IoT Security

A Security Provider's Take

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Hello World!

Telefonica Digital Identity & Privacy Sociedad Limitada [ES] https://www.elevenpaths.com/technology/iot-security/index.html

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Solutions

IoT

IoT Security

Securing the IoT, a world where objects and people are securely connected to the network.

Hacking against cameras, hard drives, IP networks, Smart meters or cars. Smart TVs that monitor and emit unencrypted conversations on the Internet. In other words, millions of devices connected to each other and to the Internet that are accessible and provide information in real time. When personal and business information appears in the network with no filters or security, there is no second chance.

When millions of hyperconnected devices use different technologies, the real challenge is to provide scalable security solutions that respond to the needs of heterogeneity and scalability that the Internet of Things is imposing.

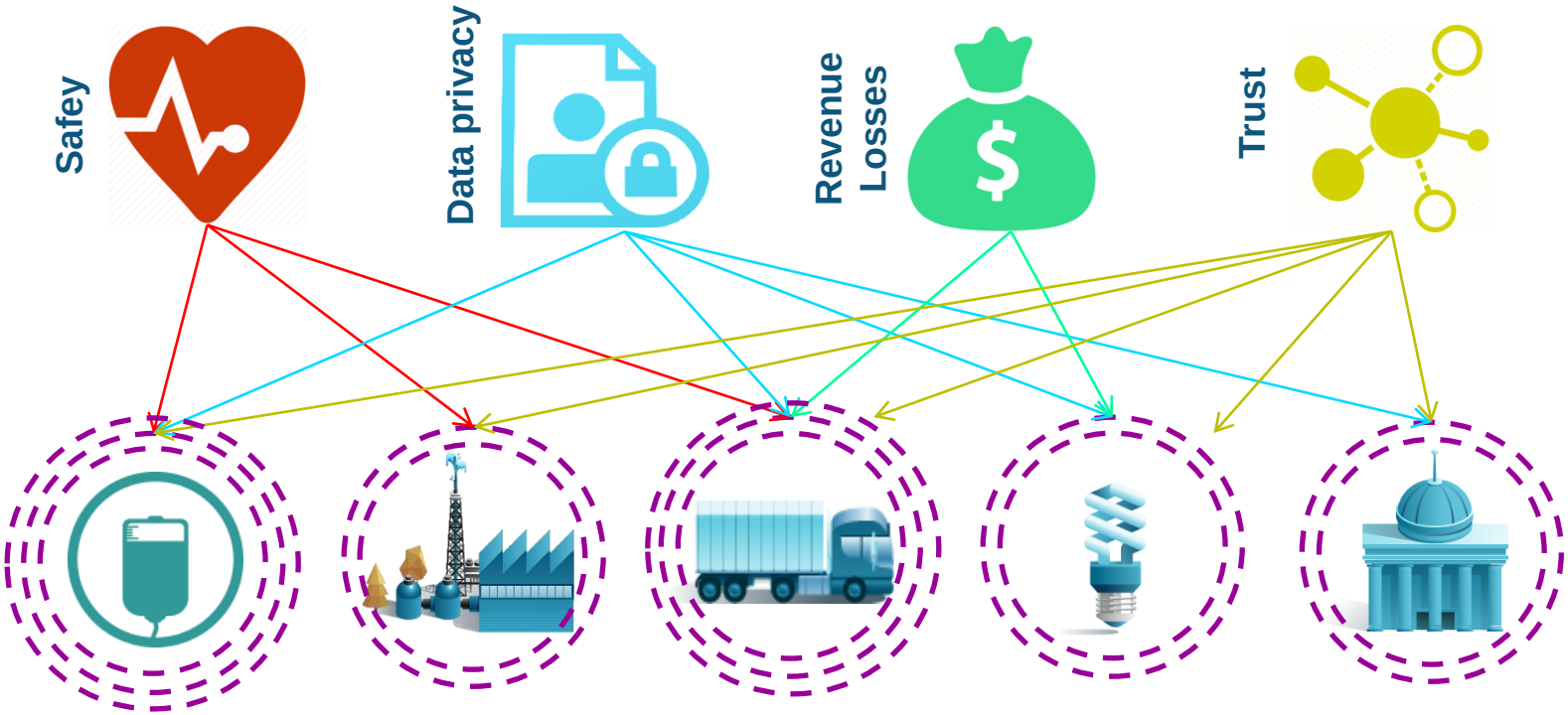
LEVEL 1
SECURE NETWORK IOT INFRASTRUCTURE

Whitepaper
"Scope, scale and risk like never before: Securing the Internet of Things".
Download here.

Discover how our security solutions for IoT work

Trusted Public Key Infrastructure

Why is IoT Security Important?



eHealth Industry Automotive Utilities Smart Cities

Deconstructing IoT

Physical World

Things

Aggregators and Gateways

Local Connectivity
(Bluetooth, Zigbee, zWave, MQTT, Coap ...)

Communications

Internet Connectivity
(4G, Fiber, VPNs)

Backend

Digital World

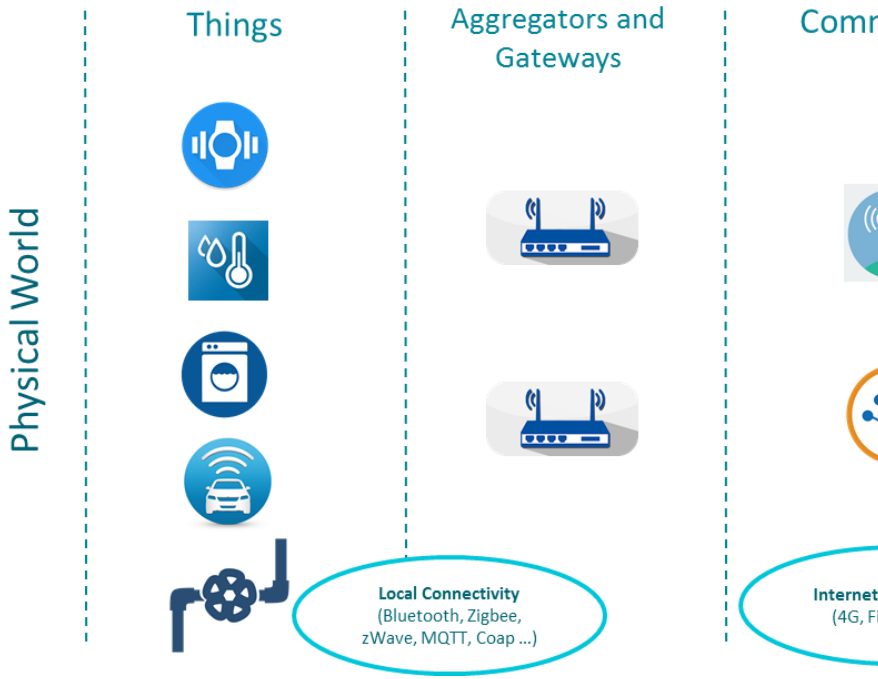
The bad news first. IoT is Hard!

Device Computing Capacity: Class 1 & 2 are problematic, current technologies break down.

Device, network & protocol **fragmentation** means complexity, the enemy of security.

Scale, cooking for 4 is not the as cooking for a regiment.

Standard security tech needs rethinking: **Identity & Access management, Network Segmentation, On-Device Detection.**



IoT = IT + OT

Security + Safety

IT & OT. A love story still in the making…

IoT requires an accelerated plan for IT and OT reconciliation.

Organizational silos vs the need to see security E2E.

OT & IT tech and business requirements need to meet each other.

48,000 PCs at Fukushima plant operator TEPCO still run Windows XP

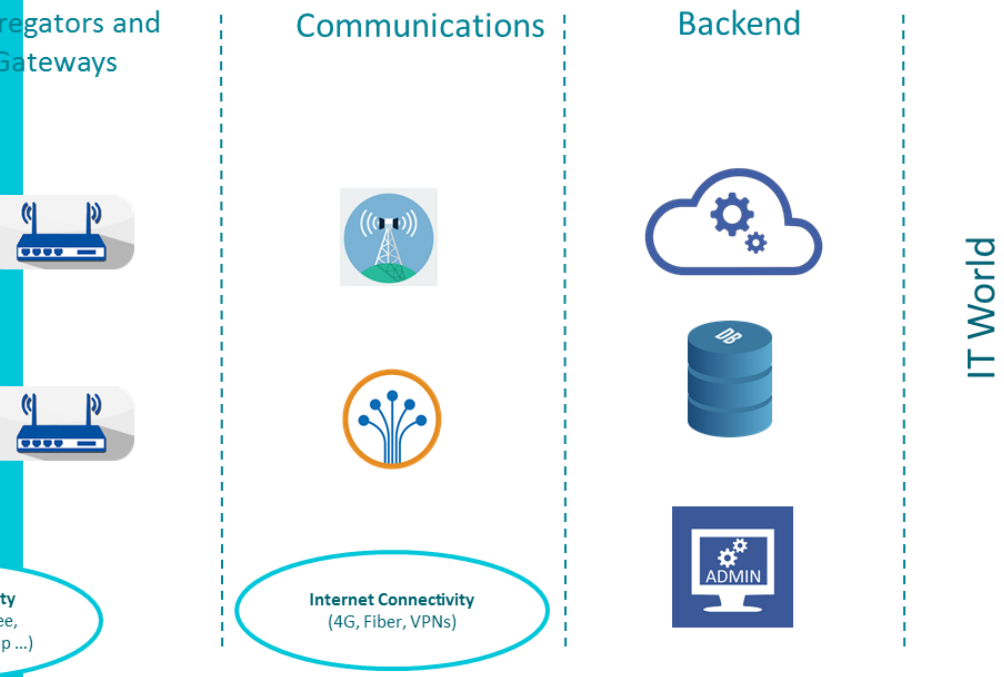
By Ryan Whitwam on April 23, 2015 at 2:30 pm | 62 Comments

3.6K shares

The Tokyo Electric Power Company (TEPCO) has been under intense scrutiny ever since the 2011 meltdown at the Fukushima Daiichi nuclear energy complex. Following an investigation by Japan's Board of Audit, TEPCO has been told to upgrade its computer systems. That doesn't sound particularly unusual, except that TEPCO operates more than 48,000 PCs all running Windows XP. Oh, and they're connected to the Internet.

One year after Microsoft ended Windows XP support, Fukushima was ordered to update

The good news. IoT is Easy!



Not new. We have been doing this for a long time.

We have learned a lot during the past years (the hard way).

Apply IT Cybersecurity lessons NOW!

Case Study 1 - Demo Tesla S hack

A security analysis by researchers. Everything is patched now.

Gain control through physical Ethernet connection to the car.

Various small vulnerabilities in parts of the system work towards control of the vehicle until getting control of it.

Remote patching of vehicles possible!

Case Study 2 - Demo Jeep Cherokee hack

A security analysis by researchers. Everything is patched now.

Full remote control of steering, throttle, brakes.

Leveraging vulnerability in the infotainment system, work towards control of the vehicle until getting control of it.

Patching through USB not a viable response!
Recalling of 1,4M vehicles.

Lessons learned from our Cybersecurity struggles

Build security in the design.

Make sure the basics first, don't make the attackers' lives easy.

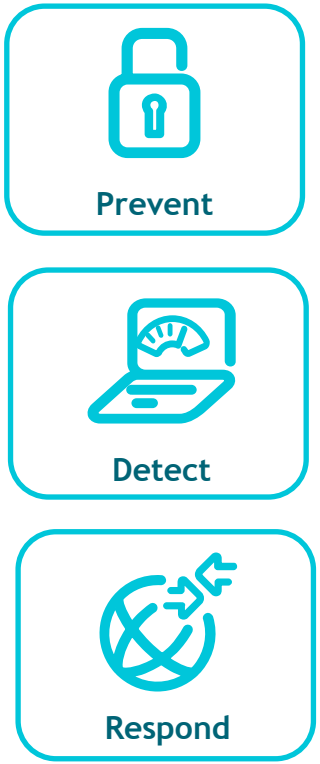
Start with the connectivity.

Known vulnerabilities, up-do-date patching, automatic and manual penetration testing.

E2E security design and controls, secure the network first.

Leverage cloud security.

Breaches are inevitable. Be ready!



At Telefonica / 11Paths we doing something about it

	IoT Security	Prevention	Detection	Response
Security Services for Customer IT & IoT Device	***Customer IT and Device Security*** *Financial Service/PoS* *Smart Metering* *ehealth* *Automotive*	Trusted IoT Public Key	Security Monitoring Threat Detection Vulnerability Management	Incident response
Secure by Design Managed Connectivity	***Physical and Infrastructure Security*** *Customer Electronics* *Industry* *Fleet Mng.*	Managed Connectivity Platform	Business Advisor (BI) Expense/ Consumption alarms Log / report analysis	Automatic Business rules
	Connectivity / Transport Security *Agriculture* *Public space advertising*	Secure Connectivity	Security information/ event management	Denial of Service Protection

Telefonica

Our IoT Security Solutions

Secure Customer IT & IoT Device

Prevention

Eliminate Cyber Risks

Trusted Public key

Detection

Detect vulnerabilities, threats, incidents

CyberThreats
Holistic Cyber Risk Detection & Response

Vamps
Persistent Vulnerability Assessment & Management

Security Monitoring

Response

Managed incidents response

Incident Response

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Address Shadow IoT and IoT Vulnerabilities

Powered by Faast

Persistent pentesting for IoT devices

The first technology that persistently detects and analyzes new vulnerabilities in IoT devices

Innovation

Personalization

Global view

Intelligence

Technical team

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Start protecting the IoT today!

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securely powered by ElevenPaths

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