Private Dock Cloud

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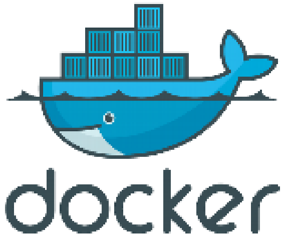
Project Guide: Prof. Sudhir Goswami

Objective:

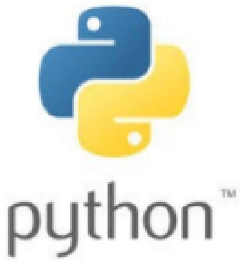
Construction of a private cloud, and then providing following services-

1. Operating System As A Service.
2. Software As A Service.
3. Storage As A Service.

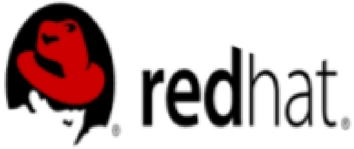
Technologies used in Private Dock Cloud



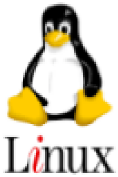
Docker, is a container. In Private Dock Cloud, it is used for providing Operating System As A Service.



Programming Language



Operating System



System Requirements

1. **Server Side**

1.1 Softwares:

a. Redhat Operating System.
b. Python 3 (and above).
c. NFS Server.
d. LVM (logical volume manager).
e. Docker.

1.2 Hardware:

a. RAM: 4GB (at least)
b. Hard Disk: 10 GB (free)
c. Clock Speed: 2.0 GHz (minimum)

2. **Client Side**

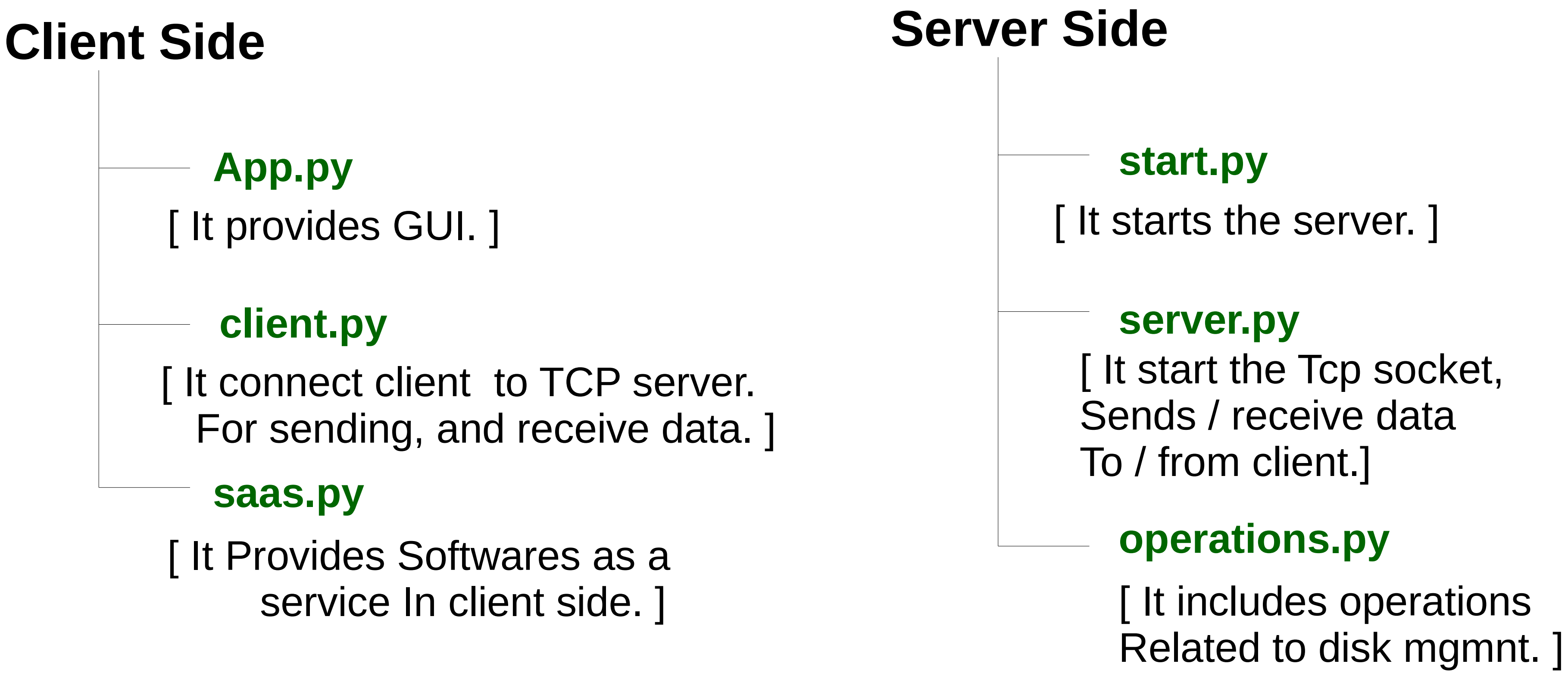
2.1 Softwares:

a. Redhat Operating System.
b. Python 3 (and above).
c. Tkinter.

2.2 Hardware:

a. RAM: 2GB (at least)
b. Hard Disk: 500MB (free)
c. Clock Speed: 2.0 GHz (minimum)

Architecture Of Private Dock Cloud



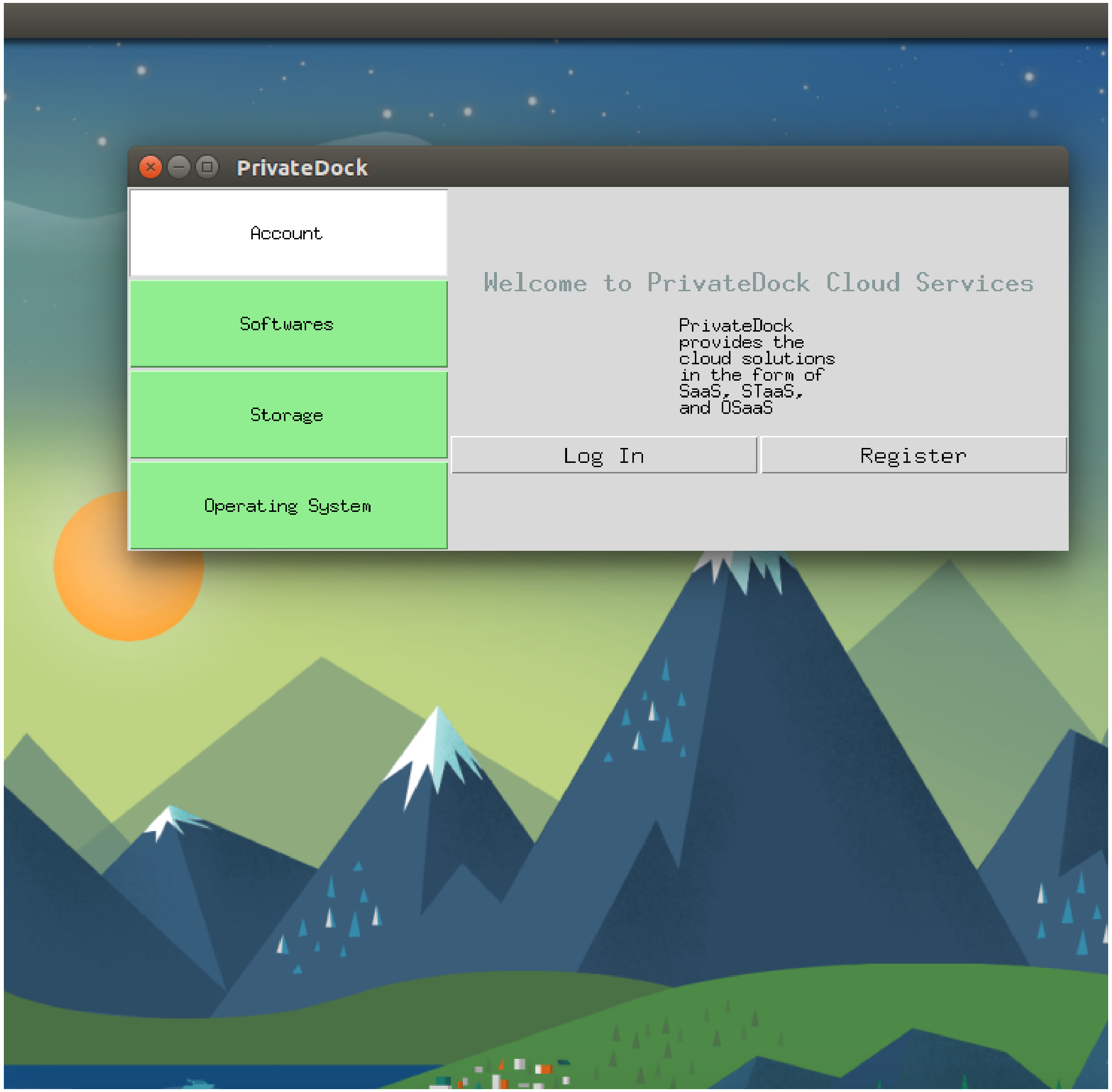
Client Side

- **App.py**
  [It provides GUI.]
- **client.py**
  [It connect client to TCP server.
  For sending, and receive data.]
- **saas.py**
  [It Provides Softwares as a
  service In client side.]

Server Side

- **start.py**
  [It starts the server.]
- **server.py**
  [It start the Tcp socket,
  Sends / receive data
  To / from client.]
- **operations.py**
  [It includes operations
  Related to disk mgmnt.]

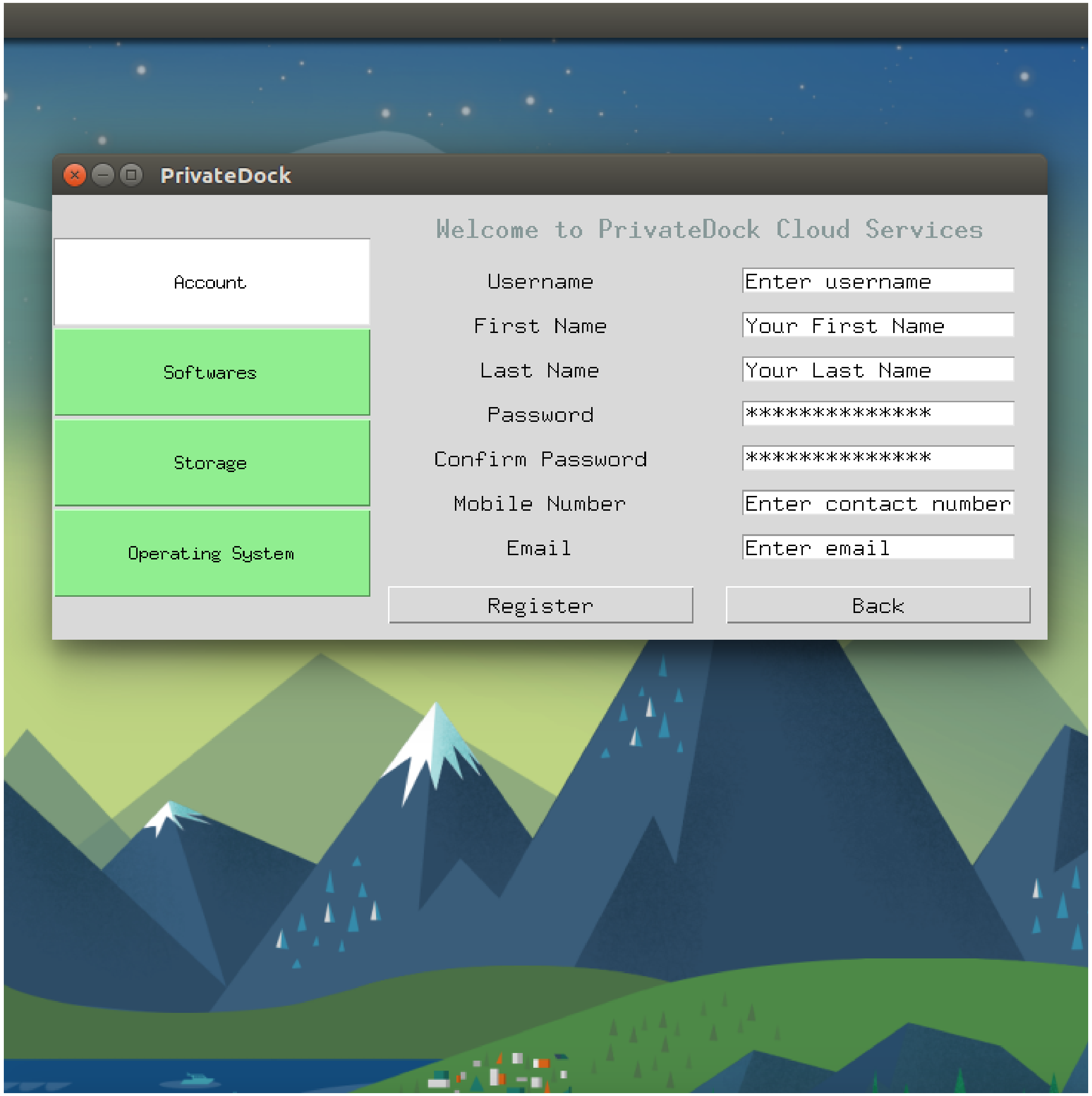
Client Side View



Welcome to PrivateDock Cloud Services

PrivateDock
provides the
cloud solutions
in the form of
SaaS, STaaS,
and OSaaS

Client Side - Registration

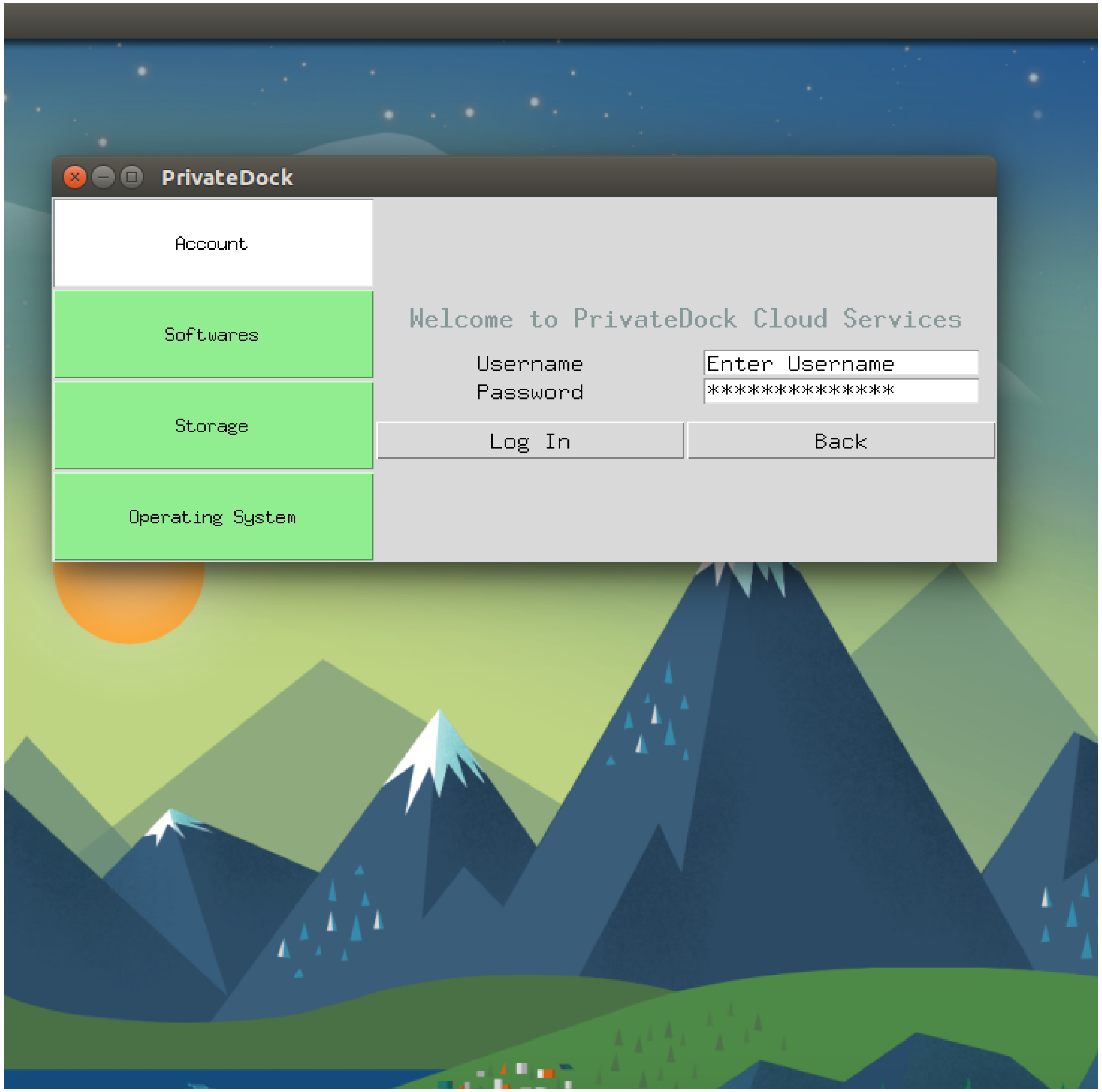


PrivateDock

Welcome to PrivateDock Cloud Services

Username	Enter username
First Name	Your First Name
Last Name	Your Last Name
Password	**************
Confirm Password	**************
Mobile Number	Enter contact number
Email	Enter email

Client Side - Login

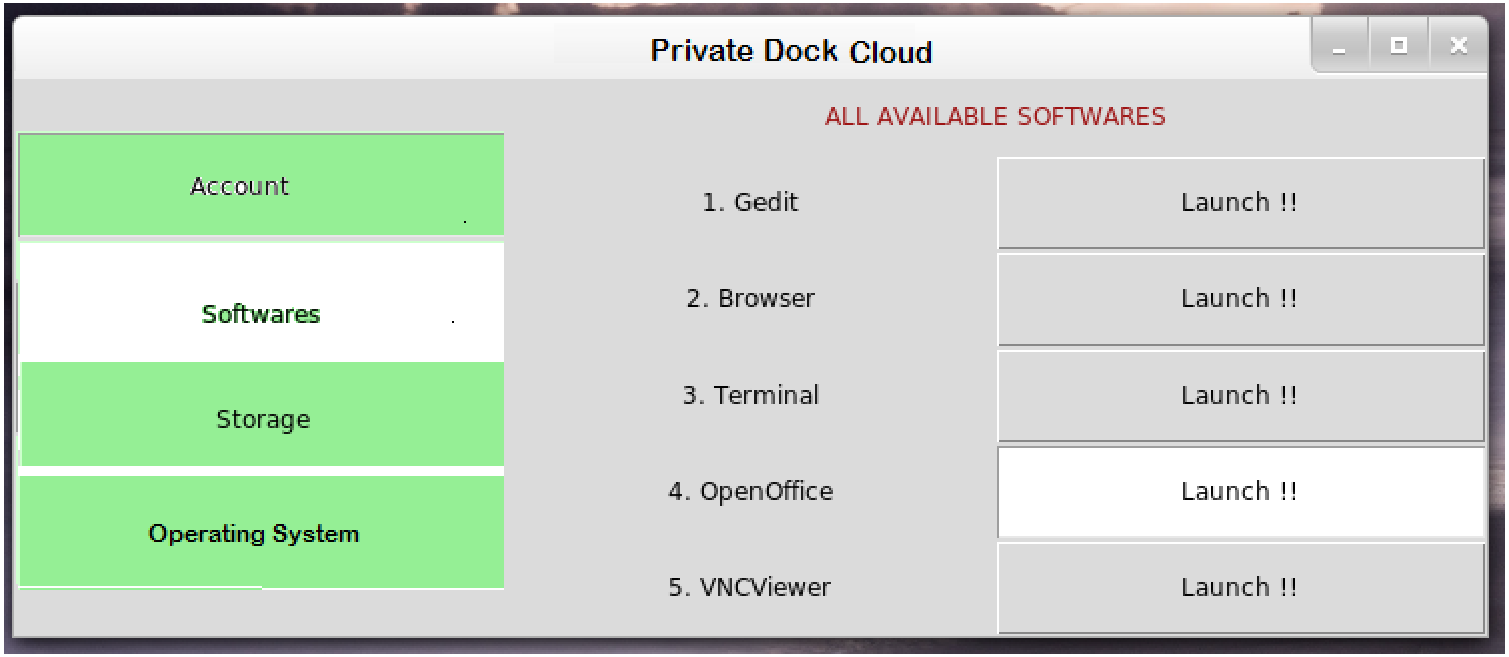


Welcome to PrivateDock Cloud Services

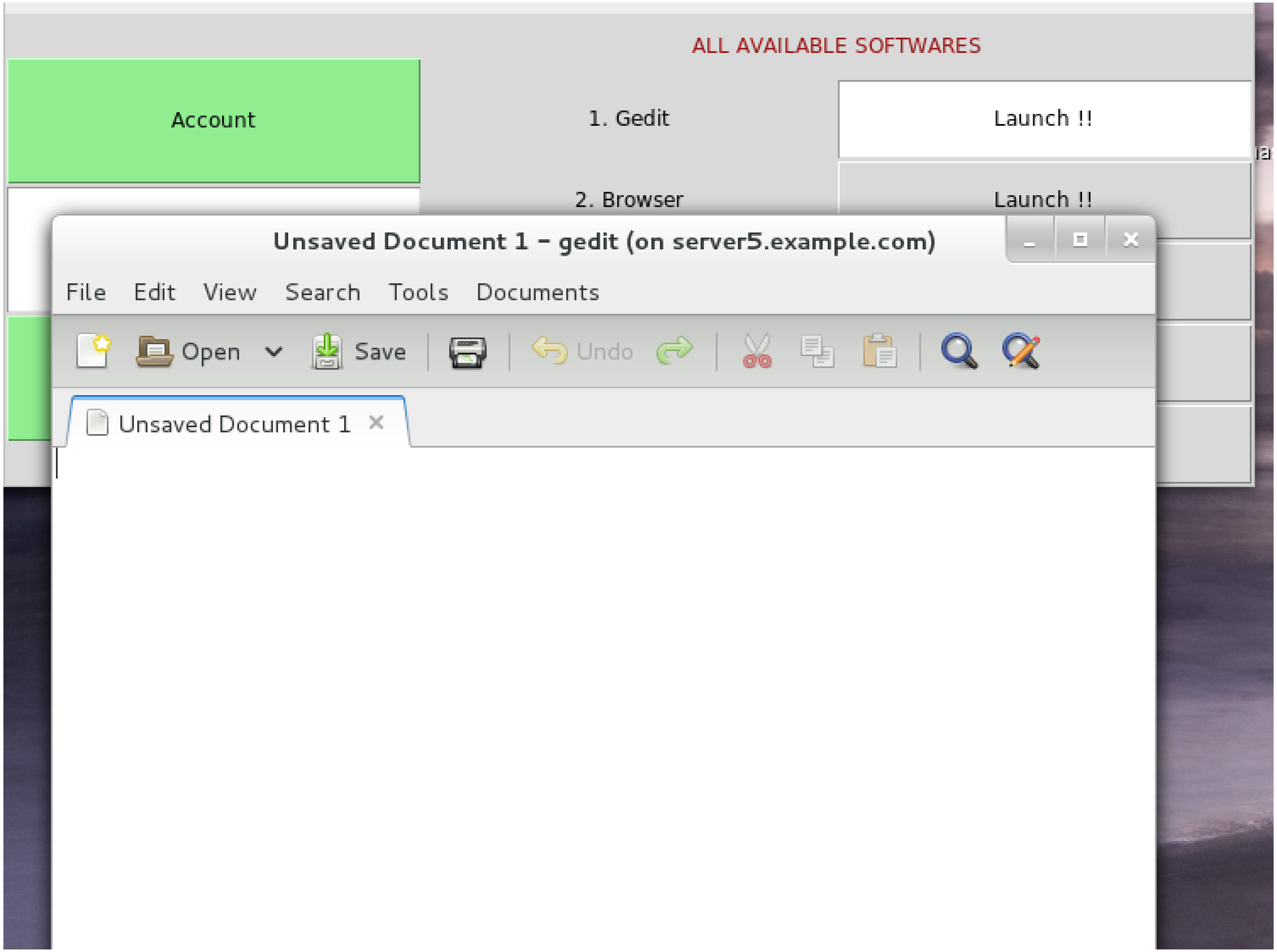
Username Enter Username

Password **************

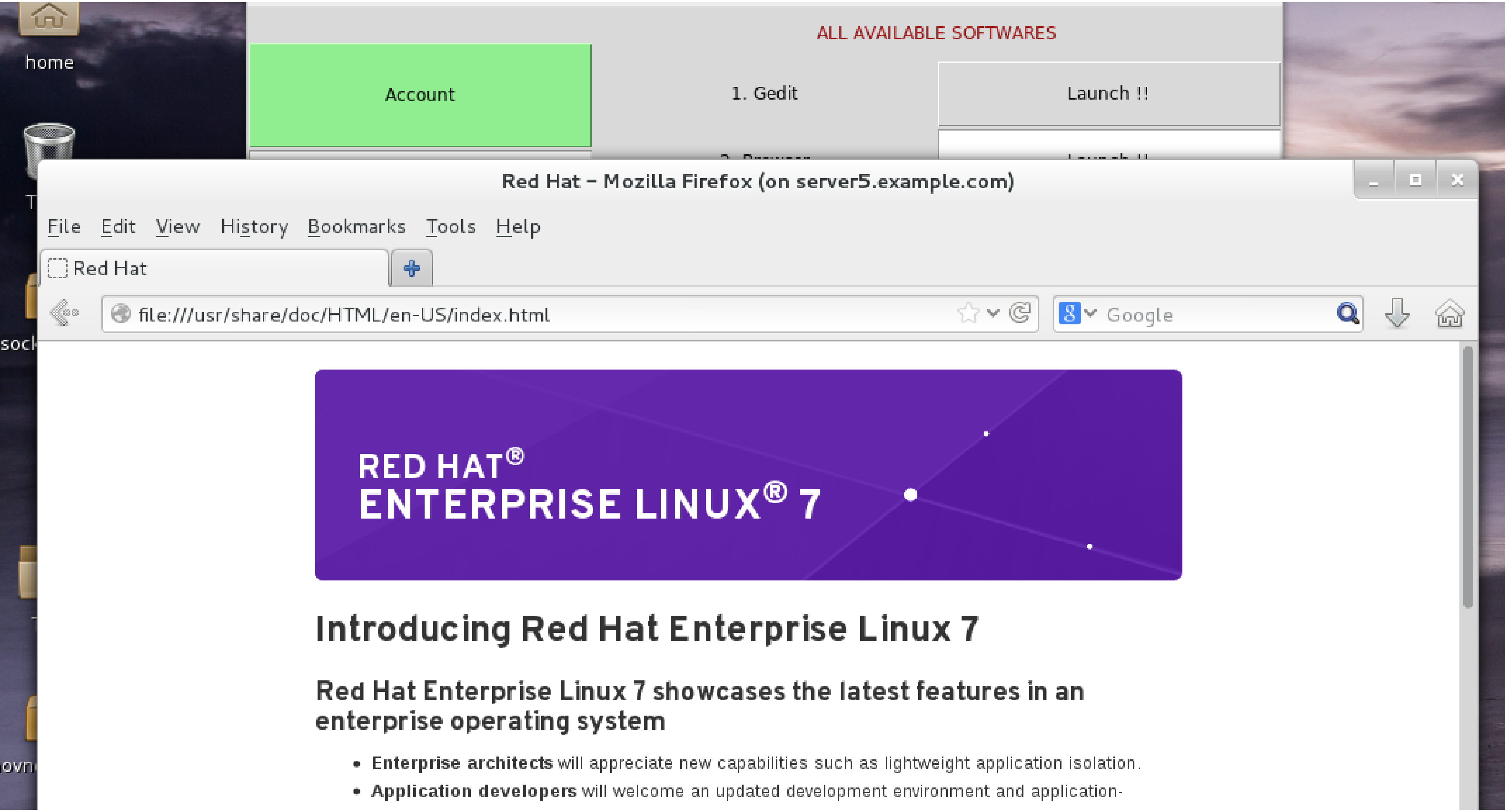
Software As a Service



Software as a Service -- Gedit



Software as a Service ---- Firefox


home
ALL AVAILABLE SOFTWARES
Account
1. Gedit
Launch !!
Red Hat – Mozilla Firefox (on server5.example.com)
File Edit View History Bookmarks Tools Help
Red Hat
file:///usr/share/doc/HTML/en-US/index.html
Google

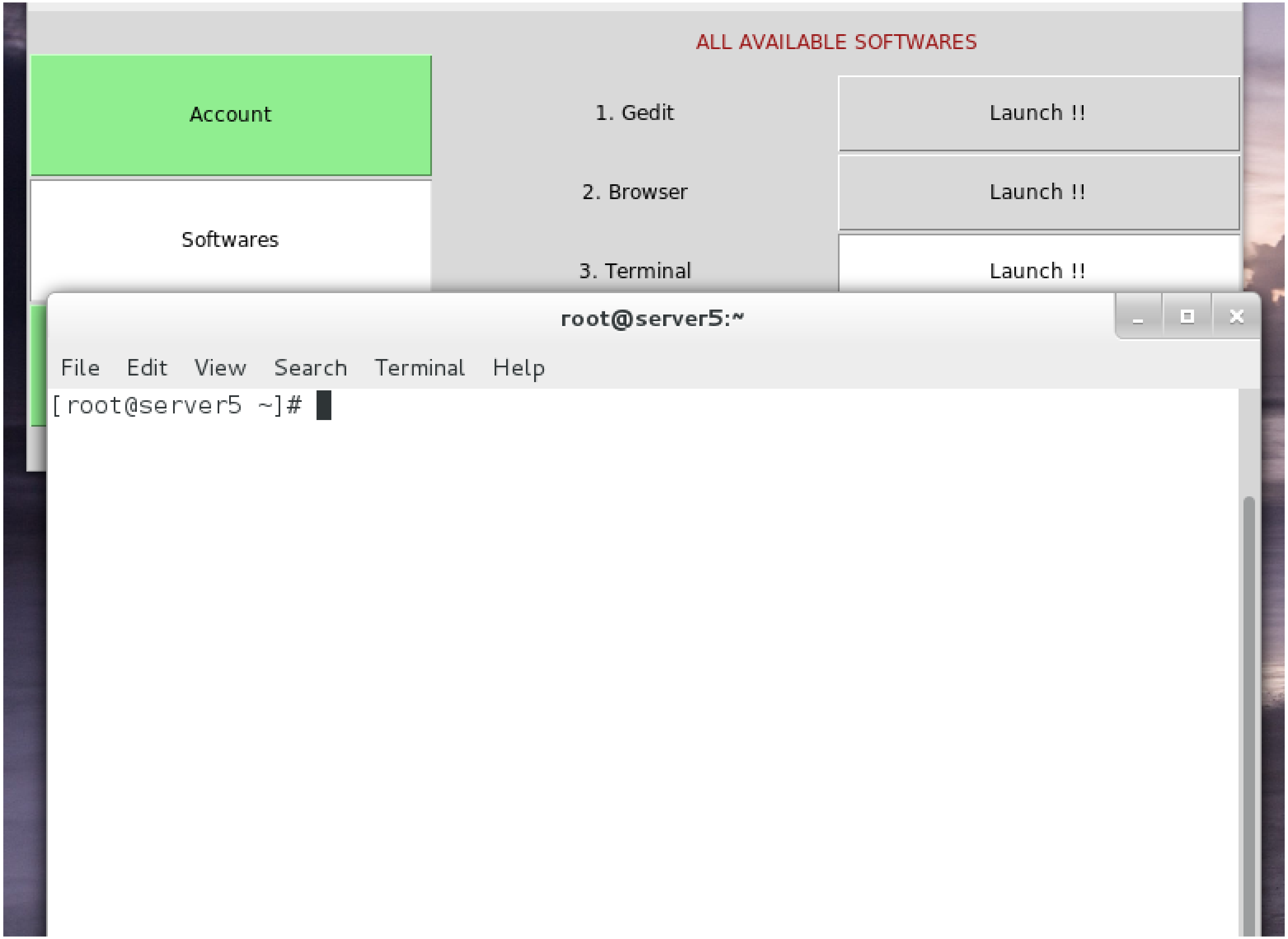
RED HAT®
ENTERPRISE LINUX® 7

Introducing Red Hat Enterprise Linux 7

Red Hat Enterprise Linux 7 showcases the latest features in an enterprise operating system

- **Enterprise architects** will appreciate new capabilities such as lightweight application isolation.
- **Application developers** will welcome an updated development environment and application-

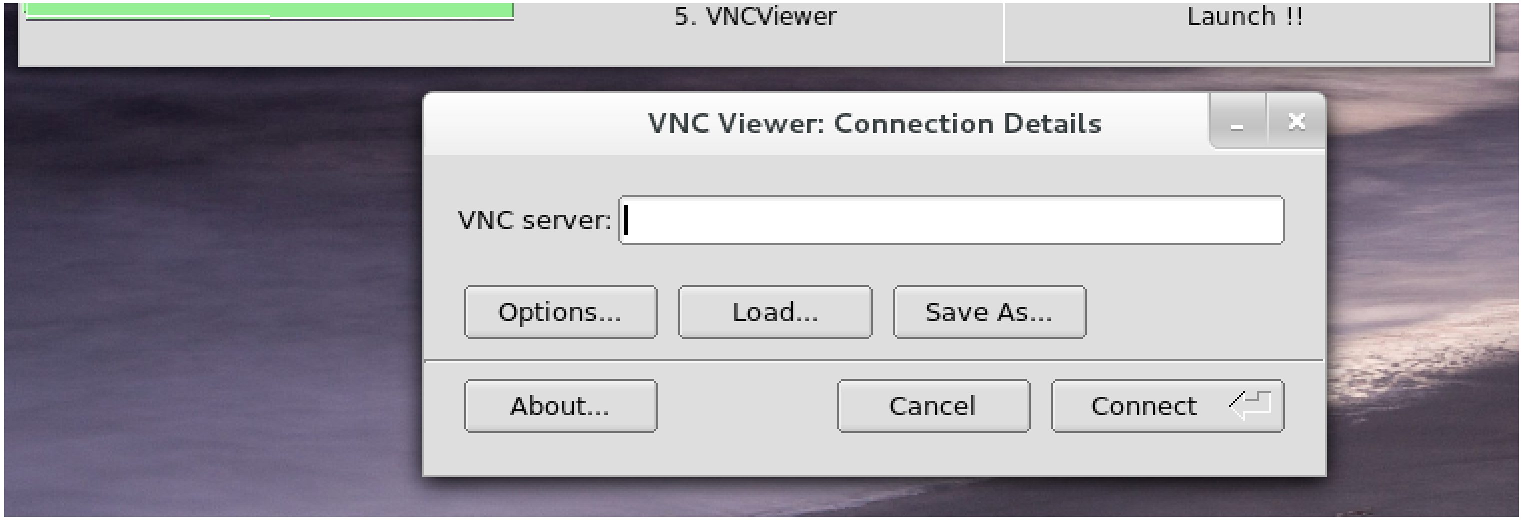
Software as a Service
And
Operating system as a Service



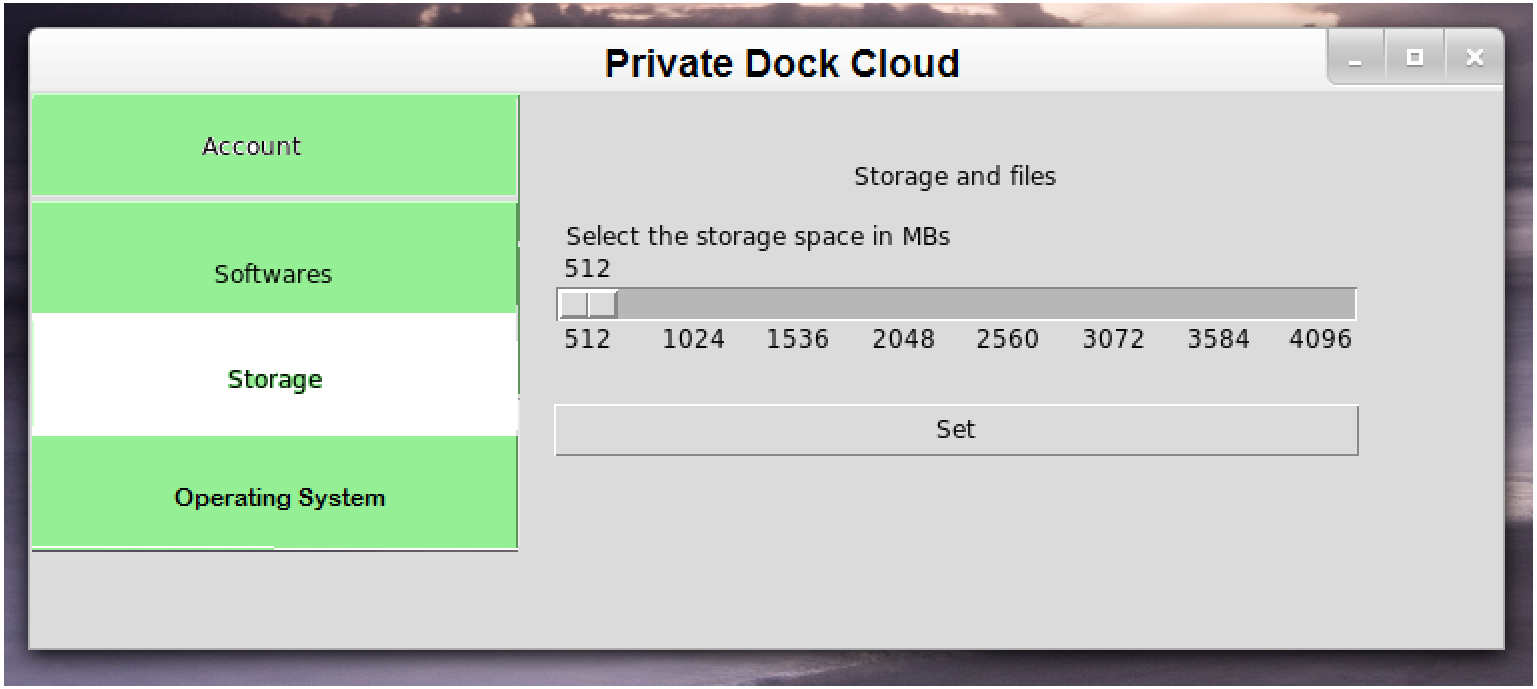
```
[root@server5 ~]#
```

Software as a Service --- VNC Viewer

(used for remote viewing a system.)



Storage as a Service



Private Dock Cloud

Storage and files

Select the storage space in MBs

512

Testing of the Software

1. Unit testing.

2. Integration Testing.
|
|---- used **commands.py**

3. System Testing.
|
|---- **df -Th used to check Hard disk status on server side.**
|
|---- **free -m used to check RAM status on Server side.**
|
|---- **ping used to check network connection.**

Future Scope

We have left Operating System Button, for future implementation, with the aim of Providing different operating systems, on customer's demand.

Thank You