Engineering positions at ExpressVPN: General Information for all candidates

Introduction

Thank you for your interest in joining ExpressVPN in an Engineering role. This document should help you decide whether to apply, and for what kind of role. It should also prepare you with what to expect during interviews. If you have any questions about the content here, please don't hesitate to ask during the recruiting process!

ExpressVPN's Culture as it relates to Engineering

- **Keen appetite for learning**. Lots of investment in skill-growth and sharing, code-reviews for all merges, openness to new tools and tech.
- **Honesty**. That means blameless postmortems and lively debates where we dig deep for multiple layers of root causes, try to learn and improve quickly.
- **Decisions for the long term**. We firmly believe that high levels of quality and low technical debt mean higher delivery-pace in the long term. We're lucky that we very rarely have externally imposed deadlines. Therefore, it's very rare for us to cut corners to hit short-term dates.
- **Reasonable work-life balance**. We believe this translates to a higher delivery pace over the long term. We generally work hard and at a very fast pace, but not necessarily super long hours. We shoot for a productive 40-hour work week.
- **We take privacy and security extremely seriously**. Threat-modeling, including for threats about the privacy of our customers and our team members, is embedded in all parts of our software development lifecycle. Our tolerance for risks of harming the security or privacy of our customers or team members is quite low. For example we generally require that no single compromise may be catastrophic. As a result, we invest in making many of our build processes reproducible, such that we can detect tampering in the build pipeline. We also have a privacy policy for employees and an audit process to prove to ourselves that our IT systems (such as endpoint protection and intrusion detection systems on workstations) comply with it.
- **Strong emphasis on teamwork and self-coordination**. Relatively little top-down direction. More on this below.

- **Accountability and authority need to align. Whomever makes a decision should live with the consequences**. No one should be held responsible for results that they weren't empowered to impact. This is our golden rule for designing positions.

Types of candidates we're looking for

We're open to hiring a **very broad range of people**. We primarily consider a candidate's **personality and core abilities**. Current levels of skill and knowledge are secondary, since we know that we can quickly upskill people, and we have the luxury of a financially successful business and a long time-horizon to make those investments worthwhile.

We're looking to hire engineers across all specializations and role types: all types of individual contributors, and people-managers at all levels.

To fit well at ExpressVPN, you need to:

- Be **hungry to learn**. No matter how skilled you are already, you bring **humility** to learn from others and from your own mistakes. You look to constantly improve yourself.
- Be **open to working in teams**. While you might be the single most skilled person in one domain, you know that you can still achieve even more by working well with others. You value feedback from others, and you bravely and respectfully give honest feedback to your colleagues.
- **Value positive relationships**. There's no place for abusive behavior here. Criticize the issue, not the person.
- Take great **pride in the quality of your work**. We believe that this attribute manifests itself through effective automated tests.

On the other hands, here are some **things you're unlikely to find at ExpressVPN**:

- **Unduly motivated by power and status**. We don't use titles much, and we make decisions based on merit, very rarely based on authority. That's also reflected in the fact that our people-managers are responsible for growing people, not necessarily for directing work.
- **Being left alone to your own devices to just write code**. See the points above about teamwork and the high value we place on each team member helping their colleagues grow.

Teamwork

1. Like many people at ExpressVPN, **engineers work in teams**. Teams are **often cross-functional,** containing engineers with various specialties as well as people from other functions, most commonly at least one product manager. The structure of teams is a lot more flexible than reporting lines for people-management. **Team membership and people management are often unrelated**. This is an important concept for all candidates to understand, since it affects the types of positions we have available. We have a company-wide inventory of teams and people. Teams are staffed such that they are reasonably self-contained to accomplish their objectives. Engineers in particular should be on only a single team at a time. **Groups of teams are called "tribes,"**e.g. the various teams that deal with our VPN are called the "Private Pipes Tribe," and managers might be on a leadership team for a tribe.

2. The company's hierarchy of Objectives and Key Results (OKRs) guides which teams we form. **Each team usually maps to at least one OKR**. The success of each team is measured by whether it achieves its OKRs. Team formation/editing can happen at any time, and is most common around our quarterly planning cycles.

3. There are the following commonly seen **types of teams,** and each team might be a combination of multiple types:
    - **Feature teams**. For example, to deliver auto-update functionality for our router. This involves specialists for firmware, backend, web UI, etc.
    - **Component teams**. For example, to maintain Lightway and manage its open-source community.
    - **Platform teams**. For example, to build and operate our API gateway.
    - Miscellaneous teams more related to **HR, Recruiting, and L&D**, such as delivering improvements to our engineering role-leveling system, improving how we hire engineers, sourcing a specific type of candidate, etc.

4. **Roles within teams**. We keep these quite flexible and let teams self-organize. Each team has a range of needs, and different members of the team can proactively step up to meet those needs. **Teams succeed or fail together**. Their members are accountable to each other. Some commonly seen patterns are:
    - **Facilitating ceremonies** like standup, backlog grooming, story refinements, retros, and postmortems. Often handled by product managers, but could be anyone.
    - **Triage** for incoming bugs and requests from outside the team. Usually consists of 2-3 people; definitely the product manager plus one or two engineers. If the team has a QA engineer, they usually participate in triage.
    - **Communicating outside of the team**, such as representing it at other forums. The team picks. Commonly the product manager, or a suitable engineer.
    - **Resolving interpersonal conflicts**. Anyone!
    - **Resolving gridlock on technical decisions**. In rare cases when necessary, a team can escalate to the Engineering Director on its tribe leadership team. However, we much prefer teams to execute without outside help. We expect team-members to debate issues objectively, consider their relative competencies, and defer to decisions of the most qualified people. Few things require consensus. Many issues can move forward when team members disagree but commit.
    - **Deciding in which order to deliver user stories (**"**sorting the backlog**"). That is the product manager's responsibility. They do that collaboratively and with input from many people, but it's their call.
    - Deciding how to merge stacks of engineering work and user stories (ie: **merging technical debt reductions into the backlog**): collaboratively as a team. The team might also designate one suitable engineer to do this together with the product manager.

5. **Which engineer gets paired with which people-manager?** It depends, and it's highly flexible. We generally pair people such that they're best suited for guiding their skill and career growth.
    - Any set of engineers and their people-manager **don't usually need a name**. They're not necessarily a team.
    - When a set of engineers and their people-manager share a common skill, such as Pentesting or Data Science, we call that a **chapter**.
    - In **pairing engineers with people-managers**, we consider **factors** such as:

        - *Functional expertise:* While the IC's skill as an engineer might be far above that of the manager, the manager does need at least a base level of understanding about the IC's craft. For example, an engineer who does a lot of network engineering is paired with a people-manager who also knows network engineering. The more well-rounded an engineer becomes, the less important functional expertise of the manager becomes, and the focus shifts instead towards coaching.
        - *Location:* Building relationships face-to-face can be easier and more enjoyable.
        - *Level of experience*: To effectively guide career and skill growth of a very experienced IC, the people-manager obviously needs a sufficient level of experience themselves as well.
        - *Personality*: Sometimes two people just match well, and some others don't, so we give ourselves flexibility in picking the right pairings.
    - We have an OrgChart showing the tree structure mapping people to people-managers, but remember that's NOT our set of teams.
    - We like to make sure that people-management is done only by people who have the necessary people-skills and who want that for their career path. We don't push people into such roles. **People-management and individual contribution tracks are equally valued**, and ICs can have higher compensation than managers.

6. **Engineers share skills via "guilds"**; these are informal groups of people who share an interest in a certain skill. For example, we might have an "Ansible guild" or a "Ruby guild." "Improving others" is a major category of "things that the company values and rewards," and everyone is expected to contribute in whichever ways they find reasonable.

7. **Hiring**. Creating hiring-plans for engineers is mostly, but not exclusively, done by Directors. Managers and ICs contribute through designing assessment plans and performing interviews. We also have **engineering hiring teams** that solve recruiting-related problems for all engineers company-wide.

8. **Ownership of code**: We generally prefer "organic ownership." Most engineers can create pull-requests into any repo company-wide, and everyone is encouraged to move across technical boundaries and do whatever is necessary to help their team achieve its OKRs. **"Leave it better than you found it."** Particularly sensitive repos might only have a small set of people authorized to merge PRs.

9. **Ownership of services**: we have an inventory of services, each of which has a single ops-owner with well-defined responsibilities. As of 2021, we have 40-50 independently deployed services running in the cloud, plus our 3000+ physical servers running our VPN infrastructure using our TrustedServer technology, plus our native apps for various client platforms.

Types of Engineering Roles

There are the following types of roles in Engineering:

1. **Individual Contributor (IC) Engineer**. Builds and operates software.
    - Accountable for:
        1. The **quality** of what they build and operate. Quality is defined very broadly: it includes security, reliability, performance, capacity, and many other aspects. A

single engineer might not have all the skills to do this well themselves, so they rely on teamwork with specialists for help, but the end-result quality of whatever they then build and operate is a key part of how the company evaluates the performance (and thus also decides compensation) of engineers.
    2. Their **pace** of delivering sufficient-quality engineering solutions. We use various ways of quantifying this, none perfect. They might not always tell us that we are fast, but they can often tell us when we are NOT fast.
    3. Plus, they are accountable for the **success of the teams** they join as described by their OKRs.

- Often "T-shaped", meaning they are deep experts in one or a few areas, and broadly competent in many others. Some specializations include:
    1. Security Engineering
    2. Pentesting
    3. Network Engineering
    4. Systems Engineering
    5. Data Engineering
    6. Etc.

2. **Engineering Manager**. Writes code as an engineer on a single team, and is **also the people-manager for a few engineers.** "People-manager" here means they're responsible for helping people grow their skills and career and representing them when the company makes decisions on **compensation**. However, this does **NOT necessarily involve directing what work they should do**. That's done in teams. This is a hugely important distinction, since it's different from how many other companies define the role of a people-manager. Also, the people-manager is NOT necessarily on the same team as the engineers they manage. That's one of many reasons why we expect **feedback to flow peer-to-peer**, not only via a manager.

3. **Engineering Director**. Is not expected to write code. Is the people-manager for several Engineering Managers. Helps identify what teams the company needs, what skills those teams need, and finds ways to deliver those skills through learning and hiring. **Heavily involved in hiring**, sometimes full-time. They might also be on "**leadership teams,**"**,** such as those that provide direction for "tribes" (aka "sets of teams").

As of 2021, we have ~120 engineers across the company and we hope to have ~200 soon. Managers take care of up to five people and Directors up to eight. With up to eight Directors, that's 5*8*8=320 engineers, so we don't need additional layers yet.

Ancillary to the general Engineering function, **we also have roles in QA Engineering**. Very important: QA roles are NOT "the people who do testing." **Engineers are expected to test their own work, usually with automation**. **QA roles are embedded in teams and help those teams deliver even better quality at a higher pace by "shifting left,"** which means avoiding bugs altogether through clearer thinking on requirements and designs, more refined stories, and helping engineers find their bugs as early as possible.

What to expect in interviews

1. Depending on how you applied: We might ask you to complete pre-screen questions to help us filter for relevant candidates. We get thousands of applicants and unfortunately cannot personally speak with all of them.
2. Recruiter phone-screen to confirm basic info about your application and answer some of your questions about the company and confirm we've matched your interests with the right role.
3. Hiring-manager video screen.
4. Interviews to test role-specific competencies, ideally in-person. Some might involve coding.
5. Resume deep-dive.
6. Written homework. For engineers: a coding challenge. For managers: likely a test in performance-management.
7. **Reference checks** performed by your hiring-manager. This is a very important part of our process. At the right time and with your permission (sometimes only after you've accepted our offer and resigned from your current position), we will want to speak with one or more of your former managers and maybe other colleagues, and we will ask you to arrange those calls for us. During your interviews, we will ask you what we should expect to hear from them when we perform those calls. This helps us weed out dishonest candidates early. For strong candidates, it assures them that joining ExpressVPN means working with highly qualified colleagues.

How ExpressVPN does Engineering

Here's a collection of points that give you a sense for how we approach Engineering.

- **TDD** by default.
- Always **CI/CD**. Test suites should pass in CI within 5 minutes. Deployments should be fully automated, such that the time-delta between a release and the timestamp of the most recent commit should be measured in minutes.
- Let **data** speak the truth. Rely less on opinions. Therefore, lots of split-testing and metrics, of course within privacy constraints.
- **Sometimes pair programming**. We've been trying to do more of it in 2021 especially.
- **Security**
    - "Be very difficult to hack" as described in our Trust Center.
    - "Be OK to get hacked"
        - Maximum possible damage is known ex-ante through threat-modeling, and deemed acceptable, non-catastrophic.
        - Time under compromise is likely low. Chances of detection are high.
    - Mitigations are tested on a regular basis. Automatically where feasible, supplemented by in-house pentesters and vendors. Service-health is contingent on sufficiently recent passing tests.
- Teams pick their delivery methodology, which is generally either **Kanban or Scrum**. We get value from metrics such as branch-age, story cycle-times and throughput, time-deltas between commits and releases, releases per time, cycle-time on code-reviews, cycle-time on CVE patches, etc.
- Each team should **deliver several stories per week**. That means we like to keep stories nice and small. "Slicing stories such that they're small but still deliver something that's incrementally valuable to a user" is an important skill at ExpressVPN, especially for our product managers.

- **Automate** as much as possible. It's rare that anyone here needs convincing that something is worth automating.
- To help **balance technical debt** with delivering proactive user stories: each service has a definition of health codified as an SLA. Any work needed to keep the service healthy is immediately prioritized to the top of the ready-to-start stack.
- Engineers working on services are generally expected to be in **on-call rotations**. They're expected to build their services such that there's no more than 1 wake-up for any person per 3 months. When a wake-up does happen, the company compensates that person. Through the postmortem that follows, the company will support whatever efforts are necessary to avoid repeats.

See open Engineering positions at ExpressVPN and submit your resumé today!

Even if you don't see exactly the right role for you, get in touch anyway—we're always on the lookout for great engineering talent.