

ČESKÉ RADIOKOMUNIKACE INTEGRATES THOUSANDS OF IoT DEVICES WITH RED HAT FUSE



SOFTWARE

Red Hat® Fuse

České Radiokomunikace (CRA), a leading Czech Republic telecommunications provider, wanted to launch an Internet of Things (IoT) Platform-as-a-Service (PaaS) solution to compete with other network operators and support Czech businesses' IoT adoption. CRA used Red Hat Fuse to create a flexible, robust integration platform that will scale to support 2 million IoT devices by 2020. With this platform, the service provider can ensure high performance and accurately predict costs to effectively support current and future customer demand.



TELECOMMUNICATIONS

348 CORE EMPLOYEES

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PETR NEMETH
IoT ARCHITECT, ČESKÉ RADIOKOMUNIKACE

BENEFITS

- Achieved flexible, seamless integration to connect diverse protocols and technologies across different customer markets
- Gained scalability to support 2 million IoT devices producing around 10 billion messages per month by 2020
- Improved cost predictability and transparency with Red Hat’s annual subscription-based model



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BUILDING AN INTERNET OF THINGS SOLUTION FOR CZECH BUSINESSES

One of Czech Republic's leading telecommunications providers, České Radiokomunikace (CRA), has been broadcasting high-quality, reliable TV services for almost 60 years. As a leading provider of cloud and information and communications technology (ICT) services, CRA offers a unique television, radio, and internet infrastructure that supports modern media delivery.

Facing competition from other network operators and global organizations, CRA began efforts to join the Internet of Things (IoT) market. CRA sought to launch a Platform-as-a-Service (PaaS) offering. This offering would be available through a dedicated IoT network based on the service provider's technology. The company also sought to build its platform to help Czech organizations of all types and sizes take advantage of IoT technology.

“Our platform would need to scale easily to accommodate the huge volume of messages produced and process messages concurrently so customers can access their data quickly,” said Petr Nemeth, IoT architect at České Radiokomunikace.

To build this IoT PaaS, CRA needed a way to process, deliver, and store messages produced by devices connected to the network. The service provider sought a robust, reliable integration solution that would scale and adapt to support rapid interdevice communication across diverse protocols and technologies. In addition, this platform needed to support a variety of user types—from internal developers to partners and customers.

“We needed to build a platform that would be flexible enough to accommodate all different types of IoT devices while integrating with our established IT systems and infrastructure,” said Nemeth.

CREATING A FLEXIBLE PLATFORM FOR SEAMLESS INTEGRATION

After evaluating several proprietary and open source enterprise integration platforms, CRA decided to deploy Red Hat Fuse as the foundation of its IoT PaaS solution.

“Red Hat Fuse not only came out top in terms of developer productivity but also offers a good balance between the business and IT support of commercial platforms and the flexibility of open source solutions,” said Nemeth. “It's a highly available and highly scalable solution that will allow us to accommodate virtually any customer.”

The service provider worked closely with Behaim ITS a.s., an IT integration partner, to configure and deploy the lightweight Fuse integration platform to its on-premise private cloud. With initial deployment completed in just five months, a total of 10,000 devices— primarily smart meters deployed by utilities providers—are now connected to the platform, sending 25 million messages each month. Fuse integrates customers' IoT devices and analytics applications for seamless communication and operations.

“Red Hat Fuse is key to České Radiokomunikace's success in the IoT market,” said Nemeth.

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CONNECTING IoT DEVICES AT ENTERPRISE SCALE

SEAMLESS INTEGRATION CAPABILITIES

Its new integration capabilities provided by Red Hat Fuse ensure CRA and its customers can flexibly connect many diverse protocols and technologies to seamlessly integrate IoT devices and applications. For example, the platform connects to popular cloud applications used by customers to run data analytics and other workloads, as well as supporting direct connections to customers' servers. CRA can easily forward messages from various IoT devices to customers' servers using HTTP. Fuse also integrates easily and securely with the company's internal customer resources management (CRM) and billing systems and processes to create an open environment for third-party collaboration to easily extend CRA's IoT PaaS offering.

"Integration is one of our biggest challenges for the future. Red Hat Fuse will allow us to not only adopt more protocols and IoT networks for our PaaS with ease but also be more open for third-party developers, cloud providers, and data analytics providers to connect to our platform as well," said Nemeth.

HIGH-PERFORMANCE SCALABILITY

CRA has now gained a reliable integration platform that can scale rapidly to meet changing needs—such as increased numbers of IoT devices connected to the company's network and PaaS solution—while maintaining high performance and availability. For example, Fuse will help CRA scale to support its plans to scale to 2 million IoT devices producing around 10 billion messages per month by 2020.

"When it comes to IoT and other mass consumption services, you connect a lot of devices and process a lot of messages," said Nemeth. "It is important that our customers have the best experience possible, and that means getting their data instantly on demand. We needed a solution that can scale to concurrently process data from as many devices as possible, and Red Hat Fuse is the perfect fit."

PREDICTABLE, TRANSPARENT COSTS

In addition to performance benefits, creating its IoT service platform with Red Hat software helps CRA understand and predict its related IT costs. Red Hat's software subscription model prevents lock-in to costly proprietary licensing fees by offering an annual renewal option. Extended product life cycles also help ensure software is updated and stable, reducing overall costs and risk.

"We can easily predict costs for increasing the number of Fuse cores and subscriptions based on the number of devices connected to our platform and the number of messages they are producing," said Nemeth. "Red Hat's transparent pricing model allows us to easily plan for the future and transparently communicate the business value of our services to customers."

PLANNING IoT EXPANSION INTO NEW MARKETS

To continue building on the early success of its IoT PaaS offering, CRA plans to expand its use of Fuse to connect to additional IoT networks and protocols and make its platform even more open to third-party integrations.

“Integration is one of the biggest challenges for us for the future,” said Nemeth. “Red Hat’s integration platform will allow more third-party developers, cloud providers, and data analytics providers to connect to our platform.”

The company is also focusing on expanding into new markets. While the utilities sector is currently CRA’s largest IoT segment—using the company’s IoT PaaS for smart meters, water distribution, and other services—the smart cities market segment is also growing rapidly.

“Smart city applications is potentially a huge market because there are lots of use cases, like transportation, traffic management, smart lighting, and energy efficiency,” said Nemeth. “Building modern services on Red Hat products gives us the scalability we need to take advantage of the opportunities offered by a highly connected world.”

ABOUT ČESKÉ RADIOKOMUNIKACE

Based in Prague, České Radiokomunikace has been providing television and radio broadcasting in the Czech Republic since 1963. The company owns an extensive backbone network and transmitting infrastructure combined with transmission and access technologies. Together these allow it to offer voice services, internet connections, data services, and business cloud services to corporate and wholesale customers.

ABOUT BEHAIM ITS

Behaim ITS builds on its two decades of integration experience to help clients overcome their 21st century IT challenges: leveraging the cloud and shared services, gaining insight quickly in a world of big data, and taking real-time action on data for competitive advantage. Beyond integration, Behaim ITS specializes in data analysis, Internet of Things (IoT), API management, in-memory and complex event processing, business process management, master data management, and visualizations.

ABOUT RED HAT

Red Hat is the world’s leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.



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