. **Deploy, configure, and maintain systems**
   - Schedule tasks using at and cron
   - Start and stop services and configure services to start automatically at boot
   - Configure systems to boot into a specific target automatically
   - Configure time service clients
   - Install and update software packages from Red Hat Network, a remote repository, or from the local file system
   - Modify the system bootloader

7. **Manage basic networking**
   - Configure IPv4 and IPv6 addresses
   - Configure hostname resolution
   - Configure network services to start automatically at boot
   - Restrict network access using firewall-cmd/firewall

8. **Manage users and groups**
   - Create, delete, and modify local user accounts
   - Change passwords and adjust password aging for local user accounts
   - Create, delete, and modify local groups and group memberships
   - Configure superuser access

9. **Manage security**
   - Configure firewall settings using firewall-cmd/firewalld
   - Manage default file permissions
   - Configure key-based authentication for SSH
   - Set enforcing and permissive modes for SELinux
   - List and identify SELinux file and process context
   - Restore default file contexts
   - Manage SELinux port labels
   - Use boolean settings to modify system SELinux settings
   - Diagnose and address routine SELinux policy violations

10. **Manage containers**
    - Find and retrieve container images from a remote registry
    - Inspect container images
    - Perform container management using commands such as podman and skopeo
    - Build a container from a Containerfile
    - Perform basic container management such as running, starting, stopping, and listing running containers
    - Run a service inside a container
    - Configure a container to start automatically as a systemd service
    - Attach persistent storage to a container

***Qeyd**: Təlimə daxildir:*

- Exam voucher

- Digital book

- Student pass

- Online lab

- Practice test