

## ENTERPRISE SERVICE LEVEL AGREEMENT (SLA) – 2.2 Public Cloud Infrastructure as a Service (IaaS) – Virtual Data Centre

### 1 Service Description (“Services”)

CDS (“Cogeco Data Services Inc.”) Public Cloud Infrastructure as a Service (“IaaS”) Virtual Data Centre (“VDC”) provides you with virtualized vCPU, RAM, storage, network resources, and portal that are fully owned and operated with a CDS Data Centre. CDS Geo Redundant VDC adds fully managed Disaster Recovery service supporting the replication and failover of your VDC and data to a secondary CDS Data Centre.

#### 1.1 Service Level Agreement (“Service Level(s)” or “SLA”)

CDS will use commercially reasonable efforts to provide a VDC availability of 99.99%. In the event that CDS does not meet the Service Level(s) described in this Section 1.1, you may be eligible to receive a Remedial Credit as described below.

Public Cloud Infrastructure as a Service Virtual Data Centre SLA		
SLA Metric	Objective	Remedial Credit Equivalent to
VDC Availability	99.99%	5% of MRC every 60 minutes up to 30% MRC of the affected VDC
<b>VDC Storage Level Performance</b>		
High Performance	Minimum IOPS: 1024/TB Maximum Storage Latency: 1.0ms	5% of MRC of the affected VDC
Performance	Minimum IOPS: 512/TB Maximum Storage Latency: 5.0ms	
Standard	Minimum IOPS: 128/TB	
<b>Geo Redundant VDC RPO/RTO**</b>		
RTO: Geo Redundant VDC Failover	6 Hours	5% of MRC every 60 minutes up to 30% MRC of the affected VDC
RPO: Geo Redundant VDC Replication	2 Hours	5% of MRC of the affected VDC

\*\* Geo Redundant VDC RPO/RTO is only applicable to Customer that have subscribed to the CDS Geo Redundant VDC Service

### 2 Service Level Definitions and Principles

#### 2.1 Unified VDC Service Availability and Service Unavailability

Unified VDC Service Availability includes all elements of the Service that are located in a CDS Data Centre. Unified VDC elements include vCPU, RAM, and storage Service components as well as the supporting network elements that provide connectivity to CDS Public Internet, SSL Access, as well as CDS Private Networks. Problems related in any way to the VDC’s VMs operating systems, software, data, and applications, or to your actions or third parties are not included in the SLA. Service Availability means the percentage of time that the Service is available to you. Determination of Service Availability is based on the CDS Ticketing System (“TTS”).

Service Unavailability means the time period when a Service will be considered unavailable. Service Unavailability begins when a trouble ticket has been initiated through the TTS, either by you or CDS, and you have released the affected Service components to CDS. For greater clarity, Service Unavailability does not include the excluded items (“Exclusions”) listed above and in section 5 below. Service Unavailability outage time ends when CDS notifies you that the problem has been resolved.

The TTS will capture all Service unavailability alarms for the Customer. Any other alarms generated will be non-service (or non-business) impacting.

### 2.1.1 Service Availability Calculation

$$100 * \frac{(\text{Total \# minutes in a month} - \text{Maintenance Minutes}^1) - (\text{Total Service Unavailability minutes})}{(\text{Total \# minutes in a month} - \text{Maintenance Minutes})}$$

NOTE: Service Availability Calculation is based on a calendar month

### 2.2 Monthly Recurring Charge "MRC"

### 2.3 Mean Time to Notify ("MTTN")

Mean Time to Notify means the cumulative sum of the length of time of all TTN instances in a month, divided by the sum total number of TTN instances

#### 2.3.1 Mean Time to Notify Calculation

$$\frac{\text{The sum of the total time to notify for all CDS monitored alarms (via tickets) for the customer network elements within the calendar month}}{\text{Total number of tickets opened for the customer network elements within the calendar month}}$$

### 2.4 Response Time Objective

Response Time Objective is the length of time CDS takes to initially respond to your Help Desk issue. Response Time begins when you report an Issue to the Help Desk to the time that CDS acknowledges the issue and assigns a priority to the issue (i.e.: the ticket is assigned a priority).

- An Emergency Request is when your equipment is non-responsive and assistance is needed immediately.
- A Non-Emergency Request is when the requested change can be scheduled within a few hours but during the same day.
- A Scheduled Request is used when the request can be scheduled over a period of days.

### 2.5 Completion Time Objective

Completion Time Objective is the length of time CDS takes to answer or solve your Help Desk issue. Complete Time begins when you report an issue to the Help Desk to the time that CDS answers or solves your Help Desk issue (ie: the ticket is closed).

### 2.6 Remedial Credit

Remedial Credit means the amount to be credited by CDS to you in accordance with section 4 to compensate you for CDS' failure to meet the Service Level(s) detailed in section 1.1.

### 2.7 Service Level Target

Service Level Target means the level of performance of the Service that is required to be delivered by CDS under the Service Level Agreement as detailed in section 1.1.

### 2.8 Time to Respond

Time to Respond means the length of time from when you report the trouble and CDS is given access to all necessary Service components to until the time CDS starts restoration activities. Determination will be based on the TTS.

### 2.9 Geo Redundant VDC Recovery Time Objective ("RTO")

Geo Redundant VDC RTO is the duration of time between when CDS notifies you via TTS that a disaster recovery incident has occurred at the primary CDS Data Centre until the time CDS notifies you via TTS that their VDC resource pools, VMs, data stores, and connectivity have been restored at the secondary CDS Data Centre.

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<sup>1</sup> Maintenance Minutes includes Scheduled Maintenance and Emergency Maintenance minutes.

#### 2.10 **Geo Redundant Recovery Point Objective (“RPO”)**

Geo Redundant RPO is the maximum duration of data that might be lost in the event that CDS declares a disaster recovery incident.

#### 2.11 **Minimum Input Output Operations per Second (“IOPS”)**

Minimum IOPS is the minimum number of (4k block size) read or write operations per second that are available in a VDC resource pool. The minimum IOPS is determined based on the VDC’s storage level as well as the size in GB of your storage pool. IOPS are shared amongst the Customer’s VMs within a specific VDC.

##### 2.11.1 **Minimum IOPS Measurement**

Confirmation of Minimum IOPS will be performed by CDS upon your request and release of the impacted VDC. Due to IOPS performance implications, CDS may remove any active snapshots, stop backup/replication processes, or pause any active VMs associated with the impacted VDC’s. CDS will initiate a trouble ticket, conduct an investigation of the impacted VDC’s storage performance, notify you of the test results, and where applicable rectify the performance issue.

#### 2.12 **Maximum Storage Latency**

Maximum Storage Latency is the maximum amount of time in millisecond required to complete a storage IO operation. CDS Storage Latency is based on your subscribed storage level.

##### 2.12.1 **Maximum Storage Latency Measurement**

Confirmation of Maximum Storage Latency will be performed by CDS upon your request and release of the impacted VDC. Due to Latency performance implications, CDS may remove any active snapshots, stop backup/replication processes, or pause any active VMs associated with the impacted VDC’s. CDS will initiate a trouble ticket, conduct an investigation of the impacted VDC’s storage performance, notify you of the test results, and where applicable rectify the performance issue.

### 3 **Scheduled and Emergency Maintenance**

#### 3.1 **Scheduled Maintenance**

Scheduled maintenance means any maintenance at the physical locations where the Customer’s Service is located or connected (“**Scheduled Maintenance**”). CDS will use commercially reasonable efforts to notify you seven (7) days in advance of any Scheduled Maintenance via e-mail addressed to your designated technical contact. You are responsible for providing CDS’ Network Operations Centre (“**NOC**”) with an up to date technical contact.

#### 3.2 **Emergency Maintenance**

CDS may need to perform emergency releases to the CDS network, which may affect the operation of the Service (“**Emergency Maintenance**”). CDS will notify you immediately of any Emergency Maintenance that will impact the Service via e-mail addressed to your designated technical contact. The Customer is responsible for providing CDS’ NOC with an up to date technical contact.

### 4 **Service Credit Process**

If CDS is unable to meet any of the Service Levels set out in section 1.1 during any calendar month (as confirmed by CDS), you, upon written request to CDS, will be provided with a Remedial Credit for the pro-rated charges as set out in section 1.1 for the affected Service for which the SLA Metric has not been met as outlined in the affected Service’s SLA. CDS will apply the Remedial Credit to the next available billing period following your request for a Remedial Credit.

For each instance of Service Unavailability, you may only claim a Remedial Credit under one SLA. For example, where a single instance of Service Unavailability is less than 99.99%, you may only claim the Service Availability Service Level Target or the Storage Performance Service Level Target.

For greater clarity, the maximum value of the Remedial Credits claimed by you, for any Service, calculated in a calendar month, will not exceed the monthly recurring fees for the affected Service.

You must request Remedial Credits in writing within thirty (30) days of the last day of the calendar month in which the failure or service interruption occurred.

## 5 Exclusions

### 5.1 General

CDS takes pride in delivering the highest possible quality of service to our customers, however there are times when a failure or service interruption is clearly outside CDS' control or circumstances impact CDS' ability to restore service promptly. Exclusions are defined as periods of downtime or interruption of CDS' services to the extent caused by but not limited to:

- a) Implementation of changes, new services or equipment or other work (for example, additional technical assistance) performed by CDS at your request;;
- b) Acts or omissions by you or the your representatives or end user customers (collectively "**Customer Contacts**"), including delayed or lack of response by you or Customer Contacts to disruptions that require your participation for problem source identification and/or resolution;
- c) Instances where CDS or its agents are not afforded access to your premises or equipment to repair or remedy a problem;
- d) Unavailability or service interruption where no trouble has been established by CDS;
- e) Failure of your or your customer owned hardware or software including operating systems and applications;
- f) If you have not provided clear written instructions for CDS technician to follow;
- g) If you are not available for assistance while the request is being serviced;
- h) Software, systems and applications that you have not backed up prior to submitting the request;
- i) Test and inquiry trouble tickets;
- j) "No Trouble Found" trouble tickets;
- k) Force Majeure Event(s), malicious code / hacker activity, and/or unavailability due to equipment, software, networks, devices and systems not under CDS control including, where applicable, faults or errors in your equipment, hardware, software or applications or the one of your Customer Contacts;
- l) Periods of Scheduled Maintenance or Emergency Maintenance;
- m) Your negligence or parties authorized by you;
- n) Your breach of your obligations under this Agreement;
- o) Policy and configuration changes – CDS applies security policy and configuration changes in accordance with your written instructions. If you provide instructions that result in a service outage, such time will not be counted against service level agreements; or
- p) Security incidents – CDS Managed Security Services cannot prevent attacks; CDS is limited to only providing Customers notice that a potential security incident exists. CDS response is limited to customer notification.

### 5.2 Third Party Providers

An Exclusion also includes (i) the unavailability of equipment or systems or transmission facilities not provided by, under the control of, or under the direction of CDS, including any such equipment or systems or transmission facilities which CDS has contracted for, by, or on your behalf, and (ii) service failure or interruption caused by any third party service provider ("**Third Party Provider**"). In such cases, CDS will co-ordinate with the Third Party Provider(s) to remedy such failure as quickly as possible and will provide to you a service credit equivalent to the credit provided to CDS by the Third Party Provider(s) (if any) as a result of the service failure or interruption.

For greater certainty, no Remedial Credit will be provided where the failure or service interruption is due to an Exclusion.

## 6 General

Capitalized terms used in this SLA that are not defined in this SLA have the meaning assigned to them in the Agreement