High availability routing appliance for small business

PRESENTER: ROY ADAMS
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Why is this solution needed?

Small business must have continuous, reliable internet access

Biggest Problem

Service Failure

No Connectivity

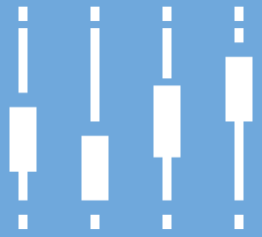
What are the typical challenges?
Small business needs...

1

System needs to be cost effective for set-up and the future

2

System needs to be easy to manage for the business owner



3

System needs to be feature rich offering redundancy

How does routerOS help?
Solution Overview (RB751G-2HND)

1

ADSL Link

2

iinet
connect better

ADSL Link

3

3G/4G

Supports 10 to 15 Users for Internet access, voice access and internal hosting.

6 Common Problems & Requirements

Voice (VoIP) Capable internet Connection

DSLAM Choices

NTU, Bridge, Modem Reliability

Planning for Failure

Load Balancing the Links

Stateful Connection Tracking

Voice Capable Internet

- Not all connections are created equal
- Contention ratios play a big part

HOW TO TEST

psping -t -i 0.02 *{sip*
com.au}

Allow this to run for 5 minutes

NOTE of the rtt/min/avg/max/mdev

DSLAM choices

1. Ensure you have **a different DSLAM** for resilient DSL access
2. Your **geo location** will impact on your **choice of DSLAM**
3. Talk to your telco about your **different DSLAM choices**
4. Ask your telco about their **media offerings** (fibre, copper, satellite, cellular and WI-FI.

NTU/Bridge/Modem reliability

Hardware can be bigger problem than you think!

TP LINK TD-8840T

- Low Cost
- Reliable
- Broad compatibility

Check the modem!

- Is the modem losing sync ?
- Are there excessive CRC errors ?
- Is the connection flapping ?

Planning for failure

If failover occurs can one link handle all the traffic?

512 Kbps Calculation

Minimum uplink speed is 512Kbps

- **Compressed voice** conversation **30Kbps**
- **Quality voice** conversation **80Kbps**

Load Balance the Links

1 **Split traffic**
to make best use of links for outgoing traffic

2 **Load balancing**
ensures redundant links work in readiness for failover

3 **Emergency Failover**
DSL 1 & 2 Fail - Need service to find the problem

4 **Seamless Failover**
DSL 1 Fails minimal disruption to users and ***DSL 2*** takes the load

3G needs a **static** or **public** IP

Stateful connection tracking

If an incoming IP connection is established on either link **1** or **2**, then all outgoing traffic for that connection stays with the **same link!**

Load balance incoming traffic to a single server such as an RDP or email server inside your network.

- **Round robin** or **specify DNS name**
- **RDP01.company.com** uses Telstra
- **RDP02.company.com** uses IINET

How can this solution help YOU ?

1. Cost effective
2. Big business solution for SMB
3. Set and forget
4. Easy implementation

Questions

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