



G-Cloud 15 Service Definition Document (SDD)

January 2026

Introduction & Scope

This document is intended to describe how the EARL software application(s) - herein referred to as EARL works. It is intended to be descriptive and sufficient to adequately describe the application, its function and general information relating to its deployment and maintenance.

It is anticipated that this document be used as part of commercial frameworks, agreements and other similar processes. It is not intended to be a technical document, nor is it intended to be exhaustive.

Revision History

Version	Date	Summary of Changes	Updated by
1	04/02/2023	Version one	LR
1.1	01/03/2024	Updated content	LR/NG
1.2	04/05/2024	Updated content	LR
1.3	10/08/2025	Updated content	LR
1.4	14/01/2026	Updated content	LR

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What is the service?

The EARL applications are offered by EARL Health Technology Ltd (EHT) via a Software as a Service (SaaS) model. This means that EHT hosts the applications and all associated services on its own servers, using the Amazon Web Service (AWS) cloud infrastructure, and makes the application available to its customers via the internet.

There are three applications.

- A web based application, normally accessed from a web browser on a desktop or mobile device
- Native iOS application which customers can download onto their mobile devices via the Apple store
- Native Android application which customers can download onto their mobile devices via the Google Play store

Customers can purchase a licence to use and access the EARL applications for the duration of their licence.

EARL - Key Functionality

Making Electronic Referrals

EARL's primary function is to facilitate electronic referrals from one clinical service to another. EARL can securely send referrals from the client service to any other clinical service in the world, providing that they have an email address or phone number.

EARL has a wide range of safety and assurance tools that then proactively monitors that the referral to ensure it is read and acknowledged within the receiving services SLA, and is automatically escalated where appropriate, via a number of different methods.

To maximise the value of the electronic referrals, EARL offers a range of other tools including but not limited to the following:

Clinic / Referral Workflow

EARL also provides a referral dashboard function for services, clinics, departments etc to receive and manage referrals. Receiving services still have access to the same functionality as those services sending the referral. The EARL referral dashboard unifies all other referral methods into a single, easy to manage inbound referral list.

Publicly Accessible Homepage

The web application is publicly accessible at apps.earl.health/ED. Accessing this URL will prompt users to login before accessing any content.

Optionally, clients can be provided with a custom URL such as "*example.EARL.Health*". By using a custom URL, users can be automatically logged into a guest account associated with the client and have immediate access to the clients' content (that the client has defined as being accessible to the public).

Clinical Support Tools

EARL's clinical support tools enable services to provide their clinicians with rapid access to an easy to navigate clinical support portal. Services can include guidelines, protocols, advice and guidance via PDF's, video's, images, external links or virtually anything else. EARL's clinical tools have been developed from the ground up, specifically for UK clinicians and offer the very best in availability with a range of governance, assurance and management tools.

All of the clinical support content is automatically downloaded to the native iOS and Android apps, and are even available offline, when there is no WiFi or mobile signal, enabling clinicians to access all of this content, from anywhere, including at the patient's bedside.

Patient Information / Discharge Advice Leaflets

EARL provides the ability to upload and manage patient information and discharge advice leaflets. Clinicians can use the app to access these leaflets and either print them, or they can send them via email or SMS directly to patients. The app sends the messages, not the clinicians device. So, for example, SMS's will be sent from "Metro Hospital".

Learning Portal

Clients' can utilise a learning portal to provide their staff with a variety of different learning resources from e-learning programmes, videos, PDF's, images or links to external resources.

Patient Communication Tools

EARL includes the ability to send manual or automated SMS or Email to patients. For example; when a patient is referred to a service, they can receive an automated SMS informing them that they have been referred to the service, and include a service information leaflet or link to further information. When the consultant in the receiving service reviews the referral, or actions it, this too can trigger an update SMS with further information to the patient.

Every communication sent, and its status; i.e. whether sent, delivered or read, can be returned to the primary EPR and reported on.

Client Administration Portal

Clients' are provided access to an administration portal where they can manage their own EARL configuration, to include but not limited to:

- Add / Remove / Edit clinical support content
- Add / Remove / Edit patient information leaflets
- Add / Remove / Edit users
- Add / Remove / Edit learning content
- Add / Remove / Edit phonebook entries
- Add / Remove / Edit homepage notices
- Add / Remove / Edit referral pathways and associated SLA's
- View statistics and analytical information including reports

NHS Digital / NHS Spine Integration

EARL utilises the NHS Digital Personal Demographics Service (PDS) and the GP Connect Application Programmable Interfaces (API's). The former is used to validate and update patient demographic details, ensuring that patient details are

always correct. The latter is used to obtain the following from the patients' GP record:

- immunisations
- consultations
- problems
- investigations
- outbound referrals
- diary entries

For EARL to utilise these data sources within the application, it is necessary for the client and EARL to jointly complete an NHS Digital onboarding process.

Backup, restore and disaster recovery

EARL maintains a 7 day point in time recovery function. That is to say that, the database and application data can be restored to any point in time within the last 7 days.

Daily and weekly backups of the production database are executed automatically, with no downtime. Backups are stored in multiple data centres within the same geographical region. Daily backups are kept for 10 days and weekly backups are kept for six months.

In the event of a restore event being required, a restore operation may take several hours and, once complete, there's a period of downtime of about 15 minutes.

A disaster recovery happens after any kind of disaster. EARL engineers will balance the recovery point objective (RPO) against the recovery time objective (RTO). EARL defines the RPO as

the maximum targeted period in which data might be lost from an IT service due to a major incident

and the RTO as

the targeted time frame and service level within a business process that must be restored after a disaster (or disruption) in order to avoid unacceptable consequences associated with a break in business continuity.

EARL tests its disaster recovery scenarios at least every six months.

Monitoring and High Availability

EARL's cloud infrastructures are monitored 24/7 for critical health indicators, such as response times and availability. Our cloud systems include automatic self-healing and alarms to the EARL technical support team. We provide a 99.5% minimum uptime guarantee and publish our availability publicly on our performance status page [here](#).

An internal service ticket is automatically created on

- Multiple and consecutive failures of HTTP/S ping requests any application
- Persistently high CPU utilisation on the Front-Ends

- Any core services fault
- Front-end or database disk space at near capacity
- Any failure to complete the processing of electronic referrals

Service constraints

EARL's maintenance window is every Wednesday morning, between 0200 and 0600. It is during this timeframe that routine updates, patches and upgrades are applied. These normally occur without any downtime, and without any reduction in performance or availability to the end users.

There is, very occasionally, a requirement for a short period of downtime. On average, this occurs once every 18 months and is normally less than 30 minutes. In the event that a period of downtime is expected, clients will be notified in writing at least 14 days prior and notices will be placed throughout the applications for 7 days prior.

Service levels

EARL offers a minimum uptime of 99.5% and publishes its performance via a publicly available performance portal at status.earl.health.

The following options are also available, at additional cost, as part of the EARL 'High Availability' resilience and assurance tools

- 99.95% minimum uptime
- SOC2 Type II, PCI DSS and HIPAA compliant
- Dedicated SecOps and 24x7 CSIRT
- Minimum uptime guarantee of 99.95%
- Geographically distributed data centres (within the region selected by the customer), with automatic load balancing
- Automatic database replication, failover and load balancing
- 1 year log retention

After sales support

Every client is allocated a Client Success Manager (CSM) who acts as the single point of access for all their EARL needs. In the initial stages, the CSM will liaise with the client and their project team to ensure manage the planning and deployment of EARL. Post deployment, the CSM will spend time at the client site to ensure optimum use of EARL applications and continue to make appropriate recommendations.

Support Services

A support ticket can be raised using the support portal within the EARL applications, or by telephoning the dedicated support helpline.

Priority 1 (Critical) support tickets are managed 24/7/365 and with a target resolution time of 2 hours. All others are managed during normal office hours with a target resolution time of 72 hours.

Scalability

EARL leverages the full benefit of cloud architecture using state of the art load-balancing, auto-monitoring, self-healing and auto-scaling capabilities. This means that EARL can automatically scale horizontally (normally by adding additional servers) and vertically (normally by adding additional resources to those servers) in order to automatically manage load and demand. There is effectively no limit to the number of simultaneous users, sites, or services that EARL can accommodate.

EHT regularly performs load testing on EARL applications, to a factor of at least 10x maximum current or anticipated users.

Professional Services & Consulting

EARL is designed to be self-managing. That is to say, after the initial configuration and deployment, clients' should be able to manage their deployment without intervention from EHT engineers or technical teams.

There are, however, a small number of exceptions. The most common example is the configuration of new referral pathways. In order to comply with our DCB0129 clinical risk management system, new referral pathways require technical testing and sign-off from the EHT technical team. EHT will endeavour to accommodate new referral pathways without additional cost, but reserves the right to charge in accordance with its professional fees framework for the configuration and deployment of complex pathways.

Technical requirements

There are no firm technical requirements to use the EARL applications, other than, that is, access to the internet using a modern internet browser. Connection speeds above 50 mbps are recommended but not mandatory.

EARL is tested, developed and tested using the Google Chrome browser and clients are **strongly** advised to use Google Chrome to ensure maximum compatibility and ensure expected behaviour and performance. However, it is likely that other modern browsers such as Safari, Edge and Firefox will also work as expected.

EHT commits that EARL can integrate with any other clinical or administrative system. It can achieve this in a number of different ways, including RESTful / HL7 compliant API's, integration servers or even robotic process automation. Integration is a key part of the pre-deployment process and will be managed by the EARL CSM.

Hosting options and locations

EARL is currently hosted on AWS infrastructure in the Dublin AWS data centre.. Clients can, during onboarding, specify another AWS location for their application data to be stored, though, this may be at additional cost.

Access to data (upon exit)

The EARL applications are intended to integrate with existing clinical and administrative systems and facilitate a constant bidirectional exchange of data. There shouldn't therefore be a requirement to provide core platform data as part of a service exit.

However, EHT recognises that some clients' may wish to retain copies of audit, access or performance data that isn't routinely transferred to other systems. Access to data on exit will be managed by the CSM and be provided to clients' within 28 days of the end of a contract and be provided either by secure download or via physical media such as a USB memory stick.

Security

EHT is committed to providing a secure platform. Whilst a full description of the security footprint is out of scope of this document, EHT offers that its applications use the following technologies/strategies:

1. Full (strict), end to-end encryption, using a trusted origin certificate
2. Certificate signed with at least SHA-256
3. Completed certificate chain to trusted root certificate
4. TLS 1.3 supported
5. TLS 1.2 Minimum
6. RFC7540 - HTTP/2
7. RFC6797 – HTTP Strict
8. Forced HTTPS via HTTPS rewrite at ONS and web server level.
9. ONS services
10. Tiered web application firewalls
11. RFC7208 (SPF)
12. RFC4035 (DNSSEC)
13. RFC6377 (DKIM)
14. RFC7489 (DMARC)
15. RFC8640 (TLS-RPT)
16. RFC8461 (MTA-STS)
17. IP Whitelist(s)
18. Enforced multifactor authentication

In addition, EHT has/is

- NHS Digital Data Security and Protection Toolkit (DSPT) compliant
- NHS Digital DCB1596 Secure Email Accreditation
- Cyber Essentials Plus Certified
- Independent penetration test and security audit at least annually
- National Cyber Security Centre (NCSC) - Web Check compliant
- National Cyber Security Centre (NCSC) - Mail Check compliant