

Configuration as a Service in Multi-Tenant Enterprise Resource Planning System

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Abstract : Enterprise resource planning (ERP) systems are the organizations tickets to the global market. With the implementation of ERP, organizations can manage and coordinate all functions, processes, resources and data from different departments by a single software. However, many organizations consider the cost of traditional ERP to be expensive and look for alternative affordable solutions within their budget. One of these alternative solutions is providing ERP over a software as a service (SaaS) model. This alternative could be considered as a cost effective solution compared to the traditional ERP system. A key feature of any SaaS system is the multi-tenancy architecture where multiple customers (tenants) share the system software. However, different organizations have different requirements. Thus, the SaaS developers accommodate each tenant's unique requirements by allowing tenant-level customization or configuration. While customization requires source code changes and in most cases a programming experience, the configuration process allows users to change many features within a predefined scope in an easy and controlled manner. The literature provides many techniques to accomplish the configuration process in different SaaS systems. However, the nature and complexity of SaaS ERP needs more attention to the details regarding the configuration process which is merely described in previous researches. Thus, this research is built on strong knowledge regarding the configuration in SaaS to define specifically the configuration borders in SaaS ERP and to design a configuration service with the consideration of the different configuration aspects. The proposed architecture will ensure the easiness of the configuration process by using wizard technology. Also, the privacy and performance are guaranteed by adopting the databases isolation technique.

Keywords : configuration, software as a service, multi-tenancy, ERP

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