

Kerio MailServer Appliance for VMware

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1 What is Virtual Appliance?

Pre-built, pre-configured, ready-to-run solutions packaged with an operating system inside a virtual machine are known as virtual appliances. The philosophy is to deliver easy-to-use and readily deployable pre-integrated production solution stacks. This helps to save valuable time and simplify software development, as well as its management and distribution.

2 Why Use a Virtual Appliance?

Virtual appliances make installing and managing software much easier. Great customer experience proves this fact the best.

- None or minimal need of patching and managing saves your time, money and resources
- The ISV (Independent Software Vendor) serves as a single point of contact for an integrated solution which helps to reduce support costs
- Easy deployment of applications helps you to get new software up and running fast

3 What is Kerio MailServer Appliance?

Kerio MailServer Appliance for VMware includes a 30-day trial version of the latest *Kerio MailServer* installed on *CentOS*. The trial version of *Kerio MailServer* is not limited in functionality, but it expires after a certain period of time. After 30 days from the installation, the product stops working.

Kerio MailServer Appliance for VMware runs on:

- *VMware ESX Server 3.x*
- *VMware Server*
- *VMware Workstation*
- *VMware Player*

Use the following data to login to *CentOS*:

- Name: root
- Password: kerio

— **Warning** —

If you want to use this virtual machine in your production environment, do not forget to change your password for *CentOS*.

4 How It Works

Download the *Kerio MailServer Appliance* archive, unpack it and copy it to your virtual environment. Before using it on *VMware ESX Server*, use the script attached in the archive to convert the image file.

The first startup of *VMware Virtual Appliance* automatically runs a special script for installation and basic configuration of *Kerio MailServer*. First, the script connects to the *Kerio Technologies* download server and checks for *Kerio MailServer* updates. If the connection fails, the network for *VMware* is not set properly and *VMware Virtual Appliance* might therefore not include the up-to-date version of *Kerio MailServer*. If the update check is completed successfully or if installation of the current version is selected, the installation gets started automatically.

First, the installation script opens the license agreement. Then, the installation process is started. It can take several minutes. Once the installation is completed successfully, the script continues by offering the basic *Kerio MailServer* configuration wizard. Once the installation wizard is finished, *Kerio MailServer* is ready to use. For quick and easy login to the *Kerio MailServer* administration and to *WebMail*, corresponding icons have been created on the desktop of the virtual host.

5 Specifics and limitations of running KMS in virtual environment

Since functionality of *Kerio MailServer* is not bound to any specific hardware device, there is no real difference between running it on a physical or a virtual machine. However, there are certain areas worth to mention.

Performance limitation

Please bear in mind that there are certain penalties for applications running on virtual computers. The *VMware* company states that *ESX Server 3.0.1* can reach 90 percent performance in comparison with related performance of physical computers. In case of the other *VMware* virtualization products, the percentage will be even lower. Performance of *Kerio MailServer* running on a virtual machine will be most affected by limitations of disk operations which might become an issue if *Kerio MailServer* is used by higher number of users.

Performance improvement tips

- In case that *Kerio MailServer* is used by more than 50 users, it is suitable to choose *ESX* server for virtualization in production environment.
- Set resource limits such as CPU, memory, or network and disk operations separately for each virtual machine.
- A stand-alone virtual disk should be used for data storage. However, it is not necessary to use virtual disks only (except on *ESX Server*). By storing on a hard drive you can make performance increase by a few percent, but you give up the option of “Consolidated Backups” (snapshots).
- Increase CPU frequency and extend memory size for the virtual machine.

User data back-up

User data can be backed-up in the same way as on a physical machine. However, it is not recommended to save back-ups on the virtual disk used as the mailserver’s data store. In this case, the best method would be to create a new virtual disk which will connect to the virtual machine. This virtual disk will then be used as the destination disk for the user data back-up

store. Additionally, it is also recommended to back-up the entire virtual disk. To create a new disk, follow these guidelines:

- For *VMware ESX Server*: [link](#)
- For *VMware Server*: [link](#)
- For *VMware Workstation*: [link](#)
- For *VMware Player*: *VMware Player* does not support changes of the virtual machine settings. It is necessary to open an image in *VMware Workstation* and add the disk (as described in the previous case).

Detailed description of backing-up for *ESX Server* is provided in the following document: [link](#)

Disk management

Since *VMware* appliance certification requirements do not allow creation of expanding (non-preallocated) virtual disks (due to worse performance), *Kerio MailServer* appliance includes 10 GB initial free space on a preallocated disk. If this space is too small for the user data, it can be expanded. However, this operation is not trivial and requires rich knowledge and experience in virtualization and disk management. First, it is necessary to expand the disk size. If you want to do it, follow [these guidelines](#) ([this method](#) for *ESX Server*). Then expand partition of the particular disk (you can use [this method](#)). Before applying these operations, it is desirable to back-up the entire *VMware* appliance!

Warning

Kerio Technologies is not responsible for any damage or loss of data resulting from manipulation with virtual disks using the suggested guidelines and/or utilities!
