

Specification

KS HR Data API Version 3.0

For

**Norwegian Association of Local and Regional
Authorities**

by

Catalyst IT Europe Limited

Version: 3.0

January 2020

Commercial in Confidence

catalyst 

open source technologists

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Revision History		
Modified By	Date	Change
Harry Barnard	28 January 2020	Initial Version

1 Introduction

1.1 Purpose

This document provides details of the specification for the KS Laring HR Data API Version 3.0.

2 General Information

An authority in the context of the KS HR Data API is any kommune, fylkeskommune or other organisation providing API data.

2.1 Reference Server

A reference server providing example HR Data API data and interactive documentation is provided here:

<https://kshrdata.catalyst-eu.net>

The authentication credentials are:

username: ks
password: demo

2.2 Versioning

This document represents the final version 3.0 specification. Future amendments to this specification will require a new version to be created. The API will use [semantic version](#) numbering where incompatible changes will necessitate a major version increase and new functionality added in a backward compatible manner causes a minor version change.

2.3 Authentication

Endpoints must be served over HTTPS and have at least basic access authentication.

If invalid credentials are supplied the server must return an **HTTP 401 Unauthorized** error.

2.4 URLs

The endpoint URLs can be in any format you like and are configured for each Authority uniquely. You must inform KS of your endpoint URLs so that they can configure your API integration correctly.

2.5 Data Format

Changes

Responses from the endpoints are composed of a number of changes. The data must be in the [NDJSON](#) format with the **application/x-ndjson** content-type header set. This is a format that provides line-delineated JSON objects. Each line of this data must relate to an individual change. Change data is defined in section 2.7.

Authority

Uniquely the Authority endpoint will return a single JSON format object with the content-type header set to **application/json**. The Authority endpoint must not provide individual change data and requires no parameters.

Unique IDs

Unique IDs refer to codes that are used to uniquely identify data in the data set. They are used to cross reference data across the system and with external data sources.

Dates

Dates must be in the [RFC 3339](#) format.

Optional Fields

Optional fields where the value is empty must be omitted or set to **null**.

Boolean Fields

Fields where the value is **false** must be omitted or set to **false**. Fields where the value is **true** must be set to **true**.

Missing or Invalid Fields

Where a required field is not provided or invalid data is provided in a field a change will be rejected and will not be processed.

2.6 Date Parameters

All dates must be represented in [RFC 3339](#) format. For example **2016-10-12T15:21:00Z**.

If a request is made with an invalid or missing date parameter the server must return an **HTTP 400 Bad Request** error.

There are two request types that could be made to an endpoint. One with a date range and one without.

Without date parameters

Every endpoint can be called without date parameters, which will fetch the "current image" of how things are at that moment. When a request is made without providing a **fromDate** and **toDate** only data representing the currently existing entities must be returned. A request like this would be made to provide an initial data set for import. Only **add changeTypes** should be returned in this scenario.

With date parameters

A request with both parameters **fromDate** and **toDate** will fetch all changes that have occurred between the two dates. All **changeTypes** must be returned in this scenario, including those related to entities that have subsequently been deleted. Typically the **toDate** will be the moment the request was made.

2.7 Change Data

Each change provided by each endpoint will provide the following data:

changeType	add, delete or modify String
changeDate	Date and time that the change occurred Date <i>This should be in RFC 3339 format.</i>
newRecord	Contains the data relating to the entity after the change. <i>This should only be provided for changeTypes: add and modify.</i>
oldRecord	Contains the data relating to the entity prior to the change. <i>This should only be provided for changeTypes: delete and modify.</i>

3 Endpoints

3.1 Authority

This endpoint provides data about the data providing Authority and the data it provides. **It does not require date parameters and must not return changes.**

/authority

name	Authority Name String <i>The name of your Authority. This will most likely be your kommune or fylkeskommune name.</i>
version	API version Number <i>The version of KS HR Data API data you are providing.</i>
email	Email Address String <i>An email address that will receive reports and other information about data import tasks.</i>

Example Authority Response

```
{  
  "name": "Example kommune",  
  "version": "3.0",  
  "email": "example@kommune.no.example"  
}
```

3.2 Organisation

Organisations represent organisations, companies, teams and other business units in the hierarchy. Their unique ID is Organisation Unit ID which must be unique within all the Organisations in your data set.

Their position in the hierarchy is set by providing a Parent Organisation Unit ID. There can be only one Parent Organisation for each Organisation supplied.

/organisation

id	Organisation ID String <i>The ID or Organisation Unit ID should be unique within all the Organisations in your Authority.</i>
name	Organisation name String <i>The name of this Organisation.</i>
parent	Parent Organisation ID String (optional) <i>The ID or Organisation Unit ID of the parent Organisation of this Organisation. If set to null or omitted the Organisation will be placed at the root of your hierarchy otherwise it will be placed as a child of this Organisation.</i>
external_id	External ID String (optional) <i>The id or code for this Organisation used by your HR or finance system. This will be used for debugging the import of Organisation data in future enhancements of the KS Laring platform.</i>
address_1	Address line 1 String (optional) <i>First line of this Organisation's address.</i>
address_2	Address line 2 String (optional) <i>Second line of this Organisation's address.</i>
address_3	Address line 3 String (optional) <i>Third line of this Organisation's address.</i>
postcode	Postcode String (optional) <i>This Organisation's postcode.</i>
postal_area	Postal area String (optional) <i>This Organisation's postal area/city.</i>
email	Organisation email address String (optional) <i>This Organisation's email address.</i>
phone	Organisation phone number String (optional) <i>This Organisation's phone number.</i>
url	Organisation website address String (optional) <i>This Organisation's website URL.</i>

Example Organisation Change

```
{
  "changeType": "add",
  "changeDate": "2009-01-18T11:35:00Z",
  "newRecord": {
    "id": "971032146",
    "parent": "123456789",
    "external_id": null,
    "name": "KS Laring",
    "address_1": "Haakon VII's gt. 9"
    "address_2": null,
    "address_3": null,
    "postcode": "0161",
    "postal_area": "OSLO",
    "email": "firstname.lastname@example.kslaring.no",
    "phone": "+47 24 13 26 00",
    "url": "https://kslaring.no"
  }
}
```

3.3 Person

People represent individual people who need to be represented in the hierarchy. Their unique ID is National ID Number.

They can be an employee in multiple Organisations. They can be associated with Organisations using Employee Positions and Employee Taxonomies.

/person

national_id	National ID Number String <i>Norwegian National ID Number or D Number of this Person.</i>
external_id	External ID String (optional) <i>The ID, code or username for this Person used by your HR or finance system. This will be used for debugging the import of Person data in future enhancements of the KS Laring platform.</i>
first_name	Forename String <i>Person's first or given name.</i>
middle_name	Middle name String (optional) <i>Person's middle name or names.</i>
last_name	Surname String <i>Person's last or family name.</i>
email	Person's email address String <i>This is the email address that will be associated with their account on KS Laring. This is the email address that will be used to receive KS Laring emails and other notifications.</i>

Example Person Change

```
{
  "changeType": "delete",
  "changeDate": "2012-12-02T08:42:36Z",
  "oldRecord": {
    "national_id": "12345678910"
    "external_id": "abc1234",
    "first_name": "John",
    "middle_name": null,
    "last_name": "Smith",
    "email": "john.smith@kommune.no.example",
  }
}
```

3.4 Venue

Venues represent venues, meeting rooms and other locations an Event may occur. Their unique ID is Venue ID which must be unique within all the Venues in your Authority.

Their position in the hierarchy is set by providing a Organisation Unit ID for the Organisation the Venue is associated with. There will be only one Parent Organisation for each Venue supplied.

/venue

venue_id	Venue ID String <i>This is the Venue ID string associated with this Venue used to uniquely identify it within your Authority.</i>
org_id	Organisation Unit ID String <i>Organisation Unit ID of the Organisation this Venue is associated with.</i>
name	Venue Name String <i>Name of this Venue.</i>
floor	Floor String (optional) <i>The floor this Venue is on in it's building.</i>
room	Room String (optional) <i>The room of this Venue in it's building.</i>
address_1	Address line 1 String (optional) <i>First line of this Venue's address.</i>
address_2	Address line 2 String (optional) <i>Second line of this Venue's address.</i>
address_3	Address line 3 String (optional) <i>Third line of this Venue's address.</i>
postcode	Postcode String (optional) <i>This Venue's postcode.</i>
postal_area	Postal area String (optional) <i>This Venue's postal area/city.</i>
email	Venue email address String (optional) <i>This Venue's email address.</i>
phone	Venue phone number String (optional) <i>This Venue's phone number.</i>
url	Venue website address String (optional) <i>This Venue's website URL.</i>
contact	Contact person String (optional) <i>The name of the contact person for this Venue.</i>
seats	Number of seats Integer (optional) <i>Number of maximum potential enrolment places for Events at this Venue.</i>

Example Venue Change

```
{
  "changeType": "add",
  "changeDate": "2019-07-24T14:52:18Z",
  "newRecord": {
    "venue_id": "AB345",
    "org_id": "HK12345",
    "name": "Oslo Opera House",
    "floor": "Ground Floor",
    "room": "Room 9",
    "address_1": "Kirsten Flagstands pl. 1",
    "address_2": null,
    "address_3": null,
    "postcode": "N-0106",
    "postal_area": "OSLO",
    "email": "post@operaen.no",
    "phone": "+ 47 21 42 21 21",
    "url": "https://operaen.no",
    "contact": "Joe Bloggs",
    "seats": 500
  }
}
```

3.5 Employee Position

Employee Positions represent the formal relationships between People and Organisations. They could be seen as a representation of an Person's role within an Organisation. They are uniquely identified by combining **org_id** and **national_id**. Where either of these fields change it is assumed a new Employee Position is being referenced.

People can have multiple Employee Positions in one or multiple Organisations.

/employee_position

org_id	Organisation Unit ID String <i>Organisation Unit ID of the Organisation this Employee Position is associated with.</i>
national_id	National ID Number String <i>Norwegian National ID Number or D Number of the Person associated with this position.</i>
position_name	Position name String <i>The name of the Employee's position or role within the given Organisation.</i>
position_code	Position code String (optional) <i>The code associated with the Employee's position within the given Organisation.</i>
external_id	External ID String (optional) <i>This is the ID or code associated with this position used by your HR or finance system. This will be used for debugging the import of Employee data in future enhancements of the KS Laring platform.</i>
email	Employee's email address String (optional) <i>This is the email address associated with this Person's position within the given Organisation. It is anticipated this email address will be used in future enhancements to the KS Laring platform.</i>
main	Is this the Employee's main position? Boolean (true or false) <i>A Person can only have one main position on KS Laring. If a main position has already been set this field will be ignored.</i>
manager	Is this a Manager Position? Boolean (true or false) <i>Setting this to true will allow this Employee to carry out administrative tasks on the associated Organisation's data, reports and invoices.</i>
reporter	Is this a Reporter Position? Boolean (true or false) <i>Setting this to true will allow this Employee to view the data, invoices and reports relating to the associated Organisation.</i>

Example Employee Position Change

```
{
  "changeType": "delete",
  "changeDate": "2018-04-01T12:15:06Z",
  "oldRecord": {
    "org_id": "12345",
    "position_code": "12345678",
    "position_name": "Supervisor",
    "external_id": "0123456",
    "national_id": "01234567891",
    "email": "supervisor@kommune.no.example",
    "main": true,
    "manager": true,
    "reporter": false
  }
}
```

3.6 Employee Taxonomy

Employee Taxonomies represent the informal relationships between People and Organisations. They are a way of “tagging” People with attributes in relation to Organisations. The taxon string can be anything that has meaning for your Organisation.

People can have multiple Employee Taxonomies in one or multiple Organisations.

/employee_taxonomy

org_id	Organisation Unit ID String <i>Organisation Unit ID of the Organisation this Taxonomy is associated with.</i>
national_id	National ID Number String <i>Norwegian National ID Number of the Person this Taxonomy is associated with.</i>
taxon	Taxon text String <i>String to associate with this Person and Organisation.</i>

Example Employee Taxonomy Change

```
{
  "changeType": "add",
  "changeDate": "2016-09-11T09:50:01Z",
  "newRecord": {
    "org_id": "12345",
    "taxon": "Tag1",
    "national_id": "12345678910"
  }
}
```