

A Comprehensive Overview of Atlassian Forge

Introduction

Atlassian Forge represents a major evolution in cloud-native development platforms tailored for customizing and extending Atlassian's widely used tools like Jira, Confluence, Bitbucket and Trello. Forge provides a sophisticated technology stack and managed services to help developers rapidly build, deploy and manage advanced apps and add-ons aligned to Atlassian's products.

This whitepaper provides an in-depth examination of Atlassian Forge. We will explore its components for accelerating development workflows, key capabilities for boosting productivity, use cases showing its extensibility, and the multifaceted benefits it offers both builders and Atlassian customers.

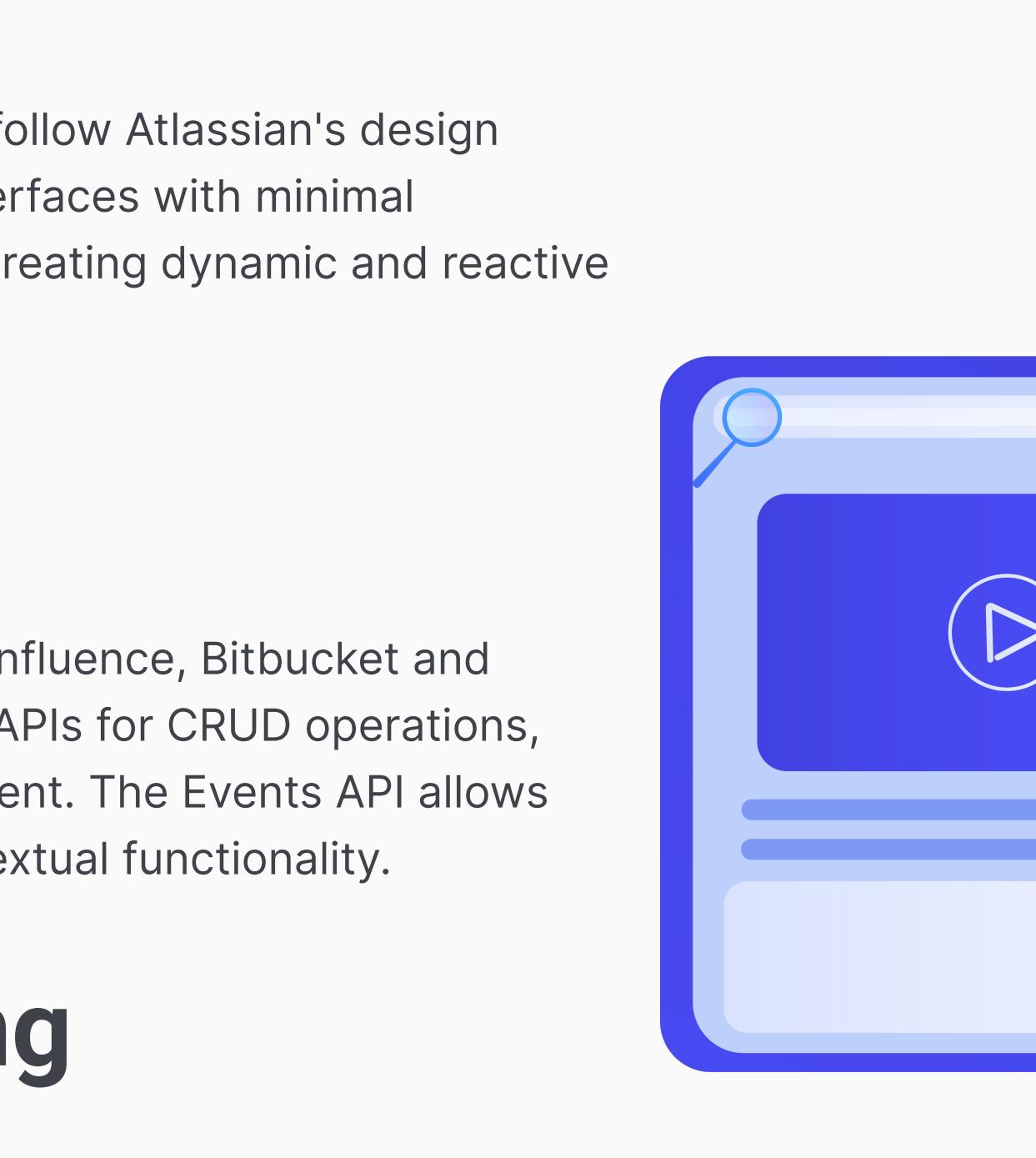
Core Components of Atlassian Forge

Atlassian Forge represents the next generation of Atlassian's platforms for building an ecosystem of integrated and secure apps across its product portfolio. Forge brings together and enhances capabilities of previous platforms like Atlassian Connect into an integrated, full-stack solution spanning the end-to-end app development lifecycle.

Forge provides four primary components, each aimed at streamlining different aspects of building apps:

- Forge UI - A frontend framework containing reusable UI components, templates and themes to accelerate crafting intuitive user interfaces optimized for Atlassian products.
- Forge Data - Offers a comprehensive suite of APIs to securely access, manage and share data between Atlassian tools to power deep integrations.
- Forge Deploy - Provides services to deploy and host apps flexibly on Atlassian Cloud or privately on self-managed infrastructure. Incorporates CI/CD pipelines.
- Forge Marketplace - Atlassian's marketplace for distributing apps to customers. Handles licensing, payments and updates.

Together these components enable developers to build, host, distribute and manage apps across Atlassian's product ecosystem seamlessly.



Key Capabilities of Atlassian Forge

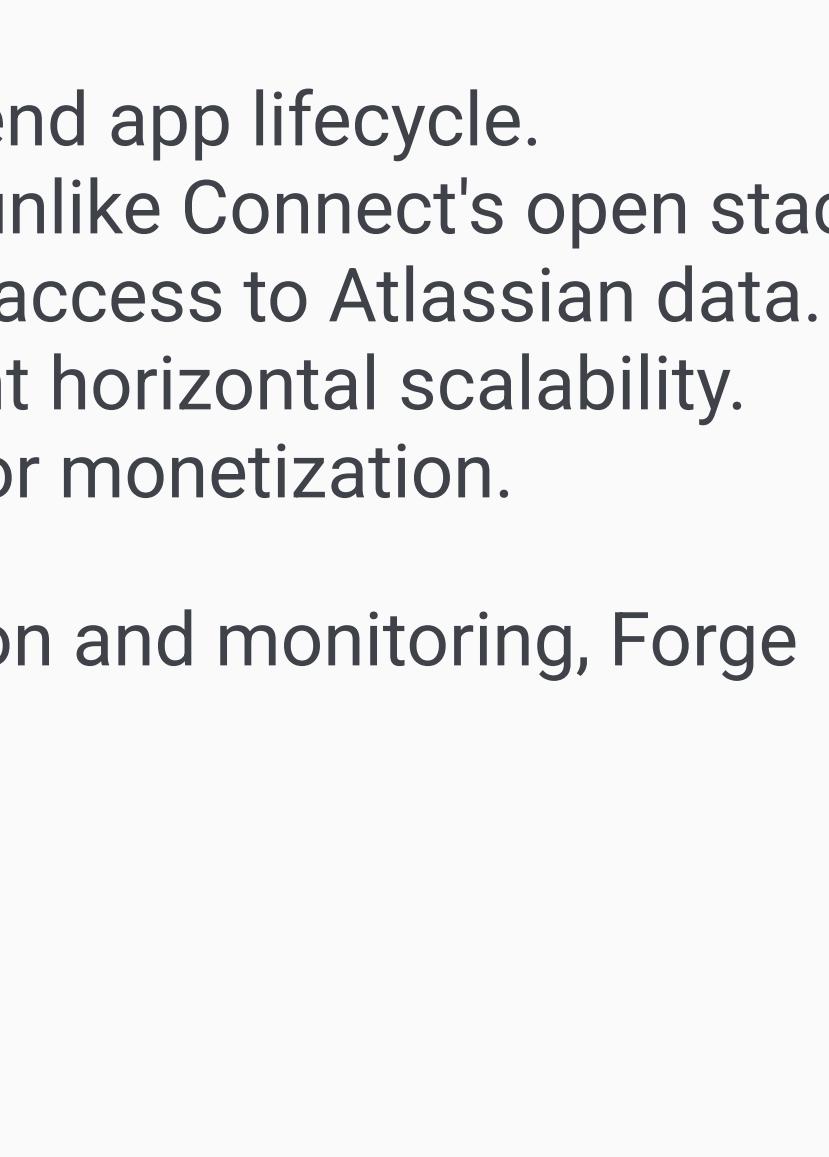
Forge offers an expansive range of capabilities across the app development lifecycle to accelerate building robust apps and extensions customized for Atlassian tools:

Sophisticated UI Development

Forge UI provides pre-built UI components, templates and themes that follow Atlassian's design guidelines to help developers quickly craft polished, consistent user interfaces with minimal repetitive coding. Forge UI supports popular frameworks like React for creating dynamic and reactive UIs.

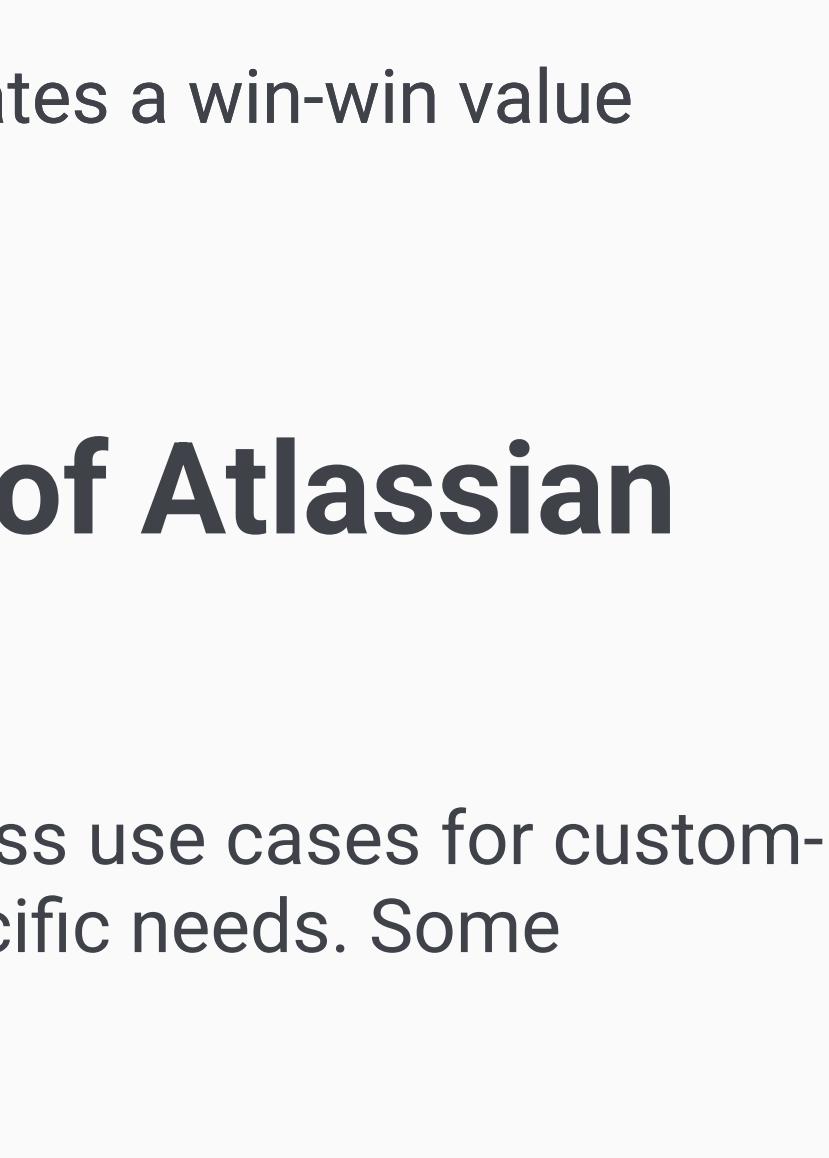
Extensive API Access

Forge Data exposes comprehensive APIs to access data across Jira, Confluence, Bitbucket and Trello to power deep integrations between them. It offers management APIs for CRUD operations, enabling apps to programmatically create, read, update and delete content. The Events API allows apps to react to triggers and state changes in real-time to provide contextual functionality.



Flexible Deployment and Hosting

Forge enables hosting apps on Atlassian Cloud for fully managed infrastructure or privately on self-managed environments for more control. Apps can leverage containers and microservices for modular architectures that scale seamlessly. Forge provides enterprise-grade hosting plans tailored for staging, testing and production scenarios.

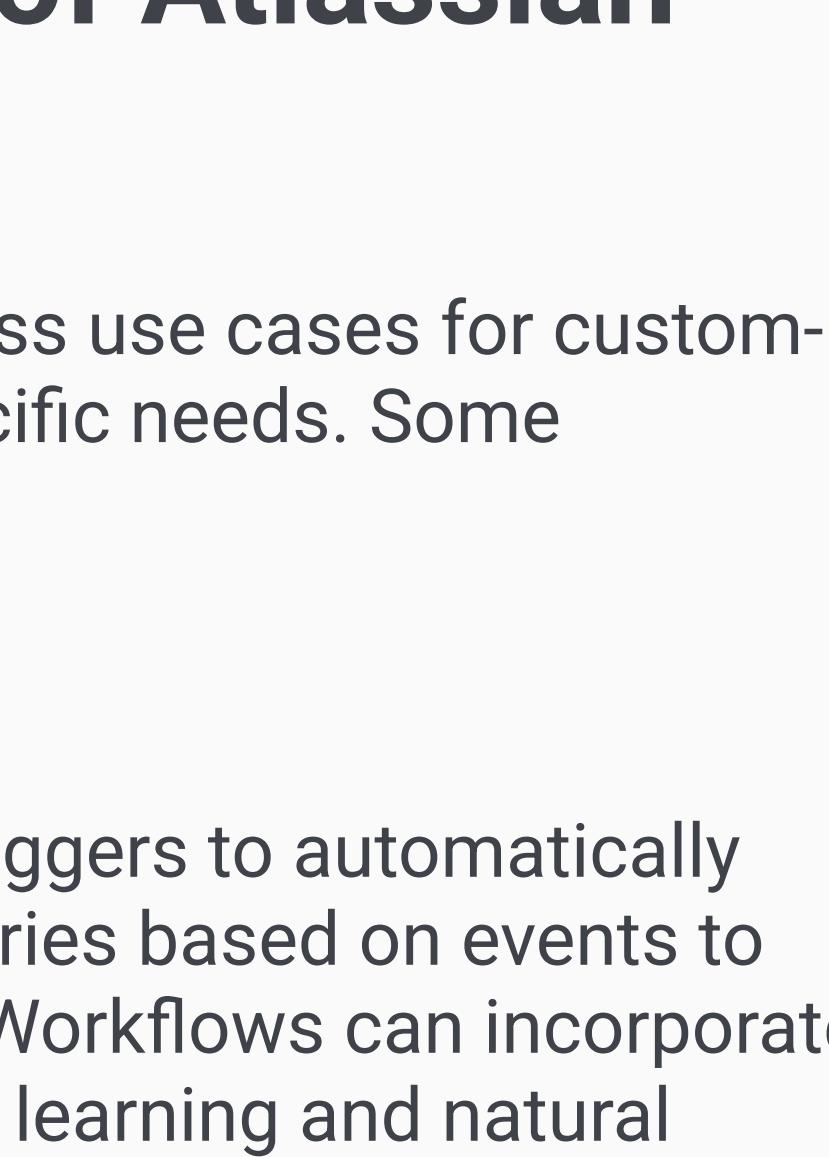


Automated CI/CD Pipelines

Forge incorporates continuous integration and continuous deployment (CI/CD) pipelines to automate builds, testing, containerization and release cycles. It integrates with Git tools like Bitbucket to enable triggering deployments on every code commit for rapid iterations. Forge allows configuring automatic or manual approvals before releasing updates.

Turnkey Marketplace Distribution

Forge Marketplace streamlines publishing both free and paid apps for distribution to Atlassian's vast customer base. For paid apps, it handles licensing, entitlements, payments, renewals and centralized billing. Forge enables pushing updates to distributed apps manually or automatically based on release workflows.



Advanced Monitoring and Analytics

Forge provides extensive monitoring capabilities to track app performance in real-time combined with logs and analytics to identify issues, bottlenecks and guide optimization. Users can visualize metrics in dashboards and integrate with other tools.

Comparing Forge to Earlier Atlassian Platforms

Atlassian Forge represents a major evolution beyond earlier developer platforms like Atlassian Connect:

- Managed Hosting - Forge apps are hosted by Atlassian Cloud unlike self-hosted Connect apps.
- Streamlined Experience - Forge emphasizes simplified workflows for efficiency versus Connect's complexity.
- Integrated DevOps - Forge incorporates CI/CD, repos, testing for end-to-end app lifecycle.
- Modern Tech Stack - Forge only supports Node.js based microservices unlike Connect's open stack.
- Expansive APIs - Forge provides extensive REST APIs for programmatic access to Atlassian data.
- Enterprise Scalability - Forge's cloud-native architecture provides inherent horizontal scalability.
- Turnkey Commercialization - Forge Marketplace simplifies distribution for monetization.

By consolidating capabilities spanning development, deployment, distribution and monitoring, Forge provides an integrated cloud platform tailored for Atlassian apps.

Benefits of The Atlassian Forge Platform

Atlassian Forge delivers multifaceted advantages:

For developers, Forge drives productivity by cutting development timelines through its robust tooling and automation. Reusable components accelerate UI creation while integrated CI/CD pipelines optimize release processes. Forge also reduces maintenance overhead by handling hosting, scaling and updates. Access to Atlassian's massive customer base through Marketplace unlocks monetization potential.

For Atlassian customers, Forge enables deeper customization of workflows aligned to their needs on Atlassian tools. Apps built on Forge can integrate Atlassian products with countless external systems and expand capabilities with new features. Forge also allows centralized management and security controls. The underlying cloud infrastructure provides the foundation for growth.

By empowering developers while also benefiting Atlassian users, Forge creates a win-win value proposition for all stakeholders.

Real-World Use Cases of Atlassian Forge

Atlassian Forge supports virtually endless use cases for custom-tailoring Atlassian tools to address specific needs. Some examples include:

Workflow Automation:

Forge apps can incorporate rules and triggers to automatically update issues, pages and code repositories based on events to remove manual steps from processes. Workflows can incorporate sophisticated logic using bots, machine learning and natural language processing.

Advanced Reporting and Analytics:

Forge enables transforming Atlassian data into customizable reports, metrics dashboards and predictive models for business insights. App can ingest activity logs for analytics on productivity, cycle times and bottlenecks.

Enhanced Collaboration:

Forge apps can bridge Atlassian tools with communication channels like Slack, Microsoft Teams and WhatsApp to centralize conversations and seamlessly collaborate across tools.

Mobile Access:

Forge can mobilize Atlassian data and actions by building cross-platform companion apps on iOS and Android for productivity on the go with offline access capabilities.

Legacy Integration:

Forge apps can build adapters and connectors to ingest and normalize data from legacy systems into Atlassian tools while maintaining bidirectional sync.

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The expansive capabilities of Atlassian Forge empower developers to build apps that cater to diverse custom needs limited only by imagination. Forge apps thereby create tremendous value for organizations by solving specific challenges.

Conclusion

Atlassian Forge represents a generational leap in cloud-native development platforms tailored for the Atlassian ecosystem. By combining technologies for accelerated coding, automated deployments, turnkey distribution and robust monitoring, Forge enables frictionless development of impactful apps and extensions.

The promise of Forge is increased developer productivity and simplicity while unlocking Atlassian's products to be customized for any use case. For Atlassian customers, Forge brings the collective expertise of a vast developer community to enhance their tools.

Underpinned by enterprise-grade architecture designed for scale, Forge represents the future of customizing Atlassian experiences while retaining security and governance. By democratizing development, Forge helps realize the full potential of Atlassian tools.

