

# RedHat Screening Questions

## S1 - Q3

**In your own words, explain what you understand microservices to be. When would you consider using them? What are the pros and cons of using them?**

A microservice is a way to approach to developing applications: instead of using a large monolithic application, a microservice requires to split the logic behind an application in a group of small task that can be run independently, even if they are using a common data management service. They are very useful when you need to deploy them in the cloud, as well as when you need to upgrade a single service and you don't need a full application restart, usually required by the monolithic application. Plus, if any microservices goes crazy and crash, the other microservices will still work -- in a monolithic application, this can result as a full-system shutdown. Another huge pro of using microservices is that when you need to replicate them for scaling needs, you can just replicate them as you need instead of replicating the whole monolithic application, that may use processes that you don't need. Sadly, deploying multiple microservices will require more resources than a single monolithic application, as well as human resources -- every microservice need a full team for developing (UI, Middleware, DBs). Another reason for using microservices is because you can develop them with different technologies and languages, that's impossible in building an entire monolithic application.

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## S1 - Q4

**How would you secure communications between Apps on mobile devices and a RESTful API?**

Since we cannot store safely API Key in mobile devices, because some users can reverse engineer our app and expose our services and abuse them, we need a better way to secure the communications. We can use token authentication (OAuth2) to solve this problem, granting to the user a temporary access to our API: this token will be bound to his own account and created only after user's login, so we can identify anyone who's trying to abuse our services. Then we can store this token, that expires after a certain amount of time, in the local storage of the mobile device and use it for communicate safely with our RESTful API.

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## RedHat Screening Questions

### S2 - Q3

**If you were working on a new feature along with several other distributed team members and you became blocked and unable to continue with your work in a productive manner, how would you go about resolving the problem so that you could continue on?**

If there are no possibilities to bypass or get over those obstacles, then the only thing i can do is to trying to help my team on focusing on the blocking issue and helping them in fixing it out. Otherwise, when it's possible, i will move to another task and starting running parallels coding while they're fixing the issue.

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### S2 - Q4

**What do you value in a code base?**

Once a code base is shared among the team's developer, it's easy for everyone to understand what behaviour is expected from a specific task and what's going wrong: this will be helpful in tracking ad fixing unexpected bugs. Plus, when you need to replace a developer, you can handle easier the problem because everyone else knows, more or less, what they have to do to fulfill the gap. Sharing a code base may lead to better design decisions, as long as you are planning to do continuous integrations and you're strong focused on using test-first programming.

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## RedHat Screening Questions

### S3 - Q2

#### **What do you find most exciting or interesting about working in the software development field?**

I love to craft my own solutions to my needs, because most of the time there is no available software to fulfill that urges. For example, some time ago i wrote a Node application that allowed me to continuously fetch data from some sport's website, saving the match's results for statistical purpose, and then republishing them for betting purpose. Being able to develop any kind of software makes you capable of doing almost everything you can imagine, freeing you from the boundaries of someone's else software's limits or unwanted features.

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### S3 - Q4

#### **In your career to date, what are you most proud of and why?**

Actually, I'm focusing my efforts in improving my skills with latest technologies. I'm capable of using technologies like websockets and frameworks, and I'm currently using them in my own webservice. Even if I'm running a small community (400+ active users) I can feel that my ideas are appreciated and needed for solving small but boring issues, and that's what I'm proud of. I was able to use my continuous improving to provide to those users a even better or more performing solutions to their needs, and this allows me to test my knowledge and my code, figuring out what i can do to improve their user experience.

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