



“With Harness, we were able to reduce engineering toil by 20-30%.”



“Spinnaker wasn’t a good fit for our CD requirements around feature branching.”

Frank Moley, Engineering Manager,  
Cloud Services and Infrastructure

# DataStax Upgrades Continuous Delivery with Harness

## About

- Frank Moley, Engineering Manager - Cloud Services and Infrastructure, DataStax
- DataStax is the company behind the massively scalable, highly available, cloud-native NoSQL data platform built on Apache Cassandra™. DataStax gives users and enterprises the freedom to run data in any cloud at global scale with zero downtime and zero lock-in

## Compelling Events

- Cloud Services and Infrastructure team were tasked with empowering DataStax Astra engineers with self-service feature branching deployment capabilities to accelerate velocity and time-to-market
- DataStax Astra is a database-as-a-service built on Apache Cassandra and designed from the ground up to run anywhere, on any cloud, in any datacenter, and in every possible combination

## CI/CD Challenges

- Self-hosting, managing and operating Spinnaker became unworkable for the Astra DataStax team. The team needed to focus their time and effort on the engineering pipelines vs. managing the CD platform that underpinned pipelines
- Debugging and troubleshooting failed deployments could often take 4-5 hours when changes were made
- Difficult to understand and trust what versions of services are running on specific clusters and environments
- DataStax CD requirements changed from basic Containers/Kubernetes deployments to Dynamic feature branching deployments where engineers could deploy to their own namespaces within Kubernetes clusters
- Onboarding new Astra teams/services could take hours
- Implementing canary deployments and automatic rollbacks was a challenging project that was estimated to be several weeks of work

## Harness Benefits

- Harness Continuous Delivery as-a-Service allowed DataStax Astra team to focus on implementing pipelines vs. managing the platform that provided pipelines
- GitOps/GitSync capabilities with pipeline templates meant deployments could be managed as code with repeatable processes and rapid onboarding
- Troubleshooting deployments now takes less than a minute with granular transparency of deployment execution
- Deployment auditing means teams can understand and trust what versions of services are running on any cluster or environment in seconds
- Canary deployments and automatic rollback can be implemented within days
- Seamless integration of secrets management into deployment pipelines while removing dependencies with Jenkins

## CI/CD Ecosystem

- Jenkins (CI)
- Terraform (infra provisioning)
- Containers & Kubernetes (AWS & GCP)
- AWS Secrets Manager
- Datadog (APM)
- ELK Stack (Logs)

## Business Impact & ROI

- DataStax Astra team has implemented best practice Continuous Delivery across 25-30 engineers.
- Reduced engineering TOIL (20-30% of engineer time) associated with managing old CD platform which more than paid for the cost of Harness
- Reduced onboarding time of new services from couple of hours to couple of minutes
- Reduced deployment troubleshooting by 98% from 1 hour to under 1 minute
- Reduced time of implementing canary deployments and automatic rollback from several weeks to days