

# SOFTWARE AND SERVICES

Red Hat® OpenShift Online

Red Hat OpenShift Startup Program Financial technology startup company A.IX Capital needed an affordable cloud platform to support development of its robo-advisor application, a solution that provides algorithm-based, automated investment strategies for professional and private investors. To support this innovation, the company chose to take advantage of the Red Hat OpenShift Startup Program to deploy Red Hat OpenShift Online with no initial cost. With OpenShift Online, A.IX Capital quickly and easily built a stable and scalable system. As a result, its IT team can focus on innovating to grow its core business, instead of spending time on routine IT management.





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> DR. FABIAN BRAUN FOUNDER AND CEO, A.IX CAPITAL



#### **FINANCIAL SERVICES**

# **FEWER THAN 10** EMPLOYEES

# BENEFITS

- Gained flexible, scalable, and stable platform that can easily scale to add customers and support algorithm development for innovative financial advisory applications
- Achieved cost-effective deployment with access to free test version through the Red Hat OpenShift Startup Program
- Reduced time required for IT management to only minutes each week, helping IT teams focus on core business and customers
- Gained access to broad OpenShift community, as well as Red Hat's expert support



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## LAUNCHING AN INNOVATIVE SOLUTION

The financial technology industry is growing rapidly, with startup companies challenging established vendors throughout the market. A.IX Capital, a German financial services startup, has built an innovative robo-advisor application that provides algorithm-based, automated investment strategies for professional and private investors without the use of human financial planners.

"Our robo-advisor makes investment decisions and handles others' investments in our funds," said Dr. Fabian Braun, founder and CEO of A.IX Capital. "We've taken exchange traded funds (ETFs), investment funds traded on stock exchanges, and added trend-based risk management called active indexing."

To run this system, A.IX Capital sought a reliable, scalable, and affordable IT platform that could easily be run and managed. The company has fewer than 10 employees and none of them are IT specialists.

"We're small and self-funded, and we were looking for a fast and effective way to get our idea into production," said Braun. "What we know and understand are the algorithms and the business logic. We didn't want to have to handle a datacenter, plan an operating system update, or install all the right libraries and database software."

### ACCELERATING DEVELOPMENT WITH A CLOUD PLATFORM

A.IX Capital sought a platform that would meet these needs, as well as support the Python programming language.

"We've written business logic and tools, such as Monte Carlo simulations, all in Python and the Django framework," said Braun. "Python is popular in finance due to its simplicity, which means there are lots of libraries available for chart analysis and other functions, so we wouldn't have to develop everything for ourselves."

After extensive research, A.IX Capital found that Red Hat was the only major cloud provider that offered native support. As a result, A.IX Capital decided to base its algorithm system on Red Hat OpenShift Online, a cloud-based application platform that lets developers quickly develop, host, and scale applications.

"Most datacenters said they didn't have a service specifically for Python, which meant we'd need to add the software ourselves, which we didn't want to do," said Braun. "We could have bought a virtual server in a datacenter or a physical server, but then we'd have to determine an operating system and other details. It was much more simple with OpenShift."

A.IX Capital runs its customer portal web server and all of its business algorithms using OpenShift Online. In addition, the company uses Red Hat's platform to manage millions of euros for its customers with a fund accounting system and an evaluation system that tracks over 1,100 funds daily, as well as evaluation tracking every 15 minutes for its investments.

# **GAINING SIMPLE, FLEXIBLE I.T. AT LOW COST**

# **COST-EFFECTIVE DEPLOYMENT**

As a startup, A.IX Capital was able to take advantage of the Red Hat OpenShift Startup Program. The company used this program, which offers free access to a test version of the environment, to develop its algorithms in a proof of concept system before committing to any expenses—such as buying a physical or virtual server in a datacenter.

"If we'd needed to spend money up front to find out our algorithm didn't work, especially when we were starting the company and short on money, that would have been painful," said Braun. "With OpenShift, we easily uploaded our locally written software project, then developed and tested it further without any cost. Once we knew our application was working, it was very simple to move to production. And with the OpenShift Startup Program, we didn't even pay for the production-level service for the first six months."

#### GREATER STABILITY AND SCALABILITY

With all of A.IX Capital's business based on OpenShift Online – from its customer portal to internal development resources – high availability is essential.

"If the system shut down, we wouldn't be out of business immediately, but it would cause us a lot of pain, and we didn't want to risk that," said Braun. "The Red Hat OpenShift Online platform has been 100% reliable, with no downtime."

The company runs its test system on its own computers and hosts its production system on cloud-based OpenShift. Keeping two redundant copies of its data and code not only ensures the company can recover quickly from a major issue or outage, but also reduces the risk of launching new features and capabilities.

"With a test and production environment running in parallel, and OpenShift providing version management, we can easily push minor changes live to production in just 15 seconds or use the test system for bigger changes," said Braun.

In addition to providing the stability to meet changing requirements without interruption to service, OpenShift Online lets A.IX Capital easily add more resources as necessary to meet customer and development demands.

"Since our database and web servers are separate, I can add more web servers to access the same database without any issues," said Braun. "OpenShift easily scales, so we can add as much computer time or memory as we need to handle traffic increases on our site or finish more complex calculations."

# EASIER I.T. MANAGEMENT

As a new startup company, A.IX Capital needs to focus on its core business, instead of managing its IT environment. OpenShift Online helps the company accomplish this by handling routine operations of its IT infrastructure.

"OpenShift makes sure that we have the right operating system and database software, updated with all the patches we need. All we add is our business logic," said Braun. "It also resolves security issues to minimize risk. Now we spend little time managing or maintaining IT operations, usually just minutes a week. OpenShift is very simple to use. It just works."

# ACCESS TO EXPERT SUPPORT AND KNOWLEDGE

Using an open source solution has helped the company resolve most issues itself, with help from a large, active community of OpenShift users. With access to industry-leading support from Red Hat, A.IX Capital can quickly resolve any issues that require additional expert guidance. The company receives same-day responses to email queries to ensure issues cause as little disruption to business as possible.



"If we had selected a more niche cloud provider, it would have taken longer to get up and running and would have been riskier," said Braun. "With a smaller provider, if they change their business model, I'm out of business. With Red Hat, we have reliable, enterprise-level support."

## CALCULATING FOR CONTINUED INNOVATION

With its platform now up and running, A.IX Capital is looking ahead to future developments and adding new features. For example, the company has now fully automated the communications workflow with its partner banks, using OpenShift to automatically process and encrypt data from emails.

"We have the opportunity to add more complexity to our algorithm without worrying about having enough capacity for calculations. That capability gives us freedom for future development. If I want more computer time, I just buy more," said Braun. "Red Hat OpenShift Online can grow with us, and relieving that burden of worrying about growth is worth a lot."

#### **ABOUT A.IX CAPITAL**

A.IX Capital is an innovative startup in the financial technology (fintech) industry that has built a "robo-advisor" platform, which provides automated investment strategies for private investors through mutual funds and directly to professional investors. Based in Düsseldorf, Germany, it helps to deliver cost-effective and broadly diversified investments for its customers.

## **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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