

Case Study

Migration to Cloud and SaaS

Enterprise-wide Workforce Management Solution

InVision Software AG, Germany

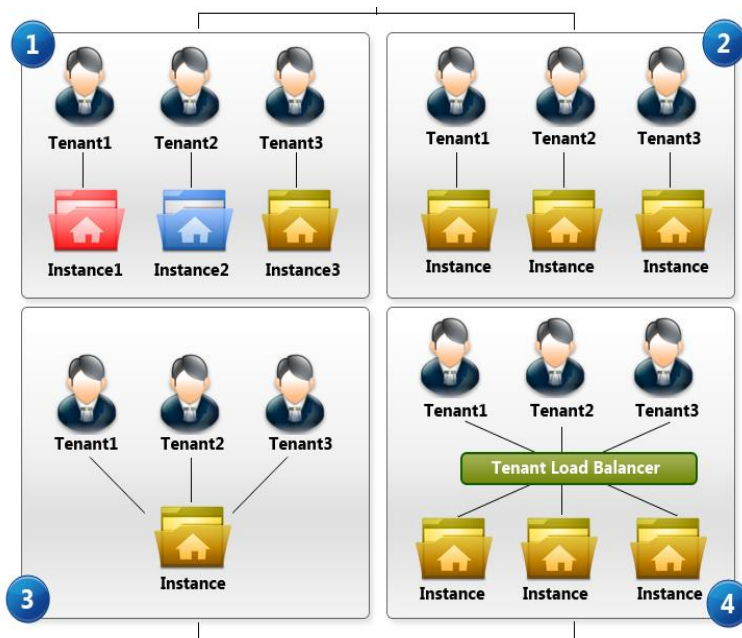


The Customer

InVision Software is a world-leading supplier of enterprise-wide workforce management solutions which enable companies to optimise their staff planning and scheduling processes. InVision empowers customers to reduce personnel costs, increase productivity, improve employee satisfaction and to boost revenue by leveraging better customer service. Founded in 1995 and based in Ratingen (Germany), InVision currently employs about 170 WFM specialists and has offices across Europe, North America, and South Africa. InVision Software AG (IVX) is listed in the Prime Standard Segment of the Frankfurt Stock Exchange. Among InVision's clients are numerous international blue chip companies, such as ABN Amro, Allianz, BMW, Deutsche Telekom, IKEA, Sky and Vodafone. Further information: www.InVisionwfm.com

The Need

InVision was offering its workforce management software on an on-premise model. In 2010 InVision decided to transition their core business model to cloud computing. With this model their customers will be able to use InVision's products as Software as a Service (SaaS), without initial investment in expensive hardware or software. By simply going online, they can access all functionalities, just paying a user fee – without any investment costs. Furthermore, the implementation period of InVision's SaaS solution can be significantly reduced, compared to conventional WFM projects.



InVision's end goal was to convert their on-premise product to a multi-tenant SaaS Product. However they decided to take a phased approach. They wanted to move their business model to cloud and SaaS immediately, by using Multi-tenancy Maturity Model 2 (MMM 2 - See Figure) and then move module by module to a multi-tenant maturity model 4.

For adapting to the MMM 2 model they wanted a cost effective and elastic mechanism to add cloud instances as they keep acquiring customers.

For migrating to a MMM 4 model in a phased manner, they wanted to build a Multi-tenant SaaS Framework, which will become the engineering foundation for their SaaS product.

The Framework

When InVision came to know of Techcello, they were already 3 months in to the process of building an in-house Multi-tenant SaaS Framework. Once InVision came to know of the celloSaaS option, they initiated an elaborate evaluation exercise over a period of 2 months. POCs were developed using the Free Trial License provided by Techcello. Extensive performance tests were also done. And finally, InVision decided to stop their in-house framework development and instead use the celloSaaS framework provided by Techcello.

The Cloud Solution

Amazon EC2 offered the capability to add instances elastically in a cost effective manner. InVision moved their product quickly to Cloud model by hosting the individual instance of the tenants in Amazon EC2. Each of these instances has the tenant specific Application server and Database. They also built a central server which hosts the Tenant, User, License and Privilege related services and data. When a tenant is created the central system uses Amazon EC2 services to spin off a new instance and make the instance ready for the tenant.

End users of the system log in via the central application hosted on the central Amazon instance. Once the user is authenticated, they are redirected to the application hosted on respective instance for the tenant.

The Central Application

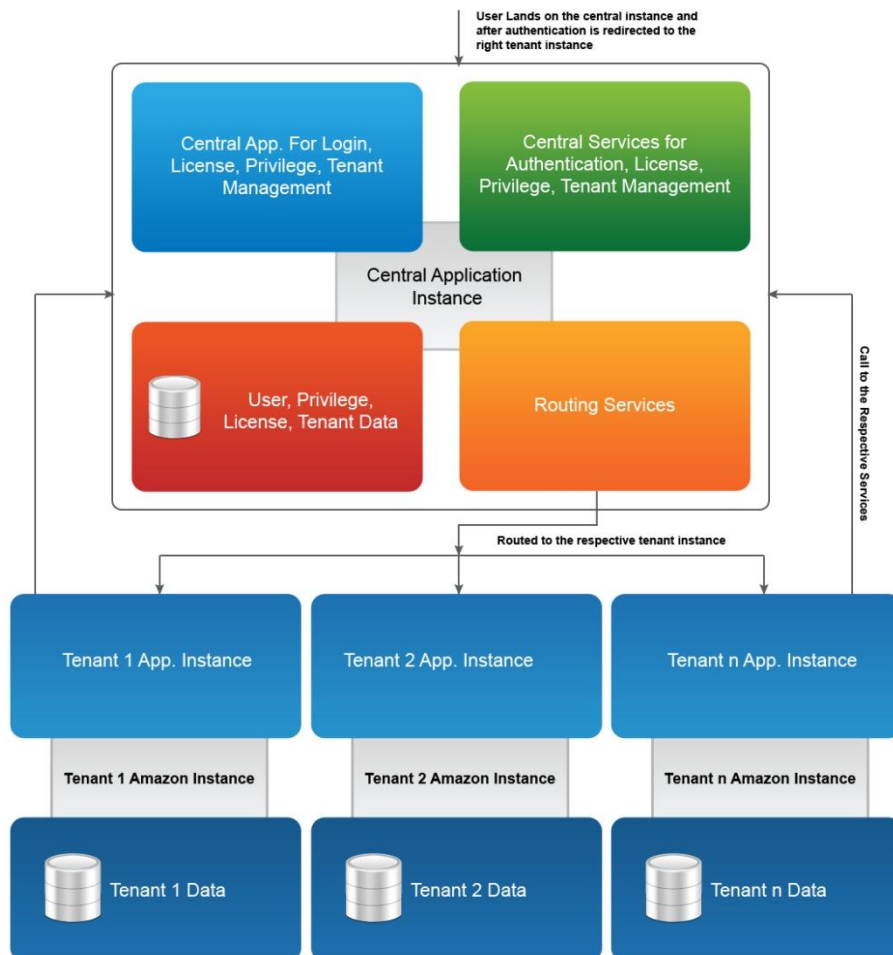
InVision used the Multi-tenant SaaS Framework provided by Techcello to build their central Application.

The Techcello framework supports all the 4 types of Multi-tenancy namely,

- a) on-premise separate machine for every tenant,
- b) separate database-separate instance,
- c) separate database-shared instance
- d) shared database-shared instance

InVision currently uses the Techcello Framework with a separate database- separate instance for each tenant. However, the same Framework can be used to move the various modules of their product to a completely shared Multi-tenancy (MMM 4) in a phased and module by module approach.

Since the Techcello framework provided ready-made components and services required for tenant management, user management, role and privilege management, package and license management etc. the central application developed using the framework had to focus only on integrating these services and APIs with their existing product.



InVision found this approach more practical and faster than trying to re-engineer the entire product from scratch. They were able to offer a cloud based SaaS offering to their customers, within a very short period of time, while at the same time, they are able to work on a long term plan of modernizing and migrating all their product modules to fully shared multi-tenancy.

Other Amazon services used

InVision uses Amazon Elastic Cache for distributed caching. They are also planning to migrate to Amazon RDS in the future. (celloSaaS supports both)

The Team

The InVision team of 30+ developers are lead by 4 architects. All of them went through a 12 hour online training program conducted by Techcello.

Having completed the migration to Cloud and SaaS with MMM 2 model, the team is currently working on moving their various product features / modules to MMM 4 model, using the celloSaaS framework.

Summary

InVision was able to move to a Cloud based SaaS model without spending too much time or Capex. Amazon's elasticity allowed them to keep adding servers as they acquired new customers. The Techcello framework gave them all the engineering and operational components required for Multi-tenant SaaS in a ready to use form. The central application instance built using celloSaaS framework also allowed them to start with partial multi-tenancy and move gradually towards 100% Multi-tenancy.

About Techcello

Summary : Techcello's "Multi-tenant SaaS Framework" (product name : celloSaaS) fills an important gap between .NET and the Cloud (Amazon, Azure, Private). It helps you build multi-tenant applications 30-40% faster and 50% cheaper. The framework has all the plumbing, engineering and operational components required for a robust and scalable SaaS product.

Why use a Framework?: Techcello's productized framework approach gives complete freedom, flexibility and control of custom development, without the complexities, risks, cost and time overheads of building and maintaining your own multi-tenant engineering stack. It provides a true multi-tenant architecture at the application level and database level.

Why Techcello?: Unlike other alternatives it does not lock you in to either a proprietary development environment or a non-Microsoft run time container, application server or APaaS platform. It retains the .NET environment both during development and deployment, giving complete technical and strategic control over the entire application stack.

Benefits: Saves 40-50% on the cost of building a SaaS product or migrating an existing application to a multi-tenant architecture. You can get to the market faster. It provides a robust, scalable and strong engineering foundation to your product or application (tested, supported and easily extensible). You can deploy your application anywhere from on-premise Windows boxes, Private Clouds and Data centres to the Azure and Amazon Cloud platforms.

Adoption/Validation: Since April 2010, many small, medium and large ISVs in Germany, UK, USA, Malaysia and India have chosen the celloSaaS framework as the engineering foundation for their present and future products.

Accolades: Techcello was featured as a Cool Vendor by Gartner in April 2011. Techcello was also chosen by Microsoft as a finalist in the Startup Challenge.

Partners: Techcello has partnered with leading OPD providers and Solution Integrators such as Aspire Systems, Persistent Systems and Symphony Services.

For more information : Email : info@techcello.com, Website : www.techcello.com