

VMWARE CONFIDENTIAL – FOR BETA CUSTOMERS UNDER NDA ONLY

Note: This is a list of new features currently under consideration for VMware Infrastructure 3.1. This list is for planning purposes only and not a commitment from VMware. This list is subject to change.

New features in VMware Infrastructure 3.1:

1. VMware Infrastructure 3.1 beta provides a new VMware **UpdateManager** which automates patch management for physical ESX Server 3.1 hosts as well as Microsoft and RedHat Enterprise Linux virtual machines. UpdateManager allows users to define a baseline patch/update level for compliance checking. It scans entire datastores or individual hosts and virtual machines against the baseline, reports on the compliance status and remediates manually or through scheduled tasks. It automates backup prior to patching and rollback if the patching fails. It can patch online as well as offline or suspended virtual machines.
2. VMware Infrastructure 3.1 beta features experimental support for a new resource optimization called **Distributed Power Management**. When Distributed Power Management is enabled for a pool of host servers, it monitors utilization continuously and automatically VMotions virtual machines to different host servers if there is an opportunity to shut down hosts and save power. Before turning on this new feature, users can test the hosts to see if they can be DPM enabled. If capacity in the resource pool decreases or virtual machine loads increase, DPM brings hosts back online and works with DRS to maintain service levels for VMs.
3. VMware Infrastructure 3.1 beta provides a **guided server consolidation interface** that guides IT administrators through the server consolidation process by analyzing a selected group of servers, recommending consolidation candidates and their placement on hosts and converting the servers from physical machines to virtual machines. Hosts that are utilized by this server consolidation interface include physical servers with VMware ESX Server, VMware ESX Server HW and VMware Server.
4. VMware Infrastructure 3.1 beta introduces VMware **Storage VMotion** that allows you to move virtual disks from one datastore to another without any disruption or downtime.
5. VMware Converter is now integrated with VirtualCenter to ensure seamless operation of various types of virtual machines with VMware Infrastructure 3. It also includes support for scheduled and scripted conversions, support for MS Vista conversions and restore of images backed up using VCB.
6. VMware VirtualCenter is now enhanced to incorporate support for CDP (Cisco Discovery Protocol). This helps IT administrators discover physical and virtual network configurations, allowing them to better debug and monitor Cisco-based environments from within VirtualCenter.
7. VMware Infrastructure 3.1 beta comprises numerous performance optimizations that take advantage of advanced cpu, networking and operating system technologies.
 - a. Performance optimization for hardware page tables in the underlying processor hardware
 - b. Performance optimization for virtualization aware guest VMs that conform to the para-virt ops standard.(Ubuntu version?)

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- c. Extended VMXNet support for 64-bit guests¹
 - d. Support for TCP Segmentation Offload dramatically increasing TCP transport performance for network-intensive workloads² (e.g. for backup over LANs).
 - e. Support for jumbo frames to reduce network i/o processing overheads³
 - f. Support for IOAT v1. for enhanced memory to memory copy speeds for faster networking performance.
 - g. 10 Gb Ethernet cards bring higher speed and increased I/O consolidation capabilities to VI.
- 8.** VMware Infrastructure 3.1 beta brings enhanced scalability to the virtualization suite. It can now manage 200 hosts and 2000 virtual machines, twice as many as before. It also provides support for physical servers with upto 128G of memory allowing larger consolidation ratios and virtual machines with upto 64G of RAM. enabling more memory intensive workloads to be run in virtual machines at near native performance.
- 9.** In VMware Infrastructure 3.1 beta, VMware HA includes several enhancements:
- a. It also has improved scalability so that a VMware HA cluster can now contain twice as many physical hosts as was allowed in VMware Infrastructure 3.0. (32)
 - b. VMware HA now restarts virtual machines on the host with the most number of unreserved physical resources.
 - c. It now provides enhanced monitoring capabilities through new alarms for failover events that can be used to monitor and notify administrators.
 - d. VMware HA is now enhanced to include experimental support for monitoring failures within virtual machines. When enabled, VMware HA will detect OS failures in virtual machines and automatically restart them.
- 10.** VMware Infrastructure 3.1 beta brings several usability enhancements to VMware Tools
- a. Tools can now be updated for selected groups of virtual machines
 - b. Tools upgrade can now be scheduled
 - c. The user gets a warning if a tools update requires a reboot
- 11.** VMware Infrastructure 3.1 beta further broadens the number of storage and networking options for users with support for:
- a. Support for select SATA devices
 - b. Experimental support for multipathing/round robin load balancing
 - c. Support for 10GbEthernet cards
 - d. Support for VMware Consolidated Backup over iSCSI SANs

¹ Support for limited 64-bit guests only-Win2003 SP2 64 bit (Enterprise) ,RHEL 5 64 bit ,SLES 10 64 bit

² Supported for limited guests only-Win2003 SP2 32/64 bit (Enterprise) ,RHEL 5 32/64 bit , SLES 10 32/64 bit

³ Supported for limited guests only--Win2003 SP2 32/64 bit (Enterprise) ,RHEL 5 32/64 bit , SLES 10 32/64 bit

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- 12.** VMware Infrastructure 3.1 beta includes support for features developed by our partner community namely:
 - a. Support for N-port id virtualization technology which allows a physical HBA port to acquire multiple SAN addresses allowing for granular management of i/o, storage capacity utilization, hot spot detection and chargeback.
 - b. Support for Infiniband technology. Infiniband cards are community supported.
- 13.** Support for IPv6 based virtual machines.
- 14.** VMware Infrastructure 3.1 also enables built-in licensing support for tracking desktop virtual machines.