

ELECTRONIC ARTS USES SEVONE TO ENSURE THAT ITS ONLINE GAMERS CAN PLAY ON.

MANAGING CAPACITY IN REAL TIME ELIMINATES NETWORK OUTAGES, KEEPS ONLINE GAMES ALWAYS UP AND AVAILABLE TO PLAYERS.



“The SevOne Platform helps our team to ensure a positive gaming experience[...]it’s a tremendously valuable tool for our team.”

—Susan Calland, Senior Network Engineer

Company

With 300 million registered players and \$4.4 billion in annual revenue, Electronic Arts is the world’s largest video game company.

CHALLENGES

Not long ago, the video game experience was much different than it is today. Back then, a player would go to a video store, buy a game, pop the disc into a console, and then it was ‘Game on!’.

Since then, a digital transformation has occurred, creating both opportunities and challenges for game makers. The video stores are now gone, and much of the gaming world has shifted to online mode. Today, every game Electronic Arts makes has an online component—often wildly popular, and therefore critical to the games’ success. Given how popular online components are with players, the networks that the games run on have become more and more important.

This network dependency reaches its peak in launch season, the period from September to January each year when new or updated games are introduced. Gamers, of course, love the action, graphics, sound, and competition that the games include, but if the network doesn’t perform well on launch day and thereafter, it can spell trouble for that game.

Network management is trickier in the video game business than it is in other industry segments for two main reasons—the ever-present need for speed, and uncertainty about the amount of capacity required.

With regard to speed and responsiveness, Electronic Arts must consistently deliver the high transaction rates players need. In Battlefield™ for example, if a player doesn’t get a shot off due to network latency, and instead, gets shot and loses, that player will likely get very upset. Unhappy players can have a disproportionate effect on how games are received in the marketplace. So consistently high transaction rates are a must, and latency of any kind must be avoided.

The second challenge is managing capacity, especially during the launch of a new game. Despite good capacity planning and the best guesses of seasoned staff, Electronic Arts (like every other video game company) never knows how many players they will be hosting until it actually happens. For example, the company was pleasantly surprised when over 13 million players logged on for its Battlefield I beta launch last fall.



Handling these challenges and making sure its network is always performing as required, is the job of the company's Technical Operations group. Within that group, the Network Engineering team is responsible for managing the hosting and network infrastructure for the online components of all Electronic Arts games. A team of 25 network engineers monitor and manage a global network, servers, storage, connectivity, and other resources to make sure that the company's network always meets players' demands for highly time-sensitive traffic delivery.

"My team and I have to make sure that our players can play their favorite games whenever and wherever they want to," said Susan Calland, Electronic Arts' Senior Network Engineer. "On most days that's easy, because our network traffic volumes are manageable and fairly predictable. But when we launch a new game, nobody can predict what's going to happen. We just have to wait and see, and be ready for anything."

With their previous network monitoring system, the Technical Operations team would get hundreds of thousands of alerts each week, most of which were false alarms. That system also didn't give the Network Engineering team the visibility they needed to identify and resolve problems quickly.

"We were pretty much forced to wait it out. When the call came in at 2AM telling us that a network problem was keeping people from playing, we'd all go online and try to figure out why," said Susan Calland. "It was an ineffective approach that wasn't helping player satisfaction. That's when we decided to switch to SevOne."

ENSURING PERFORMANCE IN AN UNPREDICTABLE ENVIRONMENT

The Electronic Arts Technical Operations and Network Engineering teams use the SevOne Platform to look at all of the different resources in the company's data centers. From the company's 'war room' in Austin, Texas, the team closely monitors all of the various shared services and their capacities to make sure players can interact with their games with the high responsiveness they expect.

The Network Engineering team set up policies in the SevOne Platform that generate alerts that tell them exactly what is actually broken. Instead of sending thousands of confusing alerts, the SevOne Platform sends far fewer, and the alerts identify what is actually broken, where it is, and what needs to be fixed. API-level integration with Electronic Arts' ticketing system automatically keeps the SevOne Platform in sync with that system. At a glance, the team can see the status of each ticket, including who it was assigned to, if it is being worked on, and if more resources are needed to resolve it.



TWO CAPABILITIES THAT POWER A PROACTIVE APPROACH

While the SevOne Platform has two features that are particularly helpful in enabling the Network Engineering team take a more proactive approach to network monitoring and management. Those tools are Total Traffic Graphs and Slope Alerting. Following are brief descriptions of how the team is using these features to manage traffic and avoid network outages.

- **Total Traffic Graphs:** An especially critical tool during game launches, SevOne's Total Traffic Graphs gives the team real-time visibility in all traffic coming into and out of the company's datacenters around the world.

"Throughout a launch, we can look at SevOne's real-time dashboards, and instantly see if anything surprising or concerning is happening anywhere in our global network," said Susan Calland. "At a glance, we can tell if we have any issues cropping up, and act quickly and surgically to deal with them before they blow up into larger problems."

- **Slope Alerting:** Due to the unpredictable nature of network traffic during the launch of a new video game, the traditional, baseline approach to alerting is not that useful. "There's no real baselines to these events," added Susan Calland. "What happened during the last launch might be completely different than the next launch, so historical baselining and standard deviation basically go out the window."

Instead, the team uses SevOne's new Slope Alerting feature. With Slope Alerting, the SevOne Platform analyzes the last six data points from a device. Electronic Arts polls every 5 minutes, so they get a 30-minute window, with alerts designed to fire off if the slope line goes too vertical too quickly. "With Slope Alerting, we can see a capacity issue much earlier, and act on it very quickly, adjusting that capacity to accommodate our players' needs well before their gaming experiences are negatively impacted. It's a world of difference over our old way, which was getting a flood of alerts at the 85–90 percent levels—when it's too late to head off the outage."

Susan Calland summarized the business value Electronic Arts has received as follows. "With SevOne, we're able to visualize our network operations more completely, more quickly, in real-time, and have those detailed views displayed in easy-to-understand dashboards. That visibility has helped us to improve our issue detection, identification, and mitigation capabilities enormously. The SevOne Platform helps our team to ensure a positive gaming experience for our players, especially during our critically important launch events. It's a tremendously valuable tool for our team."

About SevOne.

SevOne provides the world's most scalable infrastructure performance monitoring platform to the world's most connected companies. The patented SevOne Cluster™ architecture leverages distributed computing to scale infinitely and collect millions of objects. It provides real-time reporting down to the second and provides the insight needed to prevent outages. SevOne customers include seven of today's 13 largest banks, enterprises, CSPs, MSPs and MSOs. SevOne is backed by Bain Capital Ventures. More information can be found at www.sevone.com. Follow SevOne on Twitter at @SevOneInc.