

ATLASSIAN + GINKGO BIOWORKS

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DAVE TREFF

Head of Digital Operations



**GINKGO BIOWORKS**  
THE ORGANISM COMPANY

# Ginkgo Bioworks scales to save the planet with Atlassian Cloud

Ginkgo Bioworks aims to triple output and halve costs each year. Here's how migrating to Atlassian Cloud for storage, speed, and scalability helps them do it.



INDUSTRY  
Life Sciences

LOCATION  
Headquarters in Boston, MA

NUMBER OF USERS  
1,200

SOLUTION PARTNER  
**Praecipio Consulting**

ATLASSIAN PRODUCTS & APPS



**Confluence**  
Document collaboration



**Atlassian Access**  
Security and control for cloud



**Jira Software**  
Project and issue tracking



**Opsgenie**  
Modern incident response



**Jira Service Management**  
High-velocity ITSM



**Comala Document Management**  
Custom approval workflows

DNA programming. Slime molds. Biosynthetic gene clusters. Not the typical terms you'd find in a Jira Software or Confluence instance. But the team at Ginkgo Bioworks discusses complex bioengineering topics over their morning coffee.

Ginkgo was founded in 2008 with a simple question in mind: "What if we could grow anything?" Their work in synthetic biology centers around engineering and programming DNA to create alternatives for chemicals and organisms that are in high demand or low supply, from **supporting Moderna in creating the raw materials for their COVID-19 vaccine**, to **developing resource substitutions that could save endangered species and plants**. "I tell people I work for the coolest company on the planet," says Head of Digital Operations Dave Treff. "Ginkgo Bioworks is a mission-driven company. We exist because we want to save the world from climate change. That's why people like working here."

Engineering new organisms to meet such lofty goals requires the latest and greatest technology in every aspect of their business. Ginkgo Bioworks had been leveraging on-premise deployments of Atlassian products to power their work for years before accelerating growth sparked a need for more storage, speed, and scalability. As a forward-thinking, lean-operating company that prioritizes cloud solutions, a migration to Atlassian Cloud Premium was a clear choice.

By moving to the cloud with support from Atlassian and Solution Partner **Praecipio Consulting**, Ginkgo Bioworks has offloaded maintenance, greatly improved data accuracy and visibility for better decision making, and unlocked

new features that are helping drive their exponential growth. With more time, energy, and budget to dedicate to their core business, the team is on track to more than triple the output they're doing today, cut costs by over 50%, and perhaps even bring slime molds into the mainstream.

## **On a mission to migrate for storage, speed, and service**

Over the years, Atlassian has become an indispensable part of daily life for employees across Ginkgo Bioworks. Confluence has served as the company-wide knowledge base for basic instructions and policies, scientific lab notes and documentation, and financial recordkeeping (integrated with the [Comala Document Management](#) plugin for compliance). Software developers and synthetic biologists have also used Jira Software to manage and track their work. Realizing that development and operations groups were using two different tools for service management, the team sought to consolidate around a single solution by replacing their existing ticketing system and unruly spreadsheets with Jira Service Management. Now the product is being scaled throughout the company as the primary way to invoke service from other teams.

“Within days of implementing Jira Service Management, we had other teams coming to us and saying, ‘Hey, I need to manage requests the same way you do,’” says Bruce Kozuma, Senior Group Product Manager. “We built it, and they were there immediately. Teams from environmental, health, and safety (EHS); lab operations; automation teams; and even business development – all wanting to use Jira Service Management.”

As more and more departments started using Atlassian tools, Ginkgo Bioworks started encountering several common challenges of on-premise deployments: storage limits, maintenance commitments, and operational headaches. “When Atlassian decided that they were going to focus on the cloud and took away the storage limit per account, I said, ‘Get us off servers now! We can’t scale like that.’” Dave recalls. “Everyone agreed we needed to get to the cloud. We run very lean, and every other tool we use is cloud-based. It was a natural decision.”

In addition to achieving quick consensus on migrating, the team was also aligned around their need for a Solution Partner. “We knew we needed a really

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good, reliable partner who knows their stuff and could help us move to the cloud. We went with Praecipio Consulting because they were a top-tier Solution Partner,” Dave says.

Together, Praecipio Consulting and Ginkgo Bioworks embarked on a three-month migration process that would alleviate their immediate challenges and spark long-lasting improvements to transform the service they provide to each other and the world.

### **Cleanup and collaboration set the stage for a smooth transition**

Praecipio Consulting’s first order of business was to lay out a clear plan for each step, from preparation to migration and post-production support. Cleanup was their first big priority. Dave says, “Our Jira and Confluence were messy because there was nobody curating them. We couldn’t find anything, there were holes in the data, and information was scattered across Google Docs, too. We asked Praecipio Consulting to help organize everything.” Praecipio Consulting Partner Christopher Pepe expected Ginkgo Bioworks would want to transfer all of their data to the cloud, so he was pleasantly surprised that they were so open to cleaning up first. “There’s a trend of getting to the cloud faster, rather than needing to keep data in the same resolution as it was on-prem,” he says.

Praecipio Consulting began by evaluating Ginkgo Bioworks’s on-premise instances and providing suggestions for restructuring so that users could find information faster and more easily post-migration. Then, they upgraded Jira

Software and Confluence, evaluated which apps could and should be carried over to the cloud, and updated links to avoid errors. Along the way, everyone collaborated to troubleshoot any issues that arose. “We worked with Atlassian to handle some of the backend transition. They provided really great service, like poking into the database, so there were no weird technical issues,” Bruce says. He also believes Praecipio Consulting was critical to their migration success. “The overall migration experience was as smooth as it could be due to the efforts of Praecipio Consulting,” he explains. “They’re consistently delivering what we want, checking in on us, and giving us their A team. I can throw them at anyone and know they will be professional, thorough, and knowledgeable; that they’re going to follow a very intelligent process; and that we can trust that they’re giving us the best information.”

With trusted partners and a strategic approach, Ginkgo Bioworks felt confident they had all the ingredients they needed for a smooth migration.

### **“Usage exploded” as employees discover new features, integrations, and automations**

As the team made the official transition to Atlassian Cloud a few months later, Dave and Bruce’s teams breathed a sigh of relief. “From a user’s perspective, it was seamless and uneventful. They signed in, and everything was the same, but better,” Dave says.

Once Praecipio Consulting and Ginkgo Bioworks confirmed the migration was successfully completed, they began integrating new tools, features, and automations for efficiency, security, and visibility. “There’s no longer this friction of ‘I can’t see that ticket because it’s in a different system entirely.’ For example, we got a report of some unhappy customers in one system. We were able to do the research and go from one ticket to another ticket and another team because they were linked in the same system,” Bruce explains.

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Head of Digital Operations

Post-migration, Dave says “usage exploded across the company,” uncovering a need for enhanced security and streamlined permissions management. By integrating Atlassian Access and Okta, Ginkgo Bioworks now has single sign-on and role-based administration, which enables IT to quickly grant employees access to exactly what they need by assigning them to a group, rather than providing access person by person or tool by tool. “People want access immediately, and getting them started quickly is super important,” Dave says. “We reconfigure people and teams regularly, so we need to keep data segregated but available. Role-based permissions via one central location make it easy.”

Ease and speed are common themes for Ginkgo Bioworks, so they have also been working with Praecipio Consulting to leverage more tools and features within Jira Service Management. “Jira Service Management Premium allows us to use Insight for asset management and more tightly integrate Opsgenie [for major incident management], so we have everyone’s schedule and shifts. That has been huge,” Bruce says. He and Dave point to Ginkgo Bioworks’s extensive lab equipment inventory as one area where Jira Service Management will make a huge impact. The asset management capabilities will help IT keep track of well over 700 pieces of equipment, which are frequently moved from lab to lab. When one goes down, the major incident response features alert the on-call employee for maintenance, which not only speeds up resolution, but also enables lean staffing. Bruce says, “Insight is going to be a linchpin of our IT asset management and change management strategy.”

## Triple the output, half the costs, exponential possibilities

Access to the latest and greatest cloud features is fueling Ginkgo Bioworks’s growth and innovation. The first year post-migration was all about foundational capabilities. The second year will be focused on data-based decision-making and compliance. The team has a long wish list of optimizations on the horizon, including expanding Jira Service Management across the company, making it easier to find data in Slack,

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analyzing ticket data to identify training needs and profitability trends, and enhancing search in Confluence – all of which will have ripple effects throughout the organization. “This is well outside of just ticket handling. We’re working with Praecipio Consulting to set up projects that are really transformational for the business,” Bruce says.

These impacts are made possible by Ginkgo Bioworks’s partnership with Praecipio Consulting and Atlassian. “Since we don’t have to worry about hardware or operating systems, we can focus on governance and procedures, Sarbanes-Oxley [financial recordkeeping and reporting], quality assurance, auditability, compliance, and other recommendations, so Ginkgo Bioworks can stay ahead,” says Bruce.

Staying ahead of their past performance and industry peers is exactly what Ginkgo Bioworks plans to do. They have big dreams, and with a solid cloud platform and partner, the team is well on their way to achieving them. “We’ve been tripling our output and trying to cut costs per strain by half,” Dave explains. “That means in three years, we would theoretically need 27 times the network and storage we have today. But by moving to the cloud and converging around Atlassian products for service management, we can scale non-linearly, have the metrics to support making the investments we need, and drive profitability.”

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