

A New Wave...in Disaster Recovery and Distributed Data Protection.

FDRSOS® and IBM® z/OS Distributed Data Backup...the fastest, least disruptive, most efficient z/OS solution for System Storage DS8700 disaster recovery and distributed data protection.

- 1 A new way...**to extend z/OS® data protection to distributed servers over high performance System z FICON channels.
- 2 A new way...**to cut backup times, conserve CPU resources, reduce backup storage requirements and improve recovery time for Linux on System z, AIX, Linux x86-64, NetWare, OES2, UNIX and Windows data residing on IBM DS8700 enterprise storage.
- 3 A new way...**to advance business continuance and disaster recovery backup with IBM FlashCopy®.
- 4 A new way...**to improve distributed data backup and restore, moving data across high performance FICON channel connections, instead of transmitting data over TCP/IP network connections.
- 5 A new way...**to protect existing investments, leveraging and extending existing System z tape management (RMM, CA1) and security infrastructures (RACF, ACF2, Top Secret) to address distributed platform business resiliency.



FDRSOS and IBM System Storage DS8700 z/OS Distributed Data Backup

IBM & INNOVATION® Data Processing are joining forces to bring you the next wave in distributed data protection. FDRSOS and DS8700 z/OS Distributed Data Backup (zDDB) is the answer to the old dilemma “manage the backup or manage the business?”

Everyone can agree business information is priceless. However the backups to protect it are taking longer and longer. Surveys show 81% of respondents state data/storage growth is their biggest data protection challenge.

The bottom line is...there is too much data.

You need to reduce the amount of time it takes to protect all that data as well as the amount of storage you use to store the backup. Data protection technologies are continuing to evolve particularly in the System z mainframe environment. The introduction of the combination of INNOVATION FDRSOS and IBM zDDB exemplifies this evolution.

FDRSOS and z/OS Distributed Data Backup...

the fastest, least disruptive, most efficient z/OS solution for DS8700
Open Systems Disaster Recovery and Distributed Data Protection

The Challenge?...

Enterprises today depend on a mix of mainframe and distributed data, increasingly environments that consolidate mainframe and Open Systems platforms are becoming the norm.

FDRSOS and DS8700 zDDB can help you consolidate hundreds of distributed Open Systems backup servers onto one z/OS backup server running on System z.

Notwithstanding advances in network oriented data protection technology many enterprises find the sheer volume of distributed data is overwhelming communication networks, backup windows and available backup storage; consuming critical processor

cycles, while tying up processors and peripherals. Additionally, Data Protection is not only a question of backup. Business resiliency also depends on reliable “rapid” restore, but recovery across network links is never “as rapid as you would like” and always has its own degree of uncertainty.

Vast data warehouses that continue to expand, and far-flung internet-based customers exacerbate the problem to the point where skipping backups in order to keep business systems available seems the only choice.

Catch the new wave in Open Systems data protection; FDRSOS and DS8700 z/OS Distributed Data Backup. “FDRSOS and zDDB...a new way to provide Open Systems disaster recovery protection.”

A comprehensive family of Distributed Data Protection and Business Continuance Solutions for the enterprise.

IBM and INNOVATION are joining forces to bring you the next wave in Open Systems distributed data protection, FDRSOS and zDDB.

FDRSOS with zDDB and FlashCopy lets you keep critical and revenue-generating applications online without compromising information security.

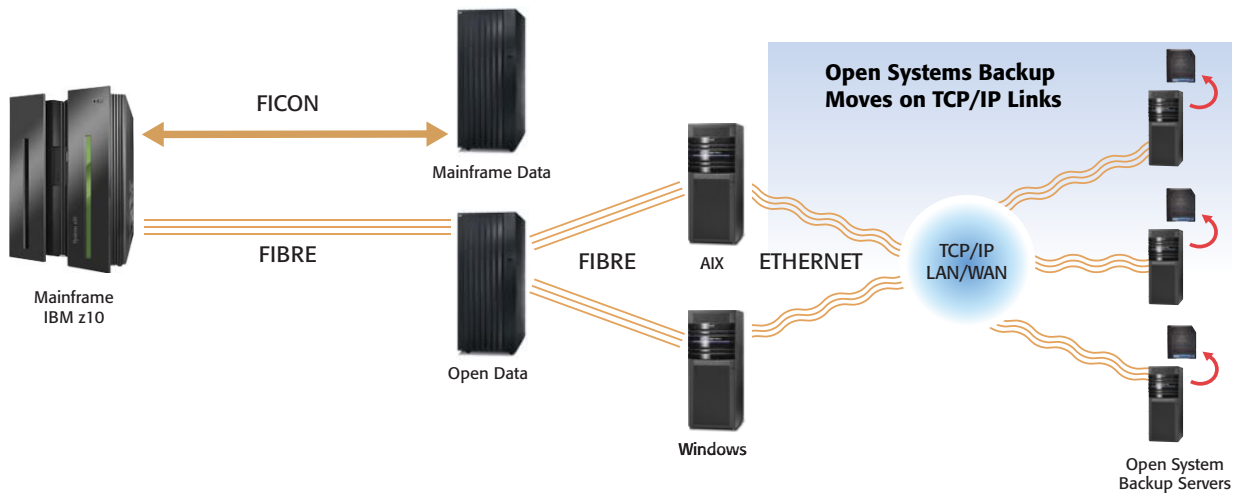
z/OS mainframe data protection for Open Systems is the result of a long-term technology partnership between INNOVATION and IBM.

SOLUTION HIGHLIGHTS

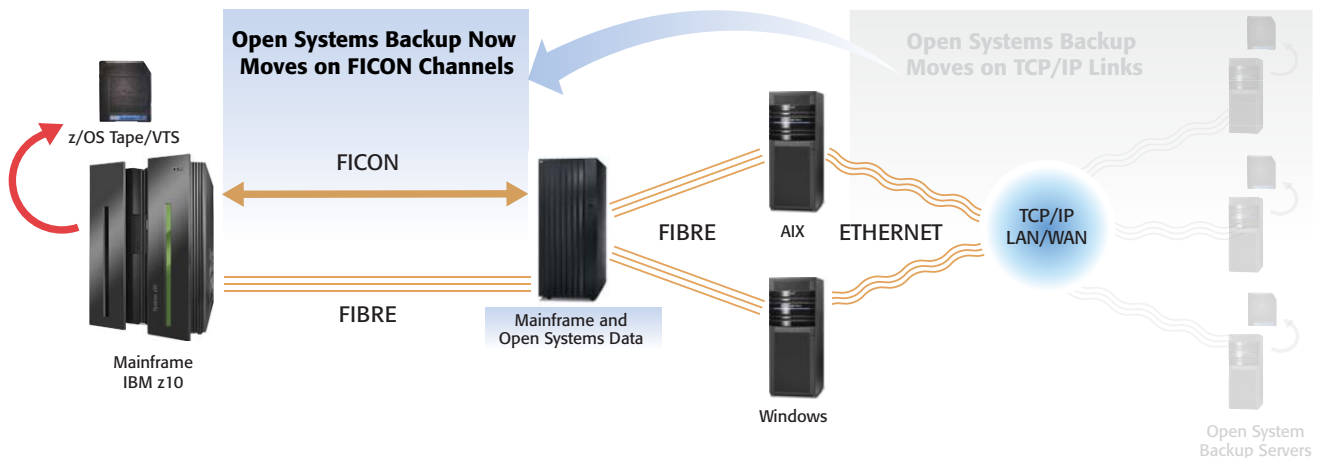
INNOVATION software exploiting IBM DS8700 Storage System zDDB and FlashCopy provide the following advantages:

- | | | |
|--|---|---|
| <ul style="list-style-type: none">• Eliminate the need for distributed backup servers with dedicated tape and disk | <ul style="list-style-type: none">• Free up CPU resources by moving data on high performance FICON channels | <ul style="list-style-type: none">• Empower Open Systems distributed data backup with System z mainframe RAS |
| <ul style="list-style-type: none">• Reduce network congestion by taking distributed data backup off TCP/IP communication networks | <ul style="list-style-type: none">• Maximize value by protecting investments in existing System z mainframe Tape Management and Security Systems | <ul style="list-style-type: none">• Broad Ranging Platform Support includes: Linux on System z, AIX, Linux x86-64, NetWare, OES2, UNIX and Windows |
| <ul style="list-style-type: none">• Ensure backup no longer constrains production | <ul style="list-style-type: none">• Minimize backup window disruption using FlashCopy | <ul style="list-style-type: none">• Easy to use...simple to automate |

Before Open Systems Backup Data Moves Across TCP/IP Links



After with FDRSOS and zDDB Backup Data Moves on FICON Channels



INNOVATION PRODUCTS	CAPABILITY	ADVANTAGE
FDRSOS®	Provides extremely high performance System z disaster recovery protection for DS8700 distributed data for Linux on System z, AIX, Linux x86-64, NetWare, OES2, UNIX and Windows (Open Systems) over high performance System z FICON channels utilizing the IBM z/OS Distributed Data Backup (zDDB) facility.	<ul style="list-style-type: none"> • Extremely fast and efficient backup of entire systems and large databases • Extremely fast and efficient disaster recovery of entire systems and large databases • Simple-to-Use • Frees communication network resources • Data Transfer consumes no TCP/IP processor CPU cycles • Utilizes existing z/OS scheduling, tape management and security systems
UPSTREAM®/SOS (An optional feature of FDRSOS)	Provides high speed incremental and file level backup as well as file level restore for Open Systems and Linux on System z data residing on IBM DS8700 enterprise storage over high performance System z FICON Channels utilizing the IBM z/OS Distributed Data Backup (zDDB) facility.	<ul style="list-style-type: none"> • Same as FDRSOS plus: • Incremental backup of only changed data files • Ideal for online backup of larger database warehouses • Reductions in backup and recovery time • File level backup and recovery • Conservation of tape/disk backup storage space
SOSINSTANT (An optional feature of FDRSOS)	Provides FlashCopy System z disaster recovery protection to create point-in-time copy of DS8700 Open Systems & Linux on System z disk volumes.	<ul style="list-style-type: none"> • Same as FDRSOS and UPSTREAM/SOS plus: • FlashCopy data protection • Ensures continuous business operations • Offline backup FlashCopy of volumes are also available for additional tasks

FDRSOS and UPSTREAM/SOS Hardware and Software Specifications

System z Processor Requirements:

- System z with FICON channel.

z/OS Operating Systems:

- Any current release z/OS. Note: The z/OS system I/O configuration must provide a UCB for each DS8700 device defined as an Open Systems volume and enabled by the z/OS Distributed Data Backup (zDDB) feature for cross-platform z/OS FICON access.

System z & Open Systems Platform Client Support:

- Red Hat and SUSE Linux on System z, IBM AIX, Linux x86-64, NetWare, OES2, UNIX and Windows.
- Contact INNOVATION Data Processing for the most current listing of supported platforms.

IBM DS8700 Components

- FDRSOS and require a DS8700 with z/OS Distributed Data Backup feature.
- SOSINSTANT requires FDRSOS and a DS8700 with z/OS Distributed Data Backup and FlashCopy features.



CORPORATE HEADQUARTERS
275 Paterson Avenue Little Falls, NJ 07424
Tel: (973) 890-7300 • Fax: (973) 890-7147
support@fdrinnovation.com
sales@fdrinnovation.com
http://www.innovationdp.fdr.com

EUROPEAN OFFICES

France
191, avenue Aristide Briand
94230 Cachan
Tel: (33) 1 49 69 94 02 • Fax: (33) 1 49 69 90 98
frsales@fdrinnovation.com
frsupport@fdrinnovation.com

Germany
Orleansstraße 4a
81669 München
Tel: (49) 089-489 0210 • Fax: (49) 089-489 1355
desales@fdrinnovation.com
desupport@fdrinnovation.com

Netherlands (& Nordic Countries)
Brouwerstraat 8
1315 BP Almere
Tel: (31) 036-534 1660 • Fax: (31) 036-533 7308
nlsales@fdrinnovation.com
nlsupport@fdrinnovation.com

United Kingdom
Clarendon House
125 Shenley Road
Borehamwood, Herts
WD6 1AG
Tel: (44) 0208-905 1266 • Fax: (44) 0208 905 1428
uksales@fdrinnovation.com
uksupport@fdrinnovation.com

IBM, z/OS, FICON, DFSMS, IBM FlashCopy, DS8700 and z/OS Distributed Data Backup are service marks, trademarks or registered trademarks of International Business Machines Corporation. FDR, FDRSOS, SOSINSTANT, FDR/UPSTREAM and UPSTREAM/SOS are service marks, trademarks or registered trademarks of Innovation Data Processing. All other service marks, trademarks or registered trademarks are the property of their respective owners.

INNOVATION Software and IBM DS8700 Distributed Data Protection Solutions.

FDRSOS...Cross Platform z/OS Disaster Recovery Protection for Open Systems Data

FDRSOS, provides the ultimate in z/OS distributed data protection and disaster recovery for AIX, Linux x86-64, NetWare, OES2, UNIX, Windows and Linux on System z.

FDRSOS seamlessly integrates with zDDB to provide dual access (FICON and FIBRE) DS8700 Open Systems disk volumes full volume physical image backup/restore across high performance System z FICON channels. No other solution has the capability of using high performance Systems z FICON channels to directly read and write the same DS8700 disk volumes used by the Open Systems business applications themselves. Only FDRSOS and zDDB combine to transfer data at high performance FICON megabytes per second versus TCP/IP communications network speeds of megabits per second.

FDRSOS offers the advantage of using high-speed TS3500 tape, TS7680 ProtecTIER de-duplication, TS7700 VTL and DS8700 disk, over high performance System z FICON channels, under the control of z/OS auto-operations scheduling, tape management (CA1, RMM) and data access security (RACF, ACF2, Top Secret). FDRSOS/zDDB backup/restore of a complete DS8700 logical volume is a data protection practice best suited for the protection of large databases and disaster recovery.

UPSTREAM/SOS... Off-Network File Level Distributed Data Protection

UPSTREAM/SOS, an option of FDRSOS provides users with file level distributed data protection without putting backup data on the communications network.

UPSTREAM/SOS combining with zDDB, provides the same unsurpassed levels of z/OS disaster recovery protection, scheduling, management and security that FDRSOS offers with the advantages

of incremental backup & logical file recovery. UPSTREAM/SOS additionally offers Online Database Backup for ORACLE, IBM DB2, MS Exchange and Lotus Notes with administrative control of database and file level selection via the UPSTREAM Director GUI.

SOSINSTANT...FlashCopy Disaster Recovery and Distributed Data Protection for Open Systems

SOSINSTANT, an option of FDRSOS seamlessly integrating with DS8700 FlashCopy, enables full volume backups of distributed Open Systems data from point-in-time copies of DS8700 logical volumes even as enterprise business applications continue with normal access of the active production volumes. FDRSOS with zDDB and (SOSINSTANT) IBM FlashCopy integration is a distributed data protection solution with the ability to extend business hours allowing applications to service more customers and continue generating revenue as the information they depend on remains available without any sacrifice in the level of protection it receives.

IBM z/OS Distributed Data Backup

The z/OS Distributed Data Backup feature provides the capability to perform backup of Open Systems data on the IBM System Storage DS8700 over FICON connections. This multiplatform backup solution can help clients simplify their heterogeneous backup environments by consolidating and managing them through the mainframe.

IBM FlashCopy

The IBM FlashCopy function enables clients to make point-in-time, full volume copies of data, which are immediately available for read or write access. Target volumes are available for read and write processing and can be used for testing or backup purposes. Data is physically copied from the source volume to the target volume using a background process.

FOR MORE INFORMATION on the complete family of FDR Business Resiliency solutions, contact INNOVATION Data Processing: (973) 890-7300, sales@fdrinnovation.com or visit: www.innovationdp.fdr.com