

Cal Poly Campus “Desktop Security Initiative” Standards, Guidelines and Practices: Storage Media and Secure Data Disposal-Disk Wiping

Overview of Hard Drive Tool “Wipe Process”

- Boot from DBAN disk
- Select drive(s) to be wiped
- Verify selection; past this step data WILL be unrecoverable
- Perform Department of Defense Quick wipe (3-pass)

Procedures to For Using “Darik’s Nuke and Boot” (DBAN) Hard Drive Tool

Step 1 - Download and Create the DBAN tool image

Download the DBAN ISO image from <http://dban.sourceforge.net/> and use Roxio Easy CD Creator to burn the image (standard software in Workstation Program images). From the “File” pull-down menu, select “Record CD” from ISO image.

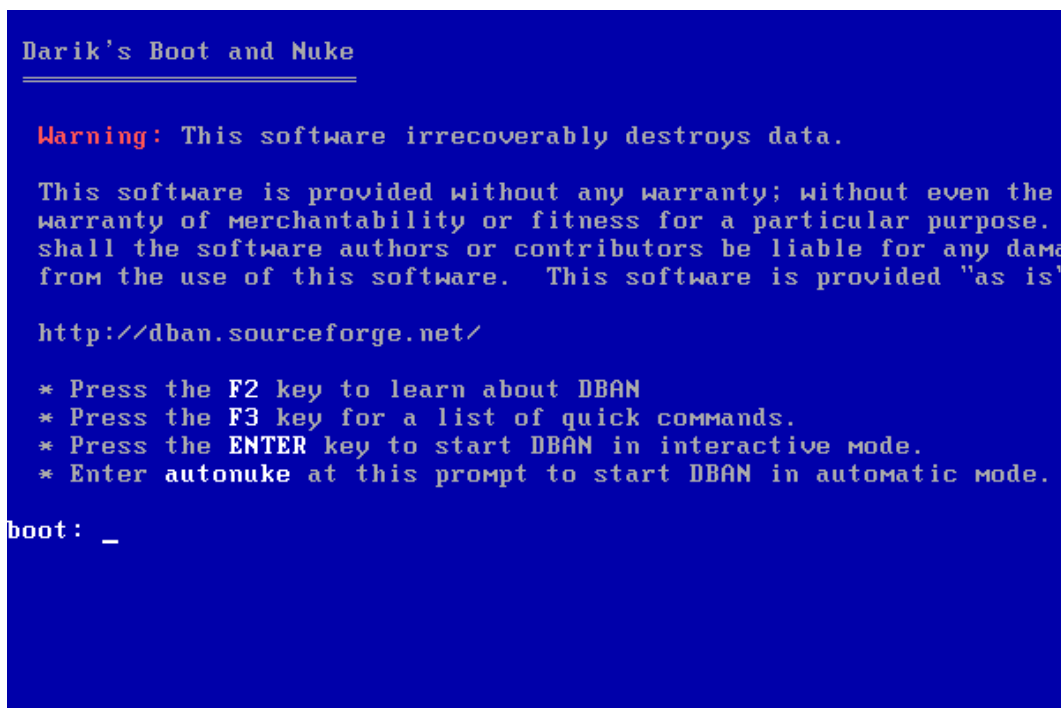
Step 2 - Run DBAN

NOTE: Ensure that you are not using the DBAN tool with existing “production” hard drives that may result in complete data loss (e.g. reformatting of master drive with your personal data).

It is HIGHLY RECOMMENDED that the DBAN tool be used in a controlled environment to minimize possibility for error.

Boot the computer

Boot the computer with the DBAN CD; the following screen will appear:



```
Darik's Boot and Nuke
-----

Warning: This software irrecoverably destroys data.

This software is provided without any warranty; without even the
warranty of merchantability or fitness for a particular purpose.
shall the software authors or contributors be liable for any damage
from the use of this software. This software is provided "as is"

http://dban.sourceforge.net/

* Press the F2 key to learn about DBAN
* Press the F3 key for a list of quick commands.
* Press the ENTER key to start DBAN in interactive mode.
* Enter autonuke at this prompt to start DBAN in automatic mode.

boot: _
```

Step 3 - Wipe the Disk

At the DBAN title screen, press the Enter key and DBAN will boot to the configuration console:

```
Darik's Boot and Nuke: Quick Commands
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You may enter these commands at the boot prompt. In each case, all disks in
the computer will be wiped automatically without confirmation.

dod      Wipe all disks with the DoD 5220-22.M method.
ops2     Wipe all disks with the RCMP TSSIT OPS-II method.
gutmann  Wipe all disks with the Gutmann method.
prng     Wipe all disks with the PRNG Stream method.
quick    Wipe all disks with the Quick Erase method.

Edit the syslinux.cfg file on the floppy disk to change the default
behavior of DBAN.

boot: _
```

Select “dod” then the “short” command.

“DOD-Short” is the Cal Poly minimum standard which equates to the US Department of Defense 5220-22.M short wipe and uses passes 1, 2, 7 from DoD standard method.

Use the up and down arrows to scroll through the available drives and use the Enter or space key to select a drive to be wiped. Once all drives to be wiped have been selected, press the ‘M’ key to select the method that will be used to wipe the disk(s).

While DBAN is wiping the hard drive, the following screen will appear:

```
----- Darik's Boot and Nuke 1.0.4 -----
Options                                     Statistics
Entropy: Linux Kernel (urandom)           Runtime:      00:00:34
PRNG:   Mersenne Twister (mt19937ar-cok)   CPU Time:    1%
Method: DoD Short                          Load Averages: 1.08 0.29 0.10
Verify: Last Pass                          Throughput:   56016 KB/s
Rounds: 1                                  Errors:      0

(SCSI 0,0,0,0,-) VMware, VMware Virtual S
 [08.87%, round 1 of 1, pass 1 of 3] [writing] [56016 KB/s]
```

Step 4 – Disposition of the Disk

Once the DBAN process has completed and the hard drive reformatted, it may be disposed of or re-assigned as needed.

NOTE: If the hard drive itself is tagged as State Property, survey (or transfer) forms must be completed. These are available online at:

<http://www.afd.calpoly.edu/FiscalServices/financialreporting/property.htm>

Appendices

A – ITS Benchmarks for DBAN “Cal Poly Standard”

B – ITS Benchmarks for Ghost v7.5 or Newer Standard

C – DBAN Technical Overview Matrix

APPENDIX A - ITS Benchmarks for DBAN “Cal Poly Standard”

The following benchmarks were documented in March 2005, using a standard Workstation Program Dell Optiplex GX270. DoD **Short is the minimum Cal Poly standard.**

Method	40 GB EIDE	120 GB SATA	Both Simultaneously
DoD Short (3-passes)	2 hr	3 hr 30 min	Not Tested
DoD 5220-22.M (7-passes)	3 hr 20 min	6 hr 18 min	Not Tested

APPENDIX B - ITS Benchmarks for Ghost v7.5 or Newer Required

The following benchmarks were documented in April 2005, using a standard Workstation Program Dell Optiplex GX270. DoD **Short is the minimum Cal Poly standard.**

Method	40 GB EIDE	120 GB SATA
Symantec Ghost gdisk.exe (DoD 5220-22.M)	Ghost network boot: 4 hr	Ghost CD boot: 26 mins Not tested for Ghost network boot (too slow)

APPENDIX C – DBAN Technical Overview

Name	Description	Security Level	Number of Passes	Tested by ITS?
DoD Short	US Department of Defense 5220-22.M short wipe. Uses passes 1,2, 7 from DoD standard method above.	Medium	3	Yes
DoD 5220-22.M	US Department of Defense 5220-22.M standard wipe. Uses same algorithm as Heidi Eraser product.	Medium	7	Yes