



Optus Wholesale VoIP Services

ABOUT OPTUS WHOLESALE VOIP SERVICES

Voice over Internet Protocol (VoIP) is having an increasing impact on the telecommunications sector as businesses and consumers realise the communication improvements the technology brings to their IT environments.

This growing awareness represents a huge opportunity for Carriers and Carriage Service Providers, but the challenge is the ability to offer an attractive array of flexible, secure and durable VoIP solutions at the right price.

Optus can help. We've made substantial investments in our Voice and IP network products and services in recent years – meaning our wholesale customers have an exceptional choice of VoIP services to assist you meet your wholesale voice requirements.

Optus' Wholesale VoIP solutions are designed to help you address Australian businesses demands for future network readiness as well as immediate performance enhancements. What's more, our wholesale customers continue to receive around-the-clock dedicated customer support.

Optus Wholesale has a range of VoIP interconnect products designed to meet the needs of Carriers and Carriage Service Providers (C/CSPs). The products available are:

- Optus Wholesale VoIP Carrier Interconnect
- Optus Wholesale VoIP Call Termination
- Optus Wholesale VoIP International Call Termination

The Optus Wholesale VoIP products are provided to C/CSPs over the secure Optus MPLS core based managed IP Next Generation Network. The Optus Wholesale VoIP C/CSP based products are available Australia wide.

Optus Wholesale VoIP products are designed to deliver a solution that enables you to originate and terminate VoIP traffic as well as complement Optus Wholesales existing circuit switched C/CSP services.



OPTUS WHOLESALE VOIP CARRIER INTERCONNECT

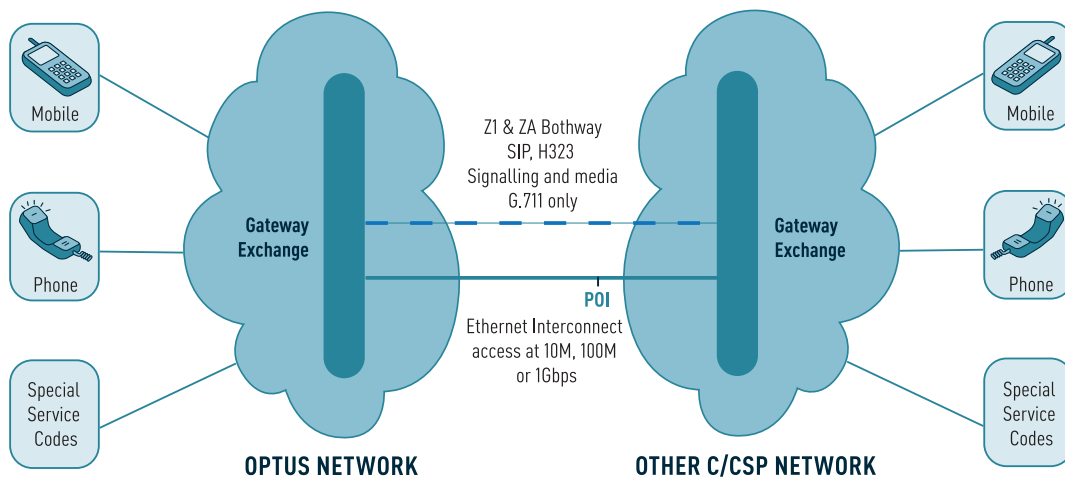
Optus Wholesale VoIP Carrier Interconnect service provides voice interconnection of declared and non declared services between your network and the Optus fixed and mobile network.

Interconnection between the C/CSP network and the Optus network takes place at points of interconnection (POIs).

Each POI may consist of an Optus Z1 bothway trunk for origination and termination of Optus responsible traffic and/or ZA bothway trunks for origination and termination of your responsible voice traffic. The VoIP POI is a single ethernet port on an Optus supplied customer edge (CE) router. This port is for shared use and as well as the POI for Carrier Interconnect the port may also be a service delivery point for non Carrier interconnect voice services such as the Optus Call Termination service. Each Z1 or ZA trunk is delivered in 4bit/s increments that support a maximum of 36 simultaneous bothway voice calls.

The Optus Wholesale VoIP Carrier Interconnect servicesupports both SIPv2 and H.323v4 VoIP signaling protocols and G.711a Codec for Voice carriage between the networks.

The following diagram shows the VoIP CI service.



Z1 - Optus Responsible Link

ZA - C/CSP Responsible Link

Call Types

The following Call Types are supported by the OW VoIP CI service:

Declared Services	Non Declared Services
Domestic PSTN Terminating Access	Data Network Access Service
Mobile Terminating Access	Special Services
Domestic PSTN Originating Access	Video Telephony



Features and Benefits

Features and Benefits of the Optus Wholesale VoIP Carrier Interconnect service:

- Voice and Data convergence over a single ethernet access
- Offers carrier grade voice quality interconnection (G.711)
- Offers multiple Optus wholesale voice services over a single customer interface reducing interconnect gateway hardware costs
- Offers multiple VoIP protocols (SIP and H323) to meet your equipment requirement
- No transcoding required from VoIP networks reducing your equipment costs and improving quality

Interconnection with Optus requires the C/CSP to meet responsibilities as set down by the Telecommunication Act 1997.

More details regarding the Optus Wholesale VoIP Carrier Interconnect service to assist with planning your VoIP interconnection with Optus can be found in the VoIP technical specification brochure.

OPTUS WHOLESALE VOIP CALL TERMINATION

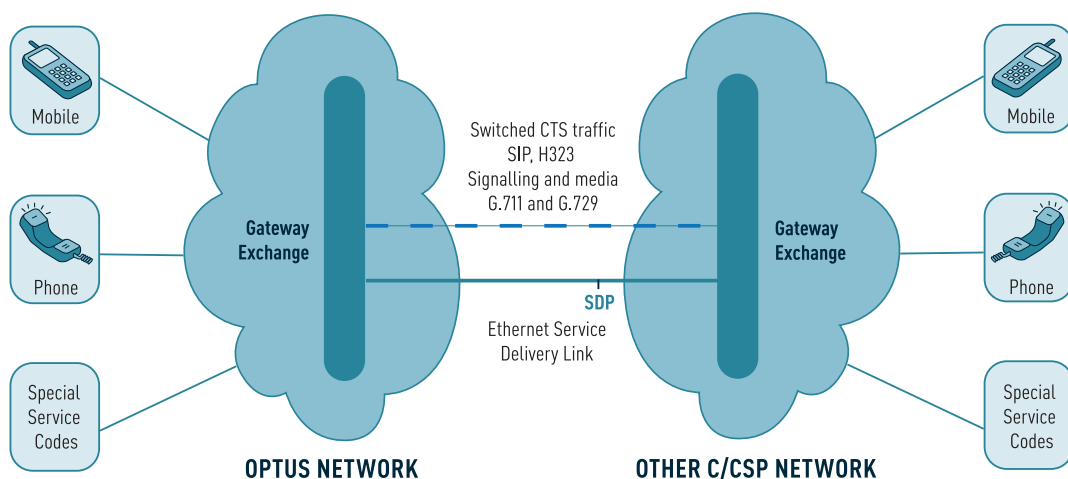
The Optus Wholesale VoIP Call Termination Service (CTS) is a Next Generation Network service enabling C/CSPs to terminate voice traffic to Fixed and Mobile networks of Optus and other C/CSP networks with Optus interconnection arrangements.

The OW VoIP CTS service comprises 2 parts:

1. The physical ethernet access between the C/CSP gateway and the Optus gateway known as the Service Delivery Link, and
2. The virtual connection from the Service Delivery Point at the C/CSP location to the Optus network for the carriage and termination of voice traffic – the Optus Switched Long Distance Service. Refer to the Optus Switched Long Distance Service brochure for details on this service.

The Optus Wholesale VoIP CTS service offers C/CSPs a choice of SIPv2 and H323v4 VoIP signalling protocols and G.711 and G.729 Codecs for transportation of Voice. The Ethernet Service Delivery Link is available as 10M, 100M & 1G.

The following diagram shows the OW VoIP CTS service:





**OPTUS WHOLESALE
VoIP SERVICES**

- National Coverage
- Carrier grade voice quality interconnection
- No transcoding required from VoIP networks resulting in improved quality and reduced equipment costs
- Voice and data convergence over a single Ethernet access
- Multiple VoIP protocols

Call Types

Calls to the following destinations of Optus and other C/CSPs networks are supported by CTS:

Optus Destination	Destination of other C/CSPs
PSTN - Local	PSTN - Local
PSTN - National	PSTN - National
Mobile	Mobile
Special Service Codes – 18,13 & 1300	Special Service Codes – 18,13 & 1300
International	International
Mobile Satellite - 0145	Emergency Services – 000,112 & 106 #1
Operator - 12	Emergency Services – 1144x (SA & VIC) #1
Fault Reporting - 125125	DNAS - 0198
DNAS - 0198	#1 – Must support MoLI & FoLI (ACIF G557:2006)

Features and Benefits

- A solution assisting C/CSPs to meet many regulatory requirements such as LNP, MNP & FP&LR porting
- Reduces your interconnection requirements by combining with CI
- No need for transcoding from VoIP to circuit switched technologies
- Flexible VoIP protocol options – SIP and H323
- G.711 and G.729 voice Codec options meet VoIP requirements
- Single Voice interface for multiple interconnect services (CTS and CI)
- Data can be delivered using the same ethernet access via a separate port
- Very scalable making capacity planning and management simple
- QOS managed by the C/CSP by ensuring the voice traffic does not exceed available bandwidth i.e. 90 x G.726 or 36 x G.711 speech channels per 4M of bandwidth.

To assist you with planning your VoIP interconnection with Optus more details regarding the Optus Wholesale VoIP Call Termination Service can be found in the VoIP technical Specification brochure.

Optus Wholesale VoIP services are part of a range of integrated communications solutions that we provide. To discuss your wholesale needs, please contact your Optus Wholesale Account Manager or visit our website at www.optus.com.au/wholesale.

**Further
Information**