Spark Case Study

Spark and Metaswitch Embrace Agile Methodology for Digital Transformation Using Metaswitch's Programmable Rhino RAS

Spark

metaswitch

![metaswitch]

Executive Summary

Spark, New Zealand's leading provider of digital services, recognised that a shift to a fully converged all-IP IMS network was an opportunity for a business-wide digital transformation that would make customers the heart of all conversations and thus help all of New Zealand win big in a digital world. Driven by this purpose, Spark partnered with Metaswitch to deliver the public switched telephone network (PSTN) replacement and introduced new digital services using Metaswitch Rhino (VoLTE) Telephone Application Server (TAS). This was executed with the introduction of Spark's company-wide Agile way of working, the adoption of new IT systems, and a move to a DevOps methodology.

www.metaswitch.com

Seizing the Opportunity for Digital Transformation

Spark is leading New Zealand into a new digital era that will transform the way we communicate, the way we do business and ultimately the way we live.

The paradigm shift to digital has truly begun in the telecom space and, whether an operator is in a fight for market supremacy or survival, there is one common North Star: the provision of superior customer experience.

In addressing this, operators typically focus on a set of interactions throughout the customer's journey, from engagement with the operator's sales channels or support teams, through to the consumption of products or services. While this ticks many customer experience boxes, these boxes are often individual isolated events and do not get to the heart of the challenge: how does an operator truly support the end-to-end customer journey?

"The ambition was to make the customer the heart of all conversations, to help all New Zealand win big in a digital world."

Spark, the leading provider of digital services in New Zealand, has fully embraced this challenge by transforming the entire set of processes that support customers – from the network and infrastructure that underpin them, through to the culture and skillsets of the people that run them.

For many years Spark's customer base consumed a very typical set of landline voice and messaging services. But with the uptake of fibre and wireless broadband the operator saw many of its customers migrating to new services underpinned by data and IP voice connectivity.

Spark recognised this as the opportunity for transformation and their vision was to create a seamless customer centric approach across the entire organisation built on a fully modernised network. The execution included the introduction of a company-wide Agile way of working, the adoption of new IT systems, a move to a DevOps methodology, the migration to a fully converged all-IP, IP Multimedia Subsystem (IMS) network and the introduction of new digital services. The ambition was to make the customer the heart of all conversations, to help all New Zealand win big in a digital world.

Pathway to digital

Provides the security, communications, applications and infrastructure tools needed to build a true digital business.

World class network

Invested more than $1.25 billion in digital platforms for customers since 2014.

Much more than a telco

Offers mobility, collaboration, cloud services, networking, security, IT services and big data analytics.
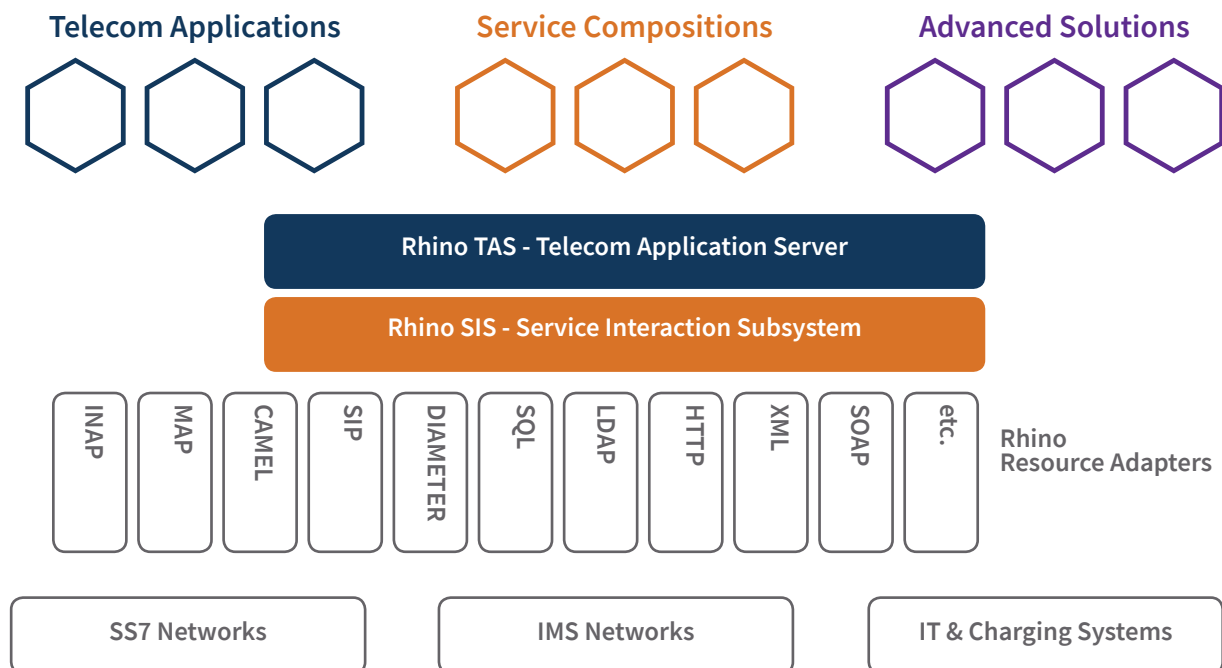
Cloud Native Rhino TAS Platform Enables Agile Development

The close partnership between Spark and Metaswitch was built upon a very close alignment of vision and working methodology.

Driven by this legacy network and service transformation strategy Spark made the decision to modernize their Telephone Application Server (TAS) and selected the Metaswitch Rhino platform to support their transition. The Rhino TAS is a cloud-native, carrier-grade and genuinely open TAS and Service Broker (SCIM) combination that provides network operators the capability to develop new applications or modify existing services to produce unique and highly customized offerings. Critically it makes service creation faster, less costly and less prone to error. The Rhino TAS, is an application on the platform built using this framework and is the first TAS to be architected using cloud native architecture from inception. It is designed to support network functions virtualization (NFV) with complete management and orchestration (MANO).

For Spark, the potential of Rhino was clear. It offered a completely programmable framework that could provide the glue to transform their legacy network, enable rapid new service creation, support new service vice testing within minutes and support carrier-grade, "five-nines" availability in an IT-grade envi-

Telecom Applications   **Service Compositions**   **Advanced Solutions**

Rhino TAS - Telecom Application Server

Rhino SIS - Service Interaction Subsystem

| INAP | MAP | CAMEL | SIP | DIAMETER | SQL | LDAP | HTTP | XML | SOAP | etc. |

Rhino Resource Adapters

SS7 Networks   **IMS Networks**   **IT & Charging Systems**

Execution

Spark previously ran a high-value 0800 freephone service on their legacy network but there was an ambition to future proof it by creating a new IMS-based, feature-rich service. The joint Spark and Metaswitch teams set about realising this vision and a partnership was created consisting of an R&D development team of Metaswitch developers working on core framework enhancements and a product development team of Spark developers working on service creation in a fully agile, SCRUM methodology. This became one of the first programable network teams in Spark.

Embracing Agile methodologies, the project was run in sprints of two-week cycles consisting of continuous software enhancements, testing and integration. Throughout the process the Spark teams were also able to develop their own automated testing tools and recruit new developers. The joint approach was a resounding success.

"Metaswitch's Rhino solution is not only future-proofing our network but enabling us to build out new telecommunications services within a virtualised environment... to meet the ever-changing demands of our customer base."

–Colin Brown
Network Evolution Tribe Lead, Spark

Spark's next priority was to deploy the Rhino TAS to support fixed voice services and leverage the benefits of using a single platform.

Many of the building blocks and testing tools had already been created in the partnership approach, with Spark's own team of experienced agile developers able to fully own the development in-house. In fact, their expertise was such that they were able to take the IR.92 features provided by the OpenCre-

ate framework and develop a full set of features required for their PSTN emulation, Voice over Fibre and Wireless Voice products. Spark now benefits from a flexible service layer and no longer rely exclusively on traditional vendor R&D release cycles for service creation.

"It was critical that we worked with a partner that was aligned to our strategy and could fully embrace our agile way of working - Metaswitch more than fulfilled that requirement."

–Colin Brown
Network Evolution Tribe Lead, Spark

The partnership between Spark and Metaswitch was built upon a very close alignment of vision and working methodology and the relationship continues to evolve.

Spark has become an active participant in the Rhino Market. A market place that brings together app developers and many of Rhino's customers to share ideas, new and innovative applications and customised services. Meanwhile, transformation across other parts of the organisation continues as it is rec- ognised that the Rhino platform can provide the glue to other signalling and service creation chal- lenges. The vision is that Rhino and the supporting teams from both companies will continue to facili- tate Spark's rapid transformation.

"Spark's commitment to digital transformation is driving clear value for its customers." said **Ian Maclean, CMO of Metaswitch.** *"We are strongly committed to our on-going partnership and to enabling Spark's innovation in service development and delivery"*

About Metaswitch

Metaswitch is the world's leading cloud native communications software company. We develop commercial and open-source software solutions that are constructively disrupting the way that service providers build, scale, innovate and account for communication services.

By working with Metaswitch, visionary service providers are realizing the full economic, operational and technology benefits of becoming cloud-based and software-centric. Metaswitch's award-winning solutions are powering more than 1,000 service providers in today's global, ultra-competitive and rapidly changing communications marketplace.

Our success stems from a unique combination of our deep experience in software engineering, with superbly agile development capabilities; an extremely highly-regarded support team; and financial and organizational stability, based on a foundation of recruiting and retaining talented and enthusiastic employees, and rewarding them fairly for their contribution.

We have a 30+ year history of providing high-performance, hardware-independent software to the communications industry, while solving its most difficult problems. Our communications software solutions are critical elements of the equipment of the leading industry telecom equipment manufacturers, as well as the networks of the world's leading network operators, underpinning their most advanced data and voice services.

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