

Data for Accountability, Transparency and Impact Monitoring (DATIM)

SIMS 4.0 Data Import
Reference Guide (Version 1)

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Diplomacy (S/GAC)

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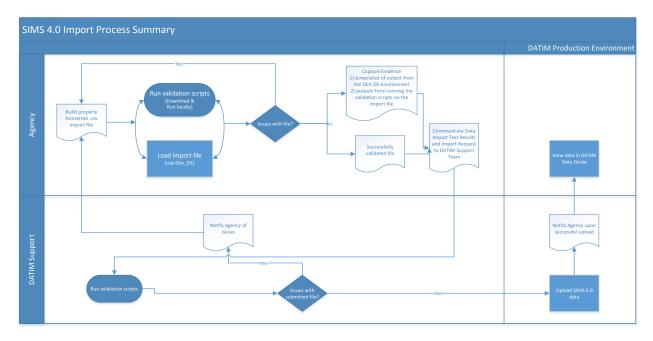
1 Document Scope

This Data for Accountability, Transparency and Impact Monitoring (DATIM) Data Import Reference Guide serves as a resource outlining the steps involved with importing Site Improvement Through Monitoring System (SIMS) version 4.0 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 SIMS Data Import Approach

Agencies do not have the ability to directly import their SIMS data into DATIM. Instead, the DATIM Support Team has developed an import process to facilitate import of SIMS data into DATIM. This data import is the process of importing appropriately formatted files into DATIM using the Import-Export application; only the DATIM Support Team has access to this app in DATIM.

This document outlines this process, which involves the following: (1) each agency's technical representative testing their SIMS import files in Dev-DE.datim.org (a DATIM test environment) and using R script validation scripts to ensure that their files are compliant with DATIM import requirements and specifications as explained in this document, and (2) submitting a valid file and working with the DATIM Support team to successfully import the file into the production DATIM environment. A summary of this process is outlined in the illustration below. Details corresponding with each of these process steps are described in this document.



3 Roles and Responsibilities

Stakeholders	Roles and Respons	sibilities		
DATIM Support Team	The DATIM Support Team has developed a validation script to perform system validation on SIMS 4.0 data. Upon 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, revalidation, retesting, and resubmission of an updated file to the DATIM Support Team.			
	The DATIM Support execute the validation	rt Team is responsible for providing tion scripts.	instructions on how to access and	
	Stakeholders may DATIM.	rt Team is available to provide assist contact the DATIM Support Team vi	a the DATIM Support app in	
SIMS Implementing		entatives from each agency are resp	= -	
Agency Technical	·	vidence of successful SIMS 4.0 data	import in Dev-DE, to the DATIM	
Representatives	Support Team for	SIMS 4.0 file import into DATIM.		
	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.			
		ncy technical representatives may e port testing process, but an import r		
	1	am only if it comes from a designate		
	·	isting of these representatives follo	•	
	Dev-DE.datim.org	site should be delivered to the DATI	M Support Team.	
	Agency	Name	Email Address	
	CDC	Katie Norwood	Yqo6@cdc.gov	
	CDC	Juanika Mainor-Harper	Yzm7@cdc.gov	
	PC	Annie Schwartz	aschwartz@peacecorps.gov	
	DOD	Margo Sloan	Margo.l.sloan.ctr@mail.mil	
	HRSA	Laura Foradori	<u>LForadori@hrsa.gov</u>	
	USAID	Anja Buschur	abuschur@usaid.gov	
	USAID	Jacob H. Buehler	<u>jbuehler@usaid.gov</u>	
	USAID	Matt Sattah	msattah@usaid.gov	

4 PEPFAR Reporting Timelines and SIMS Data Import Eligibility Rules

All data (including SIMS data) should be reported to DATIM in accordance with the timeline specified in the <u>PEPFAR data calendar</u>. In accordance with the PEPFAR data calendar, only SIMS 4.0 data for the current data reporting quarter will be accepted for import into DATIM. For example, this means that during the FY20 Q2 reporting period, only SIMS 4.0 data for FY20 Q2 can be submitted.

Note: In FY19 Q3, FY19 Q4, and FY20 Q1, data from preceding SIMS 4.0 quarters will be accepted to allow additional time for 'back-entry' of SIMS 4.0 data from FY19 Q2–Q3 (when agency electronic data collection systems were not available). That is, all back-entry of SIMS 4.0 data should be completed by the data import deadline for FY20 Q1 (i.e. tentatively February 7, 2020).

5 Characteristics of DATIM Data

Data values in DATIM are always associated with four dimensions, which describe different aspects of the data:

- Where—Organization unit (OU): This dimension describes the location of the data.
- What—Data element: This dimension describes the phenomena to which the data value is attached.
- When—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 for which the data
 are being reported.

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

6 Construct Appropriately Formatted Files for Import

A correctly formatted CSV file containing SIMS data should be generated. Only the following columns are required in the CSV file (order is important):

Dataelement Perio	d OrgUnit	CategoryOptionCombo	AttributeOptionCombo	Value
-------------------	-----------	---------------------	----------------------	-------

The header in the CSV file is optional. DATIM does not make an assumption that there is a header and 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, the header line can be omitted from the CSV file.

Note: For SIMS data, the category option combo should be included; however, the value must always be the default. The default value is "HllvX50cXC0".

6.1 SIMS Data Elements

SIMS data in DATIM must have a data element and disaggregation (also known as a category option combination).

Data element and category option combos/disaggregations can be reported as either code or unique identifier (UID).

Please refer to the code list on the DATIM Support page (https://datim.zendesk.com/hc/en-us/articles/115002334246-DATIM-Data-Import and-Exchange-Resources) for the appropriate data element and category option combos/disaggregations codes and UIDS.

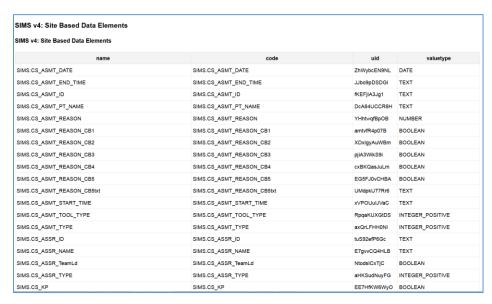
As mentioned above for SIMS data, the category option combo should include and must always be the default value. The default value is HllvX50cXC0.

There are three types of SIMS 4.0 code lists: (1) Site-Based Data Elements, (2) Above Site-Based Data Elements, and (3) SIMS v4 Option Sets.

	SIMS	Site Based Data Elements	HTML	JSON	CSV	XML
SIMS 4.0		Above Site Based Data Elements	HTML	JSON	CSV	XML
		SIMS v4 Option Sets	HTML	JSON	CSV	XML

6.1.1 Valid Data Types

SIMS data elements are modeled based on the SIMS data dictionary data element types.



SIMS data element names follow a naming convention to allow consistency and for easy identification of the associated valid value types. The naming conventions are described as follows.

Field Name	Data Type	Length	Valid Values/Format
*_COMM	string, long text	50k characters	
*_SCORE	integer	zeroPositiveInt	
*_RESP	bool		true/false (all lowercase)
_CB	bool		true/false (all lowercase)
*_PERC	integer	zeroPositiveInt	
*_NA	bool		True/False
*_Date	date		YYYY-MM-DD (2019-01-01 for January 01, 2019) 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	
*_TIME	string, long text	50k characters	

Field Name	Data Type	Length	Valid Values/Format
_KP	bool		
_TYPE	integer	zeroPositiveInt	

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

6.2 Value

The value field is constrained to acceptable value type as determined by the associated data element as outlined above. Refer to the table above to determine the valid format based for the associated data element's naming convention.

6.3 Period

Each data value in DATIM must have a valid period. SIMS data are currently reported on a daily basis, hence the period should be reported using yyyyMMdd format using calendar year: for example, 20160101 for January 01, 2016, 20160102 for January 02, 2016.

6.4 Comment Field

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.

6.5 Organization Units

OU is typically the site where the data are captured. Examples are site, facility, community, district, and county. This should not to be confused with PEPFAR OU. Facility, site, community, and OU codes and UIDs are available in the current code list available on the DATIM Support page (https://datim.zendesk.com/hc/en-us/articles/115002334246-DATIM-Data-Import-and-Exchange-Resources).

Note: To access these codes, users must be logged into DATIM Support because this is a password-protected resource.

6.5.1 Reporting Levels

SIMS data can be reported at two organization hierarchy levels and hence should be associated as follows:

- SIMS 4: Site-Based—for assessments associated with community and facility levels
- SIMS 4: Above Site-Based—for assessments associated at the country level down to the prioritization sub national unit (PSNU) level (not any lower)

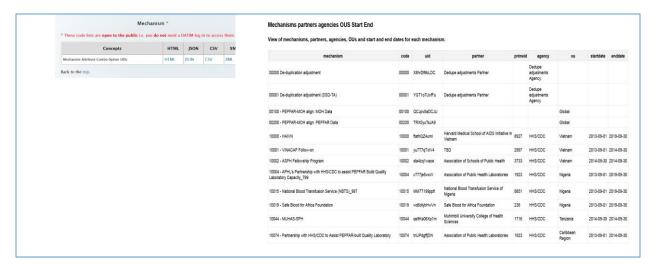
6.6 Attribute Option Combo

Attribute option combo refers to the funding mechanism for which the data apply. An example is "25147," which refers to the FACTS Info mechanism ID. FACTS Info is the source for the DATIM implementing mechanism. Data from FACTS Info are regularly synchronized with DATIM. All mechanisms that are present in a given data import file must be active for the period for which data are being imported. After a mechanism is "promoted" or made active in FACTS Info, it will take up to 24 hours for the data to be updated in DATIM. Please ensure that all mechanisms for which you will be reporting

data are active in FACTS Info prior to attempting to test any data in the DEV-DE test environment. If any mechanisms are not active, or data need to be reported against mechanisms to which the user does not have access, validation errors will occur.

The "Agreement End Date" attribute in FACTS Info may inhibit a mechanism from being visible or available in DATIM. The date must be valid for data to be entered appropriately. **Note:** Implementing partners DO NOT have access to this system. Funding agencies should provide the mechanism ID to partners interested in data exchange.

Funding mechanisms can be reported using code or UID should be reported. Funding mechanism UIDs and code are available at the DATIM Support page (https://datim.zendesk.com/hc/en-us/articles/115002334246-DATIM-Data-Import-and-Exchange-Resources). If codes are used for the 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."



7 Example CSV files

1. Using codes for data element and funding mechanism:

Dataelement	period	orgunit	categoryoptioncombo	attributeOptionCombo	value	Comment	Storedby*	Timestamp*
SIMS.S_01_01_HIVQMQI_COMM	20160101	IHuZkWbFwNK	HIIvX50cXC0	13559	This is a	AssessmentXYZ		
					sample			
					data			
					value			
SIMS.A_01_01_HIVQMQI_Q1_RESP	20160101	IHuZkWbFwNK	HIIvX50cXC0	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	HllvX50cXC0	nYb1tJnit15	This is a	AssessmentXYZ		
					sample			
					data			
					value			
lppMVnAcWF9	20160101	IHuZkWbFwNK	HllvX50cXC0	nYb1tJnit15	4	AssessmentXYZ		

^{*}Optional fields

7.1 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 above site and site
Reporting period	For a file being uploaded on May 13, 2016, reporting period should be: fy16q2 (all letters should be lowercase).
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.

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 three-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 lowercase.

7.2 Number of Files per Agency

Each agency should upload one file for each data set (i.e., one for above site and one for site). **Example:** following the example above for HRSA, there should be two files in total:

- 1. hrsa abovesite fy19q2 v1.csv
- 2. hrsa_site_fy19q2_v1.csv

8 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 that is a copy of the actual DATIM production system. It is a testing environment that can be used to validate data prior to import into the production system without 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 that have 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. 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 is the SIMS Data Exchange Exercise Guide, which can be found on the DATIM Support page (https://datim.zendesk.com/hc/en-us/articles/115002334246-
DATIM-Data-Import-and-Exchange-Resources).

8.1 Validation Scripts

The implementing agency's development team should perform validations testing using the R validation scripts provided by the DATIM Support Team. The validation scripts and instructions for how to set up and use them are at available at DATIM Support (https://datim.zendesk.com/hc/en-us/articles/115002334246-DATIM-Data-Import-and-Exchange-Resources).

Date	Туре	Document	Description
May 13, 2019	SIMS	Validation of SIMS Data Payloads for DATIM Using R Validation Package.pdf (1 MB)	This guide serves as a resource outlining the steps to validate countries' data against the business logic of DATIM prior to importing the data into the DATIM system.

8.2 Agency DEV-DE Testing Credentials

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	Katie Norwood
USAID	system_usaid_sims	Anja Buschur
DOD	system_dod_sims	Mary Kratz
PC	system_peacecorps_sims	Annie Schwartz
HRSA	system_hrsa_sims	Laura Foradori

9 Submit the SIMS Data File for Import into DATIM

After validation and testing are successfully completed, the submission process begins. The following is a submission checklist for items required for submission of the SIMS data file for import into DATIM:

- ✓ A validated and tested SIMS data file:
 - ✓ Include the format of the file (CSV, JSON, or DXF); CSV is the preferred format
 - ✓ Include the coding scheme that has been used (UIDs or codes)

- ✓ Include screenshots and outputs from successfully running validation scripts and testing in Dev-DE of the SIMS import data file
 - ✓ The screenshot should show output from the DEV-DE environment, indicating that the data were imported without any conflicts reported from the server.
- ✓ (Optional) Include any reports of validation rule violations. If validation rule violations should be ignored, please include a statement of justification.

After you have the items listed above, proceed with communicating and submitting the SIMS file for import into DATIM.

9.1 Communicate Data Import File and Test Results to the DATIM Support Team

Submission of SIMS data files for import into DATIM production (datim.org) is done via DATIM Support. Please take the following steps to request import of your SIMS 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.

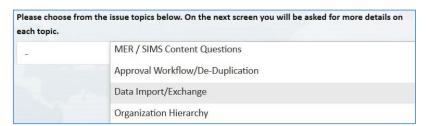
1. Navigate to datim.org and select the "DATIM Support" icon found under "Apps" in DATIM.



2. Select "Submit a Request," found in the Technical Support section.

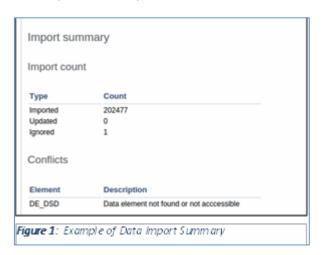


3. This will take users to a new page where they can select a topic. From the dropdown menu, select "Data Import/Exchange."



4. After selecting "Data Import/Exchange," additional questions will appear. Answer them accordingly, and be sure to complete the mandatory fields or the request cannot 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 were able to be imported with no conflicts reported from the server and the outputs from running the validation scripts on the import file.



5. Click on "Submit" when ready to send your request to DATIM Support.

9.2 SIMS Data Import into DATIM (performed exclusively by the DATIM Support Team)

Upon receiving your submission through the submitted DATIM support ticket, the DATIM Support Team will follow these steps:

- 1. Test and validate the submitted SIMS data file using the same R Scripts and server (DEV-DE). If any issues are detected, the file **will not** be imported.
 - a. The agency will be notified of testing validation issues and will need to take corrective action to address validation issues flagged by the DATIM Support Team.
 - b. After the agency has correct these issues, it will need to repeat the above process with the newly corrected import file (i.e., revalidate, retest, and resubmit).
- 2. After all validation and testing issues have been verified by the DATIM Support Team as fixed, the file will be ready for import into DATIM production. The import into DATIM production will be performed by the DATIM Support Team, which will provide the agency with a timeline for when the file will be imported into DATIM production.
- 3. Upon receipt of approval from the S/GAC Team Lead, the DATIM Support Team will import the SIMS data file into DATIM.
- 4. The DATIM Support Team will inform the agency after the import is complete and proceed to close the support ticket.

10 DATIM's Policy and Process for Managing Organizational Hierarchy Changes

DATIM has established a policy and processes for handing organizational hierarchy changes. These type of changes originate from requests submitted by a country's site administrator. The DATIM organizational hierarchy change policy requires getting approval from each country's PEPFAR Program Manager (PPM) and informing the PEPFAR Chair and Country Lead in a DATIM Support Ticket before

these changes can be completed in DATIM. Organizational hierarchy changes can include the following site operations in DATIM:

- Adding sites
- Relocating or merging sites
- Deleting sites
- Renaming, editing, or updating sites

Details of the policies and process steps associated with each type of organizational hierarchy change are available on DATIM support page https://datim.zendesk.com/hc/en-us/articles/211856726-Organization-Hierarchy-Templates, including templates and instructions on how to request these changes. A valid DATIM log in the required to access this page.

Only deletion and relocation operations have a significant impact on existing SIMS assessments associated these sites already in DATIM. These are handled as per our organizational hierarchy policy and process, as described in the sections that follow.

10.1 Deleting Sites

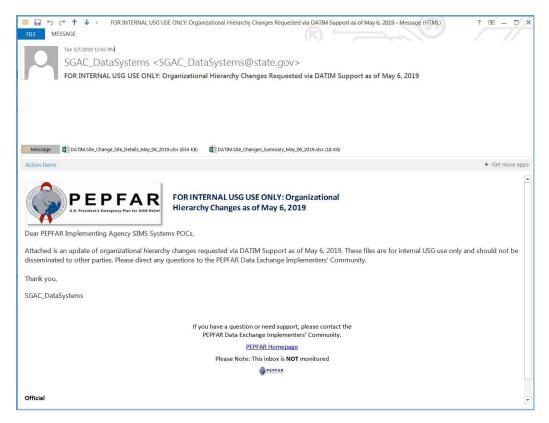
It should be noted that sites cannot be deleted from DATIM if they have SIMS and MER data associated with them. If the DATIM Support Team receives a request to perform a site deletion, the team will investigate whether there are existing SIMS assessments associated with the site marked for deletion. If SIMS data are associated with the site, the DATIM Support Team will notify the country site administrator to move these data to an appropriate site (i.e., a Receptor site) and then perform the processes outlined for site relocation prior to deleting the site. After the SIMS data have been relocated to the Receptor site and no data exist at that site, the site will be deleted from DATIM.

10.2 Relocating or Merging sites

These two site operations can only be performed by the DATIM Support Team; technically, however, SIMS data cannot merged because SIMS data are assessment data collected on a daily basis, unlike MER data, which are aggregate data. After the DATIM Support Team receives a request to perform a site relocation, the SIMS assessment data are moved to the Receptor site. For most relocation requests, the SIMS assessment moves to the Receptor site seamlessly. However, in very rare cases, a collision may occur, which happens if the assessment being moved to the Receptor site has the same period and funding mechanism as an already existing SIMS assessment already associated with the Receptor site. In the event of a collision, the DATIM Support Team will communicate to the country team, informing them of remediation steps that will be taken to avoid a collision, and will then complete the relocation of the SIMS assessment. To remediate a collision, the DATIM Support Team applies an offset value to the period, typically by moving it one day over for the assessment being moved, thus resolving the collision and allowing for the move to the Receptor site to be completed.

10.3 Communicating Organizational Hierarchy Changes to Agency Stakeholders

DATIM Support communicates on a weekly basis via email (see sample email below) to all SIMS agency points of contact detailing the organizational hierarchy changes that have been completed in DATIM.



11 Resources

Several reference and guidance materials further explaining DATIM data import are available on the DATIM Support page under the <u>Data Import and Exchange</u> page, including detailed guidance on how to download and use the R Script.

SIMS stakeholders are also encouraged to participate in the PEPFAR Data Exchange Implementer Community call. The <u>PEPFAR Data Exchange Implementer Community page</u> contains details on upcoming call dates and agenda items, previous call recordings and notes, and call-in details, as well as information on how to sign up for the PEPAR Data Exchange listserv.

Participating agencies are also 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.