Simplifying Encryption and Authentication

Trusted Computing Group Opal Self-Encrypting Drives

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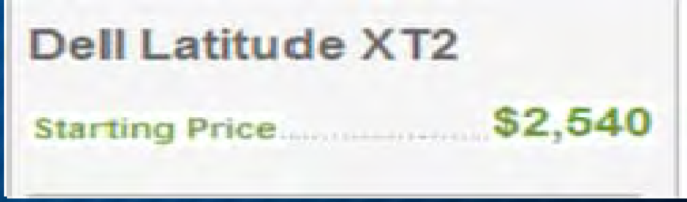
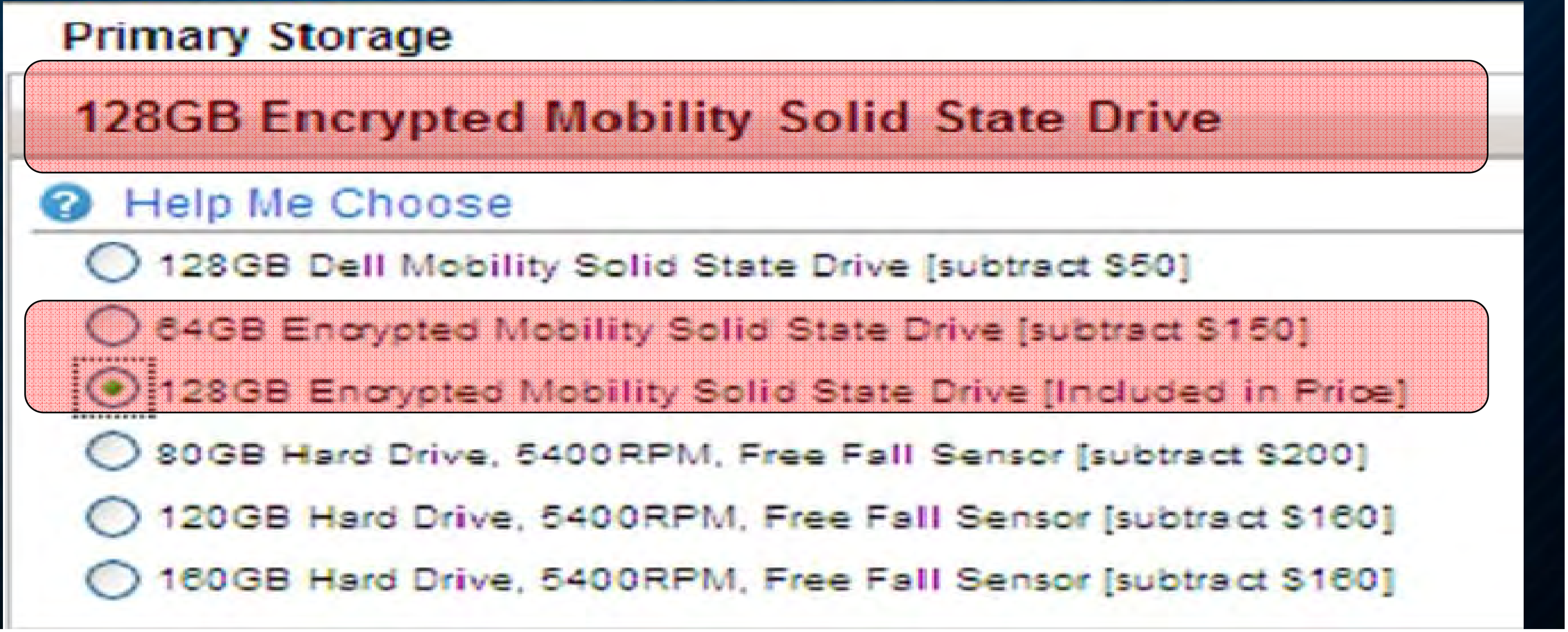


Dell Latitude XT2

Starting Price $2,540



Primary Storage

128GB Encrypted Mobility Solid State Drive

○ 128GB Dell Mobility Solid State Drive [subtract $50]

○ 64GB Encrypted Mobility Solid State Drive [subtract $150]

● 128GB Encrypted Mobility Solid State Drive [Included in Price]

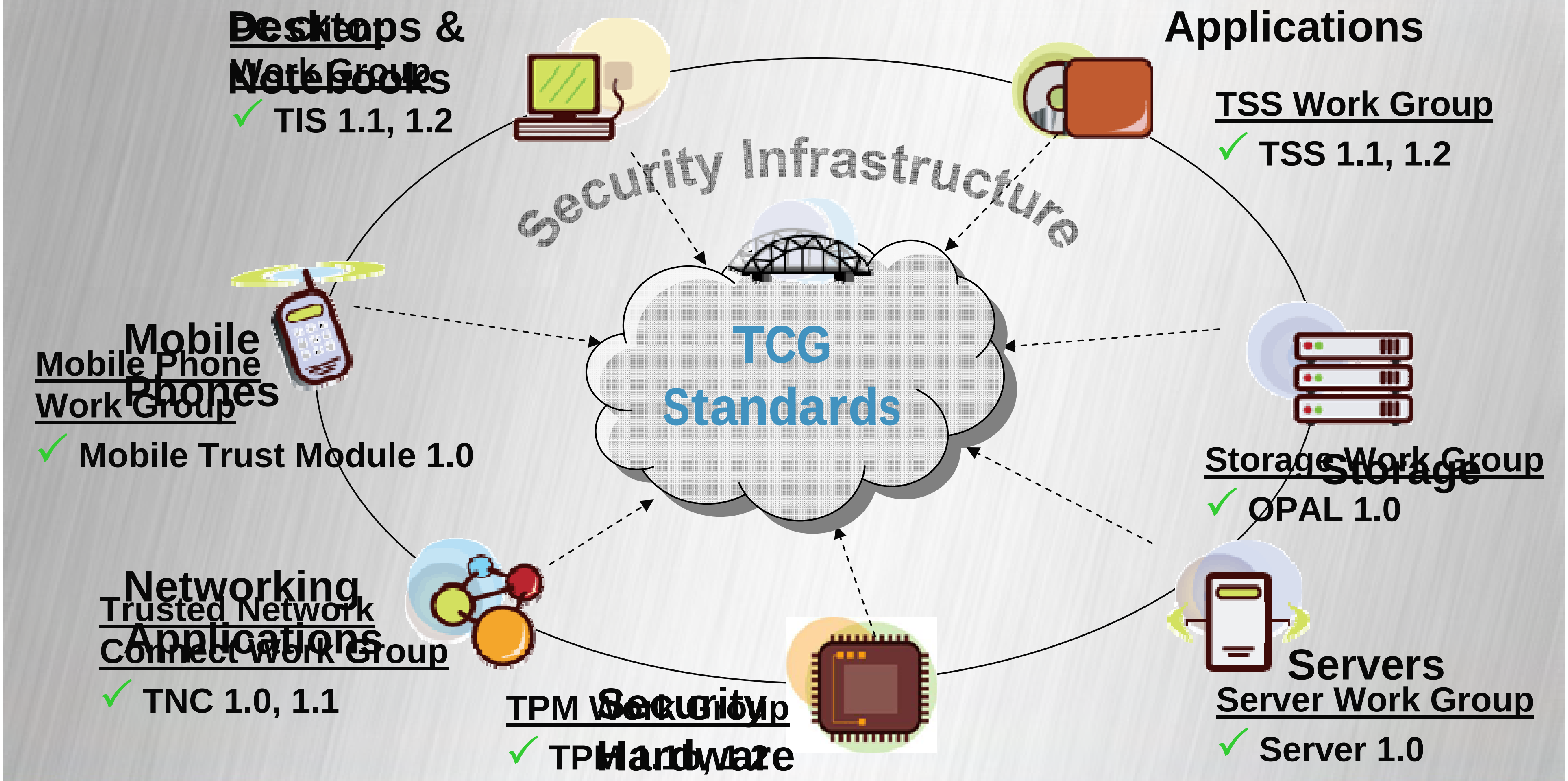
○ 80GB Hard Drive, 5400RPM, Free Fall Sensor [subtract $200]

○ 120GB Hard Drive, 5400RPM, Free Fall Sensor [subtract $160]

○ 160GB Hard Drive, 5400RPM, Free Fall Sensor [subtract $160]

Trusted Computing Group (TCG)

Developing Open Industry Standards



Desktops & Notebooks

Desktop Work Group

✓ TIS 1.1, 1.2

Applications

TSS Work Group

✓ TSS 1.1, 1.2

Security Infrastructure

TCG Standards

Mobile Phones

Mobile Phone Work Group

✓ Mobile Trust Module 1.0

Storage

Storage Work Group

✓ OPAL 1.0

Networking Applications

Trusted Network Connect Work Group

✓ TNC 1.0, 1.1

Security Hardware

TPM Work Group

✓ TPM 1.1b, 1.2

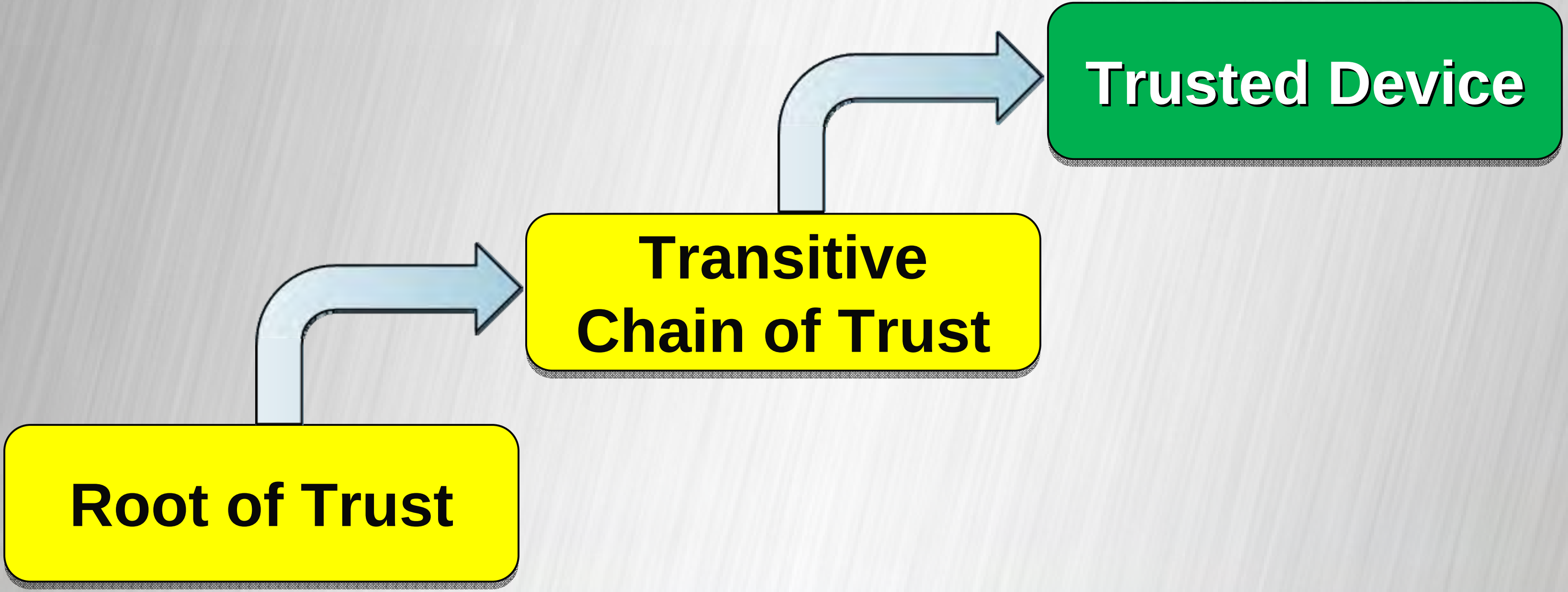
Servers

Server Work Group

✓ Server 1.0

Prerequisite - Hardware Root of Trust

- A platform root of trust, *based in hardware*, is essential for all security in the device
- Software **CANNOT** provide a secure root of trust



Root of Trust

Transitive Chain of Trust

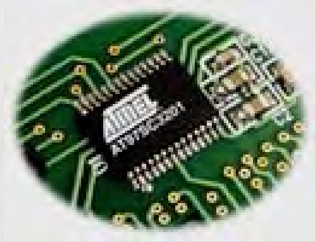
Trusted Device

Trusted Computing in Action

- Virtually all “business grade” laptops and desktops include TPMs as part of their standard configuration
  - Tier 1 – Dell, HP, Lenovo
  - Tier 2 – Acer, Fujitsu, Sony, Toshiba
- US Government agencies are mandating TPMs
  - Air Force “Mainstream Buying Standards” requires TPM 1.2
  - Army requires TPM 1.2 for all new Window’s PCs
  - OSD Mandates TPM on all new PCs
- Integration within Intel vPro chipset – iTPM
- Microsoft Vista® leverages TPM for enhanced security
  - BitLocker® - Integrated FDE that utilizes a TPM
    - Gartner strongly recommends using a TPM

⇨ TPM install base is headed towards ubiquity ~300 Million

⇨ TPM aware applications are entering the market



First Application: Device Identity

Information Assurance and Security is based on **Strong Identity**

Billions has been spent on providing identity to users but that is only **half the solution**

It is now time to invest in the **secure identity of all devices**

Secure identity requires a hardware root of trust

Device Identity is not a New solution

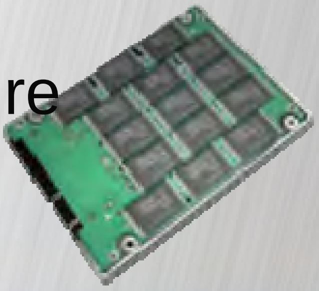
- The cellular network went to strong identity of devices in the transition to digital in mid 90's
- The cable industry transitioned in the mid 80's
- The satellite industry transitioned in the mid 80's
- The garage door opener got an identity in the 70's

It is now time to adopt a proven platform identity solution for Cyber security on the Internet

Self-Encrypting Drives

Changing the Landscape of Data Encryption

- Strong specifications for attached storage
- Should apply to all USB data storage
- Moves PC authentication to PRE OS stage
- Integrated support for multiple authentication factors
  - ❑ Card
  - ❑ Password
  - ❑ Network
  - ❑ TPM
- Data protection in hardware is the right architecture



Trusted Computing in Action

Factory-Installed Self-Encrypting Drives

- Optional on Dell Latitude, Optiplex and Precision Workstations
  - ❑ Latitude E4200, 4300, 5400, 5500, 6400 and 6500
  - ❑ Latitude D530, 531, 631 and 830
  - ❑ Precision M2400, 4400, 6400, T3500, 5400, 7400
  - ❑ Optiplex 760, 960
- Supported by Lenovo and HP – as custom features
- TCG’s Opal Self-Encrypting Drive Specification (2/09)
- Seagate Drives have NSA National Security System Approval
- All PCs should be procured with Self Encrypting Drives

⇨ ***Compliance Regulations are Driving Adoption***

Our Vision ....

- In the future –
  - ❑ You will log into your device and your device will log you into everything else.
  - ❑ Only authorized PCs will be on my network and I can definitively identify them all.
  - ❑ The PC will have the premier Root of Trust and Privacy Models for all devices. Scalable and Global
  - ❑ When My PC is un-attended or lost my data is safe.

Trusted Computing just getting started.

The components exist and are ubiquitous.

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Thank You

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