

# Business Continuity Whitepaper

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## Introduction

With over 15 years experience designing and delivering robust cloud based software solutions to UK businesses, we've learnt that service-interrupting events can occur at any time. That's why we work hard to ensure we deliver consistent performance so that your business can continue without disruption.

This paper outlines the systems of prevention and recovery that we apply to Quill's suite of cloud software products and services.

## Infrastructure

To ensure **fast, scalable and consistent** performance, Quill's core server infrastructure is built on Google Cloud Platform (GCP) **London UK region**, which is divided into three isolated zones each with independent power, cooling, networking and control planes - effectively three data centres in one - with Quill's servers distributed across these zones.

## Power, cooling and fire prevention

Redundant power systems, diesel engine backup generators, cooling systems, fire detection and suppression equipment and remote monitoring are all employed to keep things running **24x7** and ensure uninterrupted services.

## Connectivity

As **Premium Tier** clients, our services are delivered over GCP's well-provisioned, low latency, highly reliable network: with at least three independent paths between any two locations on the network to ensure that traffic flows even in the event of a disruption.

## Resilience and scalability

Quill's server resources are load balanced across three zones to provide a **highly available** service to our users and we can quickly **scale up** when demand increases to prevent any degradation in performance to existing users.



## Transparent maintenance

**Live migration** ensures there is no disruption to Quill's systems when scheduled maintenance work occurs, such as: firmware or operating system upgrades, hardware replacements, network or power grid maintenance etc. This is automatic and transparent.

We may also schedule specific maintenance windows from time to time (outside of normal working hours) to perform routine checks or updates. We inform our users well in advance of this.

## DDoS protection and mitigation

Our software and network architecture is designed with best practices in mind such as: proxy based load balancing; API rate limiting; and the ability to quickly scale up. This, in addition to other GCP features, ensures our architecture is as resilient to Distributed Denial of Service attacks as possible.

## Sustainability

At Quill, we strive to reduce our environmental impact and choose Suppliers that support that ethos. GCP is committed to **carbon neutral** operations and purchases enough renewable energy to match or exceed consumption for all of its operations globally.

## Uptime and monitoring

Quill targets an overall Service Level Objective uptime of 99.9% as detailed in your contract.

We use a combination of monitoring methods including: **real time metrics** that show us the current health of our servers and web services; **automated alerts** when certain thresholds are exceeded; and **historic analysis** to identify trends or unusual activity.



## Disaster recovery (DR)

The multi-regional and multi-zonal nature of our infrastructure forms the core of our DR planning. Please refer to the “Service Levels and Credits” section of your contract which detail our **Recovery Time** and **Recovery Point Objectives**.

## Multiple regions

We will always default to the **London UK region** except in extreme circumstances where we may utilise an alternative region, but always within the EEA.

## Data and backups

Backups are taken hourly, daily (overnight) and, in the case of Interactive Accounts, prior to month-end completion. All backups are stored **cross-regionally** within EEA and **multi-versioned** with **encryption-at-rest** employed throughout. In rare cases, we may use these backups to restore data and maintain high reliability. Backup data is retained for limited and defined timelines after which it is deleted.

## Security

Please see our Security Whitepaper for full details about Quill’s security strategy.

## Changes to this document

Quill’s Business Continuity and Security strategies are dynamic and evolving processes undergoing constant scrutiny and evaluation and are therefore subject to change without notice.

