

# New York Regional Education Agencies Unify Data to Improve Operations and Accelerate Student Learning



## Executive summary

Technology is a key component of K-12 educational instruction and school district operations, but the challenge is how to use technology effectively while ensuring the privacy of sensitive student data. In New York state, a project called RIC One offers a family of services that provide end-to-end, fully automated data integration and single sign-on for applications that students, teachers and administrators use within school districts to improve school operations and classroom instruction. Since deploying Splunk Cloud and Splunk Enterprise for central log management and application monitoring, RIC One has seen benefits, including:

- Supporting districts statewide while ensuring student data privacy
- Eliminating time-consuming manual data entry processes
- Saving costs with easy-to-use and provision cloud solution
- Enabling small, distributed statewide team to work efficiently

## Why Splunk

In New York, Boards of Cooperative Educational Services (BOCES) partner with school districts to provide shared educational programs and services that help meet the evolving educational needs of students. Currently, 12 Regional Information Centers (RICs) across the state, organized under BOCES, are collaborating on the RIC One project.

As the project got underway, the team responsible for infrastructure and operations needed to collect log data to monitor the many components that make up the RIC One technology stack. The team relies on several open-source tools and initially considered various options for log aggregation and data visualization. The team selected Splunk Cloud because of its need for a central logging solution, since the components of the stack are deployed, in part, to both Amazon Web Services (AWS) and local infrastructures in all of the RICs throughout New York state. A key benefit of Splunk Cloud was that it required fewer servers for the team to maintain and administer.

## Centralized application monitoring

RIC One has developed an Application Programming Interface (API) that provides education application developers with an easy and consistent way to access data, including class roster data, while enabling school

### Industry

- Education

### Splunk Use Cases

- Log management
- Application delivery
- IT operations
- Cloud solutions

### Challenges

- Manual application administration and login was time-consuming for teachers
- Required centralized log management solution to monitor application performance
- Needed to ensure secure student data management

### Business Impact

- Enhances overall educational experience with simplified access to relevant applications at any time
- Easier user and application management reduces IT burden
- Promotes efficiencies and enables districts to implement new IT solutions with ease
- Ensures security of student and teacher data across districts
- Cloud solution is easy to use, provision and is cost-effective

### Splunk Products

- Splunk Cloud
- Splunk Enterprise
- Splunk App for AWS
- Splunk for OpenAM App

districts to retain complete control of privacy and security for their students and staff. Data is partitioned into 12 regional data providers hosted within the private cloud of the RICs. The RIC One team also developed RIC One LOGIN, which gives students and staff single sign-on capability for logging in to instructional and administrative apps and significantly saves time versus older processes that required teachers to enter student information manually.

The RIC One infrastructure team builds technology stacks for VMware and Microsoft Hyper-V, and also uses Docker and several other solutions. Once a RIC deploys a stack into its infrastructure, the RIC One infrastructure team no longer has visibility into it. Therefore, the only way the RIC One team can get visibility into its applications to see how they are performing and to troubleshoot is to have centralized application management.

“We don’t have access to these sites where our applications are running. So when normalization of student data is encountering errors, or when the API isn’t responding as we thought, having those applications log centrally and having those alerts and dashboards right in front of us has been huge,” says a RIC One staff member. “We’re such a small team, so it would be more expensive if I had to dedicate a guy to manage, run and build visualizations, whereas with Splunk Cloud it was ‘set it, forget it and it works.’”

### Proactive monitoring, alerts and visualizations add value

RIC One relies on Splunk Cloud for proactive log monitoring and ensuring that processes are running and succeeding every day. Splunk Cloud alerts the team if one of the processes fails, enabling them to resolve issues quickly. In addition to Splunk Cloud, the RIC One infrastructure team relies on Splunk Apps, including the Splunk App for AWS, which offers critical insights into its AWS account. In addition to Splunk

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#### Staff Member, RIC One

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Cloud and Splunk Apps, the RIC One project is also running Splunk Enterprise on-premises to safeguard students’ personally identifiable information.

According to the RIC One team, the ability to demonstrate the project’s successes to a superintendent or a director of technology has been gratifying. For example, when the team created a graph to show that they have authenticated 12,000 people and connected them to 36 different applications in the last 30 days, they received extremely positive feedback.

“I don’t think we could be operating without Splunk. If we had to manually go to these different places to find this information and do data correlations without the notifications, we wouldn’t be where we are,” says the RIC One staff member. “Splunk is so powerful that if you have all that information there, what you can do with it is just endless.”

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