E-INVOICE TRANSMISSION (XRECHNUNG)

TECHNICAL GUIDANCE FOR YOUR IT DEPARTMENTS

Ruhr-Universität Bochum · As of: November 2026 · Version 1.1

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Important information in advance:

1. The *terms of use of the state portal* apply to the web entry module as well as to Peppol and direct sending. Please read them carefully in advance.
2. To check in advance whether your invoice will be accepted, you can use a *KOSIT validator*.
3. "If an incoming message does not contain an XML file [this means regular PDF, hybrid PDF or other formats], further processing is stopped and the message including its attachment(s) is deleted. The invoice issuer receives **no** feedback."
   (Excerpt from the information for invoice issuers on vergabe.nrw, under the heading "How do I use the direct sending option?"; translated from German)

1. BASIC PRINCIPLE

Ruhr-Universität Bochum is an institution of the State of North Rhine-Westphalia. Electronic invoices are not delivered to us directly but via the central **E-Rechnungsportal NRW** (vergabe.nrw). The portal receives the invoice, validates it and forwards it to the target authority.

Forwarding to us is based exclusively on the **Leitweg-ID**, which must be contained in the invoice itself:

Leitweg-ID: 05911-06001-11

This ID belongs in the field **BT-10 Buyer reference** of the XML data set. It is mandatory for every transmission channel. The value must be copied exactly – no spaces, no additional characters, no altered separators. If the Leitweg-ID is missing or incorrect, the state portal rejects the invoice without comment, even if the technical transmission was successful.

2. PERMITTED FORMATS

The portal accepts:

- **XRechnung** in the currently valid version (**XML**)
- **ZUGFeRD exclusively in the XRECHNUNG profile**, and exclusively as a standalone **XML file**

The portal does not accept:

- × plain PDF invoices
- × scanned documents or image files
- × hybrid PDF files with embedded XML (ZUGFeRD/Factur-X as PDF container)

Of the ZUGFeRD profiles, only the **XRECHNUNG** profile is permitted.
Not accepted:

- × **MINIMUM** und **BASIC WL** – do not contain complete invoice data and are not e-invoices under EN 16931
- × **BASIC**
- × **EN 16931** (formerly COMFORT)
- × **EXTENDED**

BASIC, EN 16931 and EXTENDED are technically valid invoice formats, but the state portal does not accept them. The decisive criterion for the check is the profile identifier in the XML (BT-24 Specification identifier).

Documents supporting the invoice (delivery notes, timesheets, etc.) must be embedded as an attachment **within** the XML in accordance with EN 16931.

3. TRANSMISSION CHANNELS

There are three channels through which e-invoices can be sent to us: direct sending by e-mail (recommended), Peppol and the state portal's web entry module.

3.1 DIRECT SENDING BY E-MAIL (RECOMMENDED)

The simplest way. No registration and no Peppol connection is required.

Recipient address: eingang@erechnung.nrw

Requirements:

- The **XML file** is sent as an attachment to the e-mail.
- BT-10 Buyer reference contains the Leitweg-ID 05911-06001-11.
- BT-49 Buyer electronic address is also mandatory (rule PEPPOL-EN16931-R010, part of XRechnung 3.0.x and therefore valid for every transmission channel and both syntaxes). Recommended: the Leitweg-ID 05911-06001-11 with scheme 0204. Alternatively, an e-mail address with scheme EM is permitted.

```
UBL: <cbc:EndpointID schemeID="0204">05911-06001-11</cbc:EndpointID>

CII: <ram:URIUniversalCommunication><ram:URIID schemeID="0204">05911-06001-
11</ram:URIID></ram:URIUniversalCommunication>
```

For CII, this element is located within ram:BuyerTradeParty.

- Permitted are XRechnung (**XML**: UBL or CII) as well as ZUGFeRD in the XRECHNUNG profile as extracted **XML**. Important, all other ZUGFeRD profiles are not permitted (see section 2, PERMITTED FORMATS)!
- Documents supporting the invoice must be embedded in the XML.

Important: For this channel, the **syntax is not restricted**. Both UBL and CII are accepted. This is a major difference from the Peppol channel (section 3.2).

Only one invoice may be sent per e-mail. The e-mail text itself is not evaluated; all invoice-relevant information must be contained in the XML.

3.2 PEPPOL

Suitable for senders with an existing Peppol connection.
Important! We are **not** registered as **a separate participant** in the Peppol network: The state portal NRW has **one participant identifier (0204:05-nrw-83) for all connected authorities** of the state. The **addressing** therefore takes place **on two levels**, and both must be correct.

Level 1 – Transport (SBDH envelope / AS4)

Recipient participant identifier:

```
iso6523-actorid-upis::0204:05-nrw-83
```

The prefix 0204 is the ISO 6523 code for Leitweg-IDs registered by KoSIT. The value 05-NRW-83 is the collective identifier of the state portal. **Our own Leitweg-ID does not belong here.**

Level 2 – Invoice content (payload)

Independent of the transmission channel, identical to direct sending by e-mail:

BT-10 Buyer reference:

```
<cbc:BuyerReference>05911-06001-11</cbc:BuyerReference>
```

Only this value controls the forwarding from the state portal to us.

Fields to be set in the invoice

Via Peppol, only **UBL** can be delivered. Peppol BIS Billing 3.0 (UBL) with the German ruleset is recommended – this specification meets the requirements for an XRechnung. Three fields must be set:

BT-24 Specification identifier:

```
<cbc:CustomizationID>urn:cen.eu:en16931:2017#compliant#urn:fdc:peppol.eu:2017:
poacc:billing:3.0</cbc:CustomizationID>
```

Alternatively, the XRechnung UBL document types are also registered for the state portal.
In BT-24 the value is then:

```
urn:cen.eu:en16931:2017#compliant#urn:xoev-de:kosit:standard:xrechnung_3.0
```

They are not recommended for new implementations: XRechnung UBL Invoice V3.0 and CreditNote V3.0 have been redundant since February 2025 and will be phased out of the Peppol network in the medium term.

BT-23 Business process type:

```
<cbc:ProfileID>urn:fdc:peppol.eu:2017:poacc:billing:01:1.0</cbc:ProfileID>
```

The 01 is the business process number, the 1.0 its version. Both are independent of the version number of the specification in BT-24 and are not typos.

BT-49 Buyer electronic address:

```
<cbc:EndpointID schemeID="0204">05-NRW-83</cbc:EndpointID>
```

BT-49 is not limited to Peppol; it is also mandatory for direct sending (rule PEPPOL-EN16931-R010). The value given here (scheme 0204, 05-NRW-83) applies to Peppol only; for direct sending, the Leitweg-ID is entered (see 3.1). Some access points additionally check whether the value matches the recipient identifier in the SBDH. BT-49 therefore mirrors the transport address, while BT-10 carries the Leitweg-ID – two different values that must not be swapped.

All values mentioned are each a single character string without spaces.

Checking reachability

The registration in SML and SMP is decisive. It can be verified via the OpenPeppol SML & Business Card Lookup:

`https://lookup.peppol.org/`

The complete participant identifier must be entered there, i.e. 0204:05-NRW-83. A search for the value 05-NRW-83 alone returns no result.

The lookup must lead to the following addresses:

SMP:

`https://peppol-smp.dataport.de`

Access Point:

`https://peppol-ap-cd.dataport.de/as4/inbound/message`

Both addresses are operated by Dataport on behalf of the State of North Rhine-Westphalia. They apply equally to all authorities connected to the state portal and are not specific to Ruhr-Universität Bochum. Assignment to us takes place exclusively via the Leitweg-ID in BT-10. If the values found differ from those given here, there is something wrong with the addressing.

The lookup also lists the document types accepted by the recipient. For the specification recommended above, the entry is:

```
urn:oasis:names:specification:ubl:schema:xsd:Invoice-
2::Invoice##urn:cen.eu:en16931:2017#compliant#urn:fdc:peppol.eu:2017:poacc:bil
ling:3.0::2.1
```

3.3 WEB ENTRY

For occasional individual invoices without system integration, manual entry or upload is possible via the state portal at www.erechnung.nrw. Free registration is required.

4. COMMON CAUSES OF ERRORS

If an invoice does not arrive, the sending access point generates a technical error message. Keeping its exact wording is the fastest way to find the cause.

Channel	Symptom	Probable cause
E-mail	No processing	PDF sent instead of XML; hybrid ZUGFeRD PDF instead of extracted XML
Both	Invoice delivered but rejected	BT-10 Buyer reference empty, incorrect or with additional text
Peppol	Peppol Directory finds no entry	The Directory only lists participants with a published business card; it is no proof of reachability. See section “Checking reachability”
Peppol	SMP lookup fails	Participant identifier misspelled; Leitweg-ID used instead of 0204:05-NRW-83 as recipient
Peppol	Access point refuses sending	CII syntax instead of UBL; unsupported document type
Peppol	Validation error before sending	BT-23 Business process type or BT-24 Specification identifier set to a wrong value; BT-49 does not match the recipient identifier (05-NRW-83)
Both	Validation error PEPPOL-EN16931-R010 “Buyer electronic address MUST be provided”	BT-49 Buyer electronic address is missing; mandatory for direct sending too; often not mapped in the source system