Bulk Account Creation

Messaging Anti-Abuse Working Group (MAAWG) Meeting Philadelphia, Pennsylvania, October 27th, 2009

Joe St Sauver, Ph.D. (joe@uoregon.edu, joe@internet2.edu) MAAWG Senior Technical Advisor http://www.uoregon.edu/~joe/bulk-account-creation/

Disclaimer: all opinions expressed in this presentation are solely those of the author and are not necessarily those of any other entity or organization.

Why Is This Topic Part of Today's APWG Session At MAAWG?

- Backstory in one sentence: A few months ago, during an APWG IPC conference call, I was (briefly) foolish enough to ask if the bulk creation of free accounts was posing any problems for people.
- From such a simple, innocent, unsuspecting inquiry, this talk was born (although neither APWG nor MAAWG nor any other organization bears responsibility for my remarks today)

Free Accounts

- Free accounts are offered by many leading web email providers, including AOL, Gmail, Hotmail, and Yahoo, as well as by other online services such as Craigslist.
- Generally, accounts are meant to allow an individual to obtain access to certain services, including messaging, which require authentication for access control, resource allocation (e.g., disk space), and user privacy.
- Accounts also allow "state" (preference and configuration data, etc.) to be persistently saved from session to session, regardless of whether the user is using the same computer they used the last time they were on.
- Sites also leverage user accounts for statistical tracking.
- Accounts, even free accounts, are important to both providers and to users.

One (or Perhaps a Few) Account(s) Per Person

- Most services implicitly expect users to have only a single account, or perhaps just a couple of accounts (such as a personal account and a business account).
- Many providers do not explicitly limit the number of accounts a user may have, however most services do require accurate contact information.
- For example, Google's Terms of Service (TOS) state, "In order to access certain Services, you may be required to provide information about yourself (such as identification or contact details) as part of the registration process for the Service, or as part of your continued use of the Services. You agree that any registration information you give to Google will always be accurate, correct and up to date." [emphasis added]

Selling or Otherwise Transferring Accounts

 Selling (or otherwise transferring accounts) is generally forbidden. Again looking at Google's terms of service, we see:

"Unless you have been specifically permitted to do so in a separate agreement with Google, you agree that you will not reproduce, duplicate, copy, sell, trade or resell the Services for any purpose." [emphasis added]

- Similarly, Hotmail's terms of service say: "In using the service, you may not: [...] resell or redistribute the service, or any part of the service."
- eBay says: "While using eBay sites, services and tools, you will not: [...] transfer your eBay account (including Feedback) and user ID to another party without our consent"

It's Therefore "Surprising" To Learn That People Are Buying and Selling Accounts

- Well, actually, it's not **too** big of a surprise if you think about it a little, but you know what I mean.
- What <u>may be</u> surprising is how forthright people are about trading in bulk accounts, how many accounts they are selling, how little they're charging for what they're selling, and how many people appear to be doing it...
- Let's look at a few examples

You Really Can Buy "Anything" On eBay...

 Mozilla Firefox

 Image: Comparison of the second s

1000 unique email acounts!

If you want more or less, message me for the amount wanted. 10 cents each.

Each come with a unique password.

Forwarding takes extra time from 1-4 days! Non forwarding will be under 24 hours!

Will send as a text file when bought.

I HIGHLY RECOMMEND NOT TO BUY FORWARDED GMAIL ACCOUNTS. GOOGLE SEEMS TO DISABLE THESE AFTER A COUPLE WEEKS. IF REQUESTED TO DO FORWARDED YOU ARE FULLY AWARE THAT THESE FORWARDED ACCOUNT HAVE A HIGH CHANCE TO BE DISABLE.

Otherwise, plain regular gmails are fully guaranteed and will be replaced if they are disabled . (which they won't be :-))

Examples of the gmail email addresses that you will recieve:

juanchen 14@gmail.com edwardoosborn@gmail.com giovannimelendez 1@gmail.com roxannarichards 5@gmail.com elvishansen 6@gmail.com

Each comes with a unique password in this format in txt file. juanchen14@gmail.com:password

[http://pages.ebay.com/help/policies/maillists.html explicitly prohibits the sale of "email addresses" on eBay...] ⁷

Other Sellers May Use Dedicated Websites



★ BENEFITS OF GMAIL BANK:



EMAIL FORWARD INCLUDED: Let us know the email you want your Gmail accounts to forward o and we will take care of the rest.



EASY ACCOUNT IMPORT AND EXPORT: We provide our customers account data via Excel. Simply copy and paste into any 3rd party software.



GMAIL ACCOUNTS IN 48 HOURS: We delivery your accounts to your inbox in 48 hours. So you can quickly be up and marketing online.

Some Bulk Account Sellers May Be International



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Some Bulk Gmail Account Providers Use Gmail Themselves

🚱 http://www.accountheadquarters.com/gmail-account-creation.html

▼ Google

I'm offering Brand New Bulk Gmail Accounts for the lowest prices in the marketplace! All accounts are made Brand New and in working order....I only sell accounts to One customer and they are never resold!(Beware of cheaper Gmail Sellers) These are created with the highest degree of quality and privacy (making your marketing efforts harder to follow!)

Delivery will be between 3-6 days.

All passwords+Gmail addresses are unique in their style and creation(using a Name format ie Robertjones886@gmail.com)....I cannot do Gmails with custom passwords or addresses...Sorry...

ORDER BELOW!

Bulk Gmail Accounts!

 New Gmail Accounts! (1,000) \$45.00

 Add to Cart

For Any Questions or Concerns Please Contact me at accountsuperstore@gmail.com...

Another Example Of A Gmail-Based Gmail Account Provider

Bulk Gmail Accounts - Cheapest Price, 24/7 Support, Fast Delivery **N •** http://forums.digitalpoint.com/showthread.php?t=1424747 [2] How Much Can you Provide Per Day? 100 K + Account!! [3] I Have Some Accounts Which don't Work, Will You Replace? Yes , We Replace any Accounts Which don't work immediately We deliver in 10 minutes [4] Can I Have A Refund ? Yes, We offer a refund If you had 100+ accounts which don't work and this never happens before with us [5] I Have more questions, Where to ask ? Contact our 24/7 Support With P.M me here. Skype: Mohamed elzarie Yahoo messenger: karate_man24 AIM: elzarie [6] I Want To Order, What to do? We Currently Accept PayPal For payment PayPal Email: mygoldseries@gmail.com After Payment P.M Me with the following

AOL and Yahoo Accounts? Also No Problem

http://www.emailtvt.com/

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What We Offer For AOL, Gmail, and Yahoo Accounts:

We guarantee our Gmail and Yahoo Accounts are fresh and ready to be used.

So you will never have to manually create, enter word verification, or setup your email forwarding account ever again.

It's all done for you. That's right we create as many AOL, Gmail, and Yahoo Accounts as you need and also take care of the email forwarding so you can check a single account and have all your other emails go directly to the inbox of your choice.

If you have an issue with an account whether it is logging in or with receiving mail forwarding please use our support tab and we are happy to help resolve the problem.

Placing Your Order:

Our service is for bulk AOL, Gmail, and Yahoo Accounts so you will need to order a minimum of 1,000 and can order 10,000, 100,000, or even 1 million. We can handle any order and for much larger orders we do ask that you allow some additional time past the normal 48 hour deliver window.

If You're More of A "Do-It-Yourselfer" And You Need Accounts, You Can Buy Tools...

 No need to wait on someone to make bulk accounts for you... Gmail Account Creator, Automatic Account Creator Software



EasyGmail™ Creator Suite | Automatic and Multiple Gmail Account Creator 💣 http://ezgmail.com/ G • Google We believe that with the features contained within the EasyGmail™ Creator Suite, you will now have a product that you can now rely on for your long-term usage: Custom Usernames A Few Bells & Custom Display Names Whistles Unique Passwords Proxy Support (Auto-Rotating) Integrated Help Desk & Support Account Un-Locker & Auto-Updating · Notification when IP Change is needed Modify Settings: Enable Forwarding & POP Multi-Threading & Multiple Cookie Sessions Create Accounts & Modify them later on Auto-Pilot Manual Captcha Entry Option or Automatic Captcha Entry via ImageToText.com · Created Accounts can be Exported to a simple text file format A Professional Marketing Tool **Researched & Designed Specifically For You** Creator - Because of this tool's effective method of multi-threading, it is so fast that even utilizing the

manual Captcha entry mode of the Creator, it is hard to keep up. With **multiple local cookie sessions** and complete control over your display name, usernames, and unique passwords; you can now be at ease knowing that your marketing campaigns will not be disrupted due to account deletion of "snammy" looking accounts

GYC Automator Ex - Fully automated Gmail, Yahoo, Hotmail, Craigslist and Backpage account creato



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- Fully Automated signup process (using image2type service)
- Create Gmail, Yahoo, Hotmail, Craigslist, Backpage & KIJIJI accounts
- Create and Activate KIJIJI, Backpage and Craigslist accounts
- Single click login to Gmail, Yahoo!, Hotmail, Craigslist or Backpage accounts
- Choose domain (rocketmail, ymail, yahoo) for Yahoo accounts
- Choose domain (live.com, hotmail.com) for Windows Live Hotmail accounts
- Verify Craigslist accounts
- Change password for existing Gmail accounts
- Change password for existing Craigslist and Backpage accounts
- Allow to change email forwarding for existing Windows Live Hotmail accounts



Do you want to <u>automatically</u> create *Gmail Accounts* in seconds flat without breaking a sweat? Introducing the new <u>Jiffy Gmail Creator</u> version 2.3 for unlimited email accounts!

Gmail Accounts In A Jiffy

With Jiffy GMail Email Creator Software you are able to better utilize the world's best email service. For an unlimited amount of reasons with your business, you might need to mass create GMail email accounts. Our software handles all the tedious tasks of email creation and you can do it in a few simples clicks.

Download Demo

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CLAD Genius - Craigslist Auto Poster - Craigslist Ad Poster - CL Auto Poster

C N M P http://www.cladgenius.com/

Create Accounts



Now with one piece of software you can post ads online, along with create Gmail, Hotmail,

and Craigslist accounts. All in a few simple clicks for easy marketing, only with CLAD Genius.

Easy Ad Maker



Benefit with "mutations" by creating your ad once and having CLAD Genius create unique versions

for infinite posting abilities, helping you stay clear of ghosting and flagging.

Custom Marketing



Easily select the cities and countries you want to promote your product or service to. This gives

you instant marketing abilities to target the consumers you are looking for.

Main Menu	
Home	Â
Purchase	<u>ال</u>
Download	≛
FAQ	
Contact	\times
Phone Verified Accounts	

Make Money Posting



If you aren't using free



" A friend of mine mentioned online classified sites as a w vechicles quicker and said that with CLAD Genius it would both and it really should be this simple. Thanks guys for s

- A. Clark/ Baltimore, MD Auto Dealer

Auto Posting The Smart and Easy Way



Whether you are posting on Craigslist.org, Backpage.com, Kijiji.com or all the smarter and faster way to get your classified postings online and fully autom tool is called CLAD Genius, short for Classified Advertising Genius, the only set to the set of the set of

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Can't Find What You Need? Hire Someone to Custom Code It for <\$200 From Scratch

GetAFreelancer.com - Gmail/AOL/Yahoo/Hotmail account creator with Proxy | .NET | C/C++ | Data Entry | Java | JavaFX

EDT <u>nStrikeTech</u> VIEW PM POST PM No Feedback Yet) BID ON THIS PROJEC
o and Hotmail accounts.
P.I will import the Proxy IP address through a list so i need an
MAKER.But some of this software is slow and also no secondary

There Are Even Open Source Options...

YCC Yahoo! Bot Maker 2.4.1

Language:	Visual Basic.NET 2008
Screenshot:	Image: CC: Yahool Bot Maker version 2410 Unename and Desenord Second Upename (a. @pathon comp pathon com Image: Fail Concentration Sp-Ub Holmation Field Canceled Removed Tetal Sp-Ub Holmation Image: Fail Concentration Sp-Ub Holmation Male Sp-Ub Holmation Male Sp-Ub Holmation Male Sp-Ub Holmation Male Sp-Ub Holmation Security Answer 1 Male a first first New Security Answer 2 Male a first New Male (Answer) New Max (Answer) New Male (Answer) New Male (Answer) New Male (Answer) New None New None <tr< th=""></tr<>

Introduction

YCC Yahoo! Bot Maker is a program designed to quickly and efficiently create Yahoo! accounts. The accounts created by YCC Yahoo! Bot Maker can be used for any of the Yahoo! services such as Yahoo! Mail or Yahoo! Instant Messenger (Y!M).

There Are Even Open Source Options (cont.)

🕥 🔘 💮 Yahoo! Coder's Cookbook YCC Yahoo! Bot Maker – A program designed to quickly and efficiently create Yahoo! accounts

http://www.ycoderscookbook.com/code/YCC_Yahoo_Bot_Maker.html

License Agreement

The software, YCC Yahoo! Bot Maker, is distributed under the Creative Commons GNU General Public License which can be found at http://creativecommons.org/licenses/GPL/2.0/ The major points follow:

- 1. No commercial distribution without permission.
- 2. You are allowed to modify the program and source, all I ask is you keep the original credit.
- 3. If you do modify the program it will fall under the same license agreement.

I have chosen this license to allow users to do pretty much what they want with the program. The big thing that I ask is please don't redistribute this software without acknowledgment to YCC and a link back to http://ycoderscookbook.com. I would love to hear what you think about the program and if you have made useful changes. A forum for YCC Bot Maker can be found at http://www.ycoderscookbook.com/forums/viewforum.php?f=8.

As with any piece of freeware, I have made every effort to make the software useable and friendly. With that said I take no responsibility for damage created by this program or the user's actions. You may be violating the Yahoo! Terms of Service by using this program. The user takes full responsibility for their actions.

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Google

Why In The World Would Someone <u>Want</u> Tens of Thousands of Accounts?

- Actual email spam sending: a few hundred messages per account X 10,000's or 100,000's of accounts can add up!
- Spam filter testing: are messages sent to "test" accounts getting through, or are those emails getting filtered?
- Reputation (mis)-feedback: if test emails do get filtered, spammer-controlled test accounts can potentially be used to mis-mark test emails as non-spam in an effort to "correct" that filtering "mistake"
- Callback verification/sender address verification purposes: spammers need many "real" accounts because completely bogus envelope sender addresses will fail callback verification tests, and if a single valid envelope sender is used too many times, it will be detected and blocked 22

Why In The World Would Someone <u>Want</u> Tens of Thousands of Accounts? (cont.)

- Phishers, scammers and fraudsters need drop boxes to accept replies; using many different drop boxes insures that people can't filter on a common message body string (or thwart an entire campaign by killing a single drop box account).
- With an account on one provider, perhaps Google, one can use that account to obtain accounts on another provider (such as Craigslist).
- Etc., etc., etc.
- Let's look look at a few of those ...

Sample (Relatively Low Volume) Sending Tool

Easy Inbox Mailer sends email using Gmail and Hotmail account

http://www.bestshareware.net/download/easy-inbox-mailer.htm 👘 🏫 🔻

Easy Inbox Mailer



of 1500 to 1800 emails/hour.

Easy Inbox Mailer is a quick inbox mailer which sends email using Gmail and Hotmail account from your desktop. Now you can send unlimited emails from your desktop without loging in to your gmail and hotmail account without using any SMTP server. You can add multiple email account on this software to send email. Say if you add 50 email accounts and select 200 email/account then you will be able to send 10,000 emails. The software rotates the email account automatically after sending a certain number of emails selected by you. If you select 100 then the software will send 100 email using each account and use the next account for sending to another 100 email. As this software use Gmail and Hotmail account for sending emails you can expect almost 100% inbox delivery rate. It can send at a speed

G Google

Postfix on Callbacks ("suitable only for low traffic sites", "performs poorly under high load")



WARNING

The sender/recipient address verification feature described in this document is suitable only for low-traffic sites. It performs poorly under high load; excessive sender address verification activity may even cause your site to be blacklisted by some providers. See the "Limitations" section below for details.

What Postfix address verification can do for you

Address verification is a feature that allows the Postfix SMTP server to block a sender (MAIL FROM) or recipient (RCPT TO) address until the address has been verified to be deliverable.

The technique has obvious uses to reject junk mail with an unreplyable sender address.

The technique may also be useful to block mail for undeliverable recipients, for example on a mail relay host that does not have a list of all the

And yet, we know some sites <u>do</u> use callbacks, and thus the bad guys are motivated to work around problems which would be associated with completely bogus MAIL FROM addresses.

Familiar Sorts of Scam Examples Enabled by Bulk Created Accounts

- "I wish to notify you that late Engr. Jurgen Krugger made you a beneficiary to his WILL. He left the sum of Thirty Million,One Hundred Thousand Dollars (USD\$30,100.000.00) to you in the Codicil and last testament to his WILL. Note: You are advise to contact me with my personal email address: deanharry_chambers@live.com" [continues]
- "This is to officially inform you that (ATM Card Number 048000101775550) has been accredited in your favour. Your Personal Identification Number is 437. The ATM Card Value is 2,000,000.00(Two Million, Great British Pounds Sterling).You are advised to contact Mr. Joe Brown via Email: disbursementunit@hotmail.com" [continues]

Would Breaking Bulk Account Creation Make Those Sort of Scams Impossible? No...

- Scammers can still create new accounts manually on a onesie-twosie basis
- Obviously scammers could still use other contact mechanisms (such as "throw away" no contract anonymous cell phones or VoIP drop box numbers), but email is still the preferred contact members for these sort of scams.
- And anyhow, wouldn't you rather these guys use someone else's free accounts, and not your company's?

Gmail Account Used To Bootstrap The Creation of Craigslist Accounts

000	Create Craigslist accounts					
	www.rain-clouds.co	m/Create_Craigs	slist_Accounts	s.html 🏠	• • G • G	oogle
► View Cart (0 items)						
RainMaker	Home	Features	Forum	Downloads	Purchase	Affiliates

Create Craigslist accounts

The software can create Craigslist accounts by simply placing your G-mail accounts into the program. Craigslist accounts are needed to post to craigslist, and even though most sections require craigslist phone verified accounts, other do not. The software can take your G-Mail accounts and plug it into the Craigslist system to register your Craigslist accounts, ready to go. As a bonus for being a RainMaker customer, we randomly give our users bulk phone verified accounts. This is not part of the software but may become part of the system in future updates.

All User receive free updates for life.

Account features

- Just insert G-mail accounts
- Automatically create CL accounts
- Can create G-mail account
- Able to post with multiple accounts
- Rotates accounts while posting
- Lower the risk of getting banned from craigslist
- Place more ads with more accounts
- Post ads without limits
- Program updates itself at all times

What Are the Primary Challenges The Bulk Account Creators Face?

- Providers enforce limits on the number of created accounts/IP, so account creation tools must be proxy enabled so as to be able to readily change IPs (or at least they need to constantly re-DHCP to get assigned new IPs)
- Captchas are commonly used in an effort to prevent automated account signup, but automated tools and/or manual captcha entry by workers from the third world can largely neutralize the protective effect of Captchas
- If bulk-created accounts exhibit any sort of detectable pattern, the accounts sharing that common characteristic risk being identified and deleted *en masse*
- Bulk created accounts (like spam) actually need a fair amount of other information (names, locations/zip codes, secret questions and answers, etc.)

Example of How One Account Creation Program Deals With Some of Those Requirements

hoo Account Creator - with OCR , By Richard, netwheat@hotmail.com		
Start Pause Test random proxy Test random data	Check IP	
Is Log Accounts Proxy usage monitor test		
lutput data	Input data	
Save data in: .\Data\Accounts.txt	Male Names	
Empty previously created data	Aaron	
town options:	Abbott	a circa a d
CL US Proxy or AUL	Abner Abraham	
Flowy (* MOL	Adam	
Stop session after: 10000 🚖 created account(s)	Addison	
✓ Delete proxy from list while 999 error ✓ Delete proxy from list while proxy is bad	Adler	
sernames	Adrian	
✓ (First)_{(Last)###	Adrien Aedan	
Username masks: V (First). (Last)#####	Aiden	
✓ (First). (Last)### ✓ (First)_(Last)###	Aiken Alan	
G (Feet) (Last)##	Allan	
Use full ID name from the list	Alastair Albern	:
averrera	Albert	3
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Digits Punctuation Min Length: 7 2	Aldis	d'a
Uppercase Vax Length: 12 -	Aldrich Alexander	
	Alfie	
C Use Predefined password:	Alfred Algernon	
Password: pass0123456	Alston	
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Use females in: 100 🛫 % of total accounts	Ambrose	
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	Arnold Arthur	

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What Are the Primary Challenges ISPs Face When Trying to Block This Sort of Abuse?

- Provider bulk account identification and takedown efforts may not scale as well as automated account creation processes (particularly when providers are loathe to incur any "false positives")
- There are LOTs of bots/open proxies out there these days
- The bad guys and bad gals are getting better at avoiding easily recognized patterns (such as the use of johnsmith1, johnsmith2, johnsmith3, etc., for account names)
- Captchas which are sufficiently difficult (e.g., able to resist automated captcha breakers) may be too hard for normal customers to successfully decode (and ISPs need to be ADA-compliant, so even if a captcha breaker can't "read" a visual captcha, could it "hear" an audio one?)₃₁

Example of a Yahoo and AOL Captcha Decoder

💮 💮 🎦 Yahoo Bot – Yahoo OCR | Yahoo Captcha Decoder | AOL OCR | AOL Captcha Decoder | Yahoo Accounts Creator | A



An Open Source Captcha Decoder

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PWNtcha – caca labs

👫 🎄 http://caca.zoy.org/wiki/PWNtcha

▼ Google

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DEFEATED CAPTCHAS

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PWNtcha is able to detect and decode the following captchas:

Origin	Samples	PWNtcha efficiency	Comments
Authimage	5228AF <u>8221.4</u> P	100%	Vendor site: ⇒ http://www.gudlyf.com/index.php?p=376 Weaknesses: constant font, aligned glyphs, constant glyph position, constant rotation, no deformation, non-textured background, constant colours, no perturbation.
Clubic	593744 694349	100%	Weaknesses: constant font, no rotation, no deformation, aligned glyph, constant background, weak colour variation, weak perturbation.
linuxfr.org	Mc CUro0 Pi hhzZRL uobBZWp	100%	Weaknesses: constant font, aligned glyphs, no rotation, no deformation, non-textured background, weak colour variation, weak perturbation.
LiveJournal?	s <u>mu6 † 5 z</u> dmgi 4 i 8 u	99%	Weaknesses: constant font, constant character position.
lmt.lv	PA8 JVK 9R5	98%	Weaknesses: constant font, almost aligned glyphs, no rotation, no deformation, constant background, no colour variation, weak perturbation.
Ourcolony	439285 547692	100%	Weaknesses: constant font, no rotation, no deformation, no colour variation, no perturbation.
Paypal	STJBB82X 83MNFXTS	88%	Weaknesses: constant font, almost aligned glyphs, no rotation, no deformation, constant background, no colour variation, no additional perturbation.
			Vendor site: 🖙 http://www.phpbb.com/

Note The Going Rate: Half a Cent/Captcha



Captcha-Bypass. CAPTCHA ends here.

Get tired of CAPTCHAs or cannot enter them? We have a ready solution for you.

Captcha-Bypass benefits

Here are our key features. You can find full feature list here.



We offer the **least price** comparing to our competitors: from \$0.005 per CAPTCHA

iMacros support



Success rate is about 95-100%



We solve all CAPTCHAs. From any site. Yes, 24/7.



Integration with many programming languages: .NET, PHP, C++, Java



Great response time: about 5-15 seconds



Order now Order CAPTCHAs Now

They Can't Auto-Decode *Every* Captcha, But They Can Automatically Read *Enough* of Them

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google	licit	etsans		<i>jacklyne</i>		50%	
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	hotmail	3B8DXN19H	À	UAWWXJ	Cepse	×96 /	30%
NEW yahoo		MFOMMB		AT5573X2			
	TVyX2T367		2MbJKMzn			NEW 45% \$8000	
		SONFAM	.7	\$2e	1854		

How Might A Provider Detect These Bulk Created Accounts?

- You're looking for "statistical outliers," or "anomalies..."
- Unusually rapid account creation speed: users who are manually creating accounts take time to read and fill in their information; robotic account creators are fast(er).
- Large numbers of accounts forwarding their email to a single common account particularly if that account in turn forwards all the email it receives to still another account
- Large numbers of accounts accessed via POP or IMAP from a single IP (but beware potential NAT gateways)
- Large numbers of changes to existing accounts from a single IP (such as password updates); again, beware NAT
- Statistically anomalous contact information (for example: uncommon names appearing too many times). 36

Detecting Bulk Created Accounts (continued)

- You're also looking for inconsistencies...
- Domestic customers registering for international accounts: this could be a legitimate out-of-region registration (for example, perhaps one done by an international student or a traveling business person), but this could also be an abuser trying to 'game' different abuse handling practices.
- More extreme example: IP geo-location says the connection used to create an account was from Vietnam; the account's postal address is Topeka, Kansas; the phone number associated with the account is from Ireland; the browser's default character set is Cyrillic... Hmm...
- The account holder seems to "misunderstand" what's spam, consistently miss-marking real spam as being "not-spam"

How Might A Provider Detect These Bulk Created Accounts? (cont. 2)

- You're also looking for **abuse**...
- Bulk-created accounts were created for abusive purposes, so one would expect them to show up in abuse complaints.
- Two problems:
 - these accounts may not show up in YOUR abuse complaints. For example, consider a spam sample routed via provider A's mail server, but with an account from provider B used as a MAIL FROM address for callback verification purposes. That spam will likely be reported to provider A, but NOT to provider B
 by the time complaints about one account start rolling in, it may be too late (e.g., the spammer may already have moved on to yet another throwaway account)₃₈

What Can We Do To Try To Discourage Bulk Account Creation and Abuse? Some Ideas...

- Do geo-IP mapping and disallow out-of-region accounts.
- Backstop that by paying attention to network latencies -you know that in-region customers will be < N msec away from you (where N might be say <= 100 msec, worst case, over a well provisioned domestic network)
- Disallow known bots, proxies, anonymizers and automatic language translator sites when creating accounts.
- To deal with those who are continually re-DHCP'ing for new IPs, track and rate limit account creation on a per netblock (or per /24) basis & per ASN, as well as per IP.
- Don't be too predictable. Ask for data on multiple screens, in different sequence(s), with different prompts, changing what you ask for and using different captchas.

What Can We Do To Try To Discourage Bulk Account Creation and Abuse? (cont. 1)

- Re-ask the same user the same question multiple times, and require intrasession answer-to-answer consistency.
- Are all supplied data prima facie valid? For example, for US addresses, does the US Postal Service think that the supplied address is a valid/deliverable addresses?
- Use a "2nd channel" (such as phone or SMS validation), limit # of accounts/phone #, and periodically revalidate
- Pay attention to captcha entry failures when they occur. If only 30% of mechanically scrutinized captchas are read successfully, you may have substantial captcha failure data to mine. Track and rate limit captcha failures per IP, per encompassing network block (or per /24), & per ASN.
- The bad guys want you to be fast, so slowww dowwwngnn.

What Can We Do To Try To Discourage Bulk Account Creation and Abuse? (cont. 2)

- Limit max recipients/msg & max msgs/account/day
- Watch for unused/suspiciously under-used accounts
- Make it harder for abusers to conceal their locations: insure that all emitted emails include the customer's source IP as part of the message's Received: headers
- Insure that your abuse department doesn't automatically screen and discard abuse reports simply because the reported spam didn't "originate from" your service. Scammers love to send spam from provider A, but with a Reply-To address associated with provider B, and perhaps a third (provider C) address buried in the message text
- Discuss account abuse with legal counsel; they may be able to suggest non-technical strategies for handling i¹/₄₁.

Thanks for the Chance To Talk Today!

• Are there any questions?