

RED interchange API

Introduction

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.

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. Please contact us to receive a Postman collection with sample requests.

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](#)

Delete Items from RED

```
> DELETE http://localhost:29221/{tenant}/Bundle/10000
```

Deletes a stored bundle in RED medical application.