ICONZ | Hosting a world of opportunities

Whitepaper

The Decision to host IT Infrastructure

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1. Overview

Making the decision to host your IT infrastructure is a complicated task—so complicated, in fact, that business executives sometimes shudder at the mere thought of attempting this arduous task. But as hard as it is, navigating the decision process can be easy if you focus on a single question: **What is my strategy for success?** In other words, if your business is an instant sensation in the market, how will you scale to meet the demand? A success strategy must be built into your IT plans from day one. This includes laying out plans for your server hosting needs, support, supply chain, language, features, operating system and the all important service levels you require. Is it just New Zealand business hours you are after or is 24 x 7 global coverage what you looking for?

Many organizations get lost in the decision process because they ask**: "How cheaply can we get online?"** The resulting "strategy" invariably involves DIY hosting and a vague intention to add servers as Web traffic grows. This works for a while—until business grows, traffic suddenly spikes and more servers must be added immediately before everything comes grinding to a halt or worse, crashing down. The reality is that most businesses are not capable of adding additional servers to their IT infrastructure on short notice, cost aside of course. Even after they have been 'afforded' (purchased) from hard earned capital, they still have to be provisioned, installed, tested, secured and brought online. Plus, you need a support plan in place for all of the ongoing patching, routine maintenance, and environmental problems that may arise such as cups of coffee falling into servers or the aggrieved staff member walking off with your precious assets. Suddenly a 24/7 IT support team is needed and a redundant architecture is required. Without these, companies are forced to put in long hours of server maintenance or withstand costly downtime—hours that should be devoted to achieving business goals.

1.1 So what are the options you have for Hosting?

Well as you would expect, there are a plethora of options, all of which I talk about in another of my whitepapers called 'assessing the hosting options'. Shared hosting, dedicated servers, co-located servers, or cloud hosting are all great options but choosing the right solution for your company is easier if you keep the original question in mind: **"What is my strategy for success?"** To provide answers to the all important question, let's look at these core hosting options.

Shared Hosting

Shared web hosting is the 'bread and butter' hosting platform of the web development world. Most small websites start out life on a shared hosting platform. In this environment, many different clients (100s) share the same server and the same resources. While each client has their own limits on certain things (storage space, allowed email accounts, allowed bandwidth per month, allowed FTP accounts), the same server and physical memory are shared.

Co location

The first alternative to DIY other than 'in your garage at home or the office' is co location. In most major cities there are vendors that rent out space in their data centres such as ICONZ do.

They/we supply the server cabinets, Internet connection, power, environmental controls and physical security while you own the gear and maintain it yourself including the OS, software and licenses. While outsourcing physical space and power is very helpful, responding to success will involve the same challenges as self-hosting—manpower, knowledge, readiness.

Managed Hosting

Another viable option is managed hosting. Here the value proposition changes as you no longer have to worry about running a set of servers in a data centre. Even better, you also don't have to worry about owning the hardware as it can be provided for you as part of the monthly service fee.

Servers can be added with a single phone call, so the hardware aspect of your success strategy becomes simpler. The hosting service provider maintains the hardware and the operating system, keeping it patched and secure. You only need to worry about your business applications.

Cloud Hosting

The next level is the 'cloud', what? Yes, the cloud, where the hosting service maintains the hardware, the operating system as well as the programming interfaces. Why cloud? Who really knows? It got its name by its association with the internet. Really? But then isn't everything cloud? I rest my point...silly isn't it?

Cloud hosting is just a whole heap of really powerful servers clustered together with a bunch of memory (RAM) and space (disk) at the ready, overlaid with some clever virtualisation software that make them all appear like individually powerful servers in their own right. The even clever part is that it works, and very well.

The more advanced hosting providers offer cloud hosting on high spec blade servers and high speed SAN infrastructure which provide the same essential service but with many different levels of performance and availability (uptime) which is very important when you are considering hosting database intensive web applications and sites that will generate huge volumes of traffic or data read/write calls.

In the 'cloud' world, there are many pretenders so be careful and make sure you check the credentials of your provider. It's sometimes the wild-wild west out there and it's your business application, data and clients we are talking about after all.

With cloud hosting, you only pay for the resources you use, reducing capital expenditure, and you can scale your usage to meet fluctuating user demands. Everything necessary for a success strategy is offered by the cloud vendor—except that you are limited to the cloud's APIs and the programming languages the cloud supports. There are many different types of cloud offerings emerging from the more experienced providers, such as complete shared environments, servers that you can use for days or weeks at a time through to standalone and dedicated private cloud setups that give you ultimate control over your hosted cloud environment.

1.2 What to consider when choosing a hosting service

Regardless of the hosting service you choose, there are several key factors you should consider in any solution.

Exceptional Customer Service

No, a mobile phone number on a website just won't cut it I'm afraid! Your ideal provider will ensure you have an expert account team that is well versed in your specific business. They will also have on-call technical representatives to provide assistance 24 x 7 everyday of the year.

In the unlikely circumstance that a crisis does arise, it is essential you have the utmost confidence that your account and service team is working around the clock to ensure your IT environment is brought back to normal with as little interruption to your mission critical operations as possible.

Reliability

Look for a solution that provides guaranteed quality of service agreements, service level agreements (SLA's), and comprehensive disaster recovery plans and back-up. If the hosting company is not willing provide guarantees of up-time for your environment that should signal some caution for the IT decision makers. Choosing the wrong partner could lead to serious consequences.

Does your hosting provider offer backup services at all? In the cloud world, this is often overlooked. There are constant reports and complaints from customers of cloud providers with the astonished, "*but we assumed everything was backed up*"? The next thing once you have found this 'tick in the box' is, what type of backup service do they have? Can I recover my servers and files instantly, up to 30 days, a year? How is this done? Be sure to ask the question and understand the answer.

Scalability

This is a key factor to consider when selecting a hosted solution. Consider the following situation – if your product or application is mentioned and praised in the media as 'The next big thing', traffic to your web site could skyrocket and without the proper hosted solution supporting your business, you could very easily find your site down and you will lose valuable business opportunities. The ideal hosting solution will grow with you through this increased activity and ensure uptime to your site, regardless of traffic levels.

1.3 In Conclusion

If success is in your future, you must have a strategy for dealing with the surging traffic that it will bring. Choosing the right hosting service and service provider must be a central part of that strategy to ensure your business has the support necessary to sustain growth. A prepared plan is the difference between getting through the labyrinth, or getting stuck in a series of dead-ends.

2. About ICONZ

Founded in 1992 as the Internet Company of New Zealand, ICONZ has built its reputation on being the best of its kind, offering a full range of Internet, managed hosting and data centre services to the business and government sectors.

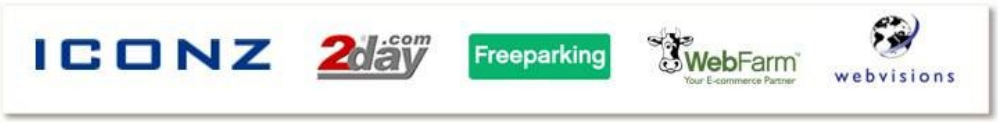
With an understanding that any loss of connectivity and/or access to your data could have a significant effect on your business, ICONZ commits to delivering the highest level of service and support.

ICONZ pledges to give you a strategic advantage in your local business environment by assembling the right mix of people, tools and technologies to put the global power of the Internet and hosting services to work.

ICONZ delivers highly scalable and flexible co-location, dedicated and virtual hosting services to handle just about any combination of requirements. All servers are hosted within the state-of-the-art ICONZ data centre utilising the latest technologies. They benefit from stable, secure scalable solutions and redundant Internet connectivity via multiple providers allowing uninterrupted and continued access to your data.

With considerable experience in network security, ICONZ offers server support, system admin services and 24x7 monitoring of routers, websites and email servers and an integrated suite of security services which includes firewall management and access control.

Our comprehensive hosting business includes WebFarm, one of the largest web hosting providers in New Zealand, Freeparking, a popular domain name registrar, and 2day.com, an automated windows-based web hosting company.



Our global reach to Asia has never been closer with our sister company Webvisions. Webvisions is Asia's premier hosting provider, serving over 20,000 businesses in over 40 countries. With its corporate headquarters in Singapore, Webvisions' global network provides its clientele with multiple hosting presences in India, Malaysia, Thailand, Philippines, Indonesia, Hong Kong, Japan, Australia, China and Vietnam.

In addition, ICONZ ensures that, regardless of where your business may be located, we have connectivity solutions to best meet your needs offering fibre optic, wireless, satellite, copper and ADSL services.

2.1 The ICONZ data centres

2.1.1 Enhanced security

ICONZ's enterprise-class data centres have multiple levels of physical security systems, including biometric palm scanners at entrances to control entry and DKS access at all interior and exterior doors. Entry to the data centres and building requires mandatory visitor registration and visitor escorts to each floor. Our strict security measures ensure a reliable, safe environment for your IT operations. Video surveillance is across the entire facility, monitoring both internal and external activities.

2.1.2 Data centre network

Combined with our sister company Webvisions, ICONZ can provide pan-Asian hosting services through any of the 12 (Wellington online early 2010) data centres managed by the group.

2.1.3 Fire protection

Our data centres have early-warning fire-detection systems with both smoke and high-temperature detectors. The systems are monitored 24x7 on-site by our Customer Care Centre.

2.1.4 Uninterrupted power

The ICONZ data centres are fed power through highly redundant and efficient power systems and are backed up by generators that can keep the site running at full load for 24 hours with hot refuel capability, without requiring power from any direct electric grid.

2.1.5 Precision environment

The data centres are well equipped with full data-grade HVAC (Heating Ventilation Air Conditioning) systems with N+1 redundancy for regulating the air temperature and humidity in the area where your equipment resides – maximising your equipment's performance and ensuring continuous operations.

2.1.6 Flexible space options

Spread over 600 square metres of usable space over two separatd floors, our New Zealand data centres provide a combination of Slab-on-Grade (concrete) flooring and raised floors for cabinets. All cabinets are individually locked for security. Wider afield in Asia and Australia, our data centres have a wide range of service features to suit any environment or budget.

2.1.7 Network

ICONZ is carrier-neutral and overcomes the limitations of existing data centres, network and Internet operations through direct interconnection to both National Telco's (Telecom and Telstra) peering exchanges in Auckland and Wellington.

The ICONZ data centre is redundant with multiple circuits terminating onto the ICONZ network. The primary circuit between Auckland and Wellington is with TelstraClear. ICONZ utilises their primary backbone and also has automatic failover to the secondary TelstraClear backbone.

As ICONZ is a Telco independent company, we have every business Telco terminating onto our network including Telecom, TelstraClear, Vector Communications, CityLink, Kordia and IPSTAR.

A very unique aspect of doing business with ICONZ is the ability to employ a network strategy that can both substantially lower overall bandwidth costs while increasing performance. The ICONZ data centre core is peered with the ICONZ Network Core at 1Gbits/sec, and has the ability to provide either 100Mbit/sec or 1 Gb/sec connectivity for customers if required.

The ICONZ network core is a redundant network, based on routing equipment from Cisco Systems and Juniper Networks. Edge connectivity to the global Internet is via multiple upstream providers, and is peered via BGPv4. Domestic connectivity (inter-city within New Zealand) is similarly protected via multiple redundant providers.

2.1.8 Open peering

ICONZ believes data should take the shortest, most direct path. We advertise our IP address space over CityLink's WIX and APE (Wellington Internet Exchange and Auckland Peering Exchange) and have an open peering policy. ICONZ is peered at both of the main neutral peering exchanges (APE and WIX) and also has direct peering arrangements with other major ISPs and many large corporations and site-hosting companies. We have agreements with both Telecom and TelstraClear; they are the main carriers in New Zealand.

2.1.9 Latency

There is minimal latency over the ICONZ national network. As an example, Auckland to Wellington should, on average, experience no less than a 12–15-millisecond response time on our backbone. ICONZ has a team of dedicated engineers available 24x7 and back-to-back

Service Level Agreements with our major suppliers to provide our customers the best of our 'industrial-strength' backbone.

Target destination – www.google.com – max response time – 250ms.

ICONZ networks are monitored and provide one of the most reliable Internet solutions in the market exceeding our customers' expectations on a consistent basis.

2.1.10 24 x 7 network operations centre

Your equipment and bandwidth are always monitored by our highly trained and certified technical staff. Our Customer Care team is available to assist you 24x7x365, with all your queries and issues.

3. Contact information

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