Red Hat Upgrades to openUC: Customer Case Study

Welcome to Red Hat

Red Hat, the world's leading provider of open source solutions, has its corporate headquarters in Raleigh, North Carolina and satellite offices worldwide. Founded in 1993, its mission has been to make rapidly innovating open source technologies accessible to the enterprise environment. It has since grown to provide cloud, virtualization, storage, Linux, and middleware technologies to thousands of communities. They have served travel agencies, healthcare facilities, retail networks, scientific initiatives, governmental organizations and more. Their solution, JBoss Fuse, helped drive research forward for the Large Hadron Collider while their Linux solution cut costs at Beth Isreal Deaconness Medical Center. Whatever the industry, their technologies have been responsible for facilitating the innovation and growth of mission-critical enterprises around the world.

Red Hat Voice Infrastructure circa 2010-2011

In order to consistently provide reliable services in the rapidly evolving arena of open source technology, Red Hat's business strategy is dependent on the constant innovation of its IT services. After all, a sophisticated infrastructure is critical to the functioning of a multinational software company. With a wide spectrum of internal customers, ranging from a sophisticated technical community to sales, marketing, support, and executive management, including a large remote worker population, Red Hat's global network services team is constantly looking for innovative ways to meet everyone's needs.

Back in 2010, Red Hat had the forethought to use SIP as its basic underlying protocol, but its potential was limited by the incumbent provider's vertically integrated and closed system. The legacy infrastructure was running on five independent regional voice clusters and communications services were limited to dialtone and voicemail. Remote dialtone and voicemail services had to be accessed via a softphone across VPN, a constraint that slowed connectivity and marred voice quality. With limited video integration and no advanced collaboration features, the global network services team had to ask themselves one question: how can we innovate and do more for our users? With most of the budget spent on the regular maintenance upgrade cycle of the incumbent provider's hardware and software and given the complicated licensing scheme, they knew change would likely have to happen at the level of the provider.

Time for an Upgrade

Red Hat had a bold vision for its IT infrastructure: an open core that was standards compliant, one that allowed people to work however and wherever they wanted. As Chris Stierle, senior manager of global network services, put it, "We wanted to get out of the product model where we tell our clients how things are used. We want to support collaboration on any client and on any device no matter where you are. " This broke down into three short term objectives:

- Implement a better voice solution for remote workers
- Reduce costs for basic voice services

- Implement an open, standards-based SIP core that fosters innovation

The first place to look was the incumbent provider's offering. As expected, their solution meant more money, more complex licensing, and more hardware. Furthermore, their desktop and mobile solutions for collaboration were a bad fit for a company using a Linux environment. Considering over 85% of Red Hat's end users used Linux as a desktop operating system, this was a serious shortcoming. While the incumbent provider's solution had the appeal of short term convenience, it took the team further away from the long term goal and vision.

Surprisingly, the answer to the problem came during the team's lunch break. Joe Micciche, senior telecommunications engineer, stayed behind to work on a project and, by the time his team returned, he had SIPfoundry's sipXecs running on an old server under his desk. With no new gear, licenses, or upgrades, he had installed a system that met all of their long term goals. Stierle and Micciche tested the resilience of the system by incrementally increasing the number of pilot users. When they had reached several hundred users, the server continued to run smoothly and confidence grew. "The CPU was barely even touched," Strierle recalled. The next step was finding a company that could provide the expertise and failover security to turn Micciche's pilot project into a real initiative.

Welcome to eZuce

Red Hat worked with the eZuce team to assess how the openUC™ solution could operate as their global communications system. Upon evaluation, they found that many of the available features, cited in the list below, were in direct alignment with their long term vision:

- An open, standards-based SIP core that could adapt to onsite hardware without any vendor-specific constraints
- A flexible infrastructure that supported all major operating systems including Linux
- A light weight system that required only five global servers to replace the entire old phone system globally, reducing maintenance cost and carbon footprint
- Availability of collaboration features such as video, presence, and instant messaging
- The possibility of exploring future opportunities to innovate with new devices and clients supporting evolving use cases
- And further reducing cost such as by implementing openACD, eZuce's contact center solution

In addition, the team projected that the new solution's all-inclusive pricing model would lead to significant cost savings. Unlike the incumbent provider, openUC has a single software license that gives users access to all the product features and unlimited device capabilities. No more costly maintenance upgrades of hardware and software of a proprietary solution, budget could now be spent on improving service for users with new services. After comparing all of openUC's features to the incumbent provider's solution, the team decided that openUC would be the most cost-effective solution and moved ahead implementing it as their new communications system fully replacing the old system.

User Experience
During the pilot deployment, Red Hat immediately saw favorable results. The internal company mailing lists became a forum for positive feedback from Red Hat associates who were impressed with the innovative nature of the initiative. They also appreciated how the flexible infrastructure freed up their communications. If they wanted to have a meeting, they no longer had to hunt around for the right desk phone. The solution was also accessible to all the remote users and, now able to operate outside the VPN, they experienced vast improvements in connectivity, voice and video quality, and therefore they enjoyed increased mobility. In reference to remote workers, Stierle commented, "there have been multiple email threads dedicated to how much our implementation has changed the way they do business for the better." Before openUC remote workers were isolated by limited communications options. They were forced to choose between a poorly functioning softphone and their personal home phone. The openUC solution has allowed them to interact with their peers anytime, both nationally and internationally, without restriction.

The solution has facilitated the development of work relationships in other ways. For example, users have been taking more advantage of video conferencing capabilities. Before, tracking down a conference room with a dedicated video conferencing unit wasn't worth the hassle. Now that the process has simplified to bringing up a SIP client on a laptop, more and more people are using the service. Stierle noticed that "people that have worked together for years but are located in different regions around the globe are finally getting to see each other face to face." The Red Hat team expects that once they bring in other services such as chat and multi-point video, they will see even more of these newfound connections.

The global network services team experienced cost savings in both direct and indirect ways. There were such immediate benefits as reduced per user licensing and hardware costs, reduced back-end infrastructure costs, and no additional expense for new features. Furthermore, their thirty three servers required to run the old system were reduced to five, causing a significant decrease in their hardware footprint. They also experienced benefits in unexpected ways, such as a minimized need for server maintenance or specialized training, controlling the support staff growth rate.

Additionally, traveling associates can now use mobile device clients to connect globally and avoid international roaming charges. Stierle recalled that "in one case, a US based IT associate had to go help out with a sick parent for a month in EMEA. She decided to just take her corporate handset with her and she set up a home office in a completely different country." This opportunity to work internationally for a month would never have been possible without this new and open system. Cases like these made it clear that the modernization of their communications technology allows Red Hat to explore more opportunities for people to work remotely, which provides significant cost savings.

The most significant outcome, however, was that the openUC solution empowered Red Hat to realize their vision. Any SIP-compliant client could now work from anywhere. In addition, the open, standards-based SIP core allowed them to work in whatever way they

felt was most efficient. In short, the solution saved time and drove productivity. Stierle's conclusion: "When done correctly, innovation in IT is always worth the challenges."

Lee Congdon, CIO, Red Hat

"An open SIP communications platform is an important element of our corporate collaboration and communications strategy. We expect to improve our associate's productivity and improve their ability to communicate across virtual teams by enabling them to use any SIP compliant device to interact. This should result in faster response times for our product and support teams and ultimately our customers. In addition, when openUC is fully deployed globally, we expect to have roughly 80% less hardware to manage when compared to our current telephony infrastructure, with an associated reduction in support costs."