

# Mikrotik Transparent Traffic Shaper

By Oktama Tija

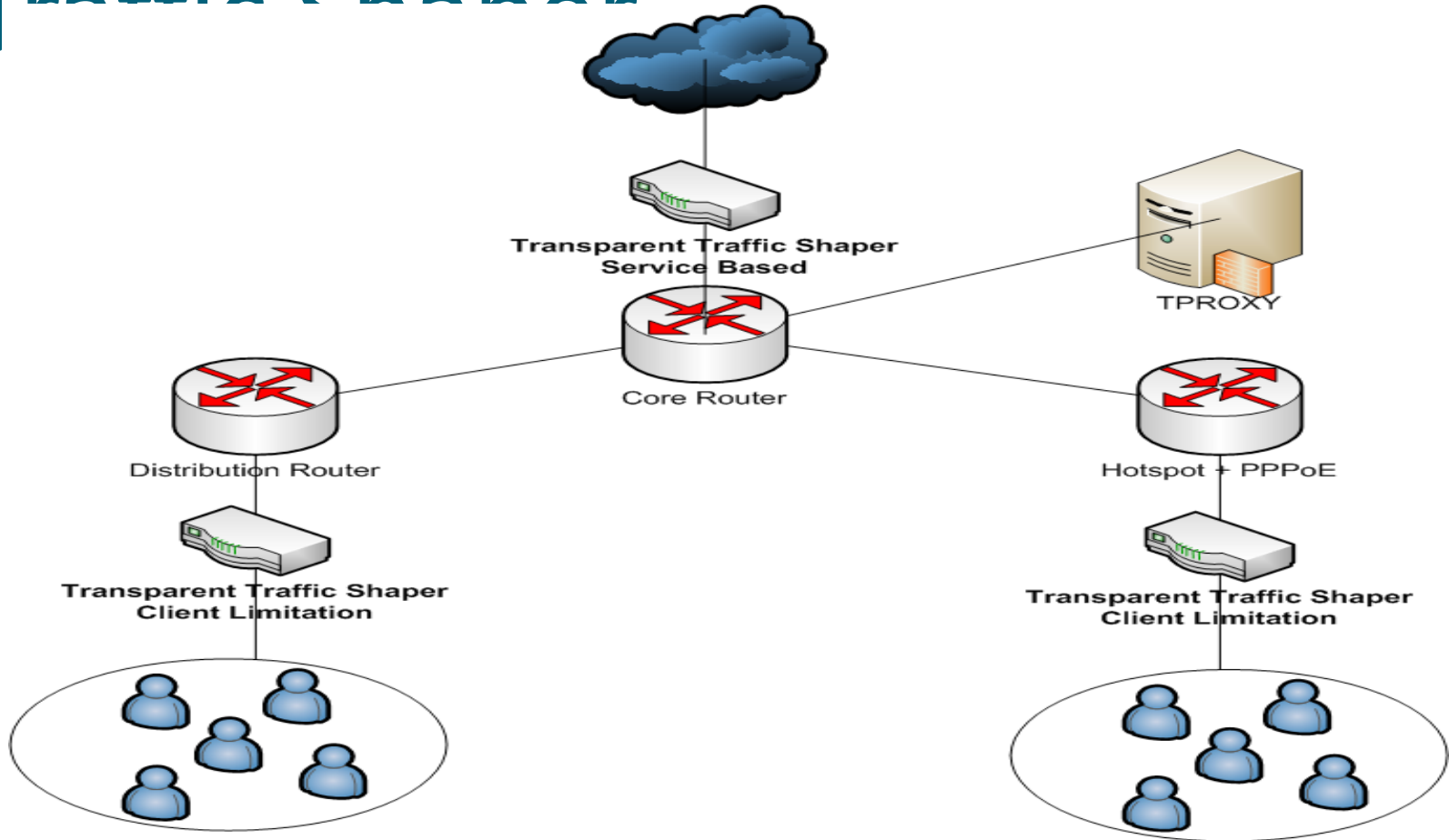
- Name : Oktama Tija, Just Ordinary Person
  - Owner Internusa Total Solution,
    - Internusa Cybernet (Warnet)
    - Jayapura - Papua
  - MTCNA, MTCTCE
  - Mikrotik Consultants, 2011
  - [Http://www.intosolusi.co.id](http://www.intosolusi.co.id)

# Kenapa menggunakan Transparent Traffic Shaper

- Distribusi Ip-Public lebih mudah
- Mengurangi beban pada core router maupun distribusi
- Mudah menerapkan Limitasi bandwidth Client
- Bandwidth Control untuk setiap service (HTTP, HTTPS, SSH, Online Game, Voip, etc)
- Harga yang sangat terjangkau berbanding kompetitor lainnya.
- Support VLAN
- Fleksibilitas yang sangat baik

# Penempatan Transparent

## Traffic Shaper



# Bridge Interface

The screenshot displays a network configuration window titled "Bridge". On the left is a sidebar menu with the following items: Interfaces, Wireless, Bridge, PPP, Mesh, IP, IPv6, MPLS, Routing, System, Queues, Files, Log, Radius, Tools, New Terminal, ISDN Channels, KVM, Make Supout.tif, Manual, and Exit. The main window has tabs for "Bridge", "Ports", "Filters", "NAT", and "Hosts". Below the tabs are several icons: a red plus sign, a blue minus sign, a blue checkmark, a red X, a yellow folder, a funnel, and a "Settings" button. A "Find" search box is located on the right. A table lists the bridge interface:

	Name	Type	L2 MTU	Tx	Rx	Tx Pac...	Rx Pac...	Tx D
R	bridge1	Bridge	1600	689.8 kbps	7.4 Mbps	619	835	

At the bottom of the window, a status bar indicates "1 item out of 16 (1 selected)".

Interfaces  
Wireless  
Bridge  
PPP  
Mesh  
IP  
IPv6  
MPLS  
Routing  
System  
Queues  
Files  
Log  
Radius  
Tools  
New Terminal  
ISDN Channels  
KVM  
Make Supout.tif  
Manual  
Exit

### Bridge

Bridge Ports Filters NAT Hosts

+ - ✓ ✗ 📄 🏠 Find

Interface	Bridge	Priority (h...	Path Cost	Horizon	Role	Root Pat..
ether1	bridge1	80	10		designated port	
ether2	bridge1	80	10		designated port	
ether3	bridge1	80	10		designated port	
ether4	bridge1	80	10		designated port	

4 items (1 selected)

# Enable ip firewall bridge

The screenshot displays the Mikrotik WinBox interface. The main window is titled "Bridge" and shows a table with one entry: "bridge1" of type "Bridge". The table columns are Name, Type, L2 MTU, Tx, Rx, Tx Pac..., Rx Pac..., and Tx D. The "bridge1" entry has L2 MTU of 1600 and Tx of 523.2 kbps. A "Bridge Settings" dialog box is open over the table, showing three checked options: "Use IP Firewall", "Use IP Firewall For VLAN", and "Use IP Firewall For PPPoE". The dialog has "OK", "Cancel", and "Apply" buttons. The WinBox interface includes a sidebar with menu items like Interfaces, Wireless, Bridge, PPP, Mesh, IP, IPv6, MPLS, Routing, System, Queues, Files, Log, Radius, Tools, New Terminal, ISDN Channels, KVM, Make Supout.tif, Manual, and Exit. The top status bar shows "admin@118.97.30.126 (MikroTik) - WinBox v5.17 on x86 (x86)", "Uptime: 10:14:54", "Memory: 1831.7 MB", "CPU: 2%", and "Hide Passwords". The Windows taskbar at the bottom shows the time as 8:49 PM on 10/20/2012.

Name	Type	L2 MTU	Tx	Rx	Tx Pac...	Rx Pac...	Tx D
R bridge1	Bridge	1600	523.2 kbps				

Bridge Settings

- Use IP Firewall
- Use IP Firewall For VLAN
- Use IP Firewall For PPPoE

Buttons: OK, Cancel, Apply

# Quick and Dirty

- Tentukan penggunaannya
  - Service based Bandwidth management?
  - Client Limitation? Dedicated Bandwidth atau Shared Bandwidth ke Client (up to)?
- Gunakan Chain Prerouting
- Gunakan HTB Interface



# Tentukan Penggunaannya

- Service Based management

```
/ip firewall mangle
```

```
add action=mark-packet chain=forward comment=Cache-HIT disabled=no dscp=12 new-packet-mark=cache.hit \  
passthrough=no
```

```
add action=mark-connection chain=prerouting disabled=no dst-port=80 in-interface=local-bridge \  
new-connection-mark=HTTP passthrough=yes protocol=tcp
```

```
add action=mark-packet chain=prerouting new-connection-mark=HTTP disabled=no \  
new-packet-mark=HTTP
```

```
add action=mark-connection chain=prerouting disabled=no dst-port=443 in-interface=local-bridge \  
new-connection-mark=HTTPS passthrough=yes protocol=tcp
```

```
add action=mark-packet chain=prerouting disabled=no connection-mark=HTTPS \  
new-packet-mark=HTTPS
```

```
add action=mark-connection chain=prerouting disabled=no dst-port=!80 in-interface=local-bridge \  
new-connection-mark=LAINNYA passthrough=yes protocol=tcp
```

```
add action=mark-packet chain=prerouting disabled=no connection-mark=LAINNYA \  
new-packet-mark=LAINNYA
```

- Client Limitation, 256Kbps Shared, 512Kbps shared, 1Mbps Shared

Ip firewall mangle

```
add chain=prerouting src-address-list=256kbps \
```

```
    action=mark-connection new-connection-mark=256kbps
```

```
        add chain=prerouting connection-mark=256kbps action=mark-packet \
```

```
            new-packet-mark=256kbps
```

```
add chain=prerouting src-address-list=512kbps \
```

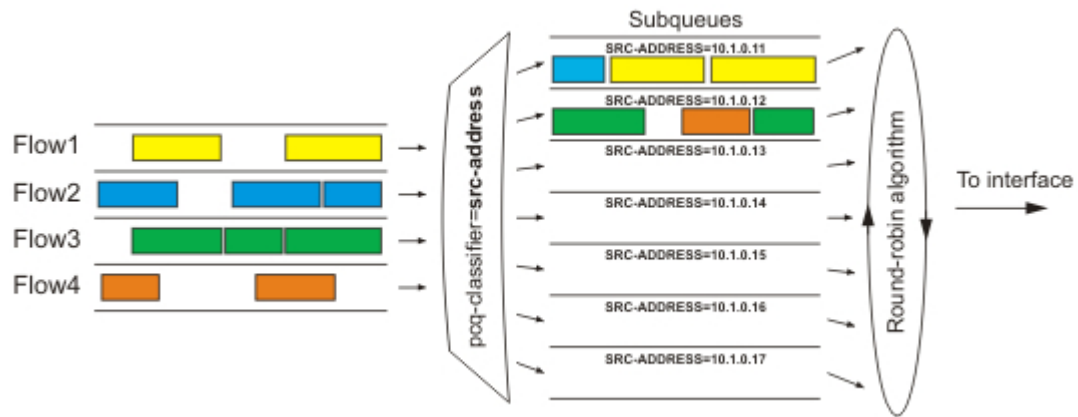
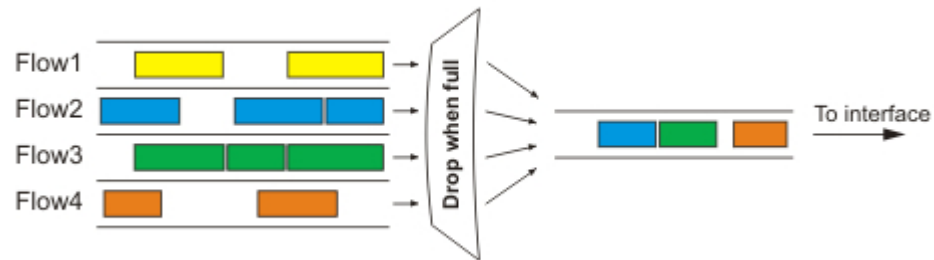
```
    action=mark-connection new-connection-mark=512kbps
```

```
        add chain=prerouting connection-mark=512kbps action=mark-packet \
```

```
            new-packet-mark=512kbps
```

```
add chain=prerouting src-address-list=1mbps \
```

# PFIFO & PCQ



# Queue

Simple Queues | Interface Queues | Queue Tree | Queue Types

+ - ✓ ✗ 📄 ⚙️

00 Reset Counters 00 Reset All Counters Find

Name	Parent	Packet ...	Limit At (b...	Max Limit ...	Avg. Rate	Queued Bytes	Bytes
Downlink	Lan			10M		0 B	0 B
1Mbps	Downlink	1mbps	1M	10M	0 bps	0 B	0 B
256kbps	Downlink	256kbps	1M	10M	0 bps	0 B	0 B
512kbps	Downlink	512kbps	1M	10M	0 bps	0 B	0 B

Queue Type <pcq-1m>

Type Name:  OK

Kind:  Cancel

Rate:  Apply

Limit:  Copy

Total Limit:  Remove

Burst Rate:  ▼

Burst Threshold:  ▼

Burst Time:

Classifier

Src. Address  Dst. Address

Src. Port  Dst. Port

Src. Address Mask:

Dst. Address Mask:

Src. Address6 Mask:

Dst. Address6 Mask:

Queue <1Mbps>

General | Statistics

Name:  OK

Parent:  Cancel

Packet Marks:  Apply

Queue Type:  Disable

Priority:  Comment

Limit At:  ▲ bits/s

Max Limit:  ▲ bits/s

Burst Limit:  ▼ bits/s

Burst Threshold:  ▼ bits/s

Burst Time:  ▼ s

enabled

Remove

Reset Counters

Reset All Counters



Special Thanks.

Syaifuddin,

Yosan

FMI (Forum Mikrotik Indonesia) + Junkers  
Community

Spectrumindo

Achmad bagus (Dhecyber)

Maulana Akbar (Indonic)