

## FalconStor Introduces Virtual CDP Appliance

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FalconStor has introduced Virtual Continuous Data Protection (CDP) Appliance for virtualized environments in the SMB market. FalconStor's Virtual CDP Appliance provides disk-based backup and disaster recovery for both Virtual Machines (VMs) and physical servers. FalconStor leveraged its flagship IPStor technology to develop the software appliance for a market hungry for enterprise-level data protection features at a low cost.

Make no mistake, providing enterprise features in a simple-to-use and reasonably priced appliance rides the wave of a major IT trend. But that is only part of this story. The other noteworthy part of Virtual CDP Appliance is just that – it's "virtual." Virtual appliances have all the earmarks of a revolutionary approach to developing and deploying business applications. These virtual appliances are really pre-integrated software stacks containing an operating system, application, and supporting software, that are simply downloaded and easily installed at the business site. The implications for faster software development cycles and powerful customer experience are profound. As one of the first vendors to support virtualized servers for the SMB market – and as an early provider of a robust virtual appliance -- we expect FalconStor to quickly establish a reputation in this sector that later vendors will have to match.

### The Challenges of CDP

VMware by definition combines physical and virtualization platforms. The combination is great for application hosting and delivery, allowing IT to quickly create and deploy full application hosting environments on virtual machines. However, data protection and recovery have been slower to catch up, making it difficult to provide cost-effective and efficient data protection in smaller IT shops. Yet this market would benefit from CDP in virtualized environments if the technology were more comprehensive for data protection, eased disaster recovery requirements, and were simple to purchase and deploy.

- **Theme #1: Manage virtual backups.** Virtual servers are tailor-made for fast and flexible application serving. However, storing virtual server backups is a different matter – traditional backup products copy full server images, leading to significant amounts of largely wasted storage space and long recovery periods. Traditional CDP helps by copying changes to data elements, but rarely protects virtual applications or systems as well. And it is precisely this one-stop-shopping approach that SMB firms need.
- **Theme #2: Disaster recovery.** Ironically, a popular reason for virtualizing servers is easier DR. Disaster-proofing a purely physical site

requires a large initial and ongoing investment at a remote hot site. Testing such an environment is expensive and time-consuming and can easily require downtime on both primary and secondary systems. With virtual servers, it is considerably easier to simply mirror the virtual application to a secondary VM. But not all CDP products can remotely replicate, and SMBs are resistant to purchasing multiple data protection products that may or may not integrate with one another.

- **Theme #3: Simplicity.** SMBs are sensitive to adding new technologies into their IT architecture. Installing, learning, upgrading, and maintaining new technology devices – particularly those representing a new-to-them technology like CDP – can influence an SMB buyer to put off the purchase indefinitely. Thus the easier a new technology is to install, learn, and run; the happier the customer will be. This is why easy-to-use mechanisms like virtual appliances hold such promise for this market, and why simplified product delivery and easy installation help to streamline an otherwise complicated procedure and reassure this market segment.

There are CDP products out there from vendors like Asempira, Atempo (Storactive), EMC (Kashya), InMage, Mendocino Software, Symantec (Revivio acquisition), TimeSpring Software, Topio and XOsoft. But none of them offers CDP optimized for virtual machines and the SMB market, leaving FalconStor to lead in a fast-growing

storage segment targeted at virtual server environments.

## Meeting the Challenge with Virtual CDP

Being first in to a growing market has real advantages, but FalconStor has far more to offer than that. Virtual CDP is built from IPStor, which continuously reflects block-level changes. Such functionality greatly expands the product's usefulness to SMB virtual server installations. These environments can use CDP's classic ability to restore from any-point-in-time (APIT) and can also use Virtual CDP to restore system images, both physical and virtual. In fact, this level of restore is a breakthrough for SMBs, who typically must restore from slower tape.

The Virtual CDP Appliance, which is certified for VMware Virtual Infrastructure, works by providing continuous delta-snapshot service for up to 255 snapshots per LUN, and IT can mount snapshots directly through Raw Disk Mapping (RDM). Snapshots are agent and application-aware with no additional scripting needed. Remote replication is available, in essence providing remote hot-site advantages to SMB users. Virtual CDP Appliance also provides a strong suite of integrated data protection operations for SMB customers. It is simple to download, use and install; and enables cost-effective DR measures and testing. These are features that fill real needs in the SMB virtualized environment.

### **Advantage #1: Beyond the Data Elements**

Virtual CDP's ability to capture block-level changes allows it to capture data, applications, and systems. Changes made to the physical server data can be backed up either to physical or virtual servers. Virtual CDP puts the advantages of the VMware environment to good use by protecting applications running in a guest OS as well as the physical server itself [PLEASE VERIFY].

### **Advantage #2: Disaster Recovery Setup and Testing**

Disaster recovery is a major driver for server virtualization because DR is a major headache in the data center. A best practice for traditional DR is to recreate the primary site in nearly every detail at the secondary site, from hardware to software to components. This doubles not only the upfront purchase costs, but also the ongoing system maintenance requirements, since any patches or upgrades made to systems at the primary site must be made at the secondary site as well. For DR testing, Virtual CDP allows VMware users to replicate their LUNs to a remote site – i.e., mount test data to the secondary VM – and thus test DR without expensive and disruptive traditional testing.

### **Advantage #3: Powerful Simplicity**

Virtual CDP Appliance reduces the complexity of deploying a CDP solution, particularly in SMB environments that often lack specialized data protection administrators. Packaging CDP as a virtual

appliance enables the SMB customer to quickly download the Virtual CDP Appliance to their environment, easily install it, and have continual access to immediate patches and upgrades for better customer support. And because the virtual appliance conforms to the industry-standard Open Virtual Machine Format (OVF), customers will be able to use it on a variety of virtualization platforms, thus avoiding vendor lock-in [PLEASE VERIFY]. Instead of viewing CDP as an expensive luxury for the large data center, IT can regard Virtual CDP Appliance as a reasonably priced, efficient and simplified tool for critical data protection. It is this message that allows FalconStor to ride the Independent Software Vendor (ISV) wave into the virtual server market.

### **Advantage #4: Physical-to-Virtual Recovery**

Physical-to-Virtual (P2V) recovery protects continuous availability by enabling IT to recover a physical server within minutes. There is no VMDK conversion involved, which significantly shortens recovery time. P2V recovery works by assigning the most recent snapshot or mirrored disk to a Virtual Machine and using the VMware converter to add VMware drives and tool to this Virtual machine. This approach has three distinct advantages over physical CDP-based recovery processes: 1) it does not disrupt operations, 2) it does not require identical hardware between primary and secondary systems, and 3) P2V conversion itself is very fast; about 10 minutes versus an hour for traditional P2P and P2V conversion processes.

## **Taneja Group Opinion**

Virtual CDP Appliance is a useful and comprehensive disk-based data protection product for SMB customers, but it is not for everyone. Users that need to protect storage arrays, or with more than 16 hosts, should look at the larger IPStor instead. Since CDP technology is I/O intensive, IT should ensure that their physical servers have sufficient memory capacity and I/O bandwidth to support the technology in a virtualized environment. In some cases it will be worthwhile for SMBs to upgrade performance and memory on the servers in order to more effectively use Virtual CDP.

In spite of these limitations, the benefits of Virtual CDP Appliance are significant. SMB customers can use Virtual CDP to restore not just their data, but also entire machines,

both physical and virtual. The product enables users to set up and test their disaster recovery processes in non-production virtual machines, thereby reducing the cost and disruption of traditional DR testing. And above all, by packaging and delivering the CDP solution in a virtual appliance, FalconStor has made CDP technology much more widely accessible and useful to SMB customers. This represents a positive step forward not just for SMB users, but also for CDP technology itself, which has struggled to find widespread market acceptance. As the first of many new products headed into the SMB virtualized environment, Virtual CDP Appliance has carved out a place for FalconStor in what will be an increasingly crowded front.

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