Xen Architecture



SWITCH Serving Swiss Universities

Alessandra Scicchitano alessandra.scicchitano@switch.ch

Why Xen?

- Already had a look at Kvm.
- It is one of the most used virtualization software.
- Paravirtualization was
 introduced by Xen



Hyperthreading (HT)

- Intel technology name for the concept known as simultaneous multithreading (SMT)
- Xen is HT-aware and able to understand both Intel and AMD execution units



Supported virtualization types

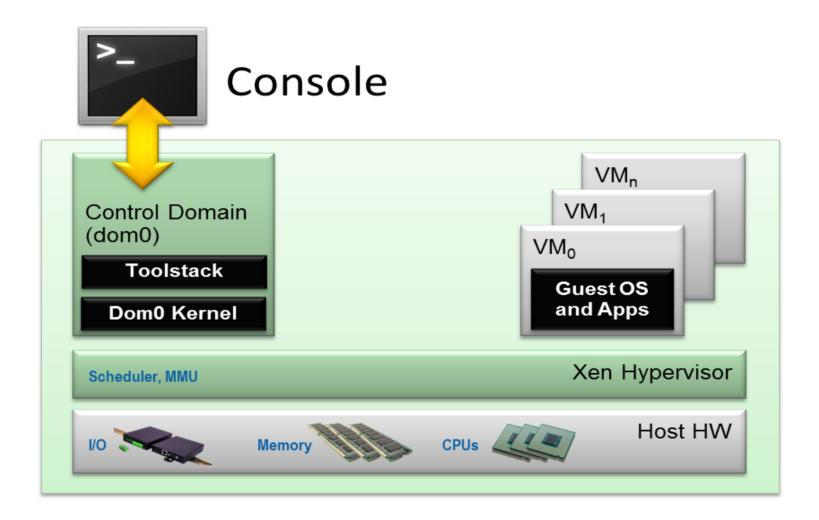
Paravirtualization (PV)

• Full virtualization (HVM)

• PV-on-HVM

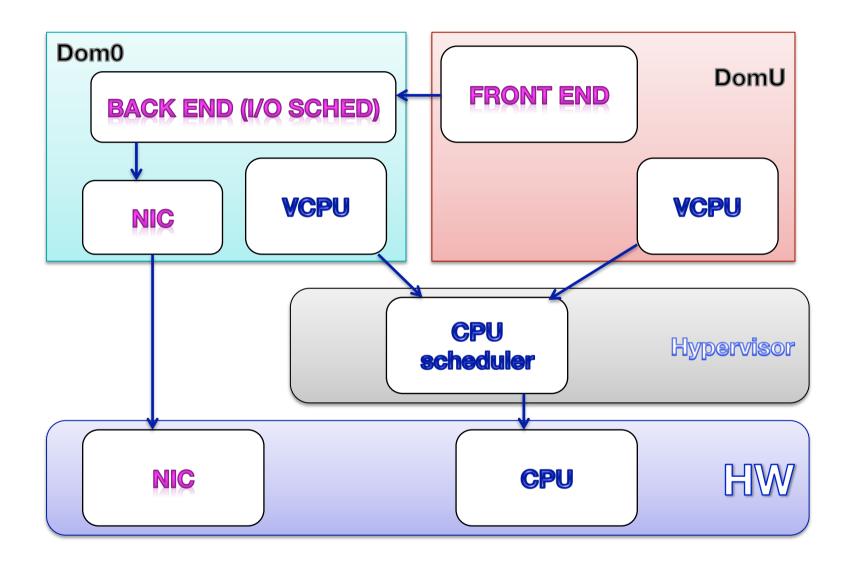


Xen Architecture





Reference: wiki.xen.org





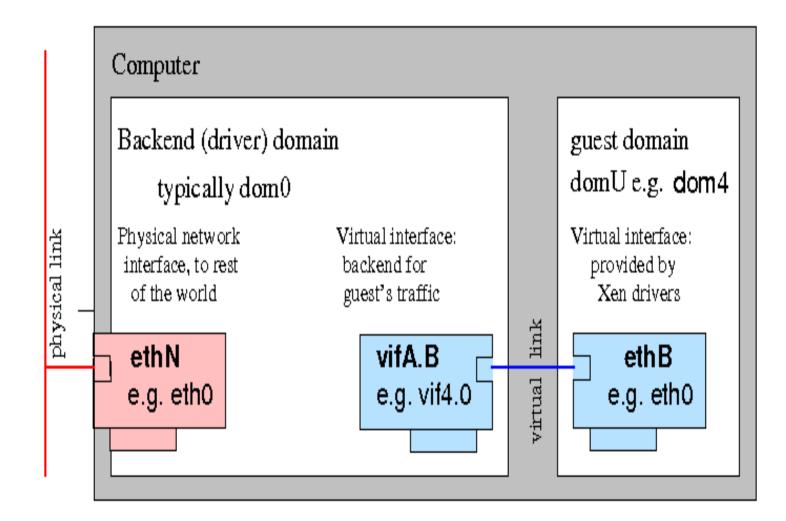
CPU Scheduler

Credit Scheduler:

- Based on *weight* and *cap* (optional) parameters
- VCPUs are labeled *under* if they have existing credits, *over* otherwise.
- Every 30ms the priorities (credits) are recalculated
- Features load balancing of Virtual CPUs across physical ones.

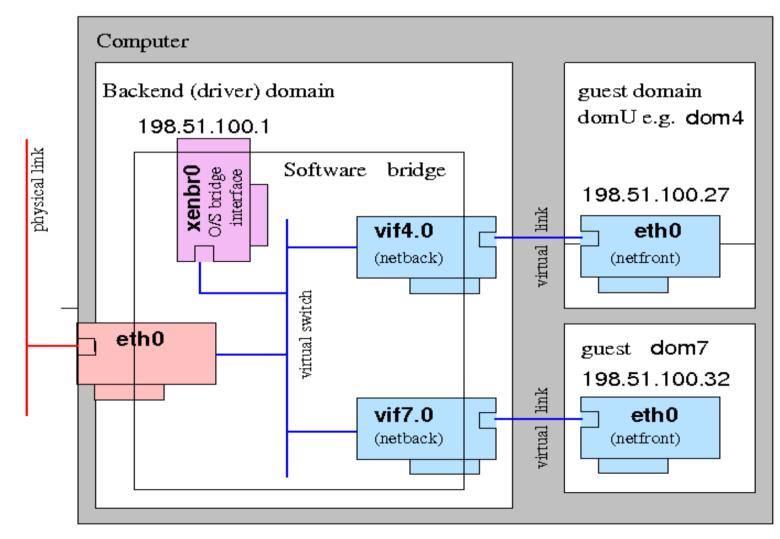


Network architecture





Bridging





Reference: wiki.xen.org

Reference

http://wiki.xen.org/wiki/Xen_Networking

