

Introduction to the IoT Security Foundation

Build Secure, Buy Secure, Be Secure





The Questions

- Why does the IoT Security Foundation exist?
- Who are we?
- What do we aim to do?
- How do we do it?
- How can you participate?

IoT security status 'egregious'



Army of webcams used in net attacks

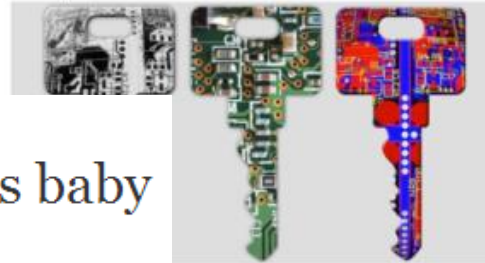
© 29 September 2016 | Technology

News > World > Americas

Hacker takes control of Ohio couple's baby monitor and screams 'bad things'

Lazy IoT, router makers reuse skeleton keys over and over in thousands of devices – new study

SSH logins, server-side HTTPS certs baked in firmware



RISK ASSESSMENT –

New, more-powerful IoT botnet infects 3,500 devices in 5 days

Discovery of Linux/IRCTelnet suggests troubling new DDoS menace could get worse.

DAN GOODIN - 11/1/2016, 9:15 PM

Multiple Backdoors found in D-Link DWR-932 B LTE Router

Wednesday, September 28, 2016 | Swati Khandelwal

Cyber criminals hack a REFRIGERATOR: Will the 'Internet of Things' create a new bot army for the spammers?

NEWS

Anonymous hacker claims he broke into wind turbine systems

Hacking traffic lights with a laptop is easy

TECHNOLOGY NEWS | Tue Oct 4, 2016 | 8:58pm BST

J&J warns diabetic patients: Insulin pump vulnerable to hacking

Fiat Chrysler recalls 8,000 more Jeeps over wireless hacking

Latest recall designed to protect connected vehicles from remote manipulation, says automobile company

HOME > EXTREME > OUR INSECURE INTERNET OF THINGS IS BECOMING TERRIFYING

Our insecure Internet of Things is becoming terrifying

By Graham Templeton on September 8, 2015 at 8:37 am | 19 Comments

IoT vulnerabilities and exploits dominate the news headlines

'we cannot carry on like this'
Something needs to be done to protect users

Manufacturers must do better



Introducing the Internet of Things Security Foundation

Beyond the horror stories: the IoT Security Foundation was launched on

Sept 23rd 2015 in response to wide-ranging security concerns from IoT stakeholder groups



Purpose

IoT is Socially and Economically Important

- The economic impact of the Internet of Things will be measured in \$trillions.
- The number of connected devices will be measured in billions.
- The resultant benefits of a connected society are significant, disruptive and transformative.



Yet the growth of IoT also represents a growing attack surface – a real threat.

The IoTSF mission is to help secure the Internet of Things and ‘make it safe to connect’.

Our mission: Make it safe to connect



Awareness



Advocacy



Guidance



Advice



Education

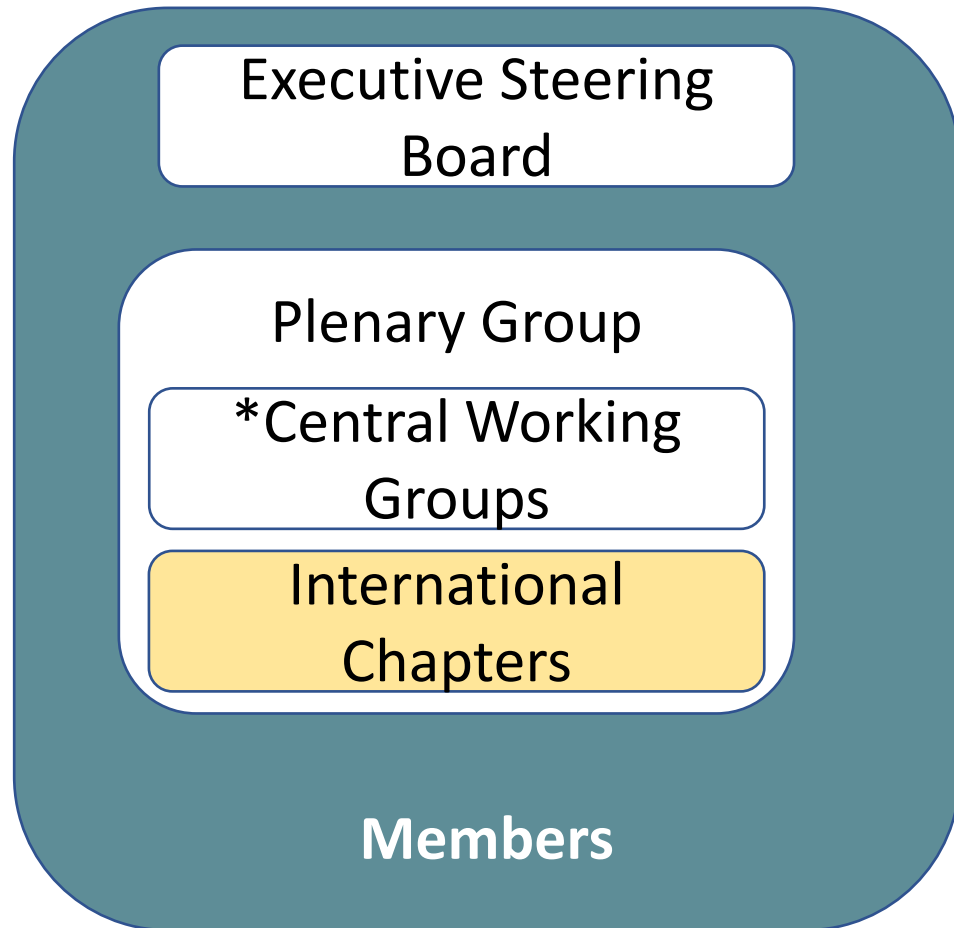


Training



Research

Organisation and Operation



Impactful Benefits

- Promote awareness and a security mindset
- Produce best practice materials and tools for vendors and users of IoT technologies.
- Bilateral links to international standards efforts
- Influence / consult on cyber security regulations
- Conferencing, Meetings and Networking Events
- Collaborative Projects

*See <https://www.iotsecurityfoundation.org/working-groups/>

How do we do it?

- Published IoT Security Assurance Framework
- Secure Design Essentials
- Helping members meet regulations
- Monthly Webinars

IoT: New Standards and



Table
EXECUT Security Foundation

A - CLASSIFICATION OF DATA
B - PHYSICAL SECURITY
C - DEVICE SECURE BOOT
D - SECURE OPERATING SYSTEM
E - APPLICATION SECURITY
F - CREDENTIAL MANAGEMENT
G - ENCRYPTION
H - NETWORK CONNECTIONS
J - SECURING SOFTWARE UPDATES
K - LOGGING
L - SOFTWARE UPDATE POLICY



- 2.4.3 Assurance Applicability – Business Secur
- 2.4.4 Assurance Applicability – Device Hardw
- 2.4.5 Assurance Applicability – Device Softwa
- 2.4.6 Assurance Applicability – Device Operat
- 2.4.7 Assurance Applicability – Device Wired
- 2.4.8 Assurance Applicability – Authenticati
- 2.4.9 Assurance Applicability – Encryption a
- 2.4.10 Assurance Applicability – Web User Ir
- 2.4.11 Assurance Applicability – Mobile App
- 2.4.12 Assurance Applicability – Data Prote
- 2.4.13 Assurance Applicability – Cloud and
- 2.4.14 Assurance Applicability – Secure Su
- 2.4.15 Assurance Applicability – Configur
- 2.4.16 Assurance Applicability – Device

Release 3

IOT WEBINAR SERIES

THURSDAY, 27th APRIL 2023

EUROPEAN CYBER RESILIENCE ACT

FLORIAN LUKAVSKY
CTO & FOUNDER
ONEKEY

MATT TETT
ADVISOR
IoT SECURITY MARK

The poster features two circular portraits of speakers: Florian Lukavsky and Matt Tett. The background is dark blue with white and light blue text.

Membership: Security is a Team Sport



An ecosystem of professional and corporate stakeholders



vodafone



Invitation

Join the home of IoT Security

- ✓ Be part of an expert international community
- ✓ Help champion and drive the IoT cybersecurity agenda
- ✓ Network and raise your profile with customers, associates and stakeholders.

Join: <https://www.iotsecurityfoundation.org/join/>



Our
Founding
Values

SECURITY FIRST

Designed in at the start

FIT FOR PURPOSE

Right-sized for application

RESILIENCE

Through operating life

www.iotsecurityfoundation.org

or simply IoTSF.org