



Protecting Corporate Data from Mobile Threats...

And the emerging role for microSD-based security

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Information security is broken

\$77B

WORLDWIDE SPENDING ON INFORMATION SECURITY IN 2015

\$400M

FINANCIAL LOSS FROM 700 MILLION COMPROMISED RECORDS

99.9%

VULNERABILITIES REMAIN MORE THAN A YEAR AFTER DISCOVERED AND PUBLISHED

70.00%

OF MALWARE SAMPLES ARE UNIQUE TO THE ORGANIZATION

23%

OF SECURITY INCIDENTS INVOLVE PHISHING AND MALWARE

95%

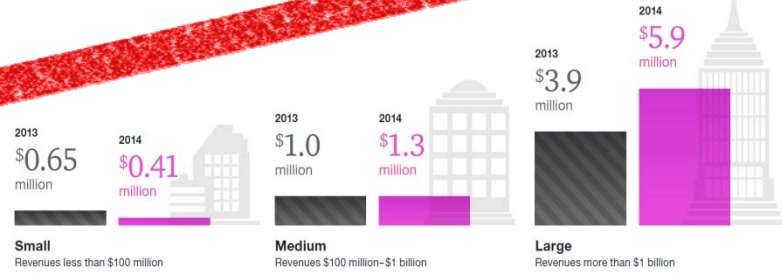
OF INCIDENTS INVOLVE CREDENTIALS TOLEEN FROM DEVICES



How Data Breaches Occur



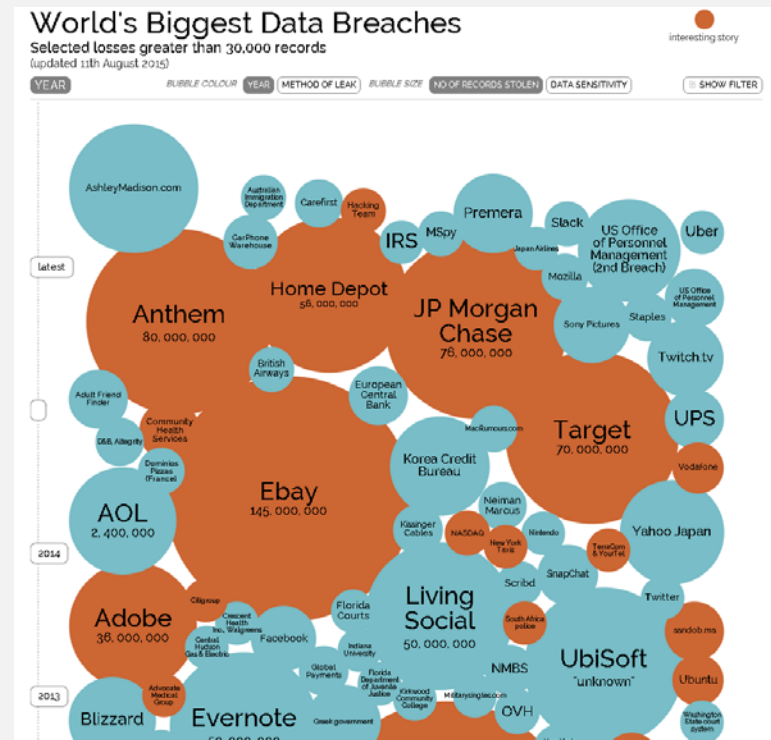
Average financial losses due to security incidents



Sources: Gartner Research, Verizon 2015 Data Breach Report, PWC The Global State of Information Security Survey 2015, Trend Micro website. Slide courtesy of the Prpl Foundation.

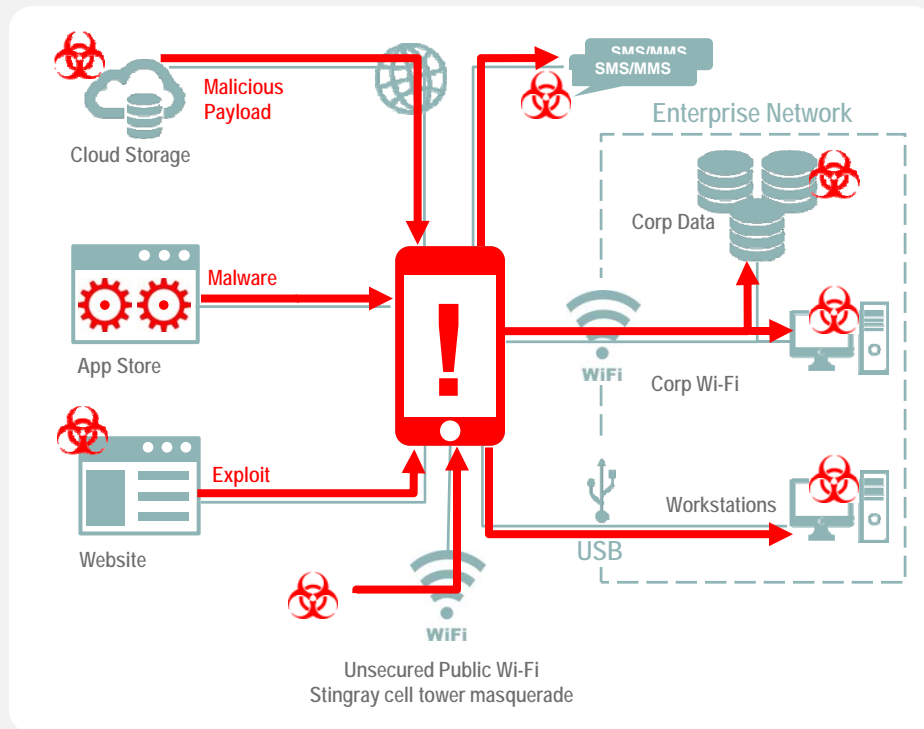


And the data breach pandemic continues



Source: Gartner Research, Verizon 2015 Data Breach Report, PWC The Global State of Information Security Survey 2015, Trend Micro Website. Graphic courtesy of InformationisBeautiful.net Website

Mobile attack vectors threaten corporate data



Mobile security threats

- ✓ Unpatched OS and apps
- ✓ Malware on appstores
- ✓ Malicious payloads / attachments
- ✓ Drive by attacks (browser)
- ✓ Unsecured public Wi-Fi
- ✓ Rogue cell tower (stingray)
- ✓ Jailbreaking / rooting
- ✓ Auto-download of malicious MMS

Source: Gartner Research, Verizon 2015 Data Breach Report, PWC The Global State of Information Security Survey 2015, Trend Micro website



Corporations are demanding solutions

In a recent international survey of IT decision makers...*

93%

Believe mitigating targeted attacks is a high, urgent or critical priority

91%

See preventing data breach by mobile as high, urgent or critical

90%

Rate regulatory compliance as high, urgent or critical issue

74%

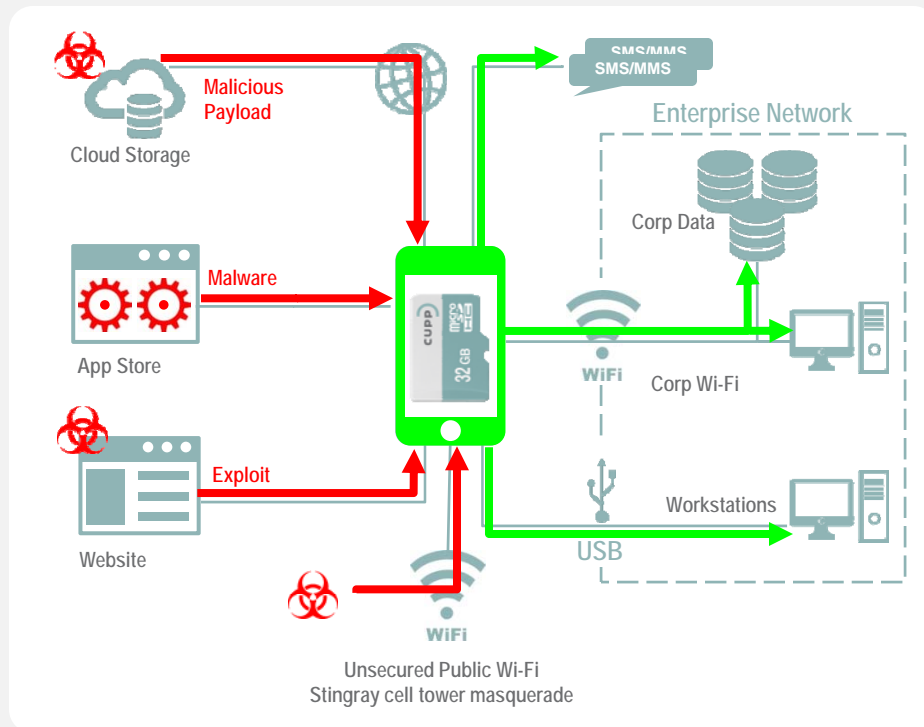
Demand stronger hardware based security!

And microSD-based security appliances can address this need, particularly for Android smartphones and tablets...



** Source: Decisive Analytics LLC, Multinational Security Decision Makers Study 2015 – Commissioned by CUPP Computing*

CUPP creates a hardened shell around the device



How the security engine works

- ✓ Intercepts all network traffic
- ✓ Scans each packet for exploits
- ✓ Scans each payload for malware
- ✓ Filters unwanted apps / appstores
- ✓ Blocks low-reputation websites
- ✓ Blocks access to known CCS
- ✓ Alerts admin of intrusion attempts

Source: Gartner Research, Verizon 2015 Data Breach Report, PWC The Global State of Information Security Survey 2015, Trend Micro website



CUPP vs. security software approach

Self-contained hw subsystem

- ✓ Completely isolated from host OS
- ✓ CPU optimized for security tasks
- ✓ Hardened open source kernel
- ✓ Onboard low-power crypto engine
- ✓ Optimized high-speed SD bus
- ✓ Built-in IPS/IDS (firewall + snort)
- ✓ Encrypted memory up to 32GB
- ✓ Immune from mobile OS exploits
- ✓ Immune from mobile apps attacks
- ✓ Immune from rooting / jailbreaking
- ✓ Portable across user's devices



Unique patented chip design

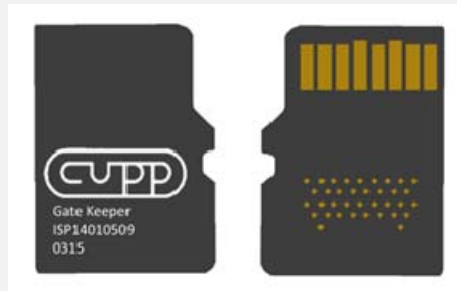
- ✓ MPU Atmel uProcessor
ATSAMA5D36A die - 4.6 x 4.1 mm
- ✓ LPDDR2 512MB RAM Micron
U80M die - 8.5 x 9.5 mm
- ✓ NAND Flash Micron L83A Die x2 -
9.1 x 8 mm (stack)
- ✓ NAND Flash driver Hyperstone S8
Die - 1.8 x 3.8 mm
- ✓ Lattice FPGA LCMX02-4000 ZE
Die - 3.8 x 3.7 mm
- ✓ Total of 40 R L C



MicroSD-based security market forces

Demand Side

- ✓ Data breach is a pandemic
- ✓ Strong demand for solutions
- ✓ Tough regulatory environment
- ✓ Increased BYOD usage
- ✓ Consumerization of IT
- ✓ Widespread Android deployment
- ✓ Increased use of Android tablets



Supply Side

- ✓ Moore's law
 - ✓ High performance CPUs
 - ✓ Memory die size shrinks
 - ✓ Low power FPGA
- ✓ Advances in packaging
- ✓ Security paradigm advancements
- ✓ MDM, MAM commoditization
- ✓ Funding availability for Hardware



Key take-away messages

Take-aways

- ✓ Traditional IT security is broken
- ✓ Data breach pandemic continues
- ✓ CSO's are demanding HW solutions
- ✓ MicroSD form factor can help
- ✓ CUPP has built the world's first microSD-based security appliance!





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