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## **Corporate Profile**

Incorporated in 2003 as a Private Limited company in Singapore, ezNetworking Solutions Pte. Ltd. (also known as EZNETSOLS) is a Managed Internet Solutions Provider (MISP) focusing on providing quality infocomm solutions and services to our clientele.

At EZNETSOLS, we are committed to offering simple and meaningful solutions to your complex problems and we work hard to achieve the highest levels of quality in our solutions to help you meet your changing business needs.

By staying at the forefront of Internet development, we are able to bring new and innovative solutions to our customers to help them derive greater value from their investments.

With unceasing dedication and commitment, and drawing on our expertise and wealth of experience in the Internet arena, we are always upgrading ourselves to understand customer needs better and seek to continuously provide better and more effective solutions to improve your business needs.

You can trust us to bring you total satisfaction in your connectivity needs.

## **Solutions & Services**

Traditionally, companies operate their own IT infrastructure in-house for better control. However, this involves heavy capital (CAPEX) and operational (OPEX) investments to keep servers operating in an optimal environment, requiring heavy upfront investments in infrastructure and daily maintenance that results in higher operational costs.

Today, many companies are embracing an outsourcing model to manage their IT infrastructure as while IT is critical to their business, managing it may not be one of their core competencies and may adversely affect their return of investments (ROI). Not only does outsourcing to a dependable third-party streamlines operations and saves costs, it also makes the business more efficient and profitable.

At EZNETSOLS, we are committed to delivering solutions and services that our customers value. As your requirements change, we also easily adapt, allowing you to optimise your CAPEX and OPEX with a pay-as-you-grow solution configurable to exactly fit your needs.

Our EZ-programme is a suite of professional managed services that delivers high-level expertise in managing our customers' day-to-day network operations to provide them with a secured and reliable platform to conduct their business. They can then concentrate on their core business with knowledge that their infocomm needs are being properly taken care of.

Standard services available under this programme includes:

- Connectivity to the Internet (ezLocate – Rack Space & ezConnect – Remote Access)
- Shared and dedicated firewall solutions (ezSecure)
- Intrusion detection services (ezSecure)
- Virus scanning (ezSecure)
- Load balancing (ezPerform)

- SSL Acceleration (ezPerform)
- Content caching (ezPerform)
- Disaster recovery & backup procedures (ezBackup)
- System administration (ezAdmin)

Customers will be able to reap the benefits of the high availability and lower repair times that results from our pre-engineered and integrated solutions while at the same time experience reduced installation & maintenance costs and enjoying maximum scalability.

Depending on our customer requirements, we are also capable of providing further customised solutions on top of our standard services to better cater to our customers needs.

Our portfolio of other services includes:

- Corporate web hosting
- Domain name hosting
- Infrastructure development
- Systems integration
- Web design and Applications development

Do feel free to contact us to see how we can assist you in your IT needs.

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## **Our Facilities**

Majority of the solutions and services that we provide to our customers are run off our in-house managed Cisco and Juniper powered network residing in the SingTel EXPAN Data Centre.

By leaving the complexities of managing a data centre to SingTel, Asia's leading communications company, we are able to leverage on their expertise and solutions to ensure that our customers are serviced by a highly redundant and secured Telco-grade Data Centre. With sophisticated infrastructure such as Uninterrupted Power Supply (UPS), Standby Generators, Precision Air-Conditioning, Security System and Fire Protection Systems, our customers can be assured of the availability of service, 24 hours a day, 7 days a week.

The combination of the facilities management services provided by EXPAN and our own 100% Cisco and Juniper powered network, allows us to have the maximum flexibility of matching the best of both worlds and deliver innovative, reliable and quality services that our customers value.

## **The Network**

As the number of Internet users and Internet-based mission-critical applications increase daily at an unprecedented pace, service-provider and enterprise customers are demanding greater reliability and availability. When every minute of downtime can mean millions of dollars in lost revenue and embarrassing headlines, companies are eagerly looking for solutions to make their systems highly available.

Understanding this concern, our network is designed and built from ground up to maximize availability by implementing best current practices in network design as well as using highly reliable and scalable components in our network.

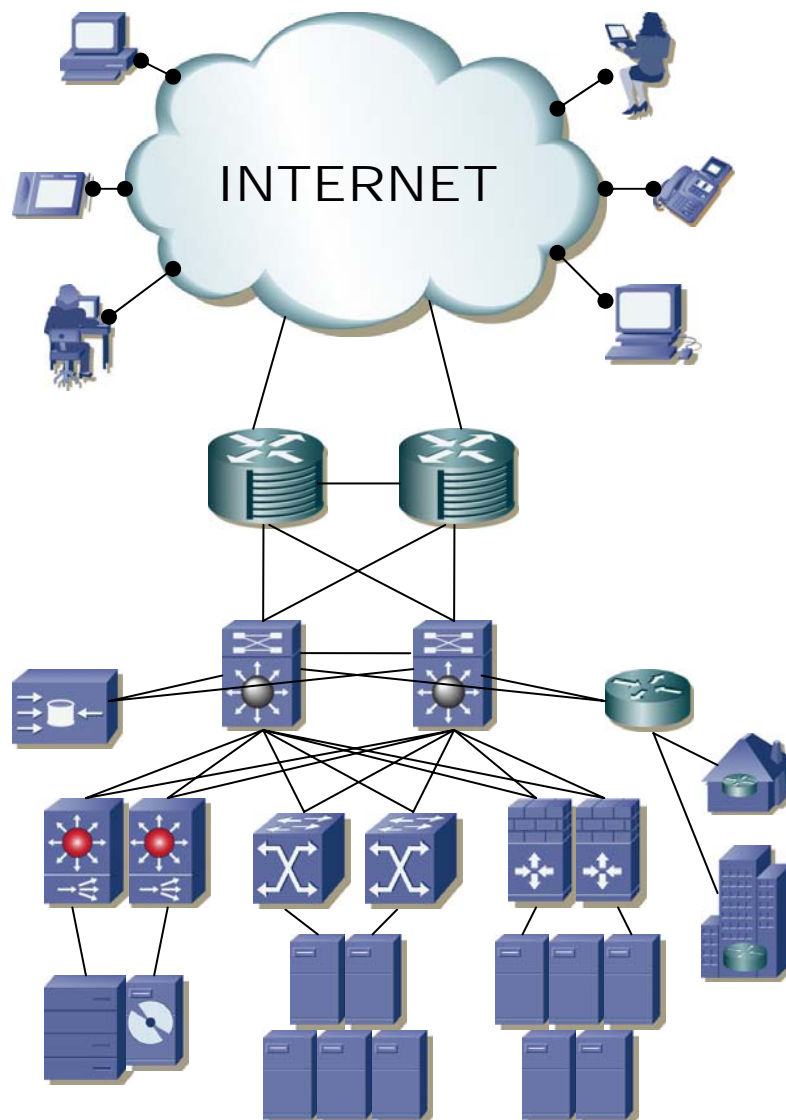
All the network equipments used on our backbone have the following features which allows us to have a highly resilient network backbone that is not easily affected by hardware or power supply problems and yet at the same time scale easily without significant network downtime by being able to change components on the fly.

- Redundant power supplies, each connected to different power sources;
- Redundant Route Switch Processors / Supervisor Engines;
- Modular chassis with Online Insertion and Removal (OIR) capabilities for line cards;

And our network backbone itself is fully meshed to prevent any physical link from being a single point of failure.

Being an APNIC (Asia Pacific Network Information Center, <http://www.apnic.net>) member, we obtain our IP addresses directly from them and this allows us to maintain carrier and provider neutrality while having the flexibility of easily scaling up to more diversified connections to the Internet when the need arises.

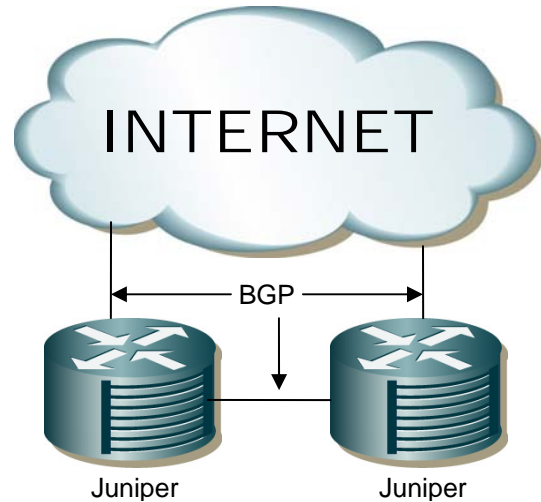
## Network Topology



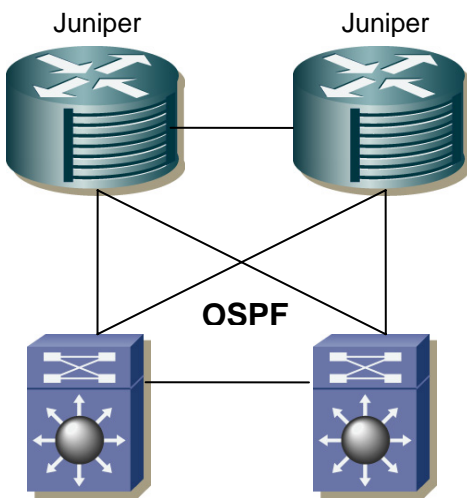
Our network backbone currently runs at gigabit speeds and is 100% powered by state of the art Juniper routers and Cisco Catalyst switches. Cisco and Juniper are the industry leaders in networking products and technologies and we chose to use their equipment to provide the highest possible level of performance and reliability to our customers.

## External Connectivity

Our multiple connections to the Internet and Singapore One are handled by Juniper routers. These routers perform external BGP peering with our upstream providers and obtain the full internet routing table to calculate the optimal path to any destination on the Internet or Singapore One. In the event of any link failures, the BGP routes would converge and fall back to the remaining connections.

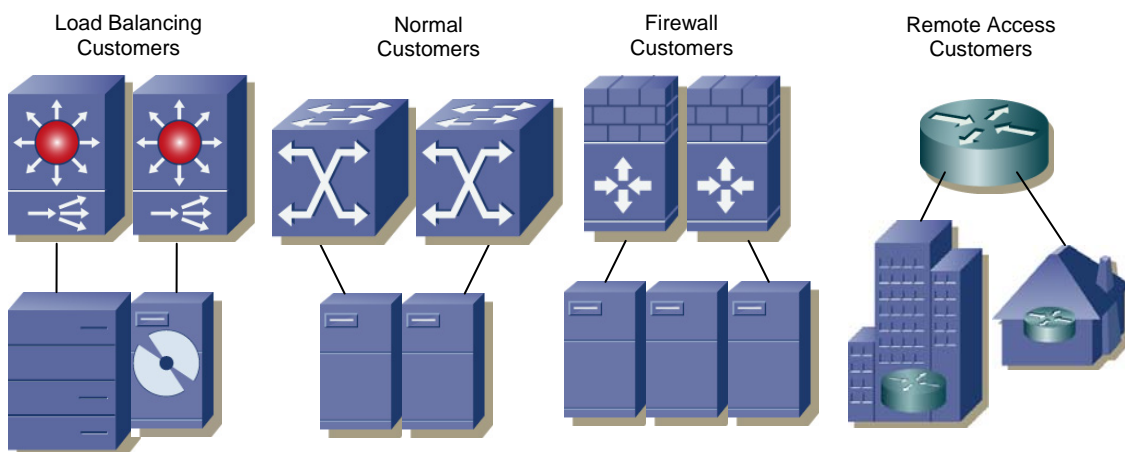


## Internal Connectivity



The network backbone is formed by a mesh of N x Gigabit network connections linking our Juniper core routers to our Cisco Catalyst multilayer distribution switches. Routing on our network backbone is determined by the OSPF dynamic routing protocol which does load sharing on equal cost paths as well as extremely fast route convergence in the event of any link failure while utilizing low CPU cycles. This allows the multilayer distribution switches and core routers to have maximum available CPU to forward and route customer traffic.

Customers are connected to our various edge routers and access switches depending on the solutions and services which they require from us. All our edge routers and access switches have at least 2 physical connections back to our multilayer distribution switches for redundancy and load sharing purposes. Our edge routers are also configured in pairs to allow for failover via the VRRP or HSRP protocol in the event of physical or link failures.



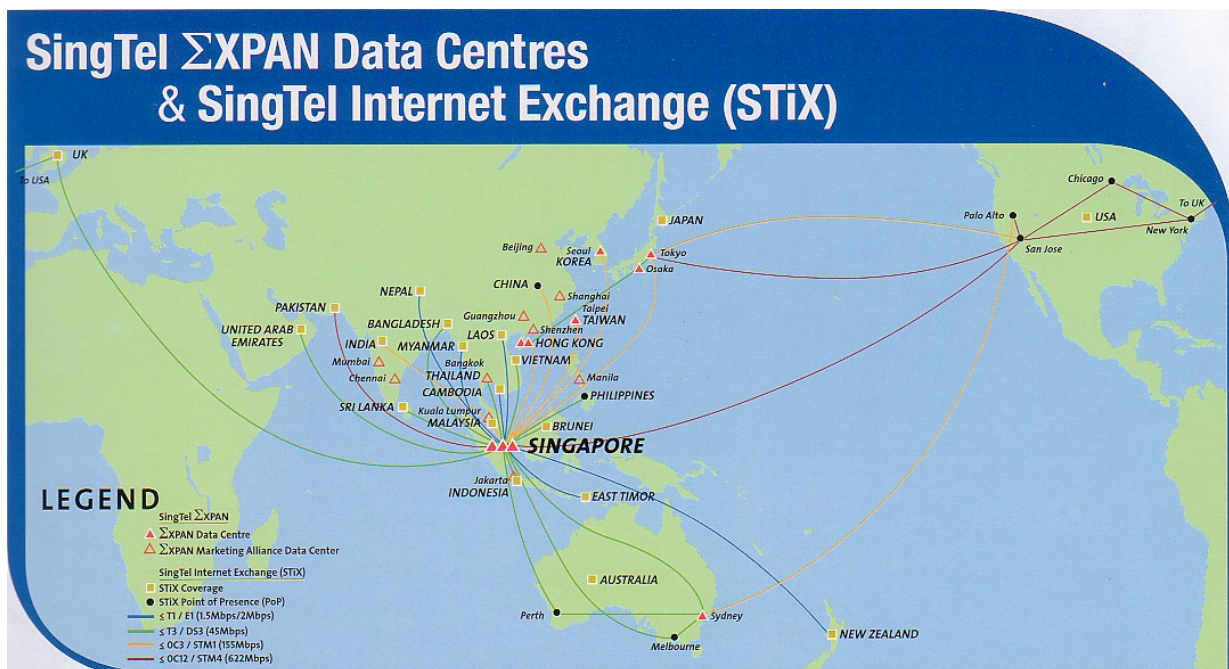
## The Data Centre

- More information about SingTel EXPAN can be obtained via their website at <http://www.singtel.com/expan>
- Copyrights and trademarks of other product and company names mentioned herein may be of their respective owners.

Our main network operations are located at the SingTel EXPAN Data Centre (Comcentre III Building), situated off Exeter Road which is a well connected and easily accessible place at the heart of Singapore.

The Data Centre covers a total area of 298,000 sq ft and provides connectivity to SingTel's Regional Network via STiX (SingTel Internet Exchange) and ConnectPlus Managed Data Services (ATM Service, Frame Relay Service, International Lease Circuit, Internet Protocol Service) to address the communication needs of corporate customers.

It also provides a range of IT operations support services from System Management, Security, Backup, Database Administration and Domain Name Services, to allow customers to manage their systems and network elements.



## Technical Fact Sheet

Power	<ul style="list-style-type: none"> <li>• Equipped with fully redundant UPS</li> <li>• Fully redundant power distribution systems with two diverse power feeds</li> <li>• Thirty-minutes full load battery backup to allow for generator startup and synchronization</li> <li>• Multiple generators to provide emergency power with backup fuel</li> </ul>
Fire Suppression System	<ul style="list-style-type: none"> <li>• Pre-action dry sprinkler cross-detection system to detect and extinguish any small fires</li> <li>• FM200 dry fire suppression system in all Data Centre areas</li> <li>• Network-monitored, fully integrated fire system (VESDA) to detect, notify and perform controlled shutdown</li> </ul>
Environmental & Climate Control	<ul style="list-style-type: none"> <li>• 24 x 7 Air-conditioning with redundant units</li> <li>• 24 x 7 Temperature and Humidity Control (CRAC) in all Data Centre areas to maintain temperatures at 21°C (+/- 1°C), while relative humidity is kept at 50% (+/- 5%)</li> <li>• Environmental system backed up by emergency generator power</li> <li>• Raised floor designed with at least 450mm airflow space to provide efficient cooling</li> </ul>
Facility Security System	<ul style="list-style-type: none"> <li>• Biometric scanners to prevent tampering of equipment within the Data Centre</li> <li>• Contact-less card access systems have also been installed in various locations to prevent unauthorized access</li> <li>• Intruder alarm system</li> <li>• 24 x 7 Physical security monitored by security guards</li> <li>• 24 x 7 Closed Circuit TV (CCTV) monitoring system with digital recording</li> <li>• Secure and monitored access via customer access list and escorted visitations</li> </ul>
Call Management & Incident-Tracking System	<ul style="list-style-type: none"> <li>• 24 x 7 Global Helpdesk</li> <li>• 24 x 7 Network Operations Centre (NOC)</li> <li>• 24 x 7 On site support operations</li> <li>• Full-time proactive monitoring systems</li> </ul>