



OWASP Live CD:

**An open environment for
web application security.**



OWASP
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The OWASP Foundation
<http://www.owasp.org>

Presentation Overview



- Who are we and what's this OWASP Live CD thing anyway?
- Where are we now?
- Where are we going?
- What have you done for me lately?
- How can I get involved?



About Matt



■ Varied IT Background

- ▶ Developer, DBA, Sys Admin, Pen Tester, Application Security, CISSP, CEH, RHCE, Linux+

■ Long history with Linux & Open Source

- ▶ First Linux install ~1998
- ▶ DBA and Sys Admin was all open source
- ▶ Last full-time commercial OS = Windows 2000
- ▶ Contributor to many projects, leader of one



General goals going forward



- Showcase great OWASP projects
- Provide the best, freely distributable application security tools/documents
- Ensure that the tools provided are easy to use as possible
- Continue to document how to use the tools and how the modules were created
- Align the tools with the OWASP Testing Guide v3 to provide maximum coverage
- Awesome training environment



Where are we now?



■ Current Release

- ▶ ~~AppSecDC Nov 2009~~ DOH!

■ Previous Releases

- ▶ AppSecEU May 2009
- ▶ AustinTerrier Feb 2009
- ▶ Portugal Release Dec 2008
- ▶ SoC Release Sept 2008
- ▶ Beta1 and Beta2 releases during the SoC

■ Overall downloads = 330,081 (of 2009-10-05)

- ▶ ~5,094 GB of bandwidth since launch (Jul 2008)
- ▶ Most downloads in 1 month = 81,607 (Mar 2009)



Lets Google that...



owasp|

- owasp **top 10**
- owasp.org
- owasp **esapi**
- owasp **top 10 vulnerabilities**
- owasp **testing guide**
- owasp **live cd**
- owasp **dc**
- owasp **xss**
- owasp **webgoat**
- owasp **appsec dc**

[Advanced Search](#)
[Language Tools](#)

Google Search I'm Feeling Lucky



Available Tools: 26 'Significant'



OWASP Tools:



Web Scarab

a tool for performing all types of security testing on web apps and web services



WSFuzzer

a fuzzer with HTTP based SOAP services as its main target



Web Goat

an online training environment for hands-on learning about app sec



Wapiti

audits the security of web apps by performing "black-box" scans



CAL9000

a collection of web app sec testing tools especially encoding/decoding



DirBuster

a multi threaded Java app to brute force directory and file names



JBroFuzz

a web application fuzzer for requests being made over HTTP and/or HTTPS.



SQLiX

a SQL Injection scanner, able to crawl, detect SQL-i vectors



Available Tools: 26 'Significant'



Other Proxies:



Burp Suite



Paros



Spike Proxy



Rat Proxy

Scanners:



w3af



Grendel Scan



Nikto



namp



Zenmap



Fierce Domain Scanner

SQL-i:



sqlmap



SQL Brute

Duh:



Firefox

Others:



Metasploit



Httpprint



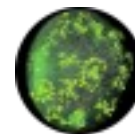
Maltego CE



netcat



Wireshark



tcpdump



Its Demo time!





There's a new kid in town

OWASP WTE

**Web
Testing
Environment**



What's this WTE thingie?



■ The project has grown to more than just a Live CD

- ▶ VMWare installs/appliances
 - ▶ VirtualBox installs
 - ▶ USB Installs
 - ▶ Training Environment
 - ▶
-
- ▶ Add in the transition to Ubuntu and the possibilities are endless
(plus the 26,000+ packages in the Ubuntu repos)



What OWASP WTE brings



- Among the new ideas for WTE are
 - ▶ Live CDs & Live DVDs
 - ▶ Virtual installs/appliances
 - ▶ A package repository
 - Can a 1+ tool to any Debian based Linux
 - apt-get install owasp-wte-*
 - ▶ Custom remixes of any of the above
 - ▶ Targeted installs
 - WebGoat Developer Version
 - ▶ Wubi
 - ▶ Kiosk version



Some WTE specifics



- Targeting Ubuntu
 - ▶ Specifically 9-04 for initial testing
 - ▶ Will test on other Debian variants too
 - ▶ Repository for apt-get'ing packages
- Each tool is its own self-contained package
 - ▶ Allows selective installs of the tools
 - ▶ OWASP menu dynamically grows/shrinks
 - ▶ Public svn
- OWASP WTE will initially produce
 - ▶ Live CD, VMware and VirtualBox installs



The WTE Hive

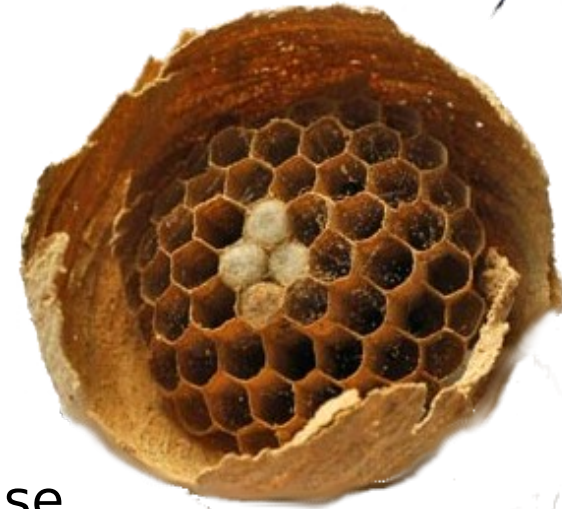


- Me (duh)

- Brad Causey



- ▶ Contributor to OWASP Live CD
 - Maintains the virtual installs
 - Vmware & VirtualBox
 - Creating packages for the next release



- Drew Beebe



- ▶ Recent addition after AppSec DC
- ▶ Great packager and automation junkie

- [Your Name Here]

- ▶ We're always looking for help



Its Demo time!



Documentation available



■ OWASP Documents

- ▶ Testing Guide v2 & v3
- ▶ CLASP
- ▶ Top 10 for 2007
- ▶ Top 10 for Java Enterprise Edition
- ▶ AppSec FAQ
- ▶ Books
 - CLASP, Top 10 2007, Top 10 + Testing + Legal, WebGoat and Web Scarab, Guide 2.0, Code Review

■ Others

- ▶ WASC Threat Classification, OSTTMM 3.0 & 2.2



Where are we going with WTE?



■ The cool fun stuff ahead

- ▶ Project Tindy
- ▶ Project Aqua Dog
- ▶ Builder vs Breaker
- ▶ Auto-update installed tools
- ▶ Website update
- ▶ OWASP Education Project
- ▶ Crazy Pie in the Sky idea



Project Tindy & Aqua Dog



■ Project Tindy

- ▶ OWASP Live CD installed to a virtual hard drive
- ▶ Persistence!
- ▶ VMware, Virtual Box & Paralles



■ Project Aqua Dog

- ▶ OWASP Live CD on a USB drive
- ▶ VM install + VM engine + USB drive = mobile app sec platform
- ▶ Currently testing
- ▶ Qemu is the current VM engine



Builder vs Breaker



Builder is where the ROI is

But darn it,
breaking is really fun.

Builder tools coming in future packages.



(Thanks Top Gear!)



Website Update




- Quick, spell my last name...
- Need a much easier URL – AppSecLive.org
 - ▶ Community site around OWASP Live CD
 - Forums, articles, screen casts, etc
 - ▶ Online Tool database
 - Seeded with the 331 I've already got
 - ▶ Articles and HowTos published by users
 - ▶ www.owasp.org will ***always*** be its home
 - ▶ AppSecLive allows us to go beyond wiki



Website Update





appseclive.org

Downloads

Navigation

- Blogs
- Downloads
- Forums
- Tutorials
- Recent posts

Recent blog posts

- Welcome! [more](#)


Active forum topics

- User Agent Switcher list
- Before you ask a question... [more](#)

New forum topics

- User Agent Switcher list
- Before you ask a question... [more](#)

Syndicate



To establish a community around the OWASP Live CD and Web Application Security.

Welcome

Welcome to AppSecLive.org! We are an online community focused on, you guessed it, web application security. We welcome all folks from all arenas to join us in discussing everything from tools to techniques relating to the security of the web. WebAppSec.org is also the new home of the OWASP Live CD, which is maintained by Matt Tesauro. This is where you will find support for the OWASP Live CD.

A few quick pointers:

[Read more](#)

User login

Username: *

Password: *

[Log in](#)

- [Create new account](#)
- [Request new password](#)

Creating a VirtualBox Image from the OWASP Live CD

Creating a VirtualBox Image from the OWASP Live CD

I'd like to thank Kent (if you know him, you know him, if not, don't worry about it) for the early versions of this document and for working out the kinks early on. You've been an amazing help to our virtualization efforts.

A few notes on this tutorial.

[We've done this so you don't have to.](#)

[Read more](#)

Making the Sqlmap Module

Submitted by mlesau on Sun, 05/03/2009 - 15:03

Get the source for sqlmap

Go to the [sqlmap website](#) and grab the latest source tarball. In this case, that is [sqlmap-0.7rc1.tar.gz](#). Yes, it's a release candidate but per the site, it works fine on Linux. That's what we're using so no worries.

Going forward with WTE



■ Design goals

- ▶ Easy for users to keep updated
- ▶ Easy for project lead to keep updated
- ▶ Easy to produce releases (every 6 months)
 - Crank out new .debs when new tool releases
 - Continually updating repository
- ▶ Focused on just application security – not general pen testing
 - Both dynamic and static tools
 - Developer tools also



OWASP Education Project



- Natural ties between these projects
 - ▶ Already being used for training classes
 - ▶ Need to coordinate efforts to make sure critical pieces aren't missing from WTE
 - ▶ Training environment could be customized for a particular class thanks to the individual modules
 - Student gets to take the environment home
 - ▶ As more packages get built, even more potential for cross pollination
 - ▶ Builder tools/docs only expand its reach
 - ▶ All of OWASP on a DVD?



My Crazy Pie in the Sky idea



- .deb package + auto update + categories
= install profiles
 - ▶ Allows someone to customize the OWASP Live CD to their needs
 - ▶ Example profiles
 - Whitebox testing
 - Blackbox testing
 - Static Analysis
 - Target specific (Java, .Net, ...)
 - ▶ Profile + VM
= custom persistent work environment



So what will WTE do for me?



■ For Testers / QA testers

- ▶ Wide array of tools, pre-configured and ready
- ▶ Nice “jump kit” to keep in your laptop bag
- ▶ Great platform to test or learn the tools

■ For App Sec Professionals

- ▶ Both dynamic and static tool coverage
- ▶ Ability to customize the the job your on

■ For Trainers

- ▶ Ready to go environment for students
- ▶ Ability to customize for the class



How can you get involved?



- ▶ Join the mail list
 - Announcements are there – low traffic
- ▶ Post on the AppSecLive.org forums
- ▶ Download an ISO or VM
 - Complain or praise, suggest improvements
 - Submit a bug to the Google Code site
- ▶ Create deb package of a tool
 - How I create the debs will be documented, command by command and I'll answer questions gladly
- ▶ Suggest missing tools, docs or links
- ▶ Do a screencast of one of the tools being used on the OWASP Live CD



Learn More



- **OWASP Site:**

http://www.owasp.org/index.php/Category:OWASP_Live_CD_Project

or Google “OWASP Live CD”

- **Download & Community Site:**

<http://AppSecLive.org>

- **Google Code Site:**

<http://code.google.com/p/owasp-wte/>

- **Original site:** <http://mtesauro.com/livecd/>



OWASP WTE Synaptic Pride...



Synaptic Package Manager

File Edit Package Settings Help

Reload Mark All Upgrades Apply Properties Quick search Search

All

owasp-wte

S	Package	Installed Version	Latest Version	Size	Description
<input checked="" type="checkbox"/>	owasp-wte-burpsuite		1.2		Burp Suite is an integrated platform for attacking web
<input type="checkbox"/>	owasp-wte-cal9000		2.0		CAL9000 is a collection of web application security te
<input checked="" type="checkbox"/>	owasp-wte-dirbuster		0.12		DirBuster is a multi threaded java application designe
<input checked="" type="checkbox"/>	owasp-wte-doc		1.0		This package includes OWASP Documentation.
<input checked="" type="checkbox"/>	owasp-wte-fierce		1.0.3		Fierce is not an IP scanner
<input checked="" type="checkbox"/>	owasp-wte-grendel-scan	1.0	1.0	0 B	Grendel-Scan is an open-source web application secu
<input checked="" type="checkbox"/>	owasp-wte-httpprint		301		httpprint is a web server fingerprinting tool.
<input checked="" type="checkbox"/>	owasp-wte-jbrofuzz		1.2		JBroFuzz is a web application fuzzer for requests bein
<input checked="" type="checkbox"/>	owasp-wte-maltego		2.0		Maltego is an open source intelligence and forensics
<input type="checkbox"/>	owasp-wte-metasploit		3.3.3		Metasploit provides useful information to people who
<input checked="" type="checkbox"/>	owasp-wte-netcat		0.7.1		Netcat is a featured networking utility.
<input checked="" type="checkbox"/>	owasp-wte-nikto		2.0.3		Nikto is an Open Source web server scanner
<input checked="" type="checkbox"/>	owasp-wte-nmap		4.76		Nmap is a free and open source utility for network ex
<input checked="" type="checkbox"/>	owasp-wte-paros	3.2.13	3.2.13	0 B	Paros proxy intercepts and modifies all HTTP and HTT
<input checked="" type="checkbox"/>	owasp-wte-ratproxy	1.5.3beta	1.57+dfsg	0 B	A semi-automated, largely passive web application s
<input checked="" type="checkbox"/>	owasp-wte-spikeproxy		1.4.8		SPIKE Proxy is a professional-grade tool for looking fo
<input checked="" type="checkbox"/>	owasp-wte-sqlbrute		1.0		SQLBrute is a tool for brute forcing data out of databa
<input checked="" type="checkbox"/>	owasp-wte-sqlix		1.0		SQLiX is a SQL Injection scanner.
<input checked="" type="checkbox"/>	owasp-wte-sqlmap		0.7rc1		sqlmap is an open source command-line automatic S
<input checked="" type="checkbox"/>	owasp-wte-tcpdump		4.0.0		Tcpdump prints out a description of the contents of pa
<input checked="" type="checkbox"/>	owasp-wte-w3af		1.2		w3af is a Web Application Attack and Audit Framewor
<input checked="" type="checkbox"/>	owasp-wte-w3af-console		1.2		w3af is a Web Application Attack and Audit Framewor
<input checked="" type="checkbox"/>	owasp-wte-wapiti		2.0.0		Wapiti allows you to audit the security of your web ap
<input checked="" type="checkbox"/>	owasp-wte-webgoat	5.2	5.2	0 B	WebGoat is an online training environment for hands-
<input checked="" type="checkbox"/>	owasp-wte-webscarab	20090122	20090122	0 B	WebScarab: a local proxy for web application testing
<input checked="" type="checkbox"/>	owasp-wte-wireshark		1.0.7-1ubuntu1		Wireshark is a network traffic analyzer, or "sniffer", fo
<input type="checkbox"/>	owasp-wte-wsfuzzer		1.9.4		WSFuzzer currently targets Web Services.

Sections

Status

Origin

Custom Filters

Search Results

27 packages listed, 1222 installed, 0 broken. 0 to install/upgrade, 0 to remove

OWASP WTE is OPEN



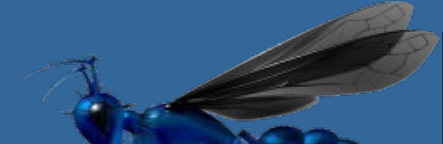
- Add will always be...



Questions?



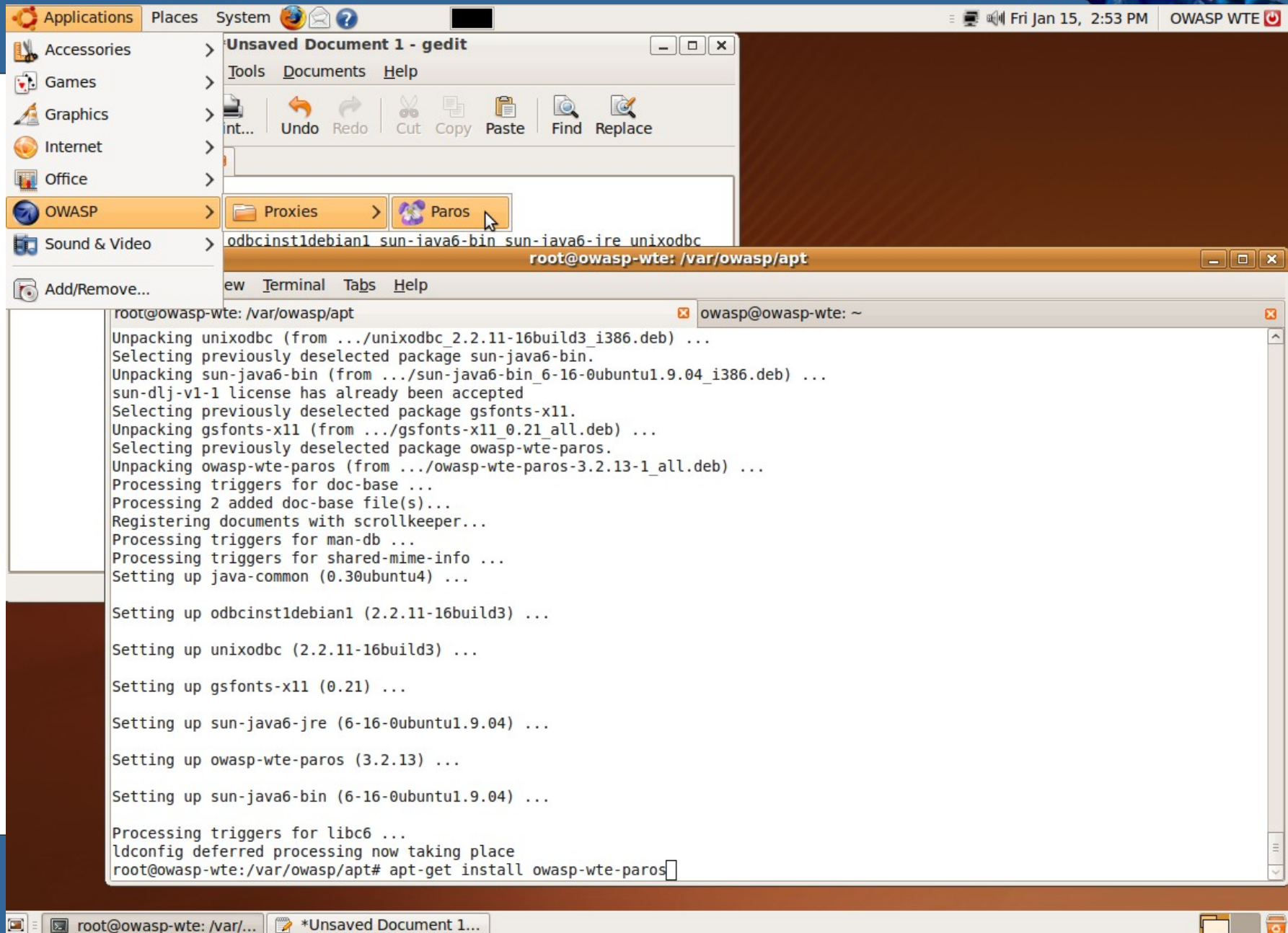
the BIG commit



File Edit View Terminal Help

```
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/ParsedPredicateList.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/ParsedRelativeLocationPath.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/ParsedStep.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/Set.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/Util.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/XPathGrammar.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/XPathParser.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/XPathParserBase.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/__init__.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/pyxpath.py
Adding conversion/wsfuzzer/contents/usr/lib/python2.5/site-packages/_xmlplus/xpath/yappsrt.py
Adding conversion/wsfuzzer/contents/usr/share
Adding conversion/wsfuzzer/contents/usr/share/applications
Adding conversion/wsfuzzer/contents/usr/share/applications/wsfuzzer.desktop
Adding conversion/wsfuzzer/contents/usr/share/pixmaps
Adding (bin) conversion/wsfuzzer/contents/usr/share/pixmaps/wsfuzzer-icon.png
Transmitting file data .....
```

First package test install



The screenshot shows a Linux desktop environment with a blue background and a large blue dragon-like creature in the top right corner. The desktop has a menu bar with 'Applications', 'Places', and 'System'. The 'Applications' menu is open, showing categories like Accessories, Games, Graphics, Internet, Office, OWASP, Sound & Video, and Add/Remove... The 'OWASP' category is selected, and the 'Paros' application is highlighted. A terminal window is open in the foreground, showing the output of the command `apt-get install owasp-wte-paros`. The terminal output indicates that several packages are being installed or updated, including `unixodbc`, `sun-java6-bin`, `gsfonts-x11`, `owasp-wte-paros`, and `sun-java6-jre`. The terminal prompt is `root@owasp-wte: /var/owasp/apt`.

Applications Places System

Accessories > **Unsaved Document 1 - gedit**

Games > Tools Documents Help

Graphics > int... Undo Redo Cut Copy Paste Find Replace

Internet >

Office >

OWASP > Proxies > Paros

Sound & Video > odbcinst1debian1 sun-java6-bin sun-java6-jre unixodbc

Add/Remove... root@owasp-wte: /var/owasp/apt

new Terminal Tabs Help

root@owasp-wte: /var/owasp/apt

```
Unpacking unixodbc (from ../unixodbc_2.2.11-16build3_i386.deb) ...
Selecting previously deselected package sun-java6-bin.
Unpacking sun-java6-bin (from ../sun-java6-bin_6-16-0ubuntu1.9.04_i386.deb) ...
sun-dlj-v1-1 license has already been accepted
Selecting previously deselected package gsfonts-x11.
Unpacking gsfonts-x11 (from ../gsfonts-x11_0.21_all.deb) ...
Selecting previously deselected package owasp-wte-paros.
Unpacking owasp-wte-paros (from ../owasp-wte-paros-3.2.13-1_all.deb) ...
Processing triggers for doc-base ...
Processing 2 added doc-base file(s)...
Registering documents with scrollkeeper...
Processing triggers for man-db ...
Processing triggers for shared-mime-info ...
Setting up java-common (0.30ubuntu4) ...

Setting up odbcinst1debian1 (2.2.11-16build3) ...

Setting up unixodbc (2.2.11-16build3) ...

Setting up gsfonts-x11 (0.21) ...

Setting up sun-java6-jre (6-16-0ubuntu1.9.04) ...

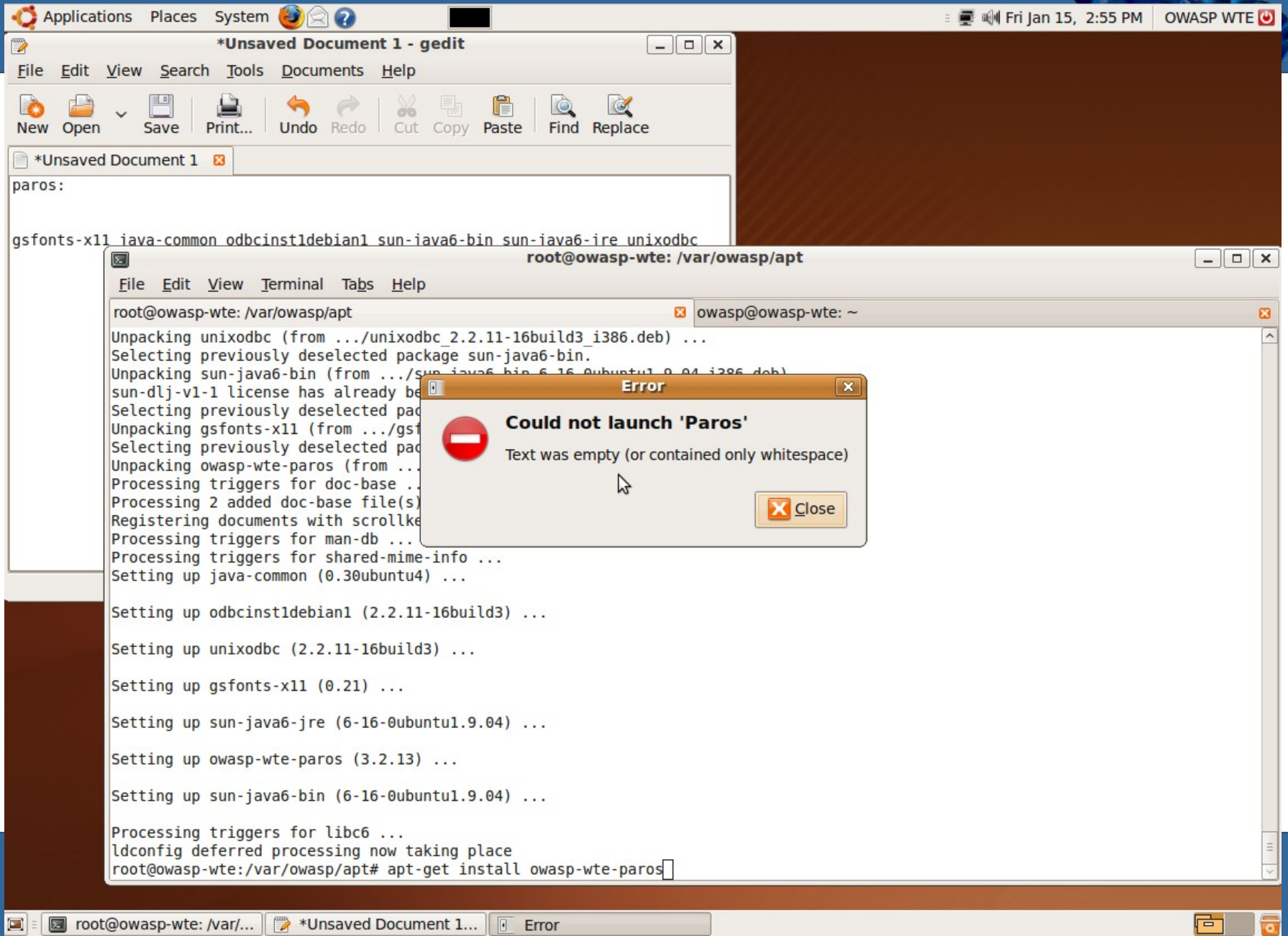
Setting up owasp-wte-paros (3.2.13) ...

Setting up sun-java6-bin (6-16-0ubuntu1.9.04) ...

Processing triggers for libc6 ...
ldconfig deferred processing now taking place
root@owasp-wte: /var/owasp/apt# apt-get install owasp-wte-paros
```

root@owasp-wte: /var/... *Unsaved Document 1...

First package fail



Yeah, genuine alright

