NHSmail JML Synchronisation Onboarding Guide

January 2021
Version 1.2

Contents

1 Overview

1.1 Document's Intended Audience

This document is intended for organisations that are implementing the Joiners, Movers, Leavers (JML) solution. It details the end-to-end process for implementing the product; both installing TANSync 2.0 and enabling Electronic Staff Record (ESR) Integration. It provides a step-by-step guide which readers are encouraged to use as a checklist for reference during the onboarding process.

This guide focuses primarily on technical and business readiness, pre-requisites, and the set-up of TANSync 2.0 and ESR integration. Where necessary, it includes links to accompanying documentation to facilitate the onboarding process. For example, the installation process for TANSync 2.0 is detailed in a separate guide.

The JML solution has been designed for use in accordance with the ESR Best Practices. Organisations are expected to be familiar with this guidance. Further information can be found in Section 7.1.

Readers are expected to have a comprehensive understanding of the installation of Microsoft products and experience working with identity products such as Identity Lifecycle Manager (ILM), Forefront Identity Manager (FIM) or Microsoft Identity Manager (MIM).

2 Executive Summary

This section introduces the JML product; outlining its capabilities, key benefits and a high-level solution overview.

2.1 JML Synchronisation

NHSmail is the secure, national collaboration Portal providing services to over 1.4 million users across more than 13,000 health and care organisations in England and Scotland.

NHSmail manages identities for all users within Microsoft Active Directory (AD) and enables Local Administrators to manage these accounts within the NHSmail Portal.

Health and care organisations will also typically manage local identities within their own Microsoft AD. The NHS Electronic Staffing Record (ESR), which is managed by the NHS ESR Central Team, provides workforce management tools to NHS organisations; managing on-boarding and off-boarding processes for personnel.

As employees join and leave NHS organisations, there is considerable administrative effort required by back office teams to manage these movements within ESR, the NHSmail Portal and Local AD services. NHSmail records 64,000 of these movements each month.

JML Synchronisation will automate these processes; improving identity management and cyber security for NHS organisations. This service will be available on an 'opt-in' basis.

2.2 Key Benefits

JML Synchronisation will provide significant benefits for NHS organisations:

Enhanced employee experience and increased workforce productivity through quicker access to business systems.

Reduced administrative effort enabling teams to focus on higher priority items.
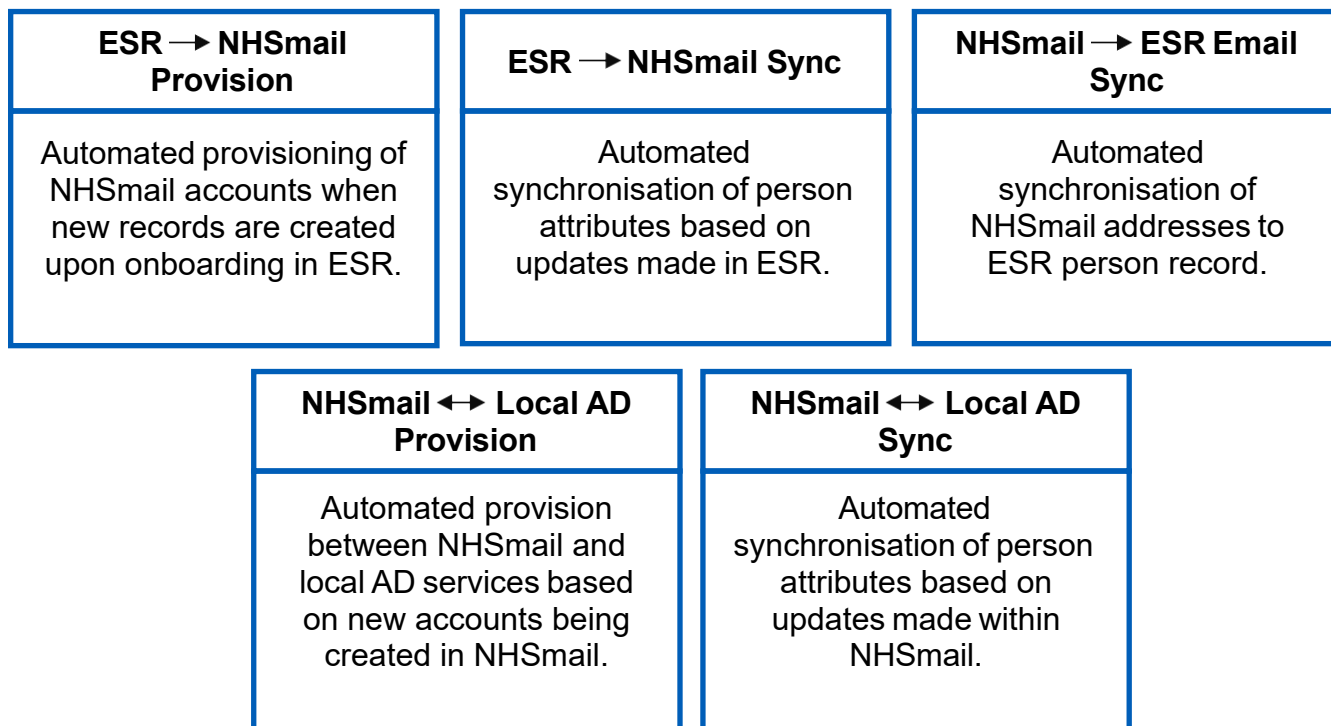
Increased cyber and data security through timely access management and better audit capabilities.

Improved identification of individuals in people directory.

2.3 Solution Overview

JML Synchronisation will deliver integration between ESR, NHSmail and Local AD services. The solution will enable the following capabilities:

ESR → NHSmail Provision	ESR → NHSmail Sync	NHSmail → ESR Email Sync
Automated provisioning of NHSmail accounts when new records are created upon onboarding in ESR.	Automated synchronisation of person attributes based on updates made in ESR.	Automated synchronisation of NHSmail addresses to ESR person record.

NHSmail ↔ Local AD Provision	NHSmail ↔ Local AD Sync
Automated provision between NHSmail and local AD services based on new accounts being created in NHSmail.	Automated synchronisation of person attributes based on updates made within NHSmail.

* Organisations have the option to configure TANSync 2.0 to synchronise certain attribute values from Local AD to NHSmail.

High-Level Design

The below diagram illustrates the data flows that the JML solution establishes between ESR, the NHSmail Portal and Local ADs.
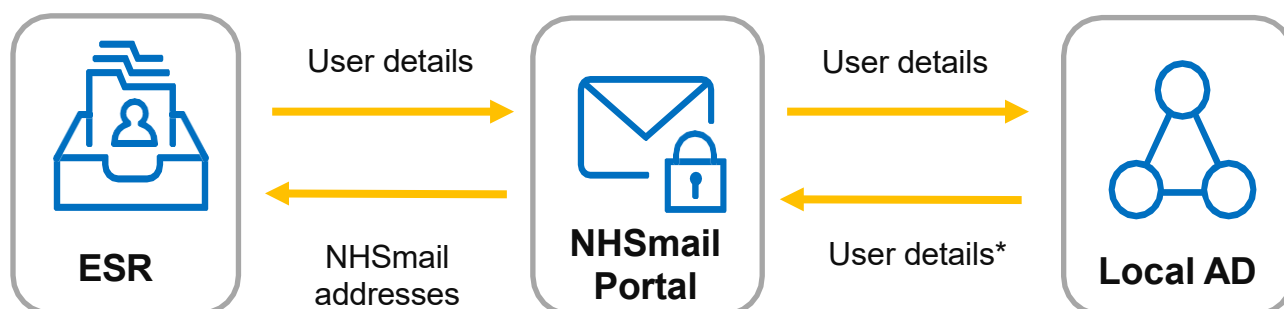
*At organisation's discretion.

The below table shows the three types of NHS employee for whom relevant identity management processes will be automated as a result of JML Synchronisation. The employee must be present in the NHSmail Portal.

Employees Managed					
ESR	NHSmail	Local AD	Management	Description	Employee Type
✓	✓	✓	JML	Employee present in ESR, and also has an NHSmail and a Local AD account.	Standard employees which need to be present on ESR, and need an NHSmail and Local AD account.
X	✓	✓	JML (TANSync)	Employee with an NHSmail and a Local AD account.	Employees who do not need to be in ESR but do need an NHSmail and Local AD account i.e. Students.
✓	✓	X	JML (ESR)	Employee present in ESR and also has an NHSmail account.	Employees without a workstation but which need an NHSmail account and ESR presence.

The management of data is synchronised across ESR, NHSmail and the Local AD. If a record is created in ESR, accounts are provisioned in NHSmail and the Local AD. Equally, if an account is created in NHSmail, a corresponding account is created in the Local AD.

The table below shows the types of NHS employee for whom relevant identity management processes will not be automated as a result of JML Synchronisation.

If an employee should not be present in all three systems, the organisation will be required to take manual remediate action, detailed in the table below.

Employees Managed Manually					
ESR	NHSmail	Local AD	Management	Description	Example
✓	X	X	Manual	Employee is present only in ESR, but does not have an NHSmail or Local AD account.	Employees who need to be present on ESR (i.e. for payroll), but who do not need access to a NHSmail or Local AD account.
X	✓	X	Manual	Employee has an NHSmail account, but is not present in ESR and does not have a Local AD account.	Employees who only need access to an NHSmail account, but do not need to be present in ESR or have access to the Local AD.
X	X	✓	Manual	Employee only has a Local AD account, does not have an NHSmail account and is not present in ESR.	Employees who only need access to the Local AD, and do not need to be present on ESR or have a NHSmail account.

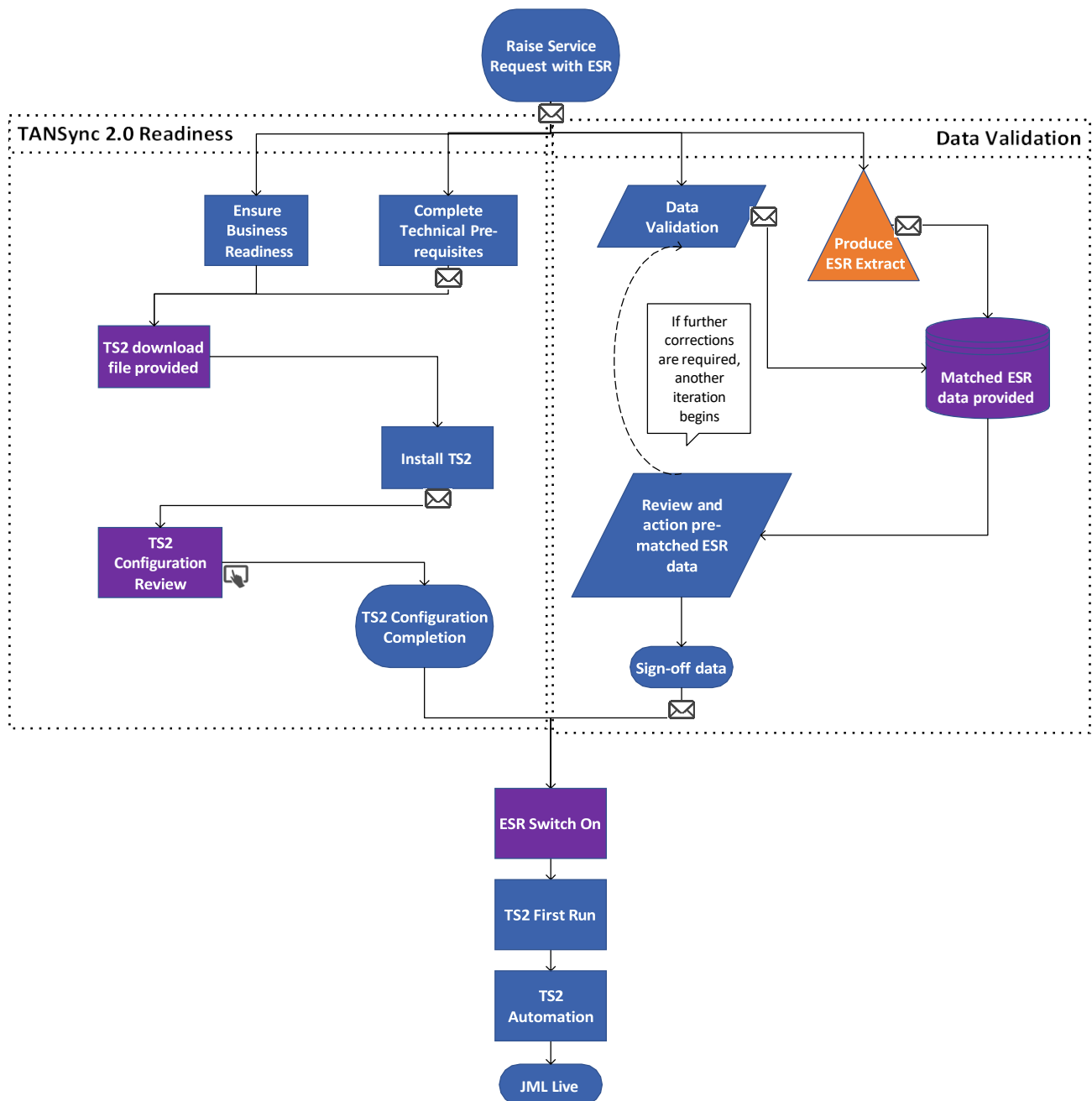|				
✓	X	X	**Remove employee from NHSmail and Local AD:** Employee should only have a presence on ESR.	1. Find the mailbox in the NHSmail portal. 2. Mark the NHSmail account as a leaver. 3. JML will remove the local AD account.
	✓	X	**Remove employee from Local AD:** Employee should only have NHSmail.	1. Find the employee in the metaverse search tab in Synchronisation Manager. 2. Mark the TANSync object as an explicit disconnector. 3. Delete the employee object in AD.

Key:

✓	Employee is present in th~
X	Emplo~~

Please note that It is not possible to have employees present in both ESR and Local AD without also being present in NHSmail.

3 Onboarding Overview

The below diagram outlines the process for successful adoption of the JML solution. It is best used as a checklist. Some of these activities can be completed in parallel. Some activities can be clicked on to take you to the page(s) where they are covered in more detail in this guide.

JML Onboarding Process

TANSync 2.0 Readiness

Data Validation

- Raise Service Request with ESR
- Ensure Business Readiness
- Complete Technical Pre-requisites
- Data Validation
- Produce ESR Extract
- TS2 download file provided
- If further corrections are required, another iteration begins
- Matched ESR data provided
- Install TS2
- TS2 Configuration Review
- TS2 Configuration Completion
- Review and action pre-matched ESR data
- Sign-off data
- ESR Switch On
- TS2 First Run
- TS2 Automation
- JML Live

Key

JML Onboarding Team	NHS Trust	ESR NHS Central Team	Email JML Onboarding Team	Screensharing call

4 Business Readiness

The JML onboarding process requires a notable investment of resource and effective coordination between different teams. To ensure a successful onboarding experience, organisations are required to make the following preparations:

- **Collaboration:** The onboarding process will be most successful if IT and Workforce teams are aligned on expected timelines and able to collaborate. Both teams are required to validate data and there is benefit in working together to review and reconcile findings. The data validation process may also highlight areas where IT and HR business processes can be improved.

- **Capacity:** It is important that the onboarding process is sufficiently resourced. It requires IT and Workforce colleagues to work with the JML Onboarding Team to meet all pre-requisites and complete data validation and installation activities. TANSync 2.0 should be supported similarly to any other IT infrastructure. To mitigate problems effectively, organisations are advised to upskill more than one person with the knowledge to support TANSync 2.0. It is also worth considering whether your onboarding coincides with an upcoming CQC audit as this may impact capacity at your organisation.

- **Governance:** Organisations are advised to confirm the support of a senior stakeholder, familiar to both IT and Workforce teams, who can serve as an escalation point. JML Synchronisation involves the NHS ESR Central Team sharing the onboarding organisation's ESR data with NHSmail. During JML onboarding, organisations will request the creation of a daily data feed by submitting a Service Request through the ESR Service Desk. A Data Sharing Agreement between NHS Digital and the NHS ESR Central Team is in place. It is important to comply with any GDPR obligations as well as local best practices.

- **ESR Best Practices:** Organisations will be best placed to benefit from JML Synchronisation if they use ESR in accordance with the Best Practices found in Section 7.1.

- **Service Desk:** Organisations should inform their Service Desk teams about JML onboarding due to the potential for increased contact from users following Go-Live.

5 Pre-requisites

There are several pre-requisites that must be completed before installing the JML Synchronisation tool.

These can be progressed in parallel, however **teams are advised to raise a Service Request for the ESR Data Extract prior to commencing the technical pre-requisite items.**

5.1 Provision of ESR Data Extract

The following steps explain how to obtain the ESR Data Extract:

1. Raise a Service Request (SR) with the ESR Service Desk:

   - Request a new Service » AC » ESR Interfaces » G-Z » Other System Interfaces, or perform a search on "other" in the top search bar

2. The template below provides guidance on how to answer the mandatory questions when raising the request:

   - *Requested date for Go Live:* <**Preferred Go-Live date**>

This refers to the point at which the ESR data extract will be enabled rather than JML Go-Live itself. Please choose the first available date. The first available date will reflect a Service Level Agreement (SLA) of 18 weeks. However, it is expected that the extract will be delivered within 8 weeks of the request being submitted.

   - *What is the name of the solution you wish to interface with?* **NHSmail**

   - *Who supplies the solution, or is this a locally developed solution?* **NHSmail**

   - *What business functionality will the solution provide?* **Email account creation and updates**

   - *What interfaces are you asking us to switch on for you (or if you are uncertain, what data will you require)?* **NHSmail Bi-Directional Interface**

Once the organisation has requested an ESR extract, please inform the JML Onboarding Team by emailing JML.Support@nhs.net. (Please write "JML Step 5.1 Completed [organisation's name]" as the subject-line of the email.)

5.2 Delivery of ESR Extract

Once the requested ESR extract is available, a notification from the NHS ESR Central Team will be issued to the requesting organisation. Following this notification, please inform the JML Onboarding Team by emailing JML.Support@nhs.net. (Please write "JML Step 5.2 Completed [organisation's name]" as the subject-line of the email.)

5.3 Technical Pre-requisites

Once the SR is raised with the ESR NHS Central Team and the organisation is awaiting its delivery, the following pre-requisites must be actioned. To facilitate the TANSync 2.0 synchronisation, the organisation may be required to procure hardware and configure its environment.

- **Security**: It is recommended that organisations follow Microsoft security best practices.

- **SQL 2014**: SQL 2014 Standard or a later version should be deployed if not already in use.

- **Licensing**: The organisation will require a Microsoft Windows Server Licence.

- **Networking**: Networking access should be configured for successful synchronisation between the NHSmail Portal via port 443 and Local AD via LDAP or Secure LDAP.

- **TANSync 2.0 Server Specification**: Windows Server 2012 R2 or above; with 2x Core, 16GB of Ram, and 150GB of Disk space.

- **Installation Actor**: Permissions for TANSync 2.0 installations must be configured.

- **Synchronisation Service - Service Account**: A service account to run the synchronisation service is required.

- **On Premise Active Directory Account**: A service account with access permission is required to access the organisation's AD.

These requirements are detailed further at the following address:

https://comms-mat.s3-eu-west-1.amazonaws.com/Training-Materials/Guidance/NHSmail_VN050_+JML_TechArchSpecificationDocumentation_v1.0.pdf

Once these **Technical Pre-requisites** are completed, please inform the JML Onboarding Team by sending an email to JML.Support@nhs.net. (Please write "JML Step 5.3 Completed [organisation's name]" as the subject-line of the email.) On receiving confirmation, the JML Onboarding Team will share the download file for TANSync 2.0. Instructions on how to install and configure TANSync 2.0 can be found in Section 8.3.

6 Data Validation

The data validation process involves the examination and, if appropriate, the update of user attributes for all users across ESR, NHSmail and the organisation's Local AD. A set of anchor values should be consistent across all systems for every user to allow the JML Synchronisation system to link user accounts across the three platforms.

The anchor values are the following:

ESR	NHSmail	Local AD
Email Address	Email Address	Mail
	NHSmail ID	NHSmail ID attribute of choice

Organisations can choose to populate different NHSmail ID attributes of their preference in the Local AD. These attributes are then configured in TANSync 2.0 for matching purposes.

The accounts with anchor values correctly populated in all three platforms will be successfully linked once JML is activated.

6.1 Matching Accounts Across Services Per User

The use of a script or software (i.e. access database) is recommended to compare accounts across ESR, the NHSmail Portal and the Local AD. This can optimise the process for matching accounts based on similarities across a number of attributes.

It is recommended that similarities between several attributes across the three platforms are prioritised as follows:

- Email Address
- Phone Number
- First and Last Name
- Position Description

Based on a similarity score, decided by each organisation, the script should identify employees with accounts that are matched across the three systems, and flag any additional employees in a single platform and, thus, without matched accounts.

6.2 Reviewing Matched and Unmatched Accounts

The matched and unmatched accounts should be reviewed for accuracy. This will require input from both IT and Workforce teams. It is recommended that in the first cycle, Workforce colleagues review unmatched accounts on ESR, while IT colleagues review unmatched accounts in the NHSmail Portal, and Local AD. IT and Workforce teams are then advised to jointly review all accounts.

6.3 Identifying Missing Anchor Values

- **Matched accounts:** Once matched accounts are identified, please ensure that the system storing those accounts contains the appropriate anchor values, manually updating anchor values if necessary.

- **Unmatched accounts:** Where an account is not matched but should be, please ensure that the system storing that account contains the appropriate anchor values.

6.4   Updating Anchor Values

Missing anchor values should then be added to the relevant system:

- **Updating ESR**: Anchor values such as NHS.net email addresses can be added to ESR by updating the email address for individual users. This can be done manually per account, or in bulk by raising a **one-off** Service Request for an email mass update, if there are more than 100 email addresses.

- **Updating Local AD**: Anchor values such as NHS.net email addresses and NHSmail IDs can be added to Local AD. Guidance on where to find NHSmail ID information is provided in Section 6.7.

Please note that the email address is an essential anchor value to matching via the JML system, therefore organisations should make sure that all Local AD accounts and ESR accounts have a valid NHS.net email address populated.

This phase of the data validation process (Section 6.1 - 6.4) may involve multiple iterations to complete.

Once satisfied that the data held in ESR, NHSmail and Local AD is accurate, please inform the JML Onboarding Team by emailing JML.Support@nhs.net. (Please write "JML Step 6.4 Completed [organisation's name]" as the subject-line of the email.) The Onboarding Team will then provide a matched ESR/NHSmail data set for sign-off, ahead of ESR Automation Switch On, as outlined in Section 6.5.

6.5   Matched ESR/NHSmail Data Set

Once an organisations' internal data validation exercise between ESR, NHSmail and Local AD is complete and the JML Onboarding Team receives the sign off email stating they have completed Step 6.4, a Pre-Matched Data Set will be generated and shared by the JML Onboarding team to the organisation.

A Pre-Matched Data Set is matching report between ESR and NHSmail containing data from the organisation and should be used to comparing the internal data reports from data validation with this matched ESR/NHSmail data set.

Matching criteria for the Pre-Matched Data Report is consistent with the criteria used by the JML synchronisation once live. The table below shows the attributes considered and the scores associated to each attribute:

Name	Score
Email Address	5
Employee Number	5
Mobile Number	4
Last Name	1
First Name	1
First & Last Name	3
Position Description	1

The Pre-Matched Data Set will be generated to automatically match accounts between ESR & NHSmail. Where a score of 6 or more is achieved the data set will assume that the ESR

record and NHSmail account represent the same person. Matches with a score of 6 or more would be shown as a 'True' match under the column "MatchedToNhsMail" within this Data Set.

Any records with a score of less than 6, will result in a 'False' match. This requires a manual check to be carried out by the organisation to verify their details and update these in the appropriate platform to achieve a 'True' match.

6.6 Maximising Data Quality

The following recommendations may be useful to maximise data integrity, in advance of JML Switch-On.

- Data should be compared between ESR and NHSmail before comparing the data between NHSmail and Local AD. This is because ESR is authoritative in the JML process, thus decreasing the likelihood of organisations needing to make further validation of data in the Local AD.
- Since the email address is a necessary anchor value, it is recommended that teams begin the data validation process by examining accounts in ESR and Local AD that do not have NHS.net email addresses.
- NHS.net email addresses populated in ESR and Local AD should be valid, rather than alias email addresses. Alias email addresses are common for people who have name changes.
- During JML Synchronisation, accounts in ESR and Local AD can be matched with deleted or perm_deleted NHSmail accounts. If it is necessary to replace such accounts, teams are advised to do so during the data validation process by including the updated NHSmail email address in ESR and Local AD before JML Switch-On.
- Once JML is switched on, users' personal attributes such as first name, last name, email address and mobile phone number will not be automatically synchronised between ESR and NHSmail. The data validation process is therefore the best opportunity to update these attributes if they are incorrect in NHSmail.

6.7 Data Validation Sign-Off

The data validation process is complete and a JML Synchronisation ESR/NHSmail matching report is signed off. If it is not possible to sign-off the data at this stage, the validation process will begin another iteration until data validation is ready for sign-off. Please repeat steps detailed from Sections 6.1 to Section 6.6.

Once data set is ready for sign-off, please inform the JML Onboarding Team by emailing JML.Support@nhs.net. (Please write "JML Step 6.7 Completed [organisation's name]" as the subject-line of the email.)

6.8 Accessing NHSmail Reports

During the data validation process, anchor values such as NHS.net email address and NHSmail ID should be added to Local AD. All users who have NHSmail should have unique email addresses and an NHS Unique ID.

NHSmail unique email addresses and NHSmail IDs can be accessed on the NHSmail Portal under Reports > Admin Reports > Mailbox Report.

7 ESR

7.1 ESR Best Practices

Organisations will be best placed to benefit from JML Synchronisation if they use ESR in accordance with the ESR Best Practices.

The most recent version of the ESR Best Practices will be available on the Kbase.

For any queries about ESR, please contact the organisation's ESR Lead or submit a Service Request to the ESR Help Desk.

7.2 ESR Performance Optimisation

To minimise issues in the use of ESR, organisations are advised to access guidance on ESR Performance Optimisation, found on the ESR MM-0100 Guidance. This guidance is accessible at the following location:

https://www.electronicstaffrecord.nhs.uk/kbase/welcome-to-esr-knowledgebase-kbase/mm-0100-it-infrastructure-guidance/

Please note that to access this document a Kbase username and login details are required.

7.3 ESR Downtime Notifications

ESR has scheduled weekend downtime periodically throughout the year. During this downtime, JML will not operate so daily extracts will not be received. When the ESR service resumes, any ESR changes made during the downtime period will be received in the extract delivered on the following Monday. Please note that this extract may arrive later in the day than usual.

Notifications of scheduled ESR downtime are issued to a mailing list maintained by the NHS ESR Central Team. It is expected that organisations using ESR will have received these notifications already, and that recipients would have shared updates on ESR downtime with IT colleagues. If unsure, teams are advised to contact their organisation's ESR Lead.

7.4 Receiving ESR Extracts

It is expected that an ESR data extract will be received every day, except during periods of scheduled downtime detailed in Section 7.3. Where there are no ESR changes, a blank file will still be received by the JML Onboarding Team.

8 TANSync 2.0

8.1 TANSync Overview

TANSync solutions are NHSmail Identity Management Solutions that give organisations the ability to synchronise local data with NHSmail using NHSmail Portal APIs. The solutions are based on Microsoft Identity Manager (MIM) 2016.

TANSync 2.0 is the second version of the solution and is a necessary requirement for JML. The difference between versions 1.0 and 2.0 is that TANSync 1.0 designed to create users manually in the Local Active Directory and then synchronise them to NHSmail, whereas TANSync 2.0 can create users in Local Active Directory automatically from updates made on NHSmail when synchronising the information.

TANSync 2.0 solution is available for organisations wishing to synchronise user information with the NHSmail platform. TANSync 2.0 pulls information from the NHSmail Portal into your local Active Directory as well as pushes information from your local Active Directory into the NHSmail Portal which then synchronises the information into the NHSmail Exchange and NHSmail Active Directory infrastructure.

TANSync 2.0 is configured to create new users in your local Active Directory if they are either joined to your organisation or are newly created in the NHSmail Portal.

Organisations that do not have TANSync 1.0 installed on their servers can progress to Section 8.3 of this guide, on the installation of TANSync 2.0.

8.2 Uninstalling TANSync 1.0

To completely remove TANSync 1.0 installation from their servers, organisations will be required to complete the following tasks:

1. Disable any active scheduled sync tasks in Task Scheduler.
2. Close any open sessions of the Synchronisation Manager tool.
3. Disable the 'Forefront Identity Manager Synchronisation Service' in the services tool.
4. Using the Program and Features tool, select Forefront Identity Manager and then click uninstall.
5. Ensure there are no traces of the files left in C:\Program Files\Microsoft Forefront Identity Manager\ and that the directory no longer exists.

The database FIMSynchronisationService must be deleted in order to install TANSync 2.0. Please note that it is possible to create a backup of this database, however this is not required for TANSync 2.0 deployment.

8.3 Installation of TANSync 2.0

The TANSync 2.0 installation download file will be provided once Section 5.3 of this Onboarding Guide has been completed. Extract the TANSync zip file provided by the JML Onboarding Team to the server before proceeding to the Deployment Guide.

The TANSync 2.0 Deployment Guide provides detailed instructions on the installation process. It can be accessed at the following location:

https://s3-eu-west-1.amazonaws.com/comms-mat/Training-Materials/Guidance/NHSmail+JML+TANSync+Deployment+Guide.pdf

Please note that Section 4.2.3 of the TANSync Deployment Guide requires a synchronisation service account to proceed. This account can be requested from NHSmail by raising a ticket to the IT service desk. This request should be assigned to the NHSmail2-SyncService queue.

Within the ticket body, please specify your organisation's ODS code and specify that this request is for a TANSync synchronisation service account. The account with appropriate permissions will be created and the details needed to proceed in the deployment guide will be provided to you once this request has been actioned by the IT service desk.

> **Upon completing Section 5.1 of the TANSync 2.0 Deployment Guide, please return to this JML Onboarding Guide and continue to follow this guide up to Section 9.2.**
>
> **Please do not commence Section 5.2 of the TANSync 2.0 Deployment Guide (TANSync 2.0 First Run) until ESR Automation has been switched on. If completed before, ESR updates will overwrite any data that has already been synchronised.**

8.4 Confirming TANSync 2.0 Configuration

Once the TANSync 2.0 installation is complete up to **Section 5.1** of the Deployment Guide, please send confirmation via email to JML.Support@nhs.net. (Please write "JML Onboarding Step 8.3 Completed [organisation's name]" as the subject-line of the email.)

The JML Onboarding Team will arrange a screensharing call for a configuration review once confirmation has been received that TANSync 2.0 has been installed.

When all activities relating to ESR Integration have been completed, the JML solution can be switched on. Details of this process can be found in Section 9.

8.5 TANSync 2.0 User Guide - IT

If general MIM support is required, please follow these instructions to access the Help section:

1. Open Synchronisation Service Manager

2. Click 'Help'

3. Select 'Contents and Index'

4. Explore the Help section for information on how to use the tool.

8.6 Account Passwords

Passwords for accounts automatically created by JML in NHSmail and Local AD will be randomly generated in accordance with the NHSmail password policies. The passwords for new user accounts can be accessed in the following ways:

1. NHSmail account passwords will be sent to an email address chosen by your organisation during the onboarding process. We recommend a shared mailbox as the destination of these emails.

2. Local AD account passwords are accessed via a text file (in the format .txt) the location and name of this file should be configured during the set-up of TANSync 2.0.

8.7 Recommendations

The following recommendations may be useful in helping to avoid difficulties during the onboarding process.

- Ensure that the service account for TANSync 2.0 has the correct permissions to allow changes on NHSmail. This will reduce the likelihood of a connection error during the synchronisation process.

- It is recommended that sites complete the full import from NHSmail overnight as the process can take several hours.

- When planning onboarding, organisations are advised to complete the initial TANSync 2.0 synchronisation during working hours when an IT team is present to monitor the process.

- After 180 days of inactivity, NHSmail accounts are deleted. If an employee does not require their NHSmail account, it is recommended that the account is disconnected from their Local AD account to prevent the accidental disablement of this following the TANSync 2.0 synchronisation.

  o If the employee does require an account, a new one can be created and connected to their Local AD accounts. The JML solution will then be able to correctly reconcile these accounts. Identifying and descoping accounts that meet these criteria in advance will help to avoid problems arising later in the process.

- Once ESR has been switched on, it is recommended that organisations wait 48 hours before activating TANSync 2.0. This allows time for teams to validate that changes in ESR have been applied in NHSmail correctly. Once the organisation has confirmed that ESR updates are as expected, please continue to Section 9.2 to begin the TANSync v2.0 First Run.

- Once TANSync has been turned on and the synchronisations are running, the organisation may notice that a user object from NHSmail has not been joined to the corresponding user object in Local AD correctly. In this instance, the objects will need to be disassociated. Please follow the instructions in the link below for guidance on how to perform this procedure.

  https://comms-mat.s3-eu-west-1.amazonaws.com/Training-Materials/Guidance/JML/NHSmail_JML_TANSync-CorrectWrongJoins_Guidance_v1.0+20190918.pptx

9   JML Switch-On

9.1   ESR Automation Switch-On

Following the completion of the data validation process, detailed in Section 6 of this guide, the JML Onboarding Team will schedule a date for the ESR Automation Switch-On, avoiding a conflict with any Portal changes or freezes planned locally.

During this time, the JML Onboarding Team requires the organisation to provide an email address to receive information about newly provisioned NHSmail accounts once JML is switched on. It is recommended to provide a shared mailbox for this purpose.

The JML Onboarding Team will also discuss the option to synchronise non-personal data between ESR and NHSmail during the JML Switch-On process.

Once ESR has been switched on, it is recommended that organisations wait 48 hours before activating TANSync 2.0. This allows time for teams to validate that changes in ESR have been applied in NHSmail correctly. Once the organisation has confirmed that ESR updates are as expected, please continue to Section 9.2 to begin the TANSync 2.0 First Run.

9.2   TANSync 2.0 First Run

On completion of Section 9.1, TANSync 2.0 should be run for the first time. The process to complete this can be found in **Section 5.2** of the TANSync 2.0 Deployment Guide.

Organisations schedule a day of their preference for TANSync 2.0 First Run. Organisations should check with the JML Onboarding Team to avoid a conflict with any Portal changes or freezes planned locally. Any disruption to TANSync 2.0 synchronisation will result in failure.

Please refer to the following link for guidance on how to verify changes to Local AD using the export feature of TANSync 2.0. This feature records all changes due to be applied to the Local AD in an 'xml' file which can then be assessed for assurance that the correct changes will be applied to Local AD:

https://comms-mat.s3-eu-west-1.amazonaws.com/Training-Materials/Guidance/JML/NHSmail_JML_TANSync-ExportToFile_Guidance_v1.0+20190918.pptx

Following a successful first run of TANSync 2.0, please follow the remaining steps in the TANSync 2.0 Deployment Guide from **Section 5.3** onwards to enable provisioning and set up a schedule of tasks for automation.

10 Onboarding Support

A dedicated Onboarding Team will be on hand to support organisations throughout their adoption of JML. Organisations can expect to receive support at the following points:

- **Onboarding Webinar:** Periodic webinars will be hosted by the JML Onboarding Team for organisations when they approach their Onboarding start date. These sessions will outline the JML solution and the Onboarding Process and provide an opportunity to ask questions. Organisations will be invited to the webinar closest to their onboarding start date.

- **ESR/NHSmail Data Validation:** The team will provide a datasheet to the organisation containing both matched and unmatched records for analysis and reconciliation.

- **TANSync 2.0 Configuration Review:** Once TANSync 2.0 has been installed, the team will perform a remote configuration check via screenshare before it is switched on.

- **ESR Automation**: The JML Onboarding Team will schedule a date for the ESR Automation Switch-On. Advice on timings and guidance for IT and HR teams will also be provided.

This Onboarding Guide specifies six instances when organisations should email the JML Onboarding Team as part of the Onboarding Process:

Section	When to email?	Subject Line	Link
5.1	When ESR extract has been requested	"JML Step 5.1 Completed [organisation's name]"	JML.Support @nhs.net.
5.2	Upon delivery of ESR extract	"JML Step 5.2 Completed [organisation's name]"	JML.Support @nhs.net.
5.3	When Technical Pre-requisites are completed	"JML Step 5.3 Completed [organisation's name]"	JML.Support @nhs.net.
6.4	When data validation is complete, once data held in ESR, NHSmail and Local AD is accurate. Organisation is ready to receive a matched data set for sign-off	"JML Step 6.4 Completed [organisation's name]"	JML.Support @nhs.net.
6.6	Data validation sign-off	"JML Step 6.6 Completed [organisation's name]"	JML.Support @nhs.net.
8.3	Upon Completion of TANSync 2.0 installation – TANSync's **Deployment Guide, Section 5.1.**	"JML Step 8.3 Completed [organisation's name]"	JML.Support @nhs.net.

For JML queries that cannot be answered in this Onboarding Guide, the JML Onboarding Team can be contacted via email: JML.Support@nhs.net.

ESR Queries: For queries specifically related to ESR itself, teams are advised to contact their organisation's ESR Lead or raise a Service Request through the ESR Help Desk.

11 Frequently Asked Questions (FAQs)

Onboarding	
11.1 **Is my organisation eligible for the JML solution?**	To be eligible for the JML service an organisation must meet the following criteria: • Must be using both ESR and NHSmail to facilitate the TANSync 2.0 synchronisation, an organisation may be required to procure hardware and configure their environment. A detailed explanation of these requirements can be found at the following address: https://comms-mat.s3-eu-west-1.amazonaws.com/Training-Materials/Guidance/NHSmail_VN050_+JML_TechArchSpecificationDocumentation_v1.0.pdf • Be able to commit appropriate resources • Have a valid account for the ESR extract service • Provision a TANSync 2.0 server (further information on technical pre-requisites are detailed in the Onboarding Guide)
11.2 **Where is there more information about JML?**	Organisations can contact the JML Onboarding Team at JML.Support@nhs.net with any queries and to register for a briefing webinar.
11.3 **How can my organisation register for JML?**	Organisations can contact the JML Onboarding Team at JML.Support@nhs.net to register the organisation's interest in the JML solution. You will be invited to join a webinar providing an overview of JML and the information the organisation requires to commence onboarding. The team will then assist the organisation with the onboarding process.
11.4 **Which stakeholders should be involved in the JML onboarding process?**	The JML onboarding process requires a nominated senior stakeholder to ultimately own the organisation's onboarding process; handling any dependencies and escalations and ensuring that governance factors are addressed. To ensure a successful experience, it is crucial that each organisation's onboarding process is sufficiently resourced. Effort is required from both IT and HR administrators, with the IT team configuring TANSync 2.0, and both teams working together to complete data validation activities. It is crucial that these teams are aligned on objectives and collaborate to ensure a successful and timely onboarding experience.

11.5 **How long will it take to have the JML service functioning?**	Organisations should apply due diligence in the adoption of the JML service. The technical and business pre-requisites, as well as set-up and data validation, require effort from both IT and HR teams. Much of this work can be completed in parallel, such as raising the Service Request for the organisation's ESR extract and implementation/configuration of the TANSync 2.0 service. Prior to onboarding, the JML team will complete a consultation to understand the organisation's readiness and prepare a timeline together.
11.6 **Can organisations that do not use ESR still adopt JML?**	The JML service is only available to organisations that subscribe to ESR.
11.7 **Are any technical requirements required to support organisations onboarding to JML? Is any additional equipment or software required?**	To facilitate the TANSync 2.0 synchronisation, an organisation may be required to procure hardware and configure their environment. A detailed explanation of these requirements can be found at the following address: https://comms-mat.s3-eu-west-1.amazonaws.com/Training-Materials/Guidance/NHSmail_VN050_+JML_TechArchSpecificationDocumentation_v1.0.pdf
Information Governance	
11.8 **What are the GDPR obligations?**	A Data Sharing Agreement has been signed between NHSmail and the ESR NHS Central Team, managed by the Business Services Authority (BSA). An organisation should ensure that they comply with any GDPR obligations that apply, as well as any local data protection and security practices.
11.9 **How is data shared between NHSmail, ESR and local organisations and what controls are in place?**	A daily extract file is provided by ESR and the data is processed securely into the NHSmail Portal and subsequently into an organisation's Local AD. Organisations request the ESR extract as part of the onboarding process, accepting any terms and conditions of use. NHSmail has a formal Data Sharing Agreement with the Business Services Authority. This allows the transfer of the NHSmail email address and provides assurance that data sourced from ESR will be maintained in accordance with GDPR regulations. The NHSmail and BSA have undertaken its own GDPR review and updated the NHSmail national Data Protection Impact Assessment (DPIA). Organisations are advised to undertake their own local Information Governance reviews and must comply with GDPR obligations.

ESR	
11.10 **Which data will be synchronised as part of JML?**	The JML service includes three data flows. These are detailed below: **ESR to NHSmail**: The flow of user details for new joiners and leavers, as well as existing NHS employees who are changing personal or occupational information. **NHSmail to ESR**: New and updated NHSmail addresses will be synchronised from the Portal to ESR. **NHSmail to Local AD**: Person attributes from NHSmail will be synchronised to an organisation's Local AD.
11.11 **When will the ESR to NHSmail Portal synchronisation run?**	The daily extract is received from ESR at approximately 6am and is expected to complete by 8am.
11.12 **Do name changes in ESR automatically trigger updates to email addresses in the NHSmail Portal?**	No, the email address does not automatically update as a result of a name change.
11.13 **Are name changes in ESR or NHSmail automatically reflected in updates to login name (samAccountName) in the Local AD?**	With default TANSync 2.0 configuration, changes to a user's first or last name in ESR will not result in an automatic update to the user's Local AD login. However automatic changes are possible through alterations in the configuration of TANSync 2.0. This is detailed in the Deployment Guide (Sections 5.3: Configure Provisioning for JML Synchronisation, 8.2: Advanced Rule Extensions and 8.3: Attribute Flow Precedence Configuration).
11.14 **Can the 'Preferred Name' attribute be used when generating a new NHSmail account?**	Only the First Name and Last Name attributes from ESR are used to autogenerate the display name. However, once the NHSmail account is created, the user is free to change their name in the Portal.

11.15 If a user does not log into their NHSmail account, will the presence of active assignments in ESR keep their NHSmail account active?	NHSmail accounts that have not been accessed will automatically become inactive after 90 days. After a further 90 days, accounts will be deleted. Local Administrators then have 30 days to restore deleted accounts. JML Reporting makes it possible to identify which accounts have different statuses in ESR and NHSmail.
11.16 What is the process for when ESR has scheduled downtime?	ESR has scheduled weekend downtime periodically throughout the year, during which daily extracts will not be received and JML will not operate. When ESR services resume, JML will operate as normal, and any changes made in ESR during this time will appear in an extract on the following Monday. This extract may arrive later in the day than usual.
TANSync 2.0	
11.17 What is TANSync 2.0 and how does it differ from TANSync?	TANSync is an NHSmail Identity Manager Solution which provides organisations with the ability to synchronise local data with the NHSmail API. It also provides the ability to synchronise this data back to their Local AD and is based on Microsoft Identity Manager (MIM) 2016. TANSync 2.0 was developed to create users in the organisation's Local AD with the NHSmail Portal as the authoritative source. TANSync 1.0 works in reverse.
11.18 If an organisation already has an instance of TANSync, can this be used for JML?	The latest version of TANSync 2.0 is required for JML. More information can be found in the Onboarding Guide. The TANSync 2.0 Deployment Guide provides a step-by-step view of the installation process.
11.19 Can TANSync 2.0 be used to synchronise NHSmail with a Local AD?	Yes, this is an existing service with TANSync. TANSync 2.0 is an updated version and can replace any existing TANSync instances.
11.20 For TANSync 2.0 configuration, can there be more than one Active Directory container, and can they be in multiple locations?	More than one Active Directory container is supported if they are within one domain. For more information about TANSync 2.0 configuration please see the TANSync 2.0 Deployment Guide.

11.21 **If an organisation switches to Office 365, will the TANSync 2.0 configuration settings need to be changed?**	No, TANSync 2.0 configuration will not need to be altered if switching to Office 365.
11.22 **Is it possible to reduce the time taken for the full TANSync 2.0 synchronisation?**	Changing the timing of the full TANSync 2.0 synchronisation may reduce the duration. The Onboarding Team recommends running the full synchronisation overnight to achieve the best results. The amount of time the full synchronisation will take depends on the organisation's system. Most updates will be picked up by the delta synchronisation that is run more frequently.
11.23 **If a TANSync 2.0 synchronisation is planned at the same time as a portal update, it will fail. Where can I find more information about Portal updates?**	TANSync 2.0 synchronisation can be affected by Portal updates. The NHSmail Support Site features information about scheduled Portal updates and releases: https://support.nhs.net. The JML Onboarding Team will also work with the organisation to agree a date for JML Switch-On.
11.24 **If a user changes their password during a full TANSync 2.0 synchronisation, will the changes be applied?**	Yes, password changes are not impacted.
11.25 **Is it possible to check the user record changes due to be implemented by TANSync 2.0 before they are applied?**	Yes, it is possible to view the synchronisation in read-only mode by exporting to .xml format. For detailed steps please refer to the following link: https://comms-mat.s3-eu-west-1.amazonaws.com/Training-Materials/Guidance/JML/NHSmail_JML_TANSync-ExportToFile_Guidance_v1.0+20190918.pptx

General	
11.26 **If the JML service is no longer required, how can the synchronisation be switched off?**	If the JML service is no longer required, both the ESR interface and TANSync 2.0 must be switched off. To stop receiving the daily extract from ESR, please follow these steps: Raising a Service Request (SR) with the ESR Service Desk under the offering: *Request a Service – Amend Settings on Existing Interface* (**Route**: *Request a new Service » AC » ESR Interfaces » A-F » Amend Settings on Existing Interface, or perform a search on "amend" in the top search bar*) *SR mandatory questions:* • **Name of the Interface you want to change**: *NHSmail bi-directional Interface* • **Changes you require**: *Switch off Interface* • **Requested date for Change**: *Date you would like to request interface is switched off.* *The SLA for Service Requests is 18 weeks.* To switch off TANSync 2.0, Local Administrators should stop the scheduled task that initiates the synchronisation and stop the Forefront Identity Manager synchronisation service.
11.27 **How does JML manage the merger of organisations?**	NHSmail organisation data is synchronised from ODS. One organisation will remain open with the same ODS code (though possibly change name); the other organisation will move to a "closed" status in ODS. In NHSmail the open organisation will continue as normal but have the name updated (if it has been updated in ODS); the closed organisation can still be used but new accounts cannot be created. There is functionality to transfer users, shared mailboxes and distribution lists between organisations; this is normally used to move any accounts that need to be kept from the closed organisation to the open one.
11.28 **Will JML impact HR and IT processes?**	JML will automate back-end processes, preventing manual user detail updates across the three services. JML will be most successful when ESR is used in accordance with ESR Best Practices.

11.29
 	
Can all employees be managed by JML? What are the exceptions?
	All users except the following can be managed by JML:
	
	1. Users who **do not use nhs.net**
	
	    • Those who have, but do not use their NHSmail accounts
	
	    • Those who do not need an NHSmail account (e.g. contractors)
	
	    • Those in an organisation that do not use NHSmail
	
	2. Users who **work across two organisations**. In this instance, only one organisation can manage the user using JML, so the primary organisation must be identified. This is most challenging when both organisations use the JML service, so it is important to identify users who fall into this bracket.

11.30 **Are there any costs associated with JML?**	The JML solution is funded by NHS Digital. The only costs for an organisation to cover are those incurred when fulfilling any technical pre-requisites outlined in Section 5.3.
Support	
11.31 **What support is available and how can problems with the implementation be reported?**	During the onboarding process, a dedicated JML Onboarding Team will provide support alongside the Onboarding Guide which includes step-by-step instructions. For any additional queries, please contact the team at email JML.Support@nhs.net.

12 Glossary

Term	Description
AD	Active Directory
ESR	Electronic Staff Record
FIM	Forefront Identity Manager
HR	Human Resources
ILM	Identity Lifecycle Manager
IT	Information Technology
JML	A service available for organisations using NHSmail and ESR to provide the capability to automate the synchronisation of data relating to **Joiners, Movers, Leavers** across ESR, NHSmail and local Active Directories
MIM	Microsoft Identity Manager
NHS	National Health Service
TANSync 2.0	A bi-directional interface that synchronises data between NHSmail and local Active Directories