



PEPFAR

U.S. President's Emergency Plan for AIDS Relief

Data for Accountability Transparency and Impact (DATIM)

SIMS 2.0 Data Import Reference Guide (Version 6)

U.S. Department of State – Office of U.S. Global AIDS Coordinator and Health Diplomacy (S/GAC)



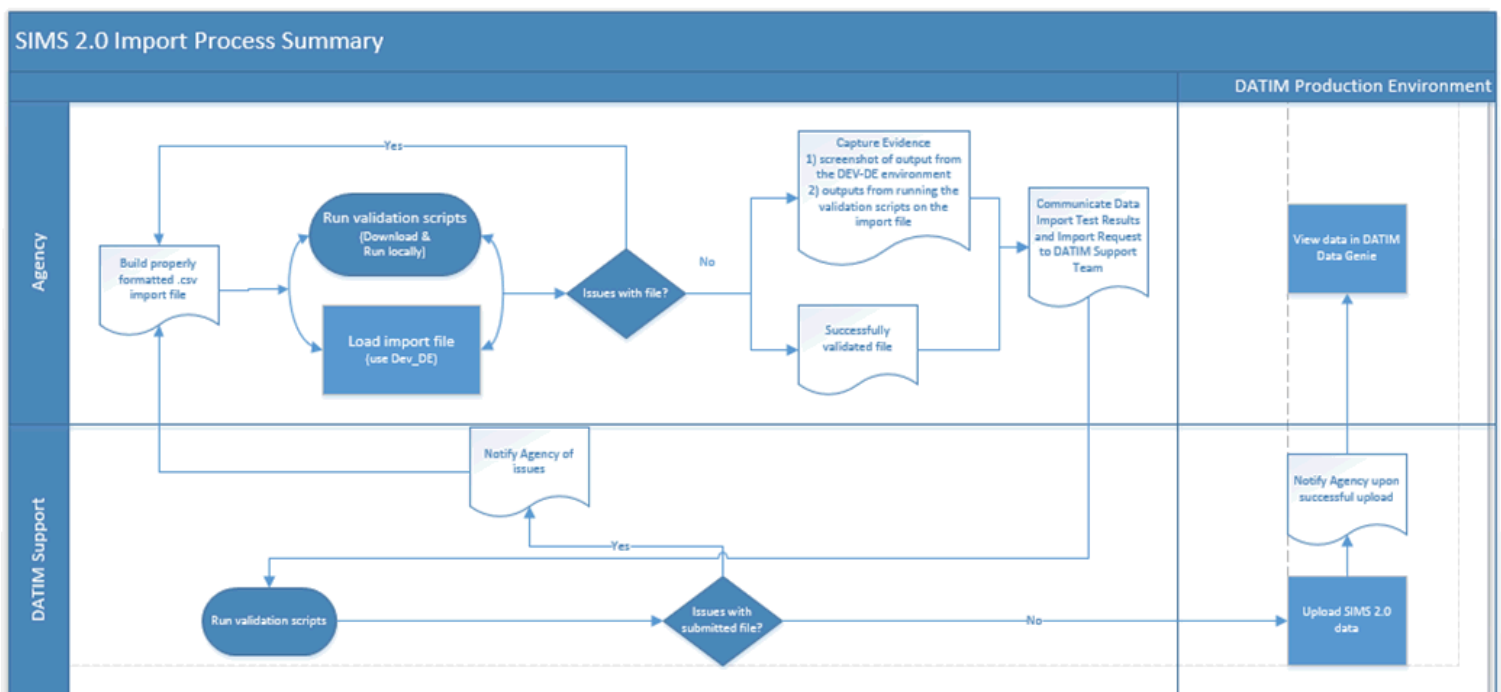
Data Import Reference Guide

1 DOCUMENT SCOPE

This DATIM Data Import reference guide serves as a resource outlining the steps involved with importing SIMS 2.0 data into DATIM. Data intended for import into DATIM must satisfy strict requirements with respect to the format of the data as well the relationship of the data to the current metadata of the system. Data must be valid with respect to the destination sites, data elements, and mechanisms.

2 APPROACH

Agencies do not have the ability to directly import their data into DATIM. Instead, a process will be utilized whereby technical representatives from each agency will be able to test their SIMS 2.0 import files in a DATIM lower region ("Dev-DE.datim.org") to ensure that their files are compliant with DATIM import requirements and specifications (as explained in this document). Once evidence of a successful import in Dev-DE can be provided by the agency representative, the DATIM Support team will proceed with reviewing and importing the agency's SIMS 2.0 file into the production DATIM environment. A summary of this process is outlined in the below illustration. Additional details corresponding with each of these process steps are described in this document.



If any questions should arise during this process, please contact the DATIM Support Team. Data should be imported in accordance with the timeline specified in the [PEPFAR Data Calendar](#).

3 CHARACTERISTICS OF DATIM DATA

Data values in DATIM are always associated with four dimensions, which describe different aspects of the data (reference *Figure 1*).

- **Where** – The Organization Unit: This dimension describes the location of the data.
- **What** – Data element: This dimension describes the phenomena which the data value is attached to.
- **When** – Reporting Period: This dimension describes the time period of the data being reported.
- **Who** – Funding mechanism: Also known as the "attribute option combination", this is an extra custom dimension in DATIM that describes which implementing mechanism the data is being reported for.



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All data in DATIM contain those four dimensions, also known as metadata.

4 ROLES & RESPONSIBILITIES

Stakeholder(s)	Roles & Responsibilities																														
DATIM Support Team	<p>The DATIM team has developed a validation script to perform system validation on SIMS 2.0 data. On receiving a file for import, the DATIM Support Team will run the validation scripts on the import files prior to attempting any import. If any issues are detected, the file will not be imported and the participating agency will be notified of validation findings for the purpose of correction, re-validation, re-testing and re-submission of an updated file before submitting again to the DATIM support team.</p> <p>The DATIM support team is responsible for providing instructions on how to access and execute the validation scripts.</p> <p>The DATIM support team is available to provide assistance throughout this process. Stakeholders may contact the DATIM Support Team via the DATIM Support app in DATIM.</p>																														
Implementing Agency Technical Representatives	<p>Designated representatives from each agency are responsible for submitting the request – accompanied by evidence of successful SIMS 2.0 data import in Dev-DE - to the DATIM Support Team for SIMS 2.0 file import into DATIM.</p> <p>Prior to that submission, these representatives are responsible for coordinating and managing their teams through the process of creating a properly formatted csv import file, running the import file through the validation script, testing the import using Dev-DE.datim.org and capturing results of the validation and test import</p> <p>Implementing Agency Technical Representatives may engage other agency personnel in support of this import testing process, but import requests will only be accepted by the DATIM Support team if it comes from a designated Implementing Agency Technical Representative. A listing of these representatives is provided, below. Requests for access to the Dev-DE.datim.org site should be delivered to the DATIM Support Team.</p> <table border="1" data-bbox="397 1323 1497 1936"> <thead> <tr> <th data-bbox="397 1323 771 1379">Agency</th> <th data-bbox="771 1323 1128 1379">First, Last Name</th> <th data-bbox="1128 1323 1497 1379">Email Address</th> </tr> </thead> <tbody> <tr> <td data-bbox="397 1379 771 1436">CDC</td> <td data-bbox="771 1379 1128 1436">Linda Mattocks</td> <td data-bbox="1128 1379 1497 1436">LMattocks@cdc.gov</td> </tr> <tr> <td data-bbox="397 1436 771 1493">CDC</td> <td data-bbox="771 1436 1128 1493">Mark Wilson</td> <td data-bbox="1128 1436 1497 1493">MWilson6@cdc.gov</td> </tr> <tr> <td data-bbox="397 1493 771 1549">CDC</td> <td data-bbox="771 1493 1128 1549">Vilma Thomas</td> <td data-bbox="1128 1493 1497 1549">VThomas3@cdc.gov</td> </tr> <tr> <td data-bbox="397 1549 771 1606">PC</td> <td data-bbox="771 1549 1128 1606">Audrey Knutson</td> <td data-bbox="1128 1549 1497 1606">AKnutson@peacecorps.gov</td> </tr> <tr> <td data-bbox="397 1606 771 1663">PC</td> <td data-bbox="771 1606 1128 1663">Jasmine Buttolph</td> <td data-bbox="1128 1606 1497 1663">JButtolph@peacecorps.gov</td> </tr> <tr> <td data-bbox="397 1663 771 1719">DOD</td> <td data-bbox="771 1663 1128 1719">Stephanie Hess</td> <td data-bbox="1128 1663 1497 1719">stephanie.a.hess3.ctr@mail.mil</td> </tr> <tr> <td data-bbox="397 1719 771 1776">DOD</td> <td data-bbox="771 1719 1128 1776">Bersabeh Medmim</td> <td data-bbox="1128 1719 1497 1776">bmedmim@hivresearch.org</td> </tr> <tr> <td data-bbox="397 1776 771 1883">HRSA</td> <td data-bbox="771 1776 1128 1883">Diana Palow</td> <td data-bbox="1128 1776 1497 1883">DPalow@hrsa.gov</td> </tr> <tr> <td data-bbox="397 1883 771 1936">HRSA</td> <td data-bbox="771 1883 1128 1936">Surendranadh Yedluri</td> <td data-bbox="1128 1883 1497 1936">SYedluri@hrsa.gov</td> </tr> </tbody> </table>	Agency	First, Last Name	Email Address	CDC	Linda Mattocks	LMattocks@cdc.gov	CDC	Mark Wilson	MWilson6@cdc.gov	CDC	Vilma Thomas	VThomas3@cdc.gov	PC	Audrey Knutson	AKnutson@peacecorps.gov	PC	Jasmine Buttolph	JButtolph@peacecorps.gov	DOD	Stephanie Hess	stephanie.a.hess3.ctr@mail.mil	DOD	Bersabeh Medmim	bmedmim@hivresearch.org	HRSA	Diana Palow	DPalow@hrsa.gov	HRSA	Surendranadh Yedluri	SYedluri@hrsa.gov
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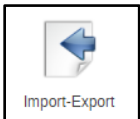
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	HRSA	Asher Weinberg	AWeinberg@hrsa.gov
	USAID	Jacob H. Buehler	jbuehler@usaid.gov
	USAID	Matt Sattah	msattah@usaid.gov

The following accounts have been enabled in the DEV-DE environment. Each participating agency has received the account credentials.

Participating Agency	Username	Account Custodian – SIMS System Lead
CDC	system_cdc_sims	Briana Lozano
USAID	system_usaid_sims	Mathew Sattah
DOD	system_dod_sims	Mary Kratz
PC	system_peacecorps_sims	Michael Melchior
HRSA	system_hrsa_sims	Surendranadh Yedluri

5 PREPARING YOUR AGENCY'S SIMS 2.0 IMPORT



Data import is the process of importing appropriately formatted files into DATIM (dev-de environment) using the **Import-Export** application, which will allow agency HQ users to import their agency's SIMS 2.0 data. Once an agency has demonstrated the successful import of their SIMS 2.0 data into Dev-DE, they may then pass their import file and evidence of successful import to the DATIM support for their import into the DATIM production environment.

5.1.1 Construct Appropriately Formatted Files for Import

Only the following columns are required in the csv file (order is important):

Dataelement	period	orgunit	Categoryoptioncombo	AttributeOptionCombo	Value	Comment	Storedby*	Timestamp*
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- The **Comment** field is also required and will be used to provide information (such as the *Assessment ID*) to identify and differentiate the visits (i.e. to determine which group of data elements belong with which visit). It is fundamental that each "visit" is clearly grouped with a comment.
 - Please note, if there are any double quotes within the comment field, these double quotes must be escaped to avoid issues with the CSV file format. The entire comment should be enclosed in double quotes, and there should be a double quote added to escape the double quote in the comment. For example:
 - **If your comment reads:** This is a "comment" with a double quote.
 - **The double quotes must be escaped using the following method:** "This is a ""comment"" with a double quote."



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- Additional guidance around double quotes in CSV files can be found here: [CSV Memo](#)
- *Optional columns that follow are: **Storedby** and **Timestamp**.
- CSV file may or may not include the header (i.e. it is optional). As DATIM does not make assumption that there is a header, it verifies the first line of the document. If it the first line is a header, an error will be included saying that “dataelement” (name of the first column header) is not a valid data element, and can be ignored. Alternatively, header line can be omitted from the CSV file.
- Orgunit values should be reported as UIDs (see below). Data element and funding mechanism can be reported as either code or UID.
- **Data element** can be reported as either code or UID (refer to code lists for details found at <https://datim.zendesk.com/hc/en-us/articles/201767379-DATIM-Data-Exchange-Guide>. **NOTE:** users must be logged into DATIM Support in order to access this password-protected resource);
- **Period** should be reported using yyyyMMdd format using calendar year: e.g. 20160101 for January 01, 2016, 20160102 for January 02, 2016, etc.
- **Org unit** should be reported using UID (refer to code lists for details).
- **Category option combo** should include default to "HllvX50cXC0".
- **Attribute option combo** – funding mechanism code or UID should be reported (refer to code lists for details). If codes are used for funding mechanism, in the more options section of the data import interface, select “Code” for “ID scheme (all objects)” and “UID” for “Org unit ID scheme”.
- **Value:** type of the value is determined by the data element; use the naming convention outlined below for determining types of data that are accepted.

5.1.1.1 Data Element Naming Convention and Data Types

Field Name	Data Type	Length	Valid Values/Format
*_COMM	string, long text	50k characters	
*_SCORE	integer	zeroPositiveInt	
*_RESP	bool		true / false (all lower case)
_CB	bool		true / false (all lower case)
*_PERC	integer	zeroPositiveInt	
*_NA	bool		true/False
*_Date	date		YYYY-MM-DD (2016-01-01 for January 01, 2016). Note, this is different from the period date format!
*_Agency	string, long text	50k characters	
*NUM	integer	zeroPositiveInt	
_DEN	integer	integer, zeroPositiveInt	
*_TXT	string, long text	50k characters	



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*_TIME	string, long text	50k characters	
_KP	bool		
_TYPE	integer	zeroPositiveInt	

Note: Additional guidance is being developed for the Time data elements.



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5.1.1.2 Example CSV files

1) Using codes for data element and funding mechanism:

Dataelement	period	orgunit	categoryoptioncombo	attributeOptionCombo	value	Comment	Storedby*	Timestamp*
SIMS.F_01_01_HIVQMQL_COMM	20160101	IHuZkWbFwNK	HllvX50cXCO	13559	This is a sample data value	AssessmentXYZ		
SIMS.F_01_01_HIVQMQL_Q1_RESP	20160101	IHuZkWbFwNK	HllvX50cXCO	13559	4	AssessmentXYZ		

2) Same file using UIDs for both data element and funding mechanisms:

dataelement	period	orgunit	categoryoptioncombo	attributeOptionCombo	Value	Comment	Storedby*	Timestamp*
kYY5KyDceYx	20160101	IHuZkWbFwNK	HllvX50cXCO	nYb1tJnit15	This is a sample data value	AssessmentXYZ		
lppMVnAcWF9	20160101	IHuZkWbFwNK	HllvX50cXCO	nYb1tJnit15	4	AssessmentXYZ		

*Optional Fields



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CSV Naming Convention

This section provides guidelines on the naming convention for the files being submitted for import.

Naming Convention: `agency_module_reportingperiod_versionnumber.csv`

agency	Abbreviation for participating agencies: hrsa, dod, usaid, cdc, pc, and cdc
module	SIMS modules include: facility, community, and above site
reporting period	As stated above, the files being uploaded on May 13, 2016 is for the following reporting period: fy16 q2 (all letters should be lower case)
version number	The purpose of having a version number will help us identify if files are replaced during the data cleaning period. The files being uploaded on May 13, 2016 should all be labeled as v1. Note: Guidance on the SIMS data cleaning process and period is forthcoming.

Example: A user is uploading a file that contains the data for HRSA's (agency) above site visits (module) for FY16 Q2 (reporting period).

The naming convention will be as follows: `hrsa_abovesite_fy16q2_v1.csv`

Additional Notes:

- Use the 3 character file extension: .csv
- Do not use special characters, such as, . \ / : * ? " < > |, except for underscores
- Do not use spaces in the file name
- All letters should be lower case

Number of Files per Agency

Each agency should upload 1 file for each data set i.e. 1 for facility, 1 for community, and 1 for above site.

Example: following the example above for HRSA there should be 3 files in total i.e.

- (1) `hrsa_facility_fy16q2_v1.csv`
- (2) `hrsa_community_fy16q2_v1.csv`
- (3) `hrsa_above site_fy16q2_v1.csv`

5.1.2 Validation Scripts

The implementing Agency's development team should perform validations testing using the validation scripts provided by the DATIM.

The validation scripts, instructions of how to setup and use them are at: <https://github.com/jason-p-pickering/datim-validation>

Below is an example of the validation error output from the running this script on a MER file; the validation script user would need to add code e.g. `write.csv(vr_violations,file="my_violations.csv")` to the end of the script to save the output to a .csv file.

```

my_violations - Notepad
File Edit Format View Help
period attributeOptionCombo orgUnit name ls op rs ls.strategy rs.strategy periodType rs.ops ls.ops ls.count rs.count formula result
2016q2 AAAA ZZ.XXX "TB_STAT (N, DSD, Result)" 5 >= 6 NEVER_SKIP NEVER_SKIP Quarterly 1 1 0 0 5 >= 6 FALSE
2016q2 AAAA ZZ.XXX "TB_STAT (N, DSD, Result)" 0 >= 1 NEVER_SKIP NEVER_SKIP Quarterly 1 1 1 0 0 >= 1 FALSE
2016q2 BBBB ZZ.XXX PMTCT_STAT TA Num vs Denom 102 >= 107 NEVER_SKIP NEVER_SKIP Quarterly 1 1 0 0 102 >= 107 FALSE
Example of validation error outputs stored in a my_violations.csv file

```




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5.1.3 Data Import Testing

The implementing Agency's development team should thoroughly test the data import through DATIM's data exchange testing (DEV-DE) environment. This is a dedicated server which is a copy of the actual DATIM production system which can be used for testing purposes. It is simply a testing environment which can be used to validate data prior to import into the actual production system, without actually affecting the data stored in production.

Please note the following while testing in the DEV-DE environment:

- DO NOT conduct any testing in DATIM PROD
- User credentials will be the same in DEV-DE as they are in DATIM.
- Data should only be submitted to the DATIM Support Team **after** you have successfully imported SIMS data into DEV-DE.
- Submitting data which has not been able to be imported into DEV-DE will lead to delays of your import.
- Although the exact number of values will vary based on the actual import, when importing data with the Import/Export module of DATIM, no conflicts should be reported (similar to the picture below). If you receive any conflicts from the server, they should be resolved prior to submitting your data to the DATIM help desk for further validation.
- If code is used when importing the file, expand "**More options**" and select "**Code**" as the "**Data element ID scheme**".

An additional resource for data import testing: The **SIMS Data Exchange Exercise Guide** can be found on the DATIM Support page (DATIM>Administrator and Data Import Resources>Data Import and Exchange).

5.1.4 Submit Final and Tested Data

Once testing is complete, the submission process begins. Follow the below steps to submit the validated file:

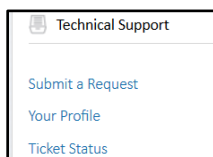
- Submit the validated and tested file to the DATIM Technical Support team for review and approval for import
- Include the format of the file (CSV, JSON or DXF); csv is the preferred format.
- Include the coding scheme which has been used (UIDs or codes)
- Include a screenshot of output from the DEV-DE environment, which shows that the data was able to be imported with no conflicts reported from the server.
- Include the outputs from running the validation scripts on the import file.
- (Optional) Include any reports of validation rule violations. If validation rule violations should be ignored, please include a statement of justification why.

The DATIM Support Team will validate your data import file and data to determine next steps. If updates or changes are needed, the submitter will be responsible. When all necessary steps have been taken and verified, the Technical Support team will facilitate the import into DATIM.

5.1.5 Communicate Data Import Test Results and Import Request to DATIM Support Team

Upon successful completion of testing your SIMS 2.0 file import in Dev-DE.datim.org, please take the following steps to request import of your SIMS 2.0 data into the DATIM production environment (datim.org). As a reminder, the DATIM Support Team may be contacted at any time during this process if you have any questions.

1. Navigate to DATIM.org and select the *DATIM Support* icon found under *Apps* in DATIM.





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2. Select Submit a Request found under the **Technical Support** section.
3. This will take the user to a new page where they can select a topic. From the dropdown menu, select **Data Import / Exchange**.

Please choose from the issue topics below. On the next screen you will be asked for more details on each topic.

-	MER / SIMS Content Questions
	Approval Workflow/De-Duplication
2	Data Import/Exchange
	Organization Hierarchy

4. After selecting **Data Import / Exchange**, additional questions will appear. Answer them accordingly, and be sure to complete the mandatory fields or the request can't be submitted. Under **Description**, indicate the plan for importing data into DATIM and include a **screenshot of the output from the DEV-DE environment**, which shows that the data was able to be imported with no conflicts reported from the server and **the outputs from running the validation scripts on the import file**.

Import summary

Import count

Type	Count
Imported	202477
Updated	0
Ignored	1

Conflicts

Element	Description
DE_DSD	Data element not found or not accessible

Figure 1: Example of Data Import Summary

5. Click **Submit** when ready to send your request to the helpdesk.
6. On receiving your submission via the helpdesk, the DATIM Support Team will run the validation scripts on the submitted files. If any issues are detected, **the file will not be imported**.
7. The participating agency will be notified of validation issues. The agency will need to take corrective action to address validation issues flagged by the DATIM Support Team
8. Once the participating agency has correct these issues, they will need to repeat the above process with the newly corrected import file i.e. re-validate, re-test and re-submit.
9. Once all validation and testing issues have been verified by the DATIM Support Team as fixed, the files will be ready for import to DATIM Production; Import into DATIM Production will be performed by the DATIM Support Team **not** the agency.
10. The DATIM Support Team will provide the agency a timeline for when their file will be imported into DATIM Production.

6 RESOURCES

Several reference and guidance materials further explaining DATIM data import are available on the DATIM Support page under the [Data Import and Exchange sub-page](#).



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SIMS Data exchange stakeholders are also encouraged to participate in the PEPFAR Data Exchange Implementer Community call which occurs on the first three of Wednesdays of every month at 9 am Eastern Standard Time. The call schedule every month is as follows:

- First Wednesday of the Month: SIMS data import
- Second Wednesday of the Month: MER data import
- Third Wednesday of the Month: SIMS data import

Additionally, participating agencies are encouraged to document the processes undertaken and resources used in the data import effort to help drive knowledge sharing, lessons learned, and process improvements. This may include:

- Structured coordination of importing efforts
- Resources for the process (time, expertise, human)
- Documentation for data mapping, instructions, or rationale for mapping
- Process for test file creation
- Data import test plan and results
- Long-term data import/exchange strategy for phased implementation
- Ongoing documentation of challenges and lessons learned

Consider time for corrective action, planning, and updating these processes as they are considered iterative. The documents created and used by the participating agencies can be leveraged and serve as great resources for others. Agencies with well-documented and set processes should consider sharing their resources.