

CORNING

ETQ Import Spreadsheet Checker

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Hi everyone. My name is Tom Gee and today I'd like to present to you some of my rapid implementation utilities and tips that have helped me personally deploy dozens of modules as well as multiple implementations of Reliance.

Reliance “import” spreadsheets

- Reliance supports mass-document/record creation by filling out an import spreadsheet and having a system Administrator load the file into the application.
- Each column in the import spreadsheet corresponds to a data field on the respective form in Reliance.

A	B	C	D	E	F
DC DOC CL LEGACY DOC NUMBER D	DOCWORK TITLE	ETQREVISION	DOCWORK ATTACHMENT ID	DC DOC CL DOC ADMIN ID	DC DOC CL DOCUMENT TYPE ID
Document number of existing legacy document. <i>This field is optional.</i>	Please enter the document title.	Please enter the revision.	Enter the complete file name for the file, including the file extension. <i>The accuracy of this field is critical to import the specific file into EQ.</i>	Please enter Group Name of the Document Administrator.	Please enter the Document type id. <i>This color</i>
2					
3	LL-MRD-20001	Vacation Request Policy	1	CGM-Goleta Doc Admin	Policy
4	LL-MRD-20002	80167 Glass Wafer Specification	1	CGM-Goleta Doc Admin	Material Specification
5	LL-MRD-20005	HF1 Job Change	1	CGM-Goleta Doc Admin	Work Instruction

Another powerful feature that Reliance supports to help expedite implementations are import spreadsheets.

These can be very helpful to plan the setup of all of your users and groups in a single Excel file, and the records can then be imported, in bulk, into Reliance.

In addition to setting up users and groups, import spreadsheets can also be used for importing bulk records into every single module in Reliance. As we migrate away from legacy applications and processes, and replace them with solutions in Reliance, our ability to import the historical data, by using the import spreadsheets, has been integral to the success and adoption of Reliance across Corning.

Import Spreadsheet Validation in Reliance

- Reliance will stop the import and alert the user of the **first** data issue detected.
- Current validation process can become very frustrating to go back-and-forth, fixing only one issue at a time.
- Needed a way to display **all** data issues found in the file

Import from File

Importing is terminated with errors due to the following:
Error importing record #1 - Value Document is not listed among the keyword options of the field CET_DC_DOC_DOCUMENT_TYPE_P

Select Module & Form

Module: Document Control

Form: Document Control

Specify import details

☐ Import new subform entries into existing documents?

Phase: CET Controlled Document (Released)

Attach the import file

Attach file: Doc Control Import Spreadsheet.xlsx

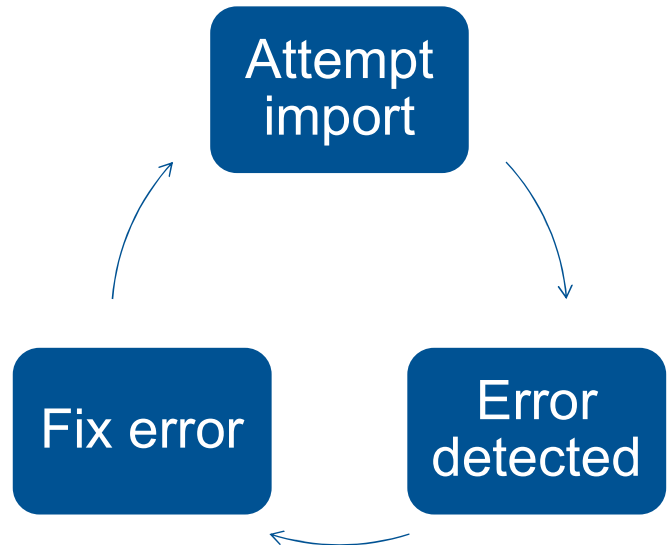
☐ Disable the field filtration formulas (Correction Formula and Keywo--

Cancel Import

While the import spreadsheet functionality is extremely powerful, it comes with one major challenge, and that is data accuracy. For example, if you are trying to import a list of controlled documents into Reliance, you typically have a number of fields that are bound to either a keyword list or a User or Group name list in the system. As a result, if you have any typos in your file, or values in the spreadsheet that do not match an allowed value in the system, the entire import will fail, and you are notified of the first error, and only the first error, that was detected in the file.

Import Spreadsheet Validation in Reliance

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- Current validation process can become very frustrating to go back-and-forth, fixing only one issue at a time.
- Needed a way to display **all** data issues found in the file



This can be very frustrating if you have a lot of data issues in your file, because of the amount of time spent going back-and-forth between the spreadsheet and to re-run the import process after fixing one issue at a time.

ETQ Reliance Import Spreadsheet Validation Utility

ETQ Reliance Import Spreadsheet Validation Utility

Business: CET Environment: I-DEV Application: Document Control Form: Document Control Subform:

Excel File: C:\Users\geek\Downloads\Doc Control Import Spreadsheet.xlsx Choose File Import from Excel Validate Data Export to Excel

Excel Data Reliance Users / Groups Validation Issues Validate Attachments

ETQ\$REVIEWERS	ETQ\$ONLINE_DISTRIBUTION	ETQ_DOCWORK_DEPARTMENT	CET_DC_DOC_PROCESS_AREA_T	DOCWORK_TITLE	DOCWORK_ATTACHMENTS	DC_CET_DOC_DOC_ADMIN
Who the additional reviewers are	Users who should receive an email when the document is released/updated	Department	Process Area	Title of the document	Path to the attachment	Site Doc Admin
CET-IM Doc	CET-IM Users	Measurements	Shared Document	CDSC Test 1	E:\ControlledDocs\IM\Converted\10-0300-0860.docx	CET-IM Doc Admin
CET-IM Document	CET-IM Managers	Measurements	Shared Doc	CDSC Test 2	E:\ControlledDocs\IM\Converted\10-0300-0960.docx	CET-IM Doc Admin
CET-IM Document	CET-IM Users	Measurements	Shared Document	CDSC Test 3	E:\ControlledDocs\IM\Converted\10-0300-1300.docx	CET-IM Doc Admin
CET-IM Document	CET-IM Users	Measurements	Shared Document	CDSC Test 4	E:\ControlledDocs\IM\Converted\10-0300-1800.docx	CET-IM Doc Admin

11/29/2021 10:15:47 AM Data validation complete. 15 validation issue(s) detected.

Therefore, I developed a dynamic import spreadsheet validation utility that shows me ALL of the data-related issues in my spreadsheet *before* I try importing it into Reliance.

I also built this application so that it would work against *any* of our 8 Reliance implementations, and against any environment, be it Dev, Test, or Production.

ETQ Reliance Import Spreadsheet Validation Utility

The screenshot shows the ETQ Reliance Import Spreadsheet Validation Utility application. The interface includes a top navigation bar with the following fields: Business: CET, Environment: I-DEV, Application: Accidents and Safety Reporting, Form: Action Item, and Subform: (empty). Below the navigation bar, there is an Excel File field containing the path C:\Users\geetk\Downloads\Doc Control Import Spreadsheet.xlsx. To the right of the Excel File field are three buttons: Choose File, Import from Excel, and Validate Data. Below the Excel File field is a tabbed interface with three tabs: Excel Data, Reliance Users / Groups, and Validation Issues. The Excel Data tab is currently selected. Below the tabs is a large data grid. To the right of the data grid is a list of modules, forms, and subforms. The list includes: Administration Center, Aspects, Objectives and Targets, Aspects, Objectives and Targets Archive, Assets, Calibration and Maintenance, Audits Management, Centralized Reporting and Alerts, CET Corrective Action Preventive Actio, CET IAP - Information Release, CET Product Setup, Change Management, Complaints Handling, Compliance Obligations, Compliance Obligations Archive, Corrective Action (CAPA/SCAR), Customer Feedback, Deviation, Document Control, Document Control Archive, Emergency Preparedness Plans, Emergency Preparedness Plans Archi, Employee Training, Enterprise Risk Management, eValidator, eValidator Archive, Failure Mode and Effects Analysis (FM), Failure Mode and Effects Analysis (FM), Hazard Analysis and Critical Control P, Hazard Analysis and Critical Control P, Job Safety Analysis (JSA). At the bottom of the application window, there is a status bar that reads: [1/29/2021 11:51:14 AM] List of Environments updated.

When starting the application, the user simply selects the desired business and environment. Next, the application connects to the backend SQL database for the selected Reliance environment, and retrieves the list of modules, forms, and subforms available. After choosing the related Application and Form, the user would select the Excel file they wish to validate and import the values from the spreadsheet directly into a data grid within the application.

ETQ Reliance Import Spreadsheet Validation Utility

ETQ Reliance Import Spreadsheet Validation Utility

Business: CET Environment: 1-DEV Application: Document Control Form: Document Control Subform:

Excel File: C:\Users\geet\Downloads\Doc Control Import Spreadsheet.xlsx Choose File Import from Excel Validate Data Export to Excel

Excel Data Reliance Users / Groups Validation Issues

ETQNUMBER	ETQNUMBER_ONLY	DOC_DC_CET_DOCUMENT_NUMBER_P	ETQREVISION	ETQSEFFECTIVE_DATE	ETQREVIEW_DATE	DOCWORK_ORIGINATION_DATE	DOCWORK_ORIGINATOR	ETQS
		Legacy documents number					Who originated the document	Docum
1		CS5533	0	1/19/2021	1/30/2022	1/19/2021	EsQAdministrator	CET-12
2		CS5534	0	1/19/2021	1/30/2022	1/19/2021	EsQAdministrator	CET-12
2		CS5535	0	1/19/2021	1/30/2022	1/19/2021	Ge, Tom	CET-12
3		CS5536	0	1/19/2021	1/30/2022	1/19/2021	EsQAdministrator	CET-12

1/29/2021 11:58:44 AM | 5 records imported from Excel.

Once the validation process begins, the utility iterates through every single column in the import spreadsheet, one at a time, and checks the Reliance system tables to determine the type of field, and as well as the allowable values for the related field. The application then iterates through every row in the column, and compares the value entered against the allowable values in Reliance.

ETQ Reliance Import Spreadsheet Validation Utility

ETQ Reliance Import Spreadsheet Validation Utility

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Excel File: C:\Users\geet\Downloads\Doc Control Import Spreadsheet.xlsx Choose File Import from Excel Validate Data Export to Excel

Excel Data Reliance Users / Groups Validation Issues ☒ Validate Attachments

ETQNUMBER	ETQNUMBER_ONLY	DOC_DC_CET_DOCUMENT_NUMBER_P	ETQREVISION	ETQSEFFECTIVE_DATE	ETQREVIEW_DATE	DOCWORK_ORIGNATION_DATE	DOCWORK_ORIGNATOR	ETQSE
		Legacy documents number					Who originated the document	Docum
1		CS5533	0	1/19/2021	1/30/2022	1/19/2021	EtQAdministrator	CET-11 Super Measur
2		CS5534	0	1/19/2021	1/30/2022	1/19/2021	EtQAdministrator	CET-11 Super Measur
2		CS5535	0	1/19/2021	1/30/2022	1/19/2021	Gee, Tom	CET-11 Super Measur
3		CS5536	0	1/19/2021	1/30/2022	1/19/2021	EtQAdministrator	CET-11 Super Measur

[1/29/2021 11:57:24 AM] Data validation complete. 11 validation issue(s) detected.

For example, if it's a dialog or combobox field, the program pulls the list of allowable values from the related Master Keyword List in Reliance.

ETQ Reliance Import Spreadsheet Validation Utility

ETQ Reliance Import Spreadsheet Validation Utility

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Excel File: C:\Users\geek\Downloads\Doc Control Import Spreadsheet.xlsx Choose File Import from Excel Validate Data Export to Excel

Excel Data Reliance Users / Groups Validation Issues ☒ Validate Attachments

ETQ\$REVIEWERS	ETQ\$ONLINE_DISTRIBUTION	ETQ_DOCWORK_DEPARTMENT	CET_DC_DOC_PROCESS_AREA_T	DOCWORK_TITLE	DOCWORK_ATTACHMENTS	DC_CET_DOC_DOC_ADMIN
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CET-IM Document	CET-IM Managers	Measurements	Shared Doc	CDSC Test 2	E:\ControlledDocs\IM\Converted\10-0300-0950.docx	CET-IM Doc Admin
CET-IM Document	CET-IM Users	Measurements	Shared Document	CDSC Test 3	E:\ControlledDocs\IM\Converted\10-0300-1300.docx	CET-IM Doc Admin
CET-IM Document	CET-IM Users	Measurements	Shared Document	CDSC Test 4	E:\ControlledDocs\IM\Converted\10-0300-1300.docx	CET-IM Doc Admin

11/29/2021 10:15:47 AM Data validation complete. 15 validation issue(s) detected.

If it's an attachment field, the application actually verifies if the file exists on the remote application server.

Highlight Data Issues

- Form field verification
- Invalid User/Group
- Invalid Keyword value
- Attachment file not found
- Invalid date values
- Leading/trailing blank spaces
- System field validation
 - Location Profiles
 - Additional Security
 - Offline Distribution
 - ETQ\$NUMBER not unique

DOCWORK_ORIGINATOR	ETQ\$APPROVE
Who originated the document	Document owner(
EtQAdministrator	CET-IDM Die Ser Supervisor; CET Measurement Own
EtQAdministrator	CET-IDM Die Ser Supervisor; CET Measurement Own
Gee, Tom	CET-IDM Die Ser Supervisor; CET Measurement Own
EtQAdministrator	CET-IDM Die Ser Supervisor; CET Measurement Own

DC_CET_DOC_DOC_ADMIN_P	CET_DC_DOC_DOCUMENT_TYPE
Site Doc Admin	Document Type
CET-IDM Doc Admin	Invalid User/Group - Trailing blank space

Any data issues that are detected are automatically highlighted in the data grid with a pop-up description of the issue. If an issue is detected, I perform an additional check to see if there might be a blank space at the beginning or end of the value, and pass that information back to the user.

Highlight Data Issues

- Form field verification
- Invalid User/Group
- Invalid Keyword value
- Attachment file not found
- Invalid date values
- Leading/trailing blank spaces
- System field validation
 - Location Profiles
 - Additional Security
 - Offline Distribution
 - ETQ\$NUMBER not unique

DOCWORK_ORIGINATOR	ETQ\$APPROVE
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EtQAdministrator	CET-IDM Die Ser Supervisor; CET Measurement Own
Gee, Tom	CET-IDM Die Ser Invalid User/Group Measurement Own
EtQAdministrator	CET-IDM Die Ser Supervisor; CET Measurement Own

Excel Data	Reliance Users / Groups	Validation Issues	
Column Name	Record #	Type	Potential Issue
CET_DC_DOC_DOCUMENT_TYPE_F	1	COMBOBOX	Invalid value
DC_CET_DOC_DOC_ADMIN_P	1	NAMES	Invalid User/Group - Trailing blank space
CET_DC_DOC_DOCUMENT_TYPE_F	2	COMBOBOX	Invalid value
DC_CET_DOC_DOC_ADMIN_P	2	NAMES	Invalid User/Group - Trailing blank space
DOCWORK_ORIGINATOR	3	NAMES	Invalid User/Group
ETQ\$NUMBER	3	UNIQUE	Duplicate value in unique/key column (2)
DC_CET_DOC_DOC_ADMIN_P	3	NAMES	Invalid User/Group - Trailing blank space
CET_DC_DOC_DOCUMENT_TYPE_F	3	COMBOBOX	Invalid value
DC_CET_DOC_DOC_ADMIN_P	4	NAMES	Invalid User/Group - Trailing blank space
DOCWORK_ATTACHMENTS	4	ATTACHMENT	File not found (\C:\VAP\92007\B4\CONTROLLED\DOC\IDM\CONTROLLED\40-2000-3800.DOCX)
CET_DC_DOC_DOCUMENT_TYPE_F	4	COMBOBOX	Invalid value

In addition to highlighting detected issues in the data grid, I also included a consolidated “Validation Issues” report within the application that summarizes all issues identified, including the row and column where the error was detected.

View allowed Keyword List values

ETQ Reliance Import Spreadsheet Validation Utility

Business: CET Environment: 1-DEV App:

Excel File: C:\Users\geetc\Downloads\Doc Control Import Spreadsheet.xlsx

Excel Data Reliance Users / Groups Validation Issues

TRIBUTION	ETQ_DOCWORK_DEPARTMENT	CET_DC_DOC_PR
Receive an ment is	Department	Process Area
	Measurements	Shared Document
	Measurement	Shared Document
	Measurements	Shared Document
	Measurements	Shared Document

View allowed values

List Values - ETQ_DOCWORK_DEPARTMENT

Search

ID	Value
1	ACCOUNTING
5	ADMINISTRATION
74	ALLGEMEIN KL
37	APPLICATION & PRODUCT ENGINEERING
66	APPLICATION ENGINEERING KL
83	AWS
136	CET CHINA COMMERCIAL
61	CKDM
11	COMMERCIAL
69	CONTROLLING KL
2	CUSTOMER
35	CUSTOMER SERVICE
48	CUTTING KL
84	CVD
52	DIE HARDWARE KL
97	DIE MANUFACTURING
95	DIE WASH
140	DIVISION

Furthermore, in an effort to expedite data-corrections, if an issue was detected with a dialog, combobox, or names field, the user can right-click on the cell and display a searchable list of the allowed values defined in Reliance for that field.

Editable Data Grid

- Make corrections directly in data grid
- Re-run validations against updated data grid values
- Export data grid contents to Excel

ETQ Reliance Import Spreadsheet Validation Utility

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Excel File: C:\Users\geetc\Downloads\Doc Control Import Spreadsheet.xlsx Choose File Import from Excel Validate Data Export to Excel

Excel Data Reliance Users / Groups Validation Issues

ETQSEFFECTIVE_DATE	ETQ\$REVIEW_DATE	DOCWORK_ORIGINATION_DATE	DOCWORK_ORIGINATOR	ETQ\$APPROVERS	DC_DOC_CET_ADDTL_APPROVAL_D	ETQ\$REVIEWERS	ETQ\$ONLINE_DIST
			Who originated the document	Document owner(s)	Whether additional review/approval is needed, besides the Doc Owner and Doc Admin	Who the additional reviewers are	Users who should email when the doc released/updated
1/19/2021	1/30/2022	1/19/2021	EtQAdministrator	CET-IDM Die Service Section Supervisor; CET-CDSC Measurement Owner	Yes	CET-IDM Doc	CET-IDM Users
1/19/2021	1/30/2022	1/19/2021	EtQAdministrator	CET-IDM Die Service Section Supervisor; CET-CDSC Measurement Owner	Yes	CET-IDM Document	CET-IDM Managers
1/19/2021	1/30/2022	1/19/2021	See Tab	CET-IDM Die Service Section Supervisor; CET-CDSC Measurement Owner	Yes	CET-IDM Document	CET-IDM Users
1/19/2021	1/30/2022	1/19/2021	EtQAdministrator	CET-IDM Die Service Section Supervisor; CET-CDSC Measurement Owner	Yes	CET-IDM Document	CET-IDM Users

The data grid inside the application not only displays the values from the Excel file, but it also allows the user to make edits to the values directly in the grid. This makes corrections faster because you can make your updates within the program and then re-run the validations to see if it resolved the issue.

Once everything has been corrected, the user can simply click the Export to Excel button to save an updated copy of their import spreadsheet.

CORNING

GitHub source code: [corning-incorporated/ETQImportSpreadsheetChecker](https://github.com/corning-incorporated/ETQImportSpreadsheetChecker): Utility to validate all of the values in an import spreadsheet before attempting to import the data into ETQ Reliance. (github.com)