

Smart Mobile ERP System on the Cloud Framework

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Abstract. The Enterprise Resource Planning (ERP) system is business process management software that allows an organization to use a system of integrated applications. ERP software integrates all types of business operation, including product planning, development, manufacturing processes, sales and marketing. ERP system is not a new concept. This has been used in business industry for a long time. With the fast growing technological advances, the mobile ERP System concept was introduced. The recent development in computing called "cloud computing" gains popularity in mobile services. One of the services it has offered is Software as a Service (SaaS). This paper introduces a SaaS- based mobile ERP system. We discussed the comparison between on-premise ERP and Cloud-based mobile ERP system, and the framework.

Keywords: SaaS, ERP, Cloud Computing, Mobile Computing

1 Introduction

The Enterprise resource planning (ERP) is business process management software that allows an organization to use a system of integrated applications to manage the business and automate back office functions. ERP system is not a new idea. This has been used in business industry for a long time. ERP software integrates all facets of an operation, including product planning, development, manufacturing processes, sales and marketing. Traditional ERP system have been used, however, with the in the fast growing technological advances, the mobile ERP System concept was introduced.

Today, the terms "Software as a Service" or SaaS describe software functionality as delivered over the Internet from a single application instance that is shared across all users. SaaS and open source are likely to appeal to some companies as potential lower-cost and lower-risk alternatives to traditional ERP.

ERP software developers are finally catching up to this expectation, creating dynamic new models of mobile connectivity that will allow for on-the-spot responsiveness at all levels. Any company involved in an ERP evaluation and selection process needs to consider the role of mobile apps in its overall business solution [5].

The contemplation of ERP to be mobilized is a challenging idea. This paper introduces a mobile ERP system with the concept of SaaS cloud.

The contents of this paper are arrange as follows, section 2 explains the background study of traditional ERP and cloud based ERP. In section 3 the methodology for our research is explained. In section 4 we present the SaaS ERP vs.

on Premise ERP Software, the benefits and drawbacks. Section 5 we present the Cloud-based Mobile ERP System Architecture. Section 6 is discussion and section 7 is conclusion.

2 Background of the Study

This section discusses about the background of premise ERP and SaaS Based ERP. We first give a brief description of cloud computing in general before we elaborate on cloud based ERP systems.

2.1 On-premise ERP System

Most people are familiar with traditional ERP systems that have been implemented in the distribution environment for the last 25-plus years. These are on-premise systems that distributors use to run their businesses, such as order entry, inventory control, purchasing, accounting, warehousing and shipping. Linked together within a network, the traditional on-premise systems allow users throughout the organization to effectively manage their piece of the business via hardware and software that is under complete control and responsibility of the distributor [4]. Figure 1 shows the ERP System Component as a whole.

2.2 Cloud-based ERP System

Cloud ERP is Enterprise Resource Planning software that is hosted in a platform over the Internet. The use of the term “Cloud” includes a broad set of applications and software deployment models, namely Software-as-a-Service (SaaS).

Software as a service (SaaS) is a software delivery model in which software and associated data are centrally hosted on the cloud by independent software vendors or application service providers on the cloud. [4].

The Cloud is a host site where the ERP applications and data are stored and the computing takes place. Even though applications delivered through SaaS look and perform like desktop applications, the computing is performed off-premise and is referred to as Internet-based computing.

3 Cloud-based Mobile ERP System Framework

In this section we present the Cloud-based mobile ERP system architecture. Software as a service (SaaS) is a software delivery model in which software and associated data are centrally hosted on the cloud by independent software vendors or application service providers on the cloud.

When we say SaaS mobile ERP it has a slight difference in platform from desktop ERP. Business Application layer and Presentation layer is designed differently to meet

the mobile requirement. Figure 1, Cloud Mobile ERP System Layer. The ERP system will be hosted by SaaS, to support mobility. It is accessible to any devices. With SaaS, there is no need a physical hardware support on the part of the business owner. Therefore, it is cost effective and maintenance needed. Figure 3 Cloud Mobile ERP System Components.

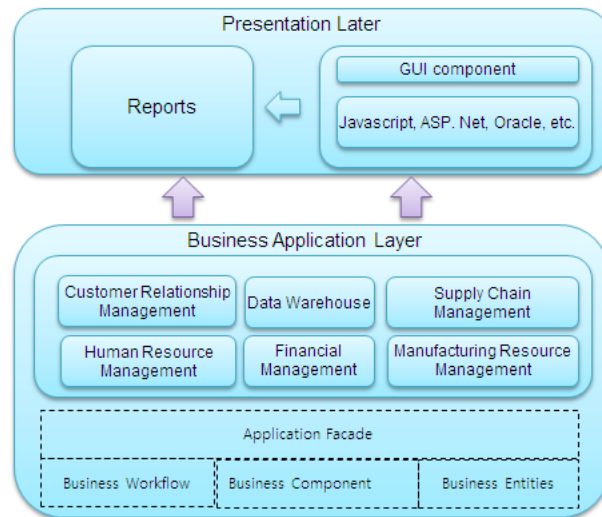


Fig. 1. Cloud Mobile ERP System Layer

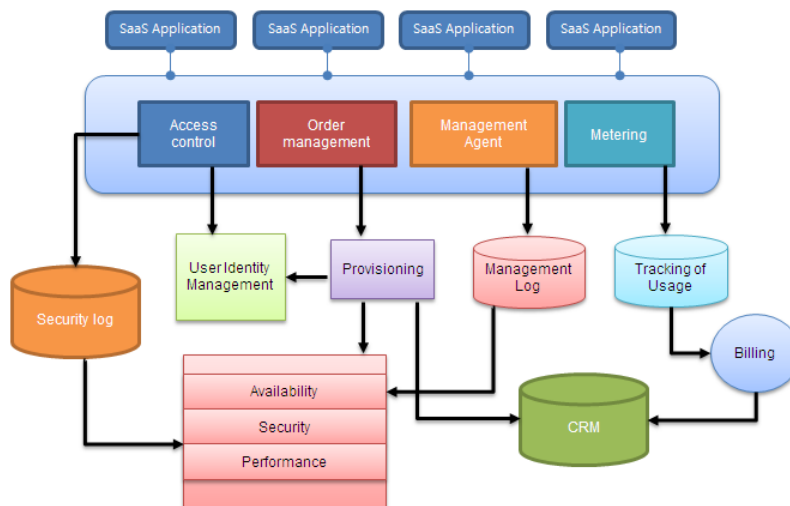


Fig. 2. Cloud Mobile ERP System Component

4 Conclusion

The advances in mobile industry also brought an idea to put the ERP system into to next level. Cloud based ERP benefits customers by providing application scalability and reduced hardware costs. In addition, Cloud computing technology made it easier to deliver our ERP software as a service (SaaS) for customers who want to acquire cloud ERP and not have to manage hardware, software, and upgrades while reducing up-front expenses. Cloud based ERP benefits customers by providing application scalability and reduced hardware costs. It is low cost, supports rapid development, flexible and scalable. It improved accessibility, mobility and usability; also it improved system availability and disaster recovery. Moving into the cloud based system is very beneficial, it's always up to the company's readiness and capability to handle such transition.

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