

# *IoT = Internet of Threats ?*

Heiko Frank  
Principal System Engineer




*Automation for Secure Applications*

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# Saturday for Breakfast

Feedback



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Neueste Updates zum Schutz vor fremden Zugriff verfügbar!



IP Überwachungskamera

Beschreibung

2. CONFID

Hard-coded password expos...

www.csoonline.com/article/3034284/security/hard-coded-password-exposes-up-to-46000-video-surveillar

Suchen

Meistbesu...

Hacked Internet of Things Da...

World's largest 1 Tbps DDoS

thehackernews.com/2016/09/ddos-attack-iot.html

Suchen

Meistbesucht vThunder1 VIP-Server Server1 Server2 VIP2-Server Firefox-Statusberi...

## World's largest 1 Tbps DDoS Attack launched from 152,000 hacked Smart Devices

Tuesday, September 27, 2016 Swati Khandelwal

G+1 123

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1 Tbps DDoS Attack

Powered By 150,000 Hacked IoT Devices

Do you know — Your Smart Devices may have inadvertently participated in a record-breaking largest cyber attack that Internet has just witnessed

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Here's How The CIA Allegedly

https://www.forbes.com/sites/thomasbrewster/2017/03/07/cia-wikileaks-samsung-smart-tv-hack-security/#


Meistbesucht vTI CIA macht Samsung Smart T

Forbes


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www.appdated.de/2017/03/cia-macht-samsung-smart-tv-zu-wanzen/


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# CIA macht Samsung Smart TV zu Wanzen

BASTIAN EBERT am Mittwoch, 8. März 2017




Samsung Or - einhang für PC, dazu Allnet-Flat mit ... [mobilcom-debitel.de](#)



freeFlat ab 13,95 € freeFLAT 2000: 2 GB LTE im D-Netz und Allnet-Flat\* [freenetmobile.de](#)

DAS NEUE IPHONE 7 UND 7 PLUS



Das neue iPhone 7 (plus) mit und ohne Vertrag im Überblick:

iPhone 7 ohne Vertrag, iPhone 7 mit

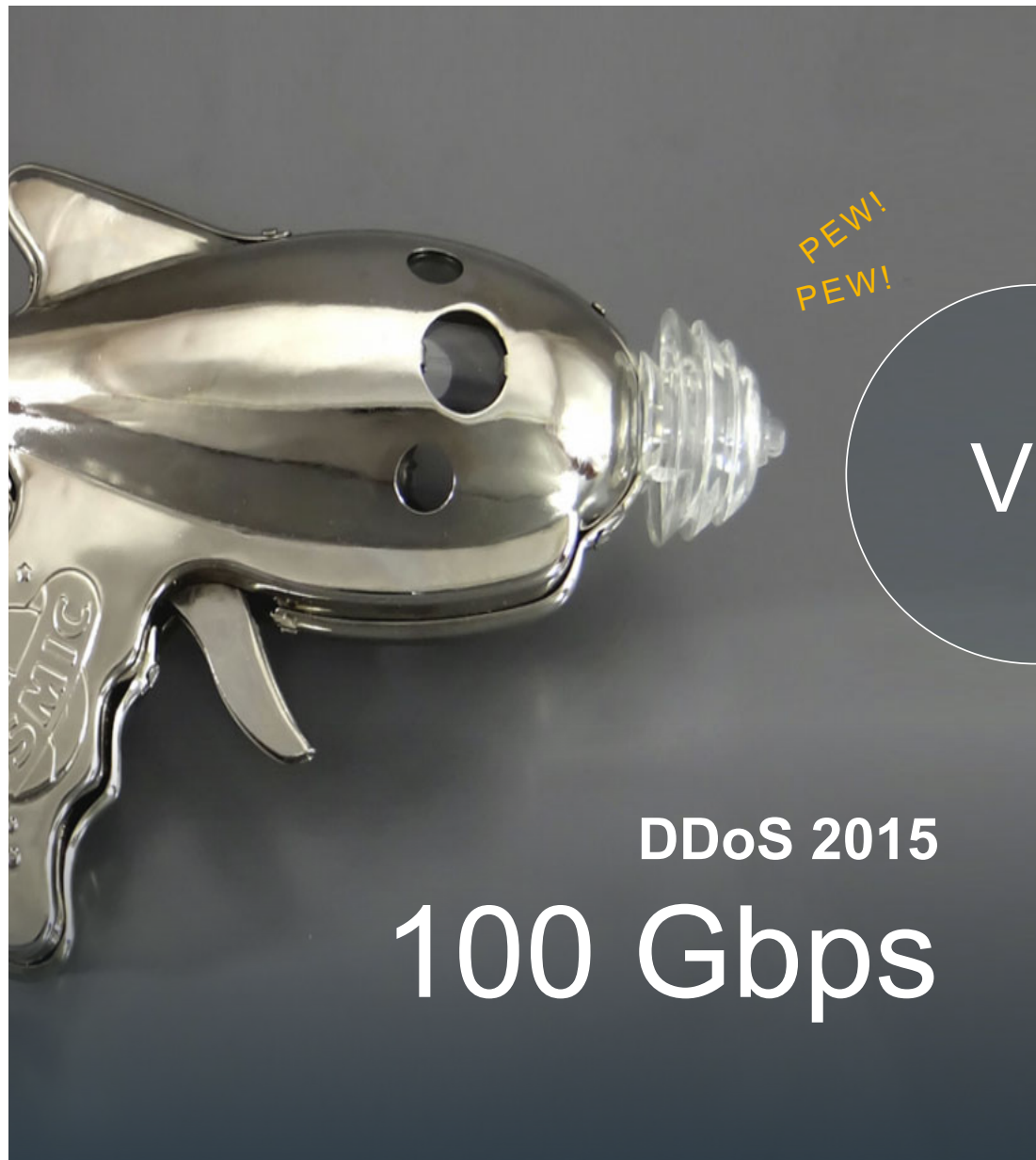
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Thunder TTS - DDOS Protection Solution

AXIO

*What is the problem?*





VS.



# The World We Live In

**DO YOU KNOW THIS MAN?**



John Kelsey Gammell

“FBI convicted a Minnesota man for launching hundreds of DDoS attacks ... former employers and business partners”

vDOS

<- Paid: **\$652.87**

-> “30Gbps of Dedicated Bandwidth” and  
“Unlimited Boots.”

Source: bleepingcomputer.com and Minnesota Star Tribune, Nov 6, 2017  
<https://www.bleepingcomputer.com/news/security/man-uses-ddos-for-hire-services-to-attack-former-employer-plaintiff-firm-via-email/>  
<http://www.startribune.com/hacker-for-hire-cases-going-federal-in-minnesota/455624163/>

**BUSINESSES ATTACKED:**



# Increased Attacks, SecOps Pressure

- High-profile attacks changing the economics of protection
- Massive scale multi-vector attack (MVA) 1.2 Tbps+
- IOT Powered Mirai, WireX, and today?

4x

Frequency of attacks > 50 Gbps

307% Growth

74% Budget increase next 6 months

A10/IDG report. Sept. 2017



The background of the slide features a person wearing a dark jacket and a microphone, possibly in a broadcast or recording setting. This image is overlaid with a dense, vertical stream of glowing blue and green characters, resembling a digital rain or data stream effect, which is a common visual motif in cybersecurity or technology presentations.

# #1—Be ready for multi-vector attacks


## #2—Rate limiting isn't enough.

A conceptual image where a hand is formed from a blue printed circuit board (PCB) with various electronic components like capacitors and resistors. The hand is holding a golden chess king piece. The background is dark with some light rays emanating from behind the king piece.

#3—Leverage threat intelligence.

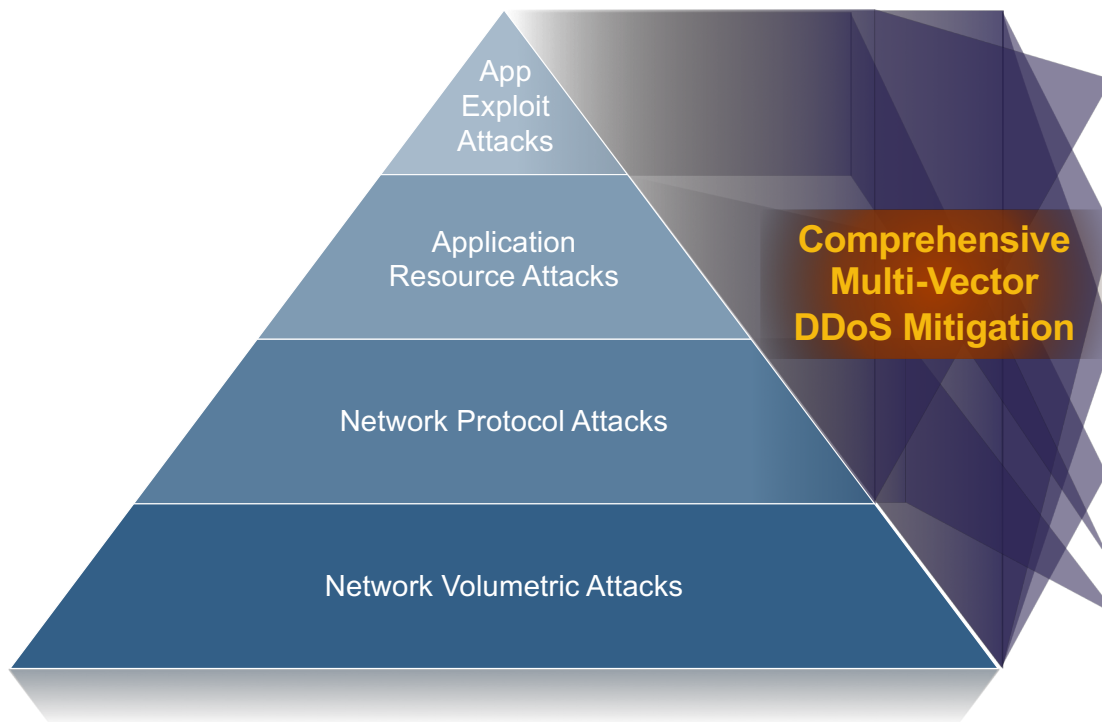
A close-up, low-angle shot of a yellow escalator handrail and black metal grating. The handrail is positioned diagonally across the frame, with the grating visible below it. The lighting is dramatic, highlighting the textures of the materials.

#4—Build auto escalation into your strategy.

A dramatic scene featuring a massive, dark-colored mecha standing amidst a battlefield. The mecha is the central focus, towering over several soldiers in the foreground. The soldiers are equipped with futuristic armor and weapons, some holding rifles. The background is filled with smoke, fire, and the silhouettes of other mecha or structures, suggesting a large-scale conflict. The lighting is dramatic, with bright highlights on the mecha's joints and the soldiers' armor, contrasting with the dark, smoky environment. The overall tone is intense and action-packed.

*#5—Get ready for scale.*

# Mitigating DDoS Attacks Using Thunder TPS Series



## Behavioral Policies & Content Signatures

Thwart malicious behavior and surgically target content patterns

## Challenge-Based Authentication

Identify malicious from legitimate clients

## Black and White Lists

High-scale source-based admission control

## Traffic Rate Control

High-granularity traffic rate enforcement

## Packet/Request Anomaly Check

Validate incoming packets & requests





# COLOSSAL

## DDoS Attacks Loom

Defeating DDoS Needs a Precision Strategy

