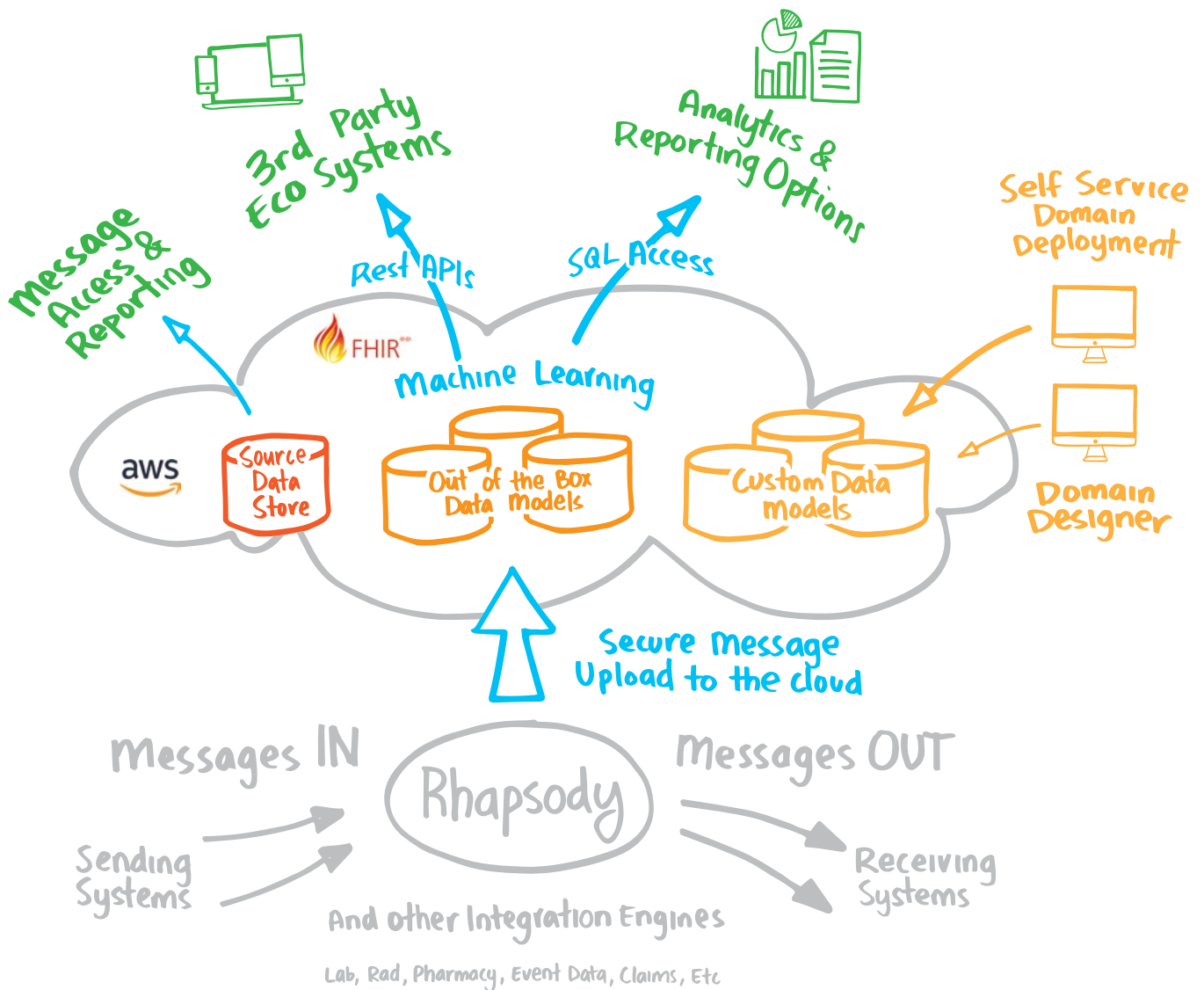# Amadeus CORE

Amadeus CORE extends your health organisation's integration engine with secure and scalable Amazon Web Services (AWS) cloud storage to provide a platform for data analytics, machine learning, value-based care and population health management. Health data is securely uploaded and accessible via industry standard encrypted RESTful API and SQL/BI interfaces.

# What is Amadeus CORE?

Healthcare organisations using their existing Rhapsody™ Integration Engine[1] or a similar engine, can securely batch or stream structured, semi-structured and unstructured health data into Orion Health's newly released Amadeus CORE.

Amadeus CORE is a next-generation health data store hosted on AWS that provides scalability to support organisations of any size. Data assets are uploaded using Transport Layer Security (TLS) encryption, and stored in a secure HIPAA compliant, HITRUST certified environment with high availability.

# Amadeus CORE stores data into:

### 1. Source Data Store
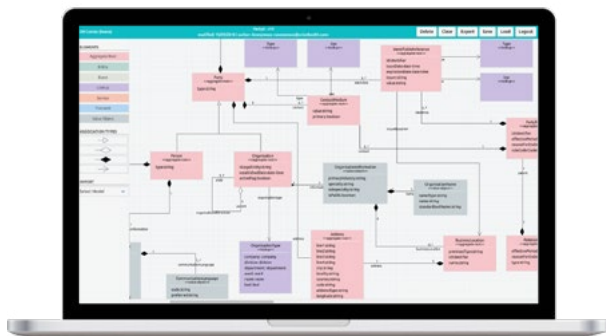
Data stored in its original form.

### 2. Preconfigured Data Models

Out-of-the-box data models for domains such as laboratory results, allergies, procedures, encounters, etc.

### 3. Custom Data Models

Developed with Amadeus CORE's advanced browser-based modelling tools.

All tooling is designed to be simple to use and built with analysts and non-technical users in mind.

At design time users can also select between different storage options (such as Postgres, Oracle, and MS SQL Server) with proven AWS elastic scalability, and the capability to deploy models using a one click app-store style browser interface.

All Amadeus CORE stored data is immediately available via automatically created ANSI SQL interfaces and RESTful APIs (read, write, update, delete, search) and secured using OAuth.

Amadeus CORE has been designed as a platform to enable machine learning and to handle vast volumes and variety of data.

[1] Rhapsody provides an out-of-the-box Communication Point for connecting with Amadeus CORE.

# Solutions

## I. Enable an ecosystem of applications

Utilise the RESTful APIs on pre-configured and custom data models to create an ecosystem of applications. Secure read, write, search, update and delete APIs enable developers to build innovative applications on top of the shared data.

## II. Provides long-term secure cloud storage of health data

Amadeus CORE enables healthcare organisations to comply with long-term data retention policies by providing a way to easily store any data in a secure, scalable and cost-effective AWS hosted environment that is HIPAA compliant and HITRUST certified. Data tagged intelligently with metadata can easily be queried and accessed via APIs and a SQL interface. Historical information is available for re-use without the expense of retrieving the data a second time from the source. When data is no longer required, it is easily purged from the solution. Amadeus CORE also provides appropriate offsite storage for disaster recovery purposes.

## III. Derive actionable insights into data integrations

Out-of-the-box dashboards and reports provide useful insights such as traffic trends, message characteristics and flow patterns to improve operational efficiency. These can help with resolving data integration issues, uncover blockages and forecast future infrastructure or service needs. All the data is queryable via APIs or a SQL interface to enable the use of third-party reporting and analytics tools.
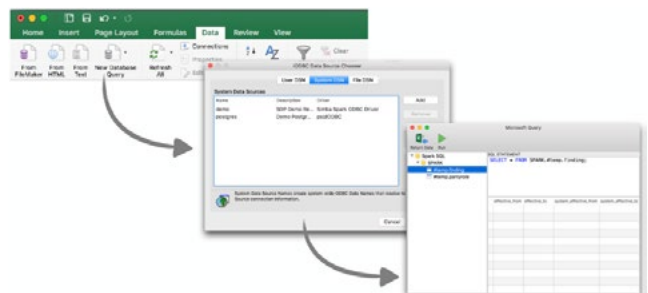
## IV. Make data available for reporting and analytics

ANSI SQL interfaces allow easy data access for analytics, machine learning and BI reporting use cases, with support for tools such as Tableau, Microsoft Excel, Jupyter Notebooks, Microsoft Power BI and other industry tools. Below is a simple example of data accessed in Microsoft Excel through the SQL interface.

## V. Delivers the foundation of a Health Information Exchange (HIE)

Aggregate and store patient data to enable the exchange of health information. Data is easily queryable via APIs and a BI interface to support a range of clinical applications. Organisations can take a first step along their data journey from a messaging engine towards foundational health information exchange data platform capabilities with this cost-effective and low risk solution.

## VI. Provides a repository for new and non-traditional data types

Store any data, as is, in the Source Data Store with minimal pre-processing. Custom data modelling provides maximum flexibility for storing any and all types of data, including traditional and emerging data types.

## VII. Enables a platform for data analytics, machine learning, value-based care and population health management

Original and modelled data is easily queried via the SQL interface to support a deeper understanding of the data assets, to enrich data analytics, train machine learning models and support value-based care and population health management initiatives. Machine learning models can be trained on pre-configured and custom data domains and results stored for future use.

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# Simply put, Amadeus CORE brings rapid data model development and secure deployment to a wide audience of users that can deliver robust cloud hosted solutions within hours.

**Ian McCrae**
Director and CEO Orion Health

To hear how it works, talk to one of our experts.
Find out more about **Amadeus CORE** at orionhealth.com/global/products/amadeus-core