Web Filtering & Monitoring

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Best practices approach

- Provision user accounts with age-appropriate services.
- SafeSearch is enforced at the domain level.
- Use of the Developer tools, Incognito Mode and Guest user accounts are disabled.
- YouTube Restricted Mode is enforced.
- Use of personal Google accounts on the Chromebooks is not allowed.

Web Filtering/Monitoring tools

Web filtering is required under CIPA and is an essential part of the network in schools. We currently employ not 1 but 3 separate CIPA compliant filtering/monitoring solutions that are considered leaders in their field and are catering exclusively to the education sector.

- Lightspeed Systems Rocket & Relay
- GoGuardian Admin with Smart Alert
- Securly - Free Chromebook Filtering

In addition, we use Auditor by Securly for student email monitoring and GoGuardian Teacher for classroom management.

Lightspeed Systems

Lightspeed Rocket

- Traditional filtering appliance on the edge of the network.
- Any Internet traffic in the district has to pass through Rocket.
- Has been used for the last 4 years (with similar devices from different vendors being used in prior years).
- Until this summer was used to filter off-network Internet activity on school Chromebooks.

Lightspeed Relay

- Cloud-based filtering/monitoring better suited for Chromebooks and off-site use.
- Relies on the same Website database and categories.

GoGuardian Admin

GoGuardian Admin

- Cloud-based web filtering/monitoring solution for Chromebooks that has been used from the beginning of the 1:1 program.
- We double filter some of the worst categories with it, but its main use is for monitoring and Smart Alerts for students in grades 6-12.

Smart Alerts uses Artificial Intelligence (AI) & Machine Learning to identify Internet activity that is considered Self-Harm or Explicit. Self-Harm alerts are being sent to school administrators. Explicit activity is being blocked and issues a warning to student.

Securly

Free Chromebook Filtering

- Cloud-based web filtering/monitoring and alerts.
- Used since October 2017 to cover elementary students.
- Provides additional web filtering and alerts school principals when it :
  - Blocks websites in categories of "Pornography" & "Hate"
  - Blocks inappropriate searches
  - Identifies a search as being "disturbing" (self-harm or bullying)

Auditor by Securly

- Email monitoring tool.
- Uses AI to send alerts to school administrators when student email content is considered self-harm or bullying.

Web filtering

Each solution provides education specific choice of categories of websites to block or allow. They also provide some additional security features such as:

- Enforcing safe search on additional search providers or blocking ones that don't support safe search
- Blocking any websites that have not been categorized yet (Unknown)
- Filtering direct IP access to the websites
- Blocking common bypass solutions or proxy services
- Additional YouTube filtering

Providing balanced filtering is an ongoing challenge.

Web Activity Monitoring

Each solution records Internet activity and shows a summary in the form of widgets on its Dashboard. They also allow administrators access to details and on-demand reports for investigations when needed.

We review Internet usage summaries and reports on a regular basis. We also monitor online communities and receive reports from teachers to identify any new unblocked websites or methods students find to bypass filtering policies.

Vendors add new features on a regular basis and we implement them.

Teachers have access to classroom management tools (GoGuardian & Relay).

Alerts

Each solution provides some level of "Flagging" of Internet activity. Simplest methods are keyword based and mostly used for occasional reviews. More advanced are based on Machine Learning (AI) and we use them to send alerts to school administrators.

Over the last year Middle School and High School administrators received:

- Over 780 Self-Harm notification emails from GoGuardian Smart Alerts
- Over 1,600 Potential Self-harm/Grief/Violence/Bullying alerts from Auditor

Elementary school administrators received around 2,300 alerts from Securly.

Alerts

Overwhelming majority of alerts we receive are false positives.

AI and Machine Learning are getting better but right now a lot of English essays and history research papers are being flagged as self-harm.

Searches for "nut cracker" or "breast cancer" are blocked by Securly.

Nonetheless, the number of alerts over the past years proven to be extremely helpful at preventing a potential tragedy.

Most effective Web security

None of the security systems are 100% effective. Technology can never control human behavior or replace teachers and parents in the lives of our kids.

While we employ one of the most comprehensive sets of Web safety tools and policies, they are most effective only in combination with all the effort from our teachers, administrators and the rest of the staff at educating our students about Digital Citizenship and guiding them through their mistakes or helping through tough times.