

## Interview memo for Developer position in Skype Calling Applications team

During interview you will have several rounds of conversations with our team members. We advise you to prepare following topics that might be touched during interview:

1. Common data structures, efficiency and main principles
2. Best programming practices, major principles, design patterns and your vision on how to write good/solid code
3. Multithreading development challenges, synchronization primitives, asynchronous techniques
4. Design solutions for developing scalable services and distributed systems
5. Testing approaches, unit testing
6. Your experience and your personal impact to projects in previous companies

### Test task

We ask you to prepare a test task using one of the following platforms/languages: C#, Java, Node.js. Code should be covered by unit tests, documented and runnable. It's desirable if you send us an archive of your git-repository of your solution.

We ask you to estimate the task in man\*hours and set your own deadline, so you can take into account your own commitments. Please let us know both your estimation and date you can complete the task.

### Test task description

Create a basic chat service implementation with REST-API that has following features:

- Ability to send text chat messages from one user to another user
- Ability to persist messages, so that receiver could receive it after sender goes offline
- Ability for receiver to receive new chat messages
- Ability to notify sender when receiver read particular message
- No client authentication/authorization needed

You could use Web-frameworks, but please don't use frameworks for chat logic.