



COMPTIA XK0-005

CompTIA Linux+ Certification Questions & Answers

Exam Summary – Syllabus – Questions

XK0-005

[CompTIA Linux+](#)

90 Questions Exam – 720 / 900 Cut Score – Duration of 90 minutes

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Know Your XK0-005 Certification Well:

The XK0-005 is best suitable for candidates who want to gain knowledge in the CompTIA Infrastructure. Before you start your XK0-005 preparation you may struggle to get all the crucial Linux+ materials like XK0-005 syllabus, sample questions, study guide.

But don't worry the XK0-005 PDF is here to help you prepare in a stress free manner.

The PDF is a combination of all your queries like-

- What is in the XK0-005 syllabus?
- How many questions are there in the XK0-005 exam?
- Which Practice test would help me to pass the XK0-005 exam at the first attempt?

Passing the XK0-005 exam makes you CompTIA Linux+. Having the Linux+ certification opens multiple opportunities for you. You can grab a new job, get a higher salary or simply get recognition within your current organization.

CompTIA XK0-005 Linux+ Certification Details:

Exam Name	CompTIA Linux+
Exam Code	XK0-005
Exam Price	\$348 (USD)
Duration	90 mins
Number of Questions	90
Passing Score	720 / 900
Books / Training	CertMaster Learn for Linux+
Schedule Exam	Pearson VUE
Sample Questions	CompTIA Linux+ Sample Questions
Practice Exam	CompTIA XK0-005 Certification Practice Exam

XK0-005 Syllabus:

Topic	Details
System Management - 32%	
Summarize Linux fundamentals.	<ul style="list-style-type: none"> - Filesystem Hierarchy Standard (FHS) <ul style="list-style-type: none"> • /boot • /proc • /sys • /var • /usr • /lib • /dev • /etc • /opt • /bin • /sbin • /home • /media • /mnt • /root • /tmp - Basic boot process <ul style="list-style-type: none"> • Basic input/output system (BIOS) • Unified Extensible Firmware Interface (UEFI) • Commands <ul style="list-style-type: none"> - mkinitrd - grub2-install - grub2-mkconfig - grub2-update - dracut • initrd.img • vmlinuz

Topic	Details
	<ul style="list-style-type: none"> • Grand Unified Bootloader version 2 (GRUB2) • Boot sources <ul style="list-style-type: none"> - Preboot eXecution Environment (PXE) - Booting from Universal Serial Bus (USB) - Booting from ISO - Kernel panic - Device types in /dev <ul style="list-style-type: none"> • Block devices • Character devices • Special character devices <ul style="list-style-type: none"> - /dev/null - /dev/zero - /dev/urandom - Basic package compilation from source <ul style="list-style-type: none"> • ./configure • make • make install - Storage concepts <ul style="list-style-type: none"> • File storage • Block storage • Object storage • Partition typo <ul style="list-style-type: none"> - Master boot record (MBR) - GUID [globally unique identifier] Partition Table (GPT) • Filesystem in Userspace (FUSE) • Redundant Array of Independent (or Inexpensive) Disks (RAID) levels <ul style="list-style-type: none"> - Striping - Mirroring - Parity - Listing hardware information

Topic	Details
	<ul style="list-style-type: none"> • lspci • lsusb • dmidecode
<p>Given a scenario, manage files and directories.</p>	<ul style="list-style-type: none"> - File editing <ul style="list-style-type: none"> • sed • awk • printf • nano • vi(m) - File compression, archiving, and backup <ul style="list-style-type: none"> • gzip • bzip2 • zip • tar • xz • cpio • dd - File metadata <ul style="list-style-type: none"> • stat • file - Soft and hard links - Copying files between systems <ul style="list-style-type: none"> • rsync • scp • nc - File and directory operations <ul style="list-style-type: none"> • mv • cp • mkdir

Topic	Details
	<ul style="list-style-type: none"> • rmdir • ls • pwd • rm • cd • . • .. • ~ • tree • cat • touch
<p>Given a scenario, configure and manage storage using the appropriate tools.</p>	<ul style="list-style-type: none"> - Disk partitioning <ul style="list-style-type: none"> • Commands <ul style="list-style-type: none"> - fdisk - parted - partprobe - Mounting local and remote devices <ul style="list-style-type: none"> • systemd.mount • /etc/fstab • mount • Linux Unified Key Setup (LUKS) • External devices - Filesystem management <ul style="list-style-type: none"> • XFS tools • Ext4 tools • Btrfs tools - Monitoring storage space and disk usage <ul style="list-style-type: none"> • df • du

Topic	Details
	<ul style="list-style-type: none"> - Creating and modifying volumes using Logical Volume Manager (LVM) <ul style="list-style-type: none"> • Commands <ul style="list-style-type: none"> - pvs - vgs - lvs - lvchange - lvcreate - vgcreate - lvresize - pvcreate - vgextend - Inspecting RAID implementations <ul style="list-style-type: none"> • mdadm • /proc/mdstat - Storage area network (SAN)/network-attached storage (NAS) <ul style="list-style-type: none"> • multipathd • Network filesystems <ul style="list-style-type: none"> - Network File System (NFS) - Server Message Block (SMB)/Common Internet File System (CIFS) - Storage hardware <ul style="list-style-type: none"> • lsscsi • lsblk • blkid • fcstat
<p>Given a scenario, configure and use the appropriate processes and services.</p>	<ul style="list-style-type: none"> - System services <ul style="list-style-type: none"> • systemctl <ul style="list-style-type: none"> - stop - start - restart - status

Topic	Details
	<ul style="list-style-type: none"> - enable - disable - mask - Scheduling services <ul style="list-style-type: none"> • cron • crontab • at - Process management <ul style="list-style-type: none"> • Kill signals <ul style="list-style-type: none"> - SIGTERM - SIGKILL - SIGHUP • Listing processes and open files <ul style="list-style-type: none"> - top - ps - lsof - htop • Setting priorities <ul style="list-style-type: none"> - nice - renice • Process states <ul style="list-style-type: none"> - Zombie - Sleeping - Running - Stopped • Job control <ul style="list-style-type: none"> - bg - fg - jobs - Ctrl+Z - Ctrl+C - Ctrl+D • pgrep • pkill • pidof

Topic	Details
<p>Given a scenario, use the appropriate networking tools or configuration files.</p>	<ul style="list-style-type: none"> - Interface management <ul style="list-style-type: none"> • iproute2 tools <ul style="list-style-type: none"> - ip - ss • NetworkManager <ul style="list-style-type: none"> - nmcli • net-tools <ul style="list-style-type: none"> - ifconfig - ifcfg - hostname - arp - route • /etc/sysconfig/network-scripts/ - Name resolution <ul style="list-style-type: none"> • nsswitch • /etc/resolv.conf • systemd <ul style="list-style-type: none"> - hostnamectl - resolvectl • Bind-utils <ul style="list-style-type: none"> - dig - nslookup - host • WHOIS - Network monitoring <ul style="list-style-type: none"> • tcpdump • wireshark/tshark • netstat • traceroute • ping • mtr - Remote networking tools

Topic	Details
	<ul style="list-style-type: none"> • Secure Shell (SSH) • cURL • wget • nc • rsync • Secure Copy Protocol (SCP) • SSH File Transfer Protocol (SFTP)
<p>Given a scenario, build and install software.</p>	<ul style="list-style-type: none"> - Package management <ul style="list-style-type: none"> • DNF • YUM • APT • RPM • dpkg • ZYpp - Sandboxed applications <ul style="list-style-type: none"> • snapd • Flatpak • AppImage - System updates <ul style="list-style-type: none"> • Kernel updates • Package updates
<p>Given a scenario, manage software configurations.</p>	<ul style="list-style-type: none"> - Updating configuration files <ul style="list-style-type: none"> • Procedures <ul style="list-style-type: none"> - Restart service - Reload service • .rpmnew • .rpmsave • Repository configuration files <ul style="list-style-type: none"> - /etc/apt.conf - /etc/yum.conf - /etc/dnf/dnf.conf

Topic	Details
	<ul style="list-style-type: none"> - /etc/yum.repo.d - /etc/apt/sources.list.d - Configure kernel options <ul style="list-style-type: none"> • Parameters <ul style="list-style-type: none"> - sysctl - /etc/sysctl.conf • Modules <ul style="list-style-type: none"> - lsmod - insmod - rmmod - insmod - modprobe - modinfo - Configure common system services <ul style="list-style-type: none"> • SSH • Network Time Protocol (NTP) • Syslog • chrony - Localization <ul style="list-style-type: none"> • timedatectl • localectl
<p>Security - 21%</p>	
<p>Summarize the purpose and use of security best practices in a Linux environment.</p>	<ul style="list-style-type: none"> - Managing public key infrastructure (PKI) certificates <ul style="list-style-type: none"> • Public key • Private key • Self-signed certificate • Digital signature • Wildcard certificate • Hashing • Certificate authorities

Topic	Details
	<ul style="list-style-type: none"> - Certificate use cases <ul style="list-style-type: none"> • Secure Sockets Layer (SSL)/Transport Layer Security (TLS) • Certificate authentication • Encryption - Authentication <ul style="list-style-type: none"> • Tokens • Multifactor authentication (MFA) • Pluggable authentication modules (PAM) • System Security Services Daemon (SSSD) • Lightweight Directory Access Protocol (LDAP) • Single sign-on (SSO) - Linux hardening <ul style="list-style-type: none"> • Security scanning • Secure boot <ul style="list-style-type: none"> - UEFI • System logging configurations • Setting default umask • Disabling/removing insecure services • Enforcing password strength • Removing unused packages • Tuning kernel parameters • Securing service accounts • Configuring the host firewall
<p>Given a scenario, implement identity management.</p>	<ul style="list-style-type: none"> - Account creation and deletion <ul style="list-style-type: none"> • Utilities <ul style="list-style-type: none"> - useradd - groupadd - userdel - groupdel - usermod

Topic	Details
	<ul style="list-style-type: none"> - groupmod - id - who - w • Default shell • Configuration files <ul style="list-style-type: none"> - /etc/passwd - /etc/group - /etc/shadow - /etc/profile - /etc/skel - .bash_profile - .bashrc - Account management <ul style="list-style-type: none"> • passwd • chage • pam_tally2 • faillock • /etc/login.defs
<p>Given a scenario, implement and configure firewalls.</p>	<ul style="list-style-type: none"> - Firewall use cases <ul style="list-style-type: none"> • Open and close ports • Check current configuration • Enable/disable Internet protocol (IP) forwarding - Common firewall technologies <ul style="list-style-type: none"> • firewalld • iptables • nftables • Uncomplicated firewall (UFW) - Key firewall features <ul style="list-style-type: none"> • Zones • Services • Stateful

Topic	Details
<p>Given a scenario, configure and execute remote connectivity for system management.</p>	<ul style="list-style-type: none"> • Stateless <p>- SSH</p> <ul style="list-style-type: none"> • Configuration files <ul style="list-style-type: none"> - /etc/ssh/sshd_config - /etc/ssh/ssh_config - ~/.ssh/known_hosts - ~/.ssh/authorized_keys - /etc/ssh/sshd_config - /etc/ssh/ssh_config - ~/.ssh/config • Commands <ul style="list-style-type: none"> - ssh-keygen - ssh-copy-id - ssh-add • Tunneling <ul style="list-style-type: none"> - X11 forwarding - Port forwarding - Dynamic forwarding <p>- Executing commands as another user</p> <ul style="list-style-type: none"> • /etc/sudoers • PolicyKit rules • Commands <ul style="list-style-type: none"> - sudo - visudo - su – - pkexec
<p>Given a scenario, apply the appropriate access controls.</p>	<p>- File permissions</p> <ul style="list-style-type: none"> • Access control list (ACL) • Set user ID (SUID) • Set group ID (SGID) • Sticky bit <p>- Security-enhanced Linux (SELinux)</p> <ul style="list-style-type: none"> • Context permissions

Topic	Details
	<ul style="list-style-type: none"> • Labels <ul style="list-style-type: none"> - Autorelabel • System booleans • States <ul style="list-style-type: none"> - Enforcing - Permissive - Disabled • Policy types <ul style="list-style-type: none"> - Targeted - Minimum - AppArmor <ul style="list-style-type: none"> • Application permissions - Command-line utilities <ul style="list-style-type: none"> • chown • umask • chmod • getfacl • setfacl • ls • setenforce • getenforce • chattr • lsattr • chgrp • setsebool • getsebool • chcon • restorecon • semanage • audit2allow

Topic	Details
Scripting, Containers, and Automation - 19%	
<p>Given a scenario, create simple shell scripts to automate common tasks.</p>	<ul style="list-style-type: none"> - Shell script elements <ul style="list-style-type: none"> • Loops <ul style="list-style-type: none"> - while - for - until • Conditionals <ul style="list-style-type: none"> - if - switch/case • Shell parameter expansion <ul style="list-style-type: none"> - Globbing - Brace expansions • Comparisons <ul style="list-style-type: none"> - Arithmetic - String - Boolean • Variables • Search and replace • Regular expressions • Standard stream redirection <ul style="list-style-type: none"> - - - > - >> - < - << - & - && - Redirecting - stderr - stdout • Here documents • Exit codes • Shell built-in commands <ul style="list-style-type: none"> - read

Topic	Details
	<ul style="list-style-type: none"> - echo - source - Common script utilities <ul style="list-style-type: none"> • awk • sed • find • xargs • grep • egrep • tee • wc • cut • tr <ul style="list-style-type: none"> - head - tail - Environment variables <ul style="list-style-type: none"> • \$PATH • \$SHELL • \$? - Relative and absolute paths
<p>Given a scenario, perform basic container operations.</p>	<ul style="list-style-type: none"> - Container management <ul style="list-style-type: none"> • Starting/stopping • Inspecting • Listing • Deploying existing images • Connecting to containers • Logging • Exposing ports - Container image operations <ul style="list-style-type: none"> • build

Topic	Details
	<ul style="list-style-type: none"> • push • pull • list • rmi
<p>Given a scenario, perform basic version control using Git.</p>	<ul style="list-style-type: none"> - clone - push - pull - commit - add - checkout - branch - tag - gitignore
<p>Summarize common infrastructure as code technologies.</p>	<ul style="list-style-type: none"> - File formats <ul style="list-style-type: none"> • YAML Ain't Markup Language (YAML) • JavaScript Object Notation (JSON) - Utilities <ul style="list-style-type: none"> • Ansible • Puppet • Chef • SaltStack • Terraform - Continuous integration/continuous deployment (CI/CD) <ul style="list-style-type: none"> • Use cases - Advanced Git topics <ul style="list-style-type: none"> • merge • rebase • Pull requests

Topic	Details
<p>Summarize container, cloud, and orchestration concepts.</p>	<ul style="list-style-type: none"> - Kubernetes benefits and application use cases <ul style="list-style-type: none"> • Pods • Sidecars • Ambassador containers - Single-node, multicontainer use cases <ul style="list-style-type: none"> • Compose - Container persistent storage - Container networks <ul style="list-style-type: none"> • Overlay networks • Bridging • Network address translation (NAT) • Host - Service mesh - Bootstrapping <ul style="list-style-type: none"> • Cloud-init - Container registries
<p>Troubleshooting - 28%</p>	
<p>Given a scenario, analyze and troubleshoot storage issues.</p>	<ul style="list-style-type: none"> - High latency <ul style="list-style-type: none"> • Input/output (I/O) wait - Low throughput - Input/output operations per second (IOPS) scenarios <ul style="list-style-type: none"> • Low IOPS - Capacity issues <ul style="list-style-type: none"> • Low disk space • Inode exhaustion - Filesystem issues

Topic	Details
	<ul style="list-style-type: none"> • Corruption • Mismatch - I/O scheduler - Device issues <ul style="list-style-type: none"> • Non-volatile memory express (NVMe) • Solid-state drive (SSD) • SSD trim • RAID • LVM • I/O errors - Mount option problems
<p>Given a scenario, analyze and troubleshoot network resource issues.</p>	<ul style="list-style-type: none"> - Network configuration issues <ul style="list-style-type: none"> • Subnet • Routing - Firewall issues - Interface errors <ul style="list-style-type: none"> • Dropped packets • Collisions • Link status - Bandwidth limitations <ul style="list-style-type: none"> • High latency - Name resolution issues <ul style="list-style-type: none"> • Domain Name System (DNS) - Testing remote systems <ul style="list-style-type: none"> • Nmap • openssl s_client
<p>Given a scenario, analyze and troubleshoot</p>	<ul style="list-style-type: none"> - Runaway processes - Zombie processes

Topic	Details
<p>central processing unit (CPU) and memory issues.</p>	<ul style="list-style-type: none"> - High CPU utilization - High load average - High run queues - CPU times <ul style="list-style-type: none"> • steal • user • system • idle • iowait - CPU process priorities <ul style="list-style-type: none"> • nice • renice - Memory exhaustion <ul style="list-style-type: none"> • Free memory vs. file cache - Out of memory (OOM) <ul style="list-style-type: none"> • Memory leaks • Process killer - Swapping - Hardware <ul style="list-style-type: none"> • lscpu • lsmem • /proc/cpuinfo • /proc/meminfo
<p>Given a scenario, analyze and troubleshoot user access and file permissions.</p>	<ul style="list-style-type: none"> - User login issues - User file access issues <ul style="list-style-type: none"> • Group • Context • Permission • ACL

Topic	Details
	<ul style="list-style-type: none"> • Attribute • Policy/non-policy <p>- Password issues</p> <p>- Privilege elevation</p> <p>- Quota issues</p>
<p>Given a scenario, use systemd to diagnose and resolve common problems with a Linux system.</p>	<p>- Unit files</p> <ul style="list-style-type: none"> • Service <ul style="list-style-type: none"> - Networking services - ExecStart/ExecStop - Before/after - Type - User - Requires/wants • Timer <ul style="list-style-type: none"> - OnCalendar - OnBootSec - Unit - Time expressions • Mount <ul style="list-style-type: none"> - Naming conventions - What - Where - Type - Options • Target <ul style="list-style-type: none"> - Default - Multiuser - Network-online - Graphical <p>- Common problems</p> <ul style="list-style-type: none"> • Name resolution failure • Application crash • Time-zone configuration • Boot issues • Journal issues

Topic	Details
	<ul style="list-style-type: none">• Services not starting on time

CompTIA XK0-005 Sample Questions:

Question: 1

A Linux server is providing time services to several VMs. Which of the following hardening techniques will BEST reduce the risk of the time server being targeted for an attack?

- a) Change the default port.
- b) Add a warning banner.
- c) Block time services.
- d) Stop time services.

Answer: a

Question: 2

A Linux server has been experiencing performance spikes over the course of two weeks. The administrator needs to create a report and determine the cause of the performance spikes.

Which of the following commands, along with information in `/var/log/messages`, will help troubleshoot the issue?

- a) `loadavarage`
- b) `uptime`
- c) `vmstat`
- d) `sar`

Answer: d

Question: 3

A systems administrator wants to load custom modules. Which of the following directories is most appropriate to keep load module settings persistent?

- a) `/etc/kernel`
- b) `/etc/modprobe.d`
- c) `/etc/sysconfig`
- d) `/usr/lib/modules`

Answer: b

Question: 4

A Linux administrator is confirming information on a system. The administrator issues a series of commands and views the following output:

```
search homebizbook.com nameserver 205.70.100.12 nameserver 205.70.100.13
```

Which of the following commands did the administrator issue?

- a) `cat /etc/hosts`
- b) `cat /etc/nsswitch.conf`
- c) `cat /etc/resolv.conf`
- d) `cat /etc/networks`

Answer: c

Question: 5

A Linux administrator issues the following command with root or sudo privileges:

```
rpm -i installpackage.rpm
```

Once the command is issued, the console outputs the following error message: failed dependency. The administrator confirmed in a previous step that all dependencies have already been installed.

Which of the following commands should the administrator issue to bypass this error message?

- a) `rpm -e installpackage.rpm`
- b) `rpm -i installpackage.rpm`
- c) `rpm -i installpackage.rpm --nodeps`
- d) `rpm -qa installpackage.rpm`

Answer: c

Question: 6

A systems administrator wants to ensure users are greeted with a warning message when they log in to deter fraudulent activity. The systems administrator should:

- a) enforce the use of PKI.
- b) implement multifactor authentication.
- c) configure disk encryption.
- d) create a MOTD or banner.

Answer: d

Question: 7

A datacenter administrator assigns a ticket to a junior Linux administrator regarding a Linux server that is presenting issues with excessive CPU consumption and causing instability in a specific application.

The junior Linux administrator troubleshoots the Linux server and finds several zombie processes running on it. Which of the following commands would effectively fix the issue?

- a) Kill -9 pid
- b) Kill -s SIGCHLD pid
- c) kill -9 all
- d) kill -9 SIG pid

Answer: b

Question: 8

A Linux administrator is investigating an unscheduled restart of an application server and wants to check for successful logins prior to the restart.

Which of the following commands would display this information?

- a) last
- b) who
- c) dmesg
- d) reboot
- e) uptime

Answer: a

Question: 9

Which of the following statements BEST describes what the command `cat /proc/meminfo` will display?

- a) Hardware-specific CPU information
- b) Hardware-specific motherboard information
- c) Hardware-specific RAM information
- d) Hardware-specific NIC information

Answer: c

Question: 10

Which of the following ls command options will list hidden files and folders?

- a) ls -lh
- b) ls -la
- c) ls -lr
- d) ls -lt

Answer: b

Study Guide to Crack CompTIA Linux+ XK0-005 Exam:

- Getting details of the XK0-005 syllabus, is the first step of a study plan. This pdf is going to be of ultimate help. Completion of the syllabus is must to pass the XK0-005 exam.
- Making a schedule is vital. A structured method of preparation leads to success. A candidate must plan his schedule and follow it rigorously to attain success.
- Joining the CompTIA provided training for XK0-005 exam could be of much help. If there is specific training for the exam, you can discover it from the link above.
- Read from the XK0-005 sample questions to gain your idea about the actual exam questions. In this PDF useful sample questions are provided to make your exam preparation easy.
- Practicing on XK0-005 practice tests is must. Continuous practice will make you an expert in all syllabus areas.

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