

# **Desktop compartmentalization**

**to improve privacy and security on your laptop.**

Magnus, Tech-Evangelist @ 0xFF

Do you trust every application on your laptop with  
your personal data?

# **A typical desktop OS**

Windows, MacOS, Linux

## **Data?**

Personal files, personal metadata, system files

**Demo**

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*I have nothing to hide*

*If you're not paying for the product,  
you are the product.*

*But I've installed the full Anti-Virus suite from  
<insert random vendor>*



## **What to do?**

Security by compartmentalization

## **Huh?**

Splitting your data and applications  
into isolated compartments

## **How?**

Mandatory Access Control

Containers

Virtual Machines

# **MAC**

Mandatory Access Control

# **MAC implementations you know**

Android, iOS

## **Desktop OS MAC implementations**

SELinux, AppArmor, MIC/Protected Folders, App Sandbox

# Containerization

Docker, LXC, OpenVZ, jails/chroot

# Virtual Machines



# **VirtualBox isolated browser instance**

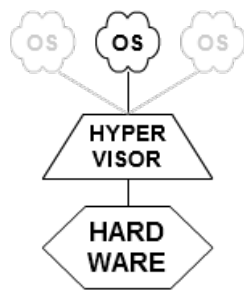
using Immutable disk image

**Demo**

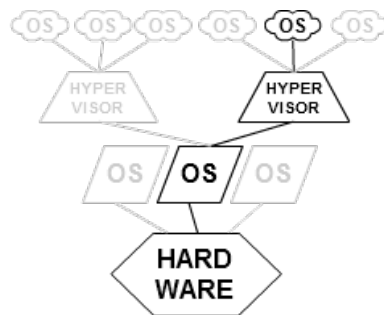
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# **Virtual Machine Hypervisors**

Type-1 (Native), Type-2 (Hosted)



**TYPE 1**  
*native*  
*(bare metal)*



**TYPE 2**  
*hosted*



## **Qubes OS**

*"[Qubes OS] compartmentalize the various parts of your digital life into securely isolated compartments called qubes"*

**DEMO**

Qubes

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# AppVMs

# Disposable VMs



# USB devices

**DEMO**

USB memory stick

# **Network Qubes**

(Tor & Privacy VPNs)

**Copy/Paste**

# System requirements

# Templates

Linux, linux or linux?

**dom0**

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**Questions?**



*“It takes 20 years to build a reputation but just a few minutes of cyber-incident to ruin it.”*

— Stephane Nappo

**Want to know more?**

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