

**BackupEDGE™**  
can be used as a **P2V**  
virtualization tool for  
Linux.



TECHNOLOGY PARTNER

### Introduction

The ability to run multiple operating systems on a single physical server can greatly decrease hardware costs. Converting Linux servers from physical servers to virtual servers has always been useful but time consuming.

Beginning with *BackupEDGE 03.00.07*, Linux physical-to-virtual (**P2V**) conversion/recovery is built into *RecoverEDGE*.

*BackupEDGE* and *RecoverEDGE* reduce **P2V** conversion to:

#### *Physical Server (PM)*

- Install and license *BackupEDGE 03.00.07* or later on the physical server and configure it to store data on something accessible to VMware (NAS / FTP server is the recommended and tested storage resource).
- Make new *RecoverEDGE* optical media or ISO image.
- Perform a *Master Backup* to the storage resource.

#### *Virtual Server (VM)*

- Create a new, blank virtual machine (**VM**) using the guidelines listed in the *BackupEDGE User Guide*.
- Boot the **VM** using the *RecoverEDGE* CDRom or ISO image.
- Test connectivity to the storage resource.
- Turn on **P2V** mode from the *RecoverEDGE* menu.
- Perform an automatic "OneTouch Restore" to the **VM**.
- Shutdown and reboot the **VM**.
- Run the networking commands and fix any networking issues.

**That's it!** Your server has been virtualized and is ready to rock.

### P2V Requirements for 03.00.07 build 1 and later

- *BackupEDGE 03.00.07* or later **must be licensed and activated**. **P2V** capability is not available in 60 day demo mode.
- Must be using a supported Linux distribution. *BackupEDGE 03.00.07* build 1 and later supports:
  - Red Hat Enterprise Linux 6.x or 5.x.
  - CentOS Server 6.5 or 5.x.
  - Oracle Linux Server 6.x.
- *BackupEDGE 03.01.00* build 2 and later also supports:
  - Red Hat Enterprise Linux 7.x.
  - CentOS Server 7.x.
- Number of virtual hard drives must match physical server hard drives. Virtual hard drives may be larger, but not smaller.

See the instructions in the *BackupEDGE User Guide* before attempting a **P2V** conversion.

- Number of virtual network interface cards (NICs) must match number of physical NICs, at least during the conversion process.
- VMware ESXi 5 or later. Other VMware products may work but are not supported.

## Theory of Operation

Virtual servers work by presenting a known set of resources to an operating system, e.g.:

- Virtual processors (CPUs).
- Virtual storage host bus adapters (HBAs).
- Virtual network interface cards (NICs).

Bare metal disaster recovery is typically the process of recovering from a hard disk failure or similar disaster to identical hardware, i.e., the same server setup with the same drivers, but perhaps a larger hard drive.

In **P2V** mode, *RecoverEDGE*:

- boots up from a prepared **VM** and recognizes that there are now different host HBAs and NICs in use,
- enables the proper drivers for disaster recovery.
- offers to map hard disk drives such as ide or cciss onto an appropriate device for VMware drivers (sdaX).
- Restores the backup, then automatically trains the guest operating system to recognize and use the VMware HBA drivers.

After a "**P2V recovery**", it is necessary to boot the new VM and adjust networking to the appropriate settings, which may or may not match the original physical machine. This is done through the operating system menus. Administrators may want to do this in single user mode to prevent long wait times when starting services on first boot.

You will need to use a different IP address and hostname if the original machine is to stay active. Changing the hostname will invalidate the *BackupEDGE* license, but there is no charge to have it re-activated on the **VM**, as long as the old server will no longer be used.

## Pricing

There is no **extra charge for P2V capability**. However, it does not run in demo mode. Your *BackupEDGE* must be fully registered and activated to use this capability. Current licenses with expired *Support and Maintenance Subscriptions* are not able to upgrade to this release. Please contact your reseller or Microlite Sales to renew your *Subscription*.

## Benefits

- Our virtualization method is one of the fastest, easiest, and most versatile available.
- After virtualization you'll never have to worry about device drivers, new specific hardware, or expansion again. For instance, more CPUs or memory can be added just by shutting down, changing the numbers in VMware, and re-starting<sup>1</sup>.
- **VMs** may be protected with *BackupEDGE*, just like the **PM**.

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1. Assumes additional resources are available on the VMware server.

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## Summary

*Backup***EDGE** with **P2V** support is the right way to virtualize your Linux servers. Additional Linux distribution support will be added in the future.