

Customer Case Study



All Systems Go



hi5 Networks
San Francisco, CA
www.hi5.com

Industry
Online Services

About hi5 Networks

- Social networking website
- #10 most visited website
- 60 Million Registered Users
- 4.5 million unique visits/day
- 200 million pageviews/day
- 50 Employees Worldwide

Key Benefits

- Single systems management solutions provides complete coverage for all technologies
- Combining feature usage metrics with performance provides key insight for capacity planning
- Historical trending information and group alerting creates early warning system to avoid outages
- Comprehensive management from Hyperic HQ allows team to succeed with less staff

hi5 Networks Grows to Support World's 10th Largest Website With Hyperic HQ

hi5 is a global social networking site where more than 60 million members come to stay in touch with friends, meet new people, create and explore content, and express themselves. Since launching in 2004, the company quickly became one of the fastest growing social networks, and the 10th most highly-trafficked website in the world according to Alexa.

With its 60 million members and 4.5 million unique visitors generating over 200 million page views per day, constant uptime and high performance are absolute musts for hi5.

"Our business, like many other online businesses, is based on our user's experiences. We make money off of paid advertising, and that advertising is based on how many users it reaches. Uptime is critical," said Akash Garg, CTO of hi5. "If our service goes down, we can't serve ads, and we risk adversely affect our users' opinion of our service, causing them to stop coming back to the site. Losing advertising momentarily isn't good, losing users is far worse."

In early 2006, hi5's popularity started to really take off. The IT infrastructure grew increasingly complicated as it scaled to support thousands of new users each day. The potential for problems—downtime, and performance issues—increased alongside the complexity. hi5 had been using a combination of Big Brother and Nagios as their systems monitoring software, which helped the company know when servers were down, but lacked the historical charting perspective to tell them when server performance was starting to degrade. Without the ability to trend performance and use it as a baseline for an early warning system, hi5 couldn't keep up with their rapid growth rate and risked costly outages. They needed a new approach.

Searching for a Solution

The hi5 IT environment is highly customized, and heterogeneous. It includes multiple terabytes of data and media files stored across an array of PostgreSQL databases and an EXT3 file system. The hi5 application was written in Java and runs on hundreds of Resin application servers and Apache web servers. The data center is filled with machines ranging from Dell Blades, SuperMicros, Dell 8-way Servers – most of which run SuSE Linux.

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Environment

- Multiple TBs of Data & Media
- Hundreds of servers with:
 - SuSE Linux
 - Apache Web Servers
 - Resin Application Servers
 - PostgreSQL Databases

Hyperic HQ Manages

- 25 different technologies
- 17 custom built applications
- 9,000+ managed resources
- 11,000+ metrics per minute

“Hyperic is like having an invisible team monitoring our systems around the clock, letting our operations team focus on scaling the business.”

Akash Garg
CTO, hi5 Networks

The operations team started to search for alternatives. They examined a number of possibilities, including Uptime and Zenoss. “Most of the other applications out there tried to repeat what Big Brother and Nagios had already done, even down to using the same colored boxes in their UI,” described Dan Gorman, Senior Systems Engineer at hi5. “We already had Big Brother and Nagios. What we needed was something better. Hyperic was the standout – bridging the gap between professional open source and commercial software. It had all the features of the big boys, but without the cost and better suited for our specific environment.”

Hyperic Gives hi5 What it Needs to Succeed

In February of 2006, after reading about Hyperic on a simple Google search, the hi5 team signed up for an enterprise trial. They downloaded Hyperic HQ directly from Hyperic’s site, and within minutes were using the software to inventory hardware, software and services in the hi5 infrastructure.

Immediately the team recognized that Hyperic provided far more coverage than its predecessors. The HQ product monitored both Resin and PostgreSQL natively – two key technologies that Big Brother did not recognize. Additionally, the team could now see the performance heuristics of their infrastructure over time, which was critical to being able to pinpoint the genesis of a problem. Since HQ was designed to be extensible, the team was able to write additional metric collectors that layered feature usage and business metrics on top of the performance data. The hi5 website serves up a variety of media files including photos, music and video – and the addition of these metrics enable the company to correlate performance with a spike in not just user traffic, but file downloads of the hottest new tunes or raciest new video.

Hyperic Insight Maximizes Data Center Potential

Over the course of the next year, the hi5 business grew exponentially. However, the team and infrastructure managing it didn’t need to, in part because of Hyperic.

Last November, the engineering team at hi5 was rationalizing its feature roadmap with the current production capacity and predicted they would need to increase their server environment by 50%, to support the new feature release. By using Hyperic, the operations team was able to reveal this additional investment was not necessary at that time.

“We knew our environment could handle the new features, we just needed to optimize performance. So we organized sections of the server farm into groups, using the HQ Mixed Groups functionality,” said Gorman.



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About Hyperic Inc.

Hyperic provides the only open source systems management software purpose-built for the fast-moving online services market. Hyperic's software provides unprecedented cross-stack visibility and helps enterprises to pinpoint, correct and prevent problems at every layer – including hardware, networks, virtualization, middle-ware and applications. Hyperic's technology-neutral approach supports innovation by enabling manageability across technologies in the market today as well as those of tomorrow. Hyperic's software manages online services businesses of all sizes, including hi5 Networks, eHarmony.com, MyNewPlace.com and more.

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"We then applied new features and performance improvements systematically to certain groups and proved empirically that we had satisfactory capacity. In fact, we had excess. It wasn't until 6 months later that we needed to increase our server count by 15% to accommodate additional growth. Hyperic helped us make those expensive decisions with confidence."

The same small and talented team has supported hi5's amazing growth without adding additional staff. "Traditionally, large scale IT shops like ours create a full scale Network Operations Center (NOC) that is staffed 24 by 7. With the complex alerting and early information on performance that Hyperic gives us, we haven't had to do that," stated Garg. "Hyperic is like having an invisible team monitoring our systems around the clock which lets our operations team focus on scaling the business."

hi5 and Hyperic Reach New Heights Together

Since starting with Hyperic, hi5's infrastructure has tripled in size and the complexity of the sites functionality has increased even more. The site was included among the top 100 websites on the Alexa rankings late last year, and the team knew it needed more automation to ensure they could keep pace. Again, they turned to Hyperic.

Capabilities like group alerting became critical. If the site hit a performance threshold, the team couldn't deal with hundreds of separate alerts for each server. Moreover, if they wanted to create a new alert, they didn't want to have do it hundreds of times. Additionally, the team wanted a single view that they could organize to show the status of recent events, alerts and track performance of groups of resources centrally. This single view would give them a steady picture of the health of their entire environment.

Scale also became a serious consideration, and the team needed to ensure that their management solution could keep pace with their accelerating growth.

"Hyperic 3.0 delivered in spades. We have the Operations Dashboard on a monitor on the wall so everyone who walks by can see our performance. Group alerting and the performance now really reflect a system of scale," said Gorman. "It's not a trivial task to centrally automate the management of several hundred machines. But Hyperic HQ 3.0 did it. Everything is fast."

"Hyperic's commitment to customer service, and track record of solving our IT management problems have been a crucial enabling factor in allowing us to scale to be the 10th largest website in the world," claims Garg. "Their dedication to solving bigger problems better than anyone else is evident in Hyperic HQ. With our size and complexity, I can't imagine ever using anything else but Hyperic for systems management."

