

DevOps Engineer Interview Questions and Answers

DevOps Engineer | Intern to senior level

DevOps engineer interview questions and answers covering Git, Docker, containers, CI/CD, scaling, load balancing and operational practices.

45 questions Read online: <https://www.freedevtemplates.com/interview-questions/devops>

Git

1. What is Git and how is it different from GitHub?

Git Easy Intern, Junior

Git is a distributed version control system that tracks changes to files on your machine; GitHub is a hosting service for Git repositories that adds collaboration features such as pull requests, code review and CI.

Git records snapshots of a project as commits. Every clone holds the full history, so you can commit, branch, view logs and compare versions without a network connection. Branches are cheap pointers to commits, which is what makes feature branches and experiments practical.

GitHub, GitLab and Bitbucket host a copy of the repository on a server so a team can share it. On top of Git they add pull requests, code review, issue tracking, permissions and automation such as GitHub Actions. You can use Git without GitHub, but not the other way round.

In day-to-day work you commit locally with Git, push your branch to the hosted remote, open a pull request for review, and merge it once checks pass.

In the interview

Git is the version control tool that runs locally and stores the full history in every clone. GitHub is a service that hosts Git repositories and adds pull requests, reviews, issues and CI on top. I use Git to commit and branch, and GitHub to share work and get it reviewed.

Key points

- Git: the version control tool, works offline
- GitHub: a hosting and collaboration platform for Git repositories
- Every Git clone contains the full history

```
git init # start tracking a project
git add src/app.js # stage a change
git commit -m "Add login form"
git remote add origin https://github.com/you/project.git
git push -u origin main # share it on GitHub
```

2. What is the difference between git fetch and git pull?

Git Easy Intern, Junior

git fetch downloads new commits from the remote without changing your working branch; git pull runs a fetch and then merges (or rebases) those commits into your current branch.

git fetch updates your remote-tracking branches such as origin/main. Your own branch and working files are untouched, so it is always safe. You can then inspect what changed with `git log main..origin/main` before deciding how to integrate it.

git pull is git fetch followed by git merge by default. If your branch and the remote have both moved, it creates a merge commit or stops with conflicts. Many teams set git config pull.rebase true so pull replays your local commits on top of the remote instead, which keeps history linear.

A good habit before starting work is to fetch, review, then merge or rebase deliberately, rather than pulling blindly into a branch with uncommitted changes.

Key points

- fetch: download only, never touches your branch
- pull: fetch + merge (or rebase with --rebase)
- Fetch first when you want to review incoming changes

```
git fetch origin
git log --oneline main..origin/main # what is new on the remote?
git merge origin/main # integrate when ready

# or in one step
git pull --rebase origin main
```

3. What is the difference between git merge and git rebase?

Git Medium Junior, Mid-level

Both integrate changes from one branch into another: merge keeps both histories and joins them with a merge commit, while rebase rewrites your commits so they appear on top of the target branch, giving a linear history.

Merging main into a feature branch creates a merge commit with two parents. Nothing is rewritten, so it is safe on shared branches, and the history shows exactly when branches were combined. The cost is a busier history with many merge commits.

Rebasing a feature branch onto main takes each of your commits and replays it on the latest main, creating new commits with new hashes. The result reads as if you started your work from the current main, which makes git log and git bisect easier to follow.

Because rebase rewrites history, the golden rule is: never rebase commits that other people have already based work on. Rebase your private feature branch to tidy it up, then merge it (often with a squash or fast-forward) into the shared branch.

In the interview

Merge combines two branches with a merge commit and never rewrites history, so it is safe on shared branches. Rebase replays my commits on top of the target branch, which gives a clean linear history but changes commit hashes. I rebase my own feature branch to keep it current and tidy, and I never rebase a branch someone else is working on.

Key points

- Merge preserves history and is safe on shared branches
- Rebase rewrites commits to produce a linear history
- Never rebase commits that others already use
- Use --force-with-lease, not --force, after rebasing

```
# merge: keeps history, adds a merge commit
git switch feature
git merge main

# rebase: replays feature commits on top of main
git switch feature
git rebase main
git push --force-with-lease # needed because hashes changed
```

4. How do you resolve a merge conflict in Git?

Git Medium Junior, Mid-level

Open the conflicted files, decide what the final code should be between the conflict markers, remove the markers, run the tests, then stage the files and continue the merge or rebase.

A conflict happens when two branches change the same lines, or one deletes a file the other edited. Git pauses the merge and marks each conflicted region with <<<<<<, ===== and >>>>>>. git status lists the files that need attention.

Resolving is not choosing a side. Read both changes, understand why each was made, and write the code that keeps the intent of both. Editors and git mergetool show the two versions side by side, but the decision is yours.

After editing, build and run the tests, because a conflict-free file can still be logically broken. Then git add the resolved files and run git merge --continue or git rebase --continue. If it goes wrong, git merge --abort returns you to the state before the merge.

Key points

- git status shows conflicted files
- Combine the intent of both changes, then remove the markers
- Run tests before continuing
- git merge --abort or git rebase --abort to start over

After editing: git add config.js && git merge --continue

```
<<<<<< HEAD
const timeout = 5000;
=====
const timeout = Number(process.env.TIMEOUT_MS);
>>>>>> feature/config

# resolved: keep the env variable, fall back to the old default
const timeout = Number(process.env.TIMEOUT_MS ?? 5000);
```

5. What is the difference between git reset and git revert?

Git Medium Mid-level, Senior

git revert creates a new commit that undoes an earlier one and is safe on shared branches; git reset moves the branch pointer back to an earlier commit, effectively removing later commits from that branch's history.

git revert <commit> calculates the inverse of a commit and records it as a new commit. History only grows, so teammates who already pulled are not affected. This is how you undo a bad change that has reached main or production.

git reset moves the current branch to another commit. With --soft the undone changes stay staged, with the default --mixed they stay in your working tree unstaged, and with --hard they are discarded. It is ideal for cleaning up local commits that have not been pushed.

If you reset by mistake, the commits are usually still recoverable for a while through git reflog, which records where your branch pointed before each move.

Key points

- revert: new commit, history preserved, safe when shared
- reset: moves the branch pointer, rewrites history
- --soft keeps changes staged, --mixed unstaged, --hard discards them
- git reflog can recover "lost" commits

```
# undo a pushed commit safely
git revert a1b2c3d

# rewrite local history (not yet pushed)
git reset --soft HEAD~1 # undo commit, keep changes staged
git reset --hard HEAD~1 # undo commit and discard changes

# recover from a bad reset
git reflog
git reset --hard HEAD@{2}
```

Docker

6. What is the difference between a Docker container and a virtual machine?

Docker Easy Intern, Junior

A virtual machine runs a full guest operating system on virtualised hardware, while a container shares the host's kernel and isolates only the process, its filesystem and resources, which makes containers much lighter and faster to start.

A hypervisor gives each virtual machine its own virtual CPU, memory and disk, and each VM boots a complete operating system. That gives strong isolation and lets you run different operating systems side by side, but each VM costs gigabytes and takes time to boot.

A container is an ordinary process on the host that the Linux kernel isolates with namespaces (its own view of processes, network and filesystem) and limits with cgroups (CPU and memory). Because there is no guest kernel, containers start in milliseconds to seconds and image sizes are often tens of megabytes.

The trade-off is isolation: containers share the kernel, so a kernel vulnerability can affect every container on the host. In practice the two are combined: cloud providers run containers inside VMs.

In the interview

A VM virtualises hardware and runs its own operating system, so it is heavy but strongly isolated. A container is just an isolated process that shares the host kernel, using namespaces and cgroups, so it starts quickly and uses far fewer resources. I use containers to package applications consistently, and they usually run inside VMs in the cloud anyway.

Key points

- VM: full guest OS on a hypervisor
- Container: isolated process sharing the host kernel
- Namespaces isolate, cgroups limit resources
- Containers are lighter; VMs isolate more strongly

7. What is the difference between a Docker image and a container?

Docker Easy Intern, Junior

An image is a read-only template made of layers that contains the application and its dependencies; a container is a running (or stopped) instance of an image with its own writable layer on top.

An image is built from a Dockerfile. Each instruction creates a layer, and layers are cached and shared between images, which makes builds and pulls faster. Images are versioned with tags and stored in registries such as Docker Hub or a private registry.

Running `docker run` creates a container from an image: Docker adds a thin writable layer, sets up networking and starts the process. You can run many containers from the same image, just as you create many objects from one class.

Changes made inside a container live only in its writable layer and disappear when the container is removed. Persistent data belongs in volumes, and changes to the application belong in a new image.

Key points

- Image: read-only, layered template
- Container: running instance with a writable layer
- Many containers can share one image
- Container changes are lost on removal; use volumes for data

```
docker build -t my-api:1.2.0 . # create an image
docker run -d --name api1 my-api:1.2.0 # start a container from it
docker run -d --name api2 my-api:1.2.0 # a second container, same image
docker ps # running containers
docker images # local images
```

8. What are Docker volumes and why do you need them?

Docker Easy Junior, Mid-level

Volumes are storage managed by Docker that lives outside a container's writable layer, so data such as database files survives when the container is removed or replaced.

A container's writable layer is deleted with the container, and it is slower than native storage. Anything that must persist, such as a database, uploaded files or caches you want to keep, needs to live outside it.

There are three options. Named volumes are created and managed by Docker and are the default choice for persistent data. Bind mounts map a host directory into the container, which is handy in development for live-reloading source code. tmpfs mounts keep data in memory only.

Volumes are also how containers share data, and they can be backed by network storage in production. Back them up like any other data: removing the container does not remove a named volume, but `docker volume rm` or `docker compose down -v` does.

Key points

- Container writable layers are temporary
- Named volumes for persistent data, bind mounts for development
- Volumes outlive containers until explicitly removed

```
docker volume create pgdata
docker run -d --name db \
-e POSTGRES_PASSWORD=secret \
-v pgdata:/var/lib/postgresql/data \
postgres:16

# the data survives replacing the container
docker rm -f db
docker run -d --name db -e POSTGRES_PASSWORD=secret \
-v pgdata:/var/lib/postgresql/data postgres:16
```

9. How do you write a good Dockerfile? What are multi-stage builds?

Docker Medium Junior, Mid-level

Use a small, pinned base image, order instructions so dependencies are cached before source code, use multi-stage builds to leave build tools out of the final image, run as a non-root user and keep secrets out of the image.

Layer caching drives build speed. Copy the dependency manifest and install dependencies first, then copy the source code. Changing a source file then reuses the cached dependency layer instead of reinstalling everything.

A multi-stage build uses one stage with compilers and dev dependencies to build the app, then copies only the output into a slim runtime stage. The final image is smaller, starts faster and has a smaller attack surface.

Other habits: pin base image versions, add a `.dockerignore` (exclude `node_modules`, `.git`, local env files), run as a

non-root user, use CMD in exec form so signals reach your process, and pass secrets at runtime or with build secrets rather than ENV or COPY.

Key points

- Copy dependency files before source code for caching
- Multi-stage builds keep build tools out of production images
- Pin versions, use .dockerignore, run as non-root
- Never bake secrets into image layers

```
# build stage
FROM node:20-alpine AS build
WORKDIR /app
COPY package*.json ./
RUN npm ci
COPY . .
RUN npm run build

# runtime stage
FROM node:20-alpine
WORKDIR /app
ENV NODE_ENV=production
COPY package*.json ./
RUN npm ci --omit=dev
COPY --from=build /app/dist ./dist
USER node
EXPOSE 3000
CMD ["node", "dist/server.js"]
```

10. What is Docker Compose used for?

Docker Medium Mid-level, Senior

Docker Compose defines a multi-container application (services, networks and volumes) in one YAML so you can start, stop and rebuild the whole stack with a single command, typically for local development and testing.

Most applications need more than one container: an API, a database, a cache, perhaps a worker. Starting each with long docker run commands is error-prone. Compose describes them declaratively in compose.yaml.

Services on the same Compose network reach each other by service name, so the API connects to postgres://db:5432 rather than an IP address. depends_on with health checks controls start-up order, and environment variables can come from an .env file.

Compose is ideal for development, CI and small single-host deployments. For production across many machines, teams move to an orchestrator such as Kubernetes or a managed container service, which adds scheduling, self-healing and rolling updates.

Key points

- One file describes services, networks and volumes
- Services find each other by name
- Great for development, CI and single-host setups
- Kubernetes or managed services for multi-host production

```
services:
  api:
    build: .
    ports: ["3000:3000"]
    environment:
      DATABASE_URL: postgres://app:secret@db:5432/app
    depends_on:
      db:
        condition: service_healthy
    db:
    image: postgres:16
    environment:
      POSTGRES_USER: app
      POSTGRES_PASSWORD: secret
    volumes: [pgdata:/var/lib/postgresql/data]
    healthcheck:
      test: ["CMD-SHELL", "pg_isready -U app"]
      interval: 5s
    volumes:
      pgdata:
```

System Design

11. What is the difference between horizontal and vertical scaling?

System Design Easy Junior, Mid-level

Vertical scaling means giving one machine more CPU, memory or disk, while horizontal scaling means adding more machines and spreading the load across them.

Vertical scaling is the simplest option and needs no code changes, but it has a hard ceiling, usually costs more per unit of capacity at the top end, and leaves a single point of failure. Horizontal scaling has almost no ceiling and improves availability, but the application must be designed for it: stateless servers, shared sessions and caches, and a load balancer in front.

Databases are the hard part. Stateless web servers scale out easily; a relational database is usually scaled up first, then read replicas are added, and finally the data is partitioned (sharded) when one primary can no longer handle the writes.

Key points

- Vertical: bigger machine. Horizontal: more machines
- Horizontal scaling needs stateless services
- Databases are scaled up, then replicated, then sharded

12. What is a load balancer and what are the common load balancing algorithms?

System Design Medium Junior, Mid-level

A load balancer distributes incoming requests across several servers to improve capacity and availability, using algorithms such as round robin, least connections or consistent hashing.

Round robin sends each request to the next server in turn and works when requests cost about the same. Least connections sends the request to the server with the fewest active connections, which is better when request times vary. IP hash or consistent hashing sends the same client or key to the same server, which helps with caches and sticky sessions.

A load balancer also runs health checks and stops sending traffic to failed servers. Layer 4 balancers route by IP and port and are very fast, while layer 7 balancers understand HTTP and can route by path, host or header and terminate TLS. The load balancer itself must not be a single point of failure, so it is deployed redundantly.

Behavioral

13. How do you answer "Tell me about yourself" in a software engineer interview?

Behavioral Easy Intern, Junior

Give a 60-90 second summary in three parts: what you do now, one or two achievements that show your strengths, and why this role is the logical next step.

This question is an invitation to set the agenda for the interview, not a request for your life story. Interviewers want a short, relevant summary that tells them where to dig deeper.

Use a present, past, future shape. Present: your current role or studies and the kind of work you do. Past: one or two concrete things you built or improved, with a result. Future: why this team and role is the next step for you.

Tailor it to the job description. For a backend role, lead with APIs and data work; for a frontend role, with user-facing features and performance. Practise it out loud until it sounds natural rather than memorised.

Key points

- Keep it to about 60-90 seconds
 - Present, past, future structure
 - Pick achievements relevant to this job
 - End with why you want this role
-

14. How do you answer "Why should we hire you?" as a developer?

Behavioral Easy Intern, Junior

Connect two or three of your strongest, provable skills directly to the needs in the job description, give a short piece of evidence for each, and show genuine interest in the team's work.

This is a closing pitch. The interviewer wants a confident, specific summary of why you fit this role, not a list of adjectives like "hard-working" and "passionate".

Before the interview, pick the two or three requirements in the job description that matter most and match each one with evidence from your experience: a project, a metric, a responsibility you held.

Finish with motivation that is specific to the company: its product, technical challenges or engineering culture. Keep the whole answer under a minute.

Key points

- Match your strengths to their stated needs
 - Back each claim with a concrete example
 - Show specific interest in the company
 - Keep it under a minute
-

15. What are you currently doing to grow as a software engineer?

Behavioral Easy Intern, Junior

Give specific evidence of deliberate learning through projects, feedback, reading, experimentation or mentoring rather than listing technologies.

Interviewers want to know whether your growth is intentional and connected to your current level and future responsibilities.

A strong answer combines a skill you are improving, how you practice it and evidence that your behavior has changed.

For senior candidates, include growth beyond coding: architecture, communication, mentoring, product understanding or leadership.

Key points

- Choose specific growth areas
-

- Practice deliberately
 - Use feedback
 - Show evidence of improvement
-

16. Why do you want to work for our company?

Behavioral Easy Intern, Junior

Connect something specific about the company, product, engineering challenges or team to your own experience and career goals.

A good answer demonstrates that you understand what the company actually does and why the role matters to you.

Choose two or three specific reasons and connect each to evidence from your background or interests.

Avoid generic statements that could be copied into any interview.

Key points

- Research the company
 - Be specific
 - Connect to your experience
 - Show realistic motivation
-

17. How do you answer "Tell me about a difficult project you worked on"?

Behavioral Medium Junior, Mid-level

Choose a real project with a technical or organisational challenge, explain your specific role and decisions with the STAR method, and finish with the result and what you learned.

The interviewer is testing how you handle complexity and pressure, and whether you can explain technical work to someone who was not there. The difficulty itself matters less than how you reasoned through it.

Pick a project where you made meaningful decisions. Briefly set the context, then spend most of the answer on your actions: how you broke the problem down, what options you considered, why you chose one, and how you worked with others.

Close with an honest result. If something went wrong, say so and explain what you would do differently. Senior candidates should also show how they reduced risk for the team, for example by phasing a migration or adding monitoring.

Key points

- Use STAR: Situation, Task, Action, Result
 - Spend most of the time on your actions
 - Say "I" for your work and "we" for the team's
 - Include what you learned
-

18. How do you answer "Tell me about a production bug you fixed"?

Behavioral Medium Junior, Mid-level

Walk through how you noticed the issue, limited the impact, found the root cause, fixed it, and what you changed afterwards so the same class of bug could not happen again.

This question tests your debugging process and how you behave under pressure. Interviewers want a calm, methodical story, not a hero story.

A strong answer has a clear order: detection (alert, logs, user report), mitigation first (rollback, feature flag, scaling), investigation (reproducing it, narrowing the cause with logs, metrics or git bisect), the actual fix, and prevention (tests, monitoring, a post-mortem).

Be specific about the technical cause, at a level the interviewer can follow. A memorable detail, such as a timezone edge case or a missing index that only hurt at peak traffic, makes the story credible.

Key points

- Mitigate impact before hunting for the root cause
 - Explain how you narrowed the cause down
 - Finish with prevention: tests, alerts, process changes
 - Stay blameless
-

19. Tell me about a mistake you made and what you learned from it.

Behavioral Medium Junior, Mid-level

Choose a real mistake, take ownership, explain the impact, what you did to recover, and what you changed so it would not happen again.

Interviewers are testing accountability, self-awareness and whether you learn from mistakes rather than whether you have a perfect record.

Choose a mistake that is meaningful but safe to discuss. Spend more time on your response and learning than on the mistake itself.

A strong answer shows prevention: a test, checklist, monitoring, review practice, documentation or process improvement.

Key points

- Take ownership
 - Explain impact honestly
 - Show recovery
 - Explain prevention
-

20. Tell me about a time you received difficult or critical feedback.

Behavioral Medium Junior, Mid-level

Describe feedback that was uncomfortable but useful, explain how you responded, and show the measurable or observable improvement that followed.

The interviewer wants evidence that you can accept feedback without becoming defensive and turn it into better performance.

Choose feedback that was genuinely actionable. Explain what you initially thought, what you understood after reflection, and what you changed.

For senior candidates, show how the experience changed the way you give feedback to others as well.

Key points

- Listen without defensiveness
 - Ask clarifying questions
 - Act on feedback
 - Show improvement
-

21. Tell me about a project or decision that failed.

Behavioral Medium Junior, Mid-level

Choose a genuine failure, explain why it failed, what you owned, how you recovered, and what you changed in future projects.

Good answers demonstrate resilience and learning rather than trying to make the failure sound like a success.

Be precise about the original assumption, the signal that showed it was wrong, and the decision you made once

you knew.

Senior candidates should explain how they changed team practices or reduced similar risk afterwards.

Key points

- Be honest
 - Identify the failed assumption
 - Recover quickly
 - Show systemic learning
-

22. Tell me about a time you had to deliver under a very tight deadline.

Behavioral Medium Junior, Mid-level

Show how you prioritized the essential outcome, communicated trade-offs, reduced risk and delivered without pretending everything could be done.

The interviewer is testing prioritization and communication under pressure, not willingness to work unlimited hours.

Explain what you cut, deferred or simplified and why. If quality or risk was temporarily accepted, explain how you contained it.

Strong answers include early communication when the original scope was unrealistic.

Key points

- Define the must-have outcome
 - Prioritize ruthlessly
 - Communicate trade-offs
 - Protect critical quality
-

23. Tell me about a time you disagreed with a code review comment.

Behavioral Medium Junior, Mid-level

Show that you can defend a technical decision with evidence while remaining open to a better argument.

Code review is collaborative engineering, not a contest of authority.

Explain the concern behind the comment before explaining your position. A strong answer may end with you changing your implementation.

If the disagreement remained, describe how you used project conventions, documentation, tests or a short experiment to resolve it.

Key points

- Understand the concern
 - Use evidence
 - Stay respectful
 - Accept better reasoning
-

24. Why are you looking to leave your current company?

Behavioral Easy Mid-level, Senior

Keep the answer professional and future-focused: explain what you are looking for next without attacking your current or former employer.

Interviewers are checking motivation, professionalism and whether your expectations match the role.

Focus on positive reasons such as greater ownership, a different technical challenge, product scale or opportunities to grow.

If there were genuine difficulties, describe them factually and briefly, then return to what you want to build next.

Key points

- Stay positive
 - Be truthful
 - Focus on the future
 - Connect to the role
-

25. How do you answer "Tell me about a time you disagreed with a teammate"?

Behavioral Medium Mid-level, Senior

Describe a real technical or process disagreement, show that you listened and argued with evidence rather than opinion, explain how a decision was reached, and how you supported it afterwards even if it was not your idea.

Interviewers want to know whether you can disagree productively. Teams need people who raise concerns, but also people who commit once a decision is made.

Choose a disagreement about something that mattered, such as an architecture choice, a deadline or code review standards. Avoid personal conflicts. Show that you first understood the other person's reasoning, then brought data: a benchmark, a prototype, an incident report.

The outcome does not need to be that you won. "We went with their approach, and I helped make it work" is a strong answer if you explain what you learned.

Key points

- Pick a professional, not personal, disagreement
 - Show you listened first
 - Use evidence: prototypes, data, constraints
 - Disagree and commit
-

26. Tell me about a time you took ownership of something that was not explicitly assigned to you.

Behavioral Medium Mid-level, Senior

Describe a problem you noticed, why you decided to act, how you coordinated with others, and the impact of taking ownership.

This question separates people who only complete assigned tickets from engineers who notice and solve important problems.

Do not describe work you simply volunteered for without explaining why it mattered to users, reliability, delivery or the team.

Show initiative without suggesting that you ignored ownership boundaries or other people.

Key points

- Identify an unowned problem
 - Explain why it mattered
 - Coordinate before changing shared systems
 - Show impact
-

27. Tell me about a time you had to work with unclear or changing requirements.

Behavioral Medium Mid-level, Senior

Explain how you identified ambiguity, clarified the important decisions, made reasonable assumptions and kept delivery moving.

Real engineering work often starts with incomplete information. Interviewers want to see structured thinking rather than waiting passively for perfect requirements.

Explain which questions you asked, which assumptions you documented and which decisions you intentionally kept reversible.

Strong candidates distinguish between uncertainty that must be resolved now and uncertainty that can be handled later.

Key points

- Clarify goals
 - Document assumptions
 - Prioritize unknowns
 - Keep decisions reversible where possible
-

28. Tell me about a time you had several important tasks competing for your attention.

Behavioral Medium Mid-level, Senior

Explain how you assessed urgency, impact, dependencies and risk, then communicated the resulting priorities.

Strong engineers do not prioritize only by who asks first. They consider customer impact, deadlines, dependencies, severity and reversibility.

Show how you made the priority decision visible to stakeholders so expectations were aligned.

For senior candidates, explain how you helped the team prioritize rather than managing only your own queue.

Key points

- Assess impact and urgency
 - Consider dependencies
 - Communicate priorities
 - Revisit when conditions change
-

29. Tell me about a time you disagreed with your manager or technical lead.

Behavioral Medium Mid-level, Senior

Show respectful disagreement, evidence-based reasoning, willingness to listen and commitment after the final decision.

Disagreeing professionally is healthy. The key is to challenge the decision rather than the person.

Explain what evidence you brought, what you learned from their perspective and how the final decision was made.

If the decision went against your recommendation, explain how you supported it afterwards.

Key points

- Challenge ideas, not people
 - Use evidence
 - Listen to constraints
 - Disagree and commit
-

30. Tell me about a process you improved for your team.

Behavioral Medium Mid-level, Senior

Identify a recurring source of wasted time or risk, make a focused improvement, and demonstrate its impact.

This question looks for engineers who improve the system around the code, not just the code itself.

Choose a process with repeated cost: deployment, code review, testing, incident response, onboarding or local setup.

Quantify the improvement when possible, but a clear reduction in errors or friction is also useful.

Key points

- Identify recurring pain
 - Make a focused change
 - Get team buy-in
 - Measure impact
-

31. Tell me about a repetitive task you automated.

Behavioral Medium Mid-level, Senior

Explain the manual problem, why automation was worthwhile, how you implemented it safely and what time or error reduction resulted.

Automation is valuable when it reduces recurring human effort or prevents avoidable errors.

Explain why you chose the level of automation you did rather than building a complicated system for a small problem.

Mention maintenance, failure handling and how users or teammates adopted the automation.

Key points

- Identify recurring cost
 - Choose proportional automation
 - Handle failures
 - Measure savings
-

32. Tell me about a time you explained a complex technical concept to a non-technical person.

Behavioral Medium Mid-level, Senior

Show how you adapted your explanation to the audience, focused on the outcome and avoided unnecessary technical jargon.

Senior engineers often communicate with product, support, sales and leadership. The ability to make technical risk understandable is important.

Explain the audience, what they needed to decide and how you translated the technical issue into business impact.

Avoid presenting technical simplification as hiding important information; explain the right level of detail for the decision.

Key points

- Understand the audience
 - Explain impact first
 - Avoid unnecessary jargon
 - Confirm understanding
-

33. Tell me about a problem you prevented before it reached production.

Behavioral Medium Mid-level, Senior

Show how you noticed a risk early, validated it, communicated it and added a safeguard.

Preventative engineering demonstrates maturity because the best incident is often the one that never happens.

Explain the signal that made you suspicious and how you verified the risk instead of relying on intuition alone.

Finish with the lasting safeguard: test, validation, monitoring, review, rollout control or design change.

Key points

- Spot risk early
 - Validate before escalating
 - Communicate clearly
 - Add a lasting safeguard
-

34. Tell me about a time you had to work with a difficult stakeholder.

Behavioral Medium Mid-level, Senior

Describe how you understood the stakeholder's goals, handled disagreement professionally and reached a workable outcome.

The interviewer is evaluating communication and emotional maturity, not whether you can complain about difficult people.

Describe the stakeholder's legitimate concern before explaining the conflict. This makes the story balanced and credible.

Focus on shared goals, explicit trade-offs and communication rather than personality differences.

Key points

- Understand their goals
 - Stay professional
 - Use facts and options
 - Find shared outcomes
-

35. Tell me about a technical debt decision you made.

Behavioral Hard Mid-level, Senior

Explain why you accepted, reduced or paid down technical debt and how you managed the associated risk.

Technical debt is not automatically bad. Interviewers want to see whether you understand its cost and deliberately manage it.

Describe the business constraint, the engineering risk and why the chosen approach was appropriate at that time.

Strong answers include a trigger or plan for addressing the debt instead of leaving it invisible.

Key points

- Identify the debt
 - Understand its cost
 - Make the trade-off explicit
 - Create a follow-up trigger
-

36. Tell me about a time you introduced a new technology or tool to a project.

Behavioral Hard Mid-level, Senior

Start with the problem, evaluate alternatives, validate the technology with a small experiment and explain how you managed adoption and risk.

Interviewers want to know that you choose technology because it solves a problem, not because it is fashionable.

Discuss the existing approach, why it was insufficient, alternatives considered, proof of concept and operational implications.

Senior candidates should include how they helped the team adopt and maintain the new technology.

Key points

- Start with the problem
-

- Evaluate alternatives
 - Prototype before committing
 - Plan adoption and maintenance
-

37. Tell me about a time you mentored or helped another developer grow.

Behavioral Medium Senior

Explain how you identified what the developer needed, coached rather than simply solved the problem, and measured their progress.

Mentoring is about increasing another engineer's ability to solve problems independently.

Strong answers describe questions, pairing, feedback, documentation or progressively larger ownership rather than simply giving answers.

Senior candidates should show patience and adaptation to the individual developer's level.

Key points

- Understand their starting point
 - Teach reasoning, not only solutions
 - Give actionable feedback
 - Increase independence
-

38. Tell me about a time you influenced a technical decision without having formal authority.

Behavioral Hard Senior

Show how you built trust, understood competing concerns, used evidence and helped the group reach a decision.

Senior engineers often influence architecture and engineering practices without being the manager or final decision-maker.

The strongest stories show persuasion through clarity and evidence rather than relying on seniority or force of personality.

Explain what happened after the decision and whether you supported the team's final choice.

Key points

- Build alignment
 - Use evidence
 - Understand other constraints
 - Support the final decision
-

39. Tell me about a time you had to choose between two good technical approaches.

Behavioral Hard Senior

Explain the constraints, alternatives, trade-offs, decision criteria and why the chosen option was appropriate for the context.

Senior engineering decisions rarely have a universally correct answer. Interviewers want to see explicit trade-off reasoning.

Compare options using factors such as reliability, complexity, performance, cost, team expertise, delivery time and future change.

A strong answer acknowledges what you gave up by choosing the preferred option.

Key points

- Define decision criteria
-

- Compare alternatives
 - Make trade-offs explicit
 - Choose for the context
-

40. Tell me about a major production incident you helped handle.

Behavioral Hard Senior

Cover detection, communication, mitigation, investigation, recovery and the changes made afterwards to reduce recurrence.

Incident questions test calm decision-making and ownership under pressure.

Separate immediate mitigation from root-cause analysis. During an incident, restoring service is usually more important than finding the perfect explanation immediately.

For senior candidates, include how you coordinated people, communicated status and improved the system after the incident.

Key points

- Protect users first
 - Communicate clearly
 - Investigate systematically
 - Prevent recurrence
-

41. Tell me about a time you decided not to use a technology or framework.

Behavioral Hard Senior

Explain why the technology looked attractive, what problem it actually solved, and why its cost or complexity was not justified in your context.

Knowing when not to add technology is an important engineering skill.

A strong answer compares the expected benefit against learning cost, operational complexity, team capability, migration cost and long-term maintenance.

Avoid making the decision sound ideological; show that you would reconsider if the constraints changed.

Key points

- Define the actual problem
 - Compare total cost
 - Avoid unnecessary complexity
 - State when the decision could change
-

42. Tell me about a time you had to balance speed of delivery with technical quality.

Behavioral Hard Senior

Explain the deadline, the quality risks, what you protected, what you simplified and how you managed any remaining debt.

Engineering teams constantly balance delivery and quality. Strong answers show deliberate trade-offs rather than treating one as always correct.

Separate reversible shortcuts from dangerous shortcuts. Never present security, data integrity or critical reliability risks as acceptable just to ship faster.

Explain what you documented or scheduled for follow-up.

Key points

- Identify non-negotiable quality
 - Make trade-offs explicit
-

- Contain risk
 - Track follow-up work
-

43. Tell me about a technical decision you made that turned out to be wrong.

Behavioral Hard Senior

Explain the original reasoning, the evidence that changed your view, how you corrected course and what decision-making practice improved afterwards.

This tests intellectual honesty and the ability to update your beliefs when reality disagrees with your assumptions.

Do not rewrite the story as if the decision was obviously correct. Explain what information was available at the time and what you missed.

The strongest answers show a change in process, such as better experiments, metrics or review criteria.

Key points

- Own the decision
 - Explain original assumptions
 - Recognize evidence
 - Improve the decision process
-

44. Tell me about a project you led from idea to production.

Behavioral Hard Senior

Walk through how you shaped the problem, planned the work, aligned stakeholders, managed risks and measured the outcome.

For senior engineers, leadership means creating clarity and reducing risk, not simply assigning tasks.

Cover discovery, design, execution, testing, rollout, monitoring and follow-up. Make your individual leadership contribution clear.

Include a moment where you made a meaningful trade-off or changed the plan based on new information.

Key points

- Define the problem
 - Align stakeholders
 - Plan and de-risk
 - Lead delivery
 - Measure outcome
-

45. Tell me about a time you worked with a teammate who was struggling.

Behavioral Hard Senior

Show empathy, clear expectations, practical support and appropriate escalation rather than blame.

The interviewer wants to see whether you can help a teammate without becoming their manager or doing their work for them.

Start by understanding the cause: unclear requirements, missing knowledge, workload, personal circumstances or process problems.

For senior candidates, explain how you balanced support with accountability and involved the appropriate lead when necessary.

Key points

- Understand the cause
 - Set clear expectations
-

- Offer targeted support
 - Maintain accountability
-

These answers are written for real interview conversations. Prefer explaining a trade-off out loud over reciting a definition. Full explanations and related questions: <https://www.fredevtemplates.com/interview-questions/devops>