Yongyi Network Technology
Co., Ltd.
南宁用易网络科技有限公司

Simple Application of CRS

Bonding and transparent vlan

MUM Guangzhou, May 2014
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MTCNA,UCT

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About Us

关于公司

- 公司成立于2006年3月
- 中国最早Mikrotik 授权代理之一

2005年9月推出首款RouterOS整机

2006年8月首款自带LCD屏幕RouterOS整机

About Us

www routeros.com.cn

成功案例（部分客户）

金龙鱼集团

7天连锁酒店

如家快捷酒店

城市便捷酒店

今麦郎集团

中国联通辽宁公司

中国电信广西公司

中国电移动河北公司

中国南宁铁路局

中国邮政广东公司

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普罗旺斯房产

广西机电设备公司

莫泰

广西视光中心

为国内外超过10000个客户提供产品和技术支持

与国内一流的工控厂家合作

五金车间

先进的冲压成型和折弯设备及各种先进的检测仪器，专业精密的五金加工工艺技术，拥有3名高级工程师及一批高素质熟练的专业操作团队。

为客户量身定作

SMT车间

无尘环保车间，高速SONY贴片生产线、劲拓10温区回流焊、GKG自动印锡机、插件及后焊组装线等全套主板生产流程和设备。

About Us

低、中、高全系列产品，满足不同需求

组装车间
全新生产线，精益的生产工艺和完善的生产流程，规范的作业标准，日产能可达3000台。

批量生产，价格最优

老化房

6间老化房，可同时容纳3000台设备一起老化；自动温控系统；超温自动抽风系统。

About Us

www.routeros.com.cn

热销产品：QNS-9898L+

Intel P4 3.2G, 3RJ45+1SFP千兆网口，带16*2 LCD，超高性价比，专为大中型企业、网吧、小区设计

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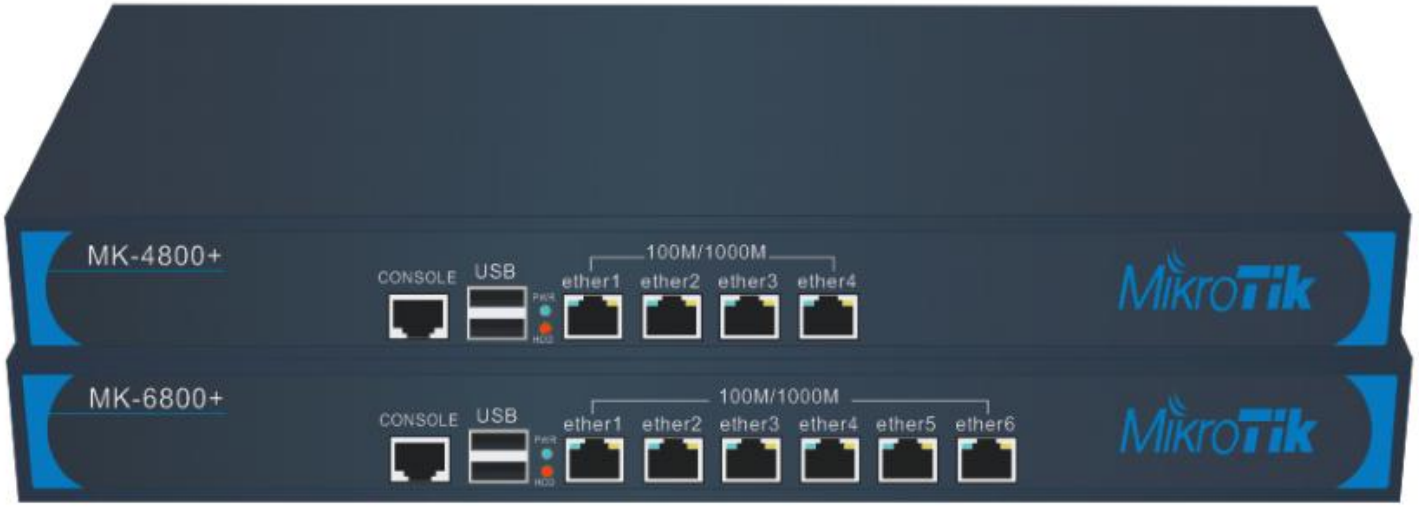
热销产品：MK-4800+、MK-6800+



Intel ATOM D525(凌动)双核1.8G,4/6*Intel
千兆网口，支持CF和SATA硬盘，支持USB扩展

About Us

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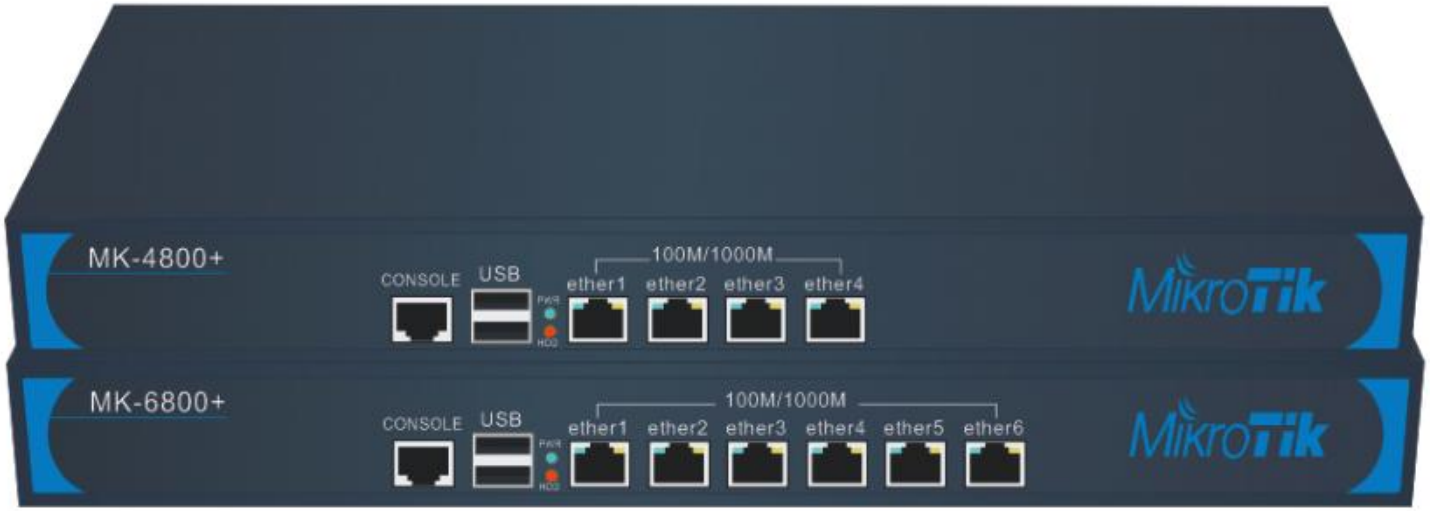
热销产品：MK-4800+、MK-6800+

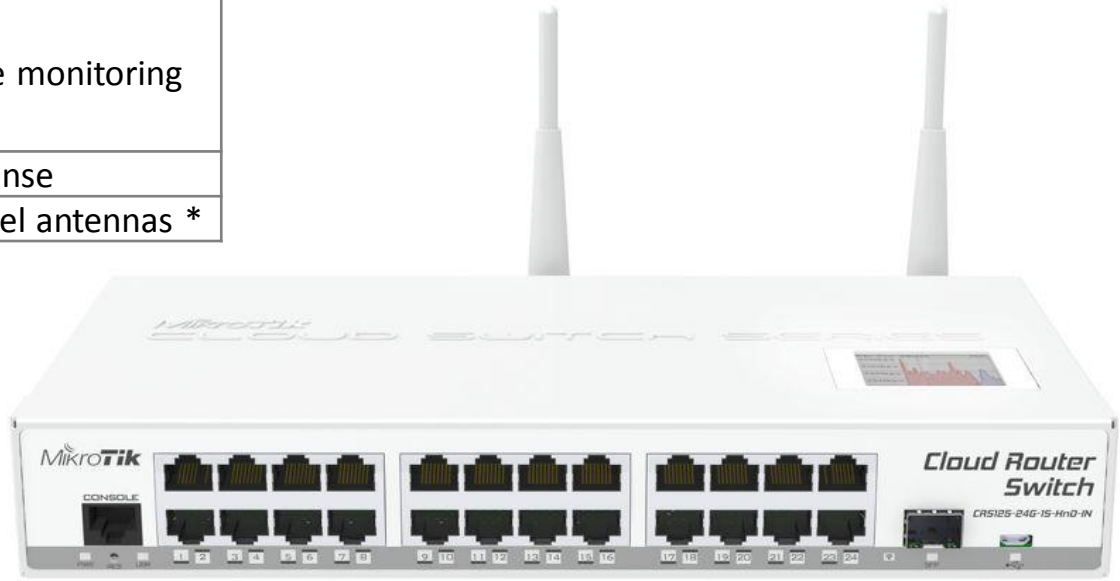


Intel ATOM D525(凌动)双核1.8G,4/6*Intel千兆网口，支持CF和SATA硬盘，支持USB扩展

CRS Features

CPU	Atheros 600MHz
Memory	128MB
Ethernet	24 Gigabit
SFP	1x 1.25G Ethernet SFP cage
Expansion	1 microUSB
Storage	128MB Onboard NAND
Serial Port	1x RJ45 Serial port
Extras	Reset switch beeper voltage and temperature monitoring touchscreen LCD
OS	RouterOS v6, Level 5 license
Wireless	2.4GHz 1W, 2x 4dBi swivel antennas *

* Only on CRS125-24G-1S-2HnD-IN

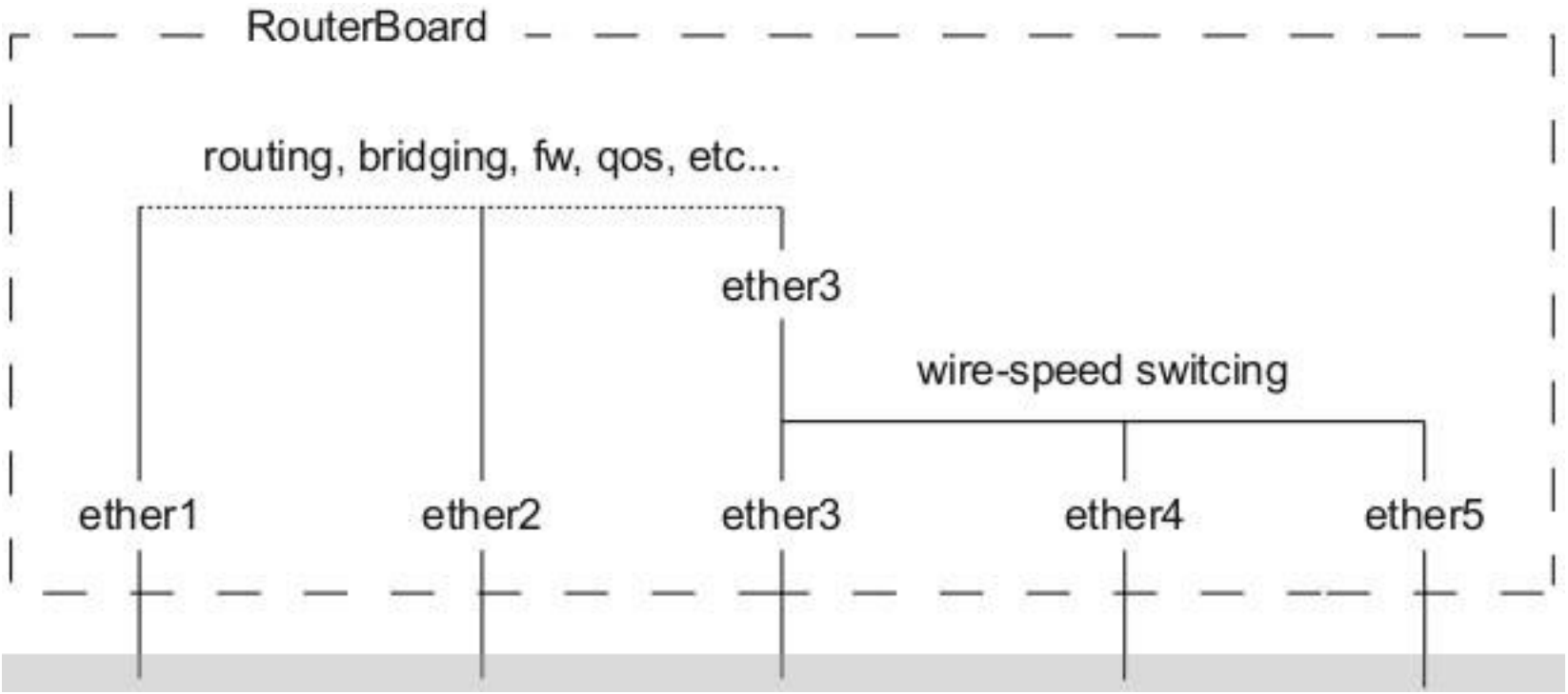


CRS125-24G-1S-2HnD-IN

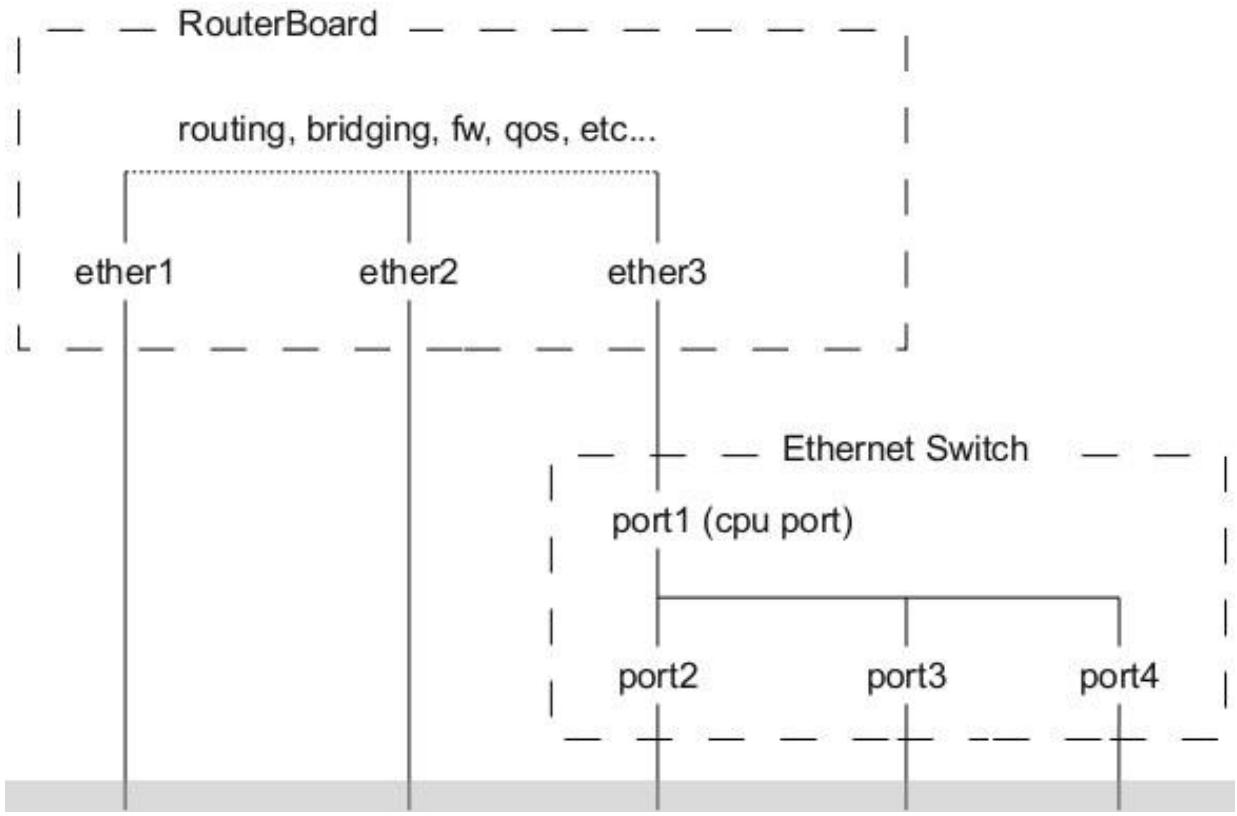
CRS Features

✓Fully manageable L3 switch
✓Support multiple “master-port”
✓Wire-speed trafic forwarding among a groupe of port

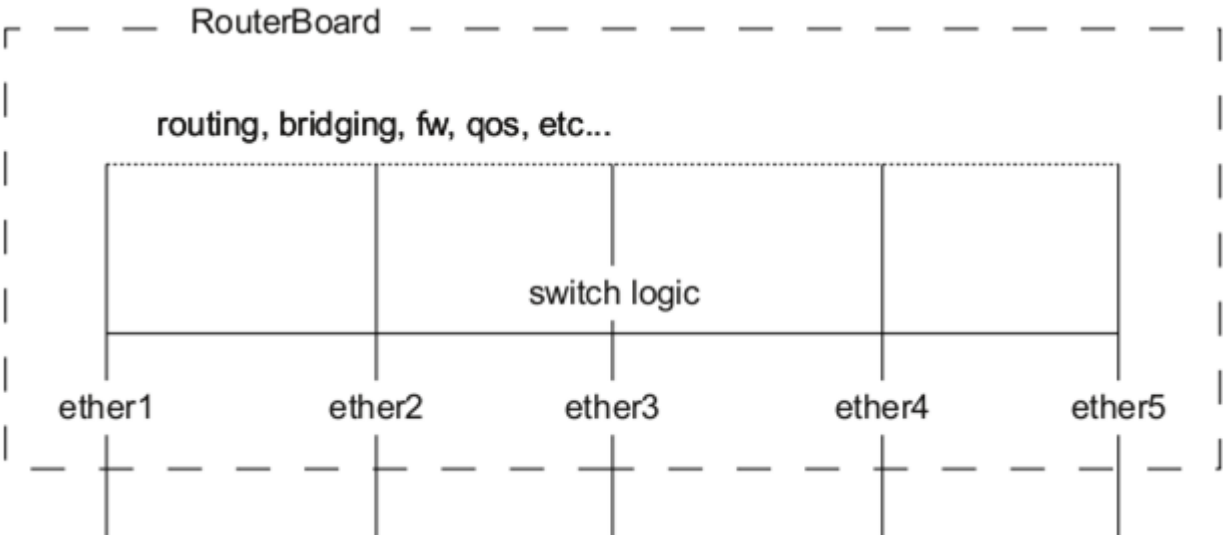
ex.



CRS Features



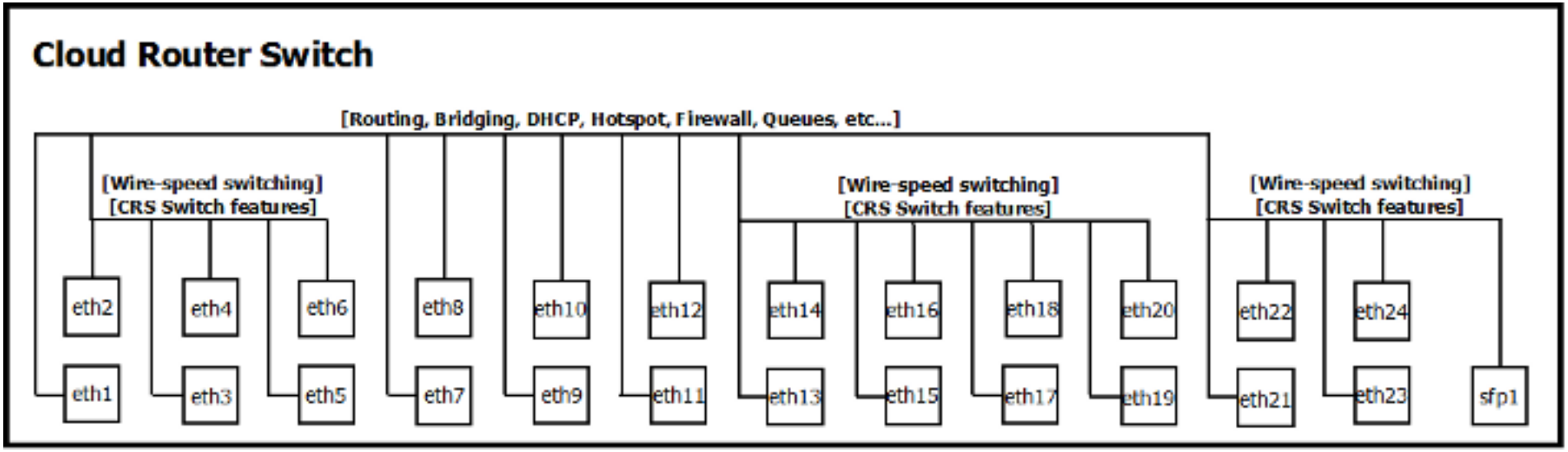
CRS Features



While the packet does not have to go to cpu port it is handled entirely by switch logic and does not require any cpu cycles and happen at wire speed for any frame size.

CRS Features

ex.
3 groupe: e2~e6, e13~e20, e21~e24+sfp1:



Bonding

Aggregation of multiple ethernet-like into a single virtual link, thus getting higher data rates and providing failover.

Bonding modes:

802.3ad

- Standard
- frames be delivered in order
- all devices need the same speed and duplex mode
- only MII link monitoring

Bonding

Balance-rr

- only the mode that permit a single TCP/IP connection to stripe traffic across multiple interfaces
- Load balancing and fault tolerance

Active-backup

- Only one active slave to transmit packets
- only MII link monitoring

Bonding

Balance-xor

- Similar to LACP
- Load balancing and fault torerance
- Works with layer-3-and-4 hash policy

Broadcast

- Transmits everything on all slave interfaces
- Provides fault tolerance

Bonding

Balance-tlb

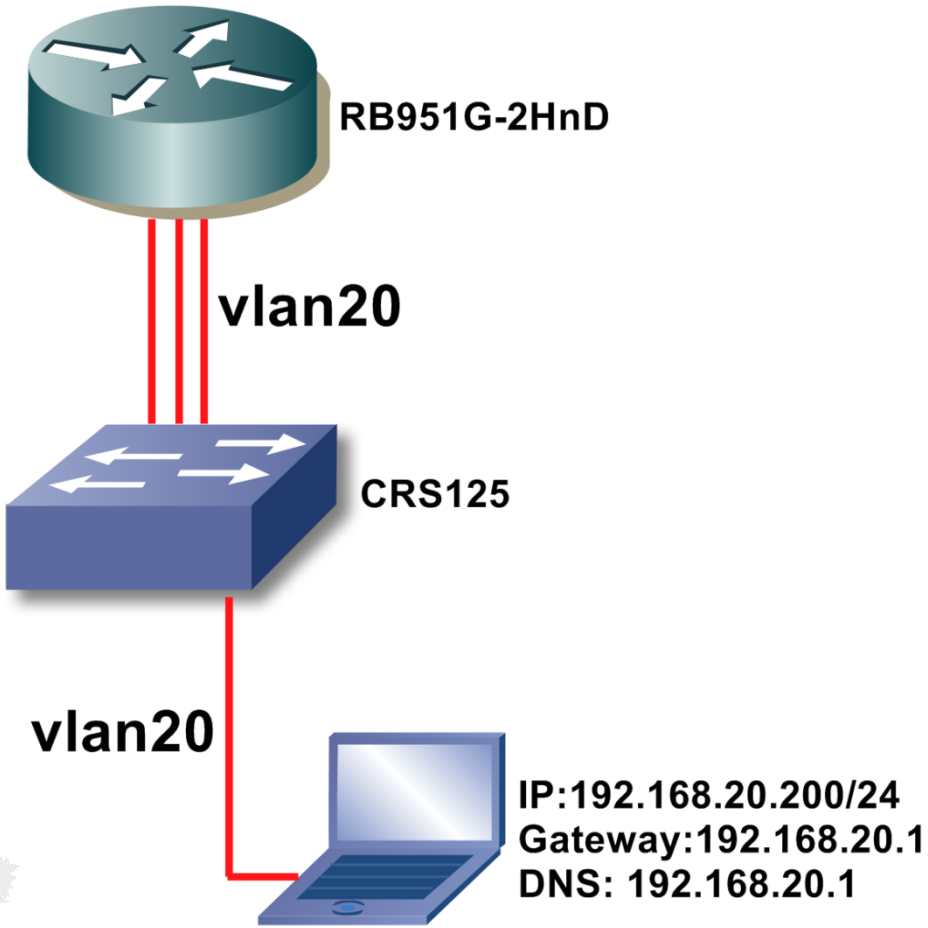
- Balances outgoing traffic by peer
- Incoming traffic is not balanced, use primary link
- Only MII link monitoring

Balance-alb

- Basically the same as balance-tlb
- Incoming traffic is balanced
- Requires device capability to change MAC address

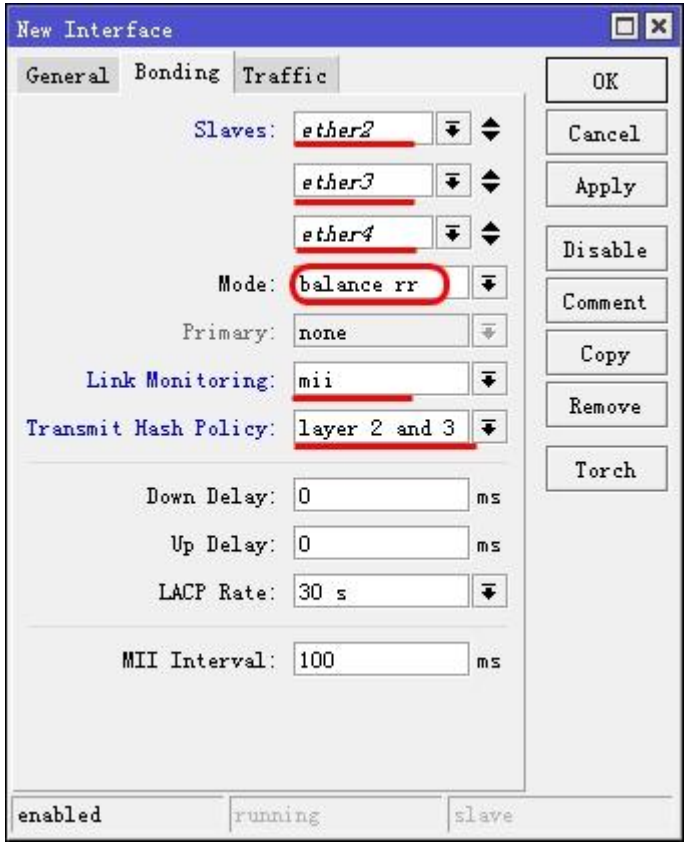
Simple case of CRS

✓CRS125-24G-1S-2HnD-IN
✓951G-2HnD
Note: ROS v6.12+

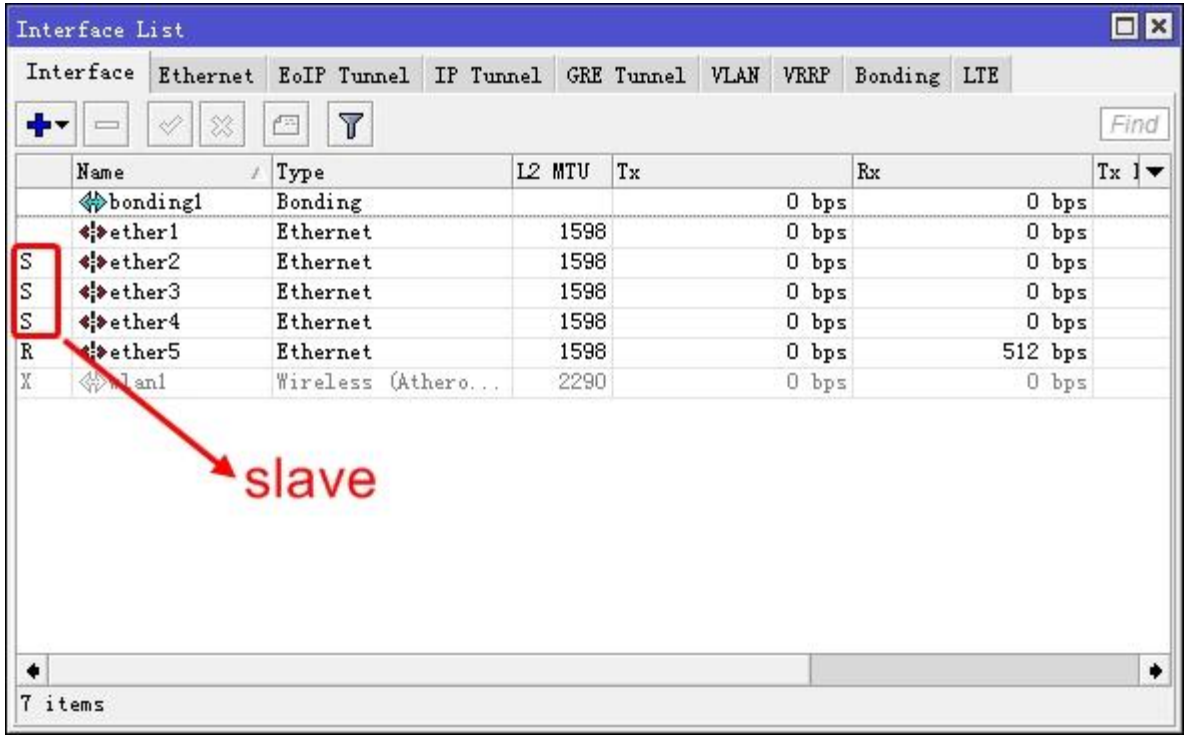


Simple case of CRS

Configuration of bonding of RB951G (function router)

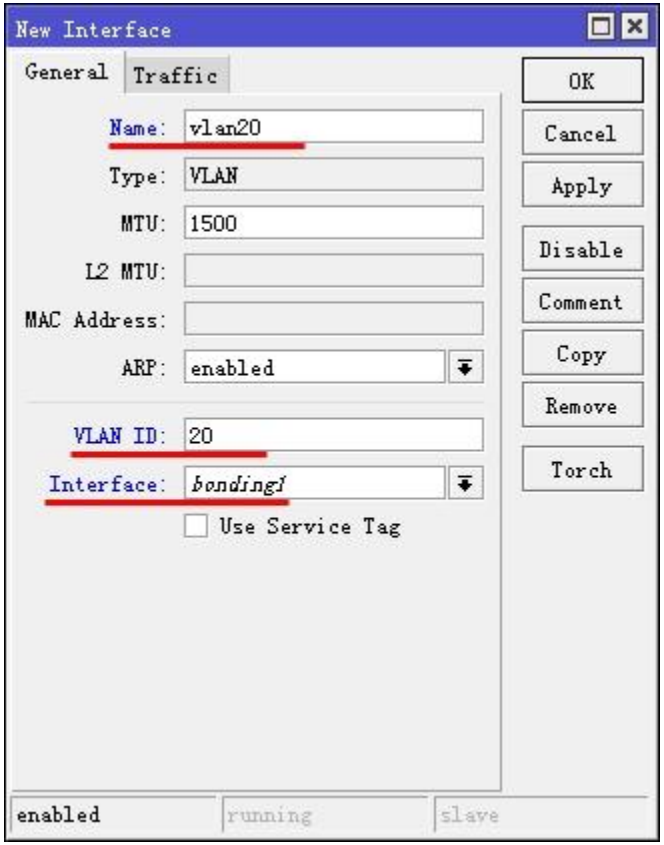


Simple case of CRS



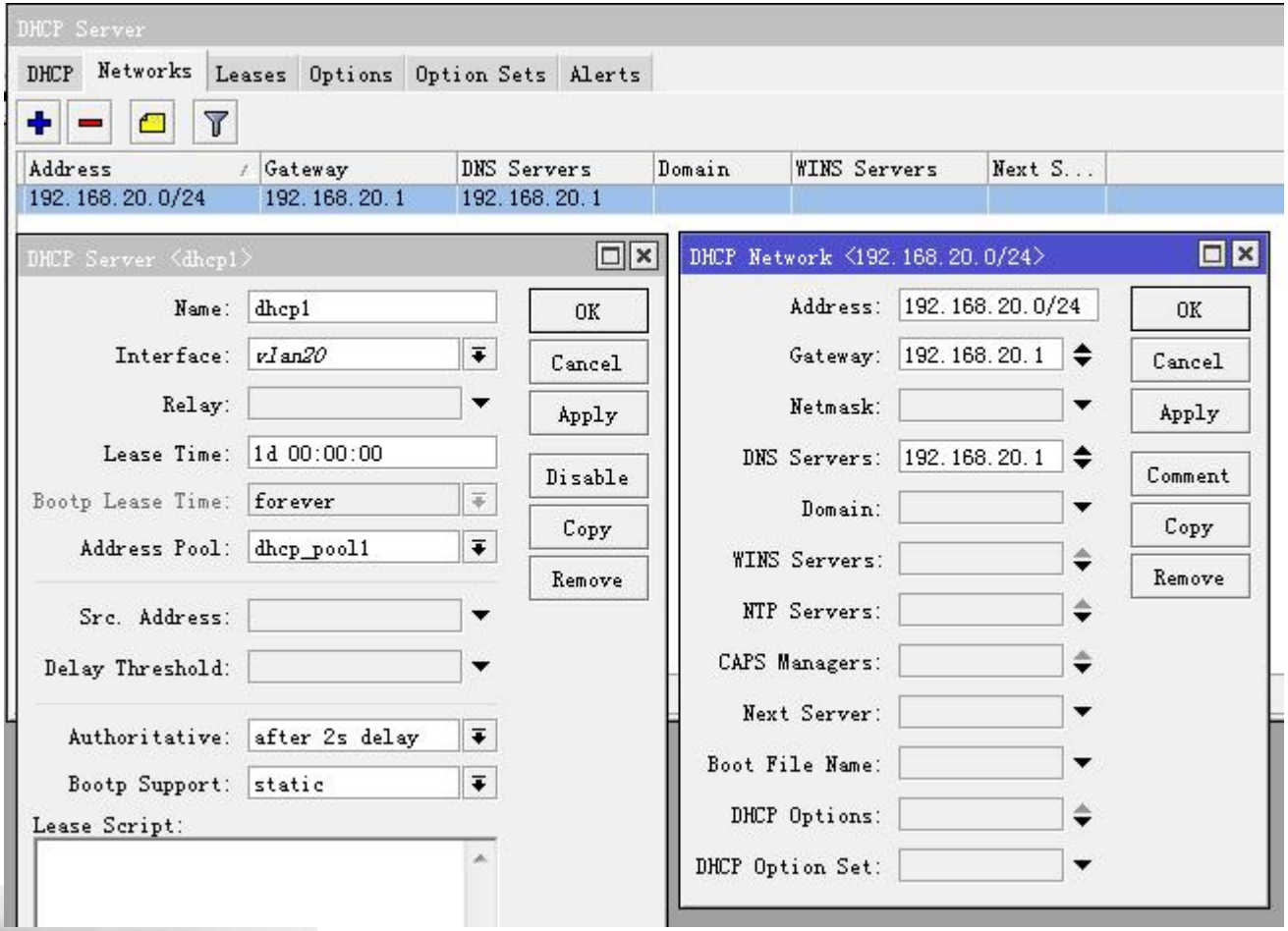
Simple case of CRS

Configure the vlan20 based on bondong port :



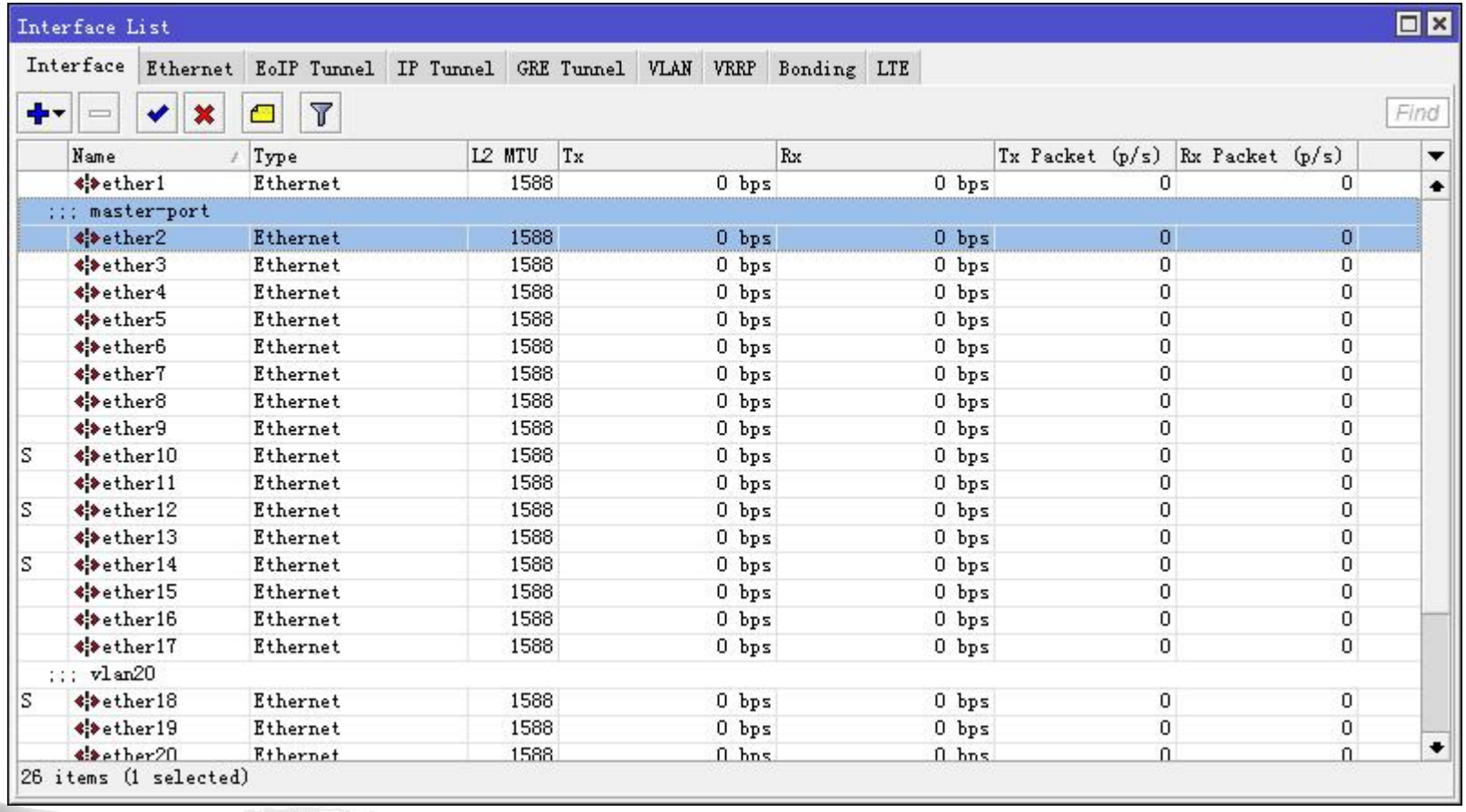
Simple case of CRS

Create a DHCP Server based on interface “vlan20” :



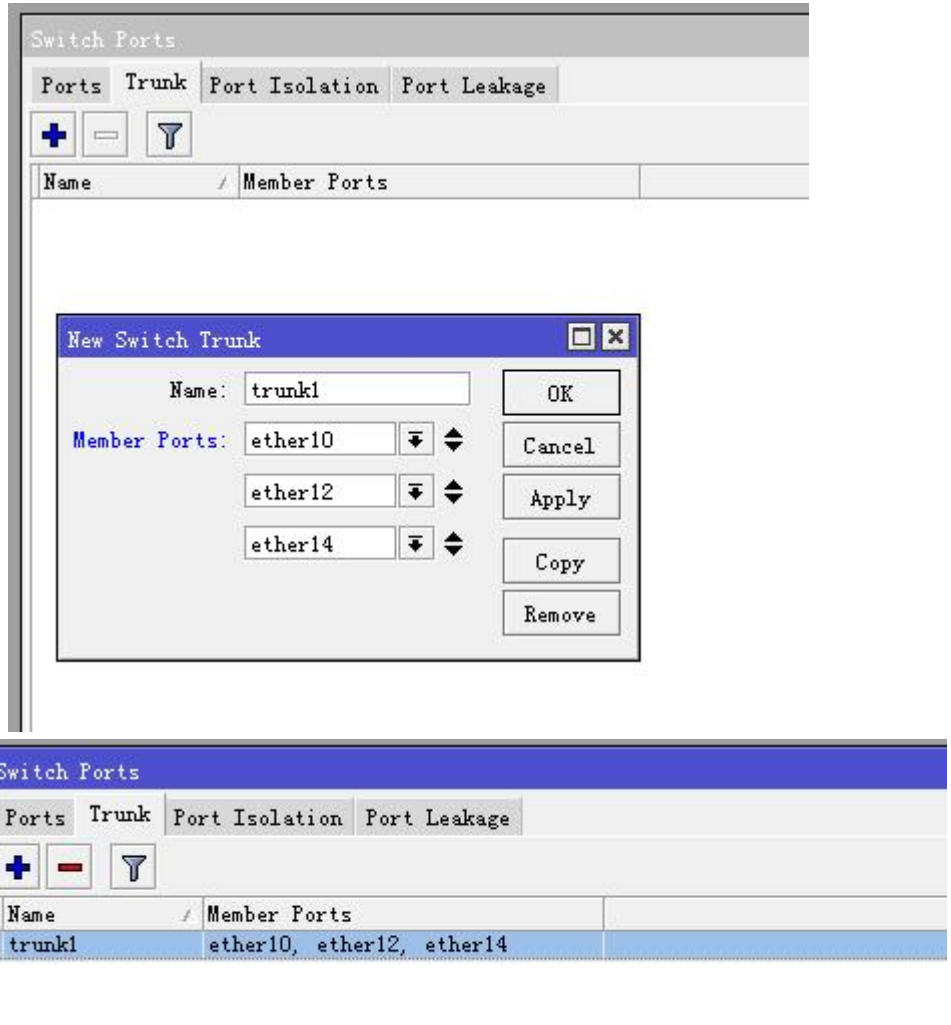
Simple case of CRS

Create a groupe of switched ports on CRS125 :



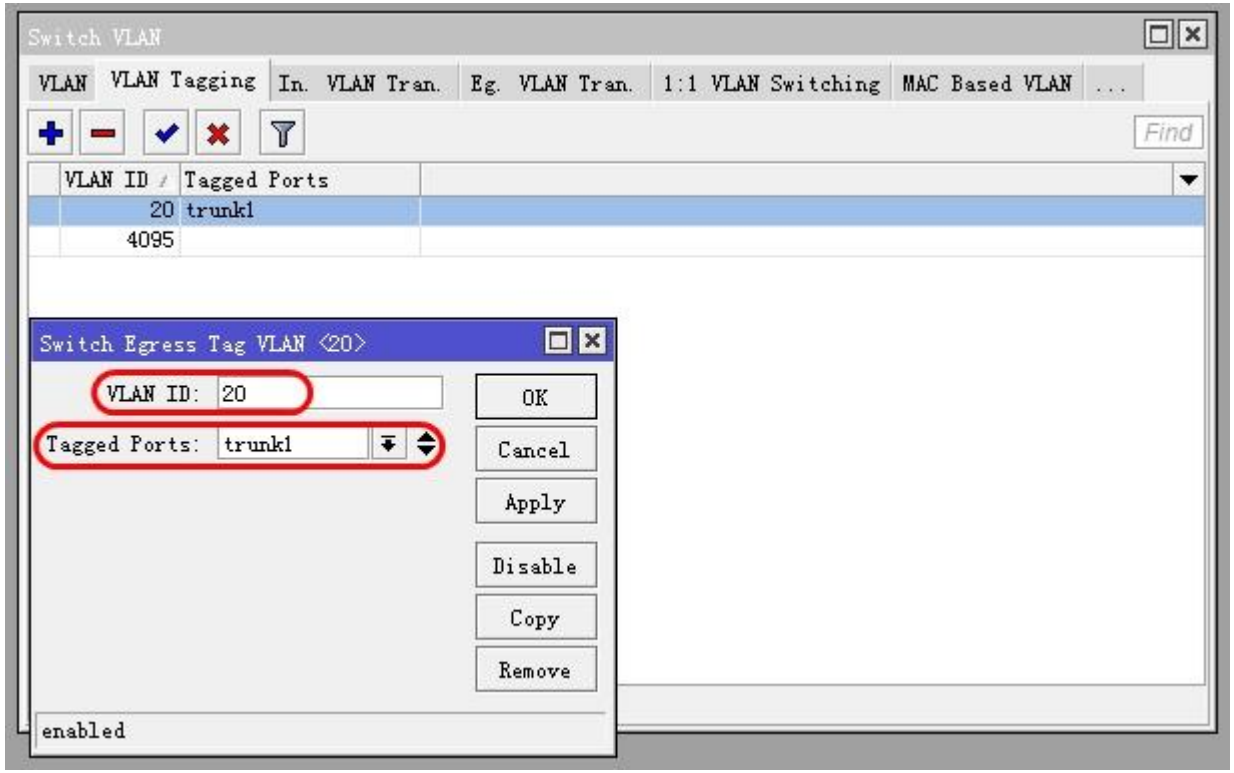
Simple case of CRS

Create an entry in the Trunk table:



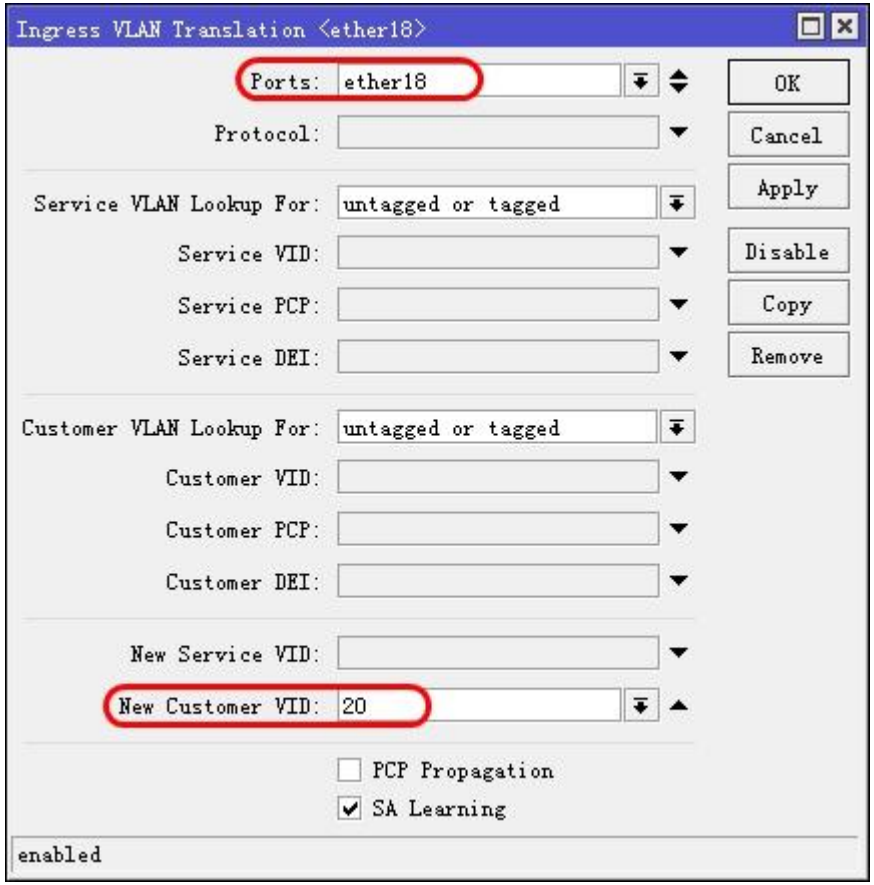
Simple case of CRS

Set VLAN tagging on TRUNK to make packets tagged before they are routed :



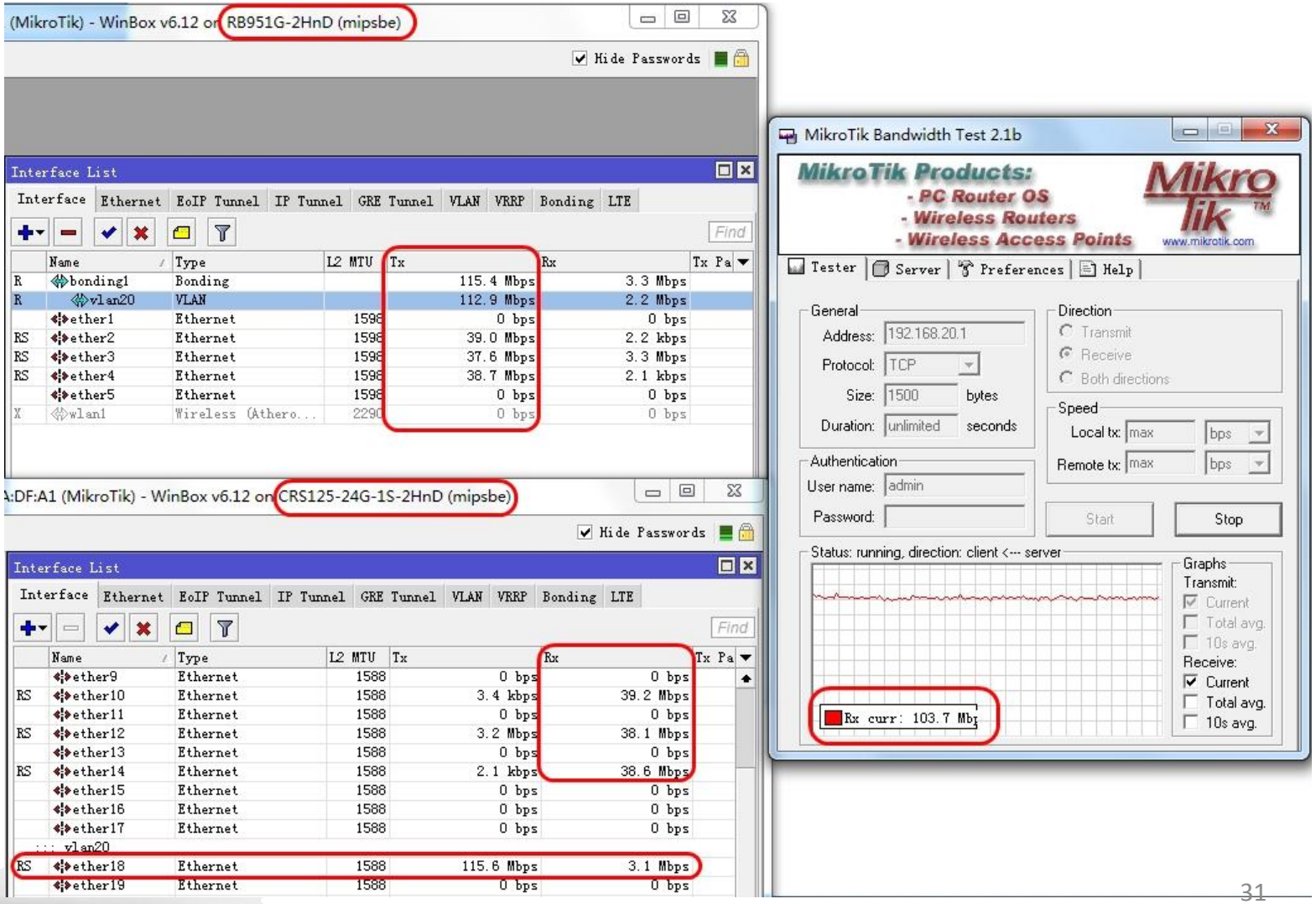
Simple case of CRS

Add ingress VLAN translation rules to ensure correct VLAN id assignment is done on access ports:



Simple case of CRS

test:



Thanks for attention

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