

Leap Solutions Asia

Service Specifications – Leap SAP Cloud and Managed Services Rev 03

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01	139	26 JAN 21	Creation
02	144	31 AUG 21	<p>General review of document Revised III. A. Base set, changed title to “III. A. Package” Revised III. A. Package, added “Only Windows license by SPAL on Leap GIO Cloud, Leap VPS, or SAP Cloud and Managed Services is provided, the technical support is not provided. If technical support for Windows is required, customers shall purchase it separately and directly from Microsoft.” Revised VI. C. Uptime, reviewed to align with actual operation: <u>Removed:</u> *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. *1) Individual instances of downtime that had a duration of less than one minute are not included. If 10 instances of downtime occurred that were each 0 minute 30 seconds in duration, the total monthly downtime is 0 minutes. If 10 instances of downtime occurred that were each 1 minute 30 seconds in duration, the total monthly downtime is 10 minutes <u>Added:</u> *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.</p>
03	XXX	15 SEP 22	Revised VII. Support specifications, Contact Information of Commercial inquiry.

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I. Document service specifications

A. Document scope

This document describes the service specifications of Leap SAP Cloud and Managed Services.

B. Document structure

The service specifications consist of the following content:

Category	Description
Service Specifications	List of common specifications shared by Leap SAP Cloud and Managed Services

II. Service outline

A. Overview

Leap SAP Cloud and Managed Services (hereinafter, refer to as “the Service”) is a service that assigns Leap Solutions Asia Co., Ltd. hereinafter, refer to as “LSA”). The services are to be provided in respect of the Baseline System. The Baseline System is the system to be utilized by the CLIENT and its subsidiaries.

1. Characteristics of standard SAP Cloud

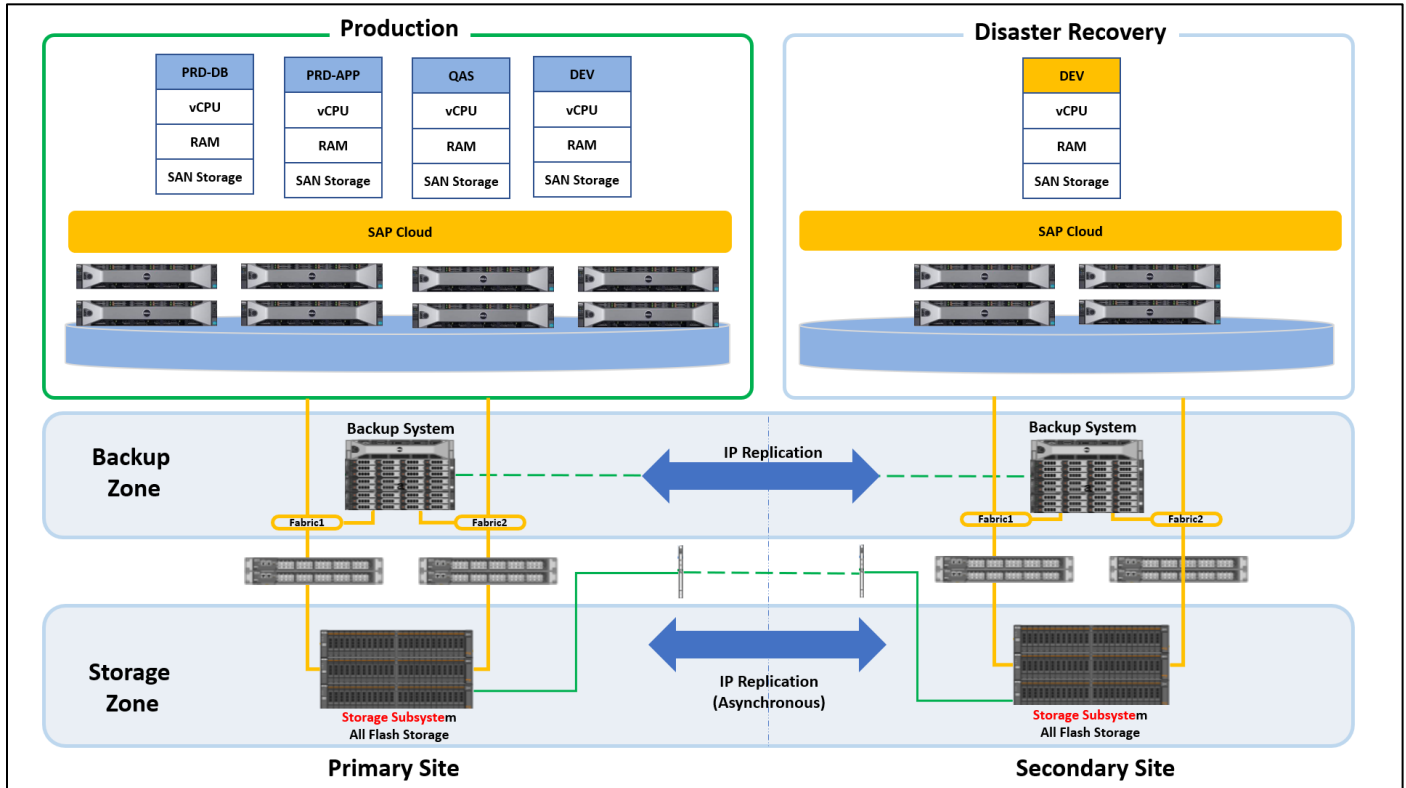
- SAP S/4 HANA with most recent support package level on Intel platform
- Linux Enterprise Server
- SAP Cloud based on 3-tier architecture: Production, Quality Assurance, and Development Systems
- Architecture designed to support Production System Availability (99.50%) and Non-production Availability (95.00%)
- Enterprise SAP Backup system with offsite management, by replicating backup data of SAP production system to Secondary site(s)
- Database administration

2. Characteristics of standard SAP Managed Services

- SAP system may run on:
 - Leap’s SAP certified cloud environment, hosted in TCC Technology Co., Ltd. premium data center (an affiliated and shareholder company)
 - Customer’s SAP Certified server hosted on-premises or in any data center
 - Other SAP Certified cloud resources
- SAP Basis administration covers:
 - Operating system administration
 - SAP database support
 - SAP security management
 - SAP transport management
 - SAP client management
 - SAP backup management
 - SAP service level monitoring and report
 - SAP operation support
 - SAP helpdesk and troubleshooting
 - SAP Hotline 24 hours support

B. Service structure

The following shows an overall picture of available components provided in the service. Some components are provided as standard, while others come with additional charges. Details on chargeable components are provided further in this document.



C. Terminology

Terms	Description
SAP	A German software company whose products allow businesses to track customer and business interactions. SAP is especially well known for its Enterprise Resource Planning (ERP) and data management programs. SAP is an acronym for Systems, Applications, and Products. SAP software products provide powerful instruments for helping companies to manage their financials, logistics, human resources, and other business areas. The backbone of SAP software offering is SAP ERP system which is the most advanced Enterprise Resource Planning (ERP) system among currently available ones.
Change Management	A process for controlling changes to the infrastructure or any aspect of the service, allowing approved changes with minimal disruption.
Configuration item	The unit or system being identified and changed in the change management process. Configuration items are components of an IT infrastructure or objects associated with an IT infrastructure. They may vary in complexity and size from a single module or minor component to an entire system.
Customization	User-specific customization of an SAP application. An application is customized to meet the requirements of the respective business case or of the specific country. This is done by the system/application administrator. Customization might include the company logo, a definition of authorizations for certain roles, etc.

Terms	Description
End User	Any user who does not have an administrative or developer role in SAP S/4 HANA System, but uses the various services provided by the SAP S/4 HANA system, such as the Employee Self Service, Manager Self Service, Posting a financial transaction, Create a Project , Purchase Requisition or Purchase Order, view a project status, generate and view a financial report or management report, raise an invoice , approve an invoice, and so on.
Enhancement	Any developments that customize, enhance, or change existing SAP functionalities. It allows you to add your own functionality to SAP's standard business applications without having to modify the original applications. SAP creates customer exits for specific programs, screens, and menus within standard applications. An enhancement does not change SAP S/4 HANA Repository objects. With the ABAP Development Workbench, you can develop any SAP S/4 HANA Repository Objects. Enhancements are not affected by upgrading to a new release.
Master Data	Information about an organization that is relatively static and can be used to describe the make-up or assets of an organization. For example: Information about customers, products, employees, materials, and suppliers. The master data also portrays the basic units of consolidation in the SAP System: i) Organizations, ii) Subgroups, iii) Financial statement items, iv) Transaction types.
Project Plan	A plan that includes the budget plan, the resource plan, and the work plan.
Project tracking	Project tracking consists of comparing the project plan with the actual advance of the project. Project tracking is particularly important for organizations with a track record of time and cost overruns. The process activities involved - i) Determine Work Done, ii) Determine Resources Spent, iii) Compare Work Done vs. Resources Spent - Earned Value Analysis, iv) Track Milestones.
Roles and Authorization	The Role of a user is a collection of authorizations that the user can use to access different transactions, reports, web-based applications, etc. An SAP authorization protects transactions, programs, and services in SAP systems from unauthorized access. To access business objects or execute SAP transactions, a user requires corresponding authorizations, as business objects or transactions are protected by authorization objects. Setting the roles and authorizations for all users is a key exercise before the system can go live.
SAP - Roles and Profiles	Roles are logically assigned to users to give the newer functionality of Roles (Menus etc.), but profiles are assigned to give the authorizations. When you create roles, it will generate the profile automatically. Roles contains transaction code while profile will hold the values. i.e. Roles work as a wrapper to profiles.
SAP Audit Management	According to DIN EN ISO 9000, this is a systematic, independent, and documented process used to obtain audit results and to evaluate these results objectively in order to determine to what extent the criteria of audit have been fulfilled. An audit is modeled in SAP Audit Management as a named auditing process to which auditable items are assigned for auditing, and which defines the time periods and other attributes of audits to be conducted
SAP Business Information Warehouse (BW)	A data collection or database that is created by integrating various datasets and data from external sources. Data warehouses provide users with a global view of the data that has many useful applications

Terms	Description
SAP BusinessObjects BI	SAP BO, also historically BOBJ, is a reporting and analytics business intelligence (BI) platform aimed at business users. It consists of a number of reporting applications that allow users to discover data, perform analysis to derive insights and create reports that visualize the insights.
SAP Development System	The part of the SAP landscape which is used typically for the development and testing of new customizing or application adjustments. Development system is where the complete configuration will be done. Most of the time, Unit testing goes in DEV system only unless Client is specific to test everything in QAS system. Once the configuration is done, tested in QAS system by consultants and by client's SAP consultants or end-users; then it will be moved to PRD and Golden client.
SAP Fiori	SAP Fiori is a new user experience (UX) for SAP software and applications. It provides a set of applications that are used in regular business functions like work approvals, financial apps, calculation apps and various self-service apps. It is a set of cross-device applications that, among other things, allow users to start a process on their desktop and continue it on a tablet or smartphone. SAP is developing its Fiori apps on its latest user interface framework, SAPUI5.
SAP GUI	SAP GUI is the GUI client in SAP ERP's 3-tier architecture of database, application server, and client. It is a software that runs on a Microsoft Windows, Apple Macintosh, or Unix desktop, and allows a user to access SAP functionalities in SAP applications such as SAP ERP and SAP Business Information Warehouse.
SAP HANA	SAP HANA (high-performance analytic appliance) is an application that uses in-memory database technology that allows the processing of very high volume of real-time data in a short time. The in-memory computing engine allows HANA to process data stored in RAM as opposed to reading it from a disk.
SAP Landscapes	SAP system landscape is defined as an arrangement of SAP servers. SAP has a methodology of running projects. As per this methodology, common practice is to create a 3 or 4 system landscapes. Normally, there will be Sandbox system (rough work system), Golden client (configuration stored here), Development system (Development work done), Quality System (Most of testing goes here), and Production system (real-time server). Work done will be moved from one system to another using Transport Requests (TRs) which will be generated when you make any changes in any system.
SAP Production System	Production system is where real-time things happen. End-users in client will start posting accounting, FI, S&P, SD, PS, HR, and other implemented modules as part of configuration done in the Development system. TRs will be moved from Development to Production once testing is complete in the Quality system. If there is any issue in the Production system, end-users will raise that as a ticket with a priority label attached to it. You, as support SAP consultant, must look into the issue by login into Production where you have only 'Display' access. Looking at the issue, do the necessary changes in Development system, generate the TRs, move it to quality system, do the testing, ask the end-user to do the same and once confirmed, move the TR to production to mitigate the error.

Terms	Description
SAP Quality System	Quality System is used to test the whole configuration; technically and functionally. Without proper testing, there will be lot of errors in the Production system which is not acceptable by any client. SAP consultants will have complete 'Change' access up to here. In the remaining Production client and Golden Client, functional consultants will not have 'Change' access but only 'Display' access just to monitor its status. In some clients, technical consultants (ABAP, BW, etc.) will not have any access to production. Only BASIS consultants will move the Transport Requests (TRs) generated by technical consultants to the Production system.
SAP S/4 HANA	SAP S/4 HANA is fully built on the most advanced in-memory platform - SAP HANA - and is designed with the most modern user experience (UX) - SAP Fiori. It delivers digitized end-to-end processes to help enterprises across industries run simple in the digital economy.
SAP Test Environment	A technological and business setting that is used to control the execution, observation, and evaluation of testing. There are different test environments to suit the test objective, such as Unit Testing, Integration Testing, Performance Testing, and User Acceptance Testing. Each of these test environments must be established prior to any testing effort.
Transaction	The classification of postings in various SAP application components based on various business points of view. For example - i) Enter an invoice, ii) Post a good receipt, iii) Create a confirmation. Using transactions, the data flow is controlled between various application components.
Transaction Code (T-code)	Sequence of characters that identifies a transaction in the SAP System. A transaction code can contain up to 20 characters and should always begin with a letter. Permitted characters are letters from A to Z, numbers from 0 to 9, and the underscore. To call a transaction, you enter the transaction code in the command field and choose Enter.
Transactional data	Data related to a single business event such as a purchase requisition or a request for payment. For example, when requisition is created, SAP creates an electronic document for that particular transaction. SAP gives the transaction a document number and adds the document to the transaction data that is already in the system. Whenever a transaction is completed in SAP, that is, when a document is created, changed, or printed, this document number appears at the bottom of the screen.
Transport	The transfer of SAP System components from one system to another. The components to be transported are specified in the object list of a transport request. Each transport consists of an export process and an import process. The export process reads objects from the source system and stores them in a data file at operating system level. The import process reads objects from the data file and writes them to the database of the target system. The SAP System maintains a transport log of all actions during export and import.
Upload	The process of loading consolidation-relevant data from a data file or a front-end system into the SAP Consolidation system.
User Acceptance Test	A user delivery system review on various platforms before delivery. This is the basis for the acceptance of Software Applications, Products, or Services. The values and conditions that are used to judge and determine that the business solution meets the stated requirements are called Acceptance Test Criteria.

Terms	Description
User Interface	The software layer containing visual presentation. It consists of a set of technical features and functions used to exchange information with a system. In an ABAP-based SAP system, the user interface covers all control elements of an ABAP program. This includes the graphical user interface (GUI) in a window and the function keys and other keys of the input device (keyboard or other hardware component that simulates a keyboard, such as a bar code reader). In Web-based applications, the user interface is realized in Web browsers by Server Pages or Web Dynos.
User Interface API	A programmable application interface (API) to the SAP Business user interface. The UI API consists of a collection of DCOM objects that provide access to the application forms, controls, and menus.
User Profile	The collection of “authorizations” a user or set of users are granted in order to perform transactions related to their jobs.
Variant	A set of filter settings and input parameters for a KPI or a report. Variants are global in nature and can be created without reference to a particular KPI or report. A variant can be an instance of a presentation that contains drilled-down data for specific variables. For example, instances can be created for different countries, regions, periods, etc.
Z-Code	A transaction code is used to access functions or running programs (including executing ABAP code) in the SAP application more rapidly. The alternative to using and having to know the transaction codes is to set up a favorites menu which is a customized menu established by the user.

D. Components

This service provides the following items:

Name	Description
Package Server	The package for the usage of Leap SAP Cloud and Managed Services
Backup Solutions	Enterprise backup Services
Monitoring	Realtime SAP Monitoring Services
Managed Services	SAP Managed Services
Help Desk Support	24/7 Support and Services

E. Contract number and standard provisioning

Optional items such as minimum contract number, maximum 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 bundled backup services, monitoring services, 24/7 support services
- Optional: Firewall, Antivirus, and Cross Connection

F. Information to be provided by the customer

1. Operations manager information

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 on the configuration sheets for LSA centralized customer information purpose.

G. Information provided to the customer

- For all your contracted Leap SAP Cloud and Managed services, your login credentials to the help desk portal will be provided to access the SAP monthly report
- Information on how to open a ticket with the help desk
- Information regarding the responsible SAP engineer for your account

III. Feature specifications

A. Package

It is a basic package which offers an SAP Cloud and Managed Services portfolio tailored to customers. Our Cloud service certified by SAP encompass on-demand infrastructure and on-demand services for SAP products.

Items	Specifications
Contract unit	1
Min. No. of Contract units	1
Max. No. of Contract units	Unlimited
Contract Terms	System environment availability is planned for the CLIENT’s use 24 hours per day and 7 days per week excluding maintenance windows and mutually agreed upon down time
Termination Terms	Advance notification before 30 days

Only Windows license by SPAL on Leap GIO Cloud, Leap VPS, or SAP Cloud and Managed Services is provided, the technical support is not provided. If technical support for Windows is required, customers shall purchase it separately and directly from Microsoft.

B. Managed services

1. SAP core operation support

- System monitoring
- Monthly report
- Technical operations support

2. SAP core technical support

- Technical hotline support
- Technical administrator support
- Database administrator support
- Operating system support
- SAP security management
- Liaison with SAP vendor, hardware vendors, and other 3rd party vendors

3. SAP infrastructure services

- Fully configured SAP hardware with no single-point-of-failure on critical components hosted at main datacenter
- High availability network infrastructure with diverse data paths
- Network operation
- Enterprise backup and recovery management system

- Offsite preparation for recovery management

4. SAP help desk

- Help desk support
- Technical support - 2nd and 3rd level assistance
- SAP monthly report

IV. Service terms and conditions

A. General terms and conditions

In order to use the Leap SAP Cloud and Managed Services, 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 SAP Cloud and Managed Services** (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.

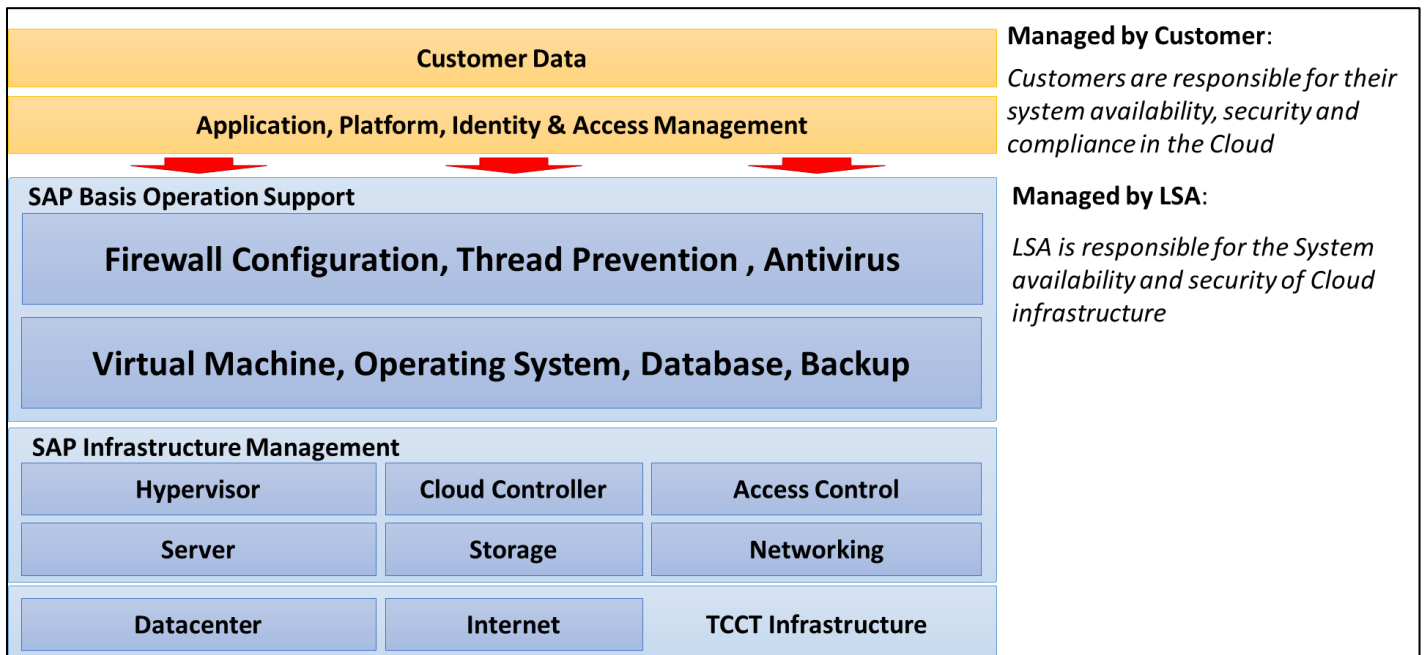
C. Terms of agreement

As a customer, you must also agree to the following terms upon subscribing to the service:

- The service assumes that its user has a clear understanding on all specifications and features outlined for the Operating system administration, SAP database support, SAP security management, SAP transport management, SAP client management, SAP backup management, SAP service level monitoring and report, SAP operation support, SAP helpdesk troubleshooting, and that the service is used by a BASIS engineer (SAP Certified Professional or having equivalent qualifications) experienced in design, Implementation, and operation
- Without a qualified BASIS engineer, these following problems may occur:
 - All features of the service may not be fully utilized
 - Unexpected failure, including stop and loss of virtual machines
 - The service will no longer be usable due to usage that violates the notes and the restrictions
- If you do not have a qualified BASIS engineer, LSA is able to provide technical assistance with regards to design, Implementation, and operation. Technical assistance is a separate and chargeable service
- Prior to the signing of the service contract, you are required to read through and agree to all notes and restrictions described in all relevant documents for Leap SAP Cloud and Managed Services
 - Depending on the nature of the service you subscribed to, there might be circumstances whereby certain technical restrictions are not inflicted upon your usage, which is not in accordance with what is set forth in the notes and restrictions
 - If an error occurs due to violations of the notes and restrictions such that it requires re-installation by LSA, the re-installation service will be charged. However, we do not guarantee the proper functioning of the system after re-installation is carried out
- This Service Specifications document, as well as your service usage aspect and application, shall be based on the license agreement of SAP Services who may change the license agreement. The Service Specifications and your service usage are subject to changes or further restrictions. Under this circumstance, you are required to comply with the changes entirely or terminate the contract.

V. Shared responsibility model

Customer: <ul style="list-style-type: none"> • Customer Data and Business process • Application Management (AMS) • SAP Licenses
Leap Solutions Asia: <ul style="list-style-type: none"> • SAP Cloud Infrastructure: Server, Storage, Network, High Availability and Backup • SAP Cloud Management: Hypervisor, Cloud Controller, Access Control • SAP Database: HANA, Oracle, DB2, Sybase, MSSQL • SAP Service: NetWeaver, Java Server, ABAP Server • SAP Application: Business Suite, Business Warehouse, Portal • Disaster Recovery • Data Center Facilities • Operation System • Network & Firewall, IPS/IDS, Load Balancer, Web Application Firewall (WAF) • Data Protection (Backup, Encryption) • Internet Access



Detailed scope of works and assigned responsibilities are listed below:

The respective responsibilities of LSA and the CLIENT and their subsidiaries are set out in the matrix shown below. The symbols in the responsibility matrix shall have the following meanings:

P – Perform the Services; and

A - Provide reasonable assistance to the Party responsible for performing the Services

SLO - Service Level Objectives (information technology services)

A. SAP implementation

Responsibility Matrix	Client	Leap	SAP Consulting
Project Preparation			
1. Define hardware size	A	A	P
2. Prepare datacenter facility (server, storage, and network)	A	P	A
3. Define scope of service between SAP Basis and Functional	P	A	A
Business Blueprint			
1. Prepare technical infrastructure specification (PRD, QAS and DEV) including connection to all interface system	A	A	P
2. Provision PRD, QAS, and DEV systems	A	P	A
3. Define SAP Client strategy on PRD, QAS, and DEV systems	A	A	P
4. Implement transport management on PRD, QAS, and DEV systems	A	A	P
5. Prepare network (LAN and WAN) and PC	P	A	A
6. Define authorization requirement and design authorization	A	A	P
Realization			
1. Provision SAP production server	A	P	A
2. Implement SAP production failover environment (cluster)	A	P	A
3. Implement SAP backup strategy	A	P	A
4. Setup SAP print server	A	P	A
5. Setup SAP printer configuration (format type, device type)	A	A	P
6. Deploy SAP GUI	P	A	A
7. Functional for Unit Test, Integration Test, UAT	A	A	P
8. Test SAP performance	A	A	P
9. Support for SAP Going Live Check	A	P	P
10. Set up administrative procedures for roles and authorizations	A	A	P
Final Preparation			
1. Execute technical system tests	A	P	A
2. Prepare SAP Basis documentation (installation, SAP Basis configuration and SAP standard support guideline)	-	A	P
3. Train IT operation on SAP Basis	A	A	P
4. Support during Pre-Go-Live	A	A	P
Go Live Support			
1. Tune-up SAP performance parameters	A	P	P
2. Support SAP production after Go-Live	A	P	P

B. SAP managed hosting (operation)

Responsibility Matrix	Client	Leap	LSA SLO
SAP Core Operation Support			
1. Systems Monitoring			24x7
▪ Operation batch run monitoring	A	P	
▪ Backup monitoring and verification	A	P	
▪ Update task monitoring	A	P	
▪ Systems alerts monitoring	A	P	
▪ Servers resource monitoring such as printer queues, available disk space, file systems, etc.	A	P	
▪ Network monitoring, being Availability and Component Devices Monitoring and Network Fault Monitoring and Management in Datacenter.	A	P	
▪ Escalation to Customer’s hierarchical management	A	P	
2. Technical Operation Support			24x7
▪ Approval of schedule for system startup and shutdown	P	A	
▪ Systems startup and shutdown	A	P	
▪ Operation jobs scheduling	A	P	
▪ Approval for hot package and release updates	P	A	
▪ SAP application maintenance, hot packages and release updates	A	P	
▪ SAP application performance tuning	A	P	
▪ Client copies	A	P	
▪ Migration support	A	P	
▪ SAP Transport Management	A	P	
▪ SAP 3 rd party interface to SAP S/4 HANA troubleshooting	P	P	
SAP Core Technical Support			
1. Emergency Technical Support			24x7
▪ Response to incident in accordance with the agreed SLAs	A	P	
2. Technical Administration Support			24x7
▪ SAP application installation and configuration	A	P	
▪ SAP license management and audit	A	P	
▪ Performance monitoring	A	P	
▪ Systems monitoring (applications, database & operating system)	A	P	
▪ Provide input for preventative maintenance	A	P	
▪ Approve identified changes	P	A	
▪ Documentation maintenance	A	P	
▪ Support for user jobs scheduling	P	A	

Responsibility Matrix	Client	Leap	LSA SLO
▪ Application logs monitoring	A	P	
▪ Program dump analysis	A	P	
▪ Printer maintenance and administration	A	P	
▪ Performance troubleshooting	A	P	
▪ System tuning/load balancing	A	P	
▪ Patch set application			
○ Apply SAP Basis patch sets	A	P	
○ Apply bug and security patches	A	P	
○ Acceptance testing	P	A	
○ Approve migration to production	P	A	
○ Migrate to production	A	P	
▪ Early watch analysis			
○ Acceptance of defined thresholds	A	P	
○ Notification of expected increases in loads (e.g. data conversions)	A	P	
○ Define and monitor all alert thresholds	A	P	
▪ Disk space monitoring	A	P	
3. Database Support			24x7
▪ Database for SAP application, installation and configuration	A	P	
▪ Database performance monitoring, table spaces, and indices for growth	A	P	
▪ Database reorganization and optimization (tuning), table space reorganization	A	P	
▪ Database backup and recovery	A	P	
▪ Installation of release updates, maintenance, and patches	A	P	
▪ Perform problem analysis and resolution, coordinate with database vendor and SAP technical support	A	P	
▪ Maintenance and administration of existing operating system and database file systems	A	P	
▪ Approve changes identified as necessary	P		
4. Operating Systems Support			24x7
▪ Operating system installation and configuration	A	P	
▪ Operating system monitoring and performance tuning	A	P	
▪ Backup and recovery of operating system	A	P	
▪ File system and operating systems maintenance, installation of release updates, and patches	A	P	
▪ Perform problem analysis and resolution, coordinate with operating system vendor and SAP technical support	A	P	
5. SAP Security Management			8x5

Responsibility Matrix	Client	Leap	LSA SLO
<ul style="list-style-type: none"> ▪ Create and assign new End Users to the system 	P	A	
<ul style="list-style-type: none"> ▪ Create new authorization objects 	P	A	
<ul style="list-style-type: none"> ▪ Set up profile generator and its associated parameters 	A	P	
<ul style="list-style-type: none"> ▪ Assign new user to authorization profile 	A	P	
<ul style="list-style-type: none"> ▪ Create additional levels of security restrictions i.e. report security, printer security, etc. 	A	P	
<ul style="list-style-type: none"> ▪ Maintain existing security elements i.e. authorizations, profiles 	A	P	
<ul style="list-style-type: none"> ▪ Approve changes to End User authorizations 	P	A	
<ul style="list-style-type: none"> ▪ Approve additional End Users license 	P	A	
<ul style="list-style-type: none"> ▪ Maintain audit trail 		P	
<ul style="list-style-type: none"> ▪ Maintenance of security administration documentation 	A	P	
<ul style="list-style-type: none"> ▪ Security harmonization during version upgrades 	A	P	
6. Liaison with SAP, hardware and other 3 rd party vendors			8x5
<ul style="list-style-type: none"> ▪ Technical Support 			
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Obtain authorization to access and use third party software and hardware as necessary to provide services 	A	P	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Obtain authorization to access all third-party accounts and contracts 	A	P	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Query third party vendors for solutions to problems involving the SAP technology stack, and other applications directly linked with the SAP Applications environment 	A	P	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Log calls with third party vendors 	A	P	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Monitor logged call to completion 	A	P	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Approve proposed solution 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Implement proposed solution 	A	P	
<ul style="list-style-type: none"> ▪ Application Support 			
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Obtain authorization to access and use third party software and hardware as necessary to provide services 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Obtain authorization to access all third-party accounts and contracts 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Query third party vendors for solutions to problems involving the SAP technology stack, and other applications directly linked with the SAP Applications environment 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Log calls with third party vendors 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Monitor logged call to completion 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Approve proposed solution 	P	A	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> ○ Implement proposed solution 	P	A	

Responsibility Matrix	Client	Leap	LSA SLO
7. Backup Management/Maintenance Support			
<ul style="list-style-type: none"> ▪ Backup media management (including media loading as required and offsite & onsite media vaulting) 	A	P	
<ul style="list-style-type: none"> ▪ Definition and implementation of backup and recovery strategy and procedures 	A	P	
<ul style="list-style-type: none"> ▪ Adhere to backup and recovery strategy 	A	P	
<ul style="list-style-type: none"> ▪ Daily, weekly, monthly, and yearly backup of file systems, application, database, and archive logs 	A	P	
<ul style="list-style-type: none"> ▪ Monitor completion of backups 	A	P	
<ul style="list-style-type: none"> ▪ Perform off-site tape storage and management 	A	P	
<ul style="list-style-type: none"> ▪ Backup strategy maintenance 	A	P	
<ul style="list-style-type: none"> ▪ Archiving strategy maintenance <ul style="list-style-type: none"> ○ Develop and maintain archiving strategy and procedures ○ Approve archiving strategy and procedures ○ Adhere to agreed archiving strategy and procedures 	A	P	
<ul style="list-style-type: none"> ▪ Systems/application/database recovery <ul style="list-style-type: none"> ○ Perform database recovery as a result of hardware, software, or application failures 		P	
<ul style="list-style-type: none"> ▪ Operational documentation maintenance 		P	
8. Disaster Recovery Planning			Annually
<ul style="list-style-type: none"> ▪ Test DR service and recovery processes 	A	P	
<ul style="list-style-type: none"> ▪ Test DR Service for Business Data and processes 	P	A	
<ul style="list-style-type: none"> ▪ Maintain complete record of testing documentation 	A	P	
SAP Infrastructure Services			
1. Fully serviced computer room spaces (Tier IV classification based on The Uptime Institute criteria, www.uptime.com) at the Data Center and Disaster Recover Center		P	24x7
2. Fully configured SAP Hardware with no single-point-of-failure on critical components hosted at the main Data Center and its Disaster Recovery Center		P	24x7
3. High availability network infrastructure with diverse data paths		P	24x7
4. Network communication and backup circuits to data center facility	P	A	N/A
5. Network operation, system engineer, and SAP Basis specialist for routine service monitoring and administration		P	24x7
6. Enterprise backup and recovery management system		P	24x7
7. Space for onsite media vaulting necessary for urgent recovery		P	24x7
8. Financing for system hardware, system software and related implementation services (exclusive of application implementation fee)		P	N/A
SAP Help Desk			
1. Help Desk Support			24x7

Responsibility Matrix	Client	Leap	LSA SLO
<ul style="list-style-type: none"> ■ Technical support 			
<ul style="list-style-type: none"> ○ Provide system and necessary infrastructure to automate issue logging, tracking, escalation, and notification 	A	P	
<ul style="list-style-type: none"> ○ Manage service requests, including, acknowledgement, assignment, logging, tracking, escalations, and notifications 	A	P	
<ul style="list-style-type: none"> ■ Application support 			
<ul style="list-style-type: none"> ○ Provide system and necessary infrastructure to automate issue logging, tracking, escalation, and notification 	P	A	
<ul style="list-style-type: none"> ○ Manage service requests including, acknowledgement, assignment, logging, tracking, escalations, and notifications 	P		
<ul style="list-style-type: none"> ■ Provide help desk telephone number 			
<ul style="list-style-type: none"> ○ Technical support 		P	
<ul style="list-style-type: none"> ○ Application support 	P		
<ul style="list-style-type: none"> ■ Change control compliance for help desk services 			
<ul style="list-style-type: none"> ○ Technical support 		P	
<ul style="list-style-type: none"> ○ Application support 	P		
2. Application Support – 1 st level “how to” assistance			N/A
<ul style="list-style-type: none"> ■ Basic application assistance to users in the processing of SAP Applications transactions 	P		
<ul style="list-style-type: none"> ■ Provide support and consultancy for Customer's business processes 	P		
<ul style="list-style-type: none"> ■ Refer business process queries to business process owners 	P		
<ul style="list-style-type: none"> ■ Train and provide advice to all End Users on business process and policy 	P		
<ul style="list-style-type: none"> ■ Assist End Users with interpretation and use of reports 	P		
3. Technical Support – 1st level “how to” assistance			24x7
<ul style="list-style-type: none"> ■ Basic technical assistance to users 		P	
<ul style="list-style-type: none"> ■ Troubleshooting on user workstation 	P	A	
<ul style="list-style-type: none"> ■ Troubleshooting on Local Area Network 	P	A	
4. Application Support – 2nd and 3 rd level assistance			24x7
<ul style="list-style-type: none"> ■ Problem analysis 	P	A	
<ul style="list-style-type: none"> ■ Define and specify requirements to fix problem 	P	A	
<ul style="list-style-type: none"> ■ Coordinate with SAP technical support and/or third-party vendor (if required) to resolve any escalated issue 	P	A	
<ul style="list-style-type: none"> ■ Unit test 	P		
<ul style="list-style-type: none"> ■ Integration test 	P	A	
<ul style="list-style-type: none"> ■ User acceptance testing 	P		

Responsibility Matrix	Client	Leap	LSA SLO
<ul style="list-style-type: none"> ▪ Approve fixes (migrate to production) 	P		
<ul style="list-style-type: none"> ▪ Implement fixes (migrate to production) 		P	
<ul style="list-style-type: none"> ▪ Update end user documentation 	P		
<ul style="list-style-type: none"> ▪ Custom code management services 	P	A	
5. Technical Support – 2nd and 3rd level assistance			8x5
<ul style="list-style-type: none"> ▪ Problem analysis 	A	P	
<ul style="list-style-type: none"> ▪ Define and specify requirements to fix problem 	A	P	
<ul style="list-style-type: none"> ▪ Coordinate with SAP technical support and/or third-party vendor (if required) to resolve any escalated issue 	A	P	
<ul style="list-style-type: none"> ▪ Unit test 	A	P	
<ul style="list-style-type: none"> ▪ Integration test 	A	P	
<ul style="list-style-type: none"> ▪ User acceptance testing 	P	A	
<ul style="list-style-type: none"> ▪ Approve fixes (migrate to production) 	P	A	
<ul style="list-style-type: none"> ▪ Implement fixes (migrate to production) 	A	P	
<ul style="list-style-type: none"> ▪ Update technical documentation 	A	P	
6. Service level reporting		P	Monthly

VI. Service level agreements

A. Service level agreements (SLA) during normal operation and disclaimers

Service	SLAs	Disclaimers
Standard SAP System Availability	<ul style="list-style-type: none"> Production = 99.50% Non-Production = 95.00% 	<ul style="list-style-type: none"> Standard SAP System Availability of Production system running underlining infrastructure, is at least 99.50%. For Non-Production system at least 95.00%
The service Level agreements (SLA) report will be shown in SAP Monthly report.		

B. Service level agreements (SLA) during disaster recovery operation

Service	SLAs	Disclaimers
Standard SAP System Availability	<ul style="list-style-type: none"> Production = 99.50% Non-Production = 95.00% 	<ul style="list-style-type: none"> Standard SAP System Availability of Production system running underlining infrastructure, is at least 99.50%. For Non-Production system at least 95.00%
The service Level agreements (SLA) report will be shown in SAP Monthly report.		

C. Uptime

Uptime is calculated using the following expression:

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

*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:

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

D. Service response time

Leap SAP Cloud and Managed Services system's measures from average dialog response time

Function	Service Response Time
SAP HANA DB	1200 ms
SAP Non-HANA DB	2000 ms

E. Common disclaimers

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

Unless explicitly defined in specific service level agreements, the specifications of devices configuring servers and storage that you use through the Leap SAP Cloud and Managed Services including but not limited to CPU, memory, capacity, bandwidth limits and performance, and of network paths including but not limited to Internet, closed networks, private branch lines, and related network control equipment are not defined in service level agreements. Issues, faults, and performance degradation with any of these specifications/devices have no effect on service levels.

The following circumstances are 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 documents 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 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.

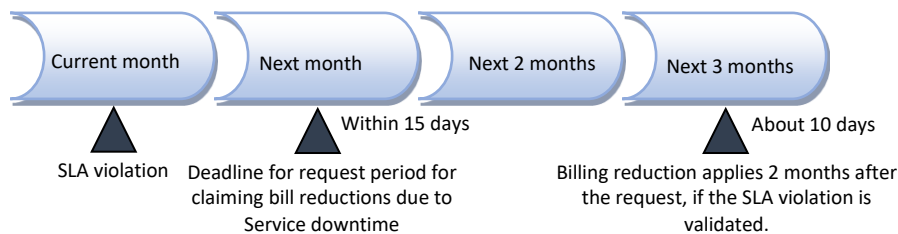
F. Billing reduction due to service downtime

General billing reduction due to downtime of LSA’s services is defined as follows		
Conditions for reduction	Description	
Reduction condition	Claim requirement	Required *Billing reductions due to service downtime are not performed automatically
	Claim method	Fill in the Billing Reduction form given by LSA Note: Please contact your LSA sales representative System ID that experienced the SLA violation Information regarding the period, details and objective evidence of the SLA violation ^{*1*2}
	Claim deadline	On 15 th of the following month after the SLA violation Note: If that day is a non-working day, it will be on next working day.
	Review of claim	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.
Billing reduction details	Amount of billing reduction	10% of monthly contracted fee for the month in which the SLA violation occurred regarding the service that experience the SLA violation ^{*3} Note: This reduction is applied to the monthly service fee for any optional services included with the applicable component
	Invoice that receives the reduction	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. Help desk

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

1. General issue inquiry

Reception Hours	Working hours (8x5)
Contact Information	Phone: (+66) 2-080-9888 E-mail: helpdesk@tcc-technology.com
Enquiry type	Service specifications Clarifying any service explanation details Other technical enquiries
Languages Support	English and Thai

2. Commercial inquiry

Reception Hours	Working hours (8x5)
Contact Information	Phone: (+66) 2-838-8888 E-mail: sales@tcc-technology.com
Enquiry type	Changes, termination, and customized orders. General enquiries
Languages Support	English and Thai

3. Emergency inquiry

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

Reception Hours	24 hours a day, 365 days a year
Contact Info.	Phone: (+66) 81-751-4949 / (+66) 2-080-9888 E-mail: helpdesk@tcc-technology.com / ssc@leapsolutions.co.th
Enquiry about	Failure or issue with SAP services
Languages Support	English and Thai

4. 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:

Impact \ Urgency	High	Medium	Low
High	1	2	3
Medium	2	3	4
Low	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 a customer’s service is affected	20% - 49% of a customer’s service is affected	< 20% of a customer’s service is 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.

5. Required information for inquiry

Required information	Your company name Your system administrator information Your system ID/Name that you contracted
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B. Support scope

Support will be carried out, for failure concerning unique specifications for using the following products, by Leap SAP Services:

- SAP Infrastructure
 - Customer’s SAP Certified server hosted in on-premise or any data center
 - Other SAP Certified cloud resource
- SAP Basis administration covers
 - Operating system administration
 - SAP database support
 - SAP security management
 - SAP transport management
 - SAP client management
 - SAP backup management
 - SAP service level monitoring and report
 - SAP operation support
 - SAP helpdesk and trouble shooting
 - SAP Hotline 24 hours support

C. Maintenance

1. Planned maintenance

Planned maintenance will be conducted for the purpose of maintaining service quality and expanding, maintaining, and preserving equipment. For planned maintenance that will not result in service being suspended, no announcement will be made. If planned maintenance will impact use of the service, notification by e-mail regarding the scope of the impact will be sent one (1) week prior 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 will be conducted in 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.

D. Notes

For security reasons, only pre-registered system administrators may contact the Help Desk. Some or all functionality may be interrupted due to scheduled/emergency maintenance procedures. Security vulnerabilities are both customers and LSA’s responsibilities:

- PaaS under LSA's responsibilities
- Application (SAP) under customers' responsibilities

VIII. Applying, changing, and cancelling

A. Lead time

1. Time taken before servicing

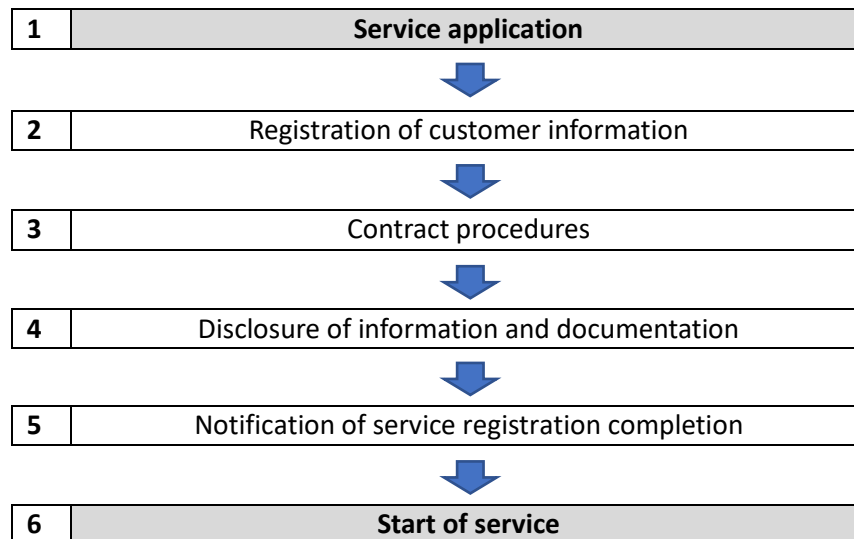
The time required for completion of the service provisioning does not include the day on which the corresponding request is received. The time period below represents the number of days from the business day following the day of receipt by LSA of an application form that contains all the required information.

The time required, from the application for the Leap SAP Cloud and Managed Services to the completion of the service provisioning, is as follows:

Service	Contract Type	Time until service provision
Leap SAP Cloud and Managed Services	New order	Based on project plan and contract agreement

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

2. The flow process till the start of the service



3. Information sent to the customer

The following information will be available to the customer:

- Quotation / General Terms & Conditions / Acceptable Use Policy / Project Completion Report (To be returned signed to LSA after review)
- Service Specifications (this document)
- SAP System Landscape

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 time required to change/cancel a service are as follows:

Service	Contract Type	Time Required
Leap SAP Cloud and Managed Services	Change	Depending on type of change
	Cancellation	One Month

B. Billing start time

LSA will start charging on the day the service becomes available to you.

C. Minimum contract period

The minimum usage period for SAP Cloud and Managed Services is 12 months.

D. Service change

If a change to order additional items is requested, a new quotation will be sent to you and it needs to be reviewed and signed back before any change can happen.

If a change to terminate any contracted items is requested, a request using our stipulated cancellation/termination form is required.

E. Service cancellation

If terminating the service, an application using our stipulated cancellation/termination form is required. After the day of termination, it will no longer be possible to log in to the service.

F. Reference

LSA General Terms & Conditions: <https://www.leapsolutions.co.th/general-terms-conditions/>

LSA Acceptable Use Policy: <https://www.leapsolutions.co.th/acceptable-use-policy/>

G. Disclaimers

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