SafeShark

SafeShark Update for FIA

4th May 2022

Introducing

SafeShark

A joint venture between DTG Testing and Connect Devices to help manufacturers navigate cybersecurity standards for IoT

- What are the cyber security requirements for Consumer IoT?

- Why are they coming in?

- When will they be introduced?

- How SafeShark can help

What is SafeShark?

SafeShark and BSI launch Consumer IoT cyber security assurance scheme

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- SafeShark provide cyber security testing services carried out against international standards

- Backed with certification from BSI

- A consumer facing logo can then be used to provide assurance of cyber security best practice

- Set up through DCMS funding, we work closely with UK Government and international standards organisations

Why were we set up

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The UK Code of Practice for Consumer IoT Security has developed into a European standard (EN 303 645)and test spec (TS 103 701)

Upcoming UK legislation will be based on EN 303 645

Further standards to be written for EU market access with EN 303 645 as a basis

The UK Code of Practice for Consumer IoT Security

Where we are and what next

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PETR S
THE PETRAS NATIONAL CENTRE OF EXCELLENCE FOR IoT SYSTEMS CYBERSECURITY

ETSI TS 103 701 V1.1.1 (2021-08)

ETSI

TECHNICAL SPECIFICATION

CYBER;
Cyber Security for Consumer Internet of Things:
Conformance Assessment of Baseline Requirements

Code of Practice for Consumer IoT Security

October 2018

ETSI EN 303 645 V2.1.1 (2020-06)

ETSI

EUROPEAN STANDARD

CYBER;
Cyber Security for Consumer Internet of Things:
Baseline Requirements

What are the requirements?

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EN 303 645 has 13 cyber security provisions

Plus an additional section for Data Protection

UK Legislation will be based on the first 3 provisions - **initially**

EU cyber security requirements will be via RE-D

5	Cyber security provisions for consumer IoT ....
5.1	No universal default passwords..........................
5.2	Implement a means to manage reports of vulnerabilities
5.3	Keep software updated ....
5.4	Securely store sensitive security parameters ....
5.5	Communicate securely ....
5.6	Minimize exposed attack surfaces........................
5.7	Ensure software integrity...............................
5.8	Ensure that personal data is secure......................
5.9	Make systems resilient to outages ....
5.10	Examine system telemetry data..........................
5.11	Make it easy for users to delete user data.................
5.12	Make installation and maintenance of devices easy ....
5.13	Validate input data......................................
6	Data protection provisions for consumer IoT..............

When is it happening?

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The UK PSTI bill is going through parliament now*

This covers 'network-connectable' 'product'**

Product Security and Telecommunications Infrastructure Bill

Government Bill

Originated in the House of Commons, Sessions 2021-22, 2022-23

Last updated: 28 April 2022 at 15:03

Commons   Lords   Final stages

See full passage

UK Parliament

Cyber requirements have been included in the Radio Equipment Directive

This will apply from 1st Aug 2024 and covers 'internet connected radio equipment'***

NEWS ARTICLE | 29 October 2021

Commission strengthens cybersecurity of wireless devices and products

European Commission

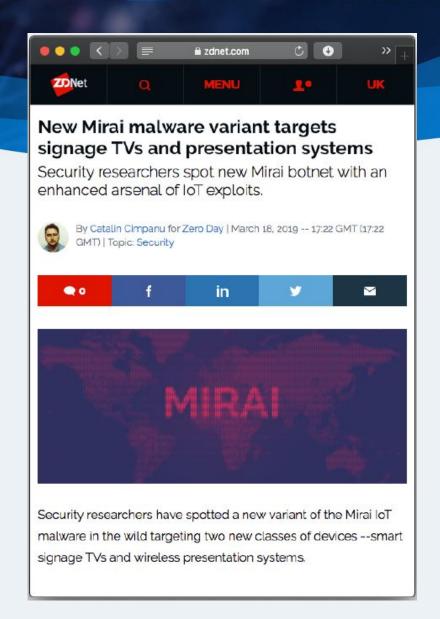# What are the threats?

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- Mirai is probably the most well known

- Creating a 'Botnet' of IoT devices to target organisations in a coordinate attack

- Targeted at consumer IoT devices including smart cameras and PVRs

- The original attack took down major websites globally

New Mirai malware variant targets signage TVs and presentation systems

Security researchers spot new Mirai botnet with an enhanced arsenal of IoT exploits.

By Catalin Cimpanu for Zero Day | March 18, 2019 -- 17:22 GMT (17:22 GMT) | Topic: Security

MIRAI

Security researchers have spotted a new variant of the Mirai IoT malware in the wild targeting two new classes of devices --smart signage TVs and wireless presentation systems.

What about my TV?

Your TV has been infected with ransomware!

Send 0.05 BTC to the wallet: 1F1tAaz5x1HUXrCNLbtMDqcw6o5GNn4xqX
Or 0.5 XMR to the wallet: 49Zs3EzeB5pJ346J1G5RrXPks69rkHXKT592k39UmMDkTvUSUoz

If you don't pay within 3 days, the price will be 0.1 BTC / 1 XMR! It's your choice. Make the right one.

Technical support: support@ransomware.kings   The Ransomware Kings

bbc.co.uk

BBC   Home | News | Sport | More

NEWS

Technology

PewDiePie hackers take over Google smart TV systems

By Joe Tidy
BBC Cyber-security reporter

3 January 2019

A message on affected TVs encourages victims to subscribe to the YouTuber PewDiePie

GETTY IMAGES

Hackers have taken control of smart TVs around the world in another stunt to support YouTuber PewDiePie.

The super-fans claim they successfully took over more than 65,000 Google Chromecast devices.

How can SafeShark help

Incorporating multiple test standards into a single service

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- A combination of expert assessment and automated objective testing

- Unique Intercept platform enabled continuous monitoring of devices

- Ensure that devices remain compliant through software updates and specification developments

- Regular reporting to manufacturers is provided to assist product development

SafeShark testing

Intercept - the unique cyber security test platform

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- Pilot program complete with initial customer

- New customers signed up for 2022 devices

- Testing within BSI labs

- Engaging with manufacturers of other consumer devices including Routers

Mounts to rear of device under test

Some interesting finds

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- TV that has code in for a fridge

- Remote access to devices through brute force attacks

- Devices with many open ports

- Devices making 000's of DNS requests daily

"refridgeDoor": "Refrigerator Door",
"remoteConrol": "Remote Start",
"expressCooling": "Ice Plus",
"waterSensor": "Water Leak",
"actHoming": "Go Home",
"act.wakeup": "Power-Saving Mode Off",
"totalAirQuality": "Overall Cleanliness",

DNS Requests

if a device under test makes a network call to the Internet, then the Domain Name looked up will be in this

DNS name	count
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Now is the time to act

When is the time to act?

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- UK and EU market access requirements are under development now

- These represent a <u>minimum baseline</u> requirement for compliance and on their own are not enough to build trust around a product or brand

- <u>**Protect your customers,**</u> your business, your investors, your reputation, and your brand position.

- <u>**Prepare for the legislation**</u> and increasing consumer demand before this becomes a business-critical issue.

- <u>**Enhance your products and brand**</u> early on, building a reputation and trust by taking a hard consumer protection stance.

SafeShark and BSI are working with leading manufacturers

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