



Introduction to Virtualization

Hans-Petter Halvorsen, M.Sc.

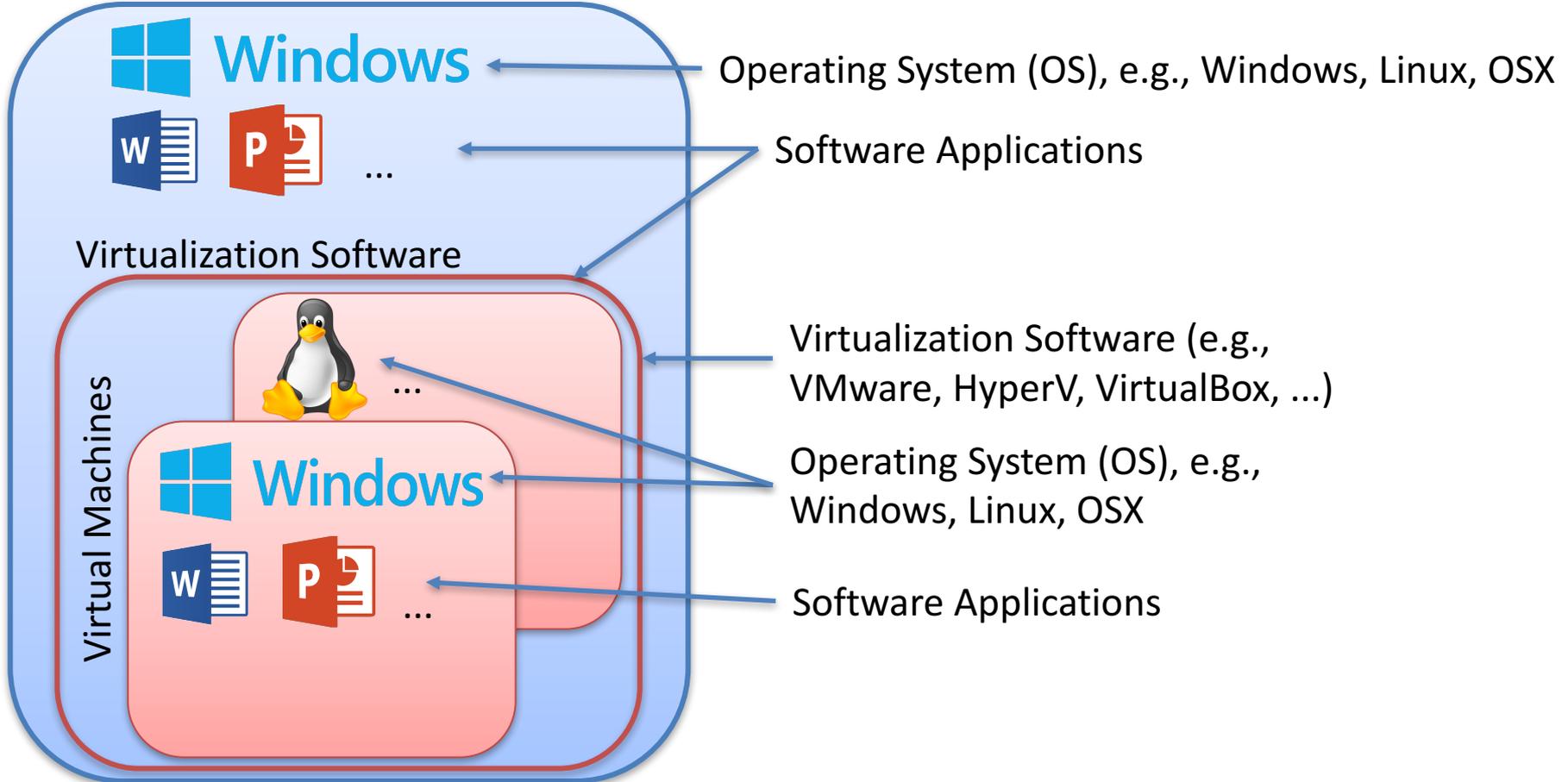


What is Virtualization?

Hans-Petter Halvorsen, M.Sc.

Virtualization

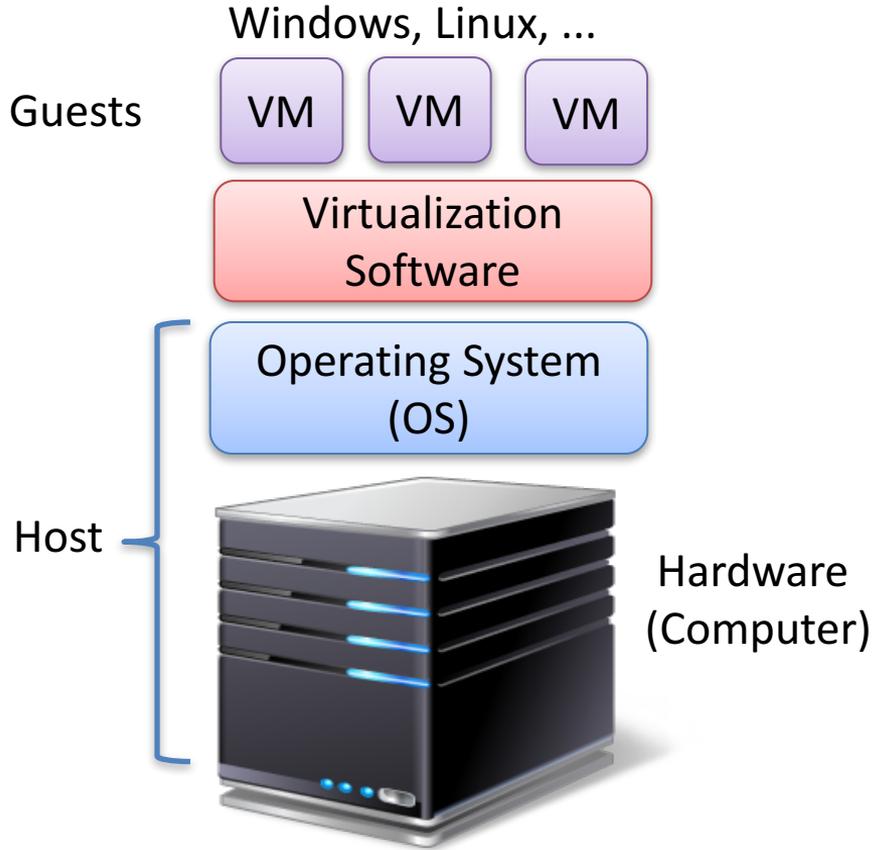
Computer



Why do we need Virtualization?

- Typically you use Virtualization when you need to test new Operating Systems (OS) or Software.
- The Software you want to test can be created by you or by others
- You want to run Windows on a Mac Computer
- etc.

Virtualization



VM = Virtual Machines



A Hypervisor can run directly on the computer without a Host OS

Virtualization Software

A lot of Virtualization Software exists. Here are some examples:

- VMware Workstation
- **VMware Workstation Player** (Free of charge and simple to use)
- VMware vSphere and vSphere HyperVisor
- VMware Fusion (Mac)
- Parallels Desktop (Mac)
- Microsoft Hyper-V
- VirtualBox
- etc.

Why Do We Need a Test Environment?

Why cant we just use our own PC?

Why Test Environment?

- “It works on my PC” says the Developer
- Clean Environment
- On the Developers PCs we have all kind of Software installed that the Customer dont have, e.g. Development Tools like Visual Studio, etc.
- We need to test on different Platforms and Operating Systems
- Customers may use different Web Browsers
- Deployment: Test of Installation packages
- Make the software available for Testers
- etc.



Typically the Developers Personal Computer with Database, Web Server and Programming Software

A Clean PC/Server (or a network with PCs and Servers) where you install and test your Software. Today we typically set-up a **Virtual Test Environment**

The Customers environment where you uninstall the final software (Servers and Clients)

Development Environment



Test Environment



Production Environment



Programming environments such as Visual Studio, etc. should not be installed in this environment. You need to create .exe files etc. in order to make your software run.



VMware Workstation Player

Download for free from this website: <http://www.vmware.com>

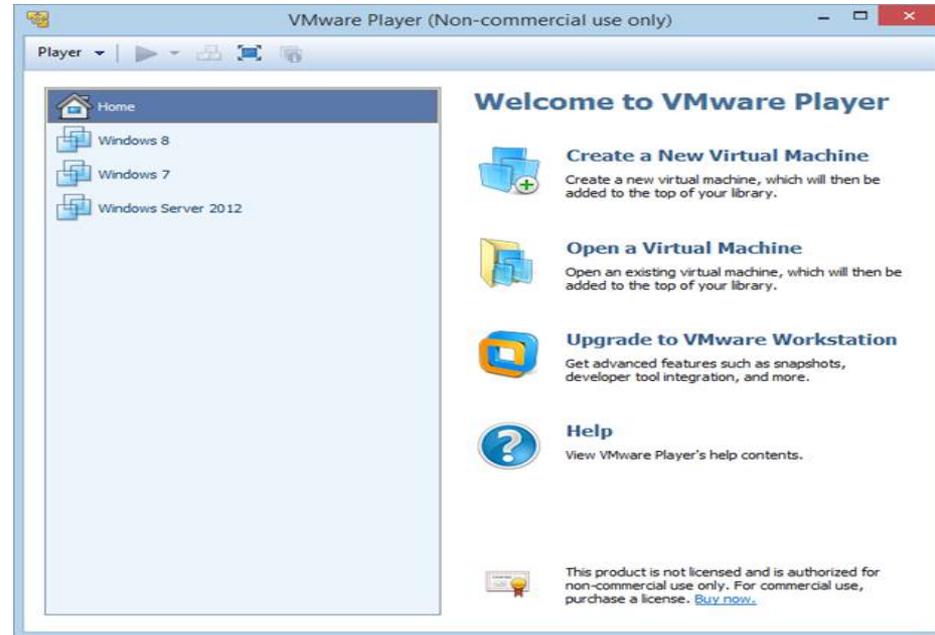
Hans-Petter Halvorsen, M.Sc.

VMware Workstation Player

VMware Workstation Player is for personal use on your own PC. VMware Player is free of charge for personal non commercial use.

VMware is a company that has been specializing within virtualization software.

<http://www.vmware.com>



DEMO

Lets Create a Virtual Machine from Scratch

Hans-Petter Halvorsen, M.Sc.



University College of Southeast Norway

www.usn.no

E-mail: hans.p.halvorsen@hit.no

Blog: <http://home.hit.no/~hansha/>

