

# LKQD TECHNOLOGIES

Every day, LKQD technology connects hundreds of publishers, vendors, advertisers, agencies and their video-related partners with millions of viewers globally across desktop, mobile and connected TV.

## BUSINESS

LKQD provides the industry's leading independent enterprise video advertising technology platform.

## CHALLENGES

LKQD needed an infrastructure partner that could handle millions of video advertising requests per second, while delivering optimal performance at an efficient cost.

## SOLUTION

Dedicated Servers, Managed Hosting

## OUTCOME

LKQD has access to cutting-edge technology, certified expertise and 24x7x365 support.



In recent years, video viewers have increasingly moved to digital devices, leading to exponential growth in video advertising. As the industry has grown, it has also become increasingly fragmented and complex. Beginning in 2014, LKQD Technologies developed a unified and scalable technology platform that enables buyers and sellers to reduce the complexity of their video advertising POINT solutions, connect with viewers across devices, integrate video advertising solutions and adopt programmatic buying and selling technologies, all within one platform.

Initially, LKQD processed a couple hundred thousand impressions daily, primarily serving mobile web and mobile app publishers. The company's technology has grown to now support more than 400 clients and the LKQD platform currently sees hundreds of millions of viewers globally across desktop, mobile and connected TV. Today, the platform processes millions of impressions per second and logs 800 billion ad metrics daily.

## LKQD EMBRACES TECHNICAL CHALLENGES

With explosive growth came a critical need for highly scalable performance and cost efficiencies. LKQD decided to move to Rackspace to maximize performance and reduce costs. Leveraging fully managed Rackspace Dedicated Servers for CoreOS and Kubernetes with a Managed Colocation Service Level and Ceph Object and Block Storage, LKQD technology provides high-performance, scalable ad serving and management, so its customers can focus on building their video advertising businesses, instead of worrying about complex technology.

LKQD initially ran on a public cloud. Christophe Clapp, CTO and Co-Founder, recounted, "We relied heavily on spot instances due to the pricing advantages, but as we grew we needed more stability and control."

Rackspace dedicated hardware increased infrastructure stability and compute capacity – without having to spend more money. "Our infrastructure is stable, it's always there and we don't have to worry about losing 30 percent or 40 percent of our compute capacity because of price fluctuations," said Clapp.

When LKQD made the switch to Rackspace, they also gained access to the latest Intel® Xeon® processor. "The fact that we run them on bare metal really gives us every ounce of performance that they have to offer, and it significantly reduced the footprint that we would've otherwise needed at Rackspace," Andrew van Dyk, VP of Engineering at LKQD explained.

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*"We ordered 600 servers and Rackspace got all of them racked and operational in five weeks. That's an incredible feat."*

ANDREW VAN DYK :: VP, ENGINEERING LKQD TECHNOLOGIES

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According to van Dyk, "The ability to scale quickly is key to our growth. We went with a managed hosting solution because we needed the best performance out of our service." They're running CoreOS as an operating system because it's secure and lightweight with Kubernetes as their application container platform. "Right now," said van Dyk, "we're running about a thousand servers, just under 45,000 cores and 7,500 containers. Each day, we process 800 billion events, so our servers are constantly running at full capacity. Given the amount of data we're processing daily, we need to be able to spill over into the cloud for additional capacity."

## SOLVING FOR SUPPORT

In order to maintain and grow their environment, LKQD needed more support. More than just the availability of a live person on the other end, they needed dedicated hosting and platform expertise to help them get the most out their technology choices. "In the public cloud, you're getting a very generic form of support," said van Dyk, "but at Rackspace we're getting a dedicated team that's always by our side to help at any time."

LKQD credits Fanatical Support® for keeping operations running without a hitch since day one. Van Dyk added, "They've always felt like a part of the team. We have weekly meetings with them and their engineers are always on the ball." For example, to get started, LKQD needed to stand up about 600 servers. "We ordered 600 servers and Rackspace got all of them racked and operational in five weeks. That's an incredible feat," said van Dyk.

## PUSHING DEEPER INTO THE RACKSPACE PORTFOLIO

The Rackspace relationship allowed LKQD to continue use and expand their existing Intel investments. "We're looking forward to testing the new Intel Xeon Scalable platform. With it, we can utilize more cores, have increased IPC counts and higher memory bandwidth," said van Dyk. Clapp agreed, "We have the potential of going from 22 cores to 28 cores, a 50% increase in memory channels and 20% more PCIe lanes. That would greatly enhance our per-server performance." Furthermore, they've also added Ceph Object Storage in Rackspace Private Cloud.

Should the company expand their presence to the EU, Asia and Australia, they'll have access to the Rackspace footprint of nine global data centers. Van Dyk added, "As we expand, being able to deploy servers around the globe, and have them turned up quickly with bandwidth and everything provisioned, is going to be very powerful."

## FLEXIBILITY TO BUILD INTO FUTURE

Impressed with the level of ongoing support, operational excellence and array of options, both Clapp and van Dyk plan to move into the future with Rackspace.

Cost savings is the biggest business impact of moving to Rackspace. According to Clapp, "Our customers greatly value low latency in the ad business because lower latency means more ads delivered, ads delivered with a better user experience, and ultimately, more revenue for the customers."

"The nice thing," said van Dyk, "is having the flexibility of the Rackspace Public Cloud, Private Cloud or dedicated hardware along with other cloud platforms. Even if we were switching technologies completely, Rackspace can fully support any direction we want to take."

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CHRISTOPHER CLAPP :: COFOUNDER, CTO LKQD TECHNOLOGIES

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## ABOUT RACKSPACE

Rackspace, the #1 managed cloud company, helps businesses tap the power of cloud computing without the complexity and cost of managing it on their own. Rackspace engineers deliver specialized expertise, easy-to-use tools, and Fanatical Support® for leading technologies developed by AWS, Google, Microsoft, OpenStack, VMware and others. The company serves customers in 150 countries, including more than half of the FORTUNE 100. Rackspace is a leader in the 2017 Gartner Magic Quadrant for Public Cloud Infrastructure Managed Service Providers, Worldwide, and has been honored by Fortune, Forbes and others as one of the best companies to work for.

Learn more at [www.rackspace.com](http://www.rackspace.com) or call us at **1-800-961-2888**.

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DED-CCS-LKQD-9551

JANUARY 11, 2018

