

SaaS Application Management through a Robust Architectural Framework



With the success of B2C on-demand solutions where standard features are provided to all users, there is an expectation that enterprise class SaaS applications too can be delivered on this model. However in order to meet widely varying business requirements of organizations and to efficiently manage a growing tenant base, SaaS providers need to have a powerful backend system enabled through the application architecture to meet this challenge. The Trakr application has been built with these needs in mind and is supported by its robust SaaS Framework.

Overview

From the day you launch your SaaS product, the number of users (tenants) will start to grow. In order to cost effectively manage the increasing number of users, the SaaS application should be built on a Multi-tenant principle with a single instance of the software being deployed. However more often than not, your tenants will demand for customized billing packages, features, reports etc. Your clients will also want to test drive the application with a limited number of users initially and vary this with time.

And the more customers you acquire and start using your application, the more complicated it's going to be in managing them. Having the flexibility within the application itself to cater to all of these needs is going to be an important differentiator between your product and your competitor's. A multi-tenant efficient, meta-data driven architecture is the key to achieving this flexibility.

Trackr; a Software as a Service (SaaS) based GPS enabled fleet and mobile workforce management solution is developed on a robust SaaS Framework which inherently supports features such as multi-tenancy, interface customizability, billing, metering and configurability.

An inside look at Metadata Services

The meta-data services of the SaaS Framework enable the customization of the Trackr application to meet individual tenant organizational requirements. This supports the four main aspects of SaaS application management.

User interface and branding

The metadata services of the Framework provide the ability to modify the tenant's user interface to reflect their corporate branding.

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Workflow and business rules

In order to support business-critical customers, the Trackr application has the ability to accommodate differences in workflows.

Extensions to the data model

Supported by the SaaS Framework, the Trackr application has the openness required for extensions of database schema or user interfaces. This is a key feature needed to avoid customer frustrations of being restricted by static, unchanging set of data fields and tables. The extensible data model of the Framework provides the ability to customize the application the way customers want it to work rather than the other way around.

Access control

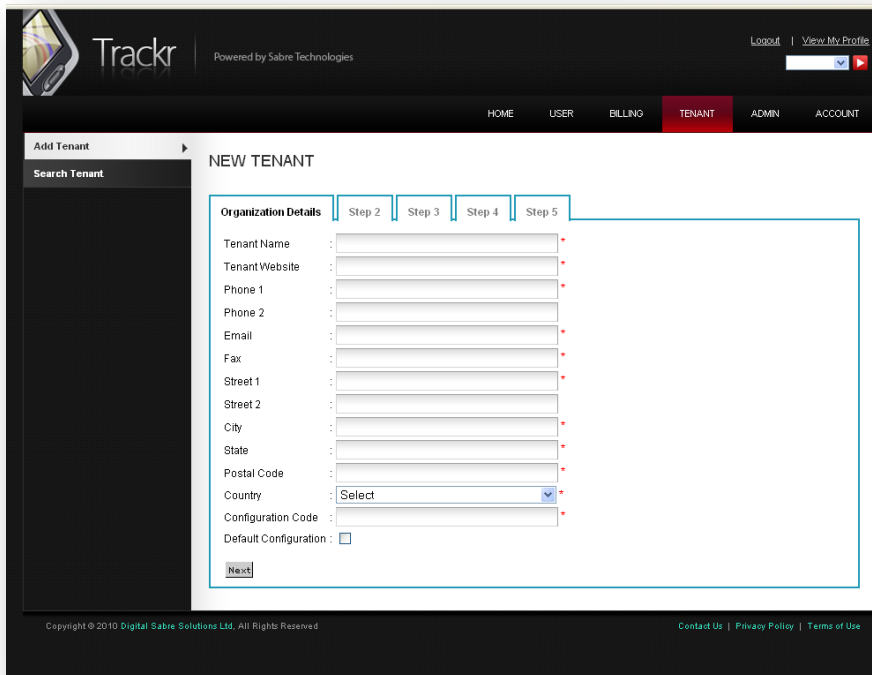
The admin panel of the application is used for creating individual accounts for end users, and for determining which resources and functions each user should be allowed to access. Access rights and restrictions for each user is tracked by using security policies, which is configurable for each tenant.

Tenant Management

To efficiently provision for newly registering tenants, managing end-users and making tenant specific customizations, Trackr has a powerful backend system enabled by the SaaS framework.

When a new client registers, the Trackr administrator can log in to the backend application and create an account for the new tenant.

An efficient client 'on-boarding', provisioning and customization process

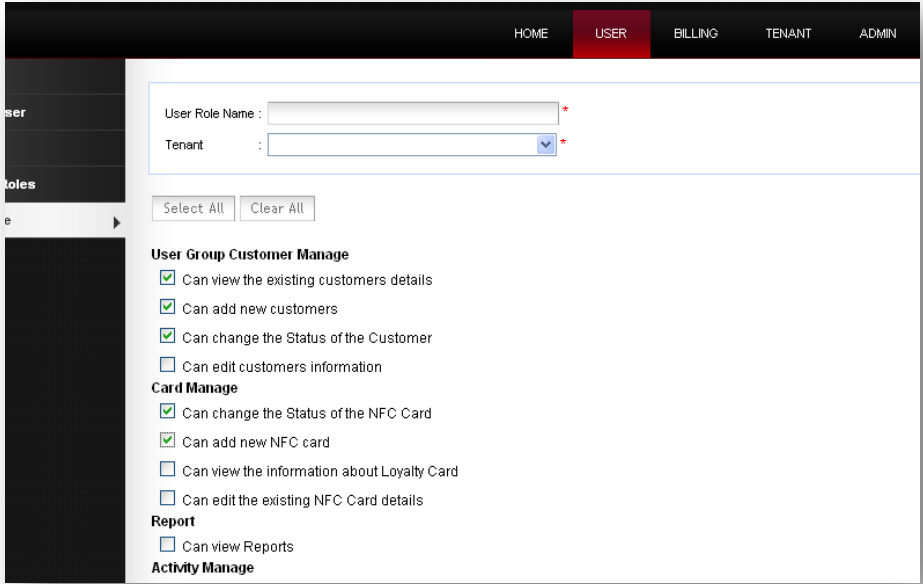


Tenant user management

Another important aspect of managing your tenants is the efficient assignment of tenant users and managing access privileges of these users. Within the tenant organization there will be multiple users with varying levels of application usage needs. The application needs to have the ability to assign functionality to users depending on the tenant organization's requirements.

This is also vital to maintaining the security of the application; where only authorized users are able to view specific information and carry out certain tasks. In Trackr, all this can be managed by the Administrative portal of the system.

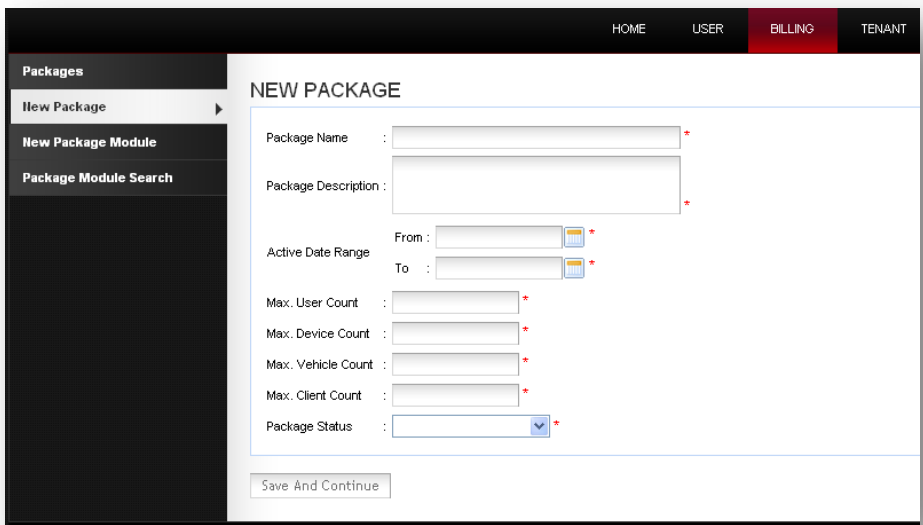
During the user creation stage, functionalities can be dynamically assigned using a tick box function.



Providing maximum flexibility in billing rule customization to ensure customer retention

Billing Package Customization

Most SaaS providers offer standard packages of the software with varying levels of features and price. However, quite often clients demand more flexibility in their billing packages. Trackr has the functionality to create customized billing packages and dynamically assign them to tenants.

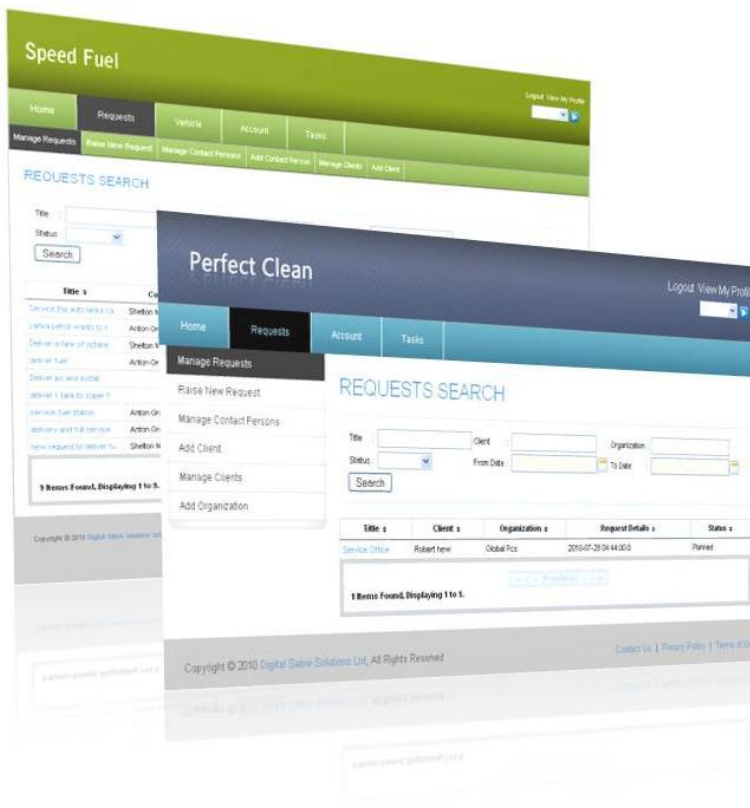


Internationalization

To meet the needs of tenants requiring multi-lingual support the SaaS framework enables *internationalization* of the Trackr application.

Metering

A fundamental aspect of SaaS; Trackr has an inbuilt metering mechanism which monitors and records usage of the application. This is consolidated into a detailed report and billing statements are generated.



Conclusion

Trackr has the capability to address unique business needs of clients and efficiently manage a growing tenant user base. This is made possible through the SaaS framework that Trackr has been built on. The tenant 'onboarding' process is supported by an administration module; enabling the efficient management of the provisioning as the number of tenants grow and customization demands increase. Deploying this framework on a cloud infrastructure will give the flexibility to scale up and scale down the application as required.

From achieving client specific branding attributes to workflow customizations, access configurations to customizing billing rules; the Digital Sabre SaaS Framework brings in the capabilities needed to meet the challenge of delivering enterprise class SaaS applications.



Digital Sabre Solutions is a technology innovator providing software development partnering services. We specialize in SaaS and Mobile application development. Through a robust set of frameworks and a CMMI certified delivery process, we deliver superior quality products while reducing development time and cost.

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