SERVICE LEVEL SCHEDULE

1. IP VPN at Airports

The IPVPN at Airports Service ("Service") is a managed network service that provides IP internetworking enabling virtual network connectivity between two or more locations. The Service allows the Client to create IPVPN's between each location equipped with the appropriate infrastructure.

The SITA IPVPN at Airports Service is further defined in the IPVPN at Airports Service Schedule as Annex 4.

1.1. Service Cover Period

The Service Cover Period means the period when service levels apply to an IP VPN AT Airports site. The Service Cover Period for an IP VPN at Airports site is 24 hours per day, 7 days per week.

1.2. Overview of SITA Commitments

The following table presents the difference between reporting and SLA for IPVPN at Airports.

Virtual Router	Reporting			Associated SLA
	Silver	Gold	Platinum	
Site Availability	✓	✓	✓	✓
Router Performance				
IP Bandwidth Utilization	✓	✓	✓	
IP Bandwidth Utilization per CoS		✓	✓	
Path Performance – RTD & PLR	✓	✓	✓	✓
Path Performance – Jitter	✓	✓	✓	✓ (Platinum only)

1.3. Topologies in Scope

A site in the context of the service is defined by its topology. A site topology is composed of the following elements:

- one or two IP Ports;
- one or two virtual routers linking WAN and Airport LAN infrastructure.

The following table and chart present the different site topologies covered by this Service Level Agreement.

Site Topology	Site Topology IP Port V			
Topology 1	Dual	Dual		
Topology 3	Single	Dual		
Topology 5	Single	Single		



1.4. Site Availability

1.5. Definition

Site Availability consists of the ability for a virtual router to communicate with the IPVPN Backbone. Site nonavailability does not include periods of service degradation, such as slow data transmission.

1.6. Site Availability Measurement Methodology

Site Availability is calculated over a measurement period of one calendar month ("Measurement Period"), in accordance with the methodology described below.

Site Availability is measured by conducting SNMP polling every five (5) minutes of the loopback interface specific to the virtual CE router. A site is considered unavailable if the measurement for the virtual router during any five (5) minute interval shows the device as unreachable or unavailable.

Sites which have two IPVPN virtual CE routers are considered unavailable if the measurement for both virtual routers during the same five minute interval shows both virtual routers as unreachable or unavailable.

Example:

Time Interval	Virtual Router 1 Availability	Virtual Router 2 Availability	Site Availability		
10/01/05 00h05	Up	Up	Up		
10/01/05 00h10	Down	Up	Up		
10/01/05 00h15	10/01/05 00h15 Up		Up		
10/01/05 00h20	Down	Down	Down		

1.7. Site Availability Service Levels

The IP VPN at Airport service levels for Site Availability for Prague Airport will be based on Topology 1, and the following Service Level applies to this:

		Service Credit	
Topology 14 Hours2 SCU	Topology 1	2 SCU	

Prague Airport – SLA Draft V1.4

The service credits will only be applied in relation to faults which are reported by the Client to the appropriate SITA Service Centre and which the Client has been allocated a Trouble Ticket number for.

1.8. Path Performance

Path Performance between a virtual CE/APH router and any IPVPN remote CE router is defined by three indicators: Round Trip Delay (RTD), Packet Loss Ratio (PLR) and Jitter and is measured per Class of Service (CoS) between two CE routers.

Router-to-Router Round Trip Delay (RTD) is the round trip delay of a packet sent between two virtual CE routers belonging to the same IPVPN community.

Packet Loss Ratio (PLR) is the percentage of bytes (or packets) lost between two virtual CE routers belonging to the same IPVPN community.

Jitter is the inter packet delay variation measured between two virtual CE routers belonging to the same IPVPN community.



1.9. Path Performance Measurement Methodology

RTD, PLR and Jitter are calculated over a measurement period of one calendar month ("Measurement Period"), in accordance with the methodology described below.

Path Performance is measured with Service Assurance Agent (SAA) from Cisco. A SAA probe generates intrusive traffic with 10 packets at 20 milliseconds interval every five (5) minutes between two CE routers from a selected path. Packet size is 128 Bytes except for Real Time where packet size is 64 Bytes.

One CE router plays the role of the SAA sender. It initiates the probe scenarios and processes and makes available the path performance indicators. The second router plays the role of the SAA responder. It answers the probe scenarios sent by the SAA sender. No indicators are processed and/or stored in the responder router. A virtual CE router can only be a SAA receiver. The IP address used by the virtual router SAA receiver is either the VLAN IP address of the virtual router in case there is single virtual router or the HSRP address in case of dual CE virtual routers.

RTD, PLR and Jitter for each path are calculated using the following methods:

- Round Trip Delay (RTD) of one measure is the average of the round trip delay of submitted packets corresponding to the ten packets per scenario. RTD is expressed in milliseconds (ms);
- Packet Loss Ratio (PLR) of one measure is the number of packets lost over the number of submitted packets corresponding to the ten packets per scenario. PLR is expressed as a percentage;
- Jitter of one measure is the average of the positive delay variation corresponding to the ten packets per scenario. Jiiter is expressed as milliseconds (ms).

1.10. Path Performance Service Levels

Service Levels for Path Performance are listed as pairs of CE routers with associated availability target per indicator and per Class of Service (CoS).

Path Performance Indicators	Feature	CoS	Site A (CE Router 1)	Site A (CE Router 2)	Service Level	Service Credit
RTD	Silver, Gold & Platinum	RT, D1 and D2	e.g. PLON001	e.g. PSIN001	tbd	1 SCU (*)
PLR	Silver, Gold & Platinum	RT, D1 and D2	e.g. PLON001	e.g. PSIN001	tbd	1 SCU (*)
Jitter	Platinum	RT only	e.g. PLON001	e.g. PSIN001	tbd	None

(*) Refer to SCU definition in paragraph 7

Service levels specified are indicative targets and are for information purposes only for the first six-(6)months after path performance reporting has started. At the end of this period the target shall be reviewed and mutually agreed with the Client. Consequently, no service credit shall be payable by SITA until the end of month four for any path performance service level failure.

The service credits for Path Performance will only be applied if Path Availability between the two sites is reported as available; and in relation to faults, which are reported by the Client to the appropriate SITA Service Centre and which the Client has been allocated a Trouble Ticket number for.

1.11. Path Performance limitations

PLR and Jitter commitments only apply for CE routers located in countries where there is in-country PE.

RTD and PLR commitments only apply on D2 between two sites with Silver service type, or, on D1 and D2 between two sites with Gold or Platinum service type. Jitter commitment only applies on RT between two sites with both Platinum service type.

Path performance is only available if the number of SAA agents to be configured on the CE router conforms to engineering rules. Furthermore the number of paths configured on a CE router cannot exceed 50. The previous limitations can be overcome with the implementation of dedicated SAA equipment.

If the IP Bandwidth or the CoS settings are changed following a Client request and if this IP bandwidth change or reallocation of bandwidth between classes causes an RTD service level failure, in any particular month, then no service credit shall apply for the said failure(s). Additionally a new six-(6) month due diligence period shall then apply in the months following the failure of RTD. At the end of the due diligence period, a new RTD service level target shall be mutually agreed between the Client and SITA.

Where a Telecommunication Operator has re-routed the traffic normally routed over a non-satellite link, through a satellite link, due to an event of Force Majeure or other non foreseeable event, and RTD service level target non conformance occurs, performance levels and SCU will not apply for the path in question over the relevant measurement period.

1.12. Service Credits

Subject to the below pre-requisites and exclusions, in the event that a service level is not met, SITA will credit the Client a sum corresponding to the number of applicable service credit units ("SCUs") calculated in accordance with service levels described in previous paragraphs.

1 SCU = 50 USD

In all circumstances, the total amount of SCUs payable by SITA to the Client in relation to all failures in the service levels which occurred during a one year period will not exceed 72 SCUs.

1.13. Pre-requisites

The Client must ensure that the following prerequisites to the application of this service level agreement are available. Failure to do so will mean that SITA cannot be held to the terms of this service level agreement that are directly affected by that failure:

- the implementation of redundant topology must conform to the designed resiliency level.; and
- Path performance require a minimum of 48 kbps IP bandwidth and a minimum of 16Kbps for both D1 and D2 whenever reporting is required for each of those classes.

SLA is suspended and will not longer apply until such time as resiliency is restored and SITA has confirmed that application of this SLA may recommence.

1.14. Exclusions

The Client agrees that SITA is not liable to the Client for any default or breach of this service level agreement if such default or breach was caused by the actions or omissions of any third parties or any actions or omissions of the Client or by equipment, products or services procured by or provided by (or on behalf of) the Client. In addition, SITA is not liable to the Client for any defaults or breach caused by or related to (without limitation); environmental conditions (including and not limited to air conditioning etc), Client related faults, force majeure events, vandalism, power supply failure, equipment managed by the Client, or third party intervention.

In addition, SITA will not be liable for any non-compliance with service levels caused by:

- 1. SITA may, from time to time, recommend to the Client an upgrade to the IP Bandwidth of an IPVPN at Airports site due to excessive traffic level. Where the Client decides not to implement SITA's recommendations and this results in SITA being unable to meet its Path Performance service levels
- 2. APH shared routers located in countries where there is no in-country PE and impacting PLR and Jitter performance;
- 3. Any outage of the IPVPN at Airports service due to causes originated not by SITA or its subcontractors; or
- 4. Scheduled maintenance.

The above provisions are intended by the parties to be severable and independent of any other provisions, and to be enforced as such.

2. Messaging

2.1. Message Connect Messaging Service Availability

Message Connect Messaging Service Availability (MSA) is the availability of relevant SITA Messaging System, expressed as a maximum outage time, excluding the messaging Maintenance window(s)

Service Level Parameter	Service	Service Level Target	Service credit
Message Connect Messaging Service Monthly Total Outage Time	Type B to Type B		1 SCU for this single Service Level target not being met.
	Type B to MQ and MQ to Type B	2 Hours	1 SCU for this single Service Level target not being met.

2.1.1. Measurement Methodology

Measurement methodology is based on system logs captured by the different messaging systems. A manual review adjusts values excluding maintenance periods to extract a monthly performance figure.

2.2. Message Connect Message Transit time Compliance Ratio

Message Connect Message Transit Time Compliance ratio is the percentage of messages complying with standard Message Transit Time performance target set per message priority.

Message Transit Time is the time taken for a message to travel between a given SITA Messaging Entry interface and a given SITA Messaging Exit Interface.

The observation period is one calendar month.

Service Level	Service*	Service Level Target	Service credit			
Parameter						
Message Connect		QU (Urgent) priority: 99.95% of messages delivered (entry to the system to exit from the system) within 15 min1 SCU for this s Service Level target not being				
Message Transit Time Compliance Ratio	Type B to Type B	QN (Normal) priority: 99.95% of messages (entry to the system to exit from the system) within 30 min				
		QD (Low) priority: 99.95% of messages delivered (entry to the system to exit from the system) within 120 min	Level TargetService creditgent) priority: of messages d (entry to the o exit from the within 15 min1 SCU for this single Service Level target not being met.rmal) priority: of messages o the system to n the system) 0 min1 SCU for this single Service Level target not being met.w) priority: of messages d (entry to the o exit from the within 120No Service Credits Applicable – Reportin Onlygent) priority: of messages d (entry to the o exit from the within 15 min1 SCU for this single Service Level target not being met.gent) priority: of messages d (entry to the o exit from the within 15 min1 SCU for this single Service Level target not being met.rmal) priority: 			
	Type B to MQ and	QU (Urgent) priority: 99.95% of messages delivered (entry to the system to exit from the system) within 15 min1 SCU for this sin Service Level target not being n	1 SCU for this single Service Level target not being met.			
	MQ to Type B	QN (Normal) priority: 99.95% of messages delivered (entry to the system to exit from the system) within 30 min	1 SCU for this single Service Level target not being met.			
		QD (Low) priority: 99.95% of messages delivered (entry to the system to exit from the system) within 120 min	No Service Credits Applicable – Reporting Only			

2.2.1.1. Measurement Methodology

Message Transit Time is measured dynamically using active probes generating Test Traffic patterns between the different Service Entry Points.

3. Fault Management

3.1. Mean Time to Restore (MTTR)

The following are the MTTR performance levels provided by SITA.

Performance	Severity Level	Restoration Time	Restoration Time	Service Credits
Level Indicator		- Performance	- Performance	
		Level	Level	
Restoration of	1	2 Hours – 80%	8 Hours – 99%	N/A
Service				
Restoration of	2	4 Hours – 80%	24 Hours – 95%	N/A
Service				
Restoration of	3	8 Hours – 80%	24 Hours – 90%	N/A
Service				

The following are the definitions of the severity levels: Severity Level 1: Loss of Service Severity Level 2: Degradation of service Severity Level 3: Intermittent degradation of Service

3.2. Escalation Timeframes

The following are the escalation time frames within the SITA helpdesk:

PATH	TITLE	SE	VERITY 1	SE	VERITY 2	SE	VERITY 3
Level 1	Group Leader	2	Hours	3	Hours	5	Hours
Level 2	Supervisor	3	Hours	5	Hours	10	Hours
Level 3	Operating Manager	4	Hours	7	Hours	15	Hours
Level 4	Head of Helpdesk	5	Hours	9	Hours	20	Hours
Level 5	Client Svc Ops Regional Head	6	Hours	11	Hours	1	Day
Level 6	Head of Client Svc Operations	7	Hours	13	Hours	2	Days
Level 7	Head of Client Svc and Network	10	Hours	18	Hours	5	Days

3.3. Fault Resolution Support

To reach a SITA Customer Service Centre (GCSC), please use the following local numbers:

221 181 670

Our Customer Service Centres offer round-the-clock support, designed to rapidly resolve the faults you report to us. When contacting a Customer Service Centre to report a fault, please have the following information readily available:

- > Your company name
- > Your contact name and telephone number

- > Client identification number, Router Name and DNA
- ➤ A description of the problem

Once you have contacted the local Customer Service Centre, our team of professionals will take responsibility for service call management, fault diagnosis, follow-up and rectification to ensure a speedy restoration of normal service.

3.4. SITA escalation policy

SITA is committed to rapidly resolving faults. While our first-line Client service agents should normally be able to give you all the assistance necessary, it may not always be possible to resolve your problem immediately.

Where this is the case, our trouble-ticketing system automatically escalates problems to increasingly higher levels of management. This ensures on-going problems are dealt with at the appropriate level, in a timely manner.

Level 1 The Floor Manager

Level 2 The Customer Service Centre Manager

Level 3 The Customer Service Centre Director

If you experience unsatisfactory service related to the resolution of a fault, you can initiate an escalation by simply calling the associated Customer Service Centre location and requesting to speak with the next appropriate level of management as shown above.

N.B. Escalations should initially occur within the centre to which the fault was registered.

In all cases the Client may feel uncomfortable with the received service the Client should not hesitate to escalate the issues to the account team.

Level 1 Customer Service Manager (CSM), contact: will be provided as part of the Statement of Acceptance and changes to this contact will be communicated by SITA consequently.

Level 2 Service Manager (SM), contact: will be provided as part of the Statement of Acceptance and changes to this contact will be communicated by SITA consequently.

Level 3 Account Manager (AM), contact: will be provided as part of the Statement of Acceptance and changes to this contact will be communicated by SITA consequently.