

Vertex in Health Cloud Secure Laboratory Information Management System (LIMS)

Service name

Secure Cloud Laboratory Information Management System (LIMS)

Service description

The Secure Cloud Laboratory Information Management System (LIMS) is a cloud-hosted software service supporting secure, auditable management of laboratory and diagnostic workflows. The service enables controlled access to patient data, imaging, and reports for patients, clinicians, and laboratory staff. It supports integration with clinical systems, secure data sharing, workflow tracking, and governance, enabling efficient, paperless laboratory operations aligned with NHS and public sector requirements.

What the service does

The Vertex Laboratory Information Management System (LIMS) is an enterprise-grade, cloud-hosted service designed to support laboratory and diagnostic operations across healthcare organisations. It helps streamline laboratory processes by providing a single, secure platform for managing patient information, laboratory workflows, images, reports, and communications.

The service supports end-to-end laboratory workflows, from appointment booking and patient data capture through to result access, reporting, and follow-up. It enables controlled access for patients, clinicians, laboratory staff, and external users, using role-based permissions to ensure information is shared appropriately.

Vertex LIMS is designed for use across diverse healthcare settings, including NHS and public sector environments. It supports integration with other clinical and administrative systems, enabling data exchange and reducing manual handling of information. The service provides auditability, security controls, and configurable workflows to support governance, compliance, and operational oversight, while enabling efficient, paperless laboratory operations at scale.

Service features

The service provides the following features to support secure, efficient laboratory and diagnostic workflows:

- Configurable user interface with selectable themes to support a personalised portal experience
- Secure online access to authorised laboratory reports and results
- Secure access to imaging studies with role-based permissions
- Controlled sharing of images and reports with authorised users

- Image viewing and manipulation tools available based on user role
- Download of DICOM images where permitted for clinical use
- Download of PDF reports for offline reference and record keeping
- Integrated chatbot providing guidance and assistance within the portal
- Secure bi-directional messaging between patients, clinicians, and staff
- Appointment booking and workflow tracking for patients and laboratory teams

Service benefits

The service delivers the following benefits for patients, clinicians, and organisations:

- Reduces administrative workload through online booking and self-service access
- Improves collaboration through secure sharing of images and reports
- Provides visibility of patient status across laboratory workflows
- Supports timely access to images and reports through clear availability indicators
- Enables paperless processes through secure document upload and access
- Helps maintain accurate patient records through controlled data access
- Supports flexible access across devices and locations
- Provides access to historical patient information to support clinical decision-making
- Integrates with multiple clinical and administrative systems
- Supports more efficient laboratory operations and reduced workflow delays

Integration and data exchange

The service is designed to integrate with other clinical systems, including imaging platforms and electronic patient record systems.

- Supports integration with PACS systems to obtain secure study viewing tokens
- Enables image viewing with appropriate patient access rights
- Supports standards-based integration using HL7, FHIR, and API-based interfaces
- Allows flexible configuration to support local system architectures

Security and logging

The service includes security controls and audit features to support governance and compliance.

Authentication

- Two-Factor Authentication (2FA) available via authenticator applications or email-based one-time passwords
- Security settings are configurable at user profile level

Audit and activity logging

- Records user interactions, access patterns, session duration, and study access
- Captures login information including public IP address
- Provides a comprehensive audit log for oversight and assurance

Governance and compliance logging

- Super-users can view all shares created, accessed, and email delivery status
- Supports GDPR-aligned access monitoring and traceability

Administration and configuration

The service includes administrative controls for secure configuration and oversight.

Super-user administration

- Configuration of automated email templates for study and report sharing
- Ability to revoke access at patient or individual share level
- Removal of user credentials associated with a patient where required

User management

- Role-based configuration options dynamically presented based on user type
- Access and features are restricted according to assigned role
- Administrative controls support safe and appropriate system use

Role-based access and features

The system supports multiple user roles, each with defined access permissions.

Supported user roles include:

- Super Administrator
- Administrator
- Patient
- Referring Physician
- Teleradiologist

User accounts for patients and external users can be created automatically when cases are shared through the portal.

Patient and guest users

- View a worklist of shared cases, including case expiry dates
- Access images and reports linked to each case
- Upload permitted document types, configurable by administrators
- Search cases using defined criteria such as date range or case reference
- Confirm identifiers to enable automatic linking to the RIS where applicable

Referring physicians

- Access a worklist of their own cases and shared cases
- View associated images and reports
- Share visits or accessions securely with other authorised users

How users access the service

The service is accessed through a secure web-based portal and is available across supported devices. Access is controlled using role-based permissions and configurable authentication settings.

Service constraints

- The service requires network connectivity and supported browsers
- Integration capabilities depend on the availability of external systems and interfaces
- Local configuration may be required to support specific workflows

Security and compliance

- Data is protected using encryption at rest and in transit
- Access is controlled using role-based permissions and audit logging
- The service supports NHS-aligned information governance and data protection requirements

Pricing

The service is provided on a subscription basis. Pricing is based on service configuration, number of users, and usage levels. Full pricing details are published separately in the G-Cloud pricing document.