

THE DDoS THREAT TO K-12 SCHOOLS

HOW TO PROTECT YOUR DISTRICT FROM BECOMING A TARGET

Like any other institution or business, K-12 school districts depend on technology to run their operations. On-premise digital assets and mobile devices have played a central role in modernizing education.

Unfortunately, there is a downside. Reliance on technology makes K-12 districts a tempting target for cybercrimes, including Distributed Denial of Service (DDoS) attacks.

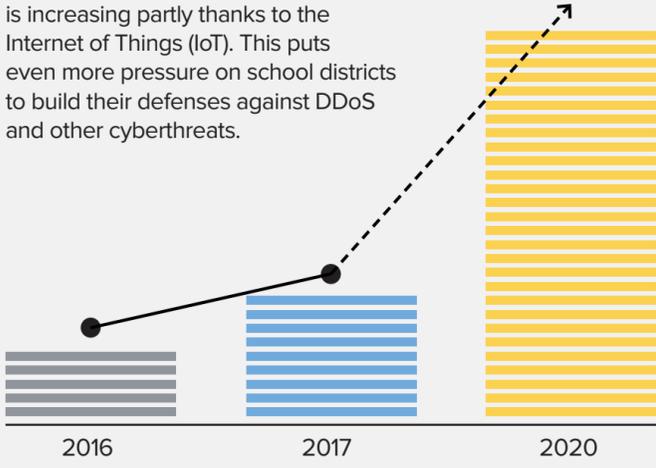
3,700 DDoS ATTACKS OCCUR DAILY¹

A DDoS attack is a coordinated effort to prevent user access to online services by flooding servers with more traffic than they can handle. Typically, attackers exploit vulnerabilities in computers and other Internet-connected devices to turn them into hosts or bots that carry out a synchronized attack.



THE IoT EFFECT

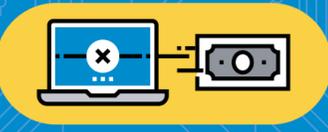
Potential damage from DDoS actions is increasing partly thanks to the Internet of Things (IoT). This puts even more pressure on school districts to build their defenses against DDoS and other cyberthreats.



IoT-connected devices will grow to **30 billion** by 2020², potentially creating plenty of new bots for DDoS attacks

RANSOMWARE TOO?

Making matters worse, cybercriminals have started to combine ransomware tactics with DDoS.³ In what is being dubbed as “ransom DDoS” or “RDoS,” perpetrators send the target a message demanding payment in bitcoin and threatening to deliver a DDoS attack if the victim refuses to pay. Short-term attacks sometimes accompany the message as a preview of larger action. These attacks so far focus on business, but education is a possible future target.



DDoS BY THE NUMBERS



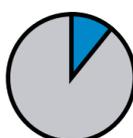
The U.S. is the **third most** targeted country for DDoS attacks.



Attacks greater than 100Gbps **increased 140%** from 2015 to 2016.



10 million DDoS attacks are predicted for this year.⁵



DDoS attacks in the U.S. **increased to 11%** of the worldwide total in Q1 2017, from 7% in Q4 2016.⁴



In Q2 2017, the longest attack lasted **277 hours**, a 131% increase from the record-holder in Q1.³



1 Tbps-level DDoS attack per month is expected in 2017.⁵

WHAT MAKES K-12 SCHOOLS AN ATTRACTIVE TARGET?

Cybercriminals have some favorite targets – healthcare, financial services, retail – but they aren't terribly discriminating when the opportunity arises to disrupt network operations.

CURRENTLY, EDUCATION ACCOUNTS FOR ROUGHLY A QUARTER (24 PERCENT)¹³ OF ALL DDoS ATTACKS.

Here's why K-12 and other educational institutions make such an attractive target:

- 1 School districts rely more and more on digital networks.**
- 2 The increasing volume of traffic** flowing through those networks makes them an attractive target because it also increases the potential for damage.
- 3 School districts tend to operate on tight budgets.** Often they lack the same resources as deep-pocket corporations to defend themselves.
- 4 Students with a grudge** – or trying to fix a grade or delay an exam – are often behind DDoS attacks.
- 5 Schools keep high-value data**, both on students and employees, including Social Security numbers, medical records and other private data.

ATTACKS ON SCHOOL DISTRICTS

The possibility of DDoS attacks against schools is more than academic. It's reality, and has happened multiple times:

- An attack on an Idaho school district crippled the systems⁶ of more than 50 schools for a week.
- At Augusta County Schools in Virginia⁷, a DDoS attack hampered the district's technology center and its online testing systems.
- The Minnesota Department of Education had to suspend comprehensive assessments⁸ twice when a DDoS attack prevented students from logging into the testing system.
- Schools in upstate New York suffered intermittent network interruptions⁹ as a result of a DDoS attack.

'AT YOUR SERVICE'

As if the prospect of DDoS attacks wasn't worrisome enough, consider this: Just about anyone can order an attack. All they have to do is take advantage of DDoS-for-hire services¹⁰ on the Dark Web, to put a contract on a website. Anyone with a grudge against an organization has the opportunity to take revenge in this manner. In some of the attacks on school districts, student perpetrators used these services. For a few dollars an hour, it's easy enough to order an attack.



DDoS-for-hire costs an average of just **\$38 per hour**.¹¹



Monthly packages also are available, ranging from **\$5–\$60 per month**.¹²

PROTECT YOUR SCHOOLS

School districts need protection against DDoS attacks. To prevent interruptions to the learning process caused by DDoS attacks, school districts should take advantage of subscription-based services that proactively detect DDoS attacks, alert them when an attack has started, and takes mitigation measures to prevent downtime and foil the attackers. As schools become more and more dependent on technology, DDoS protection is a must. The education of our children is at stake.



Sources:

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