Challenges Building Software-as-a-Service Apps

Software-as-a-Service (SaaS) is among the fastest growing segments of information technology industry. Although much of the attention focuses on the low entry cost for users and subscription revenue stream for providers, the viability of SaaS really stems from the fact users simply prefer SaaS applications. Operating the application themselves, allows SaaS providers to focus on the user experience rather than on the IT team who installs and maintains the application. Salesforce.com and Webex have proven SaaS is a viable business model and inspired a wave of change in the software industry. However, typical ISVs face a significant challenge in adopting the SaaS model when architecting multi-tenant applications.

The Challenge

Multi-tenant applications are a single software instance which is shared among all customers. When all users share a common database, such as a search engine, sharing the application offers few challenges to the developer. On the other hand, sharing applications in which users access only their own data, such as CRM, requires securing data from inappropriate use. The added security wouldn't be needed if each user had their own dedicated application and database. Unfortunately, hosting individual applications for each customer hasn't been feasible due to the economics of IT operations. The manpower involved in deploying and maintaining hundreds of copies of a complex application would make the cost of the resulting service unappealing to users. Therefore, to reduce operating costs the provider must share a single application among all users.

Building a multi-tenant application has its own costs. Architecting systems for multi-tenancy requires scarce skills. Additional engineers are required and development and test cycles are longer. In addition, when all subscribers share the same application, upgrades and outages affect the entire user base, creating spikes in support needs. Therefore, designing for multi-tenancy is a tradeoff; increasing engineering expense and time-to-market in order to lower the cost of service.

The Benefit

ISHIR has the understanding of the different SaaS models and platforms available to building multi-tenant applications. We also have experience and knowledge to overcome challenges around integration with non-SaaS applications, this poses a challenge for customers moving to SaaS. Assisting ISVs and enterprises to adopt SaaS model helps bring solutions to market quicker with smaller internal staff and external expertise.