

# 4-1-2

## Safer EMail

# The Key Points

Authenticity of Servers

Encrypted Transport

# It's Easy

- Do not use pop, it is in the clear
- Use pop3s, port 995 over TLS/SSL
- Do not use imap, it is in the clear
- Use imaps, port 993 over TLS/SSL
- And they Authenticate the Servers using X.509 Certificates. CHECK IT!

# Fetch Using IMAP4S

▼ **randy@psg.com**

- Server Settings
- Copies & Folders
- Composition & Addressing
- Junk Settings
- Synchronization & Storage
- OpenPGP Security
- Return Receipts
- Security

▼ randy@iij.ad.jp

Server Type: IMAP Mail Server

Server Name:  Port:  Default: 993

User Name:

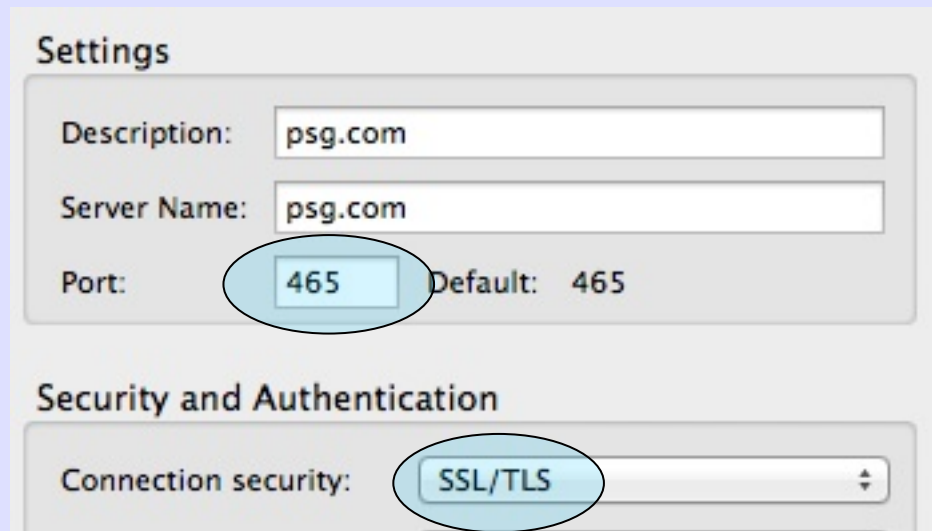
**Security Settings**

Connection security:

Authentication method:

# SMTPS over TLS/SSL

- Do Not Use Unencrypted SMTP



The image shows a screenshot of an email client's settings window. The window is titled "Settings" and contains two main sections: "Settings" and "Security and Authentication". In the "Settings" section, there are three fields: "Description:" with the value "psg.com", "Server Name:" with the value "psg.com", and "Port:" with the value "465". The "Port:" field is circled in blue. To the right of the "Port:" field, it says "Default: 465". In the "Security and Authentication" section, there is a "Connection security:" label followed by a dropdown menu. The dropdown menu is open, showing "SSL/TLS" as the selected option, which is also circled in blue.

Settings

Description: psg.com

Server Name: psg.com

Port: 465 Default: 465

Security and Authentication

Connection security: SSL/TLS

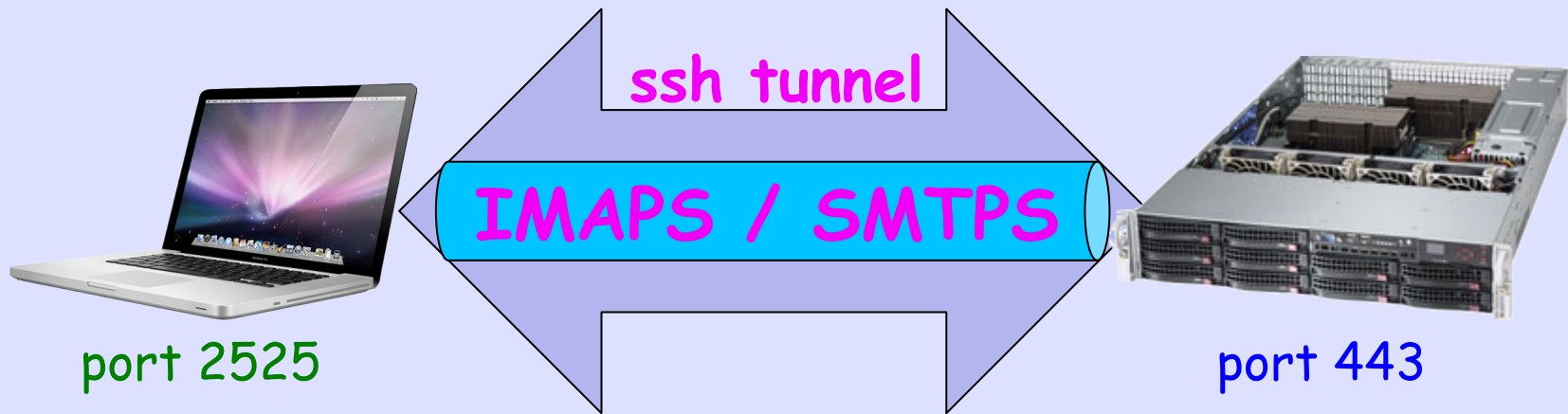
# Authenticate Servers

- Assume the Wire is Tapped
- Assume Someone will Spoof Servers
- Know Your Servers' Root Certificates
- Confirm Certificates on Configuration
- Choose Good Passphrases

# Encrypt Critical EMail

- Assume the Wire is Tapped
- Use a Personal X.509 PKCS#12 User Certificate with SMIME - T'Bird etc.
- Use a PGP key with Enigma - T'Bird

# I Tunnel & Use IMAPS



```
$ ssh -N ssh.psg.com -p 443 -L 2525:127.0.0.1:25
```

Target  
Host

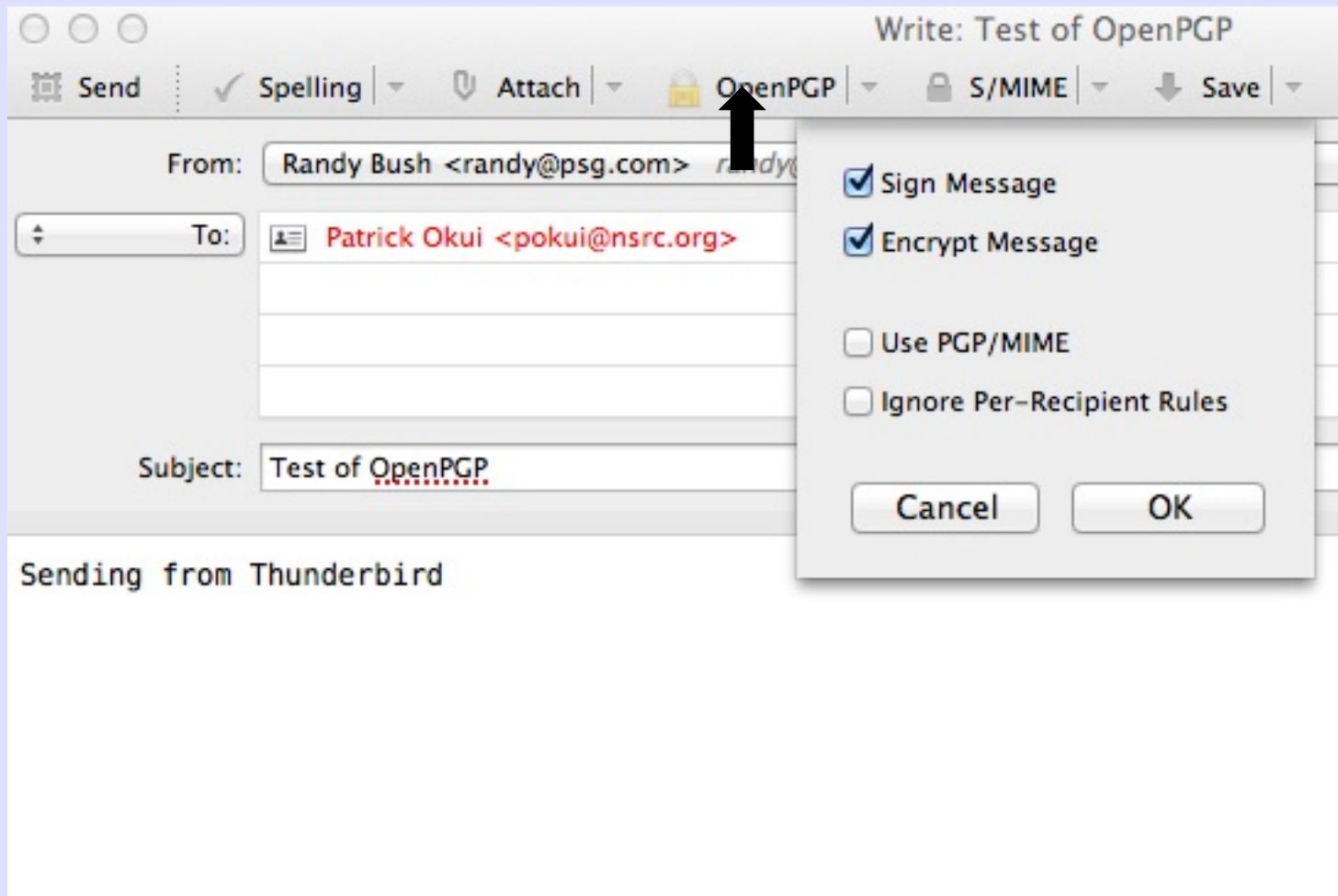
Tunnel  
Port

Port on  
MacBook

Tunnel  
EndPoint



# Using PGP



Of Course  
All Our Mail Goes To  
The NSA, GCHQ,  
PLA, ...

Or You Can Give It  
To The World's  
Largest Spy Agency  
Google / GMail