ADVA™
Optical Networking

Data Security on Every Network Layer

Internet Security Days 2015, Phantasialand Brühl

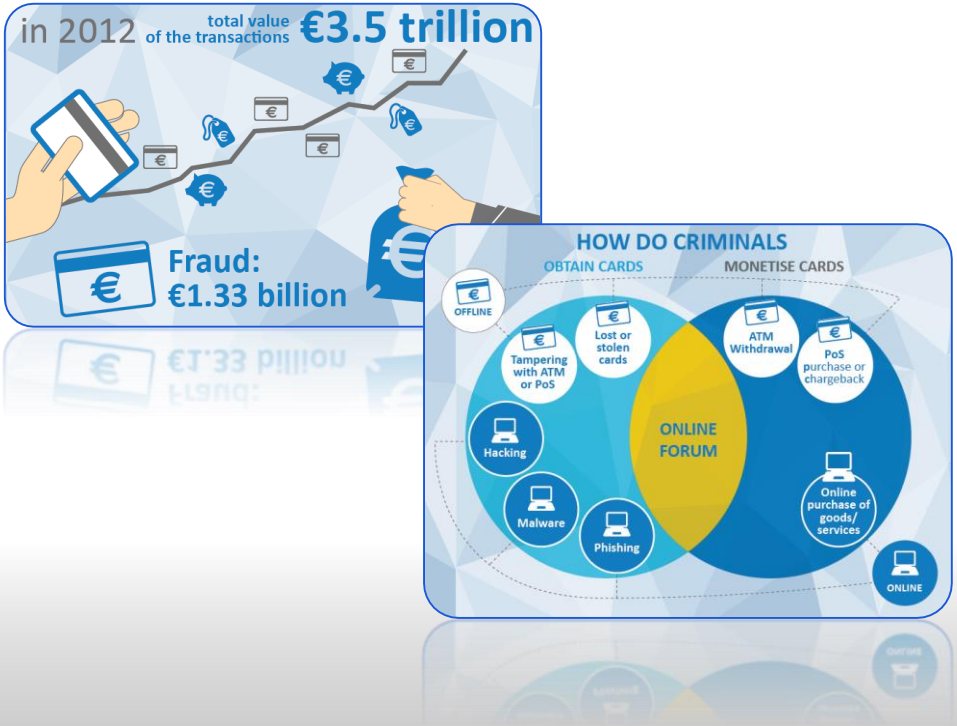
ADVA Optical Networking SE

Agenda

- Impact of Cyber Crime and Data Theft
  - Financial Service Sector
  - Production Industry
  - Cloud Service Provider
- Secure Data Highways
- Customer references and Industry 4.0 model
- Conclusion

Impact of Cyber Crime & Data Theft

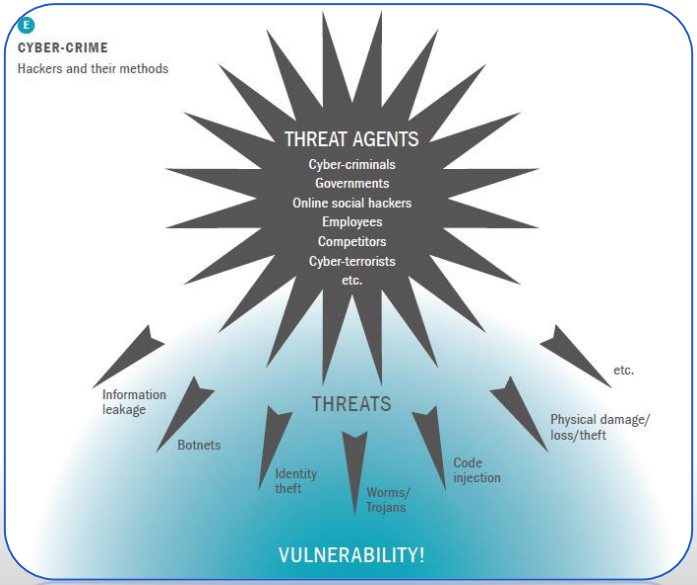
Financial Service Sector



- Payment card transactions are the most widespread non cash payment method used in the EU.
- In 2012, transactions amounted to € 3.5 trillion.
- Criminals acquired € 1.33 billion from PCF.
- This represents 38 cents lost to fraud for every € 1.000 worth of transactions.

THE INTERNET ORGANISED CRIME THREAT ASSESSMENT (IOCTA) 2014

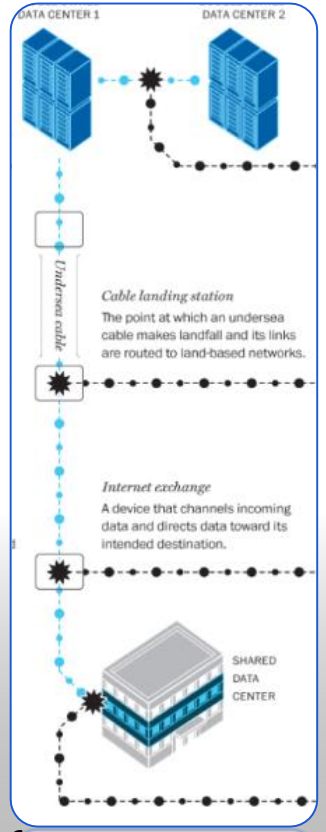
Industrie 4.0



Roland Berger March 2015
CYBER-SECURITY
Managing threat scenarios in manufacturing companies

- Industry 4.0
  - radical digitization of production – and of products, too – leaves manufacturing companies even more vulnerable to cyber-assaults.
- Attack
  - potential damage caused by cyber-crime is astronomical. At one British company, a single attack triggered losses of € 950 million.
- Cybercrime Costs - Global Economy
  - global economy €350 billion per year, of which the theft of intellectual property accounts for €120 billion
- Cybercrime Costs – US Corporations
  - large US corporations an average of € 9 million per firm per annum

Cloud Computing Services



- As more (personal) data is being stored in the cloud, we can expect to see more attacks on cloud services with the goal to
  - disrupt services for economic or political motives
  - steal/access data – including ransomware
- Cybercrime will make use of publicly offered lowest cost Cloud Compute Service and run "Big Data Analytics" to get most out of intercepted data.
- Since Snowden we know where and how the NSA and others intercept data on fiber optic cables
  - between two geographically separated Data Center location
  - cable landing stations
  - internet exchanges
  - in shared hosting facilities

http://leaksource.info/2013/10/31/muscular-nsa-gchq-tapping-communications-links-to-google-yahoo-data-centers/

ADVA™ Optical Networking

Secure Data Highways

Are Today's Information Highways Secure?

Y-Bridge for
service activities

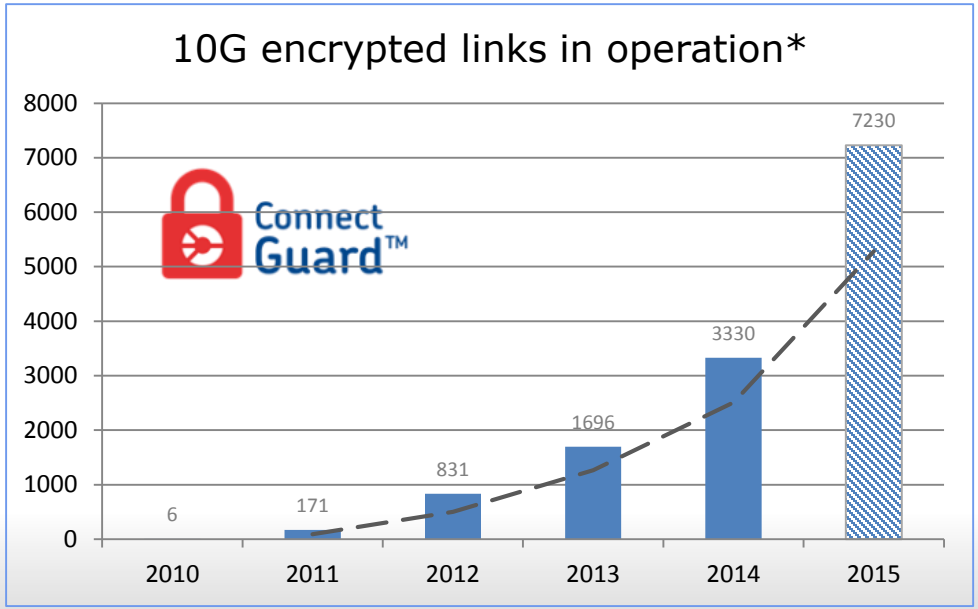
Fiber Coupling device

Easy access to the data in fiber optic cables.

How to secure the Information Highways?

Protect all data using encryption on the optical / physical layer.

Optical Layer Encryption @ A Glance

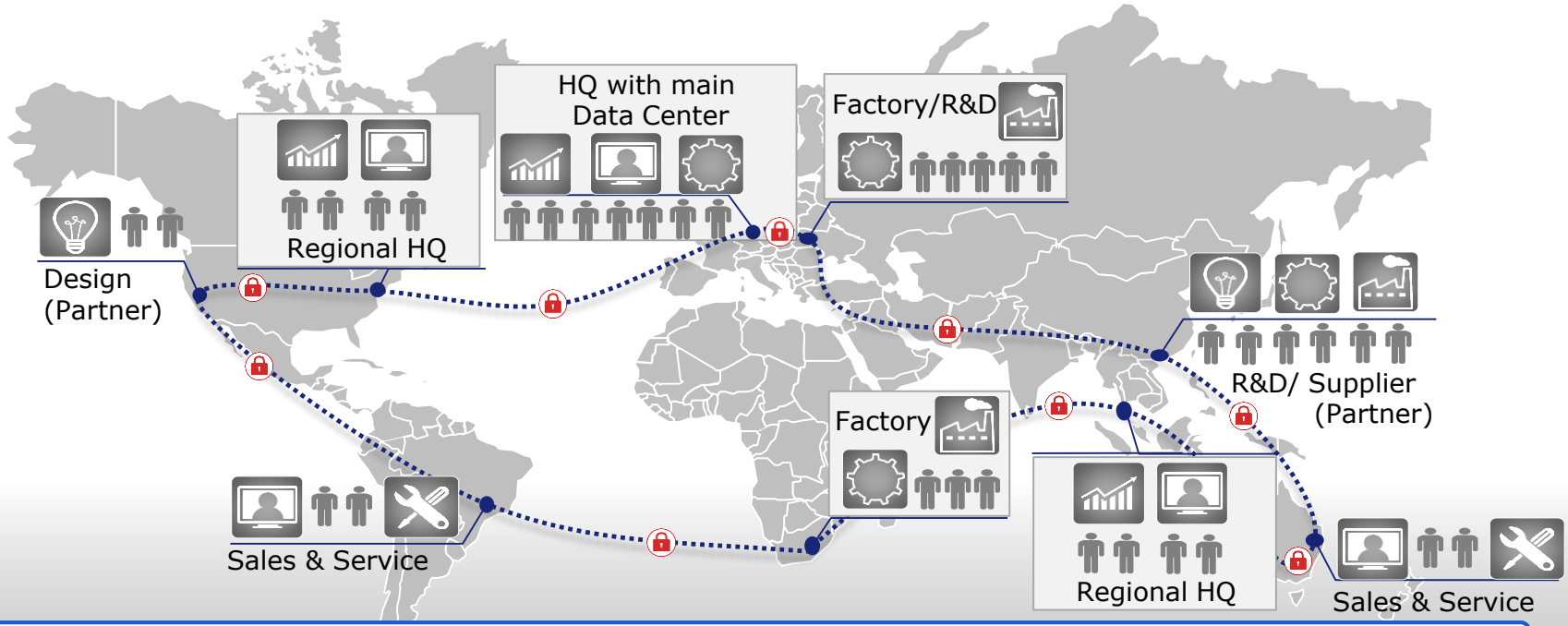


- With the introduction of the 100G encryption, ADVA will doubled the 10G encrypted links in 2015 – this trend is predicted to continue.
- In 2015 ADVA expects additional growth of 10G encrypted links introduced for Secure WAN Connectivity.
- As MSPs will launch Encryption as a Service (EaaS) the 10G equivalent links may triple in 2015.

Data Center Connectivity is the main application ☺
Secure WAN Connectivity is relevant for large enterprise customers ☺

Customer References & Industry 4.0 Model

All Data „Real-Time“
connecting all locations and things

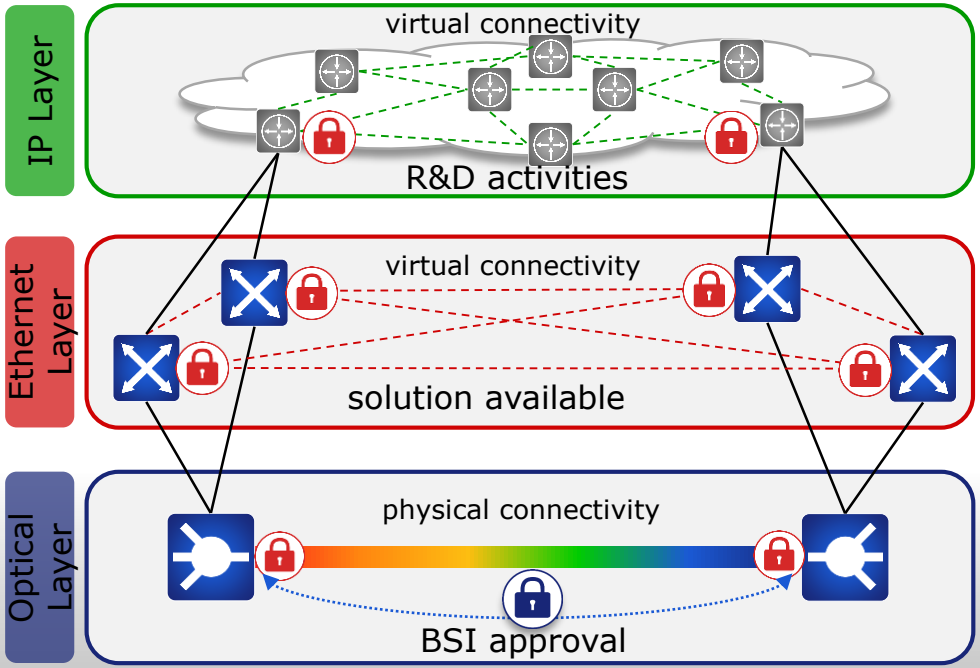


Performant and reliable data exchange between all locations

Conclusion

Secure Network Infrastructure Model

security on every network layer



- Machines & sensors
- Number: >1.000 - 100.000
- Branch offices & partner locations
- Number: 100 - 1000
- Main locations & Data Centers
- Number: 10 -100

Thanks

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