

Using a software architecture based on a Private Central Proxy Cloud to improve a Health Center System

Majda Elhozmar^{*}, Ahmed Ettalbi^{**}

^{*}Models and Systems Engineering Team, SIME Laboratory ENSIAS,
University of Mohammed V Rabat, Morocco

^{*}elhozmar.majda@gmail.com,

^{**}ettalbi1000@gmail.com

Résumé. In Collaborative and secure sharing of healthcare data in multi-clouds, Fabian, Ermakova and, Junghanns realized a solution of a novel architecture that externalizes data and its implementation for inter-organizational data sharing, which provides a high level of security and privacy for patient data in semi-trusted cloud computing environments, using Multi-Cloud Proxy (MCP) by the side of Client. But one of the biggest challenges here is the recovery of stored data. For one request, MCP must search the data requested into different Cloud providers, which can bring some drawbacks like network overload and decrease the level of security. Therefore, the focus of our article is to propose a solution by using a Private Central Proxy Cloud implemented in a private Cloud environment, which can be an intermediate between different Cloud providers and health centers. All that to get benefits such as tight coupling, increasing the level of security, minimizing network overload problem and recovering data easily.

1 Introduction

Cloud Computing has been the IT hype of 2010. Behind this fuzzy term cover some many known concepts such as virtualization and outsourcing of data. During the last years, the offers of Cloud solutions were multiplied and proposed by most of major factors in the IT. Smaller actors also offer solutions in the Cloud by using sometimes hardware resources made available by the IT giants famous Clouds. Before Cloud Computing, traditional applications have always been very complicated and expensive. Nowadays Cloud Computing technology is much easier and quicker to integrate with enterprise applications. It can help to eliminate problems of managing hardware and software because the provider is the responsible for managing and maintaining Cloud infrastructure. Also Cloud gives the consumers what they need with low cost, upgrades are automatic and scaling up or down is easy. Cloud Computing offers business users the chance to immediately implement services with usage-based billing that are tailored to their requirements, often without the need to consult with the IT department. Hence, many business applications are moving to the Cloud ; for example, cloud based system in the health domain (Kaur et Chana, 2014). The Cloud exists in several forms : private Cloud when mutualizes company resources (through virtualization), public Cloud where data will be placed