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Preliminary notes

SkyAlps is an Italian airline operator managing flights at the Bolzano airport in South Tyrol. Thanks to the support of NOI, SkyAlps has initiated an innovation process that aims to share the data of the air services offered.

The first set of data which is shared is related to the planned timetable of the flights offered, which is made available through a machine-readable API, i.e. through the AeroCRS hub, to which SkyAlps is connected. The reference method that will be used is the following: <https://docs.aerocrs.com/reference/getschedule>

The access credentials have been made available by SkyAlps and will be shared for the development purposes. An example of data record is the following:

```
{"flightnumber":"BN1900","airlinename":"Sky Alps","airlinedesignator":"BN","airlineid":423,"fromdestination":"BZO","todestination":"CAG","std":"17:15","sta":"19:15","weekdaysun":true,"weekdaymon":false,"weekdaytue":false,"weekdaywed":false,"weekdaythu":false,"weekdayfri":false,"weekdaysat":false,"accode":"DH4","fltsfromperiod":"2022/05/29","fltstoperiod":"2022/09/25"}
```

Important note: after a more detailed evaluation of the data retrieved by the service, it has been noted that in case of changes in the schedules these are visible only through the SSIM format. Therefore, the data should be requested in this way and not in the JSON format. From a correct decoding of the SSIM format, please check this specification: [https://www.slots-austria.com/jart/prj3/sca/uploads/data-uploads/downloads/e\)%20Miscellaneous/overall/SCR,%20SIR%20Quick%20Guide.pdf](https://www.slots-austria.com/jart/prj3/sca/uploads/data-uploads/downloads/e)%20Miscellaneous/overall/SCR,%20SIR%20Quick%20Guide.pdf)

SSIM format decoding specifications

A single data record is characterized by a pattern as follows:

```
3 BN 19520101J10NOV2210NOV22 4 BZO09000900+0100 DUS10451045+0100 DH4
BN 1952 Y76 000003
```

The main fields to be considered are:

- **flight_number**: in the example “BN 1952”
- **date_of_operation**: in the example “10NOV22” (the corresponding week day is provided as number, in this case ‘4’, since November 10th 2022 is a Thursday; the week days not considered are not set)
- **departure_airport_code**: in the example “BZO”
- **departure_time**: in the example “0900”, meaning 09:00. Please note that times are provided in **UTC format**
- **arrival_airport_code**: in the example “DUS”
- **departure_time**: in the example “1045”, meaning 10:45. Please note that times are provided in **UTC format**

Kommentiert [RCN1]: Are we sure about that?

Kommentiert [RCN2]: Are we sure about that?

Please note that a single record can have multiple dates about when a certain flight is going to take place. For example:

```
3 BN 19500201J16NOV2225NOV22 3 5 BZO08000800+0100 BER09500950+0100 DH4 BN
1950 Y76 000024
```

In this case we should consider separately the two flights, namely November 16th (Wednesday) and November 25th (Friday). In other word, a separate flight information should be considered for explicit week day reported (in this case associated to ‘3’ and ‘5’).

Integration in the Open Data Hub as Data Collector

METADATA

The proposal is to insert all this static data in the “station” table.

Web-service fields	Open Data Hub parameters
flight_number_date_of_operation	stationcode
departure_airport_code - arrival_airport_code	name

Table 1: Mapping between main web-service and Open Data Hub fields (reference: “station” table).

The following specifications have to be also considered:

- the Open Data Hub field **origin** is to set as **SKYALPS**.
- the Open Data Hub field **stationtype** is to set as **Flight**
- since the API does not provide any information about the positions of the airports, the proposal is to hardcode this information for all flights, assigning the position of the airport of Bolzano
 - **latitude**: 46.46248
 - **longitude**: 11.32985



- the Open Data Hub field stationcode is created on top of two fields, flight_number and date_of_operation (e.g. 'BN 1952_10NOV22'). In this way each single flight flying at a certain day will be considered as an Open Data Hub station. This means that a certain flight number will have multiple entries in the stations table, one for each day in which the flight is scheduled.
- the other fields provided by the web-service (i.e.: airlinename, airlinedesignator, airlineid, std, sta, weekdaysun, weekdaymon, weekdaytue, weekdaywed, weekdaythu, weekdayfri, weekdaysat, accode, fltsfromperiod, fltstoperiod) have to be considered as **metadata** (i.e. will be stored in the “metadata” table of the Open Data Hub-database). The entire SSIM message could be saved as a separate field in the metadata

DATA

The real-time data associated (to be continued....)