How Cerbos enabled NTWRK to streamline and scale access controls for agile growth

Case Study

NTWRK

cerbos

"Cerbos has removed an entire stress point for me around distributing permissions in general. If I had this five years ago, I'd probably be much happier."

STEVE HIGH,
Staff Engineer, NTWRK

Highlights

Challenges

- Implementing a secure and scalable authorization system
- Centralizing and simplifying access controls
- Auditing and testing policies accurately

Solution

- Quick set-up with easy-to-understand code
- Comprehensive audit logs
- Version control for easy testing and validation
- Technical advice from an expert team

Results

- Secure and extensible access permissions
- Confidence and peace of mind
- Bandwidth to deliver top-tier user experience
- Power to move fast

Challenges
Building a scalable and reliable solution for access controls

NTWRK is a premier live streaming video commerce platform with approximately 2 million end users, tailored to serve the interests of sneaker aficionados, trading card collectors, and enthusiasts of various other niches.

With a primary objective to rapidly implement centralized access controls through a dependable solution, Steve High, Staff Engineer at NTWRK, recognized the value of using a decoupled authorization system.

> *"We have been introducing all kinds of new roles to our administration and we needed not only role-based access control, which is kind of the easy part, but also the fine-grained tuning of permissions that the policies allow us to do."*, Steve says.

Seeking a third-party access control solution that would enable NTWRK to deliver top-tier user experience for their approximately 2 million end users, and concentrate on faster app iterations, the team evaluated several options. Ultimately, they found Cerbos to be a natural fit.

> "We were examining AWS Cognito for a while. Cognito is a very good solution, but you have to position your infrastructure a certain way, otherwise it becomes a thing that you're constantly fighting. Whereas the Cerbos connector is universal to my application and I can use it anywhere.", Steve explains.

Steve added that without Cerbos, the team would likely have opted for a *"heavy handed, federated authorization system like SAML, Cognito, or Auth0"*. He also considered another alternative—creating an abstraction akin to Cerbos—primarily because of the convenience it offered and its ability to significantly reduce the stress he experienced in managing permissions.

"With Cerbos, we can just do whatever we need to do and then we have this little global Cerbos instance sitting there that we can query at any time, and it just works.", Steve highlights.

> "We have numerous edge cases regarding permissions, which often led to oversights when making changes, resulting in disasters. Cerbos, however, centralizes policies in one repository, simplifying management."

Solution

Simple, robust, and secure authorization solution

Steve was impressed with the speed and ease of setting up authorization through Cerbos, even though the team at NTWRK needed to tackle some deep tech debt clean-up before implementing Cerbos fully.

> *"If you're a decent developer, you can get Cerbos up and running in minutes, in a fairly straightforward way. There's not a ton of configuration and all the configuration there is, fits in one nice little file. Cerbos is plug and play."*, Steve explains.

Opting for a sidecar approach due to performance and safety considerations, Steve found that Cerbos helped reduce latency down to microseconds, which is crucial for a large commerce platform like NTWRK. In turn, the reduced latency improved user experience for their customers.

Cerbos provided peace of mind for Steve and his team, eliminating the need for *"janky code"* and centralizing policies in a single repository.

> *"Throwing the entire concern of authorization across to Cerbos really did increase my velocity, which in turn increases velocity downstream from me. It has allowed the team to deliver top-tier user experience and concentrate on faster app iterations."*, Steve says.

The Cerbos authorization solution also offered benefits the team at NTWRK wasn't expecting. As the company prepared to open their admin portal to the outside world, they used Cerbos to manage permissions and generate tokens. For instance, they employed a SaaS that is essentially a managed Elasticsearch, allowing them to index their data and create tokens that specify access permissions. They relied on Cerbos to make these determinations, ensuring accuracy before proceeding to generate more costly tokens.

> *"Cerbos is helping prevent us from making expensive decisions code-wise. That's probably an unsung benefit."*, Steve highlights.

With Cerbos set up, Steve and his team now primarily check policies periodically for consistency. He doesn't expect the Cerbos code to be altered soon.

As they explore the extent of Cerbos' policy capabilities, Steve is impressed by its adaptability to complex edge cases.

> **"I've thrown some pretty gnarly attributes at Cerbos, and Cerbos gets it right every time. And to me, when you have some really ugly edge case logic, the prospect of having to glue the two services together to do authorization is not appealing at all. Cerbos makes that a non-issue."**

Results

Security, confidence and the power to move fast

Thanks to Cerbos, NTWRK now boasts a robust and secure solution for access controls that they can confidently rely on to move fast, instead of trying to detangle permission logic.

> *"I used to stress about authorization, and Cerbos has removed an entire stress point for me around distributing permissions in general. And like I said, if I had this five years ago, I'd probably be much happier."*, Steve says.

With Cerbos in place, the team at NTWRK can deliver top-tier user experience and concentrate on faster app iterations.

Steve highlights the pleasant experience he had with Cerbos, praising its simplicity, developer-friendly tooling, and ease of implementation.

> *"I just brew install Cerbos and run it, and then point at it. And when I'm developing locally, I don't even think about it. It's just back there running in the background."*, Steve explains.

Steve recommends Cerbos to anyone seeking an authorization solution, emphasizing its ease of use, seamless integration with their overall system, and the responsive support from the Cerbos team.

"For any kind of startup, or anybody that's tried to do any kind of authorization, honestly, I would recommend Cerbos. It's really easy to set up and run. And all those weird edge case-y decisions - push it to Cerbos, because it just works.", Steve says.

As for the future of NTWRK and Cerbos, Steve and his team are eager to continue scaling their app with Cerbos' support, with plans to gate every single user through Cerbos policies in the near future.

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