Reduced Costs & Better ROI

By using the Right Equipment

About me

Mihai Săftoiu

+10 years of experience as a sysadmin & network admin
   CEO @ TIER Data Center

Mikrotik Certified Consultant

MTCNA, MTCRE, MTCTCE, MTCWE

TIER @ Energotech Group

Historical transit pricing

Internet Transit Prices (1998-2014) U.S. Internet Region

Year	Internet Transit Prices (in Mbps, min commit)		% Decline
1998	$1200	per Mbps	
1999	$800	per Mbps	33%
2000	$675	per Mbps	16%
2001	$400	per Mbps	40%
2002	$200	per Mbps	50%
2003	$120	per Mbps	40%
2004	$90	per Mbps	25%
2005	$75	per Mbps	17%
2006	$50	per Mbps	33%
2007	$25	per Mbps	50%
2008	$12	per Mbps	52%
2009	$9.00	per Mbps	25%
2010	$5.00	per Mbps	44%
2011	$3.25	per Mbps	35%
2012	$2.34	per Mbps	28%
2013	$1.57	per Mbps	33%
2014	$0.94	per Mbps	40%
2015	$0.63	per Mbps	33%

Source: DrPeering.net

Historical transit pricing
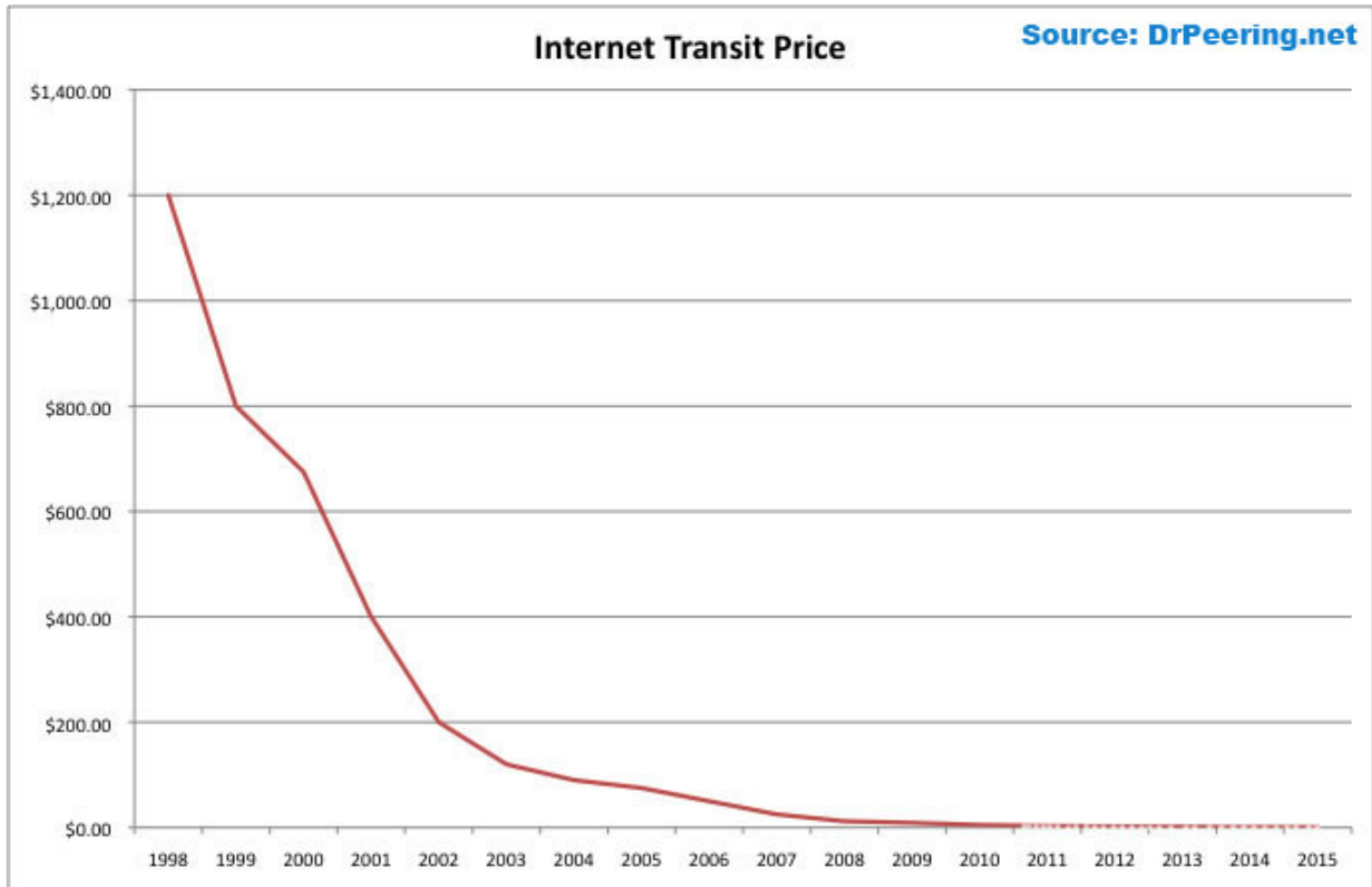
Is there a pattern?

Customers want: | | **Resulting in:**

More services ➡️ Increased service complexity

Better services ➡️ Increased operational costs

Lower prices ➡️ Lower margins

More bandwidth ➡️ A higher depreciation of technology

Something to think about

EVERY equipment vendor will state that their solution will ➡ Decrease service complexity

Reduce operational costs

Somehow it will allow for higher sales margins

Has a lower depreciation value than other solutions

KEEP CALM AND STAY SKEPTICAL

We have a new and amazing team player

Routing the world?

They <u>must</u> be crazy…

How about 10G to the „average" customer edge?

CRS210-8G-2S+IN

What was that... thing?

CPU Qualcomm Atheros 8519 400MHz
Memory DDR2 64MB
Ethernet 8x 10/100/1000 Mbit/s Gigabit Ethernet with Auto-MDI/X
SFP 2x 10G SFP+ cage (Mini-GBIC; SFP+ module not included), DDMI support.
Storage 128MB Onboard NAND with multiple OS partition support
Serial port One RJ45 serial port

Extras Reset switch; beeper; voltage and temperature monitoring, touchscreen LCD

Power options 10-57V, 24V 0.8A PSU included, **PoE in:** 10-57V on Ether1 (802.3af/at or passive PoE)
Power consumption 13W
Case dimensions 200x144x47mm
Temperature -35C to +65C tested
OS MikroTik RouterOS v6, Level 5 license
Included CRS switch, power adapter

And what does it do?

Actually, everything.

It's a switch, a router, a traffic shaper, a layer7 firewall (and much more) or even all of them at the same time.

All ports are independent. Almost all switching technologies you can think of are supported and it can even act as multiple independent switches.

All ports can be connected in any configuration the user desires.

For wirespeed traffic switching mode (not bridging) must be used.

Anything else?

It supports all routing protocols - static, RIP, OSPF, BGP.

It supports BFD.

It supports MPLS, VPLS, BGP VPLS, Cisco BGP VPLS.

It supports VRFs.

It supports IPSec, all open source types of tunnels and a few other proprietary solutions.

It supports multi-level firewalling:
- At switch level
- At bridge level
- At VLAN level
- At tunnel level (PPPoE)
- Classic filter level
- And at Layer 7, of course

And much, much more...

Is it difficult to manage?

I'm used to the CLI

RouterOS can be fully managed in many ways. Actually, it's up to you to decide what you prefer.

You can manage it by:
Winbox
Browser (Webfig)
Browser-SSL
Telnet
Ssh
API
MAC address

Or you can do it even from your phone.

How is it licensed?

Simple, you get everything once you buy it.

Where are we at now?

2x 10G ports
8x 1G ethernet ports
1x console port
1x POE

Fully licensed for EVERYTHING
Fully managed, at customer premises
Fully compatible with my existing infrastructure
Ready to serve customers' demand and meet his expectations at reduced costs

So, how is it priced?

Get ready for this...

229$

no, I didn't miss any trailing zeroes...

10G to your customer today with a high ROI.

E-mail: sales@tier.ro

Phone: +4 0723-197-754