

# Leap Solutions Asia

## Service Specifications – Leap GIO Object Storage

### Rev 02

## Document Control

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02	144	31 AUG 21	<p>General review of document</p> <p>Revised <b>VI. C. Uptime</b>, reviewed to align with actual operation:</p> <p><u>Removed:</u></p> <ul style="list-style-type: none"> <li>*Monitoring issues with the Monitoring Center are included in the downtime. Such issue will be included in the downtime only if the issue was reported.</li> <li>*1) Individual instances of downtime that had a duration of less than one minute are not included.</li> </ul> <p>If 10 instances of downtime occurred that were each 0 minute 30 seconds in duration, the total monthly downtime is 0 minutes.</p> <p>If 10 instances of downtime occurred that were each 1 minute 30 seconds in duration, the total monthly downtime is 10 minutes</p> <p><u>Added:</u></p> <ul style="list-style-type: none"> <li>*1) Downtime:               <ul style="list-style-type: none"> <li>- It will be calculated based on LSA's monitoring tool and not based on customer's own monitoring.</li> <li>- Other than the downtime of the service purchased from LSA, additional time for the configuration, operation, technical support, and administration to bring up any other hardware/software used by the customer will not be counted towards the downtime.</li> </ul> </li> </ul>

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## I. Document service specifications

### A. Document scope

This document describes the service specifications of Leap GIO Object Storage.

### B. Document structure

The service specifications consist of the following content:

Category	Description
Service Specifications	Describe the common specifications shared by Leap GIO Object Storage

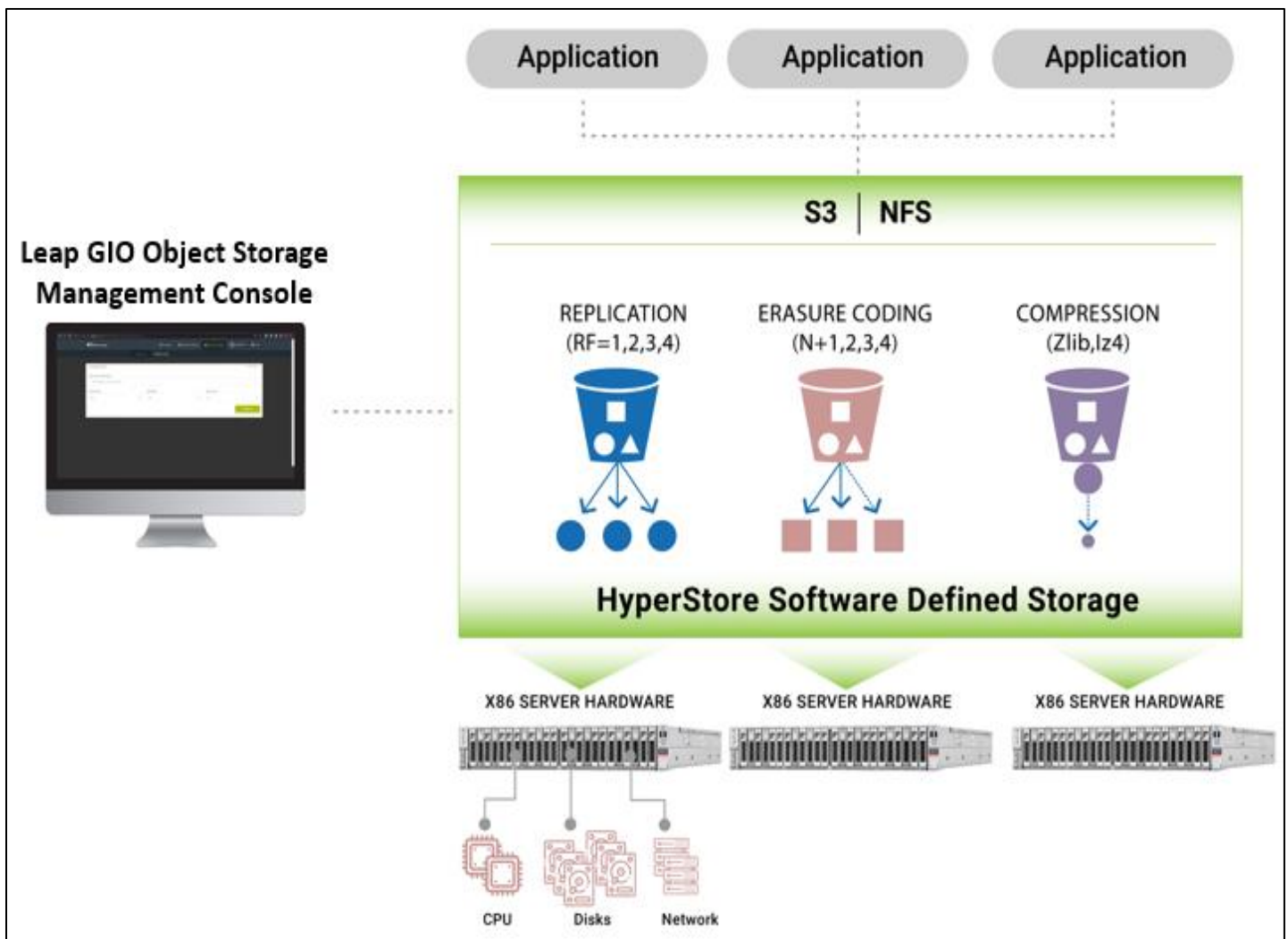
## II. Service outline

### A. Overview

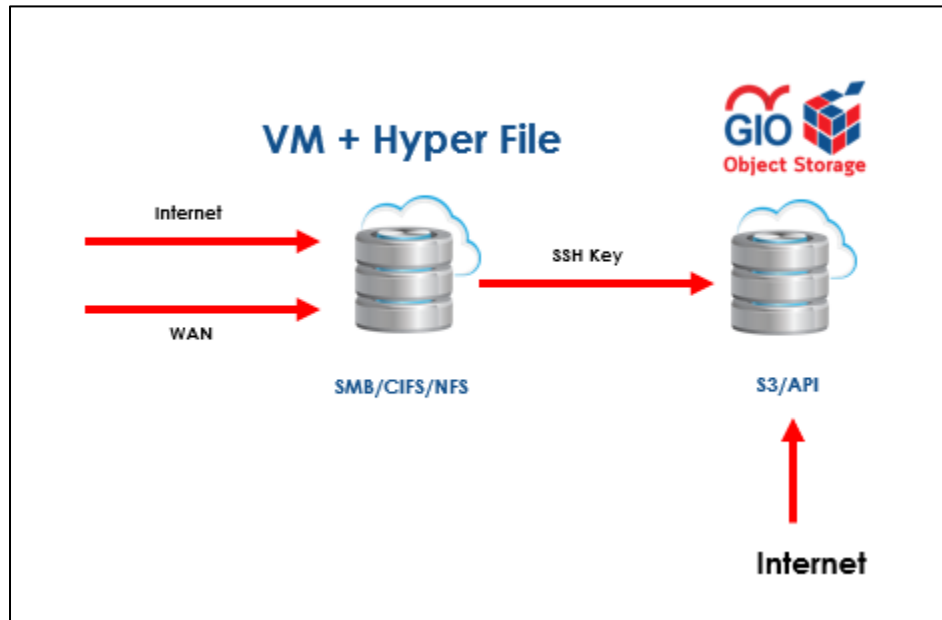
Leap GIO Object Storage allows you to store an unlimited amount of unstructured data of any content type, including analytic data and rich content like images and videos. With Leap GIO Object Storage, you can safely and securely store or retrieve data directly from its management console. It offers capabilities that boost interoperability, data durability, and operational efficiency. With ease-of-use, Leap GIO Object Storage is a low-maintenance and low-complexity storage solution.

### B. Structure

#### 1. Leap GIO Object Storage



## 2. File share solution



## C. Terminology

Terms	Description
<b>Object Storage</b>	Object storage organizes information into buckets of flexible sizes, referred to as objects. These unique identifiers are arranged in a flat address space which makes it easier to locate and retrieve your data across regions. This flat address space also helps with scalability.
<b>S3</b>	It is the object storage protocol. However, Leap GIO Object Storage is fully support S3 protocol with 100% API compatibility.
<b>Bucket</b>	All objects must be stored inside a top-level container called a bucket. Bucket names are unique on the Object Storage platform you cannot use a bucket name that is already taken by another user. The bucket is created with a storage policy that is applied to all objects in the bucket.
<b>Encryption</b>	Objects are protected (between the Object Storage server and the source/destination of the request) by encryption based on secure HTTP. Optionally, an object can be encrypted 'at rest', while it is stored within the Object Storage platform; the encryption and decryption of the object are automatic and do not require action by the user. Encryption can be set for specific tenant or for buckets, not folder.

Terms	Description
<b>Folders</b>	Folders in Object Storage behave like folders in a computer file system by creating logically-separate locations for objects. You can create folders inside folders to further organize objects at multiple levels
<b>Life cycle rule</b>	These rules allow for automatic deletion of objects at a specified future point in time (specific date, or number of days from the object creation date). Rules can be set for single objects, or can be set for a bucket (or a folder) and automatically applied to all of the objects inside the bucket (folder).
<b>Metadata</b>	Objects and folders can have user-defined metadata attached to them, in the form of key-value pairs.
<b>Object</b>	An object is a combination of file content (data) and file properties (metadata) which is stored in the same location, unlike a file system where files are stored separately from the file metadata. User-defined metadata can be added to any object.
<b>Permissions</b>	Access permissions for read, write, and (future) permission changes on the object, can be set for individual objects or for buckets, not folder. Permissions can be granted to any user that is linked to the Object Storage account currently in use.
<b>REST API</b>	Representational State Transfer. REST is an architecture style for designing networked applications.
<b>Share</b>	This is a temporary public access link to an object, where the time-to-expiry is specified by the user. The link is offered as a URL that is accessible from any Internet location.
<b>Static website</b>	The entire contents of a bucket can be presented to the Internet as a static website (that is, fixed content webpages written in HTML, and images and document files, with no interactive response to user requests). This is enabled as a bucket setting and an 'index' object (default page) and 'error' object need to be specified. Note that there is no default content supplied for the website, and there is no checking that the index object exists or that it contains valid HTML.



Terms	Description
<b>Versioning</b>	Versioning is a way of storing multiple versions of an object (that is, multiple objects having the same name and folder path inside a bucket). Versioning can be enabled or disabled for a bucket at any time, not folder. When versioning is enabled, each upload of an object with the same name is stored with a unique 'version ID'. The Object Storage web-based user interface does not currently handle versioning, only the latest version of an object can be accessed. If you have versioning enabled on your bucket, and you want to download a particular version of an object, in the CMC's Objects view click Show Versions (if object versions are not already showing in the object list). When versions are shown, under each object name the interface lists all stored versions of that object, ordered from the current (most recently uploaded) version to the oldest version. Each version is identified by a system-generated alphanumeric identifier, and for each version the upload timestamp is shown (the date and time that particular version of the object was uploaded to the system). To download a version of an object, click the alphanumeric identifier.

## D. Components

This service provides the following items:

Name	Description
<b>Package</b>	Basic package for the usage of Leap GIO Object Storage, including username, password, group name, and the Leap GIO object Storage console URL
<b>Data Disk</b>	Storage to keep your data
<b>Console</b>	Accessible via web browser, the console allows customers to manage their Object Storage environment

## E. Contract and standard provisioning

A minimum contract number and the number of features provided as standard are shown as follows:

- You can subscribe to a minimum of 1 Package
- Each package comes with group name, user id, and password to access to the console

## F. Information to be provided by the customer

### 1. Operation manager information

Fill in the contact information on the order form. It must be at least one person.

We may need to contact your operation manager(s) from time to time as part of our service operation. To ensure efficient security, we only allow the operation manager(s) that you have designated to contact LSA for support.

## 2. Contract information

The type and number of contracted service components you ordered are to be provided.

### G. Information provided to the customer

Information that will be provided to the customer when using the service are given as below (some information may only be provided upon request):

- User and password
- User guideline

### III. Feature specifications

#### A. Initialization

Upon sign up of the service, LSA will carry out the following initialization: A package providing a configuration and optional items and complying with the terms and conditions as stated in the feature specifications.

On the other hand, you are required to carry out each item and optional service as set forth clearly in [Notes](#).

#### B. Package

It is a basic environment package which enables you to use Leap GIO Object Storage

Items	Specification
Contract unit	1
Min. No. of contract units	1
Max. No. of contract units	Unlimited
Contract Terms	Data Disk used by the package have to be contracted simultaneously
Termination Terms	Once a package is terminated, Data Disk used by the package will also be terminated

#### C. Self-service portal

The Object Storage Self Service portal is a web application developed by Cloudian which allows you to use the Object Storage service without the need to install any dedicated connection client on your device. By using the Storage account, created through the Console, you can access your remote web space using any standard web browser.

#### D. 100% S3 API compatibility

Leap GIO Object Storage delivers a fully S3 compliant API to deliver the broadest range of S3 feature coverage and a 100% fidelity with the AWS S3 API. Its extensive feature set ensures seamless interoperability of developed applications.

Leap GIO Object Storage supports many advanced S3 features such as Multi-part Upload, Object Versioning and S3 compatible ACL support, location constraint, and many more.

#### E. Data protection

Create logical storage policies for groups or users with either replication or erasure coding storage policies or combination. Easily meet your IT requirements for data protection and data availability with SDS policies.

#### F. Security and encryption

With data security breaches becoming more commonplace, it is essential for businesses to safeguard their data from the prying eyes of data hackers and unauthorized users. Leap GIO Object Storage can simplify the data encryption process

by providing transparent key management at the server or node layer. This relieves administrators from the burden of having to manage encryption keys and eliminates the risk of data loss occurring due to lost keys. Furthermore, encryption can be managed very granularly—either at a bucket level or down to an individual object. SSL support for secure access and supports AES 256 encryption for data-at-rest on public clouds.

## **G. Object Lifecycle Management**

Users can dynamically manage their own data and object retention period with IT having the management oversight for security and long-term data protection.

## **H. Versioning**

Users can access different revisions of the same file stored in the system.

## IV. Service terms and conditions

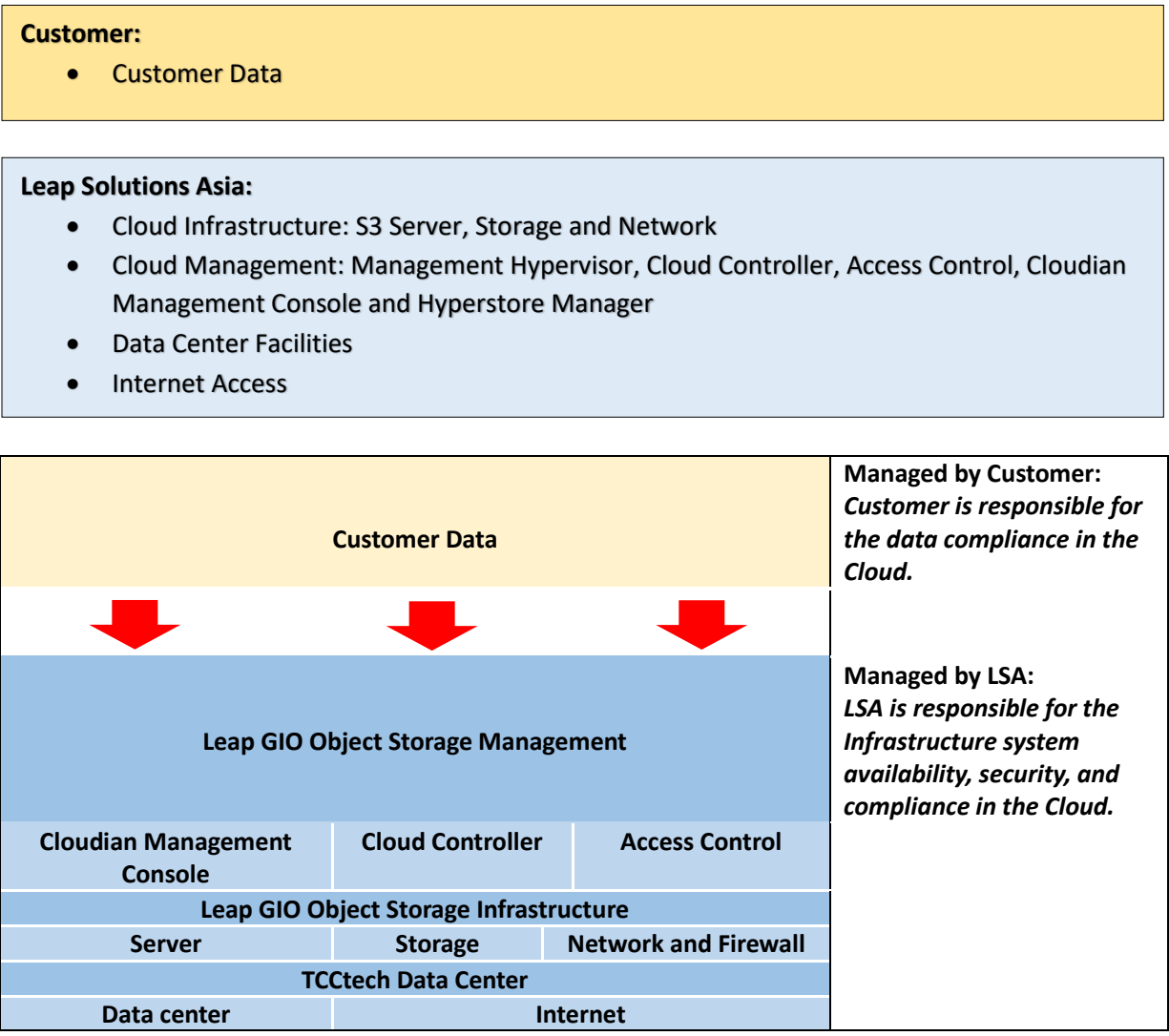
### A. General terms and conditions

In order to use the Leap GIO Object Storage service, as a customer, you need to review, sign, and return the quotation back to LSA. The **General Terms and Conditions**, the **Acceptable Use Policy (AUP)**, and the **Service Specifications – Leap GIO Object Storage** (this document) are also attached along with the quotation for your review and acceptance.

### B. Provisioning conditions

When you have decided to use the service, you are required to sign a contract and fill your information on the requirement form which is subscribed for the following items: Leap GIO Object Storage.

## V. Shared responsibility model



## VI. Service level agreement

### A. Service Level Agreements (SLA) during normal operation and disclaimers

Function	SLAs	Disclaimers
Leap GIO Object Storage	At least 99.99%	The following circumstances are exempt from classification as service downtime with regards to the SLA. The customer deletes their data with or without intention.

### B. Uptime

Uptime is calculated using the following expression:

$$\text{Uptime (\%)} = [\text{Total Monthly time (min)} - \text{Total Monthly Downtime (min)}^{*1}] / \text{Total Monthly time (min)}^{*2} \times 100$$

\*All values are truncated to two decimal points.

\*1) Downtime:

- It will be calculated based on LSA's monitoring tool and not based on customer's own monitoring.

- Other than the downtime of the service purchased from LSA, additional time for the configuration, operation, technical support, and administration to bring up any other hardware/software used by the customer will not be counted towards the downtime.

\*2) Total number of days in that particular month multiplied by 1440 (60min x 24h)

**Example:** If you experienced 30 minutes of downtime in a 30 days-month, the calculation would be:

$$\begin{aligned} \text{Uptime (\%)} &= [(30 \text{ Days} \times 24\text{Hrs} \times 60 \text{ mins}) - (\text{Downtime } 30\text{mins})] / (30 \text{ Days} \times 24\text{Hrs} \times 60 \text{ mins}) \times 100 \\ &= (43,200 \text{ mins} - 30 \text{ mins}) / 43,200 \text{ mins} \times 100 \\ &= 43,170 \text{ mins} / 43,200 \text{ mins} \times 100 \\ &= 0.9993 \times 100 \\ &= 99.93\% \end{aligned}$$

### C. Service response time

Leap GIO Object Storage response time is less than or equal to 5 (five) milliseconds with a minimum of 90% success ping transactions from LSA Infrastructure to the ISP Internet Gateway. The response time is based on normal operation usage.

### D. Common disclaimers

The following disclaimers are common to all components defined within the Service Level Agreements.

The following circumstance is not included in downtime:

- Downtime due to limitations on service, termination of service and suspension of service as defined in the quotation, the General Terms & Conditions, the Service Specifications, and the Acceptable Use Policy (All mentioned document provided by LSA)
- Acts/events prohibited from being performed by contracting parties including but not limited to the following examples:

- Generation of significant traffic due to virus infections or unauthorized access of virtual machines created by customers.
- Network loops caused by transmission of multicast or broadcast packets due to network / system design or configurations lacking measures to prevent switching and routing loops.
- Attempts to take advantage of security vulnerabilities to gain unauthorized access to LSA service facilities, to shut down service functionality, or to degrade service performance.
- Using hardware or software that generates significant amounts of traffic to attempt measuring service performance.
- Downtime due to events of force majeure. Events of force majeure including but not limited to the following examples:
  - Social unrest, such as wars, civil wars, terrorism, and riots.
  - Natural disasters such as earthquakes, tsunamis, volcanic eruptions, lightnings, floods, snowfalls, and falling rocks.
  - Obstruction of system operations due to Denial of Service (DoS) attacks.
  - Unauthorized Access.

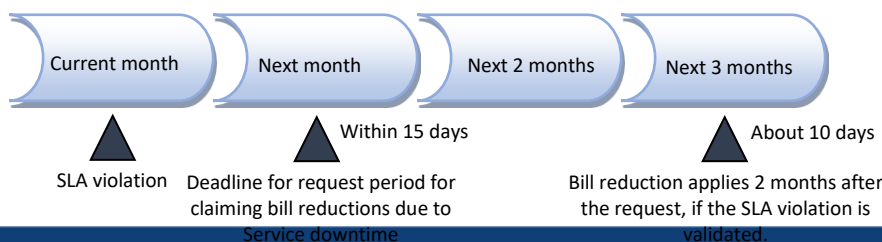
## E. Billing reduction due to service downtime

General billing reduction due to downtime of LSA’s services is defined as follows		
Conditions for reduction	Description	
<b>Reduction condition</b>	<b>Claim requirement</b>	Required - Billing reductions due to service downtime are not performed automatically
	<b>Claim method</b>	Fill in the Billing Reduction form given by LSA Note: Please contact your LSA sales representative Information regarding the period, details and objective evidence of the SLA violation <sup>*1*2</sup>
	<b>Claim deadline</b>	On 15th of the following month after the SLA violation Note: If that day is a non-working day, it will be on next working day.
	<b>Review of claim</b>	LSA will investigate the validity of the SLA violation regarding the received claim. If the SLA violation is validated, the billing reduction described as follows will be processed.
<b>Billing reduction details</b>	<b>Amount of billing reduction</b>	10% of monthly contracted fee for the month in which the SLA violation occurred regarding the service that experience the SLA violation <sup>*3</sup> Note: This reduction is applied to the monthly service fee for any optional services included with the applicable component
	<b>Invoice that receives the reduction</b>	The reduction will be applied on the invoice that is billed two months after the month where the SLA violation occurred

\*1: Inclusive of but not limited to Base Server System Log, Kernel dump, network interface Communication capture and your own Monitoring System Log. It also does not guarantee that these will be usable as information that unconditionally satisfies the requirement.

\*2: When LSA sends notification that shows indication of errors on Service Equipment and its impact on operation of the subscribed component, these may be usable as information that unconditionally satisfies the requirement.

\*3: After the violation has occurred, if the component is upgraded or terminated, and the amount of bill reduction is higher than invoice that receives the reduction, this bill is changed to the minimum charge of the previous service state. The bill reduction cannot be applied to fees other than the monthly service fee of the applicable components.







## VII. Support specifications

### A. Leap support center

The Leap Support Center handles all enquiries on how to use the service by e-mail, except for emergency calls when the system is down. Leap Support Center is available in both English and Thai.

#### 1. General issue inquiry

<b>Reception Hours</b>	Working hours (8x5)
<b>Contact Information</b>	Phone: (+66) 2-080-9822 E-mail: support@leapsolutions.co.th
<b>Enquiry type</b>	Service specifications Clarifying any service explanation details Other technical enquiries
<b>Languages Support</b>	English and Thai

#### 2. Commercial inquiry

<b>Reception Hours</b>	Working hours (8x5)
<b>Contact Information</b>	Phone: (+66) 2-080-9813 E-mail: sales@leapsolutions.co.th
<b>Enquiry type</b>	Changes, termination, and customized orders. General enquiries
<b>Languages Support</b>	English and Thai

#### 3. Incident service request prioritization

The Incident Manager is responsible for ensuring that every incident and service request are prioritized. Priority consists of impact and urgency, has 5 levels, and is coded based on the following table:

	<b>Impact</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
<b>Urgency</b>				
<b>High</b>		1	2	3
<b>Medium</b>		2	3	4
<b>Low</b>		3	4	5

The resolution time of an incident or service request depends on its priority code and is calculated as follows:

Priority code	Description	Target Resolution Time	Target Service Desk Response Time
1	Critical	1 hour	15 mins
2	High	2 hours	30 mins
3	Medium	4 hours	1 hour
4	Low	8 hours	2 hours
5	Planned	24 hours	8 hours

Impact – business impact of an incident or a service request:

High	Medium	Low
>50% of customers of the service are affected	20% - 49% of customers of the service are affected	< 20% of customers of the service are affected

Urgency – how quickly the business needs a resolution:

High	Medium	Low
Immediately – Security Incident	In medium term – system down or error with available workarounds	In long term – system error or request which is not impacting production
System down or error without workaround		

**Note:** Change of priority – priority defined by a user can be overridden by the Service Desk upon LSA approval by the Service Level Manager.

## 4. Required information for inquiry

<b>Required information</b>	Your company name Your system administrator information Your system ID/Name that you contracted
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## B. Emergency contact

Please direct your queries to the Operation Management Personnel with whom you have been assigned as Administrator.

<b>Reception Hours</b>	24 hours a day, 365 days a year
<b>Contact Info.</b>	Phone: (+66) 2-080-9822 Email: support@leapsolutions.co.th
<b>Enquiry about</b>	Failure or issue with service
<b>Languages Support</b>	English and Thai

## C. Support scope

Support will be carried out for failure concerning unique specifications for using Leap GIO Object Storage. All features and services related (i.e. access to the portal or standard package)

## D. Maintenance

### 1. Planned maintenance

Planned maintenance will be conducted for the purpose of maintaining service quality and expanding, maintaining, and preserving equipment.

- If service is not impacted, notification by email will be sent prior to maintenance.
- If service is impacted, notification will be sent by e-mail regarding the scope of the impact at least one (1) week prior to the maintenance.

Email will be sent to the contact e-mail address registered as the administrator.

In addition, after the completion of the planned maintenance, an e-mail will be sent reporting the results to all customers who were sent e-mail notifications in advance.

### 2. Emergency maintenance

If it is determined by LSA that emergency maintenance is required for service equipment, LSA may conduct emergency maintenance without prior announcement (see below cases that apply). In this case, customers will be notified by e-mail after the maintenance is conducted. However, note that LSA will try to send notices for emergency maintenance when possible.

Emergency maintenance may be conducted for the following circumstances:

- When an emergency response is required for hardware failures even while service continues uninterrupted.
- When redundancy is lost due to service failure, and a suspension of service from multiple service failures that cannot be anticipated.
- When major security risks are discovered, and it is determined that an emergency response is necessary.
- When a security incident occurs, and an emergency response is necessary.

## E. Notes

For security reasons, only pre-registered system administrators may contact Leap Support Center.

Some or all functionality may be interrupted due to scheduled/emergency maintenance procedures.

After accepting delivery of the service, you are responsible for all matters concerning security vulnerability.

## VIII. Applying, changing, and cancelling

### A. Lead time

#### 1. Registration

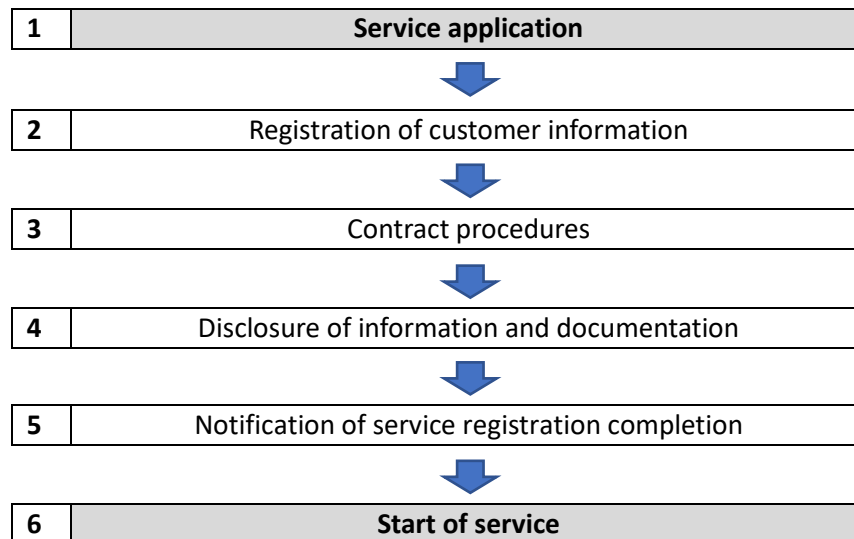
The time required for completion of the service provisioning does not include the day on which the corresponding request is received. The time period below represents the number of days from the business day following the day of receipt by LSA of an application form that contains all the required information.

The time required, from the application for the Leap GIO Object Storage service to the completion of the service provisioning, is as follows:

Service	Contract type	Time until completion of the service provisioning
Leap GIO Object Storage	New order	3 business days

The time required to start is an estimate based on our track record. It is not to be interpreted as a guarantee to deliver within the stated time period.

#### 2. The flow process till the start of the service



#### 3. Information available to the customer

The following information will be sent to the customer via e-mail (or other means if needed):

- Quotation / Service Specifications (this document) / General Terms & Conditions / Acceptable Use Policy
- Leap GIO Object Storage User Guide

## 4. Time taken for service change or cancellation

The time required to change/cancel a service varies by service and does not include the day of the request acceptance. The time period below represents the number of days following the receipt by LSA of a complete application form. The times required to change/cancel a service are as follows:

Service	Contract Type	Time Required for service change or cancellation
Leap GIO Object Storage	Change	Depending on type of change
	Cancellation	One business day

### B. Billing start time

The billing start time begins on the day the service becomes available to you.

### C. Minimum contract period

The minimum contract period for Leap GIO Object Storage is 12 months.

### D. Service change

If a change to order additional services/items is needed, a new quotation is sent to the customer and needs to be signed and returned back to LSA.

### E. Service cancellation

If a change to terminate any contract services/items is needed, a formal request should be sent to LSA via mail or email. After the day of the termination notice, customer will no longer be possible to log in to the service or to recover any data.

### F. Reference

LSA General Terms & Conditions: <http://www.leapsolutions.co.th/terms>

LSA Acceptable Use Policy: <http://www.leapsolutions.co.th/acceptableusepolicy>

### G. Disclaimers

This document is not intended to guarantee that the service will always be available for use.

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