

CYBER TIGERS



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About Us

- ▣ We are a volunteer-based organization that is spreading cyber awareness and creating a cyber first responders unit.



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Competing

- ▣ We participate in several team-based competitions a year to serve as training and experience to members. (Panoply, CCDC, Mitre)



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What we do

- ▣ We serve the community as a cyber first responder team.
- ▣ Serve as Mentors for Middle Schools/High Schools
- ▣ Network with other companies and organizations to create professional relationships



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Member Development

- ▣ Develop the skills necessary for working in the field of Information Technology.
- ▣ Develop good ethics necessary to present themselves as an IT professional.
- ▣ Develop cyber security awareness



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The Real World



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Facebook and Twitter

- Attack occurred in late January.
- None of its users compromised (more than a Billion)
- Caused by a number of its employees visited a compromised website.
- Twitter was also hacked and 250,000 of its users were compromised
- Encrypted e-mails and passwords were stolen
- Caused by the scripting/coding exploit from Java.



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Smartphone Attack

- 5 Japanese were arrested for a malicious video app that they released.
- The app was downloaded 270,000 times and stole 10 million pieces of information
- The malware would transmit phone numbers and e-mails to an external server.
- A similar incident also happened earlier that year in which 6 Japanese funneled \$265,000 from smartphone users.



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USB attack vector

- USB attacks have been used for infecting an unknowing users with viruses
- Attackers usually drop infected USBs in parking lots
- Malware usually records and installs key loggers in the computer and then sends the info to a external server



E-mail Attacks

- Attackers usually send fake e-mails en-mase to thousands of users with malware.
- E-mails could also be made to “look legit” to fool the users to steal personal information.
- Yahoo Xtra was recently hacked due to e-mail spamming and approximatly 450,000 accounts were compromised.



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Physical Security

- A clinic customers information was recently stolen due to inadequate physical security
- Papers that were supposed to be shredded were stolen by the cleaning service employee that the clinic contracted
- Information that was stolen included name, date of birth, billing info, social security and many more



E-MAIL SECURITY

By: Julian Rios

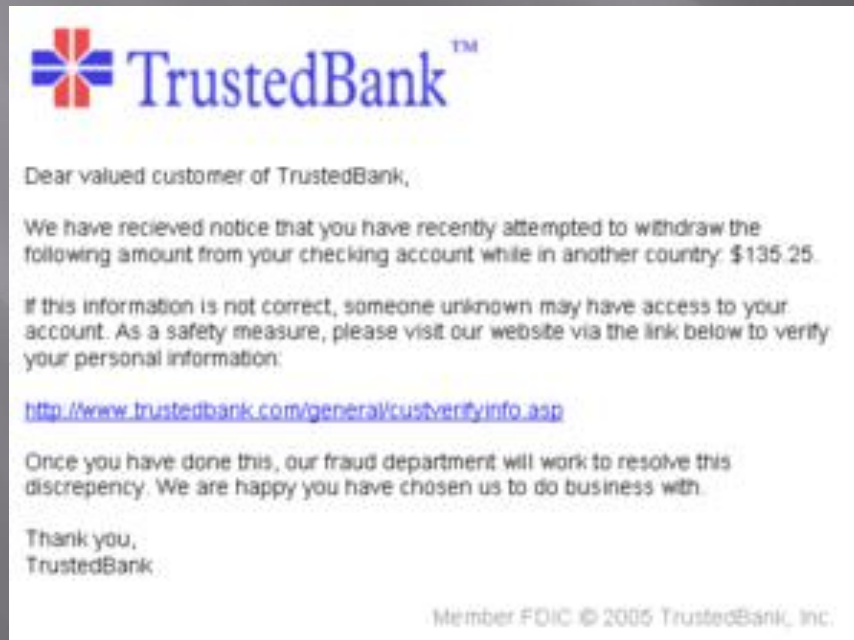


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Phishing Scams

- ❑ Companies will never ask you for personal information.
 - If personal information is brought up in a non-face-to-face capacity.
 - Malicious users impersonate big websites and ask for your information in order to “fix” your account.



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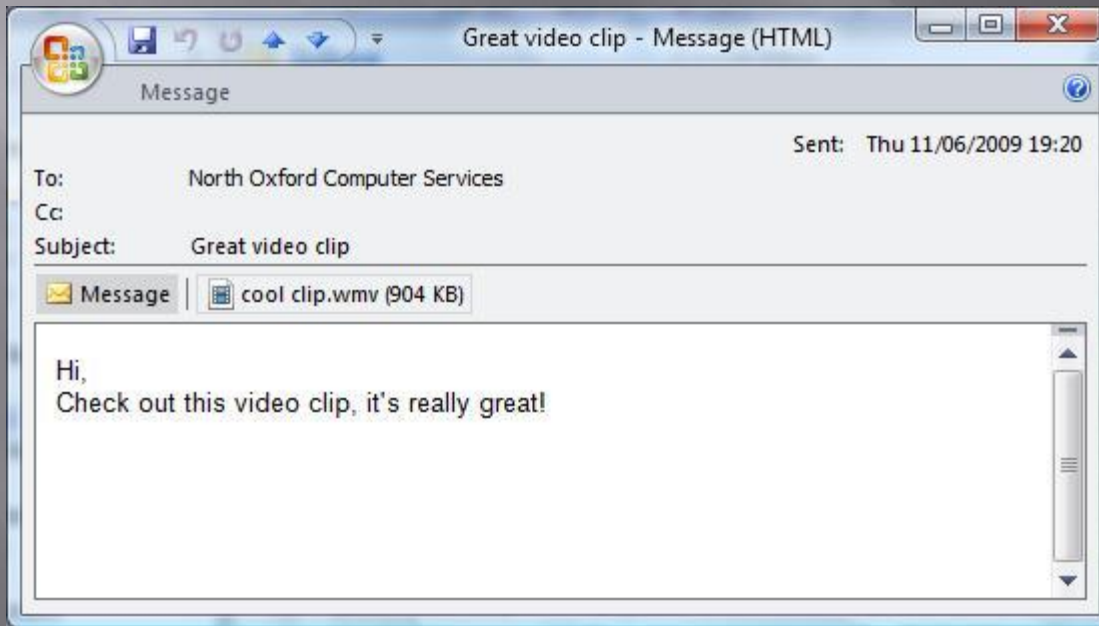
Email Links

- ▣ Links could lead you anywhere.
 - Some links could be safe, others could be swarming with viruses and malware.
 - Always visit websites directly if the email seems trustworthy.
 - ▣ E.g. Bank.
- ▣ ONLY exception is when you are expecting the e-mail link.



E-Mail Attachments

- ❑ E-mail attachments can be dangerous, no matter who they come from.
- ❑ Beware of unsolicited attachments.
- ❑ Keep software and system up to date.
- ❑ Before opening attachments, save and scan.





Free E-mail Services

- ❑ E-mail services like Yahoo, Hotmail, and Gmail.
 - Can be unsafe to use.
 - Enable option for secure browsing, or SSL.
- ❑ Messages may be sent in “plain text” and be intercepted by malicious users.
- ❑ Avoid sending sensitive information through free e-mail services.



Secure Browsing:

- ☒ Keep the connection encrypted while I'm logged in.

Check this box only if you collect sensitive information with your form(s) and intend to browse it on FormAssembly.com.

Tips.

- ▣ Avoid sending sensitive information through e-mail.
 - E.g. – Social security, credit card number, etc.
- ▣ Set up filters for unwanted spam messages.
- ▣ Don't access your e-mail from public networks.
 - E.g. – restaurants, cafés, airports, etc.



Spam

- ▣ Biggest single threat in e-mail.
 - Millions of e-mail messages are sent out everyday.
- ▣ Spam messages can contain many dangerous attachments.
 - E-mail providers like Hotmail and Gmail have spam filters.



Credits

- ▣ <http://www.learn-ethical-hacking.com/2012/03/email-security-best-practices-by.html>
- ▣ <http://www.makeuseof.com/tag/7-important-email-security-tips-you-should-know-about> *
- ▣ www.us-cert.gov/ncas/tips (Computer Emergency Readiness Team)
- ▣ <http://www.net-security.org/article.php?id=1290>



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By: Daniel Lopez

MALWARE: THE HIDDEN PREDATOR



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What is malware?

- Malware is a generic term to describe any malicious computer code that may perform denial of service, perform spying on a user or cause damage to your system



Adware

- ◉ Delivers advertising content in unexpected manner
- ◉ Usually may cause no actual harm to the system
- ◉ More nuisance than threat



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Spyware

- ⦿ Used to track user's viewing history and keystrokes
- ⦿ Collect personal information about user
- ⦿ Change computer configurations
- ⦿ Negative effects of spyware
 - Slow performance
 - New browsers toolbars
 - Hijacked Homepage
 - Increased pop-ups



Keyloggers

- Used to capture exact keystrokes of user
- Method of stealing personal information and user accounts
- May be installed in either a software or hardware method



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Trojan Horses

- Technique used to make a program appear legitimate yet may have adverse effects
- Common problems include
 - Open backdoors
 - Transmit data to attack of user
 - Slow system performance



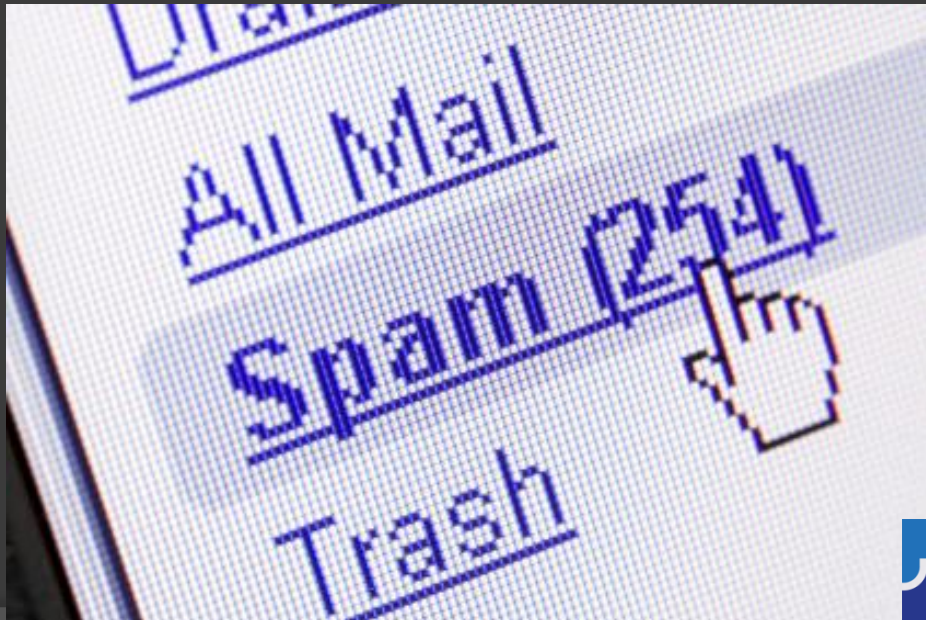
Rootkits

- Set of tools created to hide the presence of other forms of software
- Very hard to find and remove once placed in a system
- Ability to change the entire function of operating system to hide itself



Spam

- Popular method of spreading malware into other systems
- Reduces work productivity
- Nuisance



Social Engineering

- Phishing- attacker impersonating a legitimate business to steal information about user
- Vishing – Similar method but instead through a telephone call
- Impersonation – Impersonate fictitious character. Relies on attackers manipulation of human nature



Any questions?



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FIREWALLS

Ashton-Drake Giddings

[HTTP://WWW.CYBERTIGERS.ORG](http://www.cybertigers.org)



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WHAT IS A FIREWALL?

- “A **firewall** can either be software-based or hardware-based and is used to help keep a network secure. Its primary objective is to control the incoming and outgoing network traffic by analyzing the data packets and determining whether it should be allowed through or not, based on a predetermined rule set.” -Wikipedia



SOFTWARE FIREWALLS

- Microsoft Built-in Firewall
- Linux Built-in IPTables
- ZoneAlarm
- Comodo

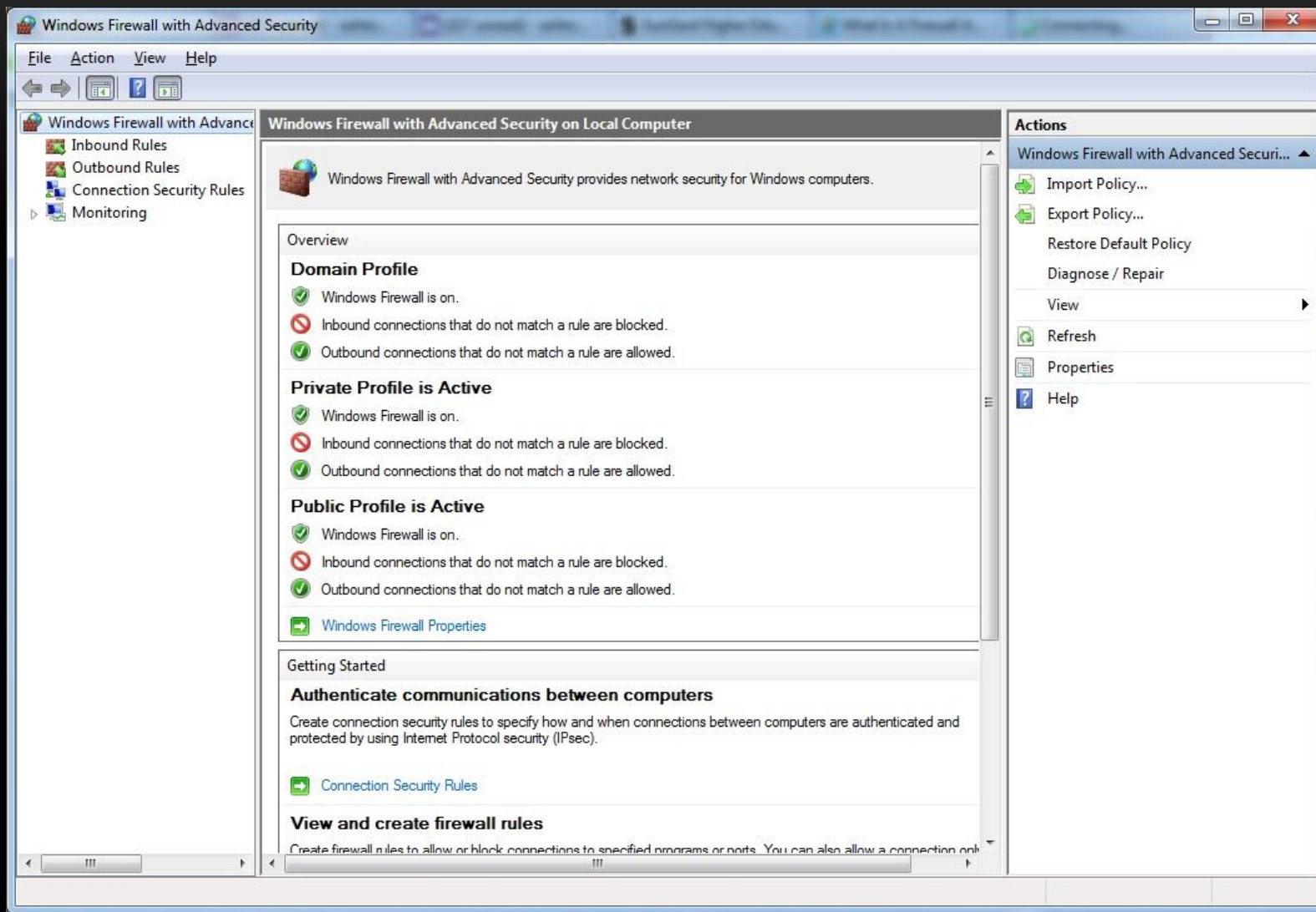


WHY IS A FIREWALL IMPORTANT?

- You want to make sure your information is private. You want to make sure unauthorized people don't access your information from the web. This is why you use a firewall. A firewall will block unauthorized connections.









ONE IS ENOUGH

- Just what the title says. You only need one firewall. Multiple firewalls will conflict. This will then either close down your network completely or open it up completely. It is just safer to have one firewall. Just configure the firewall correctly.



SAFE BROWSING

Ashton-Drake Giddings



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GET RID OF THOSE BAD BROWSING HABITS

- Do you trust every link?
- Do you believe e-mails?
- Do you click on links without knowing where they really go?
- Do you not pay attention to the URL address bar?
- Have you ever clicked a message that looked like this:

If you answered yes to any of these questions then you should reconsider your browsing habits.



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BE AWARE

From: "Virginia Commonwealth University" <peter.Loeffelmeier@t-online.de>
To:
Date: 02/26/2012 05:35 PM
Subject: New Secure Message Regarding Your Virginia Commonwealth University Webmail

NOTE that the domain is not a VCU domain but a domain outside of the US

Dear valued customer,

You have 1 new Security Message Alert!

Log In into your account to update your profile.

[Click here to Log In](#)

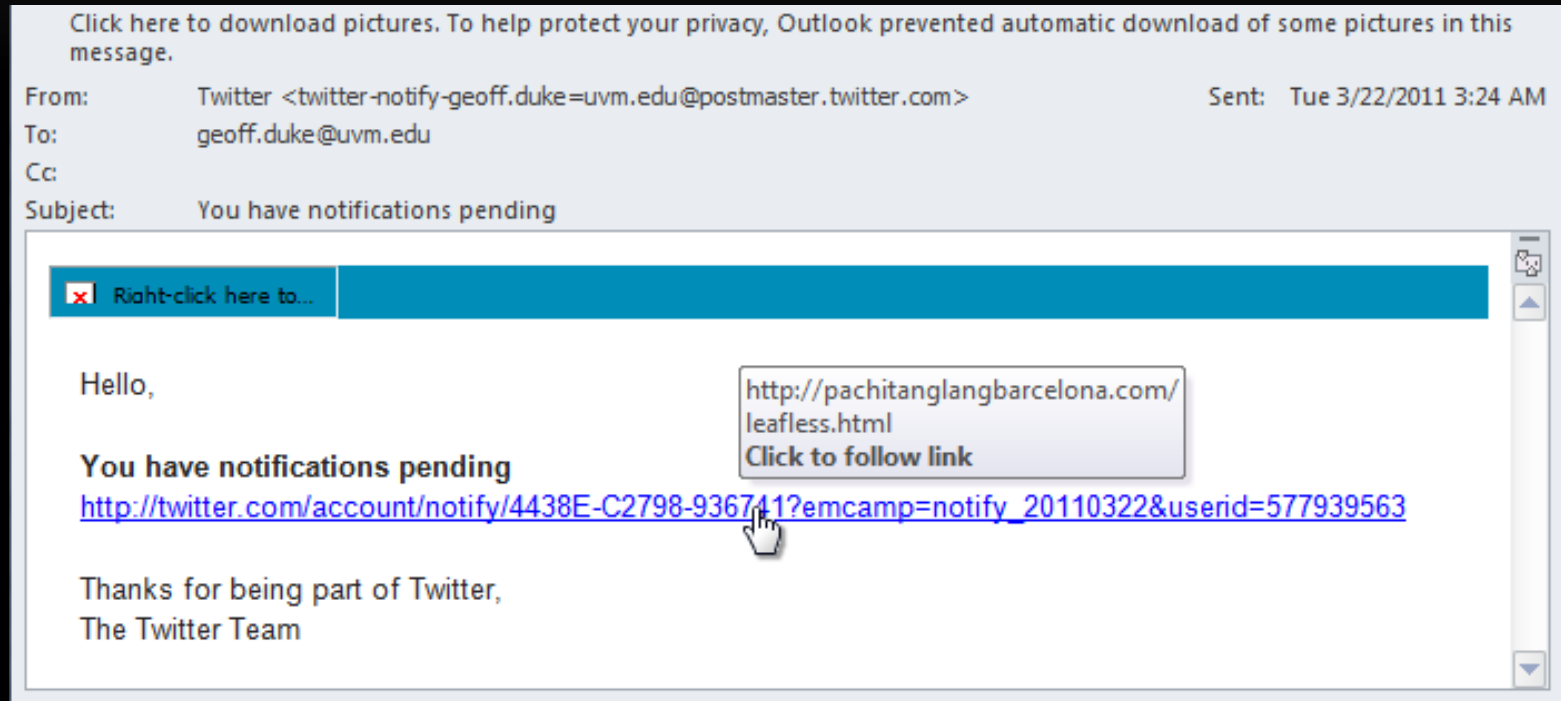
Virginia Commonwealth University.



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FALSE LINKS



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MISSPELLING AND GENERALIZATION



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HTTPS

- If you're using a website that you're inserting private information (I.E. Facebook, Bank websites, E-Commerce), always use HTTPS. This ensures a more secure connection and encrypts your data (passwords, credit card number).



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UPDATE YOUR BROWSER

- Just like any other piece of software, you want to keep up to date. A lot of the updates are made to fix bugs and security flaws.



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PUBLIC NETWORKS

- Don't put your important information on public networks
- Ex: Hotels, McDonald's, Starbucks



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