

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

This Service Schedule (including the Optional Service Features in Annexure 1) sets out the Service Description and service levels that apply to the Global IP Transit (**IP Transit**) Service.

1 SERVICE DESCRIPTION

- 1.1 Our IP Transit Service provides connectivity between a port at our PoP (**Port**) and the Internet and includes:
- (a) IP Transit Platinum Service which transmits your Internet traffic via at least two dedicated cable paths; and
 - (b) IP Transit Standard Service which offers a cost efficient platform for serving customers. IPT Standard Service customers have lower priority on Telstra backbone in case of congestion. Other than the prioritisation feature there is no difference between IP Transit Platinum Service and IP Transit Standard Service,
- each a Service.
- 1.2 The Services under this Service Schedule that are Australian Services do not include the underlying access service, which must be acquired separately under this agreement and which is more fully described in Annexure 2.

2 BANDWIDTH

- 2.1 You must specify in your Order Form the amount of Internet bandwidth for your IP Transit Standard or Platinum Service (**Committed Data Rate**).
- 2.2 Subject to the terms relating to our Burstable Bandwidth optional Service, we will not deliver your Internet traffic in excess of your Committed Data Rate.

3 SITE SURVEY

- 3.1 After acceptance of a Service Order Form, we will carry out a service delivery site survey (**Site Survey**) for the relevant Service. If the Site Survey reveals that the Service is unavailable or additional costs (including costs arising from capital works, on-site cabling or wiring or building management charges) are required to deliver the Service, we may propose an amendment to the Service and the charges for the Service by notice to you. If you do not accept the amended Service or the amended charges, you may cancel the Service provided that you reimburse us any third party costs that we reasonably incur in relation to your termination of the impacted Service.

4 SERVICE PROVISIONING TIME

- 4.1 After we carry out the Site Survey, we will provide you with a target service delivery completion date for the Service (**RFS Date**).
- 4.2 If we do not deliver the Service to you by the RFS Date, other than as a result of an Exclusion Event, you may claim a credit of 5% of the non-recurring charges (**NRC**) (or monthly recurring charges (**MRC**) if no NRC is applicable) for the delayed Service for each Business Day past the RFS Date, up to a maximum credit of 100% of the NRC (or the first month's MRC) for the delayed Service.
- 4.3 If we do not deliver the Service to you within thirty-one (31) days of the RFS Date other than as a result of an Exclusion Event, you may cancel the affected Service by notifying us in writing within fifteen (15) days of the expiry of the thirty-one (31) day period.
- 4.4 We will provide you with a period of two (2) Business Days from the date that we notify you that the Service is ready for testing (**Test Period**), to test the Service for any Provisioning Fault.

5 SERVICE AVAILABILITY TARGETS

- 5.1 We will aim to meet the following Service Availability targets:

Table 1: Service Availability

Service Type	Service Availability Target
PoP-to-PoP	99.99%

- 5.2 If a Service does not meet the Service Availability target in a month, you may claim a credit calculated in accordance

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

with Table 2.

Table 2: Service Availability Credits

Service Type	Availability calculated as a percentage	Global IP Transit Platinum Service Credit	Global IP Transit Standard Service and Australian Service Credit
PoP-to-PoP	99.98%-99.86%	10% of Port MRC	10%
	99.85%-99.45%	30% of Port MRC	
	<99.45%	50% of Port MRC	

5.3 If an IP Transit Platinum Service experiences either:

- (a) a single period of Unavailability in excess of 24 hours in any month; or
- (b) three or more periods of Unavailability of eight or more hours each in any three month period,

(either being a “Chronic Outage”), you may cancel the impacted Service without the payment of any Early Termination Charges by notifying us in writing within fifteen (15) days of the Chronic Outage.

6 MEAN TIME TO RESTORATION (MTTR)

GLOBAL SERVICES

6.1 The MTTR targets in Table 3 only apply to IP Transit Platinum Services. We will aim to meet a MTTR target of less than four hours per month.

6.2 If the actual MTTR exceeds four hours for a month, you may claim the following credit:

Table 3: MTTR Credits for IP Transit Platinum Services

Mean Time to Restore	Credit
Between 241 minutes and 480 minutes	10% of MRC
Between 481 minutes and 720 minutes	15% of MRC
Between 721 minutes and 960 minutes	20% of MRC
Between 961 minutes and 1200 minutes	25% of MRC
Between 1201 minutes and 1440 minutes	30% of MRC
In excess of 24 hours	35% of MRC

6.3 The MTTR credits do not apply cumulatively. A MTTR credit may not be claimed in addition to any other credits for other service level targets with respect to the same incident or outage.

AUSTRALIAN SERVICES

6.4 The MTTR targets in Table 4 apply to Australian IP Transit Standard Services. We will aim to meet a MTTR target of less than twelve hours per month for Australian IP Transit Standard Services.

6.5 If the actual MTTR for Australian IP Transit Standard Services exceeds twelve hours for a month, you may claim the following credit:

Table 4: MTTR Credits for Australian IP Transit Standard Services

Mean Time to Restore	Credit
Between 721 minutes and 960 minutes	5% of MRC
Between 961 minutes and 1200 minutes	10% of MRC
Between 1201 minutes and 1440 minutes	20% of MRC

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

Mean Time to Restore	Credit
In excess of 24 hours	30% of MRC

6.6 The MTTR credits do not apply cumulatively. A MTTR credit may not be claimed in addition to any other credits for other service level targets with respect to the same incident or outage.

7 ROUND TRIP DELAY (RTD)

GLOBAL SERVICES

7.1 The RTD targets only apply to Global IP Transit Platinum Services. We will aim to meet the RTD targets for Global Services applicable to your IP Transit Platinum Service and notified to you.

7.2 If the RTD on a Global Service exceeds the RTD target for that Global Service in a calendar month, you may claim a credit of 5% of the MRC for the impacted Global Service.

AUSTRALIAN SERVICES

7.3 The RTD targets for Australian Services only apply to IP Transit Standard Services that are Australian Services. We will aim to meet the RTD targets for Australian Services applicable to your IP Transit Standard Service that is an Australian Service and notified to you.

7.4 If the RTD on an Australian Service exceeds the RTD target for that Australian Service in a calendar month, you may claim a credit of 5% of the MRC for the impacted Australian Service.

8 PACKET DELIVERY RATIO (PDR)

GLOBAL SERVICES

8.1 The PDR targets only apply to IP Transit Platinum Services that are Global Services. We will aim to meet a monthly PDR target of 99.5% for your IP Transit Platinum Services that are Global Services.

8.2 If we do not meet the PDR target for a Global Service in a month, you may claim a credit of 10% of the MRC for the impacted IP Transit Platinum Service that is a Global Service.

AUSTRALIAN SERVICES

8.3 The PDR targets only apply to IP Transit Standard Services that are Australian Services. We will aim to meet a monthly PDR target of 99.5% for your IP Transit Standard Services that are Australian Services.

8.4 If we do not meet the PDR target for an Australian Service in a month, you may claim a credit of 10% of the MRC for the impacted IP Transit Standard Service that is an Australian Service.

9 COUNTRY SPECIFIC TERMS

INDONESIA

9.1 You must acquire our DNSR Service for Services supplied in Indonesia due to regulatory requirements.

INDIA

9.2 You agree that you will record and store system logs relating to Network Address Translation (**NAT**) at all times, effective from the Service Start Date, as required by the Indian Department of Telecommunications (**DOT**).

9.3 This requirement applies to any NAT mechanism deployed by you for accessing the Internet.

9.4 You agree that you will:

- (a) maintain, update and store these logs in the format appended at Clause 9.5 below;
- (b) for each such log, store it for a period of at least one year; and
- (c) produce the logs to Telstra, where such a request has been made by the DOT to Telstra, verbally or in writing.

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

9.5 The following parameters are required to be stored in SYS LOG of Network Address Translation (NAT) for Internet Access:

Sr. No.	Parameters
1	Start Date (mm:dd:yyyy) & Time (hh:mm:ss)
2	End Date (mm:dd:yyyy) & Time (hh:mm:ss)
3	Source IP Address
4	Source Port
5	Translated IP Address
6	Translated Port
7	Destination IP Address
8	Destination Port

- The term “SYSLOG” refers to Logs for NAT
- The aforesaid parameters shall also be applicable for NAT mechanism for dual stack in an IPv6 network.

9.6 By signing the Service Order Form for the Services, you confirm that you comply with the requirements of sections 9.2 – 9.5 of this Service Schedule.

10 POLICIES

10.1 You must comply with our policies relating to IP addresses and routing protocols set out at Annexure 3 as they apply to the Service, as amended from time to time.

11 EARLY TERMINATION CHARGES

- 11.1 If you cancel or downgrade a Service for any reason other than our material breach of this Agreement at any time:
- prior to the Service Start Date for that Service, you must pay us an Early Termination Charge in the amount of the costs reasonably incurred by us as a result of the termination (including any amounts payable by us to our Service Provider as a result of the cancellation of the Service) or
 - during the Initial Period for that Service, you must pay us an Early Termination Charge for the remaining months in the Initial Period calculated in accordance with the following table:

Table 5: Early Termination Charges

Initial Period	Percentage of the MRC payable as Early Termination Charge from the date of cancellation / downgrade	
12 Months	Months 1-12	100%
24 Months	Months 1-12	100%
	Months 13 to 24	75%
36 Months	Months 1-12	100%
	Months 13 to 24	75%
	Months 25 to 36	50%

12 DEFINITIONS

12.1 In this Service Schedule, unless otherwise stated:

Access Port means the point at our wholesale internet Point of Presence where the underlying access service connects.

Australian Service means a Service that is delivered to you in Australia on AS 1221.

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

Availability means the number of minutes in a month during which a Service is not Unavailable.

Early Termination Charge means an early termination charge calculated in accordance with clause 11.1.

Exclusion Event means

- (a) any faults caused or contributed to by a local access service (also known as a Local Access) (where that local access service is provided by a third party) between your site and our exchange, or our Service Provider's exchange;
- (b) any faults or lack of Availability caused or contributed to by the simultaneous failure of two or more international submarine cable systems not wholly owned or operated by us or our Service Provider for the Service, where the fault or lack of Availability would not have occurred if only one such cable system had failed;
- (c) any faults, lack of Availability or failure caused or contributed to by:
 - (i) your act or omission, or any act or omission of a third party (excluding our Service Provider), or any of your or its agents, contractors or customers;
 - (ii) your Site, our ability to access such Site or unavailability of necessary cabling facilities at such Site; or
 - (iii) any equipment or software owned or supplied by you or a third party (excluding our Service Provider);
- (d) a fault reported by you but not confirmed by us nor any relevant third party operator as a valid fault;
- (e) Planned Network Maintenance;
- (f) unavailability of permits or licences from third parties necessary for supply of the Service, including road digging permits and licences from a building owner or manager;
- (g) a Force Majeure Event or outages due to local in-country practices, any national laws, customs or regulations; or
- (h) for Global Internet Access Services only, lack of Availability where diverse routing of your site backup circuits and ISDN has not been implemented.

Global Service means a Service that is delivered to you other than in Australia.

Local Access or Local Loop means the domestic connecting carriage service providing a direct connection between a PoP in a country and your Site in that country.

Mean Time to Restore (MTTR) means the sum of the time the Service is Unavailable during a month divided by the total number of Service outages in that month. Each occasion on which the relevant Service is Unavailable is counted as one outage.

MRC means the monthly recurring charge payable for the Service or a component of the Service for a relevant calendar month.

Network of a party means

- (a) in the case of Telstra, the network used by Telstra to provide Services (including any network of Telstra's supplier); and
- (b) in the case of the Customer, its network and any network of its customers that is connected to the Customer's network.

Packet Delivery Ratio (PDR) means the ratio of the number of test IP packets received at a destination provider edge router, compared with the number of test packets sent from an origin provider edge router at 5 minute intervals in a month. PDR only applies to the Service where the Port is on a provider edge router that is enabled with a performance monitoring device to measure traffic flow over our Network, as identified on our PoP list.

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

PoP means a point of presence housing access nodes which connect to the Telstra international backbone network used by us to carry the Service between PoPs in different countries around the world.

PoP-to-PoP means a point-to point or point-to-multipoint Service provisioned between PoPs without a Local Access.

Provisioning Fault means the failure of the Service to meet the relevant ITU specifications for establishing that Service.

Round Trip Delay (RTD) is measure of the monthly average round trip delay performance for each Service and is measured separately between our PoPs between provider edge routers enabled with a performance monitoring device to measure continues traffic flow over our Network, as identified on our PoP list.

Service Interruption means an interruption or outage that results in the total disruption of the Service such that the Service is unable to send and receive data between locations on the Service and which is documented in our trouble ticket other than a trouble ticket opened:

- (a) later than 72 hours after the disruption occurs; or
- (b) for degraded service, such as slow data transmission.

A Service Interruption commences when the trouble ticket for it is opened. Trouble tickets will be opened at the time you notify us of the disruption by notice in writing or by telephone to the Service Desk or we otherwise open a trouble ticket in relation to the disruption.

Site means a location to which your Service is supplied or connected.

Unavailability means the number of minutes in a month during which a Service is subject to a Service Interruption, but does not include any period during which an Exclusion Event applies.

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

ANNEXURE 1 – OPTIONAL SERVICE FEATURES

1 OPTIONAL SERVICE FEATURES

1.1 You may request us to supply the following optional Services:

- (a) China Direct Transit Service (**China Direct Transit**);
- (b) Burstable Bandwidth; and
- (c) Domain Name Service Resolver Service (**DNSR Service**).

(Optional Service Features).

1.2 To access the Optional Service Features, you may need to separately acquire additional services. The terms relating to the supply of those additional services are set out in separate Service Schedules and Service Order Forms. You are responsible for the configuration and the security of your equipment which is connected to the Optional Service Features.

2 CHINA DIRECT TRANSIT

2.1 Our China Direct Transit Service provides your IP Transit Services with access to content hosted in China via our dedicated China interconnects in Hong Kong.

2.2 If a Service Provider ceases to supply, or notifies us of its intention to cease to supply, the carriage services necessary for us to supply China Direct Transit to you, we may limit, suspend or cancel (without the payment of Early Termination Charges) your China Direct Transit Service by providing you with at least ten (10) days' notice.

3 BURSTABLE BANDWIDTH

INTRODUCTION

3.1 Our Burstable Bandwidth Service allows you to use additional Internet bandwidth above your Committed Data Rate up to a maximum amount of Internet bandwidth (**Maximum Data Rate**) as specified by you in your Order Form. If you do not specify a Maximum Data Rate, the default ratio of 2:1 (Maximum Data Rate: Committed Data Rate) will apply. You may only request a variation to each of your Committed Data Rate and Maximum Data Rate once each month. The variation will take effect in the following calendar month.

3.2 We do not promise to deliver your Internet traffic in excess of your Committed Data Rate. We will not deliver your Internet traffic in excess of your Maximum Data Rate.

HOW WE MEASURE AND CHARGE YOUR BANDWIDTH

3.3 Your standard MRC will apply for your bandwidth usage up to your Committed Data Rate. Additional variable charges will apply for your bandwidth usage in excess of your Committed Data Rate up to your Maximum Data Rate.

3.4 We will measure your monthly bandwidth usage in five minute intervals on all your incoming and outgoing Internet traffic through each Port for the purpose of calculating your chargeable bandwidth for the option that you select below:

- (a) **95th Percentile** – we use the higher of your incoming and outgoing Internet traffic and charge a specified rate to your bandwidth usage in excess of your Committed Data Rate after excluding the top 5% of your monthly traffic when arranged from highest to lowest;
- (b) **90th Percentile** (applicable to Global Services only) – we use the higher of your incoming and outgoing Internet traffic and charge a specified rate to your bandwidth usage in excess of your Committed Data Rate after excluding the top 10% of your monthly traffic when arranged from highest to lowest; or
- (c) **Average Rate** (applicable to Global Services only) – we will charge a specified rate to the simple average of your bandwidth usage in excess of your Committed Data Rate.
- (d) **Flat Rate** – we will charge a specified rate for each Mbps of the nominated bandwidth for that Access Port.

3.5 You may also choose one of the following bandwidth measurement Burstable Bandwidth options:

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

- (a) **Standard** – bandwidth is measured and charged on a Port by Port basis;
- (b) **Aggregate** (applicable to Global Services only) – bandwidth is measured and charged on an aggregate basis across two or more Ports within the same city or group of cities; or
- (c) **Combined** (applicable to Global Services only) – a combination of Standard and Aggregate measurement.

SERVICE LEVELS

- 3.6 Our service levels only apply to your Committed Data Rate and not to the bandwidth usage in a particular month that exceeds your Committed Bandwidth.

4 DNSR SERVICE

- 4.1 If you select this Service, subject to our feasibility assessment, we will try (but do not promise) to resolve and respond to your requests for mapping of Internet domain names to Internet IP addresses and Internet IP addresses to Internet domain names.

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

ANNEXURE 2 – CARRIAGE SERVICE (AUSTRALIA ONLY)

1 CARRIAGE SERVICE (AUSTRALIA ONLY)

- 1.1 The Services under this Service Schedule that are Australian Services do not include the underlying access service, which must be acquired separately under this agreement. It is up to you to make sure the speed of your underlying access service is high enough for the speeds you select for Services that are Australian Services under this Service Schedule.
- 1.2 To provide the underlying access service Telstra will connect its Network, using cabling that Telstra will own and maintain, to one of the following points at or near the Customer's service delivery point:
- (a) distribution frame;
 - (b) where there is no distribution frame) a device serving a similar function to a distribution frame, located in a common area; or
 - (c) where neither (a) nor (b) applies) a network termination device that Telstra or Telstra's supplier owns.
- 1.3 The network boundary point is your side of the distribution frame or device.
- 1.4 Telstra uses reasonable endeavours to meet the following target response and repair times for the underlying access service. They apply 24 hours a day seven (7) days a week.

Table 6: Target response and repair times

Package	Target response time	Target repair time
Standard	2 hours	24 hours
Premier	1 hour	12 hours

- 1.5 Premier target response and repair times are available for the underlying access service at your choice (and for an additional charge).

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

ANNEXURE 3 – IP Policy

1 INTRODUCTION

- 1.1 This IP Policy applies to the Internet Services.
- 1.2 This IP Policy sets out our policies in relation to IP addresses and routing protocols that apply if we supply Internet Services to you
- 1.3 This IP Policy may be amended by us from time to time on thirty (30) days' notice to you, which we may give by email. Terms used in this IP Policy have the meaning given to them in the Internet Service Schedule.

2 IP ADDRESSES POLICY

- 2.1 The terms and conditions in clauses 2.2 to 2.8 of this IP Policy apply where we provide IP addresses to you.
- 2.2 If we agree to provide IP addresses to you, we grant to you an exclusive, non-transferable revocable licence to use each IP Address (Licensed IP Addresses) in your equipment for the sole purpose of enabling your equipment to access our PoP and the internet for the Service Term. We reserve the right to charge you for Licensed IP Addresses. Any charges for Licensed IP Addresses will be set out in an Order.
- 2.3 You may only use the Licensed IP Addresses granted by us for the intended purpose stated by you at the time we agree to supply the Licensed IP Addresses to you, or in the case of the addresses specified below for the purpose specified below:
 - (a) the Port IP address – as the gateway IP address for that Internet Port; and
 - (b) the Equipment address – as the IP address for your Equipment.
- 2.4 The Licensed IP Addresses must not be used in any way that compromises the security and stability of our network or breaches any applicable laws.
- 2.5 We may suspend or terminate the licences to use the Licensed IP Addresses where you use such Licensed IP Addresses for any purpose other than those set out in clause 2.2 and 2.3 above or if your use of the Licensed IP Addresses breaches clause 2.4.
- 2.6 We have no control over any content transmitted to the Licensed IP Address by third party content providers or geolocation providers and how such providers recognise or identify the Licensed IP Address and are not responsible for ensuring the accuracy or correction of such content. We will use reasonable endeavours to ensure that the Licensed IP Address is registered with the appropriate regional internet registry but reserve the right to refuse to reassign you a new Licensed IP Address on the basis that the content transmitted to the Licensed IP Address is inaccurate or incorrect.
- 2.7 Your licence to use the Licensed IP Addresses terminates immediately upon the earlier of:
 - (a) termination or expiration of the Agreement (being the agreement under which we supply the Internet Service to you);
 - (b) cancellation of the relevant Internet Service; or
 - (c) us ceasing to provide the relevant Internet Service to you.
- 2.8 We may change a Licensed IP Address:-
 - (a) on fifteen (15) days written notice to you; or
 - (b) immediately, if the change is needed because of software issues or a service difficulty requiring urgent changes in order to protect the functionality of the network services.

Your Supplied IP Addresses

- 2.9 The terms and conditions in clauses 2.10 to 2.12 of this IP Policy apply where you supply your own IP addresses:-

SERVICE SCHEDULE - GLOBAL IP TRANSIT SERVICE (WHOLESALE)

- (a) we may, as a condition of providing the Internet Service, require you to provide us with IP addresses from within a certain mutually agreed block (Your Supplied IP Addresses);
 - (b) you grant to us a non-exclusive, non-transferable, revocable licence to use Your Supplied IP Addresses for the purpose of providing the Internet Service; and
 - (c) our licence to use Your Supplied IP Addresses terminates immediately upon the earlier of:
 - (i) termination or expiration of the Agreement;
 - (ii) cancellation of the relevant Internet Service; or
 - (iii) us ceasing to provide the relevant Internet Service to you.
- 2.10 If you advertise IP addresses which are not provided by us, we may request written permission from the registered owner of Your Supplied IP Addresses to route those IP addresses on your behalf. If we do not receive such written permission when requested, we reserve the right to refuse to route Your Supplied IP Addresses through our, or our Service Provider's Network.
- 2.11 If you use Your Supplied IP Addresses for your Internet Service, you must use Your Supplied IP Addresses for all interfaces associated with the use of that Internet Service (including the Port IP Address and Your Equipment IP Address).
- 2.12 You must give us at least fifteen (15) days' prior written notice of any change in Your Supplied IP Addresses.

3 ROUTING PROTOCOLS POLICY

- 3.1 You must ensure that the required routing protocols are implemented and operated between your Equipment and our Network. We may change our routing protocols, on thirty (30) days' written notice to you.