

SOLUTION BRIEF

Enterprise DevOps with Plutora

Large enterprise adoption of DevOps practices is limited to pockets of the organization or portions of the engineering functions and automation.

This leaves out a high number of manual processes around change approval, deployment, testing, release planning and coordination, and test environment management. Plutora enables DevOps adoption at enterprise scale providing the business with a control center that coordinates the development and operations by integrating into existing engineering toolchains.

Plutora in the DevOps Toolchain

Plutora integrates with engineering and operations tools in the enterprise – extending each tool’s value and better connecting it to the overall feature delivery process.

- ✓ JIRA
- ✓ Kubernetes
- ✓ Docker
- ✓ Jenkins
- ✓ Chef
- ✓ Puppet
- ✓ ServiceNow

The Problem with DevOps at Scale

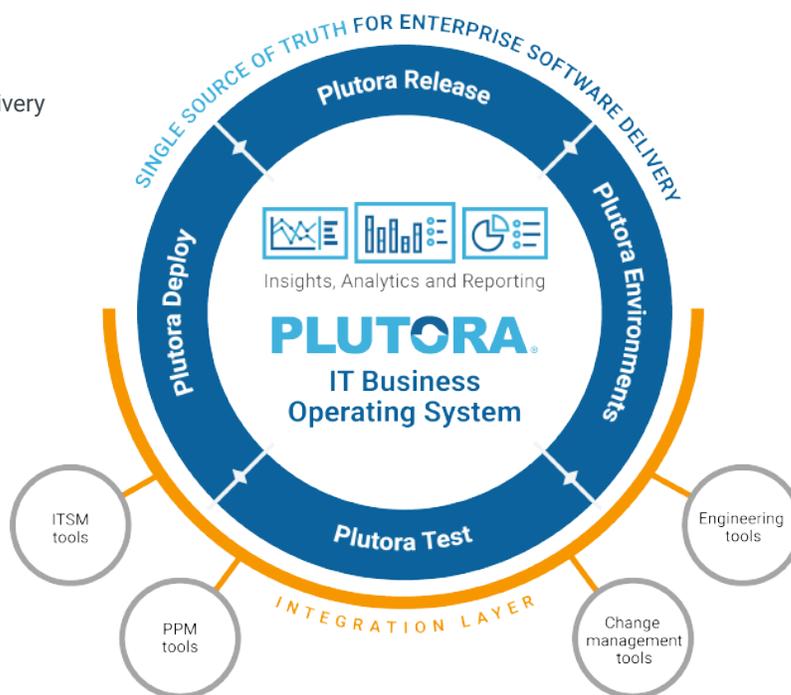
The goal of DevOps is to deliver features faster, more frequently and with higher quality by unifying both development and operations. According to a recent State of DevOps report, IT organizations have been successful in adopting these practices, but DevOps has not been adopted widely in the enterprise. Large enterprises face unique challenges. Large-scale portfolios contain applications that have been inherited via acquisition and are maintained by disparate teams and include a mix of both modern and legacy type architectures.

The enterprise has heterogeneous systems that are supported by both internal and external resources who are geographically dispersed. While internal teams can mandate a development methodology, external teams integrate code in a series of stages including integration, staging and finally production. These delivery stages create extra problems – coordinating and managing test environments at scale. Each environment instance is complex with a mix of technologies, servers, middleware, databases and communication layers. Agile methods place increasing pressure on already constrained availability of resources, their configuration, and test data. The enterprise is already stressed with a high degree of dependencies as projects must move in concert with each other to deliver value to the business. Failures carry significant potential financial, legal and customer perception risks.

DevOps at Scale with Plutora

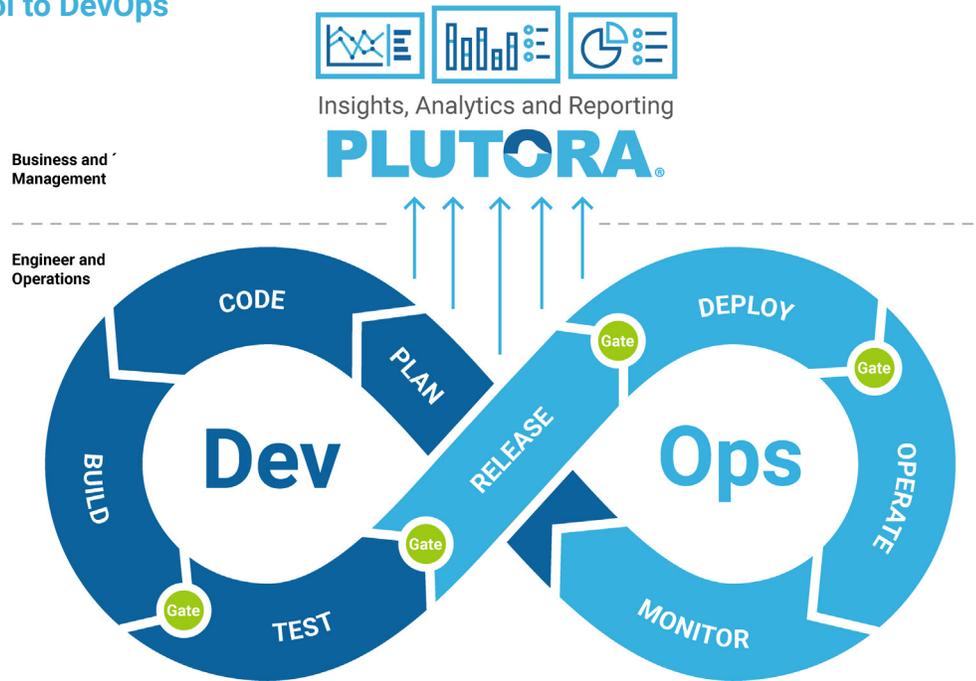
The Plutora Platform transforms the Continuous Delivery process by correlating data from existing DevOps toolchains combined with modules to manage releases, test environments, testing process and deployment activities. The orchestration of automated and manual software release pipelines provides a single view of releases and associated metrics, such as application quality.

Plutora enables DevOps at scale by making it possible to share responsibility between development and operations regardless of development methodology, technology stack, or transition services process required. Geography, vendor involvement, technology stack, heritage portfolio, on-premises vs cloud, and code ownership are made transparent by having connections to each relevant system and a robust orchestration and collaboration engine. Test environments are managed in a single location with full information regarding application impact, schedules and coordination with release pipelines. Quality information is continuously available including unit tests, automated testing and manual testing.



Adding Governance and Control to DevOps

Plutora blends the agility of DevOps with Risk Management and Governance. Each phase of the cycle includes a series of criteria-based entry and exit gates which ensure that business objectives are met prior to moving forward. Gates can be a mix of automated and manual criteria and include robust stakeholder notification. Manual release and deployment pipelines are orchestrated together with automated deployments to ensure consistency regardless of automation maturity.



Plutora in the DevOps Toolchain

Plutora integrates with engineering and operations tools in the enterprise – extending each tool's value and better connecting it to the overall feature delivery process. The list of tools below is not comprehensive, but represents a subset of the types of tools and the value added by Plutora in the integrated solution.



JIRA – User Stories

Atlassian JIRA tracks each team's requirements, user stories and non-features to be implemented by development. In the enterprise, individual teams lack perspective of the requirements related to the overall project scope and they lack complete understanding of inter-team dependencies – both time-related and functional. Any visibility provided to the business must be created manually and is out of date almost as soon as it is produced. Any cross-project rollup is less frequent and even more time-consuming.

Plutora maps a relationship between a release and user stories and augments it with quality data, systems impact matrix, and associated schedules. This provides a single view for management, development and operations. Engineering teams use that visibility for scope, architecture, and delivery timing coordination. Internal and external teams work together seamlessly under the unified system. Management gets a real-time view into the engineering process and can implement criteria gates for each stage to ensure compliance to critical success factors.



Kubernetes / Docker – Containerization



Microservices and containers such as Kubernetes and Docker offer a simplified approach to building independent services and can ensure environment consistency at each stage of the delivery process. In the enterprise, containers are just like any other application with environment, quality, deployment and feature needs. It is not uncommon for changes to legacy applications to require changes in other microservice components.

Plutora helps coordinate legacy and microservice projects together, ensuring proper quality and timing of the release. Test and staging environments with appropriate test data are scheduled for configuration for both projects. Deployment plans are orchestrated with both manual and automated steps.



JIRA – Defects

Atlassian JIRA is used to track defects and issues in the code. Each engineering team’s project includes customizations which make it difficult to roll up into a single view that spans projects. Unless manually exported and correlated, the business lacks visibility into the quality of a release train and proposed impacted systems. Release managers manually evaluate project stability and risk by mapping defects to projects, releases and systems.

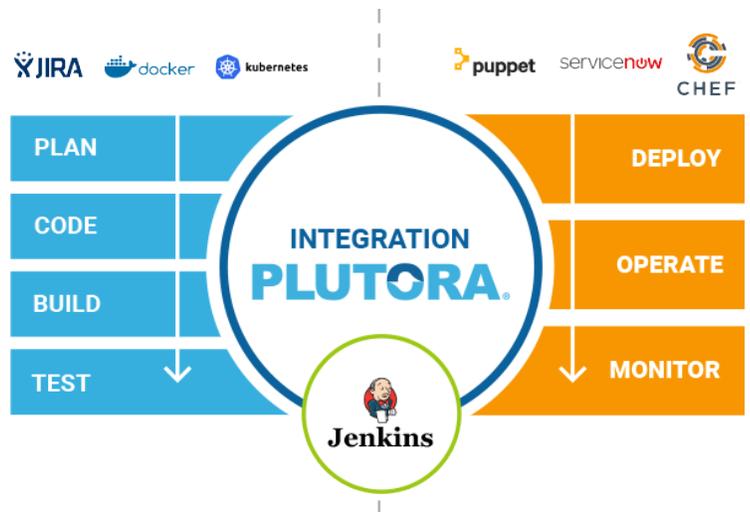
With Plutora, quality information is included by mapping it to projects, systems, and releases, providing an end-to-end view of the nature of a release. Test information is always real-time to help release teams understand the risk of upcoming changes and agility for at-risk projects.



Jenkins – Orchestration

Jenkins is the most common CI server that kicks off builds, unit tests and deployments at key events (such as check-in) or on a periodic basis. IT environments rely heavily on the automation and associated plug-ins during deployment to test and production environments. In the enterprise, regulatory and risk management often require business approval for releasing features to production. In addition, deployments often require coordinated efforts with legacy, non-automated tasks that must be performed in an exact sequence. As a development tool, usage of Jenkins is typically limited to the engineering team.

Plutora integrates with Jenkins to provide the business and management better control over the release process. Release and deployment management define deployment plans that



include both automation with Jenkins and manual steps coordinating them in the exact sequence as required. Plutora Environments also utilizes Jenkins for the build and verification of each environment instance to ensure correct configuration. Each Jenkins job’s resulting status is returned in Plutora to ensure stakeholders are up-to-date.



Puppet / Chef – Configuration Management

Infrastructure as Code (IAC) can simplify test and production environment management and deployments relegating the configuration of each environment instance into a series of scripts managed by the engineering team. While programmable infrastructure simplifies actual deployment and configuration, they lack awareness around when changes should be made. Enterprises rely on ITSM-based change requests with little advanced warning of upcoming requests.

Plutora extends the usage of IAC modules, greatly enhancing the value of Chef and Puppet in the enterprise by enabling their usage by non-engineering. Plutora provides visibility into upcoming release schedules to enable operations to prioritize systems that need to be converted to IAC, saving time in future deployments.



ServiceNow – Operations Ticketing

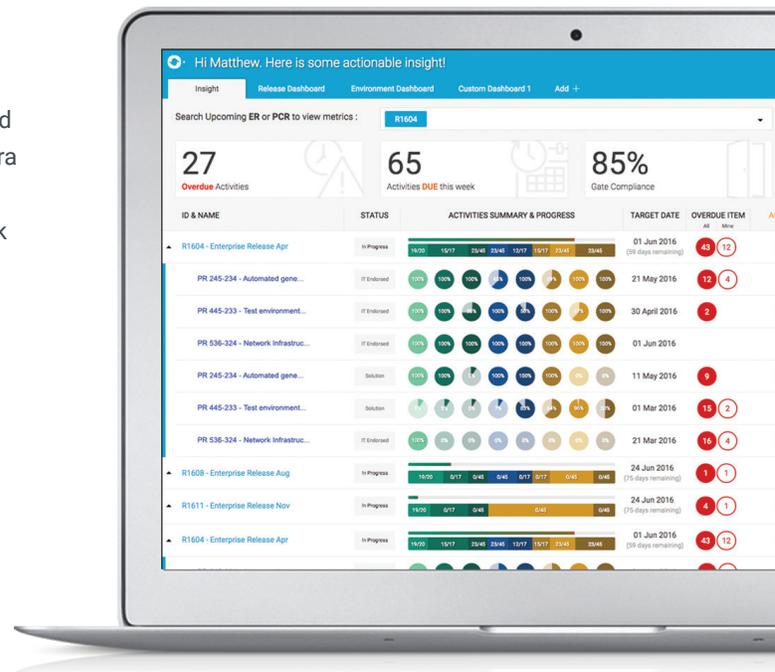
ITSM tools such as ServiceNow have deep processes which ensure consistently available production environments. In the enterprise, they are considered critical path for almost every production code delivery which limits many engineering teams’ ability accomplish the “ops” portion of DevOps. Change requests arrive late in the cycle and don’t allow operations to do much more than just react to the incoming request and lack any real, quality information.

With Plutora, release schedules are visible from inception to production with deep integrations for change requests and deployment plans. This allows engineering involvement in deployment processes orchestrated by the release and operations teams. Plutora deployment plans orchestrate with both internal ITSM tools and external teams for coordinated delivery.

Conclusion

Without Plutora in the enterprise, DevOps is functional only in selected applications or release pipelines of the organization. Using the Plutora Platform, Development, Operations, Product Planning, and Change Management are maintained in alignment with the business and work together in a more efficient fashion that is not possible otherwise. Manual coordination and processes are replaced with automation and collaboration. The business can get complete visibility with real insights into all aspects of the release process.

One critical feature, Plutora Insights, is available out-of-the-box as a drill-through Release and Test dashboard. Plutora Insights gives a single view of Releases and Quality across key health indicators (for instance, Test Execution data) for stakeholders such as CIOs, PMs, release and test managers, VPs of apps, IT Ops, and business stakeholders.



Learn more: www.plutora.com
Email: contact@plutora.com

Plutora is the market leader in Continuous Delivery Management (CDM) for Enterprise IT. The Plutora Platform combines the strength of its release, test environment, and test management solutions with the orchestration of automated and manual software release pipelines to provide a single view of releases and associated metrics, such as application quality. Plutora benefits organizations by providing predictability in the Continuous Delivery process, improving speed and frequency of releases, better aligning IT software development and operations with business strategy.