

Peppol

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PINT Wildcard Migration Plan and Guideline

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1 Introduction

This document aims to provide a migration plan towards implementation of the new Peppol Policy for use of Identifiers (PFUOI) and the mandatory use of the new wildcard scheme of Document Identifier Type for PINT throughout the Peppol Network.

It also aims to provide a guideline that explains the background issues with the different eDEC Document Type Identifier Schemes in the context of PINT, followed by a quick explanation of the changes made to the Peppol Policy for use of Identifiers (PFUOI) and the PINT specification. It concludes with the main part, the migration activities for the different actors.

This document is binding for this specific migration.

If this document refers to the “old version” of the PFUOI it means v4.2.0 whereas the “new version” of the PFUOI refers to v4.3.0. PFUOI v4.3.0 was for public review from August 7th to September 18th, 2024 at

<https://openpeppol.atlassian.net/wiki/spaces/RR/pages/3629711367/2024.08.07+review+Policy+for+use+of+Identifiers+v4.3.0>

2 Current situation

2.1 Peppol Policy for the Use of Identifiers

The PFUOI old version (v4.2.0), maintained by eDEC provided two different Document Type Identifier Schemes:

1. `busdox-docid-qns` – requires the Document Type Identifier Values to be specific and therefore allows only exact matches between the Document Type identifiers contained in the document and the receiving capability. It is the primarily used scheme in the Peppol Network.
This scheme will be referred to as “busdox scheme” in the rest of the document.
2. `peppol-doctype-wildcard` – allows the provisioning of Document Type Identifier Values on the receiver side to be flexible, by allowing the use of the `*` character in the identifier value when registering a receiving capability. The wildcard scheme can therefore support ‘best match’ between the Document Type identifiers contained in the document and the receiver capability. It also provides for a possibility to specify that a receiver can accept a certain Document Type and all its specializations.
This scheme will be referred to as “wildcard scheme” in the rest of the document.

In the old version of the PFUOI, Document Type Identifier Schemes are defined in a way that their value ranges are mutually exclusive, so that a receiver has the full control what

to use and may choose to use either the busdoh scheme or the wildcard scheme or both together.

Key elements of the design were backwards compatibility and flexibility in use.

2.2 PINT specification

Many countries now start using invoices based on the PINT model as their national invoice formats. The PINT model comes with three different data model areas: shared, aligned and distinct – the difference is that the assignments of information elements to one of these areas narrows or extends the data model it belongs to.

The PINT model is granular and foresees the existence of multiple “specializations”. It also foresees a simplified SMP registration via the wildcard scheme which will end up in less SMP endpoint registrations.

2.3 Known gaps and challenges

The following list contains a brief summary of the known issues with the current situation:

1. Currently there is no guidance for countries using PINT as to what Document Type Identifier Scheme to use. The current registrations in the [eDEC Document Type Identifier Code List](#)¹ are very diverse and contain different permutations.
2. For PINT document senders it is not clear, what Document Type Identifier Scheme to put into their SBDH envelope, depending on the used SMP registration of the receiver. That could lead to C2 needing to modify the SBDH to match the effective SMP specification. It is also unclear for C2 what type of SMP lookup to perform (wildcard or exact match).

3 Explanation of the Solution

The solution contains changes to both the PFUOI and the PINT specification.

3.1 Changes to PFUOI (eDEC)

- The semantics of the wildcard scheme were changed, so that the star character (*) for SMP registrations becomes optional, to be able to support the semantics of an exact match as well. This leads to a mandatory change in the SMP lookup

¹ At the time of writing, it was Code Lists v8.9. It is expected that over time the number of conflicting entries is reduced as the Peppol Authorities are encouraged to get these identifiers deprecated and removed.

algorithm for this scheme, which is a breaking change for the Service Providers who support PINT.

- The term of an “abstract” Document Type Identifier Value was introduced to the specification. “Abstract” means that no actual document instance can be created and exchanged with this Document Type Identifier and that it can only be used as the basis for more specialized Document Type Identifier values. SMP registrations can contain abstract or non-abstract identifiers. The [general PINT specification](#) is an example of an abstract document type.
- A statement was added, stipulating that no Document Type Identifier Value can be registered in the [eDEC Document Types code list](#) both with the wildcard scheme and the busdox scheme in parallel. Each value must be bound to only one of these schemes.

3.2 Changes to PINT (PoAC)

1. The PINT specification is intended to mandate the usage of the wildcard scheme for any of the Document Types based on it. The usage of any other Document Type Identifier Scheme will be forbidden.
2. For reasons related to the mandatory timing of implementing changes to the PFUOI, this change to the PINT specification will be introduced as follows:
 - a. The usage of the exact match identifier in the wildcard scheme in PINT will become optional in the 2024 Q4 release but cannot be used before May 15th, 2025
 - b. The usage of the wildcard scheme in PINT will become mandatory in the 2025 Q2 release (see chapter 4).

3.3 Evaluation of Changes against Gaps and Challenges

This section evaluates the proposed solution against the problem statements in chapter 2.3:

1. The proposed changes will make it easier to correctly register and use PINT Document Type Identifiers. That solves problem statement 1.
2. The creator of the SBDH envelope always clearly knows what to do. There is no ambiguity. That solves problem statement 2.

4 Migration Plan

4.1 Migration basics

This chapter contains the overall migration plan regarding the anticipated changes that need to be done.

First and foremost, it is important to differentiate between the **PINT specification (Payload) Migration** and the **PFUOI (Receiving Capability Registration) Migration**.

1. The PINT specification (Payload) Migration deals with any changes to the PINT specializations with the 2024 Q4 and 2025 Q2 releases, as described in section 3.2. It will be part of the regular biannual PINT BIS migration without any specialties and will last for 3 months. No further description of this process is contained inside of this document.
2. The PFUOI (Receiving Capability Registration) Migration however is a more complex process and described in detail in this document.

4.2 Migration Process Overview

The generic migration process is described in the Internal Regulation Part II – Use of the Peppol Network (IR) chapter 2.4.3. Each migration plan must contain the steps of Phase-In, Switch-Over and Phase-Out.

The following picture depicts the process of migration towards the use of the new wildcard identifier scheme in PINT, which has certain peculiarities and dependencies that need to be considered.

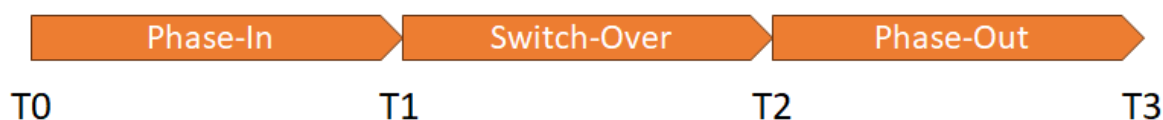


Figure 1: Migration Process

The following milestones are important:

1. T0: The new version of the Peppol Policy for the Use of Identifiers is published: 9 October 2024.
Milestone impact and expectations:
 - a. The new SMP lookup algorithm is introduced and becomes optional. Service Providers can begin to prepare the changes.

- b. The new exact match identifier option in the wildcard scheme is introduced but cannot be used before T1, therefore no capability registrations with that scheme may be made before T1.
2. T1: Switchover to the new SMP lookup algorithm (May 15th, 2025). This is set at more than 6 months after T0 to guarantee more than the minimum implementation time for the PFUOI changes as stated in the IR.
Milestone impact and expectations:
 - a. The new lookup algorithm becomes mandatory. All Service Providers must have completed this change.
 - b. The new exact match identifier option in the wildcard scheme can be used for capability registrations and becomes optional. Service Providers may begin changing old busdox scheme registrations and use the wildcard scheme for new ones. All capability registrations in jurisdictions where exact match is mandatory must be changed by T2.
3. T2: Switchover to the mandatory use of the wildcard scheme in PINT. This will be the date when the PINT 2025 Q2 release becomes mandatory (estimated to be August 27th, 2025), which is set to three months after the estimated publication date of the PINT 2025 Q2 version.
Milestone impact:
 - a. The usage of the wildcard scheme for PINT, when exact match registration is needed, will become mandatory.
 - b. All receivers with PINT exact match capabilities must be registered using the wildcard scheme.
 - c. The usage of the busdox scheme for new PINT exact match SMP registrations will be forbidden.
4. T3: Phase-out of PINT exact match registrations with the busdox scheme is set to 3 months after T2, at which point the cleanup period after the migration ends.
Milestone impact:
 - a. All SMP registrations with document types for PINT using the busdox scheme must have been removed.

5 Migration Guideline

5.1 Migration requirements

The migration only concerns how 'exact match' PINT receiving capabilities are published and updating of senders' lookup algorithms to ensure they can be found.

No migration activities are required in relation to existing 'best match' PINT wildcard receiving capabilities (e.g. `urn:peppol:pint:billing-1*`, `urn:peppol:pint:billing-1@jp-1*` etc.).

The PA Specific Requirements (PASR) of some Peppol Authorities may need to be updated.

5.2 Migration approach

BIS/payload migrations, e.g. migrating between major versions or from non-PINT to PINT versions, usually require receivers to be ready (and have published new receiving capabilities) prior to senders being able to send the new version.

However, this PFUOI migration requires the opposite approach to ensure senders' capability lookup functions are in place and ready to lookup the new exact match receiving capabilities, before those are published.

The follow sections present the alignment of different activities toward the migration steps.

5.2.1 Matching of PINT Document Type Identifiers using the busdox scheme

This section focuses on the usage of the busdox scheme for PINT usage during the migration period.

1. Between T0 and T1: PINT busdox is mandatory for exact match registrations
 - a. Noting that between T0 and T1, senders might not be able to look up PINT wildcard exact match capabilities, so during this time receivers will need to publish at least one of a PINT wildcard best match or a PINT busdox exact match receiving capability
2. T1: PINT busdox becomes optional for exact match registrations
3. T2: PINT busdox for new exact match registrations is forbidden
4. T3: All PINT busdox registrations are removed from all SMPs

Note: The term "PINT busdox" refers to all PINT-based Document Type Identifiers that use the busdox scheme.

5.2.2 Matching of PINT Document Type Identifiers using the wildcard scheme for exact matches – Sender Side Perspective

This section focuses on the usage of the wildcard scheme with exact matching for PINT usage on the sender side during the migration period.

1. T0: Start implementation time for PFUOI 4.3.0
 - a. Lookup of PINT busdox registrations for exact match must continue to be supported
2. T1: lookup of PINT wildcard registrations for exact match must be supported
 - a. Lookup of PINT busdox registrations for exact match must continue to be supported as well
3. T2: For the wildcard scheme, same as T1
 - a. Lookup of PINT busdox registrations for exact match are no longer allowed for new registrations

5.2.3 Matching of PINT Document Type Identifiers using the wildcard scheme for exact matches – Receiver Side Perspective

This section focuses on the usage of the wildcard scheme with exact matching for PINT usage on the receiver side during the migration period.

1. Between T0 and T1: PINT wildcard for exact match registrations must not be used. It is not allowed and they may not be discoverable by APs that have not changed to the new lookup algorithm yet.
 - a. PINT busdox registrations for exact match must be used as mandatory, to ensure discoverability
2. T1: PINT wildcard for exact match registrations becomes optionally usable
 - a. PINT busdox registrations for exact match may still be used, but can start to be removed
3. T2: PINT wildcard for exact match registrations becomes mandatory
 - a. All exact match registrations must be in the wildcard scheme
4. T3: For the wildcard scheme, same as T2
 - a. PINT busdox registrations for exact match must have been removed

5.3 Business Message Envelope Creators (C1 or C2)

This section deals with the entity that creates the SBDH Business Message Envelope for a document exchange. Most of the time, this will be the sending Peppol Service Provider but in some cases this may also be the sending End User itself.

1. Implementations may be changed, so that for PINT based documents always `peppol-doctype-wildcard` is used as the Document Type Identifier Scheme.

Note: this may also require the usage of a different Process Identifier when switching from BIS to PINT.

- a. This activity **MUST NOT** start before T1
- b. This activity **MUST** be finished at T2

Note to SBDH creators: To explicitly provide the wildcard scheme, you need to use the element `<Identifier>` as depicted in the below example:

```
<Scope>
  <Type>DOCUMENTID</Type>
  <InstanceIdentifier>urn:...pint...:2.1</InstanceIdentifier>
  <Identifier>peppol-doctype-wildcard</Identifier>
</Scope>
```

If this value is not provided, the default value is `busdox-docid-qns`. It is recommended to always explicitly add this element to the SBDH.

5.4 Sending Service Providers (C2)

This section summarizes the activities that sending Peppol Service Providers need to perform in which migration phase.

1. The SMP lookup mechanisms need to be adjusted depending on the Document Type Identifier used: “peppol-doctype-wildcard” for PINT-style ones and “busdox-docid-qns” for the others.
Note: Currently all PINT document types have a Customization ID that starts with “urn:peppol:pint:”.
 - a. This activity **MAY** start after T0
 - b. This activity **MUST** be finished by T1
2. The implementation of the algorithm for the lookup of Document Type Identifiers using the wildcard scheme needs to be updated to support exact match.
 - a. This activity **MAY** start after T0
 - b. This activity **MUST** be finished by T1
3. Possibly, some additional AP implementation-specific changes are needed to make sure the sending of documents using the new semantics of the wildcard scheme is ensured.
 - a. This activity **MAY** start after T0
 - b. This activity **MUST** be finished by T1

4. During the migration, the priorities of the lookup schemes change depending on the milestones
 - a. Per today:
 - i. Priority 1: busdox scheme exact match
 - ii. Priority 2: wildcard scheme best match
 - b. From T1:
 - i. Priority 1: wildcard scheme exact match [Added per T1]
 - ii. Priority 2: busdox scheme exact match
 - iii. Priority 3: wildcard scheme best match
 - c. From T2:
 - i. Priority 1: wildcard scheme exact match
 - ii. Priority 2: wildcard scheme best match

Note: busdox scheme exact match is removed per T2

5.5 Receiving Service Providers (C3)

This section summarizes the activities that receiving Peppol Service Providers need to perform in which migration phase.

1. Possibly, some AP implementation-specific changes on the receiving side are needed to reflect the new semantics of the wildcard scheme.
 - a. This activity MAY start after T0
 - b. This activity MUST be finished by T1
2. Possibly, some SMP implementation-specific changes on the receiving side are needed to reflect the new semantics of the wildcard scheme.
 - a. This activity MAY start after T0
 - b. This activity MUST be finished by T1
3. Existing SMP registrations for PINT Document Type Identifiers might need to be updated and/or deleted. Specific rules and timelines within the timeframe stated in this document might be provided per jurisdiction by the respective PA.
 - a. This activity MUST NOT start before T1
 - b. This activity MUST be finished by T2

5.6 Code lists entries

This section summarizes the activities that must be done to change the code list entries.

1. Existing Code Lists entries for PINT document types using the busdox scheme need to be scheduled for removal. This will be coordinated by the OO via a single RFC.
Note: Code List entries have the state “Deprecated” between the time they are marked for removal and the effective removal date.
 - a. This activity will start at T0
 - b. All Code Lists entries for PINT document types using the busdox scheme will be deprecated at T1
 - c. Existing Code Lists entries for PINT document types using the busdox scheme will be removed at T3