

Fostering Effective Student Learning of the Linux Operating System

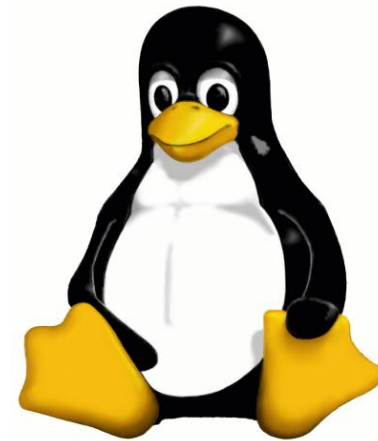
Qin Zhou

Faculty of Engineering and Computing
Coventry University



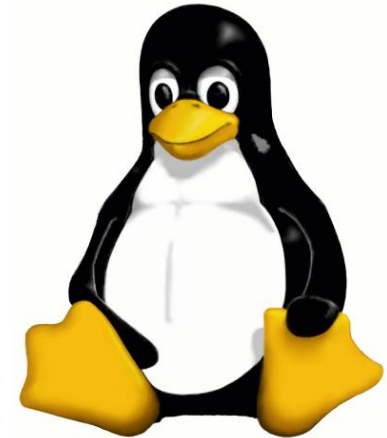
What is Linux Operating System?

- Linux is a freely distributed implementation of a Unix-like kernel
- Developed by Linus Torvalds at the University of Helsinki, with the help of Unix programmers from across the Internet
- Linux operating system is an OS with Linux as its kernel



Why Linux?

- Open Source
- Free from restriction
subject to the GNU General
Public License (GPL)
- Many tools freely available
- Large community



Linux teaching and Learning Issues

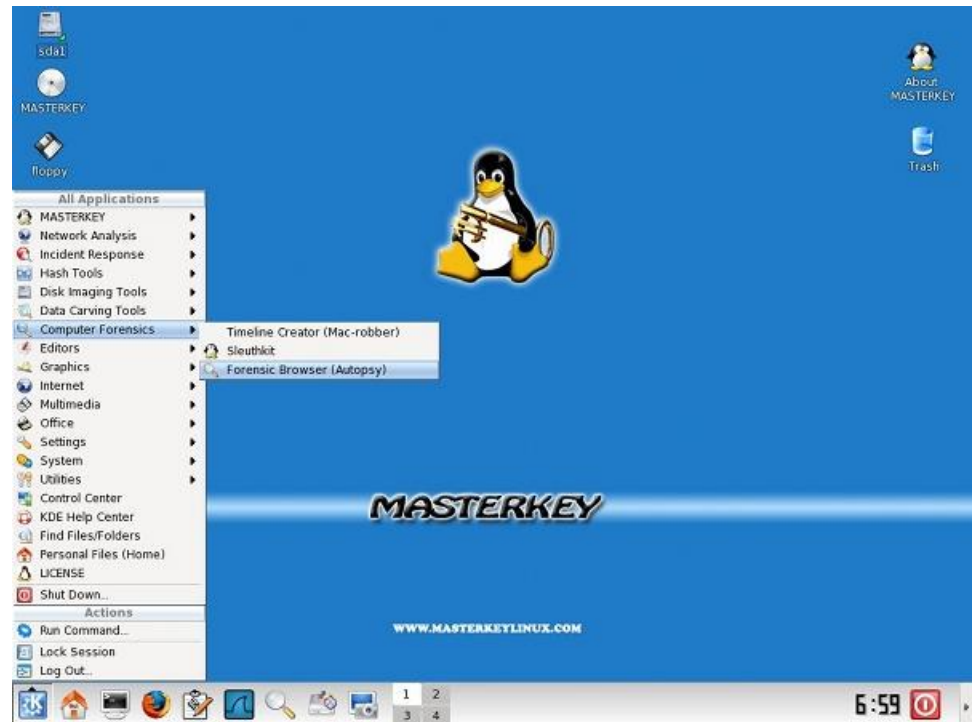
- Complicated to use – command lines
- Installation problems
- Less friendly user interface
- More...

What is Masterkey?

- A new bootable Linux Live CD
- Developed at Coventry University
- Focused on incident response, data recovery and computer forensics

Why Masterkey Linux?

- Bootable
- Installable
- Can be virtual
- Many useful built-in tools
- Easy to use
- Small, fast and stable
- More...



Where to Get It?

- <http://www.masterkeylinux.com>
- <http://www.masterkeylinux.net>
- Distributed as
 - ISO file – for CD
 - ZIP file – for USB



MASTERKEY™

Live Operating System & Toolkit for Incident Response and Computer Forensics

- Home
- Masterkey Linux
- LFT
- Downloads
- Documents
- Developers

Main Menu

- Home
- Masterkey Linux
- Live Forensic Toolkit
- Downloads
- Documents
- Search

Home
WELCOME TO HOME OF MASTERKEY!

Hi, welcome to the home of Masterkey - the official site to distribute Masterkey Linux live forensics system and Live Forensic Toolkit (LFT) for Windows, and provides related information and support.

Masterkey is Booting from CD/DVD-ROM or USB Stick



MASTERKEY™
IS BOOTING...

Masterkey U0.2

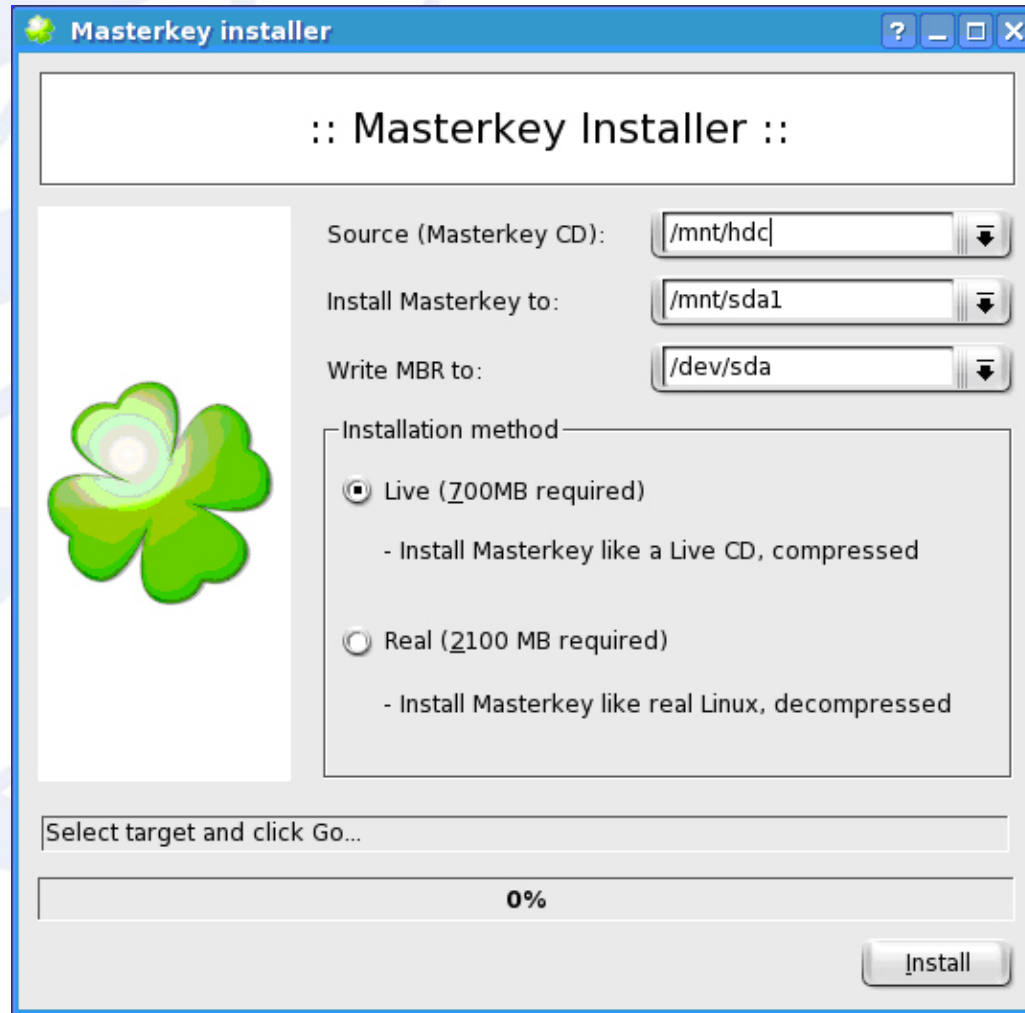
Created by Qin Zhou

RELEASE: 2009-8-18

Press ENTER to continue...

boot: _

It is Easy to Set up a Masterkey Linux Forensic Workstation...



Masterkey Goes Virtual



A screenshot of a VMware Workstation window titled 'Forensics Workstation - VMware Workstation'. The window displays a Linux virtual machine named 'Forensics Workstation'. The desktop background is blue with a penguin logo holding a key. The text 'MASTERKEY™' is prominently displayed in the center, with the website 'www.masterkeylinux.com' below it. A 'trash' icon is in the bottom right corner. The sidebar on the left shows a file system with directories like 'hda1', 'floppy', 'sda1', 'MK', 'sdb1', and 'sdc1'. The bottom status bar shows 'Shell - Konsole <2>' and the time '4:21'. A warning icon at the bottom left indicates 'You do not have VMware Tools installed.'

Use of Masterkey in Teaching and Support

- Equipped with Masterkey live CD and Masterkey virtual machines (Vmware and VirtualBox based)
- Activity-led learning approach
- Short training sessions
- Notes and online supporting materials
- Community forums

Student Reaction

- Very supportive
- Actively engaged in learning Linux OS

Questions and Suggestions?