

Customer Profile

Pulling rabbits out of hats for DTS

The people at DTS know what they're talking about when it comes to providing broadband Internet services - that's their speciality.

"We know what we're good at," says Steve Ritchie, Managing Director. "So that's what we focus on."

Established in 2002, DTS provides New Zealand businesses with

broadband Internet services through CityLink's Ethernet network. DTS prides itself on being a 100% Kiwi owned business, offering reliable, quality services at realistic prices.

"We are committed to providing high quality services to our customers," says Steve. "And CityLink's Connect4 and PublicLAN product certainly has a lot to do with that quality."



Steve Ritchie, Managing Director, DTS

In fact, our customers often ask for CityLink as their provider before we are able to tell them we use them already."

"We had no hesitation in taking up CityLink's products because we knew they would deliver on their promises and provide the level of service we expect for our customers. We often need to think on our feet and react very quickly to their needs, offering solutions within a couple of hours, rather than the two to three days that other providers can take, and we knew CityLink could do that."

"A recent example was one of our clients moving into their new building, having forgotten about their broadband connection," explains Steve. "CityLink practically pulled a rabbit out of a hat and were able to deliver at extremely short notice."

"We try not to put that much pressure on too often. We have a great relationship with CityLink and don't want to abuse it!"



FROM THE TOP: An update from Neil

I'm just back from an enjoyable two-week family holiday in the United States (Disneyland, then a road trip to Las Vegas, the Grand Canyon and back). It was great to get away, and great to get back.

The US papers are proclaiming that their economy, like ours, is swaying under the worldwide financial crisis. One notable thing during our travels was the amount of new roading and building work underway. So, the new National government's promise to accelerate government infrastructure investment may be a logical response to keep the NZ economy ticking along.

Likewise, here at CityLink our capital works programme continues with strong demand for our products and services. We continue to look to expand our fibre footprint as our customers' needs grow, and we are looking at assisting with the delivery of infrastructure to the likes of schools and other non-business entities.

Our active support of the Wellington Schools Loop organisation (where we have built a dedicated GE fibre network



for six lead schools) is important as our schools learn to collaborate together and deliver new educational outcomes in a non-constrained open access broadband environment.

This financial crisis is a momentary thing; long-term planning and the confidence to continue to invest will see us all through these challenging times.



NEW BUILDINGS

The following building has recently had CityLink network services installed:

AMP Centre, 29 Customs Street West, Auckland



Help us to help you!

In early November, the CityLink Ethernet in Wellington experienced some instability problems. For more on what actually happened, and what we're doing to reduce the likelihood of such failures in the future, visit <http://news.clnz.net>.

While we've made a variety of changes to reduce the chances of such network failures happening again, there are some configuration changes users could make that will reduce the chances of being affected by such network outages in the future.

Loopback errdisable recovery

For optimal performance, CityLink recommends that customers attach a Layer 3 device (router/firewall) directly to CityLink PublicLAN/ExchangeNET. Customers who do attach a Layer 2 device (an Ethernet switch) may have issues that a Layer 3 device could prevent.

Specifically, Ethernet switches do not like having packets they have sent out returned to them by the network. Generally, this condition (loopback) indicates the network is severely broken and, unless explicitly configured otherwise, a Cisco switch will shut down (errdisable) any interface where it detects a loop happening.

During the outages recently, when the CityLink Ethernet looped for 3-5 minutes per episode, several customer switches around the edge of the network errdisabled. While the CityLink outages were comparatively short, some customer equipment required manual intervention by customers (which took several hours in some cases). For those customers, and anybody trying to connect to them, this gave the impression that the CityLink Ethernet network was down for far longer than it actually was.

In order to prevent this happening again, customers with equipment that errdisabled due to loopback detection may want to apply loopback auto recovery - on any vaguely recent (2950/3550 and newer) Cisco equipment.

Something like:

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errdisable recovery cause loopback
errdisable recovery interval 300
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will cause the switch to attempt a restart of the err disabled port every five minutes.

Spanning Tree edge ports

On all ports where we do not see customers sending us Spanning Tree Protocol (STP) packets, we have enabled bpduguard (about 97% of all ports in use on the CityLink Ethernet). This means that if users send us a BPDU in the future, then the port facing them will shut down. If we do not see BPDUs from users, then the Ethernet will regard the port facing the user as an edge port, which means the user is less likely to get their MAC address flushed when the STP packet recalculates.

So, if users are sending us BPDUs now, and are confident they are single-homed (i.e. have only one connection to any given CityLink VLAN), they should consider disabling the Spanning Tree on their device, on the interface facing CityLink.

On the other hand, if users know they are multihomed to a single VLAN, or if there is any possibility they could be, then they should leave the Spanning Tree enabled.

Remember, if there's any technical topic you would like covered in CityLinked give us a call on 0800 4 CityLink (424 8954) so we can share it with all our customers. As they say, a problem shared is a problem halved!

JARGON BUSTER

STP (Spanning Tree Protocol): a set of protocols that ensure there are no loops in an Ethernet with redundant paths.

BPDU (Bridge Protocol Data Units): the packets that STP capable devices send and receive to communicate the status of the Spanning Tree. Also known as STP announcements.

Errdisable: the state a particular port on a Cisco switch will go into if it sees something objectionable out that port - it's presumably a Cisco contraction of "Error Disabled".

MAC (Media Access Control) address: a unique interface identifier for a device attached to an Ethernet. It is usually factory-preconfigured by the device vendor, and is not to be confused with an IP address, which is more likely to be managed locally.

TECH TIP



PublicLAN is a Layer-2 Switched Ethernet Network, with a 10-Gigabit core, extending into some 450 buildings in Wellington. The fibre optic based broadband network allows very high speed, low latency network access connections which are perfect for high speed Internet connections, telephony, video conferencing, and LAN to LAN connectivity.

In simple terms, PublicLAN is often described as a footpath. CityLink provides the pathways around the city - how fast you want to move and which buildings you want to enter are up to you (and the building owner).

PublicLAN has been around in various forms since 1997 and, with access speeds of 10, 100, 1000 or 10,000 Mb/s, has proven an extremely useful tool for businesses that need to connect with each other across separate premises, or to the Internet.

To find out more about PublicLAN, or any other CityLink products, give us a call on 0800 4 CityLink or visit our website - www.citylink.co.nz.

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Serious Broadband