



Cloud Filtering in Education

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Cloud Filtering in Education

Introduction

There was a time not so long ago when content filtering for schools was always delivered through on-premise, hardware-based solutions. Filtering wasn't something school districts were ready to think about moving to the cloud.

All of this has changed in the past few years. The move to 1:1 programs has made cloud-based filtering a logical step for schools, as well as the popularity of:

- Chromebooks, which are fundamentally cloud-based devices
- Cloud-based directories such as G Suite and O365
- Take-home programs, which lead to devices being used off campus as frequently as they're used on campus

50% of K-12 IT services are already in the cloud

Today, most schools are ready to reap the benefits of moving their filtering systems to the cloud — as long as their concerns are mitigated by the proper solutions. In fact, according to a 2017 CoSN survey, 50% of K-12 IT services are already in the cloud. Cloud-based filtering is a logical next step for schools.

How Cloud Filtering Works

With cloud filtering, no hardware sits inline on your network to capture and filter web traffic. Instead, an agent or extension may be installed on devices, or a network policy may redirect all traffic to the cloud for filtering. The best cloud filtering solutions provide both: agent-based device filtering and a solution for other, agentless network traffic.

Benefits

There are some significant benefits to cloud filtering and not having to purchase, maintain, update and upgrade hardware for filtering.

The costs of cloud filtering are a net savings compared to appliance models.

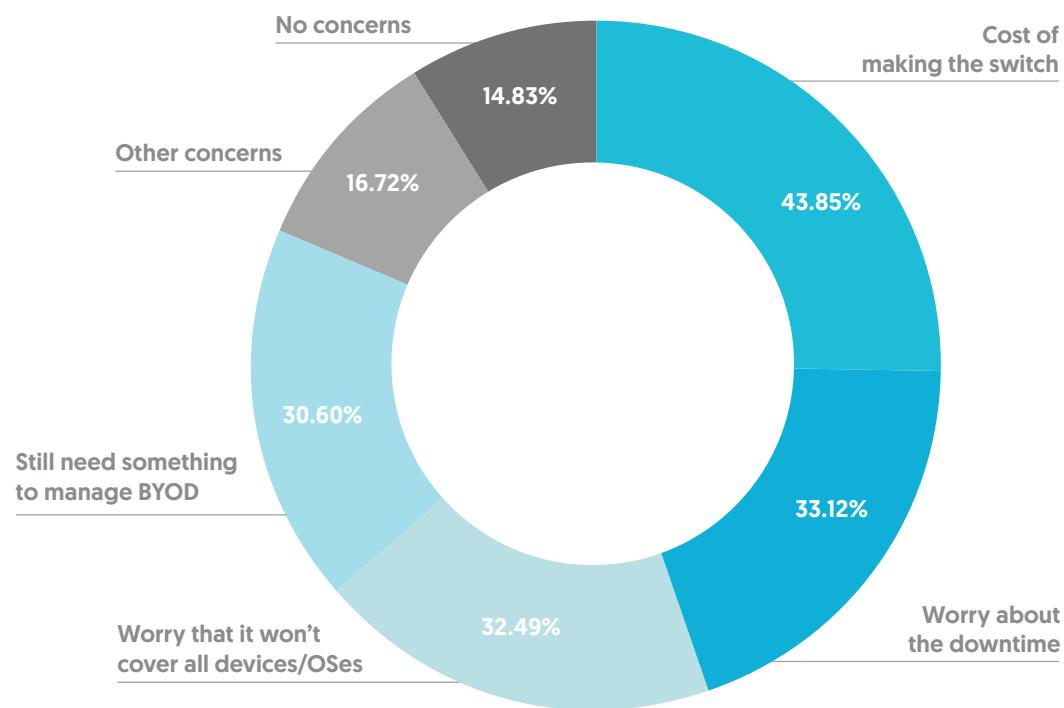
-  Cost savings
-  Time savings
-  Faster implementation
-  Flexibility for changing school needs
-  Greater, immediate scalability
-  Real-time data processing and AI
-  Automatic updates
-  A seamless experience (for end-users and admins) between on- and off-campus filtering

The costs of cloud filtering are a net savings compared to appliance models – in terms of upfront cost of a solution as well as time costs of management – for most schools. With traditional appliance filtering, hardware is the biggest cost; that hardware has to be managed, updated, and typically increased as school bandwidth grows or proxy and decryption needs change. Cloud filtering requires none of these hardware costs.

Concerns

Filtering is an essential service for Children's Internet Protection Act (CIPA) compliance and student safety, and schools need to address any concerns before making the switch.

What are your biggest concerns with cloud filtering?



 Other concerns: bandwidth; quality of reporting; compatibility with take-home devices; filter bypass attempts

Cloud Filter Checklist

Here are some critical considerations — questions you should ask any provider — as you research cloud filtering solutions.

| The Cloud | Filtering Capabilities |
|--|--|
| <p>Schools need to make sure their filtering services are hosted in a scalable, secure, reliable infrastructure.</p> <ul style="list-style-type: none">✓ Where is the cloud hosted?✓ Where is my data stored?✓ Is my data separate or mixed with other schools'?✓ Is the solution compliant with General Data Protection Regulation (GDPR)?✓ What's your average downtime and service level agreement? | <p>Schools need to ensure their cloud solutions offer critical filtering functionality.</p> <ul style="list-style-type: none">✓ What operating systems/devices are supported?✓ How does the cloud filter filter BYOD devices on the school network?✓ Does it filter IoT devices throughout the district?✓ Is it CIPA compliant?✓ What are its directory integrations?✓ Does it decrypt SSL traffic?✓ Will I need to use a second filtering solution for any other devices or traffic?✓ What additional features does it provide?✓ Does the solution cause latency on devices or my network?✓ What does the back-end filtering database look like? How large is it, how many categories does it have, how is it updated, and how are unknown URLs handled? |

Questions you should ask any provider

Reporting

Cloud-based filtering should provide powerful reporting capabilities.

- ✓ What reporting features are included?
- ✓ Are parent reports available?
- ✓ How can reports be shared?

Providers

New players in the cloud-based filtering space may not have the experience to provide the services and support schools need or the stability to continue providing them.

- ✓ How long have you been providing filtering to schools?
- ✓ Where are your developers located?
- ✓ How is your roadmap determined?



With Lightspeed Relay, we have only have to deal with one system.”

Chad Burlingame, Systems Administrator, Chippewa Falls Area Unified School District

Relay

With the appropriate, cloud-based filtering solution, schools' concerns are alleviated.

Relay is a powerful, end-to-end, cloud-based filtering solution from Lightspeed Systems. It is a cost-effective and powerful filter that eliminates the need for other solutions because it covers every device and OS — including BYOD and IoT devices — on and off school networks.

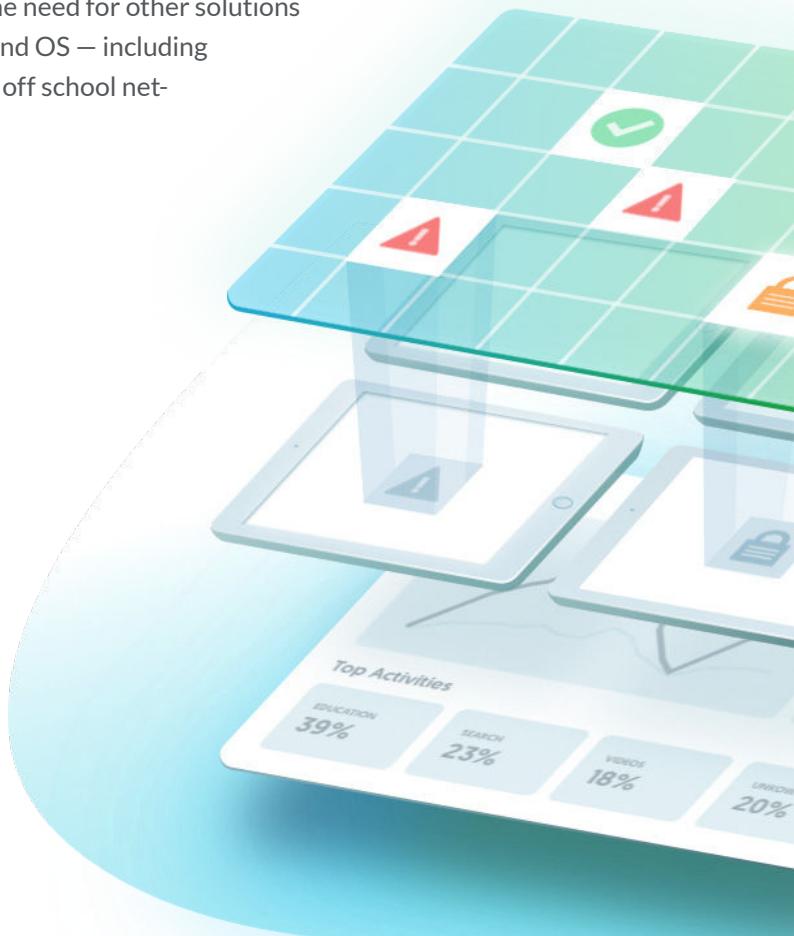
Relay is built upon 20 years of filtering expertise, enhanced with the most innovative features and functionality.

The Relay Cloud

Relay is hosted in Amazon Web Services, the most secure and reliable cloud infrastructure available. AWS is built to offer scalability and redundancy without requiring customers to purchase their own hardware. Relay and AWS are GDPR-compliant, ensuring your student data is protected and secure. Each school's data is containerized, separate from other organizations. Only designated personnel from your district have access to your organization's policies and data. Our uptime is 99.8%, giving schools assurance that their filtering service is always available. Lightspeed Systems is the only AWS-certified K-12 filtering provider.



Relay is hosted in the most secure and reliable cloud infrastructure available.





Relay's Filtering Capabilities

Within Relay's streamlined, easy-to-navigate UI are the most powerful and comprehensive filtering features and capabilities available to schools.

Smart Agents

Easily installed Smart Agents put the power of a filter inside each device to protect them wherever they go. Smart Agents ensure traffic is filtered across all browsers and apps. These agents can't be removed by students and provide minimal network impact and zero latency.

The screenshot shows the Relay Cloud Filtering interface. On the left is a dark sidebar menu with options like Dashboard, Reports, Users, Groups, Internet Access, Default Rules, Video Rules, After School Rules, Custom Allow List, Custom Block List, Blocked Search Keywords, Classroom Rules (beta), Device Management, and Audit Log. The main area is titled 'Rules' with a sub-section 'General'. It includes several toggle switches for various filtering options: Force SafeSearch (on), Filter Google image search thumbnails (on), Restrict access to Google apps (off), Allowed Google apps domains (input field), Bypass rules on failure (off), and Disable Relay Chrome browser extension on non-Chrome (off). A note below says 'Enter a website or youtube video/channel to check...'.

The level of detail and customization in the reporting, as well as the ease of the dashboard, make Relay a must for our corporation.”

Ryan Freeman, Technology Integration, Taylor Community School Corporation



SSL Decryption

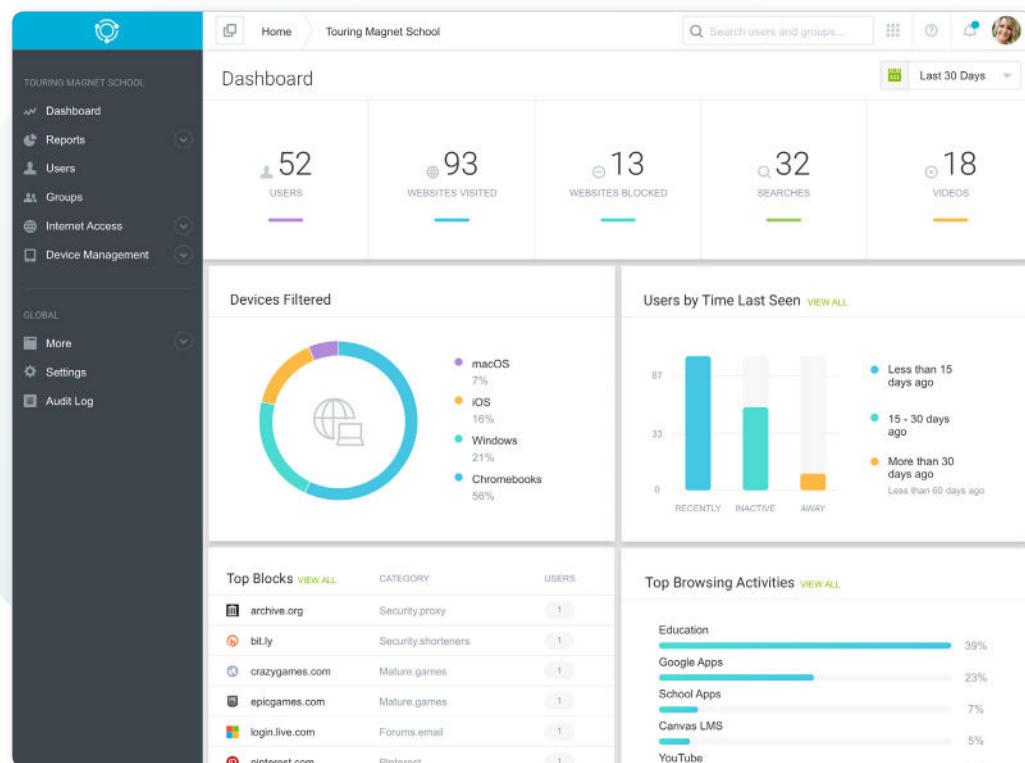
Smart Agents provide SSL decryption with no hassles. Smart Agents have TMITM proxy, PAC files, and trust certificate management built in and self-managed so schools get the benefits of SSL decryption with no additional effort.



Relay provides end-to-end coverage for all traffic across your network with a single solution.

BYOD & IoT

Unlike a network appliance, which sits on the network and sees all traffic as it passes, cloud filtering typically involves installing agents on devices. This is what makes filtering seamless and impossible to circumvent on any network. But some devices on a school network won't have agents: IoT devices like smartboards; BYOD and guest devices; and older devices. In this case, a cloud filter should have an additional feature to filter and report on this agentless traffic.



Depending on your network configuration and specific BYOD filtering needs, schools can:

- Utilize the DNS-based BYOD filter component of Relay for CIPA compliance, or
 - Utilize Relay Rockets (appliances or virtualized) inline within the network to filter and report on any traffic not filtered by a Smart Agent

Through Smart Agents and BYOD filtering, Relay provides end-to-end protection for all traffic on school-owned devices and school networks.

Our Database

Our advanced AI database is the heart of our filtering solution. Built over 20 years and designed specifically for education, it's the most accurate and comprehensive database available to schools. This database ensures CIPA compliance without over-blocking; makes it easy for schools to fine-tune policies; and ensures accurate, useful summary reports on overall web activity.

Our database technology combines artificial intelligence, real-time analysis, robot armies, a network of more than 28,000 school customers, and live human review to accurately categorize more than 65 million websites and more than 90 million YouTube videos—including foreign languages and multimedia content.

Safety Check
helps schools
by getting
the right
information
to the right
people at the
right time.

Because our database is so comprehensive, schools can block unknown URLs, knowing they are rare (and rarely educational). Any unknown URLs will automatically be put into our engine and categorized within minutes.

Student Safety

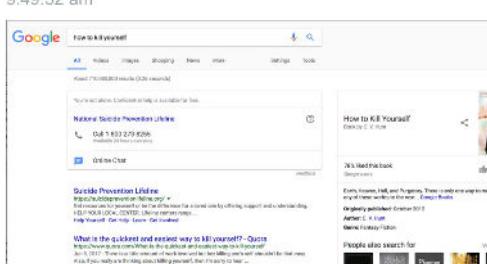
Relay's Smart Agents provide a high level of detail to offer a view into concerning student activity. Safety Check, a feature of Relay's filtering, uses advanced AI to analyze student activity and give administrators real-time information to proactively protect students from self-harm and suicide.



Safety Check: Suicide

Brittany Adams
b.adams@lincoln.wsd.org

 **Search: "how to kill yourself"**
www.google.com/search?q=how+to+kill+yourself&rlz=1CAHPZ
9:49:32 am



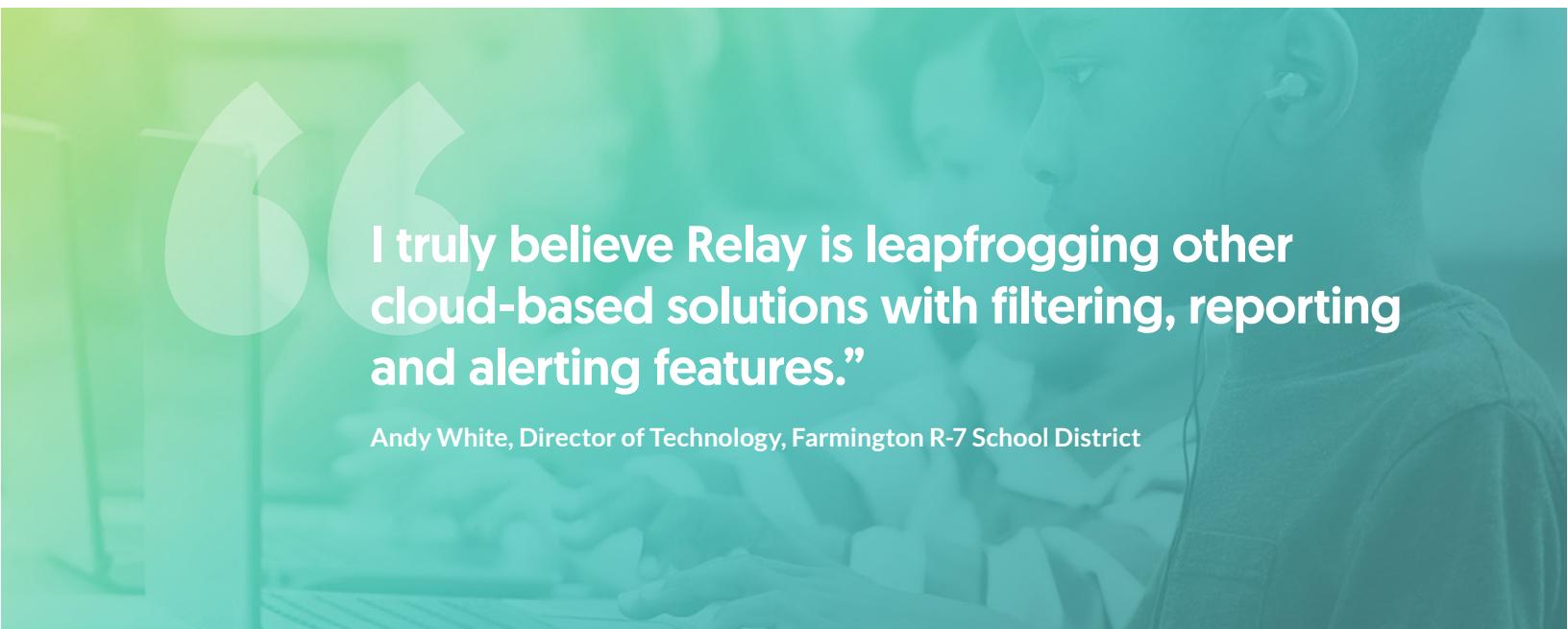
The screenshot shows a Google search results page for the query "how to kill yourself". The top result is from National Suicide Prevention Lifeline, providing a phone number (1-800-273-TALK (8255)) and a website (suicidepreventionlifeline.org). Below this, there's a snippet from the Wikipedia article on suicide prevention, followed by a link to the full article. A sidebar on the right lists related topics like "How to Kill Yourself" (ranked by C.V. Rader), "20 Best Suicide Books", and "Every Country, Every State, Every County Has Its Own Suicide Prevention Plan". At the bottom, there's a "People also search for" section with links to "Suicide Prevention", "Suicide Awareness", and "Suicide Prevention Month".

View Brittany's Activity

Features

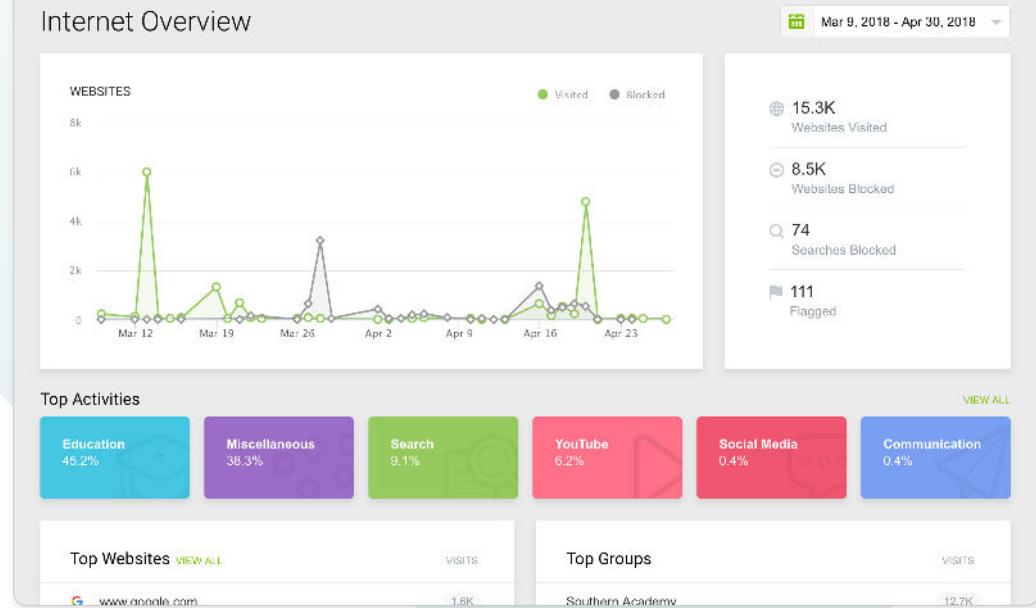
With Smart Agents, a powerful database, hassle-free SSL decryption, and end-to-end coverage, Relay provides schools with all the filtering features they need:

- ✓ Directory integration with G Suite, O365, Active Directory, and SIS
- ✓ After-School Rules to differentiate off-campus filter policies
- ✓ Cross-platform filtering for every device, everywhere
- ✓ Lockout controls
- ✓ BYOD/IoT filtering
- ✓ YouTube restricted mode, Smart Play, custom lists, comment/sidebar blocking
- ✓ The most accurate CIPA protection
- ✓ Lost/stolen device location
- ✓ Custom allow/block lists
- ✓ Safety reporting and real-time alerts
- ✓ Search controls including Safe Search and blocked search terms
- ✓ Custom flagged terms and alerts
- ✓ Social media controls (block/allow/read-only)
- ✓ Admin controls for secure delegated administration
- ✓ User-based overrides
- ✓ Audit log of policy changes
- ✓ Custom block pages
- ✓ Advanced user/group settings



I truly believe Relay is leapfrogging other cloud-based solutions with filtering, reporting and alerting features.”

Andy White, Director of Technology, Farmington R-7 School District



Relay's Reporting

Relay's reporting engine provides the perfect balance of high-level, visual dashboard summaries and granular details about activity. Reports are easy to view, download, and share. They include:

- Real-time overview, internet activity, and safety dashboards
- User-level activity reporting
- Flagged activity reports
- Search, YouTube, and Google Docs reporting
- Parent reports
- Easy sharing with secure links

About Lightspeed Systems

Lightspeed Systems has provided filtering to K-12 schools since 1999. Our focus on education, decades of experience, and innovative filtering technology are unmatched. We partner with more than 28,000 schools (including more than 5,000 US public districts) to protect 20 million students around the world.

At Lightspeed, our roadmap is driven by the needs of education and the voices of our customers. We listen to and accommodate customer needs through advisory committees, conferences, meetings, webinars, surveys and more.

Our developers are all Lightspeed Systems employees, located in our offices in the United States. Our support staff is also all employees (not contractors), located in our Austin, Texas, headquarters and our London, UK, office.





Conclusion

Cloud filtering can give schools a host of benefits, including cost-savings, time-savings and greater real-time functionality. But schools need to choose the right cloud filtering solution that provides powerful features and reports; covers every OS and device; and is built by a company that shares schools' commitment to education and student safety.

Relay filtering is part of a complete platform for 1:1 programs and can be integrated with our device management and classroom management components to filter, protect, manage, and monitor every device and student.



Find out more about why Relay is the
right cloud filter for your school.

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