

XenSummit

Xen Cloud Platform Update

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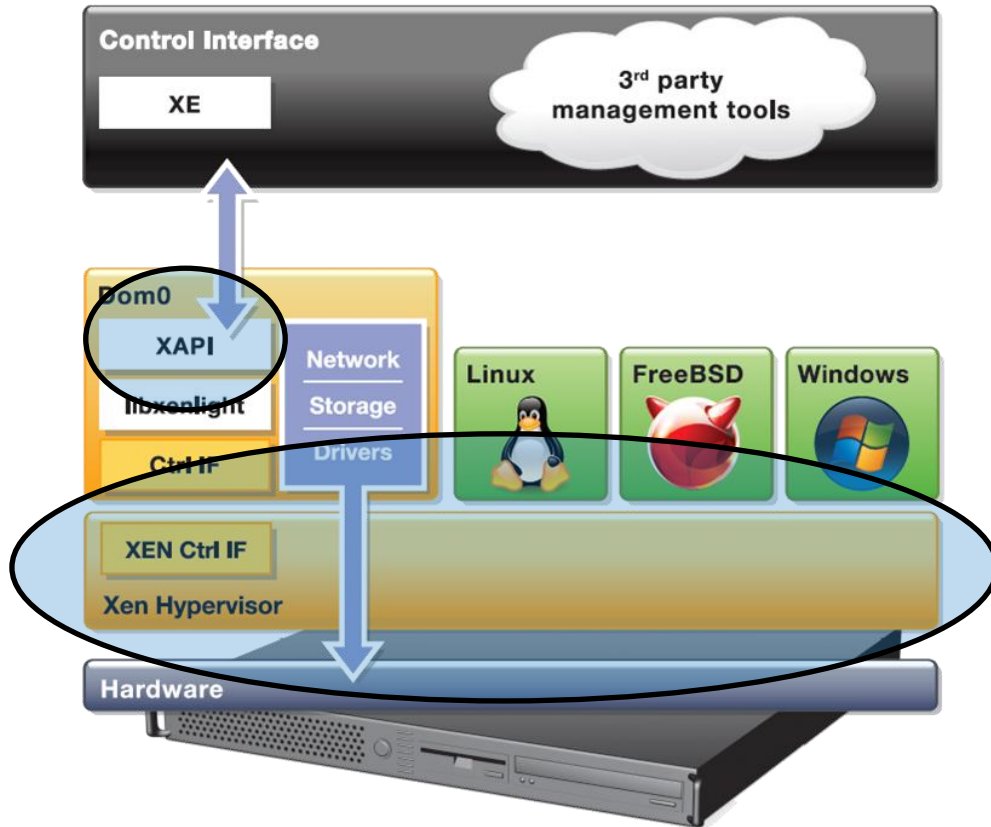
August 27-28, 2012
San Diego, CA, USA

What is Xen Cloud Platform?

The Xen Hypervisor was designed for the Cloud straight from the outset!



What is XCP?

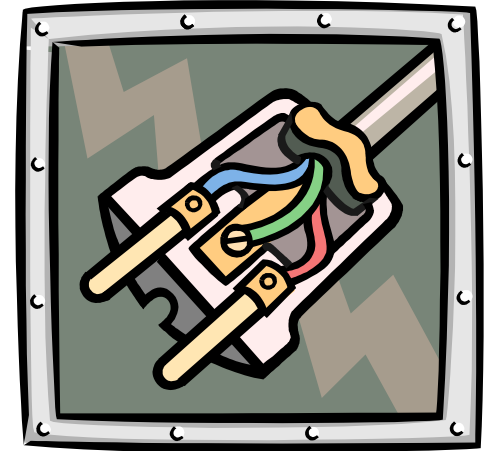


- XCP = Xen Cloud Platform
- Open Source Citrix's XenServer
- Datacenter and cloud-ready API
- Complete virtualization stack

What is XAPI?

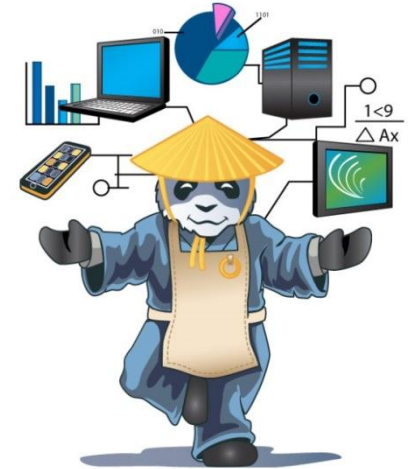
- XAPI = XenAPI server
- Written in OCaml
- XML-RPC style API
- Extensible via python plugins
- Shared with XenServer

- <http://github.com/xen-org/xen-api>



Features

- VM lifecycle
- Resource pools
- Event tracking
- Real-time performance monitoring
- Works with Windows and Linux guests
- Paravirtualized drivers optimized for Windows VMs
- OpenFlow support with Open vSwitch

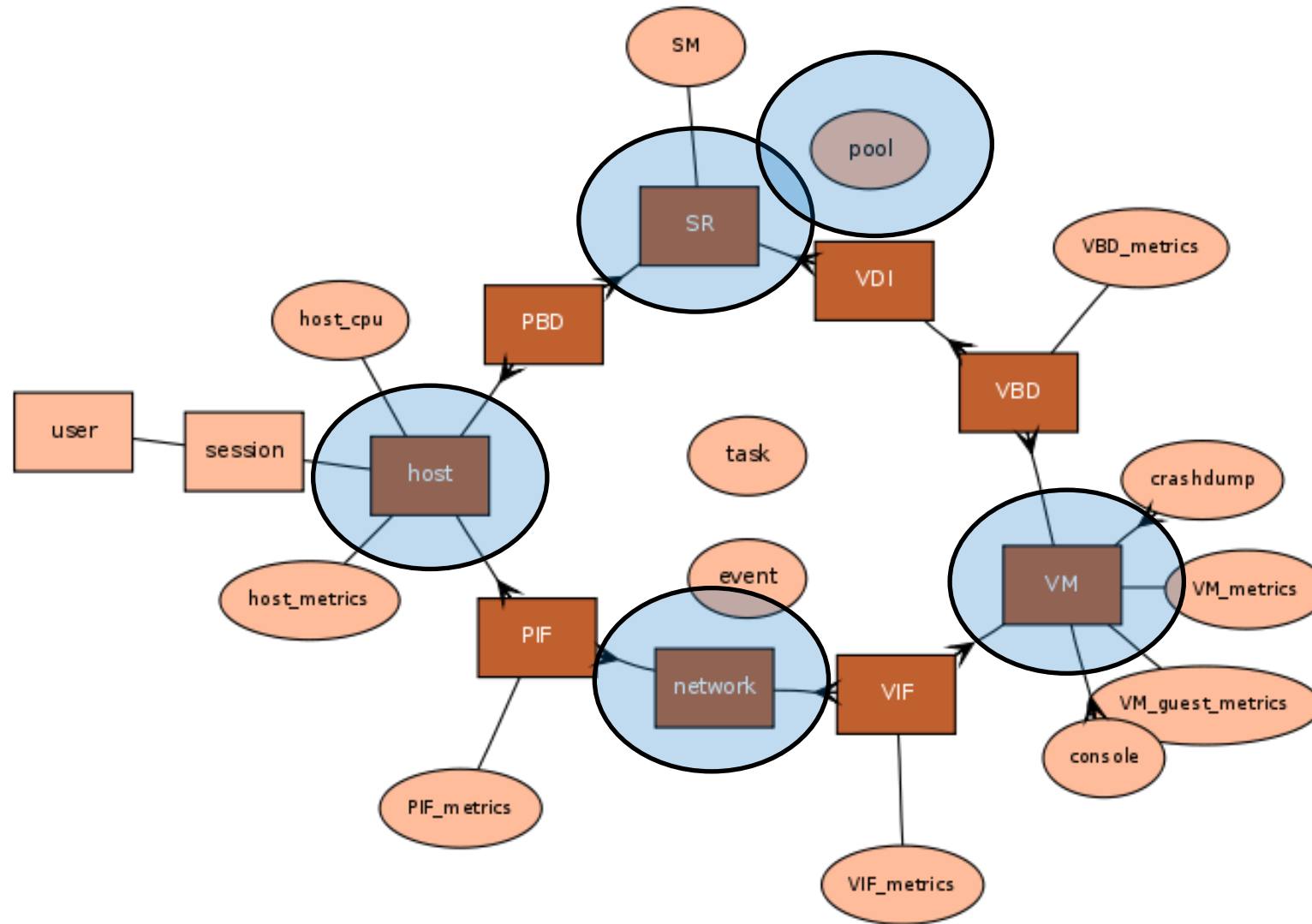


Management

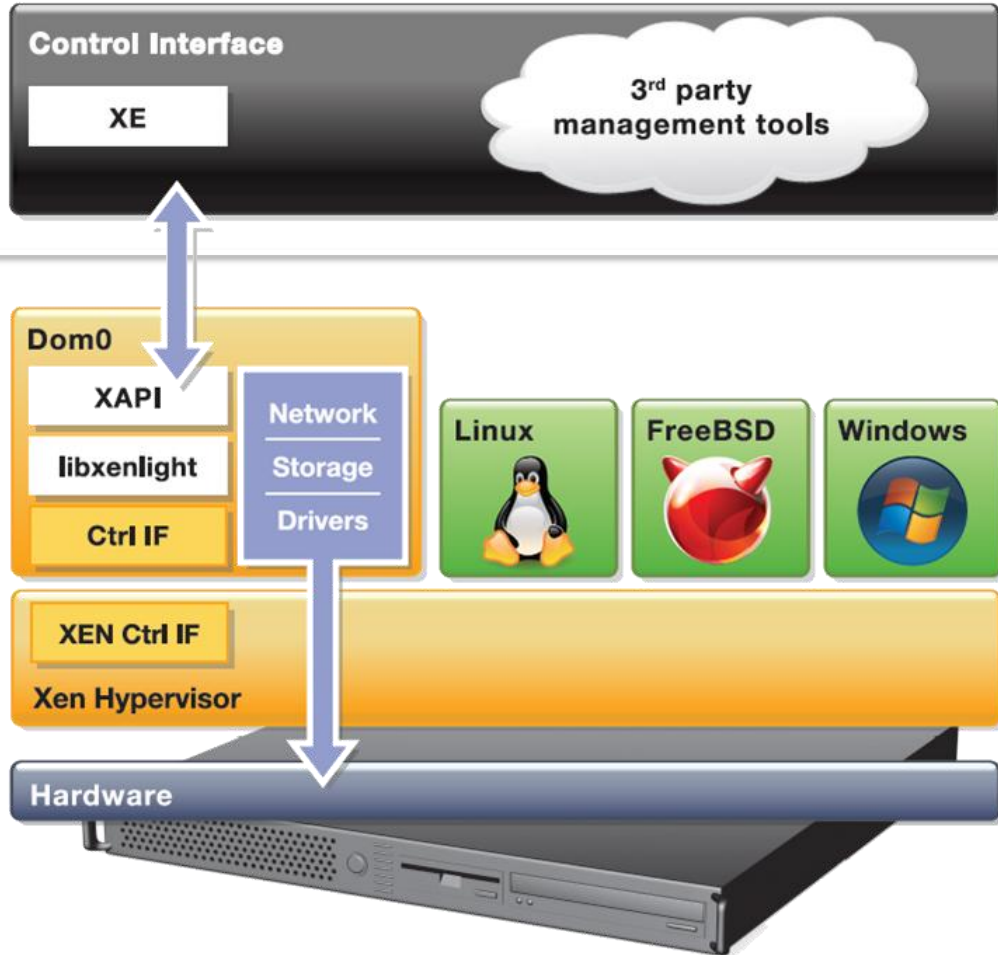
- CLI
 - xe
- Desktop GUI
 - Citrix XenCenter, OpenXenManager
- Web GUI:
 - Xen VNC Proxy (XVP), XenWebManager
- XCP Ecosystem:
 - xen.org/community/vendors/XCPProjectsPage.html
 - xen.org/community/vendors/XCPProductsPage.html



XenAPI Classes



XCP in the Cloud



cloudstack
open source cloud computing

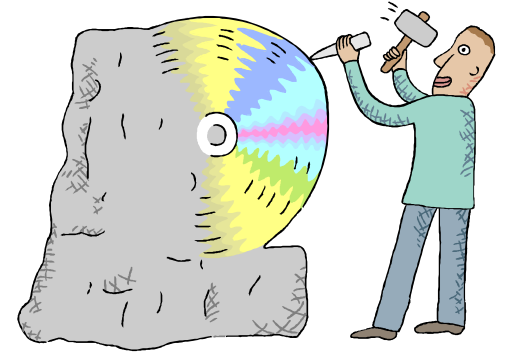
OpenNebula.org



How can I install XCP?

XCP ISO

- Installs like XenServer
- Same kernel and drivers as XenServer
- Mostly the same code as XenServer
- Based on CentOS 5.x
- Hard to build it yourself
- <http://www.xen.org/download/xcp/index.html>



XCP-XAPI

- Make the XAPI toolstack independent of CentOS 5.x
- Xen, XAPI and everything in between via your Linux distro
 - “apt-get install xcp-xapi” or “yum install xcp-xapi”
- ✓ • Debian 7.0 “Wheezy”
- ✓ • Ubuntu 12.04 LTS
- Next: Fedora & CentOS



Compare XCP Packages

ISO

- Black-box style appliance
- Based on CentOS 5.x
- Managed using XenAPI
- Supports most XenServer features
- Supports most SR types
- Hard to build it from source

xcp-xapi

- Standard Linux packages
- Most components provided by distro
- Managed using XenAPI
- Limited set of shared SR types
- Currently only in Debian/Ubuntu
- Plans forming for Fedora

What version should I use?

Past Releases

- **XCP 0.5**
 - July 2010, based on XenServer 5.6
- **XCP 1.0**
 - February 2011, based on XenServer 5.6 SP1
- **XCP 1.1**
 - October 2011, based on XenServer 5.6 FP2

XCP 1.5 - beta released Feb 2012

- **Internals:** Xen 4.1, GPT, smaller Dom0
- **Networking:** Open vSwitch backend, NIC Bonding
- **Performance and Scalability:**
 - 1 TB mem/host
 - 16 VCPUs/VM, 128 GB/VM
- **New OS Templates:** Ubuntu 10.04, Debian Squeeze, Oracle Enterprise Linux 6.0, SLES 10 SP4
- **GPU pass through:** for VMs serving high end graphics

XCP 1.6 - due Oct 2012

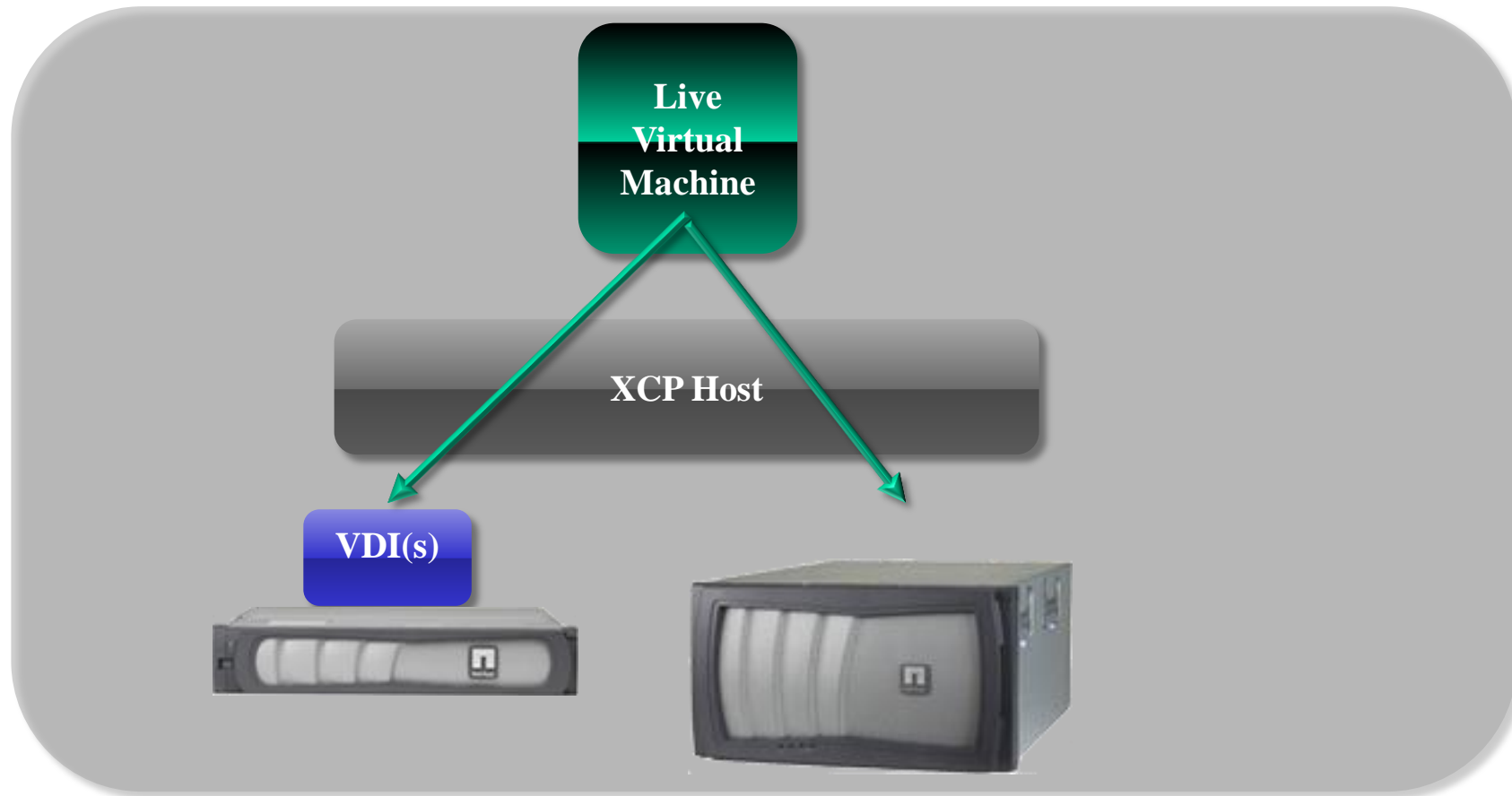
- **Internals:** Xen 4.1.2, CentOS 5.7, 2.6.32.43, OVS 1.4.1
- **Networking:** Better VLAN scalability, LACP bonding, IPv6
- **New OS templates:** Ubuntu Precise 12.04, RHEL/CentOS, Oracle Enterprise Linux 6.1 & 6.2, Windows 8
- **New Windows drivers:** installable by Windows Update Service
- **Storage XenMotion:** move VDIs during live-migration

XCP-XAPI

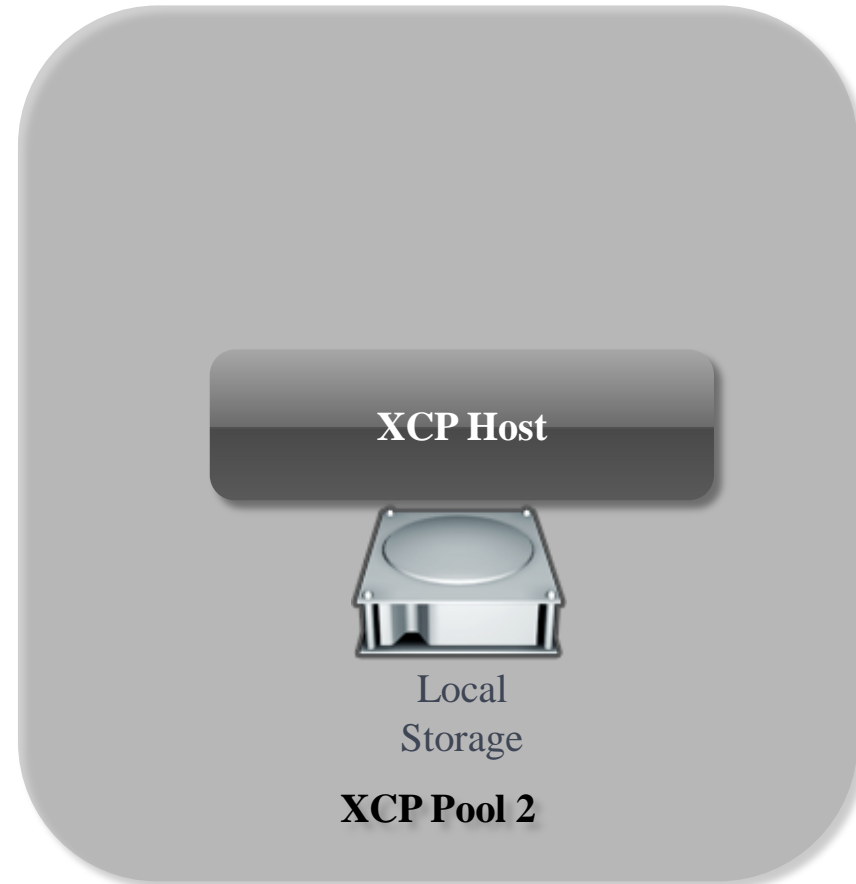
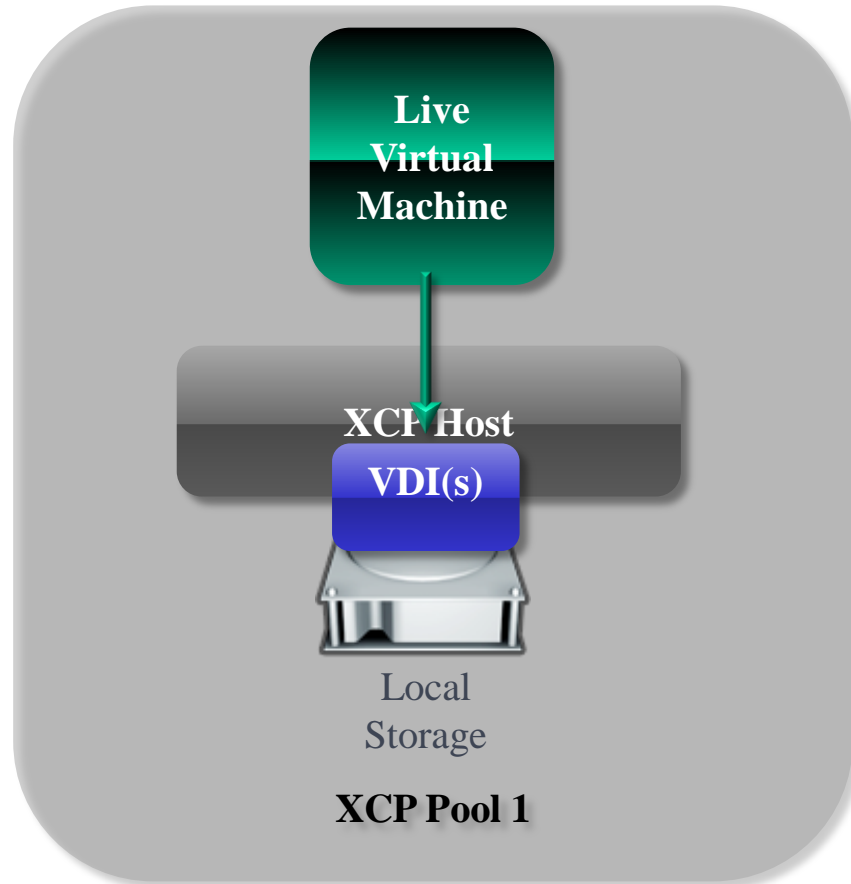
- Current Release:
 - Ubuntu 12.04 LTS
 - Based on snapshot of XCP 1.6
- Next Releases:
 - Debian Wheezy
 - Ubuntu 12.10
- Future:
 - Merge with xen-api master
 - Fedora

What is Storage XenMotion?

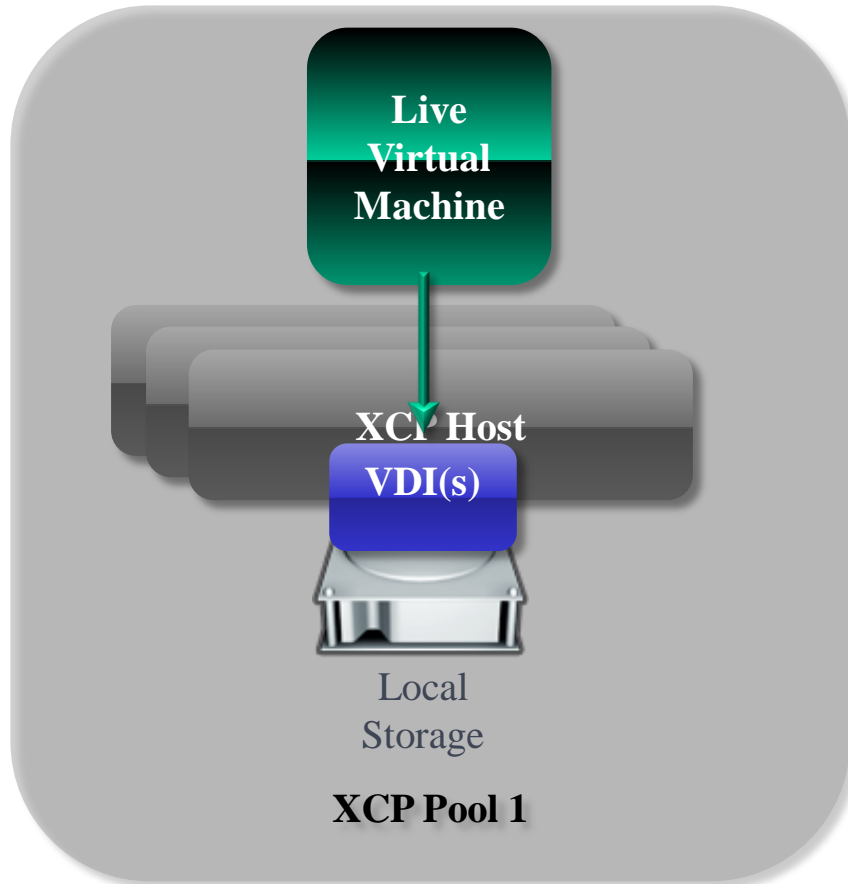
Live Storage XenMotion



Live Storage XenMotion



Live Storage XenMotion



What next for XCP?

Domain 0 Disaggregation

- Split Control Domain into Driver, Stub and Service Domains
 - Each domain contains a specific management server
- Unique benefit of the Xen architecture
 - Security: Minimum privilege; Narrow interfaces
 - Robustness: ability to safely restart parts of the system
 - Scalability: more distributed system
- Currently used by Qubes OS and Citrix XenClient XT
- Hopefully coming to XCP 2.0 in 2013

How can I get involved?

Getting involved with XCP

- Download it and use it 😊
- <http://lists.xen.org/xen-api>
- <https://github.com/xen-org>
- <https://launchpad.net/xcp>
- How do you want to get involved?

Make XCP more open?

- Open Roadmap planning
- Open Bug tracker
- Open Build system
- Release independently of XenServer
- More code open sourced

- What do you want to see?

Questions?

- Get involved:
 - #xen-api on Freenode
 - xen-api@lists.xen.org
- Get more info:
 - <http://wiki.xen.org>
 - Tutorial: <http://xen.org/community/xenday11>

