

MILLIONS OF EVENTS PROCESSED

MILLIONS OF BOTTLES OF BEER IN THE MOBILE APP

Greg Avola and Tim Mather met over Twitter six years ago when Greg was looking for a collaborator for a Twitter mobile app. They ended up working together on the app and then proceeded to take on several other projects as a designer/developer combination. In early summer of 2010, Tim came up with the idea for a check-in system for beer drinkers. The idea mapped well with Greg's interest in beer and so they quickly created a mobile app and got to market by the fall. Their creation – Untappd, a mobile check-in app for beer lovers.

Greg and Tim created one of the largest open-source databases on beers in the world. It's moderated by over 40 volunteers who help clean up information and de-dup entries. They offer free API access for developers and have the ultimate goal of making it the most widely used libraries about beer. What's even more impressive about Untappd is that it's just a two-person company – a designer and a developer, both of whom have other jobs concurrent with their Untappd work.



"For a small development team and as someone who wants to enjoy their Friday and Saturday nights, I like that I don't have to worry about whether to scale more servers. It's done automatically by Iron.io, which is key for us and obviously why we love it."

Greg Avola, Untappd Co-founder, CTO, and Lead Developer

WHAT IS UNTAPPD?

Untappd, a mobile check-in app for beer lovers, lets users record their beer selections, share their likes with friends, win rewards, get recommendations, and participate in a shared passion of beer with others around the world.

HOW THE UNTAPPD APP WORKS?

Users check-in at locations and check-in on the beers they're drinking. For each check-in, they become eligible to win badges and receive promotions. They also receive real-time recommendations for beers based on their location.

UNTAPPD STATS

- Over 1 million registered users
- Over 300,000 check-ins each weekend
- Processed over 50 million events
- Hundreds of partners
- Limitless opportunity...

BEHIND THE SCENES OF UNTAPPD APP

The app framework for Untappd is that of a mobile client, a set of app servers connected to databases, and a large async/background processing component. They make use of a LAMP

CASE STUDY: UNTAPPD

stack with PHP serving as their primary language. They use MySQL as their primary database for transactions, MongoDB for their recommendation engine and activity feeds, Redis to store all the counts for beer/user/brewery/venue, and Iron.io for their background processing and as their mobile compute engine. When users check into Untappd, there are a number of transactional events that take place. The user account gets updated and the check-in gets posted to Twitter, Facebook, and/or FourSquare. If a photo is uploaded, it gets processed. Check-in parameters are filtered for location and venue and then piped it into their MongoDB clusters that power their local recommendation capability. All in all, there can be up to 10 different events taking place for each location or beer check-in.

BEFORE IRON.IO

Initially, the check-in processes were being handled as a large batch job each night. Because actions were being posted well after the actual event, the check-in process wasn't sufficiently responsive. The Untappd team then moved these actions to the check-in response loop. That lasted for a little while as it resulted in a more responsive check-in, but quickly showed signs of strain. On heavy nights, the Untappd main app servers would start to melt because they were being used to process all the actions for each check-in, in addition to serving pages and providing query responses.

This tightly coupled serial approach resulted in users having to wait for each process to start and finish in sequence. The delayed response times had noticeable impacts on engagement. It was taking much longer to check-in as the app wouldn't respond for up to many seconds at a time. Users were getting frustrated, so they were not checking in for the second beer or the third.

AFTER IRON.IO

To make their application more responsive and scalable, Untappd move their event processing to Iron.io as a combination of IronMQ and IronWorker. Now, each check-in event is sent to a queue within IronMQ and then routed to IronWorker. The processing runs outside the user response loop, which speeds up check-ins as well as provides the ability to handle any and all spikes in traffic.

With Iron.io, Untappd has been able to reduce the average check-in time from over 7 seconds to 500ms. They've also eliminated the need to manage infrastructure for this part of their app and created an almost unlimited ability to scale their processing.

NET RESULTS

The combination of IronMQ and IronWorker has saved Untappd hundreds of hours of development time and greatly increased their ability to release new features and build new capabilities. It has also given them a very reliable and scalable processing framework. Untappd just pushes events to IronMQ and the Iron.io platform takes care of everything else. The Untappd team can concentrate on building their app and serving their customers, plus they get to relax on even their busiest nights.



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