

11

Must-Have Features for Your In-App Chat

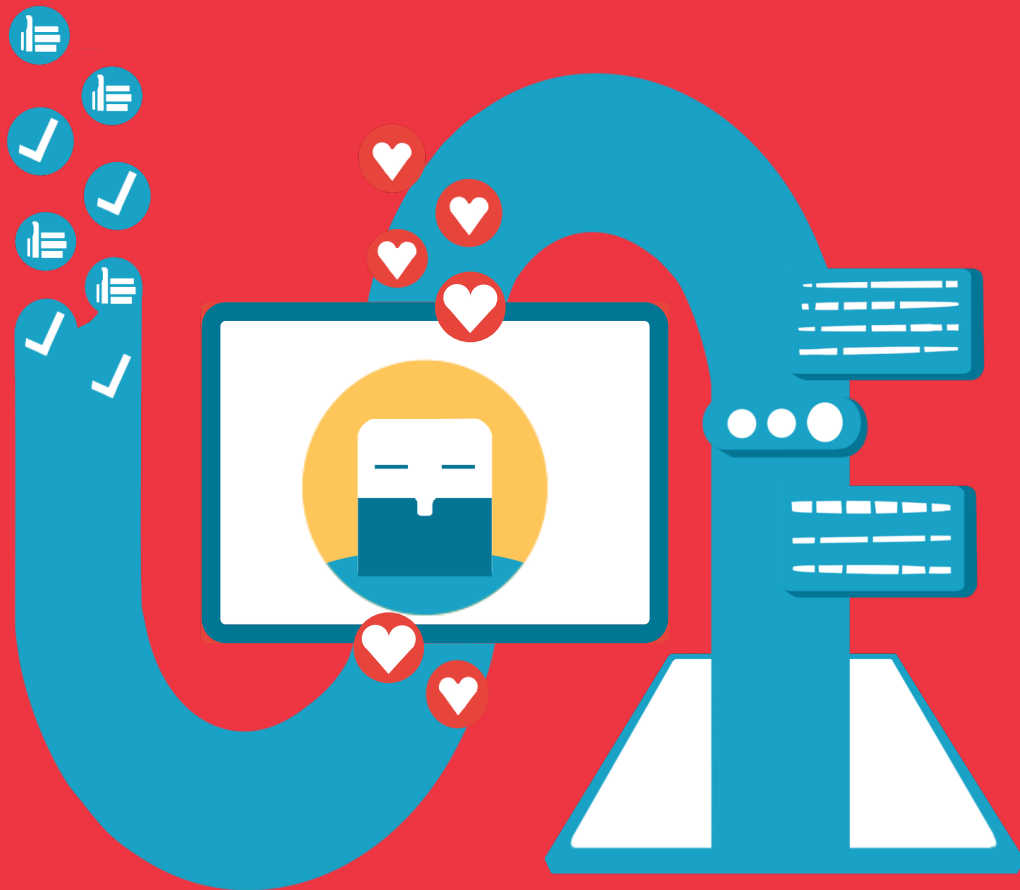














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CHAT IS AN ESSENTIAL COMPONENT OF ANY ENGAGING VIRTUAL EXPERIENCE—WHETHER THAT’S A PRIVATE DOCTOR-PATIENT CONVERSATION IN A TELEMEDICINE APP OR A GROUP CHAT BETWEEN PLAYERS IN AN ONLINE GAME.



At **PubNub**, we know first hand that in-app chat is one of the most powerful tools available to companies today, and it’s essential to create a truly engaged and connected virtual community. That’s why we’ve been focused on powering the infrastructure behind in-app chat since 2010.

If you find yourself reading this guide, chances are you’ve decided it’s time to build chat into your application, and already understand the benefits of enlisting a third-party provider to get you up and running smoothly. But how do you choose a platform to build your in-app chat with?

Using feedback from some of our customers, we compiled a checklist of 11 of the most important functionalities every in-app chat should have. By including these chat features, you’ll provide your users with a virtual space that fosters authentic, real-time interaction and engagement. Are you ready to learn how building in-app chat with these features can benefit your platform in a variety of ways?

If so, read on!



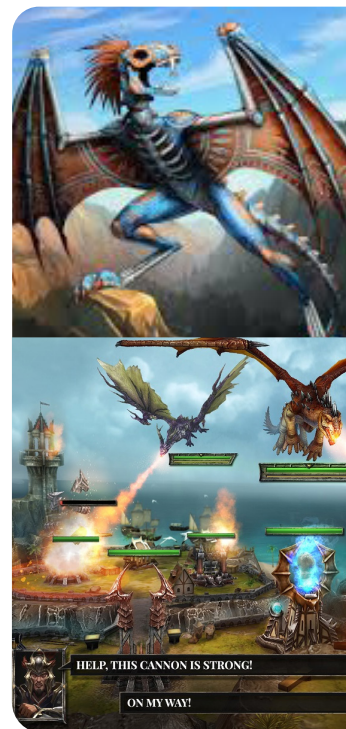
MULTIPLE CHAT TYPES WITH NO CONCURRENCY LIMITS

The type of chat you choose to build plays a huge role in fostering connection and communication among your users, so it's important you get it right.

Chat can be anything from a one-on-one conversation between two parties to group messaging between an unlimited number of users; and chat for live events can include the entire audience plus broadcasters and hosts. There are endless possibilities and ways to utilize chat for your application.

There are benefits to including each of these chat types in your application. While all of these options improve user engagement and communication, they each have their own best use cases. For example, private chat works well in telemedicine settings where patient protection is paramount, while audience-wide chat works best for sporting events or concerts where it can be streamed right alongside a video feed.

When choosing an in-app chat provider, make sure they can support the types of chat that make sense for your use case and won't penalize you as your usage grows. For example, at PubNub we have no concurrency limits, or added concurrency charges, and do not limit the number of channels you can create. This makes it easy for customers to scale with us.





Pocket Gems is a San Francisco-based game developer that specializes in making innovative and rich mobile games. With **PubNub**, they build a greater sense of community and strengthen player engagement via in-app chat for their games.

***"PubNub** lets our players immerse themselves in our game and feel like they're part of a larger community, which is a huge reason why players return time and time again."*

*Ashik Manandhar,
Engineering Director
Pocket Gems*



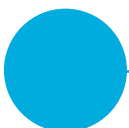
CUSTOMIZATION FOR YOUR NEEDS

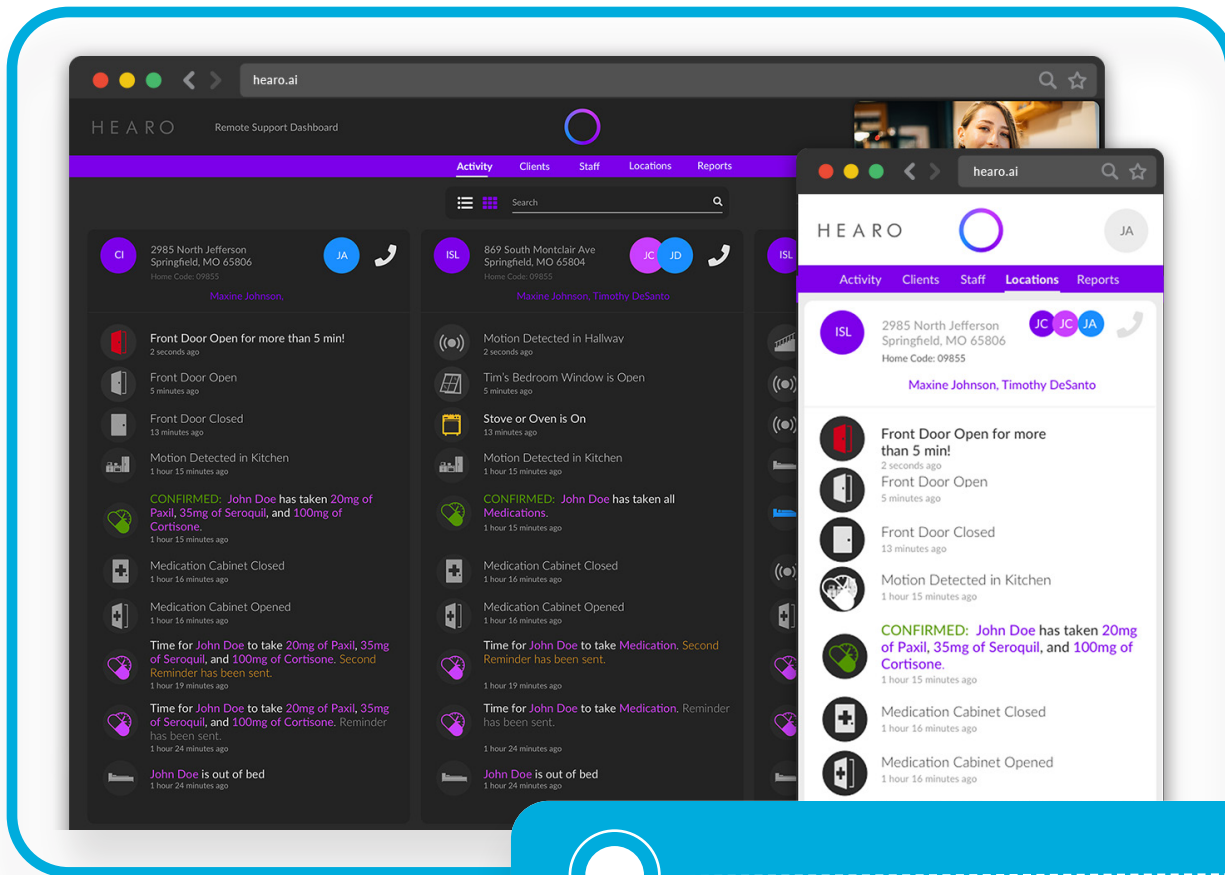
Above all, the chat you build will be part of the backbone of your application, so it's important that it fits your unique vision and the needs of your end users.

You shouldn't have to work your product around the limitations of an out-of-the-box or point solution; the chat provider you build with should work for you instead. A platform solution is beneficial for this very reason. It means you can add features that normal chat APIs can't easily offer, such as push notifications, user presence, geolocation, data streaming, profanity filtering, and more.

When selecting a solution to build your chat with, look for flexibility and customization. Ensure that you are able to have control over the UI and feature set of your chat, so you can build the most rewarding communication experience for your users.

At **PubNub**, we offer the ability to build out and add on additional features to your chat, whether that's by using our pre-built components and integrations partners, or by bringing in your own data using Functions. Our flexibility has allowed customers to build engaging virtual spaces and undertake larger, more complex projects than before.





Hearo is a remote patient monitoring company dedicated to helping patients live more independently, and connect with their direct-care providers. **Hearo** leverages **PubNub** to interconnect every part of their IoT platform, including chat between providers and patients.

“We have the flexibility to build our platform based off of our needs and our clients’ needs—not around restrictions.”

*Myke Bates,
Co-Founder and CTO
Hearo*

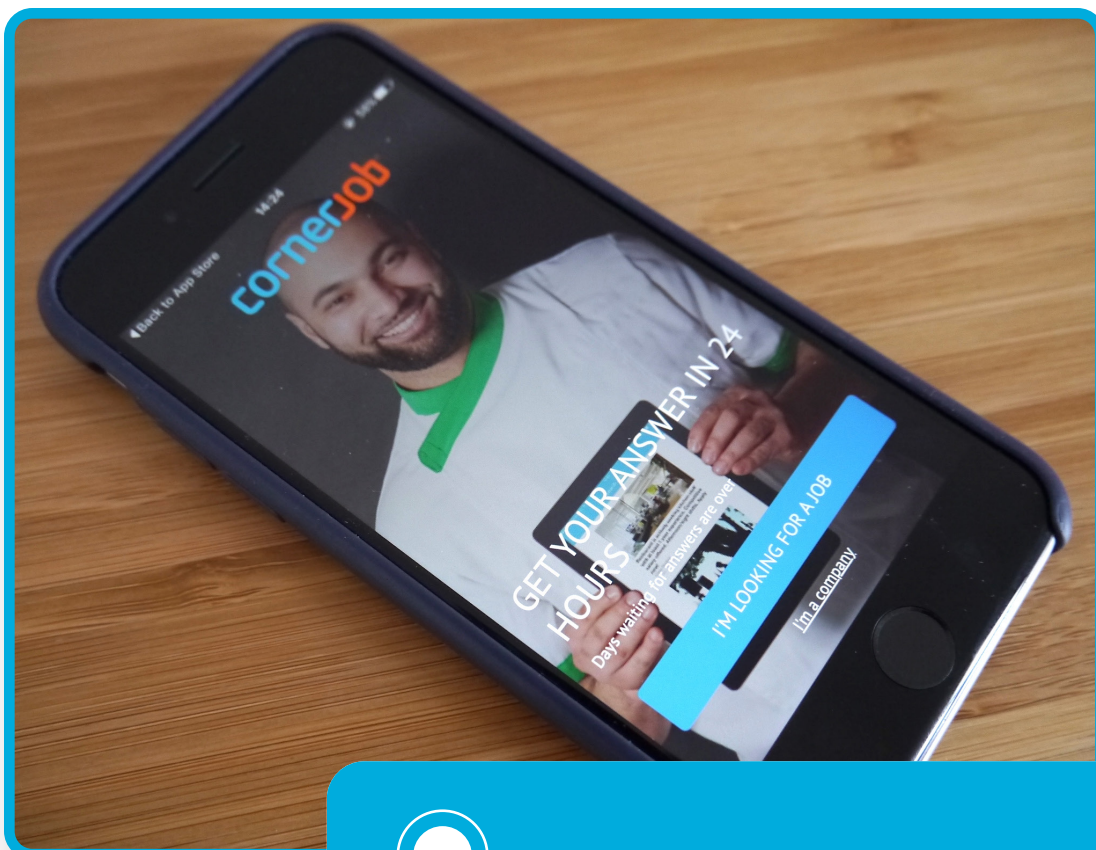
DEVELOPER SUPPORT TO GET TO MARKET FASTER AND EASILY MAINTAIN YOUR BACKEND

Maintaining your chat infrastructure is just as important as building it out. You shouldn't have to worry about solving technical issues or monitoring your chat backend yourself, which uses valuable time and resources that could be spent on your core product instead. Letting a chat provider handle your backend infrastructure helps you get to market faster while you focus on building exactly what you want.

When working with a chat provider, you should have easy access to a support network and proper documentation—including pre-built chat components and a wide range of SDKs to help implement features quickly.

Questions and issues will inevitably arise during the development process, so a dedicated support team is crucial to successful deployment. **PubNub** has a talented team of Solution Architects to assist with any issues you might encounter when testing, building, or deploying your chat so you can go to market quickly and seamlessly. And for customers who host live event streams on their platforms, like concerts, we even have a dedicated personal team to help you in real time during your events.





CornerJob is a location-based job recruitment app meant to reach blue-collar workers and assist them with the job application process. They enlisted **PubNub** to help them build the chat that they knew would be critical to providing interactivity between employers and job-seekers.

“Chat is a critical feature, but our app isn’t a messaging app. Our development team is focused on the app’s key purpose—matching offers and candidates. The fact that we don’t have to worry about the chat component is great. PubNub has been amazing.”

Pablo del Vecchio
CTO at CornerJob

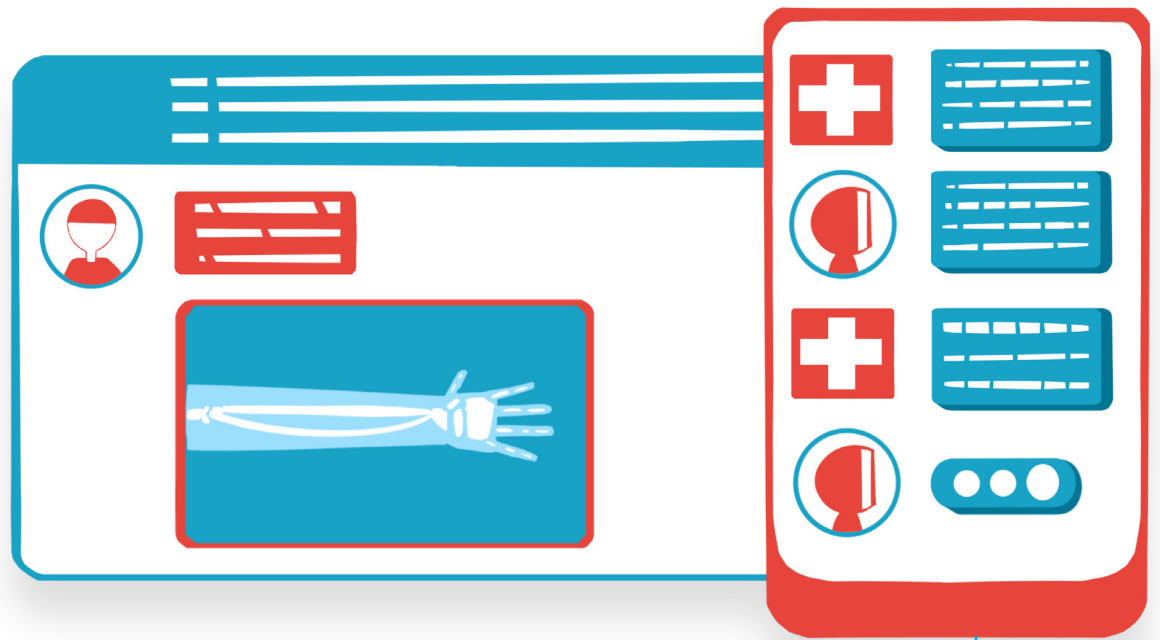
REAL-TIME SPEED AND RELIABILITY

Real-time communication is the basis of engaging online in a meaningful way, because it recreates the feeling of interacting in person. You need to be sure your messages will be delivered, and delivered immediately, no matter how many concurrent users there are.

Low latency needs to be a guarantee when you are selecting a chat provider, because when there are latency issues or delays, users will likely leave the app and go to other platforms to communicate instead, which reduces retention and engagement.

When selecting a provider to build chat with, look for one that promises speeds that are <100ms per message globally and an SLA of **99.999%** uptime. Having reliable chat infrastructure benefits not only your end users but your developers as well, because you won't have to dedicate time in-house to constantly monitoring for issues and possible disruptions.

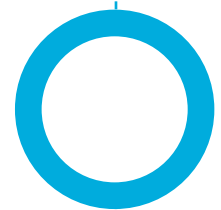




Distillery is a full-service software design and development company for startups and enterprises. They used **PubNub** to assist Australian healthcare app, MedX, with building in-app chat that meets the standards needed for strict compliance, complex rules.

“Speed is so important when you deal with chat applications...When you build your own system you have to deal with different regions and make sure you’re covering them all or else it doesn’t deliver instantly everywhere. But with PubNub there is never a lag and the speed of delivering messages is high.”

Alexander Timonin
Senior Software Engineer of **Distillery**





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CHAT THAT SCALES AS YOUR USERS GROW

You may already be confident in your application's baseline, but it is also essential that your platform can handle growth: Enter scalability.

Your application needs to be scalable so that it can easily be maintained and avoid possible failures from an influx of users. If your application is unable to handle an increased traffic, your users will soon leave your app behind in search of a platform without any delays or downtime.

You always want your business to grow, and it is important that your chat provider can grow with you. When looking for a chat provider, consider the following question: Can they handle a rapidly expanding user base, surging traffic, or spikes in engagement? You should be confident that your chat infrastructure can handle growth and scale up when you do. Bonus points if there are no limits or penalties for concurrent users.



We've worked with many high-growth companies to solve for their app scalability, **vFairs**, a virtual events platform, grew their user base by 40x in 2020 with no latency issues or outages by using **PubNub**.

"With the growth we've seen in the past ten months, it would have been a huge problem and time issue to have to scale up our chat manually. Having PubNub means we have one less thing to worry about, we've never questioned if it will work and scale with us as we grow."

Arfeen Godil, **Director of IT** at **vFairs**

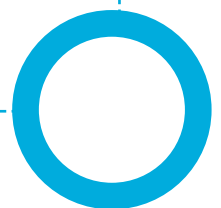
EXPANDING YOUR CHAT WITH INTERACTIVE FEATURES FOR IMPROVED ENGAGEMENT

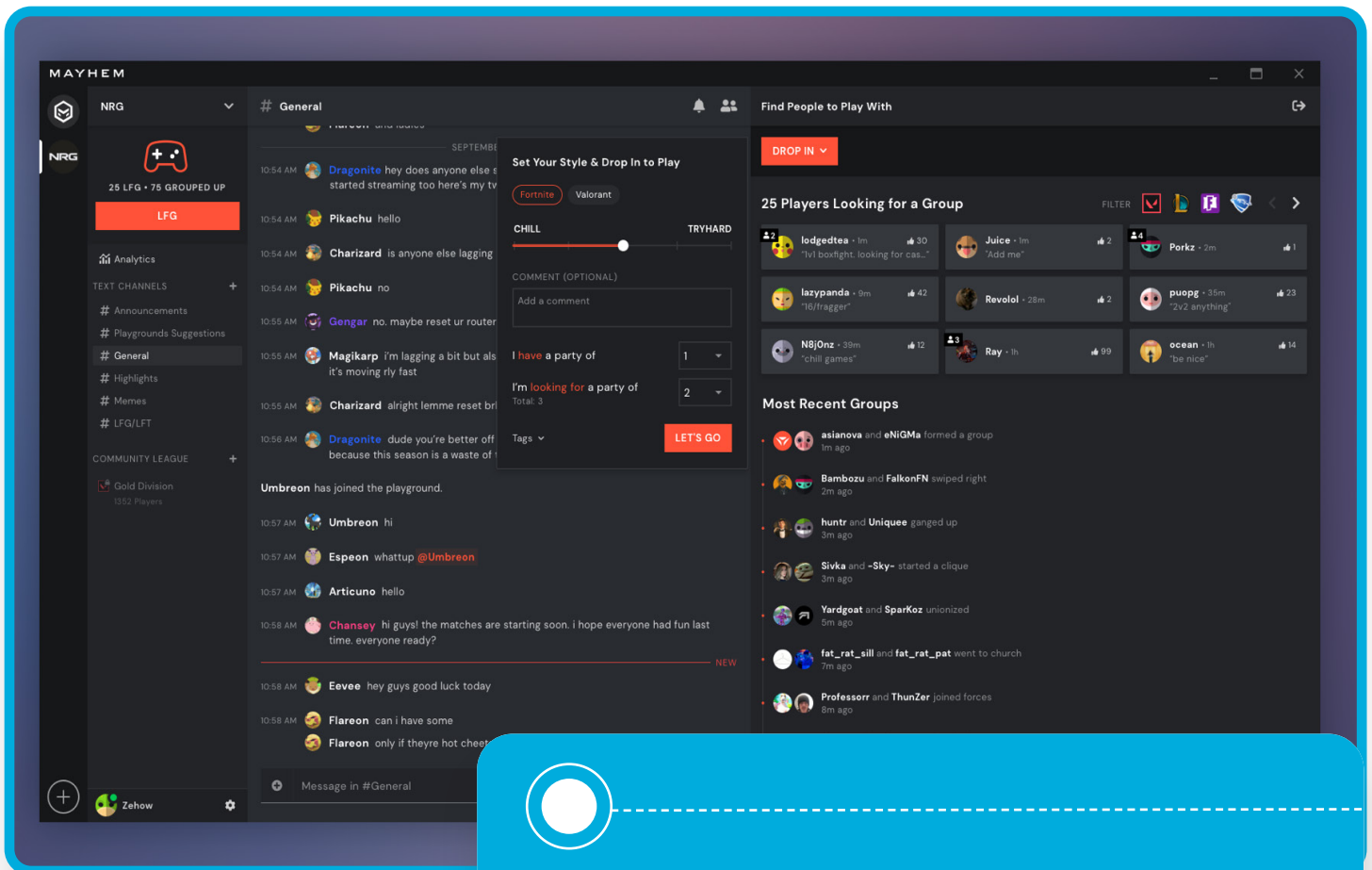
We've already established that chat is one of the best ways for users to connect with and express themselves authentically in virtual and online spaces. But why stop at just plain text? If you're looking to uplevel your chat to foster greater engagement, it's important to let users enhance and customize their messages with features like emojis, reactions, polls, and stickers.

Interactive features provide users with tools to better express themselves through their screens. A plain text message can't always convey exactly how someone is feeling, but a funny GIF or an emoji can illustrate it for them. These reactions can help users feel connected to each other and the larger community in the app.

Non-text communication features are also critical for platforms with a global audience. It lets users connect and communicate despite language barriers. For example, live chat at a concert will usually be filled with reactions and emojis over simple text-heavy messages.

When evaluating an in-app chat provider, they should include a wide range of these features for your audience to enjoy. These add unique value to each user experience. Interactive features tie in neatly with user presence features to improve engagement and retention, which is also why presence detection is next on our list.





Mayhem is a developer that lets gaming communities build customized leagues and interact through large-scale chat with tens of thousands of players. They have used **PubNub** to build an engaging chat experience that connects the entire community.

“Real-time chat is crucial to setting up games and building relationships. PubNub’s chat solution and tools allow our gamers to express their genuine selves with each other in a way that is fun for everyone.”

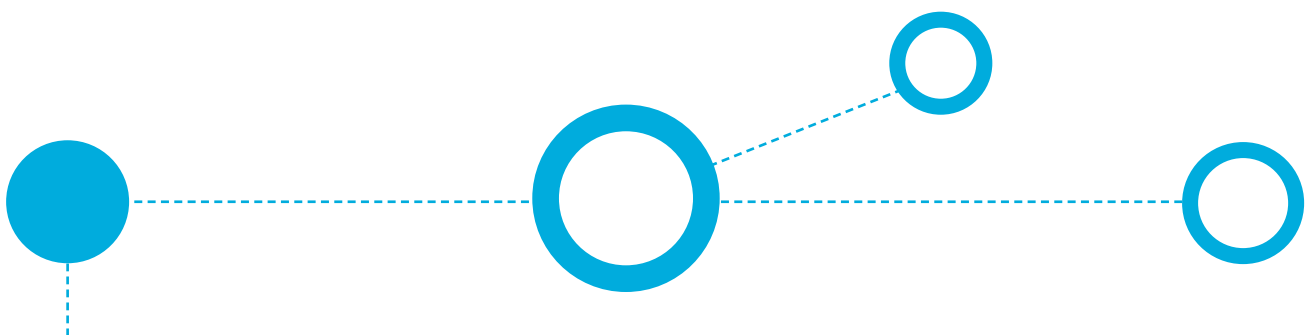
Anhang Zhu, **CTO** at **Mayhem**

ONLINE/OFFLINE PRESENCE DETECTION TO HELP RETAIN USERS IN APP

Presence detection tracks the online status of users and device connections. It makes it simple for users to see who else is online and available to chat. It can also power features like live audience counts. Displaying online or offline presence plays a key role in interactive communication—it shows people that other users are currently active and engaged.

Presence is also the real-time technology behind typing indicators and read receipts. These features help to maintain organic conversations by adding immediacy to the interaction, highlighting who plans to respond next, and displaying that someone has seen a message.

While searching for your in-app chat provider, you will find that presence detection—and related Functions like the ones included with PubNub—adds additional value for developers and helps to increase engagement and retention among users.





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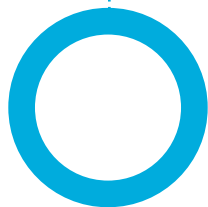
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Vampr is a mobile professional and social network for musicians. They have worked with **PubNub** to build a networking communications platform that mimics the real-world interaction of meeting and getting to know other people in the industry.

“For any geosocial network, real-time is critical. These conversations and first encounters with strangers are happening in the moment and they represent our core business. If the focus hasn’t been on making that real-time experience robust then you’re at risk of losing your pulse altogether.”

*Josh Simons,
Co-Founder and CEO at **Vampr***



DATA SECURITY AND COMPLIANCE

If your application includes sensitive user data, it is important that they can trust your platform to keep that information private and secure. So when using a third-party vendor for functions that are core to your business operations, like chat, there is an urgent need for data security. A data breach can be a devastating and costly event for both a company and its users.

Additionally, providers should also be compliant with relevant regulatory standards, such as HIPAA. HIPAA is the USA's federal regulation that ensures the protection of healthcare patients and confidentiality, and it is one of the most crucial compliance measures for the telehealth industry—which is why chat built on **PubNub** is fully HIPAA compliant. Sending a message with any electronic protected health information (ePHI) is highly regulated under HIPAA, with good reason.

HIPAA-compliant chat supports doctor-patient communication, creates a telemedicine experience with less barriers to communication, and increases efficiency for patients and staff, which leads to greater patient engagement and satisfaction.

When someone chooses a chat platform, make sure they are committed to providing a robust, scalable, and secure set of policies to ensure their data and their users' data is always protected. Data security measures should include compliance, localized storage, authorization requirements, attack protection.

Additionally, any end - to - end encryption allows you to fully or partially encrypt all message data, where it will securely pass it across networks and firewalls without worry interference.



Zeiss is a healthcare technology company that caters to vision specialists. They rely on **PubNub** to power their sensitive in-app chat because of our strict security measures and compliance to regulatory laws like HIPAA.

“As a leading software solution for ophthalmologists, data security and HIPAA compliance are extremely important for Zeiss Veracity Surgical, and we evaluate all our technology partners through this lens too. We were sold on PubNub as a partner once we learned about their strengths in data security, SOC 2, and HIPAA compliance.”

Danny Kirchmeier,
Director of Technology
Carl Zeiss Meditec
Digital Innovations

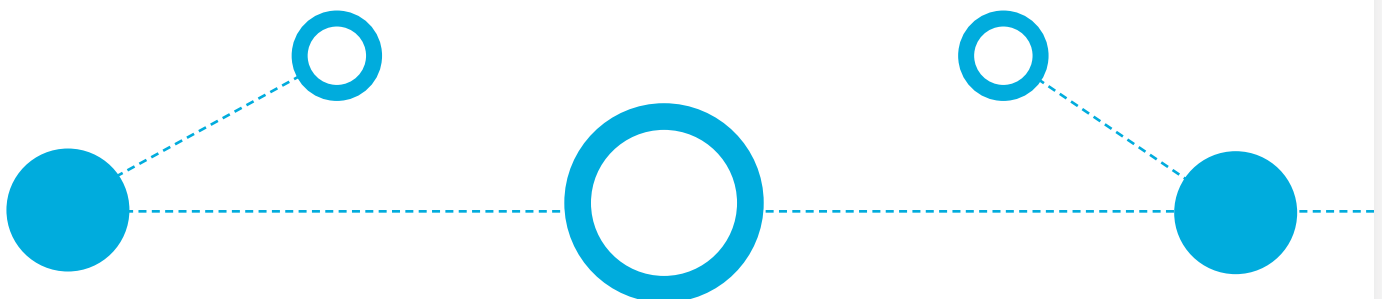
UPDATES AND NOTIFICATIONS TO KEEP USERS ENGAGED

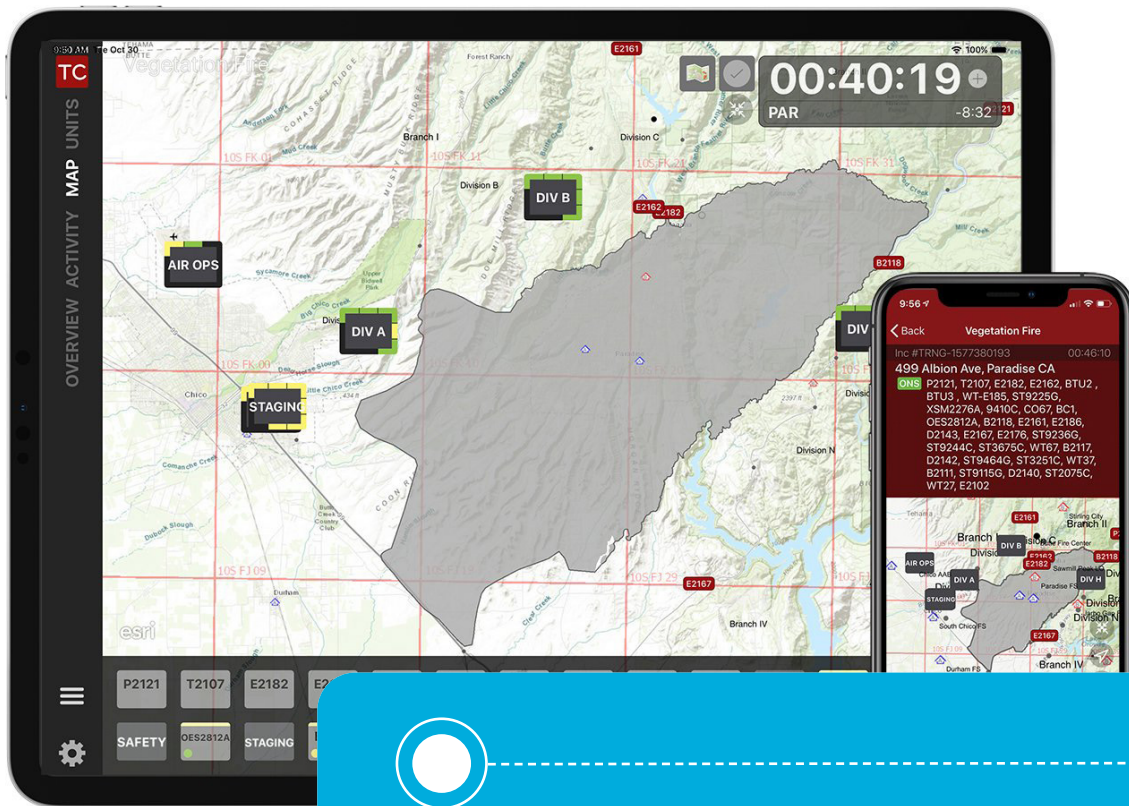
Real-time notifications can reach more people, re-engage your users, and extend communication after someone closes the app. You can reach your audience, wherever they are, with updates and offers.

Receiving these updates makes users feel more connected, which is why notifications can improve user engagement and satisfaction.



Make sure that the chat provider you choose has real-time capability for their notifications. At **PubNub**, we encourage chat notifications to keep users informed, as well as to re-engage them in your application. Notifications also let your company make exciting offers to users and share news that can reach them easily—an important feature, because positive information and feedback can increase user retention.





And in some industries—like emergency management services—real-time notifications are not only an added benefit, they are crucial. **Tablet Command**, Inc. provides incident response software to different fire departments across North America. With **PubNub**, they are able to provide instant communication and updates to their firefighters, which can save lives.

“In firefighting, one second can mean the difference between life and death. PubNub is essential to delivering updates to crew members so that they have a real-time picture of what’s going on and can respond properly.”

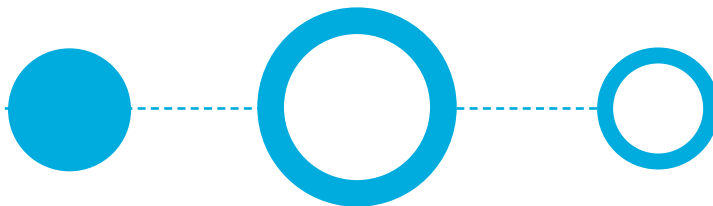
William Pigeon, CTO and Co-Founder
Tablet Command

DASHBOARDS TO MONITOR OPERATIONS IN REAL TIME

It's helpful for a third-party provider to supply insights and analytics so that you are confident in your app's continuous operation. When your team is responsible for keeping servers up and running, it is imperative that the service is reliable and they can quickly identify issues or interferences.

Operational dashboards should provide visibility into the status of your application at all times. This visibility is crucial in industries where reliable real-time operations are critical, like telemedicine or live events. When an issue does arise, it needs to be simple to discover the source of an issue and actively monitor operations.

A chat provider should deliver dashboards and insights that can integrate into existing monitoring tools for easy access to the data. For example, **PubNub's** Datadog dashboards can also send real-time notifications if an interruption occurs. With these dashboards and corresponding notifications, teams will always be alerted when an issue is detected, and able to make informed decisions to correct course.





Pocket Gems uses **PubNub's Datadog** dashboards, which give them real-time visibility into their hit game, War Dragons.

"When we have fires, we have to spend valuable time diving into issues, the source of them, and how to resolve them."

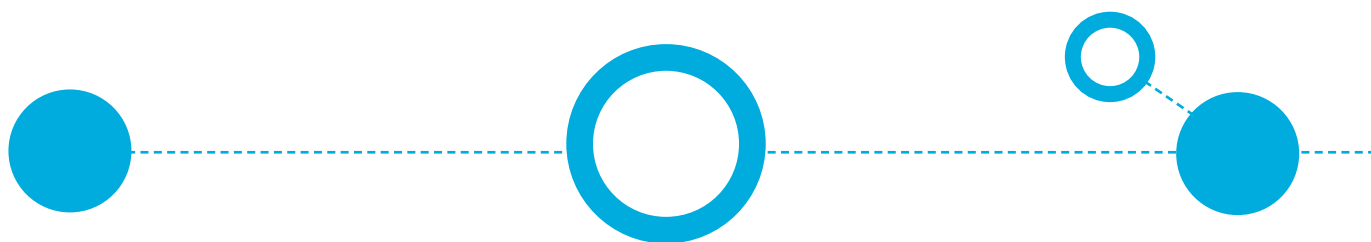
Ashik Manandhar,
Engineering Director
Pocket Gems

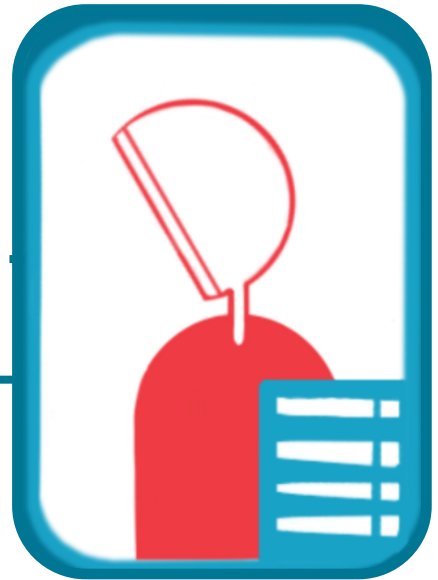
PROFANITY FILTERING TO KEEP COMMUNITIES FRIENDLY

Offering a safe environment for people in virtual spaces is essential. While a large portion of communication in virtual communities consists of lively banter and conversation, some users will inevitably introduce offensive language that can have a negative impact. Keeping chats clean from this abuse creates a more immersive and welcoming experience—this is even more important for apps who have children as users. A guarantee of filtered content can help instil confidence in parents and encourage them to let their children use your app.

Profanity filters are one of the best ways to implement automatic moderation of unsafe or harmful content. They can also include additional, intelligent features such as auto-blocking, detecting spam, and media settings. Taking precautionary measures prevents offensive content from ever reaching your audience. Having a filter also allows your team to spend more time on their core roles, instead of manually moderating.

Look for a chat provider to build with that has customizable profanity filtering to fit your needs. For example, at **PubNub**, we offer multiple Functions and integrations that can assist with handling inappropriate messages.





LiveLike is a New York-based technology company dedicated to improving virtual live events. They use **PubNub** to power their audience engagement platform and make remote events feel just as communal and enjoyable as in-person events.

“Our goal is for virtual events to be engaging and energetic. We want viewers to feel as if they were sitting front row at a concert or game, talking and laughing with their family and friends.”

*Justin Poliey,
Director of Engineering and
Product Lead at **LiveLike***

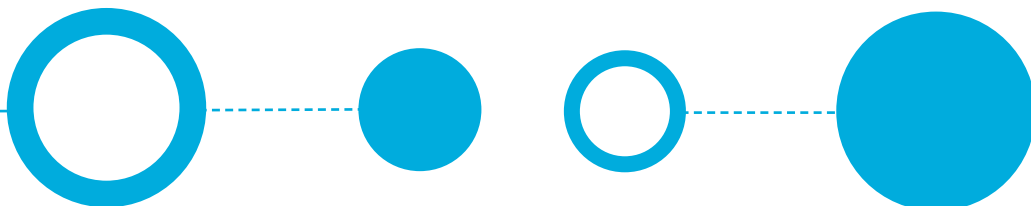


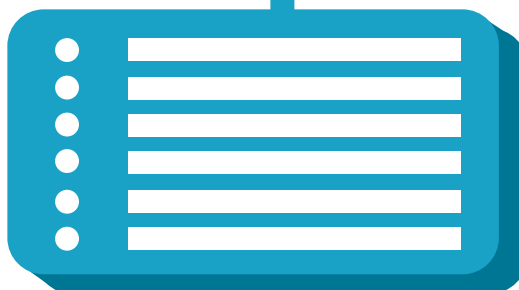
PARTNER WITH PUBNUB TO BUILD YOUR CHAT

PubNub is proud to offer all of the essential features we have listed above for your in-app chat. With everything from real-time dashboards to interactive features, to scalability and unlimited concurrent users, **PubNub** provides a platform where you can build in-app chat that is reliable and will grow as you do.

With 10 years of experience and platform maturity, **PubNub** has the infrastructure to handle trillions of messages. We also boast a variety of use cases and the best reliability in the market. We have five global data centers to prevent outages and the lowest average latency of any available provider, at an average of less than 100ms.

While there are plenty of great chat point solutions available, **PubNub** is an all-inclusive source for the features you will need in your chat. When you work with us, you don't have to build your chat alone. Instead, we provide a high-quality, reliable, and scalable solution—while you retain flexibility and customization over the look, feel, and function of your in-app chat. You will save on the cost of building and maintaining your infrastructure, as well as the opportunity cost of dedicating your team to manage and maintain your chat backend.





“When we started to experience explosive traffic, we turned to PubNub to take care of our real-time infrastructure challenges. With the help of their top-notch support and product, we are now able to put all of our focus into growing our business.”

*Evan Lowenstein, Founder and CEO at **Stageit**. Stageit is an online concert venue that allows performers to broadcast live real-time events, including selling tickets, all within a fully interactive environment.*