

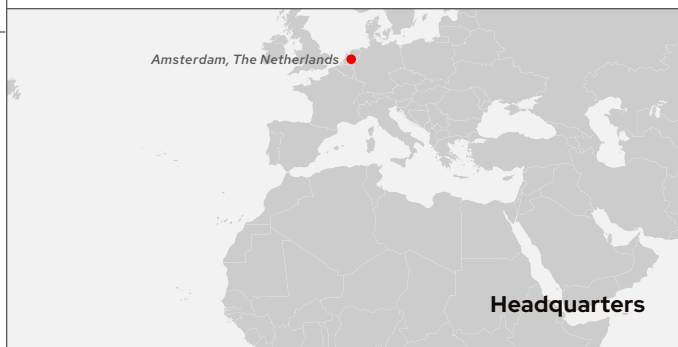
# AMS-IX uses Azure Red Hat OpenShift for simpler management of complex container environment



## Software and services

Microsoft Azure  
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The Amsterdam Internet Exchange (AMS-IX) has played a crucial role at the internet's core for almost 30 years. Connecting more than 850 networks, it's one of the world's largest hubs for internet traffic, operating multiple interconnection platforms around the world. On re-evaluating its IT environment during the development of its IX-API project—an API (application programming interface) gateway to give all customers a standard way to connect to its internet exchanges—AMS-IX recognized that it had a complex container ecosystem with different containers running on different virtual machines. AMS-IX selected Microsoft Azure Red Hat OpenShift (ARO) to help simplify its on-premises container environment; by adopting one container platform, the internet exchange hub could standardize how it deploys and manages its containers, and take its first steps into the cloud.



## Telecommunications

60+ employees

## Benefits

- ▶ Accelerated deployment of new software by 60% for a faster time-to-market
- ▶ Provided flexibility to run containers anywhere
- ▶ Simplified operations with a central container management tool, helping to save around one hour for each deployment

"Red Hat OpenShift is a very mature platform; being a Kubernetes-based platform rather than a container runtime, it adds an additional powerful set of tools that makes its containers easier to manage."

**Miguel Regalado**  
Senior Linux Engineer, AMS-IX

“Red Hat OpenShift ensures AMS-IX is not tied to a specific environment or vendor.”

**Bram Semeijn**  
PR and Communications Specialist  
AMS-IX

## Routing internet traffic efficiently for 30 years

Internet exchanges are the beating heart of today’s connected world; they ensure internet traffic is routed reliably, efficiently, securely, and cost-effectively. Internet service providers, telecom companies, cloud providers, and other companies vital to the internet ecosystem connect to them as they can offer secure, reliable, low latency, and engaging online experiences for their end-users. The Amsterdam Internet Exchange (AMS-IX) has played a crucial role at the internet’s core for almost 30 years. The neutral member-based association is one of the world’s largest hubs for internet traffic, operating multiple interconnection platforms around the world.

AMS-IX has always kept ahead of the technology curve, adopting open source more than 20 years ago. “Open source has always been important to AMS-IX,” said Miguel Regalado, Senior Linux Engineer at AMS-IX. “Open source gives us the flexibility to build the unique capabilities we need for managing our internet exchange.”

## Adopting a mature Kubernetes-based container platform

Having adopted containers back when they first emerged, AMS-IX had built up a complex ecosystem of container technologies with different containers running on different virtual machines. “This approach is no longer desirable; therefore, efforts were made to consolidate the container technologies to one single platform,” said Bram Semeijn, PR and Communications Specialist at AMS-IX.

After setting up several proof of concepts in the laboratory to demonstrate a variety of leading container runtimes and platforms, AMS-IX selected Microsoft Azure Red Hat OpenShift as the container platform of choice.

“Red Hat OpenShift is a very mature platform; being a Kubernetes-based platform rather than a container runtime, it adds an additional powerful set of tools that makes its containers much easier to manage,” said Regalado. Moreover, the vendor-agnostic platform provides flexibility as it does not tie AMS-IX to any specific container technology—which is important given its customers’ individual needs and preferred cloud platforms.

AMS-IX chose the IX-API project as the first project where Red Hat OpenShift was to be used. “IX-API is a collaborative project of the world’s largest Internet Exchanges—AMS-IX, DE-CIX, and LINX,” said Semeijn. “The goal of the project is to develop one API (application programming interface) gateway that gives customers a standard way for provisioning services at all three exchanges.”

AMS-IX built its IX-API gateway on-premise in a community Kubernetes platform and deployed the test and production versions in Microsoft Azure Red Hat OpenShift. Azure Red Hat OpenShift offers the Internet Exchange a flexible, robust, and resilient container platform that it can deploy efficiently in any customer environment to meet individual customer needs.

## **Adding flexibility while making life simpler for developers and operations**

### **Accelerated deployment of new software by 60% for a faster time-to-market**

“Containers make life easier for developers and help them to deploy and check their code really fast,” said Regalado. This was important as a containerized approach means developers no longer require that extra layer where they need another team to support their infrastructure. As a result, the team is able to speed up the deployment of new software considerably—by around 60%.

“The OpenShift Marketplace offers solutions that you can deploy directly into Red Hat OpenShift,” said Regalado. “Knowing they are certified as compatible means you can deploy really fast.”

### **Provided flexibility to run containers anywhere**

Red Hat’s open hybrid cloud approach gives AMS-IX the flexibility to run applications anywhere it needs to. Red Hat OpenShift delivers a complete application platform for both traditional and cloud-native applications. While AMS-IX traditionally uses its own premises, the Internet Exchange is looking to the future: “Red Hat OpenShift allows us to adopt a hybrid model, which gives us the cost, ease-of-use, and agility benefits of cloud for production environments,” said Regalado, “while retaining the flexibility and freedom you have with open source and in-house environments during development.”

“Red Hat OpenShift ensures AMS-IX is not tied to a specific environment or vendor. And that’s important for us,” said Semeijn.

### **Simplified operations with a central container management tool, helping to save around one hour for each deployment**

AMS-IX wanted to simplify its on-premise container environment by adopting one container platform. Standardizing on Red Hat OpenShift has made it simpler for the Internet Exchange to manage its various container deployments and has allowed it to take its first step into the cloud.

“The goal in the end is to have one central container management tool,” said Regalado. “A single place for managing even the most remote container environments. Compared to the former technology, we now save about one hour on each deployment, around 75%.”

## **Migrating more applications to Red Hat OpenShift in the cloud**

AMS-IX is currently running a limited number of applications supported with Red Hat OpenShift; however, it plans to run and support more production applications in the Red Hat OpenShift environment, including its website, from on-premises Red Hat OpenShift to ARO. Regalado also plans to run GitLab in Azure Red Hat OpenShift using the GitLab Operator. In addition, Regalado and the systems and engineering team plans to phase out other container technologies that AMS-IX is currently using.

## About Amsterdam Internet Exchange (AMS-IX)

AMS-IX is a neutral member-based association that operates multiple interconnection platforms around the world. Its leading platform in Amsterdam has been playing a crucial role at the core of the internet for nearly 30 years and is one of the largest hubs for internet traffic in the world.



## About Red Hat Innovators in the Open

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## About Red Hat

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