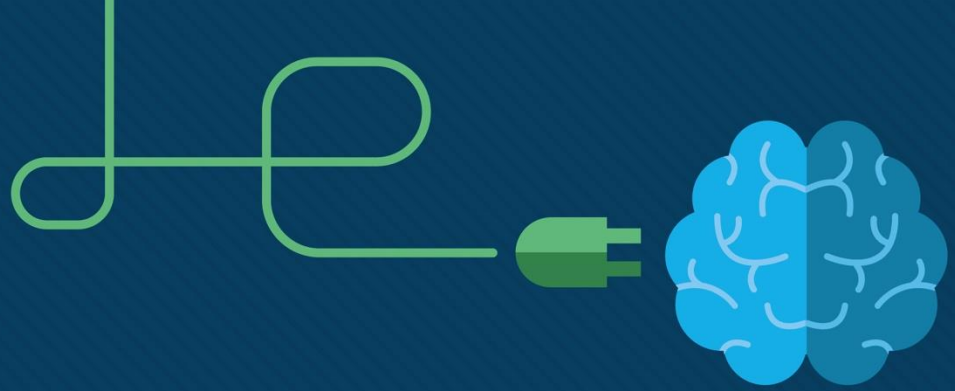
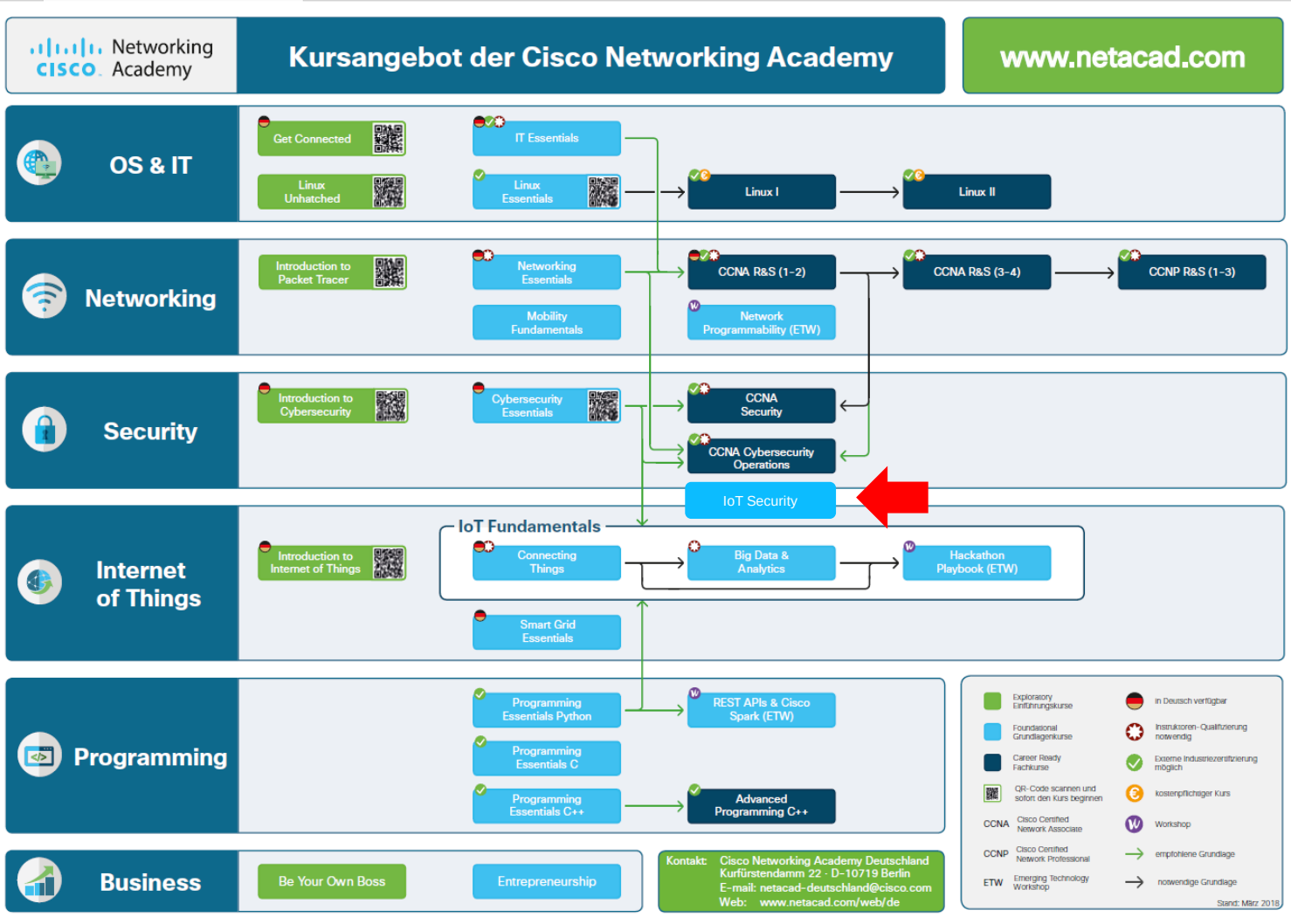


Akademietag Saarland

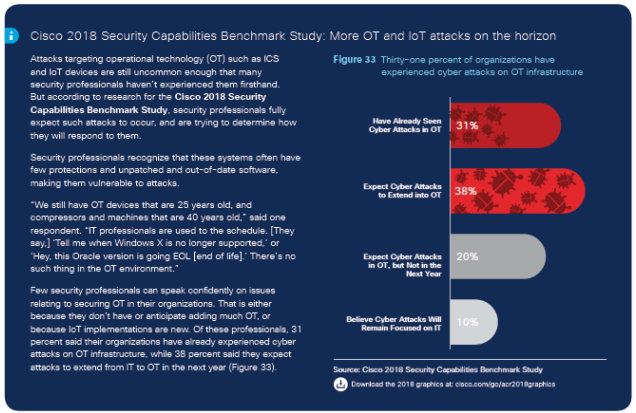
Neues Kursangebot: IoT Security

Carsten Johnson carsjohn@cisco.com

Dezember 2018


Networking Academy
Kursangebot der Cisco Networking Academy
www.netacad.com
OS & IT
Get Connected
Linux Unhatched
IT Essentials
Linux Essentials
Linux I
Linux II
Networking
Introduction to Packet Tracer
Networking Essentials
Mobility Fundamentals
CCNA R&S (1-2)
Network Programmability (ETW)
CCNA R&S (3-4)
CCNP R&S (1-3)
Security
Introduction to Cybersecurity
Cybersecurity Essentials
CCNA Security
CCNA Cybersecurity Operations
IoT Security
Internet of Things
Introduction to Internet of Things
IoT Fundamentals
Connecting Things
Big Data & Analytics
Hackathon Playbook (ETW)
Smart Grid Essentials
Programming
Programming Essentials Python
Programming Essentials C
Programming Essentials C++
REST APIs & Cisco Spark (ETW)
Advanced Programming C++
Business
Be Your Own Boss
Entrepreneurship
Kontakt: Cisco Networking Academy Deutschland
Kurfürstendamm 22 · D-10719 Berlin
E-mail: netacad-deutschland@cisco.com
Web: www.netacad.com/web/de
Exploratory Einführungskurse
Foundational Grundlagenkurse
Career Ready Fachkurse
QR-Code scannen und sofort den Kurs beginnen
CCNA Cisco Certified Network Associate
CCNP Cisco Certified Network Professional
ETW Emerging Technology Workshop
in Deutsch verfügbar
Instruktoren-Qualifizierung notwendig
Externe Industriezertifizierung möglich
kostenpflichtiger Kurs
Workshop
empfohlene Grundlage
notwendige Grundlage
Stand: März 2018

Digital transformation and cybersecurity.



Cisco 2018 Security report: almost 70% of OT companies have experienced or expect an attack to the IoT in next year.

Everything becomes **connected**

Everything needs to be **secured**

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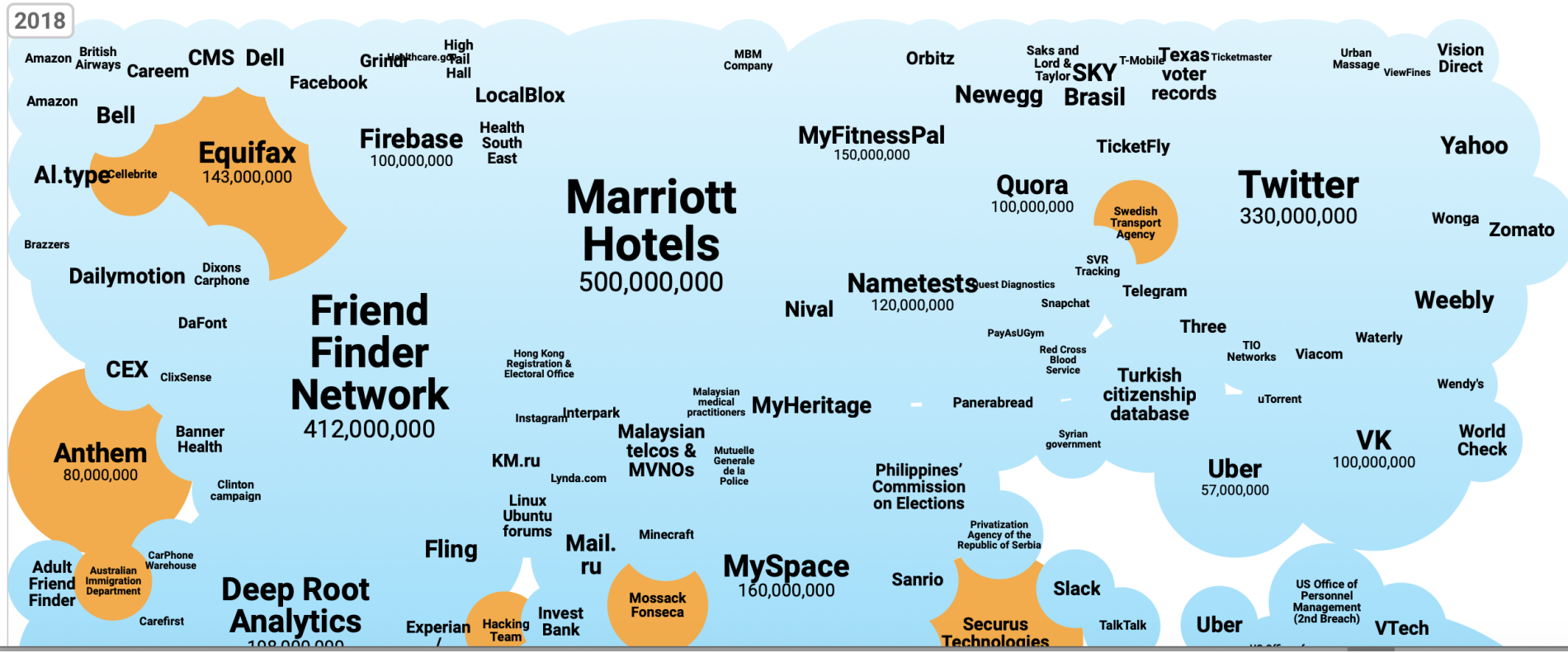
World's Biggest Data Breaches & Hacks

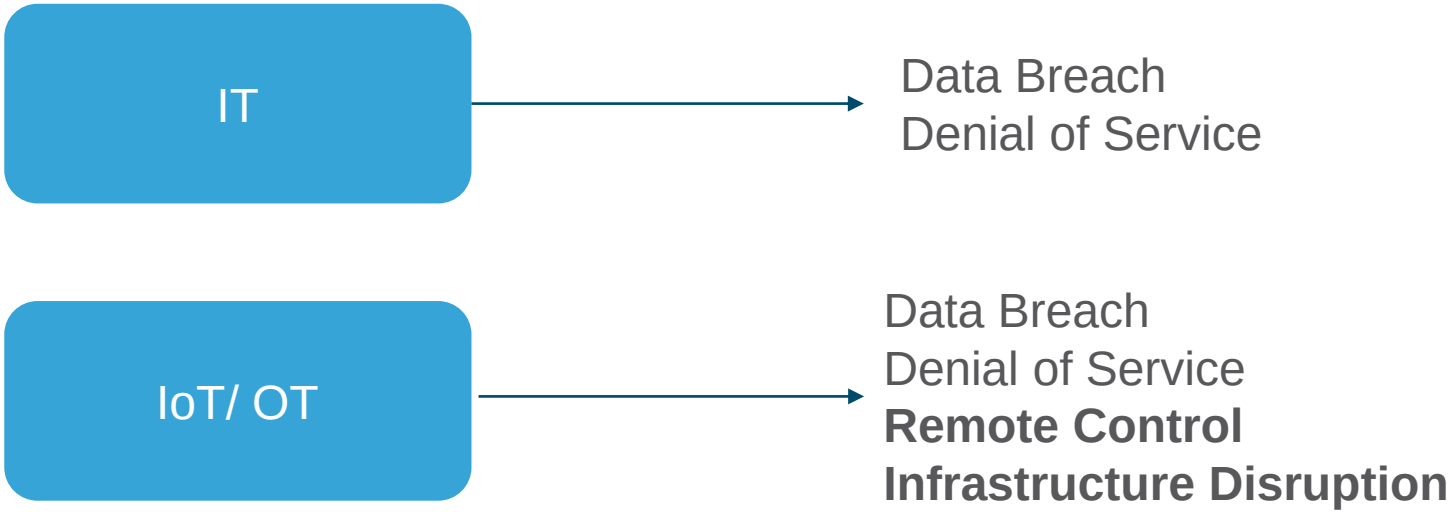
Select losses greater than 30,000 records

(updated Dec 5th 2018)

Colour | YEAR | DATA SENSITIVITY | Filter



Cybersecurity threat impact



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Threat

Exploiting a Vulnerability

Data Breach

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Threat

Exploiting a Vulnerability

Data Breach

Threat Modeling

You wear your attacker hat to identify how a threat actor can exploit the vulnerabilities.

Risk Assessment

Recommend Mitigation

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Cybersecurity Skills Shortage

WSJ PRO CYBERSECURITY

"… job candidates who get attention often demonstrate an **ability to think like malicious hackers**…"

https://www.wsj.com/articles/its-a-good-time-to-find-a-cybersecurity-job-1527646081

Deloitte.

"… **take a measured**, risk-based approach to **what is not secured** and how to secure it … develop **threat intelligence** to understand harmful behavior and **top risks** to the organization …

https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consumer-business/us-cb-cybersecurity-talent-

CIO FROM IDG

"…the key to an effective cybersecurity strategy is **regular penetration testing** and continuous intrusion detection efforts…"

https://www.cio.com/article/3277956/it-skills-training/4-most-in-demand-cybersecurity-skills.html

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IoT Security*

Course Overview

The enormous increase of connected IoT devices enables the digitization of industries, but also increases possible security threats. This course provides the learner with introductory skills to perform Vulnerability and Risk Assessments on IoT solutions in a specific business context. Students who complete the IoT Security course will be able to assess, research, and provide risk mitigation strategies for common security vulnerabilities in IoT systems.

Benefits

Students seeking a career in the rapidly growing IoT and Security domains will learn practical tools for evaluating security vulnerabilities in IoT solutions, perform threat modeling, and use risk management frameworks to recommend threat mitigation measures.

Learning Components

- Conduct end-to-end threat modeling and evaluate security risks within IoT solutions
- Discover and demonstrate a vulnerability using real-world penetration testing tools such as Kali Linux
- Gain hands-on experience with IoT Prototypes using a Raspberry Pi
- Increase awareness of emerging technologies used in the IoT Security space, such as Blockchain

Features

Target Audience: Secondary, Vocational, 2-year and 4-year College, 4-Year University students

Prerequisites:

- IoT Fundamentals: Connecting Things course
- Networking and security knowledge equivalent of Networking Essentials and Cybersecurity Essentials

Languages: English

Course Delivery: Instructor-led

Estimated Time to Complete: 50 hours

*available within 12 months

IoT Security Course Outline

Chapter	Chapter Titles	Summary Description
1	The IoT Under Attack	Explain the unique security challenges in different IoT sectors
2	IoT Systems and Architectures	Use industry-standard models to explain security requirements in IoT systems
3	The IoT Physical Device Attack Surface	Perform threat modeling activities to evaluate physical security vulnerabilities in IoT systems.
4	IoT Communication Layer Vulnerabilities	Perform threat modeling activities to evaluate local access security vulnerabilities in IoT systems
5	IoT Application Security	Perform threat modeling activities to evaluate remote access security vulnerabilities in IoT systems.
6	Assessing Vulnerability and Risk in an IoT System	Use threat modeling and risk management frameworks to recommend threat mitigation measures.

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IoT Cybersecurity Package

Prerequisite Knowledge

Basics of Networking
Basics of Cybersecurity

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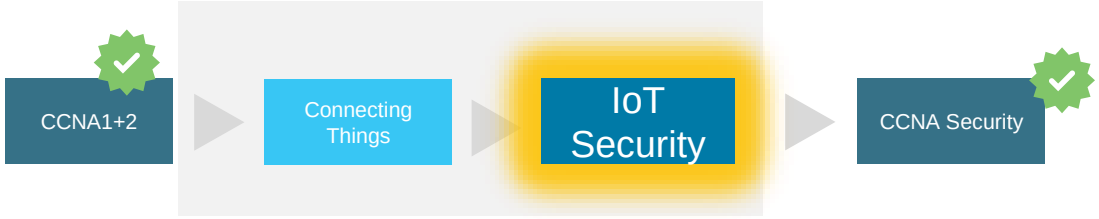
Increase Employability with IoT Security

Cybersecurity Analyst Track

Network Security Administrator Track



Certification

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IoT Security LA to GA

ab Februar 2019

Instructors enrolled in the LA classes
Instructor Training and Accreditation

Accredited Instructors teaching student classes @Cisco Academies

General Availability

@ December 1st
# 200+ Accredited Instructors

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