

IsoStock Cloud - Service Definition

INTRODUCTION

This document provides the Service Definition for IsoStock Cloud. It describes the service's scope, functionality, delivery model, and operational boundaries for procurement and customer assurance.

SCOPE

This document is intended for prospective and existing customers, procurement and assurance teams, and system owners responsible for the management of radioactive materials.

SERVICE OVERVIEW

IsoStock Cloud is a secure, cloud-hosted software service designed to support organisations in the controlled management, tracking, and reporting of radioactive materials. The service provides end-to-end visibility of radioactive substances from receipt through use, movement, decay, disposal, or transfer off-site.

IsoStock Cloud is used in regulated environments, including universities, research institutions, healthcare, nuclear medicine/radiopharmacies, pharmaceutical companies, defence and other manufacturing. The service supports regulatory record-keeping and reporting obligations while allowing organisations to configure workflows, limits, and structures to reflect local licensing conditions and operational practices.

The service is provided as Software-as-a-Service (SaaS), requiring no customer-managed infrastructure.

CORE CAPABILITIES

IsoStock Cloud provides the following core capabilities. While these sections summarise the service's core functional areas, IsoStock Cloud includes a broad and detailed set of configuration options and operational features within each area. These are designed to support differing sector requirements, organisational structures, and working practices, allowing the customer to adapt their usage over time without requiring custom development. The sections below describe the capability scope rather than an exhaustive list of individual options.

Radioactive Material Lifecycle Management

IsoStock Cloud tracks all areas of the radioactive material lifecycle, with automatic decay calculations based on referenced half-life data. Calculates activity values to the minute, and reports in units applicable to the customer's jurisdiction.

Open Sources

Maintains a complete and auditable record of radioactive materials held on-site, including receipt, storage, movement, subsampling, dividing, use, synthesis, transfer, decay, disposal, dispensing, manufacture, and dose administration. Each material is tracked on a single record, with all associated transactions recorded chronologically, providing full traceability of its parent/child relationships throughout its lifecycle.

Sealed Source Management

Supports the management of sealed sources, including source identification, location tracking, ownership, leak testing, calibration, and disposal. Documents, photos and links to other data can be attached. The service highlights overdue tests and checks and supports reporting against licence conditions.

Waste and Disposal Management

Provides comprehensive management of radioactive waste, including direct disposal routes and accumulated waste held in containers and decay stores. Waste containers can be configured by type, waste stream, and location, with contents tracked and decay-corrected individually by nuclide.

Disposal consignments can be prepared, tracked, decay-corrected to future collection dates, and recorded as disposed of upon leaving the site. Complete historical records are retained and searchable.

Regulatory Limits and Compliance Support

IsoStock Cloud supports the configuration and monitoring of regulatory limits for holdings, accumulations, disposals, acquisitions, and sealed sources. Limits can be defined by nuclide, nuclide group, disposal route, waste type, or licence grouping, and can be applied at the site or departmental level.

The service provides visual warnings as configured thresholds are approached or exceeded. Calculations are decay-corrected and reflected in summary and overview reports aligned to the defined regulatory structure.

Reporting, Audit and Records

The service offers comprehensive reporting and search capabilities across all data. Reports can be filtered by date, department, user, location, and other parameters, and exported in commonly used

formats such as PDF and Excel.

All data changes are fully auditable. When a record is edited, the service records the user, date, time, reason for change, previous values, and new values. Audit records can be viewed on screen or reported over a defined period.

Reports are designed to reflect the data required by the regulatory bodies.

Configurability and Site Modelling

IsoStock Cloud is highly configurable to reflect customer-specific organisational structures and workflows. Sites can be modelled by departments, locations, stores, users, and roles. Reference codes, units, reports, labels, and workflows can be configured using built-in tools without custom development.

INTENDED USERS AND USE CASES

IsoStock Cloud is intended for use by organisations managing radioactive materials in regulated environments (e.g. Environment Agency, Natural Resource Wales, Scottish Environment Protection Agency, Northern Ireland Environment Agency, Office for Nuclear Regulation), including:

- Research laboratories and universities
- Nuclear medicine/Radiopharmacy departments
- Pharmaceutical and industrial users
- Defence
- Energy
- Other Manufacturing using radioactivity

User access is role-based, with permissions defined by the customer to reflect operational responsibilities such as users, supervisors, Radiation Protection Officers (RPOs), and system administrators.

SERVICE DELIVERY MODEL

IsoStock Cloud is delivered as a fully managed SaaS solution hosted on Microsoft Azure in the UK South region.

Key characteristics include:

- Fully managed Platform-as-a-Service (PaaS) hosting
- Dedicated application instance per customer
- Dedicated database per customer

- Browser-based access with no local installation
- No exposed public APIs

Customers are not required to manage servers, databases, backups, or operating systems.

SECURITY AND ACCESS CONTROL

Authentication and Access

Access to IsoStock Cloud is controlled using Microsoft Entra ID (Azure Active Directory). There are no local or anonymous accounts. Multi-factor authentication (MFA/2FA) is enforced.

Only pre-configured users can access the service. Customers retain complete control over user access and role assignment within their instance.

Application and Network Security

The application is hosted on Azure App Service with firewalling controls that can restrict access to customer-defined IP ranges or subnets. Private connectivity options are available where required.

The service has no externally exposed application programming interface (API) by default.

Data Access

Customer data is accessed only by the application. Database connectivity is provided using Azure Private Endpoint and Managed Identity, removing the need for stored credentials.

DATA PROTECTION AND COMPLIANCE

Data is encrypted in transit using TLS and encrypted at rest using Azure-managed encryption keys.

The service benefits from Azure's built-in resilience and managed backup capabilities, with data hosted within UK jurisdictions. IsoStock Cloud is operated by a UK-registered, ISO 27001:2022-certified company compliant with UK law and the UK GDPR.

The underlying cloud platform maintains independently audited compliance certifications, including ISO 27001 and SOC standards. The service is supported by UK-based staff.

AVAILABILITY AND RESILIENCE

IsoStock Cloud is designed for continuous operation. The underlying cloud platform provides a high-availability service with a published infrastructure SLA.

The service has a target availability of 99.5%. Planned maintenance activities are communicated in advance, where possible, and scheduled outside regular working hours.

SUPPORT AND INCIDENT MANAGEMENT

Support for IsoStock Cloud is provided by the service provider's UK-based support team.

Support includes:

- Assistance with service usage and configuration
- Investigation of incidents and service issues
- Guidance during onboarding and migration

Incidents are prioritised based on severity and impact. Customers are kept informed of the progress until resolution.

ONBOARDING, MIGRATION AND OFFBOARDING

Onboarding and Minimising Learning Curve

New customers are onboarded through a controlled, structured setup process designed to minimise the learning curve and reduce the effort required of the customer. The service provider undertakes the majority of the onboarding work, working iteratively with the customer to configure the system to reflect their industry, organisational structure, regulatory framework, and operational practices.

Initial onboarding focuses on delivering a fully functional and usable system from day one. Core structures, such as sites, departments, locations, limits, waste routes, and user roles, are configured in advance based on customer-supplied information. This enables users to start using the service immediately, without the need for extensive upfront training or configuration tasks.

Further refinements and adjustments are made iteratively once the system is in use, allowing the configuration to be adapted based on real-world operation while minimising disruption to day-to-day activities.

Migration

Migration from previous versions of IsoStock is straightforward and automated. Full historical data is migrated into IsoStock Cloud, preserving records, audit trails, and regulatory continuity. The service provider undertakes this process. The old systems can be retired.

Migration of current data from other legacy systems is also possible, but the process varies depending on the source system, data structures, and record quality. As a result, migration is not performed through a generic automated import process; instead, scripted or bespoke data transformation and import processes are used to map and validate data against IsoStock Cloud structures before go-live.

The scope, feasibility, and level of effort are agreed in advance, and where migration is undertaken, it is managed by the service provider with minimal operational impact.

Offboarding

On termination of the service, customers can export their data. Operational and regulatory reports can be exported directly from the service in commonly used formats such as PDF and Excel. Where a complete copy of the underlying dataset is required, the service provider can supply a SQL database export (BACPAC format) on request.

Following confirmation of successful data export, customer data is securely deleted in accordance with agreed retention and disposal policies.

SERVICE BOUNDARIES AND ASSUMPTIONS

IsoStock Cloud provides software and supporting infrastructure only. Customers remain responsible for:

- Compliance with applicable legislation and licence conditions
- Accuracy and completeness of data entered into the system
- Local operational procedures and controls
- Internet connectivity and compatible web browsers

The service does not provide regulatory approval or act as a regulatory authority.

DOCUMENT REVIEW, APPROVAL AND HISTORY

The initial review, approval and ongoing revision history of the standard is managed using the MS Team approval process.

A review of this document will be managed on an annual basis unless otherwise specified in the Controlled Document list.

QUALITY ASSURANCE

This document was designed and created in consultation with internal key technical subject matter experts and business stakeholders. During development, the document is made based on ISO 27001, CE/Cyber Plus, and UK GDPR standards.

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