

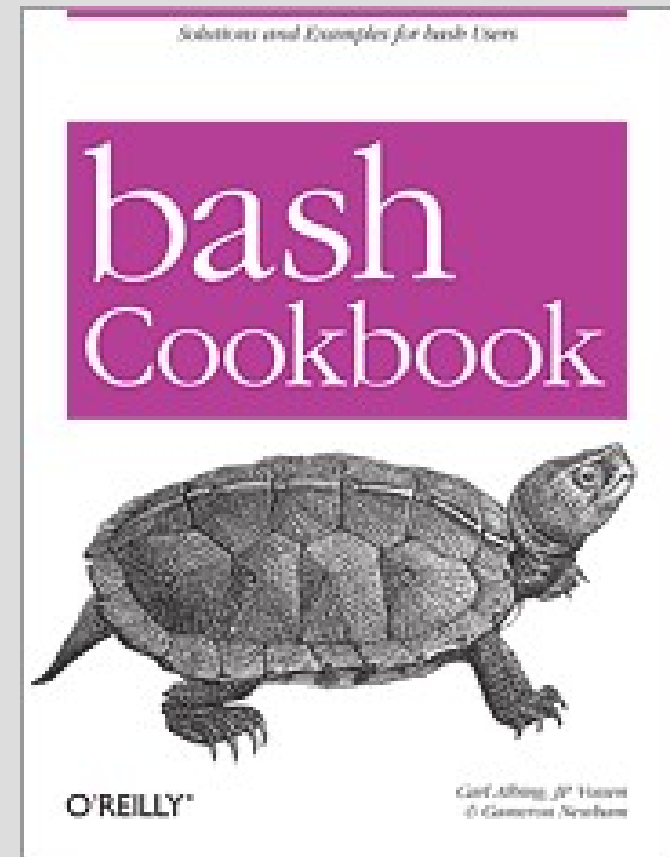
# SSH Port Forwarding as Mini-VPN

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[bashcookbook.com](http://bashcookbook.com)



# What, why?

- SSH port forwarding "tunnels" ports over a secure SSH connection
- That means you can trivially encrypt otherwise insecure, plain text protocols.
- Well, usually. Some protocols, like FTP, don't work like that. (So use scp instead.)
- Works great for SMTP, IMAP, HTTP, etc...

# How?

- -X
- -L [bind\_address:]port:host:hostport
- -R [bind\_address:]port:host:hostport
- ~/.ssh/config
  - LocalForward [bind\_address:]port:host:hostport
  - RemoteForward [bind\_address:]port:host:hostport
- See also the ssh -w (tun) switch (thanks Matt Liggett)
- And you get all the SSH authentication mechanisms, like SSH-Agent and certificates, for free!

# CLI Examples

- `ssh -X jp@foobar.example.com`
- `ssh -L 80:foobar:80 jp@foobar`

# ~/.ssh/config

## Host home

HostName foobar.example.com

Port 222

User root

Compression yes

ServerAliveInterval = 100

## # SMTP & IMAP Server

LocalForward localhost:25 192.168.1.11:25

LocalForward localhost:143 192.168.1.11:143

## # Squid

LocalForward localhost:3128 192.168.9.11:3128

## # LAN HTTP Servers

LocalForward localhost:80 192.168.9.11:80

LocalForward localhost:81 192.168.9.90:80

## # VMware Console

LocalForward localhost:903 192.168.9.196:902

# /etc/hosts

- #127.0.0.1 localhost
- # Tunnel LAN servers via SSH when remote
- # Needs '*ssh -c ~/.ssh/config home*' running
- 127.0.0.1 localhost mail mail.example.com  
smtp smtp.example.com imap  
imap.example.com

# sshfs

- The coolest thing since sliced bread!
- Install sshfs and fuse on your **local, client** system
- If the remote server has SSH (and what doesn't) you're all set!
- Now you can "mount" any remote directory, securely, via SSH:
  - sshfs [user@]host:[dir] mountpoint [options]
  - mkdir mydocs && sshfs [jp@foobar](#):mydocs mydocs

# Questions?

- Thanks
- [jp@jpsdomain.org](mailto:jp@jpsdomain.org)
- I'm on the PANTUG & PLUG lists
- <http://bashcookbook.com/>
- <http://examples.oreilly.com/bashckbk/>

