Xen Summit Spring 2007

Platform Virtualization with XenEnterprise

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Agenda

• XenServer Product Family
• XenServer Features
• Near Term Roadmap
XenSource Commercial Products
Additional Functionality on top of Open Source Xen

- **Simple Deployment and Installation**
  - 10 Minutes to Xen
  - No base OS or RPMs to install
- **Simplified DR**
  - Bulk Move VMs between systems
  - Live Migration coming this Summer
- **Bundled Multi-Server Management Tools**
  - Interact with Virtual Machines
  - Performance Monitoring System
  - Graphical and Command Line
  - Storage Management
- **Quick Deployment of Windows and Linux Virtual Machines**
  - Virtual Machine Installers
  - Physical 2 Virtual Conversion Tools
- **High Performance Windows I/O Drivers**
- **Exposes only production ready feature set**
Commercial Products

Scalability vs. Capabilities

- Xen Express™
- Xen Server™
- Xen Enterprise™

Evaluation & Limited Deployment
Single code base, Seamless upgrade
Enterprise Deployment
## XenServer Product Family

<table>
<thead>
<tr>
<th></th>
<th>Xen Express™</th>
<th>Xen Server™</th>
<th>Xen Enterprise™</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin Model</td>
<td>Single Server</td>
<td>Multi-Server</td>
<td>Multi-Server</td>
</tr>
<tr>
<td>Concurrent VMs</td>
<td>4</td>
<td>8</td>
<td>No License Limit</td>
</tr>
<tr>
<td>Physical RAM</td>
<td>4GB</td>
<td>8GB</td>
<td>No License Limit</td>
</tr>
<tr>
<td>Physical CPUs</td>
<td>Dual Socket</td>
<td>Up to Quad Socket</td>
<td>Up to 32 Sockets</td>
</tr>
<tr>
<td>VM Support</td>
<td>Windows/Linux</td>
<td>Windows Only</td>
<td>Windows/Linux</td>
</tr>
<tr>
<td>Resource Controls</td>
<td>Automatic Fair Share</td>
<td>Automatic Fair Share</td>
<td>Fine Grained Controls</td>
</tr>
<tr>
<td>VLAN</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Live Migration</td>
<td>N/A</td>
<td>N/A</td>
<td>Summer ‘07</td>
</tr>
</tbody>
</table>
XenEnterprise Features
Product Components

Administrator Console

Platform Installer (CD / PXE) and P2V tools

CLI

Bare Metal Virtualization Platform

SSL Link
Bundled Multi-Server Management

• **Manage Multiple Servers**
  – Adjust server configurations
  – Setup virtual networking

• **Create and Deploy Virtual Machines**
  – Install
  – Clone
  – Import and Export

• **Monitor Performance**
  – CPU, Memory
  – Disk and Network I/O

• **Adjust Resource Allocation**
  – Size-up, add, and remove virtual disks
  – Adjust memory and CPU allocation
  – Change networking
  – Adjust QOS Limits

• **Interact with Virtual Machines**
  – Built-in Graphical
  – Build-in Text
  – External RDP Client
Enterprise Ready Performance

• Paravirtualized Kernel and Paravirtualized I/O
  – Linux Operating Systems
  – Generally 0.5-4% overhead vs. running on native

• Hardware Virtualization Assist and Paravirtualized I/O
  – Windows Operating Systems
    • High Speed XenSource PV Drivers
  – Generally 4-7% overhead vs. running on native

• Multiple virtual CPUs per Guest
  – Up to 32 for Linux VMs
  – Up to 4 for Windows VMs
Deploying Virtual Machines

• Windows (All Versions)
  – Installing from Vendor Source
  – P2V (Leostream and Platespin)

• Linux (Express/Enterprise)
  – Installing from Vendor Source
  – P2V
  – Included VM

• Both Linux and Windows
  – Clone existing VM
  – Import a existing VM
Disaster Recovery – Bulk Move VMs

- Storage repository can be reattached to another server in the event of a failure
• Guests can be Exported to disk and imported to a standby server
Virtual Machine OS Support

- **Windows**
  - Windows 2003 Server
  - Windows XP
  - Windows 2000

- **Linux**
  - Red Hat 5.0, 4.x, 3.x
  - Novell SLES 10.1, 9 sp2, 9 sp3
  - Debian Sarge
Near Term Roadmap
March 2007 (Version 3.2)

- **New Guests**
  - Windows: Windows 2000 Server SP4
  - RHEL 5, SLES 10, 10.1

- **New Capabilities**
  - 4-way SMP guests for Windows XP and 2003
  - Up to 8GB guest memory for Windows
  - QoS control – CPU, disk, network
  - VLAN trunk support virtual bridges
  - iSCSI SAN Support
  - Enhanced Management Console
  - Additional hardware support
  - Deploy Windows VMs via PXE
• **New Capabilities**
  – 64-bit hypervisor (supporting 32-bit and 64-bit VMs)
  – Live Migration for Windows and Linux VMs
  – Shared Storage
  – NIC Teaming
  – PXE boot VMs
  – UI Enhancements
  – New XML-RPC API
XenServer Demonstration

Remote Management
Questions?