



CASE STUDY



Dream11 is India's biggest Fantasy Sports platform with 80 Million+ Indian sports fans playing Fantasy Cricket, Football, Kabaddi, Basketball, Hockey, Volleyball, Handball & Baseball. Dream11 helps Indian sports fans actively engage with and showcase knowledge of the sports they love. Fans can create their own team of real-life players from upcoming matches, score points based on their on-field performance and compete with other fans.

Scaling Handles Massive Traffic Spikes With Ease

The Need

Known to amplify fan's engagement with sports, Dream11 has experienced tremendous growth, from 1 million users in 2014 to over 80 million at the close of 2019. Based on real-world sporting events, users join fantasy contests that are automatically generated and promoted by Dream11 through the app. Each contest can have as few as two participants to upwards of tens of millions that can join up until the real-world event begins.

With the majority of user traffic spiking the hour leading up to the real-world event, the original application architecture could no longer process the tens of thousands of users per second requesting to join contests associated with a single event, let alone overlapping events. Resulting in participants inability to register or being kicked out of the registration process entirely. The app also strained to ensure contests did not exceed a set maximum number of participants as determined by Dream11 while creating the contest. If over, Dream11 cancels the entire contest and refunds fees. This excessive demand on a system already overworked and unstable weakened customer loyalty.

The Challenge

Dream11 required a highly elastic, self-healing system that could:

- scale with increasing demand, self-heal and maintain throughput and uptime under extreme loads and spikes
- integrate seamlessly with AWS
- reliably adapt to growth predicted to double each year

A tall order to fill before the Indian Premier League season, one of two peak seasons for Dream11, began in three months time. Failure to launch on time was not an option and would result in significant revenue loss.

The Solution

After analysis and research, Dream11 came to the conclusion that a Reactive Architecture could fulfill all their requirements.

The Akka Platform by Lightbend removes the back-end complexity associated with other technologies, delivering self-healing microservices that are resilient to failure and scale effortlessly. Dream11 was able to focus all efforts on building business logic while receiving the powerful back-end capabilities they required. Support and mentoring from Embedded Lightbend Engineers (ELEs) both virtually and onsite, greatly accelerated the adoption of the Akka Platform. In addition, ELEs provided training to other internal Dream11 teams in preparation for future expanded use of the platform across Dream11.

The Akka Platform gives Dream11 an application that:

- fully and efficiently leverages resources
- scales to meet the demands of the Dream11 contest participants
- scales back down after customers have been processed into a contest and a match begins

Dream11 also implemented Lightbend Telemetry for quick identification and resolution of bottlenecks in the application. Creating a highly tuned, massively performant application only possible with high-quality monitoring.

“The Akka platform could deliver the scalability and resiliency required to handle our current number of participants and expected growth,” states Mahesh Jadhav, Software Architect at Dream11. “The reduction of infrastructure and the associated cost savings the Akka Platform provides enables teams to place focus on building features that attract new customers and enhance user experiences.”

The Results

Dream11 went live with its new Contest Join app one full month ahead of schedule. After the first contest code review and a few minor code adjustments were done by Embedded Lightbend Engineers. As a result, performance levels increased to more than 30,000 user joins per second at 150ms latency less than one week after launch—well exceeding original goals.

Since implementing the Akka Platform, Dream11 has reduced cloud infrastructure costs by 30%, gained the scalability to grow at any rate of adoption for years to come, while delivering the uninterrupted experience customers expect to receive.

Visit [Lightbend](#) to learn more about [Akka Platform](#) and our other product and service offerings.
