



Event List (Melbourne)

Speaker	Topic	Date	Time	Venue
Julian Berton	Penetration Testing 101	17/09/14	5:00 PM	NAB
AISA National Conference	16th to 17th October 2014 (Central Pier Docklands)			
John Hall	Testing your security posture 101 - Case study and insights	11/11/14	5:30 PM	Telstra
Social Event (Lunch)		November -	ТВС	

Events for 2015 – Penetration Testing 201, Digital Forensics 201, Risk Management, Thought Leadership Series, Privilege Management, Case studies and more.......

Dates and times subject to change, please visit the website for the latest information





AISA National Conference

Date: 16th to 17th October 2014

Venue: Melbourne (Central Pier Docklands)

- Now in its 7th year,
- Multiday event with multiple track sessions outside of keynotes.
- Conference is free for members currently 680+ registered attendees

16th October - AISA National Conference Dinner for 380 attendees (\$79 for members and \$200 for non members).





AISA Awards

The AISA awards are your awards, candidates are nominated by members and winners will be voted for by members. Awards will be made in the following categories:

- Information Security Rookie of the Year
- Information Security Professional of the Year
- Information Security Project of the Year
- Security Employer of the Year

More information: http://www.aisa.org.au/national-conference/aisa-awards/





Sponsor



Penetration Testing 101

By Julian Berton

Julian Berton

- Years of web development experience
- Currently working at Securus Global as a security consultant
- OWASP Melbourne chapter lead



Contact

- meetup.com/Application-Security-OWASP-Melbourne/
- @JulianBerton (Twitter not very active)

You!

Now you know about us , its only fair we know a bit about you :)

Tonight?

- What is a pen test?
- Scope
- Techniques
- Process (Recon, Analysis, Exploitation, Reporting, Remediation)
- Tools
- Demo!
- Why its important

What is a Penetration Test?

- Called "pentesting", "pen testing", or "security testing", is the practice of attacking your own or your clients' IT systems in the same way a hacker would to identify security holes.
- The idea is to not harm the client network or business interests but rather to identify issues and aim in resolving them.



What my friends think I do



What my Mom thinks I do



What society thinks I do



What the government thinks I do



What I think I do

felix/#nwap -A -T4 scarme_nmap.org

Starting nmap 3.75 (http://www.insecure.org/nmap/) at 2004-10-25 11:31 PDT Interesting ports on scarme_nmap.org (205_217_153_55): (The 1658 ports scanned but not shown below are in state; filtered) PDRT STATE SERVICE MERSION

22/tcp open ssh OpenSSH 3.1p1 (protocol 1.99)
25/tcp open subc qmail sntpd
53/tcp open domain ISC Bind 9,2.1
80/tcp open http Apache httpd 2.0.33 ((Unix) nod_per1/1.99_07-dev Per1/v5.6.1)
113/tcp closed auth
Device type; general purpose
Rwming: Linux 2.4.XI2.5.X
05 details: Linux 2.4.4.0 - 2.5.20, Linux 2.4.18 - 2.4.20
Uptine 196.551 days (since Mon Apr 12 22:18:53 2004)

Nmap run completed -- 1 IP address (1 host up) scanned in 27.003 seconds
felix/#

What I actually do

Good Pen Test(er) vs Bad

The quality of their reports should give you some idea...

From a terrible report -> See here for more: http://goo.gl/qdQUgE

MySQL configured to allow connections from 127.0.0.1. Recommend configuration change to not allow remote connections.

As should any of their requests...

For a terrifying account -> See here for more: http://goo.gl/Gs2rdZ 1277 A security auditor for our servers has demanded the following within two weeks:



- A list of current usernames and plain-text passwords for all user accounts on all servers
- A list of all password changes for the past six months, again in plain-text
- . A list of "every file added to the server from remote devices" in the past six months
- The public and private keys of any SSH keys
- An email sent to him every time a user changes their password, containing the plain text password

Good Pen Test(er) vs Bad (Cont'd)

- Research any firm you plan on hiring or are recommended
- Get a sample of their work which highlights their methodology and practices
- Work with them to produce a scope that suits your needs and budget
- If you're happy with the work at the end, provide feedback. It helps everyone
 in the industry!
- Don't just choose the cheapest proposal that's responded to your tender

Vulnerability Assessment vs Pen Test?

- Vulnerability assessment (VA) is usually done with the full knowledge and cooperation of the client technical teams. Working with them rather than 'against' them.
- VA is not as reliable as exploits cannot be confirmed or tested.
- Not as fun for us pen testers ;)
- Pen tests will show real results. Ie. "Yes this can result in an attacker rooting your entire domain'.
- Pen testing allows teams to 'pivot' through your network and pick up additional findings that might otherwise have been missed.

Scope

- Scope is the limits around what a pen tester can and cannot touch.
- Its up to the organization to decide what avenues of attack will be tested.
- The fewer areas tested the more in-depth testing can be but the less realistic the test will be.
- Black hat attackers are not limited by any 'scope'

Attacker vs Professional Hacker

- An attacker has unlimited time and potentially money to find and exploit a company.
- A professional hacker has time constraints and scope limitations but has the authority to ask for help or information.

JPMorgan Chase Breach

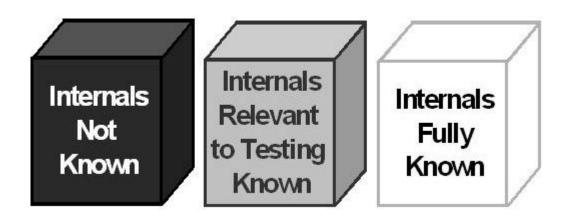
 Months of recon, planning and building before attacks started.



- "Hackers first breached JPMorgan's network by using a previously unknown flaw in one of its public-facing websites"
- "The hack began in June and was not detected until mid-August"
- "Silently siphoning off gigabytes of information, including customer-account data, until mid-August"
- "Multiple zero-day strategies "

Black vs Grey vs White Box Testing

- Whats the difference?
- Which one gives the most value to a business?



On-site vs Remote Testing

On-site:

- Interact with local resources and test environments
- Low latency means more accurate testing
- Issues can be resolved faster.

Remote:

- Allows testing of external defences such as IDS/IPS systems (Often done by accident!)
- Can be quicker setup time

Scope - Network Infrastructure

- Wired
- Wireless
- Internal
- External
- 3rd Party providers
- Telephone networks (analogue, digital, mobile, VoIP)



FIREWALL

Nothing's getting through mine.

Scope - Physical Access

Types of users:

- Staff access methods
- Contactor access permissions
- Building Maintenance/Security/Cleaners access permissions
- Malicious outsiders

Areas of concern:

- Restricted areas (Data-centres, staff only areas, etc)
- Public Areas (Lobbies/meeting rooms/restrooms)
- External 3rd party controlled areas (Hosted data centers? Partners?)
- Anywhere with a network port or wifi access

Technologies in place:

- RFID/Badges/Magstripes
- Locks
- Alarms
- CCTV



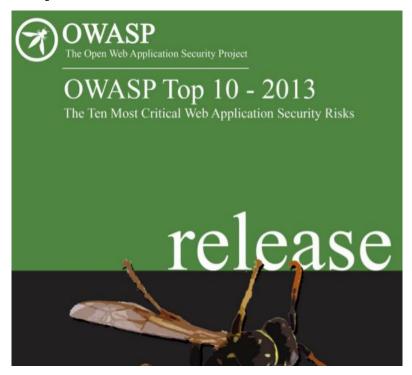
Scope - Social Engineering

- Pretending to be a user
- Pretending to be an admin
- Phishing/Spear Phishing/Phraming etc...
- Spoofing Emails
- Dropping USB sticks strategically
- Looking for Post-It Notes
- Dumpster diving



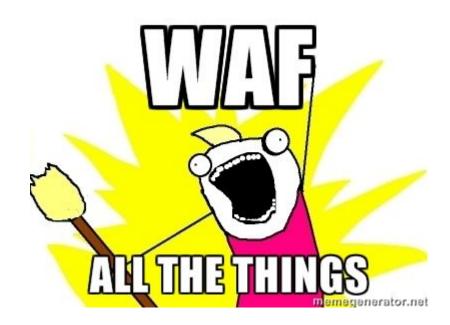
Scope - Application Security

- Mobile (iOS and Android)
- Web (Static or dynamic)
- API (SOAP or REST)
- Custom desktop applications that interact with the network

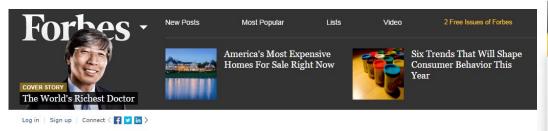


Why do we bother?

- Are IDS/IPS's enough?
- Cant we just put a WAF infront of it?
- Ill just run automated tools...
- Back to JPMorgan....



Weekly Data Breaches





FOLLOW

Lurite about the

intersection between

TECH 9/10/2014 @ 8:36AM | 7,533 views

Data Breach Bulletin: Home Depot, Healthcare.gov, JP Morgan

+ Comment Now + Follow Comments

Here's a roundup of this week's data breach news:

Home Depot HD 0.43% - A week after Brian Krebs broke the news that Home had likely been hit with a credit card breach, Home Depot confirmed on Mon



Response	•	Breaches	Forensi	CS	Gov	ernance	ID
News Blo	gs	Interviews	Webinars	White	Papers	Memberships	Re
Home > Article	S						

Articles

11.000 Patients Affected in 2 Breaches

Incidents Involve Exposed Server, Stolen Computer

Jeffrey Roman - September 12, 2014



Diatherix, which provides clinical laboratory testing services, reports a breach in via the Internet, while Temple University Physicians says the theft of a computer S DIATHERIX exposed patient data.

Apple Security Upgrade: Hits and Misses

Apple Pay Gets High Marks, But Full iCloud Fix Still Missing

Mathew J. Schwartz - September 12, 2014



Security experts see good news and bad in Apple's latest announcements. Upsi and numerous privacy and security improvements in iOS 8. But after the celebrit fixes remain missing.

Process of a Penetration test

- Reconnaissance
- Analysis
- Exploitation (Unless its a VA)
- Reporting
- Remediation

Process of Modern Day Attackers





The New York Times





MACHINE LEARNING Review and Video: With New iPhone 6 and 6 Plus. It's What's Inside That...

Œ



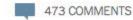
German Court Lifts Ban on Uber Ride Service



BITS BLOG Y Combinator, a Start-Up Incubator, Goes to College



TECHNOLOGY



Russian Hackers Amass Over a Billion Internet **Passwords**

By NICOLE PERLROTH and DAVID GELLES AUG. 5, 2014



A Russian crime ring has amassed the largest known collection of stolen Internet credentials, including 1.2 billion user name and password combinations and more than 500 million email addresses, security researchers say.

Tools of the trade

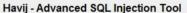
Too many to mention but here are the main ones:













Version 1.17 Pro SECTEAM Copyright @ 2009-2012





Copyright (C) 2010-2013 OWASP ZAP Attack Proxy Project https://www.owasp.org/index.php/ZAP







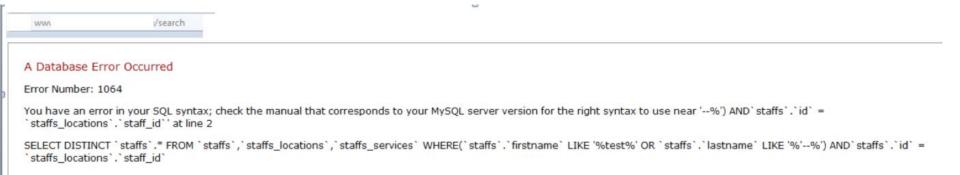




Demo!

More Demos!

SQL Injection to control all the things!



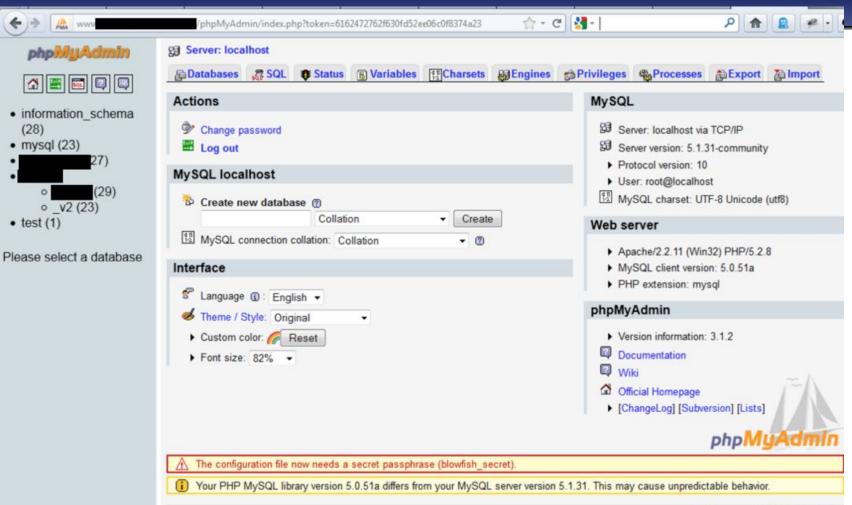


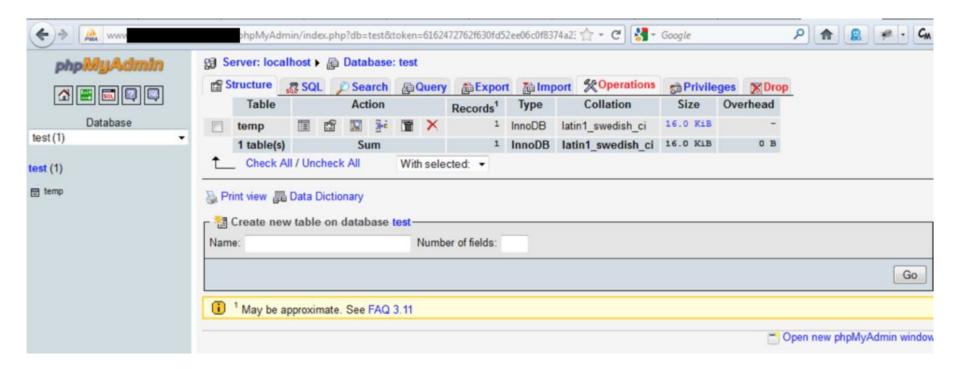
PHP Version 5.2.8

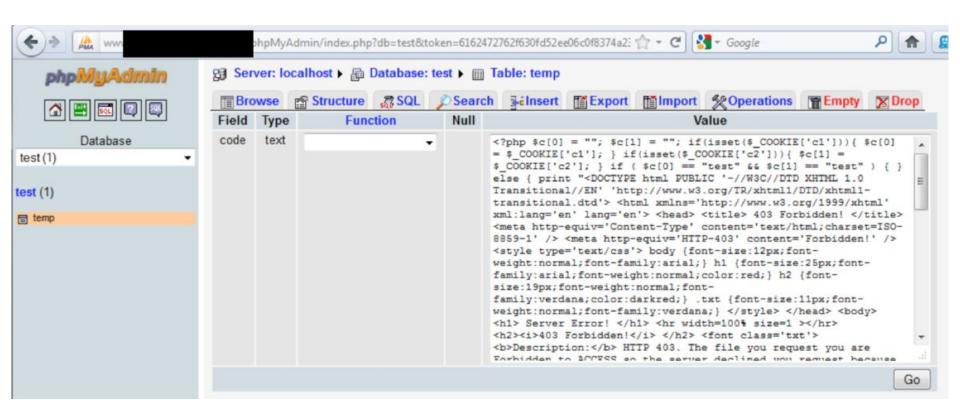


System	Windows NT 5.0 build 2195			
Build Date	Dec 8 2008 19:30:48			
Configure Command	cscript /nologo configure.js "enable-snapshot-build" "enable-debug-pack" "with-snapshot-template=d:\php-sdk\snap_5_2\vc6\x86\template" "with-php-build=d:\php-sdk\snap_5_2\vc6\x86\php_build" "with-pdo-oci=D:\php-sdk\oracle\instantclient10 \sdk,shared" "with-oci8=D:\php-sdk\oracle\instantclient10\sdk,shared"			
Server API	Apache 2.0 Handler			
Virtual Directory Support	enabled			
Configuration File (php.ini) Path	C:\WINNT			

```
$db['default']['hostname'] = "localhost";
$db['default']['username'] = "root";
$db['default']['password'] = "password'];
$db['default']['database'] = "mysql";
```

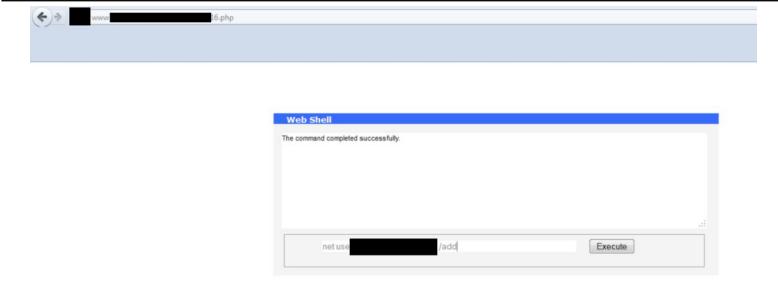






After the entry was placed into the database it was necessary to output the data stored in the table to an executable .PHP file. This was done by executing the following command:

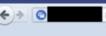
SELECT * INTO OUTFILE 'E:/Program Files/Apache Software Foundation/Apache2.2/htdocs/loop-16.php' from temp;



net user loop 53cur3p455word!? /add net localgroup administrators loop /add

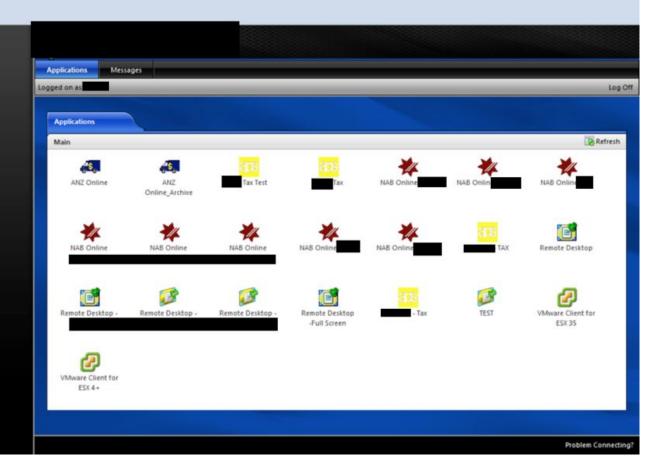
While examining files stored on the server we found a file named test.php in the directory shown here. The output provided an Active, valid Active Directory username and password as seen in the screenshot

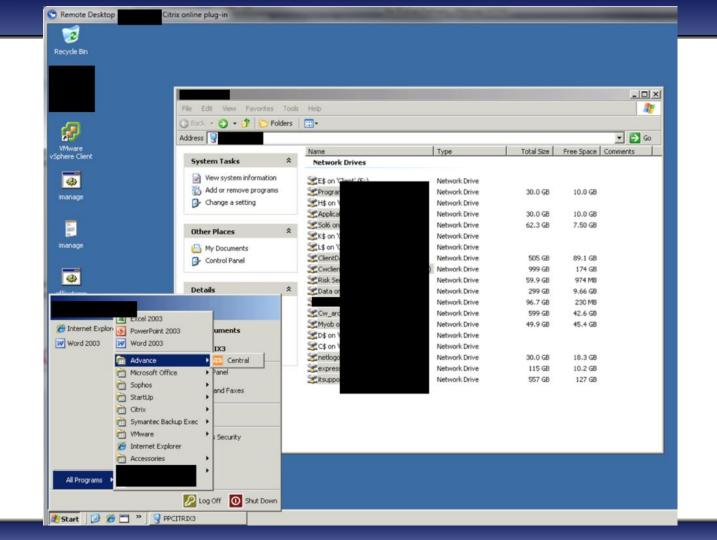
```
File Address:
            E:\Program Files\Apache Software Foundation\Apache2.2\htdocs\test.php
ini_set('display_errors',1);
require once('phpmailer.php'):
$mail = new PHPMailer();
ini_set('sendmail_from',
                                0
$mail->IsSMTP():
$mail->Host =
$mail->SMTPAuth = false:
  $mail->Port = 587;
  $mail->Username =
  $mail->Password = "Password32
$mail->From = '
$mail->FromName =
```

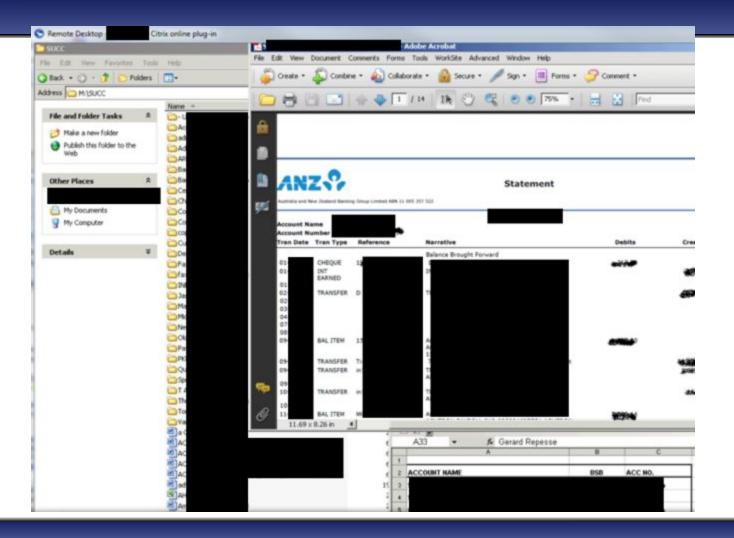


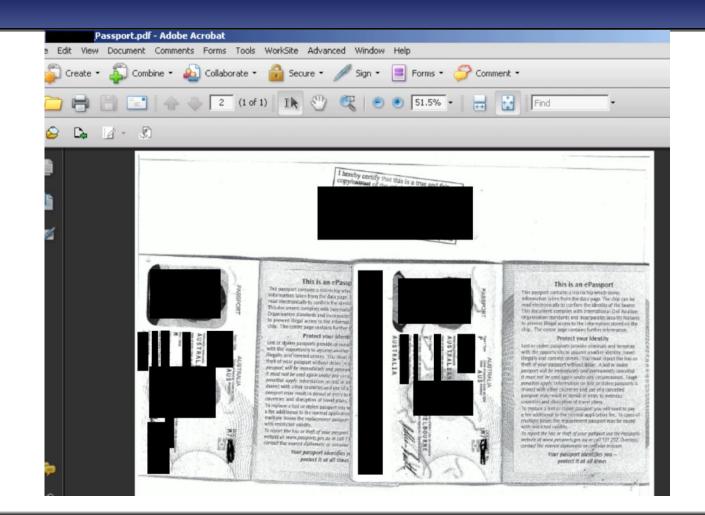
Citrix/Connect/site/default.aspx

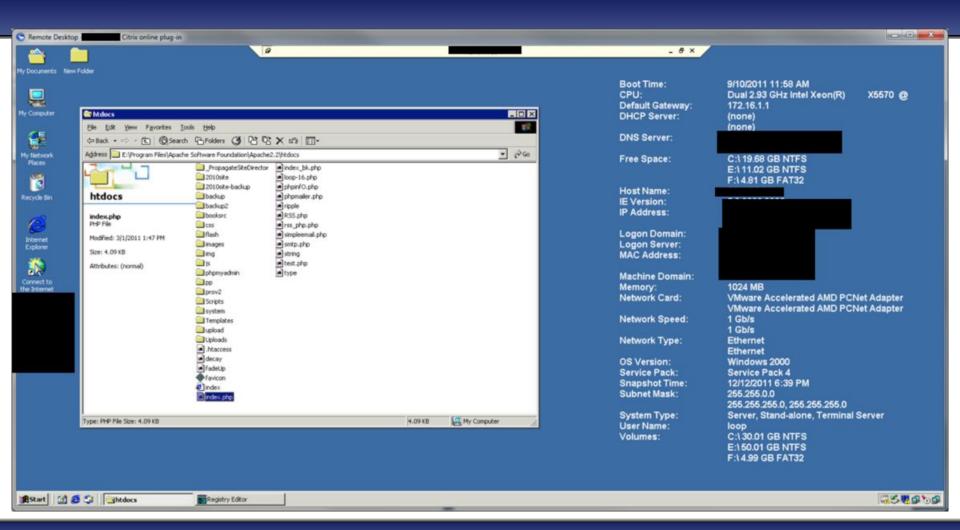


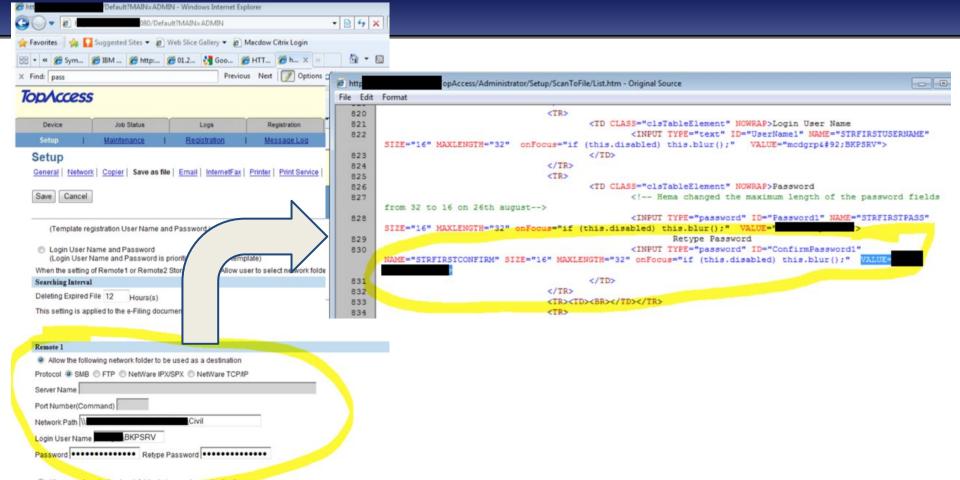












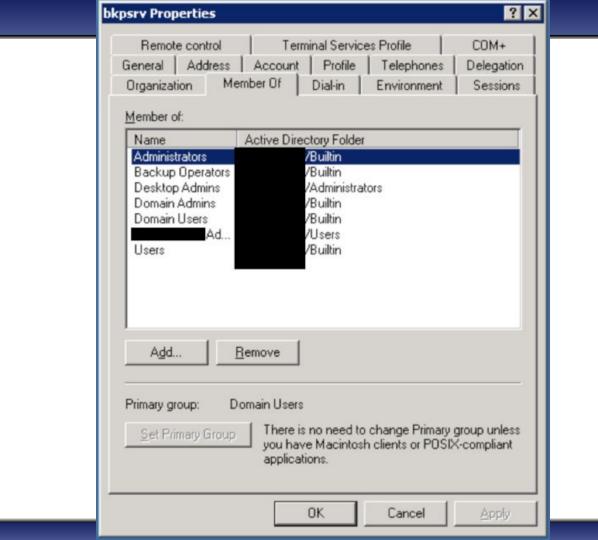
Allow user to select network folder to be used as a destination

Remote 2

Allow the following network folder to be used as a destination

Protocol
SMB FTP NetWare IPX/SPX NetWare TCP/IP

_ d × dc01 C:\WINDOWS\system32\cmd.exe Microsoft Windows [Version 5.2.3790] (C) Copyright 1985-2003 Microsoft Corp. C:\Documents and Settings\bkpsrv>whoami bkpsrv C:\Documents and Settings\bkpsrv>



GOME OVER

INSERT COINS

Outcome of a (hopefully) successful pen test

The idea is that you learn something about your network you didn't know otherwise.













OWASP Melbourne - Application Security

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My profile



Melbourne, Australia

Founded Nov 11, 2013

About us...

Members 255

Group reviews

Welcome!

+ SCHEDULE A NEW MEETUP

Upcoming 1

Suggested 0

Calendar Past

Exploitation Training - CSAW CTF

York Butter Factory

York Butter Factory, 62-66 King Street Melbourne VIC 3000, Melbourne VIC, Melbourne (map)

Hey all. The aim of this event is to provide an

Sat Sep 20

10:00 AM

14 going

0 comments

What's new





J NEW RSVP sudhir kumar RSVPed Yes for



Yesterday

■ NEW DISCUSSION REPLY Sam Stewart



References

- http://www.nytimes.com/2014/09/13/technology/after-breach-jpmorgan-still-seeks-to-determine-extent-of-attack.html? r=0
- http://www.bloomberg.com/news/2014-08-29/jpmorgan-hack-said-to-span-months-via-multiple-flaws.html
- http://www.proofpoint.com/threatinsight/posts/smash-and-grab-jpmorgan.php
- http://www.nytimes.com/2014/08/06/technology/russian-gang-said-to-amass-more-than-a-billion-stolen-int-ernet-credentials.html?_r=0
- https://www4.symantec.com/mktginfo/whitepaper/053013_GL_NA_WP_Ponemon-2013-Cost-of-a-Data-Br each-Report_daiNA_cta72382.pdf

References (Images)

- http://www.softwaretestinggenius.com/photos/qbt1.JPG
- http://www.siliconrepublic.com/fs/img/hackerdo.jpg

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