Analytics-Driven Approach Transforms IT Operations at Micron Technology

Executive summary

As a global leader in advanced semiconductor systems and with a broad memory solutions portfolio, Micron Technology, Inc. strives for high service quality that is critical to ensuring a great customer experience and keeping the competition at bay. To maintain its competitive position in the industry, Micron needed to innovate its IT operations strategy. Since deploying Splunk IT Service Intelligence (ITSI), Micron has seen benefits including:

- Adopted an analytics-driven approach to transform its IT operations and business
- Reduced business-impacting IT incidents by more than 50%
- Slashed mean-time-to-resolve major IT incidents by 32%
- Reduced the number of major IT incidents by 23%

Why Splunk

Micron Technology is a diverse multinational company with 18 manufacturing sites in the U.S. and Asia. Its product portfolio includes memory and storage technologies including DRAM, NAND, NOR and 3D XPoint. Its Manassas, Virginia facility's Manufacturing IT department manages the systems that provide product tracking, equipment integration, material handling and engineering analysis software.

According to Brian Best, Micron's IT director, the Manufacturing IT department previously lacked enterprise-wide visibility into its IT operations. While teams used various tools, none offered the ability to correlate critical IT systems in real time. This reactive approach to IT monitoring hindered the company's primary mission—to ensure that its manufacturing facilities produce and ship wafers without any system interruptions or unexpected system impacts. While considering its options for upgrading its IT operations strategy, the company briefly looked at Elastic Stack, among other tools. "We learned that a lot of the functionality not available in the other tools, like Elastic Stack, was available off-the-shelf with Splunk ITSI and there was an epiphany among the team members when we realized, 'Hey, this tool could really be used to break down those silos to provide transparency across IT and service domains,'" Best says.

Industry

- Technology

Splunk Use Cases

- IT operations

Challenges

- Needed to maintain service quality to remain competitive
- Data silos limited teams' abilities to identify, resolve and prevent IT issues

Business Impact

- Adopted an analytics-driven approach to transform its IT operations and business
- Dramatically reduced time-to-resolve and number of IT incidents
- Real-time visibility enables engineering teams to share data and expertise
- New IT operations strategy enables company to catch issues early to avoid business impacts

Data Sources

- Syslog
- CISCO SNMP
- HP OpenView
- Third-party applications
- Internal proprietary applications
- Manufacturing production data

Splunk Products

- Splunk Enterprise
- Splunk ITSI

Healthy network visibility

Previously, the network engineering team relied on several tools to monitor network health, but only the network engineers had access to the monitoring tools. When an event occurred, network engineers were the only team members who could determine whether there was a network issue. "We've been able to ingest data from those network management tools into Splunk ITSI so that everyone who is dependent on the network, including systems administrators, database administrators and application folks, now has visibility into the health of the network," Best explains.

Ensuring business service availability

Today, Micron Technology relies on Splunk ITSI for everything from event management alerting and incident management to problem and change management. The solution is helping Micron not only gain much needed real-time visibility but also save time and reduce the impact of IT incidents on its business. Overall, Best notes that Splunk ITSI has helped Micron reduce business-impacting IT incidents by more than 50%, mean-time-to-resolve IT incidents by 32%, and the number of major IT incidents by 23%. "We don't have to wait for a network engineer to get on the phone and tell us that the network is healthy. Everyone is able to see that for themselves," Best says.

Breaking down silos to leverage data, expertise

Every morning, based on custom reporting provided by Splunk ITSI data, Best and his team receive a report of KPIs, typically the top 10, that have been alerting over the previous 24-hour period. If a certain amount of alerting has occurred, there is a requirement to address that KPI.

According to Best, in the event that an issue does occur, all the teams can be involved to ensure that something critical isn't missed. In addition, Splunk ITSI has expedited the Manufacturing IT team's ability

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Brian Best,
IT Director, Micron Technology

to build dashboards that provide a macro view of the environment. "Splunk ITSI enables us to break down the walls of those silos such that the expertise of the entire organization can be used to help each other out," Best says. "Splunk ITSI allows us to see all the data across all domains."

And, while the teams are now equipped with a new IT operations strategy that enables them to catch a lot of issues up front, "If we do happen to wind up in a major incident, Splunk ITSI is the first place we go," Best concludes. "We always ask ourselves the question, 'Did ITSI help us figure out where the problem was?' Every time the answer has been, 'Yes.' That tells us that we have the right KPIs in place and the right services and dependencies defined."

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