

Controlling Cloud using Phone

Project 5e

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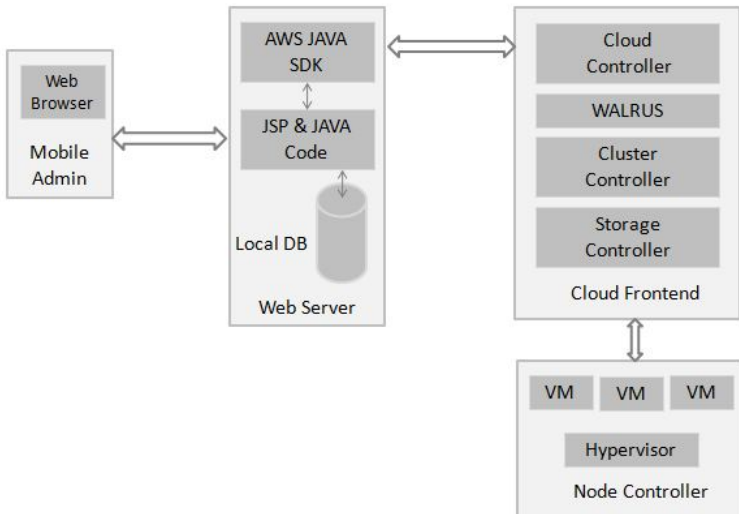
- ① Project Objective
- ② Need for the project
- ③ Salient Features
- ④ System Architecture
- ⑤ Eucalyptus Cloud
- ⑥ Use-case Diagram
- ⑦ Class Diagram
- ⑧ Sequence Diagram
- ⑨ Screenshots

The objective of this project is to create a cloud and a suitable phone interface that can be used to control it for all routine administrative purposes.

- ① No existing mobile admin for Eucalyptus
- ② Providing flexibility to administrator
- ③ Ease in accessing/monitoring instances and resources

- 1 Instant cloud updates on the home screen
- 2 Twenty five use-cases for cloud administrative tasks (divided into three categories namely cloud controller, storage controller and network controller).
- 3 Quick links for most frequent use-cases (like launching instances, creating snapshots, attaching volume snapshots)
- 4 Tab view just like HybridFox so as to keep the administrator familiar with the application
- 5 Generalization to any cloud platform made over Amazon or Eucalyptus
- 6 The mobile web-app can run on any mobile/tablet having Internet access.

System Architecture



① Node Controller (NC)

- controls the life cycle of instances running on the node
- collects data related to resource availability and utilization on the node
- reports the data to CC

② Cluster Controller (CC)

- CC manages one or more Node Controllers and deploys/manages instances
- Manages networking for the instances running

③ Walrus Storage Controller (WSC)

- provides persistent simple storage service

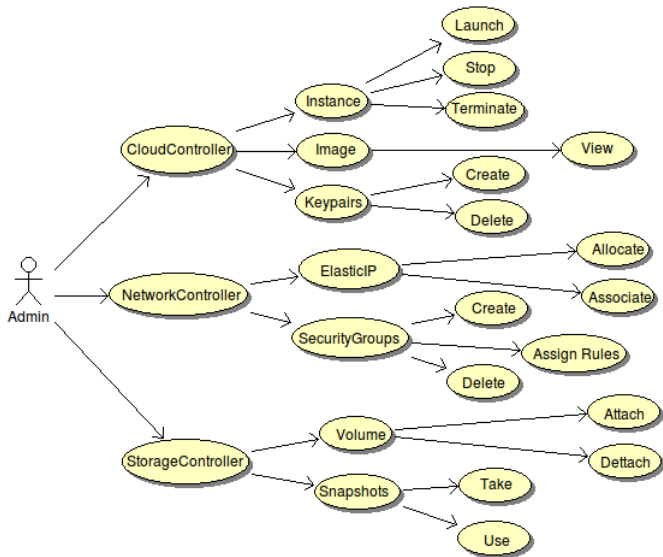
④ Storage Controller (SC)

- provides persistent block storage for use by the instances

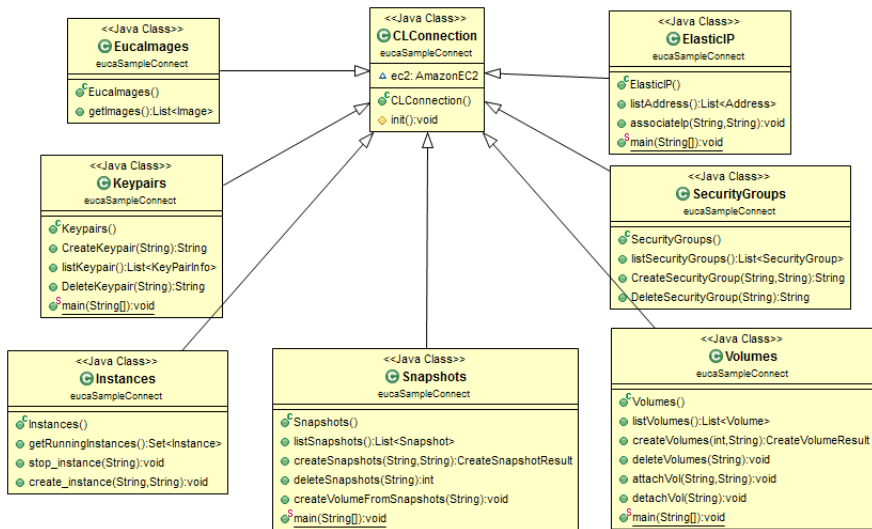
⑤ Cloud Controller (CLC)

- monitors running instances
- information about availability and usage of resources in the cloud
- decides which clusters to use for provisioning instances

Use-Case Diagram

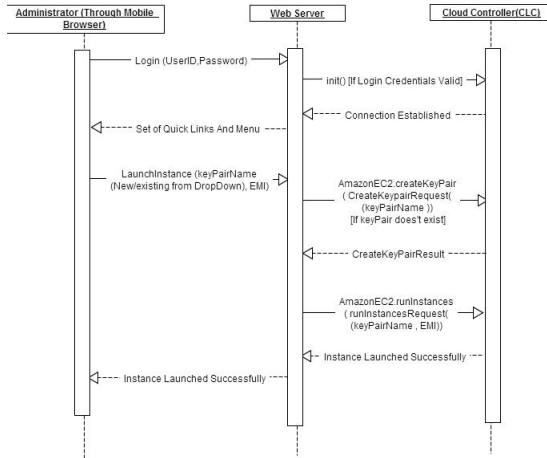


Class Diagram



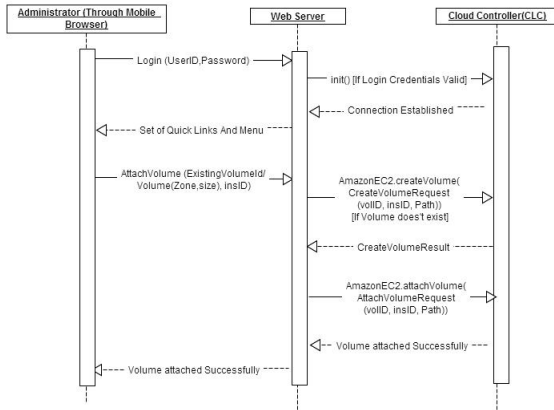
Sequence Diagram

Sequence Diagram - Launching the Instance



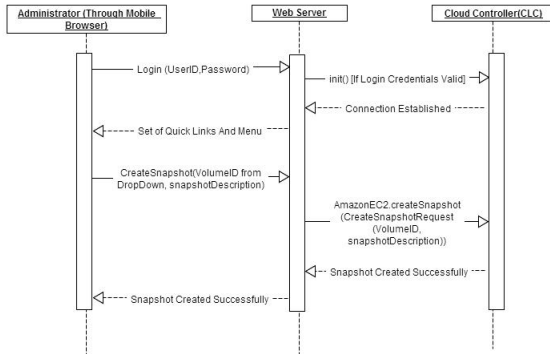
Sequence Diagram(2)

Sequence Diagram - Attach the Volume



Sequence Diagram(3)

Sequence Diagram - Creating Snapshot

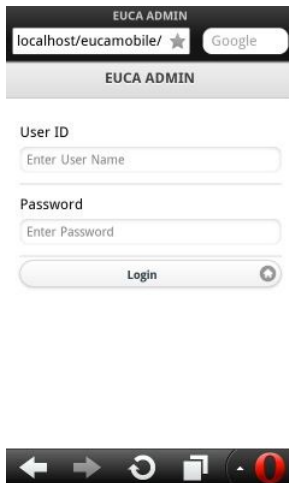


The screenshot displays the Euca Admin web interface. At the top, there is a navigation bar with 'Home', 'Euca Admin', and 'Reload' buttons. Below this, the 'Instant Cloud Status' section provides a summary of resources:

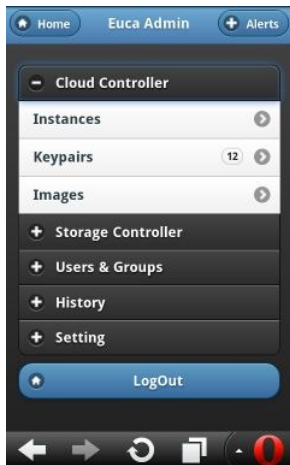
Resource	Count	Status
Instances	0 T, 0 S, 0 P, 3 R	Terminated, Stopped, Pending, Running
Snapshots	0 P, 2 C	Pending, Completed
Volumes	1 N, 1 A	New, Available
Keypairs	13 A	Available
Images	3 A	Available

Below the status section is a 'Quick Links' area with three buttons: 'Launch Instance', 'Attach Volume', and 'Create Snapshot', each with a right-pointing arrow. At the bottom, there are expandable sections for 'Cloud Controller' and 'Storage Controller', each preceded by a plus sign.

Screenshots(2)



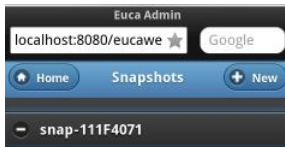
Screenshots(3)



Screenshots(4)

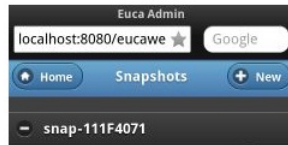


Screenshots(5)



Description : null
OwnerID : 364786878461
Progress : 100%
State : completed
Volume ID : vol-FAD03DA1
Volume size : 1
Start Time : Tue Mar 05 17:54:55 IST 2013

Create Volume Delete



Des
Own
Prog
Stat
Volu
Volu
Star
2013

Enter Details

Volume ID
vol-FAD03DA1

Description:

Create Now



Screenshots(6)



Thank you