Case Study: Zurich MedTech

Working Title: Zurich MedTech enables solutions in the implantable medical device industry using Nimibx supercomputing for tissue level simulation and for broader commercialization of their services

Products Used:

Sim4Life

About Zurich MedTech:

ZMT provides *in silico* solutions to the medical device industry. Our comprehensive simulation platform, *Sim4Life*, provides a powerful 3D validated biological and anatomical modeling environment for optimizing the effectiveness and performance of medical devices, improving patient safety, and discovering potential new treatments. Built from the ground up, *Sim4Life* provides smooth and fully automated or customizable workflows for applications ranging from exploratory research and medical device development to regulatory documentation for clinical trials and device certification. -- https://www.zurichmedtech.com/in-silico/

Summary:

With the goal of making implantable medical devices and sensors more able to detect and alert with greater quality, Zurich MedTec (ZMT) is a company that produces a variety of products and services including simulating electromagnetic and heat dissipation within human bodies from implanted devices. These simulations are accomplished with Phantoms, life-sized, anatomically accurate dolls embedded with sensors, and Solvers & Tissue Models which is software that can simulated the effect of an implanted device into a human body, *Sim4Life*. Due to the broad market for implantable devices, ZMT concluded that commercializing their software on the Nimbix cloud was a reasonable mechanism to generate additional revenue.

The Challenge:

The human body provides a unique set of challenges for implanted devices in the areas of response to electromagnetic fields to dissipation. The market place for implantable devices is quite large with many large and small players in the field, all of whom could be customers of the *Sim4Life* software.

The Solution:

 ZMT came to Nimbix to find an adequate platform to run their proprietary simulation engine, *Sim4Life*. In addition to supporting ZMT’s running of Sim4Life, the Nimbix Jarvice platform also was able, to construct an independent software vendor agreement and enable Sim4Life, to be made available to other manufacturers on a fee per use basis. This allows ZMT to accomplish their own work faster than on their on-premises computing capabilities AND it allows them to efficiently offer their technology for consumption to other device makers with very little effort expended in marketing and sales.

The Result:

ZMT now has a presence on the Nimbix cloud. Customers can access *Sim4Life* and pay for the time that they use it. The financial mechanism that facilitates this is an hourly up-lift.

For example: If Nimbix charges $X per cpu hour and ZMT feels it’s product is worth $Y per cpu hour in terms of license cost, then Nimbix and ZMT agree to price the hourly rate at $X + $Y dollars per hour. Nimbix takes care of collecting and distributing funds back to ZMT either as cash or as hourly CPU credit against their own work. Nimbix only charges for compute usage, storage up to one terabyte is free, data transfer in and out of the cloud is free.

The result is that a specialized player like ZMT now has access to world class supercomputing for their own work and their customers can now work on the same system as ZMT. This makes product support much easier. Additionally, there are tremendous cost savings in maintenance and distribution because ZMT and their customers will always be using the same platform and same code base, support issues surrounding upgrades on customer sites will be significantly reduced as customers move to using *Sim4Life* on the cloud. Additionally, there are savings now built into the ZMT sales and marketing process as *Sim4Life* is now on the Nimbix cloud and part of the Nimbix offerings, this serves as a mechanism to get *Sim4Life* in front of more eyes that simply a ZMT web site or at trade shows. This is a very financially efficient mechanism for companies where every dollar, pound euro, yen, yuan, wan, rand, peso, lira or franc is closely watched.

Moving Forward:

As ZMT continues to grow, we hope to see additional material from them hosted on our cloud.