TUM

Peer-to-Peer Systems and Security

IN2194, SoSe 2023

Gossip Module

for Anonymous and Unobservable VoIP Application

Initial Report

Team #97

May 2024

1- Team Specification:

Team number: 97
Member 1: Khaled Tarek Hegazy
Member 2: Mohamed Sherif Ebrahem Alaaser
Module: Gossip

2- Programming Language & Operating System:

We decided to go with Python as our programming language, since we are both familiar with it and it also has a huge variety of libraries, resources and community support, which will help us during the implementation of the project.

For the operating system, we will be developing the project on both Windows and MacOS but the project should also work on Linux since Python and most of its libraries are compatible across all Platforms.

3- Build System:

We intend to use “Setuptools” as our build system, since it is the most recommended and widely used build system for Python. It is built on top of the default build system of Python “Distutils”, however Distutils is now deprecated and is planned to be removed due to the existence of better build systems such as Setuptools.

4- Quality Assurance:

We plan on using Pylint as our linter to enforce coding standards, best practices and a consistent code style.

5- External Libraries:

Our initial research shows that we might use Twisted as our networking engine, which is designed for building high performance scalable networks and provides abstractions for complex tasks such as asynchronous I/O and concurrency.

However, we might also end up using Socket, which is a lower level networking interface that can be more useful if we need more flexibility and fine-grained control over the network operations, but it might also require us to manually handle non-blocking I/O, event loops, and concurrency, which can be complex and error-prone.

6- License:

Since the project's goal is solely academic, we decided to distribute it under the MIT license, which gives everyone the freedom to do anything with it, as long as they include a copy of the license and the team’s copyright notice.

7- Previous Experience:

We both have little experience with python from previous university courses only. However, we are both experienced in Software Engineering and programming in general.

8- Work Distribution:

We plan on peer-programming the entire project together, to ensure that we both put in the same effort and we both get to work on and understand all parts of the project.