

TELSTRA WHOLESALE INTERNET



HIGH PERFORMING INTERNET CONNECTIVITY

Staying connected is vital to doing business in today's fast moving, competitive global markets, and being able to rely on high quality, stable internet connection is critical for business continuity.

Telstra Wholesale Internet (TWI) is designed to provide high performance, cost-effective dual circuit connectivity to the internet.

TELSTRA WHOLESALE INTERNET OVERVIEW

Providing high performance internet connectivity, TWI solutions offer transit connectivity to the internet via dedicated connections to any one of our 86 national Points of Presence (PoPs).

Combined with our extensive suite of data access technologies including our existing Ethernet and SDH based products, TWI is available in many places where you need it; be it regionally, nationally and/or globally.

You have a choice of two core types of TWI:

- **TWI Domestic** is ideal if you've already invested in international internet capacity and wish to complement it with connectivity to the largest Australian internet backbone.
- **TWI Global** is the solution if you want to quickly acquire global (domestic and international) internet connectivity, without incurring the costs and challenges of building and operating your own infrastructure. With TWI Global, you'll gain access to our extensive TWI domestic routes which connect to our global networks.

HOW TELSTRA WHOLESALE INTERNET CAN BENEFIT YOUR BUSINESS

- **Highly reliable, service availability** means that your customers can have a consistent service experience, building on the level of trust required to drive customer loyalty.
- **Shortest possible connectivity path** means lower latency, and therefore a better service experience for your customers. Based on the largest tier 1 internet backbone in Australia, and complemented by our diverse global



connectivity, TWI gives you direct, low hop-count connectivity to the majority of Australian and international content providers and end customers, including residential, commercial and government entities.

- **Our extensive IP network coverage** enables you to reach customers where you need it, helping to provide you with greater revenue opportunities.
- **Cost effective solution** from leveraging our high-speed, highly reliable internet access without incurring the costs and challenges that come with building and operating your own internet infrastructure.

- **Self service access to your network, usage and billing information at your fingertips** through our online portal, so you can easily manage your usage and own network configurations, to help you with managing your costs.

FEATURES AND BENEFITS

| FEATURES | BENEFITS |
|---|--|
| Resiliency - Dedicated internet transit (access to an internet PoP) via tier 1, non-oversubscribed, N+1 redundant backbone and N+2 on major routes. | Scalable, secure and resilient internet connectivity enabling you to rapidly respond to market demands for high quality internet, while reducing your operational and capital investment. |
| Coverage - A choice of 86 Australian PoPs: <ul style="list-style-type: none"> Dual redundant capital city PoPs for greater resilience (Sydney, Brisbane, Melbourne, Adelaide, Perth and Canberra, Darwin, Tasmania). PoPs in over 70 major regional centres including Ballarat, Bathurst, Cairns, Geelong, Launceston, Southport and Townsville. International connectivity through our diverse and high capacity Telstra Global network. | An extensive national coverage enabling you to have a presence in many places where you need to be, to better service your customers' needs. Our international reach enables you to extend connectivity for your customers globally without needing to invest in your own international infrastructure. |
| Self service tools - Our online portal helps you manage your own services including network routing or configurations. You'll also be able to view your data usage in real time as well as current and historical performance statistics and billing information. | Self service access to relevant information at your fingertips providing you with the level of control and flexibility you need to manage your costs. You have direct access to an online tool whenever you need it, to help you configure your own network routing that best suit your business needs. |
| Connectivity options: <ul style="list-style-type: none"> BGP IPv4 and IPv6 dual stack options Ethernet or SDH based interface options | You have the flexibility to choose your own routing path and connectivity options that best meet your business needs. |
| Flexible Pricing | You'll have flexible options on tariffs such as flat rate or 95 th percentile (with burst options) to suit your needs and we can offer customised pricing to help you stay competitive in the market. |

NETWORK DIAGRAM

The network diagram below shows our domestic network topology.

TELSTRA WHOLESALE INTERNET (TWI) OVERVIEW



For our extended international network, you can view or download the network map here:
<http://www.telstraglobal.com/about-telstra/network>

WHAT YOU CAN EXPECT WHEN YOU CHOOSE TELSTRA WHOLESALE INTERNET

HIGH PERFORMING NETWORK AND FLEXIBLE SOLUTION

Designed with scalability in mind, our resilient and diversified network is built to enable highly reliable internet connectivity to maximise service availability for you and your customers.

By using our multiple TWI PoPs and extensive suite of Ethernet and SDH based products for carriage connections, we have engineered a network topology that can be designed to suit multiple business needs. For example, the level of network redundancy and load balancing can be customised to meet your specific needs.

Our TWI Domestic tier 1 internet network is complemented by an international component provided by our Telstra Global business. Telstra Global's internet backbone is a tier 1 network focussing on the Asia-Pacific region and has previously been ranked as the top IP backbone for Intra-Asia connectivity by independent market research firm Gartner Inc.

Our TWI backbone has built-in redundant paths to ensure a high level of resilience and our network is monitored around the clock to provide high levels of customer service and support through our Global Operations Centre.

OUR EXTENSIVE COVERAGE

You'll have access to 86 national Points of Presence (PoPs) and 41 global PoPs.

Our TWI offers dedicated global and domestic transit and includes access to a Telstra Wholesale Internet PoP via a tier 1, non-oversubscribed, N+1 redundant backbone and N+2 on major routes, providing you with resilient, high quality access to the internet. It features a range of access speeds from 2Mbps to 10Gbps (using multiple access ports).

TWI Domestic provides high quality domestic transit service over our tier 1 network while your international transit needs are catered for by your own infrastructure or from another international transit provider. With our extensive national coverage, this service can potentially provide your customers with the shortest connectivity path to the majority of Australian internet users, service and content providers.

TWI Global encompasses all the features and coverage offered by TWI Domestic and extended to provide the complete global connectivity. This is our most commonly used TWI. With this product you'll have access to our extensive TWI domestic routes with international connection to our US and European domestic IP backbone networks in addition to one of the largest, most comprehensive IP backbone networks in the Asia-Pacific region owned by Telstra Global. Interregional links including Asia Pacific to US, US to Europe, Europe to Asia Pacific are facilitated by our Telstra Global's diverse, high-capacity, international network facilities located in 41 PoPs.

Our TWI Global product also includes access to up-stream global routes, sourced as a transit service from our Telstra Global business.

Both TWI Domestic and TWI Global provide you with access to our Domestic Internet backbone and domestic peers, as well as connection to our global and domestic customers.

Our TWI service is typically delivered to your premises (PoP) using our existing Ethernet or SDH based access products as the connecting carriage service, or directly connected via internal building cabling where your equipment is located in either a Telstra Wholesale colocation or TEBA.

| SOLUTION | ROUTES ADVERTISED | | | |
|--------------|-------------------|----------------|-------------------------------------|----------------------------------|
| Coverage | Telstra domestic* | Domestic peers | All global & domestic TWI customers | Upstream global (rest of world)# |
| TWI DOMESTIC | Yes | Yes | Yes | No |
| TWI GLOBAL | Yes | Yes | Yes | Yes |

*Telstra Domestic Internet backbone including all BigPond, TWI and Telstra Internet Direct (TID) customers and content

#Provided via our Telstra Global's tier 1 internet network, diversely interconnected in Sydney and Perth.

SELF SERVICE INFORMATION AT YOUR FINGERTIPS

You'll have secured access to our online portal, CustData, which provides an extensive range of tools and reports for you to independently manage your own services.

You'll have access to the information you need to help you with network planning and budgeting, facilitated by readily available information to help you with analysing your usage trends, managing your access bandwidth and planning any scalable upgrades you'll need.

By using our online portal, you can manage your network through:

- configuring services (including updating BGP settings);
- testing services, viewing outage reports and log fault reports;
- comprehensive performance reporting;
- managing your own customised access control lists (including blocking of IP addresses and TCP ports) for security;
- online statement of your previous monthly charges;
- updating your contacts for billing, operational information, and account usage statistics;
- viewing any planned outages or other key service notifications you may need to know from time to time.

You'll also have the ability to produce your own reports, including traffic analysis and billing information.

OUR EXPERIENCED PEOPLE

Telstra Wholesale offers an experienced and skilled team of dedicated specialists to help identify the TWI solution that best suits your needs. You'll also receive our expert technical and operational support once the service has been activated.

GETTING CONNECTED

Our TWI services are commonly ordered in conjunction with one of our existing carriage connection service options to backhaul internet data from our PoP to your premises. A range of options are available based on your bandwidth and scalability requirements. Our dedicated team can work with you to select the best option to meet your needs.

Once you've signed an agreement with us, you can order TWI by submitting your completed order form to our dedicated wholesale provisioning group. Once we've received your order, you'll receive a receipt confirmation with an estimated delivery date.

We offer target provisioning times that vary depending on the port type, location of service and availability of infrastructure. More information on this can be provided on request.



CHARGES AND BILLING

A range of customised pricing tariffs are available to suit your specific business requirements. Your list prices are set out in your contract with us and additional pricing options can be requested through your account manager.

The options for monthly recurring charges include:

- Flat Rate (\$ per Mbps per month) – you'll pay a fixed amount for a pre-agreed amount of bandwidth.
- 95th percentile – a usage-type tariff, under which you can order a base bandwidth with an agreed burst level. The monthly charge is based on the service's 95th percentile bandwidth in that particular month.

Both the flat rate and 95th percentile tariffs comprise a monthly committed volume/charge and a variable charge for any excess usage. Other charges including a set up fee may apply.

We'll bill your services monthly in arrears, itemising the installation and monthly charges. Your billing information can be accessed via our self service online system, CustData, a portal for your TWI service management.

**CONTACT YOUR
TELSTRA WHOLESALE ACCOUNT MANAGER**
telstrawholesale.com.au/twi

OPERATIONS AND MAINTENANCE

You can report service difficulties with our National Wholesale Service Centre (NWSC). Any service difficulty will be resolved remotely by our NWSC team when possible, or alternatively it will be escalated to our infrastructure services team to rectify the service difficulty for you.

If any response or restore times are exceeded, you may escalate the matter by contacting our NWSC team or the escalation manager as nominated in your agreement with us.

We welcome the opportunity to discuss any specific service assurance options that you may need.