Virtual Machines

BACKING UP SERVERS RUNNING IN VMWARE, CITIRX AND MICROSOFT VIRTUAL ENVIRONMENTS

Companies are increasingly using virtualisation technology to run multiple virtual machines on a single physical machine. The physical machine is controlled by a special operating system, called a hypervisor, which hosts the virtual machines. Backup Systems provides the functionality to connect to the hypervisor and backup the virtual machines.

The virtual machines are stored as a configuration file and a number of image files corresponding to the hard drives associated with that machine. In the event of a disaster the backed up virtual machine can be imported into another host and started.

Backups are taken while the virtual machines are running, the Backup Server utilises vendor supplied APIs to obtain consistent disk images. Agents are not required on the virtual machines or on the host.

Backup Systems works with the most popular hypervisors, creating images in the appropriate virtual disk format:

*   VMware's ESX and ESXi (VMDK format)

*   Citrix's Xen Server (XVA format)

*   Microsoft's Hyper-V (VHD format)

In addition to restoring by importing to another host, virtual machines can also be started on a virtual environment running on a regular operating system, for example Virtual Box.

The Backup Server can be configured to backup all or some virtual machines on a host, additionally it can keep a version history of images, allowing restoration to a particular point in time. The storage of the images employs block level de-duplication which minimises the amount of storage space actually used. Bit-differencing allows the images to be efficiently replicated to the cloud or to a secondary site for disaster recovery purposes.

When choosing a backup solution, be sure to select a product that covers all the main virtualisation vendors to avoid lock-in.