MPLS saved money for Swedish Municipality

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2 mach 2010

Wroclaw

Old solution

- Multiple VLAN to each site with leased line
- No freedom on amount of VLAN ids
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- Only provider tos = fixed
- Only ADSL to a lot of the locations 2m/512k

New solution

- RB1000 as router in main server room.
- RB450 and RB750G client routers.
- RIC/522T if no connectivity
- MPLS on all Link interfaces.
- VPLS to all sites.

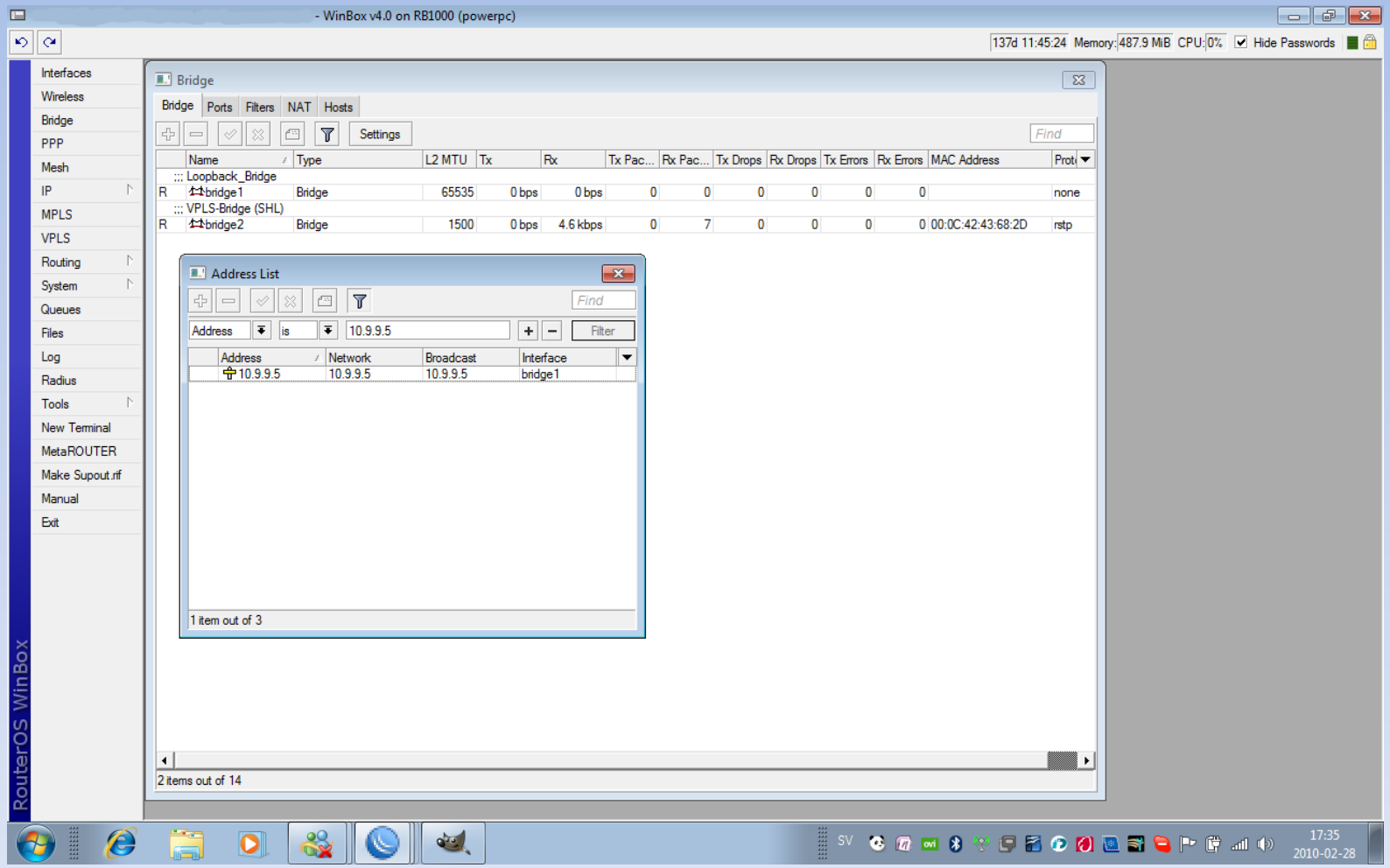
Benefit's

- Full freedom on VLAN ids.
- No extra fee for configuration of VLAN only Ethernet needed on leased lines.
- QoS with RouterOS.
- Not only ADSL.
- Possibility to get more speed up to 100M/100M.

Problems in rollout

- CMTS filtering MPLS in bridge mode “Arris C3” solution using PPPoE client on sub office router.
- MTU on PPPoE clients.
- Mixed mode in routing OSPF and MPLS. Filtering needed.

Configuration in HQ



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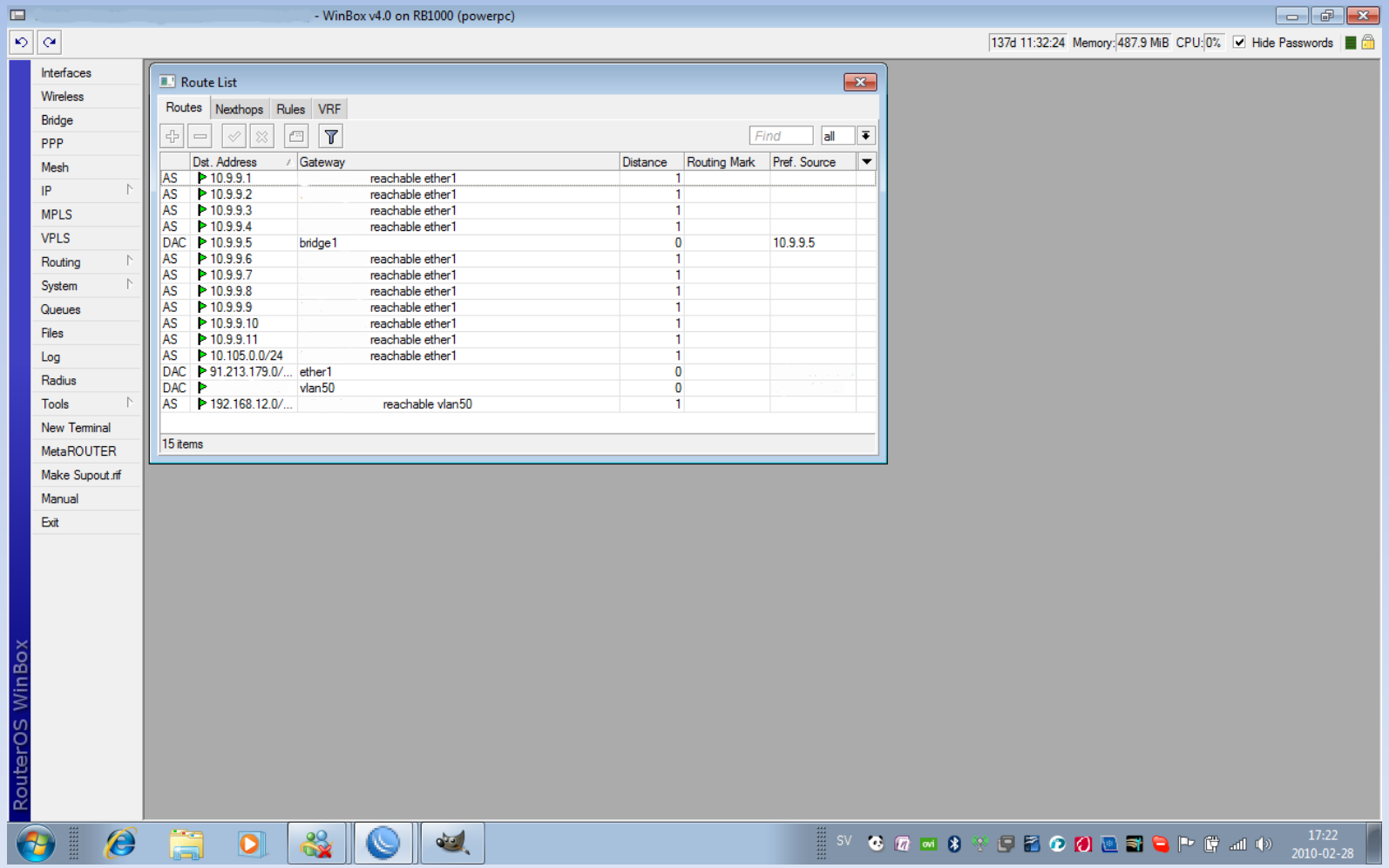

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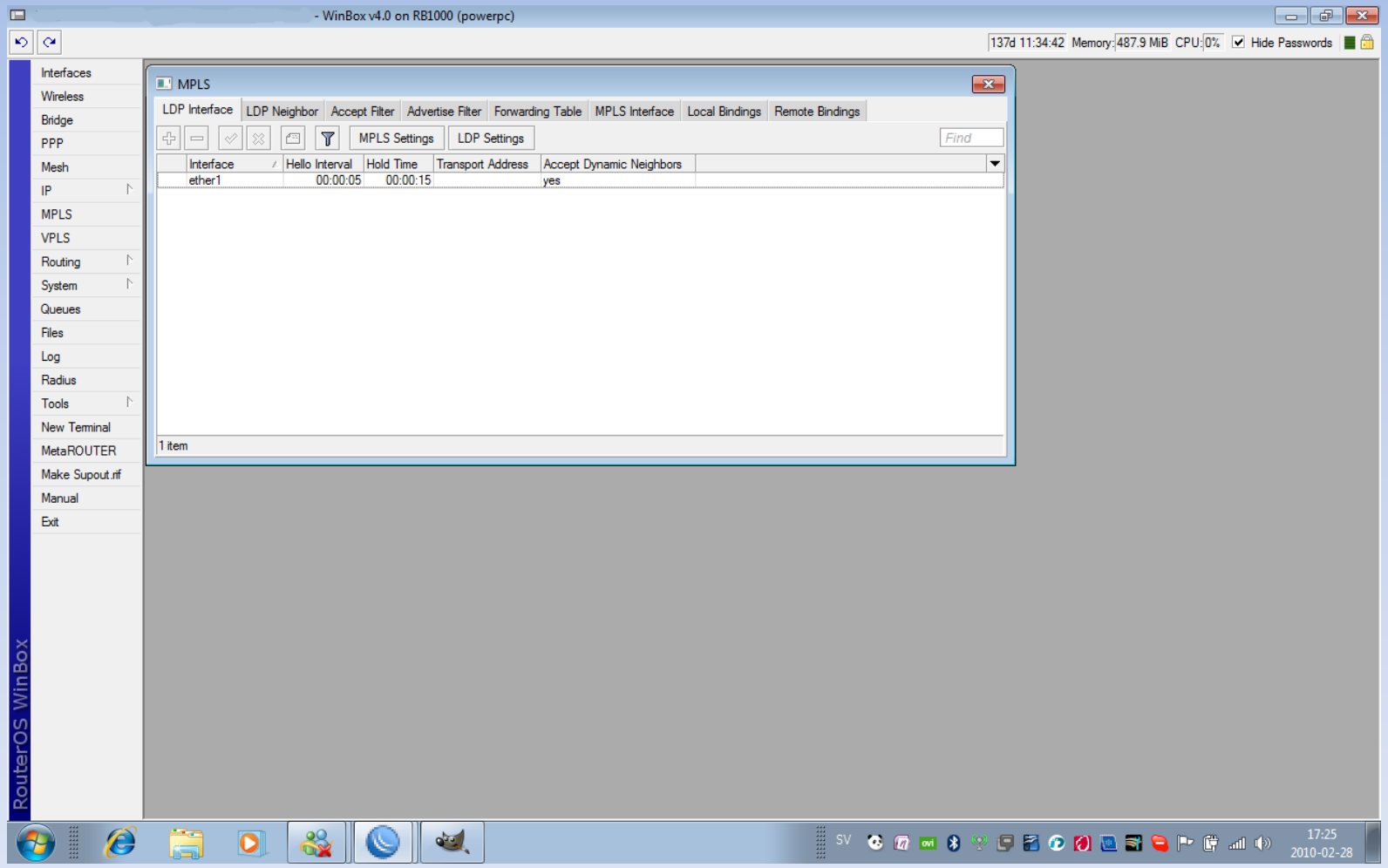

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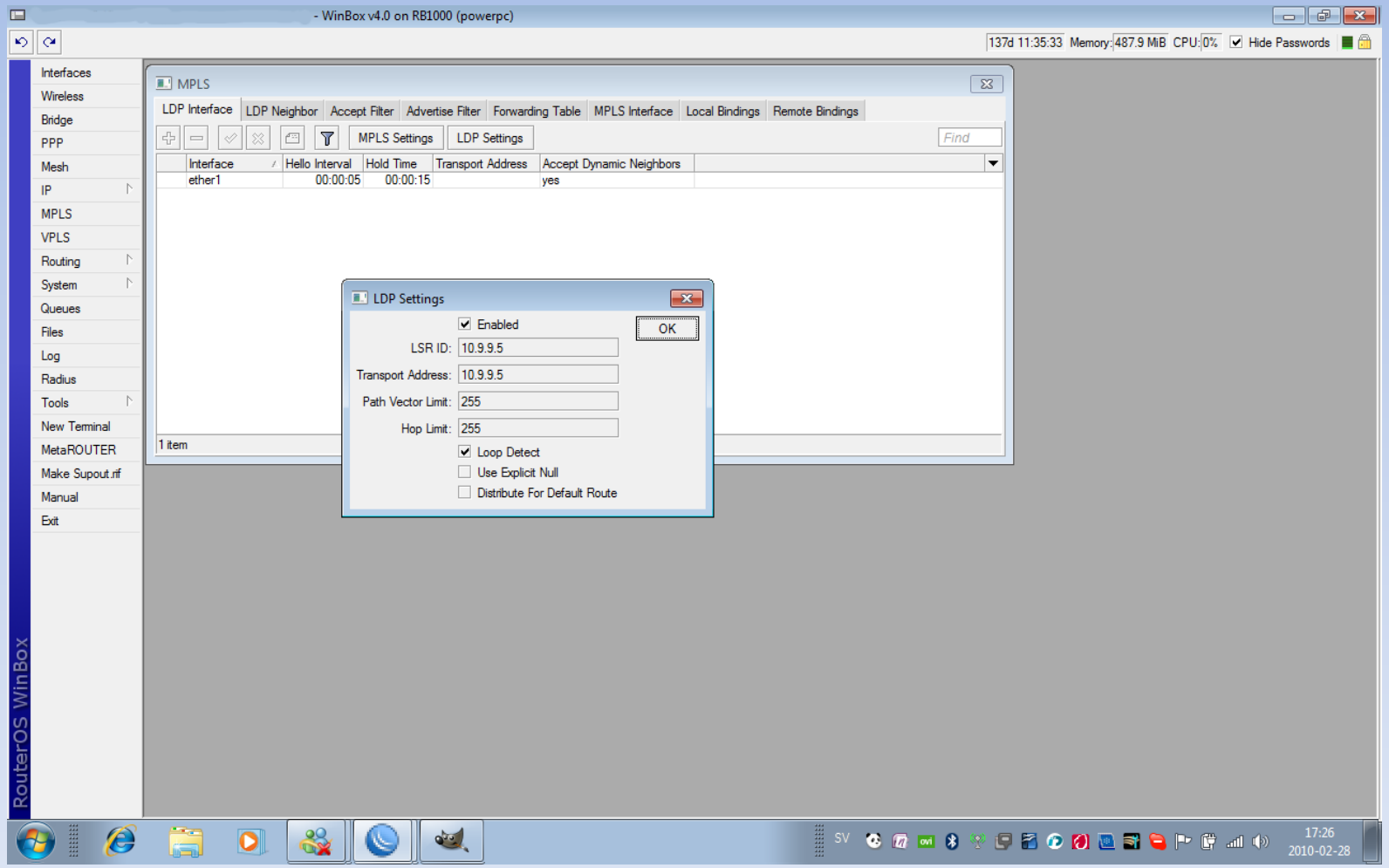

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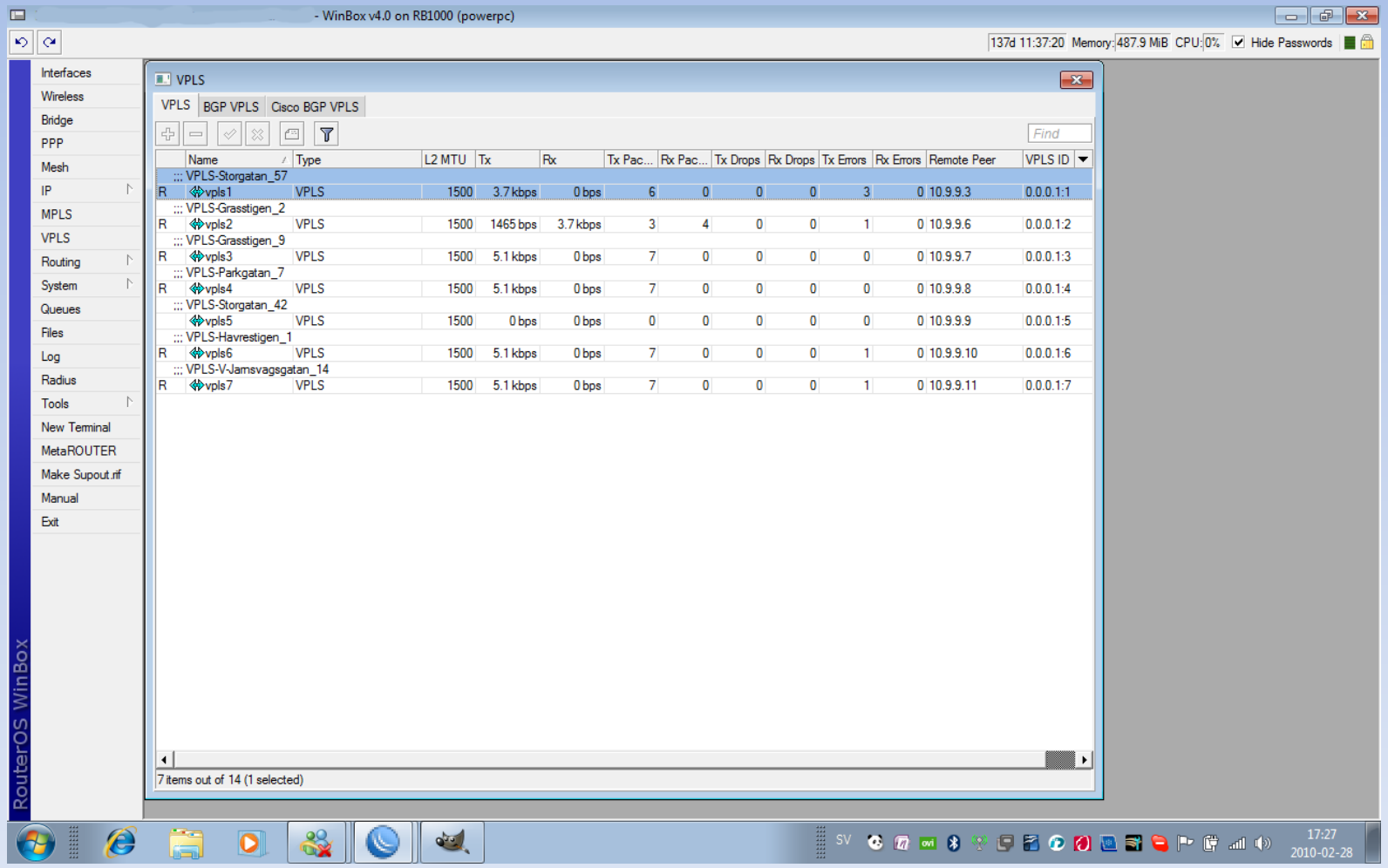

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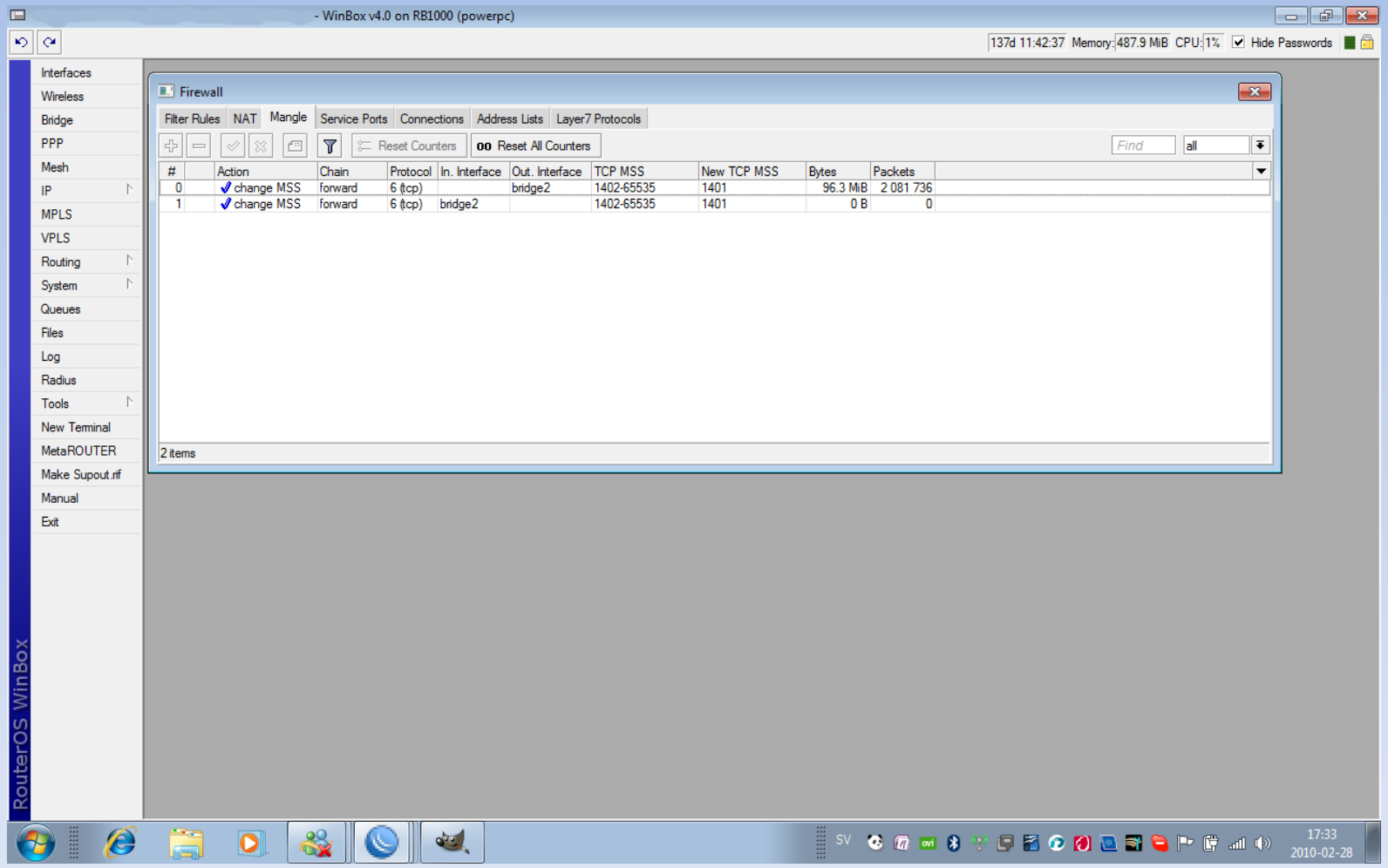

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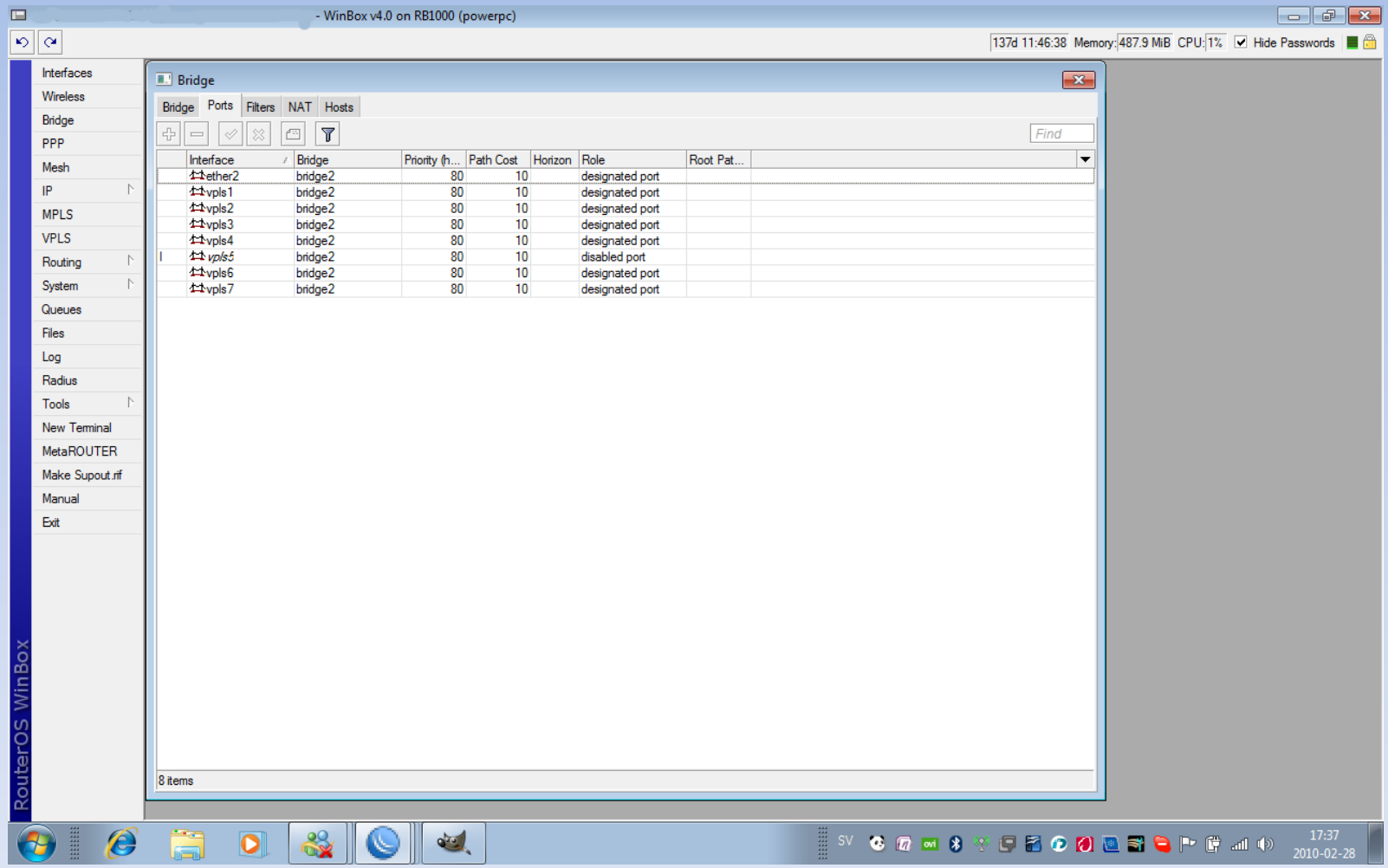
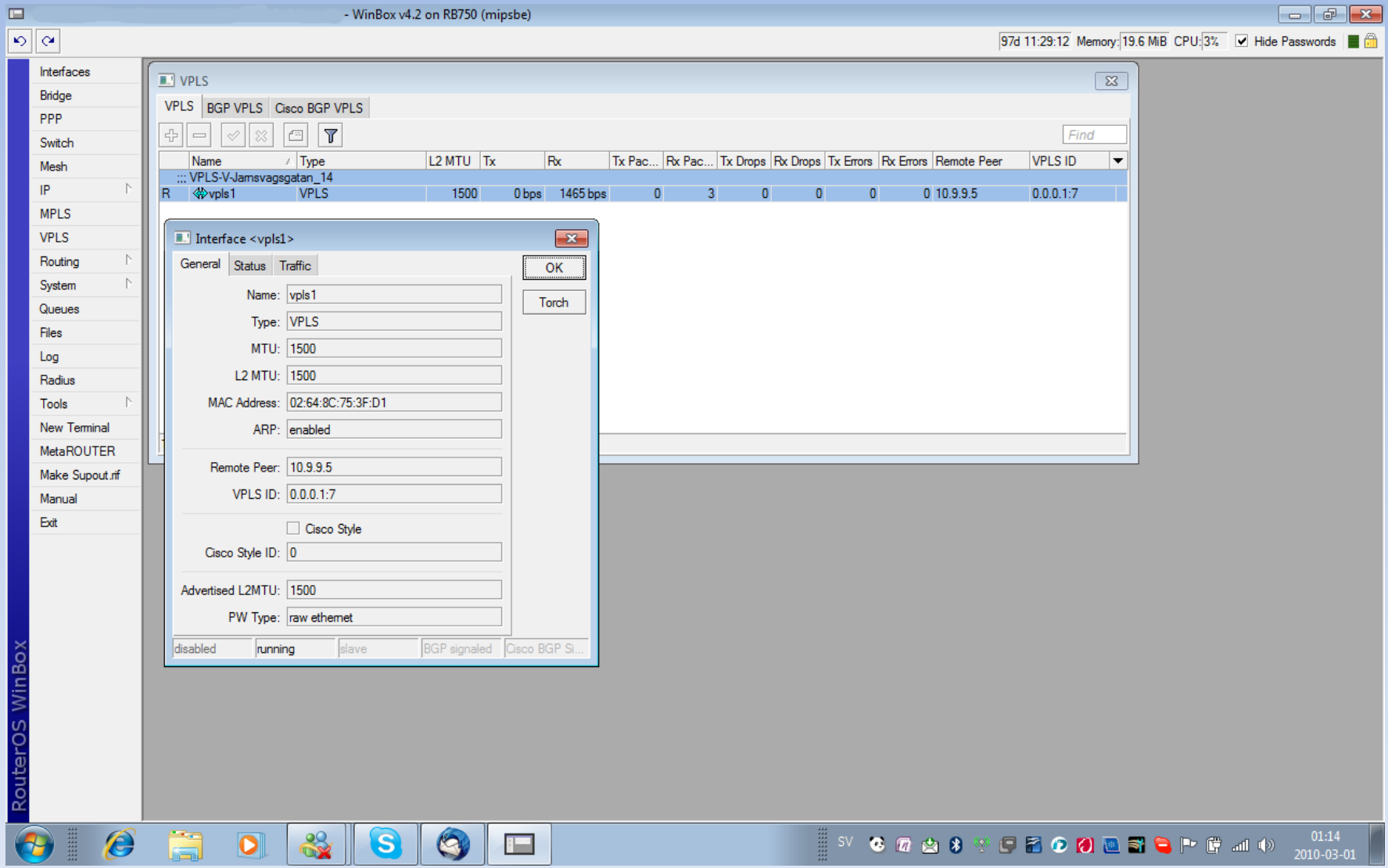


Configuration in ISP routers

- LDP settings only on the interfaces facing sub offices and HQ
- Local loop setting as all routers in the MPLS cloud
- No VPLS settings
- Only setup if a new office are added to the cloud

Configuration in sub office

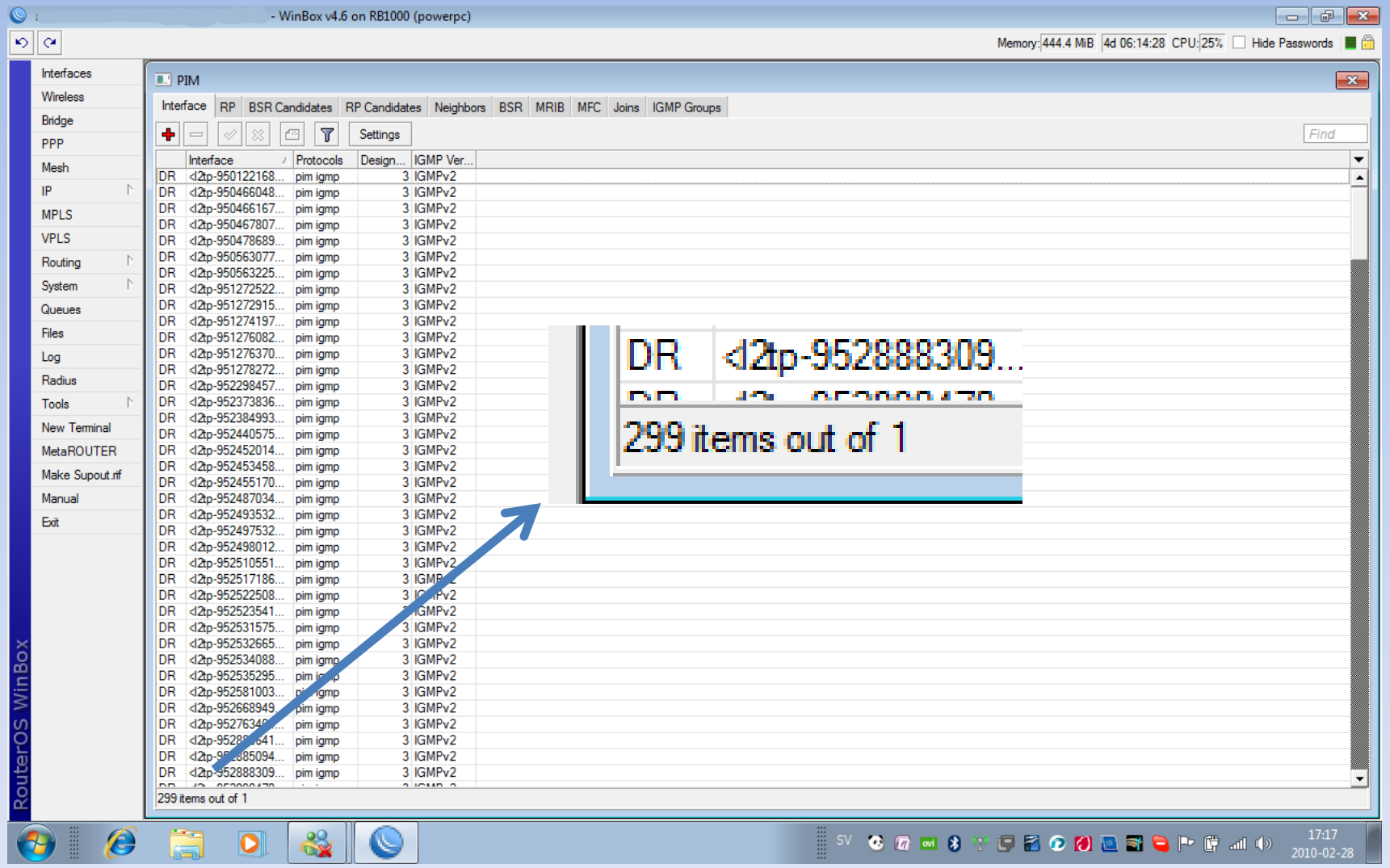
- All routers same config except local loop IP
- Saves time in rollout
- All VPLS settings pointing at the HQ local loop address


- WinBox v4.2 on RB750 (mipsbe)
97d 11:29:12 Memory: 19.6 MiB CPU: 3% Hide Passwords
Interfaces
Bridge
PPP
Switch
Mesh
IP
MPLS
VPLS
Routing
System
Queues
Files
Log
Radius
Tools
New Terminal
MetaROUTER
Make Supout.rif
Manual
Exit
RouterOS WinBox
VPLS
VPLS
BGP VPLS
Cisco BGP VPLS
Find
Name
Type
L2 MTU
Tx
Rx
Tx Pac...
Rx Pac...
Tx Drops
Rx Drops
Tx Errors
Rx Errors
Remote Peer
VPLS ID
;;; VPLS-V-Jamsvagsgatan_14
R vpls1 VPLS 1500 0 bps 1465 bps 0 3 0 0 0 0 10.9.9.5 0.0.0.1:7
Interface <vpls1>
General
Status
Traffic
OK
Torch
Name: vpls1
Type: VPLS
MTU: 1500
L2 MTU: 1500
MAC Address: 02:64:8C:75:3F:D1
ARP: enabled
Remote Peer: 10.9.9.5
VPLS ID: 0.0.0.1:7
Cisco Style
Cisco Style ID: 0
Advertised L2MTU: 1500
PW Type: raw ethernet
disabled
running
slave
BGP signaled
Cisco BGP Si...
SV
01:14
2010-03-01

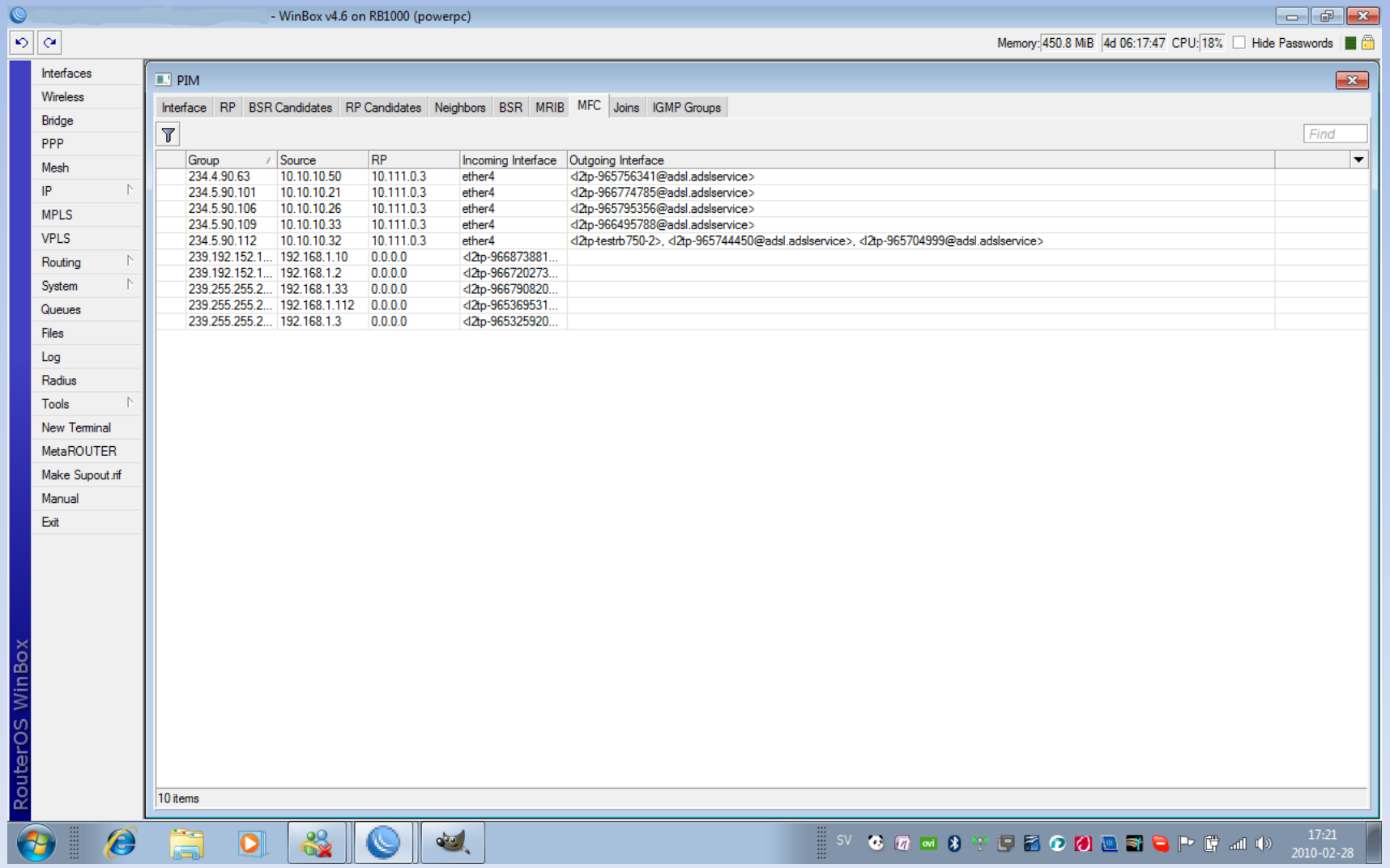
What's new in 4.6 Multicast!!

- *) remove limit on number of multicast enabled interfaces, maximum was 32;

Router running 299!! interfaces



5 Different streams to clients



That’s All

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