

ITSAC 2012

SCAP and TNC

**Enabling Enterprise Security Management Solution
Interoperability through Open Standards**

October 2012

Agenda

- ▶ Challenge of Today's Users
- ▶ ESM Data Flow Walkthrough
- ▶ ESM CND Architecture
- ▶ Trusted Engineering
- ▶ How Do I Get Involved?

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▶ Challenge of Today's Users

▶ ESM Data Flow Walkthrough

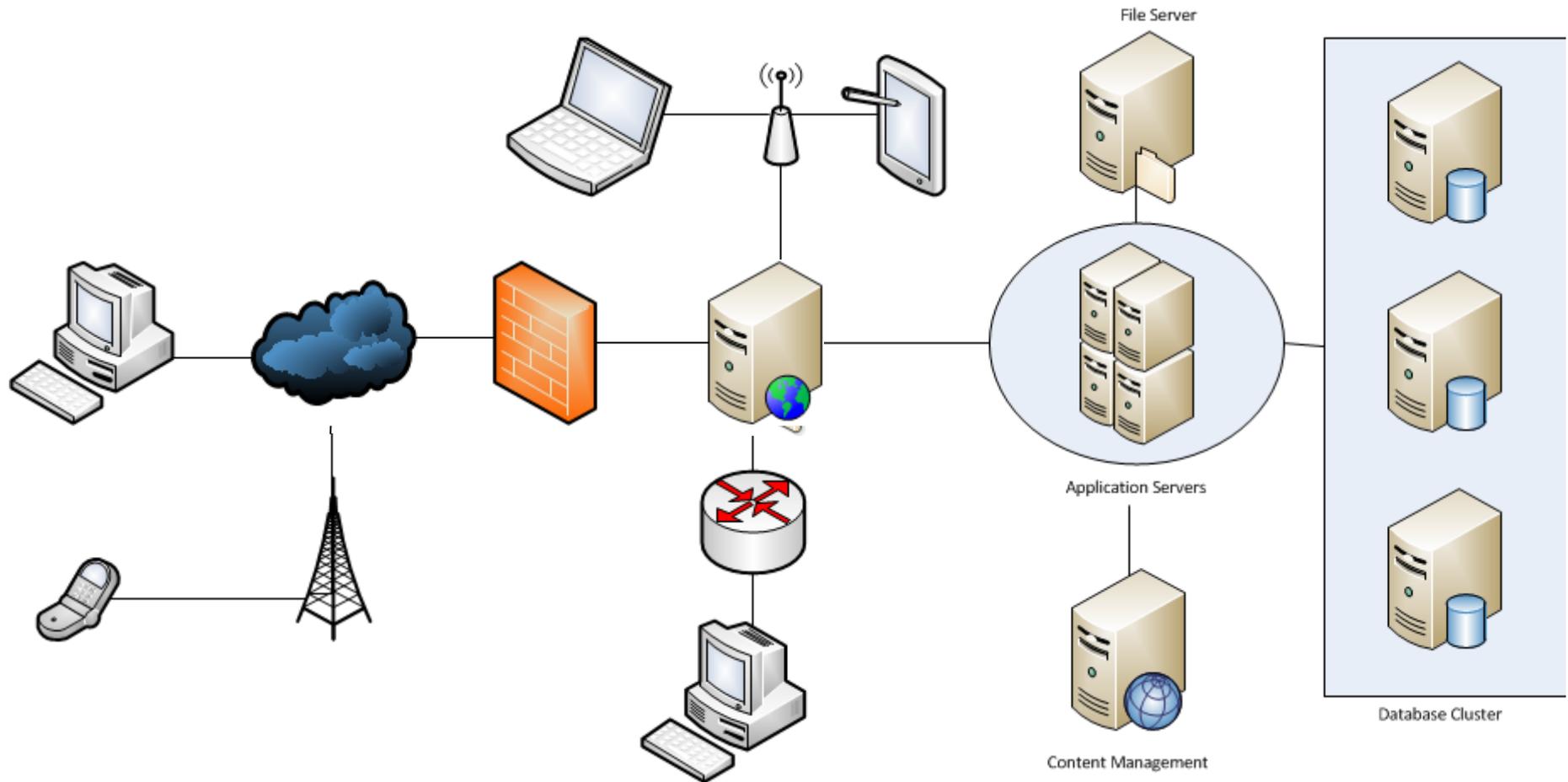
▶ ESM CND Architecture

▶ Trusted Engineering

▶ How Do I Get Involved?



Multiple Access Points is a security challenge

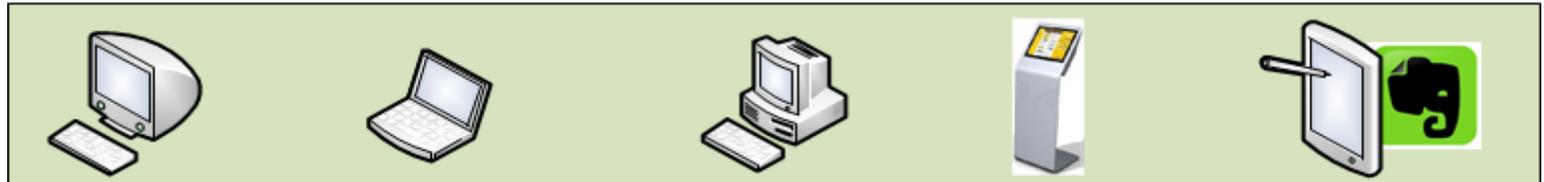


Users access information from a variety of location

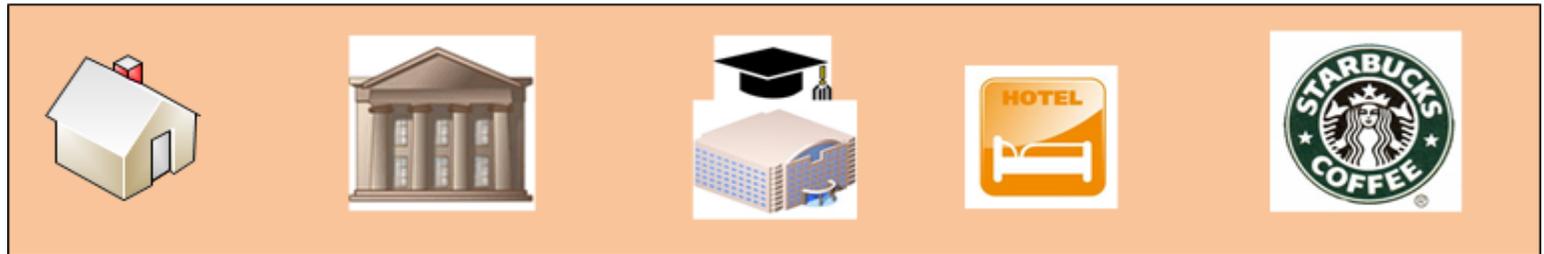


USER

DEVICE



LOCATION



TRANSPORT



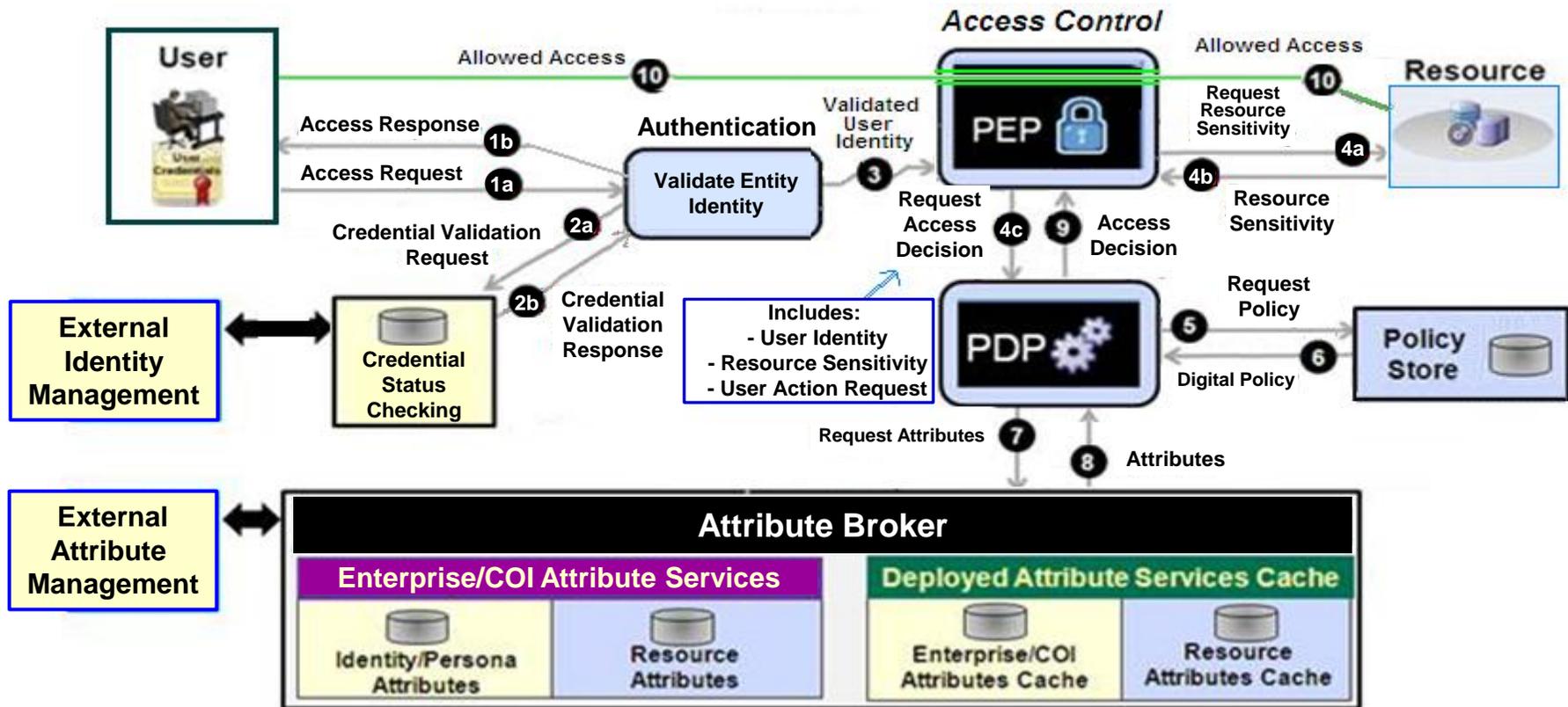
CORPORATION



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Enterprise Security Management Access Control Use Case



There are many reasons

Booz | Allen | Hamilton

Types of Access Control Solutions

Type	Object	Operation
Host Based	Processes	Execute Delete Terminate
		Change Permissions
	Files	Create Read Modify Delete
		Change Permissions
Host Configuration	Read Modify Delete	
Authentication Function	Login	
Web-Based	URLs	Access via HTTP operation
	Files	Open Download
		Execute
	Executable Scripts	Enable Disable
Forms	HTTP GET HTTP POST	
Application -Based	Application Configuration	Create Modify View Delete
	User Interface Elements	View Modify
	Commands	Execute
	Managed Resources	Create Modify View Delete
DLP	Print Spool	Submit (transfer outside security domain)
	Application Layer Protocol	Transmit (transfer outside security domain)
	File	View Move Copy (to another security domain)
	Clipboard	Copy Paste (to another security domain)
	Removable Drive	Write To (transfer outside security domain)

APT is single largest problem facing anyone on the Internet today

- ▶ “...Malware attacks against end users continue to rise, leading to increases in financial damage, intellectual property theft...”¹
- ▶ By 2018 on average 1.6% of all corporate revenue will be lost due to data exfiltration
- ▶ Cost of Cyber Crime Study by Ponemon²
 - \$5.9 Million is median total cost per compromise
 - 47% of participating U.S. organizations indicated they had experienced APT attacks or infections in the past two years.
 - More than 75% of all advanced malware goes undetected by *signature-based* security solutions
- ▶ In the last year Verizon RISK team responded to 855 incidents ⁴
 - 58% of all data theft was tied to activist groups
 - 69% incorporated malware (+20% from 2011 report)
 - 96% of attacks were not highly difficult
 - 85% of breaches took weeks or more to discover

Sources:

¹Gartner Report Mar 2012

²Klogix report "The Real Cost of Data Loss"

³Ponemon Institute, 2012 U.S. Cost of a Data Breach Study

⁴2012 Data Breach Investigations Report (DBIR)

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Recc



Phi



Delive
Exploi



Move
Laterall



Data
The



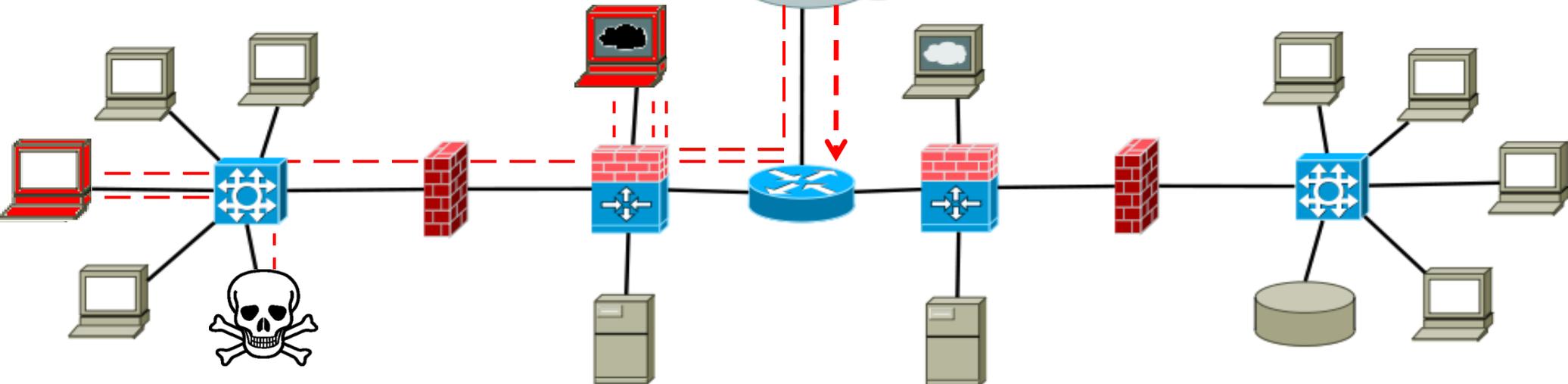
Current Action:

Attacking the Internet

Threat Actor



Internet



Data files
compromised

Recc



Phi



Delive
Exploi



Move
Laterall

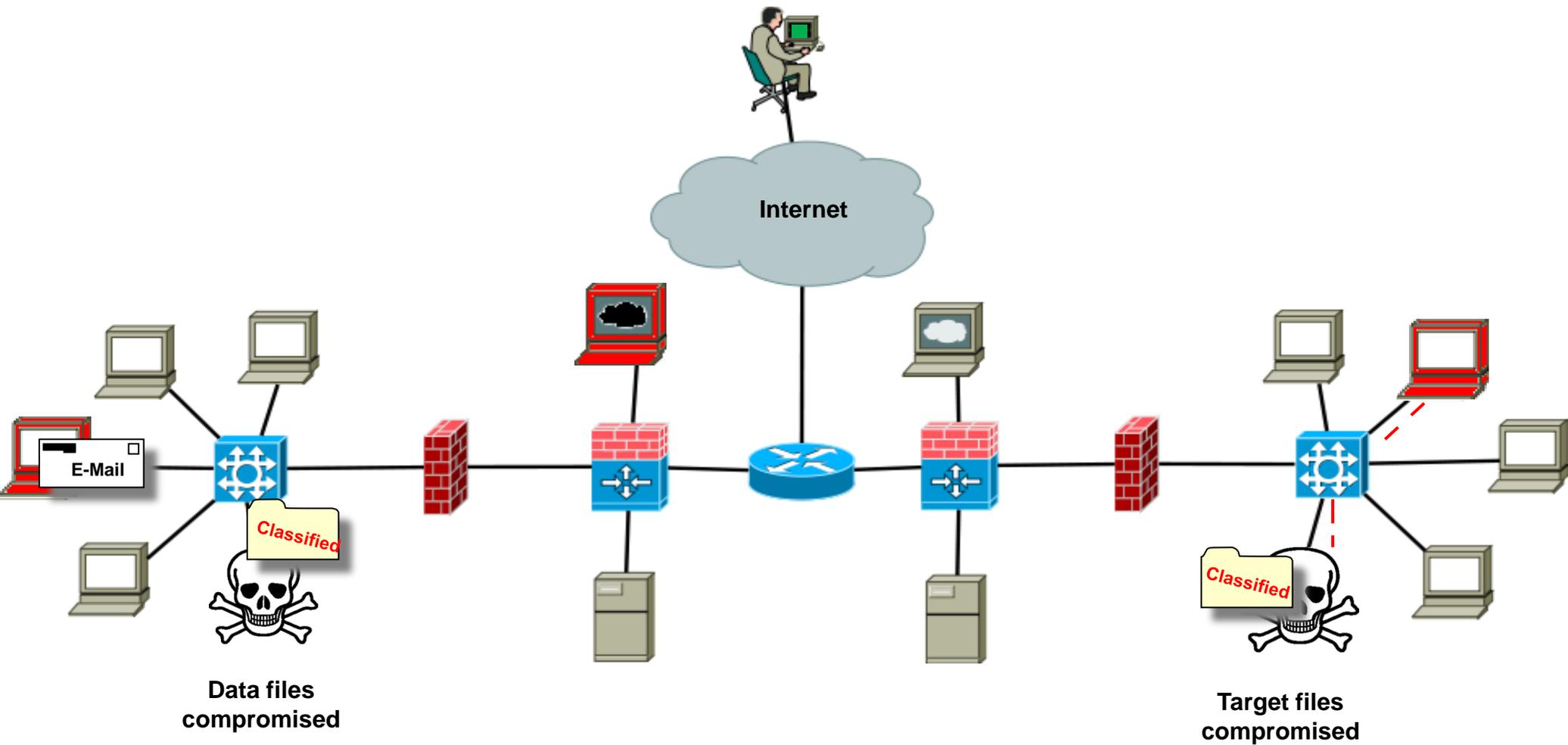


Dat
The



Current Action:

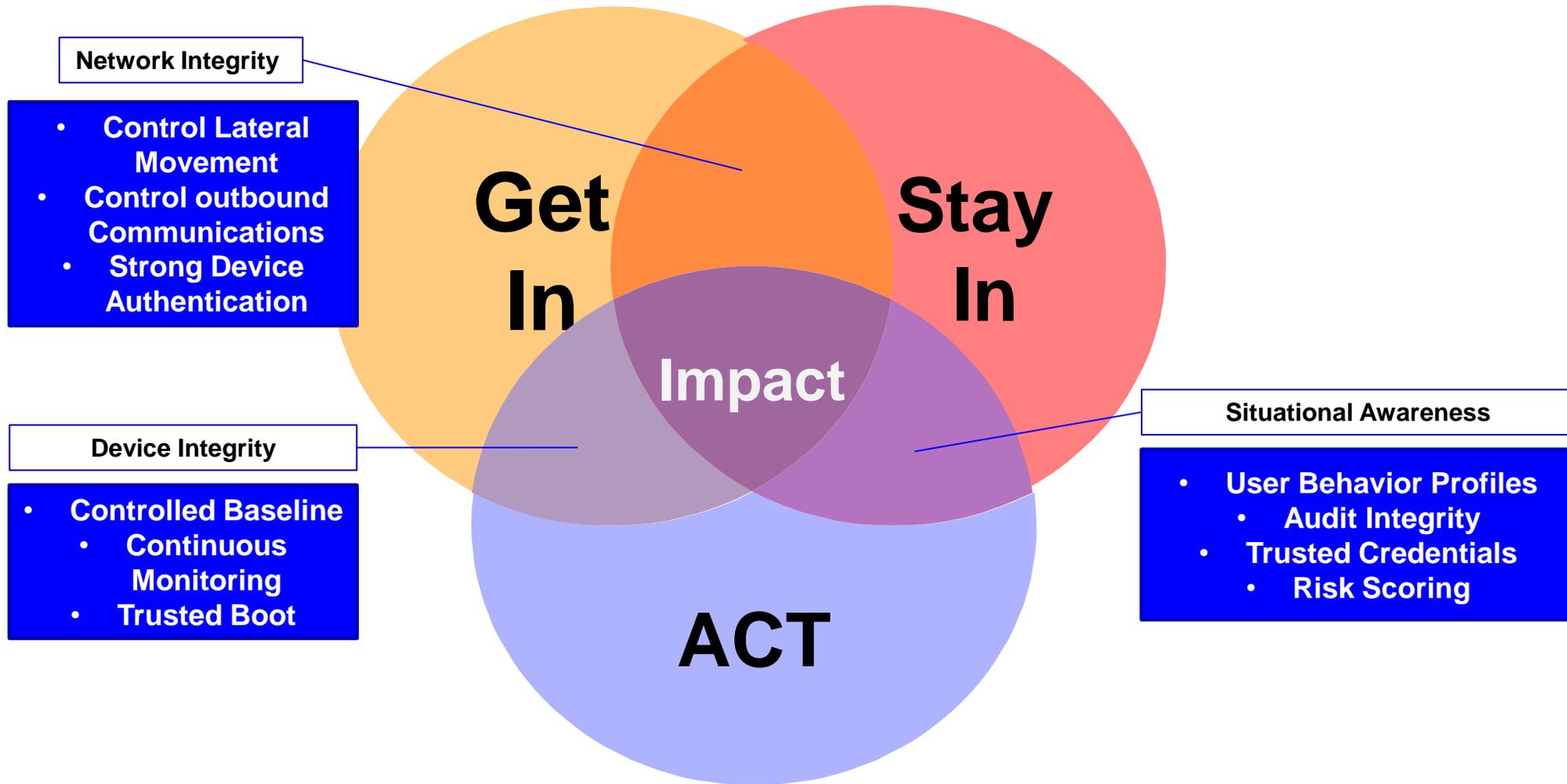
Send malware to the target host



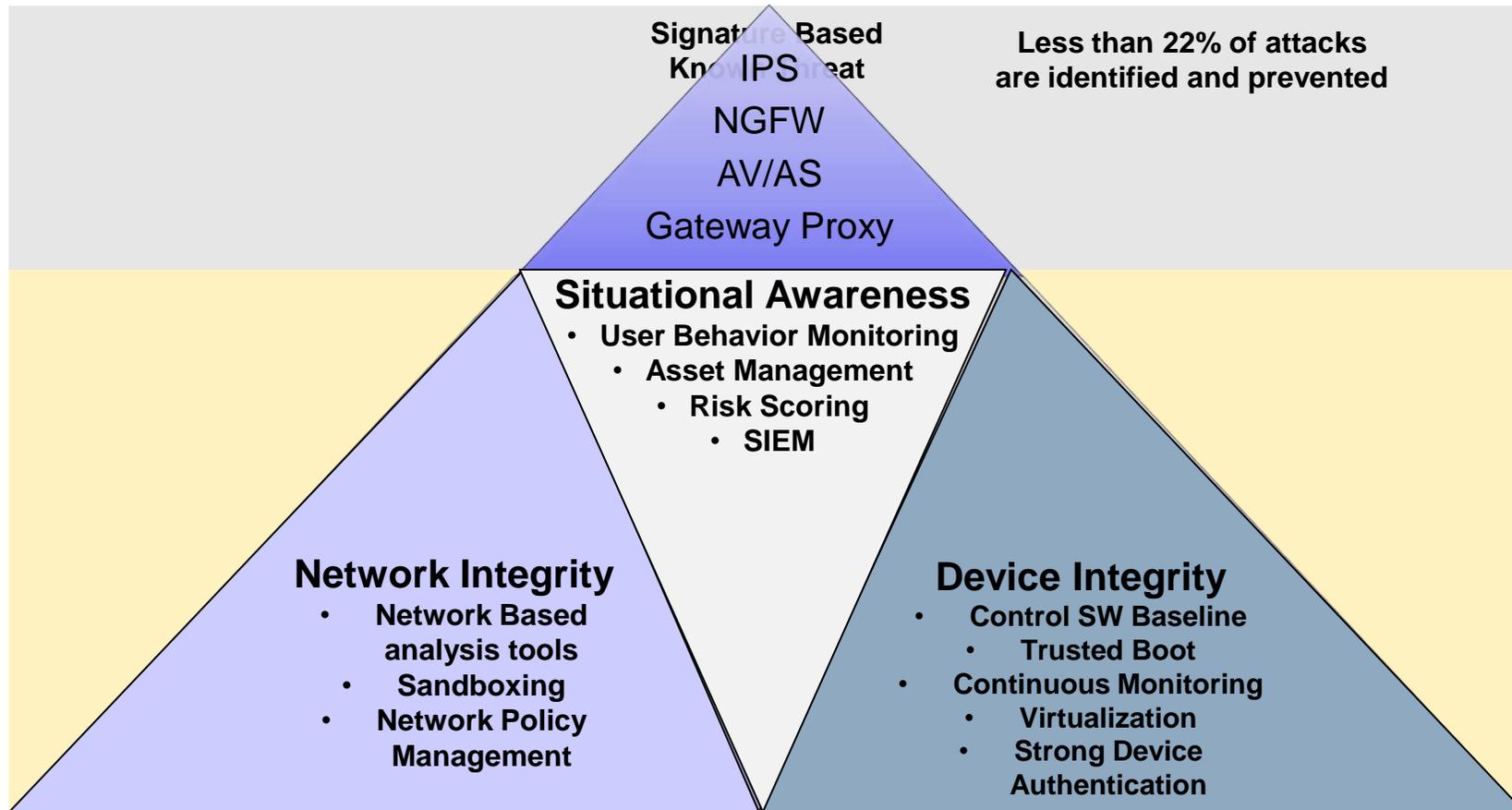
Goals of APT



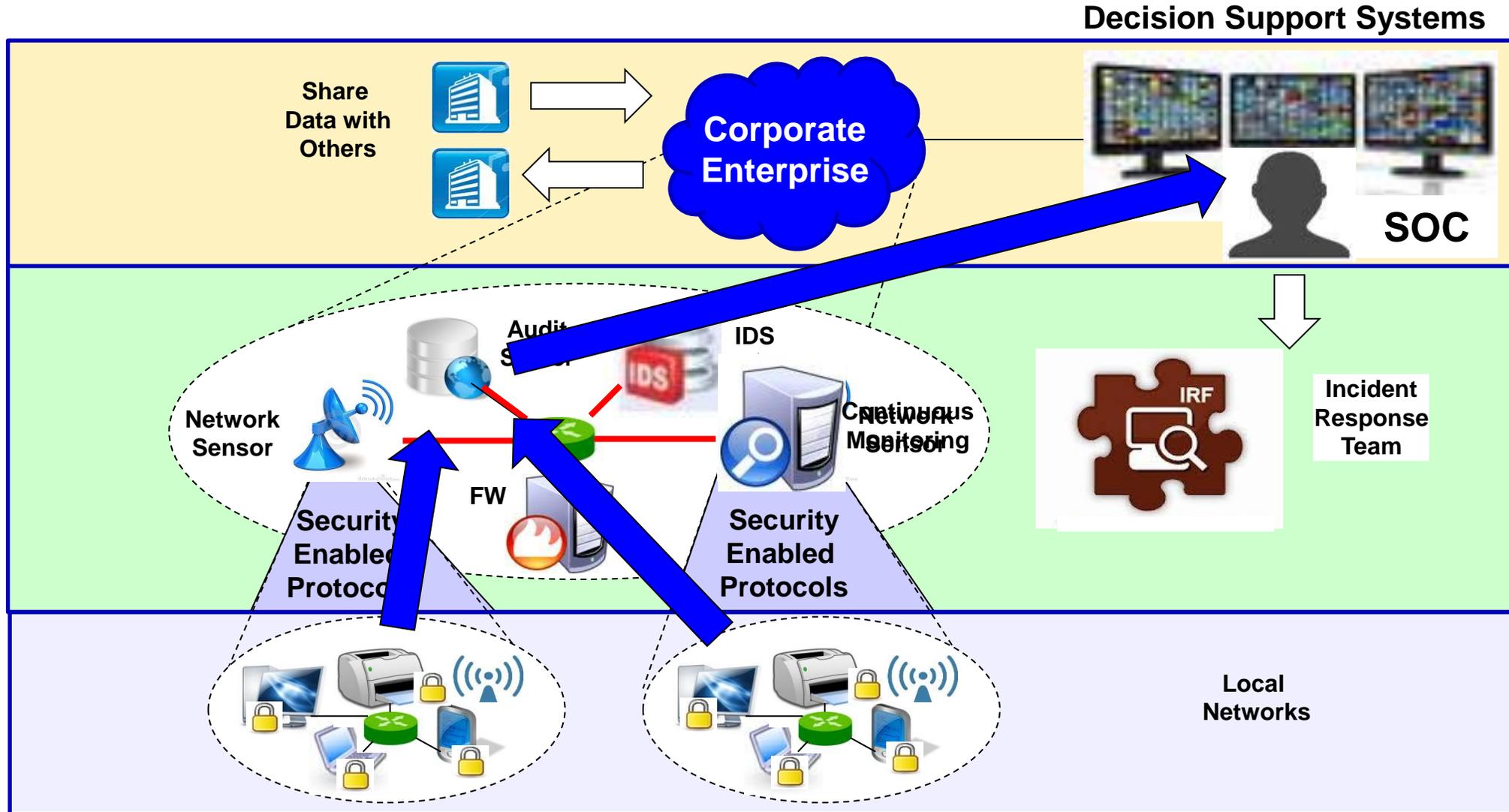
Security Controls to Defend Your Enterprise



New Protection Profiles will Assist SOC Analyst to Defend Against APT



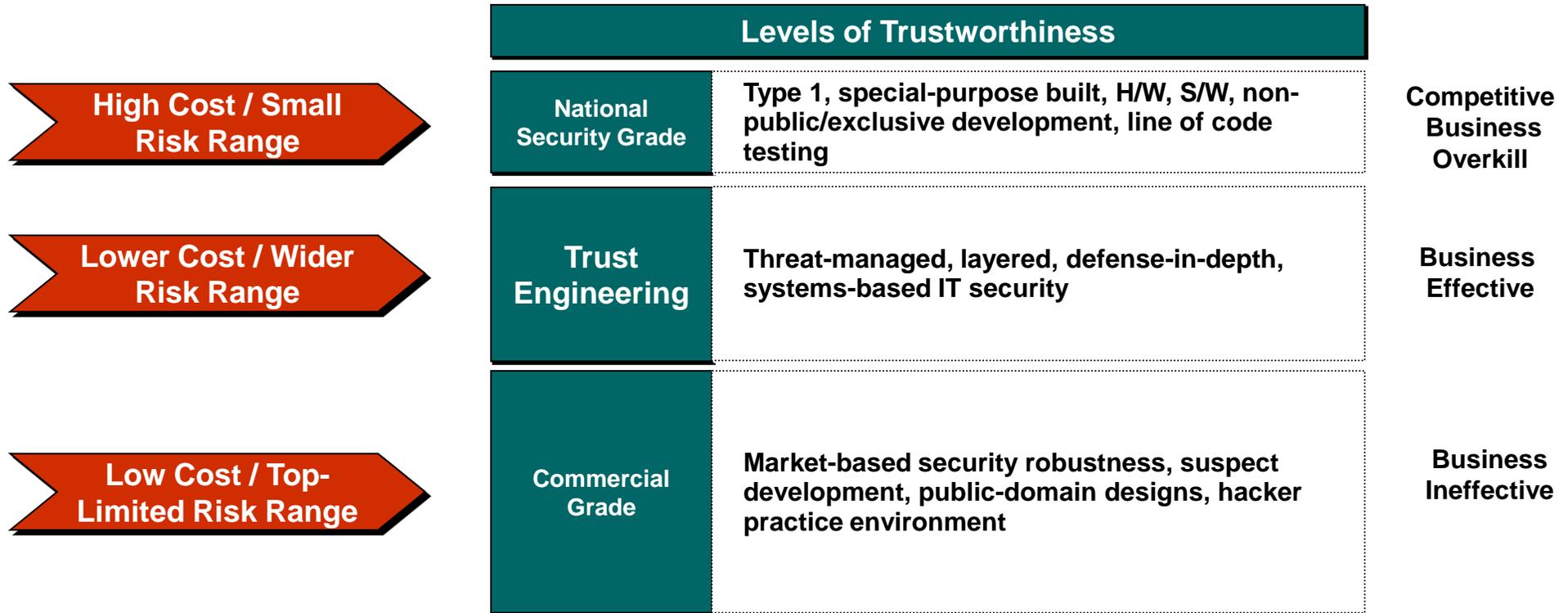
Three tier CND architecture



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Trust Engineering Layers available and relatively un-trusted components/applications to compose system solutions that enhance security posture while enabling business processes.



Enterprise requires development of standards to support the ESM solution class

FACTORS

- ▶ Define the boundary
- ▶ Environmental Factors
- ▶ Threat Analysis
- ▶ Security Objectives
- ▶ Functional Requirements
- ▶ Assurance Activities
- ▶ Mission Requirements
- ▶ Data Flows
- ▶ Use Cases
- ▶ Interfaces

Tailored Standard

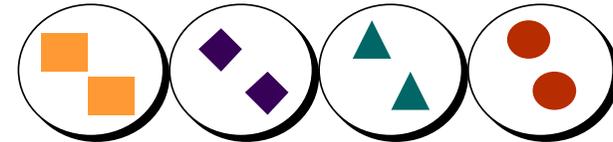
Enterprise

Existing Products



Tailored Standards

Solution Class



Application of Tailored Standards

Risk Mitigation
for Specified
Environment

Proper
Application of
Product

Resultant Mission

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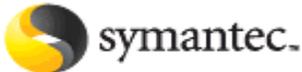
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The team, so far (growing!)

We are always looking for more participants!



Australasian Information Security Evaluation Program (AISEP)



Questions

▶ Join us at:

– <http://groups.google.com/group/enterprise-security-management>

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