BASISPOORT SIMPLIFIES DIGITAL LEARNING ACCESS WITH RED HAT JBOSS MIDDLEWARE

BASIS POORT

één inlog voor uw digitale lesmateriaal

SOFTWARE AND SERVICES

Red Hat® JBoss® Enterprise Application Platform

Red Hat JBoss Core Services Collection

To simplify access control for administrators and students at schools in the Netherlands, four major digital publishers and three distributors partnered to form Basispoort, an initiative that created a unified single sign-on (SSO) platform for access to its partners' software and content. To build this solution, the initiative hosted Red Hat JBoss Enterprise Application Platform on its own hardware. However, managing this in-house solution proved costly and time-consuming. Basispoort migrated its Red Hat JBoss Enterprise Application Platform deployment to a Microsoft Azure cloud environment and implemented Red Hat JBoss Core Services Collection to enhance its JBoss Middleware capabilities. With this updated solution, more than 1.5 million students can access educational information from many vendors using one set of credentials. Basispoort can easily scale this system to meet changing demands and can meet regulatory data requirements—at half the cost of its previous in-house solution.

Ochten, Netherlands

HEADQUARTERS
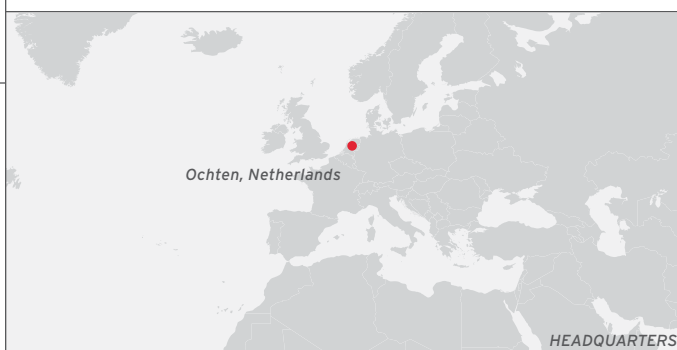
EDUCATION I.T. INDUSTRY

SIZE: **8** EMPLOYEES, PLUS A PROJECT TEAM OF **25** PARTNER MEMBERS

"We no longer need expensive in-house hardware and load balancers, and we no longer spend valuable time maintaining the infrastructure. We pay for what we need when we need it, creating huge financial savings while improving the efficiency of our service delivery."

EDWIN KENSE
OPERATIONS MANAGER, BASISPOORT

BENEFITS

- Established secure, seamless digital learning single sign-on (SSO) solution for more than 1.5 million students

- Reduced operational costs by 50% by migrating to the cloud

- Increased scalability to easily manage peak demand traffic

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UNIFYING DIGITAL SIGN-INS TO SIMPLIFY LEARNING

In the education industry, digital content is replacing physical textbooks as the preferred content format. However, with multiple publishers providing material, managing secure login capabilities for more than 1.5 million students was challenging for primary schools in the Netherlands.

"Each publisher required its own password for its system, so students had to remember up to four codes," said Edwin Kense, operations manager at Basispoort.

To make access control easier for administrators and students, four major digital publishers and three distributors partnered in 2012 to form Basispoort, an initiative that created a unified, single sign-on (SSO) platform for access to its partners' software and content. By making online teaching materials accessible via one set of credentials, Basispoort substantially reduced the administrative burden on schools and enhanced the digital learning experience for students.

Basispoort initially deployed a traditional IT environment based on Red Hat JBoss Enterprise Application Platform software and hosted in-house. However, this bare-metal environment required considerable investment in dedicated hardware that was often redundant during periods of low traffic. When the hardware contract for this environment ended, the initiative sought to find a more flexible, cost-effective solution.

"We needed the capacity to handle peak traffic in the morning when over a million children log in simultaneously, but otherwise our expensive in-house hardware was largely unused," said Kense. "We also needed the ability to better defend against DDoS [Distributed Denial of Service] attacks and other security threats. Moving to a cloud-based environment, rather than continuing to host the JBoss solution ourselves, seemed to be the obvious way forward."

DEPLOYING A SECURE, FLEXIBLE CLOUD SOLUTION

To find an effective solution for modernizing its secure, unified SSO capabilities, Basispoort issued a request for proposals (RFP). ISAAC Software Solutions, its current IT supplier and a Red Hat Premier Partner, recommended redesigning Basispoort's IT environment by creating a cloud infrastructure based on Microsoft Azure, supported by Red Hat JBoss Core Services Collection and Red Hat JBoss Enterprise Application Platform.

"We asked our solution partners to offer a quote on the project, as well as estimated ongoing running costs. ISAAC won based on its competitive pricing, as well as the easy integration of Azure with our existing Microsoft SQL Server deployments," said Kense. "In addition, ISAAC's proposed solution would allow us to add new publishers easily and scale up and down to meet demand."

In this solution, Red Hat JBoss Enterprise Application Platform remained the core application for unified, secure log-in capabilities, with Google Web Toolkit providing user interface design and an NGINX server providing certificate validation.

Red Hat JBoss Core Services Collection increases the value of Basispoort's Red Hat JBoss Middleware deployment with enhanced management, security, scalability, and interoperability. Additional services and components include load balancing, identification and authorization, high availability, and configuration management and monitoring.

Over three months, Basispoort and ISAAC worked together to migrate millions of users while running the legacy system in parallel. Once migration and a security audit were completed, the new cloud environment was switched to production use.

"Over 1.5 million names, dates of birth, and associated passwords were securely migrated to the new Azure environment," said Kense. "We undertook exhaustive performance checks to ensure we could handle the traffic load, then transitioned fully to the new platform."

STREAMLINING PERFORMANCE AND SECURITY–AT LOWER COST

REDUCED OPERATING COSTS

By moving to Red Hat's enterprise open source software and an externally hosted cloud environment, Basispoort has reduced its hardware use and now only pays for the physical resources it actually uses. As a result, the initiative cut its operational costs by as much as 50%.

"We no longer need expensive in-house hardware and load balancers, and we no longer spend valuable time maintaining the infrastructure," said Kense. "We pay for what we need when we need it, creating huge financial savings while improving the efficiency of our service delivery."

GREATER SCALABILITY TO MEET DEMAND

With its enhanced Red Hat cloud environment, Basispoort can easily incorporate systems from new publishers. In addition, the initiative can better scale up or down to meet the demand of daily peak traffic. At peak load, typically between 8am and 9:30am, the system needs to manage approximately 220,000 simultaneous single sign-on (SSO) log-in scenarios, containing multiple steps and service provider network calls.

The ability to scale to include new publishers, while also handling daily peaks in demand, is another benefit of a cloud-based approach. "It's not just about scaling up to meet demand. It's also about scaling down when the demand isn't there," said Kense. "Traditional hosted environments struggle to provide that agility, but with cloud computing, agility isn't a problem."

IMPROVED SECURITY AND COMPLIANCE

With Red Hat's subscription-based model, Basispoort can annually upgrade to the latest version of Red Hat JBoss Enterprise Application Platform and JBoss Core Services Collection. Patches and security updates are automatically deployed to the initiative's Red Hat products by ISAAC.

"Access to these updates through our Red Hat subscription gives us the ability to manage constantly changing requirements without significant up-front investment," said Kense. "It also provides peace of mind when it comes to malicious attacks."

The new solution also helps Basispoort meet strict government data protection regulations. Dutch law requires sensitive user data to be housed within the European Union, and production. Microsoft Azure operates datacenters in both the Netherlands and Ireland. As a result, Basispoort can ensure that its production and back-up environments are compliant.

"Combining the security of JBoss Middleware with the expertise of ISAAC and the flexibility of Microsoft Azure creates an ideal solution," said Kense. "We get a lot more insight into end-to-end operations so we can work more efficiently and comply with all relevant legislation."

BUILDING A DIGITAL LEARNING FUTURE

As demand for e-learning curriculum continues to grow, Basispoort anticipates increased adoption of its simple, secure user authorization offering. More content publishers and school networks are being added to the solution every year.

Basispoort's unified SSO offering based on Red Hat JBoss Middleware and Microsoft Azure will help the initiative easily manage these additions without service disruptions or additional costs.

"E-learning is the future, and this flexible, cost-effective solution lets our students securely access the information they need when they need it, making them more productive and less frustrated," said Kense. "Red Hat provides the underlying technology that supports this single sign-on experience, and we expect it to continue to play a key role as our organization grows."

ABOUT BASISPOORT

Basispoort is a partnership between four major educational publishers and three distributors. Its purpose is to provide single sign-on capability for the affiliated partners' software and content; making online teaching materials accessible via one login. The uniform login methodology via Basispoort replaces a multitude of individual existing log-in methods, resulting in a substantial reduction in the administrative burden on schools and an enhanced student experience.

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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