

VMware HA on ESX Server 3i

VMware ESX Server 3i version 3.5

VMware® High Availability allows the virtual machines running on ESX Server systems to automatically recover from host failures. When a host becomes unavailable, all associated virtual machines are immediately restarted on other hosts in the system. VMware Infrastructure 3.5 introduces enhanced High Availability functionality and provides experimental support for monitoring individual virtual machine failures. VMware HA can now be set up to either restart the failed virtual machine or send a notification to the administrator.

In Virtual Infrastructure 3.5, VMware HA operating on ESX Server 3i is an experimental feature. This document describes some prerequisites for configuring HA on ESX Server 3i, and includes recommendations for testing HA.

Prerequisites

To enable HA on ESX Server 3.5 or ESX Server 3, your virtual infrastructure system and hosts must meet a few basic requirements so that VMware cluster and HA features operate properly:

- **Host name and IP address resolution.** HA requires host name and IP address resolution of all hosts in a HA enabled cluster. Use DNS to configure this resolution. HA caches the results of the name and IP address resolution, and does not need access to the DNS server during failover.
- **Redundant network paths.** HA agents on each host communicate with the other hosts in the cluster and send heartbeats to detect the health of the hosts. With any high-availability solution, it is important to eliminate single points of failure. Use redundant network paths for communications and heartbeats on redundant NICs that are connected to separate switches. This redundancy ensures that the infrastructure itself is available. On ESX Server 3i, configure redundant VMkernel networks that HA can use. Either use NIC teaming or have two VMkernel port groups on two separate VSwitches and connect the VSwitches to separate physical NICs.
- **Storage and network access.** All hosts must have access to the same storage and networks so each host has access to all virtual machines in a cluster. This ensures that any virtual machines that were running on a host that failed can be restarted on any other host.

For more information about configuration and best practices, see *Automating High Availability (HA) Services with VMware HA* at http://www.vmware.com/pdf/vmware_ha_wp.pdf.

Test Recommendations

Test VMware HA in a non-production environment before deploying it. To test HA on ESX Server 3i, VMware recommends the following:

- Test HA using this officially released version of ESX Server 3i. Do not test on any other versions.
- Do not mix ESX Server 3 hosts and ESX Server 3i hosts in the same cluster. If a cluster uses both hosts, the entire cluster becomes experimental and the ESX Server 3 hosts are no longer supported.
- Limit the size of a cluster to eight ESX Server 3i hosts.

- Use only components listed in the compatibility guides for ESX Server 3i.
- Ensure that the Management Network Settings entries for IP, FQDN, and DNS name are correct for the local host. If you upgrade from a beta build of ESX Server 3i, verify that the host file contains this data.
- Use local storage with swap enabled on ESX Server 3i rather than using diskless configurations.
- Hosts with swap enabled need a minimum of 1GB of memory. Hosts not using swap should have a minimum of 1.5GB of memory.
- Limit the number of running virtual machines per host to no more than 20.

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