

## AKAMAI CUSTOMER STORY

# iQIYI: Video Streaming Without Waiting, Ever

Video streaming service giant delivers content from the Akamai edge, creating a superb experience for global customers, developers, and content providers



Less time for DNS resolution —  
web pages load faster



Zero start-up time before  
video begins streaming



Very low rebuffering rate —  
video doesn't freeze

## Nearby video servers — good for viewers, good for content providers

iQIYI is an innovative market-leading online entertainment service in China. To expand into other countries while continuing to delight existing customers, the company needed a content delivery network (CDN) with servers near all its global customers and content providers. The solution: the Akamai Intelligent Edge Platform. With Akamai, users around the world enjoy a great experience from beginning to end, and developers can deploy new code to hundreds of thousands of servers around the world with a click.

## The waiting is over

That spinning dial you see while your streaming video queues up? For iQIYI subscribers it's a thing of the past — iQIYI's videos start playing immediately.

The mastermind behind this achievement is Mr. Jianhua Qin, iQIYI's Senior Director of Infrastructure and Intelligent Content Distribution Business Group. Mr. Qin joined iQIYI in 2012. "My team is responsible for IT infrastructure — servers, storage, and networking — used by our developers, business teams, and content providers," he says. "Our goal is to make sure our users have the infrastructure they need to deliver a great application experience — without having to worry about where the infrastructure is."

Adding to the challenge of Mr. Qin's job is the sheer volume of iQIYI's operations — according to an industry report, iQIYI has more than 500 million monthly active users. Developers continually refine the company's AI-based recommendations engine, updating the software on demand. There is always a lot of content published every day. "To continually publish new code and new content, we need extremely efficient infrastructure," Mr. Qin says.



iQIYI

Beijing, China

<https://www.iq.com/>

### Industry

Media & Entertainment

### Solutions

- Content Delivery Solutions
- Serverless Computing
- EdgeWorkers
- EdgeKV



## A CDN that spans the world

When iQIYI started expanding globally, Mr. Qin looked for a CDN for new subscribers outside of China. A centralized cloud would create too much latency for streaming video. “We chose Akamai’s CDN for our global users because it is among one of the service providers with the lowest latency and widest reach with 325,000 servers around the world,” says Mr. Qin. “I like that Akamai has a local technical support team. And while traditional cloud providers are just moving to the edge, Akamai has more than 20 years of experience at the edge.”

## A great experience for customers, content providers, and developers

Mr. Qin is obsessive about monitoring the user experience — tracking how quickly videos start playing and whether they stall. Akamai helps with both measures. “Our videos stream from the Akamai node that’s closest to the subscriber, so they load quickly and don’t freeze,” he says. Real-time user experience metrics help Mr. Qin’s team quickly identify and remediate issues, ideally before subscribers report them.

Content providers appreciate speedy publishing and stronger security. When a variety show recorded at 4:00 PM is scheduled to air at 8:00 PM, iQIYI’s content providers can’t tolerate slow upload speeds. “Uploading new video content to a nearby Akamai edge server can save time and frustration compared to publishing to a distant cloud,” Mr. Qin says. Content providers also appreciate Akamai’s security services, which help to protect their content from cyberattacks.

iQIYI’s developers like automated deployment, which frees time for creative work, such as refining the company’s recommendations engine and identifying trends in popular content. “Each advance in infrastructure — from physical servers to virtual machines to containers — reduces the time our operations team spends to support developers,” Mr. Qin says. “Akamai makes it even simpler to deploy new software. Our developers can deploy to multiple clouds and hundreds of thousands of Akamai edge servers with a single click. Less time deploying means more time innovating.”

Now iQIYI’s developers are starting to write code directly on edge servers, with EdgeWorkers. The iQIYI DNS over HTTPS (DoH) team won first place in the inaugural EdgeWorkers Coding Challenge with a solution for DoH. The small application reduces DNS resolution time by 40%, enabling websites to load faster. Distributing the DNS service across thousands of edge servers makes it more stable. And the application helps prevent hackers from redirecting iQIYI subscribers to other websites — an attack called DNS hijacking. “One of our user interface engineers wrote the DoH service, deploying code to more than 100,000 edge nodes globally in a matter of minutes,” says Mr. Qin. “That’s amazing.”

## What’s next: The metaverse

Mr. Qin continues to think of new ways to use Akamai for a competitive advantage. On the horizon is the metaverse — immersive entertainment based on virtual and augmented reality. “Akamai could be one of our important partners in entering the metaverse,” Mr. Qin says. “I’m thinking about a ring of Akamai servers close enough to our users that anyone in the world can connect to the metaverse with less than 30 milliseconds latency. And because our developers no longer have to worry about where to deploy code, they have more freedom to innovate.”



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### Jianhua Qin

Senior Director of Infrastructure  
and Intelligent Content Distribution  
Business Group, iQIYI



iQIYI, Inc. is an innovative market-leading online entertainment service in China. Its corporate DNA combines creative talent with technology, fostering an environment for continuous innovation and the production of blockbuster content. iQIYI's platform features highly popular original content, as well as a comprehensive library of other professionally produced content, professional user-generated content and user-generated content. The Company distinguishes itself in the online entertainment industry by its leading technology platform powered by advanced AI, big data analytics and other core proprietary technologies. iQIYI attracts a massive user base with tremendous user engagement, and has developed a diversified monetization model including membership services, online advertising services, content distribution, online games, live broadcasting, IP licensing, talent agency, online literature, etc. <https://www.iq.com/>