

Qubes OS

London Cryptoparty 2013

What is Qubes OS?

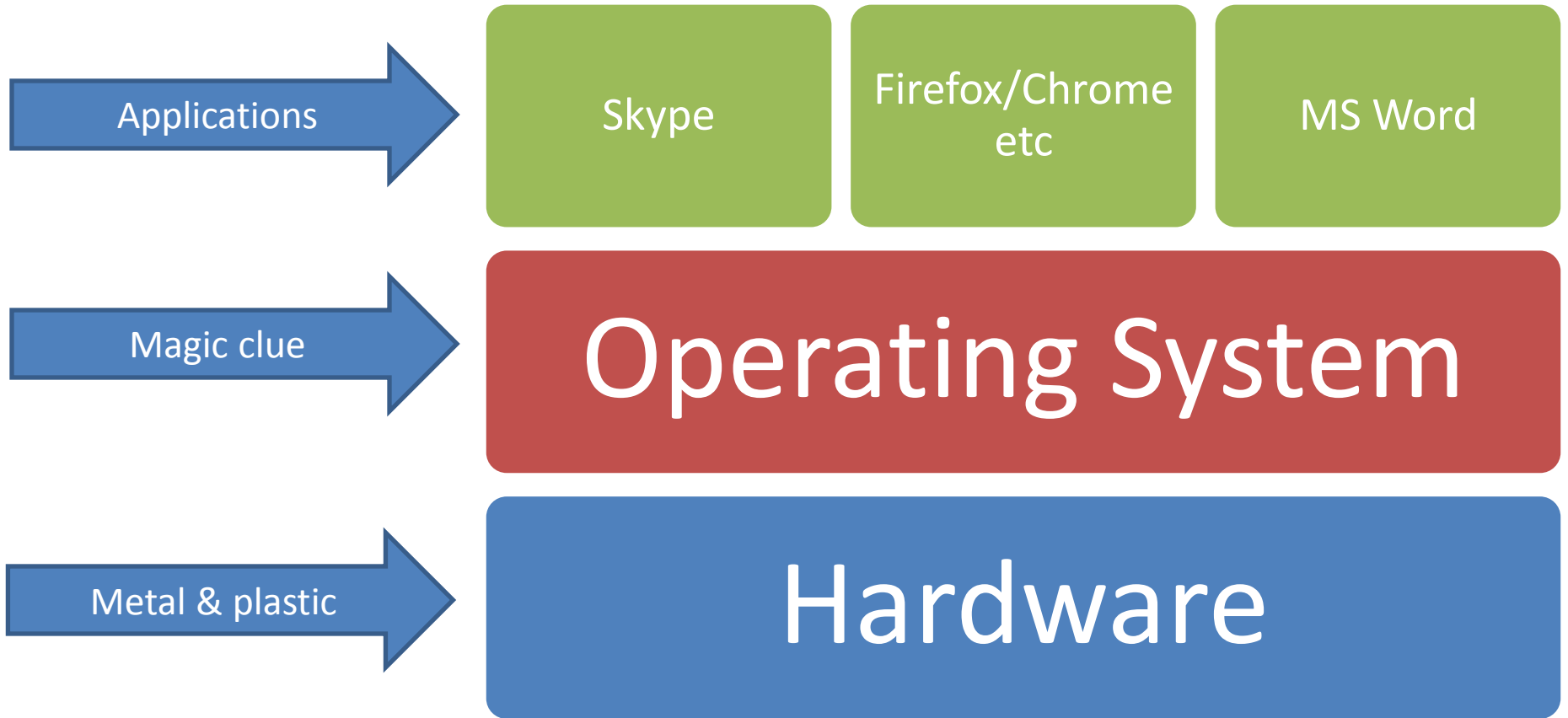
What is Qubes OS?

OS = Operating System

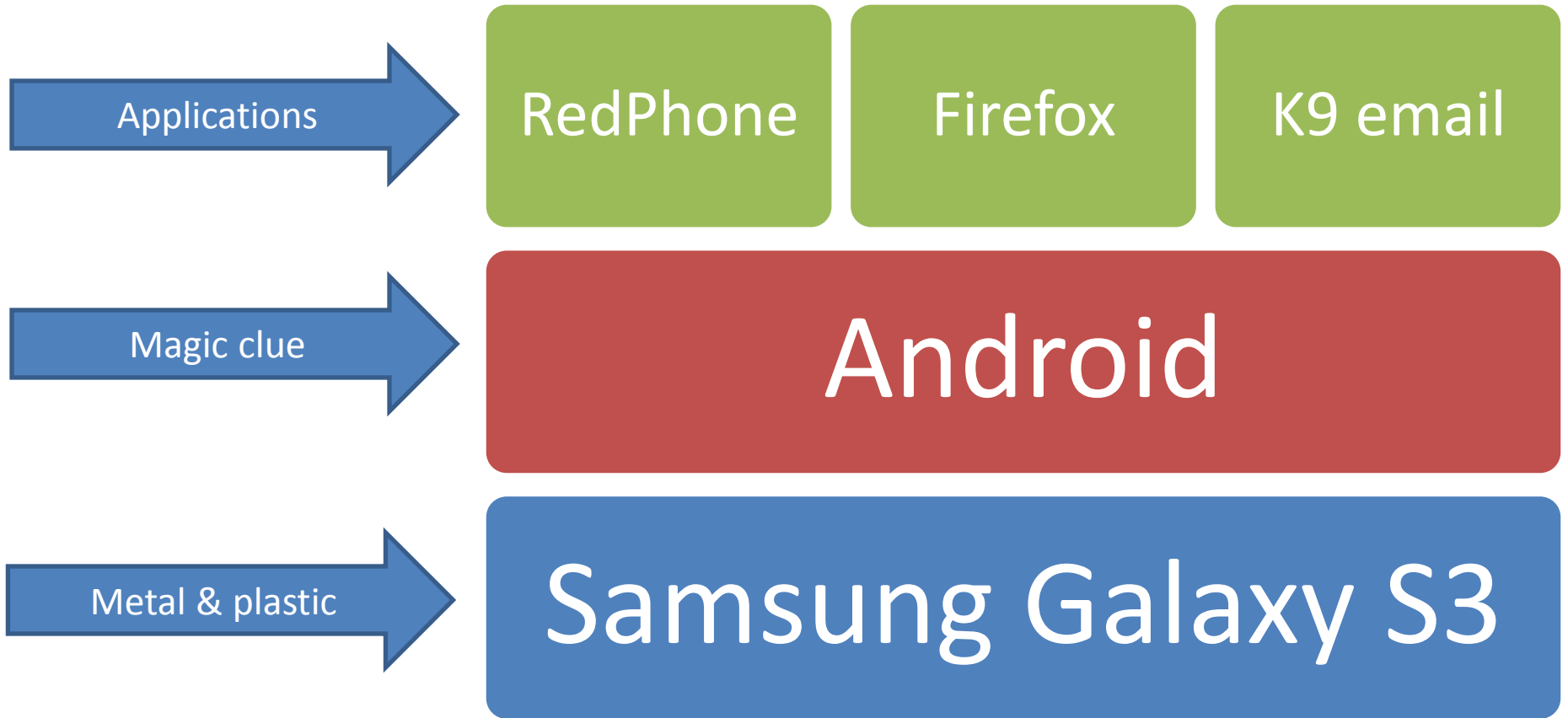
Examples of Operating Systems:

- Windows
- MacOS X
- GNU/Linux
- iOS
- Android
- FreeBSD

Relationship with our dear apps



An example of this relationship



Now that we know what an OS is...

What is Qubes OS?

A desktop Operating System* that provides

security by separation

*by Joanna Rutkova & the Invisible Things Lab

huh?

Security by separation

- Look, you WILL be compromised, okay?
- Only real question is: How to contain the damage? How to recover from it?

A-ha! Separation!

- Security experts agree:
 - e-banking & web browsing don't mix
 - work & personal email don't mix
 - etc...
- So many activities that must not happen on the same computer...
- Do you have 10 laptops handy?

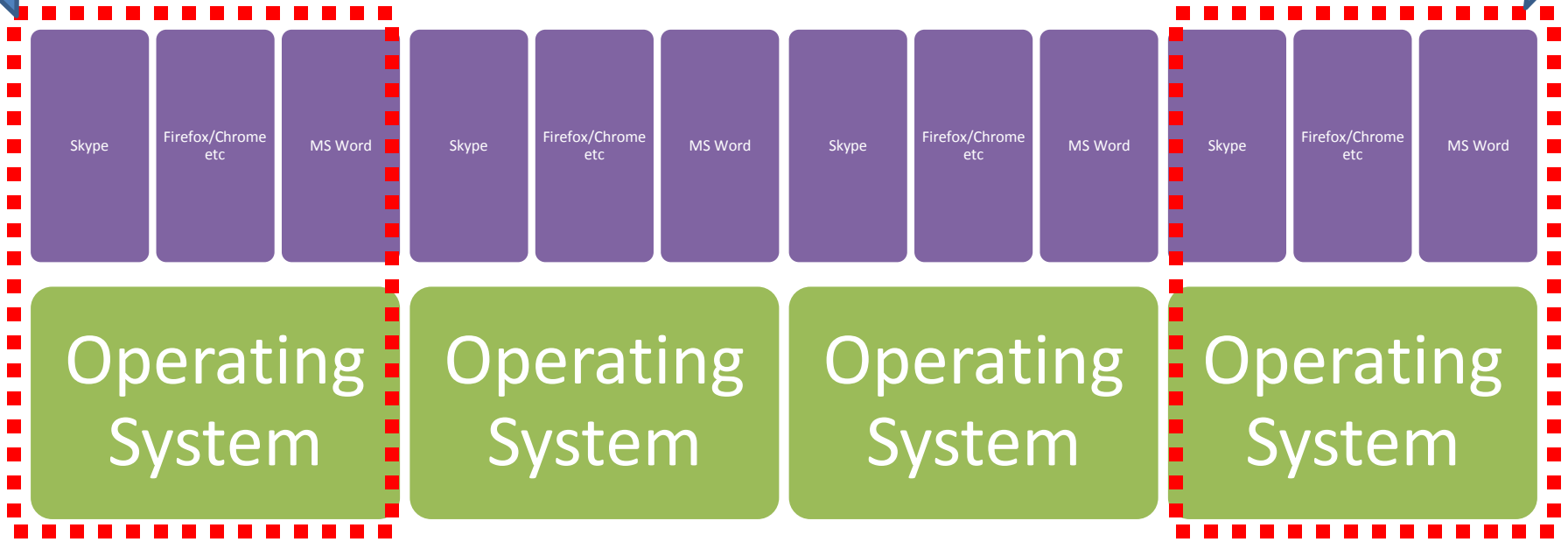
Virtual separation

- OK, physical separation is cumbersome.
- Virtual, anyone?
- “Virtual” = emulate reality with software

Oh, look – four laptops in one!

VM

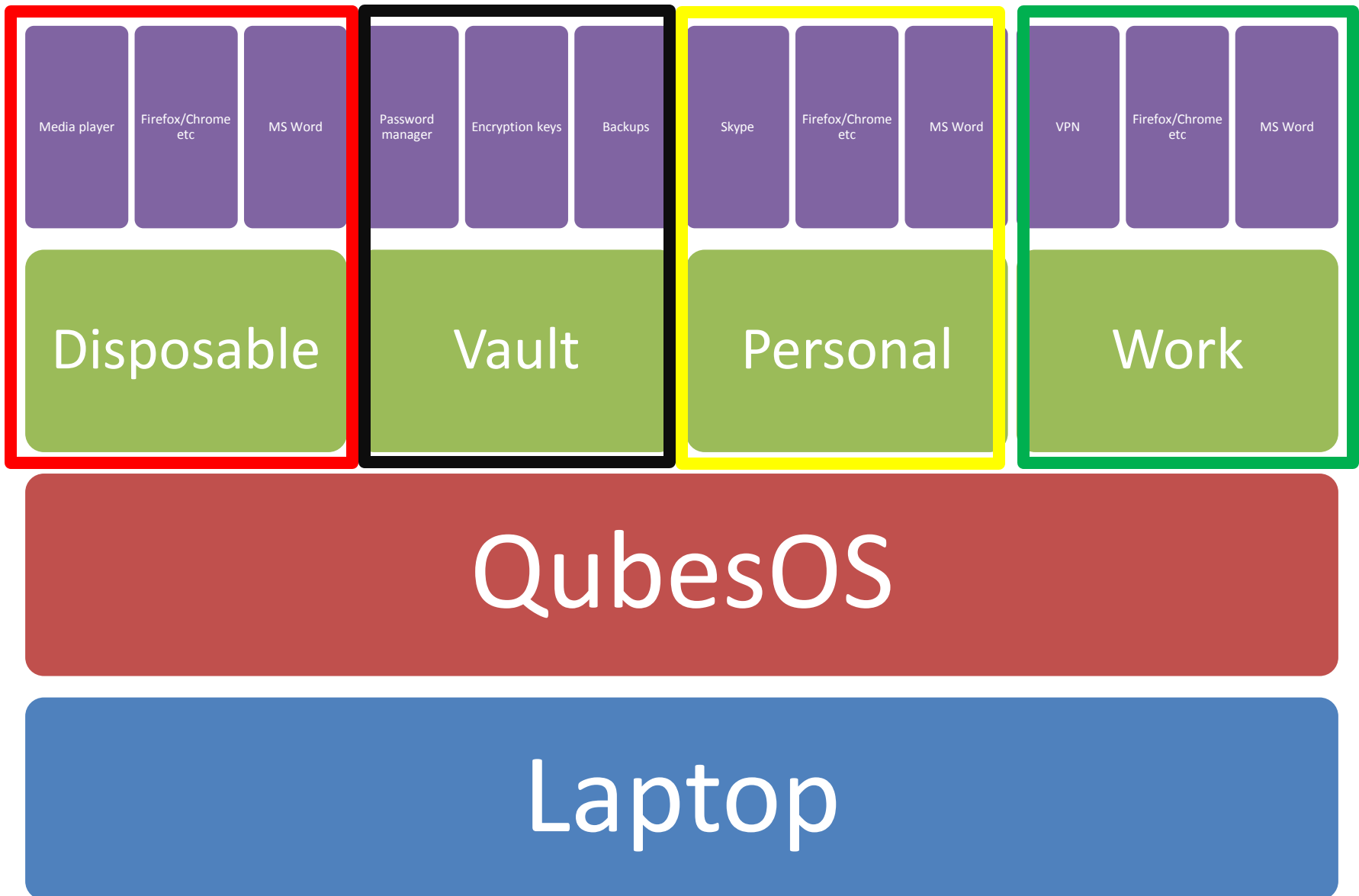
VM



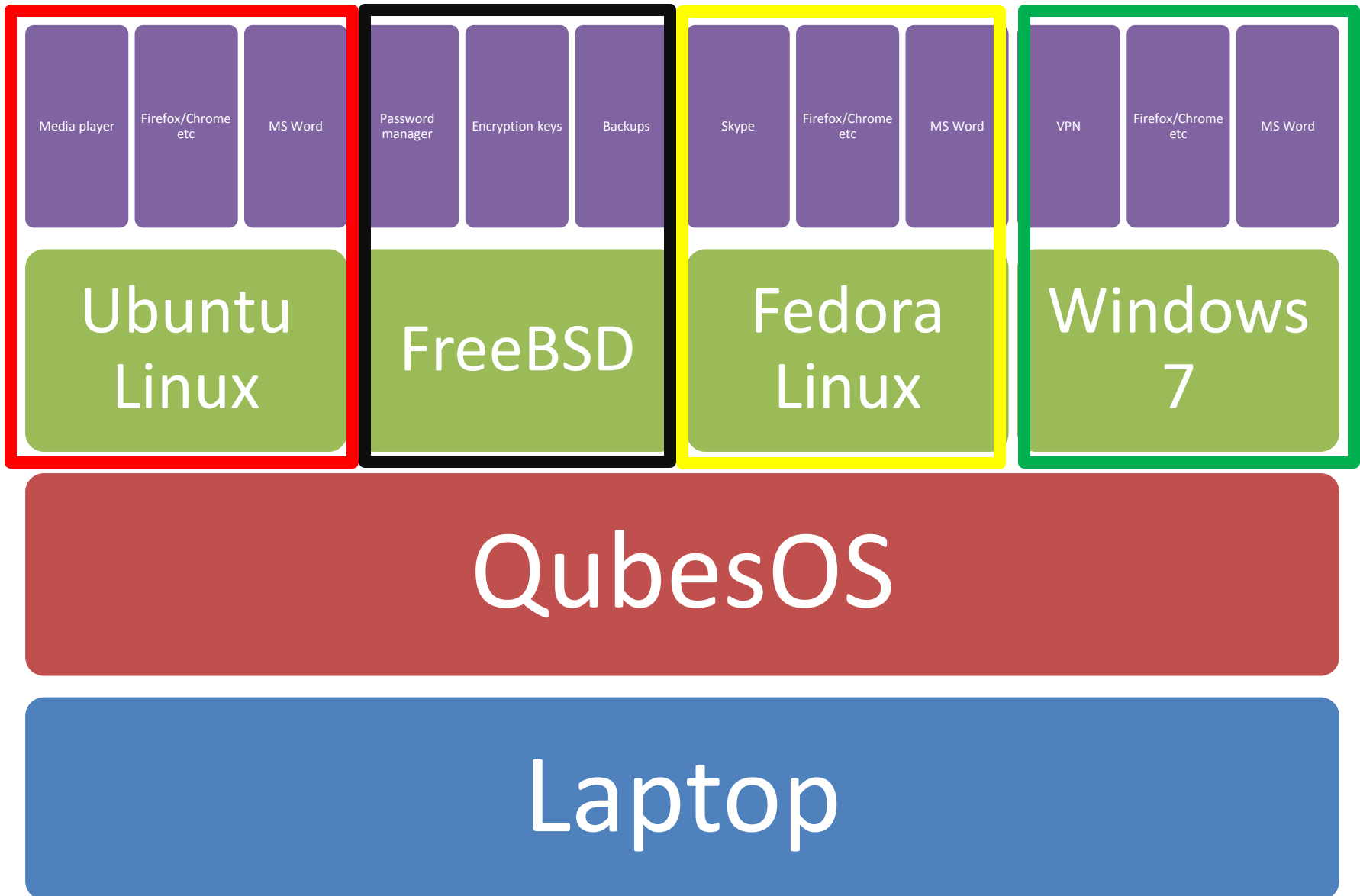
Virtualisation

Hardware

Taking it one step further with Qubes



Different OSes may coexist!



Screenshots (1)



<http://qubes-os.org/trac/wiki/QubesScreenshots>

Screenshots (2)



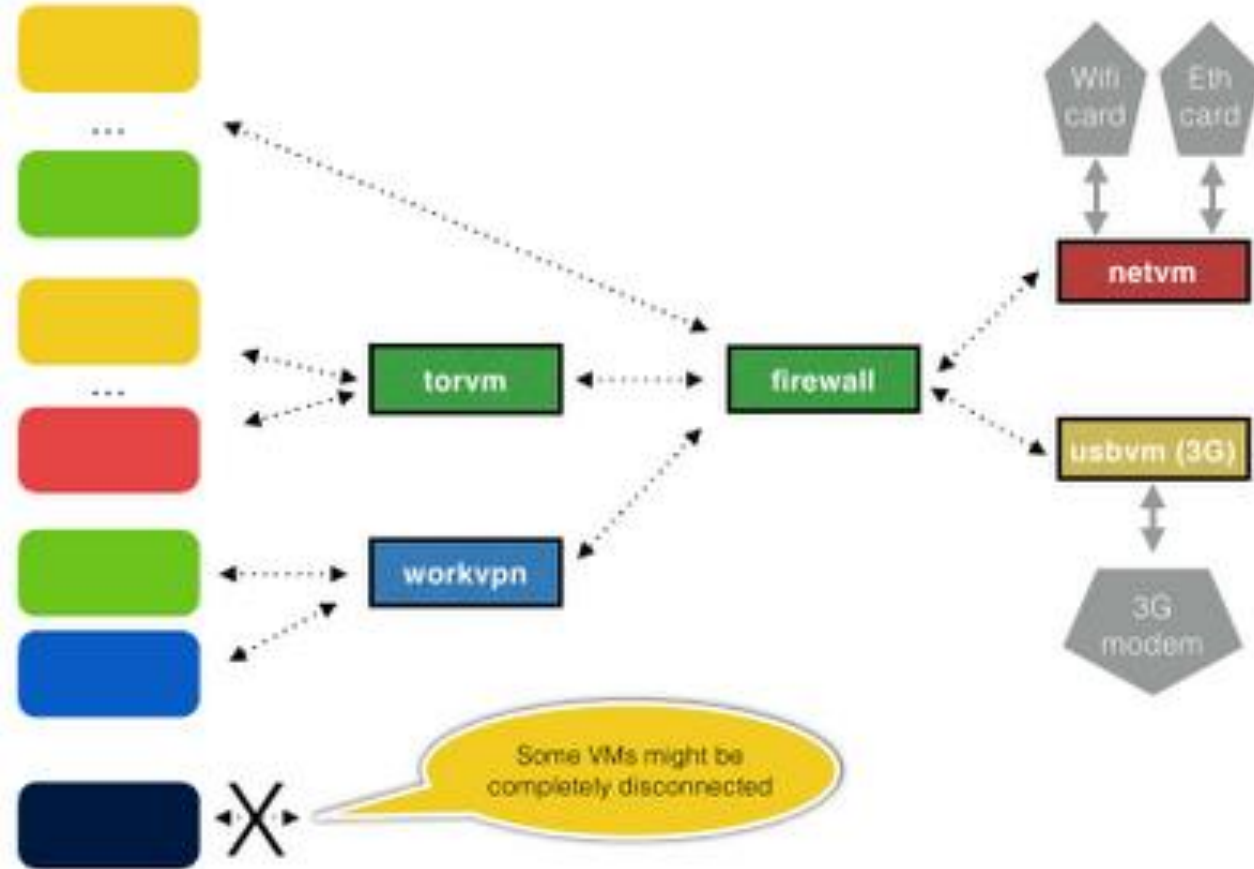
<http://qubes-os.org/trac/wiki/QubesScreenshots>

Features

- Disposable VMs
- Secure file transfer between VMs
- Free!

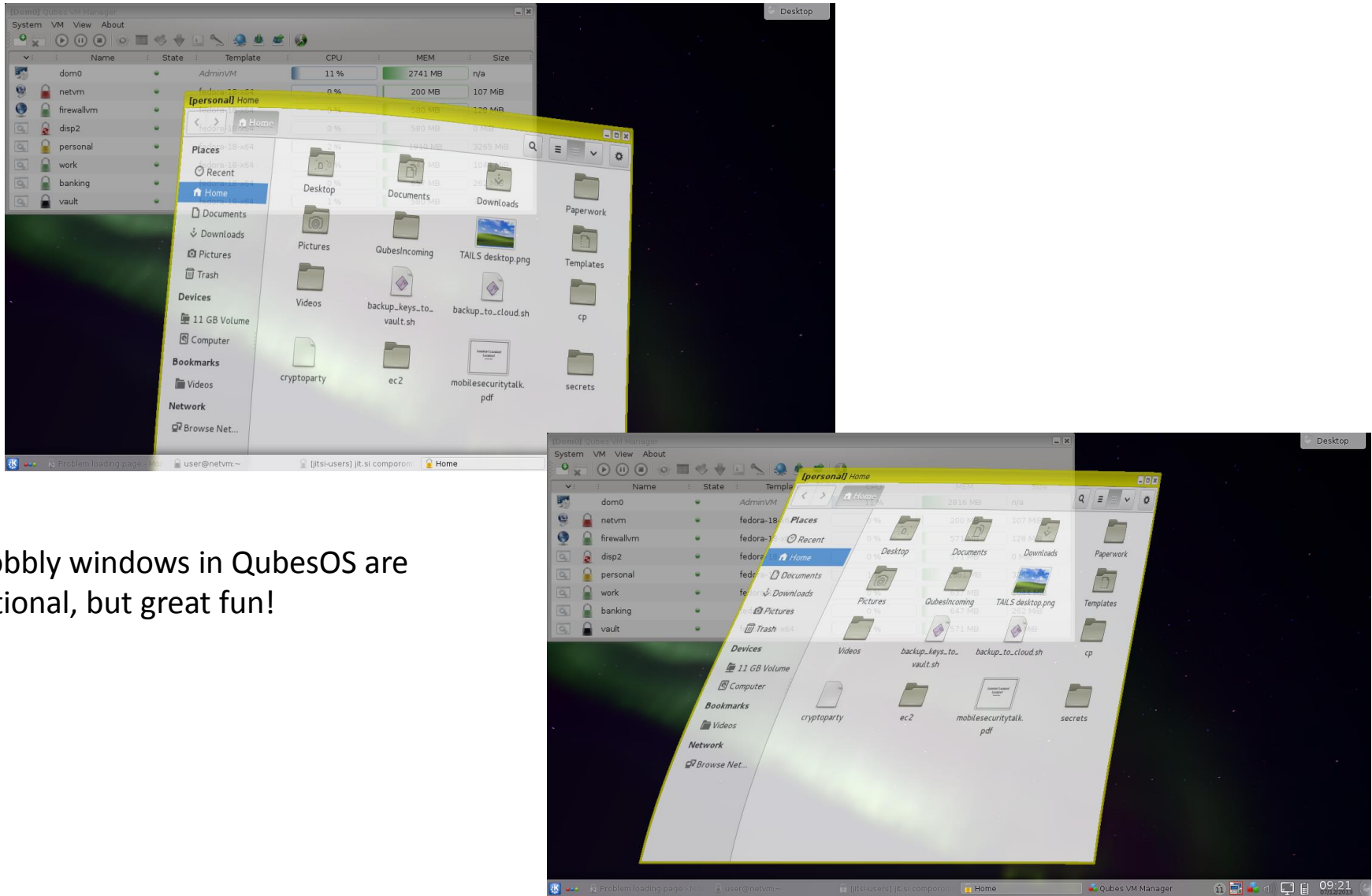
- Get it at <https://qubes-os.org>
- Warning: Extreme security comes with a learning curve.

Advanced networking setup



Demo time!

Who said secure systems can't be fun?



Wobbly windows in QubesOS are optional, but great fun!

Questions?

- More on Qubes OS:
 - What can I do about PRISM?
<http://apapadop.wordpress.com/2013/06/30/what-can-i-do-about-prism/>
 - Advanced networking with Qubes OS: VPN proxyVM
<http://apapadop.wordpress.com/2013/09/14/advanced-networking-with-qubesos-vpn-proxyvm/>
 - Using GnuPG with Qubes OS
<http://apapadop.wordpress.com/2013/08/21/using-gnupg-with-qubesos/>