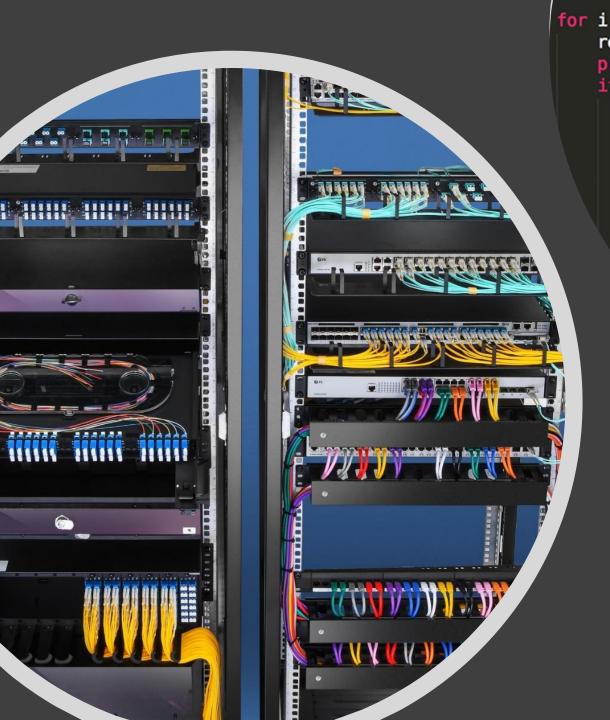


Cyber Security Awareness





```
for i in people.data.users:
    response = client.api.statuses.user_timeline.get(screen_name=i.scre
    print 'Got', len(response.data), 'tweets from', i.screen_name
    if len(response.data) != 0:
        ltdate = response.data[0]['created_at']
        ltdate2 = datetime.strptime(ltdate, '%a %b %d %H:%M:%S +0000 %Y)
        today = datetime.now()
        howlong = (today-ltdate2).days
        if howlong < daywindow:</pre>
            print i.screen_name, 'has tweeted in the past' , daywin
            totaltweets += len(response.data)
            for j in response.data:
                if j.entities.urls:
                    for k in j.entities.urls:
                        newurl = k['expanded_url']
                        urlset.add((newurl, j.user.scree
                      reen name, 'has not tweeter
```

The Cyber Security we are talking about today does NOT look like this





Social Engineering

• The manipulation of the natural human tendency to trust

- Social Media
- Email
- Phone
- On-Site



Socially Acceptable....

- Family Info
- Vacations & Travel
- Likes & Dislikes

- Friends & Pets
- Places Lived
- Causes Supported















Socially Acceptable....















Socially Acceptable....

EXAMPLES















Ain't nobody crazier than your cousins on your mama side a a a a a #ijs

pigtailedrhapsody

birthday scenario THE AVENGERS VERSION

1.	went clubbing with	17.	wrecking havoc with	JAN	THOR
2.	best friends with	18.	got trolled by	FEB	IRON MAN
3.	being stalked by	19.	is actually the child of		
4.	ruling over humans	20.	first kiss stolen by		SELVIG
5.	gained the powers of	21.	isolated on an island	APR	BLACK
6.	had babies with		shared an ice cream with	MAY	THE
7.	got into a fight with	23.	is actually a sibling of	JUN	HAWKEYE
8.	swapped personalities with	24.	got kidnapped by	The state of the	
9.	went on a date with	25.	bound for life to	JUL	COULSON
10.	formed a team with	26.	started a company with	AUG	LOKI
11.	formed a band with	27.	crashed a party with	SEP	NICK
12.	is worshipped by	28.	went to the beach with		
13.	showered together with	29.	went to prom with	OCT	BRUCE BANNER
14.	saved the world with	30.	is hugging	NOU	THE HULK
15.	became the sidekick of	31.	created a new world with	DEC	CAPTAIN
16.	became the boss of				

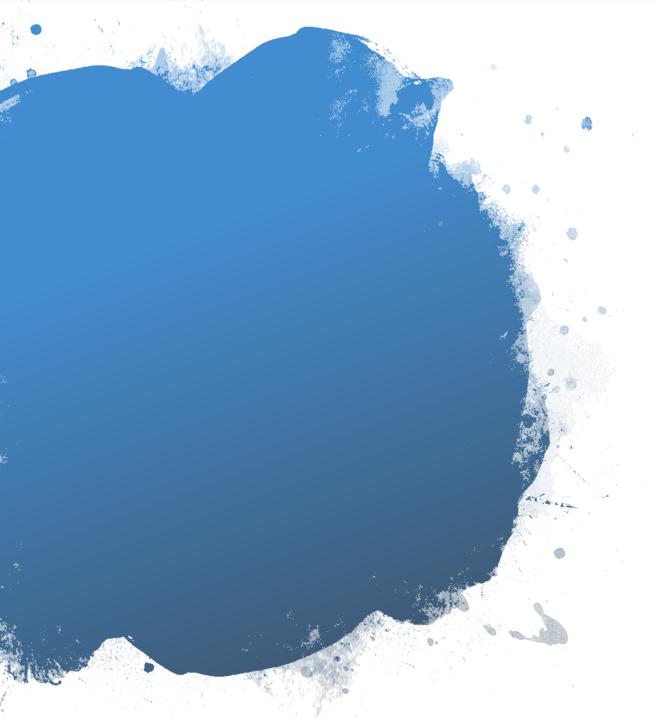
TYPE "HALLOWEEN" AND THE YEAR YOU WERE BORN IN THE GIF BAR.

THATS YOUR COSTUME THIS YEAR...



Somebody, please play. I want to see your answers:

- * How old are you: 43
- * Surgeries: 2
- * Tattoos: 3 i need more
- * Ever hit a deer: yes
- * Rode in an ambulance: yes
- * Ice skated: yes
- * Rode on a motorcycle: Yes
- * Stayed in hospital: yes
- * Skipped school: yes
- * Last phone call:
- * Last text from:
- * Watched someone die: yes
- * Pepsi or Coke: Pepsi
- * Favorite pie: coconut cream
- * Favorite pizza: hamburger and green olive
- * Favorite season: spring
- * Broken bones: 6 (4 ribs, big toe and neck)
- * Received a ticket: yes
- * Favorite Color: midnight blue
- * Sunset or Sunrise: sunrise
- * Who will play along: a few



Your Movie Star Name

=

Mother's Maiden Name

+

Social Security Number

OMG!
What's Your Movie Star Name?

As this information is assembled, they are ready to take the next step



- Urgency
- Emotion
- Empathy
- Authority

Email is the Key to the Network

- Phishing
 - Links & Attachments
 - vv ≠ w

- Business Email Compromise (BEC)
 - Personalized grammar, signatures, etc





Can you spot the hack?

From: Keith Fotta [mailto:kfotta@proactivernanagedit.com]

Sent: Tuesday, March 21, 2017 12:24 PM

To: Lori Sacchetti < lsacchetti@purechannelit.com

Subject: Payment.

Pay the attached invoice, payment is for a Legal/Professional Fees.

Cheers, Keith



Keith Fotta

Chief Executive Officer
Pro-Active Managed IT™

W | +1 (652) 379-2025 C | +1 (617) 398-0070 E | kfotta@proactivemanagedit.com www.proactivemanagedit.com From: Keith Fotta [mailto:kfotta@proactivernanagedit.com]

Sent: Tuesday, March 21, 2017 12:24 PM

To: Lori Sacchetti < lsacchetti@purechannelit.com>

Subject: Payment.

Pay the attached invoice, payment is for a Legal/Professional Fees.

Cheers, Keith



Keith Fotta

Chief Executive Officer

Pro-Active Managed IT™

W | +1 (652) 379-2025 C | +1 (617) 398-0070 E | kfotta@proactivemanagedit.com From: bevcomm.net [mailto:mlfamily@bevcomm.net]

Sent: Thursday, July 13, 2017 2:04 AM Subject: Re: bevcomm.net IT Help Desk.

Attn:

An Attempt was made to Your Account from a new computer. Please kindly confirm your account by clicking on : http://ow.ly/2Dlx30dAJJd

bevcomm.net IT Help Desk. Thank you for your cooperation. System Administrator.



Mon 7/23/2018 10:18 AM

Zimbra Primary Email <jack.mitcham@hanlees.net>

Update Your Primary Email Address

To lshgg@gdah.com

1 If there are problems with how this message is displayed, click here to view it in a web browser.

Phish Alert

IMPORTANT NOTICE ABOUT YOUR ZIMBRA MAIL ACCOUNT

We've noticed the primary email address associated with your Zimbra Mail Account, can no longer receive emails from Zimbra Mail .

To make sure you don't miss any messages from your friends and contacts, or updates on Zimbra Mail, you can:

Keep your primary address by re-confirming your email address

****Re-confirm your email address to avoid losing your Zimbra Mail Accountand Services****

Thank you for being a member of Zimbra Mail.

By the ZimbraMail Project Team

We've noticed the primary email address associated with your Zimbra Mail Account, can no longer receive emails from Zimbra Mail.

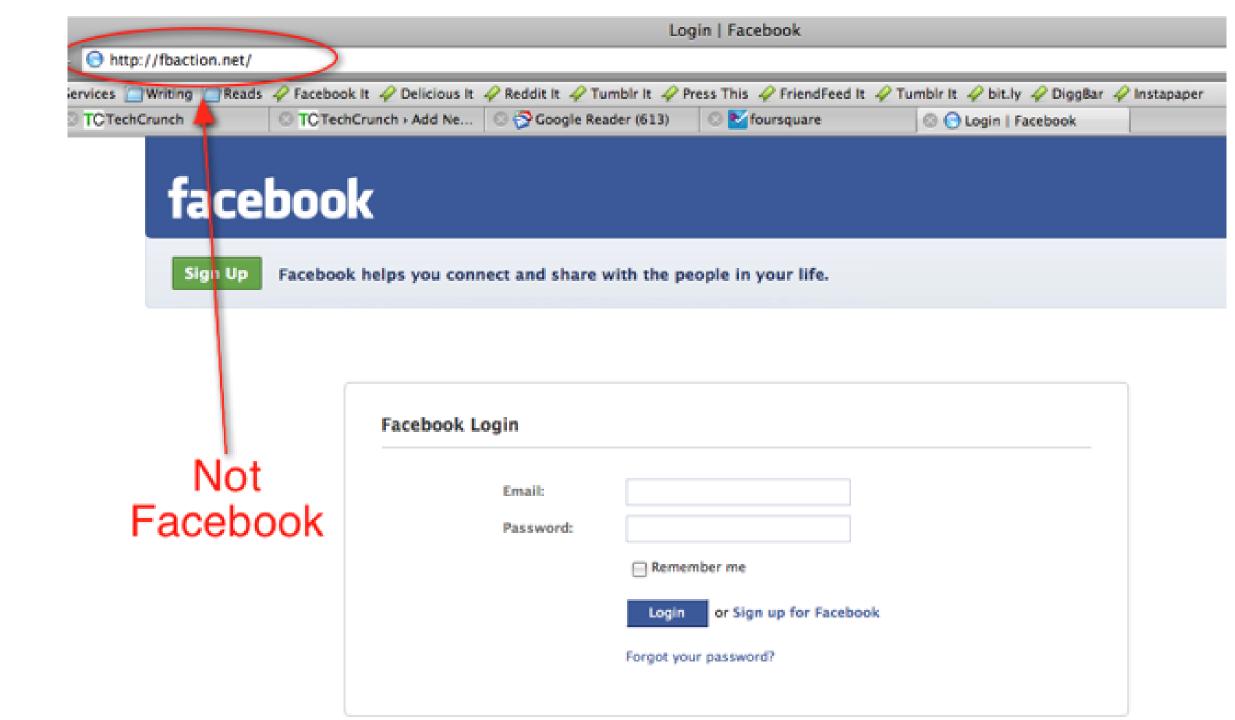
To make sure you don't miss any messages from your friends and contacts, or updates on Zimbra Mail, you can:



****Re-confirm your email address to avoid losing your Zimbra Mail Accountand Services****

Thank you for being a member of Zimbra Mail.

By the ZimbraMail Project Team



From: " | @bevcomm.net>

Sent: Sunday, October 28, 2018 7:30:10 PM

Hi

I am a hacker who cracked your e mail as well as device a few weeks back.

You typed in your password on one of the sites you visited, and I intercepted that.

Here is your password from _______@bevcomm.net upon moment of hack: bryce1

However you can will change it, or even already changed it.

Nonetheless this doesn't mean much, my own malicious software modified it every time.

Do not consider to make contact with me personally or even find me, it is impossible, since I sent you email from you

Through your own e mail, I uploaded harmful computer code to your Operation System.

However you can will change it, or even already changed it.

Nonetheless this doesn't mean much, my own malicious software modified it every time.

Do not consider to make contact with me personally or even find me, it is impossible, since I sent you email from your email account

Through your own e mail, I uploaded harmful computer code to your Operation System.

I saved all of your current contacts along with buddies, acquaintances, relatives and also the complete record of visits to the Online

Additionally I installed a Virus on your device.

You are not my only target, I normally lock pcs and ask for a ransom.

However I was hit by the sites of intimate content material that you usually visit.

I am in great shock of your current fantasies! I have never observed anything at all like this!

Consequently, when you had fun on piquant internet sites (you know what I mean!) I created screen shot with utilizing my program

After that, I combined them to the content of the particular currently viewed website.

There will be giggling when I send these pictures to your acquaintances!

However I believe you do not need that. Hence, I expect to have payment from you for my quiet. I feel \$900 is an adequate price regarding it! Pay with Bitcoins. My Bitcoin wallet address: 1FtrfX5z7CWB45P1d6bzPz7JMptp3WyaiM If you do not understand how to do this - enter into Google 'how to send money to the bitcoin wallet'. It is simple. Following receiving the given amount, all your data will be promptly eliminated automatically. My pc virus will ad ditionally eliminate itself from your computer. My Virus possess auto alert, so I know when this specific mail is read. I give you 2 days (Forty eight hrs) for you to make the payment. In case this does not occur - every your contacts will get outrageous photographs from your darker secret life and your system will be blocked as well after two days. Don't be stupid! Police force or buddies won't support you for sure ... PS I can provide you recommendation for the future. Don't enter your passwords on risky web-sites. I wish for your discretion.

Hasta la vista



';--have i been pwned?

Check if you have an account that has been compromised in a data breach

https://haveibeenpwned.com

';--have i been pwned?

Check if you have an account that has been compromised in a data breach

janderson@bevcomm.com

pwned?

Start using 1Password.com

Oh no - pwned!

Pwned on 8 breached sites and found no pastes (subscribe to search sensitive breaches)

3 Steps to better security



Step 1 Protect yourself using 1Password to generate and save strong passwords for each website.



Step 2 Enable 2 factor authentication and store the codes inside your 1Password account.



Step 3 Subscribe to notifications for any other breaches. Then just change that unique password.

Why 1Password?



Breaches you were pwned in

A "breach" is an incident where data has been unintentionally exposed to the public. Using the 1Password password manager helps you ensure all your passwords are strong and unique such that a breach of one service doesn't put your other services at risk.



LinkedIn: In May 2016, LinkedIn had 164 million email addresses and passwords exposed. Originally hacked in 2012, the data remained out of sight until being offered for sale on a dark market site 4 years later. The passwords in the breach were stored as SHA1 hashes without salt, the vast majority of which were quickly cracked in the days following the release of the data.

Compromised data: Email addresses, Passwords



Dropbox: In mid-2012, Dropbox suffered a data breach which exposed the stored credentials of tens of millions of their customers. In August 2016, they forced password resets for customers they believed may be at risk. A large volume of data totalling over 68 million records was subsequently traded online and included email addresses and salted hashes of passwords (half of them SHA1, half of them bcrypt).

Compromised data: Email addresses, Passwords



River City Media Spam List (spam list): In January 2017, a massive trove of data from River City Media was found exposed online. The data was found to contain almost 1.4 billion records including email and IP addresses, names and physical addresses, all of which was used as part of an enormous spam operation. Once de-duplicated, there were 393 million unique email addresses within the exposed data.

Compromised data: Email addresses, IP addresses, Names, Physical addresses

Passwords

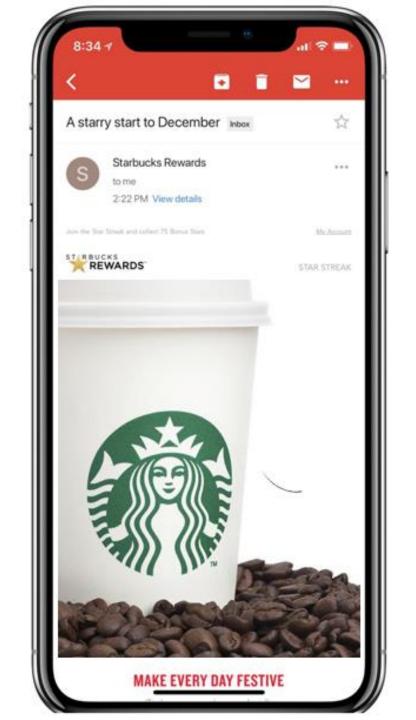
- 20% of password reset questions can be guessed on the first try
- 40% of people can't remember their own answers
- 60% of answers can be found on social media

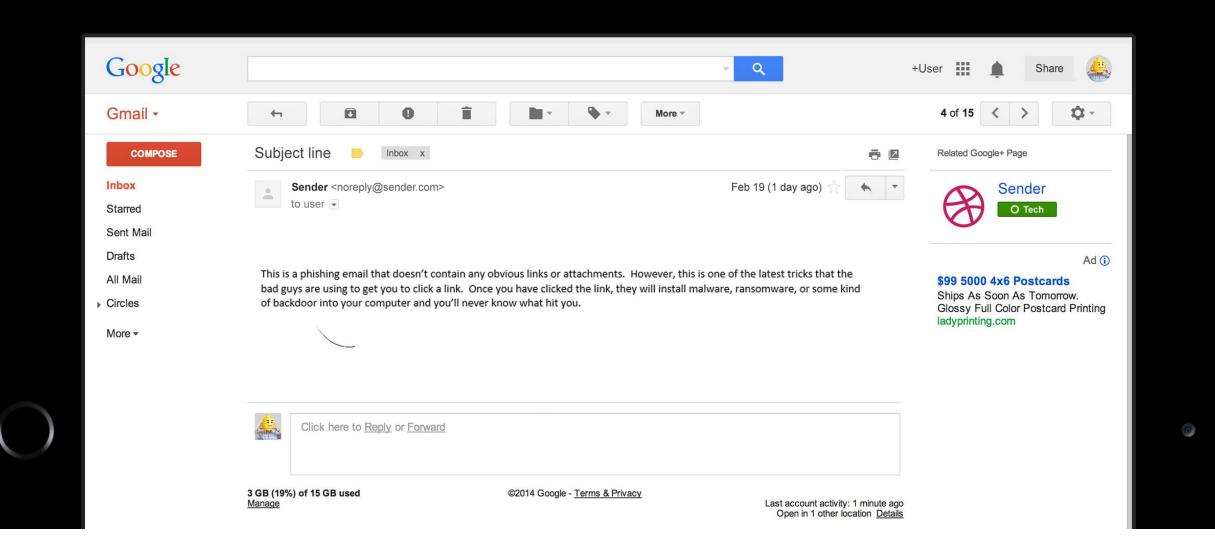
- Kevin Mitnick

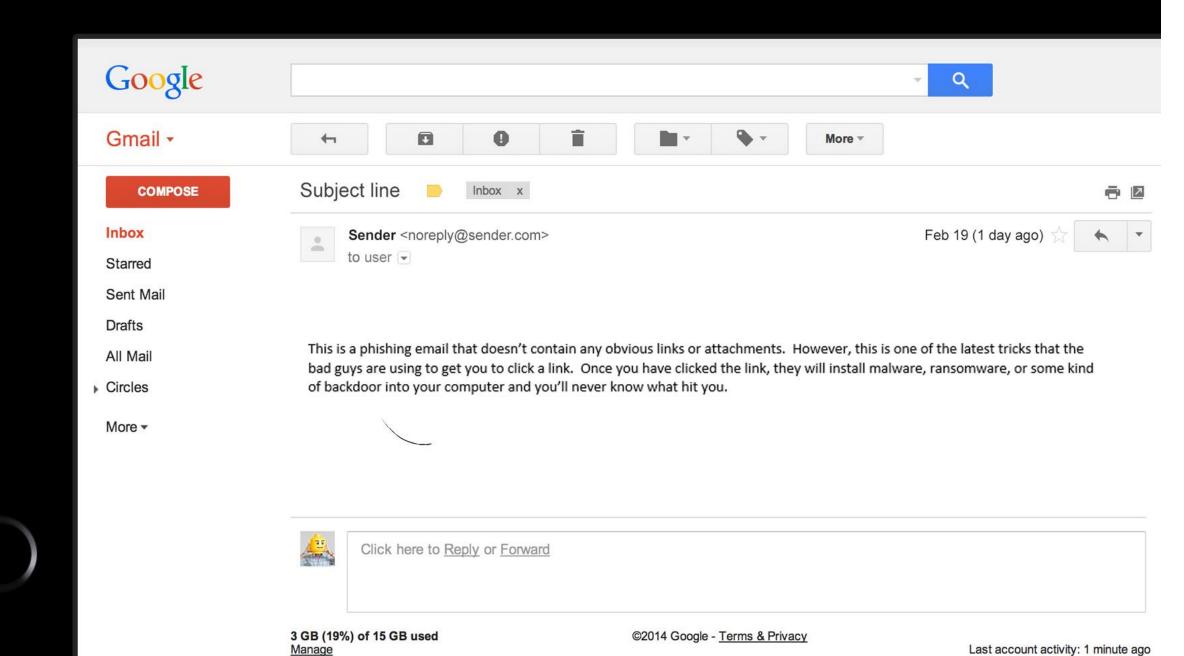






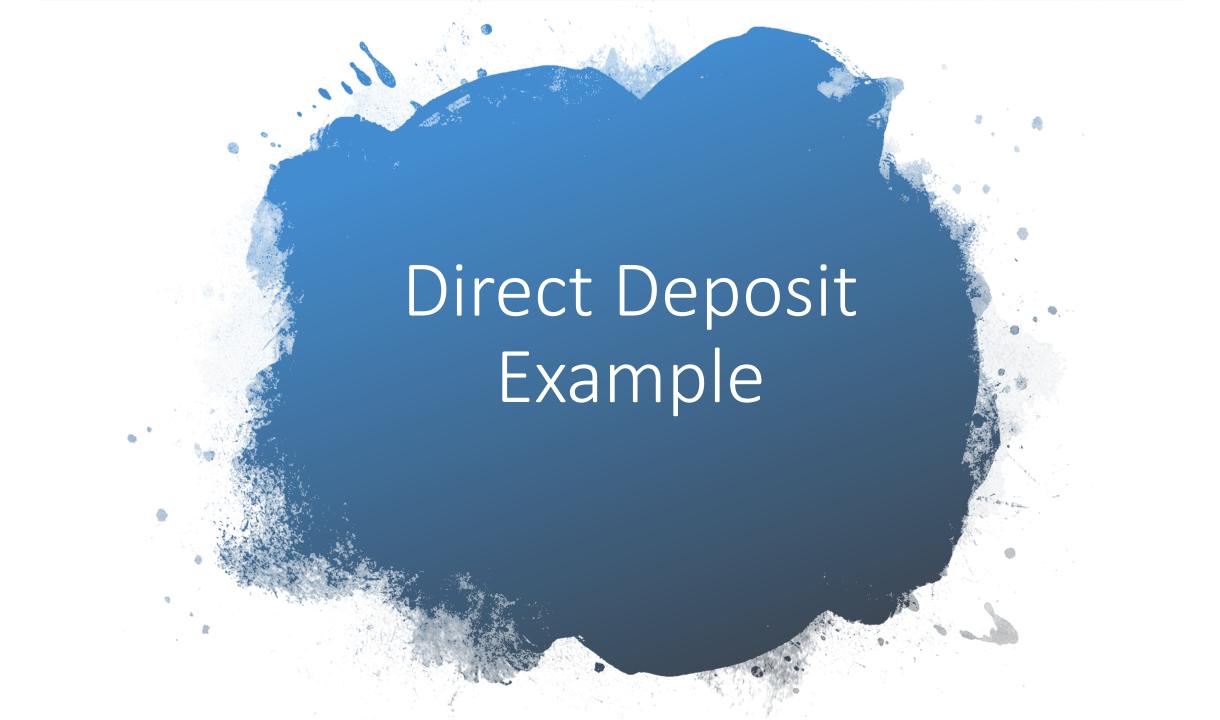






Open in 1 other location Details





From: [mailto:ed.vp@aol.com]

Sent: Tuesday, March 12, 2019 10:32 AM

То:

Subject: DD

I changed my bank and i will like to change my DD details.

What do I need to provide? I believe I only need my new bank account and routing numbers?

Also, can the change be effective for the current pay date? Please get back to me ASAP

Regards

Sent by Mail for Windows 10

-----Original Message-----

From:

To: ' <ed.vp@aol.com>

Sent: Tue, Mar 12, 2019 1:04 pm

Subject: RE: DD

Hi _____,

I just need the routing numbers and account numbers. I do need to know ASAP as I already submitted for this payroll, but can still change if I receive quickly.

From: <ed.vp@aol.com>
Sent: Tuesday, March 12, 2019 12:12 PM

To:

Subject: Re: DD

OK. Here is the new details

Routing #:124-303-120

Account #: 2012-1240-679-221

Account type : Checking

Email me back to let me know once my DD is updated.

Regards

THE RESERVE OF THE PARTY OF

Sent by Mail for Windows 10



Hover to Discover

Check Sender Email Address

Close Email, Open Browser

KeepCalmAndPosters.com



Vishing

 Phone calls are the next most common way to breach a network

All you have to do is ask

BEVCOMM Example

- Call to change email password
 - Security Questions?
 - Try Again
 - "Dave from BEVCOMM"

- Why?
- Public WiFi





One account for all Mayo Clinic services

Sign in to Patient Online Services

ssword
Show Password
Login
ate Your Account



Need help logging in?

We should have you on your way shortly. You will receive an email with your user name and an email to reset your password.

Please enter your email address:

Email:

Format: johndoe@domain.com

Continue

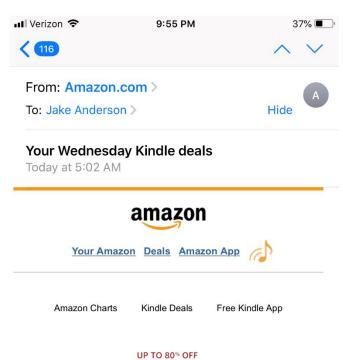


Update your information	
To finish, do one of the following.	
Enter your Mayo Clinic Number:	
	7 to 9 digits; assigned to you before your first visit. Where to find your Mayo Clinic number
- OR -	What is your matherla maiden name?
Answer the question:	What is your mother's maiden name?
Answer:	
	Continue Start Over

SMiShing - Smart Phones

• Email Links?



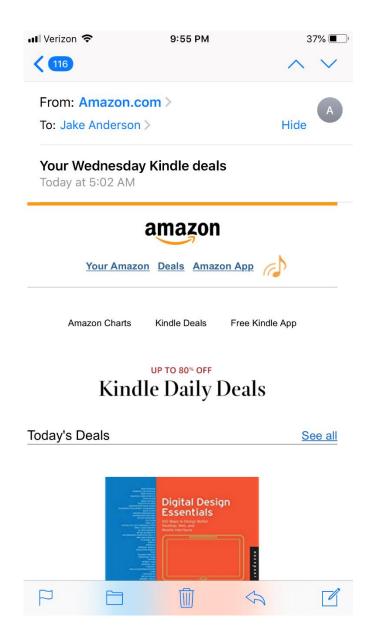


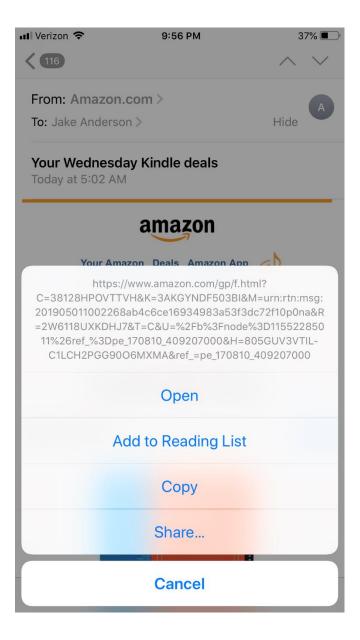
Kindle Daily Deals

Today's Deals

See all







SMiShing - Smart Phones

- Snapchat text messages with links
- Other text message links







Impersonation - On-Site Breaches

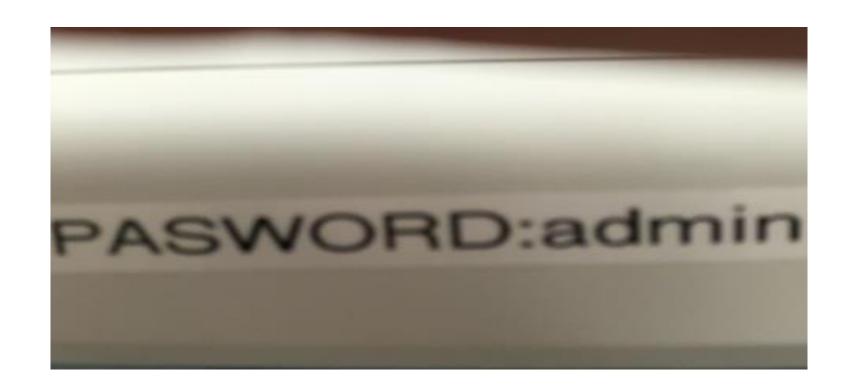
Catch Me If You Can

- Who am I?
 - BEVCOMM?
 - Hands Full?
- Out The Front Door



• Under Construction = Under Attack

Why Go On-Site?





Dave Duncan
CEO
dduncan@iacommunicationsall.com
(515) 867-2091



Brittany Bonnicksen
Director of Events and Marketing
brittany@iacommunicationsall.com
(515) 868-0332

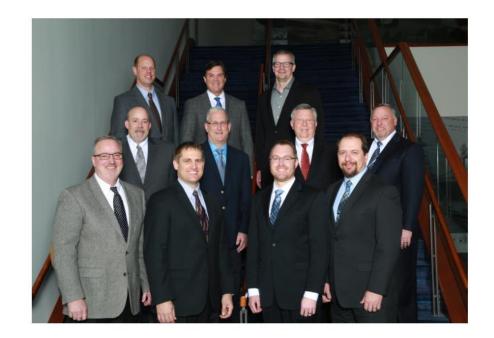


Melissa Primus

Director of Membership and Operations melissa@iacommunicationsall.com (515) 868-0333



2018-2019 Iowa Communications Alliance Board of Directors

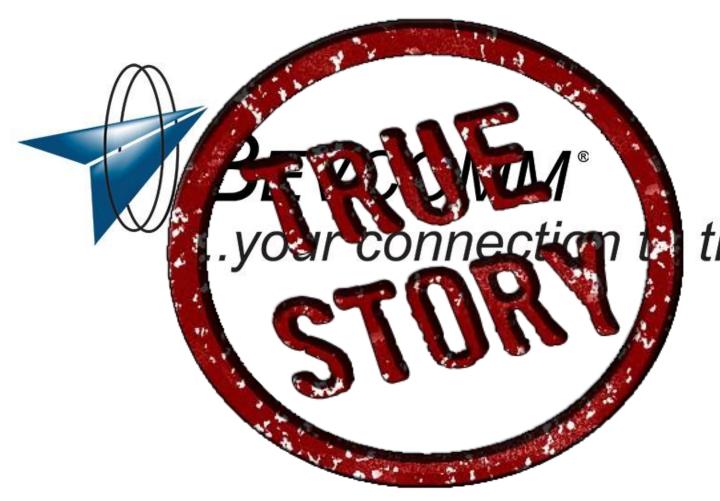


Front row: Mark Peterson, Mark Thoma, Ryan Boone, Levi Bappe Second Row: Chuck Deisbeck, Bryan Amundson, Kevin Hranicka, Jeff Roiland

Third Row: Marcus Behnken, Thomas Lovell, Mark Harvey

Business Email Compromise In Real Life





the future



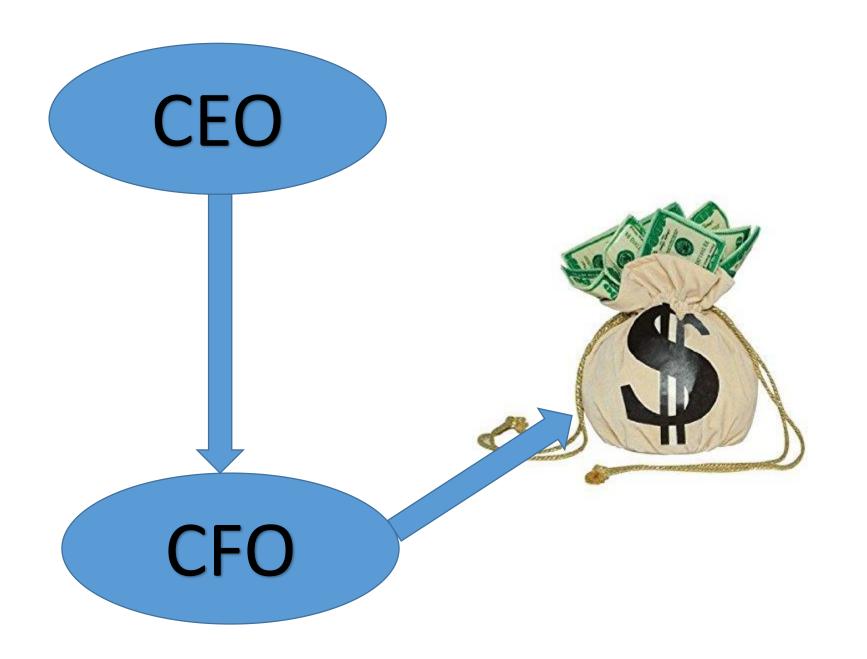


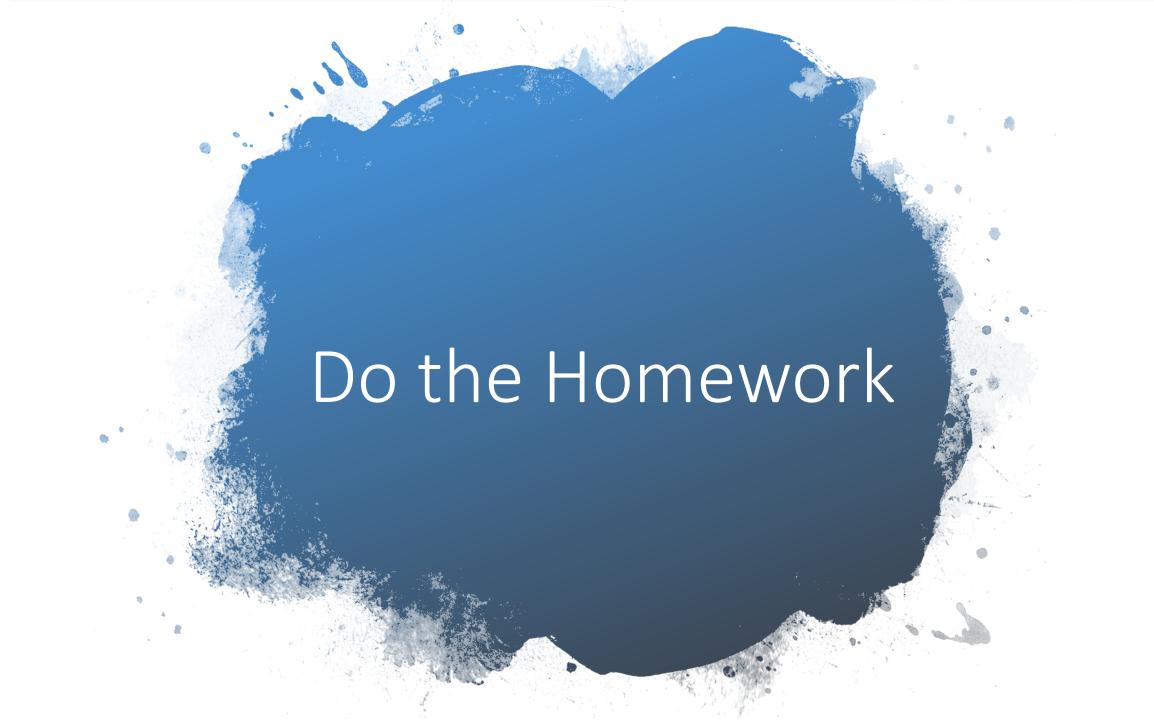






CFO











Bill Eckles • 1st
CEO at BEVCOMM
Blue Earth, Minnesota

Message

More...





Bill Eckles • 1st
CEO at BEVCOMM
Blue Earth, Minnesota

Message

More...



Arlette (Pilcher) Dutton
CFO at BEVCOMM

Greater Minneapolis-St. Paul Area

Message

More...

Plan The Attack

- Need Info from Bill:
 - Email style
 - When he might not be available in person for questions
- Have Bill email Arlette
- Have Arlette send Money

Need an "accomplice"



Narrow Down the List

Using Social Media Sites





















John Sonnek • 1st
Director of Operations at BEVCOMM
Greater Minneapolis-St. Paul Area

Message

More...

Jake Anderson
President, Business Solutions at BEVCOMM
Greater Minneapolis-St. Paul Area

Add profile section ▼

More...





Message

More...

Jim Beattie • 1st

Director of Government Relations & G BEVCOMM

Greater Minneapolis-St. Paul Area

Message

More...



Matt Peterson NOC Manager





beckles9





Matt Peterson NOC Manager



Here's the Stooge



Jake Anderson
President, Business Solutions at BEVCOMM
Greater Minneapolis-St. Paul Area

Add profile section ▼

More...

Bill Eckles

Contact Info

Bill's Profile

linkedin.com/in/bill-eckles-0081001

Website

bevcomm.com (Company Website)

beckles@bevcomm.com

Jake Anderson

Contact Info

in Your Profile
linkedin.com/in/vikingjake

Website
bevcomm.net (Company Website)

ianderson@bevcomm.com

Method of Attack? Domain Spoofing

BEVCOMM Domain Spoofing

bevcomm.com

BEVCOMM Domain Spoofing

bevcomrn.com

bevcomm.com

BEVCOMM Domain Spoofing

bevcomrn.com

bevcomm.com

bevcornm.com



Use Spoofed Domain to Create a Spoofed Email Account

janderson@bevcomrn.com

Start with the CEO



Fri 6/22/2018 6:26 PM

Jake Anderson < janderson@bevcomrn.com >

Next Week?

Hey, what days are you in the office next week?



Fri 6/22/2018 6:44 PM

Bill Eckles <beckles@bevcomm.com>

Re: Next Week?

To Jake Anderson

1 You replied to this message on 6/22/2018 6:44 PM.

Monday for a couple hours right away and then Wednesday till the end of the day Friday

From Bill Eckles mobile

On Jun 22, 2018, at 6:25 PM, Jake Anderson < <u>janderson@bevcomrn.com</u>< <u>mailto:janderson@bevcomrn.com</u>>> wrote:

Hey, what days are you in the office next week?



Fri 6/22/2018 6:44 PM

Jake Anderson < janderson@bevcomrn.com>

RE: Next Week?

To 'Bill Eckles'

1 We removed extra line breaks from this message.

Ok, sounds good.

----Original Message-----

From: Bill Eckles [mailto:beckles@bevcomm.com]

Sent: Friday, June 22, 2018 6:44 PM

To: Jake Anderson < <u>janderson@bevcomrn.com</u>>

Subject: Re: Next Week?

Monday for a couple hours right away and then Wednesday till the end of the day Friday

From Bill Eckles mobile

On Jun 22, 2018, at 6:25 PM, Jake Anderson < <u>janderson@bevcomrn.com</u> < <u>mailto:janderson@bevcomrn.com</u> >> wrote:

Hey, what days are you in the office next week?



Fri 6/22/2018 6:52 PM

Bill Eckles <beckles@bevcomm.com>

Re: Next Week?

To Jake Anderson

1 You replied to this message on 6/22/2018 6:56 PM.

Did you want to get together?

From Bill Eckles mobile

> On Jun 22, 2018, at 6:44 PM, Jake Anderson < janderson@bevcomrn.com > wrote:

>

> Ok, sounds good.

>



Fri 6/22/2018 6:56 PM

Jake Anderson < janderson@bevcomrn.com >

RE: Next Week?

To 'Bill Eckles'

• We removed extra line breaks from this message.

Nah, I was mainly just testing another spear phishing possibility.

I'm maybe enjoying this just a little too much, but check the domain name that my emails are coming from....

What have I learned?

- My spoofed domain is working
- When he will be gone next week
- What his email signature looks like from his phone

What have I learned?

- My spoofed domain is working
- When he will be gone next week
- What his email signature looks like from his phone

Time to create my next spoofed email account –

beckles@bevcomrn.com

On to the CFO with Authority & Urgency

Wire Transfer Today?

Date:



Bill Eckles <beckles@bevcomrn.com>

Eckles \ Deckles@bevcollilli.coll

To: adutton@bevcomm.com

06/25/2018 1:21

Bcc: beckles@bevcomm.com



Arlette,

Would there still be time to get a \$16,000 wire transfer out today? I'm out of the office today and tomorrow.

From Bill Eckles mobile

Re: Wire Transfer Today?



Arlette Dutton <adutton@bevcomm.com>



Date: 06/25/2018 1:23

To: Bill Eckles <beckles@bevcomrn.com>

```
I think so, we are all in a meeting right now. I think cutoff is still 3:00.
Arlette Dutton
Sent from my wireless phone
> On Jun 25, 2018, at 1:21 PM, Bill Eckles <beckles@bevcomrn.com> wrote:
> Arlette,
> Would there still be time to get a $16,000 wire transfer out today? I'm out of the office today and tomorrow.
> From Bill Eckles mobile
```

Re: Wire Transfer Today?



Bill Eckles <beckles@bevcomrn.com>

Date: 06/25/2018 1:26

To: adutton@bevcomm.com

Bcc: beckles@bevcomm.com



Ok, I'll try to get you an account number before 3:00

From Bill Eckles mobile

On Mon, 25 Jun 2018 18:23:41 +0000, Arlette Dutton wrote:

I think so, we are all in a meeting right now. I think cutoff is still 3:00.

Arlette Dutton

Sent from my wireless phone

Re: Wire Transfer Today?



Arlette Dutton <adutton@bevcomm.com>









Date: 06/25/2018 1:26

To: Bill Eckles <beckles@bevcomrn.com>

0k

Arlette Dutton

Sent from my wireless phone

On Jun 25, 2018, at 1:26 PM, Bill Eckles <beckles@bevcomrn.com<;mailto:beckles@bevcomrn.com>> wrote:

Ok, I'll try to get you an account number before 3:00

From Bill Eckles mobile

Elapsed Time = 5 Minutes



Something just didn't seem right....



Think Before You Click

- Hover to discover or long press
- Look at sender email address
- Close email, open browser
- Handle sensitive info with care
 - SSN
 - Banking/Financial/Tax
 - Medical/Health
 - Birthdays
- Call to verify (not the number in the email)
- Use multi-channel verification



A Little More Help

- Strange Phone Call?
 - Hang up
 - Get reference #
 - Call back with # you know/find
- Stranger Danger!
 - Verify credentials
 - Old Company/New Face call to verify
- No Easy/Short Passwords!
- Wait 10 Seconds
 - "Something didn't seem right..."



- Social Media?
 - Think before you post
 - You can't control your friends & family
- Know what's out there
 - And how it could be used against you

For Your Company

- Assessments
- Password Policies
- Separate Admin Accounts
- Restrict Local Machines
- VPN the Only Way In
- Use Detection Tools
- Have a Plan Incident Response
- Train Employees
 - 30 → 20
 - 150 → 2



Questions or Comments?

janderson@bevcomm.com

Questions or Comments?

janderson@bevcomm.com

beckles@bevcomrn.com

Questions or Comments?

janderson@bevcomm.com

beckles@bevcomrn.com

dduncan@iacommunicationall.org

