

Direct +

THIRD PARTIES INTEGRATION PROCESS



A G E N D A

**Assurer une
qualité data
optimale**

1. What is the DUNS number ?
2. Focus on the API-based third parties management lifecycle
3. Search process
4. Enrichment process on identity data
5. Monitoring portfolio management
6. What is the SEED file ?
7. How to deal with monitoring ?

Appendices

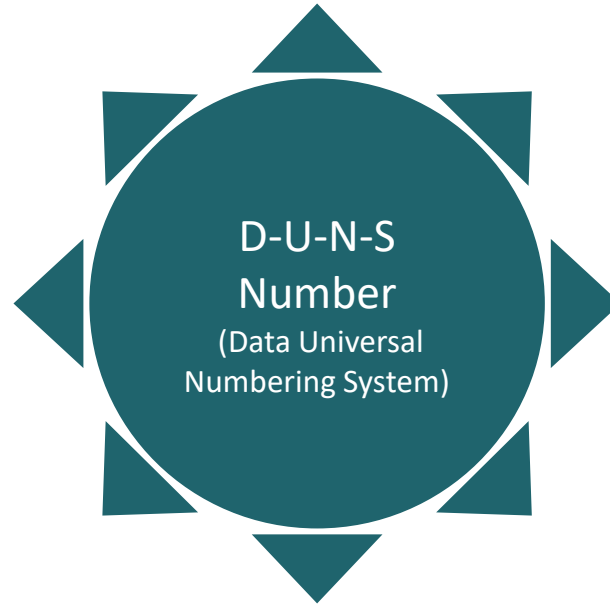
The DUNS number
International identification number for
third parties

The DUNS number

We first identify a third partie before enriching its data

- Created in 1962 in the United States
- Trademark registered and used by D&B
- Unique identification system for all companies (natural or legal persons) and organisations (humanitarian, governmental, etc.) with a recognised existence and activity.

- Internationally Recognized
- Used notably by the United Nations (1991).
- The United States Federal Government (1994)
- The European Commission (1995)




- 9-digit number
- Exclusively allocated and managed by D&B, its subsidiaries and partners (free registration)

- More than 265 million companies referenced
- In more than 220 countries

The DUNS number - Eligibility

The following are eligible

- Any company with a legal category (SA, SARL, EURL, SAS, etc.)
- Secondary establishments, such as a branch
- The professions
- Any non-profit organization, such as an association
- Any public or governmental entity and their subdivisions
- P.O. Boxes



Who can be
granted a
DUNS?

The following are not eligible

- Individuals not engaged in their own commercial activity
- Fixed assets that do not have the character of secondary establishments (construction sites, distributors, etc.)

**In France, the attribution of a Duns is
subject to the prior existence of a Siret!**

The Duns number - Basic Rule

Never reused or reallocated to another entity

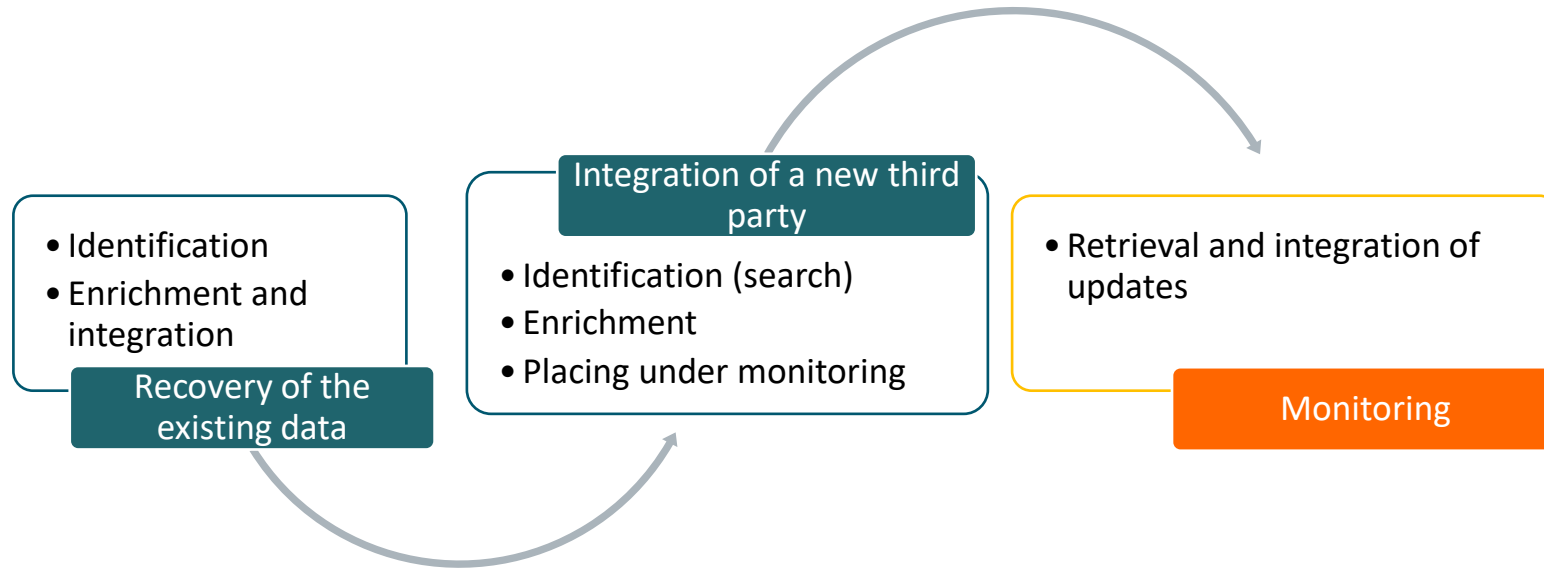
Audit and control system implemented in each site (country or geographical area).

Its mission :

- Preventing the reuse and/or reallocation of a pre-existing DUNS number
- Avoid the loss of relevant data by reconciling duplicates (if the same company had been allocated to 2 Duns)
- Maintain a database of deleted Duns with an indicator showing the reason for the deletion and, if possible, the Duns that replaced it.

Focus on the API-based third parties
management lifecycle

Referential management - The workflow



The sustainable management of a referential

The APIs

Features	API method
Token retrieval for identification purposes	https://plus.dnb.com/v2/token
Company Search and Identification	https://plus.dnb.com/v1/match/cleanseMatch?
Enriching data of company	https://plus.dnb.com/v1/data/duns/DUNSTNumber?blockIDs=xxxx
Monitoring : Differeents API to manage the Monitoring Portfolio (RegistrationID)	Described later in the document (§ Monitoring)
Monitoring : Integration of data updates	Download files from FTP

Information	Description
Exchange protocol	REST/JSON
Adding and removal of company monitoring	API call with txt file containing DUNSs as an input
Monitoring updates retrieval	Retrieval of a txt file containing JSON response from ftp server
Number of simultaneous API calls	5 calls per second

Third party integration process



Third parties referential



New third party search

Retrieval of identification token

Token retrieved

New third party search

List of probable third parties

List of probable third parties

Data enrichment of company

Data enrichment of company (call of DataBlocks)

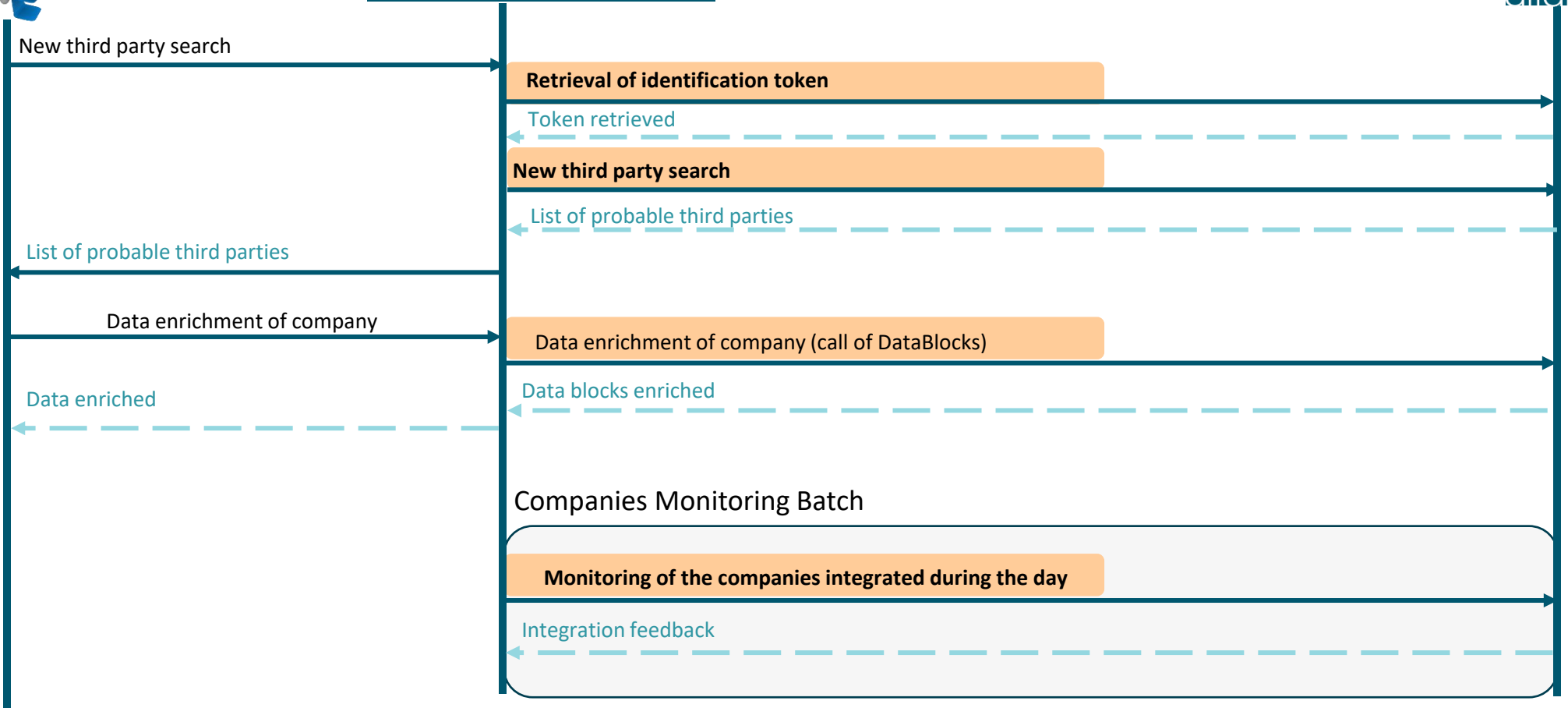
Data enriched

Data blocks enriched

Companies Monitoring Batch

Monitoring of the companies integrated during the day

Integration feedback

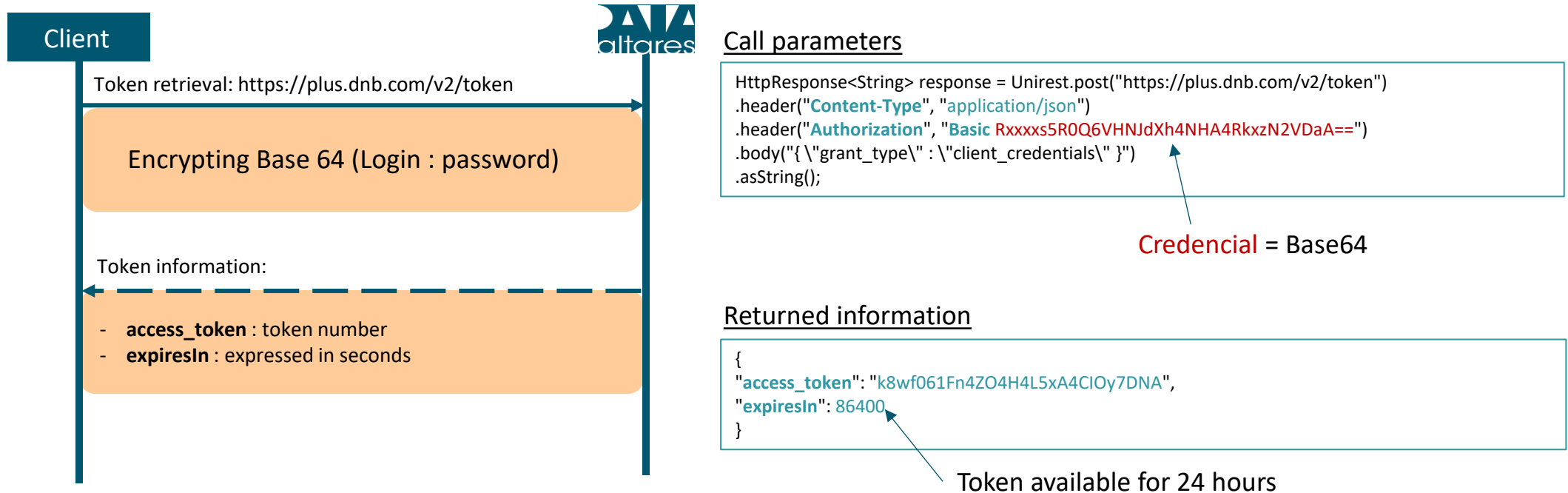


The Identification Token

The identification token

Purpose : Retrieving a token to identify yourself when querying Direct+ Services

Detailed documentation: <https://directplus.documentation.dnb.com/openAPI.html?apiID=authentication>



Search process

Company identification

Search method – cleanseMatch – call sequence

Purpose : Search for a third party

Detailed documentation: <https://directplus.documentation.dnb.com/openAPI.html?apiID=IDRCleanseMatch>

Client

Method URL: <https://plus.dnb.com/v1/match/cleanseMatch>



Query parameters

Parameter	Description	Example
authorization	Identification token mandatory	<pre>HttpResponse<String> response = Unirest.get("https://plus.dnb.com/v1/match/cleanseMatch?name=Gorman+Manufacturing&streetAddressLine1=492%20KOLLER%20STREET&countryISOAlpha2Code=US&addressLocality=SAN%20FRANCISCO&addressRegion=CA&postalCode=94110&telephoneNumber=6505550000") .header("Authorization", "Bearer LwVDAj50Ow6kPsuHu1NCb8qJsSZc") .header("Origin", "www.dnb.com") .header("cache-control", "no-cache") .asString();</pre>
Name	company name or trade name or former name	
Country code	ISO 2 format mandatory	
PrimaryAddress	Primary address	
Telephone	Telephone number	
RegistrationNumbers	Local identifier (with its code to be specified in the tag registrationNumberType)	
ConfidenceLowerLevelThresholdValue	Quality of the match (max 10) recommended : 8	
CandidateMaximumQuantity	Maximum number of returned third parties	

A list of third parties matching the search criteria :

Information for selecting the right company to be enriched

Query feedback

Feedback info	Description	Example
Duns	international company identifier	<pre>{ "matchDataCriteria": "Name and Address Lookup", "matchCandidates": [{ "displaySequence": 1, "organization": { "duns": "804735132", "websiteAddress": [], "dunsControlStatus": {}, "primaryName": "GORMAN MANUFACTURING COMPANY, INC.", "tradeStyleNames": [], "telephone": [], "primaryAddress": {}, "mailingAddress": {}, "registrationNumbers": [], "mostSeniorPrincipals": [], "isStandalone": false, "corporateLinkage": {} }, "matchQualityInformation": { "confidenceCode": 10, "matchGrade": "AAAAZAAFFZ", "matchGradeComponentsCount": 11, "matchGradeComponents": {}, "matchDataProfile": "000000000000000000000000", "matchDataProfileComponentsCount": 14, "matchDataProfileComponents": {}, "nameMatchScore": 100 } }] }</pre> <div><div>Match identity information</div><div>Match quality</div></div>
primaryName	Company reason	
tradeStyleNames	Trade name	
primaryAddress	Quality of the match	
mostSeniorPrincipals	The principal officer	
registrationNumbers	A local identifier	
matchGrade	Quality of the match (max 10) (Tolerance 8)	

Search method – cleanseMatch – other query parameters

Parameter	Description
customerBillingEndorsement	Information provided by the Customer and used for Internal Billing. This may include the name of a person, service or any other useful information that identifies the "Consumer" of the Service. Not Mandatory
candidateMaximumQuantity	Limits the number of candidates returned by the search. By default this value is the 10 most probable. Not Mandatory
confidenceLowerLevelThresholdValue	Minimum quality level of matching candidates to be returned. It is related to the value of the confidenceCode response. Not Mandatory
exclusionCriteria	Exclusion parameters of the candidates searched for. No Mandatory <ul style="list-style-type: none">• ExcludeNonHeadQuarters: Returns only the headquarters of the companies• ExcludeNonMarketable: Returns commercially active companies• ExcludeOutOfBusiness: Returns only active third parties• ExcludeUndeliverable: Returns companies with a physical address• ExcludeUnreachable: no contact information for the company (tel, fax, email) Example: ... &exclusionCriteria=ExcludeNonHeadQuarters%2CExcludeNonMarketable
isCleanseAndStandardizeInformationRequired	Presents the Standardization of Address Parameters on which the search was based to perform the search on the third party's address. Not Mandatory Ex : Search addressLocality = « ST FRANCISCO » ⇒ Standardized addressLocality = « SAN FRANCISCO » ⇒ true : taken into account. false : not taken into account(default)

Search method – cleanseMatch – other query feedbacks

Paramètre	Description
candidatesMatchedQuantity	Number of Candidates returned by search criteria
matchDataCriteria	Type of match made for the search: <ul style="list-style-type: none">• DUNS Number Lookup: If the Duns is passed in parameter only this parameter is taken into account.• Name and Address Lookup: If the name or address is filled in• National ID Lookup : If the local id is filled in, it has priority (but after DUNS)• Telephone Number Lookup: If it is the only one to be filled in
displaySequence	Order of appearance of the candidate in the answer. Candidates appear in the answer in descending order of probability of matching. (Most likely first)
operatingStatus	Returns the status of an applicant. 2 possibilities: active or out of business

Search method – cleanseMatch – Match quality 1/3

Description : Provide information on the quality of the Match for each third party returned

matchQualityInformation

confidenceCode

Overall rating on the quality of the match. This score consolidates the matchGrade scores
Ex : 8

matchGrade

Provides a grade for each element that helped identify the third party.
Each grade compares the value passed as a parameter and the value returned for the third party in question.
Ex : ABAAZZFFZZ

matchGradeComponentsCount

Number of elements tested to define the matchGrade. This value is usually 7
Ex : 7

matchGradeComponents

Describes for each element of the matchGrade the grade. The number of elements corresponds to the matchGradeComponentsCount
Ex "componentType": "Name",
"componentRating": "A"

matchDataProfile

Technical rating on matching
Ex : 0000000000989896000000009898

matchDataProfileComponentsCount

Number of tested elements to define the matchDataProfile

matchDataProfileComponents

Explains for the values tested what the comparison was based on.
Ex : "componentType": "Name",
"componentValue": "00« => Business Name

nameMatchScore

Summarizes how the search was validated
Ex : Name and Address Lookup

Search method – cleanseMatch – Match quality 2/3

matchGrade

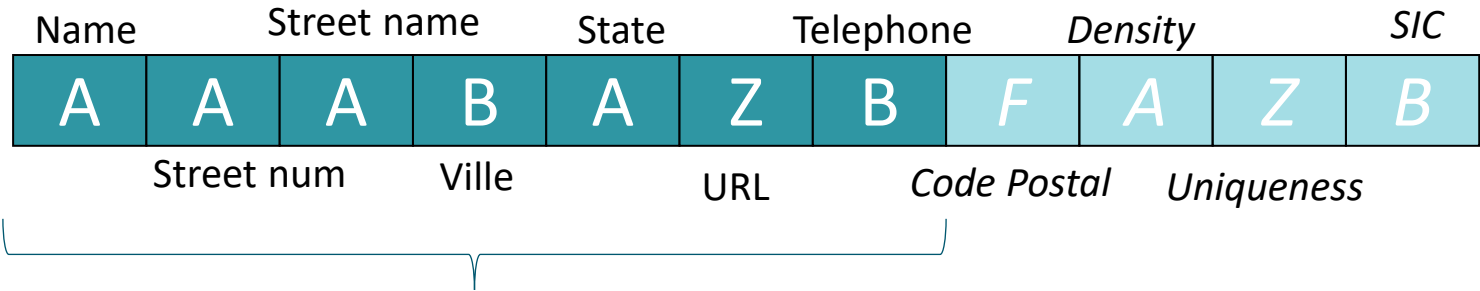
Tested values

Definition	
1- name	6- URL (mai or domain)
2- Street number	7- Telephone number
3- Street name	8- Postal Code
4- City	9- Density (Number of companies with the same postal code)
5- Country/state	10- Uniqueness (number of a search for this name in a region or country)
	11- SIC : Activity code

Grades

Grade	Definition	Example
A	values considered identical	Altares / Altares D&B
B	Values with strong similarities	Groupe Galaxie / Groupe Galaxie n’Co
F	Values considered to be different	Etablissement Eloï Pernet/ EURL Saint Eloï
Z	No values for comparison	Pas de donnée envoyée dans la requête

For confidenceCode high weighting of the address in comparison to the company name



Information used by Direct+'s Cleansematch research

Search method – cleanseMatch – Match quality 3/3

matchDataProfileComponents

The following lists allow you to define on which element a search criterion has been matched. Example in the case of a match on a company name, on which type of name did the match take place? Company name, Business name, Former company name, ...

Type of name in D&B base or the name passed in parameter matched

Code	Match To	Notes
00	Primary Name.	
01	Registered Name.	
02	Trade Style Name.	Not applicable for US and Canada
03	Name of CEO or other primary contact.	
04	Additional Executive Name.	
05	Former name.	
06	Former Tradestyle Name.	Reserved for future use.
07	Name of former CEO or other primary contact.	
08	Former Executive Name.	Reserved for future use.

Type of phone number in D&B base or the phone set in parameter has matched

Code	Matched to
00	Current Phone
02	Former Phone
98	No D&B Data exists for this field
99	No Data in inquiry for this field

Type of address in D&B base or the address passed as a parameter to match

Code	Matched To
00	Physical Address
01	Registered Address
02	Former Physical Address
03	Additional Address
98	No D&B Data exists for this field
99	No Data in inquiry for this field

Data enrichment process (DataBlocks)

Enrichment – Data Blocks – Query workflow

Purpose : Retrieving blocks of data and integrating it into an MDM/CRM/SRM for a new entrant

Complete documentation : <https://directplus.documentation.dnb.com/DataBlocks.html>



Client

Method URL : <https://plus.dnb.com/v1/data/duns/381633528?blockIDs=xxx>

Pparameters		Description	Example
Autorisation	(Mandatory)	Identification token	<pre>HttpResponse<String> response = Unirest.get("https://plus.dnb.com/v1/data/duns/275454064?blockIDs=companyinfo_L2_v1, hierarchyconnections_L1_v1, principalscontacts_L2_v1").header("Authorization", "Bearer b5nqs82809B4i4h1").asString();</pre> <div>Duns</div> <div>Connexion token</div>
dunsNumber	(Mandatory)	The DUNS to be enriched	
blockIDs	(Mandatory)	Data blocks that we want to retrieved (Example : xxx = companyinfo_L2_v1, hierarchyconnections_L1_v1, principalscontacts_L2_v1)	
tradeUp	(Option)	Return systematically the headquarter	
orderReason	(Mandatory for Risk Datablocks)	A D&B code value that defines the grounds for the customer request	

A list of data corresponding to the blocks requested of the DUNS:

Returned information	Example
<p>The informations returned will depend on the type of data requested. You'll find all the type of data that can be retrieved, with different depths :</p> <ul style="list-style-type: none">• Hierarchy & Connections• Ownership Insights• Company Financials• Payment Insights• Principals & Contacts• Filing & Events• Company Entity Resolution• Company Information• Diversity Insights• Financial Risk Insights• Company News• Industry Profile	<pre>{ "transactionDetail": { "transactionID": "rrt-06227f00e209ad95d-d-ea-32027-126803697-4", "transactionTimestamp": "2020-04-14T15:14:43.395Z", "inLanguage": "en-US" }, "inquiryDetail": { "orderReason": "6332", "duns": "275454064", "blockIDs": ["companyinfo_L2_v1", "principalscontacts_L4_v1"], "tradeUp": "hq" }, "organization": { "businessEntityType": { "description": "Corporation", "dnbCode": 451 }, "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074, "startDate": "2018-07-04" } } } }</pre>

Query parameters

Query feedback

Enrichment – List of DataBlocks and Definition

Standard Data Blocks

- Enables you to retrieve data on a specific entity or category.
- In a single online API request, multiple data blocks can be pulled.
- Monitoring and Batch are supported for all elements of standard data blocks.

Documentation

- List of Data Blocks and definition
- Generate the API specification and the full Path
 - ➔ <https://directplus.documentation.dnb.com/DataBlocks.html>

Enrichment – different calls

Some data may not be present in the Duns of the division that you are querying. In fact, some data will only be present at the level of its headquarters Duns.

Example :

- If you query the Duns of Altares' Division in Lyon for Risk data (Financial Strength Insights), I will not get any Risk data.
- To get this Risk data, you have to query the Duns of its headquarters in Colombes

Data available for all duns
(Divisions & Headquarters)

DataBlocks « All duns »

- Company Information
- Hierarchies & Connections

Data available only for headquarters

DataBlocks « Headquarters »

- Company Financials
- Filings & Events
- Financial Strength Insights
- Ownership Insights
- Payment Insights
- Principals & Contacts

Enrichment – Call Datablocks « All duns »

Purpose : Get the data from the “All duns” Datablocks and integrate them into an MDM/CRM/SRM in the context of a new entrant

Detailed documentation : <https://directplus.documentation.dnb.com/html/guides/Enrich/StandardDataBlocks.html>

Client

Call Method **URL : <https://plus.dnb.com/v1/data/duns/381633528?blockIDs=xxx&orderReason=6332>**

Main Parameters		Description	Example
Autorisation	(Obligatoire)	Token d'authentification	<pre>HttpResponse<String> response = Unirest.get("https://plus.dnb.com/v1/data/duns/275454064?blockIDs=companyinfo_L2_v1, hierarchyconnections_L1_v1, principalscontacts_L2_v1").header("Authorization", "Bearer b5nqs82809B4i4h1").asString();</pre>
dunsNumber	(Obligatoire)	Duns à enrichir	
blockIDs	(Obligatoire)	Liste des Data blocks « All Duns » (Exemple : xxx = companyinfo_L2_v1, hierarchyconnections_L1_v1)	
tradeUp	(Option)	Retourne systématiquement le Duns Siège (Mettre à vide)	
orderReason	(Obligatoire pour les Blocks Risk)	Une valeur de code D&B qui définit les motifs de la demande du client.	

Duns

List of blocks

Returned information

The data returned depends on the Datablocks requested.
For details see the online documentation

Return example

```
{
  "transactionDetail": {
    "transactionID": "rrt-06227f00e209ad95d-d-ea-32027-126803697-4",
    "transactionTimestamp": "2020-04-14T15:14:43.395Z",
    "inLanguage": "en-US"
  },
  "inquiryDetail": {
    "orderReason": "6332",
    "duns": "275454064",
    "blockIDs": [
      "companyinfo_L2_v1",
      "principalscontacts_L4_v1"
    ],
    "tradeUp": "hq"
  },
  "organization": {
    "businessEntityType": {
      "description": "Corporation",
      "dnbCode": 451
    },
    "dunsControlStatus": {
      "operatingStatus": {
        "description": "Active",
        "dnbCode": 9074,
        "startDate": "2018-07-04"
      }
    }
  }
}
```



Call parameter

Data returned

Enrichment – Call Datablocks « Headquarters » 1/2

Purpose : Get the data from the “Headquarters” Datablocks and integrate them into an MDM/CRM/SRM in the context of a new entrant

Detailed documentation : <https://directplus.documentation.dnb.com/html/guides/Enrich/StandardDataBlocks.html>

Client

Call Method

URL : <https://plus.dnb.com/v1/data/duns/381633528?blockIDs=xxx&orderReason=6332 &tradeUp=hq>

Duns

tradeUp

List of blocks

Main Parameters		Description	Example
Autorisation	(Obligatoire)	Token d'authentification	<pre>HttpResponse<String> response = Unirest.get("https://plus.dnb.com/v1/data/duns/275454064?blockIDs=Company Financials_L1_v1,tradeUp=hq").header("Authorization", "Bearer b5nqs82809B4i4h1").asString();</pre>
dunsNumber	(Obligatoire)	Duns à enrichir	
blockIDs	(Obligatoire)	Liste des Data blocks « Headquartgers » (Exemple : xxx = Company Financials_L1_v1,...)	
tradeUp	(Option)	Retourne systématiquement le Duns Siège (Mettre hq)	
orderReason	(Obligatoire pour les Blocks Risk)	Une valeur de code D&B qui définit les motifs de la demande du client.	

Returned information

The data returned depends on the Datablocks requested.
For details see the online documentation

Return example

```
{  "transactionDetail": {    "transactionID": "rrt-06227f00e209ad95d-d-ea-32027-126803697-4",    "transactionTimestamp": "2020-04-14T15:14:43.395Z",    "inLanguage": "en-US"  },  "inquiryDetail": {    "orderReason": "6332",    "duns": "275454064",    "blockIDs": [      "companyinfo_l2_v1",      "principalscontacts_l4_v1"    ],    "tradeUp": "hq"  },  "organization": {    "businessEntityType": {      "description": "Corporation",      "dnbCode": 451    },    "dunsControlStatus": {      "operatingStatus": {        "description": "Active",        "dnbCode": 9074,        "startDate": "2018-07-04"      }    }  } }
```

altares

Call parameter

Data returned

Enrichment – Call Datablocks « Headquarters » 2/2

The integrated information is that of the headquarters. We must therefore save the data specific to the third party and those specific to its headquarters on the third party's file.

https://plus.dnb.com/v1/data/duns/274845849?blockIDs=financialstrengthinsight_L2_v1&tradeUp=hq&orderReason=6332

Request in headquarter duns
274845849

```
"organization": {  
  "isDeterioratingBusiness": null,  
  "duns": "275454064",  
}
```

The API returns the HQ Duns 275454064
which should be saved for the monitoring

Data establishment

Data HQ

Third party

Processed duns = 274845849

- Address
- Name

Duns HQ = 275454064

- Risk
- Paydex

If all this information is to be monitored, 2 monitoring
portfolios will have to be created.

- 1 on the Duns establishment with associated datablocks
- 1 on HQ Duns with associated datablocks

Monitoring portfolio management

Monitoring process - Workflow

Purpose : To allow to receive updated information of the companies under monitoring of the client in order to keep up to date his Database

Detailed documentation : <https://directplus.documentation.dnb.com/html/guides/Monitor/Monitoring.html>

Preparation and Creation of the Monitoring Portfolio

1 - Registration framing

- Name of the Monitoring Portfolio
- Informations to be monitored
- Data exchange protocol
- Etc.

2 - Monitoring APIs

- Add companies to the monitoring
- Remove companies from monitoring portfolio
- To activate notifications delivery

Activate the sending of notifications

Using the Monitoring Portfolio & Notification Retrieval

3 - Updates management

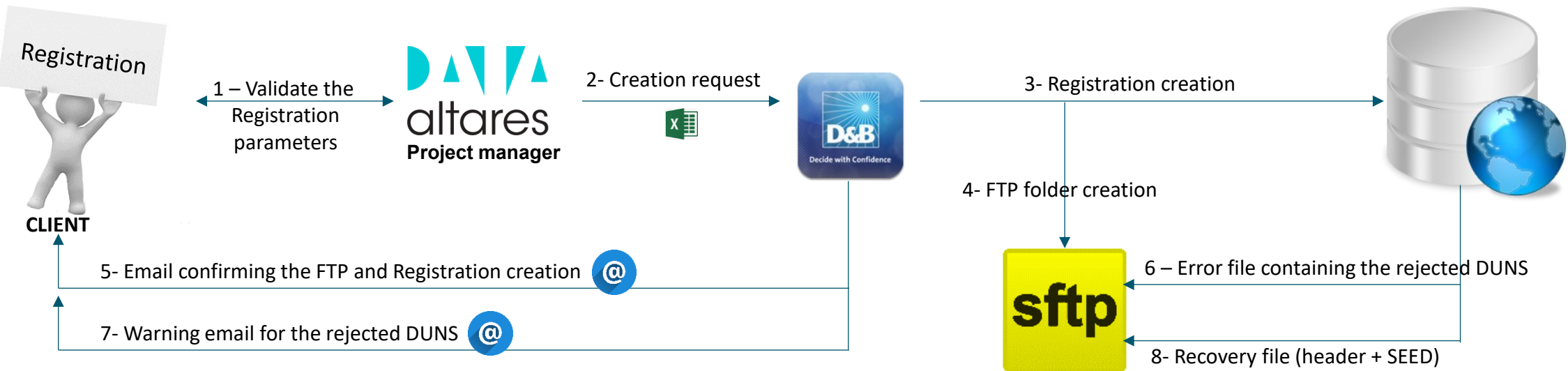
- Download updates file
- Updates integration



From a billing perspective, it is the unique number of DUNS monitored over the year (even if addition / cancellation many times).

1 – Registration Framing

- The **Registration** is a portfolio of duns for which the client wants to follow all the modifications (for 1 or many Datablocks, example « companyinfo_L2_v1, principalscontacts_L1_v1 »).
- The Registration is created by D&B with the parameters defined by the client and Altares project manager.
- It takes 7 working days to create this watch called **Registration**.



Parameters of REGISTRATION	Description
Reference : The name allowing to identify the registration (RegistrationID)	This name will be used in the files containing the updates and in the Webservice calls related to the monitoring. Cannot be modified
Universe or LOD : What do i want to monitor	In our case we will monitor a list of Duns (LOD). For marketing purposes possibility to monitor a segmentation (UNIVERSE) e.g. companies created in a country on a certain activity. Cannot be modified
seedData : Do i need a seed file?	➔ true or false Only at the creation of the Registration and within the framework of the data transfer I attach a list of Duns to be enriched. The result will be a .txt file containing the JSON Datablocks enrichment of the Duns. Cannot be modified
DataBlocks : List of Datablocks is used for monitoring	Put the Direct+ Datablocks names (example « companyinfo_L1_v1, principalscontacts_L1_v1 ») Cannot be modified
notificationType : what should be the updates file content ?	FULL_PRODUCT - I receive for one Duns Update all the registration To be used for the complete DUNS update UPDATE - Gives us only data before update and data after update. To be used to display an alert list to know the modified data of a DUNS if needed. Not modifiable
File management	DELETE_AFTER_DOWNLOAD : Delete automatically the file when it's downloaded (after 15 days, the file is automatically deleted) KEEP_15_DAYS : Keep the file 15 days on the FTP (file downloaded or not). It's automatically deleted after this delay.
Destination Type : File destination	The file can be sent to either D&B FTP or in Amazon S3 Cannot be modified
Notification Frequency : How often would I like to receive my notifications?	DAILY (after midnight UTC) / WEEKLY (Sunday after midnight UTC) / MONTHLY (The 1th of the month after midnight UTC)
JSON Path Inclusion	Define the data for which we want monitoring
JSON Path Exclusion	Define data for which we don't want monitoring
Email Addresses : mails for which notifications are sent	An email is sent when the Registration is updated. Several mails are possible. Modifiable

2a/ Monitoring APIs – List of main Apis (06/05/2022)

Documentation of all the monitoring APIs : <https://directplus.documentation.dnb.com/html/pages/MonitoringAPIs.html>

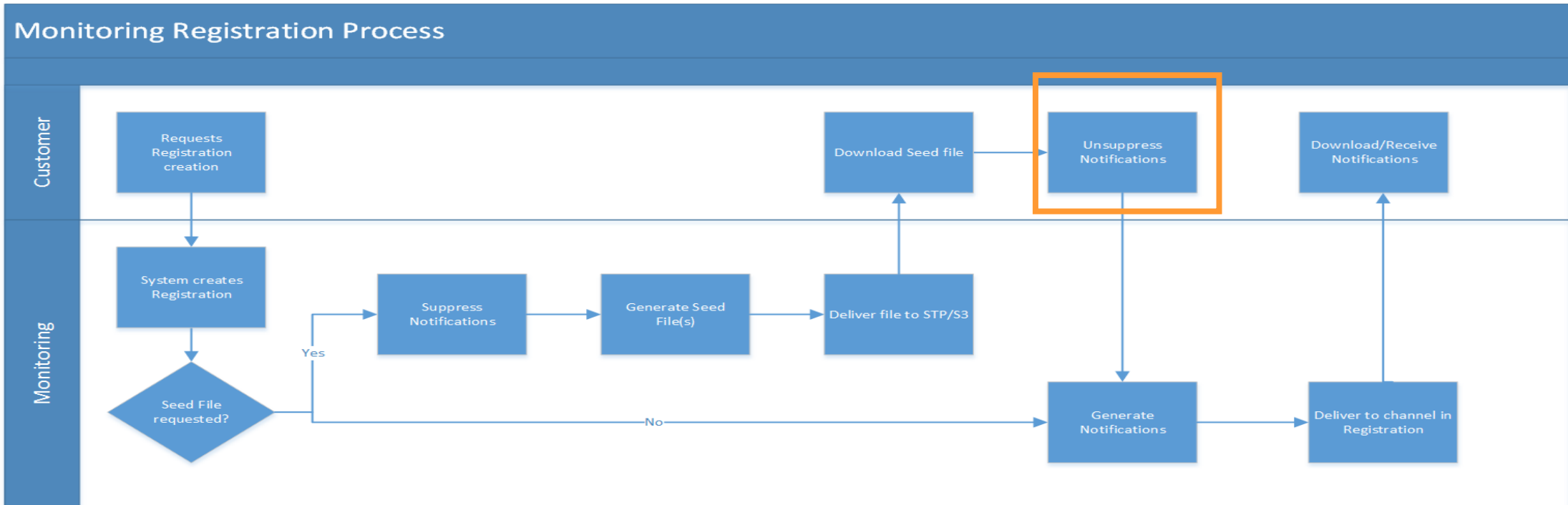
subject=duns

Features	Main APIs method
Add duns to the monitoring and Delete duns from the monitoring – a list of duns once a day (Scenario 1)	
Add Companies to the monitoring	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects HTTP verb : PATCH
Removal of company from the monitoring	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects HTTP verb : PATCH
Add duns to the monitoring and Delete duns from the monitoring – duns by duns (Scenario 2)	
Add 1 company to the monitoring	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects/{subjectID}/ HTTP verb : POST
Remove 1 company from the monitoring	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects/{subjectID}/ HTTP verb : DELETE
Other APIS	
To activate notifications delivery (once the SEED file is managed)	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects HTTP verb : DELETE
Export List of Duns in Registration (To check the list of duns under monitoring)	https://plus.dnb.com/v1/monitoring/registrations/export/{RegistrationID}/subjects
D&B FTP	
Integration of data updates	Download the files from the D&B FTP

2b/ Monitoring APIs – Activate the monitoring

Purpose : Once the Registration has been created and the SEED provided, the client has 1 month to manage the SEED file and activate the Registration monitoring with this APIs.

Detailed documentation: <https://directplus.documentation.dnb.com/openAPI.html?apiID=monSuppressNotifications>



DELETE /v1/monitoring/registrations/Registration_reference/suppress

Once this method is executed, we will be able to retrieve the notifications made since the creation of SEED.

2c/ Monitoring process – Add DUNS to the monitoring

Purpose : Add a list of duns or a Single Duns to the monitoring

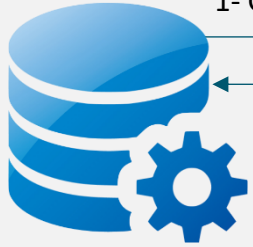
Detailed documentation:

<https://directplus.documentation.dnb/openAPI.html?apiID=monAddSubjectsToRegistration>

<https://directplus.documentation.dnb/openAPI.html?apiID=monAddSingleSubjectToRegistration>

subject=duns

1- Generate a file of Duns that still aren't under monitoring (for **scenario 1**)



CSV of ZIP, no header, one DUNS per line

2 (**Scenario 1** – Add a list of duns to the monitoring)- Call the method (POST)
https://plus.dnb.com/v1/monitoring/registrations/Registration_reference/subjects/

OR
2 (**Scenario 2** – Add duns by duns to the monitoring) - Call the method (POST) :
https://plus.dnb.com/v1/monitoring/registrations/Registration_reference/subjects/{subjectID}

Attach the Duns file



3- File containing the rejected DUNS



4- Information email in case of monitoring errors

2d/ Monitoring process – Remove DUNS under monitoring

Purpose : remove a list of DUNS or a Single DUNS from the monitoring

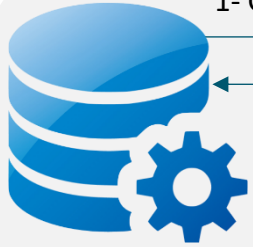
Detailed documentation :

<https://directplus.documentation.dnb.com/openAPI.htmls?apiID=monRemoveSubjectsFromRegistration>

<https://directplus.documentation.dnb.com/openAPI.html?apiID=monRemoveSingleSubjectFromRegistration>

subject=duns

1- Generate a file of DUNS to remove from monitoring (for **scenario 1**)



CSV of ZIP, no header, one DUNS per line

2 (**Scenario 1** – Remove a list of duns from the monitoring)- Call the method (PATCH) :
OR https://plus.dnb.com/v1/monitoring/registrations/Registration_reference/subjects/

2 (**Scenario 2** – Remove subject by subject from the monitoring) - Call the method (DELETE) :
https://plus.dnb.com/v1/monitoring/registrations/Registration_reference/subjects/{subjectID}/

Attach the DUNS file



3- File containing errors (duns are still under monitoring)



4- Information email in case of errors

2e/ Monitoring process – List the DUNS under monitoring

Purpose : Retrieve the list of DUNS under monitoring

Detailed documentation : <https://directplus.documentation.dnb.com/openAPI.html?apiID=monExportSubjects>
<https://directplus.documentation.dnb.com/html/pages/MonitoringAPIs.html#export-subject-list>

subject=duns



Each year upon renewal of the contract, all Duns still under monitoring will be automatically invoiced for the new year. Duns that need to be removed must therefore be removed before the renewal date of the contract.



1- Retrieve the list of DUNS under monitoring
https://plus.dnb.com/v1/monitoring/registrations/export/Registration_reference/subjects



2- Confirmation email



3- File containing the DUNS under monitoring placed in the folder



Naming pattern : REFERENCE_YYYYMMDDHHMMSS_**DunsExport**_FILE-NUMBER.zip

REFERENCE = Registration reference
YYYYMMDDHHMMSS Timestamp
FILE-NUMBER = nbr de fichier / 1 fichier = 3Go

2f/ Monitoring process – Examples of files

subject=duns

988325809
963550769
921473109
915369492
691181283
691097430
691009930
690884879
764155854
764137357
728528386
728499570
654668839
654511773
653353347
515000495
514153550

Example of file attached to the API
call to Add duns to the monitoring

988325809
963550769
921473109
915369492
691181283
691097430
691009930
690884879
764155854
764137357
728528386
728499570
654668839
654511773
653353347
515000495
514153550

Example of file attached to the API
call to suppress duns from the
monitoring

DUNS	Code	Information
489188348	10001	
91390875	10003	
238754237	21012	
001002864	40001	
546095134	40002	
692350192	40003	382784732
692577018	10200	

Example of file errors adding
duns to the monitoring

DUNS	Code	Information
683400778	21005	
89188348	10003	

Example of file errors adding
suppressing duns to the
monitoring

988325809
963550769
921473109
915369492
691181283
691097430
691009930
690884879
764155854
764137357
728528386
728499570
654668839
654511773
653353347
515000495
514153550

Example export file

3 – Updates management

What is the SEED file ?

3 – Updates management - Seed file structure

The Seed File is useful to know the updates in the delay of registration creation.

Information	Description
Content	Enrichment of all Duns in the LOD file associated with the Registration creation request
Leadtime	Within 7 working days of the request to create the Registration
Format	.zip file containing the DataBlocks enrichments of the Duns provided at the creation of the Registration
Deliverables	1 line => 1 enriched Duns

```
{
  "fileHeader" : {
    "headerType" : "SEEDFILE",
    "fileId" : "rrt-f98e3872-a-eu-6623-63069210-1",
    "inLanguage" : "en-US",
    "reference" : "PRD_MKTLNK_STP ",
    "productId" : "aasmcu",
    "versionId" : "v1",
    "totalRecordCount" : 92456097,
    "fileTimeStamp" : "2017-01-05T09:59:46.988Z",
    "files" : [
      {
        "name" : "PRD_MKTLNK_STP_20170208124948_SEEDFILE_1.zip",
        "hash" : "71a00d72f7d3f7caaec0b174dc444dccfaa0e230af85bbe444d8365b98083ba0"
      },
      {
        "name" : "PRD_MKTLNK_STP_20170208124948_SEEDFILE_2.zip",
        "hash" : "8f33b5469f92f4aba4d41c06475090f491ff3dfabec92474298c368cb60c3f67"
      }
    ]
  }
}
```

Indicate that we are in the SEED file header

Number of enriched DUNS

List of files containing the enrichment data

Example of HEADER file

SEED File - example

SEED File enrichment example

1 line per enriched DUNS

Same data structure than the DataBlocks

```

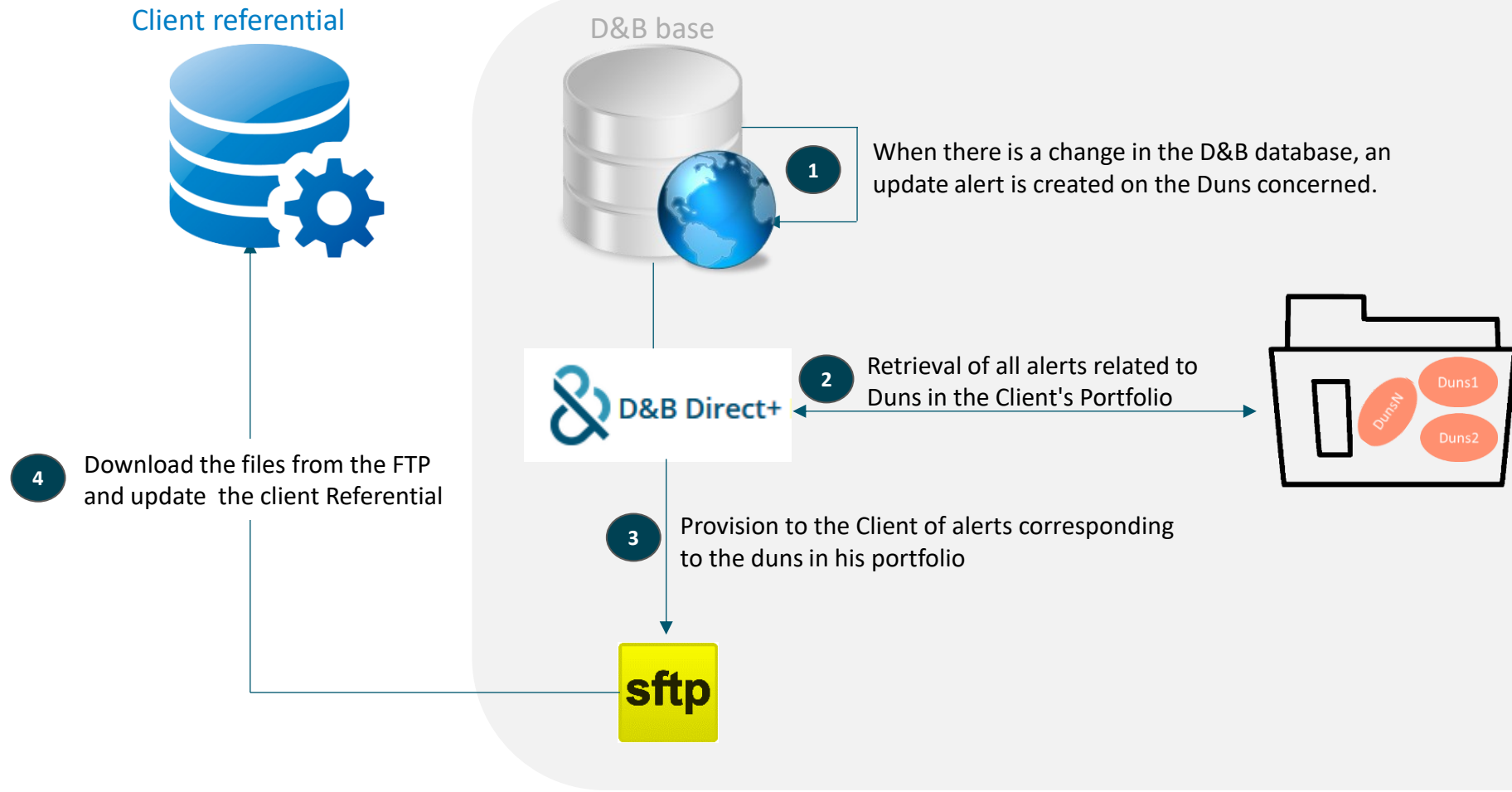
transactionDetail": {
  "transactionID": "rrt-0054d437bda32b21e-a-eu-22618",
  "transactionTimestamp": "2020-01-30T17:17:13.301Z",
  "inLanguage": "en-US",
  "productID": "cmpelk",
  "productVersion": "2"
},
"inquiryDetail": {
  "productVersion": "v2",
  "productID": "cmpelk",
  "duns": "502443740"
},
"organization": {
  "duns": "502443740",
  "dunsControlStatus": {
    "operatingStatus": {
      "description": "Out of business",
      "dnbCode": 403
    },
    "isMarketable": false,
    "isMailUndeliverable": false,
    "isTelephoneDisconnected": false,
    "isDelisted": false,
    "subjectHandlingDetails": [],
    "fullReportData": null
  }
}

```

3 – Updates Management

- List of files
- How to manage the monitoring ?

Update delivery process



Files to download from the FTP

Provided files :

Information	Description
Content	Enrichment of all Duns in the file associated with the Registration creation request
Leadtime	Files delivered within the deadline set in Registration
Format	.zip file containing the Datablocks enrichments of the Duns provided at the creation of the Registration 1 line => 1 Update alert if in UPDATE mode (N possible alerts / Duns). Notifications arrive ordered by DUNS and date of creation. 1 line => 1 Duns as soon as it has been updated if in FULL_PRODUCT mode. 1 Duns per Event Type
Deliverables	<ul style="list-style-type: none">• HEADER file: Describes the update files and synthesizes their contents.• The Duns update file(s) (NOTIFICATION) - 3Gb max if not several files - Zip File• Duns in error therefore not monitored (EXCEPTIONS)

Namming pattern :

REFERENCE_YYYYMMDDHHMMSS_FILE-TYPE_FILE-NUMBER

- **REFERENCE** = Reference given to the registration
- **YYYYMMDDHHMMSS** = Timestamp of file creation
- **FILE-TYPE** = Type of file (by content) : EXCEPTIONS / NOTIFICATION / HEADER :
- **FILE-NUMBER** = File number (not available for headers)

HEADER file example

UPDATE mode

```
{
  "fileHeader" : {
    "reference" : "STG_CMPELK",
    "headertype" : "NOTIFICATION",
    "fileId" : 0,
    "fileTimeStamp" : "2017-01-18T13:51:31.923Z",
    "inLanguage" : "en-US",
    "productID" : "cmpelk",
    "productVersion" : "v1",
    "totalRecordCount" : 192939522,
    "files" : [
      {
        "name" : "STG_CMPELK_20170118133445_NOTIFICATION_1.zip",
        "hash" : "e9494312b6f13f6f65d3200700b6370aa745680aaed166ac2ad3f86a6849ec4"
      },
      {
        "name" : "STG_CMPELK_20170118133445_NOTIFICATION_2.zip",
        "hash" : "b23d4c50d9f1a2f40562b2fbaabed69ebb3876259526e77f0c6a13b263a3ba1b"
      }
    ]
  }
}
```

File information NOTIFICATION: same as SEED file

```
"notificationCount" : [
  {
    "count" : 597659,
    "type" : "ENTER"
  },
  {
    "count" : 6256,
    "type" : "TRANSFER"
  },
  {
    "count" : 191706866,
    "type" : "UPDATE"
  },
  {
    "count" : 191,
    "type" : "UNDER_REVIEW"
  },
  {
    "count" : 18155,
    "type" : "EXIT"
  },
  {
    "count" : 597862,
    "type" : "SEED"
  },
]
```

Summary of the contents of the NOTIFICATION file

Notification file example

FULL PRODUCT Mode

```
{ "type": "SEED", "organization": { "duns": "461241614", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "462259946", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "629846408", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "514308647", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "662810548", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "462227083", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "371323127", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "461094070", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "249763145", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
{ "type": "SEED", "organization": { "duns": "460003213", "dunsControlStatus": { "operatingStatus": { "description": "Active", "dnbCode": 9074 }, "isMarketable": true, "isMailUndeliverable": false, "is1
```

- Here we'll have the enrichments of the Duns that had an update alert
- The Duns have just been added to Registration

Common structure between the 2 types of updates
Only the types differ

UPDATE mode

```
{ "type": "UPDATE", "organization": { "duns": "243813578" }, "elements": [ { "element": "organization.dunsControlStatus.lastUpdateDate", "previous": "2016-08-18", "current": "2016
{ "type": "SEED", "organization": { "tradeStyleNames": [], "stockExchanges": [ { "exchangeCountry": { "isoAlpha2Code": "AR" }, "isPrimary": true, "exchangeName": { "description": "Bue
{ "type": "DELETE", "organization": { "duns": "217825255" } }
{ "type": "UNDELETE", "organization": { "duns": "300218521" } }
{ "type": "UNDER_REVIEW", "organization": { "duns": "423792808" } }
{ "type": "REVIEWED", "organization": { "duns": "500532064" } }
{ "type": "TRANSFER", "organization": { "duns": "611710674", "dunsControlStatus": { "dunsTransfers": [ { "retainedDUNS": "064332299" } ] } } }
{ "type": "EXIT", "organization": { "duns": "204390939" } }
{ "type": "ENTER", "organization": { "duns": "019501954" } }
```

Notification file – possible types 1/2

Notification Type	Values	FULL_PRODUCT	UPDATE
DELETE	One DUNS has been deleted	X	X
EXIT	A DUNS is no longer part of the surveillance (rare!)	X	X
REVIEWED	One DUNS has been placed under surveillance; notifications will be sent later	X	X
TRANSFER	One DUNS was transferred to another DUNS.	X	X
UNDELETE	A DUNS is no longer deleted	X	X
UNDER_REVIEW	A DUNS is currently being processed. No notification of changes will be received while the DUNS is in this status.	X	X
UPDATE	The content related to the DUNS topic has been updated..		X
SEED	When a DUNS is added to monitoring in UPDATE mode or when a change occurs in FULL_PRODUCT mode	X	X

Notification file – possible types 2/2

Activity :

Activity	Notification Types for LOD Registrations	Description
A DUNS is indicated as deleted	UPDATE or SEED	All pending notifications for the registered DUNS number before it is deleted will be sent. However, while the DUNS number has the status deleted, no further update notifications will be sent. UPDATE or SEED depends on the "notificationType" setting in the Portfolio.
A DUNS is no longer deleted	DELETE	
Changes to data in a DUNS, this may include: New content, deleted content and updated content.	UNDELETE	For universe registration, a SEED record is included only if Registration a Seed File = True.
DUNS-A is transferred to DUNS-B; DUNS-A was in the portfolio. DUNS-B is no longer	SEED	For the LOD record, a SEED record is included if Registration for Seed File = True OR notificationType is FULL_PRODUCT.
DUNS-A is transferred to DUNS-B; DUNS-B was in the portfolio; DUNS-A is no longer in the portfolio.	UPDATE	UPDATE depends on the Registration notificationType setting.
DUNS is currently under review.	(DUNS-A) TRANSFER	Edit the record to delete DUNS-A and add DUNS-B.
Revision of DUNS is finalized	"Pas de notification envoyée"	
DUNS is removed from the watch list.	UNDER_REVIEW	
DUNS is under review AND is being transferred	REVIEWED	SEED is only included if the registration includes the SEED application.
A DUNS is indicated as deleted	REMOVED	
A DUNS is no longer deleted	TRANSFER	

Appendices

Miscellaneous questions

Is data update available for all countries?

⇒ Yes for all

Is it necessary to pay for a report again if we consult it again?

⇒ Multiple consultation is based on the contractual year. A Duns consulted several times over the contractual year will only be charged once for that year. If a request is made for a new year then in that case there will be a new billing for that new year.

Limit on the number of DUNS for the test account ?

⇒ The user provided for the tests is set for 300 DUNS. If an overrun is observed an invoicing can be made. This is why it is advisable to use PROD DUNS if tests with larger volumes have to be carried out.

NOTIFICATION file structure in UPDATE mode

Example of NOTIFICATION file in UPDATE mode - Type Update 1/2

Element modification

```
{  
  "element": "organization.registeredAddress.streetName",  
  "previous": "BUILDING 4, HATTERS LANE, CROXLEY GREENBUSINESS PARK",  
  "current": "BUILDING 4, HATTERS LANE",  
}
```

Array of elements modification

```
{  
  "element": "organization.industryCodes",  
  "previous": [  
    { "typeDescription": "North American Industry Classification System 2012", "description": "Unclassified Establishments", "priority": 1, "code": "999990",  
      "typeDnBCode": 24664 },  
    { "typeDescription": "D&B Hoovers Industry Code", "description": "Nonclassifiable establishments", "priority": 1, "code": "2058", "typeDnBCode": 25838 }  
  ],  
  "current": [  
    {  
      "code": "238210",  
      "description": "Electrical Contractors",  
      "typeDescription": "North American Industry Classification System 2012",  
      "typeDnBCode": 24664,  
      "priority": 1  
    }  
  ]  
}
```

Example of NOTIFICATION file in UPDATE mode - Type Update 2/2

Values modifications

```
{
  "element":"organization.telephone",
  "previous": [
    {
      "telephoneNumber":"5555551212",
      "isdCode":"86",
      "isUnreachable":false
    }
  ],
  "current": [
    {
      "telephoneNumber":"5555551000",
      "isdCode":"86",
      "isUnreachable":false
    }
  ],
  "timestamp":"2016-07-29T13:22:19Z"
}
```

Values adding

```
{
  "element":"organization.telephone",
  "previous":[],
  "current":[
    {
      "telephoneNumber":"57687353158",
      "isdCode":"86",
      "isUnreachable":false
    }
  ],
  "timestamp":"2016-07-29T13:22:19Z"
}
```

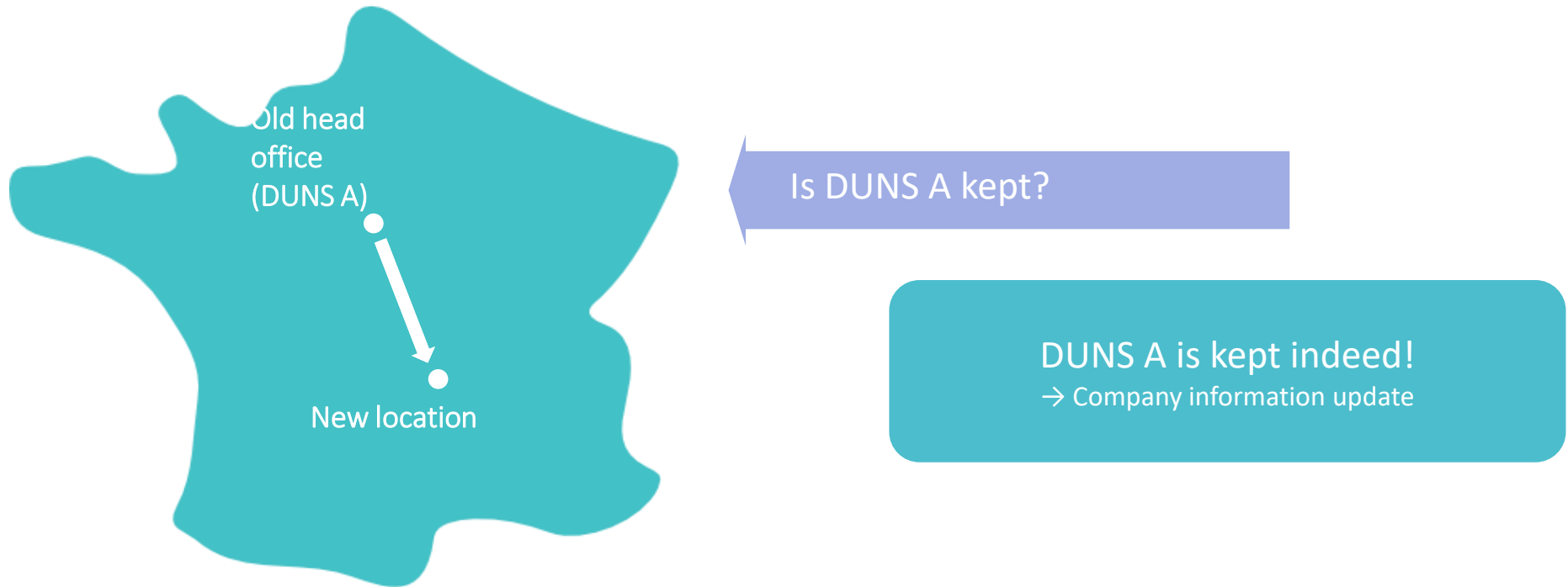
Values removal

```
{
  "element":"organization.telephone",
  "previous": [
    {
      "telephoneNumber":"5555551212",
      "isdCode":"86",
      "isUnreachable":false
    }
  ],
  "current":[]
}
```

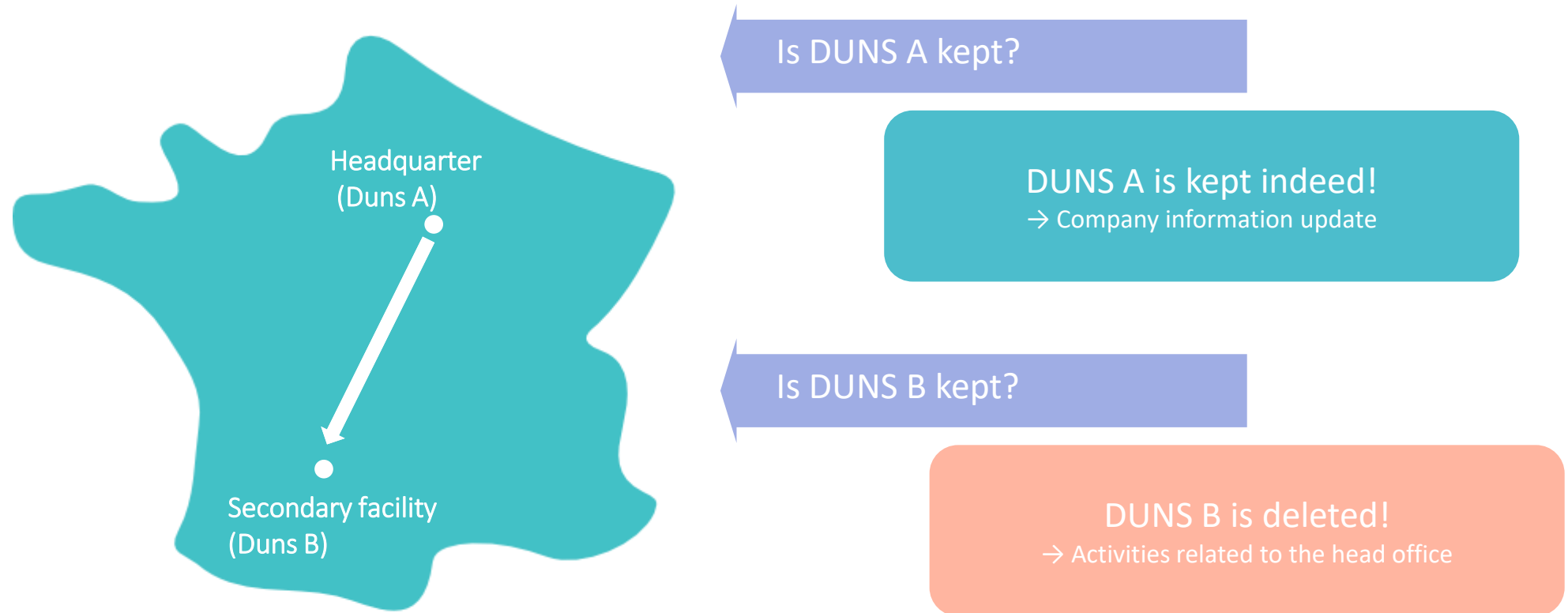
Company lifecycle

Case studies

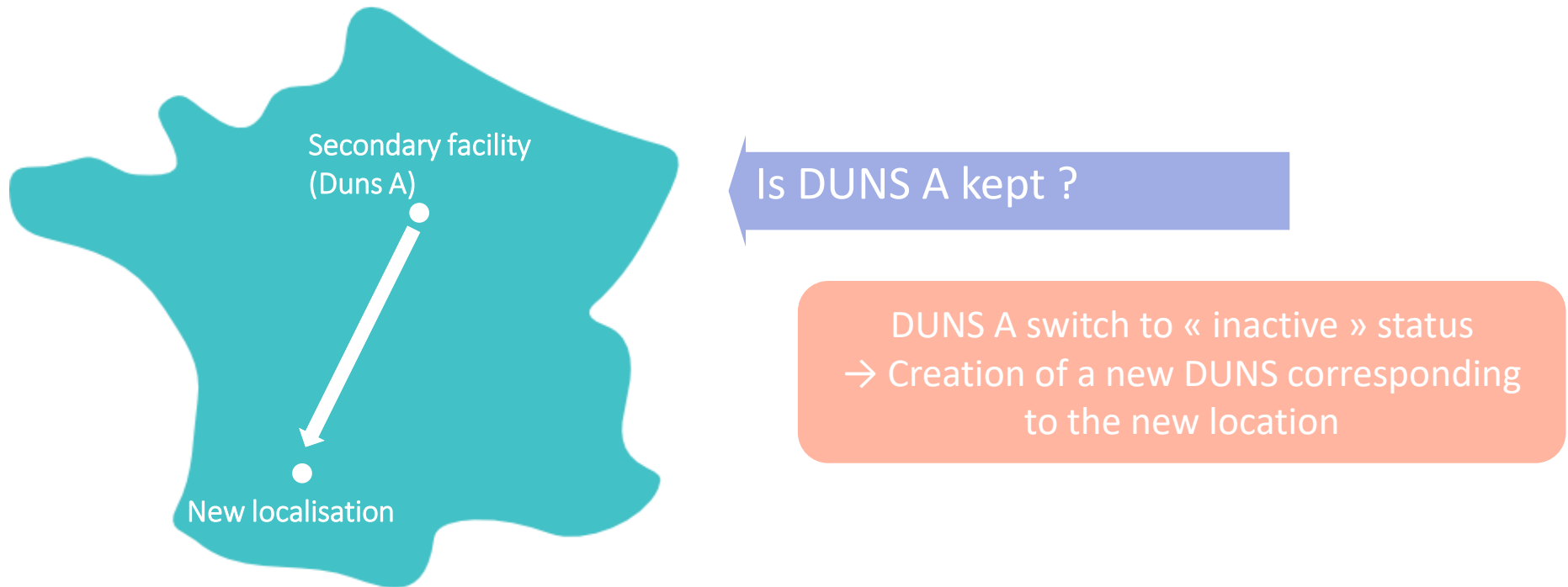
1. Relocation of the head office



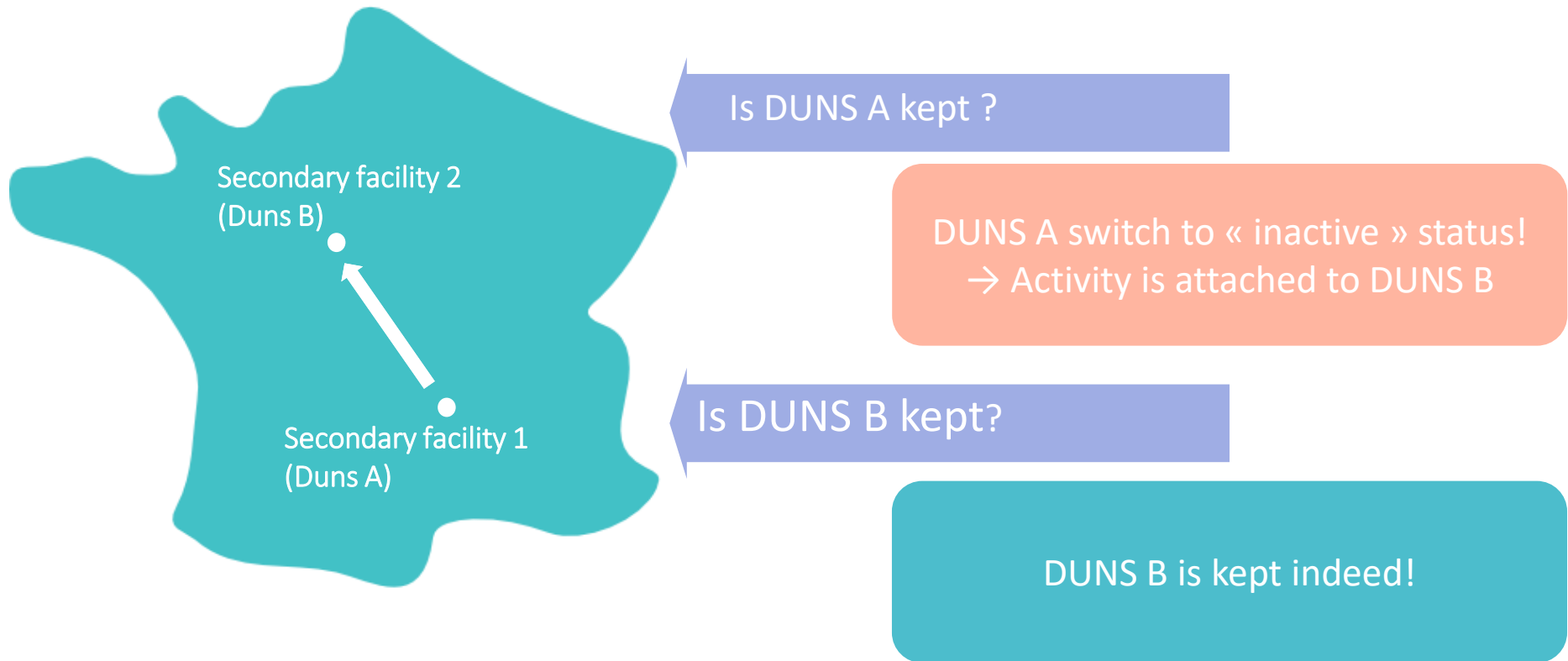
2. Relocation of headquarters to a secondary facility



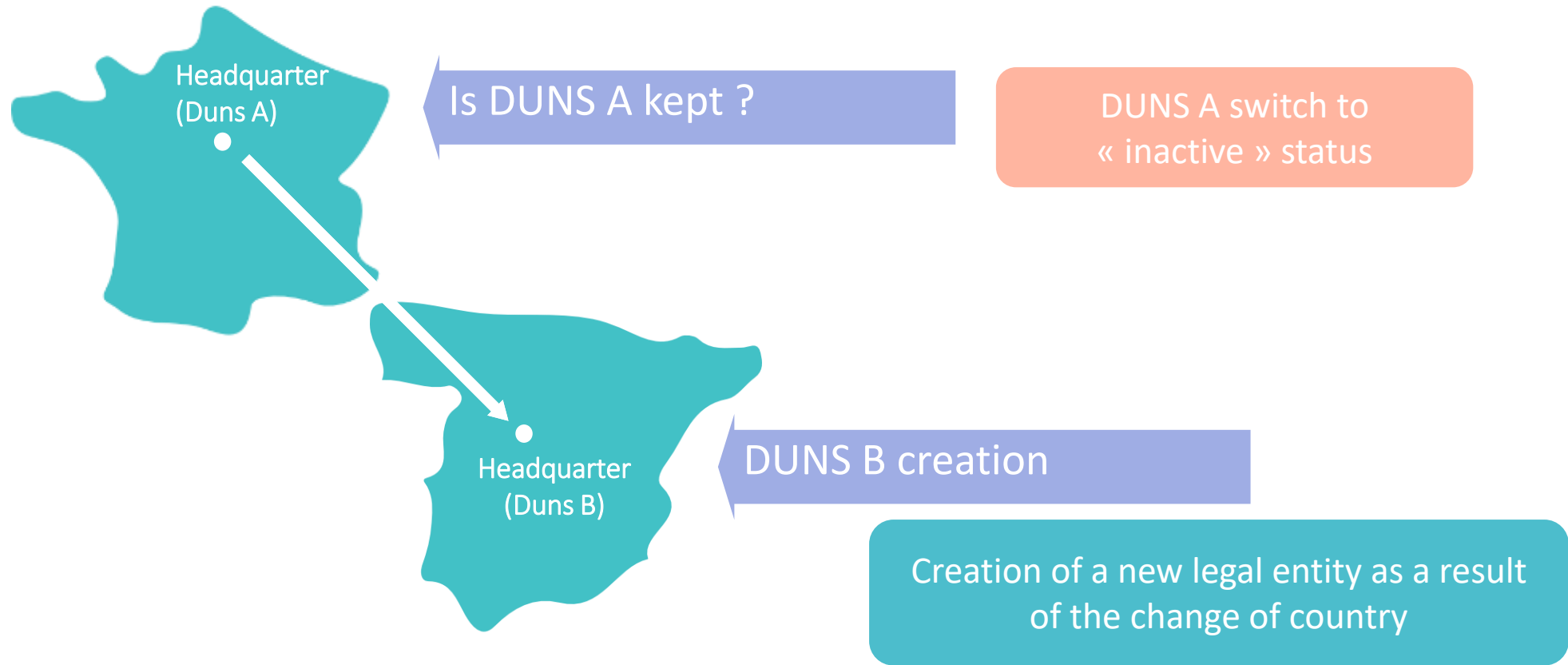
3. Relocation of a secondary facility



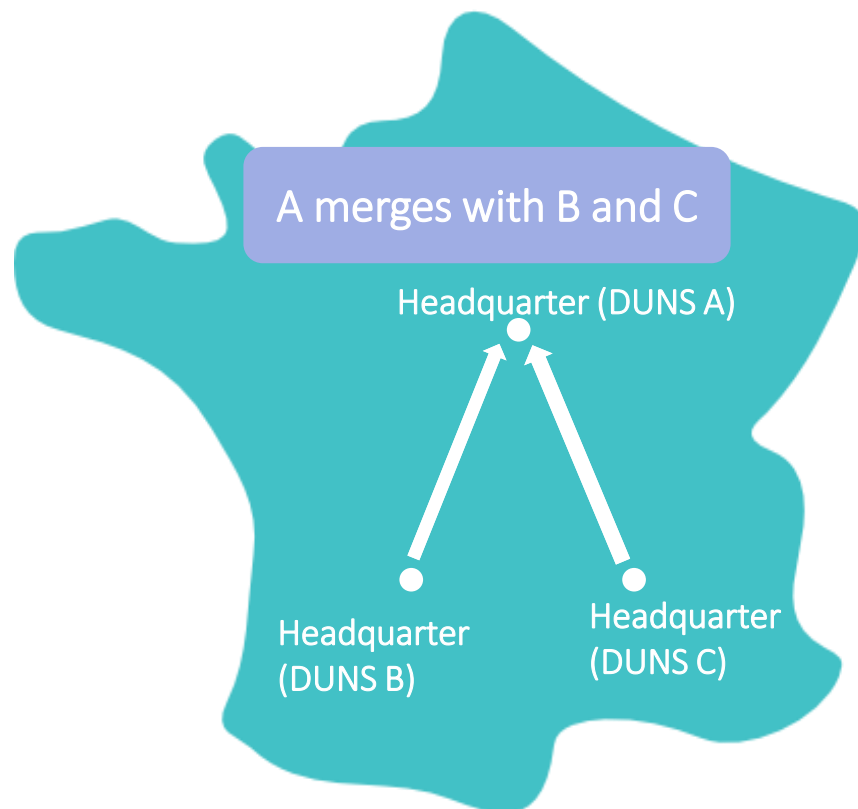
4. Relocation of a secondary facility to the location of another existing secondary facility



5. Relocation to a foreign country



6. M & A



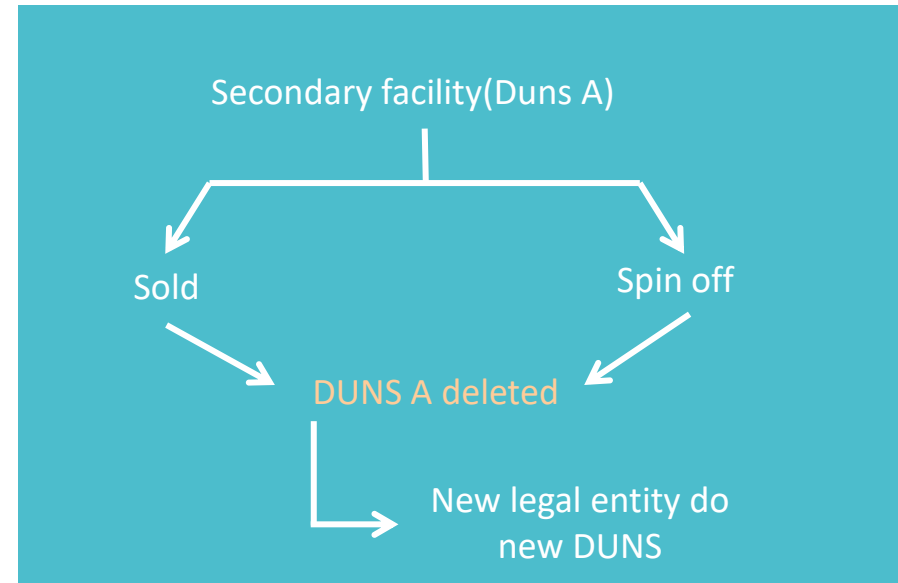
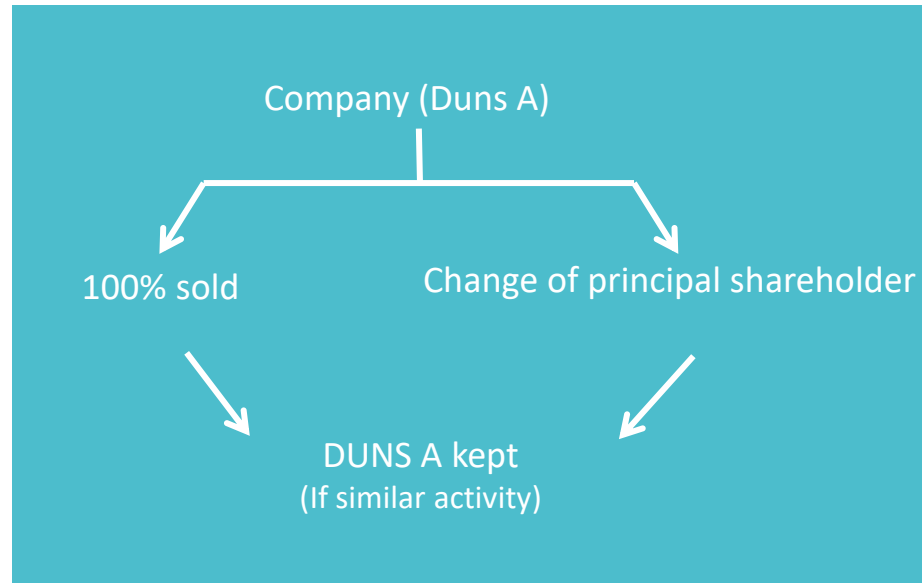
Is DUNS A kept ?

DUNS A is kept?

Are DUNS B and C kept?

DUNS B and C are deleted
→ Activity is attached to DUNS A

7. Control changes



Summary on the follow-up of a DUNS

► Duns

Case	Impact	Recommended action
Closing	The DUNS is disabled. If transfer known, (relocation, merger, takeover, etc.): presence of a successor.	Plan to replace the DUNS by its successor
Headquarter relocation	The DUNS follows the address of the head office	If it's for the HQ DUNS, we update the address