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August 6 - 8, 2012



Get the 411 on FDR/UPSTREAM

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FDR/UPSTREAM:

...One data protection solution for all your enterprise platforms. A single solution that provides fast efficient data protection for all your enterprise platforms.

...is a **comprehensive** System z software solution for enterprise business data protection, business continuance and storage resource management providing enterprise-wide backup/recovery and archive for Open System servers and corporate desktops.

...**extends** the benefits of mainframe functionality, automation and reliability to Open Systems storage, while placing minimal demands on System z utilization.

...**integrates** seamlessly into existing networks allowing IT organizations to leverage existing System z mainframe investments to manage fast growing distributed enterprise data.

...**reduces** data protection and storage administration costs, training time and extends budget dollars as it uses your existing processing, storage and network hardware.

...The UPSTREAM family supports a wide variety of client platforms as well as a choice of Storage Servers that include **Windows, AIX, x86 Linux, Linux for System Z, or z/OS mainframe backup server**.

...**UPSTREAM Reservoir** extends the data protection umbrella to an Open Systems backup server that reduces the complexity of the backup management process resulting in more manageable and consistent operations

...**reduces** data protection and storage administration costs, training time and extends budget dollars as it uses your existing processing, storage and network hardware.

...INNOVATION is working with EMC/Bus-Tech/Data Domain, IBM & Luminex to insure you the best results...Customers report..."Adding a deduplication backstore to a mainframe VTL Solution is a no brainer."

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FDRSOS Facilities

Physical Full Volume data protection for Open Systems on EMC DMX and VMAX and IBM DS8700 & DS8800

Customers with disk storage (EMC & IBM) systems that attach to both Open Systems (workstation/server) platforms via FCP channels and to z/OS via FICON channels that allowed shared access to disk volumes, can use specially formatted "FDRSOS" Local Backup Volumes in the disk storage system as a high-speed conduit for backup data to bypass network data transfer and avoid network limitations and with **minimal mainframe CPU time**.

UPSTREAM Director Log Viewer

New Director log viewer allows you to filter based on specific search criteria

The screenshot shows the UPSTREAM Director Log Viewer application window. The main window displays a log file with the following columns: Date & Time, Message #, Severity, User, Process, and Message Body. The log entries are as follows:

Date & Time	Message #	Severity	User	Process	Message Body
Thu Feb 16 10:18:26 EST 2012	PC1201E	ERROR	SYSTEM	3376	Error in configuration file Fix See additional messages.
Thu Feb 16 10:18:26 EST 2012	PC4489I	INFORMATION	SYSTEM	3376	Exiting UPSTREAM (Service: UPSTREAM) The specified
Thu Feb 16 10:18:37 EST 2012	PC1225I	INFORMATION	SYSTEM	1172	Using translation table The following translation table is now in
Thu Feb 16 10:18:37 EST 2012	PC1225I	INFORMATION	SYSTEM	1172	Using translation table The following translation table is now in
Thu Feb 16 10:18:37 EST 2012	PC4898I	INFORMATION	SYSTEM	1172	Entering UPSTREAM v3.6.3 (Windows Server 2003 32-bit v5.2
Thu Feb 16 10:18:37 EST 2012	PC9520I	INFORMATION	SYSTEM	1172	(Dispatcher) Loading schedules from C:\Program
Thu Feb 16 10:18:37 EST 2012	PC9537E	ERROR	SYSTEM	1172	(Dispatcher) Error getting saved schedules: Unexpected EOF
Thu Feb 16 10:18:37 EST 2012	PC1027I	INFORMATION	SYSTEM	1172	Temporary files cleaned up: Clean up completed.
Thu Feb 16 10:30:32 EST 2012	PC1225I	INFORMATION	SYSTEM	2668	Using translation table The following translation table is now in
Thu Feb 16 10:30:32 EST 2012	PC1275I	INFORMATION	SYSTEM	2668	Entering UPSTREAM v3.6.3 (Windows Server 2003 32-bit v5.2
Thu Feb 16 10:30:32 EST 2012	PC3133I	INFORMATION	SYSTEM	1172	Starting a new instance of UPSTREAM To handle multiple
Thu Feb 16 10:30:33 EST 2012	PC7559I	INFORMATION	SYSTEM	2668	(Java client) Monitor started Remote system: 192.168.165.4
Thu Feb 16 10:30:33 EST 2012	PC7696W	WARNING	SYSTEM	2668	(Java Client) Error opening requested file While sending the
Thu Feb 16 10:30:34 EST 2012	PC7696W	WARNING	SYSTEM	2668	(Java Client) Error opening requested file While sending the
Thu Feb 16 10:30:46 EST 2012	PC7659I	INFORMATION	SYSTEM	2668	Closing status connection
Thu Feb 16 10:30:46 EST 2012	PC7561I	INFORMATION	SYSTEM	2668	(Java client) Connection lost
Thu Feb 16 10:30:46 EST 2012	PC3157I	INFORMATION	SYSTEM	2668	Closing UPSTREAM UPSTREAM closed by remote Java
Thu Feb 16 10:30:46 EST 2012	PC1027I	INFORMATION	SYSTEM	2668	Temporary files cleaned up: Clean up completed.
Thu Feb 16 10:30:46 EST 2012	PC1278I	INFORMATION	SYSTEM	2668	Exiting UPSTREAM
Thu Feb 16 10:30:46 EST 2012	PC3135I	INFORMATION	SYSTEM	1172	Started instance of UPSTREAM now terminated: PID 2668.

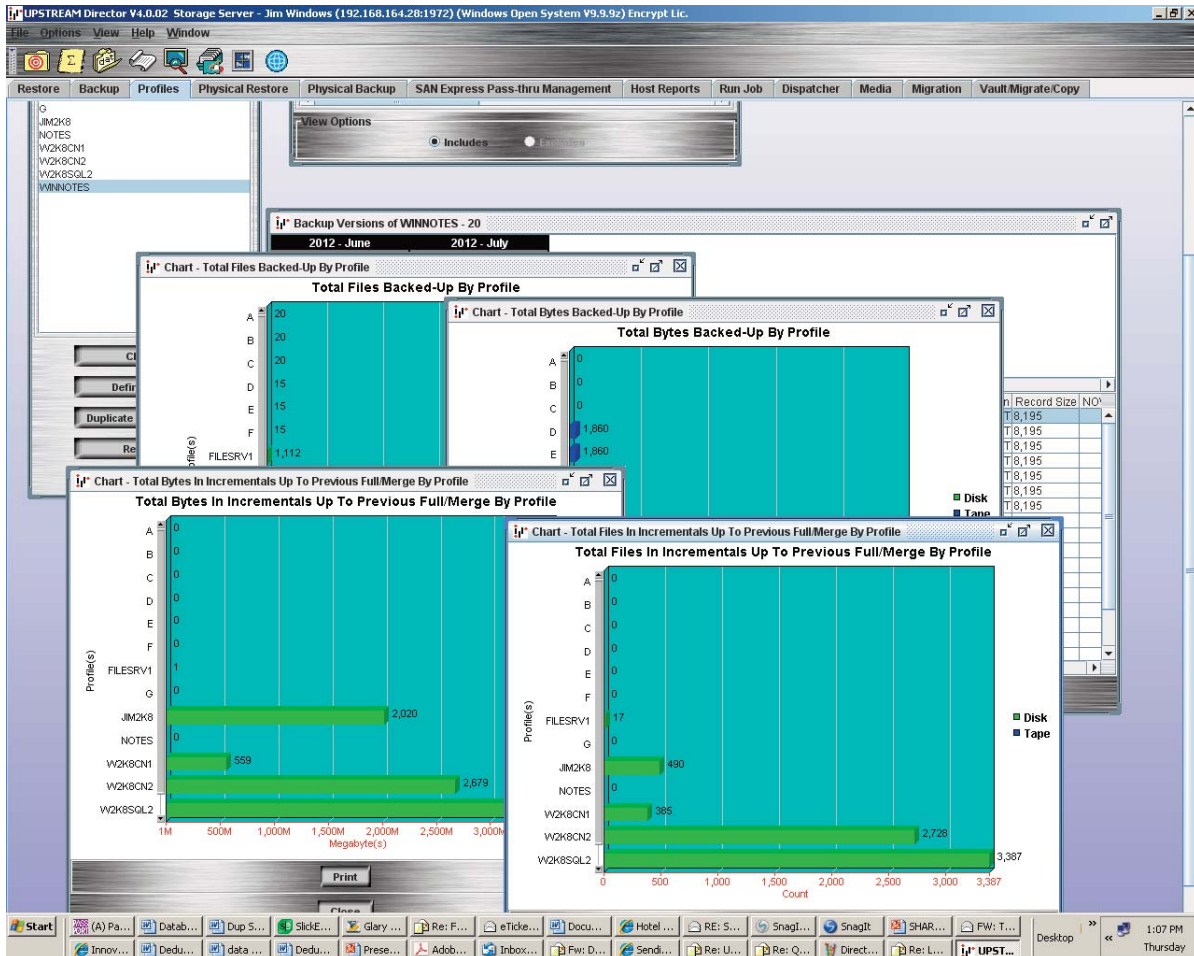
The search criteria dropdown menu is open, showing the following options: Message #, Severity, User, Process, UID, GID, PID, and Message Body. An orange arrow points from the dropdown menu to the text "Directors Search Criteria".

Directors Search Criteria

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UPSTREAM Director Charts

Charts provide an extensive array of reporting and also provides informational charts to visually provide information about your backups.



FDR/UPSTREAM z/OS Mainframe v3.7.0

The new release of FDR/UPSTREAM z/OS version 3.7.0 provides several substantial performance improvements that have resulted in improving performance by up to 50% in some sites.

- TCP/IP CPU time performance improvement
- Reduced REORG time with IAM format
- More robust Synthetic Merge & Deferred Merge's
- Enhanced reporting

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FDR/UPSTREAM Client

UPSTREAM Rescuer enhancement now makes it the easiest way to do Disaster Recovery for Linux on System z.

UPSTREAM Rescuer reduces Disaster Recovery of a Linux on System z Virtual Machine (VM) to a single command.

User Experience

Rescuer Restored 76,730 files totaling 1.4GB in 6 minutes.

Exchange 2010 support

Supporting MS Exchange 2010 as both a stand-alone database and in a DAG, FDR/UPSTREAM operates as a VSS requestor. This means that FDR/UPSTREAM Backups are database consistent backups as provided by the Microsoft Exchange Writer and/or the Microsoft Exchange Replica Writer. In all cases, FDR/UPSTREAM provides hot, full and incremental backups.

FDR/UPSTREAM supports:

Exchange Database	VSS Restore to the original, alternate or Recovery Database
Exchange Mailbox	VSS Restore to the original, alternate or Recovery Database
Exchange Mail Message	VSS Restore to the original, alternate or Recovery Database

- Full support for the latest versions of VMWare including VSphere

UPSTREAM VMware Manager General Availability

FDR/UPSTREAM has released Recovery Protection for VMware Virtual Machines with the new UPSTREAM VMware Manager, supporting VMware VSPHERE and older versions of VMware 3.5. Featuring the UPSTREAM VMware Plug-in component of the FDR/UPSTREAM Client to backup Virtual Machines. The machine running the Plug-in can be either a physical machine or a VM. Installing the VMware Plug-in also installs the UPSTREAM VMware Manager GUI, for easier VMware backups and restores. FDR/UPSTREAM ensures consistent operations of virtual machine for reliable backup & restores.

In the pipeline 4th Q 2012 – 1st Q 2013

VMware support for Changed Block Tracking (CBT) Support – Incremental Image based support

Virtual machines running on ESX/ESXi hosts can track disk sectors that have changed. (CBT) is a VMware feature that helps perform incremental backups.

File Level Support

The next version of FDR/UPSTREAM client will support image level backup that will allow for blazingly fast recovery of a file, VM, or application.

Introducing UPSTREAM RESERVOIR Duplicate File Support

UPSTREAM continues with its world class data reduction methods to now provide duplicate File support for UPSTREAM Reservoir. This feature has been available for over 15 years using the mainframe storage server, as a way to avoid transmitting and storing these duplicate files and now this powerful feature will be available for non-mainframe storage servers.

Logical Volume Backup (LVB)

Planned for 1st Q 2013 will be introduction of FDR/UPSTREAM data protection featuring Logical Volume Backup (LVB). The benefits are:

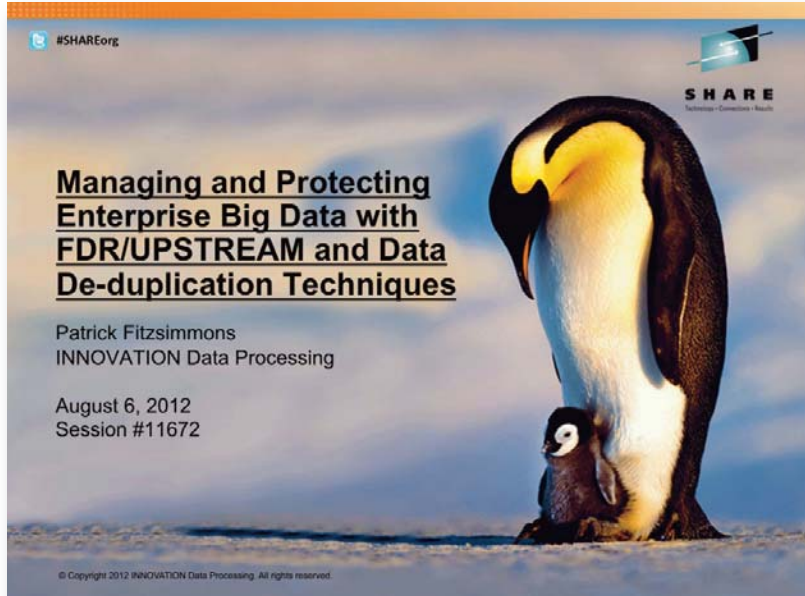
- Physical file system backup with only used blocks being backed up (faster than regular physical backup)
- Faster than file by file backup because I/O is contiguous
- File level browsing and restore from LVB backups
- Faster DR (no formatting of destination devices)
- Easier Physical to Virtual Conversion (PtoV)
- Restore entire file system to a VHD
- Backup of VHDs with file level browsing and restore
- Integration with UPSTREAM VMWare backup solution

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Learn More:

Managing and Protecting Enterprise Big Data with FDR/UPSTREAM and Data De-duplication Techniques – Session #11672

Monday, August 6, 2012 at 4:30 - 5:30 PM Elite 2



To request a personalized webcast and speak with the UPSTREAM team please contact: sales@fdrinnovation.com

INNOVATION offers a FREE No-Obligation Trial to test the effectiveness of the UPSTREAM product suite in your environment, please visit: <http://www.fdr.com/riskfreetrial/index.cfm>

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