Enhancing Authorization, Authentication and Access Control using Blockchain in Cloud Services

**Objective**

To build a secure Storage platform based on Authorization,Authentication and Access control using blockchain in cloud services.

**Summary**

We will use Ganache-Truffle suite CLI to create a local ethereum blockchain and integrate our django web application to it. Every entity will have blockchain address.

**Roles**

1. Admin (Validator)

* Login with credentials
* View Requests from users
* Approve/ Reject users request
* View Users
* Logout

1. User

* Registration with basic details and blockchain address
* Login with credentials
* Upload Files to Cloud (AWS)
* View Uploaded Files
* Logout

**Blockchain**

* Ganache CLI will be used for creating demo blockchain locally
* When user login to the system ,Authentication will be perform based on user blockchain credentials.
* AWS Storage is used to store the files
* When user upload his/her file to the AWS storage, Authorization and Access control will be set
* Only Authorized user can see his/her own uploaded file.
* Each Transaction requires the corresponding user private credentials for the Verification.

**Hardware Specification**

* Processor: i5 or i7
* RAM: 8GB (Minimum)
* Hard Disk: 250GB or above
* Mouse
* Keyboard

**Software Specification**

* Tool: Python IDLE,Ganache CLI,Solidity
* Python: version3
* Operating System: Windows 10
* Front-end: HTML,CSS,JS
* Back-end: Django (Python)
* Database: Aws Cloud

Note : We will use simple design for the development of the website. We store the data in the Aws cloud platform.