VMware for the Open Source Geek

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Who Am I?

• Shawn K. O'Shea, resident of Hudson, NH. Originally from CT.

• Full-time system administrator since 1997.

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• http://www.akibia.com
Overview

- Virtualization
- VMware product lineup
- VMware Player
- VMware Server
- VMware ESX Server
Virtualization

• “The term virtualization broadly describes the separation of a resource or request for a service from the underlying physical delivery of that service.” [1]

• “Virtualization is a framework or methodology of dividing the resources of a computer into multiple execution environments, by applying one or more concepts or technologies such as hardware and software partitioning, time-sharing, partial or complete machine simulation, emulation, quality of service, and many others.” [2]
**Hosted Architecture**
- Installs and runs as an application
- Relies on host OS for device support and physical resource management

**Bare-Metal (Hypervisor) Architecture**
- Lean virtualization-centric kernel
- Service Console for agents and helper applications
Virtualization Products in the Wild

- VMware (Player/Server/Workstation/ESX)
- Microsoft (VirtualPC/VirtualServer)
- Parallels
- Virtual Iron
- Xen (Enterprise and Open Source)
Products Links

- VMware - http://www.vmware.com/
- MS – VirtualPC http://www.microsoft.com/windows/virtualpc/default.mspx
- MS – VirtualServer
  http://www.microsoft.com/windowsserversystem/virtualserver/default.mspx
- Parallels - http://www.parallels.com/
- Xen - http://www.xensource.com/
VMware products

• Free Virtualization Products
  - VMware Player
  - VMware Server

• Desktop Products
  - VMware Workstation
  - VMware ACE

• Enterprise Products – Virtual Infrastructure
  - ESX Server
  - VirtualCenter
VMware Player

- Free download
- Launch (“play”) prebuilt virtual machines
- Virtual Appliance Marketplace
- Ready-to-run OS or Application servers
Demo

- VMware player for Linux install
- Ubuntu Dapper Drake Server
- m0n0wall
The Linux User's Dilemna

• I have a requirement to run a Windows only application, but I only have Linux installed.

• VMware could be your solution
VMware Server

• Free download

• Requires a registration process (providing personal info) in order to obtain free serial number(s)

• Will provide you with up to 100 serial numbers
VMware server features

- 64-bit support (some experimental)
- SMP up to 2 processors
- VM snapshot support
- Can run guest OS in full screen mode
Many fully supported guest OSes

- Windows (NT4, 2000, Server 20003, XP, Win3.1, 95/98/ME, Vista (experimental))
- Linux, with specific support for Red Hat, SuSE, Mandriva, Ubuntu
- Netware
- Solaris 10
Demo

- Installing VMware server
- Installing Windows 2000 VM
- Installing FreeBSD VM
- Accessing already built Windows XP VM
VMware ESX Server

- Enterprise Product
- Own standalone operating system
- SAN support. Uses VMFS clustering fs
- Create entire virtual networks with virtual switches and integrate them with existing networks (VLAN support)
VMware ESX Server (cont)

• Host machines can have up to 32 logical processors and 64 GB of RAM
• Virtual machines can have up to 4 processors and 16GB of RAM
• With sufficient hardware, ESX supports running 128 concurrent virtual machines
• VirtualCenter provides central management
Links

• Running VMware on a Physical Partition
  http://news.u32.net/articles/2006/07/18/running-vmware-on-a-physical-partition

• How to use VMware Player to create your own images
  http://software.newsforge.com/article.pl?sid=06/05/16/1940214

• How to launch ISO and use LiveCDs inside VMware Player
Links (cont.)

• VMware Keyboard Shortcuts
  http://allhotkeys.com/vmware_keyboard_shortcuts.html

• EasyVMX
  http://www.easyvmx.com/

• VMX-file parameters
  http://sanbarrow.com/vmx-intro.html
Thanks!

Questions?
Footnotes

• [1] “Virtualization Overview” - VMware White paper
  http://www.vmware.com/pdf/virtualization.pdf#search=%22hypervisor%20VMware%20virtualization%20layer%22

  http://www.kernelthread.com/publications/virtualization/