



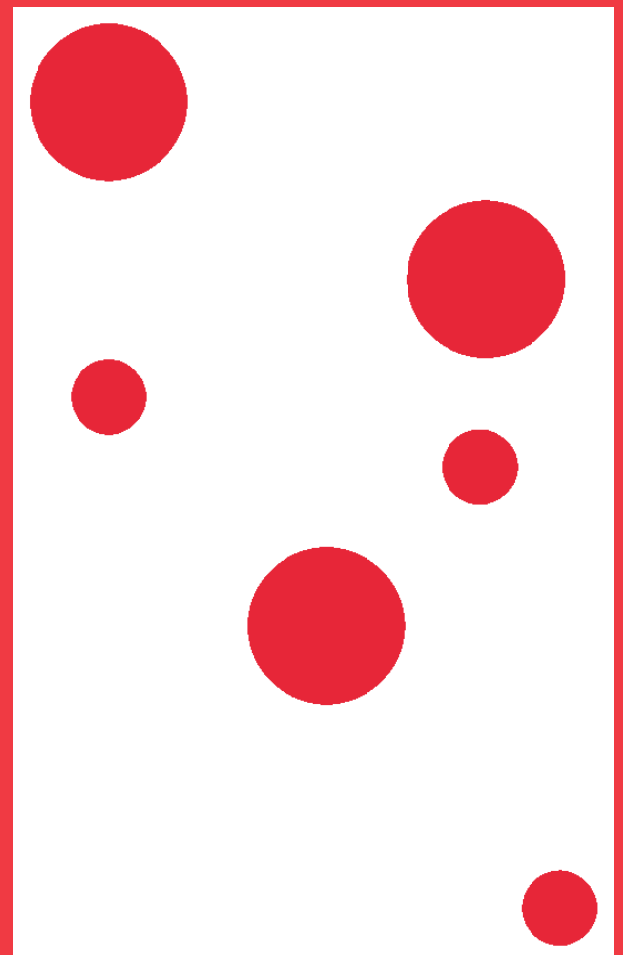
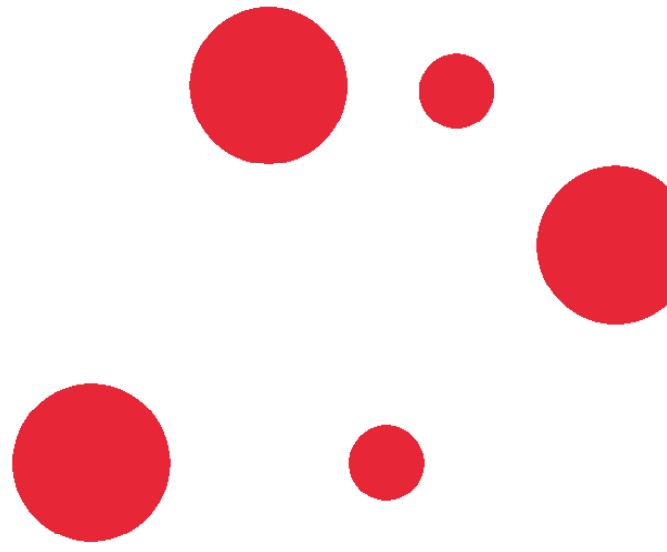
# PubNub

**POCKET**  **GEMS**

## Case Study

**Pocket Gems leverages PubNub to create a greater sense of community and heighten player engagement in their mobile strategy game, War Dragons.**

Based in San Francisco, Pocket Gems has specialized in creating graphically rich and innovative mobile games for the past 11 years. They offer unique mobile experiences to appeal to all kinds of players, from narrative games to strategic, multiplayer titles with



## Creating a connected community with in-game chat.

an emphasis on combat. But, the common theme throughout all their games is the way that they unite players globally. “We build games with the goal of creating interactive experiences that connect players all around the world,” said Ashik Manandhar, Engineering Director at Pocket Gems.

Manandhar and his team spearhead one of the flagship games at Pocket Gems: War Dragons. War Dragons is a 3D real-time mobile strategy game. In the game, players can collaborate with each other to build the ultimate dragon army, form guilds, battle rivals, and conquer lands to build their empire. “My team is responsible for building all kinds of new and exciting in-game events for our War Dragons players,” said Manandhar. “We also ensure that our systems and servers are always working so that players can experience the game without interruptions.”

To ensure the real-time operability of their game and to build out new features—like in-game chat and updates—that keep players continuously engaged, Pocket Gems relies on PubNub.



When they began building War Dragons in 2013, Manandhar and his teams always intended for the game to be heavily reliant on multiplayer, with players’ success dependent on teaming up with each other. “We always knew social interaction would be crucial to the game,” said Manandhar. “But it wasn’t until we launched that we really saw just how important it was for players to connect and communicate and how much more excitement and draw that would add.”

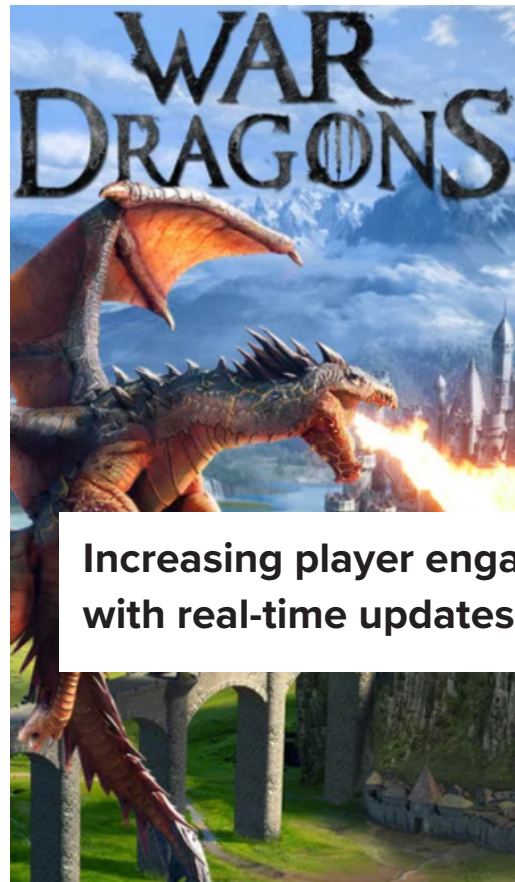
Initially, Manandhar’s team built out their own in-game chat between players. The chat they built allowed for simple text exchanges, which

worked fine for private chats when players were only sending a few messages back and forth every couple of minutes. But, a significant component of War Dragons' gameplay is real-time battles, where players team up to form guilds and battle each other for resources and territory.

"The chat we built in-house wasn't designed to scale for battles where many players need to send and receive messages simultaneously and in real-time," said Manandhar. The inability to scale their chat solution was a real breaking point for Pocket Gems. "Once we saw that we needed a scaled, real-time communication solution, we turned to PubNub," said Manandhar.

Pocket Gems was able to implement PubNub as their in-game chat solution for War Dragons overnight. And ever since, they've been able to offer their players robust real-time chat for private one-to-one conversations, group conversations between guild members, and during larger battles where players from all over the world can talk with each other. Players can also share contextual information—like battle positions—through chat, which helps players feel more connected and engaged with their guild.

By providing real-time chat through PubNub, Pocket Gems has been able to build a sense of camaraderie and connection among their players. "That sense of community is a major draw of our game," said Manandhar. "Players come for the dragons, but they stay for the people they meet and the guilds they form. PubNub is essential to ensuring they can stay engaged in the game and connected with the friends they've made."



**Increasing player engagement with real-time updates.**

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In addition to in-game chat, Pocket Gems credits real-time signaling and updates powered by PubNub with keeping players continuously coming back. Before PubNub, Pocket Gems could only provide players with updates when they logged in to War Dragons, informing them of what had happened in the game while they'd been away. But Manandhar and his team knew that providing players with real-time updates as they were playing would make War Dragons feel more captivating and lively for players—they just didn't have the time to build this capability in-house.

It was only after they brought on PubNub for in-game chat that Pocket Gems realized that real-time updates would be simple to implement. Now, Pocket Gems can pull updates from

their servers and push them through PubNub to provide real-time, in-game notifications to inform players about crucial events or changes, like land being conquered by rivals or a new player joining their guild. These notifications can be sent to individual players or broadcast globally during worldwide battle events.

“The in-game chat and updates we can power with PubNub are fundamental to our game,” said Manandhar. “PubNub lets our players immerse themselves in our game and feel like they're part of a larger community, which is a huge reason players return time and time again.” Pocket Gems credits these real-time updates, alongside chat, as crucial to increasing player retention and engagement. In fact, players that joined War Dragons in 2014, when PubNub was implemented, are still active today.

# WAR DRAGONS

## Easily scaling to support worldwide gaming events.

One of the primary benefits Manandhar and his engineering team have seen with PubNub is the ease of implementation and usage. They feel confident that they have a tech stack that is flexible and scalable to fit any new feature, roadmap, or use case they set their sights on. “We can now pursue ideas and updates that we previously put off because they would take significant dev time,” said Manandhar. “Now with PubNub, we have the technology to make our ideas a reality in a very short time with minimal effort.”

One of these ideas was creating worldwide, live battles in War Dragons with up to hundreds of players connecting, battling, and chatting simultaneously. Before PubNub, their in-house chat wasn’t designed to scale to support this volume of users and messages. But with their in-game chat now powered by PubNub, they can easily scale their chat to handle any number of users and their messages without concurrency limits or latency issues. “We implemented PubNub for our chat and updates in 2014, and we really haven’t needed to change much since then,” said Manandhar. “The underlying technology is stable, so as we’ve been increasing usage and sending more messages and gaining more players, PubNub has easily and effortlessly scaled to meet that.”

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Ashik Manandhar  
Engineering Director

## Ensuring continuous real-time operability with Datadog Dashboards

With their chat and in-game updates now powered by PubNub, Pocket Gems hosts global weekly battles where players come together to vie over valuable land and resources to grow their in-game empire. They've seen a significant uptick in player engagement from these global events and are investing in building them out as a core component of War Dragons. They are confident that PubNub's real-time chat and updates can scale to support the increased usage.

The real-time connectivity and sense of community that makes War Dragons special wouldn't be possible without the game continuously operating reliably. To ensure their players stay engaged and in game, talking and battling with each other, Manandhar's team must keep their servers up and running at all times. A key component of this

continued operability is being able to quickly identify issues and solutions if servers go down or other game interferences occur.

"When we have fires, we have to spend valuable time diving into issues, the source of them, and how to resolve them," said Manandhar. Pocket Gems now has access to PubNub's Datadog dashboards, which grants them more real-time visibility into War Dragons.

Manandhar and his team can now actively and accurately monitor their game in detail. They can easily detect issues and identify their sources. And because these dashboards send notifications when issues occur, Manandhar's team is able to rule out potential sources when fires occur to prevent disruptions and keep players happy. This is especially useful during their worldwide

## Deeply immersive, interactive mobile worlds.

battle events, where operating in real-time without latency or lag is essential.

With their operations supported by PubNub Datadog dashboards, not only does Manandhar's dev team save time in responding to issues, but players of War Dragons have increased confidence in the game and its reliability. This trust is just one of the many reasons players return to the game time and time again.

With PubNub, Pocket Gems has found a partner that can ensure they can easily execute on all their new ideas, feature updates, and endeavors—particularly into live gaming events—to deliver the best, most immersive mobile experiences to their players. If you're looking to create engaging gaming experiences that create a true sense of belonging and community among your players, reach out to our sales team to learn more about PubNub for gaming.

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