



DATA PRIVACY CHALLENGES ACROSS INTERNET

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Increasing Interest in Strong Encryption

- Data Privacy is Growing Concern
 - Data Breaches for information and content in-flight across Internet
 - DC, Campus, Branch (and Caching locations)
- Regulations Mandating Greater Security
 - HIPAA, PCI, Sarbanes ... and Corporate (e.g. Media transport across Internet)
- Opportunity (.. Encryption yes ... but also)
 - Remote DC or Branch sites
 - Expand footprint across Internet (till Fiber is available)
 - Cloud Gateway
 - Remote Caching sites



What to protect from Data Snooping and Wiretapping?

Intellectual Assets, Customer Information and Premium Content



Disaster Recovery
traffic



Communications
between sites



Premium Content
(4K/8K) distribution



Customer Information
in transit



Medical Imaging
transport



Financial Information
in transit



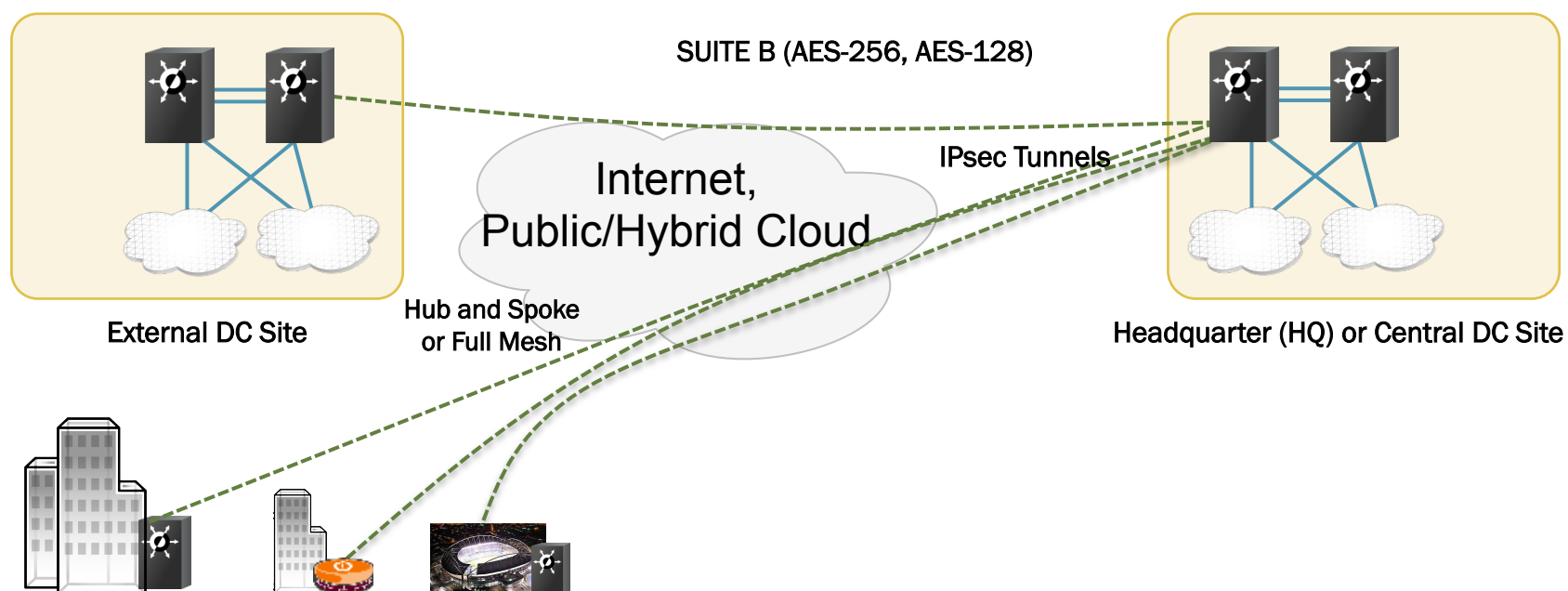
Surveillance
traffic

more



Use Case: High Performance Data Privacy (Site-to-Site)

Average cost of Data Breach increased from \$5.4M to \$5.9M



Service Providers can now secure networks with high encryption ... BIG tunnels



Challenges in securing Bulk Traffic across Internet

Varies by network and use

- Impact of encryption on throughput: 50%? (or even higher)
- Largest IPsec Tunnel: >1Gbps? How do you handle 10G flows? Ex: Inter-DC bulk data transfers
- Aggregation Hub: 7Gbps? How do you aggregate 20 branches (or 200) with 1Gbps each? Ex: Aggregate hub with 20Gbps to 200Gbps
- Encryption Level: AES-128? Is it enough encryption? What about AES-256?
- Frame Size: 120 Bytes? High tax of security header (ESP). Ex: 1500 Bytes or jumbo frames reduces the tax.



THANK YOU

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