NEST
web services

Operational design guide

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For enquires regarding this document, please email **feedback.webservices@nestpensions.org.uk.**

Purpose

NEST introduced a new 'web services' channel as part of its autumn 2015 service release. This allows payroll software providers and others to more easily integrate their products and systems with NEST. This channel provides a solution that enables employers to meet most of their day-to-day auto enrolment obligations without needing to log into NEST online.

The purpose of this document is to:

- explain, at a high level, what NEST's web services are and how they can be used

- provide practical guidance on payroll integration with NEST via web services.

This design guide is a high-level description of the processes required to operate NEST via web services. It contains key information a business process and systems designer needs to know to facilitate web services testing, effective systems integration and efficient operations. System designers and developers who need more detail about our web services will need to refer to the NEST Web Services API Specification Guide.

Document control

Where necessary in this document, we've provided links to where help can be found, for example the NEST employer help centre, or the Employer payroll guide. Please note that most of the content of these links is based on the previous NEST solution and do not yet reflect all the changes that will be introduced as part of web services or other planned service improvements.

Glossary

This glossary explains some NEST terms that you'll come across later in this document.

Term	Description
Group, or worker group	A category of workers who share the same: • contribution rates • earnings basis • frequency of payments • pay period, also known as an earnings period • payment due date, also known as a payment deadline. When a worker is enrolled into NEST they're put into a group. Before an employer can enrol any of their workers into NEST they'll need to have at least one group set up already. If an employer wants to pay different contribution rates for different groups of workers, for example managers and other staff, they'll need two groups. Similarly if they're paying contributions at different frequencies, for example monthly and weekly, they'll need more than one group. It's expected that most small employers will require only one group for their workers. When an employer is set up with NEST using web services only one group is created. If an employer wants to add more groups later they can. There's no limit to the number of groups an employer can have, and additional groups can be added at any time by logging into their online NEST account. Each group must be given a unique name.
Payment source	The method by which an employer pays contributions to NEST, for example by Direct Debit, debit card or direct credit. It also includes details of the bank account they'd like to use for refunds and how they'll pay fees in the event NEST introduces them. If an employer wants to pay two sets of workers by different methods or from different bank accounts for example, they'll need to create two payment sources. It's expected that most small employers will require only one payment source. When an employer is set up with NEST using web services only one payment source is created. If an employer wants to add more payment sources later they can. There's no limit to the number of payment sources an employer can have, and additional sources can be added at any time by logging into their online NEST account. Each payment source must have a unique name.
Contribution schedule	This lists all an employer's workers who share the same: • payment source • pay period • payment frequency • payment due date and due date 'days' logic (relative days or absolute days) Every time contribution payments are due a contribution schedule will need to be completed and submitted to NEST. NEST creates

	contribution schedules automatically for employers to complete each time contribution payments are due.
	So if an employer only sets up one payment source and one pay period they'll only have to complete and submit one contribution schedule. If their set-up is more complex, they could have multiple contribution schedules to complete.
	The information that needs to be completed in a contribution schedule includes the earnings and contribution amounts for each worker listed within it.
	Contribution schedules allow employers to pay a bulk contribution for multiple workers. To pay contributions to NEST you'll need to complete and submit a contribution schedule every time payments are due and pay the agreed amount on the schedule.
Payment due date, or payment deadline	This is the deadline for contribution payments to have cleared in NEST's account. Each contribution schedule will have its own payment deadline. Failure to make payments by this date makes them late. Over time this may lead to NEST reporting the employer to The Pensions Regulator.
	When an employer is set up with NEST using web services and the user doesn't supply payment due date information, NEST will automatically apply a default deadline. Employers can't change this date once it has been set, but they can create a new group by logging into their online NEST account and entering their preferred deadline date. Any workers enrolled into the old group will then need to be moved to the new group.
	Employers are legally required to make sure their payments have cleared in NEST's bank account by the payment due date, otherwise known as a payment deadline.
Payment schedule	This is a legally binding document, created when an employer has defined their group or groups. It sets out what an employer will pay for their workers and by when. We send a payment schedule to the employer's secure NEST mailbox once they've set up with NEST.
	Workers are entitled to see a copy of the payment schedule if they ask the employer. NEST's Trustee, our governing body, has a duty to make sure the contributions made are in line with the payment schedule.

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1   Working With NEST – Some general principles

1.1   A common solution

NEST currently has three channels for employers to use:

1. NEST online - data entry into screens in the secure area of NEST online, in which all of our comprehensive functions to enter and change data are available.

2. NEST file upload - file upload via screens in the secure area of NEST online. You can use these screens to upload files of worker enrolments and to notify us of contributions.

3. NEST secure file transfer. Transfer files to NEST, and collect return files and daily notification files, using SFTP. Employers must sign up explicitly for this channel.

In our autumn 2015 release, we added a fourth channel:

4. NEST web services - integration via web services, covering employer setup, worker enrolment, contribution notification, contribution payment and daily reporting this enables transfer of data into and out of NEST to be included in HR and payroll systems.

Employers can choose between channels to perform a business process but not all processes are available in all channels.

Every employer-related data submission to NEST or data output from NEST is for a specific employer. A payroll bureau that submits data for 10 employers via our web services channel will therefore need to submit a separate web service message for each of those employers.

All data submitted to NEST will be verified against the data already held in the NEST system. The same validation rules are applied to data entered regardless of the channel through which the data is entered.

1.2   Availability

We normally process data submissions 24 hours a day, 7 days a week, but there may be exceptions to this when we need to carry out system maintenance.

1.3   Authentication

All data transfers, including those sent via web services, are authenticated against the security credentials (user name and password) set up for each individual NEST user.

Individuals and organisations can administer NEST on behalf of an employer. Individuals are invited to act on behalf of the employer by an existing user of the system performing an administrator role for that employer. The administrator assigns those individuals a role that permits them to perform specific tasks for that employer.

NEST also has a facility, NEST Connect, which allows a delegate organisation, typically a third party administrator (TPA), to act on behalf of multiple Employers. A TPA can then invite their employees to become users of NEST and act on behalf of the Employers they are supporting.

If a NEST user changes their NEST user name or password, then if the updated values are stored in the payroll system, those changes will have to be made in the payroll system too otherwise future web service requests will fail. Where a TPA user sends web service requests for many employers, this could obviously have a large impact.

If a NEST user's online account is locked, for example if they have entered the wrong credentials three times, any future web service requests using that user's credential will be rejected. The user will have to follow the normal process to unlock their account by using the 'Unlock my account' option on the NEST user login screen.

Regardless of whether a user is given permission by an employer's administrator or a TPA they will be assigned a role. NEST will only permit users to perform business processes that their role is permitted to do. NEST online users will be prevented from performing processes that they are not permitted to do. In web services NEST will send a response containing an error message reporting that the user is not entitled to perform that process.

1.4   NEST on-line secure mailbox

The NEST system sets up a secure mail box for every user. NEST uses this mailbox to send the results of business processing for an employer to users supporting that employer. Users need to log into NEST online to view the mailbox. For users of NEST web services, the results of business processes performed via web services, for example an employer letter that confirms new enrolments will still be sent to the secure mailbox, but we anticipate that web service responses will greatly reduce the need to log into the secure mailbox to view them.

1.5   Online scheme

Although most of payroll's normal pension scheme processing will be able to be carried out via web services without having to log into NEST online, please note that in order to keep costs down we encourage employers to use our online tools to resolve their queries. In the first instance we have extensive help and support in the **employer help centre**. Web chat is available once an employer is logged in to their online account.

2   NEST's web services

2.1   The web services protocol

NEST web services are based on standard HTTP methods, and will adhere to REST (Representational State Transfer) architectural constraints. NEST's web services allow an integrated system to:

- Make web service requests

- Obtain responses to those requests

- Please refer to the NEST Web Services API Specification Guide for full technical details. This section gives an overview.

2.1.1   Make a service request

Each of NEST's web services supply a payload in the request that is specific to that web service. For enrolments and contribution submissions, the payload is similar to the payload that already exists in other delivery channels:

- On success, NEST will return an acknowledgement message that contains:

  - An acknowledgement ID for the request

    o An indication of when the response to the web service request will be available. Please note that for the **Approve for Payment** web service only we will not be able to provide an indicative response time. Instead, the text "PLEASE REFER TO THE NEST WEB SERVICES OPERATION DESIGN GUIDE FOR THE INDICATIVE RESPONSE TIME FOR THIS REQUEST" will be provided. Please see Section 11 below for information about indicative response times.

    o A unique URL that contains a Uniform Resource Identifier (URI) for retrieving the status of the original submitted web service request

- On error, for example, if the initial NEST authentication or security validations failed, or if the message does not comply with the XSD:

  - Instead of an acknowledgement, one or more error message(s) will describe the validations that failed and prevented the message from being processed or, for example, indicate that the service is down.

2.1.2   Retrieve the status of a request

The Retrieve Status web service must be used to obtain the status of the original request. The response will inform you whether the response for the earlier request is available yet or not. If it is, you'll receive back a unique URL that contains a Uniform Resource Identifier (URI) for picking up the response for the originally submitted request. If it's not available yet, for all web services except the **Approve for Payment** web service, you'll be given an updated indication of when it will be.

Please avoid polling for a response too early or continuously. This ensures all users of the services are treated fairly and helps us to maintain our expected response times.

2.1.3   Obtain a Response to a web service request

After receiving the successful completion notification for the status of the original web service request, the Retrieve Service Response web service can be invoked.

If the web service can process the request, the Retrieve Service response will:

- Identify whether the service requested was completed successfully.

- Provide the output to the original business process request as a file containing XML data.

It may identify errors that basic data validation in the service request was unable to detect. For example:

- User's role not entitled to handle this request

- Employer not found.

The diagram below is a typical interaction between a payroll system and NEST that illustrates how the NEST web services should be used.

How NEST web services work

Payroll System		NEST Service Gateway		NEST Database
Employer submits a payroll web service request e.g. Enrol Workers →		User authentication and basic message validation performed	Authenticated request →	Data placed on processing queue and Acknowledgement ID created
← If invalid user credentials validation errors then return message sent				
← Acknowledgement: Includes Acknowledgement ID, unique URL and indicative response times				
Retrieve Status (provides unique URL) →		User authentication and validation	Authenticated request →	Get Status
← If invalid user credentials validation errors then return message sent				
← Response to Retrieve Status (provides unique URL and updated indicative response times)				
Employer submits the Retrieve Service Response request to get processed results →		User authentication and validation	Authenticated request →	Data Processed and results available
← If invalid user credentials validation errors then return message sent				Results awaiting pick-up
← Results returned including any errors				

All web service requests must have user credentials

2.2   Manual intervention

NEST will report when data provided over web services cannot be processed. NEST envisages that the system receiving the web service responses will display the error messages in a way that makes it clear what steps the user should take to resolve the error.

Typically, a user will repair the data that could not be processed in the source system and simply retransmit the corrected data to NEST.

If it is not possible to correct the data in the source system then NEST allows a user at any time to complete data entry using NEST online. Of course this practice can lead to inconsistencies between the data held by the payroll system and NEST, so it's a process that must be completed with care and any exceptions resolved on a timely basis.

To be able to help employers who contact NEST about errors, the NEST contact centre will need to know the details of the NEST error message, for example the NEST error code. We suggest that the payroll software either display NEST error codes and messages directly to the employer, or store them so that they can be provided to an employer on request.

2.3   Catalogue of web services

These are the web services that NEST is planning to introduce. All web service processing is for a particular employer.

Ref	Web service function	Description
1	Set up a new employer	Sends NEST most of the information required to set up an employer's scheme in NEST. The employer themselves must finish the process using NEST online.
2	Retrieve current set-up details	Retrieves employer set-up data from NEST. Should be used by payroll as soon as an employer has been set up in NEST to ensure that data in NEST and the payroll software match. Can also be used at any time in the future, e.g. to reconcile data after an employer has changed their set-up, added a group etc. in NEST online.
3	Enrol workers	Sends worker enrolment data to NEST
4	Update contributions	Sends NEST the earnings and contribution details for a particular contribution schedule. Also used to notify NEST where there won't be contributions.
5	Approve for payment	Sends NEST an employer's confirmation that payment of a contribution schedule for an agreed amount will be made by the employer (Direct Credit or debit card) or can be collected by NEST (Direct Debit). For Direct Debits, this will be taken as the instruction from NEST to collect the contribution by Direct Debit.
6	Retrieve schedules	Request retrieval from NEST of a list of contribution schedules that require attention (due or overdue) and their current status within a selected date range. A maximum of two years data will be returned per web service request.
7	Retrieve opt-outs	Requests retrieval from NEST of a list of members who have opted out within a selected date range. The period will be limited to opt-outs that happened a maximum of five weeks from the request date.
8	Retrieve member-notified stopped contributions	Requests retrieval from NEST of a list of members who have notified NEST directly that they want to stop contributions. A request can be for a selected date range. The period will be limited to those that happened a maximum of five weeks from the request date.
9	Retrieve refunds	Requests retrieval from NEST of a list of refunds made to an employer's refund bank account. A request can be for a selected date range. The period will be limited to those that happened a maximum of five weeks from the request date.
10	Retrieve status	Requests the status of a request made in one of the above nine web services. Must be used as it provides a unique URL with which to collect the response.

| 11 | Retrieve service response | This web service is used to collect the responses for all other web services. On provision of the unique URL provided by the Retrieve status web service provided by NEST, this service gets the response. |

3 Simple employer set-up by web service

3.1 Initiation

An active NEST user account with adequate permissions is required in order to request a simple scheme set-up. The user could be an employee who is going to set their employer up, or it could be a TPA (through NEST Connect) who already has permission to set a new employer up.

3.2 Prepare employer set-up data

Most small employers are likely to need a simple compliant scheme that covers all their workers. For those small employers, NEST's **Set up a new employer** web service can be used.

This web service is available to all employers, but is configured to allow the set-up of only the simplest sort of scheme. The **Set up a new employer** web service will:

- Only allow 1 NEST Group to be set up

- Assume the payment of contributions by Direct Debit

The simple scheme set up by web service for a small employer will require, at a high level, the following data:

- A tag to name the group that will be used in other service requests.

- Information about the employer's business.

- The employer's primary contact details, including their email address. **It's important to provide a correct email address to ensure the primary contact receives the email referred to in 3.4 below**. Please note that this should be the person who is authorised to accept NEST's Terms and Conditions and authorise a Direct Debit mandate.

- Details of the contributions that will be made on a regular basis are contained in a 'group', which consists of:

  - Earnings basis

  - Contribution rates

  - Frequency (of contributions to NEST)

  - Earnings period start and end dates

  - Contribution limits

  - Payment due date

More detail on these data items is available in the **Employer help centre**. For web services, NEST will define default values for some of the group data items which we'll use only if payroll do not provide any values (see 3.3.1 below for details).

The Payment schedule is notified to the primary contact via their NEST secure mailbox notifying them of their commitment to maintaining contributions on a regular basis.

The simple scheme set-up sent to NEST should be stored by the sending system for subsequent reconciliation with data collected from NEST.

If a complex set-up is required, for example several contribution groups of workers are needed, then there is a choice of performing the whole set-up using NEST online or adding further contribution groups in NEST online after the web services simple set-up has been done for one contribution group.

3.3   Send scheme set-up to NEST

Use our **Set up a new employer** web service to set up an employer's scheme in NEST. An acknowledgement will be received containing the acknowledgement ID.

The results of processing a **Set up a new employer** request are obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service. The response will include an employer reference that's generated by NEST for each new employer. The reference is required to pull the scheme set-up data from NEST See 3.5.

3.3.1   Default values for web services employer set-up

For some data items, if no value is provided, NEST will automatically set default values. Please see the data item specification document referred to in Section 10 for more details.

If any errors are found in the data supplied, the employer will not be set up, and an appropriate error message will let you know what's wrong. Please note that we validate business information and primary contact information first, and will only validate group information if the other data is correct.

Please note that even if you repeat the **Set up a new employer** web request using exactly the same data then NEST will set up a new scheme.

3.4   Employer finalises scheme set-up in NEST online

An email will be sent to the employer's primary contact, asking them to register as a NEST user and then to log into NEST online to complete the set-up. The email will contain a URL to the sign-up page. Payroll software cannot start to use the NEST system to enrol workers etc. until this step has been completed by the employer's primary contact.

To complete setup, the employer's primary contact must:

- Create their user account at NEST,
- Log in and accept the Employer Terms & Conditions
- Authorise a Direct Debit mandate which NEST will then set up automatically at the payer's bank
- Confirm that the set-up is complete.

Once the primary user completes the set-up, NEST will automatically create a payment source in the NEST system. For Direct Debit, we'll default the employer's refund bank account to be the same as the bank account used for the Direct Debit mandates, but this can be changed via NEST online if required. For other payment methods, the employer needs to provide the refund bank account details on screen. Note that the primary contact should not change the payment source name which is defaulted to **'My source'** to avoid discrepancies between data held in payroll and in NEST which could cause future web service calls to fail.

The nominated primary contact could decide to nominate someone else as primary contact to complete the NEST set-up. Changes to the primary contact would be advised to the secure mailbox of the initiator.

Where the primary contact is not the sole person who can authorise a Direct Debit mandate, a paper mandate can be printed for signature in accordance with BACS Direct Debit rules. Please note that although the bank account details provided by the primary contact are verified at the point of input, the BACS process for automating the Direct Debit mandate set-up may fail, for example if the payer's bank branch reject the mandate. If the mandate set-up does fail then the primary contact and the initiator of the employer set-up will be advised by NEST online secure mail. Although workers can be enrolled and contributions can be notified to NEST immediately after the employer set-up is confirmed, NEST will not be able to collect contributions until we have a valid Direct Debit mandate.

If the Direct Debit mandate set-up fails the employer set-up is not complete. The primary contact should correct the bank details provided to NEST or resolve with their bank the reason why the Direct Debit mandate was not accepted and then resubmit the Direct Debit mandate set-up request.

NEST recommends the use of Direct Debit over Direct Credit to the employer as it ensures that NEST receives the exact amount of money the employer has asked NEST to collect. NEST allows employers to set up a Direct Credit payment source as an alternative to Direct Debit. NEST can accept Direct Credit automatically provided that the employer configures their bank payment with the correct Direct Credit payment reference. See the **employer help centre** for details.

3.5   Pull scheme set-up details from NEST

It's very important that systems share a common understanding of how NEST has been set up for each employer. To facilitate this, NEST provides a web service to **Retrieve current set-up details** for the employer reference set by NEST. This was provided in the response to **Set up a new employer** web service request or via NEST online. This will 'pull' an employer's NEST set-up into your own system. You can use the data provided to reconcile the set-up in NEST against the set-up in payroll before you send any enrolments or contributions to NEST.

Like any other web service, the results of the **Retrieve current set-up details** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

This web service can also be used by any employer who completed their NEST set-up within NEST online.

It can also be used at any time after the initial set-up. For example, if an employer tells you a year after set-up that they've added a new group within the NEST system, use the web service to **Retrieve current set-up details** again to get the updated data. Again, you use the data returned to reconcile the set-up in NEST against the set-up data held in payroll.

3.6   Diagram: Employer set-up and first Direct Debit collection

The diagram on the next page shows a typical series of web service exchanges from setting up an employer in NEST until the first Direct Debit has been collected. This emphasises the importance of performing scheme set-up to allow plenty of time to lodge the Direct Debit mandate and for the Direct Debit collection cycle to take place prior to the payment deadline for the first contribution schedule (set by the employer on the group as the payment due date)
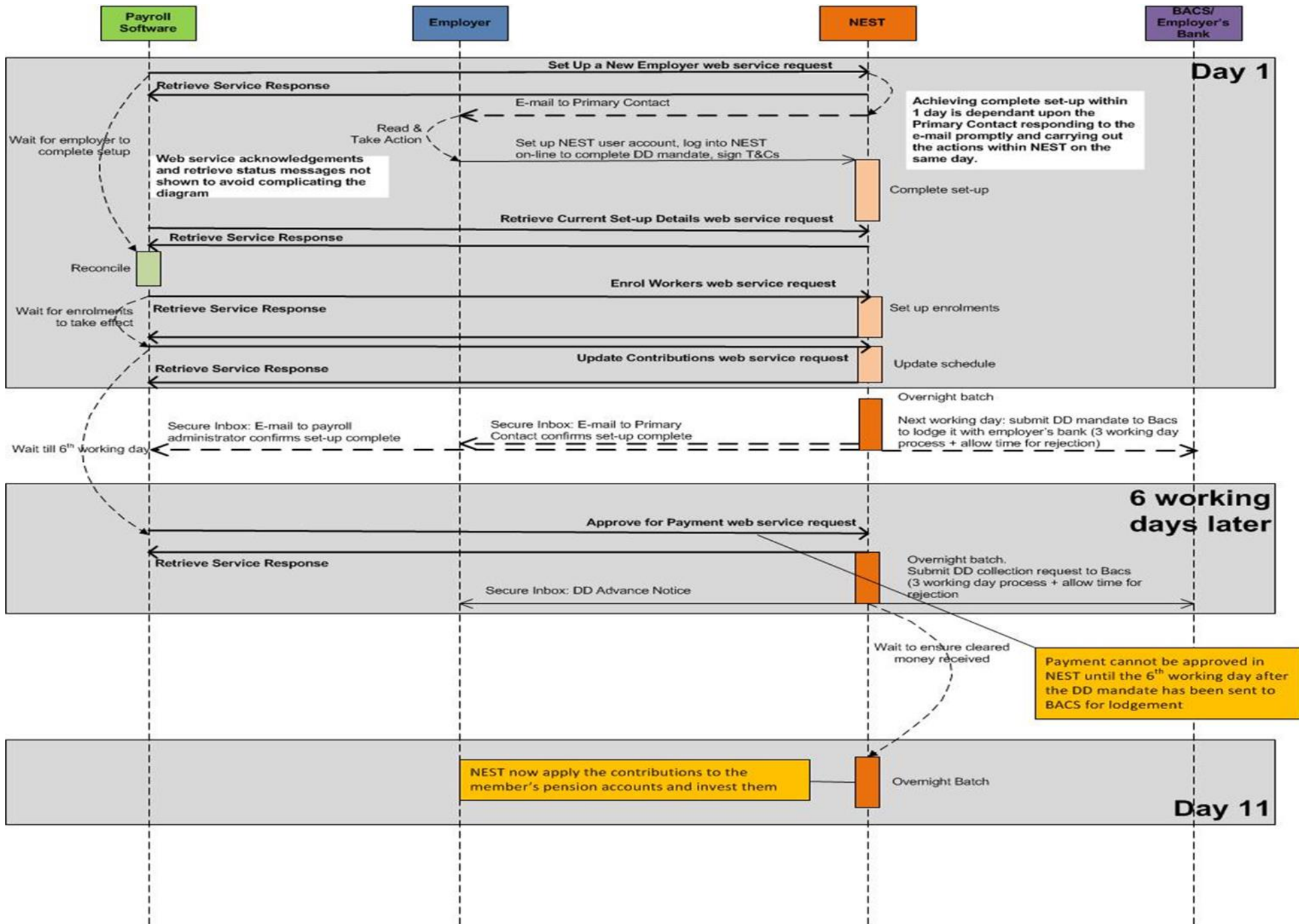
4   Enrol workers by web service

4.1   Prepare worker enrolment data

Once an employer has been successfully set ups and workers have been assessed and Statutory Communications have been issued, you can start to enrol workers using our **Enrol workers** web service.

NEST maintains one pension account for each worker, regardless of how many employments they have.

The law requires certain information to be provided when you enrol workers. It's also extremely important that all information provided to NEST is complete and accurate. Users might want to review the data on their own systems before sending it to NEST.

A new enrolment consists of:

- The worker's personal details (name, date of birth, address, etc.). NEST sends new members a *Welcome pack* through the post which gives important information about NEST, including how they can opt out. It's therefore important that employers supply a full and correct address to ensure that the *Welcome pack* reaches the member. Although a worker's email and telephone details are not mandatory, NEST would like these to be supplied to enable us to contact members quickly if necessary.

- Enrolment type

- The date from which the worker's enrolment in NEST is effective (we call this the 'start date', it's usually the date the worker becomes or became eligible for automatic enrolment with the employer). We've noticed that employers that don't align start dates for workers to the operation of their payroll are more likely to experience processing problems. One way of avoiding these problems would be to consider using postponement to align these dates.

- Allocate each worker to one of the NEST groups and NEST payment sources that the employer has set up. You can send us enrolments for workers allocated to different NEST groups or payment sources in the same **Enrol workers** web service message. Group name and payment source name will only be mandatory on an enrolment if the employer has more than one NEST group or more than one payment source respectively. If you're certain they only have one, then you will not need to provide those details.

- The data item 'Information About Worker Enrolment Received' is no longer mandatory on an enrolment.

4.2   National Insurance number and tax relief

When a worker is enrolled with NEST, we use HMRC rules to determine whether they are eligible for tax relief or not. If you provide a National Insurance number, we'll claim tax relief for that worker for every worker contribution that you make. It's therefore vital that every attempt is made to obtain and provide a National Insurance number.

If a National Insurance number is not provided, the only circumstance in which NEST is allowed to claim tax relief for a worker is if the worker is an overseas national who is waiting for a National Insurance number. The employer must make a declaration to that effect in the enrolment data for that worker.

Please note that although it's likely to be a rare occurrence, a worker could also become ineligible for tax relief because of their own personal circumstances even though we have a National Insurance number for them. Please see the **employer help centre** for more about this.

Also note that it's possible for the worker to indicate that they are not eligible for tax relief and, in effect, override what an employer believes to be the case. This can lead to NEST and payroll calculating the value of contributions differently.

4.3   Send worker enrolments to NEST

Once your enrolment data is ready, send it to NEST using our Enrol workers web service. The web service allows multiple workers to be enrolled on one submission and you'll have to provide a 'Unique Record Identifier' for each worker being enrolled. This should be unique only within that particular web service request, but NEST will not validate its uniqueness. Its purpose is for payroll to identify the transaction for a worker, it's not a worker level identifier. You may wish to use a simple sequence number, or to use an identifier from your own system for that particular transaction. This is the identifier that will be supplied back to you in the response if there is an error for an individual enrolment. It enables you to match the case to a case in your system.

Like the existing enrolment online and file upload functions, **the Enrol workers web service is not used to make changes to worker data. Its only purpose is to enrol new workers.** To establish if a worker already exists in NEST or not, NEST look for an exact match using surname, date of birth, NI number and gender. If an exact match is found, then the new enrolment is added to that existing member, otherwise a new member is created in NEST. For example, if NEST receives an enrolment a few days after the original enrolment for the same worker, but the second enrolment had a slightly different surname (e.g. the last character was missing), then that would result in a second member being created in NEST for the same person.

We'll let you know about the successes and failures, and the reason for any failures. A secure message confirming all successful enrolments is also sent to the NEST secure mailbox the next morning.

If the enrolment request for a worker fails then the request can be made again using the **Enrol workers** web service after you've corrected the data. However, the web service cannot be used to correct details for a worker that you subsequently realised are incorrect but was successfully enrolled from a NEST system viewpoint. This has to be done using NEST online, although many of the corrections can only be done within six weeks of enrolment.

To avoid errors, please refer to the format and validation rules for each enrolment data field that you can find in the enrolling workers section of our **employer payroll guide.**

4.4   Enrolment response

Like any other web service, the results of the **Enrol workers** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

The response will contain

- the employer reference

- a count of how many workers were successfully enrolled

- for each enrolment that failed

  - the unique record identifier that was supplied

  - the error message(s) to explain why it failed

4.5   Changing a worker's personal data after enrolment

In general, once a member has been enrolled, they are the owner of their personal data, not the employer, and only they can change their personal details. There are some exceptions to this, please refer to the **employer help centre** for further details.

It's therefore important that such personal data is correct when it's first sent to NEST.

5 Making contributions by web service

Note that our contribution processes operate at contribution schedule level.

5.1 Creation of contribution schedules

During set-up, the employer made a commitment in the form of the payment schedule to make regular contributions for all workers allocated to that payment schedule. On a frequency defined on the Payment Schedule, NEST creates a contribution schedule containing a list of workers allocated to that employer's payment schedule.

NEST creates contribution schedules automatically prior to a contribution schedule's earnings period start date (EPSD). This allows employers to begin working on the schedules early. The table below shows how long prior to the ESPD a contribution schedule is created.

Earnings period frequency	Calendar days prior to the EPSD the contribution schedule will be created
Monthly	17 days
4 Weekly	17 days
Fortnightly	14 days
Weekly	10 days
Tax weekly	10 days
Tax monthly	17 days

Each contribution schedule created by NEST for an employer will be uniquely defined by the following attributes:

- NEST employer reference
- The earnings period end date (EPED)
- The payment source name.
- The frequency (e.g. weekly)
- The payment due date and due date 'days' logic (relative days or absolute days)
- The earnings period start date (EPSD)

See section 5.2.1 below for details of how we match contribution submissions to existing schedules.

Each worker included in the contribution schedule will be initialised with zero earnings and contributions. The contribution schedule will need to be updated to change these values using the **Update contributions** web service.

Once a contribution schedule exists, making contributions for an employer is a two-step process if contributions are paid by Direct Debit, or a three-step process if contributions are paid by Direct Credit or Debit Card:

- Notify NEST of the earnings and contributions for each member by sending an updated version of the contribution schedule.

- Approving the contribution schedule. This action confirms the amount payable to NEST and that payment can and will be made.

- If contributions are paid by Direct Debit, NEST will automatically collect the amount due.

- If contributions are paid by Direct Credit, a payment should be made to NEST from the appropriate employer bank account for EXACTLY the right amount of money. It's important to make sure you quote the correct payment reference.

- If contributions are paid by Debit Card, this must be done using NEST online, and the NEST system displays to the user the amount that will be taken from the card.

5.2   Notify NEST of contributions

NEST expects earnings and contributions for members to be notified in line with the payment schedule that was defined during the employer set-up.

Each employer contribution schedule needs to be updated in NEST with the earnings, employer contribution amount and employee contribution amount for each worker on the schedule. The update of a contribution schedule is achieved using the **Update contributions** web service.

Note that when a worker is enrolled, NEST needs to create a member account and then allocate the worker to the correct contribution schedule. It's necessary for users to allow sufficient time up to 30 minutes before submitting contributions for these newly enrolled workers. The time to process worker enrolments is dependent on the number of worker enrolments included in the web service request.

5.2.1   The data used to identify a contribution schedule

The following fields in the **Update contributions** message enable NEST to identify the contribution schedule:

- NEST employer reference number (primary field)

- Earnings period end date (primary field)

- Payment source (primary field)

- Frequency (primary field)

- Payment due date secondary field, i.e. not mandatory, but required in some circumstances)

- Earnings period start date (secondary field, but it's required in some circumstances)

In the vast majority of cases only the primary fields will be needed to enable the right schedule to be identified, as most employers will have a small number of contribution groups and payment sources (many will only have one of each). If the employer set-up is more complicated then, in a few rare situations, NEST may not be able to identify the specific schedule in which case the **Update Contributions** message will be rejected.

In these circumstances one or more of the secondary fields must also be provided.

5.2.2   Getting the data right

Identifying workers

If workers are not found in NEST it could be because:

- The NI number or Alternative Unique Identifier provided in the Update contributions message is incorrect. Note that if an NI number is updated in the payroll system, it should also be updated within NEST to prevent the next schedule submission from failing for that member. A similar action is required if the NI number is updated in the NEST system.

- The worker is not expected to appear on this Update Contributions message because they are allocated to a different group in NEST.

Advising opt-out

If a member wants to opt out, they have one month to complete a valid opt-out notice.

If the member gives the opt-out notice to the employer, the employer must notify NEST that they've received a valid opt-out notice and declare that they received this within the opt-out period. An opt-out notice received by the employer should be advised to NEST using the **Update contributions** web service note that it will not take effect until the schedule is approved – using either the **Approve for Payment** web service or the equivalent NEST online or SFTP function.

If the employer receives an invalid opt-out notice, e.g. if an incomplete paper form is received, the one-month opt-out period is extended to six weeks.

Contributions

NEST has a duty to validate that contributions notified/received for workers are in accordance with the payment schedule that was set up by the employer and to which the worker was allocated. If the amount notified is below the specified rate, then that member's contribution update will be rejected and must be corrected and re-submitted.

NEST verifies that:

Employer contribution amount = pensionable earnings * employer contribution rate

Employee contribution amount = pensionable earnings * employee contribution rate * (1- tax relief rate)

('Pensionable earnings' could be qualifying earnings or earnings based on a different definition of pensionable pay, which the employer would have given us when they set up with NEST)

Unless an employer has chosen otherwise, NEST will accept any contribution amount up to the pensionable earnings. If an employer wants to restrict the maximum that can be paid, they will be able to do so. For example, if an employer chooses to restrict contributions to a maximum of, say 50 per cent of pensionable earnings, then NEST will only accept contributions up to that limit, and reject any records that exceed that limit. This only applies to groups set up or updated after the autumn 2015 release.

Tax relief

For those workers who are eligible for tax relief on employee contributions, the contribution amount notified and paid must currently be 80per cent of the approved 'gross' contribution (based on the contribution rate specified by the employer). For example, if the employee 'gross' contribution (based on pensionable earnings of £2,000 and a contribution rate of 1 per cent) is £20, then the amount notified in the schedule must be £16 net, and NEST will claim the £4 tax relief from HMRC.

Employee contribution amount = pensionable earnings * employee contribution rate * (1- tax relief rate)

= £2000 * 0.01 * (1 – 0.2)

= £16

If a worker is not eligible for tax relief, it's the full £20 that must be entered in the schedule and paid.

Employee contribution amount = pensionable earnings * employee contribution rate

= £2000 * 0.01

= £20

Please note that the rate of tax relief is subject to future changes that could be made by the government. The examples above use the 2015/16 tax year rates.

No contributions to make for a worker in a period

In addition to telling NEST what contributions are due for workers, NEST should also be told what contributions will not be paid and the reason why. NEST has a range of reason codes that should be used covering situations where workers will no longer be contributing, for example because they left employment, are on family leave, have decided to stop contributions, opted out via the employer etc. Please refer to the **Employer payroll guide** for further information. If a reason code is not supplied, we'll derive it wherever possible from the other data provided.

Events that happen outside of the normal payroll cycle (leavers, opt-outs, cease contributions etc. can be notified to us when they happen (using the **Update contributions** web service). This will ensure that such cases are not included in the amount we are expecting for payment. For example, leavers can be notified to NEST as soon as the P45 is produced by the payroll system.

It's not necessary to provide contribution entries at worker level for workers who have zero contributions in a period previously.

When a schedule has a mixture of workers who are due contributions and workers who have zero contributions, there will be an indicator that can be set in the **Approve for payment** web service to instruct NEST to set deductions/contributions on a schedule to zero, and mark the reason as 'insufficient earnings', for those workers for whom the employer has provided no explicit data. If subsequently the employer has contributions to make to NEST, it will be possible to provide a contribution for those workers at a later date.

No contribution to make for any worker in a period

An employer can tell NEST that none of the workers have any earnings.

An empty contribution schedule will still need to be submitted with the appropriate indicator set, in the **Update contributions** web service. That indicator can only be set if there are no members to pay.

That must then be confirmed by setting a similar indicator in the **Approve for payment** web service (see section 5.3). There'll be no need to supply any contribution detail records for any workers. **IMPORTANT**: It is the **Approve for payment** web service that updates the worker's status within a contribution schedule, so if payroll does not use that particular web service, the equivalent action will need to be taken by the employer logging into NEST online.

Tax Week 53 is a specific example. NEST allows employers to align their earnings periods to tax weeks or tax months. Tax weeks can create some difficulties when reaching the end of the tax year due to the new tax year beginning on a different day of the week. There will need to be a short Week 53 contribution schedule for that year to bring the last period of one tax year in line with the first period of the next tax year.

The contribution schedule associated with tax week 53 is likely to be empty unless the employer's payday happens to fall during tax week 53.

Changing a member's group or payment source

These actions can also be performed as part of the Update contributions web service. Please refer to the Employer payroll guide for further information.

Withholding period

If an employer wants to take advantage of the withholding period (permitted by the Auto-Enrolment legislation) and hold onto contributions for a recently enrolled worker, then NEST envisages that the employer will not include that worker on their updates to the contribution schedules along with the contribution updates for all other workers. This will result in separate schedule submissions for workers whose contributions are being withheld.

NEST expects the withheld contributions to be paid by the employer by the end of the second month following the worker's automatic enrolment date. Within that period, NEST will assume that the employer is legitimately withholding that worker's contributions and will remove that worker from any determination NEST makes about that schedule being complete or late.

If in the withholding period:

- The employer is notified by the worker that they wish to opt-out, then the contribution schedule can be updated with that information by the employer.

- NEST is notified by the worker that they intend to opt-out, then NEST updates the contribution schedule accordingly.

If a worker is still enrolled at the end of their withholding period then the employer must submit an update to **each and every one** of the contribution schedules that the worker should have been included on. Each affected contribution schedule must be updated otherwise the Employer may be reported for late payment. Please see the Employer help centre for further information.

5.2.3 Handling errors on contribution schedules

You'll have to provide a 'Unique Record Identifier' for each worker for whom you are updating contributions. This should be unique only within that particular web service request, but NEST will not validate its uniqueness. Its purpose is for payroll to identify the transaction for a worker, it's not a worker level identifier. You may wish to use a simple sequence number, or to use an identifier from your own system for that particular transaction. This is the identifier that will be supplied back to you in the response if there is an error for an individual case, and enables you to match the case to a case in your system.

Like any other web service, the results of the **Update contributions** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

The response includes:

- the schedule reference

- all of the schedule header details

- the current status of all workers on the schedule (not only those submitted in the request) who have been validated, even if those workers had been entered on earlier update schedule requests. This includes workers for whom we are expecting a payment and also workers who we've been told will not be paid, but excludes workers for whom no update has been received and excludes any workers already paid

- a count of all workers that NEST has on the schedule for which NO **Update contributions** has been received. It's important that the user updating the schedule via web services checks that the count is consistent with their records and investigates any differences

- the amount currently payable on the schedule (excluding contribution corrections)

- the amount payable for workers whose contributions have been corrected (where known)

- the total amount payable (the sum of the above two amounts)

NEST will not accept an update to a contribution schedule made for a worker who:

- has already opted-out

- has stopped contributing to the scheme

- is present on a different schedule

- cannot be identified using the workers NI number or Alternative Unique Identifier

Their entry in the contribution schedule update provided in the **Update contributions** web service will be reported as invalid.

Before actual payment, a contribution for a worker on a schedule can be submitted as many times as required, and the latest version will simply overwrite any prior version. To remove a contribution amount from a schedule the amount of zero, together with its reason code will need to be applied. Once the employer is content that the schedule is complete, the **Approve for payment** web service can be used. See 5.3.

5.3   Approving/instructing payment of a contribution schedule

Once contributions for workers submitted on a schedule are correct, NEST needs every contribution schedule, even those that are empty, to be 'approved'. This is achieved using the **Approve for payment** web service. The request includes the total amount that the employer is approving and a flag to indicate whether those workers that haven't been updated should be set to zero contributions/insufficient earnings.

The employer or the bureau acting for the employer should satisfy themselves that there are sufficient funds in the bank account to pay NEST before approving the schedule. The **Approve for payment** web service will initiate payment processing, and on receipt of this instruction NEST will either:

- Collect the amount due by Direct Debit (NEST will never collect more than the amount that's been updated on a contribution schedule), or

- Create a receivable for the amount due to be paid by the employer by Direct Credit or Debit Card.

The results of the **Approve for payment** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

If the amount approved exactly matched or exceeded the amount NEST had previously been given and recorded, then the schedule will be approved.

If the total amount was less than the amount NEST has recorded then the request will fail, and the total amount NEST has recorded will be returned in the error message along with the total amount submitted. It's for the sender to understand the differences and to update the schedule accordingly. It may be simpler for the sender to simply resend the latest version of the data for this schedule and then resend the approval for that amount. When doing so please take care to monitor whether all the worker contributions were successfully processed by NEST.

Once the **Approve for payment** web service request has been submitted the workers for whom contributions are being paid are locked on the schedule until the money is received. However, enrolled workers could still opt out, which would alter the value NEST is expecting on the schedule. For Direct Debit, the money will be received 4-5 working days later. Where payment is by Direct Credit or Debit Card, it's dependent on the payment being made by the employer and so may take longer.

Once the payment has been received and matched to the expectation, the schedule is considered 'fully paid' ONLY IF:

- all workers on the contribution schedule:

  - are paid, or

  - have a valid non-payment reason code

- the schedule is considered to be an empty contribution schedule.

5.4   Failing to pay a contribution schedule

The latest date legally allowed for paying contributions to NEST is the 22nd of the month following the month in which the workers are paid, unless the employer is holding onto contributions for them during their opt out period. When a group is set up, a self-imposed deadline for contribution payments must be defined that is applied to every NEST contribution schedule in the form of a payment due date.

IMPORTANT: If the employer fails to pay by this self-imposed deadline, the payment for the contribution schedule is considered to be late. If the schedule is late for 90 days, or an employer has multiple instances of late payment, then NEST is required to report the employer to The Pension Regulator.

It's therefore important for employers to check for unpaid schedules on a regular basis and take appropriate corrective action on each schedule. This can be done using the **Retrieve schedules** web service.

When an employer is set up using web services, payment due date details can be supplied. If payment due date details have been input, NEST will automatically default the payment due date to a date that's earlier than the 22nd. That date then becomes the legal deadline see the web services data item specification referred to in Section 10 for more details. Employers can't edit the date once set up, but can create a new group (using NEST online) with the required payment due date. Any workers linked to the old group will need to be moved to the new group)

5.5   Implications of Direct Credit

NEST strongly recommends that employers permit NEST to collect contribution schedule payments using Direct Debit.

Each collection made by NEST can only occur once the contribution schedule has been 'approved', and must contain the amounts that should be collected. NEST will not collect by Direct Debit any more than is approved on the schedule, but could collect less as worker opt-outs are taken into account.

NEST allows employers to use Direct Credit but there are handling difficulties, explained below, that often result in more costly administration.

5.5.1   Use of payment reference

If the employer does decide to use Direct Credit, **it should be noted that automatic matching of a Direct Credit payment to a schedule relies on a unique payment reference being included in the payment**

instruction (see this article). There's no standard method across all banks for capturing a payee reference so this is not a straightforward process. If the payment reference is not correct then NEST will return the money to the payer and the schedule will remain unpaid.

5.5.2   Matching money

Even when the correct payment reference is included on the Direct Credit payment, NEST must determine which contribution schedules the money received is intended for. If the employer only has one contribution schedule expecting a payment, NEST will accept the money provided it is sufficient and refund the excess.

If there is more than one schedule unpaid then NEST may be able to determine which schedules to pay. If that's not possible, NEST will need more information from the payer to determine what to do. During this period schedules will remain 'unpaid'. NEST will advise administrators of the employer's scheme that money has been received but help is required to match it to unpaid schedules via the NEST secure mailbox. NEST recommends that administrators provide their instructions via the NEST online secure mailbox. If no response is received within 10 working days, NEST will refund the money back to the employer.

6 Possible Payroll BAU Actions

The following diagram is our view of how payroll may integrate their systems with NEST's web services:

PAYROLL BAU – ENROLMENTS & CONTRIBUTIONS

NEST web service calls	Why?	Payroll actions
Call NEST 'Retrieve Current Set-up Details' web service	To check that payroll and NEST have the same set-up (in case it's been changed in either system) to avoid any problems when submitting enrolments and contributions	Use the response to reconcile the set-up data in NEST with that in payroll
Call NEST 'Enrol Workers' web service	To enrol workers in NEST	Check the NEST response to identify enrolment failures and trigger corrective action
Call NEST 'Retrieve Opt-outs web service	To check that payroll has a record of all opt-outs from NEST since last payroll run so that it does not send contribution updates to NEST for those workers	Update payroll with opt-outs
Call NEST 'Get Member-notified stopped contributions web service	To check that payroll has a record of all member-notified stopped contributions since the last payroll run so that it does not send contribution updates to NEST for those members	Update payroll with member-notified stopped contributions
Call NEST 'Retrieve Schedules' web service	To check that payroll is aware of all schedules for that employer that need attention	Reconcile schedules with payroll
Call NEST 'Update Contributions' web service	To tell NEST what earnings and contributions will be paid for this period, and for what members contributions will not be paid (includes opt-outs notified to the employer). Can also be used to change a members Group or Payment Source **	Use the response to reconcile contribution data in NEST with that in payroll and to trigger corrective action for failures
Call NEST 'Approve for Payment' web service	To approve payment of the schedule for this period. If DD, NEST will automatically collect the money. If Direct credit or Debit Card, the employer needs to pay the money.	Use the response to record the approval or to trigger corrective action if the approval is rejected
Call NEST 'Retrieve Refunds' web service	To obtain all refunds made by NEST since last payroll run	Update payroll and reconcile refunds within payroll

** The Update Contributions web service can also be used ad-hoc to notify NEST of leavers etc. as soon as they arise, or to make corrections to paid contributions.

7 Exceptions

7.1 Changes in an employer's scheme setup

7.1.1 Modifying existing group and payment source

It's inevitable that as organisations grow their requirements of their pension arrangements grows as well. The **Set up a new employer** web service can be used to get an employer started but the set-up can only be extended online. NEST online allows new contribution groups and payment sources to be created, and also allows the following set-up attributes to be modified:

- Contribution group: group name

- Contribution group: contribution rates

- Contribution group: earnings basis

- Contribution group: maximum contribution limits

- Payment source: payment source name

- Payment source: payment method

- Payment source: bank accounts used for Direct Debit, fees and the refund account

Start dates, frequency and payment due date cannot be modified.

Changes to contribution setup cannot be backdated, and will always take effect from an earnings period start date. The employer can specify an effective date up to three months in the future. Changes to payment source data can be changed at any time with immediate effect.

7.1.2 Creating new contribution groups

Employers may find as their organisation grows that they need different contribution rates for different collections of workers.

A user can create a new contribution group, and then move some or all workers to that new group. This re-allocation of workers can be done in two ways:

- By passing an instruction to do so as part of the **Update contributions** web service (see section on Notifying NEST of contributions).

- Using the NEST online 'Manage Workers' function.

Note: Please take care when moving workers between groups in order to ensure that the transition occurs on the day you intended. Please refer to **this article** for further details of this process.

It's important that the employer set-up details in NEST continue to reconcile with the details held in other systems. Use the web service **Retrieve current set-up details** to get the new setup data from NEST into other systems as part of a reconciliation process.

7.2   Enrolment related exceptions

7.2.1   Leavers that re-enrol

Where a member is included on a schedule as a leaver, the same member can be re-enrolled immediately, for example there was an error or they re-joined quickly. They will be able to be included on the next schedule following the one in which they were recorded as a leaver.

7.2.2   More than one enrolment type

Generally a worker can be allocated to only one payment schedule and can appear on only one contribution schedule in any one period. However, if a worker had been previously enrolled as WWQE (a worker without qualifying earnings) and was then automatically enrolled part way through an earnings period when they became an eligible jobholder, then that worker can have two entries in the schedule for the same earnings period. This situation can be avoided by using a waiting period for the automatic enrolment equal to the EPSD of an earnings period. However, if that is not done then you will have to notify and pay separate contributions for each of that worker's enrolments for that earnings period only. The **update contributions** web service includes data fields that allow data for both enrolments to be supplied in a single schedule. Please refer to the **Employer payroll guide** for further information.

7.3   Contribution related exceptions

7.3.1   Correcting a paid contribution

If a contribution schedule is found to contain an error in an amount field after it has been paid then it should be updated. Note that generally reason codes can't be corrected. The only exception is the 'Insufficient earnings' reason, which can be removed if contribution amounts are provided, for example it was realised later that there were contributions payable after all.

You can update the earnings or contribution amounts in a paid schedule, regardless of how old the schedule is, using the same **update contributions** web service you use to update unpaid schedules. While paid contributions can be corrected using web services, users have the option to log into their online account to make corrections. In the online area, users have more options and control available for corrections than when using web services.

Resolving an underpayment on any particular contribution schedule is straightforward. NEST will calculate the additional money to collect (via Direct Debit) or to expect (via Direct Credit or debit card). The correct amount must be entered, and NOT the difference between the correct amount and the amount that was submitted in error. Negative values won't be accepted. So if the incorrect amount in the schedule was £4.00 and the correct amount is £5.50, you should enter £5.50, not £1.50. NEST will either collect the underpaid £1.50 by Direct Debit, or (if paid by Direct Credit or debit card) will expect to receive the extra £1.50.

Resolving an overpayment is more involved. NEST will calculate the value of the money that needs to be returned and will then sell the number of units that were bought with the value of the overpayment. If the current market price for those units is less than the price when they were bought, then NEST will not be able to refund the full amount that was overpaid. It is the employer's responsibility to make up any shortfall to their worker as a result of an overpayment error in the contribution schedule.

When a Contribution Schedule contains a mixture of corrections, both increases and decreases:

- Decreases are processed before increases so that the value raised by the decreases can be offset against the amount required to pay for the increases.

- This offsetting will give rise to either the need to refund monies to the employer or to ask the employer for further monies.

- If the offsetting gives rise to the need for further monies from the employer the increases are only processed once the additional monies have been received.

- If the offsetting gives rise to a refund, the increases, if any, are processed in the same way that a contribution would be processed with a contribution charge being deducted from the value of the increase prior to investment. The net refund is paid to the employers nominated refund account.

To avoid having to correct contributions that have been paid, it's important to get earnings and contribution amounts correct the first time.

7.3.2   Making ad hoc (not scheduled) contributions

Sometimes it may be necessary to make additional contributions for a member over and above what was included in a regular contribution schedule. You can notify NEST about additional contributions, and pay them, using an 'exception schedule'. Exception schedules must be entered using NEST online data entry or file upload. It is NOT possible to submit an exception schedule using NEST web services. Please refer to the **Employer help centre** for further information.

7.3.3   Salary sacrifice

If an employer is using NEST and has a salary sacrifice agreement with their workers, the contribution levels will need to be based on their post-sacrifice pay. It will be necessary to set up a dedicated group for workers who are in the salary sacrifice arrangement. Please refer to the **Employer help centre** for more details.

7.3.4   Family leave

If a member is on family leave, such as maternity leave, and the employer and member contributions are based on different earnings, then NEST provides a mechanism for employers to provide employer contributions based on notional earnings as well as member contributions based on actual earnings. Please refer to our **Employer payroll guide** for more information.

8 Reconciliation

The addition of the NEST web services channel will allow the vast majority of employers to manage their scheme without the need to log into NEST online. Under these circumstances an external source of data-payroll or other software-and NEST are kept in synch via the web services calls.

When it becomes necessary for a user to change the data in NEST independently of the data in the external source it's easy to envisage the two systems becoming out of synch. NEST has a number of web services to retrieve data from an employer's NEST scheme so that it can be compared to data held in an external source. Where the external source and NEST have different values then it is necessary to investigate and resolve the difference.

Operational problems can be avoided if the data in NEST is reconciled to the data held in payroll systems at the beginning of each payroll cycle.

8.1 Changes to scheme set-up

Employer delegates or third party administrators can add to or alter the way an employer is set up. These changes can only be done using NEST online, not via web services. They can introduce new contribution groups and payment sources, and change the primary contact at the employer.

The web service **Retrieve current set-up details** retrieves the set-up of the Employer including:

- The primary contact's email address.
- The details of each contribution group.
- The details of each payment source (but bank details are not included)

Like any other web service, the results of the **Retrieve current set-up details** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

8.2 Changes to schedules

Users of NEST online can enrol new members, move workers between contribution groups, edit schedules and also pay schedules. All of these actions will need to be mirrored in a source system, such as a payroll system. Without doing so it is almost inevitable that payroll will not know who they should include on a schedule and which schedule needs paying. These actions can also affect the amounts payable in a schedule.

The web service **Retrieve schedules** retrieves a list of all the schedules generated by NEST that are currently due or overdue These are schedules that require attention and which have an earnings period end date within a requested date range.

Data is only available for a maximum period of two years, so the date range requested must not be greater than two years. If no date range is supplied, then the last two years will be used.

Like any other web service, the results of the **Retrieve schedules** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

The response includes summary information for each due/overdue schedule:

- The schedule matching fields (EPSD, EPED, payment source, frequency, payment due date).

- The schedule reference and schedule status (due or overdue).

- The amount of money that is currently expected (if known).

- The number of workers on the schedule that have not been entered.

- The number of workers on the schedule that have had an update attempted, but that update failed.

8.3   Members that opt-out

Workers who were automatically enrolled (eligible jobholders) or who chose to opt in (non-eligible jobholders) have a right to 'opt out' of NEST after they have been enrolled.

NEST provides three ways in which a member can opt out:

- NEST online

- By telephone

- By post- they request a paper opt out notice from NEST, NEST posts it to the member's address, the member completes it and returns it to their employer.

They can only opt out during what is known as the 'opt-out period', which is one month, and starts three working days after the worker was enrolled in NEST. NEST cannot accept opt-outs by NEST On-line or by telephone after the opt-out period has ended.

In NEST's experience, most workers opt-out independently of the employer-using NEST online or telephone-which means NEST will need to notify employers of any opt-out decision. Decisions made by workers to opt-out at NEST should be recorded in the systems that determine payroll deductions and, where appropriate, refunds of any contributions already made to NEST should be recorded as receivables on any cash handling system.

The web service **Retrieve opt-outs** retrieves a list of all of workers who opted-out for the employer within a requested date range, irrespective of the method they used to opt out.

Like any other web service, the results of the **Retrieve opt-outs** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

Data is only available for a maximum period of five weeks from the current system date. If no date range is supplied, then all opt-outs in the last five weeks will be returned.

Note that opt-out information that goes back further than five weeks will still be available by making a request through the online portal.

8.4   Members who stop paying contributions

Members can instruct NEST that they wish to stop paying contributions into the scheme. From the next earnings period there is no need for their employer to provide any further contributions, but money that the member already has in their retirement pot will stay in their NEST retirement pot.

The web service **Retrieve member-notified stopped contributions** will request that NEST produce a list of all members who instructed NEST directly to stop contributions within a requested date range. The member might or might not have told their employer, so this web service ensures that the employer is notified and their history of members who stopped contributing will be complete. This web service does **not** include the 'stop contribution' cases that the employer told NEST about, because the employer/payroll system already knows about these.

Typically the earliest date that users will set will be the latest date supplied when this web service was last run. Data is only available for a maximum period of five weeks from the current system date. If no date range is supplied, then all cases notified in the last five weeks will be returned.

Note that Information about members who've stopped contributing that goes back further than five weeks will still be available by making a request through the online portal.

Like any other web service, the results of the **Retrieve member-notified stopped contributions** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

Source systems should be updated with the stop contributions effective date that is provided in the response before they calculate any deductions from pay/contributions to NEST. If an employer ignores this step the entry on any update contribution schedule instruction for that worker will fail validation and an error for that worker will be reported.

8.4.1   Refunds

Occasionally, NEST needs to make a refund to an employer. The most common reasons for a refund are:

- Opt-out

- Overpayment of contributions

- Contributions in excess of the annual contribution limit

All refunds are made to the employer's refund account set up for the payment source associated with that schedule. NEST arranges for the transfer of money to that refund bank account, and provides refund information to employers and parties acting on their behalf in a secure message that is available in the secure area of NEST online. The same data will now be available using the **Retrieve refunds** web service, with which it will be possible to ask NEST for a list of all refunds generated by the system between two dates. The owner of the account should track receipt of all refunds advised to them by the web service.

Like any other web service, the results of the **Retrieve refunds** web service request can be obtained using the **Retrieve status** web service followed by the **Retrieve service response** web service.

Data is only available for a maximum period of five weeks from the current system date. If no date range is supplied, then all refunds in the last five weeks will be returned.

Opt-outs and other transactions are processed every day of the week, but refunds are only made on working days. This means that, after a weekend or bank holiday, the total amount refunded may be the aggregate of daily refund amounts for a number of days.

8.4.2   Refunds relating to opt-outs

If an opt-out decision is made after a contribution schedule has been updated for a worker but before the contribution schedule concerned has been approved then NEST will notify employers and parties acting on their behalf of the reduced amount that will be collected by Direct Debit or that must be paid by the employer via direct credit or debit card. NEST will make this notification using the NEST online secure mailbox.

The amount NEST collects by Direct Debit will be reduced by the value of contributions made for members that have opted out. In these cases there is never any refund because NEST never collected a contribution.

Although NEST can reduce the amount it expects by direct credit or debit card it cannot prevent an employer overpaying creating the need for a refund.

If an opt-out decision is made after a contribution schedule has been approved, then the contribution payment is said to be 'in transit'. NEST expects a payment of the amount that the employer has previously approved, including any opt-outs. Only once that money is received will a refund be arranged. Employers MUST not change the contribution payment being sent to NEST as a result of seeing the 'in transit' contributions.

If an opt-out decision is made after a contribution schedule has been paid then NEST will automatically refund the employer the value of contributions made for members that have opted out.

If a paper opt out was received by an employer within the opt-out period but not notified to NEST after contributions had been invested, then the refund amount-determined by selling the units of funds bought with the contribution-may be less than the contribution paid by the employer.

9 Existing SFTP users who change to web services

9.1.1 A few points to be aware of

All web services can be used by existing SFTP users. However, there are some points to be aware of:

a)   Schedules updated before the web services release -e.g. via SFTP or NEST online-can be approved/paid via the Approve for payment web service.

b)   The full five weeks range of data for the retrieve opt outs, retrieve member-notified stopped contributions and retrieve refunds web services will only be available five weeks from the web service code release.

c)   We've created new data item specifications and XSDs for web services that are different to those applicable to SFTP.

9.1.2 Turn off SFTP

SFTP daily notifications will continue to happen as is and will not be affected by the introduction of web services. NEST request that once you are happy that SFTP files are no longer required, the employer or one of their delegates turns off the daily notification option in NEST online within the 'Manage SFTP' area. This will stop the generation of SFTP-related emails and files.

10 Data items used in web services

The **NEST web services data specification guide** lists the business data items that will be used in each web service, both requests and responses. Please note that the technical names in the XSDs may differ from these, and the XSDs will provide full technical details of the data items.

The NEST Web Services API Specification Guide provides full details of the acknowledgement, the **Retrieve status** web service and the **Retrieve service response** web service.

11 Indicative response times

We've set out below the timings we aim for:

a)   when returning an acknowledgement to a web service request.

b)   to process the request within the NEST system.

c)   to provide the response to the **Retrieve status** web service.

d)   to provide the response when you request it using the **Retrieve service response** web service.

Please note that these timings are not service levels and can't be guaranteed. They are there to give an indication of response times for the majority of cases.

11.1.1   Acknowledgement

Web **service**	Number of worker 'records' within the web service request (where applicable)	Target time to generate the acknowledgement
Enrol **workers,** Update **contributions** and Approve **for payment.**	0 – 49	< 30 seconds
	50 – 999	< 60 seconds
	=> 1000 records	< 60 seconds
Retrieve **opt**-outs	N/A	< 30 seconds
Retrieve **schedule**	N/A	< 30 seconds
Retrieve **member**-notified **stopped contributions**	N/A	< 30 seconds
Retrieve **refunds**	N/A	< 30 seconds
Retrieve **current set**-up **details**	N/A	< 30 seconds
Set **up** a **new employer**	N/A	< 45 seconds

11.1.2   Processing of the Request

Web Service	Number of worker 'records' within the web service request (where applicable)	Target time to process the request
Enrol **workers** and Approve **for payment**	0 - 9	< 10 minutes
	10 – 49	< 10 minutes
	50 – 999	< 2 hours
	=> 1000 records	< 24 hours
Update **contributions**	0-9	< 10 minutes
	10 – 49	< 10 minutes

	50 – 999	< 2 hours
	=> 1000 records	< 24 hours
Retrieve **opt**-outs	N/A	< 5 minutes
Retrieve **schedule**	N/A	< 5 minutes
Retrieve **member**-notified **stopped contributions**	N/A	< 5 minutes
Retrieve **refunds**	N/A	< 5 minutes
Retrieve **current set**-up **details**	N/A	< 5 minutes
Set **up** a **new employer**	N/A	< 15 minutes

*For the **Approve for Payment** web service, the target time is based on the number of workers currently in the contribution schedule, not on the number of worker records within the web service request (because that web service does not have worker level data within the request).

11.1.3   Retrieve status

For all web services, NEST will aim to respond to a 'Retrieve status' request within 10 seconds.

11.1.4   Retrieve the response

For all web services, NEST will aim to respond to a 'Retrieve service response' request within 60 seconds.

11.1.5   Cut-off time

There is a daily cut-off time of 18:00 for the **Enrol workers, Update contributions and approve for payment** web services where the request contain => 1,000 records.

Requests received after 18:00 will miss that night's batch processing, and will only be processed in next day's batch. For example, for requests with => 1,000 records received 19:00 on a Monday, we'll aim to process these in Tuesday night's batch, and the response should be ready by Wednesday morning.

11.1.6   Examples of indicative response times

- Enrol workers request for 100 workers received at 20:00:00 on Monday – acknowledgement will aim to be returned by Monday 20:01:00 with an indicative response time of Monday 22:00:00

- Enrol workers request for 100 workers received at 20:00:00 on Friday – acknowledgement will aim to be returned by Friday 20:01:00 with an indicative response time of Friday 22:00:00

- Enrol workers request for 100 workers received at 20:00:00 on Saturday – acknowledgement will aim to be returned by Saturday 20:01:00 with an indicative response time of Saturday 22:00:00

- Enrol workers request for 2000 workers received at 17:50:00 on Monday – acknowledgement will aim to be returned by Monday 17:51:00 with an indicative response time of Tuesday 17:50:00

- Enrol workers request for 2000 workers received at 18:01:00 on Monday – acknowledgement will be returned by Monday 18:02:00 with an indicative response time of Wednesday 18:01:00

- Enrol workers request for 2000 workers received at 17:50:00 on Friday – acknowledgement will aim to be returned by Friday 17:51:00 with an indicative response time of Saturday 17:50:00

- Enrol workers request for 2000 workers received at 18:01:00 on Friday – acknowledgement will aim to be returned by Friday 18:02:00 with an indicative response time of Sunday 18:01:00

- Enrol workers request for 2000 workers received at 17:50:00 on Saturday – acknowledgement will aim to be returned by Saturday 17:51:00 with an indicative response time of Sunday 17:50:00

- Enrol workers request for 2000 workers received at 18:01:00 on Saturday – acknowledgement will aim to be returned by Saturday 18:02:00 with an indicative response time of Monday 18:01:00

- Enrol workers request for 2000 workers received at 17:50:00 on Sunday – acknowledgement will aim to be returned by Sunday 17:51:00 with an indicative response time of Monday 17:50:00

- Enrol workers request for 2000 workers received at 18:01:00 on Sunday – acknowledgement will aim to be returned by Sunday 18:02:00 with an indicative response time of Tuesday 18:01:00

12 About this version

Version and date		What's Changed
1.0	11 June 2015	First Public Version
2.0	04 August 2015	Changes to linked Data Item Specification
3.0	September 2015	Various minor clarifications, tidy-ups of copy and hyperlinks
4.0	December 2015	Minor changes to the disclaimer and Purpose section
5.0	March 2017	Sentence removed from section 7.3.1 regarding deduction of contribution charge on contribution correction refunds.
6.0	February 2018	Section 10 - Data items used in web services The NEST web services data specification guide has been updated
7.0	December 2018	Section 11.1.2 - Processing of the request 'Target time to process the request' column updated for SR18 - 1806 – Employer Enhancements.
8.0	June 2019	Updated to include v7.0 of the Web Services Data Specification Guide
8.1	October 2019	Formatting amendments
9	March 2021	Section 1.3 – Authentication Account unlock process statement updated.