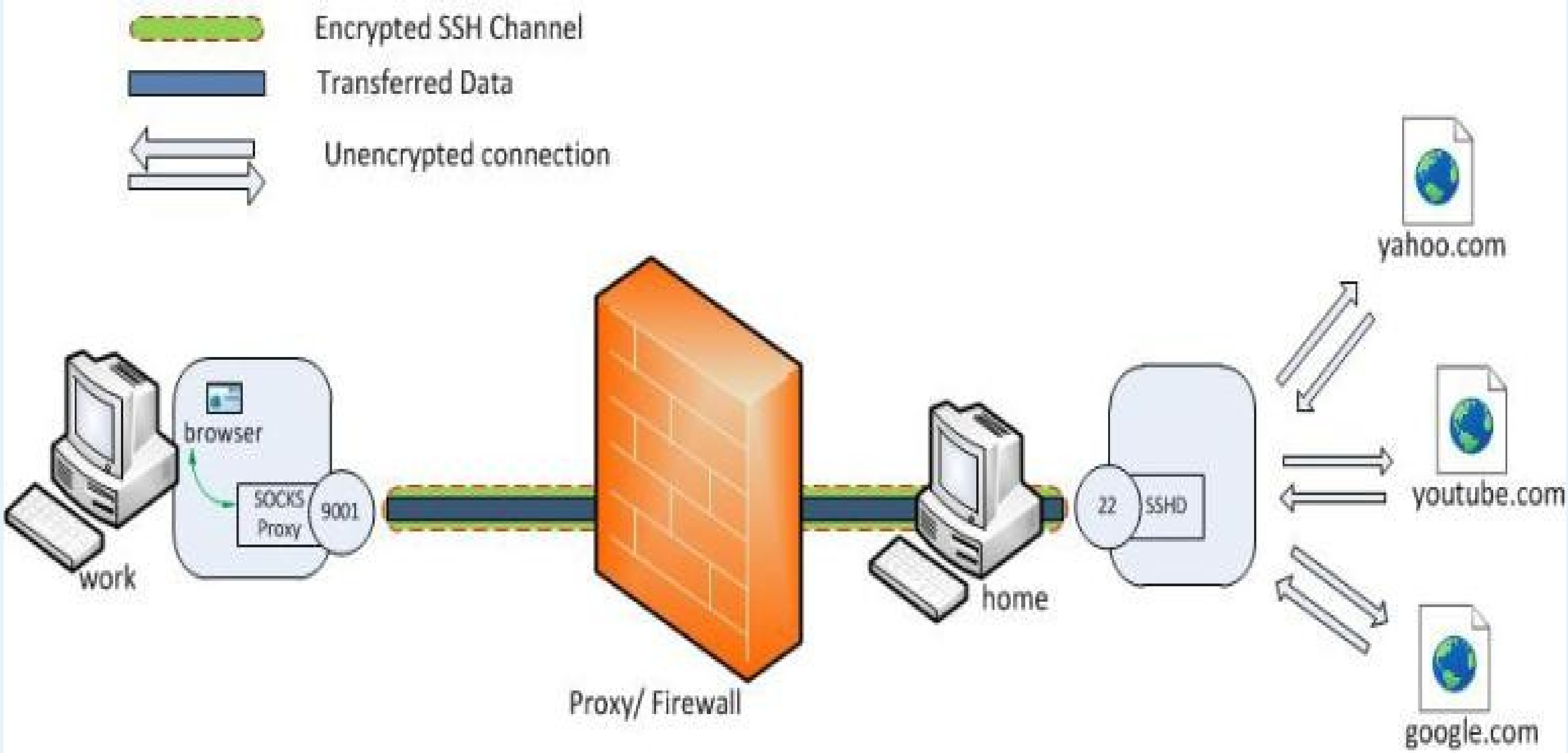
Reverse SSH Tunnels

St. Louis Unix Users Group

SSH Forward Tunnels



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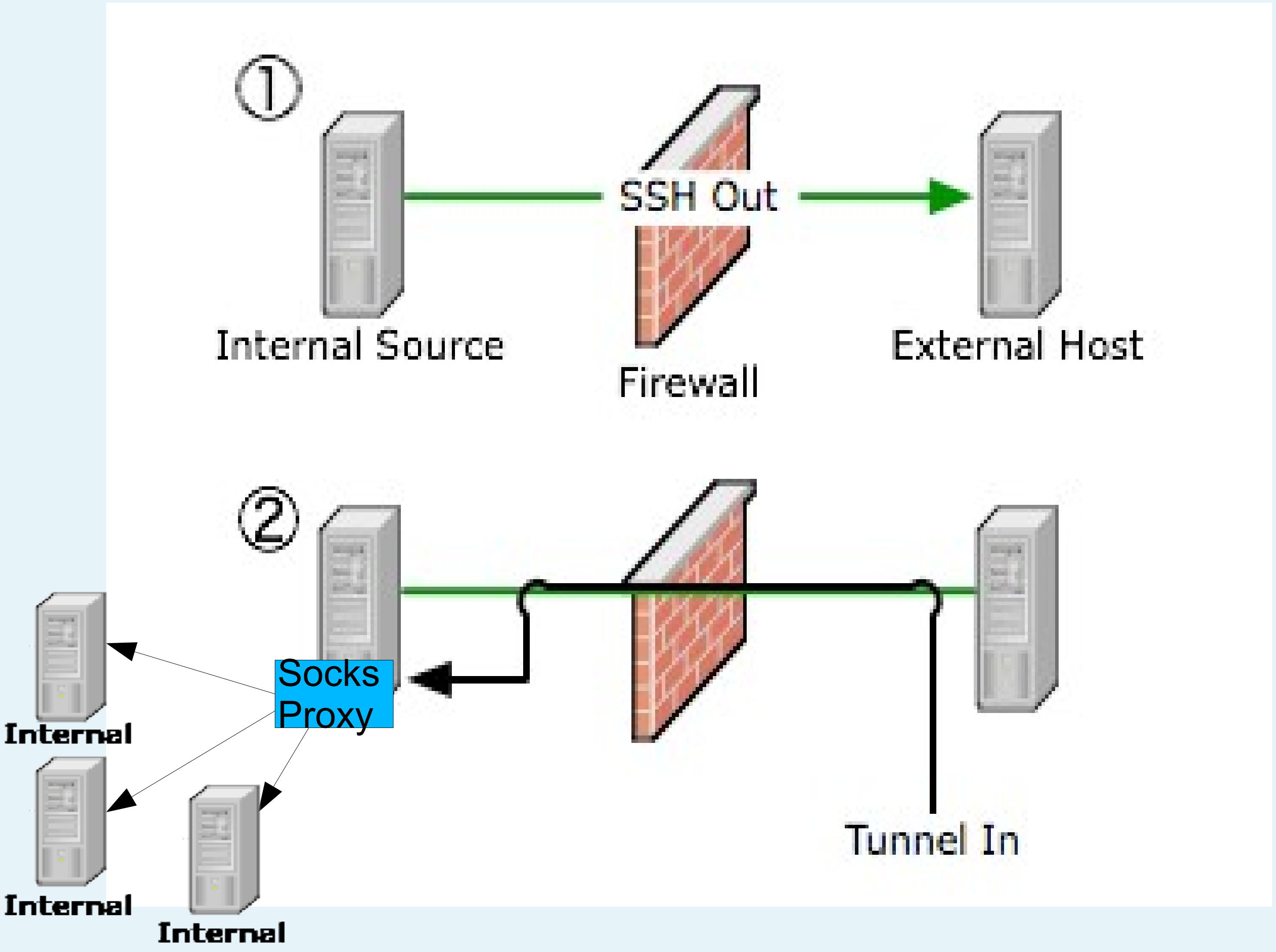


Reverse SSH Tunnels

Firewalls may deny incoming SSH connections, but allow outgoing SSH. Using forwarding, an incoming path may be setup by tunneling access to the internal sshd server over a persistent outbound connection. Warning! This use of SSH may impose a security risk to the site in question, or be a security policy violation!

Connect from the internal system to the external host. Use the -R option to open port 2222 on the external host back to port 22 on the internal system.

```
    internal$> ssh -R 2222:127.0.0.1:22 external.example.org
```

On the external host, connect back in from the external host.

```
    external$> ssh -p 2222 127.0.0.1
```

Optionally use dynamic port forward to set up a socks proxy to the entire internal network.

```
    external$> ssh -N -D 127.0.0.1:2223 -p 2222 internaluser@127.0.0.1 &
```

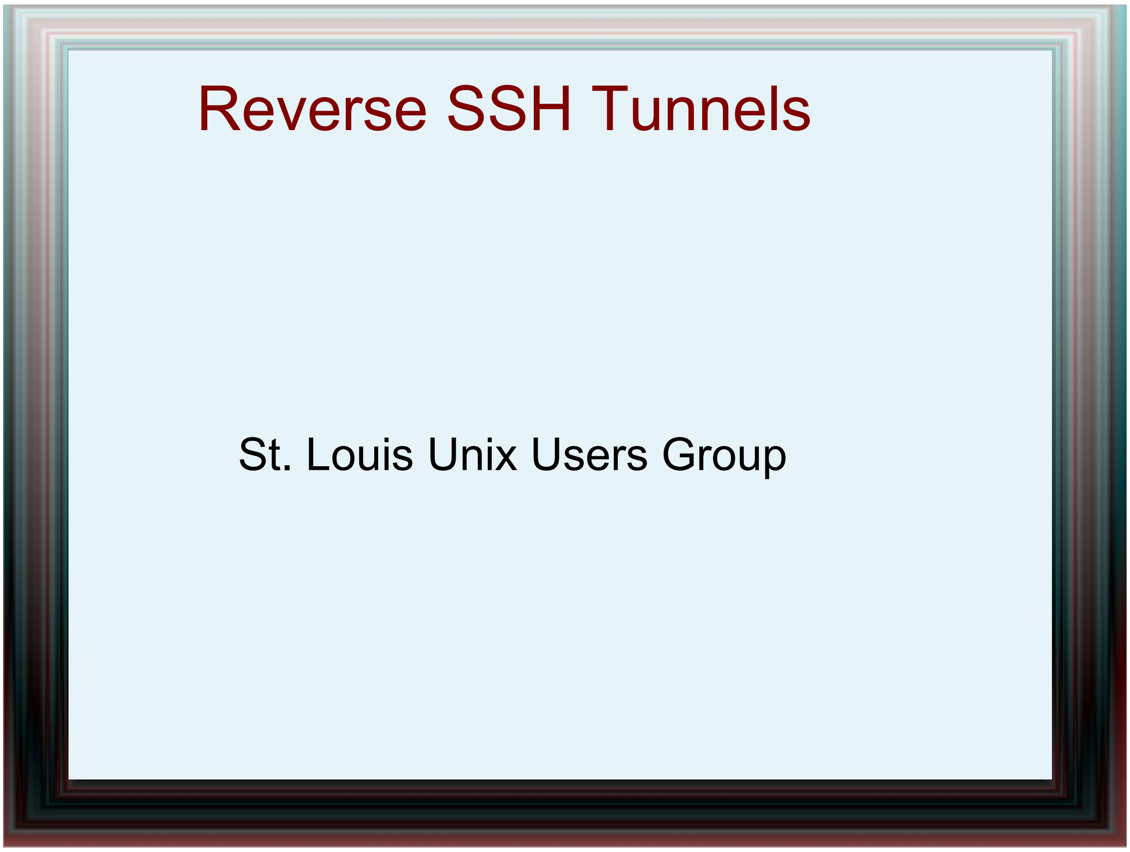
SSH to any host on the network

```
    external$>  ssh -o ProxyCommand='nc -x 127.0.0.1:2223 %h %p' user@internalip
```

Setting the NoHostAuthenticationForLocalhost yes option might be required to avoid key conflicts, if multiple connections are done using the localhost address. For more information, see ssh_config(5).

Good and Bad

- Bad
  - Trojan Horses to allow access from outside the network bypassing proxy
  - “Inside Jobs” to breach security firewalls
- Good
  - Allow hosts behind a NAT firewall to be administered remotely
  - Reverse connections to a central server
  - Access to a private network through an exposed secured server preventing detection of the real address



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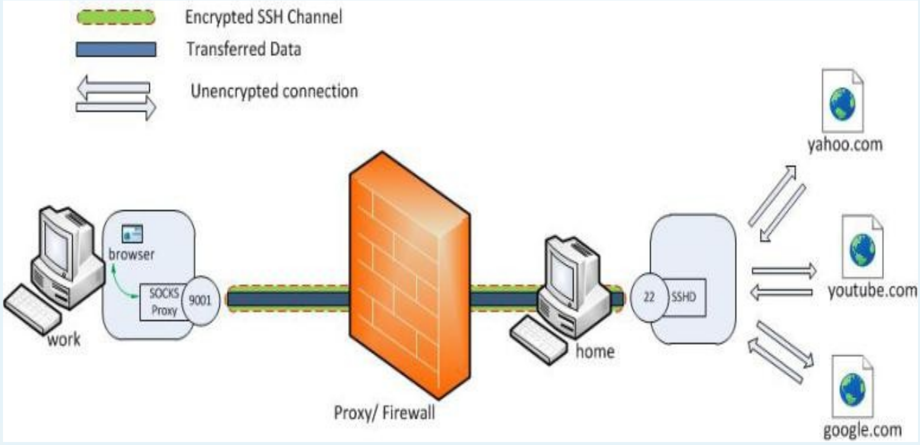

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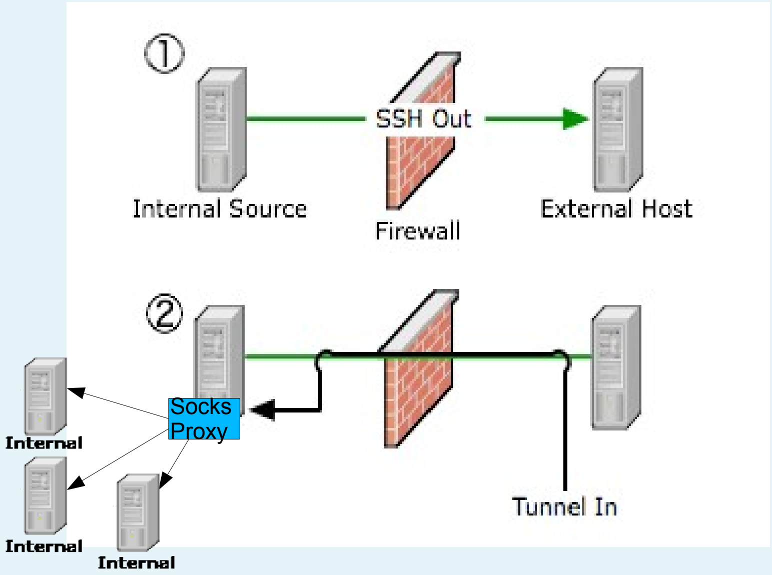

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