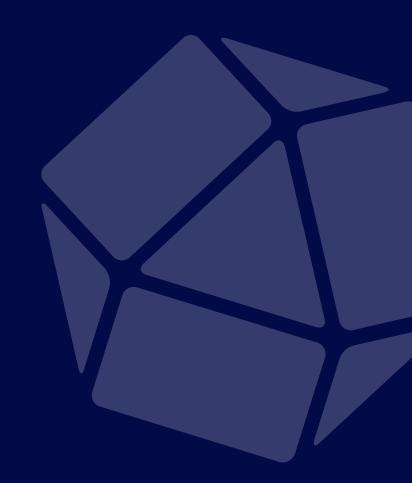**influx**data®

AN INFLUXDATA CASE STUDY

How Allscripts Uses InfluxDB to Monitor Its Healthcare IT Platform

Allscripts®

Allscripts Becomes Data-Driven Through Better Observability Enabling Better Patient Care

Company in brief

Allscripts is a healthcare software solutions and services organization; it provides solutions for electronic health record (EHR), financial, operational management, population health management, patient engagement precision medicine, payer and life science. With 30+ years in the industry, Allscripts aims to partner with its clients to innovate and make open, connected communities of care possible.

Case overview

Allscripts uses various technologies to help deliver better patient care, improve financial and operational outcomes and advance clinical results. Allscripts uses InfluxDB to centralize all application and infrastructure monitoring, and to support the no-downtime requirement of healthcare systems. Better observability has resulted in fully automated operations, reduction in operational costs and new revenue opportunities.

The business challenge

Allscripts needed to sufficiently monitor their solutions to ensure they are available and high-performing. Through acquisition of other organizations, Allscripts had developed a portfolio of different monitoring tools. They had additional systems and solutions in place including inherited data centers and monitoring tools. A plethora of disparate infrastructure components and monitoring tools had created observability gaps which had resulted in operational challenges, different alerting and visualizations, and increased costs — all at the cost of delivering the best service and support for their clients.

Technologies Used: Azure, InfluxDB, Grafana, Kafka, NGINX

The technical challenge

Allscripts realized they needed a scalable unified monitoring solution that would provide them with an IT foundation that also enabled the necessary application monitoring. They needed to be able to integrate their monitoring tool with other components of their infrastructure. By leveraging one tool holistically, they knew this would reduce their footprint and costs. Enabling their developers to customize the tools rather than having to go back to vendors was important.

They needed to be able to implement a solution through orchestration, so that they could deploy quickly and not wait on months of planning. Zero downtime and 24/7 support is key for their clients; this has been especially important during the COVID-19 pandemic. Any monitoring solution had to meet their strict cybersecurity/ransomware requirements set by their organization, government and regional security requirements and HIPAA regulations.

The solution

Observability at Allscripts includes LogicMonitor for infrastructure monitoring and AppDynamics for Application Performance Management (APM). The team quickly realized they needed a scalable tool to handle the extreme volumes of data they were looking to collect and process. They also realized they need a solution that could monitor any environment style, including hybrid, self-hosted, third party, cloud, on-premises, etc. Members of their monitoring team, Mike Montano and Chris Ruscio, ruled out Elasticsearch as they realized it wouldn't scale to the size they needed. They narrowed down their options to TimescaleDB, Prometheus and InfluxDB. They ultimately picked InfluxDB, the purpose-built time series database.

They valued that InfluxDB is horizontally scalable and that there are lightweight agents that can be deployed anywhere they need to push data to a central location. Allscripts' team can quickly modify tags, fields or measurements without having to change schemas. Allscripts uses Telegraf as their data collector; it also enables their users to have a sandbox where they can prototype any changes needed.

Results

Allscripts' DevOps team has improved their approach to monitoring. Currently, Allscripts has around 10,000 agents across three major data centers and close to 100 agents in about six other smaller data centers. They are collecting around 500,000 points per minute into InfluxDB. They are able to deploy upgrades and changes within minutes, rather than taking months.

The team has been able to reduce the monitoring footprint which means it's easy for the team to manage, maintain and secure the infrastructure supporting all of Allscripts' products and services. Allscripts has witnessed a reduction in operational costs and security risk. They have gained observability into areas of the business previously not attainable. Some monitoring wasn't previously available due to costs and scalability issues. This has all resulted in new revenue streams for the organization.

Having a centralized location for data and analysis has resulted in reduced mean time to identification and mean time to resolution. Empowering the team with the data and dashboards, support, service delivery and customer satisfaction have all improved.

What's next

In the future, Allscripts hopes to continue to consolidate their customized monitoring tools and reduce their investment in costly services; they will be increasingly relying on InfluxDB for infrastructure monitoring. The team wants to continue to improve their DevOps practices, and one of the ways they want to do this is to tweak their Telegraf relays as part of their multi-data center configuration. Allscripts hopes to fully utilize all data they're collecting; they want to start visualizing their data further and taking action on their data.

For visualization, they picked Grafana as they wanted a single interface that could aggregate multiple data sources into one UI. This way there is a holistic view, and one design language that all users use to create their own dashboards. There is a set of curated dashboards for the team to access as well as open access dashboards which enable their team to modify and design visualizations to suit their bespoke needs.

Allscripts uses SaltStack for configuration management. All of their Azure resources were created via Terraform and configured with SaltStack. Their data is ingested using Kafka, which provides a single ingress surface and a message buffer in the event of planned or unplanned cluster maintenance. The team uses Elasticsearch for log analysis. They currently stream data directly from Kafka to Kapacitor for alerting. The alerts are sent to ServiceNow for event management.

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"Previous to using InfluxDB, it would take us three months to design and implement changes to our monitoring. Today, we can deploy thousands of agents in minutes and can reconfigure them in seconds."

Chris Ruscio, Solutions Architect, Allscripts

About InfluxData

InfluxData is the creator of InfluxDB, the leading time series platform. We empower developers and organizations, such as Cisco, IBM, Lego, Siemens, and Tesla, to build transformative IoT, analytics and monitoring applications. Our technology is purpose-built to handle the massive volumes of time-stamped data produced by sensors, applications and computer infrastructure. Easy to start and scale, InfluxDB gives developers time to focus on the features and functionalities that give their apps a competitive edge. InfluxData is headquartered in San Francisco, with a workforce distributed throughout the U.S. and across Europe. For more information, visit influxdata.com and follow us @InfluxDB.

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