



# Security Built in and Built to Last

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# Security Continues to be a Challenge

**Data breaches cost \$654 billion,  
expose 2.8 billion data records in the U.S.**

Source: Forgerock U.S. Consumer Data Breach Report  
<https://www.forgerock.com/resources/view/92170441/industry-brief/us-consumer-data-breach-report.pdf>

**The average enterprise uses 75 security products to secure their network.**

Defense in depth: Stop spending, start consolidating  
<https://www.csoonline.com/article/3042601/defense-in-depth-stop-spending-start-consolidating.html>

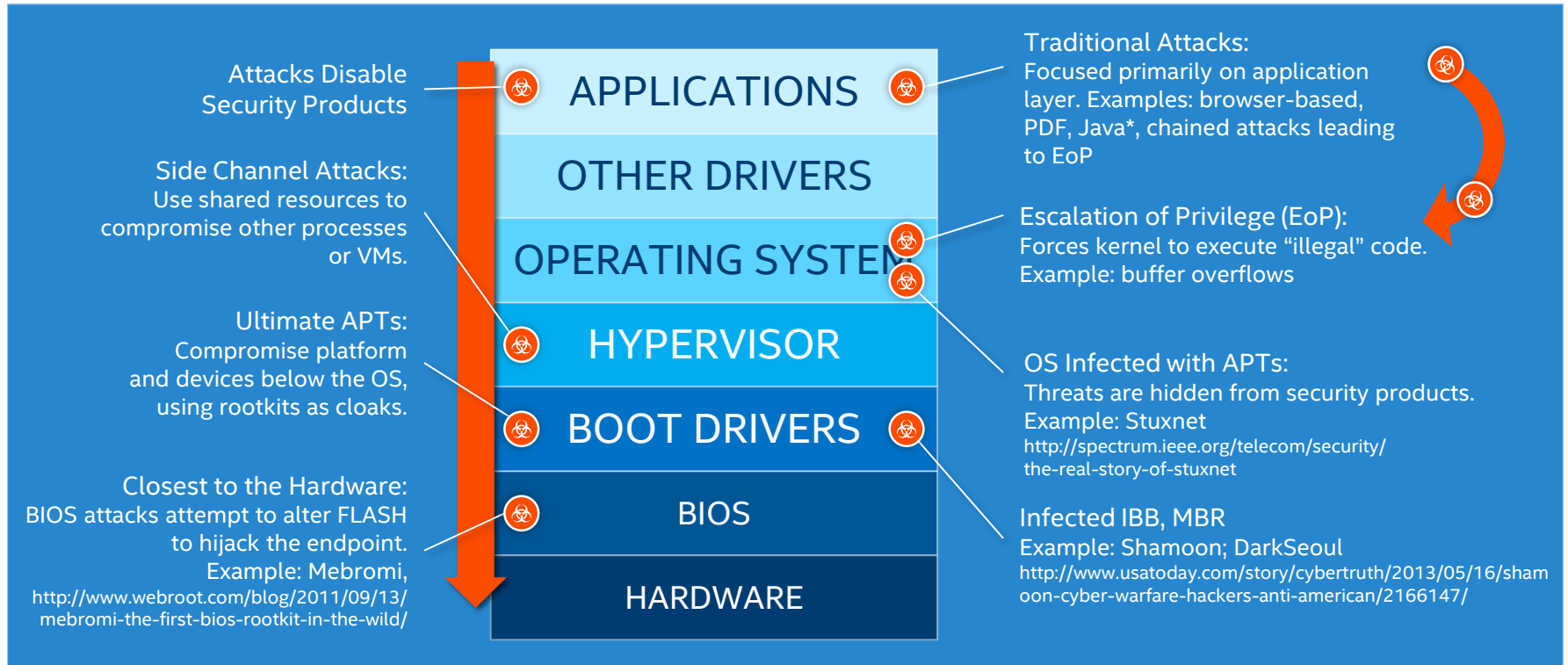
**"Complexity is the Worst Enemy of Security"**

Bruce Schneier, *Information Security*  
November 19, 1999

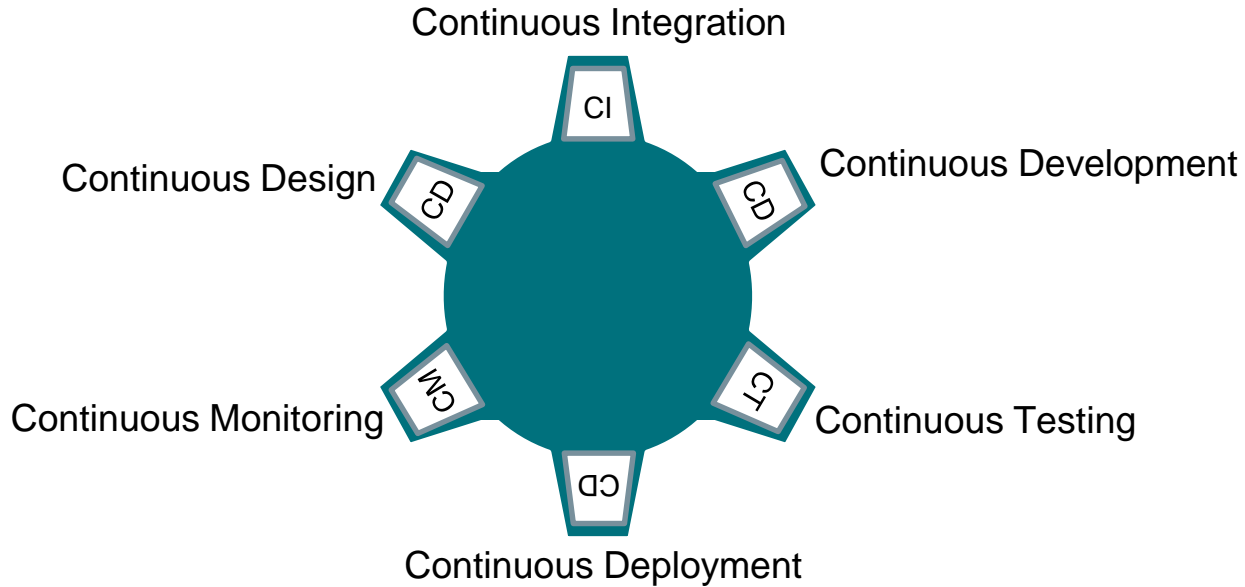
*The average large enterprise spends \$16.7 million annually on security software and salaries of the professionals who maintain it. - Bromium*



# Attacks are Moving Down the Stack

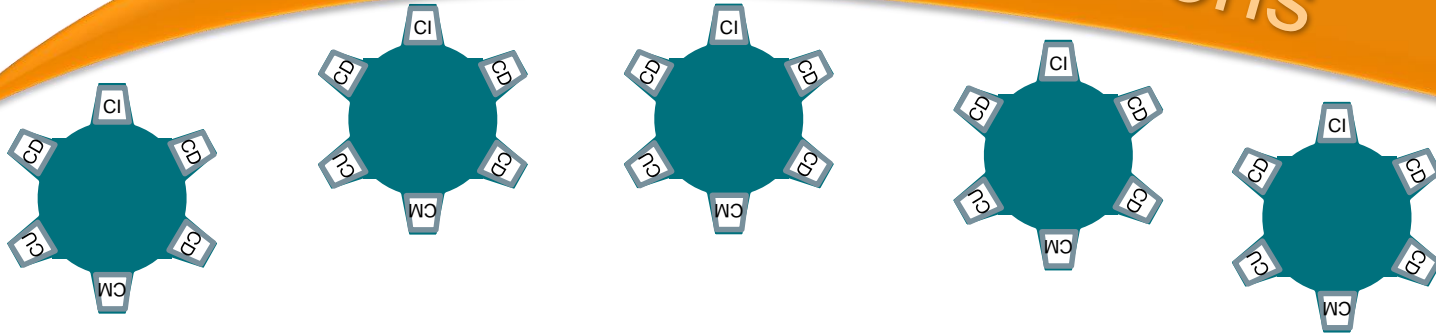


# Continuous Everything

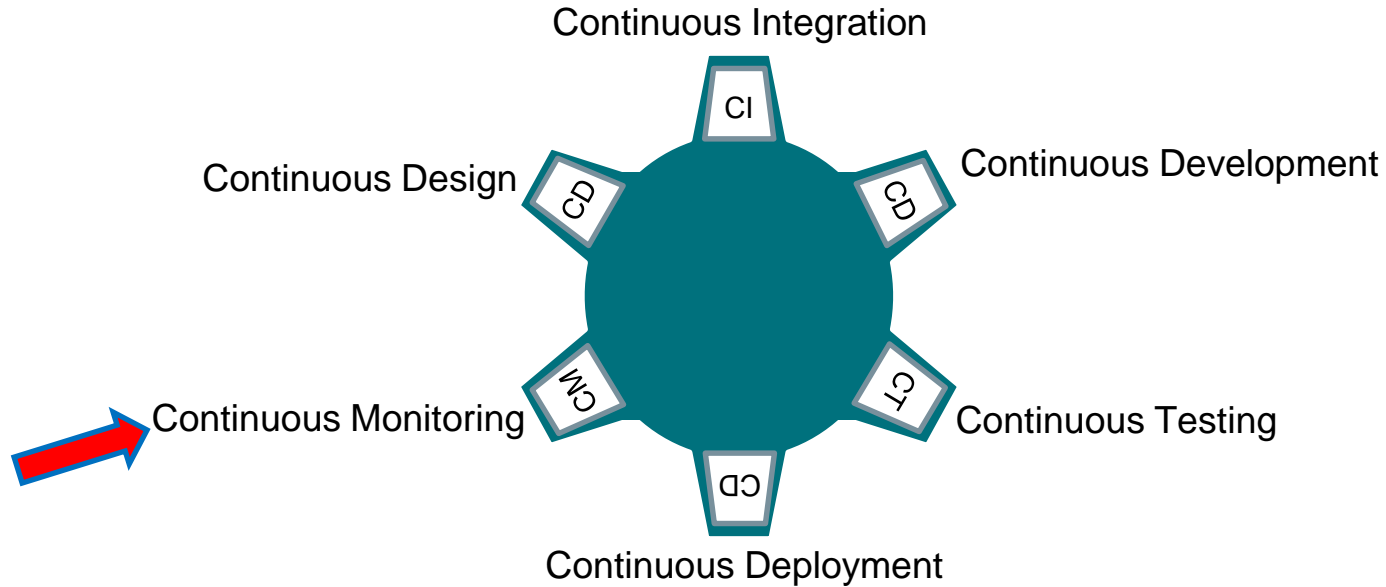


# Continuous Everything

Enterprise Applications

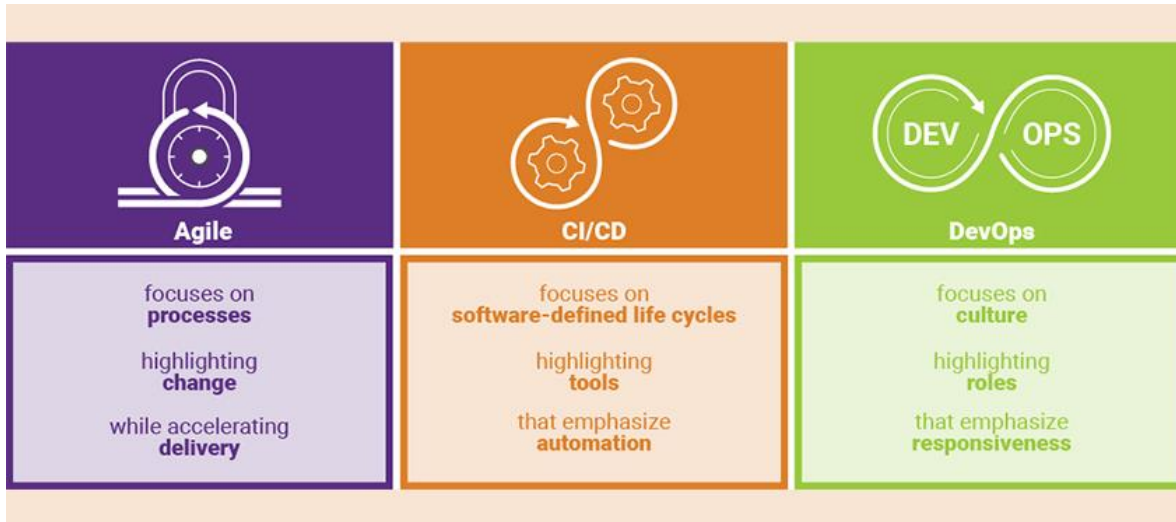


# Security Built in...?



# Security Built in...?

## Agile, CI/CD, DevOps, ... Where is Security?



What's the difference between agile, CI/CD, and DevOps?

Posted by John Steven on Monday, March 19th, 2018

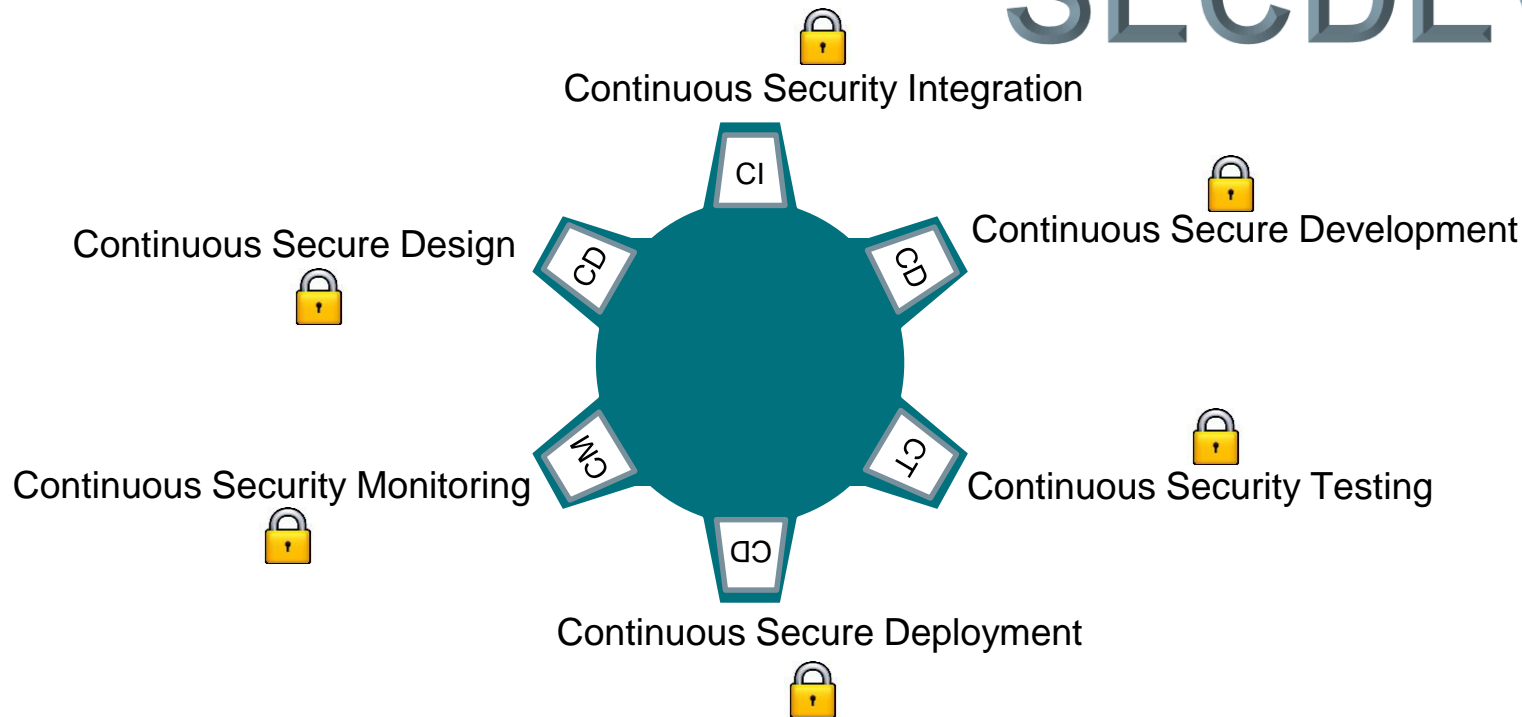
<https://www.synopsys.com/blogs/software-security/agile-cicd-devops-glossary/>



# Security Built in...!

Make Security part of every phase

# DEVOPSSEC SECDEVOPS





# Security Built in...

## How do we get there?

- Infrastructure Matters & Needs to be leveraged up the stack & Applied End to End
  - Hardware Security capabilities
  - Infrastructure Security capabilities Infrastructure Layer(s) (VMM, OS, Orchestration, etc.) Security capabilities
  - Software Defined Network Security



Threat Intelligence and Analytics



Host & System Security



Data and Application Security



Network Security



Identity & Access Management

INTEGRITY

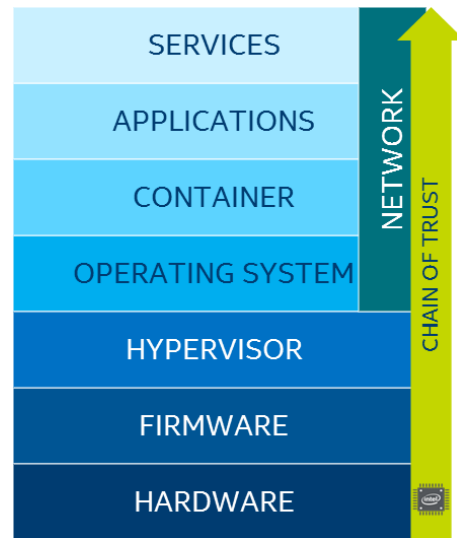
Assured configuration

PROTECTED BOOT

Measure and maintain system integrity at boot time

RUNTIME SECURITY

Isolate and protect workloads



# ... Built to Last

## From Solutions to Services and beyond

- Modular Security Design



- Infrastructure Libraries for Security



- SW Defined Security



- Security Tools



- Security SaaS

# ... Built to Last

## Build once, deploy everywhere

- Build it in:
  - Develop and Distribute Infrastructure Libraries for Security to teams
- Configure it in:
  - Provide Predefined and Configured Security & Policies for Containers, VMs, & NFVs
- Integrate it in:
  - Use Security Tools that can be integrated in, Drive vendors to give you APIs
  - Demand Integrated and Integratable solutions
- Create a Baseline of Security to cover the 80%
  - Innovate for the last 20%
- Automate it:
  - Automate as much as you can



# ... Built to Last

## Automation will set you free

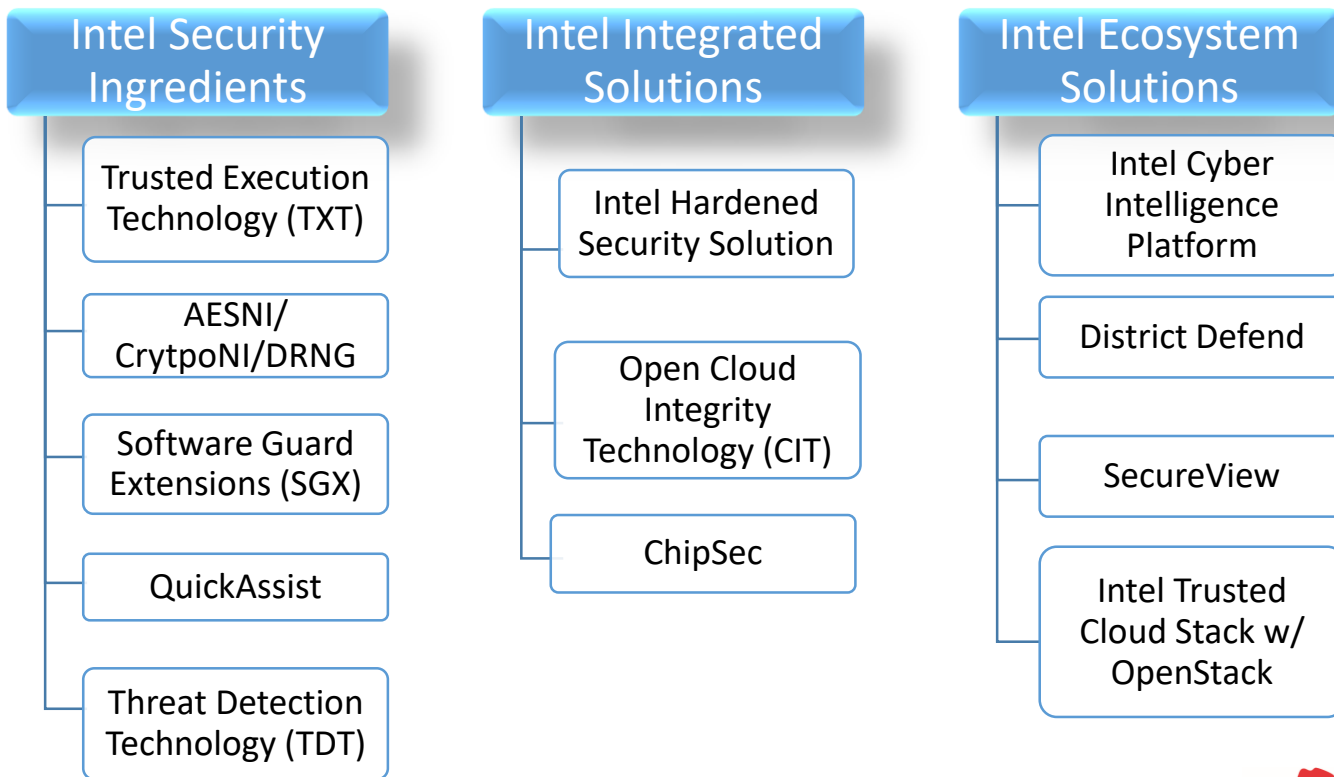
- Automated Testing
- Automated Assessment
- Automated Compliance
- Automated Audit
- Automated Deployment
- Automated Update
- Automated Patching
- Automated Throttle
- Automated Decommissioning
- Automated Recovery
- Automated ...

# Security Built in & Built to Last

- Security across the lifecycle
- Security integration up and down the stack - From HW to SW to Services and beyond
- Drive Modularity, SW defined, and Services for security too
- Security: Build once deploy everywhere
- Automation will set you free

# Security Built in & Built to Last

## Intel delivers security capabilities and solutions



Red Hat



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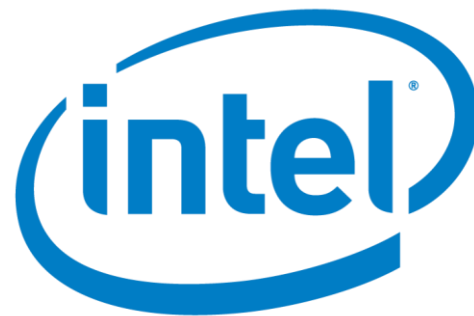
# Thank you!

## Joint Development Drives Innovation



# Red Hat

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