



Data Integrity Tool Tip Sheet

Below are tips on using the Data Integrity Tool (DIT). The DIT identifies critical data errors such as those that would result in exclusion of plan information to consumers, improper display of plan information to consumers, or being out of regulatory compliance. The DIT conducts validation checks that go beyond the standard HIOS and SERFF checks.

Additional information on using the DIT can be found in the DIT FAQ document. Issuers can reach out to the CMS help desk for additional questions at CMS_FEPS@cms.hhs.gov or 1-855-CMS-1515. States can contact the CMS state help desk at FFM_operational_questions@cms.hhs.gov.

System Requirements (Microsoft Excel):

- Microsoft Excel has limitations on the number of rows and columns it will display, depending on the version.

Version	# Rows	# Columns
2003	65,536	256
2007	1,048,576	16,384
2010	1,048,576	16,384
2013	1,048,576	16,384

- The DIT will not perform on Microsoft Excel 2003. The system needs to be updated to run the DIT on a newer version of Excel.
- There is a limit of 65,000 hyperlinks that Excel can support. When running a validation of the template data, no more than 65,000 hyperlinks will be shown in column K of the Validation_Errors tab.
- The DIT will work on any system that has a Windows Operating System. The DIT will not work using a MAC.

Preparation of Templates:

- Each template type must be stored in its own folder (e.g., all Rates Table templates must be stored in a folder containing only Rates Table templates. You cannot have a Rate Tables template and a Service Area template in the same folder, as data will not be imported correctly). Users can import multiple templates from a single folder into the DIT, as long as all templates in that folder are of the same template type.
- The DIT imports folders, not files specifically. It only requires the location of the folder where the templates are stored. Folders can be assigned any name.
- Excel will not import from a folder location that exceeds 218 characters in length. The count of folder character length includes special characters such as /,;, _

Import:

- The DIT will import and validate the following templates: Business Rules, Network ID, Plans & Benefits, Prescription Drugs, Service Area, Rates Table, and Unified Rate Review.
- You may import a template multiple times. If you have imported a certain template, re-importing that template or a different version of the same template type will overwrite the original imported data.
- You can import templates from multiple issuers as long as they are organized in separate folders for each template type.
- The DIT will only import QHP Application templates for the 2017 plan year.¹
- In order to accurately run the validation checks and avoid false positive error results, you will need to first import a completed Plans and Benefits (P&B) template that includes the Plan IDs that you wish to validate. For each Plan ID, make sure that the following columns are populated: Coverage Type (QHP or SADP), Market (Individual or SHOP), Exchange Status (On the Exchange, Off the Exchange, or Both), and Child-Only Offering. Without a Plans & Benefits template with this information imported into the tool, the DIT will run validation checks based on the default setting that the Plan IDs are:
 - Medical plans,
 - Individual market,
 - Not child-only, and
 - Offered both on and off the exchange.
- Importing data could take several minutes depending on the size and number of plans. Please refer to **Figure 1**, which represents the time interval it may take to run data through the DIT based on the number of plans and issuers per state.

Figure 1: Time interval for import and validations by Issuer per State and # of Plans

Interval of time based on Issuer per State and # of Plans				
	Issuer per State	# of Plans	Import Time (seconds)	Validation Time (seconds)
High	33	494	49	805
Average	16	163	15-30	180-300
Low	7	36	< 5	< 5

Validate:

- The DIT will only validate templates that have been imported.

¹ Issuers and States can access 2017 QHP Application templates at the CCIIO website at:
<http://www.cms.gov/CCIIO/Programs-and-Initiatives/Health-Insurance-Marketplaces/qhp.html>

- DIT validations do not apply to plans that are offered only off the exchange. Any off-exchange plans imported into the DIT will be ignored.
- The Validation_Errors tab shows all errors and warnings about data within the imported template.
- You may validate a template multiple times based on the error report.
- The difference between an *error* and *warning* in column D is that an *error* represents something that is wrong within the template which needs to be corrected whereas a *warning* is a caution that flags possible data errors which may or may not need a data change prior to template submission in HIOS or SERFF.
- Using filters may help in distinguishing between errors and warnings.
- Column K contains a hyperlink to the actual location of the error for the imported data in the DIT. This reduces the amount of time it will take to locate an error.
- If you are going to re-validate a template, make sure to clear all data in the error report by either clicking the button on the Menu tab or manually clearing the rows on the Validation_Errors tab.

Cross-Validate:

- The cross validation will check each template and make sure key data elements within multiple templates are consistent.
- One change in an imported template may eliminate multiple errors or warnings from the cross-validation report.
- You may cross-validate templates multiple times based on the error report.
- The crosswalk diagram represents the data elements that should be consistent across different templates.
- Ideally, each template should be loaded into the DIT and previously validated before clicking the cross-validation button. You will need at least two imported templates to perform cross-validation. You do not need to have all templates imported.
- DIT cross validations do not apply to plans that are offered only off the exchange. Any off-exchange plans imported into the DIT will be ignored.
- The difference between an *error* and *warning* in column E is that an *error* represents inconsistent data between templates which needs to be fixed whereas a *warning* is a caution that flags possible data errors due to inconsistent data between templates.
- Using filters may help in distinguishing between errors and warnings.
- If you are going to repeat the cross-validation of templates, make sure to clear all data in the error report by either clicking the button on the Menu tab or manually clearing the rows on the CrossValidation_Errors tab.

Additional Tips:

- Remember to clear all validations before validating a template for a second time. Make sure you do not have the filters on when clearing the data (rows that are hidden may not be cleared).