 

**SESP and DISA Interoperability**

**Report Requirements**

**and Specification Document**

**Lab Results Synchronization Report**

**Version 1.9**

 

# Version History

| **Data** | **Versão** | **Descrição** | **Autor** |
| --- | --- | --- | --- |
| 22 Feb 2022 | 0.1 | Document creation | FGH Team |
| 30 Mar 2022 | 1.0 | Internal review | FGH Team |
| 03 Jun 2022 | 1.1 | -Replace EPTS and OpenMRS with SESP  -Replace staging server with integration server  -Include the district summary tab (CV Recebidas por Distrito)  -Include data dictionary tab (Dicionario)  -Include observations column on tab: CV Recebidas por NID | FGH Team |
| 02 Sep 2022 | 1.2 | -Include DISA-SESP Interoperability diagram (per CDC review) | FGH Team |
| 08 Sep 2022 | 1.3 | -Include Duplicate NID as a reason for not processing a VL result on the integration server. | FGH Team |
| 06 Dec 2022 | 1.4 | -Included Flagged for review and Duplicate Request ID as Not Processing Causes for a VL result. | FGH Team |
| 13 Mar 2023 | 1.5 | -Updated interoperability diagram, Scope, report properties  -Specified the exact information that Synchronization Date brings  -Removed 48 hours limitation from VL Results Received by NID  -Updated parameters and report output | FGH Team |
| 21 Abr 2023 | 1.6 | -Merged status “Flagged for review” and “No result” into “Invalid result”.  -CD4 results inclusion.  -Added “Type of result” column.  - Changed all VL result specification on labels and sheet names to Lab result.  -Dictionary updated. | CSaude Team |
| 25 Oct 2023 | 1.7 | -General revision of the document | CSaude Team |
| 02 Nov 2023 | 1.8 | -CDC revision comments incorporated  -Exchanged sheets 5 and 6 | Csaude Team |
| 09 Apr 2024 | 1.9 | -Added province columns in worksheets 2, 3, 4, 5, 6.  -Updated DISA\_SR\_FR1 to include email content, and refer to files uploading platform | Csaude Team |

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# Introduction

## Purpose

The Lab Results Synchronization Report is an important tool for monitoring interoperability between DISA and SESP, specifically as it pertains to the transmission of results from the integration server to SESP. The report provides information on the synchronization status of lab results from the integration server to SESP, namely whether they have been processed, not processed or are pending. The report provides data at both the Health Facility (HF) and patient levels. As a result, it can be used to identify HF with synchronization issues, as well as being used to monitor the synchronization status of individual patients.

## Scope

This document defines the functional requirements for generating the “Lab Results Synchronization Report” from the integration server to SESP, for the previous week.

## References

Meeting notes from the internal (FGH team) requirements gathering session held on February 18th, 2022.

# Requirements Definition

## Key Assumptions

The key assumptions for “Lab Results Synchronization Report” related to DISA and SESP are the following:

* HF is implementing DISA-SESP Interoperability
* Recipient’s email addresses are configured in integration server by CSaude

## Report Properties

| **Property** | **Description** |
| --- | --- |
| **Name** | Lab Results Synchronization Report |
| **Description** | This report generates the number of lab results with their synchronization status from the integration server to local (HF) SESP during the reporting period at both the aggregate (HF) and individual level. |
| **Report Output** | Lab Results Synchronization Report Output (Separate document attached) |

## List of Functional Requirements

| **Requirement #** | **Category/**  **Functional Area** | **Requirement** |
| --- | --- | --- |
| **DISA\_SR\_FR1** | Report | The system will automatically:   * Generate the ``Lab Results Synchronization Report`` per partner (**DISA\_SR\_FR3**). * Upload the files in a secure platform (according to CDC security guidelines). * Send the link of the folder (identified by implementing partner’s name) via email per partner (to a predefined list of email addresses configured in the integration server), everytime a report file is uploaded in the folder.   The report contains a list of all Lab Results that were synchronized from the integration server to SESP between the reporting period with details of the synchronization status, with mail subject: “Relatório de Sincronização de resultados lab de dd-mm-yyyy a dd-mm-yyyy”,  and following content:  “  Caro,  Encontre aqui o relatório de sincronização, entre o servidor de integração e o SESP, de resultados laboratoriais de **dd-mm-yyyy** a **dd-mm-yyyy**.  Para qualquer questão/dúvida por favor contacte ao [Helpdesk](https://helpdeskmoz.sis.org.mz/portal/pt/signin) (Tel 82/86/84 - 8604886).  PS: Esta é uma notificação automática e NÃO deve responder a este email.  ”  Note: implementing partners will inform CSaude in order to keep recipients' email list updated to receive the reports link. |
| **DISA\_SR\_FR2** | Reporting period | The system will generate this report automatically on a weekly basis based on a scheduler, considering the following reporting period:   * Start date= Current date - 8 days * End Date = Current date-2 * Current date will be configured on the scheduler. |
| **DISA\_SR\_FR3** | Report per partner | The information that identifies partners are grouped by partners name > province name > district > facility name and code, and is updated manually in the integration server by CSaude.  Note: implementing partners will inform CSaude in order to update any information related to their HF, to add/remove/change. |
| **DISA\_SR\_FR4** | Report:  Data Dictionary/ *Dicionário*  **(Worksheet 1)** | The system will display a list of variables included in the report, with the corresponding definition for each variables, as displayed below:   * **Total Recebidos:** Número total de resultados laboratoriais criados no integration server-- **Sheet 1: Line 3** * **No. Processados:** Número de resultados laboratoriais criados no servidor de integração que foram processados (NID identificado e e-Lab criado no SESP) -- **Sheet 1: Line 4** * **Não Processados: No. Resultado inválido:** Número de resultados laboratoriais criados no servidor de integração que não foram processados (não tem e-Lab criado no SESP) porque o resultado não tem um valor válido. -- **Sheet 1: Line 5** * **Não Processados: No. NID não encontrado**: Número de resultados criados no servidor de integração que não foram processados (não tem e-Lab criado no SESP) porque o NID do paciente não foi encontrado no SESP. -- **Sheet 1: Line 6** * **Não Processados: No. NID duplicado**: Número de resultados criados no servidor de integração que não foram processados (não tem e-Lab criado no SESP) porque o NID do paciente não foi encontrado no SESP. -- **Sheet 1: Line 7** * **Não Processados: No. ID da requisição duplicado**: Número de resultados criados no servidor de integração que não foram processados (não tem e-Lab criado no SESP) porque outro resultado com o mesmo ID da requisição já foi processado (e-Lab criado). -- **Sheet 1: Line 8** * **No. Pendentes:** Número de resultados laboratoriais criados no servidor de integração que ainda não foram sincronizados com SESP. -- **Sheet 1: Line 9** * **Data de Entrada**: Data em que o resultado laboratorial foi criado no servidor de integração. -- **Sheet 1: Line 10** * **Data de Sincronização:** Data em que o servidor de integração sincronizou os resultados laboratoriais com SESP. -- **Sheet 1: Line 11** * **Estado**: O estado actual do resultado laboratorial no servidor de integração, incluindo: Processado (e-Lab criado em SESP); Não Processado (sem e-Lab criado no SESP) ou Pendentes (ainda não foi sincronizado com SESP). -- **Sheet 1: Line 12** * **Motivo não envio:** Se estado for Não Processado, o motivo pode ser NID não encontrado, NID duplicado, ID de requisição duplicado, Sinalizado para revisão, Sem Resultados. -- **Sheet 1: Line 13** * **Data da última sincronização:** Data da última tentativa de sincronização entre o servidor de integração e SESP na US. -- **Sheet 1: Line 14** |
| **DISA\_SR\_FR5** | Report:  Lab Results Received by district/ resultados *Recebidos por distrito*  **(Worksheet 2)** | The system will identify all of the lab results records created on the integration server during the reporting period (Record Creation Date>= Start Date and Record Creation Date <= End Date) **(DISA\_SR\_FR2)** and show the information as follows:   * **Province/Província -**  **Sheet 2: Column A**   Name of Province   * **District/Distrito** – **Sheet 2: Column B**   Name of District   * **Type of Result/Tipo de Resultado** – **Sheet 2: Column C**   List of type of lab results per district   * **# Processed/No. Processados** – **Sheet 2: ColumnD**   Number of lab results created on the integration server that have been processed (NID identified and e-Lab created in SESP)   * **% Processed/% Processados** – **Sheet 2: ColumnE**   Percentage of lab results created on the integration server that have been processed (NID identified and e-Lab created in SESP)   * **# Pending/No. Pendentes** – **Sheet 2: ColumnF**   Number of lab results created on the integration server that have yet to be synchronized with SESP   * **% Pending/% Pendentes** – **Sheet 2: ColumnG**   Percentage of lab results created on the integration server that have yet to be synchronized with SESP   * **# Without Results/No. Sem Resultados** – **Sheet 2 Column H**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because they do not contain a result value   * **% Without Results/ % Sem Resultados** – **Sheet 2 Column I**   Percentage of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because they do not contain a result value   * **# NID not found/ No. NID não encontrado** – **Sheet 2: Column J**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because the patient NID was not identified in SESP.   * **% NID not found/ % NID não encontrado** – **Sheet 2: Column K**   Percentage of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because the patient NID was not identified in SESP.   * **# Duplicate NID/ No. NID duplicado**– **Sheet 2: Column L**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because the patient NID was duplicated in SESP.   * **% Duplicate NID/ % NID duplicado**– **Sheet 2: Column M**   Percentage of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because the patient NID was duplicated in SESP.   * **# Duplicate Request ID/ No. ID da requisicao duplicado**– **Sheet 2: Column N**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because a result with this the request ID was already processed in SESP.   * **% Duplicate Request ID/ % ID da requisição duplicado**– **Sheet 2: Column O**   Percentage of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because a result with this request ID was already processed in SESP.   * **# Total Received/ No. Total Received**– **Sheet 2: Column P**   Number of lab results received on the integration server. |
| **DISA\_SR\_FR6** | Report:  Lab Results Received by HF/ Resultados *Recebidos por US*  **(Worksheet 3)** | The system will identify all of the lab results records created on the integration server during the reporting period (Record Creation Date>= Start Date and Record Creation Date <= End Date) **(DISA\_SR\_FR2)** and show the information as follows:   * **Province/Província** – **Sheet 3: Column A**   Name of Province   * **District/Distrito** – **Sheet 3: Column B**   Name of District   * **HF code/ Código da US** – **Sheet 3: Column C**   MISAU Health Facility code (7-8 digits)   * **HF name/ Nome da US** – **Sheet 3: Column D**   Name of Health Facility   * Type of Result/Tipo de Resultado – **Sheet 3: Column E**   List of type of lab results per HF   * **Total Received/ Total Recebidos** – **Sheet 3: Column F**   Sum of all lab results created on the integration server   * **# Processed/No. Processados** – **Sheet 3: Column G**   Number of lab results created on the integration server that have been processed (NID identified and e-Lab created in SESP)   * **# Pending/No. Pendentes** – **Sheet 3: Column H**   Number of lab results created on the integration server that have yet to be synchronized with SESP   * **Not Processed: # No Results/ Não Processados: No. Resultado inválido** – **Sheet 3 Column I**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because they do not contain a valid result value   * **Not Processed: # NID not found/ Não Processados: No. NID não encontrado** – **Sheet 3: Column J**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because the patient NID was not identified in SESP   * **Not Processed: # Duplicate NID/ Não Processados: No. NID duplicado** – **Sheet 3: Column K**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because the patient NID is duplicated in SESP   * **Not Processed: # Duplicate Request ID/ Não Processados**: **No. ID da requisição duplicado** – **Sheet 3: Column L**   Number of lab results created on the integration server that have NOT been processed (no e-Lab created in SESP) because another result with the same Request ID has already been processed (e-Lab created) in SESP. |
| **DISA\_SR\_FR7** | Report:  Lab Results Received by NID/ Resultados *Recebidos por NID*  **(Worksheet 4)** | The system will include all of the lab results records created on the integration server during the reporting period **(DISA\_SR\_FR2)**  (Record Creation Date>= Start Date and Record Creation Date <= End Date) and show the information of each record as follows:   * **Request\_ID** – **Sheet 4: Column A**   Unique ID assigned to each sample in DISA   * **Type of Result/Tipo de Resultado** – **Sheet 4: Column B**   Type of lab result associated to the RequestID   * **NID** – **Sheet 4: Column C**   Unique ID assigned to each patient in SESP, associated to the RequestID + Type of Result   * **Province/Província** – **Sheet 3: Column D**   Name of Province   * **District/Distrito** – **Sheet 4: Column E**   Name of district   * **HF code/Código da US** – **Sheet 4: Column F**   MISAU Health Facility code (7-8 digits)   * **HF Name/Nome da US** – **Sheet 4: Column G**   Name of Health Facility   * **Entry date/Data de Entrada** – **Sheet 4: Column H**   Date the lab result was created on the integration server   * **Synchronization Date/Data de Sincronização** – **Sheet 4: Column I**   Date of last synchronization attempt between integration server and SESP at the HF   * **Status/Estado** – **Sheet 4: Column J**   The current status of the lab result on the integration server, the values can be: Processed (e-Lab created in SESP); Not Processed (no e-Lab created in SESP) or Pending (not yet synched with SESP)   * **Reason not sent/Motivo não envio** – **Sheet 4: Column K**   If the Status/Estado is Not Processed, then the motive can be NID not found, Invalid Result, Duplicate NID, Duplicate Request ID.   * **Observations/Obervações** – **Sheet 4: Column L**   If the Status/Estado is Processed and the Reason not sent/Motivo não enviado appears as NID not found, this column will specify if it is because the mapping tool was used and will display: “Reprocessado após a correção do NID.” |
| **DISA\_SR\_FR8** | Report:  lab Results Pending by HF/ Resultados *Pendentes por US*  **(Worksheet 5)** | The system will identify all of the lab result records created on the integration server **(DISA\_SR\_FR2)** and are currently in pending status to SESP for more than 48 hours (Current Date - Record Creation Date> 48 hours) and show the information as follows:   * **Province/Província** – **Sheet 3: Column A**   Name of Province   * **District/Distrito** – **Sheet 5: Column B**   Name of district   * **HF code/Código da US** – **Sheet 5: Column C**   MISAU Health Facility code (7-8 digits)   * **HF name/Nome da US** – **Sheet 5: Column D**   Name of Health Facility   * **# Pending results/No. Resultados Pendentes** – **Sheet 5: Column E**   Sum of all Pending lab results that have not been synchronized for more than 48 hours (lab Results Status = Pending)   * **Last synchronization date/Data última sincronização** – **Sheet 5: Column F**   Date of last synchronization attempt between integration server and SESP at the HF |
| **DISA\_SR\_FR9** | Report:  lab Results Pending by NID/ Resultados *Pendentes por NID*  **(Worksheet 6)** | The system will include all of the lab result records created on the integration server **(DISA\_SR\_FR2)** and are currently in pending status to SESP for more than 48 hours (Current Date - Record Creation Date> 48 hours) and show the information of each record as follows:   * **Request\_ID** – **Sheet 6: Column A**   Unique ID assigned to each sample in DISA   * **NID** – **Sheet 6: Column B**   Unique ID assigned to each patient in SESP   * **Province/Província** – **Sheet 3: Column C**   Name of Province   * **District/Distrito** – **Sheet 6: Column D**   Name of district   * **HF Code/Código da US** – **Sheet 6: Column E**   MISAU Health Facility code (7-8 digits)   * **HF Name/Nome da US** – **Sheet 6: Column F**   Name of Health Facility   * **Entry date/Data de Entrada** – **Sheet 6: Column G**   Date the lab result was created on the integration server   * **Status/Estado** – **Sheet 6: Column H**   Status of lab results not synchronized |