

# FDRERASE for z/OS SECURE DATA ERASURE

## z/OS Storage Management



*The secure erasure of data is now required by many of today's government, industry and corporate privacy and security laws and regulations, such as the European Data Protection Directive, HIPAA, Sarbanes-Oxley, and DOD requirements, among others in Europe, the USA and other countries.*

*Unfortunately, the standard utilities provided within z/OS for data erasure (e.g. ICKDSF Initialization) are slow and do not always fully erase the data...*

### Fast & Secure Data Erasure

Deleting a data set with standard z/OS services (e.g. a TSO DELETE or ICKDSF Initialization) will not erase all of your data.

Likewise, re-labelling a disk volume (or wiping out a VTOC) can also leave residual data on a volume where it can be potentially accessed by unauthorised users.

FDRERASE is a *fast and secure* data erase utility for z/OS DASD, which can quickly erase many disk volumes in parallel, allowing you to securely erase your data from a set of disks in the minimum elapsed time.

FDRERASE can comfortably erase many TB's of data in less than an hour (see "Performance" and "User Quote" sections overleaf).

### Key Benefits

FDRERASE's fast and secure data erasure can be used in a variety of situations, such as:

- At the end of a **disaster recovery** exercise, test or real.
- When **de-commissioning** a disk control unit, perhaps after migrating data off it with FDRPAS.
- When internally **re-assigning** disk volumes, to be sure that no residual data remains on the disks before the new users have access to it.
- At **any other time** that you need to meet auditing requirements for the secure erasure of your data.

### Certified Erasure

FDRERASE V5.4 L50 is the first z/OS secure erase utility to complete Common Criteria Evaluation and Validation Scheme (CCEVS) evaluation and Common Criteria EAL2 Augmented validation.



FDRERASE V5.4 L50

PRODUCT NAME:	FDRERASE
Technology:	Sensitive Data Protection
Date Certified:	August 5, 2005
Conformance Claim:	EAL2 Augmented ADV_SPM.1, ALC_FLR.2
Sponsor:	Innovation Data Processing
Phone:	973.890.7300
CC Testing Lab:	SAIC

It has earned the right to display the international Common Criteria Recognition Arrangement (CCRA) certification mark on August 5, 2005.

FDRERASE is also designed to comply with current U.S. Government guidelines for erasing computer disks prior to disposal.

# FDRERASE for z/OS SECURE DATA ERASURE



## How safe is your erasure?

Deleting a data set with existing z/OS utilities and programs may still leave data on a volume.

For example, a TSO delete will remove the VTOC pointers to the tracks containing the data, but will not erase the data from the disk tracks themselves. An ICKDSF Minimal INIT deletes or rewrites the VTOC, but it does not erase the data from the disk tracks.

Data set called "Purge" exists on disk:

```

BLE FOR ERASE UNIT=01D0 VOL=SYMO16 VOLID=VOL1 CU=EMC01889/0200-10C20000 00000000 15,24,00
CYL.....0 TRK..0 REC...0 KL...0 DL....8 DATA=0000000000000000 - 3 RECORDS ON TRACK
CYL.....0 TRK..0 REC...1 KL...4 DL....24 DATA=C9D7D3F100A00000...0000000000000000
CYL.....0 TRK..0 REC...2 KL...4 DL....144 DATA=C9D7D3F207003AB8...0000000000000000
CYL.....0 TRK..0 REC...3 KL...4 DL....80 DATA=ESD6D3F1E5D6D3F1...4040404040404040
CYL.....0 TRK..1 REC...0 KL...0 DL....8 DATA=0000000000000000 - 50 RECORDS ON TRACK
CYL.....0 TRK..1 REC...1 KL...44 DL....96 DATA=0404040404040404...0000000000000000
CYL.....0 TRK..1 REC...2 KL...44 DL....96 DATA=05050505000030063...0000000000000000
CYL.....0 TRK..1 REC...3 KL...44 DL....96 DATA=D7E4D9C7C5404040...0000000000000000
CYL.....0 TRK..1 REC...4 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..1 REC...50 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..2 REC...0 KL...0 DL....8 DATA=0000000000000000 - 11 RECORDS ON TRACK
CYL.....0 TRK..2 REC...1 KL...0 DL....16 DATA=D7C1E89B9D3D34040404040404040
CYL.....0 TRK..2 REC...2 KL...0 DL....16 DATA=D4C5E4C9C3C1D34040404040404040
  
```

After an ICKDSF Minimal Init:

```

BLE FOR ERASE UNIT=01D0 VOL=SYMO16 VOLID=VOL1 CU=EMC01889/0200-10C20000 00000000 15,24,06
CYL.....0 TRK..0 REC...0 KL...0 DL....8 DATA=0000000000000000 - 3 RECORDS ON TRACK
CYL.....0 TRK..0 REC...1 KL...4 DL....24 DATA=C9D7D3F100A00000...0000000000000000
CYL.....0 TRK..0 REC...2 KL...4 DL....144 DATA=C9D7D3F207003AB8...0000000000000000
CYL.....0 TRK..0 REC...3 KL...4 DL....80 DATA=ESD6D3F1E5D6D3F1...4040404040404040
CYL.....0 TRK..1 REC...0 KL...0 DL....8 DATA=0000000000000000 - 50 RECORDS ON TRACK
CYL.....0 TRK..1 REC...1 KL...44 DL....96 DATA=0404040404040404...0000000000000000
CYL.....0 TRK..1 REC...2 KL...44 DL....96 DATA=05050505000020063...0000000000000000
CYL.....0 TRK..1 REC...3 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..1 REC...4 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..1 REC...50 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..2 REC...0 KL...0 DL....8 DATA=0000000000000000 - 11 RECORDS ON TRACK
CYL.....0 TRK..2 REC...1 KL...0 DL....16 DATA=D7C1E89B9D3D34040404040404040
CYL.....0 TRK..2 REC...2 KL...0 DL....16 DATA=D4C5E4C9C3C1D34040404040404040
CYL.....0 TRK..2 REC...3 KL...0 DL....16 DATA=D9C5C3D6D9C4E2404040404040404040
CYL.....0 TRK..2 REC...4 KL...0 DL....16 DATA=D7C1E8C1C2D3C5E2404040404040404040
CYL.....0 TRK..2 REC...5 KL...0 DL....16 DATA=D9C5C3C5C9E5C1C2D3C5E24040404040404040
CYL.....0 TRK..2 REC...6 KL...0 DL....16 DATA=D7C1E8C3C5E3E240404040404040404040
CYL.....0 TRK..2 REC...7 KL...0 DL....16 DATA=D3C5C7C1D3404040404040404040404040
CYL.....0 TRK..2 REC...8 KL...0 DL....16 DATA=C2C1D5B240404040404040404040404040
CYL.....0 TRK..2 REC...9 KL...0 DL....16 DATA=D7C3E3B6E4B3E40404040404040404040
CYL.....0 TRK..2 REC...10 KL...0 DL....16 DATA=D5E4D4C2C5D940404040404040404040
CYL.....0 TRK..2 REC...11 KL...0 DL....16 DATA=D7C1E2E2E6D6D9C4E24040404040404040
  
```

After an FDRERASE:

```

BLE FOR ERASE UNIT=01D0 VOL=SYMO16 VOLID=VOL1 CU=EMC01889/0200-10C20000 00000000 15,24,35
CYL.....0 TRK..0 REC...0 KL...0 DL....8 DATA=0000000000000000 - 3 RECORDS ON TRACK
CYL.....0 TRK..0 REC...1 KL...4 DL....24 DATA=C9D7D3F100A00000...0000000000000000
CYL.....0 TRK..0 REC...2 KL...4 DL....144 DATA=C9D7D3F207003AB8...0000000000000000
CYL.....0 TRK..0 REC...3 KL...4 DL....80 DATA=ESD6D3F1E5D6D3F1...4040404040404040
CYL.....0 TRK..1 REC...0 KL...0 DL....8 DATA=0000000000000000 - 50 RECORDS ON TRACK
CYL.....0 TRK..1 REC...1 KL...44 DL....96 DATA=0404040404040404...0000000000000000
CYL.....0 TRK..1 REC...2 KL...44 DL....96 DATA=05050505000020063...0000000000000000
CYL.....0 TRK..1 REC...3 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..1 REC...4 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..1 REC...50 KL...44 DL....96 DATA=0000000000000000 - ALL BYTES THE SAME
CYL.....0 TRK..2 REC...0 KL...0 DL....8 DATA=0000000000000000 - 11 RECORDS ON TRACK
CYL.....0 TRK..2 REC...1 KL...0 DL....16 DATA=0000000000000000 - ALL BYTES THE SAME
  
```



## Two Levels Of Certified Erasure

FDRERASE offers two levels of certified erasure:

- **ERASE** – This overwrites each track one or more times with a record of binary zeros (or a user-specified pattern) to obliterate all data records which previously existed on the track.

*ERASE meets the DoD/NCSC definition of "clearing" or "erasing" a disk, and is usually adequate for erasing disks that will be sold, scrapped, or returned to the manufacturer.*

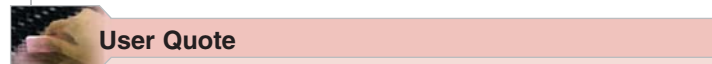
- **SECUREERASE** – This overwrites each track with varying complementary patterns (from 3 to 8 passes per track).

*SECUREERASE meets the DoD/NCSC definition of "sanitising" or "purging" a disk, and can be used on your most sensitive data to make it very unlikely that the data could be recovered, even if the hard drives were removed and accessed elsewhere as FBA disks.*



## Performance

Performing a single overwrite, ERASE can erase approximately 1.5Tb of data (per DASD controller) in 1 hour. Two ERASE jobs running against two separate DASD controllers will erase approx. 3Tb in 1 hour.



## User Quote

*"We configured a 3.3Tb DS8000 and ran FDRERASE (ERASE) against the entire box, which took just 2 hours and 4 minutes to complete..."*

**Want to Know More About FDRERASE?** For a No-Obligation FREE Trial or to request a FREE Concepts & Facilities Guide, ask your local sales representative or visit: <http://www.innovationdp.fdr.com>



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