RED interchange API

RED medical offers a FHIR interface for third-party data providers/consumers. This interface is based on the German regulatory standards §291 (Verordnungssoftware - Schnittstelle / VOS) and §371 (Archiv- und Wechselschnittstelle / AWS) SGB V. These interfaces are based on the international FHIR-Standard with local extensions e.g. for statutory billing purposes.

For updates and new features see the RED interchange API - Release Notes.

RED interchange API provides a third-party system with functions

- to send data to RED for processing and storage. This allows a third-party system e.g. to send data of patients that have been registered to RED. Patient data will be validated in RED as if entered manually and stored in the RED database using the RED end-to-end encryption.
- to query data from RED. The third-party system may send query requests to RED (e.g. for patients, patient records or documents) and RED will return data retrieved from its database
- to execute transactions with the Telematik-Infrastruktur such as basic Konnektor operations (e.g. PIN verification) or complex transactions (e.g. dispensing an electronic prescription)

The RED interchange API uses the XML-based FHIR format for data exchange. Data to be sent to RED must be separated and packaged into FHIR bundles, and data queried from RED will be returned in FHIR bundles. RED uses the FHIR bundles defined by Kassenärztliche Bundesvereinigung in their AWS project.

In order to ensure the secrecy of person-related data (as required by German criminal law) RED uses end-to-end encryption of all person-related data stored in its data-centers. In order to access data in RED Users must authenticate during login and obtain the cryptographic keys necessary to decrypt and encrypt data. Therefore the RED interchange API cannot be a server interface, as encryption keys are in the possession of the users only, and data cannot be encrypted or decrypted server-side. By requirement the RED interchange API expects to communicate with an application installed on the local machine or a locally installed server reachable via localhost.

After a user has logged in successfully and obtained his cryptographic keys a local FHIR server is started by RED on the users machine. If the FHIR server is running RED will act as recipient and listen to POST and GET requests from the sending third-party application.

Setup in RED

To use the RED interchange API it must be set up for each RED terminal (Arbeitsplatz). For development and testing the tool Postman (https://www.postman.com/downloads/) can be used as sending application. A collection of sample requests is provided for download.

Receiving data from RED - Search and Read

RED interchange API - Search/Read Practitioners

RED interchange API - Search/Read PractitionerRoles

RED interchange API - Search/Read Organizations

RED interchange API - Search/Read Claims

RED interchange API - Search/Read Encounters

RED interchange API - Search/Read Observations

RED interchange API - Search/Read Coverages

RED interchange API - Search/Read DocumentReferences

RED Interchange API - Search/Read Medication

Creating data in RED

RED interchange API - Create Data

RED interchange API - Create Data Patient

RED interchange API - Create Data Coverage

RED interchange API - Create Document Reference

RED interchange API - Create Data Medication

RED interchange API - Create Data Claim

RED interchange API - Create Data Condition

E-Prescription

The RED interchange API also allows systems to connect to E-Rezept-Fachdienst and provides functions to retrieve stored electronic prescriptions and to send dispense requests.

RED interchange API - E-Prescription

RED interchange API - E-Prescription / Physician / Create prescriptions and bulk processing

RED interchange API - E-Prescription / Pharmacy / Accept Task

RED interchange API - E-Prescription / Pharmacy / Get Task

RED interchange API - E-Prescription / Pharmacy / Reject or Abort Task

RED interchange API - E-Prescription / Pharmacy / Task receipt

Electronic Patient Record

The RED interchange API allows to send documents or other data to the electronic health record (elektronische Patientenakte) of a given patient.

RED interchange API - ePA

Operations

The RED interchange API provides a range of additional features like card pin operations or electronic signatures.

RED interchange API - Card Operations

RED interchange API - Automatic Login

Video Calls

The RED interchange API provides an option to generate codes for the RED connect video call system.