

CheatSheet: SRE/DevOps/Sysadmin

INTERVIEW

- PDF Link: [cheatsheet-sre-A4.pdf](#), Category: interview
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-sre-A4>
- Related posts: CheatSheet: Leetcode For Code Interview, CheatSheet: Well-Known Papers For IT Industry, #denny-cheatsheets

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1.1 Reference

Name	Summary
Cheatsheet	CheatSheet: Leetcode For Code Interview, CheatSheet: Common Code Problems & Follow-ups
Cheatsheet	CheatSheet: System Design For Job Interview, CheatSheet: SRE/DevOps/Sysadmin
Cheatsheet	CheatSheet: Behavior Questions For Coder Interview, Shell CheatSheet

1.2 Good Mindsets

Num	Name	Summary
1	First thing: Stop The Bleed	
2	Pets VS Cattles	
3	Fix a process VS Fix a problem	
4	Evaluate Business Impact First	
5	Prevention VS Treatment	
6	Postmortem Culture	
7	Understand Workflow & Use Cases	Super important for trouble shooting
8	Automation VS Convention	
9	Principle Of Least Privilege	
10	Design Tools VS Use Tools	Operational knowledge is not good enough

1.3 Top 25 Linux Basic Questions

Num	Name	Summary
1	Thead VS Process	Github Link
2	Explain virtual memory	Github Link
3	Explain paging and paging fault	Github Link
4	Explain the output of <code>vmstat</code> command	Github Link
5	Explain inode	Github Link
6	epoll VS poll VS select	Github Link
7	Explain how OS schedules processes	Github Link
8	Explain spinlock	Github Link
9	Explain the general file system hierarchy of a Linux system	Github Link
10	Explain What RAID is? And how to choose RAID level?	
11	Explain the output of <code>top</code> command	
12	Explain the output of <code>sar</code> command	
13	What is <code>/proc</code> directory?	
14	Forget root password. How to reset it?	
15	How to solve ssh "Connection refused" errors?	
16	How to daemonize a process?	
17	What are common scenarios of linux kernel panics?	
18	What are coredump and kdump?	
19	Program startup process in userspace	Link: Program startup process in userspace
20	What's your favorite shell and why?	Link: Bash vs Zsh
21	Figure out who has logged to server now and previously?	w, last, lastb; lastlog; <code>/var/run/*tmp</code>
22	What is init program?	
23	How does sudo work? Given <code>sudo</code> , why people may need <code>su</code> ?	
24	How linux signal trap works? And what signals can't be ignored	
25	How to close stdin/stdout/stderr of one command	<code>some_command </dev/null >/dev/null 2>&1</code>

1.4 Top 15 Linux Workflow

Num	Name	Summary
1	What happens, when opening <code>https://www.google.com</code>	Github Link
2	What happens, when <code>"ls -l *"</code>	Github Link. shell, expansion, fork
3	What happens, when <code>"Ctrl + c"</code> in a terminal	Github Link. i/o interrupt, SIGINT, sig handler
4	What happens, when <code>"touch a.txt"</code>	Github Link
5	What happens, when you press power on button in a server?	Github Link. bios, mbr, grub, init, runlevel
6	What happens, when <code>"cat /etc/hosts"</code>	Github Link
7	Explain <code>init.d</code> workflow	Github Link
8	Explain how to build a linux release	Github Link
9	Explain how kernel schedules process	Github Link
10	Explain how kernel read data from disk	Github Link
11	Explain how I/O interrupt works	Github Link. Top half, bottom half, interrupt handler
12	Explain how system call works	Github Link
13	Linux sendfile with zero-copy	

1.5 Top 20 Linux Advanced Questions

Num	Name	Summary
1	Explain Linux security model	nothing-or-all model, capability, extended attrib
2	Whether it's possible to sniff HTTPS traffic? And why?	
3	Figure out what critical commands ssh users have issued?	
4	Why is I/O uninterruptible?	
5	Explain shell features	shell pipes, filename wildcards, env var expansion
6	What is the difference between UNIX and Linux	
7	What is Virtual Memory?	
8	What is localhost and why would ping localhost fail?	
9	How does the Linux kernel handle a system call	Link: System calls in the Linux kernel
10	Difference between ext3 and ext4	
11	How do you feel about systemd?	Init processes start serially, long booting time
12	ssh port forwarding VS ssh reverse port forwarding	
13	How to quickly crash an linux machine?	
14	How to deprovision a user completely?	
15	How reliable <code>history</code> command is? And how to alleviate the problem?	<code>~/.bash_history</code> , <code>\$HISTTIMEFORMAT</code> env
16	how to generate a zombie process	
17	With <code>bg</code> in one terminal, <code>jobs</code> doesn't show in another terminal	
18	How to setup http proxy with SLA for different traffic?	
19	What's your wishlist for linux?	
20	What's your ideal monitoring system in your imagination?	

1.6 Top 20 SRE Questions

Num	Name	Summary
2	How to do a online rolling upgrade for a given system?	Single node, or multiple node?
3	How you migrate legacy on-prem app to cloud-native in public cloud?	

1.7 Top 20 Container Questions

Num	Name	Summary
1	Compare to Linux process, what things containers can't support?	
2	How to sniff container's traffic?	
3	Explain the workflow of <code>"docker stop \$container_id"</code>	

1.8 Top 10 Networking Questions

Num	Name	Summary
1	Difference between switch and router?	L2, L3
2	What is a DNS amplification attack?	
3	Difference between L2 and L3 switch?	
4	What is TCP SYN scan? How it's conducted?	
5	Which port ICMP is using?	Neither TCP or UDP. Link
6	Proxy server vs Loadbalancer. Proxy server vs Reverse proxy server	
7	Brief introduction about 802.1x	
8	List all methods which can stop one ip ssh to the server	
9	Explain how iptable routing rules works	

1.9 SRE/System Engineering

Num	Name	Summary
1	Reference	Github: chassing/linux-sysadmin-interview-questions , Github: 0xAX/linux-insides
2	Reference	Link: Facebook Production Engineering Internship Interview
3	Reference	Link: SRE INTERVIEW QUESTIONS

1.10 More Resources

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<https://syedali.net/engineer-interview-questions/>