

Table of contents

- [1122388 - Linux: VMware ESX Server 3 configuration guideline](#)

SAP Note Number: 1122388

Linux: VMware ESX Server 3 configuration guideline

Version: 2, Note Language: EN, Released on: 07.12.2007

Symptom

You are setting up your server with VMware ESX Server 3 and need some configuration recommendation.

Other terms

Virtualization, VMware, Linux, SLES, RHEL, ESX

Reason and Prerequisites

VMware support provides the following recommendations for ESX 3 if you intend to run SAP applications.

Solution

There are no SAP specific settings within ESX Server.

For best performance, we recommend the following guidelines:

1. We recommend to use the latest processor generations (Core2duo from Intel (xeon 51xx,53xx, Rev. E/F AMD), due to their enhanced support for virtualization.
2. For optimal results we recommend to use VM's with one or two virtual CPU's. If your workload requires more processing power, it is also possible to use 4 virtual CPU's, but performance wise 2 VM's with 2 vCPU's each will give better throughput.
3. Follow SAP's rules for setting up file systems for your database installation. Distribute database files over different disks. Separate log and db files. Use at least two separate VMFS (VMWare Filesystem) volumes to create the virtual disks.
4. Don't do memory over commit! With VMware it is possible to assign more virtual memory to the VM's than there is physical memory available in the host. This is not recommended at all with SAP. SAP allocates memory permanently and does not release it again. To enforce this policy, we recommend setting the "Memory Reservation" to the amount of memory configured for the VM. This will ensure that the VM with the SAP instance will always have the full amount of memory available. The same can be done for the "CPU Reservation", but we recommend enabling this only in case of performance problems, since the reserved resources are not available to other VM's any more.
5. In order to avoid time synchronisation errors we highly recommend to check the instructions mentioned in SAP note 989963.
6. If you want to use the VMware Tools, the Open Source version is available at <http://open-vm-tools.sourceforge.net>.

In regards to all other aspects, you can treat the VM as any other host. Follow the installation and tuning guidelines from SAP for best results.

Below you can find some pointers for Best Practices and Setup information for ESX Server.

All these papers can be found at: <http://www.vmware.com/vmtn/resources/cat/91>

Performance tuning Best Practices for ESX Server <http://www.vmware.com/vmtn/resources/707>

Using VMWare Infrastructure for Backup and Restore
<http://www.vmware.com/vmtn/resources/610>

Timekeeping in VMWare virtual machines
<http://www.vmware.com/vmtn/resources/238>

Release Status

Released on

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Priority	Recommendations/additional info
Category	Installation information
Primary Component	BC-OP-LNX-ESX Linux on VmWare ESX
Secondary Application Area	BC-OP-LNX Linux

No attributes available

Release Independend

No Correction Instruction available

No Support Packages available

Number	Short Text
0001122387	Linux: Supported virtualization technologies with SAP
0000989963	Linux: VMware timing problem

No attachments available

SAP Notes / Patches corrected by this Note

No entries available

The following SAP Notes correct this Note / Patch

No entries available

[Back to top](#)