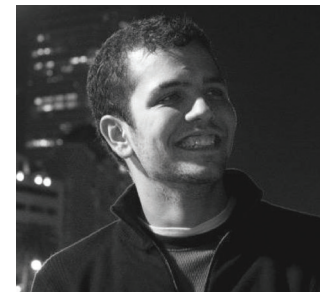Iron.io

SHOOTS & SCORES: 12 MILLION

DELIVERING MASSIVE SPORTS SCORES & NEWS

b/r bleacher report

Bleacher Report (B/R) is one of the leading sports news sources in the country. Second only to ESPN, Bleacher Report is a growing force for team-specific sports content, commentary, and real-time event coverage. B/R's goal is to deliver a comprehensive experience for sports fans and foster engagement with favorite teams and topics across all major sports. The content that B/R delivers includes curated content originating from featured columnists and external sources, all pushed to fans in real-time. They provide timely and relevant news to sports fans keeping them informed and ahead of the game.

To make this experience possible, Bleacher Report delivers real-time sports scores, news, and team updates via the Team Stream mobile app. With over 12 million downloads of the Team Stream app, users get a personalized fan experience wherever they are. Sports fans get all the latest news and alerts, all in one place on their mobile devices. In order for B/R to deliver a high volume of alerts at peak events, they needed a solution that would easily scale, and remain available in the event of a major traffic spike.

ABOUT BLEACHER REPORT

Bleacher Report, a division of Turner Sports, is the leading digital destination for team-specific sports content and real-time event coverage, and is one of the fastest-growing digital properties in the U.S.

WHAT IS THE TEAM STREAM APP?

Bleacher Report's Team Stream™ mobile app is a top-rated, industry-leading tablet and smartphone app. It provides mobile users with Bleacher Report daily sport- and team-specific email newsletters.

BLEACHER REPORT STATS

- Over 12 million downloads
- Peak of 3000 concurrent workers on dedicated cloud-platform
- Each worker can distribute thousands of push notifications to Team Stream app users on demand

"Notifications are critical to Bleacher Report. With over 12 million downloads, users look to Team Stream for breaking news alerts about their favorite teams and players. Speed of delivery is a constant focus for us. No longer worrying about infrastructure allows us to focus on delivering new features and optimizing existing ones."

Eddie Dombrowski, Senior Software Engineer, Bleacher Report

BEHIND THE SCENES AT BLEACHER REPORT

The Bleacher Report ops team has long held 99.9% uptime as a primary goal. In order to achieve this goal, changes to the infrastructure had to be made. At an early stage in their re-factoring process, the ops team realized they were not only exceeding the limits of an infrastructure of 60 concurrent servers, they were also consumed by the complexity and la-

bor-intensive monitoring they needed to do for their infrastructure. B/R had reached a point in their rapid growth where they needed to implement an asynchronous task processing system – one that was cloud-based, reliable, and could scale with the volume of notifications they were sending at any given time.

DEPLOYING IRONWORKER FOR FLEXIBILITY AND SCALE

"Because our system was already worker based, it was easy to deploy IronWorker. We had a functioning prototype copy of our existing system in less than a day. A week later, we were able to migrate our code base to use the Iron.io platform. And, a week after that, we shut down our deprecated infrastructure and never looked back," recalls Dombrowski. B/R's initial test was to send some notifications to users of their mobile app via scheduled IronWorker events. "Our push notification system is now on-demand and highly concurrent," said Dombrowski. "Before re-factoring our existing app code (which took less than a week) and moving to Iron.io, we managed our own cluster of worker instances. When high throughput was needed we often found ourselves waiting for new instances to spin up."
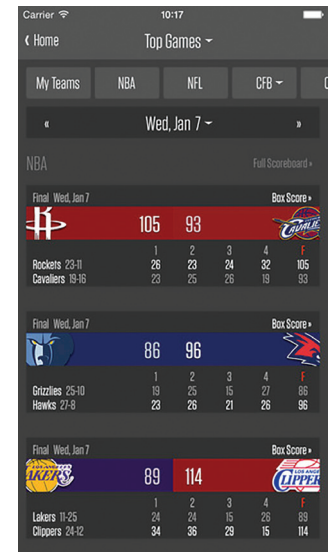
BEFORE IRON.IO

Bleacher Report had relied on a variety of self-hosted DIY open-source components to stream the latest information about fans' favorite sports teams and events. During major events, such as the NFL Draft, World Series, and NBA Finals, the pace of delivering up-to-the-minute notifications would often completely overwhelm the system and create huge backlogs in their workload processing. B/R learned the hard way that delivering massive volumes of notifications at scale could negatively impact response times and overall uptime of the system. This kind of spike in messaging traffic combined with the potential for reduced performance and reliability was simply unacceptable.
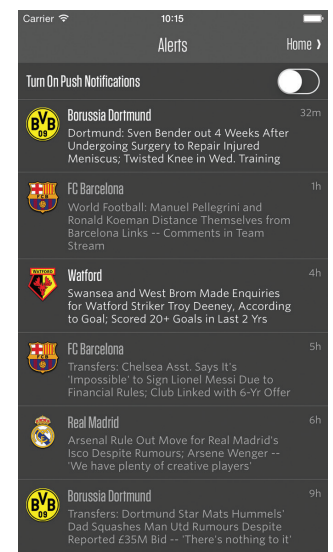
NET RESULTS

After B/R completed their migration to the Iron.io platform, they quickly realized strong measurable benefits in both alert times and cost savings. The combination of a reliable, scalable cloud infrastructure plus the power of asynchronous task-processing services from IronWorker, enabled B/R to deliver high volume messages at scale, offload critical tasks, free up valuable resources to maintain a more flexible environment, and save time and money. Since starting with IronWork, B/R has grown to a peak of 3000 concurrent workers on dedicated cloud-server resources. Non-peak usage has B/R simply spooling up 500 IronWorkers to send an update or alert to their millions of users – as each worker can distribute thousands of push notifications to mobile app users on demand.

"We noticed a dramatic performance improvement when we migrated to Iron.io. We enjoyed all the benefits of removing a whole stack of infrastructure, allowing our teams to focus on features while also saving money," says Dombrowski. "One not so obvious, yet huge win for us is our ability to scale painlessly. Before Iron.io, we were constantly triaging production issues. After Iron.io (a year later that same month), we delivered billions of push notifications with ease." The Iron.io mission is to reduce the overhead of managing infrastructure and administration of developer tools, while delivering a turn-key solution for highly scalable event-driven applications.

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