

Customer Case Study – Samsung

Samsung scales up for the biggest live TV event in U.S. history

To maintain millions of concurrent connections to Smart TVs, Samsung turned to Amazon CloudFront.

Our customer

Samsung is a giant in consumer electronics, known worldwide as a leading manufacturer of mobile devices, home appliances and cutting-edge Smart TVs.

How we helped

Professional Services On-Demand; coding and infrastructure; big data; custom VPC; Managed Public Cloud — Amazon Web Services (AWS), Amazon CloudFront, Amazon S3, Amazon Redshift.

The obstacles they faced

Samsung needed infrastructure to maintain over 4,000,000 concurrent connections — and all of that data being transferred in and out of Samsung Smart TVs during the biggest live television event in history.

What we achieved together

The solution successfully made all necessary connections — with headroom to spare. A huge amount of live data was processed and analyzed. Amazon now uses the project to show what its cloud infrastructure can accomplish.

SAMSUNG



"My team was swamped and the Super Bowl was a huge undertaking. Rackspace helped set expectations for us and handled any and all AWS issues we had."

Dang Tran,
Director of Data
Intelligence,
Samsung Electronics

Samsung scales with Amazon CloudFront for Super Bowl traffic

Samsung wanted to create a new type of advertising campaign for customers that connected on their Smart TVs during the Super Bowl's halftime show. The challenge was huge: How do you create and maintain more than 4,000,000 concurrent connections and all of that data being transferred in and out of Samsung Smart TVs during the biggest live television event in U.S. history?

Rackspace worked diligently to make sure Samsung's environment could scale and

handle the Super Bowl-sized traffic load all at once. Since the halftime show is such a highly watched live event, the tremendous flash of traffic arrives and then disappears much quicker than normal television content.

The team at Rackspace partnered with Samsung's developers to model this traffic load in the weeks leading up to the big game. This ambitious project required developers to write the code needed for Samsung's Smart TVs, and infrastructure specialists needed to build a scalable and elastic infrastructure that could handle 4,000,000 concurrent connections.

A Super Bowl-sized solution

Samsung uses Amazon CloudFront — Amazon's Content Delivery Network (CDN) — to push data back from the company's Smart TVs into AWS. The Smart TVs have a logging system that registers each box within AWS. Based on this information, Samsung can then tailor content and a unique user experience to each Smart TV viewer through Amazon CloudFront.

Rackspace and Samsung tested and built the Super Bowl halftime show solution for 500,000 total requests per second, all being driven through Amazon CloudFront.

Rackspace performed a significant number of load tests on a several occasions, with the load for each test each one increasing up to the size of the event. To test durability, Rackspace simulated massive traffic bursts across the system and was successful in making 1,000,000 concurrent requests per second.

To perform these load tests, Rackspace used a variety of tools. The Samsung team also provided Live TVs across America to help simulate these load tests, which created a realistic experience for what the Super Bowl load might look like during the halftime show.

Big traffic, big data

As part of this project, Rackspace worked with our Amazon partners to monitor traffic internally and view testing and production in real time. Having seen the solution successfully make more than 500,000 connections per second during the game, Amazon now uses this case study as an example of just what its cloud infrastructure can accomplish.

Additionally, Rackspace leveraged the power of big data through AWS. At the peak of the Super Bowl, around 2.4 million Smart TVs were being actively used. Within a custom built VPC, the high-volume data was delivered to an Elastic Beanstalk Node.js application.

Next, the real-time data was loaded and distributed to an Amazon Kinesis Data Stream, which was then sent to a multitude of consumer servers. Log data was then staged and loaded into Amazon Redshift from Amazon S3. By heavily utilizing Amazon Redshift, the large amount of live data originating from S3 buckets was constantly processed and analyzed.

Largely due to big data on AWS, Samsung delivered live feedback and data from more than 6.5 million Smart TVs.

Through our ongoing partnership with Samsung, Rackspace has been able to move more than 40 applications into AWS.

About Rackspace

At Rackspace, we accelerate the value of the cloud during every phase of digital transformation. By managing apps, data, security and multiple clouds, we are the best choice to help customers get to the cloud, innovate with new technologies and maximize their IT investments. As a recognized Gartner Magic Quadrant leader, we are uniquely positioned to close the gap between the complex reality of today and the promise of tomorrow. Passionate about customer success, we provide unbiased expertise, based on proven results, across all the leading technologies. And across every interaction worldwide, we deliver Fanatical Experience™. Rackspace has been honored by Fortune, Forbes, Glassdoor and others as one of the best places to work.

Learn more at www.rackspace.com or call **1-800-961-2888**.

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