# Знакомство с разработкой SAP Data Services

<https://habr.com/ru/articles/770924/>

*Статья ни о чем - вода.*

# SAP Data Services

<https://medium.com/plumbersofdatascience/sap-data-services-c65330f4ea4c>

# SAP DS (Data Services) in HANA

<https://www.guru99.com/sap-ds-sap-data-services-in-sap-hana.html>

# ABAP CDS (Core Data Services)

<https://abap-blog.ru/osnovy-abap/slovar/abap-cds-core-data-services/>

Data Services ***RealTime*** components provide services to ***web applications*** and other client applications.

See

<https://sapspaces.com/sap-data-services-real-time-jobs-overview-and-best-practices/>

JSON extraction

<https://help.sap.com/docs/SAP_DATA_SERVICES/e54136ab6a4a43e6a370265bf0a2d744/997a47bf3308406997d680404ebfbb3c.html>

JSON extraction works in a similar way as XML extraction, except you use the JSON-specific options and functions.

In SAP Data Services, extract JSON message and file data, represent it as ***NRDM*** - *Nested Relational Data Model* data during transformation, and then load it to a JSON message or file, you can also use Data Services to extract JSON data from a *source table* or *flat file column*. Data Services provides the ***extract\_from\_json*** function to support extracting from columns.

The *extract\_from\_json* function stores the JSON content in a single column, and builds the corresponding NRDM structure so that Data Services can transform it. The *extract\_from\_json function* takes *varchar* data only.

To enable extracting and parsing for columns, you must convert data from *long* and *clob* columns to varchar before it can be transformed by Data Services.

Convert *long* and *clob* data types to varchar as follows

* To convert *clob* to varchar, select the Import unsupported data types as VARCHAR of size option in the Datastore editor when you create a database datastore.
* To convert *long* to varchar, use the ***long\_to\_varchar*** function.