

## **Congratulations on making it to our phone interview stage for the [Network Engineering, Corp role](#) at Facebook!**

More information about Enterprise Engineering - [Enterprise Engineering through the eyes of our CIO](#)

Here are some helpful interview tips to look over for your next two phone conversations. Your first call will focus on Part A and the second call will focus on Part B.

**Please Note:** Both interviews will utilize the Coderpad platform. During Part B, it will be used if the interviewer provides reference material, or during communication issues.

### **[A. Network Scripting/Automation](#)**

A typical scripting interview starts with general questions around your monitoring and automation experience.

#### **General Interview Tips**

- Be open about what you know and don't know. One of the goals is to find the limits of your knowledge and see how you react outside of that so always attempt to answer the question at hand. The interviewer will provide hints along the way if you get stuck.
- Ask clarifying questions whenever necessary.
- Think through your solutions out loud and share as much relevant knowledge as possible.
- Take hints from the interviewer and don't be afraid to change your mind as you go.
- *Please make sure you are in a quiet place with a reliable internet connection.*

#### **Scripting/Coding Interview Environment**

The coding is done 'live' via CoderPad (<http://coderpad.io/>), a collaborative document editor specifically designed for coding phone interviews.

#### **Language Selection**

As there are many different programming languages used at Facebook to solve infrastructure challenges, we don't have a preference for the language (or languages) you use during the interview. We think that if you can show us solid programming skills in one language, you'll be able to transfer them to other languages.

#### **Types of Questions Asked**

The questions we ask require skills used every day by Network Engineers, including:

- Writing a script to poll a number of network devices
- Writing a function to sort an array
- Writing a function to search for specific words in a file and remove them from the file
- Writing a function to remove duplicates from an array
- Writing a function that reads a list of hostnames and resolves each IP address and print them
- Writing a function that monitors a running application (e.g. parse one of the memory columns from the output of vmstat or the free command. And if the memory value exceeds a certain threshold for more than a certain timeframe, then print a report to alert the Ops team.)
- The questions can be a real problem, or something contrived to use these skills.

## **Coding/Scripting Interview Tips**

- Your primary goal in the interview is to obtain a working solution to each problem in a reasonable amount of time.
- Make sure you are in a quiet place with a reliable internet connection. Headphones are very handy. A speakerphone also usually provides acceptable sound quality. Holding the phone in your neck for 45 minutes while you try and type is going to be a pain. Close your email and chat apps to avoid interruptions.
- We will always paste in the text of any coding question we ask you. Take some time after reading the question to ask questions and plan out your solution, rather than jumping right into its implementation.
- Defensive coding is important, but don't focus on details (such as error handling and corner cases) to the detriment of the overall solution. If you're not sure if a given error handling or edge case is important, ask the interviewer.
- Don't get hung up on syntax. If you can't remember the order or arguments to a function or its name, just say so, leave a placeholder and move on.
- While you don't need to provide a play by play of your thought process throughout the interview, it's best to let the interviewer know why you are making certain decisions and do most of your work in the CoderPad window. This will also help with any course corrections that may be needed while you are solving the problem.
- Take hints from the interviewer and be open to other solutions as you go. It's totally fine to present a rough solution in the beginning and iterate as you go along.
- Use the language you are strongest in. Don't use a language you know less well because it's trendy or you think it will please the interviewer. If the interviewer doesn't know your strongest language, they will figure it out later.
- Don't be afraid to change your mind. If you think you've started your solution in the wrong way, or even in the wrong language, it's OK to admit it and change tack (and the sooner you do it the better).

- Resist the temptation to look things up on the internet during your interview. We'd rather have you get a function name incorrect or the order of arguments wrong than have you looking things up during the interview. We want to see you write code and think on your feet, not search the web.

## Preparation

- The best way to prepare for coding interviews is to practice under similar circumstances by yourself or with a friend, using sample questions. A coding phone screen is an unnatural event, even if you are used to coding regularly for your job. The problems are different, the environment is different, and you are under time pressure.
- Choose at least one language and know the basics solidly. It is better to know one language really well than multiple languages poorly. This includes creating classes and methods, conditional constructs, loops, built-in data structures, input / output, and interfacing with external processes / systems. Be prepared to use this language to solve any type of problem you may get.
- Consider practicing by trying similar coding exercises here: <https://www.interviewbit.com/>

## Additional Coding Prep Resources:

<https://vimeo.com/275298962> Password: 2018prep

<https://interviewing.io/> This site is a technical interview program that allows candidates to practice coding interviews, technical interviews, etc. with engineers from companies like Facebook, Google and Amazon, that provides live feedback on every interview. Our candidates have found this useful hence sharing it here!

Cracking the Facebook Coding Interview - The Approach:

<https://vimeo.com/interviewprepsession/theapproach>

Cracking the Facebook Coding Interview- Problem Walk-Through:

<https://vimeo.com/interviewprepsession/problemwalkthrough> Password: FB\_IPS

[Production Engineering Interview Preparation](#) (Password: ProductionEng2016)

## B. Networking Knowledge and Troubleshooting

The questions focus on the following areas:

- Layer 2 (STP, 802.1x, DHCP, ARP)
- Layer 3 (BGP, OSPF, RIP),
- Network Fundamentals (TCP, IPv4|6, subnetting).
- Troubleshooting packet loss with growing complexity, load balancing, ARP, when to automate.

**Example Questions:**

- How do you manage thousands of multi vendor devices?
- What layers are you most adept at troubleshooting?
- What are the concepts around load balancing to minimize latency?
- What are some of the resources one needs for implementing OSPF? BGP? XYZ?
- Compare OSPF and BGP. Why can't I use OSPF everywhere?
- Can you isolate a connectivity problem with two racks on opposites sides of the globe?
- Can you go down to the host level and up to the broader internet routing layer to isolate the problem?
- What tools would you use to isolate the issue (e.g, Wireshark, specific Linux commands)?

**Facebook Engineering**

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