

The Server Labs G-Cloud 14 Service Description

G-Cloud 14 Service Definition – Weka Data platform Services

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1 Introduction

This document provides you with a description of each of The Server Labs' Weka Services. HPC and Big Data within the cloud requires a data platform capable of scaling to Petabytes and even Exabytes of data. Weka is one such platform that can achieve that scalability.

2 The Weka Data Platform

The Weka data platform is a high-performance, scalable, and flexible storage solution designed for modern data-intensive workloads. Here's a concise summary of its key features:

- **High performance:** Weka leverages parallelism and distributed computing to deliver exceptional performance, enabling organizations to process large volumes of data rapidly.
- **Scalability:** It offers seamless scalability, allowing organizations to easily scale storage capacity and performance as their data needs grow without disrupting operations.
- **Flexibility:** Weka supports various data types and workloads, including big data analytics, artificial intelligence (AI), machine learning (ML), high-performance computing (HPC), and cloud-based applications.
- **Parallel File System:** It utilizes a parallel file system architecture that distributes data across multiple nodes, enabling concurrent access and high throughput.
- **Advanced data management:** Weka provides features such as data tiering, snapshots, replication, and data protection to ensure data integrity, availability, and compliance.
- **Integration with cloud platforms:** It seamlessly integrates with public cloud platforms such as AWS, Azure, and Google Cloud Platform, enabling hybrid and multi-cloud deployments.
- **Real-time analytics:** Weka's platform supports real-time analytics with low-latency access to data, enabling organizations to derive insights and make informed decisions quickly.
- **Ease of management:** It offers a user-friendly management interface and automation capabilities, simplifying storage provisioning, monitoring, and maintenance tasks.

If you wish to receive further information please contact sales@theserverlabs.com

3 TSL Weka Services

TSL's Weka services typically covers the following areas:

1. **Plan Weka Cloud Deployments:** Depending on how much data is involved, the number and size of servers will be different

2. **Weka Data Platform Implementation:** A typical implementation will include the following steps.
- a. **Set-up the Cloud Infrastructure**
 - b. **Set up the VPCs for the Weka deployment**
 - c. **Define the networking for any inter VPC or on-premise connectivity**
 - d. **Develop the IaC for the deployment**
 - e. **Define and implement the security for the project**
 - f. **Set-up the Weka clients**
 - g. **Testing**
 - h. **Implementation of Monitoring and Governance**

The Server Labs has deployed many Weka clusters in the AWS Cloud capable of handling Petabytes of data. In Genomics England we have deployed workloads that retrieve many Petabytes of data from Weka.

4 The Server Labs

The Server Labs (TSL) is a 100% privately founded IT Consultancy and Software Development Company with headquarters in the UK and offices in Germany and Spain and now established as a leader in Cloud Computing services. The Server Labs focuses on the design and implementation of IT architectures and advanced software engineering projects working with the most advanced technologies to provide its clients cost-effective, scalable and high performance solutions. The Server Labs has been using the Cloud since 2006 and working with its customers in the cloud since 2008 and was one of the first European partner's of Amazon Web Services.

The Server Labs has clients in many different industry areas such as space, finance and telecoms. We collaborate with our clients to obtain success, committed to innovation, enjoying what we do every day and growing with every challenge.

The Company's mission is:

- To provide **expert services** in the field of IT architectures and advanced software engineering
- To **improve radically the software development process**
- To **help organisations achieve better business results through the correct use of latest technologies**
- To have **100% satisfied clients**
- To create high quality **innovative software solutions**, providing added value to our customers

The specific value, experience and expertise that The Server Labs can provide for e-LfH are:

1. **Technical excellence** and capability to act as lead on architectural decisions and as technology expert in software and system subjects.
2. **Architecture experience at software and system level.**
3. **Proven experience in HPC and Big Data Projects**
4. **Real cloud computing experience, at IaaS, PaaS and SaaS levels, and for both compute power as well as storage solutions in different clouds.**
5. **Quality control based on ISO9001 for all software systems developed**
6. **Technological excellence**, especially in the main technologies required for the project, including HPC, web services and security technologies.

All our architects and engineers are experts with an average of 10 years' experience in the planning, design and development of complex software systems. Our multinational team has been a pioneer in Java technologies, Object Oriented Analysis and Design and distributed architectures, and has the required hands-on experience in many state of the art technologies. In the last few years, The Server Labs has positioned itself as a leader in Cloud computing services, helping organisations move to the Cloud at all levels. For more information on current projects being undertaken by The Server Labs in Cloud computing, please see Appendix B.

Our experience working across several industries has given us a good understanding of the different requirements so we are able to provide the solution that best suits each particular business and reuse the lessons learnt in the other industry sectors when applicable. Our clients span organisations such as Banks (BNP Paribas, BBVA, Caja Madrid) , the European Space Agency (ESA), Madrid Underground (Metro de Madrid), ICCAT, Amadeus, TRAGSA, TIBCO (a leader in Messaging and Service Bus architecture systems), O2 and Telefonica, Vodafone, ORACLE, several, Sun Microsystems, TUI and Marsans travel, etc.