Implementing DOKS Sanctions API

Implementing DOKS Sanctions API is very easy and straight forward. This document describes the API call and response basics and principles for using DOKS Sanctions API asynchronously as a background process or synchronized to your UI and user interactions.

API call basics

The basic API call for DOKS Sanctions API is very easy:

```
POST https://dsa.doks.fi/api/current/keyword/
[
    {
        "keyword": "John Smith",
        "entityType": "PERSON"      // ORGANIZATION for companies
    }
]
```

You just use keyword and entity type and you are all set!

If you wish, you can easily customize some settings, for example minimum name matching score, used sanctions lists and your internal reference:

```
POST https://dsa.doks.fi/api/current/keyword/
[
    {
        "keyword": "Example Company Ltd",
        "entityType": "ORGANIZATION",
        "minScore": 0.9,
        "sources": ["EUFINANCIAL", "UN"],
        "ref": "foo-123"
    }
]
```

Names can be in any order; <firstname> <lastname> or <lastname> <firstname>. Name can also include third names, titles or initials - it does not make any difference since DOKS Sanctions API can handle all these cases!

DOKS Sanctions API has a state-of-the art name matching technology built in, so you just need to choose wanted matching score from 50% (0.5) to 100% (1.0) for API calls. If you lower the score, you will get more hits but also most likely more false-positives. However if you use too high score, you might miss relevant hits. It all depends on your business needs and used names. You can try different values and choose the level that best suits you. Default is 80% (0.8).

Internal reference does not affect the results, it is just for your convenience to help handing the response.

It is OK to make one API call for a single keyword - our systems are built for heavy loads. But if you want, you can combine up to 100 names for a single call:

```
POST https://dsa.doks.fi/api/current/keyword/
[
    {
        "keyword": "Example Company Ltd",
        "entityType": "ORGANIZATION",
    },
    {
        "keyword": "John Smith",
        "entityType": "PERSON"
    },
    {
        "keyword": "Jane Johnson",
        "entityType": "PERSON"
    }
]
```

API response basics

Successful API call to DOKS Sanctions API always responses with HTTP status code 200:

```
HTTP 200
{
    "maxScore": 0.7234564,
    "numHits": 1,
    "numTargets": 1,
    "hits": [
        {
            "id": "dsa-b5f8a9f8",
            "keyword": "Acme Inc.",
            "match": "Acme Incorporated",
            "score": 0.7234564,
            "ref": "123456"
        }
    ],
    "targets": {
        "dsa-b5f8a9f7": {
            "url": "https://dsa.doks.fi/api/current/download/?id=dsa-b5f8a9f8",
            "source": "EUFINANCIAL",
            "details": [
               {
                    "nameType": "PRIMARY",
                    "type": "NAME",
                    "value": "Acme Incorporated"
                },
                {
                    "type": "DESCRIPTION",
                    "value": "Acme Incorporated is a fictitious company."
                },
                {
                    "nameType": "AKA",
                    "type": "NAME",
                    "value": "Acme International"
                }
            ]
        }
    }
}
```

Hit means, that given name matches a name in sanction list with given matching score. Hit can be for a primary name, alias, formerly known name or name variation. Because of that, it is very common, that response contains more hits than targets. Target is a single entry in a sanction list and it contains all the known details for person or a company. Details can includes names, addresses, passport numbers, nationalities etc.

We have built some handy helpers for you; you can use maxScore (maximum single matching score from all the hits), numHits (number of the hits) and numTargets (number of different targets) to quickly detect, if response for your API call must lead to an action.

For handling the hits, you can use consolidated target details. There is no need for you to parse different sanction list formats and informations - we have done this heavy lifting for you.

You can also use target's url to fetch ready-prepared html or pdf version that includes all the details ready to be viewed on screen.

This way you can actually skip the whole parsing process: Just make the API call with keyword, get the target url and pass it through your process!

Asynchronous implementation:

1. Prepare the names you want to screen, for example database query.
2. Setup scheduled job, for example cron or similar. You can choose the frequency according to your business needs, for example once a day.
3. Make the API calls. You can combine up to 100 names for a single call or just call one by one.
4. Analyze the response. You can use your internal reference to help tracking what name on your database has been matched.
5. Perform the wanted action, for example flag database entry or send notification email.

```
// This is imaginary pseudo-code that can not be used in reality

// Get customers from database
customers = dbquery("SELECT id, name, last_screening_time FROM customers");

// Loop through customers
foreach(customers as customer) {

    // See if customer has been recently screened
    if(customer.last_screening_time > yesterday()) {
        continue;
    }

    // Make API call to DOKS Sanctions API
    if(results = make_apicall_to_DSA(customer.name)) {

        // See if there is hits
        if(get_number_of_hits_from_DSA_results(results) > 0) {

            // Flag database entry
            dbquery("UPDATE customers SET status = 'REVIEW', results = " + json_encode(results) + " WHERE id = " + customer.id);

            // Notify customer service via email
            send_email("support@foo.bar", "Potential sanctions list hit for " + customer.name + ". Please review it manually!");
        }
    }

    // Update last screening time into database
    dbquery("UPDATE customers set last_screening_time = " + now() + " WHERE id = " + customer.id)

}
```

Synchronous implementation:

1. Choose the events on your UI where you want to make the screenings, for example on demand by pressing "Screen this customer" -button or automatically while filling the name in form for a customer.
2. Make the API call on demand based on the event.
3. Analyze the response.
4. Visualize the screening outcome, for example red or green color, alert box or similar.

Bonus:
Get target's ready-prepared html or pdf-version and pass it through in UI!

```
// This is imaginary pseudo-code that can not be used in reality

// See changes in new customer form field
on.change(form.companyname, func(formfield) {

    // Make API call to DOKS Sanctions API to screen given value from changed form field
    if(results = make_apicall_to_DSA(formfield.value)) {

        // See if there is hits
        if(get_number_of_hits_from_DSA_results(results) > 0) {

            // Visualize form field with red color and instructive help text
            formfield.set_warning("red", "Potentical sanctions list hits!");

            // Get DSA target urls
            foreach(get_targets_from_DSA_results(results) as target) {

                // Place urls into UI
                links.append('<a href="' + target.url + '">See more details</a>');

            }
        }
    }
});
```