

## Yodlee Replaces HP OpenView with GroundWork Monitor for Its Entire IT Infrastructure

### CHALLENGES

- Commercial solution was difficult and costly to implement and maintain
- Solution required too much time to manage
- Solutions was overly complex and difficult to customize
- Upgrades proved to be cumbersome

### RESULTS

- Increased application availability
- Improved the quality of monitoring data gathered
- Reduced application error alerts from 2,000 per day to just 50
- Reduced personnel requirements from one full-time person to just one quarter of their time
- Improved monitoring system agility
- Reduced total cost of ownership by more than half

### INTRODUCTION

The Internet has become an increasingly vital link between financial institutions and their customers. Yodlee, a provider of innovative, reliable and secure technology solutions, helps the likes of American Express, Bank of America, Charles Schwab, Fidelity and Merrill Lynch leverage the online channel to build stronger and more profitable customer relationships—facilitating everything from viewing financial accounts, alerting consumers on transaction activity in their accounts and paying bills to transferring funds, and more.

Delivering this level of service is no small feat. Keeping Yodlee operations running smoothly requires more than 800 servers, 30 network devices, eight databases, a sophisticated in-house financial aggregation application and a team of two dozen IT professionals.

### PROBLEM

In 2000, Yodlee purchased HP OpenView to monitor its core application and network infrastructure. Implementation proved to be challenging given the solution's technical complexities and dependencies as well as its inflexibility and lack of adequate support. Cost also became an issue. Customizing monitoring functionality was time-consuming and dedicated resources were required to maintain and manage the system.

After four months of consultant time and three staff members, Yodlee placed the project on hold. Two years later, Yodlee implemented a monitoring solution based on HP OpenView that included reporting and a management portal. The solution monitored Yodlee's Linux application servers, database servers and network devices.

Operations were relatively stable until Yodlee upgraded its core application, migrated from Oracle 8i to 9i and increased its SLA requirements. These improvements forced a new set of requirements. The Yodlee staff had to develop custom scripts and integrate them with HP OpenView in order to properly monitor and manage their core application. In addition, the company had to write custom scripts to monitor the Yodlee application's database, Oracle 9i, because an Oracle 9i agent was not yet available for HP OpenView.

### Cumbersome, complex product

By 2004, the Yodlee team was growing increasingly dissatisfied. "HP OpenView required one person to manage the system full time and we didn't have that kind of bandwidth," said Tim O'Brien, SVP Operations and Information Security for Yodlee. Moreover, the custom scripts in place to monitor Yodlee's core financial application were resulting in a huge number of daily alerts. O'Brien and his team eventually decided to explore new monitoring options—and GroundWork Monitor was on the short list. Yodlee had become aware of GroundWork's open source-based solution when it was looking for SLA reporting options that were missing from HP OpenView.

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## SOLUTION

Yodlee’s goals for the new monitoring solution were very specific. First, the company wanted one unified solution for its application servers, network devices and application components. “We needed a single system that would monitor and provide visibility into our entire production IT infrastructure,” said O’Brien. “It had to be transparent so it could be configured and tuned easily, and it needed to accommodate custom script development as we evolved our core application.”

### Need for better quality information

Yodlee also expected better quality information from the new system, including more timely notification of critical issues and fewer false alarms. “Bottom line, we wanted to improve root cause analysis at the system and application levels,” said O’Brien. In particular, O’Brien and his team were looking for better data from the company’s JMS messaging system so that monitoring scripts could be adjusted to yield more relevant information and timely alarms.

### Goal of increased uptime and better resource utilization

The company also wanted to increase uptime and, at the same time, reduce resource requirements. Yodlee’s India NOC team alone had been spending 12 hours a day on monitoring and response, and these efforts were focused primarily on firefighting.

### Affordability and scalability were key

Finally, Yodlee wanted a solution that was both affordable and scalable to accommodate anticipated growth. “After making a significant investment with HP OpenView, we still had to buy a new spy or agent for each item we wanted to monitor,” said O’Brien. “We were looking for a solution that could be easily maintained as our infrastructure grew.”

## Open source vs. commercial options

Going in, Yodlee was cautious about switching to open source. Any open source solution had to meet the company’s rigorous security protocols, offer enterprise-level support and easily accommodate customizations and changes. After careful review, Yodlee concluded that GroundWork had the right set of functionality going in. “The key for us was that GroundWork provided what we wanted—not more and not less,” O’Brien explained.

## RESULTS

Since deploying GroundWork Monitor, Yodlee has seen improvements across all of its key buying criteria. Availability, for instance, has improved at the application level. This is because custom plugins now monitor application status and performance metrics, so any potential issues are caught and resolved before outages occur. Reports based on these performance metrics also provide additional insight that helps the team determine the performance impact of changes to applications or configuration settings.

### Faster error identification and resolution

Yodlee is also experiencing fewer application error alerts—from 2,000 messages per day to an average of just 50. Previously, Yodlee’s monitoring scripts monitored all layers of the application and system—often resulting in redundant messages. Working closely with the Yodlee IT staff, the GroundWork implementation team implemented more sophisticated correlation logic, resulting in a dramatic reduction in spurious alarms. In addition, the team implemented a more precise error message classification so error messages get classified in terms of severity, type and subtype.

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“Now, we have fewer and more relevant messages, and we can see why they were generated,” said O'Brien. “When problems do arise, we can fix the application faster, and we're fixing errors that weren't getting attention before at all,” said O'Brien. Most importantly, application issues are getting addressed before they affect customers. “We know before customers do if there is a problem. This way, we work under less pressure and are generally more proactive and focused on relevant issues,” he explained.

#### Increased uptime

Uptime has also improved. With GroundWork Monitor, Yodlee is able to identify more problems and respond more quickly. “This represents huge change. Before, if two of our application servers were down for a significant amount of time, service to customers started to degrade. Now, before customers even notice, we know the servers are down, we take action, and we are back in business,” O'Brien said. He added that while these kinds of problems had previously been forwarded to the next NOC shift, today they are getting addressed in the same shift.

#### Improved resource utilization

Yodlee says it requires one quarter of one person's time to manage the GroundWork Monitor system versus one full time person with its previous solution. “With HP Open View, there were too many things we had to customize and then test,” said O'Brien. “The maintenance lifecycle was longer because it is a much more complex application.”

#### Improved monitoring agility

With GroundWork Monitor's open architecture, Yodlee is better prepared to adapt the system to changes in its application and infrastructure. “If we want a new type of functionality, with an open source solution like GroundWork, we don't have to wait for a software vendor to write a new script. We can tap the community or simply write our own plugin. This has enabled us to move and innovate much faster,” said O'Brien.

#### Benefits of the console

GroundWork Monitor's management console has been a welcome addition. “We're able to see more performance metrics, including statistics on the application layer, and in a graphical format. We now have information about what's going on and we are spending time on the right things.”

#### Lower overall TCO

All told, the GroundWork Monitor system, including software, custom development and implementation cost Yodlee less than half what it would have cost to achieve the same level of functionality through customization of HP OpenView. Including a customized SLA reporting system, customized monitoring of Yodlee's application, on-site deployment and the first year of support, the complete GroundWork Monitor system has cost approximately \$200,000. To achieve the equivalent level of functionality with HP OpenView would have cost \$200,000 to \$400,000 just for the OpenView agents, without any custom development work or support.

#### ABOUT GROUNDWORK

GroundWork provides open source software and solutions for network and systems monitoring and management. With GroundWork solutions, enterprises leverage the flexibility and value of open source to achieve enterprise-level availability, performance and operational efficiency at a fraction of the cost of traditional software.

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