

# DSB Dynamic Enumerations

## Frequently Asked Questions

**Author:** Derivatives Service Bureau

**Date:** 21<sup>st</sup> July 2022

**Version:** 1.1

## Table of Contents

Preface .....	3
Change History .....	3
1 Introduction .....	4
1.1 Document Purpose .....	4
1.2 Background.....	4
2 Frequently Asked Questions.....	4
2.1 Is there a user guide link on this notification for more details? .....	4
2.2 What are the differences between the normalized and denormalised templates? .....	4
2.3 How long do users have to upgrade their systems to use the new dynamic enumeration template format?.....	4
2.4 What is the impact when the DSB start consuming the normalised templates? .....	4
2.5 What does the DSB mean when it says that it will no longer support denormalised templates from June 2023? .....	5
2.6 I am having issues with the tooling that I use to process the templates – can anything be done about this? .....	5
2.7 When will the DSB start consuming the normalised templates? .....	5
2.8 Would there be impacted files/products for this notification? .....	5
2.9 Is adding “&internalizeRefs” to the URL a tactical change that will stop working on 26th June 2023, or is it a strategic/permanent way to resolve \$ref entries in the ‘normalised’ request templates? .....	5
2.10 Why has the “&internalizeRefs” parameter not been applied by default to ensure backward compatibility?.....	6
2.11 Could you clarify how a ReST API consumer would download the enumeration files independently of the product template files without resorting to file download or GitHub?.....	6
2.12 How do the relative folder paths in the \$ref command apply to the ReST API download? .....	6
2.13 Do we have to make any changes on our download program to continue the downloading of denormalized version of files? .....	6
2.14 Which files will be affected among ‘isin/’, ‘totv/’ and ‘totv-v2/’?.....	7
2.15 Do we have to retrieve or download the normalised templates again whenever there is an update to enums/FROs? .....	7

## Preface

### Change History

Date	Change	Version	Author	Revision Details
10/06/2022	Creation	1.0	DSB Technical Support	Initial revision
21/07/2022	Addition	1.1	DSB Technical Support	Added section 2.15

## 1 Introduction

### 1.1 Document Purpose

The purpose of this document is to provide answers to the frequently asked questions posed by the industry in relation to the dynamic enumerations release.

### 1.2 Background

The DSB included a question to Industry as part of the DSB's Industry Consultation process, this question was aimed at reducing the delivery times for the three enumerations which are changed regularly on the system. One of the issues was that templates had to be changed as each template contained a copy of the enumeration. The project decoupled the enumerations from the templates, meaning that the templates no longer need to change. Instead, a referenced enumeration file would be updated to include the new enumeration values.

## 2 Frequently Asked Questions

### 2.1 Is there a user guide link on this notification for more details?

Users may find the Dynamic Enumerations User Guide [here](#)<sup>1</sup>.

### 2.2 What are the differences between the normalized and denormalised templates?

Normalised schemas are now the current format of the DSB JSON schema of the product templates where the enumerated values are extracted to separated files and referenced in JSON using the keyword "\$ref".

Sample templates are available in section 7.1 Normalised templates in the Dynamic Enumerations User Guide [here](#)<sup>1</sup>.

### 2.3 How long do users have to upgrade their systems to use the new dynamic enumeration template format?

As agreed with the DSB's Technology Advisory Committee (TAC), the DSB will continue to support the denormalised templates for a period of 12 months from the point of implementation of the normalised templates into the system.

During this period users of the legacy denormalised templates will see the same updates once the changes have been made to the product templates.

### 2.4 What is the impact when the DSB start consuming the normalised templates?

There are changes to the response when using **GET ?schemas/schemaName** brought about by the Dynamic Enumerations. When requesting a GET ?schemas/schemaName via ReST API, the DSB would now respond with a normalised schema.

---

<sup>1</sup> <https://www.anna-dsb.com/download/dynamic-enumerations-user-guide-v1-0/>

## 2.5 What does the DSB mean when it says that it will no longer support denormalised templates from June 2023?

The DSB currently publishes two versions of the product templates on both GitHub and the File Download area. After the 26<sup>th</sup> June 2023, the DSB will only publish the normalised version of the product templates to this area, the denormalised product templates will be removed.

Programmatic users will still be able to obtain a denormalised version of the template by calling the **GET /schemas?schemaName=** method and passing the “**&internalizeRefs**” parameter.

## 2.6 I am having issues with the tooling that I use to process the templates – can anything be done about this?

To obtain a version of the schema which incorporates all external references, ReST API users can add the **&internalizeRefs** parameter.

Users may refer to **Section 3.2 - Obtain JSON schemas** of the ReST ROE found [here](#)<sup>2</sup> for further details.

## 2.7 When will the DSB start consuming the normalised templates?

The DSB has already started consuming normalised templates in UAT, UAT2 and Production will follow during the weekend of the 25<sup>th</sup>/26<sup>th</sup> June 2022.

## 2.8 Would there be impacted files/products for this notification?

The DSB provides the normalised versions of the JSON schemas which includes:

- A normalised JSON schema that defines the enumerated attributes of:
  - Notional currency
  - Reference Rate
  - Underlying Index
- A normalised JSON schema of request for ISIN for each of the product schema (one schema per each request).
- A normalised JSON schema of a record for each version of each of the product schema (a schema for each version of product schema).

Users may find the JSON and Documentation links in the [Release details page](#)<sup>3</sup>

## 2.9 Is adding “&internalizeRefs” to the URL a tactical change that will stop working on 26th June 2023, or is it a strategic/permanent way to resolve \$ref entries in the ‘normalised’ request templates?

“**&internalizeRefs**” has been added to assist users with the transition away from denormalised product templates. The DSB has no plans to remove this option on 26th June 2023. The DSB recommends that all users plan to consume the normalised version of the templates by 6th June 2023.

---

<sup>2</sup> <https://www.anna-dsb.com/download/dsb-rest-api/>

<sup>3</sup> <https://www.anna-dsb.com/2022-june/>

## 2.10 Why has the “&internalizeRefs” parameter not been applied by default to ensure backward compatibility?

The DSB’s default position is to support normalised templates, and this has been reflected in the default options of the get Schemas method. This approach ensures consistency across the schema API, file download and GitHub versions of the DSB’s product templates. Users who use the “&internalizeRefs” option will not be getting the full benefits of the dynamic enumerations release as they will still be required to download all product templates whenever there is an enumeration change. Users who are consuming the normalised templates will only need to update the enumeration files that have changed.

## 2.11 Could you clarify how a ReST API consumer would download the enumeration files independently of the product template files without resorting to file download or GitHub?

You may download schemas thru ReST API by invoking **GET /schemas?names** that will return the list of schema names. Using each of these names the user may invoke **GET /schemas?schemaName=** that will return the JSON schema for that name. You may also add the optional flag: **internalizeRefs** to the query (i.e.: **GET /schemas?schemaName=<schemaName>&internalizeRefs**) doing this will return a “denormalised” schema.

For more information regarding obtaining JSON schemas thru ReST API methods please refer to section 3.2 of the [ReST API ROE](#)<sup>2</sup>. You may also refer to Section 5 for ReST method samples.

## 2.12 How do the relative folder paths in the \$ref command apply to the ReST API download?

The relative paths within the schema (e.g.: “**\$ref**”: “**../codesets/ISOCurrencyCode.json**”) refers to the paths in either GitHub and/or File-download section only.

For ReST API, one can download all schema using the **GET /schemas?schemaName=<SchemaName>**. This method will work for either the main product definition (e.g.: **GET /schemas?schemaName=Rates.Swap.Fixed\_Float.InstRefDataReporting.V2**) or the referenced files, e.g.: **GET /schemas?schemaName=ISOCurrencyCode**.

## 2.13 Do we have to make any changes on our download program to continue the downloading of denormalized version of files?

The old file download path for the schemas which is <https://prod.anna-dsb.com/file-download/json-schema/isin-product-definitions> will remain the same and will return the denormalized/old schemas as there is a separate folder location for the normalized schemas which is on <https://prod.anna-dsb.com/file-download/json-schema/normalized-isin-product-definitions/>

Please do note that as stated on the notification below the DSB will continue to support the denormalised templates for a period of 12 months to allow users to transition to the normalised versions

2.14 Which files will be affected among 'isin/', 'totv/' and 'totv-v2/'?

The folder locations specified above are not affected as the schemas are located on <https://prod.anna-dsb.com/file-download/json-schema>

2.15 Do we have to retrieve or download the normalised templates and codesets again whenever there is an update to enums/FROs?

For the future changes to enumeration values, the DSB will send a notification providing the change details. Users who are consuming the normalised templates will only need to retrieve or re-download the codesets which contain the updated enumerations. These are available from these links for [PROD](#) and [UAT](#).