



ORACLE



# Securing your Open Source Infrastructure



**Ankur Pahwa**

Pre Sales Consultant

Oracle Linux & Virtualization

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## Safe Harbor

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# Why Security is important?

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- Digitalization – Enterprise and Public
- Cloud Storage
- Digital Economy
- Smart City Setups
- IoT Devices





## Everything you need to know about the Petya, er, NotPetya nasty trashing PCs worldwide

This isn't ransomware – it's merry chaos

28 Jun 2017 at 03:19

SHARE ▼



Petya Via EternalBlue Exploit

## South Korean hosting co. pays \$1m ransom to end eight-day outage

Talked scum down from \$4.4m after they waltzed through unpatched legacy mess

By Richard Chirgwin 20 Jun 2017 at 03:02

Erebus Linux Ransomware

## Stack Clash flaws blow local root holes in loads of top Linux programs

We knew about this in 2005. And 2010. And people are still building without -fstack-check

By Iain Thomson in San Francisco 20 Jun 2017 at 01:03

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Powerful programs run daily by users of Linux and other flavors of Unix are riddled with holes that can be exploited by logged-in miscreants to gain root privileges, researchers at Qualys have warned.

Essentially, it's possible to pull off a "Stack Clash" attack in various tools and applications to hijack the whole system, a situation that should have been prevented long ago.

Stack Clash

Source : <https://www.theregister.co.uk> , <https://www.bleepingcomputer.com>

## Linux Servers Hijacked to Mine Cryptocurrency via SambaCry Vulnerability

June 10, 2017 04:30 AM



SambaCry

SambaCry

An unknown threat actor is using a vulnerability in Samba installations to take over Linux machines and use them as pawns in a vast cryptocurrency mining operation.

According to public data, their actions started about five days after the Samba team announced they patched CVE-2017-7494, a vulnerability in all Samba versions released since 2010.

Because the vulnerability is exploitable via the SMB protocol, and because the issue came to light so close to the WannaCry ransomware outbreak, some researchers started referring to the bug as SambaCry or EternalRed.

over US\$1 million to

customer video files and the data.

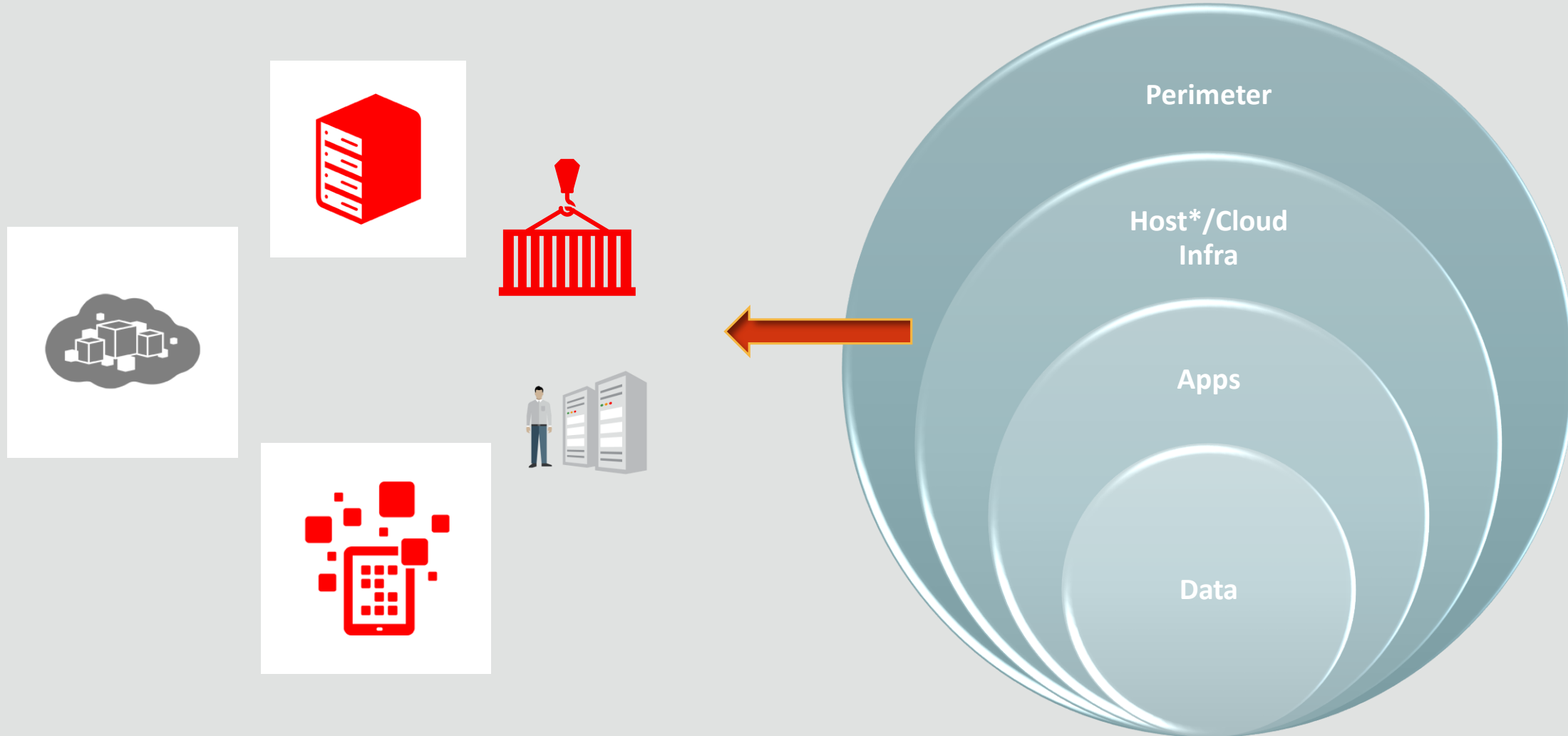


WannaCry



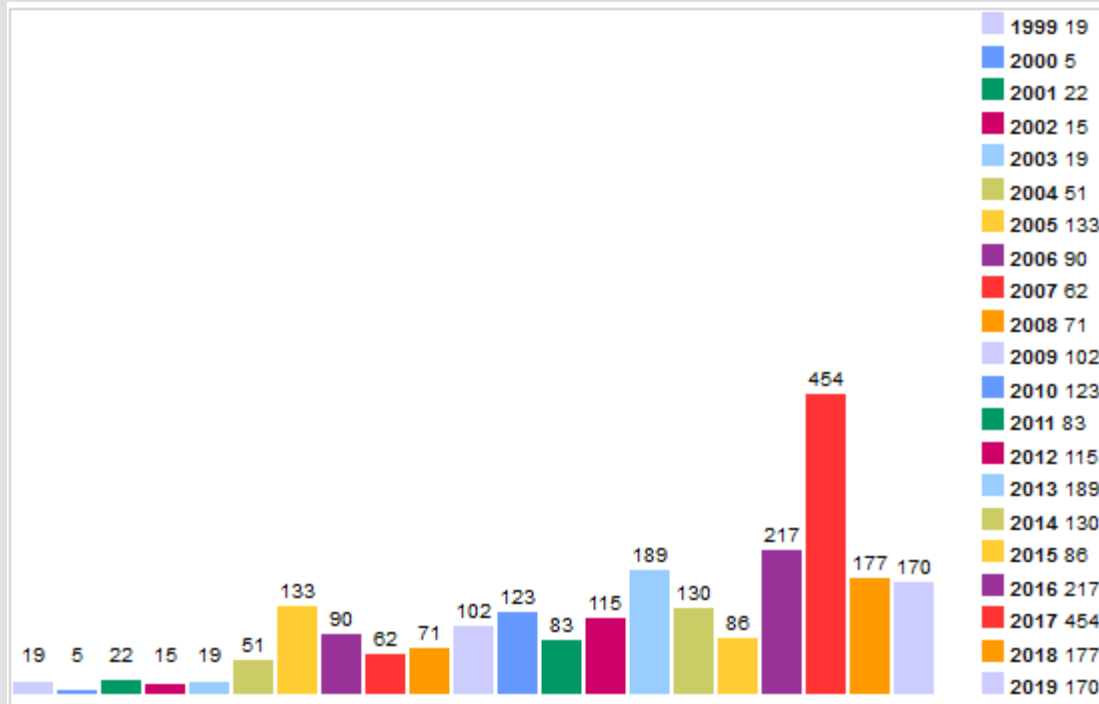
# No “Silver Bullet” for Security

Think “Defense in Depth”, especially in today’s software-defined world

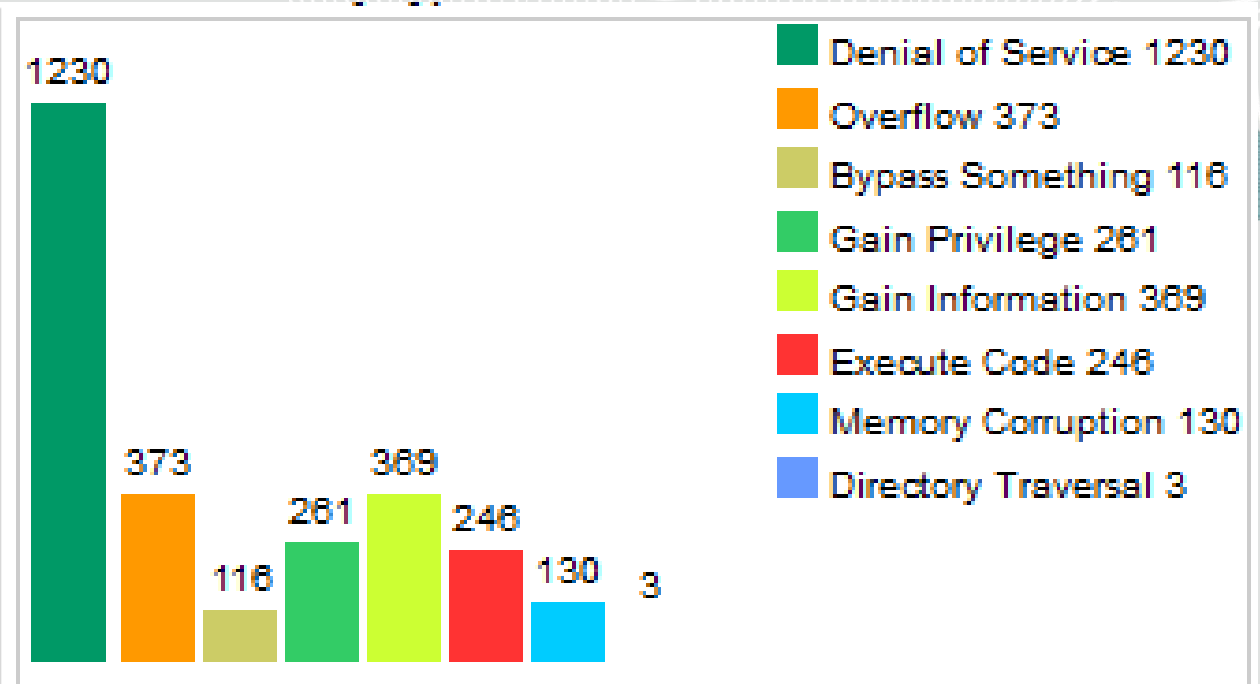


# Do you also consider Operating System Security?

Vulnerabilities by Year



Vulnerabilities by Type



- **CVE-2018-14634 Mutagen**
- **CVE -2016-5195 Dirty Cow**
- **Heartbleed - openssl**

Source: [https://www.cvedetails.com/product/47/Linux-Linux-Kernel.html?vendor\\_id=33](https://www.cvedetails.com/product/47/Linux-Linux-Kernel.html?vendor_id=33)







## Ksplice Live Patching **Applies Security Patches While Running**

- Rapidly patch zero-day vulnerabilities with no downtime
  - Kernels
  - Hypervisors (KVM, Xen, and QEMU)
  - Critical user space packages (glibc and openssl)
- Keep critical systems patched with no downtime
  - 100,000s of Oracle Cloud servers patched in hours
- Proven: 1 million+ patches delivered

**Always Secure.**

## Known Exploit Detection

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- As CVEs are patched, Ksplice adds 'tripwires' to code that fire when erroneous conditions are triggered
- Helps report attempted exploitation of a known attack vector
  - Default is to log exploit attempt to syslog; email alerts can also be set
  - You can take specific action for specific tripwires (report/ignore)
- Helps system admins monitor systems for suspicious activity

**Highly Secure.**

## Autonomous Linux **Reduces Downtime**

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- Automatic OS maintenance

  - Performs patching and updating while the system is running

  - Patches are fully tested by Oracle to validate updates don't break compatibility

- Eliminating human errors means **99.995% availability**: total downtime less than 2.5 minutes per month

- Another reason why Oracle is ...

**Highly Reliable.**





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