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ABOUT IQVIA

IQVIA, a Fortune500, and the largest healthcare data science company and leader in human data science technology.

CHALLENGES

- The Digital Media Solutions business unit of IQVIA had a goal to move applications to an agile development process using AWS EKS Kubernetes and do so in just a matter of weeks.

- IQVIA wanted a solution that was easy to manage regardless of scale without a staff of Kubernetes subject matter experts.

- Reliable controls for seamless deployments, especially to familiarize DevOps teams new to Kubernetes.

- Establishing security policies to ensure that clusters and workloads are protected. Given that Kubernetes is insecure by default, it presents inherent challenges for companies like IQVIA that consistently handle sensitive healthcare data.

BENEFITS

- Lowering the DevOps barriers to entry.
- Easily finding and fixing issues with clusters and workloads.
- Streamlining operations and boosting efficiency.
- Increasing secure access to data.

INFRASTRUCTURE

AWS

IQVIA

IQVIA chose AWS EKS Kubernetes due to it's simplicity and adherence to CNCF standards for Kubernetes. This prevents vendor lock-in in the event business needs change and other cloud solutions are required in the future.

IQVIA is a global human data science company focusing on digital enablement for leading international pharmaceutical brands and agencies. They are the biggest data enabler in the pharma industry for healthcare data, both for clinical data and marketing, using first-party, data-driven strategies as a human data science company.

IQVIA's head of technology, Krishna Boppana, is the technology and product strategy leader for their digital advertising business unit, Digital Media Solutions. His team runs a first-party advertising platform that conforms to privacy restrictions like CCPA, developing products and first of its kind data provider first-party data privacy safe solution, with cohorts, for targeting and measurement.

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> *"We call ourselves a human data science company. We help pharma brands to reach the right audiences for their brands, products, and services."* – **KRISHNA BOPPANA**
>
> **The company is ranked at the top in healthcare of Fortune 500's list of the World's Most Admired Companies.**

They have direct relationships with many leading pharma brands worldwide, enhancing their digital campaigns. IQVIA is based in over 100 countries worldwide. Every COVID vaccine worldwide has, at some point, depended on IQVIA's data, with IQVIA providing healthcare data, clinical data, trial data, and setting up labs at different points.

PROJECT MISSION

IQVIA's global vision as a human data science company is to improve access and democratize healthcare data for the pharmaceutical sector using Nirmata's Kubernetes management and governance features.

MAIN CHALLENGES

Kubernetes is one of the first projects that Boppana's business unit is doing. Kubernetes has a steep learning curve that IQVIA works to shorten, using the best tools to improve accessibility.

With no tools in place to aid with deployment, IQVIA needed more reliable controls and seamless deployment measures, especially to familiarize DevOps teams. Teaching a DevOps team how to use the technology can be exhaustive, especially with developers based in different countries and time zones.

> *"They (developers) are stuck if they need to do a deployment because there are one or two people in different time zones in other parts of the globe, and they're waiting, so we're wasting time. We immediately realized that we needed to enable these development teams."* – **KRISHNA BOPPANA**

Even if developers are not too familiar with Kubernetes, they should still handle the significant components within development cycles, so they're not waiting and depending on approval.

Another driving point for IQVIA is establishing security policies to ensure the cluster is unaffected. Given that Kubernetes is an open-source system, it presents inherent security challenges for companies like IQVIA that consistently handle sensitive healthcare data.

Managing deployment and helping developers cost IQVIA in terms of time and productivity. During the early stages of their project, when they researched developing and deploying docker images, IQVIA realized that a lack of familiarity with Kubernetes significantly disadvantaged their outsourced development needs.

IQVIA required the fastest and most efficient way to update developer skills, seeking a third-party platform to bridge the Kubernetes knowledge gap, shorten the Kubernetes learning curve and add much-needed scalability.

NIRMATA BENEFITS

The benefits that Nirmata provided IQVIA in its quest to optimize its deployment process and ensure a better understanding of Kubernetes across the board include:

• Shortening the Kubernetes learning curve
• Lowering the DevOps barriers to entry
• Easily finding and fixing issues with clusters
• Streamlining operations and boosting efficiency
• Increasing secure access to data

With Nirmata, it's easier to understand what should be deployed and when; thus, streamlining operations. For IQVIA, Amazon Web Services (AWS) is their main cloud provider, using a technology stack including various cloud services. With Nirmata, IQVIA configures their clusters, so Nirmata sees them, providing more resource accessibility. Using configuration management, IQVIA restricts users within certain environments, improving how they perform cluster management.

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THE SOLUTION

After extensive research, IQVIA enlisted Nirmata's secure developer self-service platform, enabling self-service Kubernetes cluster provisioning on private and public clouds. After comparing all platforms on the open market, Nirmata immediately stood out as the ideal partner for IQVIA to partner with.

> *"The users can come in and do the deployments themselves, and we can create a clean way of separating the groups; deployment groups, test groups, admins, enabling deployment. With this new world of teams being dispersed around the world, you must have that self-service, and DevOps cannot be the bottleneck. Thanks to Nirmata, the bottlenecks are eliminated, improving learning and boosting productivity along the way."* – **KRISHNA BOPPANA**

After exploring Nirmata, IQVIA could stay in focus and readily enforce cluster security. Compared to other tools with similar features, Nirmata facilitated a friendlier deployment process, allowing for the creation of deployment policies and changes on the fly.

THE RESULTS

Easier Learning to Faster Development and Deployment

After incorporating Nirmata into their operations, IQVIA has successfully reduced the time it takes for developers to achieve more excellent proficiency in Kubernetes, improving significantly in less than six months. IQVIA successfully engaged their 25-person team, reducing the learning curve and simplifying the deployment process, ensuring it's 75% faster.

> *"We used to do major deployments over the weekends – it typically took four to six hours just to make sure everything works. Now, we push, deploy, and test within an hour."* – **KRISHNA BOPPANA**

Flexible Configurations Allows for Improved Access Control, Productivity, and Security

As a first-party privacy data company, data security is a steadfast priority. The flexible controls and configurations Nirmata offers allow them to optimize speed and ease of using security simultaneously. Certain users can be limited to using certain part sizes, including environments, before setting that in policies and configurations. It's beneficial for collaboration with international and outsourced teams.

> *"Working with Nirmata allows us to avoid DevOps bottlenecks without compromising security. It keeps our day clean, improves productivity, and we can sleep better at night."* – **KRISHNA BOPPANA**

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Nirmata DevSecOps Platform Enables Policy-based Management

With Nirmata, IQVIA is able to apply Kubernetes and industry best practices from the beginning of the CI/CD pipeline to enforce compliance. Any exceptions can be clearly documented and audited to ensure integrity is maintained. These policies can ensure that misconfigurations - which surveys indicate are a leading cause of vulnerabilities - are avoided. Additionally, these policies allow IQVIA to enforce standards such as vulnerability scans to be run before any code can be deployed to even the earliest stages of the pipeline. These intelligent guardrails shift security left and design it in from the beginning

Streamlined Process Reduces Alerts by 50%

During the earliest stages of configuration, IQVIA's development team consistently received urgent messages necessitating immediate attention. After tinkering with Nirmata configurations, the development team significantly reduced the number of alerts without compromising security. As a result, the team seldomly gets more than one or two alerts per day.

The Biggest Advantage? Improved Access to Secure Healthcare Sector Data

By leveraging Kubernetes in Nirmata, IQVIA provides pharma clients worldwide with the most reliable and secure access to top-quality first-party data.

> "Now we're confident that we can continue to adapt and evolve. We will never be a high transaction, e-commerce with hundreds of nodes type of company. But, within scalability, availability, points of use, this (Nirmata) helped us to get on the Kubernetes bandwagon and know how to incorporate that." **– KRISHNA BOPPANA**

CLOUD NATIVE COMPUTING FOUNDATION

Nirmata is a proud member of the Kubernetes community

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