

Security Training



Part 3: Tech Training & Practice

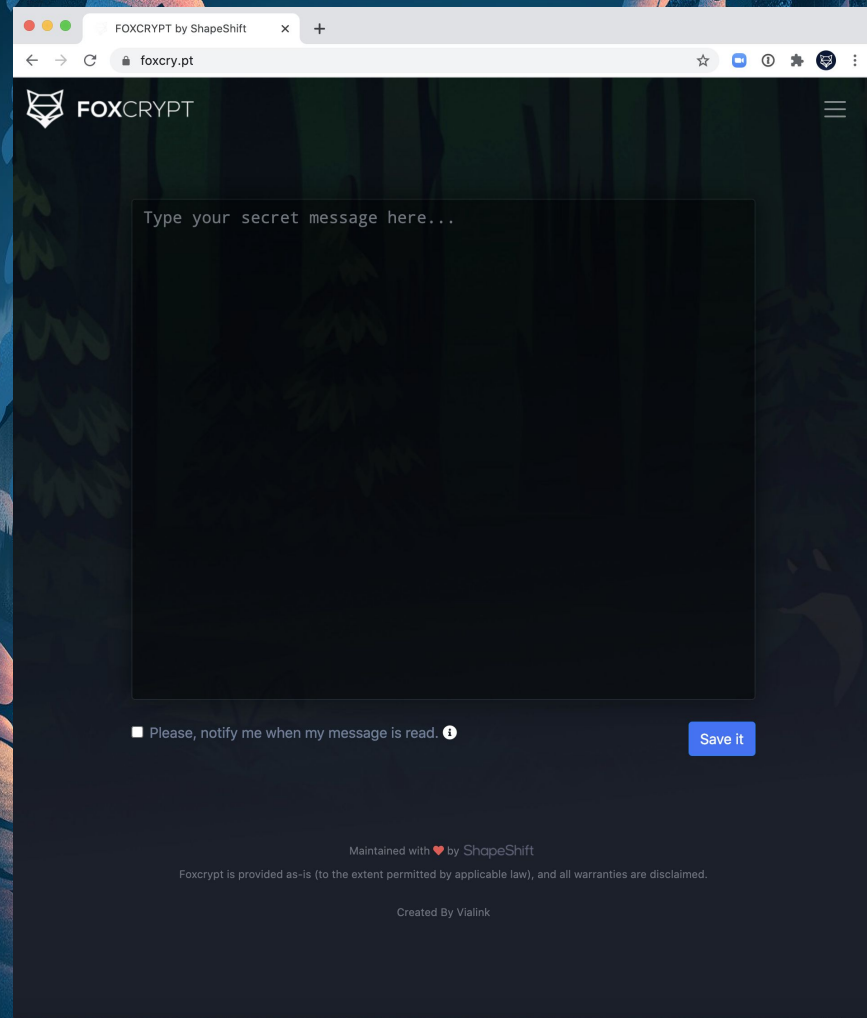
This section will allow you to practice using some of the tools that have been installed in previous training sessions and offer a time to ask questions.



Foxcry.pt

Website to quickly and securely share text with other foxes (<https://foxcry.pt>)

- Auto-destructs messages after they're read
- Great way to share API keys, customer PII, and other sensitive data with foxes



GPG Practice

GPG is what ShapeShift uses for Encryption.

It has four primary functions:

- Encrypt a message
- Decrypt a message
- Sign a message
- Verify a message



Encryption vs. Digital Signatures

Encryption protects **confidentiality** of data

- It hides information from others

Digital Signatures protect **integrity** and **authenticity** of data

- It shows unauthorized changes
- It allows recipients to know the true author
 - Like a wax seal on an envelope

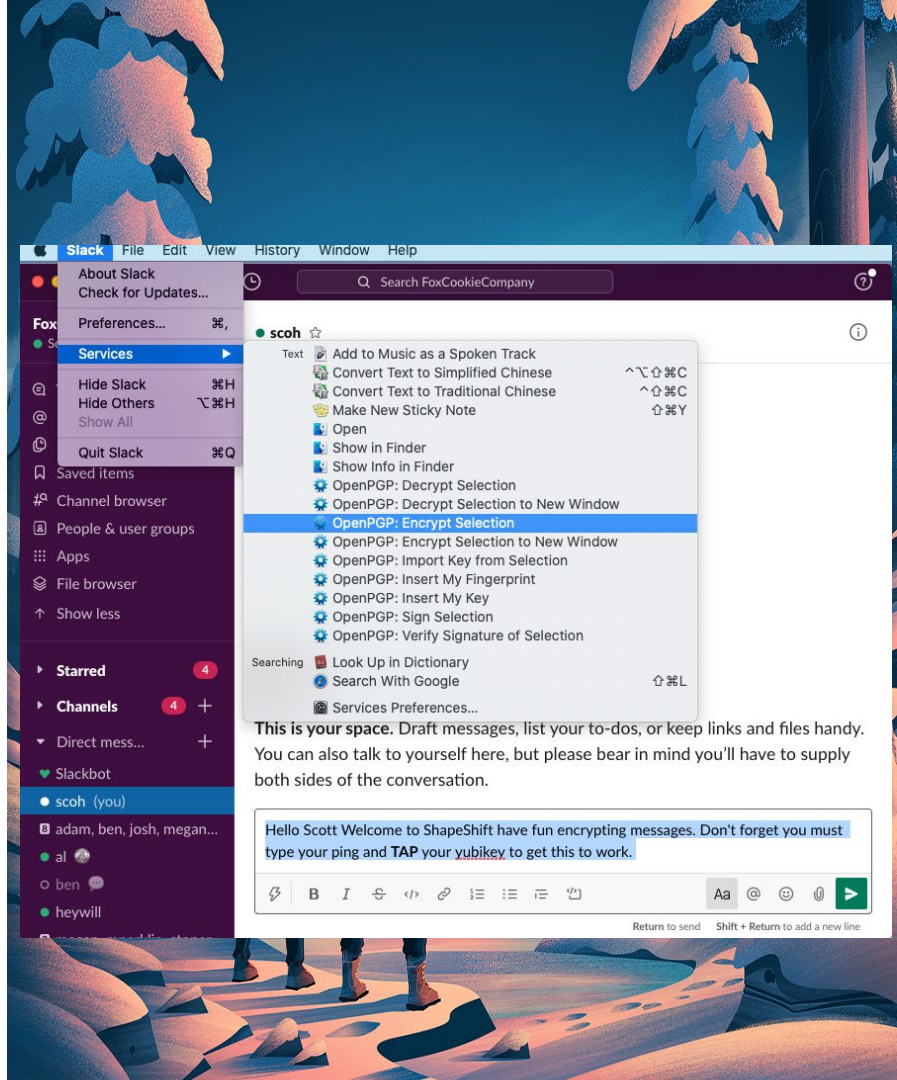


GPG Practice Encrypt

Encrypt a message (Slack Example):

- Pick your recipient (Slack)
- Type your message in Slack (don't hit enter)
- Highlight your message
- Slack Menu → Service → OpenPGP: Encrypt Selection

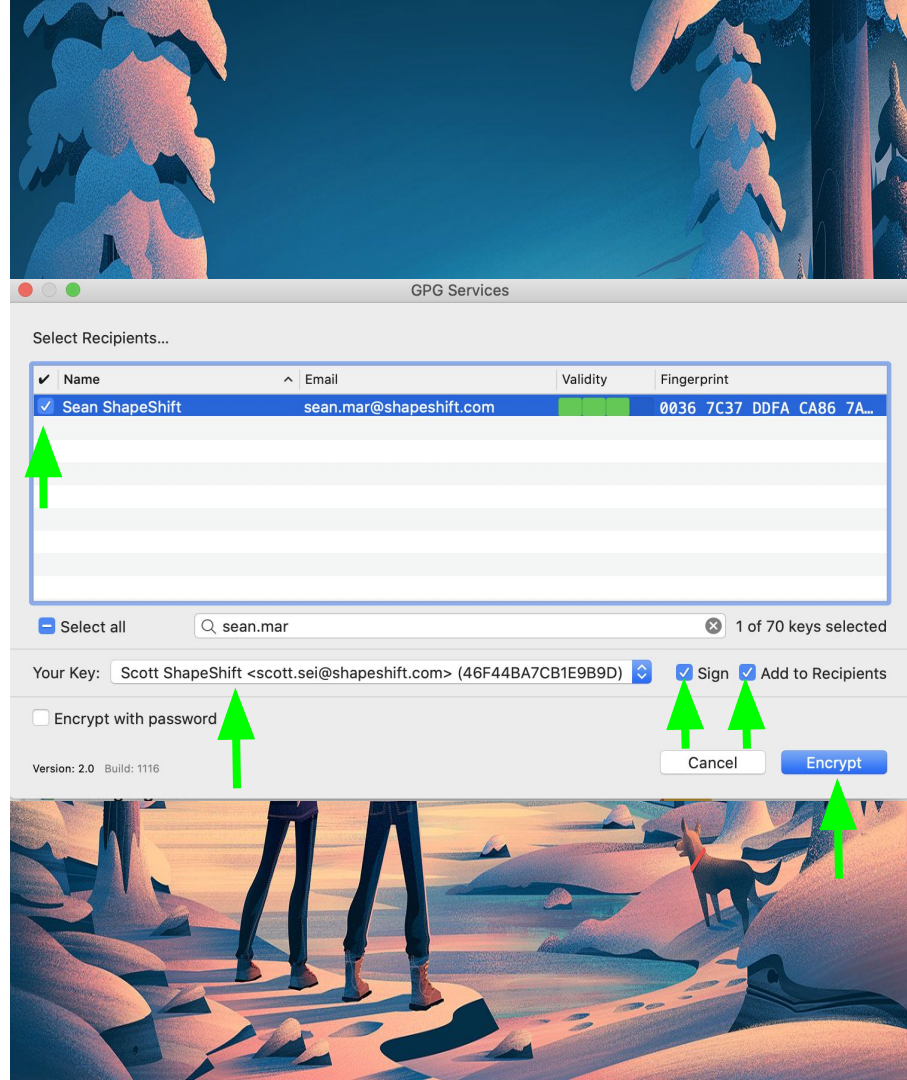
Key Point: The **Services** menu is on every app!



GPG Practice Encrypt

Encrypt a message (Slack Example):

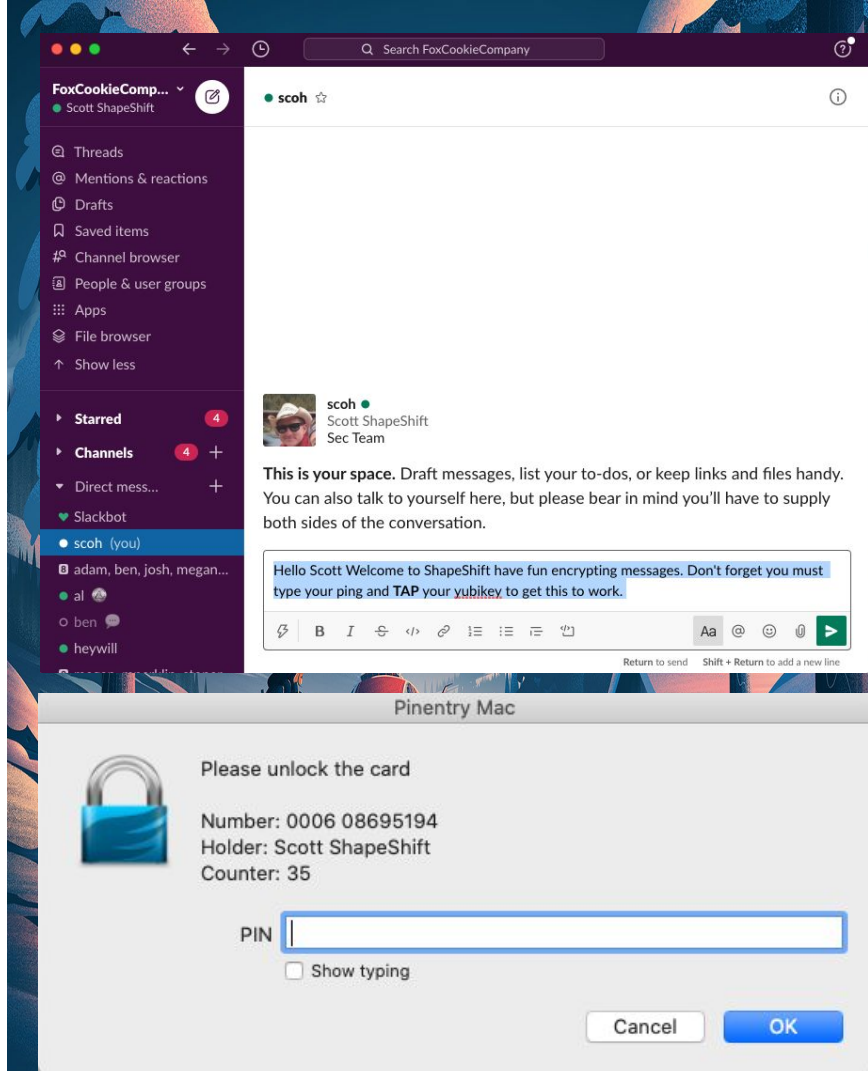
- Pick your recipient(s) (GPG)
- Make sure you private key is selected
- Make sure **Sign** is selected
- Make sure **Add to Recipients** is selected
- Press Encrypt



GPG Practice Encrypt

Encrypt a message (Slack Example):

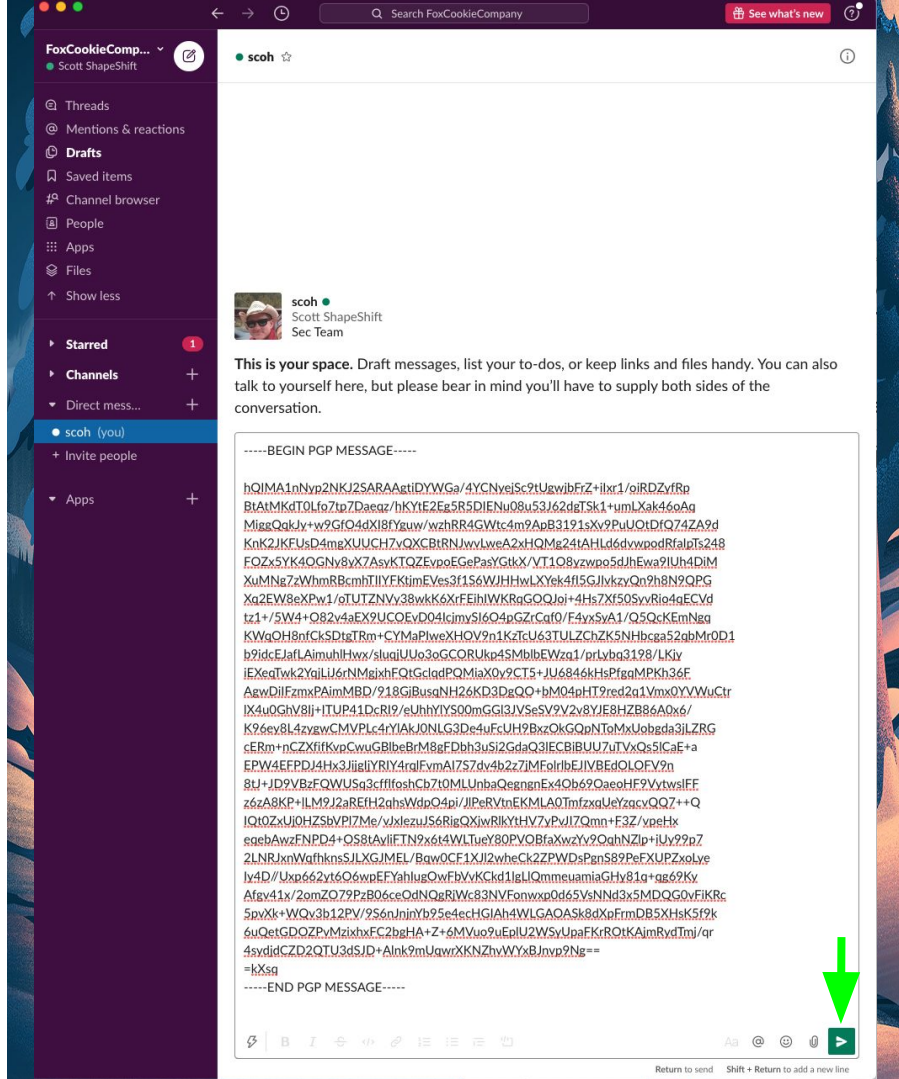
- GPG will prompt you for your 6 digit PIN
- After you enter your PIN (Look at your Yubikey)



GPG Practice Encrypt

Encrypt a message (Slack Example):

- Short Tap your Yubikey to complete the process to see this the encrypted message in slack
- Hit Enter to send!



The screenshot shows a Slack interface on a mobile device. The left sidebar contains navigation options like Threads, Drafts, Saved Items, Channel browser, People, Apps, Files, and Show less. The main chat area shows a conversation with a user named 'scooh' (Scott ShapeShift, Sec Team). The message content is a GPG encrypted message, starting with '-----BEGIN PGP MESSAGE-----' and ending with '-----END PGP MESSAGE-----'. A green arrow points to the send button (a green paper plane icon) at the bottom right of the chat input area.

Threads
Drafts
Saved Items
Channel browser
People
Apps
Files
Show less

Starred
Channels
Direct mess...
scooh (you)
Invite people
Apps

scooh
Scott ShapeShift
Sec Team

This is your space. Draft messages, list your to-dos, or keep links and files handy. You can also talk to yourself here, but please bear in mind you'll have to supply both sides of the conversation.

-----BEGIN PGP MESSAGE-----

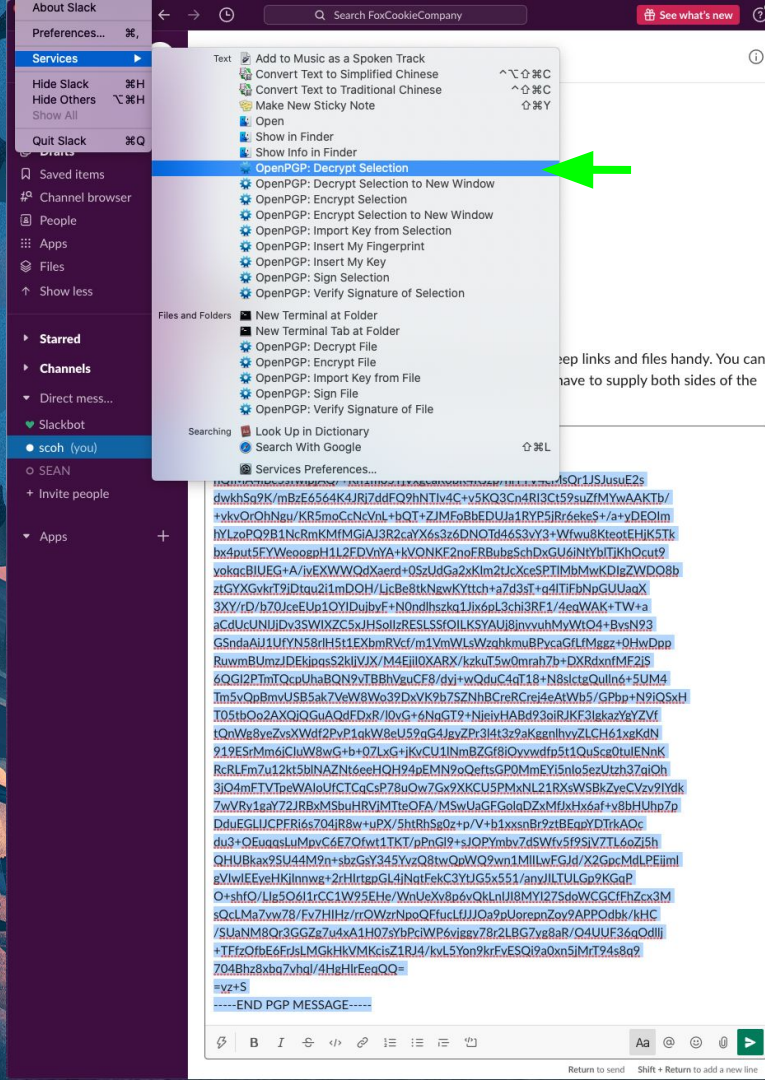
hQIMA1nNyp2NKJ2SARAAGtIDYWG/4YCNyejSc9tUgwiFrZ+ilxr1/oiRDZyfRp
BtAtMKdITOLfo7lp7Daeqz/hKYIE2Eg5R5DIENu08u53j62dgTSk1+umLXak46oAq
MiaGQqkLv+w2GfO4dXl8fYguw/wzhRR4GWtc4m9ApB3191sXv9PuUOidQ74ZA9d
KnK2JKFUsD4mgXUUCH7vQXCBtRNJwvLweA2xHQMg24tIAHLd6dvwpodRfalpIs248
FOZx5YK4OGNv8vX7AsyKTQZEvpoEGePasYgkX/VT1O8yzwpo5dJhEwa9IUh4DiM
XuMNg7zWhmRBcmhIJYFKtmEVes3f1S6WJHhwlXYek4Jl5GJlvkzyQn9h8N9PQP
Xq2EW8eXPw1/gTUTZNVy38wkK6XrFEihlWKRaGQOJoi+4Hs7Xf50SvRlo4aECVd
tz1+/5W4+Q82v4aEX9UCQEvD04lcmYSl6O4pGzrCaf0/F4yxSvA1/Q5QcKEmNag
KWqQH8nfCkSDtsTRm+CYMaPlweXHOV9n1KzTcU63TULZChK5NHbcca52qbMrOD1
b7dcEJafLAIMuhIHwx/sluqIUu3oGcORUKp45MblbEWzq1/prlybq3198/LKly
iEXeqlTwk2YqIU6rNMxixhFQtGclqdPQMiaX0y9CT5+JU6846kHsPfgaMPKh36F
AgwDilFzmxPAimMBD/918GjBusaNH26KD3DgQO+bM04pHT9red2q1Vmx0YVWuCr
IX4u0GHv8lj+ITUP41DcR19/eUhhYYS00mGGI3JVSeSV9V2v8YJEH8ZB86A0x6/
K96ey8L4zvawCMVPLc4YIAkJOHLG3De4uFcUH9BxzOkGQpNTomXUobgda3ilZRG
cERm+nCZxfifKvpCwuGBIbeBrM8gFDbh3uSj2GdaQ3IECBIBUu7uTVxQs5lCaE+a
EPW4EEFDJ4Hx3JiigJlYRlY4ralFvmAl7S7dv4b2z7IMFoirIbEJIVBE4OLQFV9n
8U+JD9VBZfQWUSq3cfffoshCb7i0MLUnbaQeqngnEx4Ob69OaeoHF9VvtwslFF
z6zA8KP+ILM9J2aREIH2qhsWdpO4pi/JPPerVtnEKMLA0TmfzxaUeyzacvQQ7++Q
IQtoZxUjDHzSbPl7Me/vlxlezuJ56RigQXiwRikYHV7yPvJl7Qmn+F3Z/vpeHx
gaebAwzENPD4+Q58tAvilFTN9x6t4WLTueY80PVQBfaXwzYv9QahNZlp+ilUy99pZ
2LNRJxnWafhknsJLXGJMEU/BawOCF1XJl2wheCk2ZPWDsPgnS89PeFXUPZxolye
ly4D/Uxp662y6Q6wpeFYahluoQwFbVvKcd1l8UQmmeuamIAGHv81q+qg69Ky
Afgv41x/2omZO79PzB06ceOdNqgRIWc83NVFonwxp0d65VsNNd3x5MDQGOvFIKRC
5pvXk+WQv3b12PV/956nJinYb75e4ecHGIAh4WLGAAOSk8dXpFrmDB5XHSK5f9k
6uQetGDOZPvMzixhFC2bgHA+Z+6MVuo9EupIU2WSyUpaFRotKAIMRydTmj/q
4syldidCZD2QTU3dSJD+Alnk9mUawXKNZhwWYx8Jnvp9Ng==
=kXsg
-----END PGP MESSAGE-----

Return to send Shift + Return to add a new line

GPG Practice Decrypt

Decrypt a message (Slack Example):

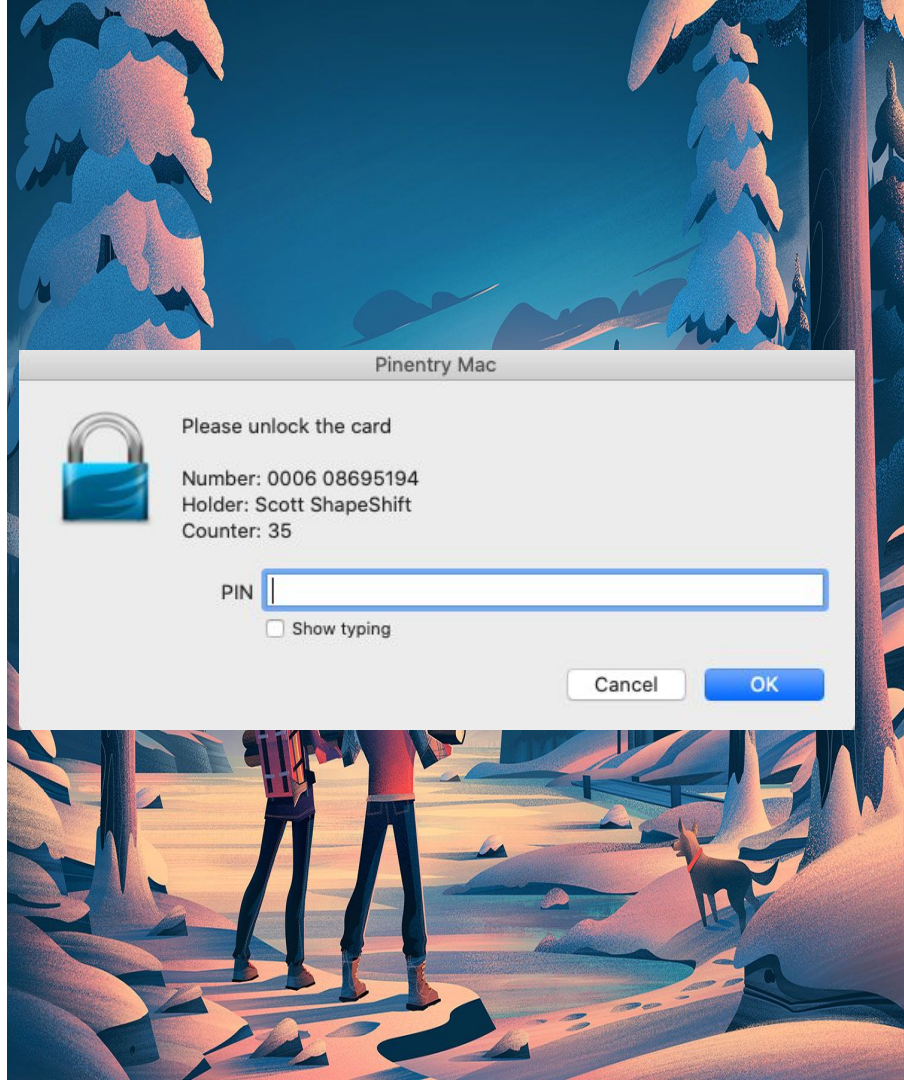
- Highlight the messages
- Slack Menu → Service → OpenPGP: Decrypt Selection



GPG Practice Decrypt

Decrypt a message (Slack Example):

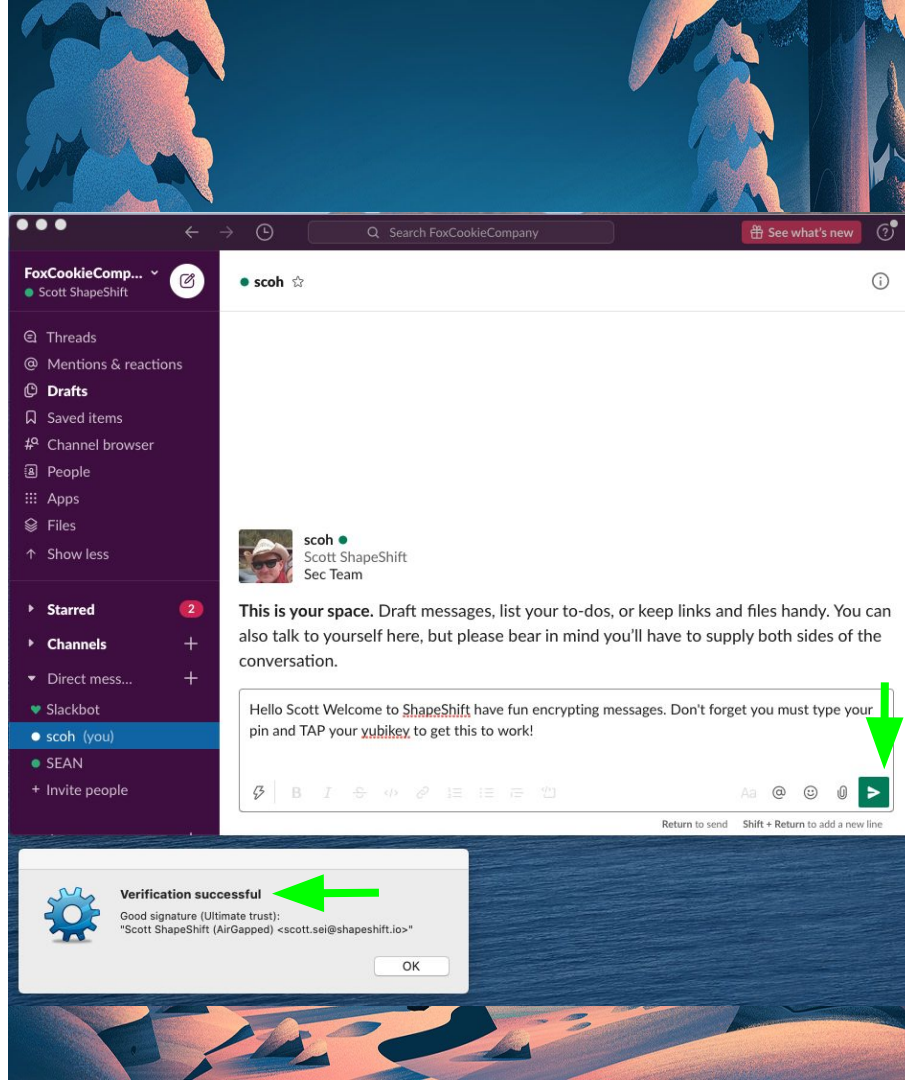
- GPG will prompt you for your 6 digits PIN
- After you enter your PIN (Look at your Yubikey)



GPG Practice Decrypt

Decrypt a message (Slack Example):

- Short Tap your Yubikey to complete the process to see this the decrypted message in Slack
- A verification popup from GPG will show success



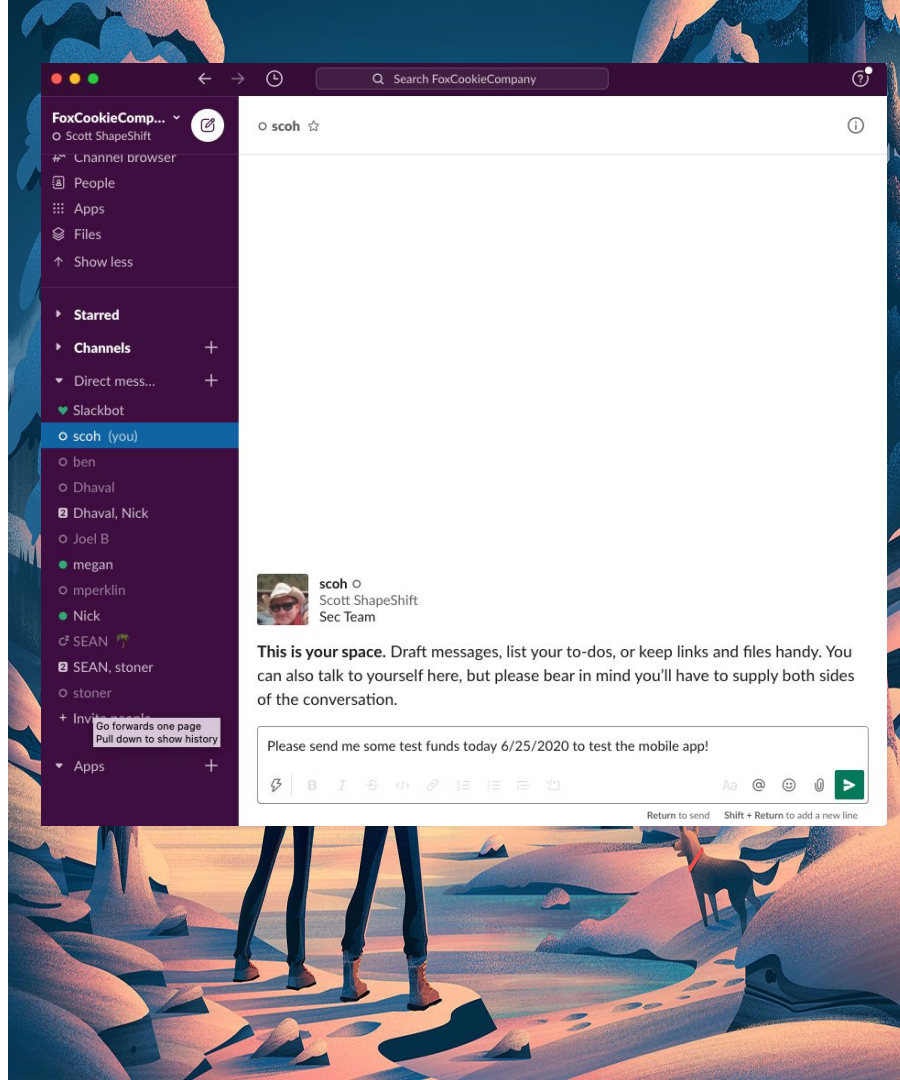
Questions



GPG Practice Signing

Sign a message (Slack Example):

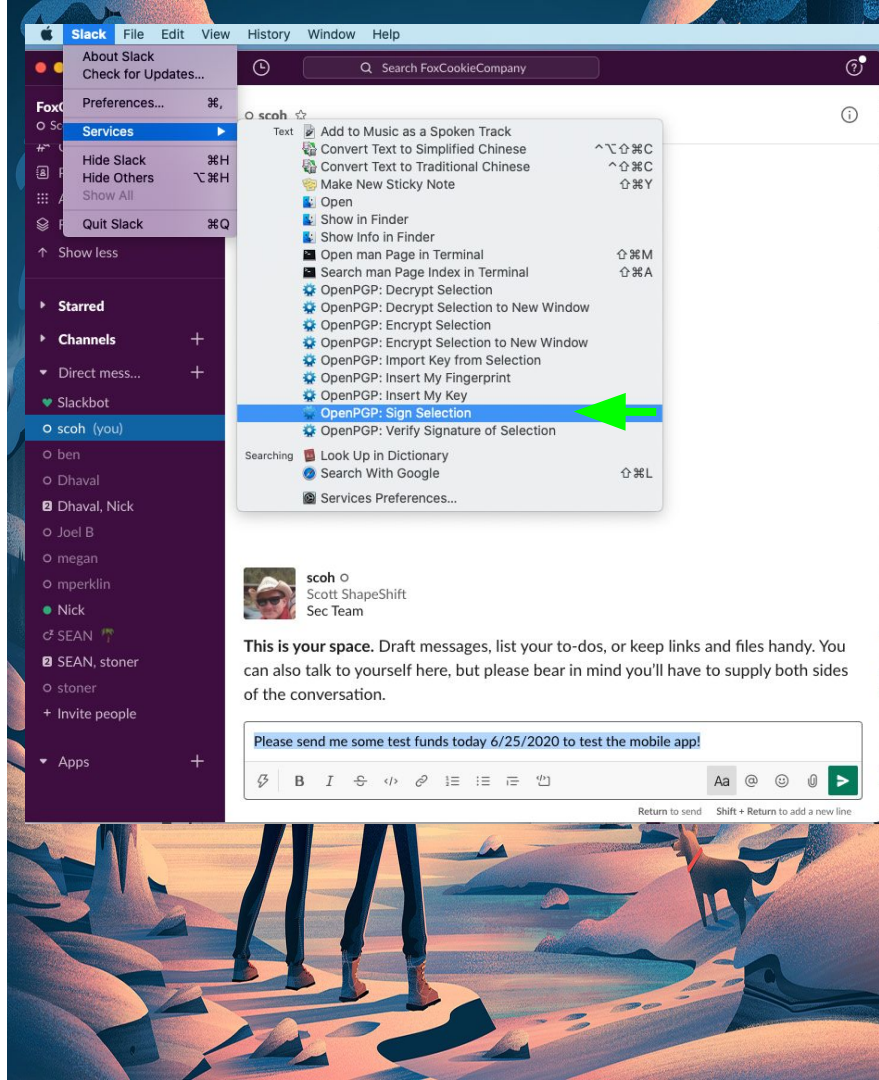
- Type your message in slack
- Don't hit enter



GPG Practice Signing (continued)

Sign a message (Slack Example):

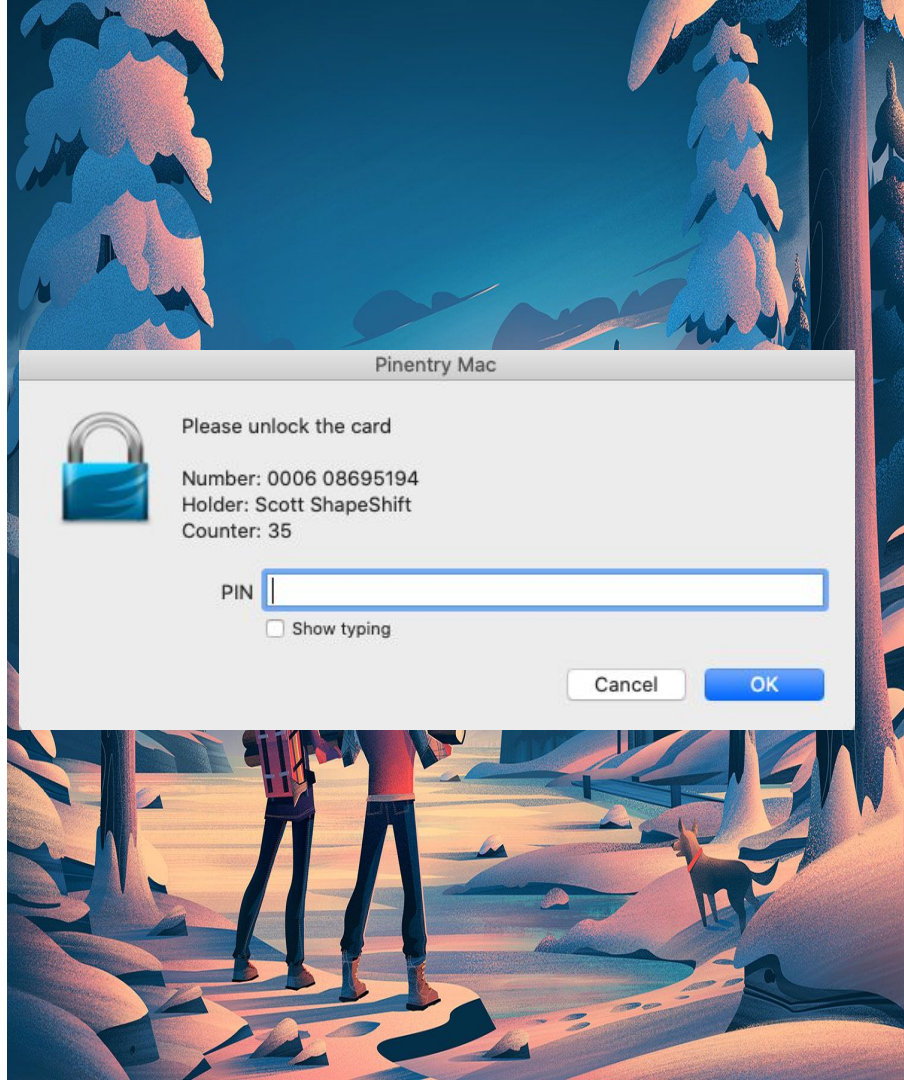
- Highlight your message
- Slack Menu → Service → OpenPGP: Sign Selection



GPG Practice Signing (continued)

Sign a message (Slack Example):

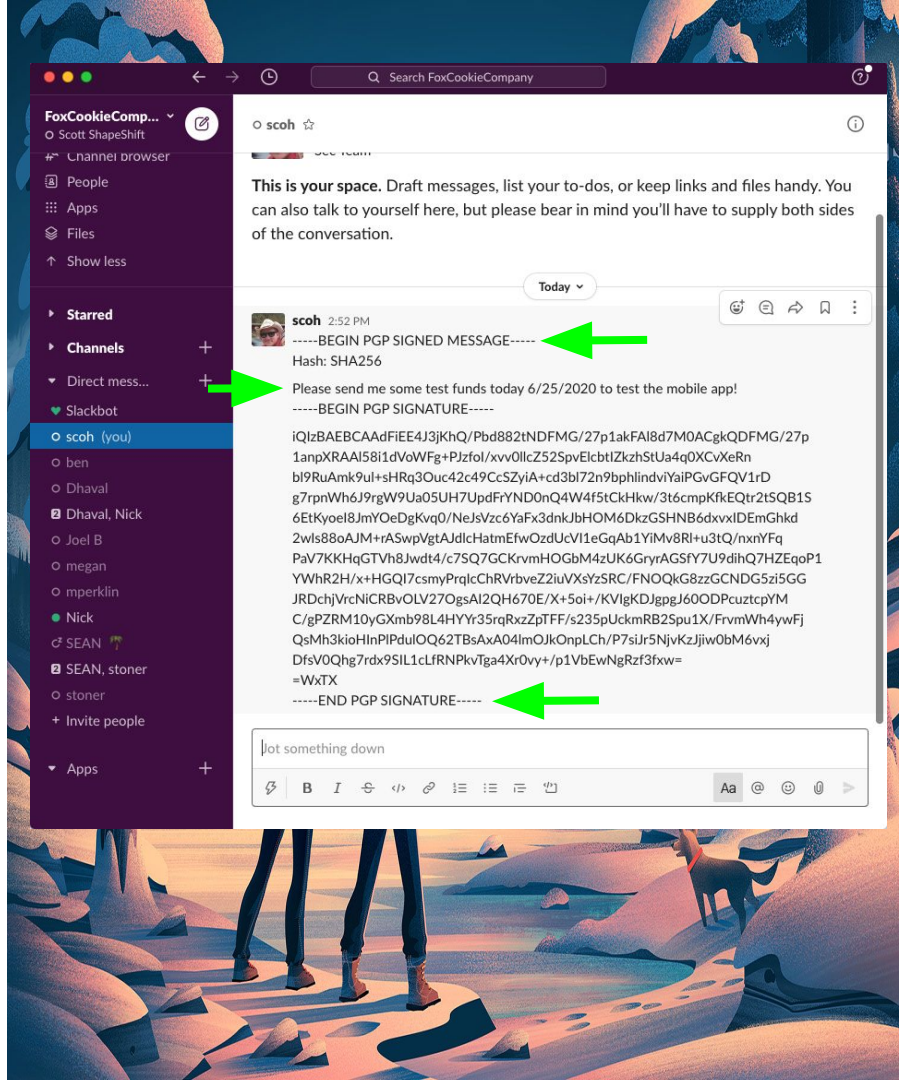
- GPG will prompt you for your 6 digit PIN
- After you enter your PIN (Look at your Yubikey)



GPG Practice Signing (continued)

Sign a message (Slack Example):

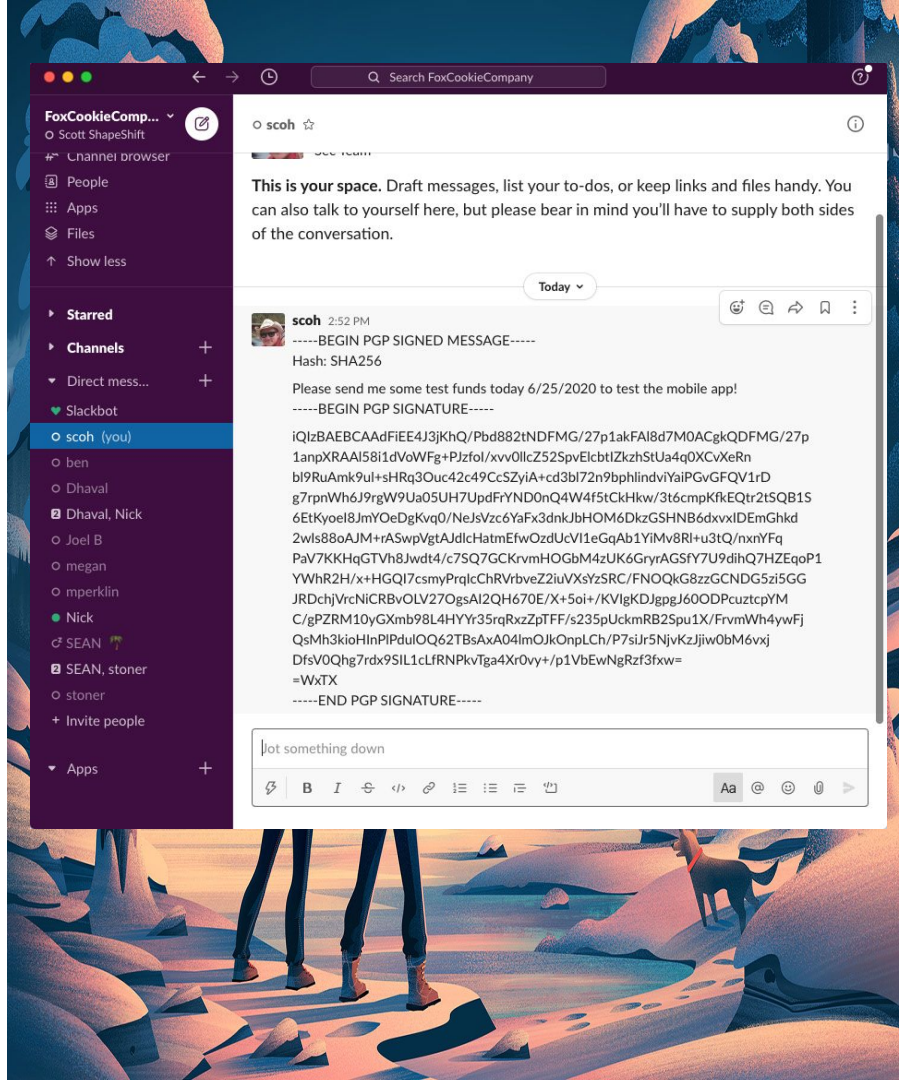
- Notice your message is still there but it is now wrapped with your GPG signature
- Press enter to send



GPG Practice Verification

Verify a message (Slack Example):

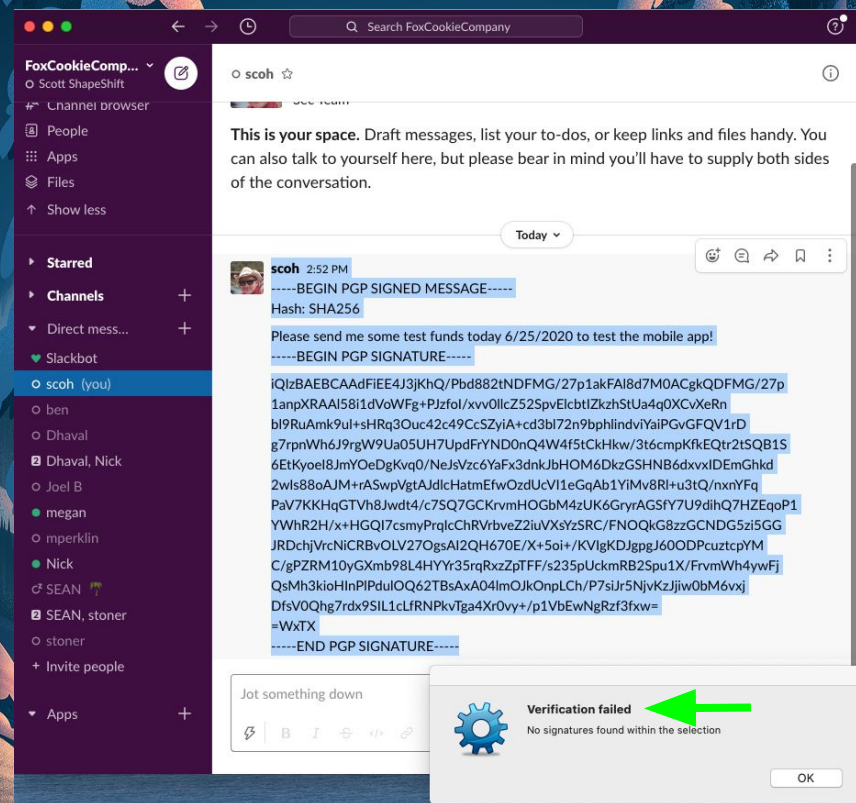
- You will probably see signed message in Slack.
- There is a Slack/GPG bug that causes verification to fail in Slack
- There's a workaround



GPG Practice Verification Slack Bug

Verify a message (Slack Example):

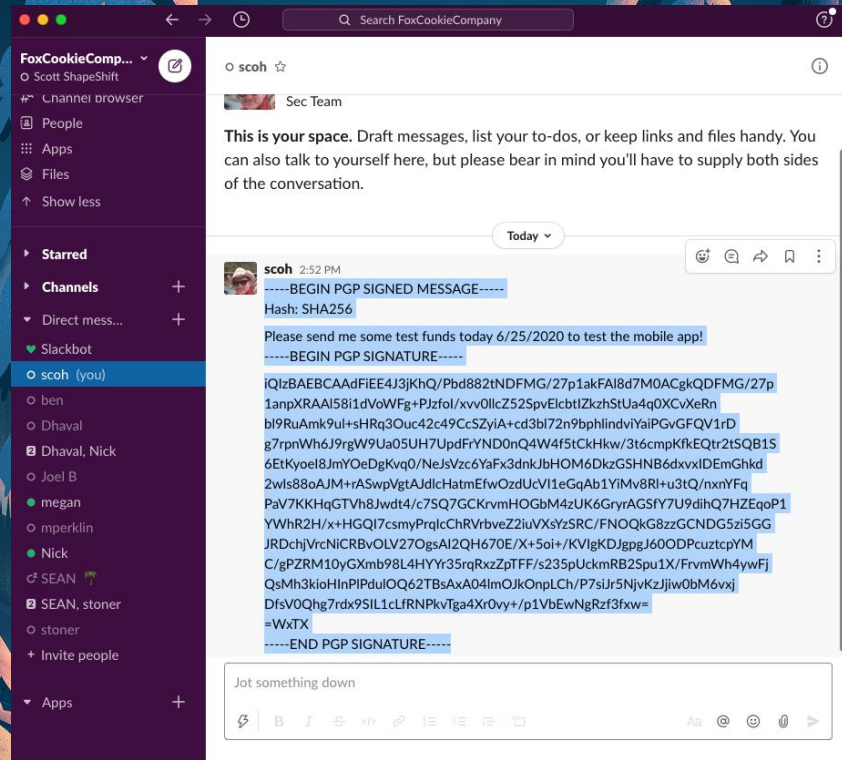
- When trying to verify GPG signed message directly in slack it will always error
- Notice the Verification failed message



GPG Practice Verification (continued)

Verify a message (Slack/TextEdit Example):

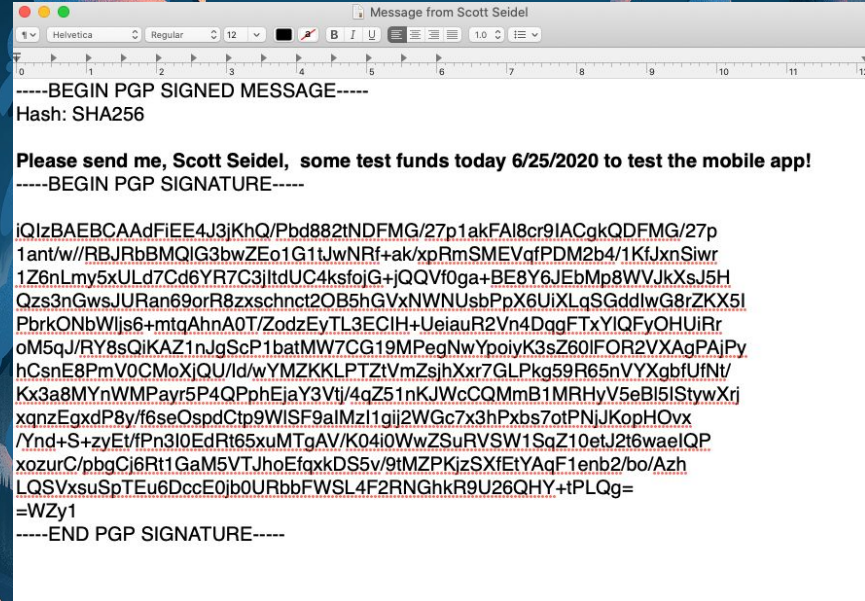
- Highlight the slack message.
- Make sure you get all the text starting at -----BEGIN PGP SIGNED MESSAGE-----
- Copy the message



GPG Practice Verification (continued)

Verify a message (Slack/TextEdit Example):

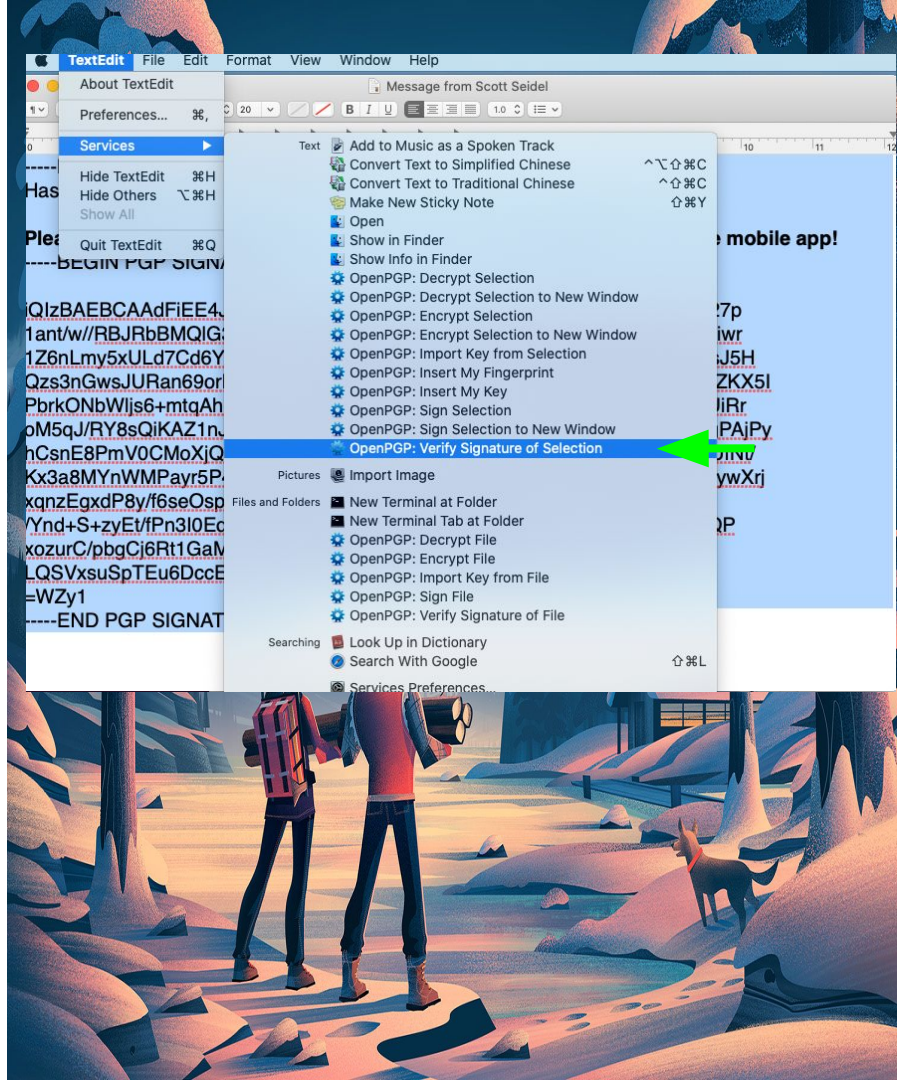
- Paste the text into a text editor. (TextEdit)



GPG Practice Verification (continued)

Verify a message (Slack/TextEdit Example):

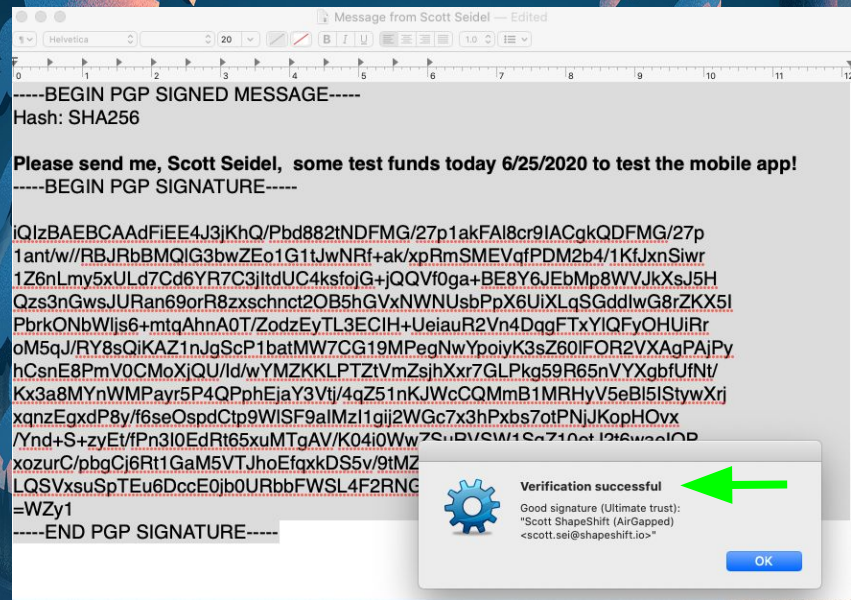
- Highlight the messages
- Slack Menu → Service → OpenPGP: Verify Signature of Selection



GPG Practice Verification (continued)

Verify a message (Slack/TextEdit Example):

- Notice the Verification successful message that pops up from GPG

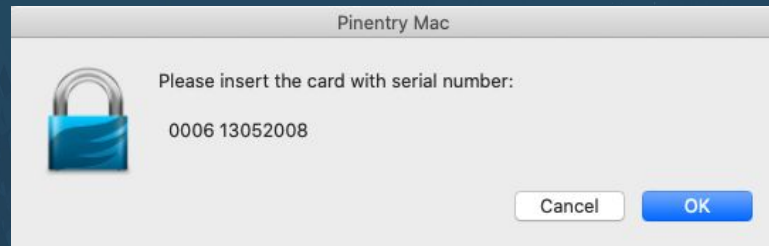


GPG Practice Errors

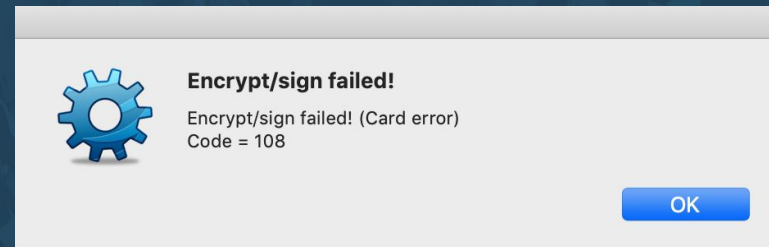
Troubleshooting

- Is your Yubikey Present?
- Did you highlight the message?
- Do you know your 6 character Pin?
- Did you remember to "TAP" your yubikey?

Yubikey is not found



Forgot to TAP Yubikey



Questions



Quiz

1. What are the Classes of Information at ShapeShift?
2. How do you treat Confidential information differently?
3. Why do we have alias emails?
4. When should you use your Alias email?
5. When should you use your Corporate email?
6. What is Strong Auth?
7. How do you perform Strong Auth?
8. When do you need to perform Strong Auth?
9. Why do we have a “Going Public” process?

