

## **Illuminator Virtual Recovery Engine Bridges the Recovery Management Gap**

Analyst: Michael Fisch

### **Management Summary**

*I wonder why it has taken so long?* This question came to mind after learning about Illuminator's new *Virtual Recovery Engine (VRE)*. This product is an application-aware, top-down tool for recovery management. It is fantastically useful, because data recovery is a real challenge for many enterprises. **Data protection technologies – backup, point-in-time copy, and replication – need to be coordinated with each other and with the application data they protect.** There are many details and interdependencies involved, which make it difficult to guarantee the consistent, complete, and fast recovery of data, but this is also exactly what enterprises need to do!

The question about taking so long is not directed at Illuminator, but at the computer industry, in general. Vendors are adept at developing and innovating the next great product feature. We have data centers full of gadgets with dazzling bells and whistles! However, these gadgets have to work together effectively in the real world of enterprise computing. They collectively must deliver computing services to the business, not merely shine in the spotlight as standalone works of brilliance. The interconnection and coordination of the gadgets are where enterprises face many challenges. While vendors work on technologies in this area, it still seems to play second fiddle to developing the next great product feature. From the perspective of enterprise customers, it is smarter and cheaper to deal with coordination and integration using advanced technologies, rather than hiring more people and consulting services.

**So, kudos to Illuminator for delivering a product that addresses recovery management from a system-wide and cross-domain perspective.** VRE is like a recovery command center. It provides insight and coordination across applications, databases, volumes, storage arrays, and data protection technologies. VRE gathers information about the environment, analyzes it, and presents a consolidated, actionable view for administrators. Enterprises can use it to:

- Make sure application data is properly protected and recoverable,
- Verify disaster recovery capabilities,
- Free up management resources, and
- Free up storage capacity.

**VRE bridges a real gap in recovery management.** Read on for details.

### **IN THIS ISSUE**

➤ <b>The Challenge</b> .....	<b>2</b>
➤ <b>Illuminator Virtual Recovery Engine</b> .....	<b>2</b>
➤ <b>Purposes and Benefits</b> .....	<b>3</b>
➤ <b>Conclusion</b> .....	<b>3</b>

## The Challenge

*What is going on?* This is the million-dollar question in data protection and recovery. Unfortunately, the situation is more like a black box than an open book, because people do not have a full sense of what is going on. Most IT departments live with incomplete or unknown answers to important questions.

- *Which data copies, replicas, and backups are associated with which applications and file systems?*
- *Are all copies of data complete, consistent, and ready for recovery?*
- *If not, which ones are problematic and why?*
- *Are there periodic gaps in recoverability?*
- *If you had to recover an application now, which copy would you use?*
- *What are the recovery service levels<sup>1</sup> for each application?*
- *Are these service levels guaranteed?*
- *Is it easy to change and differentiate service levels, if an application requires something more or less stringent?*
- *Will disaster recovery plans and processes work?*

It is not that IT departments are lackadaisical about data recovery, but the tools have not been available to answer these questions easily. Data protection technologies – such as backup, point-in-time copy, and replication – operate independently from one another. They are not inherently coordinated across an enterprise environment, and it is not easy for administrators to do it manually. To piece pull together information, they must do a lot of legwork, consulting different tools and compiling information in spreadsheets. Even then, it does not ensure everything works properly all the time. Testing can give insight, but it is too time-consuming and disruptive to do frequently.

In a more perfect world, IT would have automatic, centralized, system-wide visibility and control over data protection and recovery. This includes everything from applications to blocks of data on storage arrays.

## Illuminator Virtual Recovery Engine

Illuminator *Virtual Recovery Engine* (VRE) is a management tool that provides system-wide and application-aware insight into data protec-

<sup>1</sup> In terms of recovery time objective or RTO (how quickly data can be recovered) and recovery point objective or RPO (how current recovered data can be).

tion and recovery. It is a software product that runs on a dedicated server. VRE gathers information about the data recovery environment, analyzes it, and presents a consolidated, actionable view for administrators. It does not use agents.

## How It Works

VRE interfaces with applications, servers, storage arrays, and data protection technologies directly over a network. For typical enterprise environments, it gathers descriptive information in less than a day that includes:

- Applications and their associated databases, volumes, and file systems
- In which storage systems the volumes reside
- The specific data protection applied to volumes – point-in-time/snapshot copies, remote replication, and backups
- The recovery point (in time) for each copy
- The status of each copy – whether it is complete, consistent, and usable for recovery

It can refresh this information regularly, maintaining a near real-time profile.

VRE then correlates, analyzes, and presents the information. Administrators can see on one screen how applications are protected and what the expected recovery service levels are. If there is a problem, such as a failed backup or misconfigured copy, administrators can see where it is and identify how to correct it. (They would use a device manager or other administrative tool to reconfigure it.) VRE even presents the recovery status of applications over time and shows whether service levels remain consistent. Periodic or occasional lapses can point to issues in the data protection processes that need to be corrected.

In short, VRE answers the question about what is going on with data protection and recovery. The holistic view it provides helps IT departments to deliver consistent and demonstrable recovery service levels to the business.

## Platform Support and Pricing

VRE supports:

- **Servers** – *Windows*, *Linux*, and all major variants of *Unix*
- **Storage systems** – EMC Symmetrix *DMX* and NetApp *FAS* series
- **Point-in-time copy** – EMC *TimeFinder* and NetApp *Snapshot*

- **Replication** – EMC *SRDF* and NetApp *Snap-Mirror*
- **Backup applications** – NetApp *SnapVault* and Veritas *NetBackup*

The list price of Illuminator VRE starts at \$50,000. Pricing is based on the number of managed servers, applications, and storage systems.

## Purposes and Benefits

Illuminator VRE brings several benefits to an enterprise.

### ***Make Sure Application Data Is Properly Protected and Recoverable***

Deploying data protection technologies alone is not sufficient to ensure application data is properly protected. Nor is it enough to have good, written operational procedures. You also have to be able to verify and audit from a detailed and system-wide perspective in order to meet recovery objectives consistently.

VRE provides this (heretofore-missing) ability to verify and audit an enterprise's data recovery capabilities on a continual basis. It helps demonstrate compliance with service level agreements (SLAs). VRE's detailed, cross-domain insight makes it easier to provide differentiated recovery services based on unique application and business requirements, avoiding a costly, one-size-fits-all approach. It also allows system administrators, database administrators, and storage administrators to work together on recovery issues that cross all of their respective domains.<sup>2</sup>

### ***Verify Disaster Recovery Capabilities***

Related to recovery management in general is disaster recovery, which is concerned with the processes and technologies for recovery from a physical system failure. It involves failover to an alternate system often at a remote site. Since fires, floods, and system failures do happen, disaster recovery is an important aspect of business continuity and survival. However, it is also difficult and disruptive to test. VRE can add confidence to disaster recovery plans by confirming that remote replicas, copies, and backups are functioning and properly coordinated with applications.

<sup>2</sup> For more information on recovery management, see the issue of **Clipper Notes** dated March 10, 2007, entitled *Recovery in Perspective – Ensuring Access to Enterprise Data* and available at <http://www.clipper.com/research/TCG2007038.pdf>.

## ***Free Up Management Resources***

While effectively meeting recovery objectives is the first priority, to do so with fewer management resources is a great secondary benefit. VRE simplifies recovery management by automating the tasks of discovery, mapping, and analysis. It allows IT administrators to act with greater purposefulness and precision – no wasted motion. This ultimately saves money in the form of operating costs, since skilled labor is a large expense.

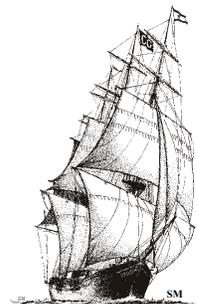
## ***Free Up Storage Capacity***

Another secondary benefit is freeing up storage capacity. In environments where data copies have been used extensively, there is quite possibly an overabundant proliferation of copies. **Using VRE to coordinate and streamline the protection scheme can free up storage capacity otherwise tied up in unnecessary copies.**

## **Conclusion**

Illuminator VRE addresses an outstanding problem in recovery management. Enterprises need reliable recovery services, but it is hard to coordinate across applications, volumes, storage arrays, and the many different data protection technologies available. **VRE connects the dots by mapping the recovery environment and providing single, actionable view.** In short, it gives the insight needed to take effective action.

**If your enterprise uses EMC or NetApp storage systems in an open systems environment<sup>3</sup>, consider Illuminator VRE to bridge your recovery management gap.**



<sup>3</sup> Illuminator plans to expand its list of supported platforms in the future.

### ***About The Clipper Group, Inc.***

***The Clipper Group, Inc.***, is an independent consulting firm specializing in acquisition decisions and strategic advice regarding complex, enterprise-class information technologies. Our team of industry professionals averages more than 25 years of real-world experience. A team of staff consultants augments our capabilities, with significant experience across a broad spectrum of applications and environments.

- ***The Clipper Group can be reached at 781-235-0085 and found on the web at [www.clipper.com](http://www.clipper.com).***

### ***About the Author***

***Michael Fisch is Director of Storage and Networking for The Clipper Group.*** He brings over ten years of experience in the computer industry working in sales, market analysis and positioning, and engineering. Mr. Fisch worked at EMC Corporation as a marketing program manager focused on service providers and as a competitive market analyst. Before that, he worked in international channel development, manufacturing, and technical support at Extended Systems, Inc. Mr. Fisch earned an MBA from Babson College and a Bachelor's degree in electrical engineering from the University of Idaho.

- ***Reach Michael Fisch via e-mail at [mike.fisch@clipper.com](mailto:mike.fisch@clipper.com) or at 781-235-0085 Ext. 211. (Please dial "211" when you hear the automated attendant.)***

### ***Regarding Trademarks and Service Marks***

***The Clipper Group Navigator, The Clipper Group Explorer, The Clipper Group Observer, The Clipper Group Captain's Log, The Clipper Group Voyager, and "clipper.com" are trademarks of The Clipper Group, Inc., and the clipper ship drawings, "Navigating Information Technology Horizons", and "teraproductivity" are service marks of The Clipper Group, Inc. The Clipper Group, Inc., reserves all rights regarding its trademarks and service marks. All other trademarks, etc., belong to their respective owners.***

### ***Disclosure***

Officers and/or employees of The Clipper Group may own as individuals, directly or indirectly, shares in one or more companies discussed in this bulletin. Company policy prohibits any officer or employee from holding more than one percent of the outstanding shares of any company covered by The Clipper Group. The Clipper Group, Inc., has no such equity holdings.

### ***Regarding the Information in this Issue***

The Clipper Group believes the information included in this report to be accurate. Data has been received from a variety of sources, which we believe to be reliable, including manufacturers, distributors, or users of the products discussed herein. The Clipper Group, Inc., cannot be held responsible for any consequential damages resulting from the application of information or opinions contained in this report.