



## DRIVING DIGITAL TRANSFORMATION TO DEVOPS FOR CONTINUOUS IMPROVEMENT

## **COMPANY**

Toyota Research Institute - Advanced Development, Inc. (TRI-AD) was founded in 2018 to develop innovative software for automated driving, and to help fulfill the Toyota Motor Corporation's vision of "Safe Mobility for All." Based in Tokyo, Japan, TRI-AD engineers pioneer intelligent and adaptive driving platforms, helping to enable human comfort and safety through accident avoidance and automated navigation. Their mission is to create world-class technology and build the safest mobility in the world.

## **CHALLENGES**

To innovate quickly, TRI-AD needed to adopt DevOps practices and promote an agile development culture, bringing Toyota's principle of Kaizen (continuous improvement) to software development. To work this way, TRI-AD needed to release quickly and more frequently, and incorporate feedback rapidly. The automotive industry has long relied on waterfall development methods; TRI-AD sought DevOps solutions that would help ease the transition.

INDUSTRY
Automotive Research

- PROBLEM
  - Transition to DevOps
  - Innovate quickly through CI/CD
- RESULTS
  - Automated pipelines
  - Continuous releases
  - Virtually no downtime
- SOLUTION

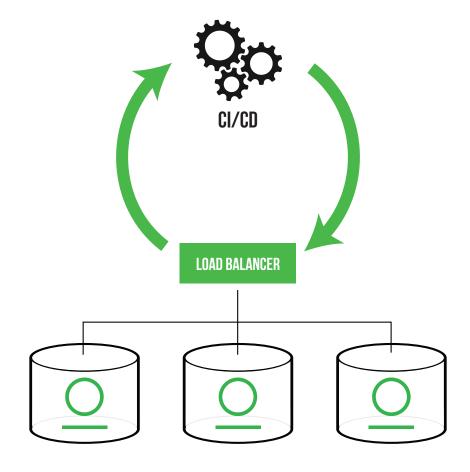
  JFrog Enterprise



## **RESULTS**

TRI-AD standardized on JFrog Artifactory as their single source of truth for all binaries and builds in their development pipeline. By integrating with CI server and other systems, TRI-AD designed and deployed an automated pipeline of infrastructure tools that produce a release within a few hours. Developers experience "virtually no downtime," aided by high availability Artifactory's stability under load.

Toyota Research Institute's infrastructure success validated the DevOps development transition needed for agility and quality. From the moment developers push code, builds automatically flow through development, staging, and production environments to release, empowering TRI-AD to achieve continuous integration and continuous delivery.



"We don't want our developers to spend their time setting up the tools they need or looking for good practices. We want to provide them with the tools and their best practices so that they have more time to focus on their development work and work more efficiently."

- Gwenn Etourneau, Senior Infrastructure Engineer, TRI-AD







