U3 Hacking in Linux

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- What is U3?
- How can I use U3 in Linux vs. Windows
- Hands on live demo
The Propaganda

It's a (really irritating) auto-run software tool
What's is U3 supposed to do?

- Install portable applications
- Password protect your secret files
- Work as a regular thumb drive
- Best thing since sliced bread
Does it do these things out of the box?

- Install portable apps
- Password protect your secret files
- Work as a regular thumb drive
- Best thing since sliced bread? hmm..

- Only in M$ Windows
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- Sorta
  - Auto-run stuff in windows
  - Annoying extra partition in Linux
Only in M$? What will we do?

- Borrow a M$ Windows box and run the uninstaller. :-)
  - Windows in a VM might work?

- u3-tool :-)
  - u3-tool.sourceforge.net/  (Yay!!)
U3 isn't just for Windows any more

Tool for controlling USB flash devices that confirm to the U3 specifications. This program can control the following features:

* Replacing of CD image
* Changing of virtual CD allocated size and completely removing it
* Enabling and disabling Security
* Unlocking and changing password of secured U3 device
* Obtaining various device information
U3 is actually a virtual CDROM

dmesg |grep CD-ROM
[ 1.628540] scsi 3:0:0:0: CD-ROM TSSTcorp CDDVDW SH-S223F SB02
PQ: 0 ANSI: 5
[ 1.631727] Uniform CD-ROM driver Revision: 3.20
[ 1.631792] sr 3:0:0:0: Attached scsi CD-ROM sr0
[104631.202975] scsi 19:0:0:1: CD-ROM SanDisk SanDisk Cruzer 8.02 PQ: 0 ANSI: 0
[104631.208603] sr 19:0:0:1: Attached scsi CD-ROM sr1

ls -l /dev/sr*
brw-rw-r--- 1 root cdrom 11, 0 2010-01-15 08:37 /dev/sr0
brw-rw-r--- 1 root cdrom 11, 1 2010-01-16 13:40 /dev/sr1

The **hardware** thinks it's really a CD-ROM.
The U3 CD-ROM partition is:

- Hard to write (Good for storing things you don't want changed, utilities, certificates?, etc)
- Bootable (without modifying the iso)
- A separate “virtual device” from the read-write disk portion
- Treated as a CD for auto-run policy
Live CD's

- Knoppix
- Ubuntu Install CD
- Slax
- UBCD
- Puppy
- Tiny Core
- http://www.livecdlist.com/
Live Demo

Get u3-tool

wget -c http://downloads.sourceforge.net/project/u3-tool/u3-tool/0.3/u3-tool-0.3.tar.gz

tar zxvf u3-tool-0.3.tar.gz

./configure

make

sudo make install
Grab an iso to put on the drive:

wget -c
http://distro.ibiblio.org/pub/linux/distributions/tinycorelinux/2.x/release/tinycornre_2.7.iso
Figure out how big the image is:
ls -l *.iso

Make the CD “partition” just big enough:
sudo [path to]/u3-tool -p 10615784 /dev/[sdd1]

Double check the drive letter:
sudo fdisk -l

Write the new image:
sudo [path to]/u3-tool -l tinycore_2.7.iso /dev/[sdd1]
Check out your new bootable image!
kvm -cdrom /dev/scd1
Conclusion

- U3 may be useful after all
- Netbooks without CDROM
- Store “read-only” diagnostic tools
  - Memtest, disc utilities, etc
- Good way to play with LiveCD's without creating a million coasters
- Thanks!