

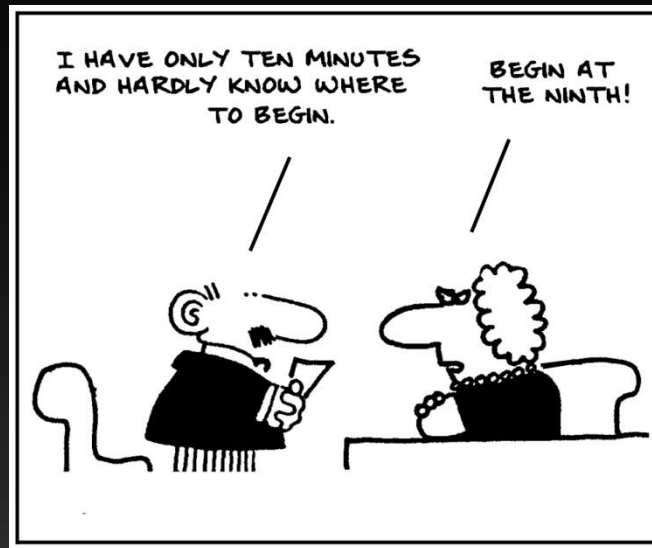


Hotspot using social accounts

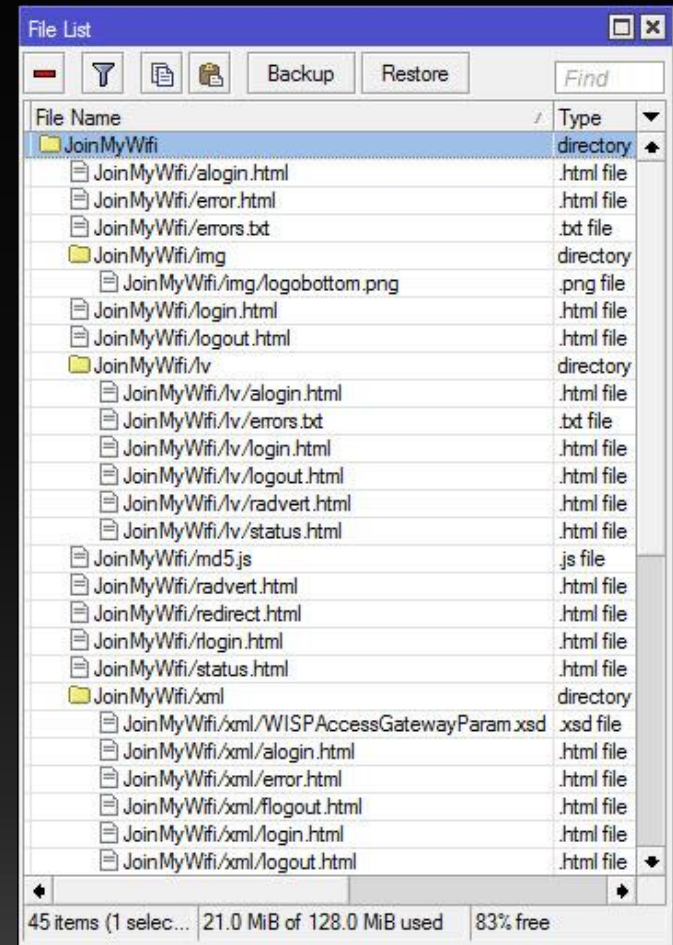
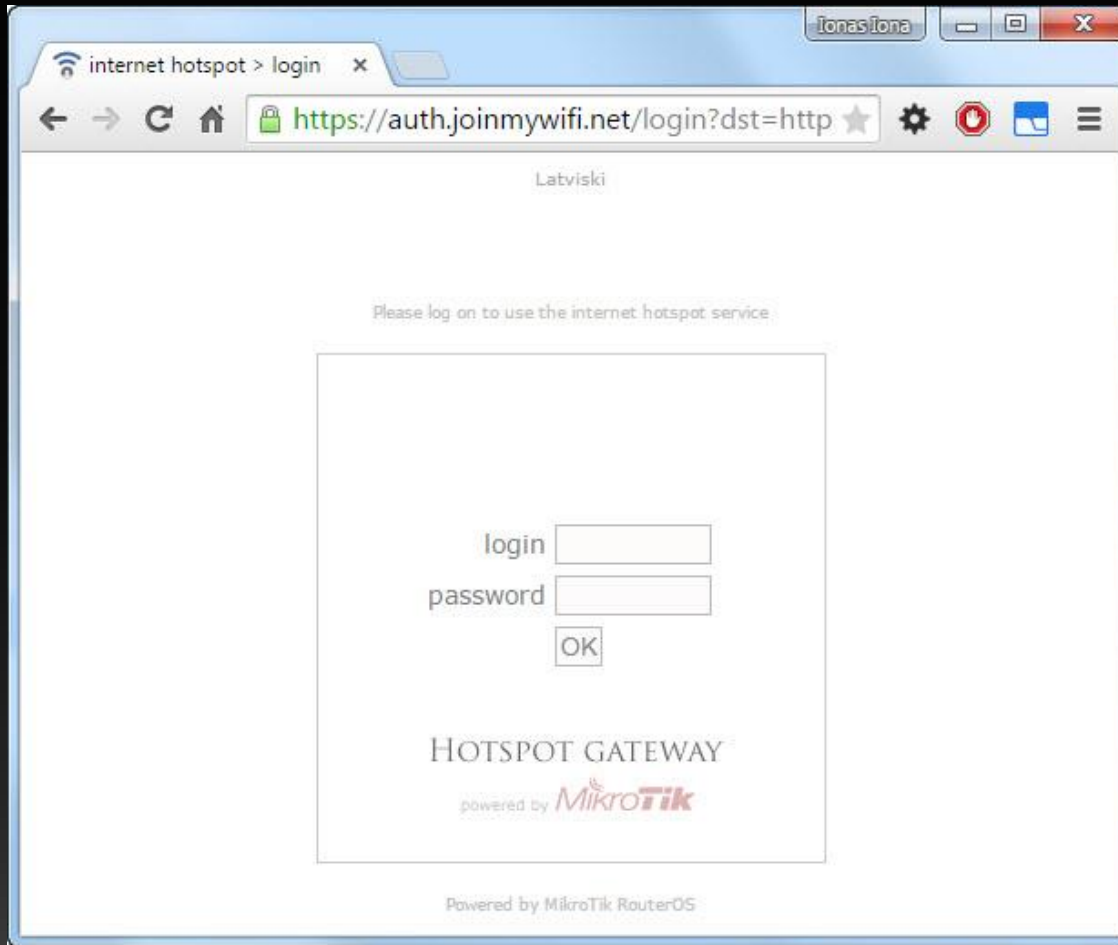
Ionas Iona

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- ◆ MikroTik certified consultant (Cyprus)
 - MTCNA, MTCWE, MTCTCE, MTCUME
- ◆ CV
 - www.joinmywifi.com/IonasCV.pdf
- ◆ Presentation
 - www.joinmywifi.com/HotspotMUM.pdf
 - www.joinmywifi.com/HotspotMUMdetailed.pdf

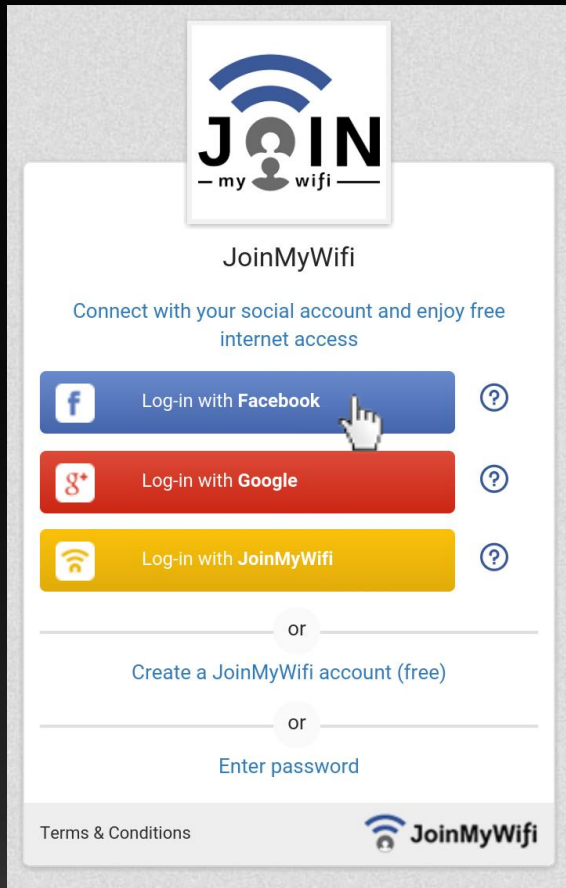
- ◆ Hotspot
- ◆ Captive portal



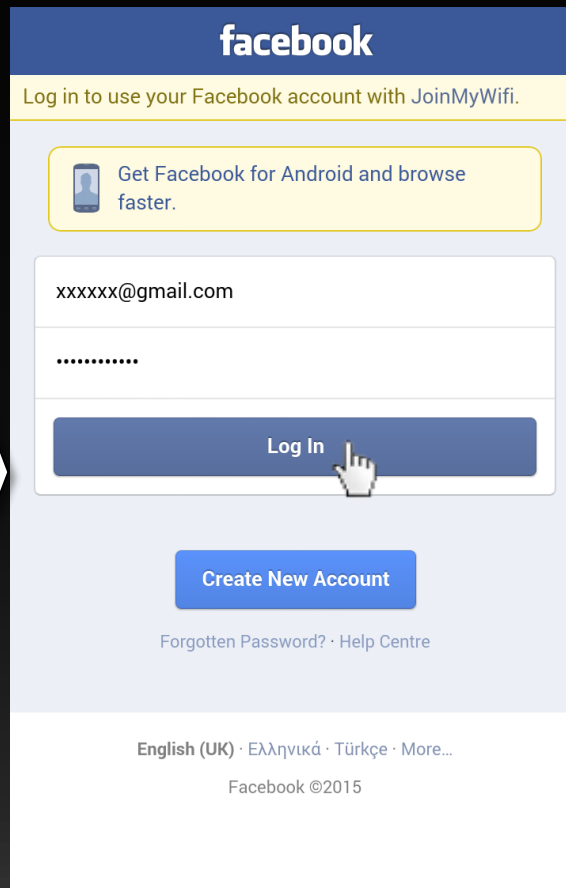
MikroTik default captive portal



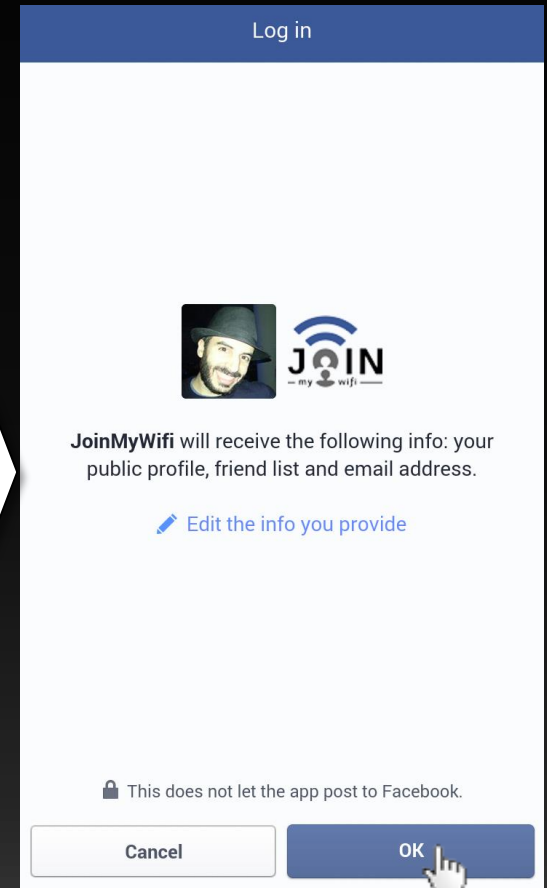
JoinMyWifi platform (1/2)



The screenshot shows the JoinMyWifi login interface. At the top is the logo with a Wi-Fi symbol and the text "JOIN - my wifi". Below it, the text "JoinMyWifi" is displayed. A sub-header reads "Connect with your social account and enjoy free internet access". There are three large buttons: "Log-in with Facebook" (blue), "Log-in with Google" (red), and "Log-in with JoinMyWifi" (yellow). Each button has a question mark icon to its right. Below these buttons, there are "or" separators and two options: "Create a JoinMyWifi account (free)" and "Enter password". At the bottom left is a link for "Terms & Conditions" and at the bottom right is the JoinMyWifi logo.




The screenshot shows the Facebook login screen. The top bar is blue with the "facebook" logo. Below it, a yellow banner says "Log in to use your Facebook account with JoinMyWifi." A yellow box contains the text "Get Facebook for Android and browse faster." with a mobile phone icon. The login form has a text input field with "xxxxxx@gmail.com", a password field with ".....", and a blue "Log In" button. Below the form is a blue "Create New Account" button and links for "Forgotten Password?" and "Help Centre". At the bottom, there are language options: "English (UK) · Ελληνικά · Türkçe · More..." and the text "Facebook ©2015".



The screenshot shows the Facebook permissions screen. The top bar is blue with the text "Log in". Below it, there is a profile picture of a man and the JoinMyWifi logo. The text reads: "JoinMyWifi will receive the following info: your public profile, friend list and email address." Below this is a link "Edit the info you provide" with a pencil icon. At the bottom, there is a lock icon and the text "This does not let the app post to Facebook." There are two buttons: "Cancel" and "OK".

JoinMyWifi platform (2/2)


Post to Facebook



JoinMyWifi would like to post to Facebook for you.
Who should be able to see these posts?

Friends ↕

Not Now OK



Welcome Ionas, please be so kind and share the love... or click "Proceed" and get internet access instantly.

Check-in

What's on your mind?
- at JoinMyWifi


Tag friends

Check-in

Like us

Share our page

Proceed



Ka-boom! You are now connected to the internet! Enjoy!

Continue to the internet

JoinMyWifi

MikroTik pros

- ◆ Firewall
- ◆ PCQ
- ◆ QoS
- ◆ Transparent HTTP proxy
- ◆ Transparent DNS server
- ◆ VLAN
- ◆ oVPN
- ◆ SNMP
- ◆ Value for money

Hotspot on router

- ◆ Centralized management
- ◆ Advanced OS
- ◆ Less HW required
- ◆ No need to replace/reconfigure current infrastructure
- ◆ Faster deployment
- ◆ Cost effective

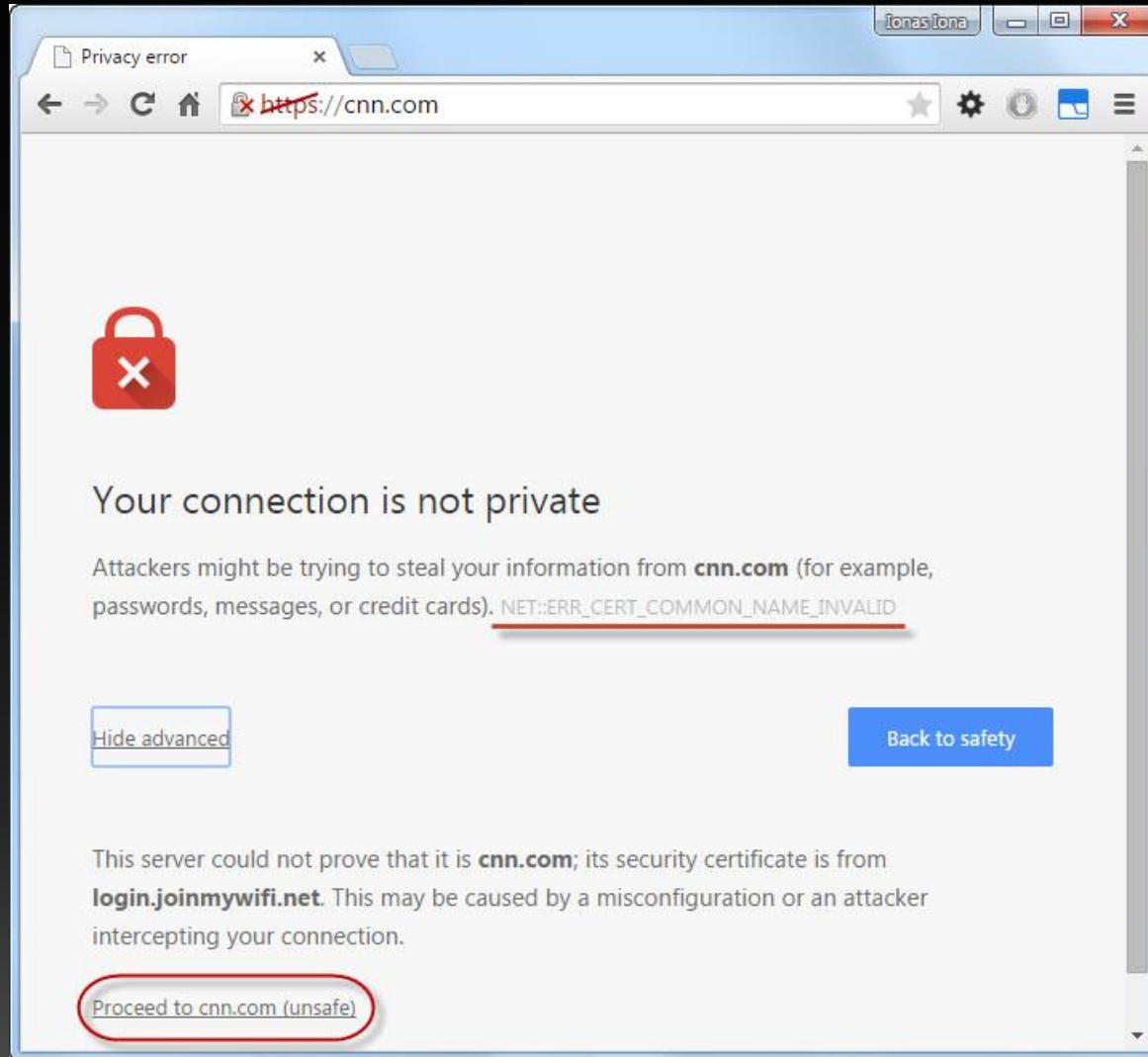
Pages on server

- ◆ No need for router file updates
- ◆ Pages reside in one domain
- ◆ Dynamically created pages
- ◆ Manageable source code
- ◆ Painless debugging
- ◆ Global scale

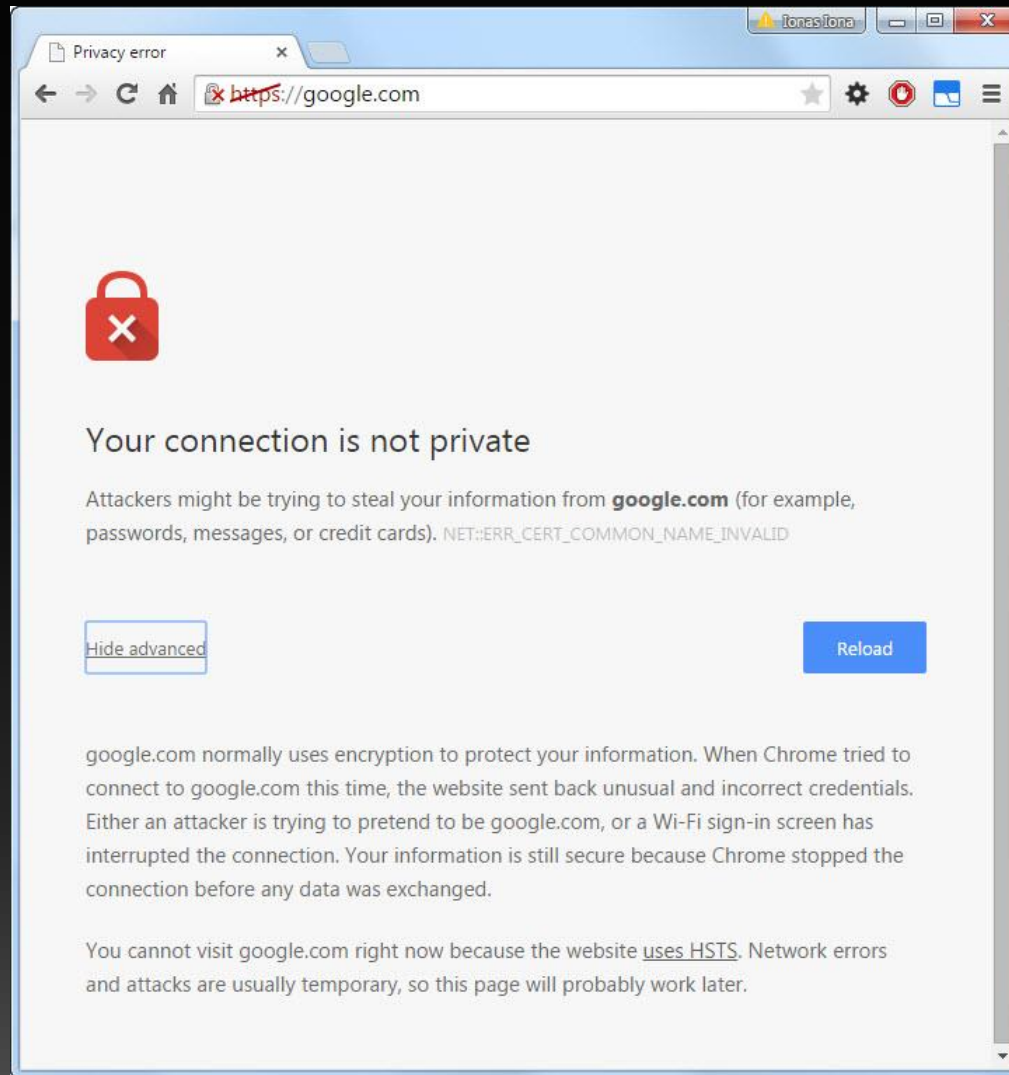
Security

◆ HTTPS

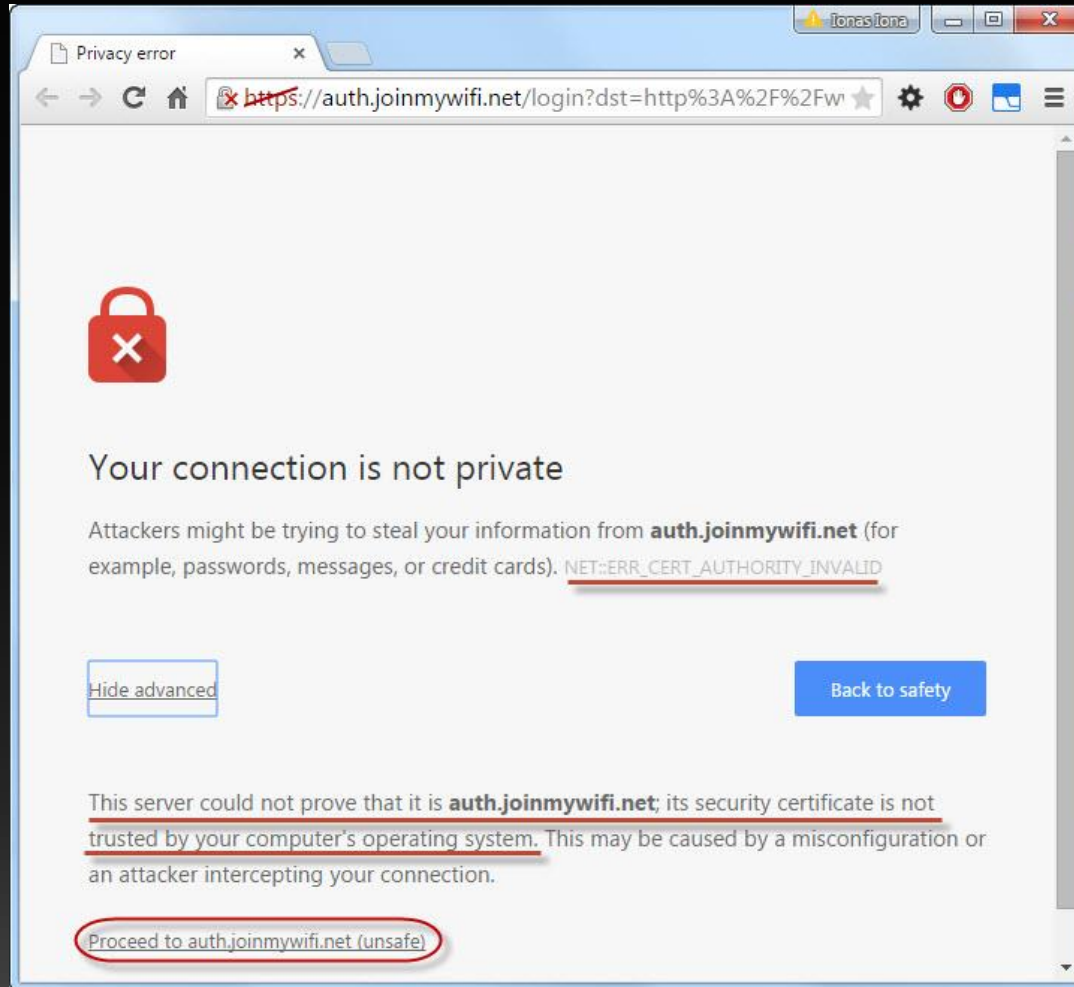
Man in the middle attack



HTTP Strict Transport Security



Self-signed certificates



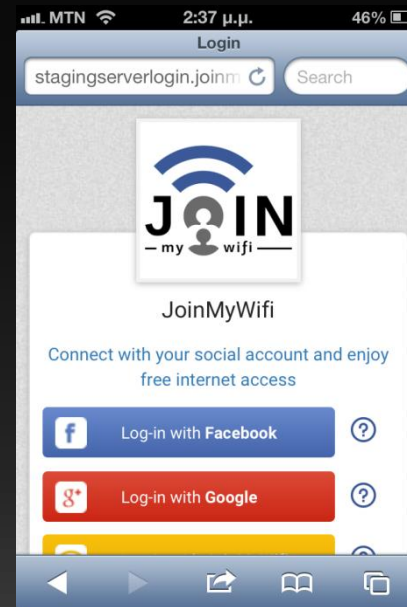
◆ Captive portal automatic detection

◆ Issues

- Android OS devices
- iOS/OS X devices
- Windows devices



Pseudo browser



Default browser (Safari)

Walled garden

◆ Disabling automatic detection

- Android OS devices (default pop up: Android browser)
 - clients3.google.com
 - gstatic.com
- iOS/OS X devices (default pop up: Safari pseudo browser)
 - airport.us
 - apple.com
 - apple.com.edgekey.net
 - appleiphonecell.com
 - captive.apple.com
 - gsp1.apple.com
 - ibook.info
 - itools.info
 - thinkdifferent.us
- Windows OS devices (default pop up: IE browser)
 - ipv6.msftncsi.com
 - ipv6.msftncsi.com.edgesuite.net
 - microsoft.com
 - msftncsi.com (Windows checks if DNS server resolves this domain correctly)
 - msftncsi.com.edgesuite.net
 - teredo.ipv6.microsoft.com
 - teredo.ipv6.microsoft.com.nsatc.net

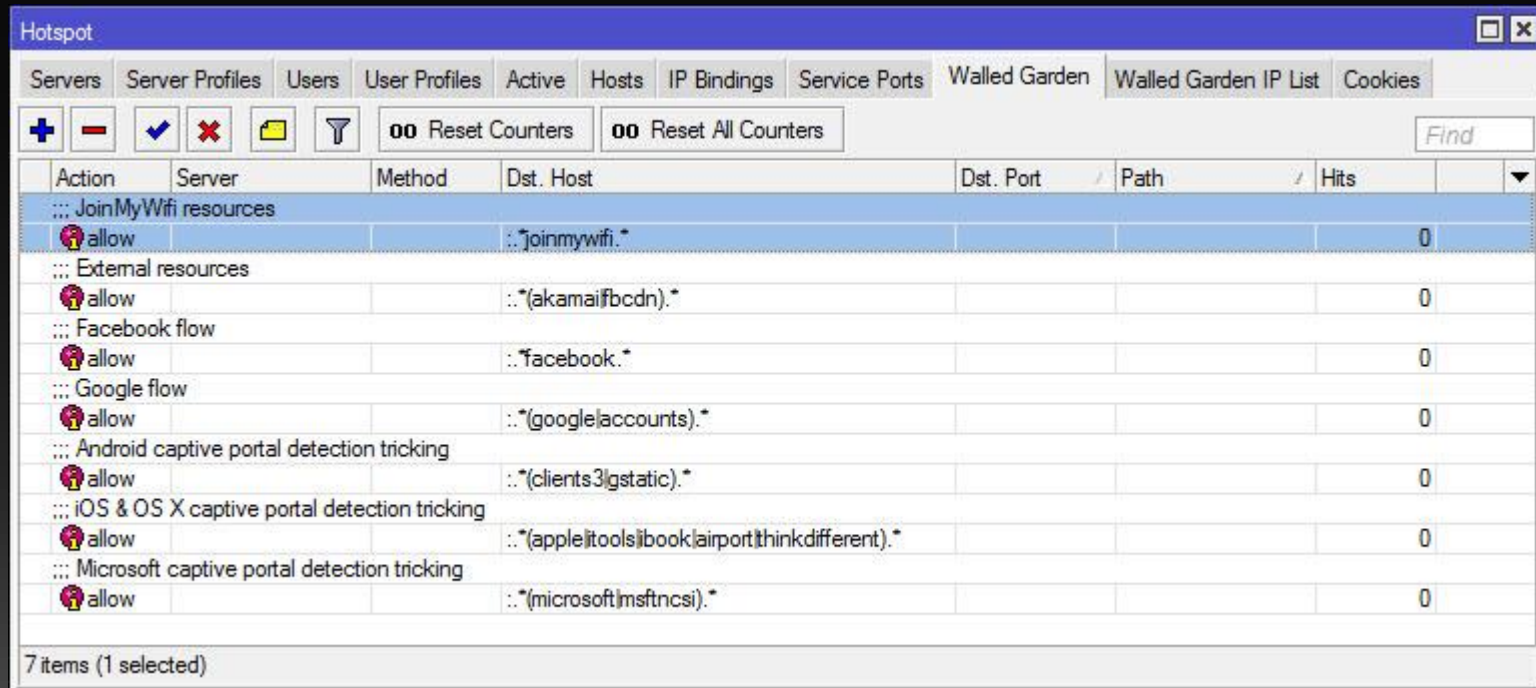
Required internet resources

- ◆ Facebook flow
 - facebook.com
 - Akamai resources
 - Fbcdn resources
- ◆ Google flow
 - accounts.google.com
 - apis.google.com
 - google.com
 - googleapis.com
 - googleusercontent.com
 - l.google.com

Walled garden configuration

```
/ip hotspot walled-garden
add comment="JoinMyWifi resources" dst-host=":*joinmywifi.*"
add comment="External resources" dst-host=":*(akamai|fbcdn).*"
add comment="Facebook flow" dst-host=":*facebook.*"
add comment="Google flow" dst-host=":*(google|accounts).*"
add comment="Android captive portal detection tricking" dst-host=":*(clients3|gstatic).*"
add comment="iOS & OS X captive portal detection tricking" dst-host=":*(apple|itools|ibook|airport|thinkdifferent).*"
add comment="Microsoft captive portal detection tricking" dst-host=":*(microsoft|msftncsi).*"

```



The screenshot shows the Mikrotik WinBox interface for configuring the Walled Garden. The 'Walled Garden' tab is active, displaying a table of configured rules. The table has columns for Action, Server, Method, Dst. Host, Dst. Port, Path, and Hits. Seven rules are listed, all with an 'allow' action and a hit count of 0. The first rule is selected.

Action	Server	Method	Dst. Host	Dst. Port	Path	Hits
allow			:::joinmywifi.*			0
allow			:::(akamai fbcdn).*			0
allow			:::facebook.*			0
allow			:::(google accounts).*			0
allow			:::(clients3 gstatic).*			0
allow			:::(apple itools ibook airport thinkdifferent).*			0
allow			:::(microsoft msftncsi).*			0

7 items (1 selected)

Live demo

Windows

An exception 06 has occurred at 0028:C11B3ADC in VxD DiskTSD(03) + 00001660. This was called from 0028:C11B40C8 in VxD voltrack(04) + 00000000. It may be possible to continue normally.

- * Press any key to attempt to continue.
- * Press CTRL+ALT+RESET to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue

Questions



Thank you!

