



Service Level Agreement

1 Service Level Agreement

1.1 Preamble

Introduction

This Service Level Agreement (“SLA”) describes the levels of service that the CUSTOMER shall receive from QCLOUD for the Cloud Services (“Cloud Services”) delivered from the datacentre in the **Islamic Republic of Pakistan**.

Purpose

The CUSTOMER depends on the services that are provided, maintained, and supported by QCLOUD. Some of these services are critical to the CUSTOMER’s business.

This SLA sets out the levels of availability and support QCLOUD guarantees to the CUSTOMER for the subscribed Cloud Services (the “Service Levels”). It also explains applicable adjustment and service credits in case these levels are not met for reasons under QCLOUD control.

Terms of Agreement

This SLA forms an integral part of the Agreement, which includes the Master Services Agreement (“MSA”), the QCLOUD Proposal (“Proposal”), and or purchase order (all together the “Agreement”), if any.

The CUSTOMER’s sole and exclusive remedy for deviation from the Service Levels are service credits as set out in the Adjustment Policy of this SLA. The CUSTOMER agrees that the compensation provided under the Adjustment Policy of this SLA represents a reasonable pre-estimate of all of its losses and damages and QCLOUD shall have no further liability and/or obligation in whatsoever form for a deviation from the Service Levels.

1.2 SLA Terms Definitions

Time Window

As operating activities are partially time dependent, the operations coverage will vary within different time windows. The following time windows and abbreviations will be used in the next sections.

Time Window	Day	PAKISTAN Standard Time
24x7	All calendar days	00:00-24:00 PAKISTAN Time (GMT+5)
Working Days (Business Days)	Mon-Fri (Except PAKISTAN official holidays)	Business Hours
Business Hours	Mon-Fri (Except PAKISTAN official holidays)	Daily 09:00 – 18:00 PAKISTAN Time
On-Call Support Hours	All calendar days	Inside Business Hours

Service Operating Hours	All calendar days	As defined on a per service basis
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Service Outage

The unavailability of a service for the end users for reasons under QCLOUD reasonable control, usually due to a failure of a system component, is defined as a Service Outage. Service Outage is measured in minutes of service unavailability.

QCLOUD may suspend services under following circumstances, and with no limitations such suspension period shall not be considered as Service Outage under this SLA:

- Maintenance windows as defined in section below.
- Threats to Data and Service Integrity - systems may be shut down on a very short notice when system or data integrity is in any way endangered due to software or hardware problems, security intrusion or cyber-attacks including but not limited to malware.
- Force Majeure - which refers to any downtime that are the result of events or conditions beyond QCLOUD’s reasonable control. Such events might include but are not limited to any acts of common enemy, earthquakes, floods, fires, and epidemics.
- Breach of contract – QCLOUD may suspend services in case of breach by the CUSTOMER of Acceptable Usage Policy, the Terms & Conditions, delayed payments or any other material breach of the Agreement.

Maintenance Windows

A maintenance window is a period during which some technical activities are executed by QCLOUD operations team, as part of preventive work, expansion, upgrades, or other operational requirements. Such maintenance may or may not cause services outages.

QCLOUD will schedule maintenance activities outside Business Hours whenever possible. For Scheduled Maintenance, QCLOUD shall provide email notification to the Customer two (2) Business Days in advance. For Emergency Maintenance, QCLOUD will provide same day notification.

Additionally, QCLOUD reserves the right to suspend all services under this SLA for up to ten (10) hours every Calendar Year for a full system maintenance. All reasonable efforts will be made to minimize the impact of this maintenance outage on the customer. The full system maintenance will be typically triggered by legal and/or quality requirements to QCLOUD (like audits, inspections, or maintenance). This shall not be considered as Service Outage.

Priority Codes

QCLOUD Service Desk shall assign a priority code to each ticket at opening time. The following table provides the definitions of the priority codes:

Priority	Definition	Examples
P1	<p><u>Service outage</u></p> <p>A system, network, or mission critical application related to primary business processes is experiencing an outage due to underline Cloud service(s) with no workaround. Continuous effort will be made to resolve,</p>	<ul style="list-style-type: none"> • Loss of any of the critical services provided to Customer. • Network is down high security alert.
	<p>and immediate management and appropriate technical resource notification will occur.</p>	
P2	<p><u>Partial service outage</u></p> <p>A service outage with workaround (automatic or reactively provided by QCLOUD).</p> <p>An individual system, function or service required for a secondary business process is unavailable due to underline Cloud service(s).</p>	<ul style="list-style-type: none"> • Loss of redundancy for a fault tolerant system. • Non-critical server is down (mirroring, backup). • Loss of performance. • Incident affecting a large group of users.
P3	<p><u>Degraded service</u></p> <p>The server, network, or critical application is still up but performance is degraded due to underline Cloud service(s).</p>	<ul style="list-style-type: none"> • Performance below standard service average. • Incident affecting a small group of users.

1.3 Service Levels Calculation Methods

QCLOUD's Network Operation Center (NOC) monitors and measures the service levels. The results of the measurements are compared with the contractual SLAs. Any deviations trigger corrective actions defined by the Standard Operating Procedures.

Standard Availability Level Calculation

Availability is measured using QCLOUD's NOC systems, over each measurement period. It is calculated to the nearest minute, based on the number of minutes in the given period (for instance, in the case of a monthly measurement, a 31-day month contains 44,640 minutes). QCLOUD will calculate the availability of the services as defined herein:

$$\text{Availability} = (N - O) / N * 100 \text{ [\%]}$$

<i>N in minutes</i>	<i>Service Availability in % Total Number of minutes in the measurement period, e.g., 24*60*31 = 44,640 minutes in a calendar month with 31 days</i>
<i>O in minutes</i>	<i>Number of minutes of Service is unavailable</i>

Standard Support Level Calculation

Support Level is measured using QCLOUD's trouble ticketing systems, over each measurement period. QCLOUD will calculate the support level of the service desk parameters as defined herein:

$$\text{Support Level} = (IC - NM) / IC * 100 \text{ [\%]}$$

<i>IC</i>	<i>Total number of Incidents or Calls during a specific period of time within service's operating hours</i>
<i>NM</i>	<i>Number of incidents or calls for which parameter criteria is Not Met</i>

Only incidents (IC and NM) reported and recorded through the correct and agreed channels and methodologies will be considered for the calculation of the Support Level.

1.4 Contractual Services Levels

QCLOUD guarantees to its customers the highest level of services quality and availability through this SLA. The Service Levels are defined in the following sections and shall always be limited to items listed in the proposal document ("Proposal"). The SLA levels shall be applicable starting 30 days following the Notice of Activation or account registration and only if all CUSTOMER Responsibilities and pre-requisites listed in the Proposal are met.

QCLOUD reserves the right to make changes to its services and offerings subject to written agreement by the parties.

Any loss or degradation of service resulting directly or indirectly from the following events will not be included in the calculations of unavailability:

- Planned outage or maintenance windows.
- CUSTOMER forgetting the access credentials to the portal or any act or omission of the CUSTOMER.
- Issues caused due to CUSTOMER action or activity.
- Access to any CUSTOMER Premise Equipment or customer Cloud tenant was denied.
- Incompatibility or failure of CUSTOMER Equipment, facilities, or applications.

Service Desk

Definitions

Response Time refers to the elapsed time from the time the incident is reported to the Service Desk until the time when an assigned resource starts working on the incident, when such incident is under QCLOUD responsibility and control as per the services provided to CUSTOMER. **Service Levels**

Parameter	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Response Time	≤ 4 Hours (P1 tickets)	99.80%	Standard Support Level Calculation	Monthly	Case 1
	≤ 8 Hours (P2 tickets)				
	≤ 12 Hours (P3 tickets)				

Notes:

- 1 In case several incidents are reported/detected for the Customer, only the highest priority incident is calculated for the Service Desk Service Level.
- 2 QCLOUD resources priority shall always be to address higher Priority incidents first.

Service Level Adjustment:

This service is eligible to Service Level Adjustment as defined in section “Service Level Adjustment Policy”, as per the indicated case for each Service Level Parameter.

Management Portal (Customer Self Service)

Definitions

Management Portal availability is the time where QCLOUD self-service portal is available and operational.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Management Portal Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment:

This service is eligible to Service Level Adjustment as defined in section “Service Level Adjustment Policy”, as per the indicated case for each Service Level Parameter.

Internet Service

Definitions

The Internet Service is considered unavailable when the exchange of IP Traffic between the assigned Internet Service Provider (ISP) Demarcation Point and the directly connected ISP Core IP Node on a 24-hours basis (up to the Committed Data Rate where applicable) is interrupted.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Internet Service Availability	24x7	99.80%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustment as defined in section “Service Level Adjustment Policy”, as per the indicated case for each Service Level Parameter.

Elastic Compute Server (ECS)

Definitions

ECS Instance is determined to be unavailable when the provisioned virtual machine (VM) is no longer accessible as per QCLOUD monitoring tools due to an incident caused or managed by QCLOUD.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
ECS Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustments defined in section “Service Level Adjustment Policy”, as per the indicated case for each SLA Level Parameter.

Elastic Volume Service (EVS)

Definitions

An EVS is determined to be unavailable when the provisioned storage volume is no longer accessible as per QCLOUD monitoring tools due to an incident caused or managed by QCLOUD.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
EVS Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustment as defined in section, “Service Level Adjustment Policy”, as per the indicated case for each SLA Level Parameter.

Object Storage Service (OSS)

Definitions

An **Object Storage** is determined to be unavailable when the provisioned storage bucket/container is no longer accessible as per QCLOUD monitoring tools due to an incident caused or managed by QCLOUD. **Service Levels**

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Object Storage Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustment as defined in section, “Service Level Adjustment Policy”, as per the indicated case for each SLA Level Parameter.

Elastic File Storage (SFS)

Definitions

Scalable File Storage is determined to be unavailable when the provisioned storage is no longer accessible as per QCLOUD monitoring tools due to an incident caused or managed by QCLOUD.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Scalable File Storage Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustment as defined in section, “Service Level Adjustment Policy”, as per the indicated case for each SLA Level Parameter.

Elastic Load Balancer (ELB)

Definitions

ELB is determined to be unavailable when the provisioned load balancer is no longer accessible as per QCLOUD monitoring tools due to an incident caused or managed by QCLOUD.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Elastic Load Balancer Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustment as defined in section, "Service Level Adjustment Policy", as per the indicated case for each SLA Level Parameter.

Bare-Metal Service

Definitions

Bare-Metal Service is determined to be unavailable when the provisioned bare-metal server is no longer accessible as per QCLOUD monitoring tools due to an incident caused or managed by QCLOUD.

Service Levels

Service	Criteria	Service Level	Calculation Method	Measurement Period	Adjustment Policy
Bare Metal Server Availability	24x7	99.50%	Standard Availability Level Calculation	Monthly	Case 2

Service Level Adjustment

This service is eligible to Service Level Adjustment as defined in section, "Service Level Adjustment Policy", as per the indicated case for each SLA Level Parameter.

1.5 Service Levels Adjustment Policy

Adjustment Policy for Baseline Charges

QCLOUD shall apply adjustments for a Service where a related Service Level defined in the previous sections has not been met (identified as a breach), based on the policies detailed below.

This SLA and all related adjustments shall be applicable starting 30 days following the Notice of Activation and only if all CUSTOMER Responsibilities and pre-requisites listed in the contract are met.

CUSTOMER must notify QCLOUD within five (5) business days from the end of the month in which the breach occurs along with the information related to the claim, in order to be eligible for the SLA adjustment. QCLOUD will then review the claim and all related facts, and then answer the CUSTOMER with the applicable service credit, if any.

The service credit will apply in the relation to the root cause of the Service Level failure, e.g., in the case of a virtual-machine availability failure, the "ECS Availability" SLA will be used for any credit calculation and not the Internet SLA or any other SLA dependent or linked with virtual-machine availability. Service Credits will be provided in the form of CREDIT NOTE (free credit) for the next service period.

QCLOUD will not apply an adjustment for any period in which CUSTOMER received or will receive Services free of charge.

Adjustment Policy Tables

Case 1 for Standard Support Level Calculation

Parameter	Incident Priority	Credit Amount per Incident on Affected Service
Response Time	P1	2% of Service MRC for a breach of 1 Hour or portion thereof, and 1% for each additional Hour or portion thereof.
	P2	2% of Service MRC for a breach of 2 Hours or portion thereof, and 1% for each additional 2 Hour or portion thereof.
	P3	2% of Service MRC for a breach of 4 Hours or portion thereof, and 1% for each additional 4 Hours or portion thereof.

Case 2 for Standard Availability Level Calculation

	Achieved Level by QCLOUD during Measurement Period	Credit Amount on Affected Service
Service Availability (A)	$A \geq 99.50\%$	0% of Service MRC
	$99.20\% \leq A < 99.50\%$	2% of Service MRC
	$98.90\% \leq A < 99.20\%$	4% of Service MRC
	$98.60\% \leq A < 98.90\%$	6% of Service MRC
	$98.30\% \leq A < 98.60\%$	8% of Service MRC
	$A < 98.30\%$	10% of Service MRC

Application of Adjustments

In the event that CUSTOMER is eligible to receive a service credit, the calculation of the total adjustment shall be based on the following:

- If one or more than one Service Level is breached due to a similar or different fault (or incident), then QCLOUD will credit the adjustment of the penalty against the total Service Monthly Recurring Charges (MRC) of the customer for the given contract.
- The total maximum adjustment credit for a particular month shall not exceed 25% of the customers total MRC.
- CUSTOMER's account shall receive a credit equal to the calculated adjustment amount as per the above tables and rules.

Adjustments shall apply on the monthly invoice to CUSTOMER following the month in which the service credit-triggering incident has occurred.

Adjustment Policy Exceptions

Adjustment against the service level availability outlined above will not be issued due to failures that, as determined by QCLOUD, in its reasonable or good faith judgment, are a result of:

- Maintenance initiated by QCLOUD and completed during Scheduled Maintenance window;

- Maintenance initiated by CUSTOMER, whether implemented by CUSTOMER or QCLOUD on behalf of CUSTOMER;
- CUSTOMER initiated work that is independently generated by CUSTOMER;
- CUSTOMER required operating system software and hardware configuration or revisions;
- Problems caused by CUSTOMER supplied Content, Data or software;
- A bug in QCLOUD-provided virtual machines or software;
- CUSTOMER exceeding system capacity and/or Agreement capacity;
- Activities required to recover CUSTOMER Content or Data from backup media;
- Activities required to complete database server failover;
- Acts or omissions of CUSTOMER, its Affiliates, its employees, agents, third party contractors or vendors gaining access to QCLOUD's network or to CUSTOMER's systems at the request of CUSTOMER;
- CUSTOMER failing to (i) provide QCLOUD with adequate access to CUSTOMER equipment or log files for testing and troubleshooting, or for QCLOUD to comply with its obligations regarding the Service, or (ii) take any remedial action in relation to a Service as recommended by QCLOUD, or otherwise preventing QCLOUD from doing so, or (iii) cooperate with QCLOUD in addressing any Service problems;
- Acts or omissions of QCLOUD executed at the request of CUSTOMER to the extent non-urgent requests are in writing and to the extent such acts or omissions arise solely and directly from CUSTOMER's written request;
- CUSTOMER's failure to adhere to QCLOUD architecture, configuration and processes;
- QCLOUD's loss of global carrier bandwidth due to attacks directed towards CUSTOMER's platform;
- DNS (Domain Name System) issues outside QCLOUD's control;
- Global Internet and remote CUSTOMER site equipment issues outside QCLOUD's control which affect VPN and remote access services;
- Force Majeure event as defined in the Agreement; or
- Termination of the Services by either Party in accordance with the Agreement.

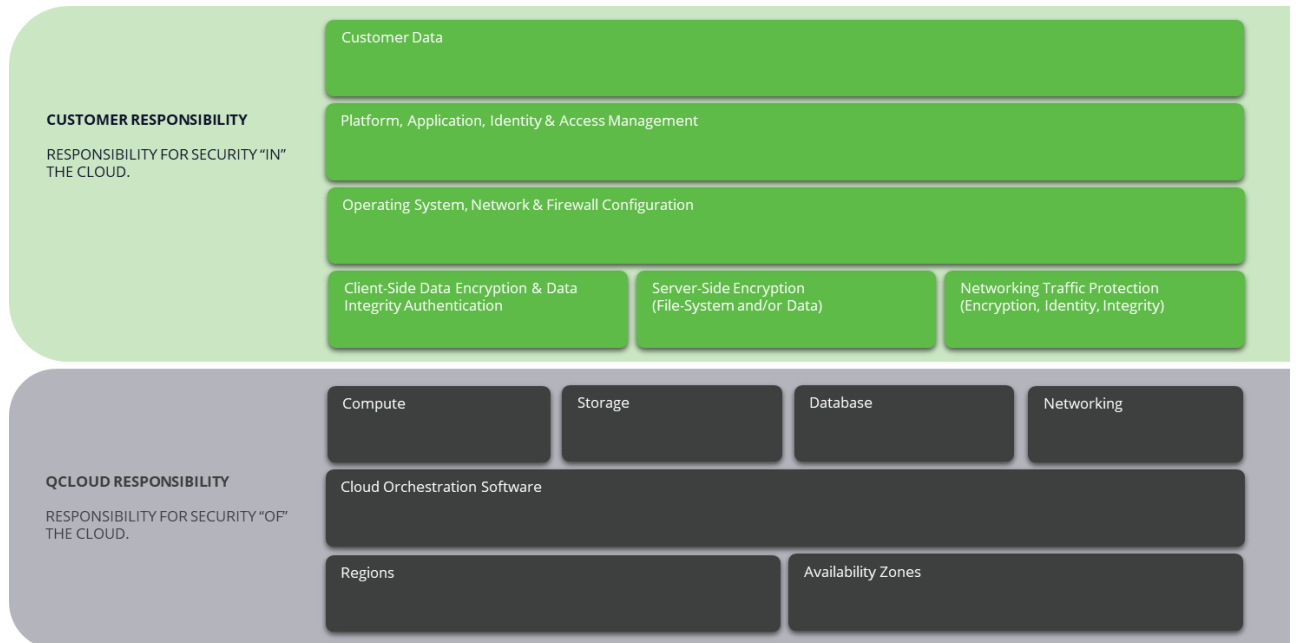
2 Appendix B: Shared Responsibility Model

Security and Compliance is a shared responsibility between QCLOUD and the CUSTOMER. This shared model can help relieve the CUSTOMER's operational burden as QCLOUD operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates.

The CUSTOMER assumes responsibility and management of the guest operating system (including updates and security patches), other associated application software as well as the configuration of the QCLOUD provided security group firewall and third-party security appliances. CUSTOMERS should carefully consider the services they choose as their responsibilities vary depending on the services used, the integration of those

services into their IT environment, and applicable regulations. The nature of this shared responsibility also provides the flexibility and CUSTOMER control that permits the deployment.

As shown in the chart below, this differentiation of responsibility is commonly referred to as Security “of” the Cloud versus Security “in” the Cloud.



2.1 QCLOUD Responsibility

QCLOUD is responsible for protecting the infrastructure that runs all of the services offered in the QCLOUD. This infrastructure is composed of the hardware, software, networking, and facilities that run QCLOUD Services.

2.2 Customer Responsibility

CUSTOMER responsibility will be determined by the QCLOUD services that a CUSTOMER selects. This determines the amount of configuration work the CUSTOMER must perform as part of their security responsibilities.

For example, a service such as Elastic Compute Service (ECS) is categorized as Infrastructure as a Service (IaaS) and, as such, requires the customer to perform all of the necessary security configuration and management tasks. CUSTOMER that deploys an ECS instance is responsible for management of the guest operating system (including updates and security patches), any application software or utilities installed by the CUSTOMER on the instances, and the configuration of the QCLOUD-provided firewall (called a security group) on each instance.

For abstracted services, such as Object Storage, QCLOUD operates the infrastructure layer, the operating system, and platforms, and customers access the endpoints to store and retrieve data. Customers are responsible for managing their data (including encryption options), classifying their assets, and using User Management & IAM tools to apply the appropriate permissions.

This CUSTOMER/QCLOUD shared responsibility model also extends to IT controls. Just as the responsibility to operate the IT environment is shared between QCLOUD and its customers, so is the management, operation and verification of IT controls shared.