UCAS Enhances Customer Service Through Improved Application Management

Executive summary

UCAS is a charitable organization responsible for managing applications to higher education institutions (HEIs) in the UK on behalf of its university and college members. It processes over 650,000 applications from students each year. UCAS needed to search and visualize a large volume of machine-generated data to streamline reporting, ensure service uptime and maintain service level agreements (SLAs). Since deploying Splunk Enterprise, UCAS has seen benefits including:

- Higher availability of UCAS systems
- Insight and visibility across multiple systems
- Improved security of personal data

Why Splunk

Although UCAS is active year-round operating application services, the service peaks in mid-August on A level results day as students log into Track, UCAS' online application system, to find out whether they have been accepted into their chosen university or college. This places much more pressure on UCAS' IT infrastructure than any other point of the year. In order ensure site uptime and application performance, UCAS was faced with the challenge of collecting, searching and visualizing a large volume of machine-generated data. Unfortunately, this was a laborious and time-consuming manual process that did not allow for correlation of key system events. UCAS' IT Operations team was also tasked with improving monitoring and reporting across the IT landscape.

The UCAS IT team (application support, infrastructure support and architects) deployed Splunk software for troubleshooting, performance management and operational business analytics. The Splunk solution gives UCAS' IT team a series of visualizations of system performance, key operational metrics (broken down by HEI), their usage, the queries they are running and how the various applications are functioning. In addition, senior UCAS executives now use Splunk dashboards to get insight into key performance indicators (KPIs) and service level agreements (SLAs).

Industry
- Higher education

Splunk Use Cases
- Application delivery
- Business analytics
- IT operations management

Challenges
- Needed to collect large volumes of machine-generated data such as log files
- Inability to effectively search and visualize information across multiple key systems
- Needed to improve monitoring and reporting across the IT landscape

Business Impact
- Improved customer experience for students and HEIs
- Improved visibility and analytics at CxO level
- Increased availability of key services at peak times
- Minimized risk of outage and subsequent business impact
- Improved security of personal data
- Holistic view of systems for Application Support teams

Data Sources
- Log files from Oracle Application Server and Database
- Microsoft products including IIS
- Windows OS registry
- Custom application logs
- Red Hat Linux logs
- AWS, Azure and Rackspace

Splunk Products
- Splunk Enterprise
- Splunk on Splunk (S.o.S)

Operational visibility leads to rapid issue resolution

Deployment of Splunk software has enabled UCAS to provide a consistent approach to log collection and retention and expose that data in an easily searchable form. Logs were previously available by accessing each server; however, this required system administrator time and did not allow related events on different systems to be easily found. With Splunk, UCAS is able to rapidly resolve production issues, ensuring that any students or HEIs trying to use the system could easily access it, even at peak times.

In addition, by capturing machine data of system usage, UCAS gains visibility into real-world demand for its applications and services. This captured system information is used to allow creation of performance test cases. This identifies potential issues, which can then be resolved preemptively.

Real-time monitoring streamlines security and operations

UCAS processes personal data, so security is extremely important. Using Splunk software has enhanced UCAS' ability to maintain its highly secure system architecture. UCAS has created specific Splunk configurations for its IIS server deployments and custom application logs. UCAS has also integrated Splunk to Hyperic for wider systems management. Additionally, UCAS uses the Splunk on Splunk (S.oS) app for managing the Splunk deployment. This allows UCAS to continue to use its existing systems management tools in tandem with Splunk software to gain a 360 degree view of operations and infrastructure.

Using Splunk Enterprise, UCAS can get insight into how each of its services is running. UCAS has around 15 dashboards that give real-time monitoring and

"Using Splunk enabled us to provide an enhanced service to our customers. We chose Splunk for its speed of getting started and feature-rich solution at a manageable cost. During our busiest time of the year, there was a big spike in app server CPU load that we were alerted to by Splunk. We used a Splunk dashboard to find the spike and then to drill down, identify and resolve the issue with an individual user of our systems."

Peter Raymond, Solution Architect
UCAS

insight into system load and response times. This real-time information allows UCAS to provide a better customer experience to HEIs and student applicants.

Running at peak performance

Splunk Enterprise is used by UCAS to provide services for application management and operational insight to keep the organization's IT running at peak performance. Additionally, UCAS has delivered a number of dashboards to provide insight across business and IT. A number of these dashboards make up part of their Joint Operations Centre (JOC), giving UCAS a good view of Operational Intelligence across system performance and customer experience. With insight and visibility across multiple systems, UCAS is now able to track down the cause of errors and potential operational disruption. This rapid resolution of production issues leads to UCAS' systems being highly available, which in turn leads to happy executives and students being placed at the right universities and colleges.

Download Splunk for free or get started with the free cloud trial. Whether cloud, on-premises, or for large or small teams, Splunk has a deployment model that will fit your needs.

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