ObjectRocket®
a rackspace. company

Untappd scales rapidly while staying lean with ObjectRocket as an extension of their team

UNTAPPD
DRINK SOCIALLY

Untappd, a social network for beer lovers, gives millions of beer aficionados a new way to explore and share the world of beer with friends. Beer drinkers can find out what and where their friends are drinking, review the beers they've tried, and get beer recommendations.

With 5.2 million users and 580+ million check-ins to date, Untappd generates and processes a lot of data.

Their primary data structure is a MySQL database, which they supplement with MongoDB, Redis, and Elasticsearch based on the strengths of each as they apply to specific use cases. They don't see any single database as the sole solution for all their needs; instead, they prefer to leverage services from multiple solutions as needed to keep the user experience fast, efficient, and enjoyable.

> **We use MySQL databases for primary data store and then we supplement with MongoDB, Redis, and Elasticsearch for different pieces of our application. People often ask me why we don't just move all the way to Mongo or move all the way to Redis. The simple answer is that you don't have to put all your eggs in one basket. Use what's going to work best for you.**

Greg Avola
Founder & CTO, Untappd

AT A GLANCE

Customer's Business:
Untappd is a social network for beer lovers to rate, review, and track their favorite beers with friends. Beer enthusiasts can find out what and where their friends are drinking, review beers, and get recommendations. Vendors add venue information and current beer menus to make it even easier to explore the world of beer.

Challenge:
Untappd's small team had difficulty scaling with the application's enormous growth. They needed a partner that offered a complete solution to manage instances of MongoDB, Redis, and Elasticsearch to keep the application's response time fast and accurate for an optimal user experience that keeps users engaged.

Solutions:
• ObjectRocket for MongoDB®
• ObjectRocket for Redis®
• ObjectRocket for Elasticsearch® with Kibana

Outcome:
Untappd has been able to scale rapidly and remove limits on users' social interactions—without adding headcount—by making ObjectRocket an extension of their team.

ObjectRocket®

The right database for the job: How Untappd uses database-as-a-service

MongoDB

Untapped uses MongoDB for any geo-centric queries because it runs faster at a lower cost than anything else for that purpose. For example, they provide trending locations, with specific beers indexed by latitude and longitude so users can find where their favorite beer is being served or learn where to get new brews they'd like to try. They also use MongoDB to make recommendations, which are limited by local availability. The app will not recommend a beer that is only available in the northeastern United States while you are visiting the west coast.

Redis

They added Redis for its strength as an in-memory data store, which made it the best solution to use as a counter. So on a beer page, users can see the number of check-ins there have been for that particular beer, how many monthly check-ins, how many check-ins by unique users, and so on. Those counts are all stored in Redis, so when a user checks in, the app runs a background job that generates those values for each month and pools the data.

Elasticsearch

They switched some tasks, including the application's main social activity feed and analytics, to Elasticsearch because it was better suited for them than MongoDB. But the team did see a great deal of potential for other value Elasticsearch can provide to Untappd—particularly Untappd for Business. For example, regional sales teams can use Elasticsearch to look up how many app users are located in a given area, which offers rich possibilities for targeted local advertising. That can be a heavy query on a database, but Elasticsearch with Kibana makes it fast and easy.

By applying the right tools for the right purposes and using (and sharing) as much open source technology as possible, **Untappd has been able to scale seamlessly** while adding both users and functionality.

The challenge: Needing to scale rapidly without adding staff

What's extraordinary about Untappd is that it was founded and run by a team of just two people: Tim Mather and Greg Avola. The two shared a love of beer and technology, so they designed and built their social drinking network application on a part-time basis while they kept their day jobs for the first several years. Perhaps even more extraordinary is the fact that, eight years and millions of users later, Mather and Avola are still the core team behind Untappd. Though they now have a team of engineers working with them, and it's not just the two of them any longer, it remains a lean operation by design.

At times, Untappd's small team had difficulty scaling with the network's enormous growth. They needed **a complete solution to manage instances of MongoDB, Redis, and Elasticsearch to keep the application's response time fast and smooth** for an optimal user experience that would keep users coming back to the app over and over again. But they needed to do it without adding staff— particularly during the early years when it was just Avola and Mather putting in long nights and weekends to get the app off the ground.

By choosing ObjectRocket and its suite of managed database-as-a-service solutions, Avola (Untappd's backend developer) was able to launch the application and build features quickly and easily all by himself for several years because he didn't have to worry about the database piece. He could concentrate on building the application while leaving the rest to ObjectRocket's knowledgeable experts.

"There are parts of the app that are completely powered by ObjectRocket. They provide stability in the platform so that we can actually continue to build our app and not worry about those pieces being up all the time," says Avola, now CTO of Untappd. "We can focus on the important parts of our app, which is gaining users, gaining traction, and building new features."

With ObjectRocket's help, Untappd could finally focus on the important parts of their app—gaining users, gaining traction, and building new features.

objectRocket

Why ObjectRocket?

ObjectRocket helped Untappd increase performance by moving some processes to MongoDB, and later to Redis and Elasticsearch, and managing instances for them. ObjectRocket is able to ensure that interactions on the app remain high quality and very fast. But social feeds are notoriously difficult to scale out, which is where ObjectRocket's expertise with all three tools came in very handy.

"We were looking at query times for our Friend Feed from anywhere between three seconds to seven seconds. **Together, we were able to decrease that all the way down to less than a second**. After that, we did a lot of our heavier queries on Mongo, which helped us significantly when it came to high traffic periods," says Avola. "As our user base grew, we looked for a more cost-effective solution that would allow us to have better management over the larger data set we were putting in. So we moved over to Elasticsearch, which was about one-fourth of the cost. We were able to keep 30 days of activity now instead of 10 because we were no longer inserting thousands of documents for all of a user's friends—with Elasticsearch, it's just one document per check-in…. so much faster and more efficient."

What impresses Avola the most about working with ObjectRocket is that **they're like an extension of the Untappd team**. "We've been working with ObjectRocket for years now, so there's a lot of historical knowledge there that's irrefutable. You can't really get that anywhere else. So for us to be able to lean on their expertise is very beneficial."

Story time with Greg Avola, Founder & CTO of Untappd

One time we were looking at our API logs for a server. We do a lot of requests, sometimes up to 38,000 requests per minute at certain peak hours. We have an internal service that works for a business product, but we saw some spikes in activity every 30 minutes. What was happening?

I investigated. "What requests are coming through?" I wondered. I wanted to see all the logs, but it's very difficult to parse patchy logs at that volume. So we spun up an Elasticsearch instance with ObjectRocket, and we wrote all the requests, the index for a particular day. And then I used Kibana to actually search for the data, and I immediately found what I was looking for. Done.

That kind of thing is very easy to accomplish with ObjectRocket for Elasticsearch with Kibana. I don't have to write any complex queries. I don't have to do any CSVs. I just set it up, do it, experiment, and take it down when I don't need to have it anymore.

> *I love ObjectRocket so much because of the level of support that they provide for us. We have a Slack channel; we can talk with them. If there's an issue, they're always very on top of it.*

Greg Avola
Founder & CTO, Untappd
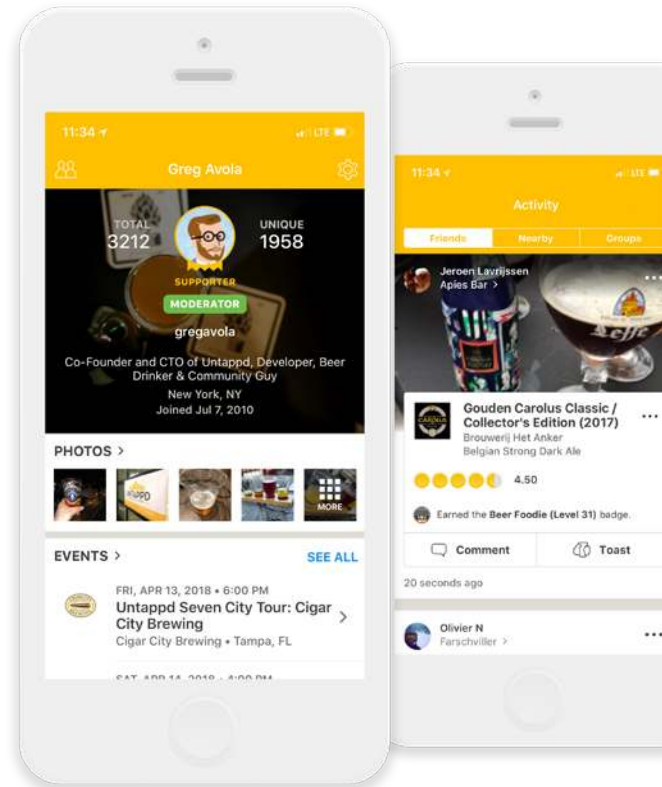
ObjectRocket

Finding even more value in the data

With its wildly popular consumer app now in full swing, Untappd is shifting its focus to leveraging its tremendous amount of data for the business side. Avola plans to use Elasticsearch less for search and more for data and analytics moving forward. "I'm getting more and more impressed with Elasticsearch and what it can do. I can load up Kibana, and run queries and generate reports on all sorts of things that can help Untappd and our commercial customers make better business decisions and solve for new use cases and business problems in the future." Avola relies on ObjectRocket to manage Elasticsearch services in a flexible, customized, and cost-effective way that will allow Untappd to continue innovating and finding even more value in their data.

Whether you're a small start-up or a large established company, you can benefit from outsourcing your database management to ObjectRocket. Whether it's MongoDB instances, Redis, Elasticsearch, or any combination of the three, ObjectRocket offers personal service and exceptional support to free your engineers to develop new products and features without having to worry about the database piece.

If you're interested in learning more about how we can help you customize and manage your databases, contact us and we'll set up a time to talk about your specific needs.

If you ask any engineer, "What would you rather be doing? Troubleshooting logs of a server or building new stuff?" They'd always tell you, "Building new stuff."

Working with ObjectRocket frees your engineers to build great new stuff.

Looking for MongoDB, Redis, or Elasticsearch management for your company?

SCHEDULE A CONSULTATION

1-888-440-3242 | sales@objectrocket.com

© 2018 Rackspace, US Inc.
All trademarks, service marks, images, products and brands remain the sole property of their respective holders.
Date Modified: 04/17/2018

ObjectRocket
a *rackspace* company

www.objectrocket.com