Reviewer's report

Title: The Cloud Paradigm Applied to e-Health

Version: 1 Date: 6 November 2012

Reviewer: Alejandro Calderon

Reviewer's report:

Minor Essential Revisions.

Considerations for authors:

* Abstract has to be update in order to clarity that the "results" paragraph is where this work will be used and the expected impact. The "results" paragraph seems to me the summary of the main contributions. "It is though to include.." -> "It is thought to include.."

* "In Preliminary concepts and related work" authors said that PasS is a combination of software and service but it not clarify that there are three layers: Infrastructure as a Service (IaaS) where raw virtual machine are offered (e.g. dual core with 1 GB of RAM virtual machine), then on top Software as a Service (SaaS) where virtual machine with some kind of software installed is offered (then it combines both, e.g. the former with Linux and Apache2 plus Mysql) and finally the Platform as Service (PaaS) where virtual machine with software that are accessed remotely is offered (e.g. the former that provides a WebMail service) In the last one the users see the services but they don’t care about Infrastructure and software needed.

So PaaS joins IaaS plus SaaS in order to provide a service entry point (normally by Web) so users only works with the services directly.

* The second paragraph of "Preliminary Concepts and Related Work" explain that in a previous work the cloud system is modelled by M/M/m distribution. Also that M/M/m/m+r has been used by authors and G/M/m - M/G/m - G/G/m could be used.

The authors should clarify better how we can detect the use of M/M/m or M/M/m/m+r models.
(For future works, it could be an adaptive system that can select the proper model on the fly)

* It just a question of taste but I prefer "Front-end and Back-end" rather than "Front-and Back-end"

* Page 5, in the Back-end section it said "...the server and its virtual machines..." so for fault tolerant reasons, some extra servers and virtual machines may be around.
Otherwise "the server" becomes a single point of failure.

* Page 6, line 6 on "Methods, system analysis and design" we found "(Section )," with the missing number of the section.

* On page 7, "Fig. 6shows" (white space missing) and the same problem on section "Result and discussion" with "Fig. 7show", "Fig. 8show", "Fig. 7by"

* Page 7, "Tacking into account" -> "Taking into account"
Page 8, "...when the averaged waiting time..." -> "...when the average waiting time..."

* In the "Future work" section there are the word "Furthermore" many times used. For the second one it is better to use "Moreover", and for the last one "In this way, by knowing the hospital users..."

* "Future work" should include tasks like:
+ Not only up 100 servers but 1,000,000 servers in order to demonstrate the real scalability.
+ It would be nice to explain how fast can W (the main waiting time) change and the proposed system react without problems (check + create the virtual machine warranty that Wmax < W)

* The Authors information have to be reviewed:
- "in the same university" -> "in the same University"
- "e-Health and parallel simulation" -> "e-Health, and parallel simulation"
- "His research interest include are" -> "His research interests include"
- "he is a research associated at" -> "he is an associate researcher at"
- "...His main research interest are information governance and privacy..." -> "...His main research interests are information governance, privacy..."

In general, to many currently (at the present time, at present, nowadays, now, etc.)

* Figure 4 label ends in ",," rather than ":"
**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.