opentext™

Case Study

HPE

HPE IT identifies the source of a problem 72 times faster with Operations Bridge Analytics (OBA).

Overview

When you're running the IT operations organization for one of the world's largest technology companies, you have hundreds of thousands of users depending on the availability and performance of your IT services. That's the case at the HPE IT organization, which provides IT services to support more than 300,000 employees across the global HPE enterprise. To help maintain the highest levels of availability and performance for IT services, the HPE IT organization turned to Operations Bridge Analytics (OBA), an AI operations solution designed to leverage the Big Data generated in today's complex IT environments and turn it into actionable insight.

"We're now able to bring data, reporting, and analysis together in just one instance, whereas in some cases with past products—and with less data—we might have needed 13. Any IT organization, as it grows, will eventually experience an economy-of-scale factor that makes it hard to troubleshoot manually, making OpsAnalytics an essential investment."

FUNCTIONAL ARCHITECT
HPE IT

Challenge

Managing a Complex IT Environment

The HPE IT organization manages more than 20,000 databases, over 35,000 servers, 60,000 network devices, and 2,000 applications spread across traditional and private cloud data centers. The expectation is that HPE IT will deliver five 9s of availability, or services that are up and running 99.999 percent of the time.

To meet this requirement, HPE IT makes heavy use of management tools for data center automation, proactive monitoring, and lights-out operations. While these tools are highly effective, they aren't necessarily designed to ferret out the causes of complex issues that span technology silos. Sometimes IT performance issues or outages arise while various management tools indicate that all is well.

"When this happens, SMEs from different data center domains get together in a war room to figure out what the problem is," explains the functional architect in the Enterprise Services unit at HPE IT. "Every SME has their own tools

Hewlett Packard Enterprise

At a Glance

- **Industry**
  Software & Technology
- **Location**
  United States
- **Challenge**
  Maintain the highest levels of availability for thousands of databases, applications, servers, and network devices.
- **Products and Services**
  Operations Bridge Analytics
- **Success Highlights**
  + Pinpoint the root cause of a complex problem 72 times faster (in 30 minutes vs. 36 hours)
  + Increased uptime for critical business services with fast root-cause analysis
  + Automated key aspects of costly, labor-intensive troubleshooting tasks

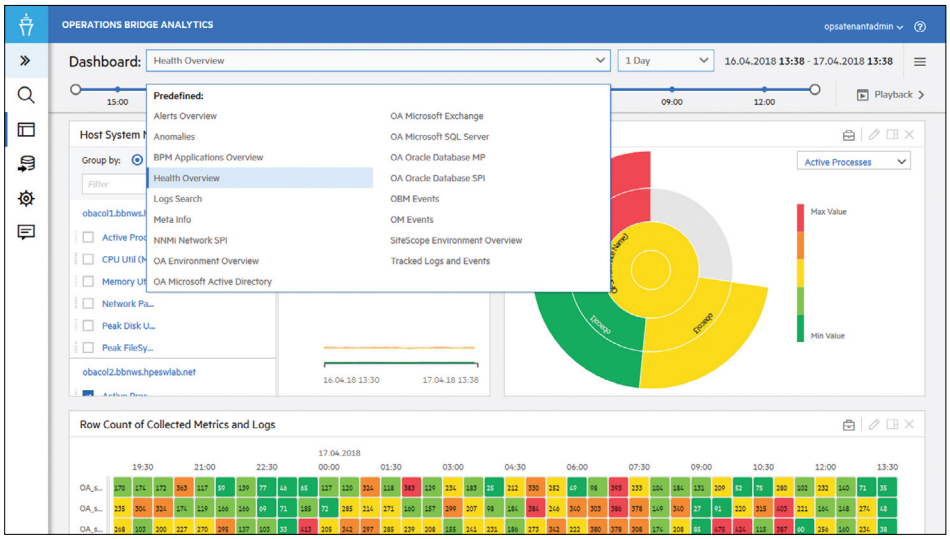

Figure 1. A dashboard view. Operations Bridge Analytics provides visual dashboards and analytics of all data, including log analytics, moving averages for back-end, network, and client transactions as seen here.

to do analysis on their data. You could have 10 people involved on calls that go hours at a time."

Solution

Operations Bridge Analytics for a Comprehensive View of Operations

"Our starting point was that we knew we had good information in silos, but we wanted to find a way to bring it together and use it in a unified cohesive way," the functional architect says. "Micro Focus (now part of OpenText™) Operations Bridge Analytics breaks that siloed barrier, collecting all the information into a single analytics engine."

In HPE's private cloud, HPE IT is using OBA to analyze over 15,000 virtual machines, and plans to extend OBA in its traditional data center. The solution efficiently consolidates, manages, and analyzes massive streams of IT operational data, such as topology performance metrics, availability metrics, machine data, events, and log data.

Operations Bridge Analytics features intelligent search, visual analytics, and guided troubleshooting to help HPE IT easily build operational dashboards to quickly analyze and pinpoint a root cause faster. This solution applies powerful analytics leveraging OpenText™ Vertica™ and ArcSight by OpenText™ capabilities.

"[OBA] doesn't require a whole team of experts to analyze the data and resolve problems," the functional architect said. "All this can be done quickly and easily by IT professionals with basic-level skills."

Diverse Use Cases

The HPE IT database team is using HPE Operations Analytics to address problems such as these:

- Database parameter change causes performance degradation
- Connection storm causes performance degradation
- Checkpoint incomplete causing database performance issues
- High active sessions causing performance degradation
- Archive space filling up and causing database to hang
- Auditing of configuration changes
- Tracking violations of application account usage by individual users
- Analyzing capacity and trend issues
- Out-of-the-box analytics
- Data analytics capabilities come with
- HPE Operations Analytics out of the box.

They are included in a fixed-pricing structure that is not dependent on data volume. These capabilities include:

- Guided troubleshooting
- Automated log analytics
- Visual analytics
- Predictive analytics
- Intelligent search
- Content framework

Results

Identifying a Root Cause When All Else Fails

In one of many uses cases involving IT event analysis, HPE IT leveraged OBA to quickly identify the root cause of a major network performance issue that was blocking email and SharePoint access for large numbers of employees.

In this case, Network Node Manager started to generate thousands of critical events into OpenText™ Operations Bridge. Faced with this overwhelming flood of events and days of troubleshooting later, HPE IT was still unable to find the root cause. Administrators then turned to OBA for help.

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"Within a half hour we were able to create a unique dashboard optimized to this use case, which helped us quickly resolve the situation," the functional architect said. "To be clear, most of the time was spent in creating the dashboard, deciding what data source we should analyze. The actual root cause identification was done in minutes with OpsAnalytics, now Micro Focus (now part of OpenText™) Operations Bridge Analytics." The issue turned out to be a starved port on a network switch, a problem identifiable by analyzing massive amounts of log data.

Improving Performance for a Mission-Critical Application

In another use case, the HPE IT database management team leveraged OBA to improve the performance of an online order management application. This mission-critical application provides customers and partners with up-to-date information about products they have ordered.

When this highly visible customer-facing application experienced severe performance degradation, certain business functions came to a halt.

"When an outage like this occurs, we are essentially out of business," says Nagendra Solanky, Strategic Technologist for HPE IT Global Data Services. "We're losing money and credibility. Naturally, our first order of priority is to bring the app back up."

In this case, the team had not yet deployed OBA, and the troubleshooting process was long and involved. It took 36 hours to identify the root cause of the problem—a database configuration issue—and two weeks to clear the backlog of transactions that were not processed during the outage.

"In problem situations, we spend a lot of resources across our team and other HPE IT teams to figure out what's wrong," Solanky says. "Troubleshooting across a landscape with so much information is virtually impossible from a human standpoint. For the most part, when this occurs, we are not able to find the root cause."

Soon after this event, HPE IT deployed OBA, and the Global Data Services team recreated the same type of database configuration issue in a test case. With OBA and its powerful log analytics and event analytics capabilities, they identified the root cause of the problem in less than 30 minutes.

"With OpsAnalytics, we fixed the problem in a matter of minutes," Solanky says. "OpsAnalytics gave us key metrics on application performance, database performance, and OS/platform performance that all came together in one place so we could triage and diagnose more effectively."

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