



SERVICE TERMS AND SLA FOR GLOBAL CROSSING MANAGED ATM AND FRAME RELAY SERVICE

Global Crossing Managed ATM and Frame Relay Service. These are the service terms and service level agreement for Global Crossing's Managed ATM and Frame Relay Service ("The Service"), which apply to Managed ATM and Frame Relay Services provided by Global Crossing, in addition to the terms of any Master Services Agreement, Retail Customer Agreement, Carrier Services Agreement or other Global Crossing master agreement (in each case a "Master Agreement") executed by the Customer and Global Crossing. Initial capitalized terms not defined in these terms and conditions have the meanings given to them in the Master Agreement.

1 Description of Service

- 1.1 **Service Description** Global Crossing's Managed ATM and Frame Relay Service comprises of the provision of Private Virtual Circuits (PVCs) across Global Crossing's Network, either with or without (i) local access circuits ordered by the Customer from Global Crossing and (ii) Managed Network Service. The Service is available as Global Crossing POP to Global Crossing POP Service ("POP to POP") and Customer Premises to Customer Premises Service ("End to End") categories. POP to POP Service includes all of the Global Crossing network elements, excluding local access. If local access is provided by a Global Crossing-owned city ring or Metro Network at each end of the circuit to the Customer's premises the Service will also be classified as POP to POP. End to End Service includes all Global Crossing Network elements plus the provision of local access circuits ordered from Global Crossing by the Customer from the Customer premises to the Global Crossing POP over facilities that may be provided by third party suppliers. Specific customer requirements, locations and charges shall be set forth on the Order Form for the Service.
- 1.2 Charges for the Service, include (i) non-recurring charges ("NRCs") for the installation, additions, modifications, de-installation, and expedite charges, and (ii) monthly recurring charges ("MRCs") for ports, PVCs and local access circuits (if any).
- 1.3 **Back up PVCs**. For Customer locations on Global Crossing's Network (only), Global Crossing provides, on request, optional back-up PVCs for the purpose of creating a secondary connection between two sites or a secondary connection to a third site. On request, Global Crossing will provide back-up PVC(s) at 25% of the standard PVC price. For Global ATM Service, class of service for the back-up PVC is Unspecified Bit Rate unless otherwise agreed at time of order. For Frame Relay Service, back-up PVCs are provisioned at 25% of the committed information rate for the corresponding primary Frame Relay PVC. Customer is solely responsible for switching traffic from primary to back-up PVCs in the event of a Service Unavailability (defined below) on the primary PVC, unless Customer has subscribed to Global Crossing's Managed Services offering. When service to primary PVC(s) has been restored, Customer should switch traffic back to the primary PVC(s). Global Crossing reserves the right to monitor use of back-up PVCs and to increase charges payable for back-up PVCs if, in its reasonable opinion, Customer is using back-up PVCs for more than back-up / resiliency purposes. Details of any back-up PVCs ordered by Customer will be set out in an Order Form. The SLA parameters and credits in Section 2 do not apply to back -up PVCs.

2 Managed Network Services

- 2.1 Global Crossing's Managed Network Services ("MNS") is a set of services that includes design, engineering, implementation management, network management, life cycle management, and equipment rental services for router based wide area networks. In addition, MNS supports (a) customer procured equipment, or (b) Global Crossing procured equipment where Global Crossing rents equipment to the Customer. Additional charges apply over and above charges for the ATM and Frame Relay Service. Details of MNS ordered by Customer in connection with ATM / Frame Relay Services

together with details of all charges applying to MNS, will be set out in a separate Order Form for MNS.

- 2.2 The MNS boundary extends to the local interface(s) on each wide area network Customer premises router, that is either (i) the LAN Port or (ii) where Voice over IP (VoIP) is a component of the managed service, the Voice Port(s).
- 2.3 Global Crossing may utilize contractors or subcontractors to provide MNS.
- 2.4 Customer Procured Equipment: If Customer chooses to provide its own equipment, the Customer shall provide a detailed list of Customer equipment (“Customer Equipment”) to be covered by MNS. Global Crossing will then notify Customer of (i) all Customer Equipment (including its hardware and software) that is (in Global Crossing’s sole discretion) ineligible for the Service (“Non-Eligible Equipment”) and/or (ii) any remedial action which may be required by Customer to ensure that any such equipment (and/or Customer’s facilities) qualify for the Service. Global Crossing shall have no responsibility for any Non-Eligible Equipment. To the extent that Global Crossing agrees to provide the Service in relation to Non-Eligible Equipment pending replacement or upgrade of that equipment by Customer, Global Crossing shall provide such services on an ‘as is’ basis without warranty of any kind and the Service Level Agreements set out in this appendix shall not apply to the provision of such services by Global Crossing. Customer shall retain ownership of all Customer equipment provided however that Global Crossing shall have sole control of any Customer equipment which is to be managed by Global Crossing as part of the Service.
- 2.5 Design and Engineering. Global Crossing will work with the Customer to develop a design of equipment to be managed by Global Crossing (“Managed Devices”) to support the Customer's Global Crossing transport solution. Global Crossing engineers define all equipment, software, interfaces, and memory required to support the Customer's requirements as communicated during the sales cycle.
- 2.6 Implementation and Installation. Global Crossing will work with the Customer to develop a comprehensive work plan to implement and install the network including transport and Managed Devices. Global Crossing is responsible for the following activities for network implementation and installation:
- Providing up to date project milestones install dates and project timeline.
 - Shipping (of Global Crossing provided equipment) and installation of equipment
 - Removal of equipment out of the boxes, replacement of packing material back into each empty box it arrived in and stacking of boxes.
 - For Global Crossing procured equipment, comparing the equipment on site with the bill of materials and making any discrepancies known to the Customer contact person.
 - Connecting equipment to WAN access and any installed dial backup Terminal Adapters.
 - Insuring installed equipment is accessible in-band and out-of-band (if provided) by management center.
 - Ordering and installing all dial backup (including ISDN circuits) that are part of the agreed solution for the Services provided within the United Kingdom (the "UK").
- 2.6.1 Prior to installation, the Customer is responsible for the following activities for network implementation and installation:
- Providing contact information for each location where service is being turned up.
 - Providing access at site for installation/implementation at scheduled times. Ensuring that appropriate contact personnel are on-site and available for installation.
 - Ensuring that the equipment meets agreed upon design including: configuration, fault management, and is free of physical defects (for Customer provided equipment)

- Ensuring use of all necessary power distribution boxes, conduits, grounding, surge and lightning protection and associated hardware. Power outlets must be within four feet/ 1 meter of the equipment to be installed
- Ensuring all required inside wiring is in place. Making any necessary building alterations to meet wiring and any other site requirements.
- Ensuring that Managed Device placement is within six feet/two meters of the telecommunications access demarcation point. Ensuring that each Telco Access Demarcation is clearly marked in a way that allows the installer to connect the correct circuit to the correct router port or CSU/DSU.
- For AMT and/or Frame Service provided outside of the United Kingdom, ordering and installing all dial backup that is part of the solution and providing the Service Profile Identifier to the Global Crossing project manager two weeks prior to scheduled installation.
- Ensuring environmental requirements meet equipment manufacturer's requirements
- Ordering, installing and managing the third party Internet connection that is part of the SOHO RAS feature (if requested by Customer), and for providing Internet service provider information (provider name, Internet IP address for Global Crossing CPE interface) to Global Crossing.
- Configuring Customer's voice equipment used in connection with VoIP services, if ordered. Connecting Managed Devices to LAN access. Connecting Managed Devices to customer voice equipment for VoIP access.
- Retaining original packing lists and providing a copy of the packing list to the Global Crossing designated installer.

2.6.2 Out of Band Management Modems: Where Customer requests, and Global Crossing agrees to provide, out of band management modems, the following additional terms shall apply:

- Customer shall be responsible for (i) ensuring that out of band management modem analog lines are ordered and installed within two meters of applicable Managed Devices, and providing applicable telephone numbers to Global Crossing, in each case at least two weeks prior to the Site readiness date in each case and (ii) configuring Customer Equipment to ensure routers can accept out of band management modem calls on auxiliary ports. This arrangement must conform to the Service specifications allowing out-of-band access to the CSU/DSU and the router via a secure modem and must be available 24 hours per day.
- Global Crossing shall be responsible for connecting Managed Devices to out of band management modems at Customer Sites and shall provide configuration via the out of band management modems to re-configure routers for lifecycle Moves/ Adds/Deletes (MACD) or upgrades.
- Unless otherwise agreed, the modem for out of band management provided by Global Crossing is the MultiModemZBA by MultiTech, which will be provided by Global Crossing unless Customer already has a suitable out of band modem acceptable to Global Crossing.

2.6.3 Installation at each Customer Site will be scheduled by mutual agreement between Global Crossing and Customer. Installations are based upon two-hour blocks of time; the time of installation begins when the technician arrives on site. Installations requiring more than a single two-hour block of time due to Customer requests or Customer delays will be billed for additional two-hour blocks of time as set out in the Order Form. If installation is unsuccessful due to failure by the Customer to comply with its obligations under these terms and conditions, or for any other reason within the Customer's control, then the Customer will be charged for a Faulty Truck Roll, as set out in the Order Form for MNS. This includes, but is not limited to, (i) Faulty Designs, where the Customer orders incorrect equipment or software, (ii) Site Not Ready, where the site does not have the proper power, LAN equipment, or equipment racks, or (iii) No Access, where the technician is not able to gain access to the installation area or (iv) cancellation by Customer of the scheduled installation with less than three business days' notice to Global Crossing.

2.6.4 Global Crossing installs MNS during normal business hours, that is between 08:30 and 17:30 local time Monday to Fridays, excluding local bank and other public holidays. Installations carried out, at Customer's request, during periods outside those times ("Out of Hours"), may incur additional charges as indicated on the Order Form.

2.7 Network & Fault Management: The network management includes Network Monitoring, Configuration Management, Fault Management, and Performance Reporting. Global Crossing monitors network elements that have a constant connection to Global Crossing's Network. Devices are monitored seven days a week, 24 hours-a-day. Global Crossing will handle all proactive and reactive Customer communications. Global Crossing is responsible for:

- Isolation and resolution of all logical faults to determine if the problem is with software, hardware or the network.
- Emergency fixes and software updates.

2.8 Configuration Management: Configuration management is the remote configuration of all Managed Devices in the network. Global Crossing is responsible for, and has sole access to all configuration management and software and hardware changes. Global Crossing is responsible for:

- Configuring routers for Customer.
- Maintaining database of logical configuration, physical configurations and software specification.
- Perform emergency re-loads.
- Providing configuration in-band to re-configure routers for lifecycle Moves/Adds/Changes/Deletes (MACD) or upgrades (additional charges may apply).
- Updating Managed Device software as required to support the ongoing provision of the Services.

2.9 Equipment Maintenance: Global Crossing provides on-site Managed Device maintenance and repair once the Global Crossing has determined through fault resolution that a physical error has occurred. The on-site coverage options are as follows (service level availability varies by geography and the coverage option applying at each Customer Site will be set out in the Order Form for the Service):

- 7x24, Four Hour Response: Repair coverage is 24 hours per day, seven days per week. A field engineer will arrive at the Customer site within four hours of problem dispatch (dispatch is within thirty (30) minutes of problem identification).
- 5x9, Next Business Day Response: Repair coverage is 8:00 a.m. to 5:00 p.m. local time. If dispatch is required, a field engineer shall arrive on site no later than 5:00 p.m. the next business day. Trouble calls must be received by 5:00 p.m. local time to ensure next business day response. Prior to dispatching maintenance assistance or in case of customer request for maintenance assistance, Global Crossing may request that the customer verify that the local environment (including power, LAN connectivity and, where applicable, Voice interface connectivity) have been diagnosed and ruled out as the source of the reported fault.

2.10 MNS Service Levels: The following service level options are available for MNS:

- **Silver MNS Service**: Silver MNS Service is provided via a single Managed Device at Customer's Site, connected to the Global Crossing Network with a single fixed link.
- **Gold MNS Service**: Gold MNS Service is provided via a single Managed Device with an ISDN or DSL backup circuit from Customer's Site to the Global Crossing Network.

3. Service Level Agreement (SLA)

3.1 Service Availability

- (a) **Commitment:** Global Crossing guarantees Service Availability per calendar month in accordance with the table below.

	Single ATM/FR Port
No MNS	99.99%
'Gold' MNS	99.99%
'Silver' MNS	99.80%

Guarantee	Maximum Service Unavailability
100%	0 minutes of Service Unavailability
99.999%	< 26 seconds of Service Unavailability
99.99%	< 4.32 minutes of Service Unavailability
99.90%	< 43 minutes of Service Unavailability
99.80%	< 87 minutes of Service Unavailability

- The End to End Availability guarantee for ports served by DSL local access circuits is 99.8%, regardless of whether the port is managed or unmanaged. The guarantees above do not apply to ports served by microwave or satellite based local access circuits. Where local access circuits are arranged by Customer and not provided by Global Crossing, all periods of Service Unavailability caused by those local access circuits are excluded for the purposes of the SLAs set out in this Section 3.

The demarcation points for End-to-End Service Availability are as follows:

- For Sites at which Global Crossing provides MNS with 7x24, Four Hour Response, the Managed Device (router) at the Customer Site; and
 - For Sites at which Global Crossing does not provide MNS or provides MNS with 5x9, Next Business Day Response, the point of interface of the local access circuit at Customer's Telco Closet or Telco Room on Customer's premises.
- (b) **Measurement:** For POP to POP Service, Service Availability is defined as the ability of a PVC to pass traffic between logical ports on the Global Crossing Network. For End to End service (including the provision of DSL local access), "Service Availability" is defined as the ability of a PVC to pass traffic between Customer Interfaces, that is, the point(s) of Customer connection to the Service in a Telco closet or Telco room on the Customer premises. "Service Unavailability" is defined as periods for which the Service is unavailable, and is measured from the time (a) that the Customer reports Service Unavailability to Global Crossing, and Global Crossing opens a trouble ticket, until the time (b) that Global Crossing advises the Customer that the Service is restored and operating in accordance with agreed specifications, and Global Crossing closes the trouble ticket. Any periods of time during which a trouble ticket is kept open at Customer's request following notification by Global Crossing that Service has been restored, is not included in measuring the duration of a period of Service Unavailability.
- (c) **Credit:** For the first two hour period (or part thereof) of Service Unavailability in excess of the parameters in the table in Section 3.1 above, Global Crossing will credit the Customer ten per cent (10.0%) of the applicable ATM/Frame and MNS MRC for the applicable month for all affected customer ports. For each successive one hour period or (part thereof) of Service Unavailability in excess of that two hour period, Global Crossing will credit the Customer five per cent (5.0%) of the applicable ATM/Frame and MNS MRC for the applicable month for all affected customer ports.

3.2 Latency

- (a) **Commitment:** Global Crossing guarantees an average (in a calendar month) one-way trip latency across each PVC provided to Customer of no more than the latency figures in the table below.

ATM (ms)						Frame Relay (ms)					
	Europe	N. America	S. America	Asia North	Asia South		Europe	N. America	S. America	Asia North	Asia South
Europe	50	120	160	215	230	Europe	40	110	150	205	220
N.America	120	60	130	115	140	N.America	110	50	120	105	130
S.America	150	130	65	200	220	S.America	140	120	55	190	210
Asia North	215	115	200	50	130	Asia North	205	105	190	40	120
Asia South	230	140	220	130	100	Asia South	220	130	210	120	90

- (b) **Definition & Measurement:** Latency is a measurement of the time from transmission of the last part of a cell to the receipt of the first bit of a cell at the destination point. Latency is measured between access and egress ports on the Global Crossing Network only and does not apply to local access circuits or any MNS (if applicable). Latency is measured using Global Crossing's network management system and is the sole and conclusive measurement for the purpose of this guarantee. The latency commitment does not apply to frame sizes less than or equal to 256 Mb.
- (c) **Credit:** If the actual monthly average roundtrip latency of the Service exceeds the parameters above, Global Crossing will credit the Customer ten per cent (10.0%) of the applicable ATM/Frame and MNS MRC(s) for the applicable month for the affected port(s).

3.3 Cell Delivery and Frame Delivery

- (a) **Commitment:** Global Crossing guarantees that on average (in any calendar month), no less than 99.999% of all cells (ATM service) or frames (Frame service) transmitted by Customer and accepted on Global Crossing's Network, will be successfully delivered across the applicable PVC.
- (b) **Definition & Measurement:** The cell & frame delivery guarantee applies to cells (in the case of ATM Service) and frames (in the case of Frame Relay Service) that are within the sustained cell rate for Variable Bit Rate (VBR) and peak cell rate for Constant Bit Rate (CBR) (except for cells marked "cell loss priority 1", and Unspecified Bit Rate (UBR)). The guarantee does not apply to any cells or frames (i) misaddressed by Customer, or (ii) not accepted onto Global Crossing's Network and does not apply to local access circuits. Cell delivery is measured using Global Crossing's network management system and is the sole and conclusive measurement for the purpose of this guarantee.
- (c) **Credit:** If the actual monthly average cell or frame delivery of the Service exceeds the parameters above, Global Crossing will credit the Customer ten per cent (10.0%) of the applicable ATM/Frame and MNS MRC(s) for the applicable month for the affected port(s).

3.4 Mean Time to Restore (MTTR)

- (a) **Commitment:** Global Crossing commits to an aggregate average mean time to restore ("MTTR") not to exceed four (4) hours in any billing month. This commitment does not apply to ports in India which are not provisioned via redundant local access circuits on two different carriers' networks.
- (b) **Measurement:** The aggregate average monthly MTTR is calculated by dividing the cumulative time of Service Outages in a month by the total number of trouble tickets opened for the Customer in that month.
- (c) **Credit:** If the aggregate average MTTR for a given month exceeds four (4) hours, Global Crossing will issue a credit equal to ten percent (10%) of the total ATM/Frame Relay and MNS MRC(s) for the applicable month for the affected port(s) identified in the trouble ticket(s).

3.5 Installation

- (a) **Commitment:** Global Crossing guarantees that all ATM/Frame PVCs ordered by Customer and accepted by Global Crossing, will be installed within five business days of the applicable local access circuit being installed and ready for service.
- (b) **Definition & Measurement:** The installation guarantee excludes testing and circumstances where Customer is not ready to receive or use the ATM/Frame PVC, and does not apply in countries where the Service is provided by Global Crossing via NNI using a third party partner in that country via NNI.
- (c) **Credit:** For any ATM/Frame PVC not installed by Global Crossing within the time period specified above, Global Crossing shall issue Customer with a credit equal to 100% of the applicable non recurring installation charge for that PVC. Global Crossing will issue a credit allowance equal to 100% (one hundred percent) of the Installation Charges paid or payable by Customer for any installation of the Service that is not activated within the guaranteed times stated above. Credit or cancellations shall not apply in where the completed service order is modified by or at the initiative of Customer after it is originally completed.

3.6 **General terms applying to SLAs**

- (a) SLA credits are calculated after deduction of all discounts and other special pricing arrangements, and are not applied to governmental fees, taxes, surcharges and similar additional charges.
- (b) If an incident affects the performance of the Service and results in a period of Service Unavailability, entitling Customer to one or more credits under different SLA parameters, only the single highest credit applying in respect of that incident will be applied.
- (c) In no event will SLA credits in any calendar month exceed 100% of the total MRCs payable by Customer for the applicable Converged Connection Type or Service Application (as applicable) in that month.
- (d) SLA credits are applied only upon Customer's written request, which must be submitted within 15 business days of the end of the month in which entitlement to an SLA credit arose
- (e) All approved SLA credits claimed by Customer for a given month will be totaled and applied to Customer's next following invoice for the Service, or as promptly thereafter as is practical in the event of a dispute.
- (f) SLA credits provided for in these terms and conditions are Customer's exclusive remedy with respect to items covered in these terms and conditions.
- (g) SLAs apply to newly installed services and to Service reconfigurations requested by Customer commencing on the next calendar day following (i) the Service Commencement Date or (ii) completion of the Service reconfiguration, as applicable.

3.7 **Exclusions.** No SLA credit shall apply to the failure of a Service to comply with an SLA, or to any period of Service Unavailability, caused, in whole or part, by any of the following:

- (a) a failure of Customer's premises equipment or equipment of a Customer's vendor; other than routers being supported under Global Crossing Managed Services or On-Site Support
- (b) a failure in local access facilities connecting the Customer to Global Crossing's network which are not provided by Global Crossing;
- (c) force majeure events as defined under the Master Agreement;
- (d) any act or omission of Customer or any third party (including but not limited to, Customer's agents, contractors or vendors), including, but not limited to (i) failing to provide Global Crossing adequate access to facilities for testing, (ii) failing to provide access to Customer premises as reasonably required by Global Crossing (or its agents) to enable Global Crossing to comply with its obligations regarding the Service, (iii) failing to take any remedial action in relation to a Service as recommended by Global Crossing, or otherwise preventing Global Crossing from doing so, or (iv) any act or omission which causes Global Crossing to be unable to meet any of the SLAs;
- (e) customer's negligence or willful misconduct, which may include Customer's failure to follow agreed-upon procedures;

- (f) any scheduled maintenance periods when Customer has been informed of such maintenance, and emergency maintenance; or
- (g) disconnection or suspension of the Service by Global Crossing pursuant to a right to do so under the Master Agreement or these terms and conditions.