MIKROTIK IMPLEMENTATION

By Michael Takeuchi

STMIK ADHI GUNA, 30 March 2018

Little Things About Me – Michael Takeuchi

- My name is Michael Takeuchi
- Was MikroTik Certified on MTCNA, MTCRE, MTCINE, MTCUME, MTCWE, MTCTCE, MTCIPv6E
- Was Cisco Certified on CCNA-RS
- Was Juniper Certified on JNCIA-Junos
- MikroTik Certified Consultant on mikrotik.com
- January 2017 – June 2017 Work as Remote Network Engineer at Middle East
- July 2017 – Now Work as Network Analyst at Internet Service Provider (AS38320)

https://www.linkedin.com/in/michael-takeuchi

https://www.facebook.com/mict404

MAU KEMANA SETELAH LULUS KULIAH/SEKOLAH?

5 TAHUN MENDATANG,
MAU NGAPAIN?

Kerja?

Nyari kerja kok susah ya...

Pekerja

Nyari tenaga kerja yang qualified susah ya

Pengusaha

ARE YOU QUALIFIED?

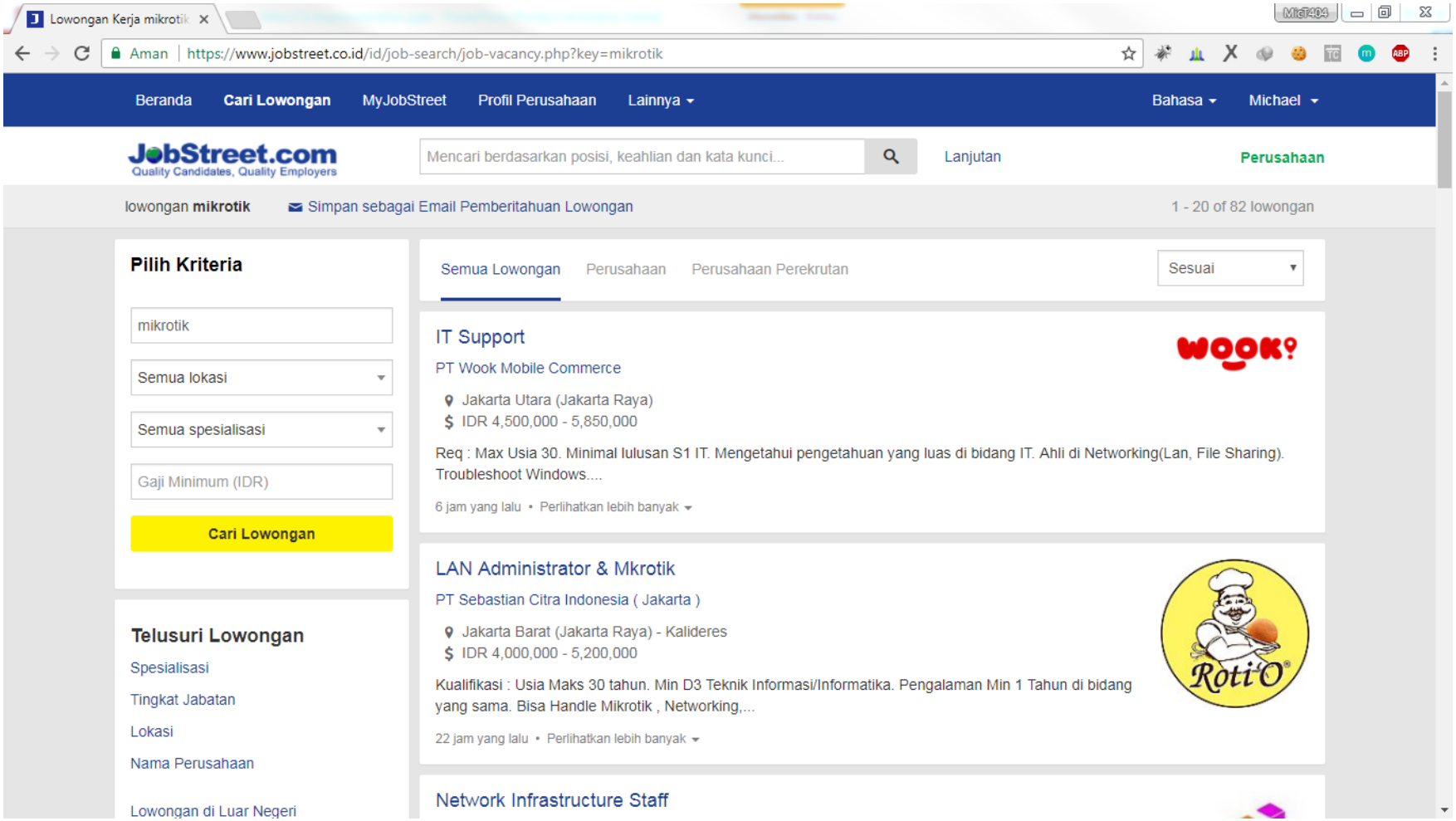
https://www.jobstreet.co.id
https://id.jobsdb.com/id
http://www.qerja.com/
https://jobindo.com/
dkk

IMPROVE
YOUR SKILLS !

Contoh Pekerjaan Dengan Keahlian Khusus

- Klik website pencari kerja
  - Search dengan kata kunci "mikrotik"

https://www.jobstreet.co.id/id/job-search/job-vacancy.php?key=mikrotik



PERNAH DENGAR?

- BGP
- Firewall
- MPLS
- NAT
- QoS
- Routing
- VLAN
- VPN

Lalu? Apa Sih MikroTik?

MikroTik

- Name of Company & Brand (https://www.mikrotik.com)
- Which Has Product (https://mikrotik.com/products) :
  - RouterBOARD
  - **RouterOS** – MikroTik Operating System (Used on MikroTik Product & x86/x64)
- Which Has Program:
  - MikroTik Academy (https://mikrotik.com/training/academy)
  - MikroTik User Meeting (https://mum.mikrotik.com)
  - Certification (MTCNA, MTCRE, MTCIPv6E, MTCTCE, MTCUME, MTCWE, MTCINE), https://mikrotik.com/training/about
- Headquarter: Riga, Latvia, Europe

MikroTik History

- Created on 1995 by John Tully (CEO) & Arnis Riekstins (CTO)
- Established on 1996
- First Time Using Linux Kernel 2.2 by 5 – 15 Person
- Be Wireless ISP (WISP) Before Being MikroTik Company

MikroTik RouterOS

- RouterOS is MikroTik's stand-alone operating system based on linux v3.3.5 kernel.
- Can be installed on PC x86 and also Virtualization Environment x64 (CHR)

RouterOS Features

- Routing
- Firewall
- QoS / BW Management
- Switching
- VPN
- NAT

LOW COST
With Many Feature

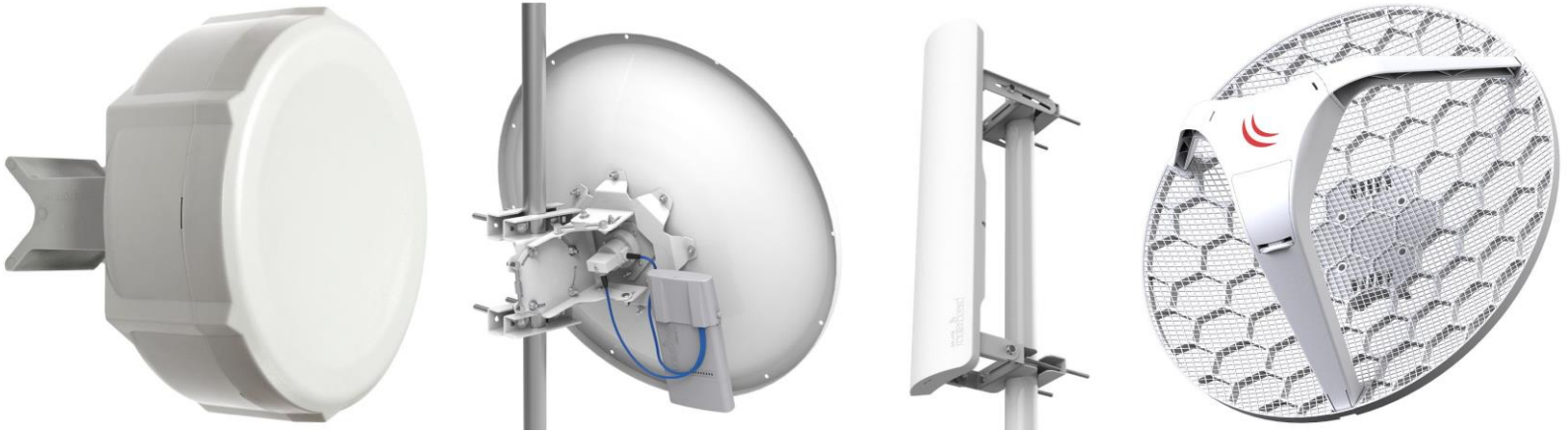
I LOW
COST

Affordable SOHO Router (Small Office & Home Office)

- https://www.youtube.com/watch?v=OuYif-1FHc0

Wireless Solution

- https://www.youtube.com/watch?v=2cym7j8BcJ0



MikroTik User Meeting (Up to 3000 Participants & More)

- https://www.youtube.com/watch?v=eKOwaxfotW8

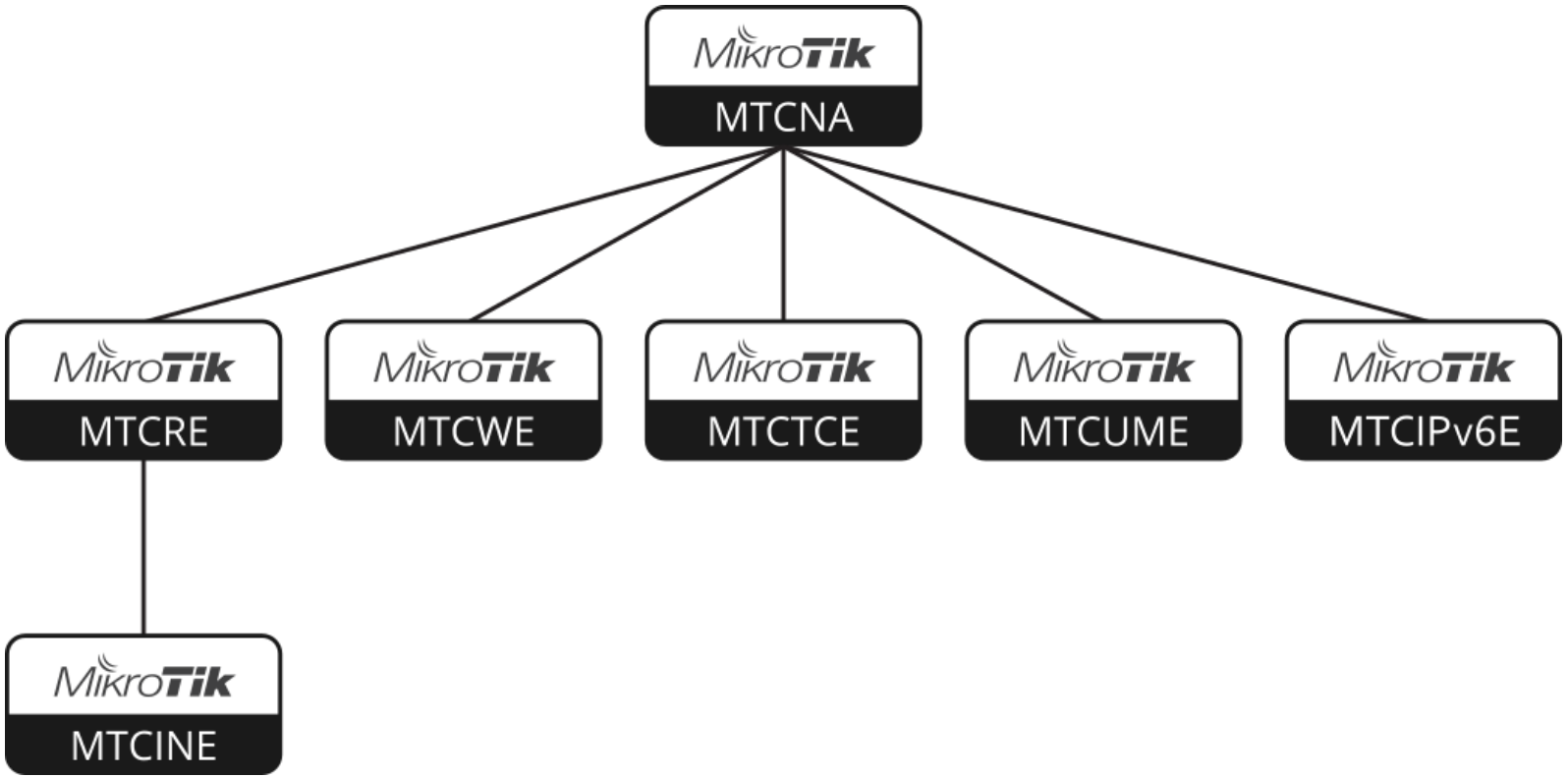
Upcoming MUM Events

https://mum.mikrotik.com

Forum MikroTik

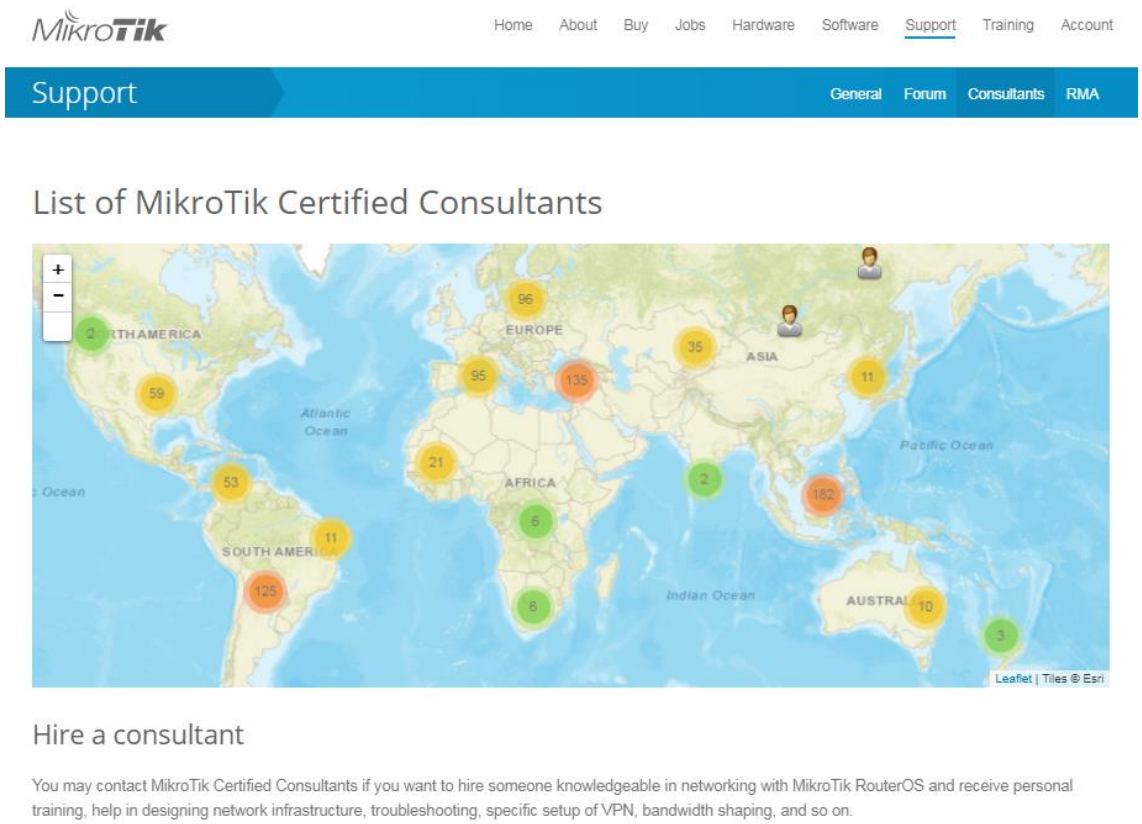
- Official MikroTik Forum: https://forum.mikrotik.com
- Lokal (Indonesia): http://www.forummikrotik.com

MikroTik Certification



MikroTik Consultant

- https://www.mikrotik.com/consultants/



MikroTik Academy

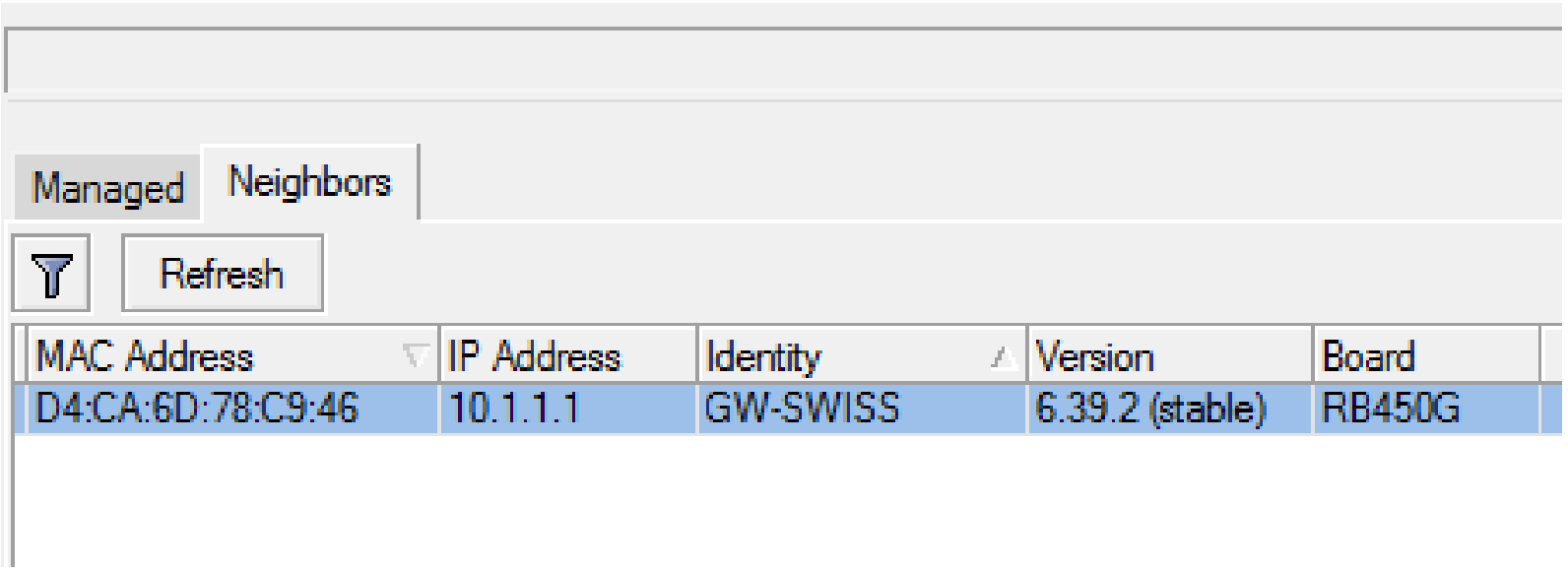
- https://www.youtube.com/watch?v=gVDubJTegV4

Siapa dan Dimana Saja Yang Pakai MikroTik?

Small Office & Home Router (SOHO)

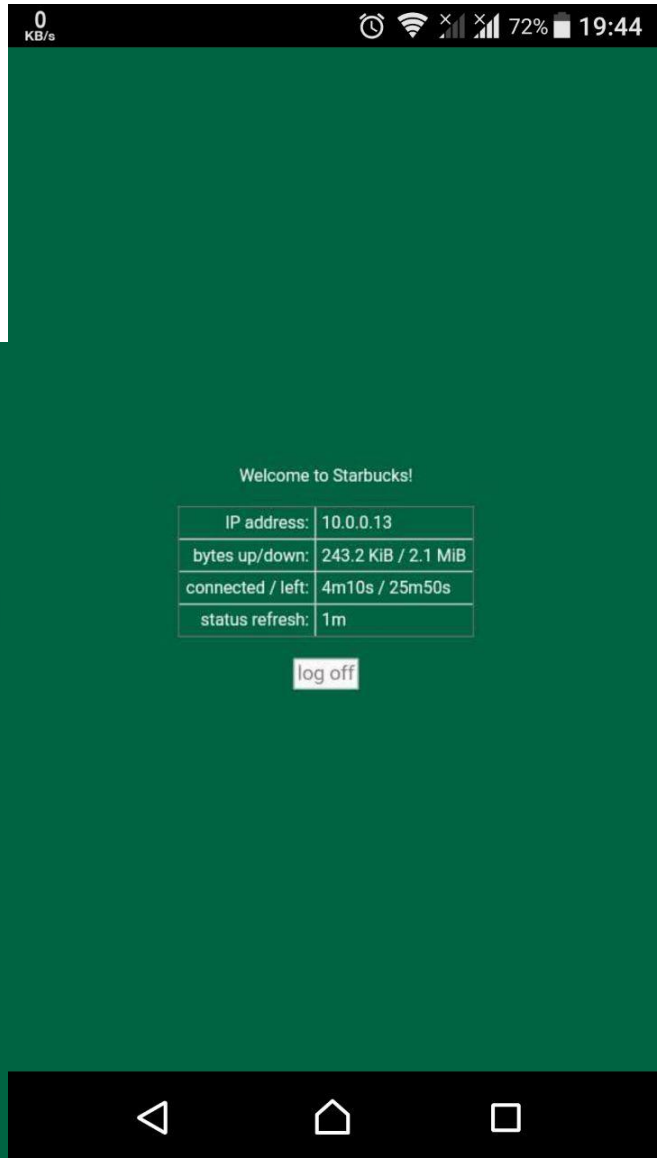
- Pembatasan Jam Konek Gadget
- Wireless Access Point
- Limit Bandwidth
- Blokir Akses
  - Streaming
  - Social Media
  - Website Porno

Hotel


Managed
Neighbors
Refresh
MAC Address
IP Address
Identity
Version
Board
D4:CA:6D:78:C9:46
10.1.1.1
GW-SWISS
6.39.2 (stable)
RB450G

Resort

Restaurant & Caffe



Hospital

```
[[redacted]@[redacted]-Hospital-Alam-Sutra] > system identity print
  name: [redacted]-Hospital-Alam-Sutra
[[redacted]@[redacted]-Hospital-Alam-Sutra] > system resource print
                uptime: 2w1d4h34m18s
               version: 6.40.5 (stable)
            build-time: Oct/31/2017 13:05:15
      factory-software: 6.35.3
           free-memory: 980.0MiB
          total-memory: 1011.0MiB
                   cpu: ARMv7
             cpu-count: 2
         cpu-frequency: 1400MHz
              cpu-load: 2%
        free-hdd-space: 91.6MiB
       total-hdd-space: 128.3MiB
    architecture-name: arm
           board-name: RB3011UiAS
             platform: MikroTik
```

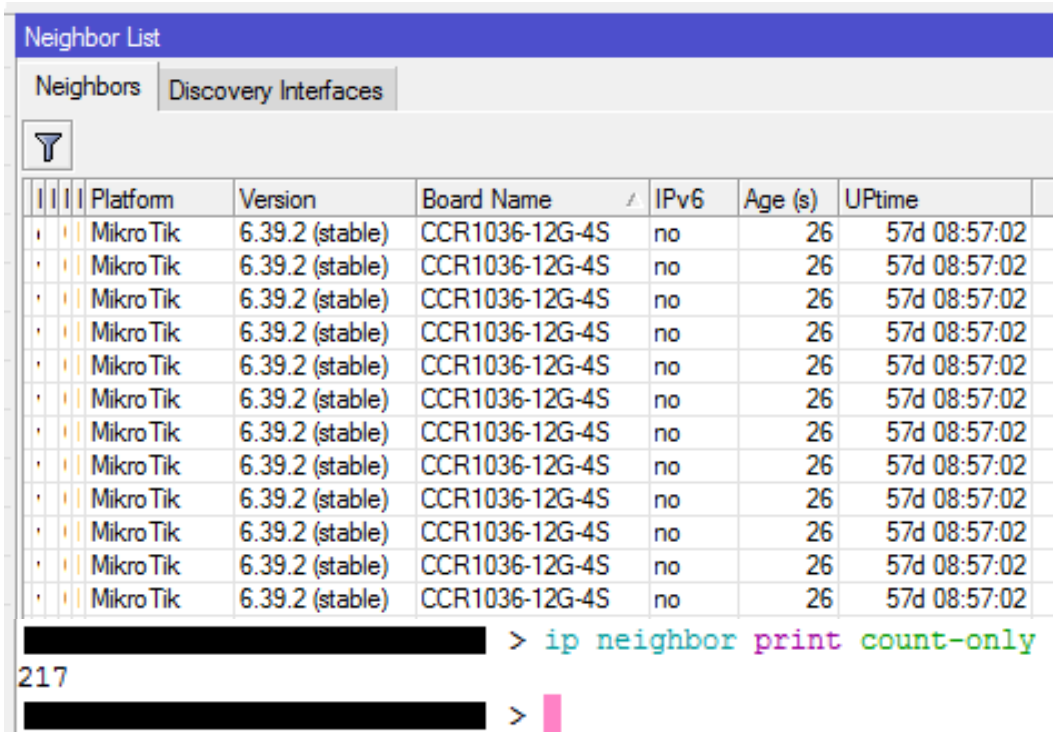
Kampus/Sekolah

```
[admin@SMK-Taruna-Bhakti-Depok] > system identity print
  name: SMK-Taruna-Bhakti-Depok
[admin@SMK-Taruna-Bhakti-Depok] > system routerboard print
       routerboard: yes
             model: RouterBOARD 750G r2
```

Fitur Umum Yang Digunakan di Hotel, Caffe, Sekolah, Rumah Sakit

- Bandwidth Management
- Hotspot/Captive Portal
- Load Balancing
- Routing
- Firewall
- Switching

Data Center


Neighbor List
Neighbors
Discovery Interfaces
Platform
Version
Board Name
IPv6
Age (s)
UPtime
MikroTik
6.39.2 (stable)
CCR1036-12G-4S
no
26
57d 08:57:02
> ip neighbor print count-only
217
>

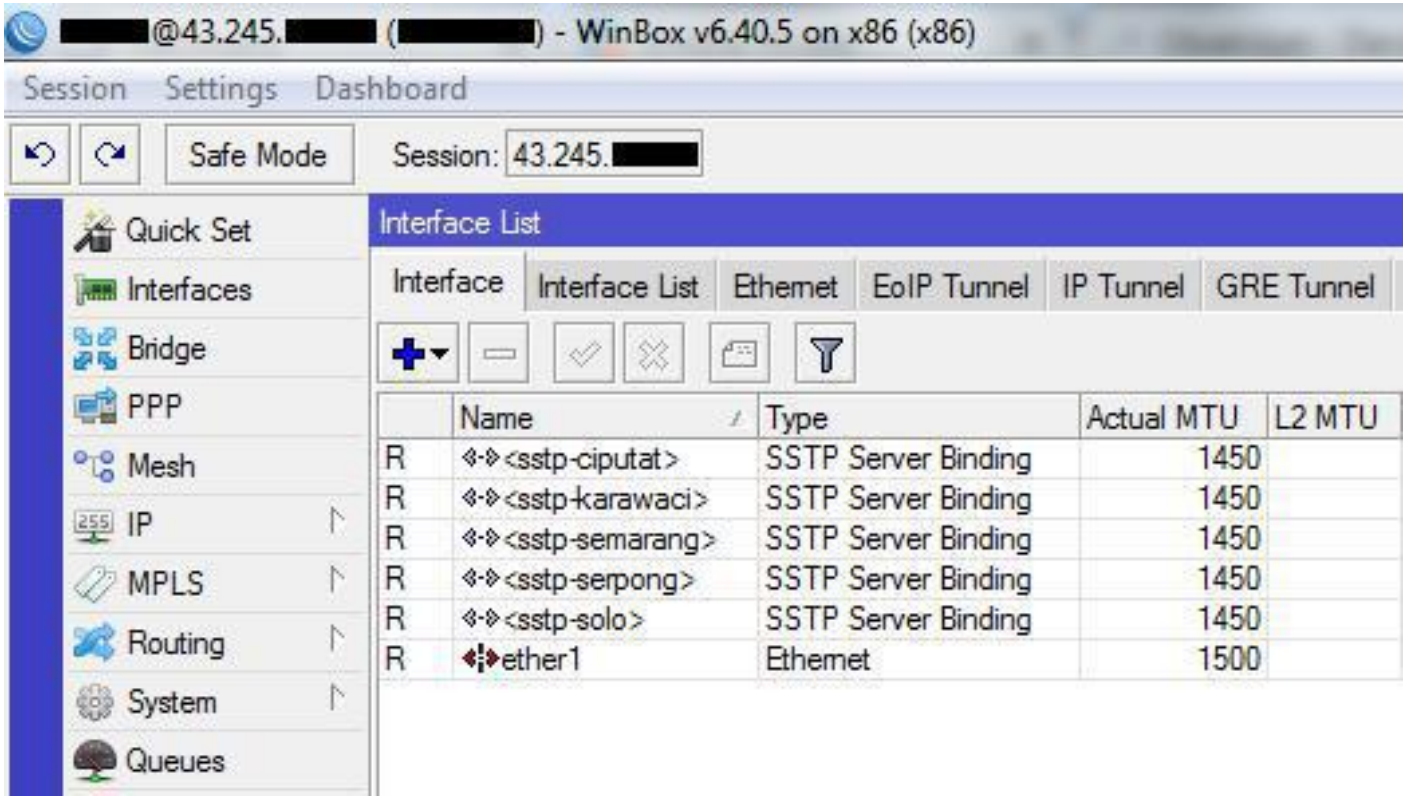
Data Center

CLOUD CORE
MikroTik
DCCCR01.RT
OFACCR01.RT
ITLCCR01.RT
HSCCR01.RT

Fitur Umum Yang Digunakan di Data Center

- Dynamic Routing (Border Gateway Protocol, BGP)
- VLAN
- Firewall
- Bandwidth Management

Konektivitas Antar Cabang & Kantoran



Fitur Umum Yang Digunakan Pada Konektivitas Antar Cabang & Kantoran

- PPTP, L2TP, SSTP, IPSec, EoIP, GRE, OpenVPN (Tunnel) dkk.
- Dynamic Routing (OSPF, RIP, iBGP, dkk.)
- Firewall
- VLAN
- Bandiwidth Management
- Hotspot Captive Portal
- Wireless Access Point
- TheDude Network Monitoring

Cukup Belajar MikroTik Aja?

TIDAK!
TIDAK!
TIDAK!
TIDAK!

PERNAH DENGAR?

- Alcatel-Lucent
- Allied Telesis
- Aruba
- Brocade
- Cambium
- Cisco
- EnGenius
- F5
- Fortinet
- Huawei
- Juniper
- Netgear
- Ruckus
- Ubiquiti

https://en.wikipedia.org/wiki/List_of_networking_hardware_vendors

Learn Concepts, Don't Be a Fan Boy

Discuss Group Reference

- https://www.facebook.com/groups/ilmujaringan/
- https://t.me/IT_Networking
- https://www.facebook.com/groups/mikrotik.id/
- https://www.facebook.com/groups/rtrwnetgratis/
- https://www.facebook.com/groups/ForumMikroTikIndonesia/

Feel So Hard To Implement This Awesome Things?

Let Me Help You!

michael@takeuchi.id
http://www.facebook.com/mict404
https://www.linkedin.com/in/michael-takeuchi

Any Question?

thank
you