



PAYE Online for Employers

Electronic Data Interchange (EDI)

EB3 (PAYE) Step by Step Guide

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1. Glossary of Terms

AS2	Applicability Statement 2
BACS	Bankers Automated Clearing Services
BES	Business Exchange Services
EB	Electronic Business information series
EDI	Electronic Data Interchange
EDIFACT	Electronic Data Interchange For Administration, Commerce and Transport (This is a United Nations standard)
GFF	Generic Flat File
ISDN	Integrated Services Digital Network. This is a communication method
I.T.	Information Technology
MIG	Message Implementation Guidelines
HDS	HMRC Digital Services
OFTP	Odette File Transfer Protocol. This is a communication method
PAYE	Pay As You Earn
VAN	Valued Added Network. This is a communication method
X.400	This is a communication method

2. Introduction and Overview

2.1 What is this document about?

This document is a step by step guide that brings together best practices from employers who have set up and are currently using EDI to send and receive PAYE forms with HMRC.

2.2 Who will find this document useful?

Any employer, bureau or agent who has read the www.hmrc.gov.uk/ebu/eb2paye.pdf and wants to know:

- what is needed to use EDI
- how to register for this service
- more specific technical information

3. How do I get started using PAYE Online for Employers - EDI?

Your current circumstances will determine what sections of this guide will be useful. The aim of this 'Step by Step Guide' is to provide further information and greater detail on the set up of PAYE Online for Employers - EDI. The contents are for guidance only and are intended to help you decide if EDI would be of benefit to your organisation.

The following stages will need to be considered:

1	Establish your current payroll capability
2	Involve your Information Technology/ Quality Assurance department
3	Complete EDI Enquiry form 1
4	Select a telecommunication method
5	Consider putting together a business case
6	Set up required software
7	Complete EDI Registration 2 form
8	Conduct EDI message testing
9	Agree go live date

4. Your Current Payroll Software Capability

Your payroll software must have the ability to produce an output file of PAYE data in either EDIFACT (the International standard for EDI formats) or GFF (Generic Flat File) format.

The PAYE data output must conform to our published EDI technical specifications, Message Implementation Guides (EB5) series of documents available at: www.hmrc.gov.uk/ebu/ebu_paye_ts.htm

4.1 Payroll Software

You will need to check with your software provider to make sure your payroll software is capable of exchanging information by EDI. If not:

- you may need to upgrade your software, or purchase additional software to translate the messages into an EDI format. A list of software providers is available at: www.hmrc.gov.uk/ebu/edi/edi-software.htm

If using in-house software you will need to check the structure and format of the messages produced against the EDI Message Implementation Guides available at: www.hmrc.gov.uk/ebu/ebu_paye_ts.htm

This may result in enhancements to your software being required or consideration being given to using a translation software provider.

4.2 Does your payroll software enable you to send and receive all the forms that you want to?

- Your software provider will be able to advise which forms their product supports. For guidance on the forms supported by some recognised products go to: www.hmrc.gov.uk/ebu/edi/edi-software.htm
- For a list of forms that can be sent and received by EDI, refer to the EB2 or go to www.hmrc.gov.uk/payerti/reporting/edi.htm

4.3 What functions do software translation packages offer?

EDI translation software takes information from a payroll product and translates the information into EDI messages in either EDIFACT or GFF format. These are the only two formats we accept for EDI. Translation software may also be able to receive various forms from us as EDI messages for example P6, P9 etc and translate them into a format that the payroll software can accept. There are various types of translation software available:

- Software which will translate the payroll output into an EDI format that can be sent over your own communications link.
- Mapping devices that can only be used with specific VANs. Additionally, Some translation providers will translate and communicate EDI messages on behalf of employers. Other translation providers can take an EDI format message and translate into xml format for transmission over the Internet.

As well as creating EDI messages from payroll packages that do not have EDI functionality; these translation software products can also be used simply to convert EDI messages produced by the payroll product in GFF format, to EDIFACT format. This may be a favoured option for employer's who already connect to a VAN that does not handle GFF messages.

You will need to decide which of these services you require. If you are unsure speak to some translation providers to see who can best provide the functionality you need.

5. Quality Standard (QS)

The QS describes the levels of accuracy that an online return must meet and makes sure that the employee/tax/NIC details are in the correct format. Every year we publish to the HMRC website the information that software developers should build into their online filing payroll software.

Software that meets our QS, confirms that you have the right entries, that they are in the right boxes and all add up. Your software supplier will be able to tell you if their software meets our QS.

Any form that fails the QS will be rejected and an automatic message will be sent to you explaining the reason for rejection. You would then have to correct the error and re-send.

Other useful information is below:

- If you use a recognised payroll software product, it will comply with our Quality Standard.
- A list of recognised payroll software suppliers can be found at: www.hmrc.gov.uk/ebu/edi/edi-software.htm
- If you wish to develop your own payroll software rather than buy new or upgrade your existing version, the technical specifications can be found in the Message Implementation Guides (EB5s) these are listed at: www.hmrc.gov.uk/ebu/ebu_paye_ts.htm
- For more information on Quality Standard go to: www.hmrc.gov.uk/ebu/qual_stand.htm

6. Communication Methods

You will need a communications link in order to send and receive EDI data, a list of communication software providers is available at:

www.hmrc.gov.uk/ebu/edi/edi-software.htm

The options are:

6.1 Value Added Network (VAN)

A VAN is a third party communication service that can provide you with:

- a mailbox
- connection to a network
- data transport across the network
- support
- acknowledgement of transmissions
- message control and traceability
- security

The costs associated with a VAN are:

- setting up the connection and continued use (line rental)
- data transport (telephone calls). These charges are usually in "bands", the costs depend on the volume
- storage of data (in the inbox)

All VANs accept data in EDIFACT format and some also accept data in GFF format. If you wish to exchange GFF messages over a VAN you will need to check that your VAN provider can handle GFF messages.

6.2 Integrated Services Digital Network (ISDN)

- ISDN is a network service that provides high data transfer speeds at low cost. To send EDI data over an ISDN line also requires Odette File Transfer Protocol (OFTP) communications software.
- This software can be configured to manage the communications you wish to send and receive and provides an acknowledgement that a data file has been delivered.
- An ISDN line is a direct leased line or network line, and connects only when there is something to send or receive. The network line may have problems if the network is engaged whereas the leased line will not.
- Call costs are determined by the length of time the line is in use. HMRC systems do not support dial up modems to send EDI data, so it cannot be sent by email.

6.3 X.400

This is an electronic mail open system standard which is adapted for EDI message exchanges. HMRC supports the transfer of these messages using the Cable and Wireless (CW) X.400 ADMD (Administration Domain) on the CW mail service.

6.4 AS2 Applicability Statement 2

- The concept is to provide a secure, reliable and authenticated transport mechanism for EDI traffic over the internet using existing internet and Security standards
- AS2 is a specification of how to transport EDI data over the internet using the HTTP protocol. It specifies the means to connect, deliver, validate and reply to (receipt) data in a secure and reliable manner. AS2 creates an envelope around an EDI message which is then sent securely over the internet. The use of digital certificates and encryption provides security and non-repudiation. The purpose of AS2 is to ensure that transmission of EDI traffic is secure, reliable and authenticated
- Encryption ensures only the sender and receiver can view the data
- Digital signatures ensure Trading Partner authentication

6.5 Points to Consider

Check with your IT department to see whether or not your organisation already uses any of the above.

If not, you will have to consider purchasing, installing and managing either an ISDN line, VAN or AS2 capability. Refer to the www.hmrc.gov.uk/ebu/eb2paye.pdf for more information.

If yes, the available communication channel must be compatible with your payroll software and the format of the messages it produces (EDIFACT or GFF). Refer to the EB4 (PAYE) Software Developers at: www.hmrc.gov.uk/ebu/eb4_paye_edi.pdf for guidance on compatibility or alternatively you may have to get confirmation from your communication and software providers.

If using ISDN it should be noted that this must be supported by Odette File Transfer Protocol (OFTP) message handling facilities. This provides a standardised means of communication between computer systems. It is important that you consult an OFTP supplier to ensure that it is installed correctly in your system.

It is recommended that any communication channel must be capable of handling the volumes that are to be exchanged. Ideally this should allow for any growth of the organisation or in an increase in the forms or messages being sent.

Before deciding on a particular communication channel you will need to consider funding. You will need to discuss with any prospective supplier the following aspects, which if required, may incur costs.

-
- Consultancy
- Installation
- Training
- Maintenance
- Running costs
- Transmission costs
- Storage of data (in box)
- Data Volumes
- Operating platforms

7. Registration

Having established that EDI is your preferred online filing option, there is a two part registration process that must be followed before testing can be arranged and go live can be achieved. The two-part process covers our Enquiry 1 and Registration 2 forms.

The Enquiry 1 form can be found at Appendix B. This form:

- must be completed by any organisation considering the exchange of PAYE information using EDI
 - is a provisional registration document that provides an overview of your organisation and enables us to assess the potential demand on EDI
 - does not commit an organisation to using EDI
- should be completed and submitted to HDS before completing the Registration form2

On receipt of this you will be allocated an HMRC EDI Account Manager. The Account Manager will contact you and will then be available to provide you with any support and information you require in the initial stages as well as guiding you through the testing phase in preparation for 'go live'.

The Registration form2 can be found at Appendix C. This form:

- must be completed by any organisation that is ready to start testing their EDI communication links
- should be submitted to the Account Manager when the communication links have been successfully installed within your organisation
- should confirm the employer tax references that you are intending to test and eventually exchange live messages for
- Allows you to highlight the forms that you wish to test and the test dates. At least a weeks notice should be given to allow for the setting up of a test facility. It is recommended that you plan to test as early as possible to avoid any peak demands towards the end of the calendar or financial year
- asks for details of the payroll software and the communication software/hardware that is to be used.

8. Testing

8.1 PAYE Message Testing

Once you have successfully installed the communication links within your organisation you will then need to test the sending of and, if appropriate, receipt of PAYE messages between yourselves and our IT partners.

The process ensures both the communication links and the format of messages have been thoroughly tested. The test facility will be set up on receipt of Registration form2.

Before submitting Registration form2 to your Account Manager you should check that you have:

- already submitted the Enquiry form 1
- entered all employer tax references to be included in the test (and eventual live) process
- indicated which forms you wish to test, the expected testing date, and format of data (EDIFACT or GFF)
- given at least one weeks notice of the expected test date
- provided an email address for receipt of acknowledgement reports

You will also need to check the communications method has been indicated and that the VAN mailbox ID, OFTP Address Information, X400 Address Information, or AS2 information has been entered.

8.2 Test Process

Once the Registration form2 has been processed we will contact you by email to confirm:

- that the test facility has been arranged
- the forms to be tested
- communication ID's and message address information

8.3 Test Frequency

The number of successful test files that are required before moving to the live service will depend on the payroll software being used and the form type.

- Forms P6, P6b, P9, SL1/SL2
One successful test is required.

- All other forms

If using payroll software that has gone through the payroll software recognition process, then one successful test is required for each form type, for more information on software recognition see: www.hmrc.gov.uk/ebu/eb4_paye_edi.pdf

If using any other payroll software then four consecutive successful tests are required for each form type.

Your Account Manager will advise you of the number of tests your organisation is required to make.

If your organisation intends to receive forms P9 by EDI, a successful test must have been made and the service switched from test to live by 31 December before the start of the new tax year.

8.4 Test Data

- **Incoming Forms from HMRC**

If the online form is coming from HMRC to your organisation for example: P6, a dummy PAYE test file of P6 data will be made available to your organisation. This will test the communication link between your organisation and HMRC.

- **Outgoing Forms to HMRC**

If the online form is from your organisation to HMRC for example: P46CAR, your organisation should send a PAYE file containing test data. This will test the communication link between your organisation and HMRC and the accuracy of the message structure.

8.5 Test Results

- **Incoming Forms from HMRC**

Once you have processed the incoming test data advise your Account Manager that it has been successfully received.

- **Outgoing forms to HMRC**

For these forms an acknowledgement report will be sent for all rejections. Our IT partners will report back to your organisation any data, structure or transmission errors in the test messages. You will need to rectify the errors before retransmission. Your Account Manager can confirm successful test results if required.

9. Message Rejections

9.1 During testing, what are the main causes of message rejections?

If any interchange sent by you contains an error, this will be reported to you.

Typical problems are bad characters (characters that are not in the published character set for the message), missing mandatory data, incorrect sequence of data and for GFF messages, incorrect field lengths.

9.2 What should an employer do if an error is reported back to them?

After correcting the reported error, you must then retransmit the message.

10. The Go Live process

Once you have successfully tested you should contact your Account Manager to agree a 'go live' date.

11. EDI Live Service

When you are ready to include additional PAYE forms, or more employer PAYE references, you will need to complete Registration form² indicating that this is a change, and send this to your Account Manager.

Your Account manager will then arrange the test facility for the additional forms. The testing process described in the previous section of this guide will apply each time you require additional forms.

If you have any queries about the set up, or live operation of EDI contact your Account Manager for clarification.

Appendix A

HMRC Mailbox Details

Means of Communication	Description	Details
Easylink (ex AT&T)	VAN Mailbox Id & UNB Identification Odette Id (only required by OFTP users)	INLANDREVENUE -or- HMRC OEDSMS
GXS TGMS	VAN Mailbox Id & UNB Identification	INLANDREVENUE -or- HMRC
GXS Tradanet (ex GEIS/INS)	VAN Mailbox Id & UNB Identification Tradanet User Number (TUN)	5013546096166 9D76
GXS Information Exchange (ex-IBM)	VAN Mailbox Id & UNB Identification (Account code + User Id) Odette Id (only required by OFTP users)	GBEDS GBEDS003 OEDSIR
DINET	VAN Name = DINET SSID = DINET	INLANDREVENUE OEDSMS
AS2 Applicability Statement 2	AS2 Identifier URL if HTTP used URL if HTTPS used Port No if HTTP used Port No if HTTPS used MDN Type	EDS-BES-UK http://194.75.51.17:4080/servlet/AS2 https://194.75.51.17:5443/servlet/AS2 4080 5443 Either Synchronous or Asynchronous
OFTP Addressing Information	Odette SSID Odette SFID NUA Password	OEDSMS INLANDREVENUE -or- HMRC 01740644415 OEDSMSPW
X.400 Addressing Information	UNB Identification Organisation Name Surname PRMD ADMD Country Organisation Unit 1	INLANDREVENUE -or- HMRC EDS MS STD EDI EDS BES MS 400NET GB INLAND REVENUE

Appendix B

HM Revenue & Customs PAYE

Electronic Data Interchange (EDI) – Enquiry form

Use this form if you are considering sending and/or receiving PAYE information using Electronic Data Interchange

1	Employer/Bureau Name Address		
2	Contact Details Name Telephone Number Email Address	Payroll:	EDI:
3	District Numeral/PAYE ref	Employer name	

If there are several PAYE references involved, a separate list is acceptable. List attached

4	Number of employees Type of business Annual turnover of employees (%)		
5	Details of In-house or Bureau Payroll Operation		
6	Details of In-house or Package Payroll Solution		
7	Form Completed by	Name: Date:	

Please return completed form to:

HMRC Digital Service
 Victoria Street
 Shipley BD98 8AA
 Telephone 0300 200 3600
 Fax: 03000 518339
 email: helpdesk@ir-efile.gov.uk
www.hmrc.gov.uk

Appendix C

**HM Revenue & Customs
PAYE**

Registration for Electronic Data Interchange (EDI)

Please indicate if this is a new registration, or a notification of change:

New	<input type="checkbox"/>	Complete all details in sections 1 - 7
Change	<input type="checkbox"/>	Please use this form to notify HMRC of any of the following: <ul style="list-style-type: none"> • Add employer/clients (complete sections 1 - 3 and 7) • Remove employer/clients (complete sections 1 - 3 and 7) • Additional messages you wish to test (complete sections 1, 2, 4, 5 and 7) • Changes to Communication method (complete sections 1, 2, 5, 6 and 7) • Changes to Payroll Software (complete sections 1, 2, 4, 5 and 7)

1	Employer/Bureau Name			
2	Contact Details Name Telephone Number Email Address	Payroll:	EDI:	
3	District Numeral/PAYE ref	Employer name		

If there are several PAYE references involved, a separate list is acceptable. List attached

4	Details of In-house or Package Payroll Solution				
5	Message Type	X	Expected Testing Date (DD/MM/YY)	Format of Data (EDIFACT/GFF)	Message Version
	EAS: Employer Alignment Submission	<input type="checkbox"/>			
	FPS: Full Payment Submission	<input type="checkbox"/>			
	EPS: Employer Payment Summary	<input type="checkbox"/>			
	EYU: Earlier Year Update	<input type="checkbox"/>			
	NVREQ: NINO Verification Request	<input type="checkbox"/>			
	NVREP: NINO Verification Reply	<input type="checkbox"/>			
	GEN: Generic Notification	<input type="checkbox"/>			
	P6 (Daily)	<input type="checkbox"/>			
	P6B (Budget)	<input type="checkbox"/>			
	P9 (Annual)	<input type="checkbox"/>			
	SL1/SL2 (Student Loan notifications)	<input type="checkbox"/>			
	P11D	<input type="checkbox"/>			
	P11D(b)	<input type="checkbox"/>			
	P46CAR	<input type="checkbox"/>			

Please supply an email address/addresses for the receipt of Acknowledgement reports, Error reports and Response messages:

6	Communication Method	VAN <input type="checkbox"/> (complete section 6a) OFTP <input type="checkbox"/> (complete section 6b) X.400 <input type="checkbox"/> (complete section 6c) AS2 <input type="checkbox"/> (complete section 6d)
6a	VAN Details	EASYLINK <input type="checkbox"/> GXS TRADANET <input type="checkbox"/> GXS IE <input type="checkbox"/> GXS TGMS <input type="checkbox"/> DINET <input type="checkbox"/> VAN Mailbox ID SSID SFID Sender ID The generic Virtual Filename 'HMRC-EDI-DATA' is allocated to any files we transmit. If this is not acceptable please specify: Virtual Filenames
6b	OFTP Address Information	Odette SSID Odette Password Odette SFID NUA Sender ID The generic Virtual Filename 'HMRC-EDI-DATA' is allocated to any files we transmit. If this is not acceptable please specify: Virtual Filenames
6c	X.400 Address Information	
6d	AS2 Information <i>(details of the person who can be contacted to co-ordinate the AS2 connection)</i>	AS2 Contact Name AS2 Contact Telephone AS2 Contact Email URL including port no. EDI Sender ID
7	Form Completed by	Name Date (dd/mm/yy)

Please return completed form to:

HMRC Digital Service
 Victoria Street
 Shipley BD98 8AA
 Telephone 0300 200 3600
 Fax: 03000 518339
 email: helpdesk@ir-efile.gov.uk
www.hmrc.gov.uk