



Nominee Showcase Presentation

ISE[®] Canada Executive Forum and Awards

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Company Name: TELUS

Project Name: Embedding Security throughout the Enterprise –
From Products to the Infrastructure

Presenter: Ken Haertling
VP & Chief Security Officer





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Company Overview



- leading national telecommunications company in Canada
- provides wide range of communications products and services, including wireless, data, internet protocol (IP), voice, television, entertainment and video
- \$11 billion annual revenue
- 13.2 million customer connections
 - 7.7 million wireless
 - 3.4 million wireline
 - 1.4 million internet subscribers
 - 712 thousand TELUS TV customers)
- 40,000 employees internationally
- TELUS was the first Canadian company to receive prestigious international recognition as the named most philanthropic company globally in 2010





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Embedding Security Throughout the Enterprise – From Products to Infrastructure

	Past	Present
security approach	• policeman	• partner with the business
innovation	• obstructed	• embrace
rate of change	• slower	• rapid
technology adoption	• impeded	• agile
approach to risk	• “eliminate”	• manage

- policeman approach
 - Smartphone → Blackberry only
 - Social Media → banned
 - Network Perimeter → never poke a hole
- partner approach
 - risk management approach
 - understand risk appetite, what is “secure enough?”
 - help business achieve objectives in a secure manner





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Approach

- retrofitting the old is a time-consuming and cumbersome task
 - adds significant cost/delay
 - business has little appetite for additional cost/delay
 - security didn't have the budget
- internal project assembly line
 - don't bolt on security at the end of the line
 - be a partner to the business rather than policeman
 - get involved at the design stage
- build security in from the ground up
 - security can't be an afterthought
 - aim is to get out in front and build security in from the beginning
 - involved in initial design discussions for products and services





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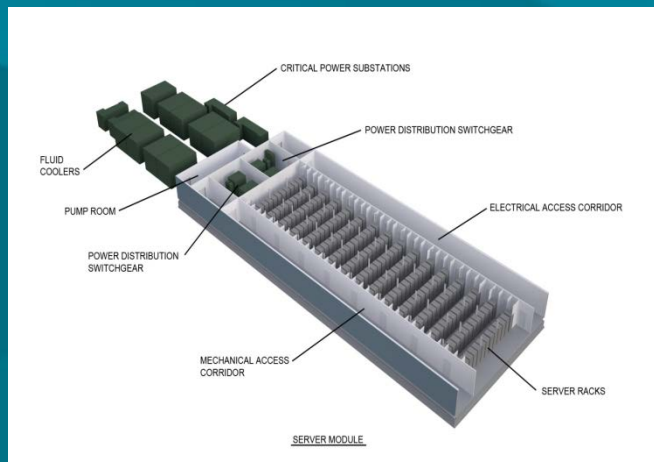
Security Consulting Areas

- 1) new IT system (internal facing)
 - key HR systems (ie. SAP) and others moving to the cloud
 - which data do we feel comfortable migrating first (ie. training)
 - may not wish to proceed with employee or consumer data right out of the gate
- 2) engineering technical design (customer facing)
 - ie. Optik TV
 - networking
- 3) outsourcing
 - non-core functions
 - data security ramifications



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Cloud Security: Data Centre Design

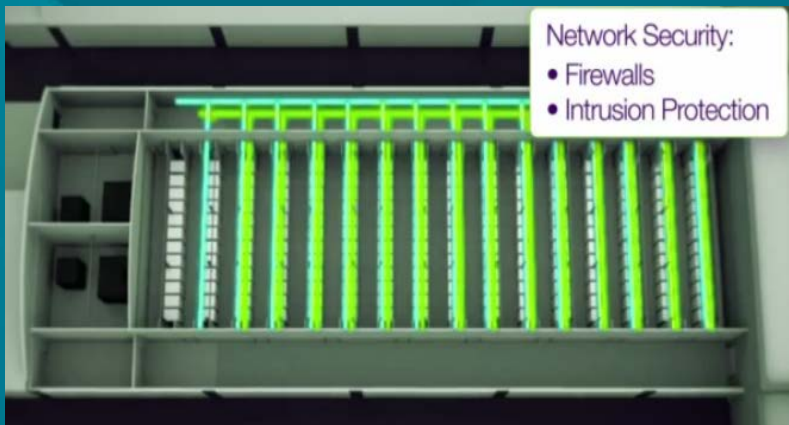


cloud computing

- software as a service
- platform as a service
- comms as a service
- **infrastructure as a service**
- security as a service
- data as a service
- identity as a service
- storage as a service



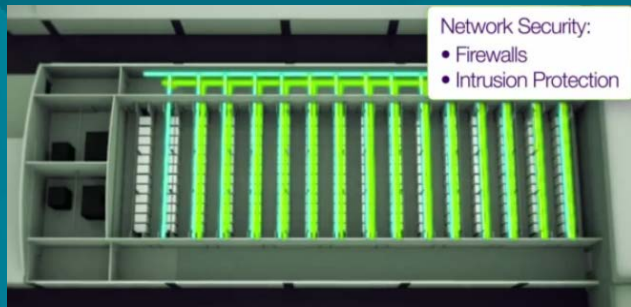
- everything as a service





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Cloud Security: Forward Looking Approach

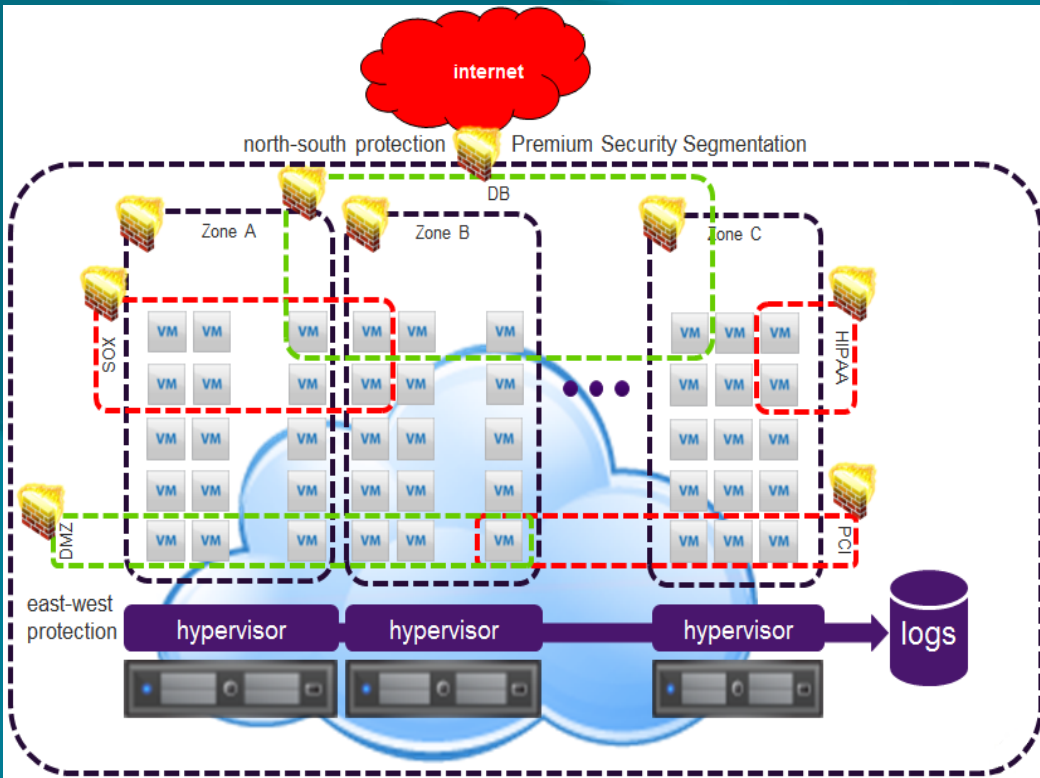


- security concerns are the #1 impediment to cloud adoption
 - looked to bring comfort and audit edge to everything we do
 - Canadian geographic cloud with cost advantages of a public cloud but assurance data does not leave Canada
- built to where security would be in 3 years not where it will be in a quarter
 - incremental small steps would take too long
 - desired a transformative step
 - considered security model
- aimed toward security design several years ahead of its time
 - moving away from layer 3 firewalls to layer 7 firewalls
 - looked through lens of network to very layer 7 driven
 - accelerate provisioning time of new firewall from 3-6 weeks to 3-6 hours



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Cloud Security: Design



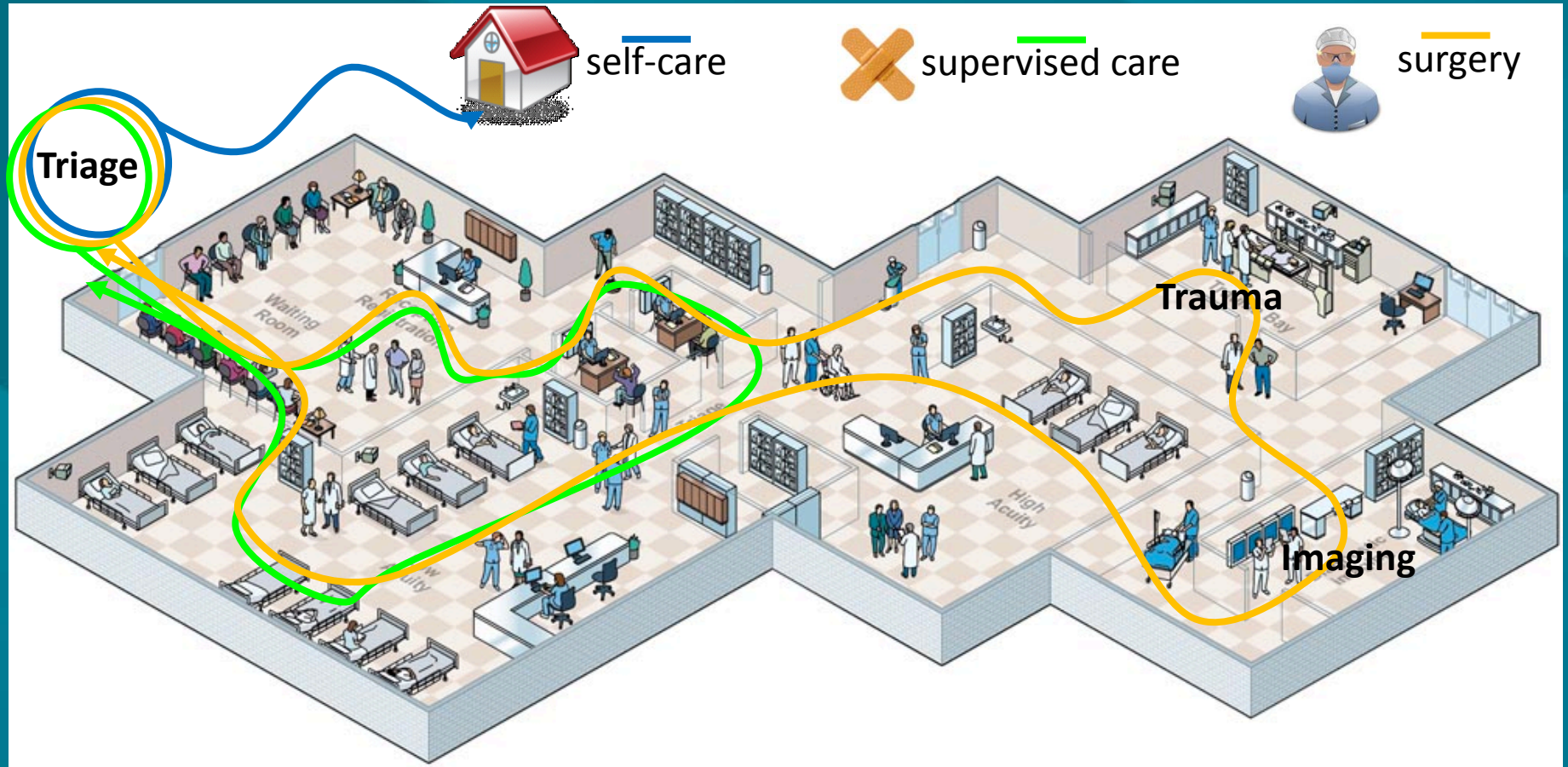
Technology	Description
DDoS protection	volumetric and non-volumetric protection
perimeter firewalls	north-south protection
perimeter IPS/IDS	north-south protection
hypervisor security	ensure right customers are in the right silos
virtual machine security	from virtual firewalls and intrusion prevention/detection to anti-virus and anti-malware
SIEM	correlation engine, nerve centre of cloud
network forensics	flow and packet capture (PCAP)
governance, risk, & compliance (GRC)	enabler for formal compliance and visibility
vulnerability management	identifying, classifying, remediating, and mitigating vulnerabilities





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Hospital Emergency Room





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Next Steps

- partner over policeman
 - security is not the bottleneck
 - differentiate products with security
- resource constrained
 - people to do consulting
 - money to implement security solutions
- embed security in what you do
 - retrofitting the old is time consuming and costly
 - key is to build security in at the design stage
- get security at the table
 - insert in the process where project capital is released
 - triage and determine what level of engagement is required

