



# Virtualization with Marshal8e6 Products

Virtualization refers to a set of technologies that allow a single physical host computer to emulate multiple ‘virtual’ computers running within a software container on the host computer. This allows a single computer to run one or more “virtual machines” – computers running their operating systems independently from one another. In effect, virtual machines are completely separate computers, running on the same physical hardware.

“You can use virtualization to provide disaster recovery and expand your array at anytime by simply restoring images or adding further virtual servers based on an image of a freshly installed node.”

## Benefits of Virtualization

**More efficient use of hardware – This is due to the fact that the average CPU & resource utilization on a corporate server is around 25%, collapsing 3-4 of these together on similar hardware, or more on larger hardware offers these advantages:**

- Less physical space required in server room
- Lower power consumption contributing to green computing
- Lower air conditioning requirements contributing to green computing
- Ability to run separate applications on separate virtual machines on the one host computer
- Disaster recovery – Images can be backed up (even when the virtual machine is being used) and quickly restored or moved to different host computers to maximize availability, because the hardware is virtual, no expensive standby servers need to be bought and maintained.

## Virtualization Products

Marshal8e6 uses both VMware’s suite of products and Microsoft’s Virtual Server (Hyper-V) extensively. One of the most exciting applications of virtualization technology is virtual appliances. A virtual appliance is conceptually similar to a traditional hardware appliance. The same benefits of simplicity, managed updates, and pre-configured applications are enjoyed, but the need for an additional physical piece of hardware is eliminated. Instead, you download a large file containing disk images of a virtual machine and load it onto your existing virtual server.

The **MailMarshal Virtual Appliance** is a VMware virtual machine running a hardened version of the Windows Server 2003 operating system, preloaded with MailMarshal SMTP. The Virtual Appliance is automatically updated and managed, just as a hardware appliance would be. Deployment of a virtual appliance is even more effortless than its hardware appliance counterpart. The virtual appliance is downloaded to a VMware server, some simple configuration tasks are performed, and the virtual machine begins filtering mail.

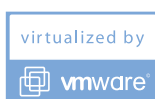
## Practical Applications for Virtualization with Marshal8e6 Products

Virtualization provides a number of opportunities for use with Marshal8e6 products including a fast and easily reproducible deployments. By using a Marshal8e6 virtual server or virtual appliance image you can create multiple MailMarshal or WebMarshal array nodes quickly and easily. Once the image is enabled in your virtual environment, you need only point the new node at a MailMarshal or WebMarshal Array Manager server to add them to the array. The Array Manager will automatically synchronize the new node with user data and policy configuration. You can set up multiple virtual nodes in your DMZ or secure network and locate your Array Manager inside your trusted network.

After establishing your array architecture using a virtual environment, you can take a snapshot of your servers at anytime and save this image for disaster recovery and restoration. If you have made a range of custom rule changes and you wish to save your configuration and database, you can have your virtualization software make automated images on a regular basis. In the event of a hardware failure you can quickly reproduce your virtual environment on new hardware and restore from your last saved virtual machine image.

You can use virtualization to expand your array at any time by simply adding another virtual server using an image of your established nodes. If you wish to test an upgrade, you can take an image of your MailMarshal or WebMarshal server and then apply an upgrade to a test virtual machine that is not part of your live environment. This allows you to observe any issues or potential problems which could disrupt an upgrade of your live environment. Once you have performed an upgrade and are satisfied that the upgrade is working properly, you can take a new image of your upgraded environment so you can quickly and easily restore your environment for disaster recovery.

Using **MailMarshal Virtual Appliance** you will see a time savings, reduction of hardware and facilities costs, painless testing of products, and easy disaster recovery.



Please visit <http://www.marshal.com/pages/vmware.asp> for our support statement on VMware.



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