



symbio
NETWORKS™
Australia's Leading Wholesale VoIP Provider

Wholesale VoIP Solution

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NETWORKS™

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Wholesale Interconnect

The Symbio Networks Wholesale VoIP network is the largest SIP aggregation network throughout Australia and New Zealand and one of the strongest in terms of voice quality and reliability in the Asia-Pacific region. The wholesale network terminates millions of minutes of wholesale VoIP traffic a day.

Symbio's quality infrastructure and expertise in VoIP network management and operations allow our customers to leverage these benefits to their competitive advantage within their market.

With connections to major Internet backbone providers, combined with bulk purchasing power, Symbio Networks can provide high quality voice origination and termination to the Australian and New Zealand PSTN for carriers and service providers.

Experience

Symbio possesses unparalleled expertise and experience in the area of VoIP and IP service networks.

Combined we have over 100 years engineering experience in the fields of Telecommunications, Internet networks and Research and Development, placing Symbio as the market leader in converged service networks.

Interconnectivity

Symbio has built a highly interconnected mesh for their VoIP network within Australia and New Zealand. This allows service providers greater ease of connection. Our expansive IP footprint allows for many meet-me points to maximise voice quality with minimal latency.

Proven Technology

We are partnered with leading vendors within the industry including Dialogic, Sun, Stratus and Cisco.

Together with these vendors and Symbio Networks proprietary telecommunications software, Symbio continues to develop innovative, quality and secure VoIP solutions allowing our customers to achieve their business objectives in today's emerging converged services market.

Integration

Symbio Networks Wholesale VoIP platform has been proven to integrate with many of

the leading platforms from major equipment and softswitch vendors. The ease of interoperability allows carriers and service providers to interconnect to the Symbio wholesale platform and commence commercial traffic without the need for extensive setup delays.

Scalability

The Symbio Networks Wholesale VoIP network has been designed to ensure efficient scalability to cater for the ever-expanding growth of our wholesale customer base. We adopt a capacity planning policy designed to enable us to suit both long-term consistent growth as well as short-term traffic spikes as per customer requirements.

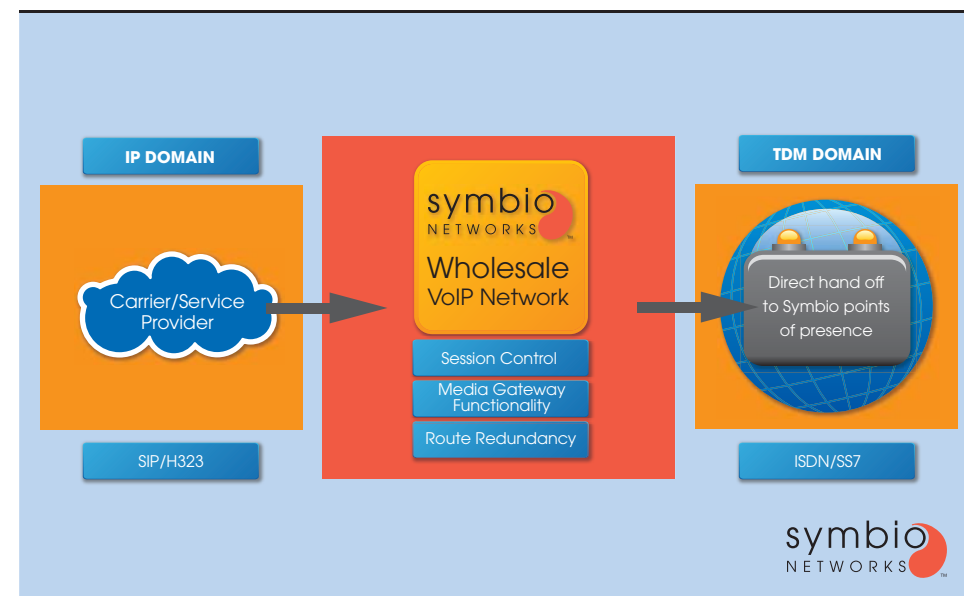
The 'linearly scalable' nature of the Symbio Wholesale VoIP network means we are strongly placed to ensure long-term carrier-grade delivery of wholesale voice services.

Reliability

The Symbio Wholesale VoIP network employs significant levels of network monitoring and seamless redundancy/failover strategies. Our policy on network redundancy ensures no-single point of failure within the network, or through our multiple interconnecting carriers.

Network Operations

Our dedicated team of engineers provide 24x7 technical and operational support.



WHOLESALE SERVICES

Termination Services

The Symbio Wholesale platform maintains direct TDM routes to all domestic operators within Australia and New Zealand for termination of voice services. Symbio also offers competitive international routes provided through tier 1 carriers.

Origination Services

Symbio can provide DID (direct in dial) and toll free numbers throughout Australia and New Zealand, with number portability support.

Hosted Calling Card

The Symbio Calling Card platform is a fully hosted solution, operating entirely off the Symbio Wholesale network. This advanced platform is well proven and widely deployed within Australia and South East Asia.

Advantages of the Symbio calling card platform include the ability to custom-design call flows and IVR, billing and rate plan sophistication, route flexibility, as well as call quality and reliability.

MEETING POINTS

Service providers, operators and carriers can meet Symbio directly via an Ethernet cross-connect at our points of presence in:

- Equinix (Sydney)
- Verizon (Sydney)
- Equinix (Singapore)
- Telstra (Auckland)

Symbio Networks also peer at a number of peering exchanges. These include:

- PIPE (Sydney)
- PIPE (Melbourne)
- Equinix (Sydney)
- Equinix (Singapore)
- WAIX (Perth)
- Auckland Peering Exchange - APE (Auckland)

Our AS number is 38333

IP Routing Support

The Symbio wholesale network employs Border Gateway Protocol (BGP) for IP routing redundancy.

NETWORK SUPPORT

Signalling Support

The Symbio Wholesale VoIP platform allows carriers and service providers to interconnect in multiple protocols in both the TDM and IP domains.

- VoIP Protocol Support
- Session Initiation Protocol (SIP)
 - H323 V2
 - Others upon request

- TDM Protocol Support
- ISDN
 - SS7 (multiple variants)

Media Support

The wholesale VoIP solution provides support for all common forms of VoIP voice media, including all common Codecs.

- Voice: G711a/u, G729a/b, G726, G723, ILBC
- Fax: T38 (over SIP and H323)
- DTMF: RFC2833 and others
- Dynamic acoustic echo cancellation
- Silence suppression and comfort noise generation (where required)