

Cryptographic RBAC Compiler

Fourth Sprint

26/11/18 - 09/12/18

- Recap
- Sprint Backlog
- User Stories
- Design
- Implementation
- Testing
- Nex Sprint

- Creation of a **storage solution** (server side for the admin, client side for the users) for managing the keys -> **<suspended>**
- Implementation of **symmetric keys** in the system (generation, encrypt/decrypt file, ...)
- Creation of ER diagram for database
- Implementation of adding and retrieval of **users, roles and files** (for now file key = its path) through a **database manager** class that exposes these APIs (actual implementation will come with securePG)

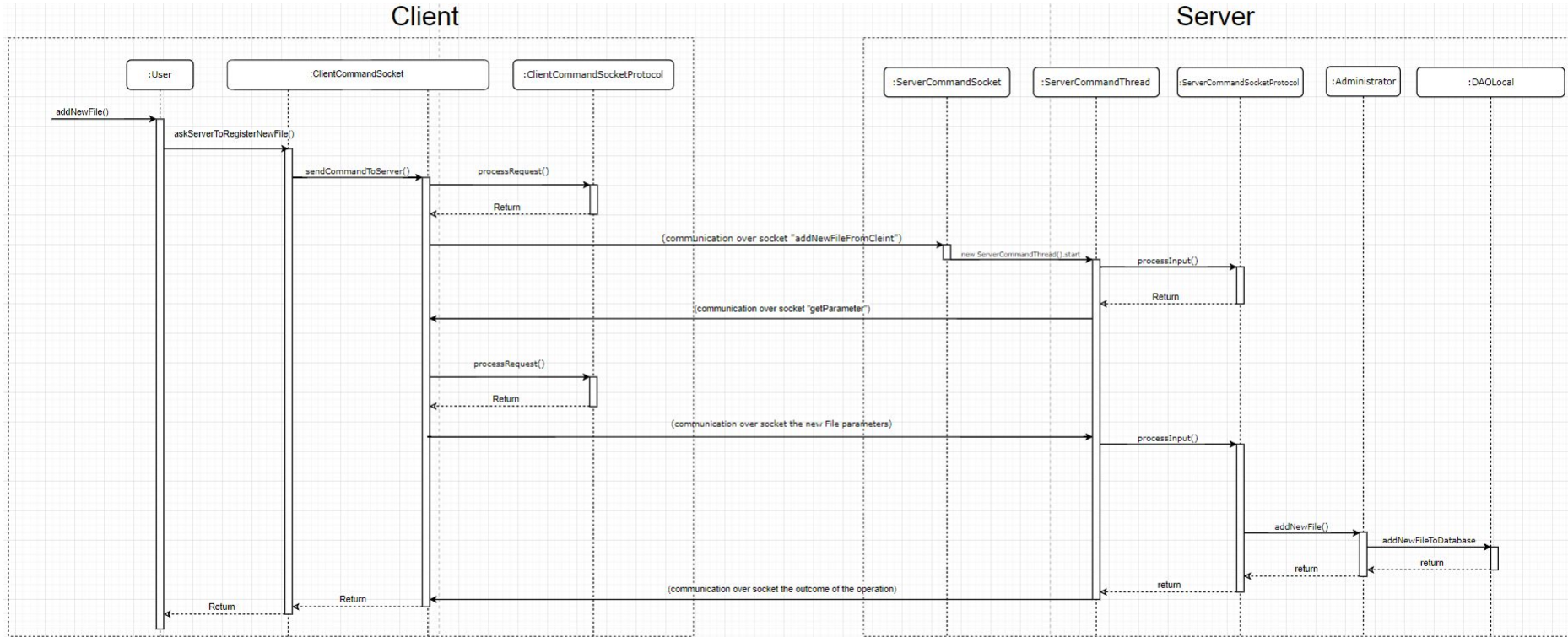
- Creation of the **Gitlab** project (Code, graphs, documentation, ...) to be shared it with Adam
- Creation of a simple **storage solution** for managing keys
- Definition and implementation of **scenario** as sequence of operations (AddUser, AddRole, AssignUserToRole, AddFileFromUser, ...)
- Refactoring, test implementation and “TODO” resolution

8. As a registered **User**, I want to create a file and push it into the server to later be able to decrypt it

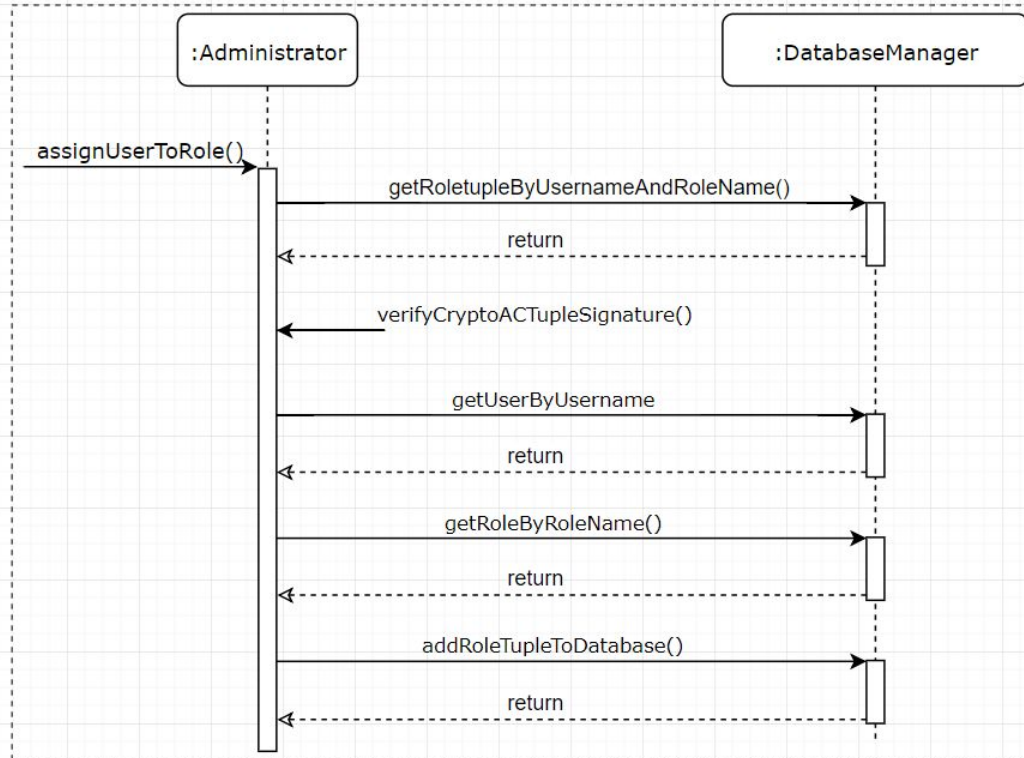
9. As the **Administrator**, I want to assign a User to a Role to give him/her permissions of the Role

10. As the **Administrator**, I want to assign a Permission to a Role over a certain file to let Users belonging to that role access the file

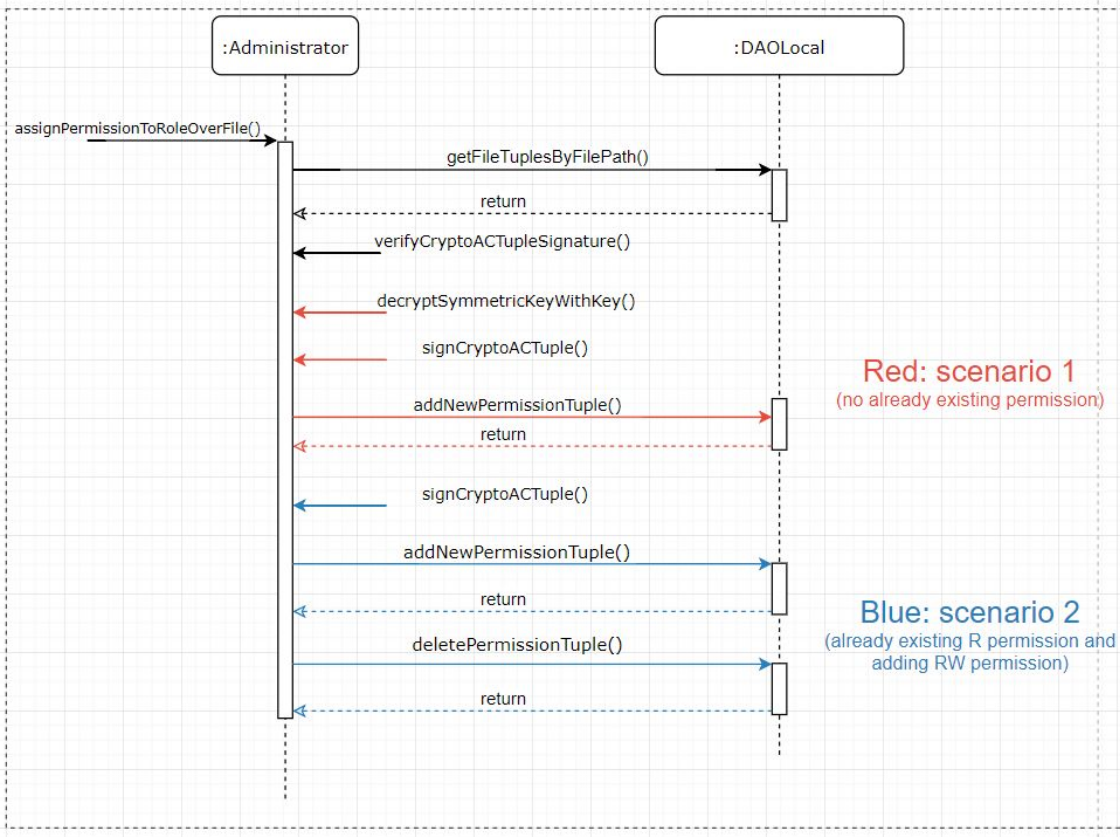
1. As a **User**, I want to register, create and push a file and get the permission to download it later

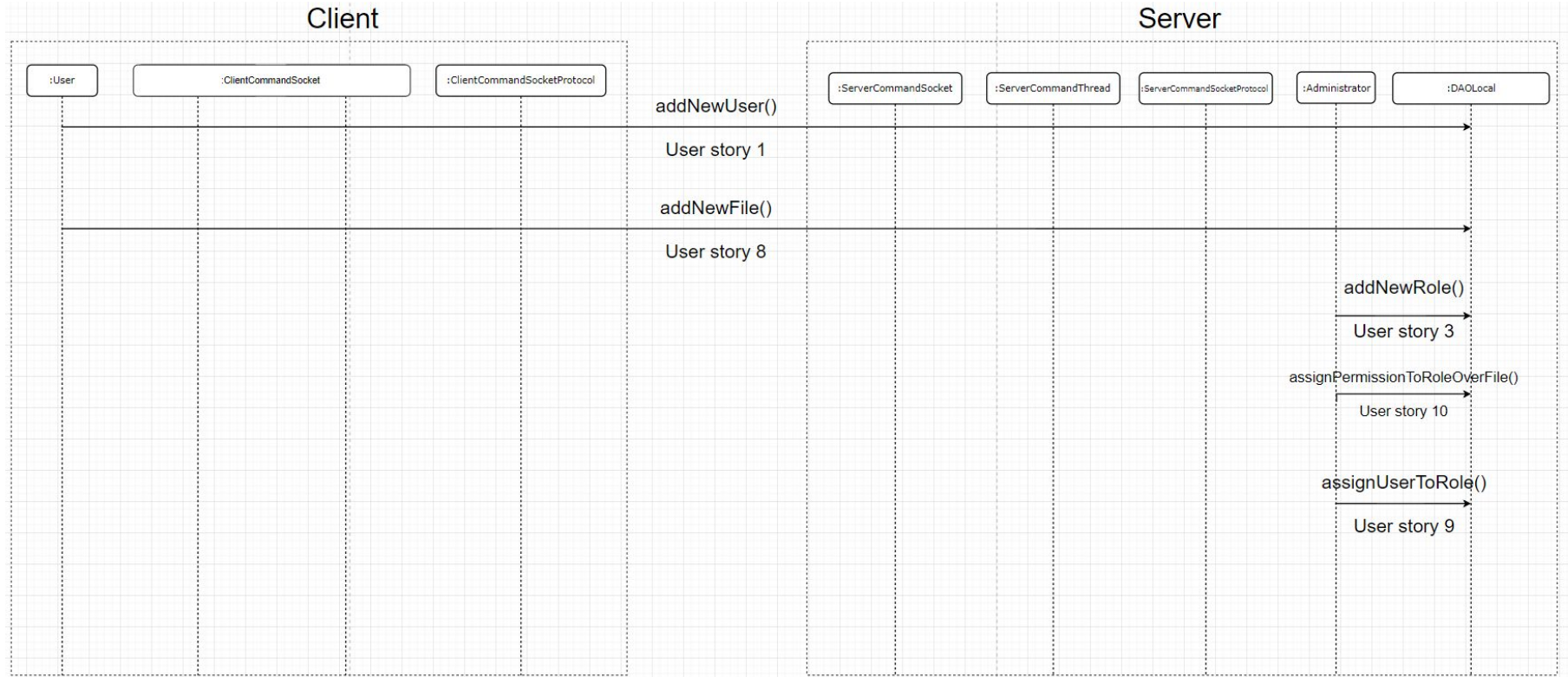


Server



Server





- Implemented temporary cache for methods in DAOLocal:
`addNewUser/Role/FileToDatabase() - getUser/Role/FileFromDatabase()`
`addNewUser/Role/FileTupleToDatabase() - getUser/Role/FileTupleFromDatabase()`
- Implemented user stories exploiting low-level functionalities blocks
- User's and Administrator's keys are saved in a txt file (for now)
- Done refactoring, test implementation and TODO resolution

(see code for details)

- Implemented all tests for DAOLocalDatabaseManager methods
- Implemented all tests for new Administrator methods (assignUserToRole, addNewFile)

(see code for details)

- Add other low-level functionalities
 - **deleteFile**
 - **revokeRolePermission**
 - **Read**
 - **write**
- Development of other scenarios
 - User read file
 - User write file



Thanks