Service Description – CloudShield for CloudDesk

TITLE	Service Description - CloudShield for CloudDesk
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Contents

1. Introduction

The purpose of this document is to detail the CloudShield for CloudD service according to ITILv3 standards.

It sets out:

- the key features of the service;
- responsibilities; and
- how you can use the service.

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As with all services, we are at times dependent on you, as the Client, to take certain steps to enable us to properly provide the Calligo Service Management. We have described, by way of a RACI matrix, how our responsibilities will be apportioned and what we require from you.

This is intended to help you to identify what we do and, perhaps just as importantly, what we don't do in respect of each service. If you believe any area of responsibility (whether on our behalf or yours) needs to be amended or updated, please contact us at https://calligo.cloud/io.

This Service Description is subject to change from time as time, as our services develop to meet our client's needs. We will notify you in writing of such changes as they occur.

If a conflict exists between the terms of (a) our Master Services Agreement and/or standard terms and conditions and (b) this Service Description, the terms of the documents listed at (a) shall govern.

The Service Description forms part of the service design and is used to document the key elements of the service.

2. Service Information

CloudShield for CloudDesk is a multi-tenant solution for disaster recovery services.

2.1. Key Product Features

- Replication from any Calligo datacentre to any other Calligo datacentre
- Flexibly grow or shrink recovery virtual datacentre resources
- Dedicated storage shares per client
- All Solid State Disk (SSD) storage for virtual machines
- Guaranteed resource availability for reserved resources
- Flexible connection options to DR site (portal only, virtual private network (VPN), Multiprotocol Label Switching (MPLS), Point-to-Point (P2P))
- Replication of desktop master gold builds
- Replication of user persona data
- Independent public DNS names for desktop access in alternate site
- Support for different testing and actual failover configurations
- None disruptive test failovers, live servers continue to operate as normal
- Ability to recover to last 15min of user persona changes (does not include data which is covered under CloudShield for CloudCore)

2.2. Locations of Service

The service is available in the following Calligo locations:

- Jersey
- Guernsey
- Bermuda
- London
- Singapore
- Zurich
- Toronto
- Vancouver

2.3. Relation to other services

The service is dependent on the following services:

- CloudDesk

2.4. Using the service

Client can perform the following with the service:

- Request recovery to alternate datacentre
- Access disaster recovery desktop for testing and live data processing if required
- Request additional recovery desktops

The Client's use of the service is based on the following assumptions; -

- That the Client will follow secure computing best practices
- Be responsible for any remedial work required to its own or third party applications and services, unless otherwise agreed with Calligo.

If the Client fails to meet those assumptions, Calligo will not be able to provide this service in the manner intended, if at all.

2.5. Requesting additional resource

User persona data is automatically replicated for any user who is setup with an active desktop. Desktops provisioned at the recovery site do not have to match the number on the primary site.

Requests to increase the number of recovery desktops will require a service request ticket. This will be actioned according to the Calligo Service Desk response times based upon priority of the request.

The current Calligo Service Desk SLA's are published separately at https://calligo.io/licences.

2.6. Commercials

The latest prices per unit are available from our Account Management team and/or as contained in your SOW.

2.7. Service Levels

Service Availability target = 99.9% per calendar month. The service is available 24 hours 365 days a year.

If availability on a monthly basis falls below 99.9%, we will provide credits for the service affected as described below:

Monthly Uptime Percentage < 9.5%	Service Credit - 10% (of monthly charge)
Monthly Uptime Percentage < 99%	Service Credit - 25% (of monthly charge)

(For further information, please see our Service Level Agreement - https://calligo.io/licences).

2.8. Access to service

Clients can access the service via the CloudDesk client at the alternate URL. Consumption of the recovered VMs is via the network access method purchased at setup. Clients can use any client device supported by CloudDesk to access the disaster recovery desktops. Details of the latest supported list can be found here https://calligo.io/compatiblity

2.9. Levels of Access

Clients can have multiple levels of access (as shown below) providing an increased level of control and adherence to governance.

- Can logon to desktop service and consume desktop

2.10. Responsibilities

The service has split responsibilities to deliver all functionality and the following responsibilities are defined for each party:

2.10.1. RACI Definitions

- Responsible - Those who do the work to achieve the task. There is at least one role with a participation type of responsible
- Accountable - The one ultimately answerable for the correct and thorough completion of the deliverable or task, and the one who delegates the work to those responsible. In other words, an accountable must sign off (approve) work that responsible provides. There must be only one accountable specified for each task or deliverable
- Consulted - Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communication
- Informed - Those who are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication

Matrix

Item	Responsible	Accountable	Consulted	Informed
Specification of compute, networking and storage requirements	Calligo	Calligo	Client	
Configuration of compute, networking and storage requirements	Calligo	Calligo	Client	
Configuration, monitoring and management of CloudShield components	Calligo	Calligo		
Monitoring and management of replication status	Calligo	Calligo		Client
Creation of DR Runbook (listing all activities for each party)	Calligo	Calligo	Client	
Decision to failover CloudShield protected systems to DR location	Client	Client	Calligo	
Failover of CloudShield protected systems to DR location	Calligo	Calligo	Client	
Failback of CloudShield protected systems to original location	Calligo	Calligo	Client	
Testing and issues resolution of application systems following failover or failback	Client	Client	Calligo	
Annual test failover of CloudShield protected systems to DR location	Calligo	Client		
Maintaining a suitable client device to connect to the service	Client	Client	Calligo	
Notify Calligo of any changes to the number of desktops to be available at the DR site	Client	Client		Calligo
Protection of any VMs or data not covered under CloudShield that will be required on the destination site	Client	Client	Calligo	

2.11. Documentation and Training

The end user documentation for this service is found on the Calligo Supportal, this will be updated as and when the service is changed. https://viaje.cloud/support

There is no formal training provided by Calligo for this service.

2.12. Standards and Policies

This service is compliant with the following compliance standards and policies up to the responsibility boundaries:

- ISO 9001
- ISO 27001
- SSAE 16 SOC 1 – Type 1

2.13. Backup and Restore

The service protects user persona data and desktop master images. This allows for desktops to be recovered in the event of a site failure. Client data is stored outside of the CloudDesk service on a CloudCore server which should be protected by CloudCopy (available on further request)

Calligo backup all management infrastructure and configuration to ensure that recovery of service can be made in the event of a failure of the service as a whole.

There are no restores for this service other than in the event of a whole service failure. Client side failures are classified as a failover. The data is replicated in near real time and as such will represent the actual data at the point of failover at that checkpoint.

2.14. Scheduled maintenance windows

The service requires a regular maintenance windows to ensure that the service is updated and patched as required by Calligo's standards. The scheduled maintenance is taken into account by any SLA for the service so as not to reduce its overall availability.

Details of all scheduled maintenance windows can be found at – https://calligo.io/licences.

3. Appendices

3.1. Appendix A – Availability Table

Availability %	Downtime per month
90% ("one nine")	72 hours
95% ("one and a half nines")	36 hours
97%	21.6 hours
98%	14.4 hours
99% ("two nines")	7.20 hours
99.5% ("two and a half nines")	3.60 hours
99.8%	86.23 minutes
99.9% ("three nines")	43.8 minutes

3.2. Appendix B – Glossary

256bit AES – An encryption algorithm that keeps data secure. The larger the bit number the harder it is for the data to be decrypted without the key.

Active Directory Federation Services (ADFS) – A Microsoft Windows service to allow two domains to exchange authentication credentials via an encrypted connection over the internet**.**

Active Directory Synchronisation – A tool to copy user accounts from one domain to another and keep the passwords in synchronisation.

Application consistent – A point in data where the application that uses it will always see it as valid as opposed to crash consistent where the data may be incomplete.

DNS (Domain Name Service) – A computing service used to translate an IP address to a name. Used both for public domains such as www.xyz.com and private internal domains.

GB – Gigabyte of capacity, 1 GB = 1024 Megabytes.

Gold Build – Template from which other virtual machines can be provisioned from. Contains all the required OS and software pre-installed.

High Availability – A configuration that provides for the loss of components within a site and maintain the service that is being delivered without the need to recover from backup or switch to another site.

Infrastructure as a Service (IaaS) – A service that provides computing resources such as memory, CPU, networking and disk to allow for virtual machines to be hosted in a resource consumption based model.

Input Output Operations Per Second (IOPS) – A unit of measurement for disk storage performance.

ITILv3 – Version 3 of the Information Technology Information Library which is a collection of best practice processes and documents to manage an information technology company.

Multiprotocol Label Switching (MPLS) – A network connection for high performance networking over the internet that can use quality of service to provide better reliability.

MB – Megabyte of capacity, 1 MB = 1024 Kilobytes.

Multi-tenant – Shared service or resources to provide a commodity of scale service where users pay for a subset of the service or resources as is required by the user.

Platform – A grouping of technology and services that provide the overall service that is being delivered.

Platform as a Service (PaaS) – A service that provides tools to create computer applications without the need to run virtual machines that have operating systems (OS). The service is consumed on a resource consumption model.

Point-to-Point (P2P) – A private physical network connection between two locations not over the internet.

Protection Group – A group of virtual machines that are replicated together for consistency.

Public IP Address – A unique computerised address used in computer networks to define destinations for communication on the internet.

Recovery Time Objective (RTO) – The time in which a protected item can be made available for use after recovery.

Recovery Point Objective (RPO) – The point at which any protected item can be recovered to. This stipulates the potential amount of lost time or data.

Single sign-on – The use of a single credential to access multiple services or applications.

Software as a Service (SaaS) – A service that provides access to an application for use without access to any associated OS or infrastructure required to run that application. The service is consumed on a resource consumption model.

Solid State Disk (SSD) – A disk with no moving parts offering greater performance than traditional hard disk drives (HDD).

Storage Volumes – A logical partition of a storage system used to hold specific data.

TB – Terabyte of capacity, 1 TB = 1024 Gigabytes**.**

Two Factor Authentication (2FA) – The use of a secondary one time passcode in addition to a username and password to gain access to a service or application.

User Persona – Settings and data specific to a user's configuration of an operating system or application. Allows for these settings to be transferred between virtual machines.

Virtual datacentre (vDC) – A logical representation of a physical datacentre's resources such as CPU, Memory and Disk.

Virtual Desktop – A virtual representation of a physical desktop comprised of memory, CPU, network and disk. The virtual desktop runs an operating system and applications.

Virtual Machine (VM) – A virtual representation of a physical server or desktop comprised of memory, CPU, network and disk. The virtual machine runs an operating system and applications.

Virtual private network (VPN) – An encrypted network connection over the internet between two end points.

4. Document Control

DOCUMENT OWNER & APPROVAL
The is the owner of this document and is responsible for ensuring that this procedure or process is reviewed in line with the review requirements of Calligo's Integrated Management System.
Approved by Director of Product & Service Development, Calligo on 01 August 2019

CHANGE HISTORY RECORD				
VERSION	DESCRIPTION OF CHANGE	AUTHOR	APPROVAL	DATE OF ISSUE
1.0	Initial Issue	Mark Thomas		30/10/2017
1.1	Revision after review by Julian Box	Mark Thomas	Julian Box	09/11/2017
1.2	Added RACI matrix, glossary of terms and amendments	Mark Thomas		04/12/2017
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