



ORACLE®

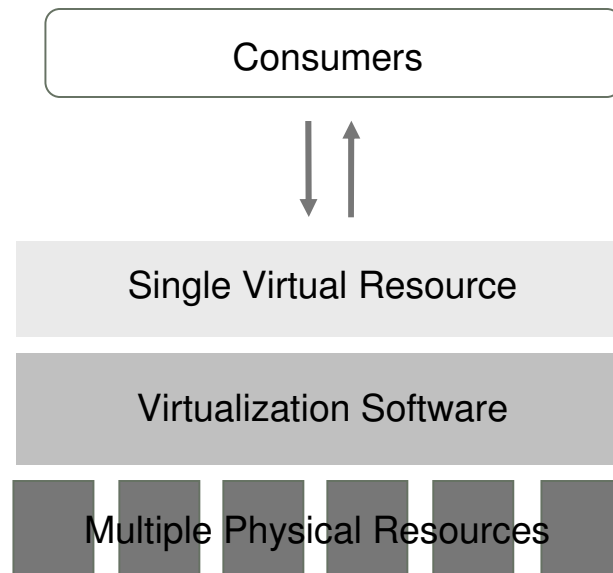
**Introducing Oracle VM:
Oracle's Virtualization Product Strategy**

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

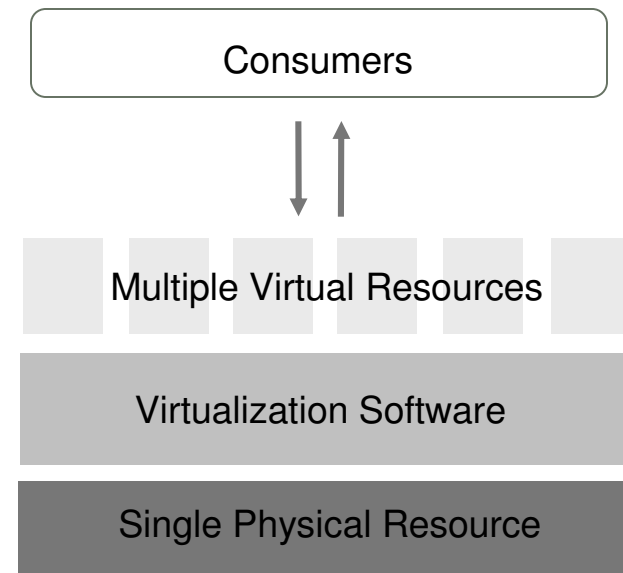
Defining Virtualization

- Abstract underlying technology
- Simplify interfaces to resources

Make many resources look like one

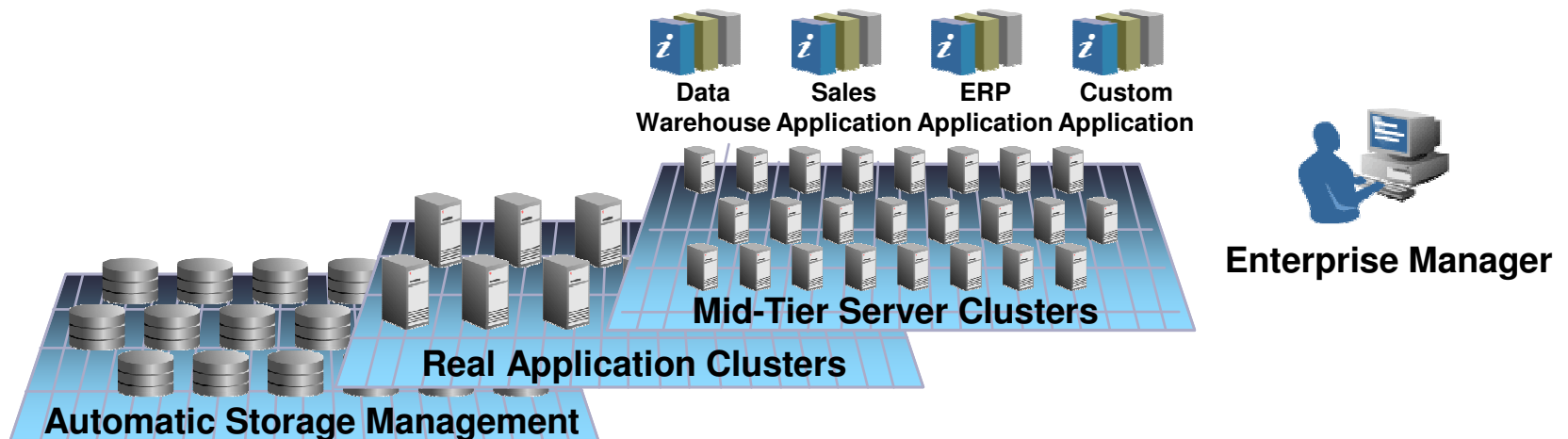


Make one resource look like many



Oracle Grid-Based Computing

- Grid-Based Storage
 - Oracle Automatic Storage Management
- Grid-Based Server Clusters
 - Oracle Database
 - Oracle Middleware
- Grid-Based Management
 - Oracle Grid Control





Announcing Oracle VM

- New server virtualization software and support
 - Free product download; low-cost support
- Runs both Linux and Windows
 - Supports PV on all hardware and HV on latest x86 hardware
 - 64-bit and 32-bit guests
 - Up to 64-way SMP
 - Up to 32 virtual processors per guest
 - Includes live migration at no additional cost
 - Integrated, browser-based management console
 - Free downloadable VM images
- Enterprise-quality support

ORACLE[®]

VM

ORACLE[®]



Announcing Oracle Product Certification with Oracle VM

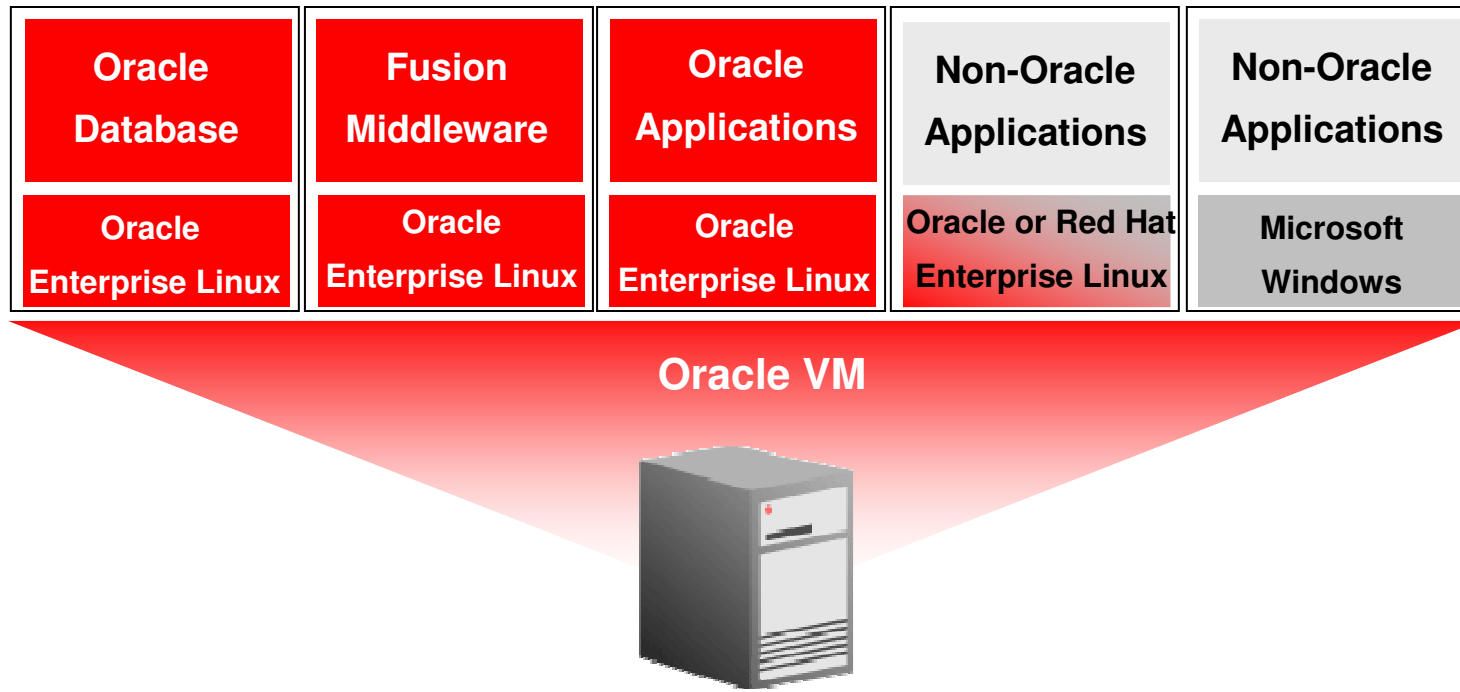
- Oracle Database
- Oracle Application Server
- Oracle Enterprise Manager
- Oracle Berkeley DB
- Oracle TimesTen
- Oracle E-Business Suite
- Oracle PeopleSoft
- Oracle Siebel
- Oracle Hyperion



Announcing Partner Support



Oracle VM



- Oracle tested and supported server virtualization technology
- Maximizes consolidation of Linux and Windows servers
- Saves on power, cooling and space



Oracle VM Features

- Simplified installation
 - Server install is a single CD
 - Server installs and configures in a minute
- Faster deployment
 - Pre-configured Virtual Machine images of Oracle Database and Oracle Enterprise Linux
- Live migration
- Linux and Windows guest support
 - Oracle Enterprise Linux 4 and 5;
 - RHEL3, RHEL4 and RHEL5
 - Windows 2003, Windows Server 2003 and Windows XP (on HV capable hardware)
- Browser-based management
 - Create, clone, share, configure, boot, and Migrate virtual machines



Technology Enhancements

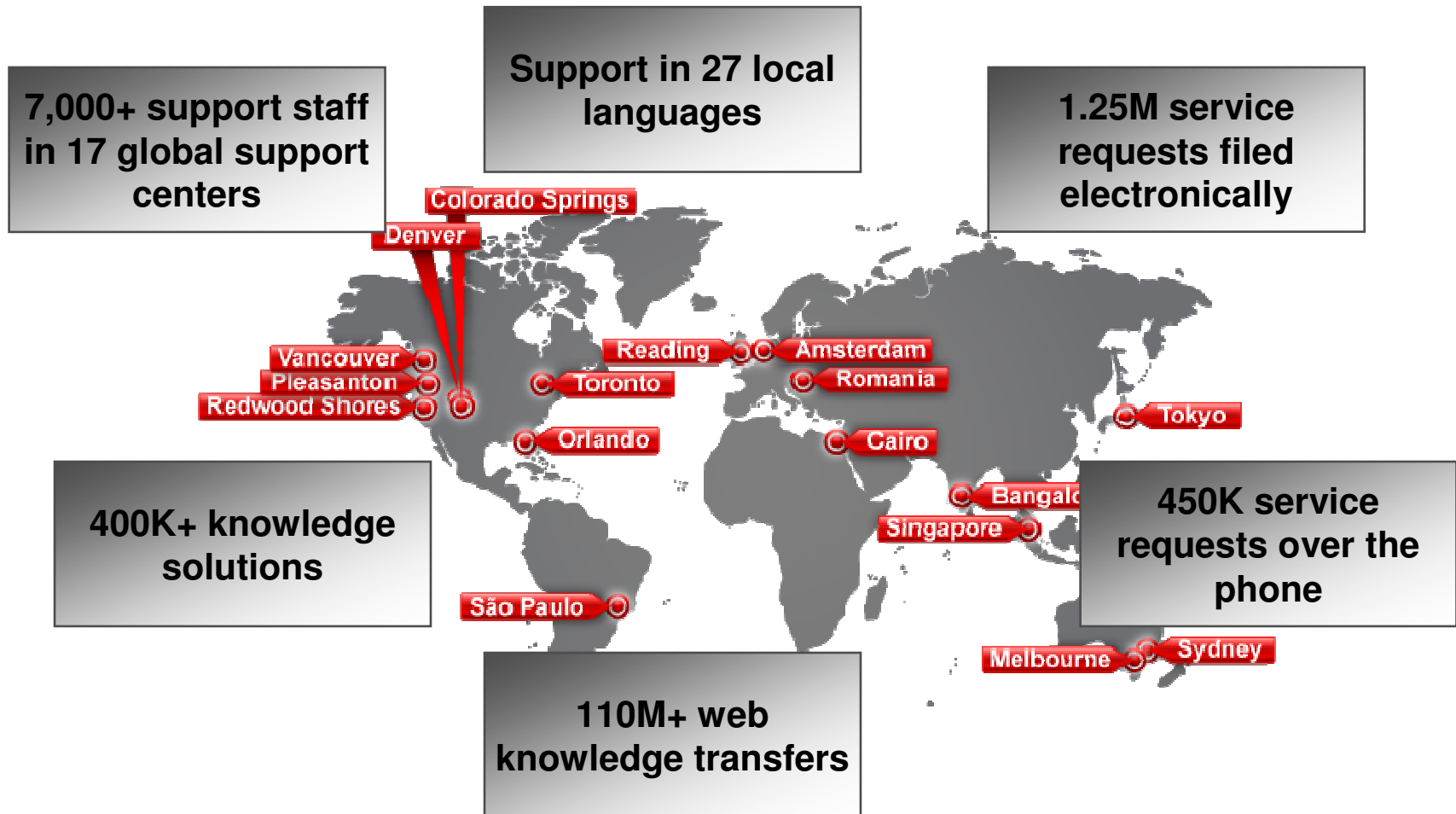
- Enhanced and optimized Xen technology, addressing
 - I/O overhead
 - Memory overhead
 - Process Scheduling
- Community involvement
 - Dedicated Xen development team
 - Contribute code and bug fixes to Xen
 - Members of Xen community at Oracle e.g. Dan Magenheimer
 - Member of XenSummit committee
- Significant testing
 - Real-world testing with Oracle On Demand workloads
 - Testing with Oracle Validated configuration workloads



Performance Testing

- Many benchmarks run comparing existing server virtualization products with Oracle VM (paravirtualized linux kernel) and Oracle products.
- For real-world benchmarks, Oracle VM has on average **three times less overhead** over real hardware; compared to existing server virtualization products from other vendors.
- Virtual SMP scalability of Oracle VM is at 90+%
- Small workloads are at same performance as real hardware

One Support Call for the Complete Stack





Oracle VM Benefits

- Faster and more efficient
 - Significantly less overhead than the other, leading, server virtualization vendor for real World benchmarks
- Affordable
 - No license cost
 - 24x7 support:
 - \$499 for 2 processors per machine per year
 - \$999 for unlimited processors per machine per year
- Enterprise quality
 - One support call for the complete software stack
 - Validated with key Oracle products
- Risk-free
 - Deploy with confidence and full backing from Oracle



Oracle Products Licensing With Oracle VM

- Uses existing licensing model
 - Physical CPU based
 - No per instance charges
- Significant benefits for consolidated environments
- Soft and hard partitions
 - Hard partitions enable sub-server licensing
 - Oracle VM can be configured both ways

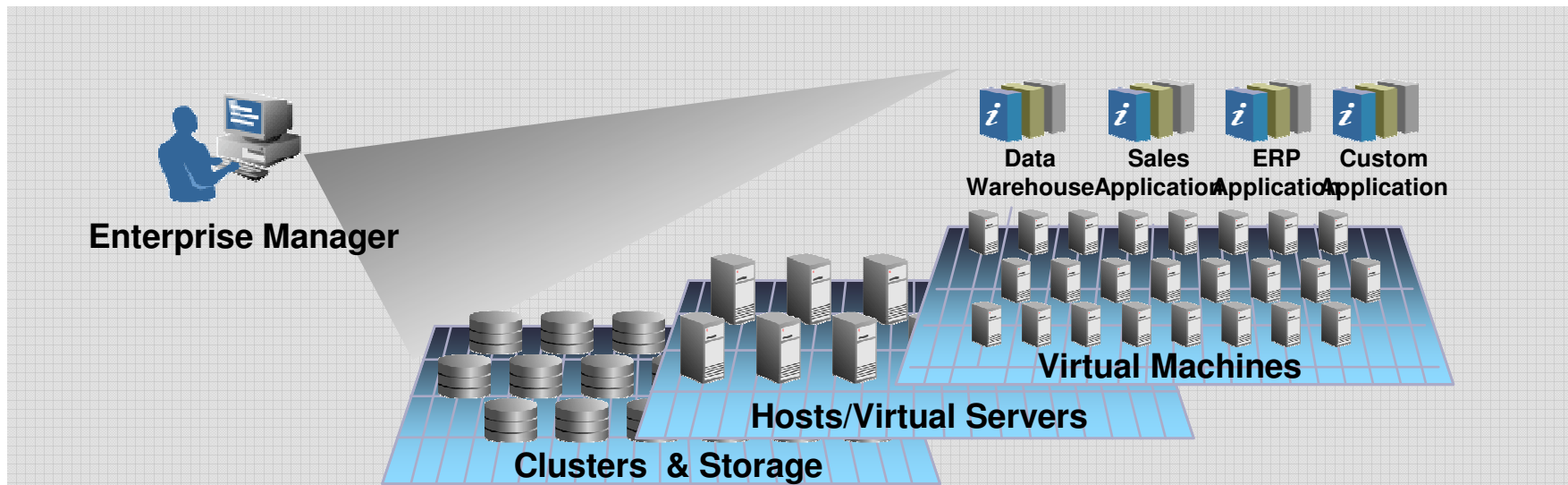



Opportunities

- VM templates and virtual appliances for easier deployment
- Vertical stack integrated
- One management console for managing Apps down to the virtual environment

Opportunity: Oracle Enterprise Manager for Virtualized Infrastructure

- Top-down management of applications running in virtualized environment
- “Application aware” monitoring and administration of virtual resources
- Dynamically grow & shrink resources to meet SLA objectives
- Integration with oracle.com for live updates on best practices
- Support for Lifecycle Management and ITIL driven flows
- Integration with 3rd party management tools





Oracle VM Server Hardware Requirements

Memory	1 GB At least 2 GB recommended
Processor	x86 and x86_64 Hardware virtualization support required for hardware virtualized guests
Guest memory	As required by guest operating system



Oracle VM Manager Hardware Requirements

Memory	2 GB
Processor	X86 and x86_64 1.83GHz*1
Swap space	2 GB
Disk space	4 GB

Oracle VM Manager

ORACLE VM Manager

Home Profile Logout Help

Virtual Machines Resources Servers Server Pools Administration

Logged in as admin

Servers

Refresh Add Server

Search

Server Pool Name: Server Host/IP:

Server Name: Status: All

TIP Search criteria are case insensitive. Use '%' as a wildcard, for example prod%

Servers

Select and	Reboot	Power Off	Edit	Delete			
Select	Server Host/IP	Server Name	Server Type	Status	Server Location	Server Pool Name	
<input checked="" type="radio"/>	ovs-z.cn.oracle.com	ovs-z.cn.oracle.com	Virtual Machine Server	Active	OARDC	OARDC Server Group	
<input type="radio"/>	ovs-y.cn.oracle.com	ovs-y.cn.oracle.com	Server Pool Master, Utility Server, Virtual Machine Server	Active	OARDC	OARDC Server Group	

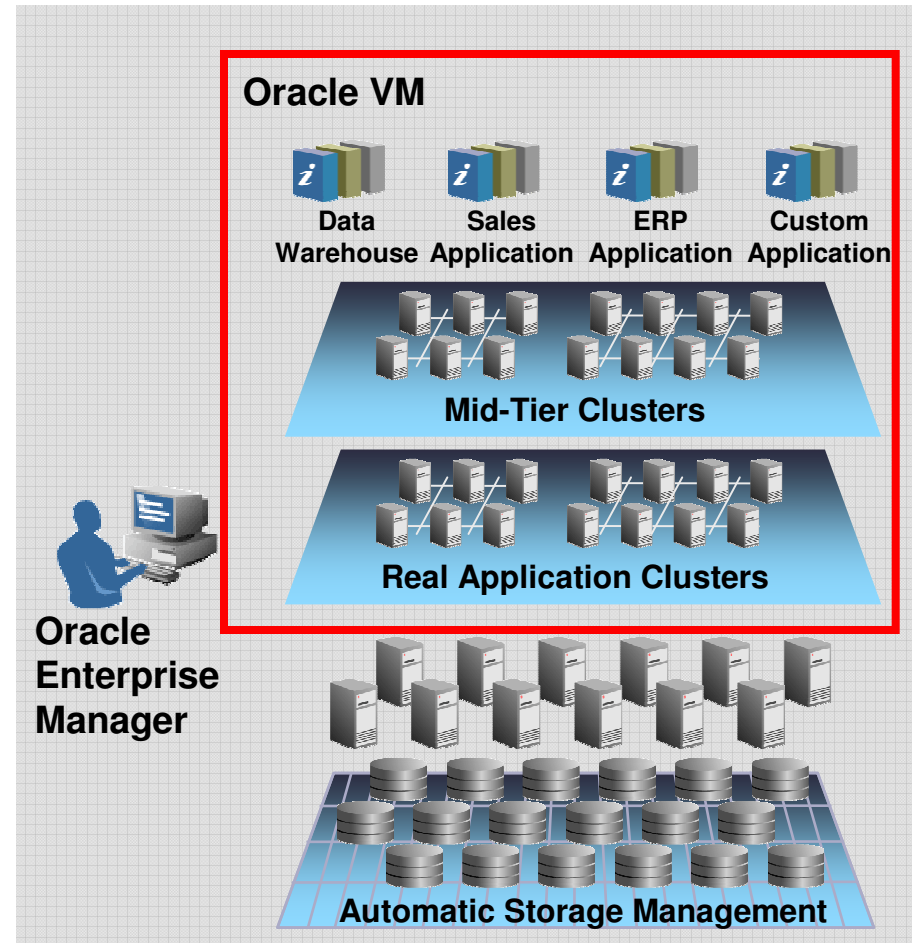
Refresh Add Server

Virtual Machines Resources Servers Server Pools Administration

Copyright © 2007, Oracle. All rights reserved. Oracle VM Manager 2.1

Summary

- **Oracle Uniquely Combines**
 - Proven Grid capabilities
 - Server virtualization
- **Full Virtualization Strategy**
 - Applications
 - Data
 - Servers
 - Storage
- **Real-World Benefits**
 - Maximized consolidation
 - Optimized agility
 - High availability





Resources

- **Oracle VM Home Page**
oracle.com/virtualization
- **Free Download: Oracle VM**
edelivery.oracle.com/oraclevm

