

Direct +

Integration process
Pull API Monitoring

General information

Notification Process: macro-steps

Objective: To enable the receipt of company update information from my database in order to keep this database up to date.

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

Preparation and Creation of the Monitoring Portfolio

Define monitoring

- Monitoring Portfolio Name
- Information to monitor?
- Data exchange method?
- Etc.

Use of the Monitoring Portfolio & Retrieval of notifications via API call

Integration process,

My monitoring steps

- Add companies to monitor
- Remove companies from my monitoring

"Batch update process

Manage updates

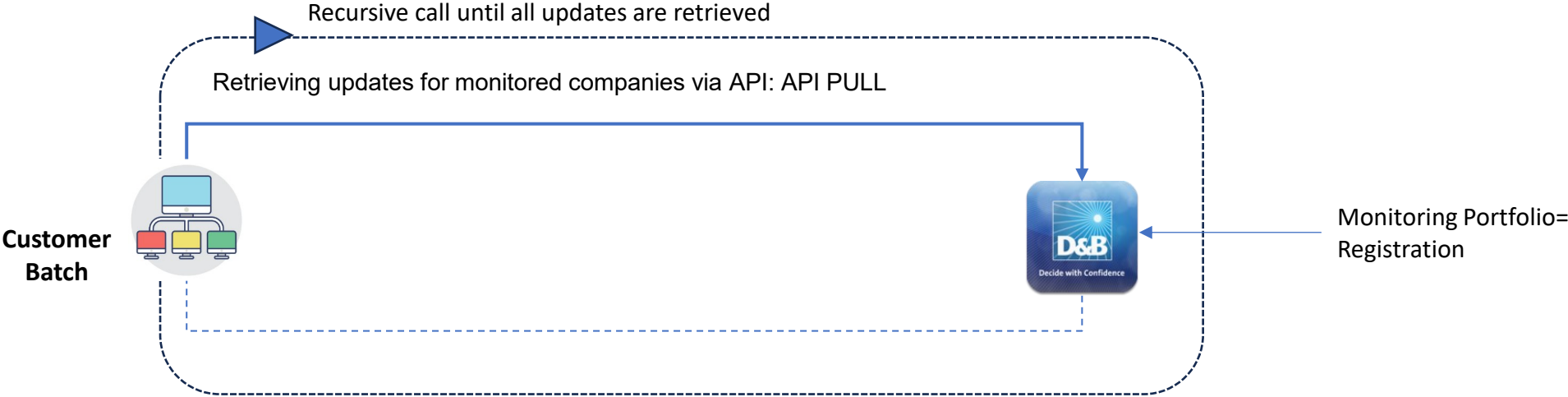
Integrate update data



Billing rules:

- DUNS monitored for at least one day during the contract period will be billed.**
- On the anniversary date, the DUNS under monitoring are automatically renewed for the following period.**

Monitoring process



1 – Creation of the monitoring Portfolio : D&B Registration

Creation of the monitoring Portfolio : D&B Registration

- The **Registration** is a portfolio of [DUNS](#) that allows the client to track all changes for one or more **Datablocks** (e.g., *companyinfo_L2_v1*, *principalscontacts_L1_v1*). It is created by [D&B](#) in collaboration with the client and the [Altares](#) project manager, based on predefined parameters.
- Setting up this monitoring process takes **7 business days**.



Registration ARGS	Description
Reference : Registration name (RegistrationID)	This name will be used in the files containing updates and in the Webservice calls related to monitoring. Non-editable. NO
LOD : Duns to be monitored	In our case, we will monitor a list of Duns (LOD). Non-editable..
seedData : SEED requested ?	It is an initialization file. Only during the creation of the Registration and as part of the data recovery process, I attach a list of Duns to enrich. The result will be a .txt file containing the JSON enrichments of the Duns with the data. False
DataBlocks : Monitored datablocks	Names of DataBlocks separated by a comma (e.g., "companyinfo_L1_v1, principalscontacts_L1_v1"). Non-editable.
notificationType : what should the update file contain?	UPDATE – It provides only the data before and after the update. To be used for displaying an alert list to identify the modified data of a DUNS if needed. Non-editable.
Mode	API_PULL
Destination Type : how notification are recieved	N/A
File Management : automatique deletion of files in FTP	N/A
Notification Frequency : What frequency files are delivered	N/A
JSON Path Inclusion (trigger de reception)	Define the data for which we want to have monitoring (optional; by default, it will be for all the data in the DataBlocks).
JSON Path Exclusion	Define the data for which we do not want monitoring (optional; by default, it will be for all the data in the DataBlocks).
Mail Address : Adresse de contact du sur le Registration	N/A

2 – Description API_Pull

Pull Notifications - Documentation

[D&B Direct+ Documentation](#) | [API Details \(dnb.com\)](#)

Endpoint	<code>https://plus.dnb.com/v1/monitoring/registrations/{reference}/notifications</code>
Inputs	<p>Reference A string used to identify the record. The reference must be unique for each subscriber.</p> <p>maxNotifications Requests the extraction of a certain number of notifications, if applicable, up to the specified value. If maxNotifications is not specified, one notification will be returned (if available). If fewer notifications are available than the value of maxNotifications, all available notifications will be returned. The Pull API may return a large number of small notifications (incomplete product) or a smaller number of larger notifications. When an error or timeout occurs during the extraction of notifications, it is recommended to reduce the maximum number of notifications to be extracted.</p>
outputs	<p>JSON response with primarily a notification array, where each element includes:</p> <p>The notification type: UPDATE</p> <p>Organisation object, which contains:</p> <ul style="list-style-type: none">dunsElement object consisting of the data that has changed in the D&B databases.

Monitoring Process – API Pull Mode Call (Notifications)

Objective: Obtain the list of notifications in Pull mode

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

<https://plus.dnb.com/v1/monitoring/registrations/{reference}/notifications>

Nom du registration

Input parameters	Description/best practice
MaxNotifications (best practice)	to 1 up to 100 (Update)
<u>Response</u>	
The format depends on the type of notification (update)	1 up to 100 notifications on Update
Message 404 : Not Found	No notifications availble, calls were already made
WARNING ! Availabilty of the notifications	4 days
Erreur or timeout	Decrease the number of notifications

Exemple on UPDATE

```
{
  "transactionDetail": {
    "transactionID": "rrt-0a68fa2f1d89ad965-b-eu-10610-21233151-90",
    "transactionTimestamp": "2024-02-25T16:21:00.869Z",
    "inLanguage": "en-US"
  },
  "inquiryDetail": {
    "reference": "Test_Sambath_API_Pull_Update"
  },
  "notifications": [
    {
      "type": "UPDATE",
      "organization": {
        "duns": "081466849"
      },
      "elements": [
        {
          "element":
"organization.corporateLinkage.globalUltimateFamilyTreeMembersCount",
          "previous": 1326,
          "current": 1327,
          "timestamp": "2024-02-22T11:07:46Z"
        }
      ],
      "deliveryTimeStamp": "2024-02-25T16:21:07.593Z"
    }
  ]
}
```

Ref registration

Type of notifications

Duns updated

Data updated

Date and time of the update

Date/Heure d'appel en mode API_PULL

monitoring process – Adding DUNS to monitoring.

Add duns to monitoring

Documentation :

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

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

subject=duns



Add 1 duns monitoring – call API (HTTP verb = **POST**) :

https://plus.dnb.com/v1/monitoring/registrations/Registration_reference/subjects/{subjectID}



- Either
 - Have a list of duns
 - Plan a batch with a recursive call for individual addition and activate monitoring.

monitoring process – deleting DUNS to monitoring.

Objectif : Supprimer un duns unitairement dans le monitoring

Documentation complète :

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

subject=duns



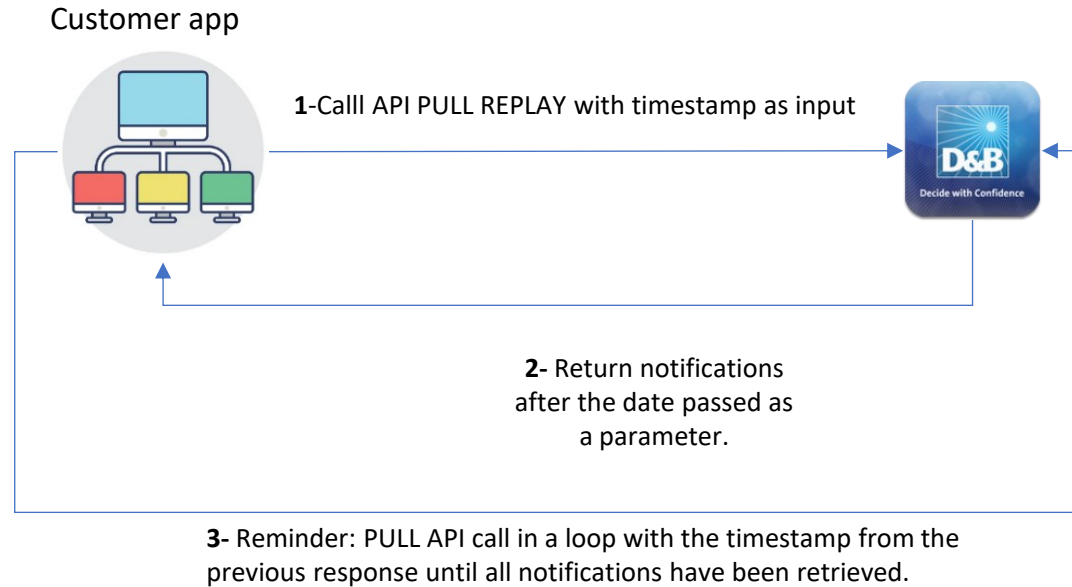
Retrease 1 duns from monitoring - callAPI (HTTP verb = **DELETE**) :
https://plus.dnb.com/v1/monitoring/registrations/Registration_reference/subjects/{subjectID}/



- Plan a batch with a recursive call.

Pull Notifications : Replay

Allows for replaying previously extracted notifications for a subscription.
The notifications that have been extracted are available to be replayed via the replay API for 14 days.



Monitoring process – call Replay

Objective: To retrieve the list of notifications in Pull mode (replay). **UPDATE**

Complete Documentation:

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

The Pull API must be executed within 4 days; after that, the call can be made in Replay mode for 14 days.

<https://plus.dnb.com/v1/monitoring/registrations/{reference}/notifications/replay>



Registration Name

Information	Description
Registration created API_PULL (deliveryTrigger)	API_PULL
Availbilty of notifications	4 days
Mode UPDATE	1175 notifications
MaxNotifications	10

Monitoring process– call Pull API - Limitations

Information	Description
Registration created API_PULL (deliveryTrigger)	API_PULL
Availability of the notifications	4 days
Mode UPDATE	1175 notifications
Mode Replay Pull – input parameter <i>replayStartTimestamp</i>	during 14 days
Max of duns in the process	300 000

Get REPLAY API_Pull_notifications

Examples

GET

https://plus.dnb.com/v1/monitoring/registrations/Test_SAS_API_Pull_Update/notifications/replay?re...

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

☒ replayStartTimestamp

2024-03-01T10:07:58.881Z

Key

Value

Description

Body

Cookies (2)

Headers (20)

Test Results

Status: 200 OK

Time: 364 ms

Si

Pretty

Raw

Preview

Visualize

JSON

16

17

18

19

20

21

22

23

24

25

26

elements": [

{

element": "organization.corporateLinkage.globalUltimateFamilyTreeMembersCount",

previous": 1524,

current": 1526,

timestamp": "2024-02-27T15:46:18Z"

}

,

deliveryTimeStamps": "2024-03-01T10:20:38.815Z"

}

]

Example of UPDATE with replayStartTimestamp (1/2)

```
{
  "transactionDetail": {
    "transactionID": "rrt-055e002969f3beb7d-c-eu-9986-22696003-28",
    "transactionTimestamp": "2024-03-01T14:37:14.517Z",
    "inLanguage": "en-US"
  },
  "inquiryDetail": {
    "reference": "Test_SAS_API_Pull_Update"
  },
  "notifications": [
    {
      "type": "UPDATE",
      "organization": {
        "duns": "268909075"
      },
      "elements": [
        {
          "element":
            "organization.corporateLinkage.globalUltimateFamilyTreeMembersCount",
          "previous": 1524,
          "current": 1526,
          "timestamp": "2024-02-27T15:46:18Z"
        }
      ],
      "deliveryTimeStamp": "2024-03-01T10:20:38.815Z"
    }
  ]
}
```

Registration reference

Type of update

Duns updated

Data updated

Date/time of update

Date/Heure of call API_PULL

Example of UPDATE with replayStartTimeStamp (2/2)

[D&B Direct+ Documentation](#) | [API Details \(dnb.com\)](#)

Block of notifications

The element that was updated

```
1  {
2    "transactionDetail": {
3      "transactionID": "rrt-08baf3ead30fe6d38-c-eu-18433-34122935-11",
4      "transactionTimestamp": "2023-10-10T13:20:16.938Z",
5      "inLanguage": "en-US"
6    },
7    "inquiryDetail": {
8      "reference": "Kamilia_Test_Pull_Notifications"
9    },
10   "notifications": [
11     {
12       "type": "SEED",
13       "organization": {
14         "corporateLinkage": {},
15         "duns": "270093792",
16         "dunsControlStatus": {
17           "operatingStatus": {
18             "description": "Active",
19             "dnbCode": 9074,
20             "startDate": "2016-02-20"
21           },
22           "operatingSubStatus": {
23             "description": "Active",
24             "dnbCode": 9074,
25             "startDate": "2016-02-20"
26           }
27         }
28       }
29     }
30   ]
31 }
```

Le timestamp on which we need to loop until all notifications are exhausted

```
7244   "description": "Polish",
7245   "dnbCode": 3809
7246 },
7247 "multilingualSearchNames": [],
7248 "imperialCalendarStartYear": null,
7249 "businessTrustIndex": {},
7250 "securitiesReportID": null,
7251 "investigationDate": null,
7252 "tsrReportDate": null
7253 },
7254 "deliveryTimeStamps": "2023-10-09T13:16:42.525Z"
7255 }
7256 ]
7257 }
```

Pull Notifications - Documentation : Replay

[D&B Direct+ Documentation](#) | [API Details \(dnb.com\)](#)

Endpoint	<code>https://plus.dnb.com/v1/monitoring/registrations/{reference}/notifications/replay</code>
Inputs	<p>Reference <i>A string used to identify the record. The reference must be unique for each subscriber.</i></p> <p>maxNotifications Requests the extraction of a certain number of notifications, if applicable, up to the specified value. If maxNotifications is not specified, one notification will be returned (if available). If fewer notifications are available than the value of maxNotifications, all available notifications will be returned. The Pull API may return a large number of small notifications (incomplete product) or a smaller number of large notifications. When an error or timeout occurs during the extraction of notifications, it is recommended to reduce the maximum number of notifications to be extracted.</p> <p>replayStartTimestamp A valid ISO-8601 string in the format "yyyy-MM-dd'T'hh:mm:ss'Z'". The replay API will return the first notification after the timestamp indicated by this parameter, up to the maxNotifications number if available.</p>
outputs	<p>JSON response primarily consisting of a notification array, where each element includes:</p> <ul style="list-style-type: none">• The notification type: FULL_PRODUCT, UPDATE• Organisation object, which includes:<ul style="list-style-type: none">• duns• Element object consisting of the data that has changed in the D&B databases• deliveryTimeStamp

3 – Monitoring process, other APIs

Monitoring process: Liste of APIs Monitoring

Documentation de toutes les APIs de monitoring : <https://directplus.documentation.dnb.com/html/pages/MonitoringAPIs.html>

Fonctionnalité	API	subject=duns
Add/supress duns		
Add duns to monitoring	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects/{subjectID}/ HTTP verb : POST	
Delete duns from monitoring	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects/{subjectID}/ HTTP verb : DELETE	
API call Pull mode	https://plus.dnb.com/v1/monitoring/registrations/export/{RegistrationID}/notifications	
other APIS		
Activate notifications (once seed is processed)	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/subjects HTTP verb : DELETE	
Export liste of duns under montoring	https://plus.dnb.com/v1/monitoring/registrations/export/{RegistrationID}/subjects	
Liste of registration on an account (850xxxx)	https://plus.dnb.com/v1/monitoring/registrations HTTP verb : GET	
Details of registrations	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID} HTTP verb : GET	
Check duns in registration	https://plus.dnb.com/v1/monitoring/registrations/{RegistrationID}/duns/{subjectID} HTTP verb : GET	

4 – Notifications management

Notification management 1/2

Type of Notification	Content	UPDATE
DELETE	Duns was deleted	X
EXIT	UN DUNS is not under monitoring	X
REVIEWED	Duns is under monitoring – notification will be sent later	X
TRANSFER	Duns has been transfered to another duns	X
UNDELETE	Duns was undeleted	X
UNDER_REVIEW	Duns is under process. No notifications will be sent undet this status.	X
UPDATE	Update has been sent	X
SEED	When a DUNS is added to monitoring: UPDATE + FULL_PRODUCT A SEED notification is sent when a DUNS has been updated: FULL_PRODUCT.	X

Notification management 1/2

Activities :

Activities	Notification Types for LOD Registrations	Explanations
Duns was deleted	UPDATE or SEED	All pending notifications for the registered DUNS number before it is deleted will be sent. However, once the DUNS number has the "deleted" status, no further update notifications will be sent. UPDATE or SEED depends on the "notificationType" parameter of the Portfolio.
	DELETE	
Duns is not deleted anymore	UNDELETE	For the universe registration, a SEED record is included only if the Registration has Seed File = True.
	SEED	For the LOD registration, a SEED record is included if Registration for Seed File = True OR the notificationType is FULL_PRODUCT
Data changes for a DUNS may include: New content, deleted content, and updated content.	UPDATE	UPDATE depends on input Registration notificationType.
DUNS-A is transferred to DUNS-B; DUNS-A was in the portfolio. DUNS-B is no longer.	(DUNS-A) TRANSFER	Modifiez l'enregistrement pour supprimer DUNS-A et ajouter DUNS-B.
DUNS-A is transferred to DUNS-B; DUNS-B was in the portfolio; DUNS-A is no longer.	"no notifications"	
DUNS is under review	UNDER REVIEW	
The DUNS revision is finalized.	REVIEWED	SEED is included only if the registration includes the SEED request.
DUNS is removed from monitoring	REMOVED	
DUNS is under review and transfered	TRANSFER	