



# Data Pull Technical Overview

Version 1



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# 1 Registry Technical Overview

## 2 Data Pull Scenario

Our standard integration method is represented by the Data Pull Scenario. In this scenario, the Registry reporting process is fully managed and presents minimum impact to the participating site with optimum results. This approach is preferred because it requires the least amount of work effort for technical staff.

Below is a technical discussion of the various functions shown in the accompanying diagram followed by the section number (①) for ease of identification.

### 2.1 The Registry Practice Connector (RPC) ①

(Formerly known as the Light Weight Connector (LWC))

The RPC may be installed on any physical computer or virtual machine (VM) allowing access to the required data source. This may be the ED-EMR, EDIS database server, or other data sources as required. The RPC is capable of connecting to multiple data sources if needed. The RPC software runs as a Windows® service and only requires a Microsoft® Windows Operating System (O/S) with Microsoft® .NET 3.0 framework installed.

A READ ONLY service account is required for the RPC to directly access the database. Once mapping to the appropriate fields are completed, the RPC will perform a data pull on a nightly basis and submit this data to the Registry.

### 2.2 RPC Management Server ②

The purpose of this server is to provide a remote management path to the RPC at the participating site. Upon installation of the RPC, a connection is established to the RPC Management Server via **port 7171** using a **256bit Rijndael encryption key**. Sessions on this connection are always initiated from the participating site outbound to CEDR. Communication is established when the RPC Management Server responds to a communication request from the Registry Practice Connector. The connection can never be started from the Registry Data Centre.

This management connection is used by the **Mapping Analyst** for activities such as data mapping, scheduling extraction jobs, software updates, and reviewing job history logs.

## 2.3 Clinical Data Upload Server (CDUS) ③

This server is accessible by the RPC for the purpose of transmitting all clinical data being reported to the Registry. The upload takes place via **https: port 443** using a **2048-bit RSA encryption key**. As with the management session discussed above, these upload sessions are always initiated from the participating site side and can never be initiated from the Registry Data Centre. Uploads are typically scheduled to run nightly as approved by the site.

## 2.4 Clinical Data Repository (CDR) ④

Following the submission to the Clinical Data Upload Server, the information is transferred to the CDR where it is stored in a HL7 CDA compliant format. The CDR stores the data as it has been extracted from the participating site with little transformation.

## 2.5 Data Marts ⑤

The structured raw data from the site's data sources are stored in the Clinical Data Repository. From the Repository, it is transformed into one or more mission specific data marts. These data marts support requirements such as quality measure calculations.

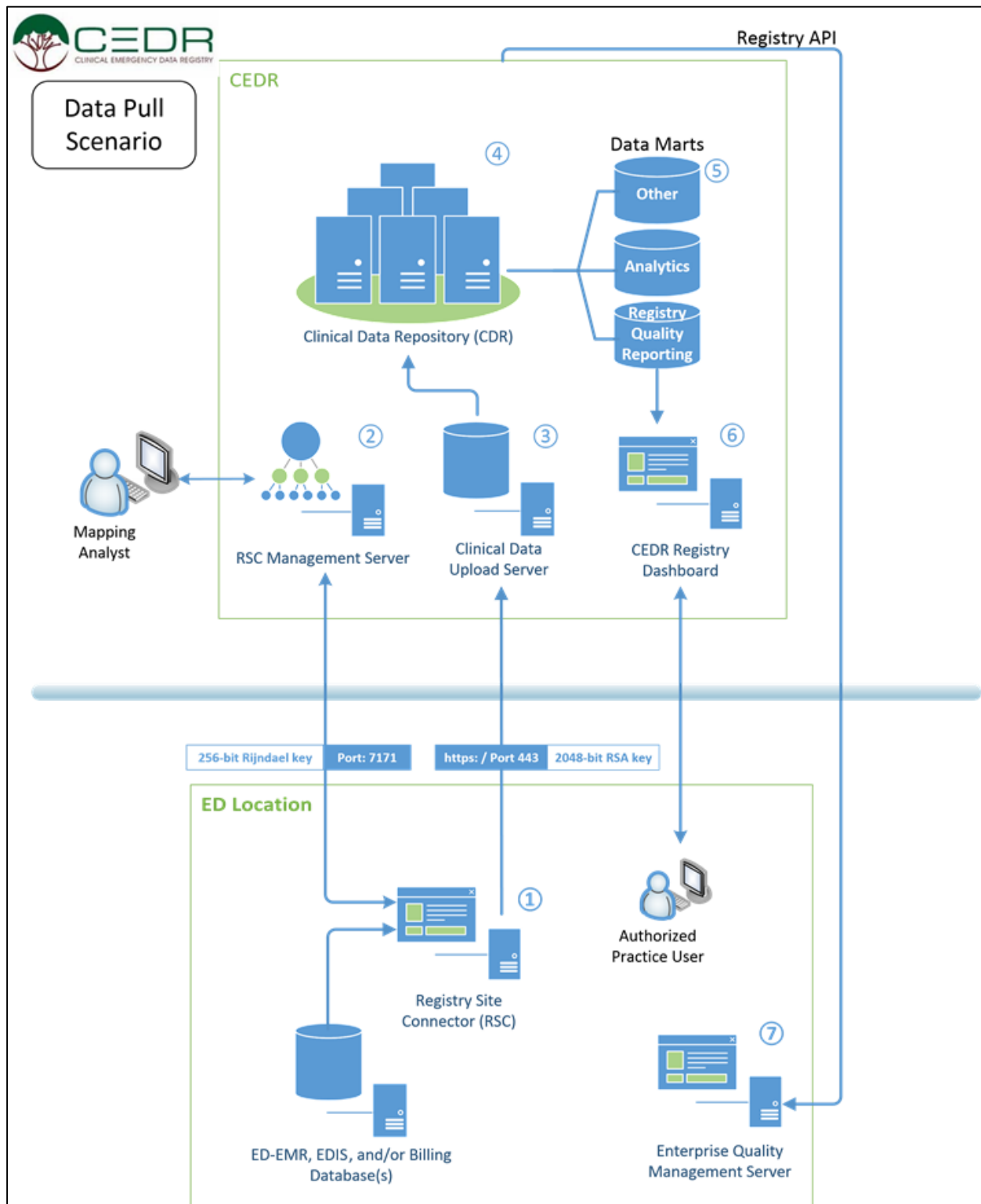
## 2.6 CEDR Registry Dashboard ⑥

The CEDR Registry Dashboard provides EP Group leadership with a secure and easy to access web portal for retrieving reports, performing analytics, reviewing performance dashboards, and more.

## 2.7 Enterprise Quality Management System ⑦

Healthcare Organizations are increasingly deploying enterprise wide quality management systems / dashboards that provide an overview of QI activities throughout the organizations. These initiatives are greatly benefited by receiving structured data (calculated performance scores, encounter level performance measurement etc.). The Registry Platform exposes the following Web services based APIs for consumption by Practices

- 1) Provider level calculated performance score – These are delivered in a structured QRDA Level 3
- 2) Encounter level calculated performance score – These are delivered in a HL7 DFT message generated per encounter
- 3) Registry Data Dictionary imputed values – These are delivered via a csv file



**Figure: Data Pull Scenario**