

# GAME ON

IGG becomes a \$100 million company in less than 3 years with Dell servers and Dell Certified Partner Rev2 Technologies



SOLUTIONS  
• SERVICES



#### CUSTOMER PROFILE

**COUNTRY:** United States

**INDUSTRY:** Technology

**FOUNDED:** 2005

**NUMBER OF EMPLOYEES:** 550

**WEB ADDRESS:** www.igg.com

#### CHALLENGE

Online gaming startup IGG needed a reliable hardware platform and local partner to help construct a simplified, manageable network infrastructure and improve availability for game servers.

#### SOLUTION

Dell channel partner Rev2 Technologies recommended Dell™ PowerEdge™ servers and Dell PowerConnect™ stackable switches, and provided systems expertise and procurement, integration and delivery services for IGG's ever-expanding server installation.

#### BENEFITS

##### GET IT FASTER

- Dell Certified Partner Rev2 provides fast systems consultation, order management and delivery, and 4-hour technical support

##### RUN IT BETTER

- Intermittent outages eliminated with SAS hard drives
- IGG has experienced no hardware failures on Dell equipment
- More than \$500,000 annual savings in IT staff time

##### GROW IT SMARTER

- Stackable Ethernet switch improves scalability
- \$300,000 cost avoidance on data center move
- Revenue grew from zero to \$100 million in less than 3 years

The Dell logo, consisting of the word 'DELL' in a bold, white, sans-serif font, is centered within a black circle. The circle is set against a green background that has a slight gradient and a circular shadow effect.

It's 8 p.m. You're home from work and ready to do battle on the virtual high seas. Your character, Handsome Lance, is soon engaged in a melee with the Siren Queen—only to fall victim to her spear.

# “WE’VE NEVER HAD ANY PROBLEMS WITH OUR DELL SERVERS. NOT EVEN A NIC OR HARD DRIVE FAILURE.”

Kevin Xu, chief operating officer, IGG

“I wish I had more time to play,” you sigh. “Then I’d be better at this. I’d show those teenagers a thing or two.”

The game is “Tales of Pirates,” a multi-player online role-playing game from IGG. It’s free to play—that is, unless you want a little boost.

## PAYING FOR PERFORMANCE

The rationale and proven business model behind IGG’s many online games is simple: level the playing field between younger players who have copious amounts of time (and often very little money) and older enthusiasts whose gaming time is limited by work and family obligations.

“For a small fee, players can drink a potion that will double or triple their speed, or purchase weapons that will enhance their gaming experience,” explains Kevin Xu, founder and chief operating officer, IGG. “Players can also buy clothing and other items to decorate their characters.”

With more than 8 million registered players, these micropayments add up—but not if the servers that host IGG’s proprietary game server application go down. “If we’re down for a day, the business loses around \$100,000,” says Xu.

## PARTNERING FOR UPTIME

When IGG launched in 2005, the company leased dedicated, white-box servers from its Internet service provider, but the servers were old and unreliable. “I didn’t know much about servers, but I

learned a few things quickly,” Xu recalls. “Unfortunately, I learned quite a bit about the business impact of slow CPUs and insufficient memory.”

The real showstopper for Xu, however, was a hard-drive performance issue that caused approximately 30 seconds of downtime every two to three days. “All games in progress on the server would abruptly end, and players had to log in again and start over,” he says. “And that in turn caused network congestion, so it was kind of a domino effect.”

Xu began looking for a co-location facility where he could host and maintain his own server infrastructure. He wanted to standardize on one brand of server that would be reliable, and find a local partner that could configure and deliver those servers to allow Xu to concentrate on growing IGG’s business.

“One of the hosting providers we talked to recommended Rev2 Technologies, a local systems integrator and Dell Certified Partner, and said they had a great reputation,” says Xu. “So I called them. The very first time we talked, they solved my hard drive problem. It turned out that by using serial-attached SCSI [SAS] drives instead of SATA drives in our servers, we could improve performance. We followed their advice, and haven’t experienced that 30-second outage since.”

## 460 SERVERS, ZERO FAILURES

IGG purchased a Dell PowerEdge 1950 server with Intel Xeon processors through Rev2, complete with SAS

## HOW IT WORKS

### HARDWARE

- Dell™ PowerEdge™ 2950 and 1950 servers with Intel® Xeon® processors
- Dell OptiPlex™ desktops with Intel processors
- Dell PowerConnect™ 6224 Ethernet Switches
- Dell Remote Access Controllers (DRAC)

### SOFTWARE

- Dell OpenManage™ Server Administrator
- Fedora Core Linux®

### SERVICES

- Dell Basic Support Contract leveraging Dell advanced technical systems expertise with Dell’s Warranty Support resources
- Technical project requirements consultation with systems, integration and networking
- Post-sales inventory management and networking technical assistance

# “DELL SERVERS AND REV2’S EXPERTISE HAVE BEEN INSTRUMENTAL IN HELPING US GROW FROM ZERO TO A \$100 MILLION COMPANY THAT’S NOW THE CLEAR LEADER IN OUR MARKET.”

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drives in a RAID array to protect the data. “The server worked great,” says Xu. “We installed Fedora Core Linux, loaded our apps and put it into production. I knew we had found the right hardware partners in Rev2 and Dell. I tell them what I need and they give it to me—without me having to spend too much time thinking about it.”

Xu hasn’t looked back. IGG now has around 460 Dell PowerEdge 2950 and 1950 servers in its Bay Area co-location facility—the company’s largest server farm—as well as additional Dell servers at facilities in New York, France, China and Hong Kong. “We’ve never had any problems with our Dell servers,” says Xu. “Not even the typical things you’d think would happen from time to time, like a NIC or hard drive failure. The Dell hardware has been absolutely reliable.”

Rev2’s technical consultation, systems integration, procurement and inventory management assistance allows IGG to keep overhead low in the United States, where IT labor costs are relatively high. “I only have one person on my Santa Clara team dedicated to hardware, and Rev2 does the rest,” says Xu. “And this is an ongoing responsibility—we’re constantly expanding. We have already ordered another large batch of Dell servers to prepare for summer, which is our peak season. Without Rev2, I’d have to hire more people to handle the influx of hardware.”

## SAVING OVER \$500,000 A YEAR

System administration is done remotely by employees in China, using Dell OpenManage Server Administrator software and Dell Remote Access Controllers for out-of-band management. Remote administrators have full control of the server hardware and operating system from any client system running a Web browser, even if the server is down or hung.

“Our Chinese administrators are super happy with OpenManage,” says Xu. “And the Dell Remote Access Controllers make it easy for them to access the servers remotely. Without these tools, I’d have to add at least 10 system administrators to my U.S. staff.” That’s a savings of more than half a million dollars annually.<sup>1</sup>

## CREATING A HIGH-DENSITY NETWORK

Rev2’s vision and familiarity with Dell systems—hardware and software—helped IGG redesign its local area network for maximum density and flexibility. “All the game data is exchanged in the internal network, but all the users’ communication is exchanged on the exterior network,” Xu explains. “As the internal network grew to 30 servers, then 60 servers, then 100 servers, network congestion became really bad.”

Rev2 recommended a “stackable” Dell PowerConnect 6224 Ethernet switch, which can connect up to 576 servers in a stack of 12 switches. “We’re not seeing that congestion on the uplink port anymore,” says Xu. “Another benefit is that if any of our servers do go down, we now have the VLAN flexibility where we can just plug the replacement server into any physical network port and configure it to match the original port. In other words, we’re not locked into a physical 1U or 2U server location in the rack.”

The Dell switch was less than half the price of the Cisco switches that IGG was using previously, says Xu. “We’re now using Dell PowerConnect switches exclusively,” he says.

IGG has also standardized on Dell OptiPlex desktops and Dell Latitude laptops for its developers and business users. “Once I saw the high quality of the Dell servers and switches, I wanted to give my team reliable Dell client machines as well,” says Xu.

## A MOVING EXPERIENCE

Although IGG’s business is flourishing despite the economic downturn, its previous Bay Area co-location provider was not so lucky. “They had to shut down their hosting business because they couldn’t get enough customers,” said Xu. “So we had to move all the Dell servers to a new location.”

With the cost of downtime around \$100,000 a day, Xu sought to minimize the business disruption the move would cause. "Once again, we turned to Rev2," he says. "They provided us with 80 rails that we put on the rack prior to the move, as well as switches that we preloaded onto the rack, so we were able to do most of the cabling ahead of time. So all we needed to do on moving day was physically relocate the servers and connect them to the network and power. Total downtime was only six hours. Without Rev2, it would likely have taken us three entire days. Rev2 basically saved us \$300,000."

### FROM ZERO TO \$100 MILLION IN 3 YEARS

With robust Dell hardware and Rev2 providing front and back-line support, IGG has effectively removed all technological barriers to growth.

"Over the past two to three years, Dell servers and Rev2's expertise have been instrumental in helping us grow from zero to a \$100 million company that's now the clear leader in our market," Xu concludes. "It's really a miracle that it happened so fast. Dell servers fit the online gaming business perfectly."

<sup>1</sup>: The median annual salary for network and computer systems administrators was \$62,130 in May 2006, according to the United States Government Bureau of Labor Statistics. Ten full-time positions at \$62,130 equals \$621,300.

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