CU P&C 22.4.1.0 Docs

A new version of Appian is available! Update now to take advantage of the [latest features in Appian 23.4](#).

☑ This content applies solely to Connected Underwriting, which must be purchased separately from the Appian base platform.

Connected Underwriting Overview

Introduction

Appian Connected Underwriting empowers insurers with a powerful tool to accelerate the underwriting process and improve customer experience. This page provides a quick overview of how Appian Connected Underwriting can help insurance organizations improve their time to quote.

Connected Underwriting provides a single application to consolidate disparate data sources. By reducing the time needed to gather critical information, organizations can accelerate their ability to provide accurate quotes.

If you want a more comprehensive overview of the solution, check out Using Connected Underwriting, starting with the [Workbench Overview](#).

What does Appian Connected Underwriting provide?

Appian Connected Underwriting streamlines the business-to-quote process by automating the ingestion, clearance, and triage of information needed for an underwriting Submission. The Submission is the key record in underwriting activities.

They are created in two ways:

1. Via emails received from insurance brokers.
2. Manually created by an underwriter.

Data ingestion

Connected Underwriting uses Appian Intelligent Document Processing (IDP) to extract critical data from shared inboxes and incoming submissions. By extracting critical information needed for review, your underwriters are empowered to make the decisions needed to lead the underwriting process.

Submission clearance

Connected Underwriting allows underwriters to keep track of broker correspondence and quickly respond with automated emails and follow-ups, as well as ensure submission data completeness and alert underwriters if duplicate submissions exist.

Triage

With Connected Underwriting, underwriters can quickly prioritize workloads based on their business needs. Underwriters can filter for new business submissions or renewals, and sort submissions based on their submission scores, which are powered by their business rules.

Get started

Ready to get started? Check out the topic browser on the left to see all of the content covered in the Connected Underwriting documentation.

Connected Underwriting Support and Release History

Solution Support

Appian provides product and documentation for 12 months from the general availability (GA) release date of a solution release. After 12 months, the solution product documentation is deprecated and archived.

In addition to the Connected Underwriting release notes and product documentation, Appian's Solutions Support team provides a number of services to ensure the success of your Connected Underwriting solution. See the [Appian Solutions and Documentation Support Guide](#) for more information.

Release History

The Release History table provides information about each Connected Underwriting version, including release dates, supported Appian platform versions, support expiration dates, and documentation availability.

Solution Version	Release Date	Supported Appian Platform	Support Expiration Date	Download PDF
23.4.1.3	29 Dec 23	23.4 +	30 Dec 24	-
23.1.1.2	21 Apr 23	23.1 +	23 Apr 24	-
22.4.1.1	8 Mar 23	22.4 +	8 Mar 24	-
22.4.1.0	15 Dec 22	22.4 +	15 Dec 23	-

You can view the documentation for an unsupported version of Connected Underwriting by clicking the document link associated with the solution version you want to download from the **Download PDF** column. After the download, you can open the ZIP file to view the PDF.

To learn more about this version of Connected Underwriting, see [Connected Underwriting Overview](#) page.

# Installing Connected Underwriting

Introduction

The Appian Connected Underwriting solution is an expertly-developed application built on the Appian low-code platform. It allows insurance professionals to streamline the underwriting submissions process for new and existing business. This guide provides guidance for installing Connected Underwriting.

System requirements

- Appian platform running version 22.4 or greater.
- A supported version of MariaDB as a business data source.
  - **Note**: Instructions below are for MariaDB databases. For use with other databases, the SQL script used in **Step 3** for installing and upgrading will need to be modified.
- A supported [web browser](#).

Verifying Appian version and database type

To check the Appian platform version and database: From the navigation bar, click on **About Appian**.
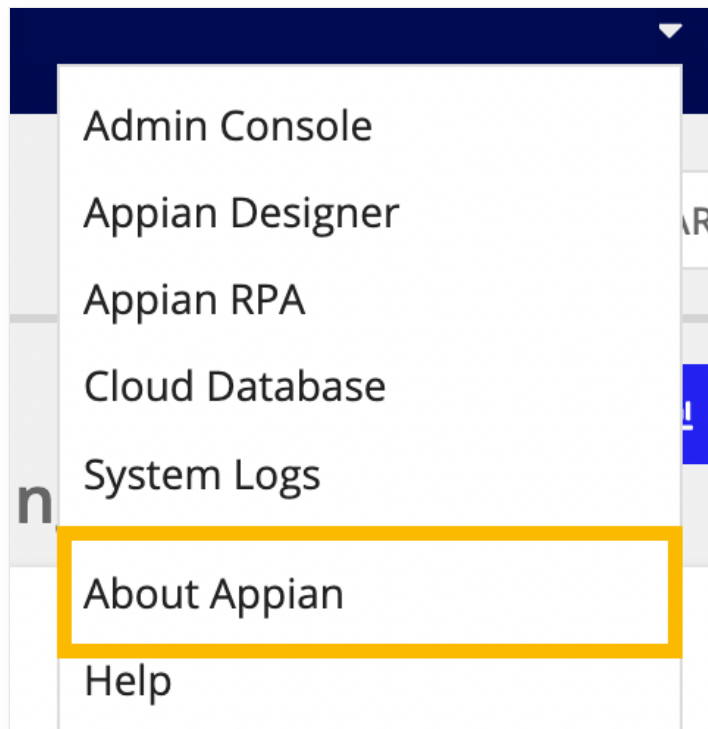
Refer to the Appian Version number under System Information.

About This Environment	appian

SYSTEM INFORMATION

Appian Version **22.3**

Appian RPA **8.4.0**

Execution Engines **3**

Application Server Configuration **Single**

Hosting Environment **Appian Cloud**
Learn more about High Availability ⤤

Feature Toggle Mode **Custom Properties**

REFERENCE LINKS ⤤
👥 Appian Community
📄 View Release Notes
📄 View Hotfix Notes

DATA SOURCES

ⓘ This list only includes data sources that are added in the Admin Console or configured in the application server. Your environment may also include connected system objects for data sources. **Learn more about data source connected systems** ⤤

Name	Type	RDBMS Version	Driver

EXPORT CLOSE

To check the solution version: From Appian Designer, search for constant `ISU_TXT_APP_VERSION`.

Technical support

In the instance of technical difficulty, current customers can log into Appian Community and open support cases. All users of Connected Underwriting can also email Appian Support at support@appian.com.

Installing Connected Underwriting

Installing Connected Underwriting consists of six main steps:

1. Download the software package.
2. Deploy Connected Underwriting plug-ins to the Appian environment.
3. Create the database objects in the business data source.
4. Import the Connected Underwriting application into the Appian environment.
5. Configure Outlook Graph Poller

Before starting the installation process, review the System Requirements to make sure all minimum requirements are met.

Step 1: Download software package

The first step in installing Connected Underwriting is to download the software package that contains the following files. These files will be used in the remaining set up steps.

- **ConnectedUnderwritingv22.4.1.0.sql**: SQL script for creating the database objects needed for the Connected Underwriting application.
- **ConnectedUnderwritingv4.1.0.application.zip**: Application package to import into Appian.
- **ConnectedUnderwritingv4.1.0.application.properties**: Import customization file for configuring the solution package.
- **ConnectedUnderwritingv4.1.0.adminConsole.zip**: Admin console package to import into Appian
- **ConnectedUnderwritingv4.1.0.adminConsole.properties**: Import customization file for configuring the Admin Console imports.

To download the software package:

1. In MyAppian, navigate to the [Support tab](#).
2. At the top of the page, select **DOWNLOADS** and then **SOLUTIONS**.
3. In the grid, click **Connected Underwriting v22.4.1.0.0**.
4. Under **Downloads**, click **Connected Underwriting Installer** and agree to the License Agreement.
5. Click **Connected Underwriting Installer** to download the ZIP file.
6. Unzip **Connected Underwriting v22.4.1.0.0** to access the installation files.

Step 2: Deploy plug-ins

Connected Underwriting relies on the following plug-ins to be deployed and configured in the target system before the application files can be imported.

Appian Cloud environments

To deploy the plug-ins for an Appian Cloud environment:

1. In the target environment, log in as the deployment user.
2. Navigate to the **Admin Console**.
3. On the left side of the console, click **Plug-ins**.
4. Click **ADD PLUG-INS**.
5. Search for and click `Appian Solutions`.
6. Click **DEPLOY**.
7. Repeat the above steps, but search for and click the following:
     - Appian Regular Expression Functions
     - Content Tools
     - MSGraph Email Poller
     - PDF Tools
     - PDF Utilities
     - Rich Text Editor

Self-managed environments

To deploy the plug-ins for a self-managed environment:

1. Download the following plug-ins from the [Appian AppMarket](#):
     - [Appian Regular Expression Functions](#)
     - [Content Tools](#)
     - [MSGraph Email Poller](#)
     - [PDF Tools](#)
     - [PDF Utilities](#)
     - [Rich Text Editor](#)
2. Follow the [Deploying Plug-ins](#) instructions to deploy the plug-ins listed above.

Step 3: Create database objects

In order to create the structure for the database tables, views, and other objects that are a part of the Connected Underwriting application, you will need to run a DDL script in your database.

To create the database objects:

- In your MariaDB business database, import and run the `sql` DDL file that was downloaded in [Step 1](#).

Step 4: Import the application

The next step to install the Connected Underwriting application is to import the application files into the target environment.

To import the application:

1. In the target environment, log in as the deployment user.
2. Navigate to the **Appian Designer**.
3. Click **IMPORT**.
4. Click **UPLOAD** and choose the **ConnectedUnderwritingv4.1.0.application.zip** file that was downloaded in Step 1.
5. Select **Include related import customization file** and click **UPLOAD**. Select the **ConnectedUnderwritingv4.1.0.application.properties** file that was downloaded in Step 1.
   - **Note**: If you have credentials for any of the integrations, you may include them in the properties file.
6. Click **INSPECT** in order to ensure that there will be no complications on import.
   - **Note**: Inspection could take several minutes and may time out, but import will continue in the background.
7. Click **IMPORT**.
   - **Note**: The import may time out due to file size, but import will continue in the background.
8. Review the import results.

> If the business database is not called **Appian**, a warning will occur when inspecting/importing the data stores. To fix this, after the import is complete, open each data store object and update the **Data Source**.

Step 5: Configure email poller

> The email poller pulls files and emails directly from your Outlook inbox. It is important to ensure security best practices such as virus scanning are correctly configured in Outlook before installing the plugin to your environment.

After following the setup steps for creating an Outlook inbox and Azure application account, these credentials must be provided to Appian to allow the poller to run.

The Connected Underwriting application comes with Admin Console configs to allow for easy entry of these credentials. To fill them out, first import the Admin Console .zip file downloaded in step 1:

1. In the target environment, log in as the deployment user.
2. Navigate to the **Appian Admin Console**.
3. Click **IMPORT**.
4. Click **UPLOAD** and choose the **ConnectedUnderwritingv4.1.0.adminConsole.zip** file that was downloaded in Step 1.
5. Select **Include related import customization file** and click **UPLOAD**. Select the **ConnectedUnderwritingv4.1.0.adminConsole.properties** file that was downloaded in Step 1.
   - **Note**: Poller credentials can be provided directly in the properties file, or can be provided via the manual steps described below. In either case, do not modify the default values for `customMailPollerTableName` and `customMailPollerDocTableName` unless you intend to modify the Appian Poller table names (not recommended)
6. Click **INSPECT** in order to ensure that there will be no complications on import.
7. Click **IMPORT**.
8. Review the import results and ensure there are no errors
9. Navigate to Third-Party Credentials on the left hand panel of the Admin Console. There should now be an item there labeled `isu-mail-poller-msgraph`.
10. Enter `isu-mail-poller-msgraph` and provide the Azure secret, tenet, and applicationID configured when enabling a polling inbox. Do not modify `customMailPollerTableName` and

`customMailPollerDocTableName` unless you intend to modify the Appian Poller table names (not recommended).
11. Click **SAVE**
12. Use Quick Search to open the following constant:
`ISU_EMAIL_POLLER_AND_PROCESSOR_ENUM_BOOL_RUN_EMAIL_POLL_AND_PROCESSOR_PM` and set it to True if not set already. This constant can be used to enable/disable poller operations if needed.

See configuring the email poller for more information.

Next steps

Now that the solution is installed and the database is set up, you're going to want to configure the solution for your organization's needs. How to Configure Connected Underwriting outlines the steps you will need to take to modify the solution to work with your organization's requirements.

Additional specifications such as branding and timezone can be set in the Appian Admin Console.

Setting Up Connected Underwriting

Introduction

After installing Connected Underwriting, there are several configurations you will likely perform to customize the solution for your organization's processes. In order to make sure your solution remains flexible and aligns with best practices, we have provided instructions to guide you through some common configurations.

This page outlines the order we recommend for configuring the default solution to work for your organization after completing the installation process. However, all of these instructions can be used to modify the solution at any time.

> Updates in Appian Designer should be done with caution by someone familiar with Appian development.

Modifying objects

To make sure you always have the default interfaces, expression rules, and process models to refer back to, we suggest performing the following steps if you need to customize the solution:

- Create copies of the interfaces, expression rules, and process models you want to update.
- Name them with the suffix of CUSTOM. For example, something different than `AS_IO_FM_UnderwritingSummary_CUSTOM`.
- Use your new objects instead of the original objects.

> Do not create copies CDTs. This would require you to update every reference to the CDT throughout the application. Instead, modify the default CDTs provided in the application.

Following this paradigm will reduce the time and effort required to upgrade or add an additional solution to your environment.

Step 1: Configure user groups and security

Configuring user groups and security is a good place to start. You will need to know:

- If your organization has any additional business roles not covered in the default groups.
- What users should be members of each group.

For more information on how to configure groups and security, see the following pages:

- See [Modifying Groups](#) to understand how to modify groups to fit your organization, as well as how to add users to the appropriate groups.
- See [Groups Reference Page](#) for more information about the default groups in Connected Underwriting and what they provide access to.
- See [Setting up Users and Groups](#) for instructions on adding users to groups from the front-end Connected Underwriting Settings site.

Step 2: Configure the email poller

> The email poller pulls files and emails directly from your Outlook inbox. It is important to ensure security best practices such as virus scanning are correctly configured in Outlook before installing the plugin to your environment.

For Connected Underwriting inbound email polling to function properly, an email account must be created. Follow the steps below to create a new MS accounts and share credentials.

> One inbox should be created for each Appian environment. The following steps must be completed for **each inbox**.

Creating an account

To create an inbox for inbound email polling:

1. Create a new account in Azure AD with desired username matching desired email address.
   - **Note**: A global admin may be required to do this.
2. Navigate to https://portal.azure.com/ and login with new account.
3. Search for **App Registrations**.
4. Create a new registration. O1. nce the application is created, navigate to **API permissions**.
5. Select **+ Add a permission**.
6. Select **Microsoft Graph**.
7. Select **Application Permissions**.
8. Select **Mail.ReadWrite**.
9. Add Permission.
10. Navigate back to API permissions page.
11. Select **Grant Admin Consent** for Appian.
    - **Note**: A global admin may be required to do this.
12. Navigate to **Certificates & Secrets**.
13. Select **+ New Client Secret**.
14. Add a description and select an expiration.
15. Save Value for your records
    - **Note**: This Value will be input as secret in Appian Third Party Credentials

Appian polling configuration

It is recommended to import the included Connected Underwriting Admin Console .zip package and import customization properties file prior to configuring the integration credentials. Details can be found in the [Installing CU](#) document.

After admin console import, the following steps can be repeated to change credentials:

1. From the desired environment, navigate to **Appian Admin Console**.
2. Navigate to **Third-Party Credentials** on the Admin Console. There should now be an item there labeled `isu-mail-poller-msgraph`.
3. Click **isu-mail-poller-msgraph** and provide the Azure secret, tenet, and applicationID configured when enabling a polling inbox.
   - **Note**: Do not modify `customMailPollerTableName` and `customMailPollerDocTableName` unless you intend to modify the Appian Poller table names (not recommended).
4. Click **SAVE**.
5. Once Admin Console configurations are complete, use Global Search to find and open `ISU_EMAIL_POLLER_CONF_TEXT_MAILBOX`. Update this constant to match the full email address that will be polled (i.e. test@microsoft.com).

For additional support on the Microsoft Email Poller, visit the [MS Graph Poller](#) on Appian Community.

Step 3: Configure document classification

Connected Underwriting uses Appian Native Intelligent Document Processing (IDP) Extraction capabilities to quickly classify extractable documents and then extract key data to save into the Submission. The solution supports extraction of key fields in the ACORD 125, ACORD 140 and ACORD 127 forms.

> Connected Underwriting provides IDP extraction support for up 125K documents per month. If you expect to exceed this document extraction threshold, contact Appian Support for assistance.

Upon installation, users with Designer access should run the `ISU Initial Training Classification AcordType` process model and complete the task to classify the form. This task only needs to be completed once.

To run this process model:

1. From the Appian Designer, click the **Insurance Underwriting (ISU)** application.
2. In the Search field, enter **ISU Initial Training Classification AcordType** and select it.
3. In the Appian Process Modeler window, select **File > Start Process for Debugging**.
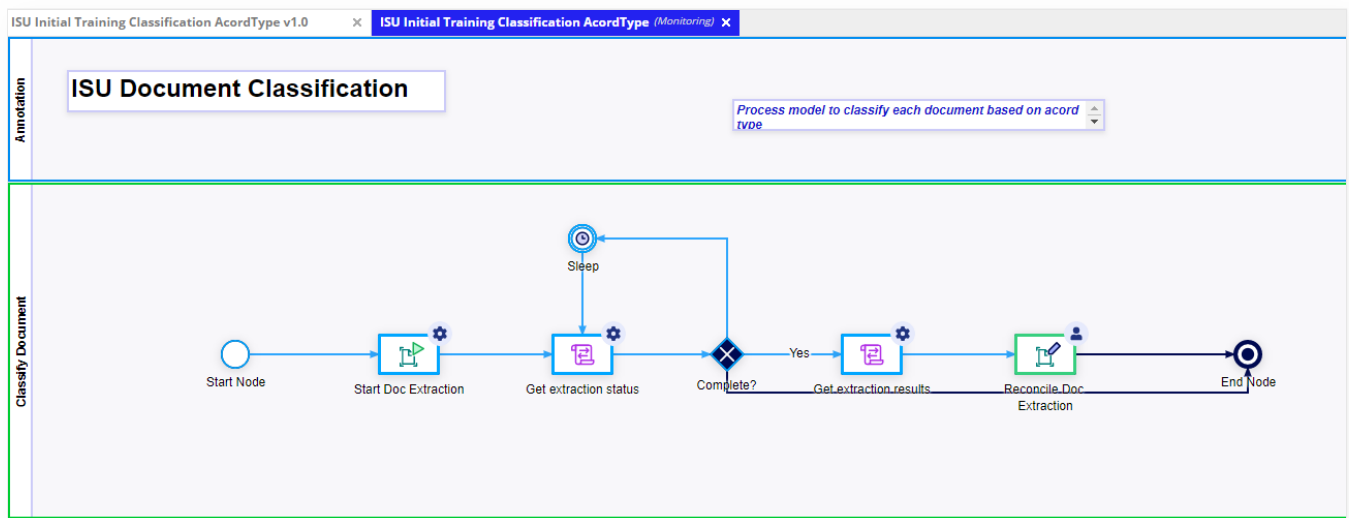
4. Select **Refresh** until the Reconcile Doc Extraction step is highlighted.
5. Navigate to Tempo. A Reconciliation task will be assigned to the user that initiated the process. Select the **Reconciliation task**.
   - **For Type**: Highlight the appropriate form type (ex: ACORD 125) by holding down **SHIFT** and selecting the appropriate text on the lower left hand corner of the first page of the pre-loaded document.
   - **For Version**: Highlight the appropriate version of the form (ex: (2016/03)) by holding down **SHIFT** and selecting the appropriate text on the lower left hand corner of the first page of the preloaded

document.

6. Click **Submit**.
7. Navigate back to the Process Modeler and click **Exit**.

Step 4: Create Scoring Tables and Submission Score Rules

After installing Connected Underwriting, business users can set up their scoring tables and submission score rules so that their submissions can have a score to help underwriters evaluate and triage what to focus on. To set up scoring tables and the submission score rules, please review [Managing Submission Score Tables](#).

There may be additional fields your organization would like to use with the Submission Score rules and scoring tables, or your organization may want to relabel some fields. For instructions on how to modify those fields, see the following pages:

- See [Configuring Scoring Set Fields](#) for instructions on how to add or modify the fields that appear in those areas.
- See the [Solutions Hub User Guide](#) for instructions on how to modify UI text.

Step 5: Import existing data

You can migrate data like customer and broker information into Connected Underwriting from other systems that your organization is using. This process is generally very unique and has its own nuances that depend on many factors.

[Migrating Customer and Broker Data](#) provides the general steps to move customers, and broker data into Connected Underwriting.

Migrating Customer and Broker Data

Introduction

After installing Connected Underwriting, you may need to migrate data from your organization's systems. This process is generally very unique and has its own nuances that depend on many factors.

This page provides general guidelines to help you migrate data from customers, brokers, broker offices, and documents.

Migrating customer data

To migrate data from customers, import data into the `ISU_T_CUSTOMER` table.

Migrating Broker and Broker Office data

To migrate data from Broker Offices, import data into the `ISU_T_BROKER_OFFICE` table. This table is a parent table to the `ISU_T_BROKER` table, as individual Brokers can be mapped to the same Broker Office. Import all related Broker data for each Broker Office into the `ISU_T_BROKER` table. Brokers that are not tied to a specific Broker Office can still be inserted into this table and simply not linked to a particular row in the `ISU_T_BROKER_OFFICE` table.

Connected Underwriting Architecture Overview

Introduction

This page outlines and explains the patterns developed by the Appian Solutions developers to make it easy to navigate and understand the application when making changes. You can find additional examples that show how to customize and modify your solution in the Modifying Connected Underwriting guides.

> For the purpose of this document, the terms Priority Scoring and Submission Scoring are used interchangeably and refer to the Submission Scoring rules and associated objects.

Connected Underwriting sites

Connected Underwriting has two key sites:

- **Connected Underwriting**: This is the primary site for all users of the solution. This is where users can view key records and take relevant actions to advance business workflows.
- **Connected Underwriting Settings**: This site is for business power users of the solution. The groups using this site can set key settings about how larger functionality is set within the solution.

Primary records and relationships

Connected Underwriting uses Appian records and record relationships to power the Underwriting processes.

Transactional record overview

The primary transactional record used throughout the solution is the **Submission** record.

The Submission record has relationships with multiple other, more minor transactional records, including one-to-one relationships with the following records:

- **Submission Decision**: This record represents the single decision an Underwriter may ultimately make for a Submission.
- **Threadset**: This record represents the link between Submissions and Messaging-related records.

The Submission record has one-to-many relationships with the following records:

- **Submission LOB**: This record represents the Lines of Business (LOB) a Submission is related to. This record has additional one-to-many relationships with other transactional records, depending on the LOB type the Submission is listed under. This record also has a relationship with the transactional **Priority Score Outcome** record, which is used to calculate priority for a particular Submission.

- **Submission Document**: This record represents various Documents that may be attached to a Submission.
- **Task**: This record represents Tasks that can be created and completed for a Submission.
- **Alert**: This record represents Alerts that may be automatically generated through user action with a Submission.
- **Submission Note**: This record represents Notes created by a user on a Submission.
- **Submission Watcher**: This record represents users who are watchers on a Submission.
- **Submission Event Audit**: This record represents distinct historical events/actions which have taken place on a Submission.

Sitting levels above the Submission record are the Customer, Broker, and Broker Office records. The Submission record has a many-to-one relationship with both the Customer and Broker records, and the Broker record has a many-to-one relationship with the Broker Office records:

- **Customer**: This record represents the actual Customer which a Submission is for.
- **Broker**: This record represents the Broker who submitted the Submission on behalf of the Customer.
- **Broker Office**: This record represents the Broker Office for a specific Broker.

In addition to these, there exists a variety of transactional records relating to the Messaging module. The key transactional records involved with Messaging functionality are the following:

- **Thread**: This record represents the sole thread relating to the corresponding Threadset for a Submission.
- **Message**: This record represents a single message in any thread for a Submission.
- **Thread Recipient**: This record represents all current recipients for a specific messaging thread for a Submission.
- **Message Recipient**: This record represents the specific recipients for a Message at the time a message was sent.
- **Message Attachment**: This record represents attachments for a Message.

Lastly, there exists transactional records relating to the email and IDP workflow for this application. These records host attempted IDP extractions and exception flows for emails and documents that come into the application which could not be processed automatically. These include:

- **Message Exception**: This record holds exceptions relating to incoming emails which could not be attached to a particular Submission.
- **Extraction Reconciliation Exception**: This record holds reconciliation exceptions for documents that need to be manually reconciled by a user before final information is extracted and saved from a document that underwent IDP extraction.
- **Classification Exception**: This record holds exceptions for documents that need to be classified correctly after uncertain or failed IDP classification of documents.
- **Submission Document Extraction**: This record holds the extracted, reconciled values from a document extraction attempt.

Reference record overview

In addition to the transactional records described above, Connected Underwriting leverages the use of Reference records to hold data to be displayed and stored for transactional purposes.

The primary record is the Reference Data record, which holds unique codes and corresponding front-end display labels for such data. This record should strictly be inserted into and updated by developers, and front-end control of this record should be limited only to data reads.

Individual records also exist for more complicated pieces of reference data, which capture additional pieces of metadata that the Reference Data record cannot capture on its own. These types of reference tables include:

- **Reference Document Type**: This record contains reference data for Submission Document types and information about the extractability of such documents.
- **Reference Status**: This record contains reference data for different statuses of a Submission and whether certain types of Submission edits are allowed.

There also exist reference records which may be interacted with and controlled by business administrators through the Connected Underwriting Settings page. These reference records provide a means for controlling larger business logic in processes, and though they are transactional in the sense that front-end users have control over at least some of the data in them, they are named and treated as reference records considering their larger business implications. More specifically, these records are used in the configuration of Alerts and Priority Score and Scoring Sets:

- **Reference Alert Configuration, Alert Set, and Alert Condition**: The set of records used for controlling how Alerts are generated for a Submission.
- **Reference Scoring Set, Scoring Condition, and Scoring Set LOB**: The set of records used for holding information relating to Scoring Tables.
- **Reference Priority Set and Priority-Scoring Map**: The set of records used for holding Submission Scoring Rules and mapping individual Scoring Sets to a Priority Scoring rule.

Usage of Records and Limitations

Much of Connected Underwriting???s technical design and functionality is driven by the core records described above. Records, and specifically, synced records, are used consistently in expressions, interfaces, and process models, instead of CDTs; both data writes and data reads leverage record data types.

As of Appian 22.3, there exists a 2,000,000 row limit that can be synced on a synced record. Connected Underwriting currently assumes that volumes should be low enough so that no more than this number of rows will exist for any particular table.

In addition to this, records often use a source filter to prevent soft-deleted data from the database from syncing in an additional attempt to keep data volumes under this maximum. There are also limitations on the size of fields which can be synced through records. Because this application contains a few long text fields on particular tables which exceed this size, these fields are read and written using CDTs.

Naming conventions

The following items demonstrate Connected Underwriting???s standard naming conventions for objects and tables related to the solution:

CDT

- Pascal casing with appropriate prefixes.

Examples

ISU_(CDTName)

- `ISU_T_InboundEmailAttachmentMSGraph`
- `ISU_UNMAPPED_DynamicContext`

Record

- Snake case with proper naming.
- ???Record??? prefix always used.
- ???R??? prefix used for reference records.

Examples

ISU_Record_(Record_Name)

- `ISU_Record_Submission`

- `ISU_Record_Broker_Office`
- `ISU_Record_R_Alert_Config`

Expression

- Camel casing.

Examples

ISU_(expressionRuleName)

- `ISU_createRecordSubmission`
- `ISU_updatePropertySubjectFks`

Interface

- Camel casing.

Examples

ISU_(interfaceName)

- `ISU_tasksList`
- `ISU_completeMessageException`

Querying

- Camel casing with appropriate ???QR??? or ???QE??? prefix, depending on entity or record being queried.

Examples

ISU_(QR or QE)_get(Entities)

- `ISU_QR_getSubmissionWatchers`
- `ISU_QE_getInboundEmailMsGraphBody`

Process Model

- Proper naming.

Examples

ISU (Process Model Name)

- `ISU Extract Document`
- `ISU Edit Auto Risk Info`

Site

- Snake case with proper naming.

Examples

ISU_Site_(SiteName)

- `ISU_Site_ConnectedUnderwriting`

Constant

- Screaming snake case with appropriate type of constant as prefix.

Examples

ISU_(TYPE)_(CONSTANT_NAME)

- `ISU_REF_CODE_DOCUMENT_TYPE_PACKET`
- `ISU_TXT_NEW_LINE`

Folder

- Proper naming.

Examples

ISU (Folder Name)

- `ISU Branding Files`
- `ISU Process Reports`

Group

- Proper naming

Examples

ISU (Group Name)

- `ISU Administrators`
- `ISU Managers`

Data Store

- Proper naming.

Examples

ISU (Data Store Name)

- `ISU Transactional Data`
- `ISU Reference Data`

Database Tables and Columns

- Screaming snake case with ???T??? or ???R??? prefix for tables.

Examples

ISU_(T or R)_(TABLE_NAME)

- `ISU_T_SUBMISSION_LOB`

- `ISU_R_DATA`
- `SUBMISSION_ID`

Variables and Rule Inputs

- Camel casing.
- Use plural name to indicate an array.

Examples

(variableName) or (variableNames>)

- submissionLob
- submissionDocuments

Field Names

- Camel casing.

Examples

(fieldName)

- `submissionId`
- `createdBy`

Prefixes

Specific prefixes are used for consistency and give a high level understanding of the object or database table. Prefixes are used to indicate where the object is used and what the object is used for.

ISU is the prefix for all objects and database tables created and included in Connected Underwriting. This will help differentiate objects that were shipped as part of the solution.

> It is recommended that implementation teams use a distinct prefix for custom objects.

- Database table names follow the pattern: ISU_[Table Type]*[Module]*[Table Name].
- The Appian objects in the application follow the pattern: ISU_[Module]*[ObjectType]*[ObjectDescription].

Module Prefixes

Module prefixes indicate that certain tables or objects all relate to the same functionality.

Currently, the only module used in Connected Underwriting is the Messaging module. This module provides the functionality for creating and attaching user-generated messages to a particular Submission. Objects and tables related to this module use the prefix `MSG`.

Table Type Prefixes

Table type prefixes are specific to the database tables and indicate what the table is used for.

- **Reference (R)**: Tables holding data that is relatively static and generally used for populating other fields or tables.
- **Transactional (T)**: Tables holding data that is often modified and created by front-end users.

The ???R??? prefix is used additionally in the naming convention for defining corresponding record types, but transactional records drop the ???T??? prefix that should be contained in their corresponding database table.

Object Type Additional Prefixes

Additional prefixes may be appended to objects and constants to help better indicate what type of object is being used and to aid the user in understanding what an object is before opening it.

Examples of additional prefixes and their object types are:

PREFIX	OBJECT TYPE
AGG	Aggregation
CP	Component
CONF	Configuration
DOC	Document
DSE	Data Store Entity
ENUM	Designer defined enumeration
EXTRACTION	Indicates a CDT that is used for document extraction via IDP
GRP	Group
INT	Integer
PM	Process Model
REF_CODE	Reference code from a referential database table
REF_TYPE	Reference type from the main Reference Data database table
TXT	Text
UNMAPPED	Used to indicate a CDT is not mapped to any database table
USER_ACTION	A type of user action; often used for button labels
UT	Utility function

Common Objects

Common Objects are used consistently across the application to help with logic or formatting. These objects are prefixed with C0.

> Don't change CO objects, as they are used multiple places and can cause issues.

Deprecated Objects

Deprecated Objects may no longer be used within the application, but are included due to potential application upgrade conflicts. These objects will all be prefixed with `ISU_DEPRECATED`.

Internationalization

Connected Underwriting can be translated into multiple languages. Note that certain UI text for Connected Underwriting interfaces are contained in bundle files. For example, labels, validation messages, tooltips, and instructional text all exist in bundle files. To update this UI text, you update the associated bundle file.

Note that some dropdown list values are contained in reference data tables. Keep in mind that user-entered text always displays in whatever language the user entered.

Using Bundle Files

In order to display UI text, Connected Underwriting loads the correct language bundle (or document file) based on the default language the user has selected. It is important that each default language available for users has a corresponding set of bundle files. For example, if users can select English (United States) or Espa??ol from settings, there must be corresponding bundle files for each of these languages.

For interfaces, you need to load the entire bundle onto the form to load the UI text onto the interface. You can do this by using a local variable with the `rule!ISU_UT_loadI18nBundles` expression rule.

The only parameter you need to pass in is called triggerRefresh. Under most circumstances, triggerRefresh can be passed as now().

The triggerRefresh parameter is only needed in cases where internationalization data needs to be reloaded after the user completes an action. For example, after a user adds new dropdown values from the front end, the triggerRefresh should be a variable updated on completion of that action.

EXAMPLE

```
1  a!localVariables(
2    local!i18nData: rule!ISU_UT_loadI18nBundles(
3      triggerRefresh: now()
4    )
5  ???
6  )
```

The `rule!ISU_UT_loadI18nBundles` expression rule will automatically take into account the user's language and load the correct UI text. It is recommended that you call this rule in the main form and pass the UI text data to the sub-interfaces as a rule input. Name the rule input i18nData and make the data type anyType.

To display UI text on an interface, for the parameter that specifies the text to display, such as the label parameter, use the `rule!ISU_CO_I18N_UT_displayLabel` expression rule. In the following example, the UI will display ???Country???, which is the value of the `lbl_Country` label key in the bundle file.

The value of the bundleKey parameter is created using:

- The name of the bundle file, without the language suffix (en_us). For example: `AS.ISU.AllBundles`.
- The label key for the value that you want to display. For example: `lbl_Country`.
  - The bundleKey parameter in this example would look like: `AS.ISU.AllBundles.lbl_Country`.

EXAMPLE

```
1  local!i18nData:rule!ISU_UT_loadI18nBundles(triggerRefresh: now()),
2    a!formLayout(
3      label: rule!ISU_CO_I18N_UT_displayLabel(
4        i18nData: local!i18nData,
5        bundleKey: "AS.ISU.AllBundles.lbl_Country"
6      )
7    )
```

Updating Bundle File Text

To update the text or languages in the bundle files, use the Solutions Customization Suite.

It is also possible to download the bundle file documents directly and update them manually. Be sure to update a bundle file for each language.

Default Bundle Files

The bundle files that are shipped with Connected Underwriting are as follows, with the prefix explanations above also applying to these bundle files:

- `AS.ISU.AllBundles`
- `AS.MSG.AllBundles`

Solutions Hub Overview

How do I tailor a solution for my needs?

There are several activities that can be performed to tailor a solution to meet the specific needs of your organization. The table below describes the difference between a configuration and customization activity, and where to perform each type of activity within the solution.

Activity	Description	Where is it Performed?
Configuration	Adapting a solution for a range of scenarios by modifying the solution's out-of-the-box, front-end settings. Configurations do not involve code changes.	In Solution
Supported Customization	Customizing a solution for a range of scenarios by adding code via the Solutions Hub. Supported customizations do not modify the solution's source code but are performed in accordance with the customization steps and are upgrade friendly.	Solutions Hub
Customization	Changing a solution for a range of scenarios by modifying or extending the solution's code. Customizations are first implemented in a development environment and typically not supported by available configurations.	Appian Designer

Wherever possible, you should always explore configuration changes first, followed by Supported Customization via the Solutions Hub. If needed, and as a last resort, customize your solution via Appian Designer.

What is the Solutions Hub?

The Solutions Hub is an Appian site that enables Low-Code Developers to perform Supported Customizations on a compatible solution built on the Appian platform. These types of customizations enable the solution to meet the needs of their organization while preserving a clean upgrade path.

Supported Customization is intended for use in a development environment only, where these types of customizations should be performed and tested before being promoted to a higher environment.

Configuration changes are performed within the solution itself. The Solutions Hub also offers a Configuration Export & Import capability, which allows a set of solution configuration data to be exported from one Appian environment and imported into another. This capability is available in all environments that have compatible solutions built on the Appian platform.

Just as Amazon allows small business owners to set up and customize their own online storefront, the Solutions Hub allows you to truly make an Appian solution your own so that it meets the needs of your specific use case.

Supported Customizations made using the Solutions Hub are preserved when you upgrade to a new solution version. This means that when you upgrade your Appian Solution to get the new features, your previous customizations remain intact. This allows your organization to take on a newly released solution version as soon as it is available.

When should I use the Solutions Hub?

It is important to understand when you should utilize the Solutions Hub over customizing directly in Appian Designer.

Appian recommends using the Solutions Hub when:

- You want to modify your solution's branding.
- You want to modify text in the languages that ship with your solution.
- You want to add new text to support a customization.
- You want to modify images that ship with the solution.
- You want to add new user interface components, pages, or elements to the solution, and there's an applicable user interface customization template that fits your use case.
- You want to extend a process that ships with the solution, and there's an applicable workflow customization template that fits your use case.
- You want to adjust business logic that ships with the solution, and there's an applicable business logic customization template that fits your use case.
- You want to move a set of solutions configuration data from one Appian environment to another.
- **You want to preserve customizations and not have to reapply them each time you upgrade your solution!**

Each solution supports a varying degree of these use cases. You can find all of the available supported customizations for your solution by opening up the Solutions Hub on a development instance of your solution. If you need to install the latest version of the Solutions Hub, you can follow the steps in the installation guide.

Solutions Hub Installation Guide

Introduction

The Solutions Hub comes pre-installed on your environments with any new solution offering or upgrade of an existing solution via Appian Cloud.

This page provides instructions for installing the Solutions Hub. Manual install is necessary if you:

- Are an on-premise customer.
- Want to receive the latest version and features of the Solutions Hub, but you haven't recently upgraded, or do not plan on upgrading, your Appian solution.
- Want to install the Solutions Hub on another environment outside of your Cloud-provisioned environments.

Technical support

Please call the dedicated solution help line for your region if at any point you need assistance or have questions:

- US: +1 (703) 420-1311
- AUS: +61 2850 34152
- UK: +44 20 3929 3748

All Appian Solution customers can also email Appian Support at support@appian.com or log in to [Appian Community](#) and open a support case to request assistance. Information on Solutions Support Services can be found [here](#).

System requirements

- Appian 22.2 or later.
- A supported [web browser](#).

Step 1: Download software package

To download the software package (as an existing Customer or Partner):

1. Go to the **SUPPORT** tab on [My Appian](#).
2. Click **DOWNLOADS**.
3. Click **SOLUTIONS**.
4. Find and open "Solutions Hub v22.2.1.2.X", where "X" refers to the latest hotfix increment on this version's branch. Be sure to stay up to date on the latest hotfix increment by regularly visiting this page.
5. In **Downloads**, click the **Solutions Hub** installer link.
6. Click **PROCEED** to agree to the license agreement.
7. Click **Solutions Hub v22.2.1.2.X** to download the ZIP file.
8. Unzip `SolutionsHubv1.2.X.zip` to access the software installation files.

Locate the following installation files, some of which will be used in later steps.

- `appian-solutions-1.27.X.jar`
- `SolutionsHubv1.2.X.zip`
- `SolutionsHubv1.2.X-AdminConsole.zip`

Step 2: Deploy Plug-ins

The Solutions Hub relies on the *latest* version of the Appian Solutions Plug-in to be deployed in the target environment before the application can be imported. This plug-in is also a prerequisite for most Appian solutions, so it may already be installed on the target environment.

- [Appian Solutions Plug-in](#) (v1.27.X+)

Appian Cloud Environments

To deploy the plug-in for an Appian Cloud environment:

1. In the target environment, log in as the deployment user.
2. Navigate to the **Admin Console**.
3. On the left side of the console, click **Plug-ins**.
4. Click **ADD PLUG-INS**.
5. Search for the plug-in by name. For example, `Appian Solutions Plug-in`.

Available Plug-ins

Search

Appian Solutions

Name	Description	Type
Appian Solutions	Plug-in with functions and smart services to be used across Appian Solutions	Plug-in (Function & Smart Service)

All plug-ins are use-at-your-own-risk, and their functionality is not guaranteed by Appian. All plug-ins should be tested thoroughly. For more details about individual plug-ins, visit the Appian AppMarket.

CLOSE

6. Click on the plug-in name.
7. Click **DEPLOY**.

Appian Solutions

Re-deploying plug-ins that are already enabled on this site could take up to a few minutes.

Plug-in with functions and smart services to be used across Appian SolutionsThis plugin contains functions and smart services used across solutions and exclusively for solution applications.

Contributed By
dan.tobias

Component Type
Plug-in (Function & Smart Service)

Version
1.12.0

Last Updated
2021-07-27

CANCEL

DEPLOY

Self-Managed Environments

To deploy the plug-in for a self-managed environment:

1. Retrieve the latest version of the Appian Solutions Plug-in from the AppMarket. Alternatively, you can also use the `appian-solutions-1.27.X.jar` file downloaded in Step 1.
2. Follow the Deploying Plug-ins instructions to deploy the plug-in file.

Step 3: Import the application

Import the application into your target environment.

1. In the target environment, log in as the deployment user.
2. Navigate to the **Appian Designer**.
3. Click **IMPORT**.

4. Click **UPLOAD** and choose the `SolutionsHubv1.2.X.zip` file that was downloaded in <u>Step 1</u>.
5. Click **IMPORT PACKAGE**.

Step 4: Set User Start Pages

By default, the start pages contained in the `SolutionsHubv1.2.X-AdminConsole.zip` file set the Solutions Hub site as the landing page and user start page for all Designers and System Administrators.

If you already have user start pages configured, we recommend skipping this step. If you have not already configured your user start pages, we recommend importing this file.

Follow the <u>Importing Admin Console Settings</u> instructions to import this file.

Next steps

After you finish installing the application, see the <u>User Guide</u> to learn how to use the Solutions Hub.

Solutions Hub User Guide

The Solutions Hub is a standalone site that offers a number of features that allow you to customize your solutions from a centralized dashboard. You can easily access the site from your solution's development environment. If the Solutions Hub is not installed on your development environment, you can follow the <u>installation guide</u> to install the suite.

The Solutions Hub User Guide is your quick reference guide to understanding of all of the features the Solutions Hub has to offer and how to use them to customize different components of your solutions.

Landing page

When you open the Solutions Hub, you'll see all of the solutions installed on the environment that support customization through the Solutions Hub.
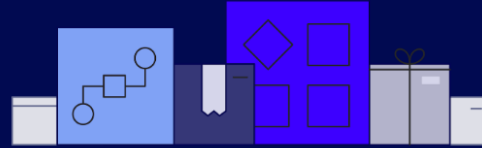
To access all of the available customizations for a given solution, click on the solution. If the solution is part of a solution "suite", then an additional **MANAGE SUITE CONTENT** button appears. For example, the Financial Services solution suite contains the Connected Onboarding, Connected Servicing, and Know Your Customer solutions. Any customizations common to all Financial Services solutions can be accessed by clicking the **MANAGE SUITE CONTENT** button.

Once in the context of a particular solution, you will be greeted with an overview of configuration & customization opportunities available for your solution. From here, you'll have the tools you need to configure & customize your Appian solution! There are links to the solution's configuration site(s), navigation tabs to each type of supported customization, and lastly a direct link to Appian Designer.
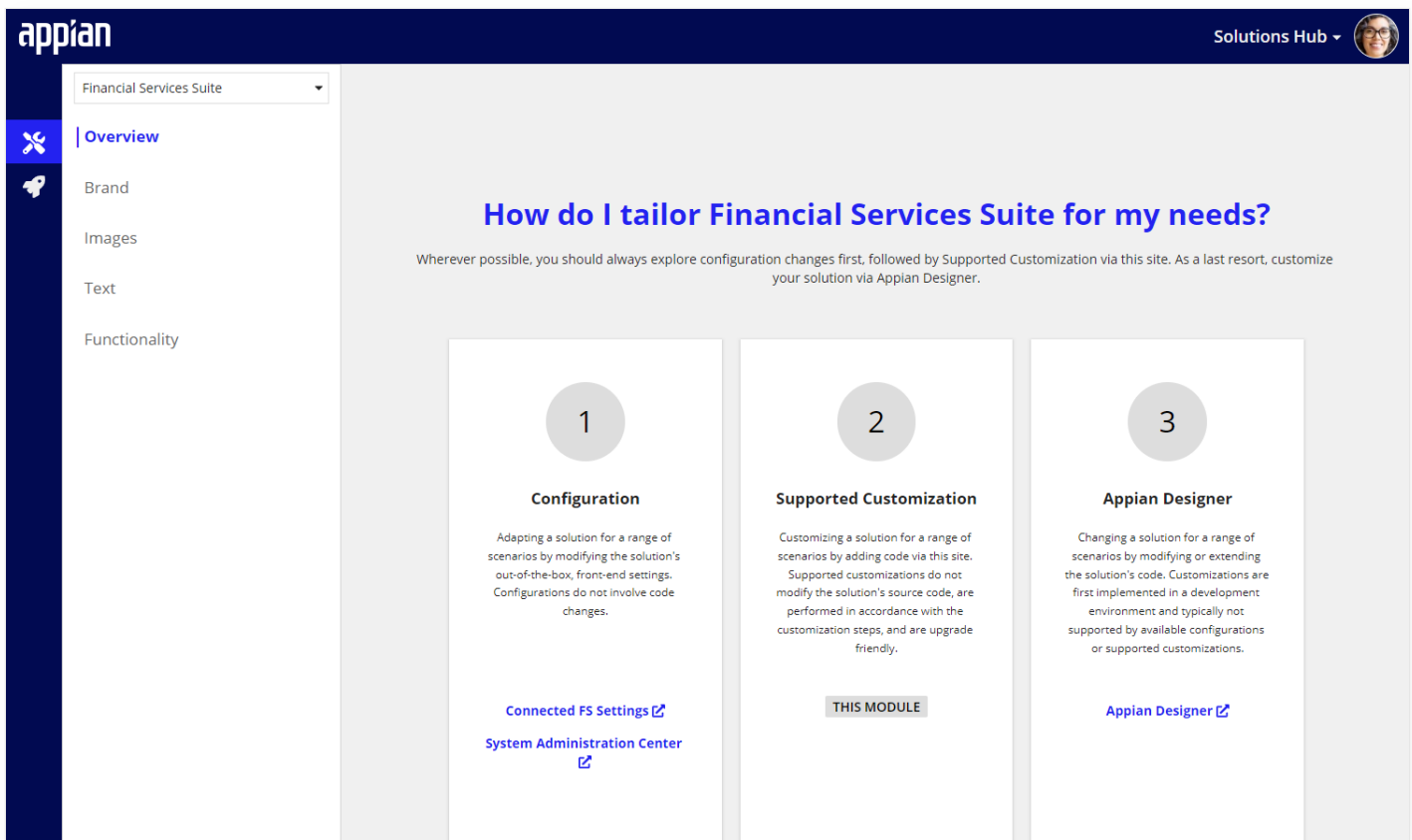
You can easily navigate context between solutions within the solution suite by selecting the desired solution from the dropdown.
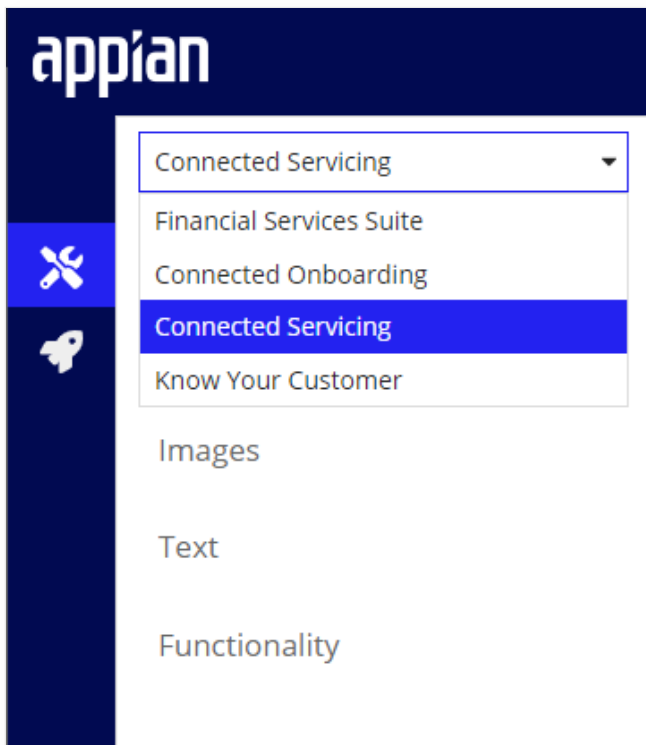
Types of customizations available

Connected Underwriting 22.4.1.0 supports the following customization categories. Each solution offers a varying degree of supported customization templates within each category.

Branding

The branding section allows you to customize your solution to match your organization's name, logos, and colors.

You won't have to go into multiple site objects on the back-end to configure the branding across your solution. It's all taken care of via the Solutions Hub. The best part? When you use the suite to customize the branding for your solution, you won't have to reapply the customizations when you upgrade your solution to the latest version.

The **BRAND** section allows you to quickly and easily customize the following three brand elements for a selected solution:

- Organization*
- Logos
- Colors

Branding changes made here impact the selected solution only, they do not affect the Solutions Hub branding. It's important to navigate to each solution's sites to view any branding changes you made.

Note: the organization name is visible only if your solution supports it.

Organization

The organization name should be reflective of your organization or company name.

This value is used in instances where the solution needs to refer to your organization. If left blank, the default name (typically the solution name) will take effect.

To update your organization name, click **UPDATE**. The UPDATE ORGANIZATION dialog will open, which allows you to update your organization name and save the changes.

Logos

You can update logos to match your brand. Logos include the site logo that end users see within the solution's sites, as well as the favicon that appears in a user's active Web browser tab.

To update the logos in your solution, click **UPDATE**. The UPDATE LOGOS dialog displays with the current file for each image. Hover over the image you want to replace, and click **X** to remove the current file. Then, simply upload a new image. Site logo file types must be PNG. Favicon file types must be ICO. Be sure to save your changes when you are finished updating your logo or favicon file.

Colors

The branding section gives you control over the color palette that is used in the solution. Colors are used throughout your solution, from accenting selected items, to providing color to charts. This offers you the ability to set component colors for your solution, such as:

- Accent Color
- Selected Highlight Color
- Navigation Bar Color
- Loading Bar Color

If a solution utilizes charts, you can even set the color palette that is used to render the charts. An extended range of colors beyond the base set listed above may be available for certain solutions.

To modify the colors in your solution, click **UPDATE**. The UPDATE COLORS dialog appears, which allows you to change the color of each presented field. Colors must be entered as valid hex codes.

Chart colors include pre-set color schemes, or you can enter your own set of hex codes by selecting **CUSTOM**

Once you have made your edits, click **UPDATE** to save your changes.

Text

The Solutions Hub provides a quick and comprehensive means to customize the text that ships with a solution without impacting future upgrades. This includes editing text that comes with the solution and adding new text.

Within the Solutions Customization Suite, navigate to **CONFIGURE & CUSTOMIZE –> TEXT**.
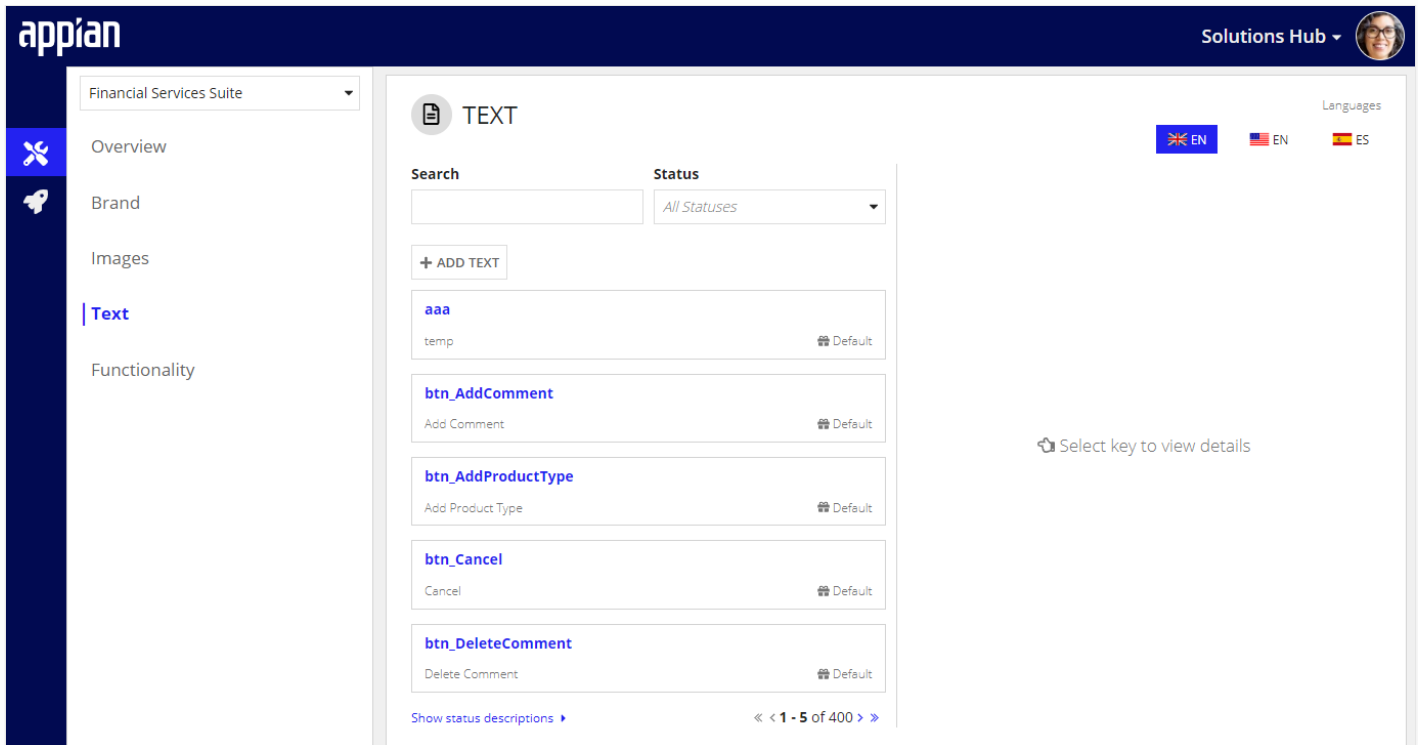
Using the language bar, first select the language for which you want to make changes. By default, English (en_US) is selected. Available languages include any that ship with the solution, or languages for which you added support.
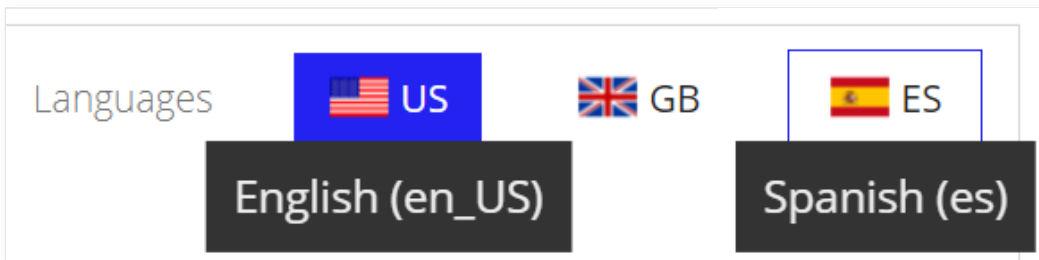
Once a language is selected, a grid shows all of the text within the solution for that language. The key, text, and status are shown on each card:
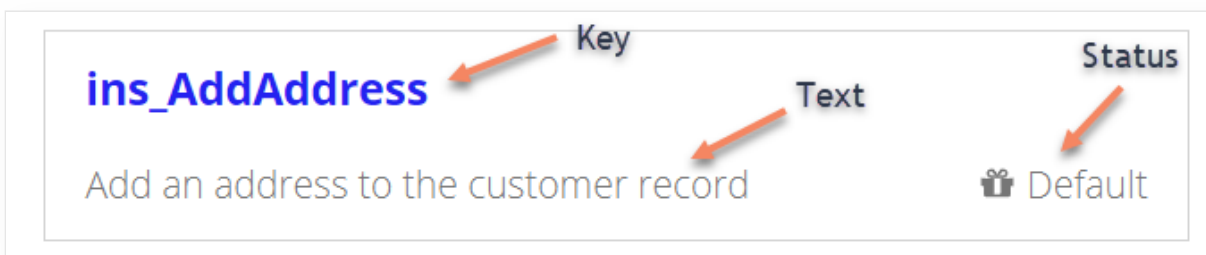
To narrow down the text set, there is a search component that allows full or partial searches on either the text key or value.

A status filter allows for easy filtering of the results. Text can have one of three statuses:

- **Default**: Text that is set to its out of the box value.

- **Edited**: Text that is modified from its default value.
- **Custom**: Text that has been added by a customer.
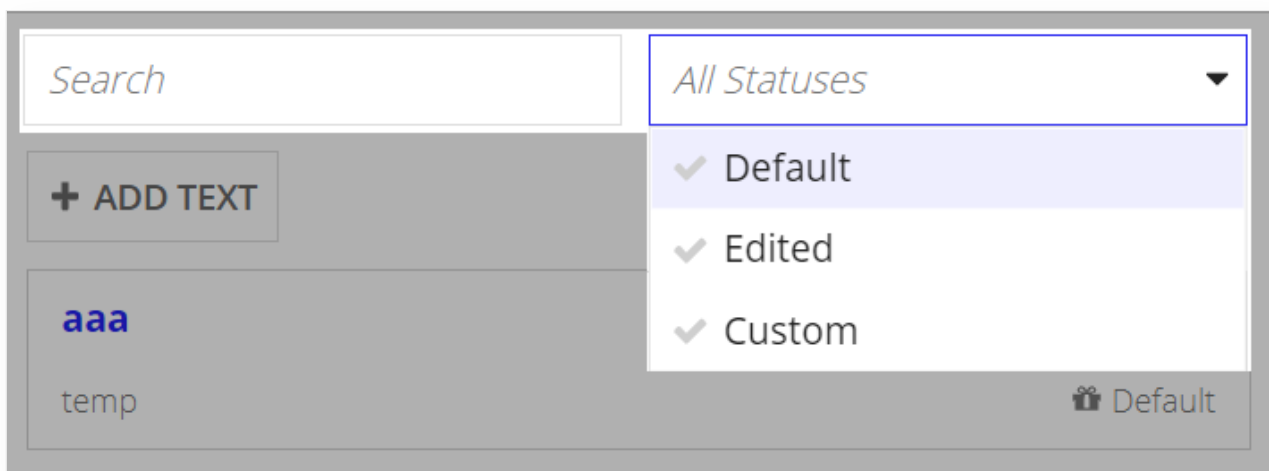
When a text card is selected, additional attributes can be viewed:

- **Key**: This is the unique identifier for a piece of text within a bundle file; the key appears on the top of the text card and the details section.
- **Text**: The value the text is currently set to and how it shows up to end users when the key is called.
- **Status**: Identifies the *current* status of the text.
- **Language**: This is the locale that this bundle file represents (e.g., en_US for English - United States).
- **Bundle Folder**: This is the Appian folder that contains the bundle file where the text is stored.
- **Bundle File**: This is the properties file that contains the text being viewed. The date and time displayed is when the file was last updated.

Editing text

To modify the text value, select a text card in the grid, and click **UPDATE**.

From here you can change the value of the text to your choosing. Click **UPDATE** to commit the change.

Adding custom text

To add new text to the solution, click **ADD TEXT**.

An in-line form appears. Enter a unique key that will serve as the reference to this text when calling it in your custom expressions, followed by the text value. If there are multiple bundle files present in the solution, you will first need to select the applicable one.

Click **SAVE**. A confirmation dialog indicates that the text was added successfully.
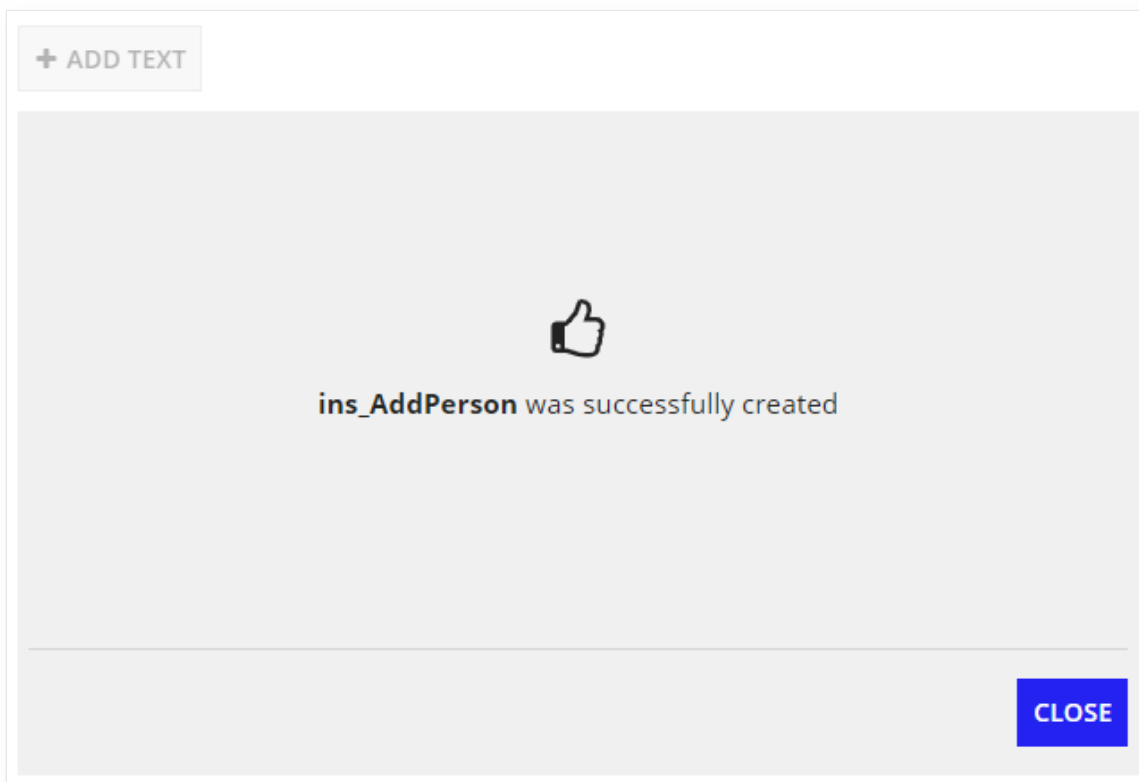
Reverting text to default

There may be times when you want to change text back to its default value. Click into the text card of the edited text that you want to revert.

Click **REVERT TO DEFAULT** and confirm that you would like to make the change. This action cannot be undone, though you can always edit the text again if desired.

Deleting custom text

There may be times when you no longer need the custom text that you added to the solution. Maybe the solution's latest version now ships with a feature that covers the use case of a customized report.

In these instances, you can delete custom text by clicking into a custom text card.

Click **DELETE** and confirm that you would like to delete the text. This action cannot be undone.
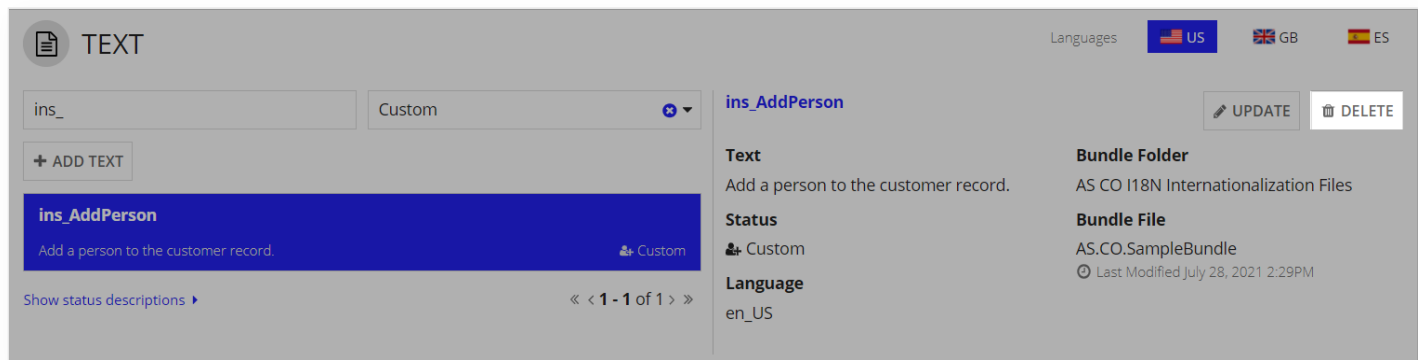
It is important to know that deleting custom text does not mean that any customized functionality in which the text is used is also deleted. Be sure you delete or remove access to any customized front-end reports, records, or sites if you intend to fully restrict access to a former customization.

Working with Arguments

In `[%1] is currently closed`, `[%1]` is an argument. When working with arguments, keep the following in mind:

- If the default label does not have arguments, your custom label can not have arguments.
- If the default label does have arguments, your custom label can have arguments, but does not have to.
  - Your custom label cannot use different arguments and cannot use more arguments than the default label.
- Make sure the syntax of the translated value stays the same as the default. For example, use [%1], not ###1### or {1}.

Functional customizations

This section outlines the methodology for performing, editing, and reverting functional customizations.

Performing a customization

To perform a customization, find the supported customization template that best matches your customization use case. Navigate to **CONFIGURE & CUSTOMIZE –> FUNCTIONALITY** within the context of the solution you want to customize.

The title and description of the supported customization template provide contextual clues as to where in the solution the customization occurs.

For example, let's say you want to customize your solution's landing page so that it includes a link to custom content. On the existing landing page, shown below, you want to add a new "Training" link.
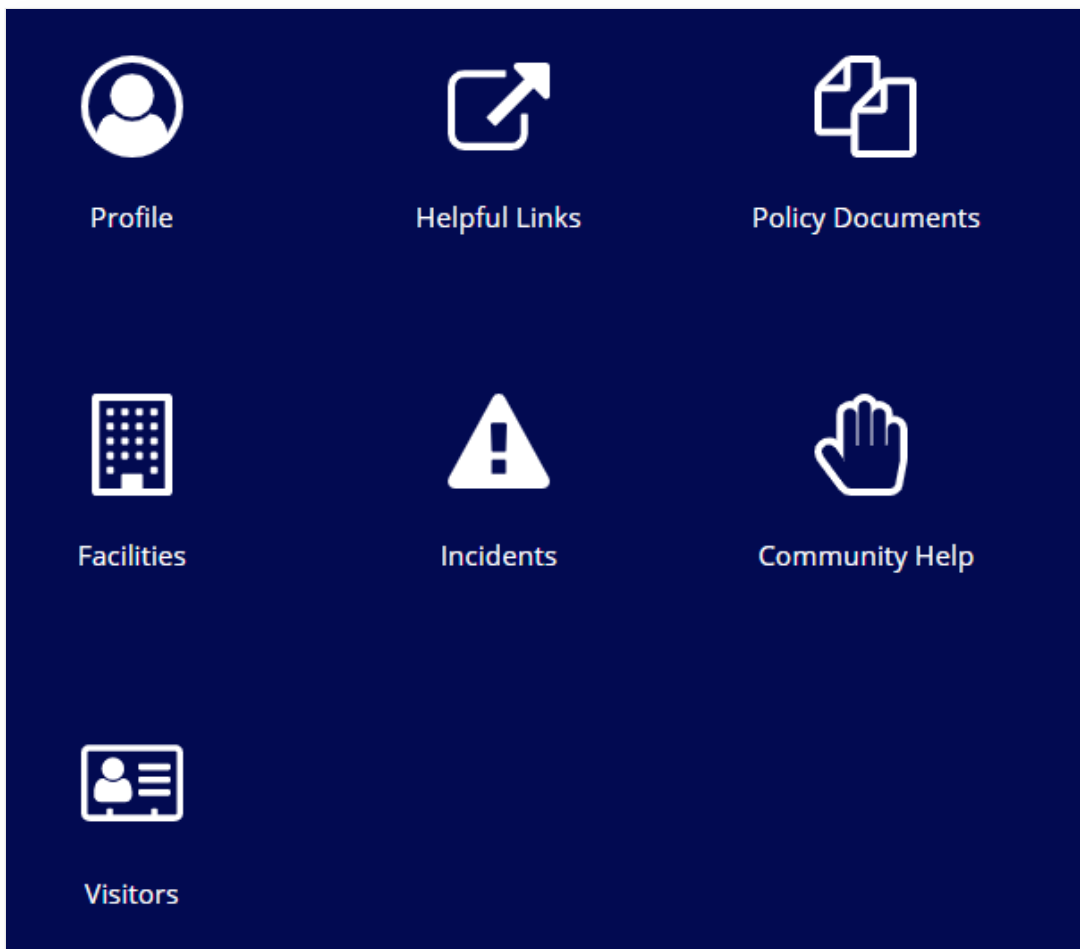
After searching the available customization templates, and finding the template you want to customize, click **CUSTOMIZE**.

A confirmation dialog appears, indicating that a new object will be created on the backend. Click **YES**.

Are you sure?

A new rule will be created with the suffix "_custom". This rule will execute in lieu of the "_default" rule.

NO   YES

When the customization template state refreshes, as shown below, click **EDIT** to begin customizing.

Home Page Quick Links

Renders quick link cards at the bottom of the Home Page, one quick link card for each configuration. Custom quick link cards are rendered after the quick link cards that are standard with the application.

Custom version

✏ EDIT   ⟲ REVERT TO DEFAULT

A new tab opens in Appian Designer that allows you to begin customizing the code. You'll see detailed how-to instructions on performing the customization within the commented code.

```
        ITA_HomePageQuickLinks_v1_custom

    2
    3   DESCRIPTION: Renders a custom quick link card at the bottom of the Home Page for each item in the a
    4   Custom quick link cards display after the quick link cards that ship with the solution.
    5
    6   DEFAULT BEHAVIOR: This rule contains no custom quick links by default. Quick links that ship with t
    7
    8   CUSTOMIZATION STEPS: For each custom quick link card you'd like to display on the Home Page, includ
    9   Use the commented Quick Link Template to configure a custom quick link.
   10
   11
   12   PARAMETERS:
   13
   14   generalBundle: A dictionary of key-value pairs for front-end labels. Custom labels can be
   15   added following the Custom Bundle documentation:
   16   https://community.appian.com/w/the-appian-playbook/2228/workforce-safety-v8-1-custom-bundle-file-co
   17
   18
   19   EXPECTED RETURN TYPE: Map?list
   20
   21   */
```

You'll see the modifiable code block with a defined example commented out.

```
   23 ▾  cast(
   24 ▾    'type!{http://www.appian.com/ae/types/2009}Map?list',
   25 ▾    {
   26
   27 ▾      /*Quick Link Template - sample configuration:*/
   28
   29 ▾      /*a!map(*/
   30 ▾        /*label: "My Link Label",*/
   31 ▾        /*icon: "icon",*/
   32 ▾        /*showWhen: true,*/
   33 ▾        /*link: a!safeLink(uri: "https://www.google.com")*/
   34 ▾      /*),*/
   35
   36 ▾      /*Note, the link parameter can return one of: */
   37 ▾        /*a!documentDownloadLink()*/
   38 ▾        /*a!processTaskLink() */
   39 ▾        /*a!recordLink() */
   40 ▾        /*a!reportLink() */
   41 ▾        /*a!safeLink()*/
   42 ▾        /*a!startProcessLink()*/
   43 ▾        /*a!userRecordLink()*/
   44
   45 ▾      /*Add 0, 1, or multiple links to this array*/
   46     }
   47   )
```

Use the detailed steps and example to perform your customization. When you are finished, save your changes.

View the example below to see how we customized a new ???Training??? link to the landing page.

```
cast(
  'type!{http://www.appian.com/ae/types/2009}Map?list',
  {
    a!map(
      label: "Training",
      icon: "graduation-cap",
      showWhen: true,
      link: a!safeLink(uri: "https://www.appian.com/university")
    )

    /*Quick Link Template - sample configuration:*/

    /*a!map(*/
      /*label: "My Link Label",*/
      /*icon: "icon",*/
      /*showWhen: true,*/
      /*link: a!safeLink(uri: "https://www.google.com")*/
    /*),*/
```

Finally, navigate to the area in your solution where you expect the customization to appear and verify the results. In our example, we can see that the new ???Training??? link was successfully added to the landing page. When the user clicks the link, they are redirected to the URL we specified in the customization.
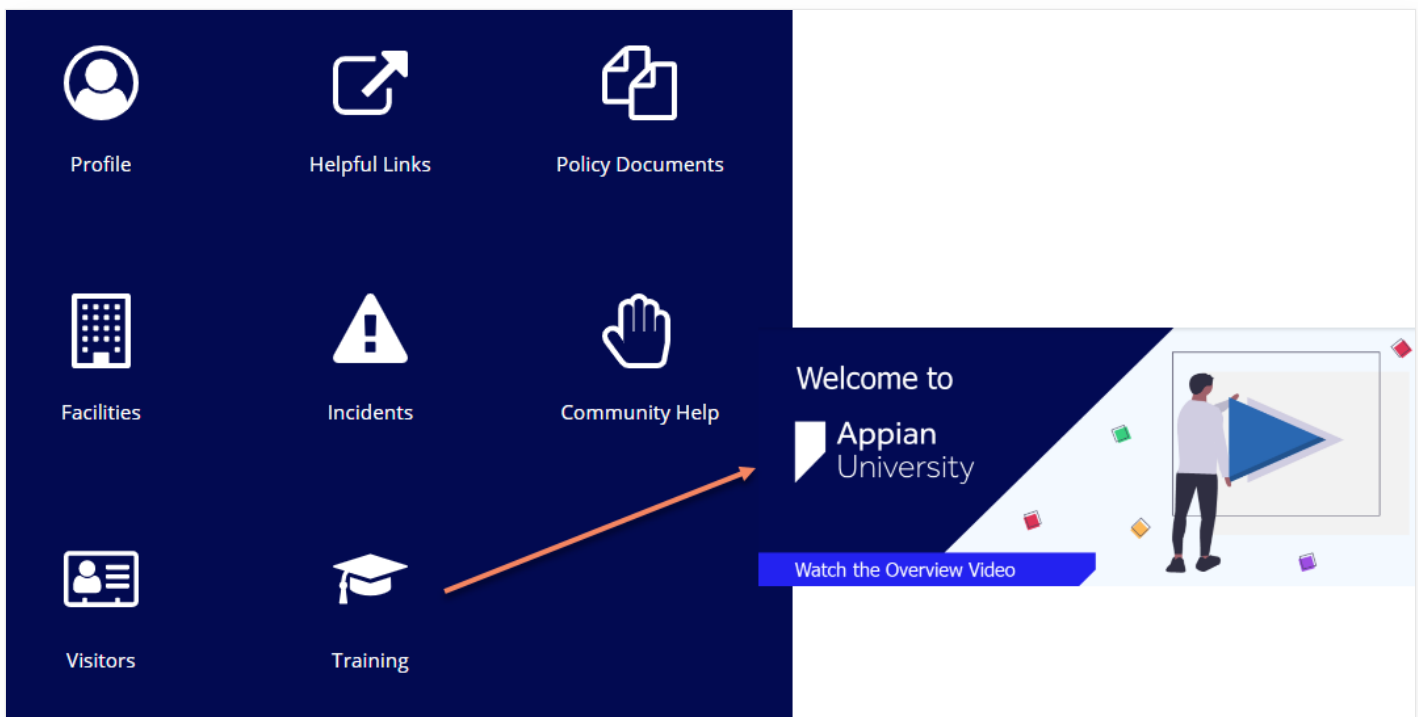
Congratulations, you have successfully customized your solution. Your changes will persist when you upgrade to a new solution version!

Editing a customization

Maybe your business requirements have changed and you need to tweak the functionality of your supported customization. To edit a customization, simply navigate to the customization template, and click **EDIT**.

The template will open in a new tab in Appian Designer where you can view the latest saved version of your customization.

Make the required changes and save the modified objects. Verify the intended results are displayed in the frontend of your solution.

Don???t forget to [deploy](#) your customizations when finished!

Reverting a customization

If you find that the latest version of an out-of-the-box feature in the latest solution release addresses your customization use case, you may want to adopt the new feature and revert your customization back to the default behavior.

Navigate to the appropriate customization template and click **REVERT TO DEFAULT**.

After understanding the impacts of this type of customization change, click **YES** on the confirmation dialog. The default out-of-the-box solution behavior will overwrite your customization so that it is no longer present in the solution.

Are you sure?

The "_default" rule will now execute in lieu of the "_custom" rule. The previous "_custom" rule will be appended with a suffix of "_reverted" and available in the application package for easy deployment.

| NO | | YES |

Deploying customizations

To deploy your customizations to a higher environment, click the **DEPLOYMENT** tab under the solution you want to deploy.

Answer the series of questions to dynamically generate the required deployment steps on-screen. Follow the steps shown to deploy your solution to a higher environment.

Below is an example of answering these questions and the rendered deployment steps:

My Workbench

Introduction

The Connected Underwriting Workbench is the primary page for accessing all the most important information needed for underwriting. The Workbench provides a consolidated view of the following four pieces of information:

1. Submissions
2. Alerts

3. Tasks

4. Exception Queue

Submissions

My Workbench displays a report summarizing how many Submissions are assigned to you. The report splits this summary into two categories:

- **Newly Received Submissions**: Submissions received within the past 24 hours.
- **Older Submissions**: Submissions received beyond the past 24 hours.

My Workbench displays a Submissions List of available records. Included on the Submissions List are three convenient filters for triaging Underwriting Submissions:

- **Last Modified**: Submissions sorted by most recently updated.
- **New Business**: Submissions that are only new business.
- **Renewals**: Submissions that are only renewals.

Create a new Submission

You can start a new Submission directly from your Workbench using the **✛ NEW SUBMISSION** button.

[Creating New Submission](#) walks you through the process of entering the information needed to start the Underwriting Submission process.

Open Alerts

The **Open Alerts** section displays alerts that are currently open across all Submissions assigned to the logged-in user. An alert shows information about when and why the alert was triggered.

You can dismiss alerts from the Workbench using the **Mark as closed** button. For more information about configuring alert conditions see [Configure Alerts](#).

Open Tasks

The **Open Tasks** section displays tasks currently open across all Submissions assigned to the logged-in user. A task shows information about what is required to complete the item and when the task is due.

You can update tasks from the Workbench using the ⋮ button and selecting **Reassign**, **Change Due Date**, or **Resolve Task**.

Exception Queue

Beneath the **Submissions List** record table is the **Exception Queue**. The **Exception Queue** displays Submissions requiring manual intervention. An example of an exception requiring intervention is an incoming message that is not associated with an existing Submission.

Exceptions can be filtered quickly by their category: **Messages**, **Classification**, and **Reconciliation**.

Messages

Message exceptions are triggered for two reasons:

1. No Submission ID and No Documents
2. No Submission ID Match

A user can click into the message to see a preview of the message and perform and an action to appropriately triage the message.

1. Click on the **Name** of the Message.
2. User must choose one of the following options and link the message.

3. If user chooses link to an existing message, user can search for an existing record.

4. Click **Save**.

Classification

Connected Underwriting will attempt to automatically classify documents that are supported for IDP extraction. Some documents may require manual classification by a user before extraction can be attempted, such as documents that are combined PDFs. Those documents will pass to the Classification exception queue. A user will be able to see the Document Name, Submission ID, and when it was received before completing the classification task.

1. Click on the Document Name.
2. User must choose one of the following options and classify the document:

- Classify as Single Doc

Choose an option below *
- ◉ Classify this document as single document type
- ◯ Classify this document as multiple document types
- ◯ Mark this document as invalid

Select Document Type *

--- Select Document Type --- ▼

- Classify as Multiple Docs

This message has no submission ID and no documents attached. Please select an option below: *

| Link to an existing submission ◉ | Create new submission ◯ | Delete this message ◯ |

Which record should this message be associated with? *

3. Click **Save**.

Reconciliation

Connected Underwriting will run through document extraction in the background on supported documents. Once the data is extracted, a task is generated to validate the data. The reconciliation task plays an important role in making auto-mappings smarter. As you complete reconciliation tasks, Appian learns how to map the data in your documents to the proper fields in your data type. Over time, this will make auto-extraction more accurate and reconciliation easier and less frequent.

> Values selected from the document preview will improve data extraction results. Values entered manually will not. If you have the option, you should select correctly labeled values from the document preview instead of entering them manually.

A user will be able to view the Document Name, Last Opened by, Submission ID, Document Type and when it was received before completing the reconciliation task.

To complete the reconciliation task:

1. Click on the Document Name.
2. On the left side of the page, review the information in the fields. Use the document preview on the right to verify the accuracy of the data.
   - **Note**: To see where the information in the fields came from, select the field and the value is automatically highlighted in the document preview.
3. If any information is missing, you can populate the information in three ways:

- Place your cursor in the field, then click the box that surrounds the desired value.

- Click the box that surrounds the desired value in the document preview on the right, then click the arrow next to the field to populate the field.

- To select text that was not automatically extracted, press and hold the Shift key while dragging the mouse.

4. Perform additional reconciliation for tables, if they appear in the document preview.
5. After all fields are verified and populated, click **SUBMIT**.

While you are reconciling the data, icons indicate how the information was entered for each field:

- **No icon**: Value was entered manually.
- **Magic wand icon**: Value was entered automatically during data extraction.
- **Link icon**: Value was selected from the document preview.

To learn more about Document Extraction, visit the [Appian Document Extraction](#) page.

Creating New Submissions

Introduction

The key element in Connected Underwriting is the Submission. A Submission provides a user with a comprehensive view of the required information gathered by an insurance organization when determining inherent risk when insuring a potential customer.

This page provides instructions for creating new Submissions. Instructions for managing existing Submissions are available on the [Managing Submissions](#) page.

Creating a new submission

This guide provides instructions for creating a new Submission as it applies to the out-the-box configuration of Connected Underwriting. These steps will not be accurate if you have modified your application to deviate from standard configuration.

Connected Underwriting supports two ways to create new Submissions:

1. Manually
2. Via email

> Regardless of the way a Submission was created, all new Submissions will show in the **ALL SUBMISSIONS** table on the **Submissions** dashboard.

Manually creating a new submission

The following steps walk you through the process of manually entering Submission information pertinent to the underwriting process. The information entered on a Submission item will also inform connected items, like customers, brokers, and broker offices.

A new submission can be created from two locations:

- **My Workbench**: Click the **✚ NEW SUBMISSION** button.

- **Submissions Dashboard**: Click **SUBMISSIONS** on the navigation bar, then click the **✚ NEW SUBMISSION** button

To create a new submission:

1. From My Workbench or the Submissions dashboard, click **✚ NEW SUBMISSION**. This will present the **Create Submission** form.

Create Submission

General Information

Assignee *

Submission Type *
○ New Business ○ Renewals

Line of Business *
--- Select Line of Business ---

Customer Information
◉ Existing ○ New

Customer and Contact Information
Select an existing Customer or Contact

Broker Information

Office Name
◉ Existing ○ New
--- Select an Existing Office Name ---

Broker Information
◉ Existing ○ New
--- Select an Existing Broker ---

Document Information
Please ensure any uploaded ACORD 125s, 140s, and 127s are less than 15 pages each. These documents will be auto-extracted.

Document Name	Document Type
No items available	

➕ Add Document

CANCEL   CREATE

2. Complete the General Information section:
   - **Assignee**: The user who will be responsible for completing the Submission.
   - **Submission Type**: The type of Submission is either for a New Business or an existing business Renewal.
   - **Line of Business**: The type of insurance coverage being applied for.
3. Complete the **Customer Information** section:
   - Select whether a customer is new or existing. Existing customers will be available to select from the dropdown list.
4. Complete the **Broker Information** section.
   - Select whether a broker and broker office are new or existing. Existing brokers and broker offices will be available to select from the dropdown list.
5. Upload any required documentation by clicking ➕ **Add Document**, then selecting the appropriate file and selecting the file type from the **Document Type** dropdown list.
6. Click **CREATE**.
7. The assignee and broker will receive a message confirming the Submission was created successfully. Click **CLOSE**.

👍

Submission **SUB113069XC** has been created for Ace Cleaners

CLOSE
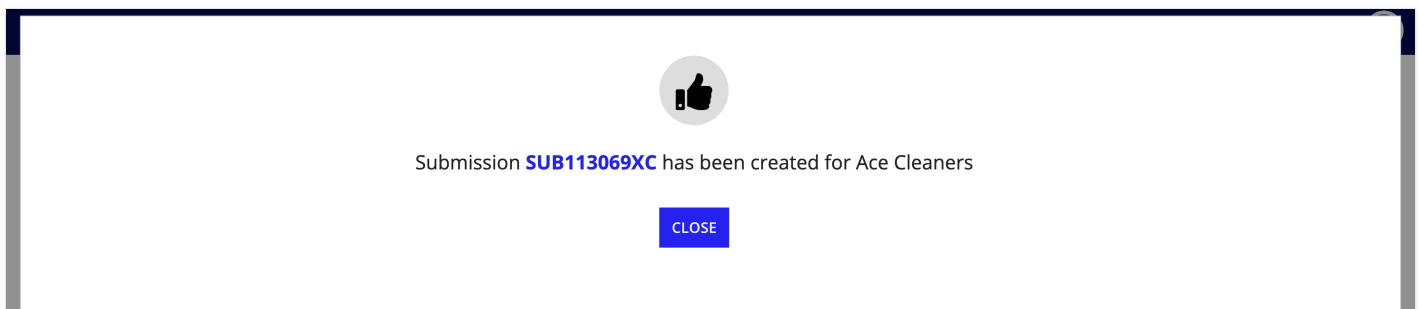
Creating a new submission by email

Often insurance organizations rely on a shared inbox to accept submissions emailed by brokers. If an organization has set up an email poller within Connected Underwriting to manage their incoming submissions, they can also create submissions automatically from incoming emails. Please see [Installing Connected Underwriting](#) for more information.

A new submission can be created from a shared box if an email adheres to the following properties:

1. The email does not contain a Submission ID in the subject line.
2. The email contains an ACORD 125: Applicant Information Section.

If both of the above properties are true, Connected Underwriting will automatically create a Submission ID and email the broker with a confirmation email. The new submission proceeds to a Processing status.

In order to continue to populate the newly-created Submission, proceed to the **Workbench** > **Exception Queue** > **Reconciliation** tab and reconcile the appropriate forms for that submission. For more information about document extraction reconciliation, visit the [My Workbench](#) page or [IDP Reconciliation](#) page.

Managing Submissions

Introduction

After you have [created a new Submission](#), you can manage it from the Submission item that is created. The Submission item allows you to review submission information, risk details, tasks, alerts, and much more.

Viewing submissions

There are two pages from which you can access Submissions: your Workbench and the Submissions dashboard.

On your Workbench, Submissions are displayed in the Submissions List panel. Note that this is not a representation of all the Submissions within Connected Underwriting. See the Home Page Overview to learn more.

By clicking the **SUBMISSIONS** tab on the navigation bar, you are taken to the Submissions dashboard. Submissions are displayed in the ALL SUBMISSIONS table.

Note that Submissions can be filtered from either location.

To filter Submissions:

1. From the top of the **ALL SUBMISSIONS** table, enter your search criteria in the **🔍 Search Submissions** field.
2. Click **SEARCH**.
   - To refine your search further, use the **STATUS**, **ASSIGNEE**, and **LINE OF BUSINESS** dropdown lists.
3. If you would like to save a combination of filter selections, click **▼**, then 🖫 **Save filter as**.

Clicking a Submission???s ID displays that item. A Submission item provides access to information critical to the underwriting process, including:

1. **General Information**: The status of a submission, who it???s assigned to, proposed effective and expiry dates, and more.
2. **Alerts**: All open alerts for a Submission.
3. **Customer Information**: The relevant contact information for the customer.

4. **Broker Information**: The relevant contact information for the broker and the office they represent.

5. **Risk Information**: The risk calculations for each insured Line of Business, and high level information on loss history.
6. **Notes**: All notes that have been attached to the Submission.
7. **Tasks**: Any tasks relevant to the Submission.

Further actions and insight are available through the tabs located at the top of the Submission item. Available tabs are Risk Details, Submission Docs, History, Messages, and Related Actions.

Risk Details

The Risk Details tab shows a view of all the insured entities connected to a Submission. Insured entities are categorized by their Line of Business. Each Line of Business can be drilled down into, using the **Details** links.

- **Loss History**: Shows high-level information associated with past claims of a certain Line of Business.
- **Details**: Shows more detailed information of the different assets insured of a certain Line of Business.

Submission Docs

The Documents tab lists all of the documents related to a Submission. You can see the status of your attached documents, the type of document, when it was received, and more.

Clicking on a document???s name will open a PDF view of that document and a summary of attributes.

History

The History tab shows a summary of key actions performed on a Submission.

Messages

The Messages tab displays all automated messages and exchanges between customers and business users for this Submission. Selecting a message item provides a detailed look at the message transmitted. The message item screen shows the message, contact information, date, and any included files.

Related Actions

The Related Actions tab provides quick access to different actions available on a Submission. Note that these actions are only available on Submissions that are not in a Completed status (except Add Note, which is still available).

Currently, managers have the following options:
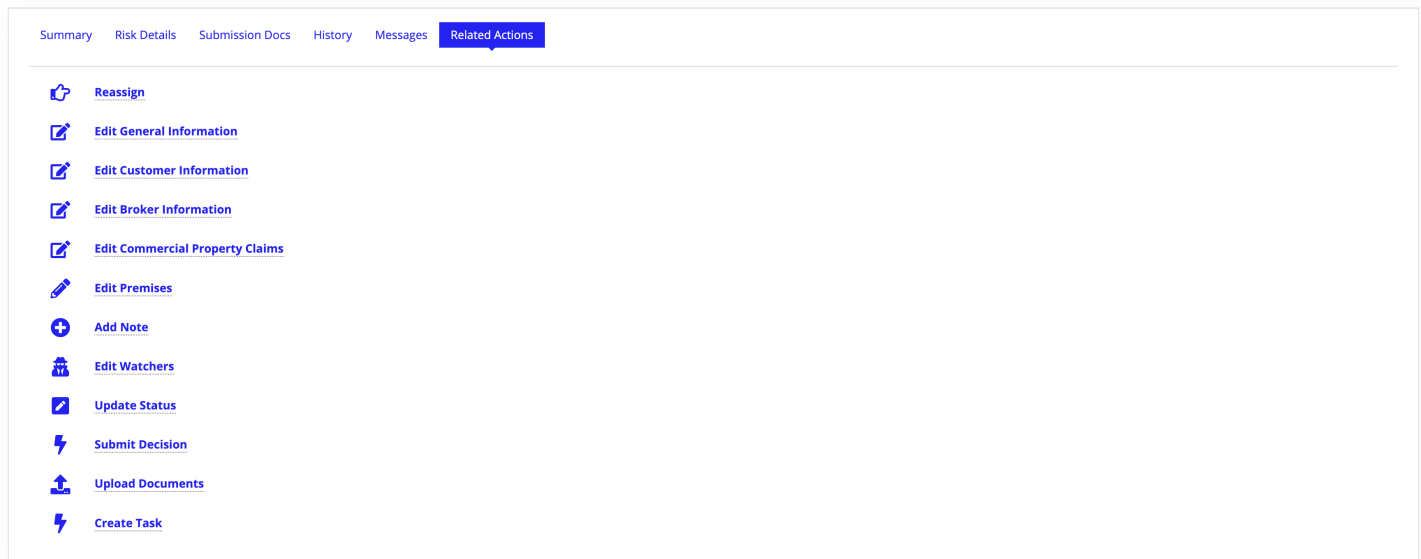
- **Reassign**: Allows you to assign a Submission to a different user or group.
- **Edit Information**: In the instance various pieces of Information change on a Submission, it can be edited here. Information can be edited for the following areas:
    - **General Information**
    - **Customer Information**
    - **Broker Information**
- **Edit Commercial Property Claims**: Allows you to add claims and edit the information of existing claims, such as Status, Loss Type, and more.
- **Edit Premises**: Allows you to add and delete insured premises and edit the information of existing premises, such as Street Address, Subjects of Insurance, and more.
- **Add Note**: Allows you to attach a note to a Submission - Notes appear on the Submission Summary page.
- **Edit Watchers**: Allows up to 10 users to subscribe to a Submission and be notified of any changes.
- **Update Status**: Allows you to update the Status of a Submission. Submissions can be placed in a Hold or Cancelled from this page.
- **Submit Decision**: Allows you to either Accept or Decline a Submission.
- **Upload Documents**: Allows you to add new documents or edit existing documents on a Submission.
- **Create Task**: Allows you to create a new Task and assign it to a user.

Managing Alerts

Introduction

Alerts are generated to notify business users of changes to a Submission. Connected Underwriting is set up with five default alerts:

- New Message
- Duplicate Submission
- New Document

- Missing General Information
- Missing Critical Information

Users can view alerts assigned to them from two places:

1. On the user's Workbench, in the Alerts section.

2. On a Submission item, in the Alerts section.

Viewing alerts

You can view all available alerts from the Alerts settings page on the Connected Underwriting Settings page.

Alerts can be filtered by name and status:

- **Alert Name**: Enter text in the 🔍 **Search Alerts** field and click **SEARCH**.
- **Status**: From the **ACTIVE?** dropdown list, select **Yes** to show Active alerts, or **No** to show Inactive alerts.
  - Any alert that the system is currently generating is an Active alert. Alerts that are disabled by a user and no longer triggered are Inactive. You can also sort the alerts by the date last modified, using the arrow in the **Last Modified** header.

Connected Underwriting allows you to save an Alert Name and Active/Inactive filter combination for future use.

To save a filter:

1. Enter the desired **Alert Name** and status combination, then click ▼▾.
2. Click 💾 **Save filter as**.
3. Enter a name in the **Name** field.
4. Click **SAVE**.

Updating alert name and display message

Managers and Admins can control Alert Names and the Alert Display Message from the Connected Underwriting Settings page.

To update an alert:

1. Click the ⋮ icon on the alert you want to update and select **Update Alert**.
2. Update the **Alert Name** and/or **Alert Display Message**.
   - Click the **Alert is Active Upon Update** toggle to make an alert active immediately upon updating.
3. Click **SAVE**.

> Details on what events trigger an alert are displayed on the **Update Alert** screen in the **When will this alert be triggered** panel.

Marking an alert as active or inactive

If an active alert is no longer required, you can stop the alert from generating by updating the alert status to **Inactive**. You can also enable an inactive alert by updating the status to **Active**. Simply click the ⋮ icon associated with the alert you want to edit and select **Mark as inactive** to disable an active alert, or **Mark as active** to enable an inactive alert.

Adding and modifying an alert

In some instances, the default alerts may not be satisfactory for a specific organization's needs. In this instance, alert logic may be modified to be more relevant to unique business needs, or new alerts may be created.

Only users with Appian Designer privileges can add or update alert logic. Refer to the [Configuring Alerts](#) section.

Managing Parties

Introduction

Quick and comprehensive access to customer, broker, and broker office information is a key feature of Connected Underwriting. The **PARTIES** dashboard contains all of this information, allowing users to confidently find the correct party they need to manage.

> For the purpose of this document, Customer, Broker, and Broker Office records are collectively referred to as ???Party??? or ???Parties.???

Party records are divided into three categories:

- **Customers**: These are the policy-holding entities and key points of contact.
- **Brokers**: These are the individuals representing an insurance firm.
- **Broker Offices**: These are the firms issuing the insurance policies.

This page describes the instructions for creating new Parties within Connected Underwriting and managing existing records.

Viewing parties

Party records can be accessed by clicking **PARTIES** on the navigation bar. This presents the PARTIES dashboard, featuring the PARTIES table.

The PARTIES table features the ability to quickly switch between Customers, Brokers, and Broker Offices using the buttons located across the top row of the table. The table can also be searched by using the **Q Search Customers** field and clicking **SEARCH**.

Clicking a Party???s name or address displays the item for that Party. The Party item provides quick access to Customer Details, Contact Information, and Submission information.

For more information on Submissions, view the [Managing Submissions](#) page.

Editing a party

There may be instances where details of a Party need to be updated - for example, a customer's address changing. Party Details and Contact Information are both easily updated from the Party item.

To edit Party information:

1. From the Party item, click **EDIT PARTY**, this presents the **Edit Party Information** form.
2. Update all the information in the Party Details and Contact Information sections.
3. Click **SAVE**.

Verify that your changes are reflected in the **Party Details** and **Contact Information** panels on the Party item.

Creating new customers

There are two ways in which you can create new Customer, Broker, and Broker Office records:

1. From the PARTIES dashboard.
2. When creating a new Submission.

From the Parties dashboard

The primary way to create a new Party item is from the PARTIES dashboard.

1. From the PARTIES dashboard, click **Customers**, **Brokers**, or **Broker Offices** from the top row of the PARTIES table.

2. Click the available button for creating the new Party. The button is dependent on which Party type you selected in Step 1.
   - Customers = ✚ CREATE CUSTOMER
   - Brokers = ✚ NEW BROKER
   - Broker Offices = ✚ NEW BROKER OFFICE
3. Complete the form for the Party type in which you are adding:
   - **Customer**

   - **Broker**

- **Broker Office**

4. Click **SAVE**.

When creating a new Submission

Parties can be created when creating a new Submission by indicating a Customer, Broker, or Broker Office as being ???New,??? and providing the appropriate Party information.

For more information on creating a new Submission, see [Creating a New Submission](#).

Managing Messages

Introduction

Gathering all the information needed for underwriting requires frequent communication between Underwriters and Brokers. Connected Underwriting allows users to send, receive, and review messages via the MESSAGES

dashboard.

This page describes how to use Connected Underwriting to manage messages.

Viewing messages

Messages are viewable from the MESSAGES dashboard, which can be accessed by clicking the MESSAGES tab on the navigation bar. Messages are available to the recipient, as well as any watchers on a Submission. The MESSAGES dashboard defaults to a view of received messages (Inbox), the view can be changed to show sent items by using the **Sent** button in the sidebar.

> The instructions on this page apply for both Inbox and Sent messages.

To find the correct message, the MESSAGES dashboard provides the ability to view messages relating to a specific Submission by using the **Select a record** field.

Once you have found the message you want to review, click on it to present a summary view of the item. The summary view of a message shows the following information:

1. The subject line.
2. A link to the Submission.
3. A button to reply.
4. Who sent the message.
5. The email address of the recipient.
6. When the message was sent.
7. The message that was transmitted.
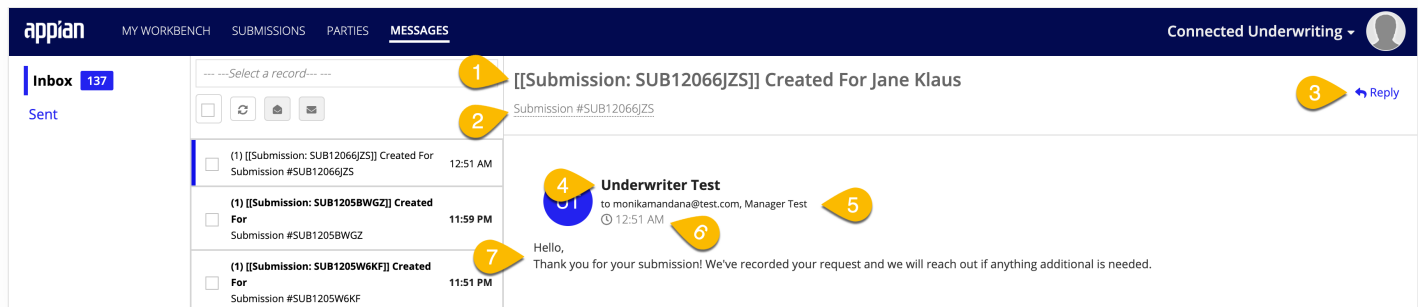
To send a message:

1. From a message, click **Reply**. This presents the message form.
2. Enter a message in the **Compose Message** field.
   - Message templates are available from the **Template** dropdown list. Selecting a template populates the **Compose Message** field with editable pre-written text.
3. Click **UPLOAD** to include any attachments.
4. Click **SEND**.
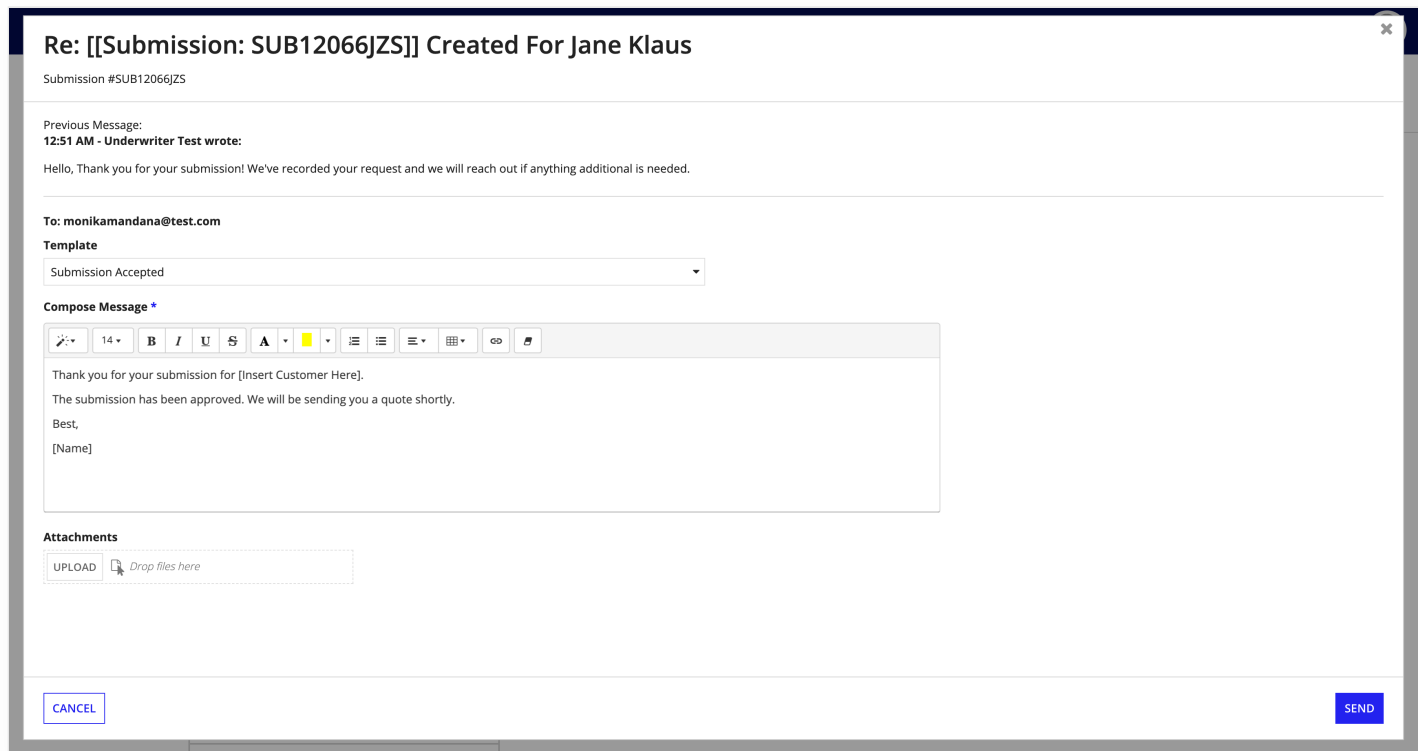
To learn more information on email templates, visit the [Configuring Email Templates](#) page.

Quick actions

Connected Underwriting includes the ability to take quick action on the messages items listed on the MESSAGES dashboard.
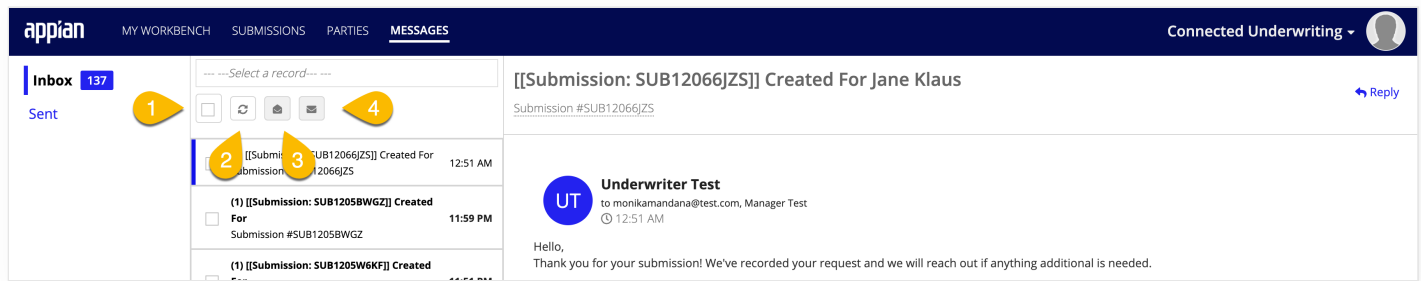
The quick actions are:

1. ☐ **Select All**: This checkbox will select all the messages shown on the MESSAGES dashboard.
2. ⟳ **Refresh**: This will refresh the messages shown on the MESSAGES dashboard, displaying any new items.
3. ✉ **Mark as read**: This will mark all checked messages as read.
4. ✉ **Mark as unread**: This will mark all checked messages as unread.

Connected Underwriting Settings

Introduction

This content applies solely to Connected Underwriting, which must be purchased separately from the Appian base platform. Connected Underwriting Settings is a separate site to allow Manager and Admins to:

- [Create and Manage Alerts](#)
- [Create and Manage Email Templates](#)
- [Manage Submission Score Rules and Scoring Tables](#)
- [Manage Users and Groups](#)

Accessing the Connected Underwriting Settings Site

Only business users with the appropriate roles are able to access this site, ensuring only select users have access to sensitive processes and information.

To access the Connected Underwriting Settings site:

1. Make sure you are in the **ISU Administrators** or **ISU Managers** group. See the [Manage Users and Groups](#) page for more information about roles and groups.
2. From the Connected Underwriting site, click the ▦ navigation menu.
3. Click **Connected Underwriting Settings**.

Configuring Email Templates

Introduction

Email Templates make it easier for underwriters to quickly send frequently used messages to brokers regarding their Submissions. In the **Connected Underwriting Settings** page, business users can create and edit email templates for underwriters to access when they are replying to a message.

To configure email templates, access the **Email Templates** tab of the **Connected Underwriting Settings** site.

View email Templates

The Email Templates page displays all email templates for Connected Underwriting. To filter the alerts by status, select Active or Inactive in the navigation pane. Any email template that an underwriter can select is active, denoted by a ???Yes??? in the **Active?** column. Email templates marked as inactive are not selectable by the underwriter.
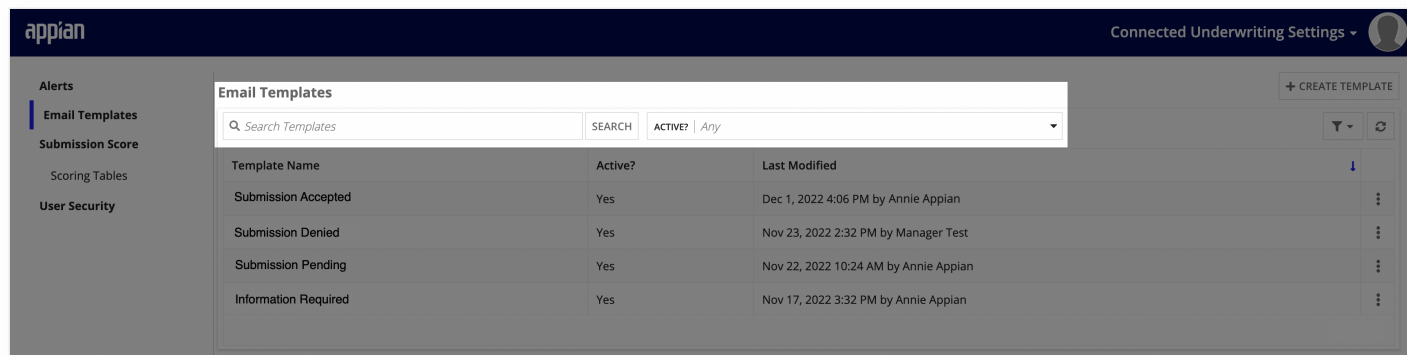
To find a specific email template, search by the email template name. You can also sort by the date last modified.

Create email templates

After installing Connected Underwriting, new email templates will need to be added if users want underwriters to have access to them.

To create a new email template:

1. From the **Email Templates** page, click **✛ CREATE TEMPLATE**.
2. Enter a **Template Name**
3. Select whether the template will be **Active Upon Creation**.
4. Enter a message in the **Compose Message** field.
5. Click **SAVE**.

Manage email templates

Managers and Admins are able to update, clone, delete, and mark templates as active or inactive from the record action menu.

To perform an action on an email template:

1. On the email template you want to impact, click ⋮
2. Select **Update Template**, **Clone template**, **Mark as active/inactive**, or **Delete template**.
3. Depending on your selection, complete the following action:
   - **Update Template**: Edit the Template Name and message, as needed. Click **SAVE**.
   - **Clone template**: Edit the Template Name and message, as needed. Click **SAVE**.
   - **Mark as active/inactive**: No further action required.
   - **Delete template**: Click **DELETE** to confirm deletion.

Configuring Tasks

Introduction

Tasks can be created for a submission to assign (and remind) users of specific work items needed to advance a submission forward in the underwriting workflow, such as uploading a document or confirmation of information. While some task types ship with the solution by default, Connected Underwriting allows you to configure new task types to extend the solution to meet your specific business requirements.

This page explains how to add a new task type to the current Connected Underwriting infrastructure and customize the solution to meet your needs.

> The modifications and extensions listed here are non-exhaustive and more complex kinds of changes can be made to these features, if desired.

Adding a new task type

To add a new task type, you need to walk through several configuration steps including creating a bundle key and constant to control the task type name display, interfaces for creating and resolving task types, and expression rules to control the update of task properties.

Follow the steps in this section to create a new task type.

Step 1: Create a bundle key and constant

1. Create a bundle key and corresponding text value for the front-end display of the task type.
2. Create a constant for the code name of the new task type. Use the naming convention `ISU_ENUM_TASK_TYPE_CODE_<TASK_TYPE_NAME>`. This should hold the text value of the Task Type code to be stored in the database for Tasks of this type.

Step 2: Create interfaces

1. Create an interface to be used when creating a new task of this type. This interface should hold the information that needs to be captured when a user is first creating a task and should also provide a read-only format to be used when a user is completing a task of this type. Use the naming convention `ISU_createTaskDynamicInterface<TaskTypeName>`.
   - Add the following rule inputs to this interface:
     - **task** (type: ISU_Record_Task)
     - **i18nData** (type: Any Type)
     - **readOnly** (type: Boolean)
   - This rule should instantiate a local variable for dynamic task properties, which should be a map and defaulted to the current dynamic task properties for the inputted task.
   - Any components that are saving user-inputted data in this interface should save into a key of the map on the local variable for dynamic task properties. It should then save this local variable cast to JSON into the dynamicTaskProperties field on the Task rule input.
   - Follow a similar structure in `ISU_createTaskDynamicInterfaceUploadDocument` for additional guidance on setting this interface up.
2. Create an interface to be used when resolving a task of this type. This interface will be used to capture any additional information from a user when they are completing the task. Use the naming convention `ISU_resolveTaskDynamicInterface<TaskTypeName>`.
   - Add the following as rule inputs to this interface:
     - **task** (type: ISU_Record_Task)
     - **processParameters** (type: Map)
     - **i18nData** (type: Any Type)
   - Extract any information that was captured upon creation of a task that is needed by casting the dynamicProperties field of the rule-inputted Task record to a map.
   - Add any components that might need to be filled out by a user upon completion of a task to the interface. If any user interaction changes or creates additional records that need to be written, save

associated records into the recordToWrite field of the processParameters rule input. This will allow these records to be updated and written appropriately in the Resolve Task process model.
- Follow a similar structure in `ISU_resolveTaskDynamicInterfaceUploadDocument` for additional guidance on setting this interface up.

Step 3: Create expression rules

1. Create an expression rule to update tasks of this type upon taking the Resolve Task action. This rule is used to update the dynamicProperties field of the Task record after a user has resolved the task; ultimately this rule should result in an update statement to the Task record???s dynamicProperties field. Use the naming convention `ISU_updateTaskOnResolveDynamicFields<TaskTypeName>`.
   - Add the following as rule inputs to this expression:
     - **task** (type: ISU_Record_Task)
     - **processParameters** (type: Map)
   - This rule should result in an updated Task record with any appropriate values set in the dynamicProperties field of the task record. Values from associated records that were created or written as part of resolving this task can be accessed through the rule input processParameters.
   - Follow a similar structure in `ISU_updateTaskOnResolveDynamicFieldsUploadDocument` for additional guidance on setting this expression up.
2. If any additional records are being updated or written as part of the resolution of tasks of this type, then create an expression rule to update these records before being written in the Resolve Task process model. Use the naming convention `ISU_updateTaskRecordToWriteOnResolveDynamicFields<TaskTypeName>`.
   - Add the following as rule inputs to this expression:
     - **processParameters** (type: Map)
   - This rule should update the recordToWrite field of the rule inputted processParameters map with any updates that need to be made prior to the record being written.
   - Follow a similar structure in `ISU_updateTaskRecordToWriteOnResolveDynamicFieldsUploadDocument` for additional guidance on setting this expression up.

Step 4: Update the task type reference expression rule

1. Lastly, update `ISU_CONF_taskTypeReference` by adding a new map with the following key-value pairings:
   - **label**: the bundle key for the task type
   - **code**: the constant pointing to the code for the task type
   - **createInterface**: the reference to the interface for creating a new task of this type
   - **resolveInterface**: the reference to the interface for resolving a task of this type
   - **resolveUpdateRule**: the reference to the expression rule that should be called to update the Task record upon completion of a task of this type
   - **resolveRecordToWriteUpdateRule**: the reference to the expression rule that should be called to update additional records upon completion of a task of this type.

Managing Submission Score Tables

Introduction
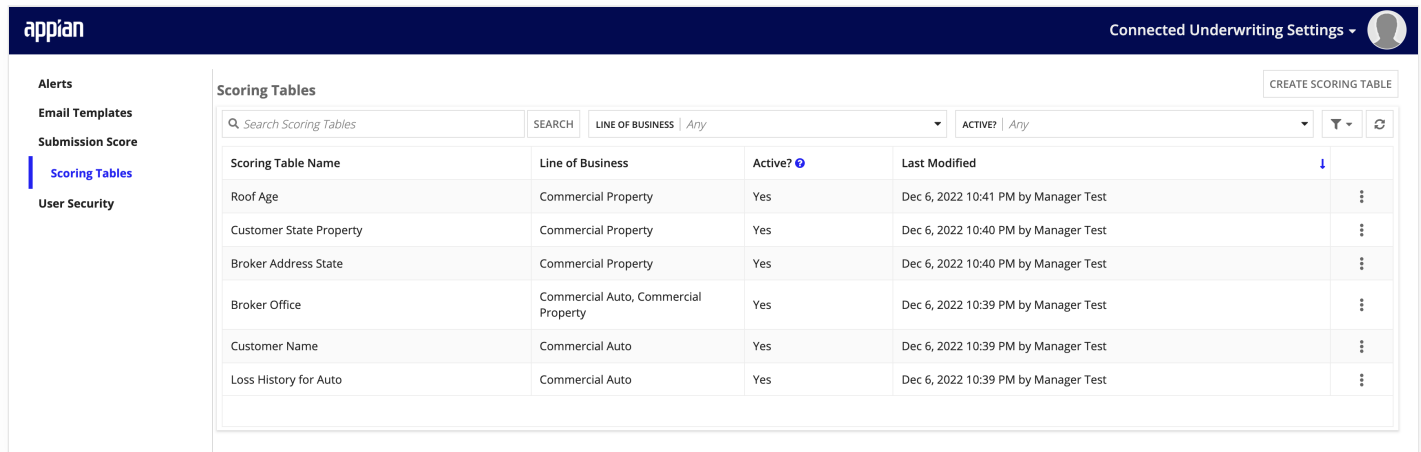
A Submission Score is calculated for every Submission based on business rules set up in the Connected Underwriting Settings site. A Submission Score is calculated from scoring tables for fields on a Submission. The scores in a scoring table are used as inputs for a weighted average calculation for a submission score. It is recommended to provide a score from a scale of 1-100.

Managers and Admins can create and edit Scoring Tables and also create Submission Scores. To configure Submission Scores, access the Submission Score tab of the Connected Underwriting Settings site. To configure

Scoring Tables, access the Scoring Tables sub-tab.

View Scoring Tables

The Scoring Tables page displays all scoring tables for Connected Underwriting. Scoring tables can be filtered by their Line of Business, or their active/inactive status.
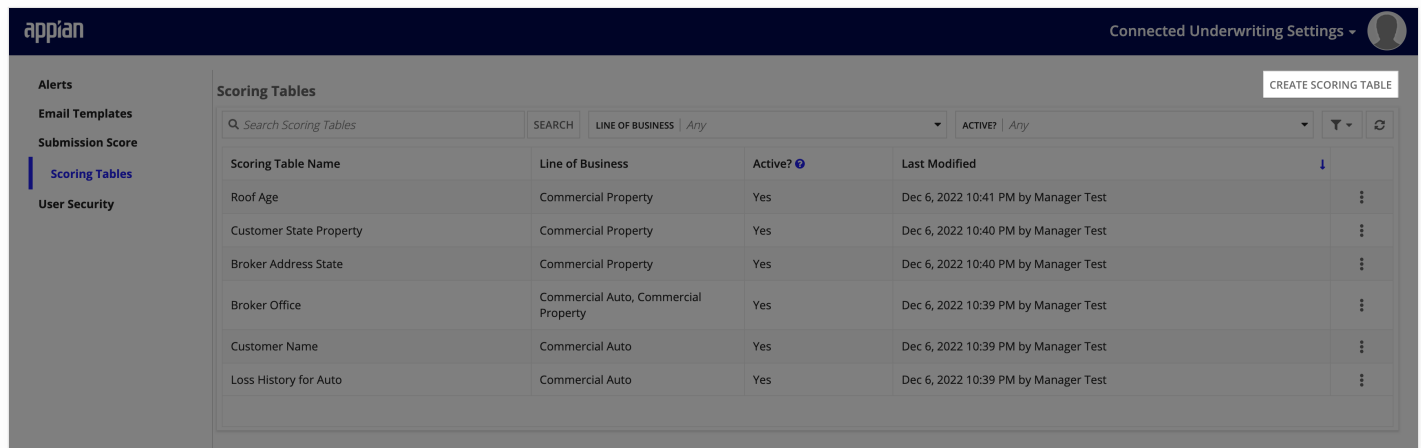
- **Active/Inactive Status**: From the **Active?** dropdown list, select **Yes** to display active scoring table; select **No** to display inactive scoring tables.
- **Line of Business**: From the **Line of Business** dropdown list, select a value.

To find a specific scoring table, search by the scoring table name using the **Q Search Scoring Table** text field.

Create a Scoring Table

After installing Connected Underwriting, it is recommended to create Scoring Tables in order to create Submission Scores. Scoring Tables will match on values within a submission, to return a score for the Submission score calculation. Scoring Tables can be created for a set of fields that are shipped with Connected Underwriting.

To create a new Scoring Table:

1. From the **Scoring Tables** page, click **CREATE SCORING TABLE**.
2. Enter **Scoring Table Name**.
3. Select the **Line of Business** that applies for this Scoring Table.
   - This can be multi-select. This selection determines the tables that will be available for selection during the creation of the submission score rule.
4. Select a **Field** to create the Scoring Table for.
5. Once you select a Field, the Scoring Table grid will populate for users to input values and associated scores.

6. Users must also input a score for when there is no match for a value.
7. Click **SAVE**.

Create Scoring Table

Scoring Table Name *	Line of Business ? *	Field *
Loss History for Auto	21/100	Commercial Auto	Oldest Construction Year

What is a scoring table?

A scoring table is used during the creation of a submission score rule. The scores in these tables will be used as inputs for a weighted average calculation for the submission score. It is recommended to provide a score from a scale of 1-100, but this can vary by carrier.

Oldest Construction Year Min ?	Oldest Construction Year Max ?	Score	
1990	2000	10	✕
2001	2010	20	✕
If there is no match, then assign a value of:		5	

⊕ Add Row

CANCEL   SAVE

View a Submission Score

The **Submission Score** page displays all submission scores for Connected Underwriting. Submission Scores can be searched and filtered in the same way as Scoring Tables.

appian   Connected Underwriting Settings ▾

Alerts

Email Templates

Submission Score

Scoring Tables

User Security

Submission Score   CREATE SUBMISSION SCORE RULE

🔍 Search Submission Score Rules   SEARCH   LINE OF BUSINESS | Any   ▾   ACTIVE? | Any   ▾   ▼ ▾   🔄

Rule Name	Line of Business	Active?	Last Modified	↓
Property Scoring Rule Q4	Commercial Property	Yes	Dec 6, 2022 10:45 PM by Manager Test	⋮
Auto Scoring Rule Q4	Commercial Auto	Yes	Dec 6, 2022 10:45 PM by Manager Test	⋮

Create a Submission Score

After creating Scoring Tables, a user should create their Submission Score rules. A Submission Score rule will calculate the weighted average based on the Scoring Tables you've selected. Submissions with higher scores will show up at the top your workbench.

appian   Connected Underwriting Settings ▾

Alerts

Email Templates

Submission Score

Scoring Tables

User Security

Submission Score   CREATE SUBMISSION SCORE RULE

🔍 Search Submission Score Rules   SEARCH   LINE OF BUSINESS | Any   ▾   ACTIVE? | Any   ▾   ▼ ▾   🔄

Rule Name	Line of Business	Active?	Last Modified	↓
Property Scoring Rule Q4	Commercial Property	Yes	Dec 6, 2022 10:45 PM by Manager Test	⋮
Auto Scoring Rule Q4	Commercial Auto	Yes	Dec 6, 2022 10:45 PM by Manager Test	⋮

To create a new Submission Score:

1. From the **Submission Score** page, click **CREATE SUBMISSION SCORE RULE**.
2. Enter the **Rule Name**.
3. Select **Action Upon Creation?** (Yes or No).
4. Select the **Line of Business** that applies for this Submission Score rule.
5. Select **Add Input** in the Scoring Table Inputs section to choose Scoring Tables to evaluate against for the Submission Score rule.
6. Once you select the Scoring Tables, you can apply the weightage for each Scoring Table.
   - For example, an organization that wants to prioritize Customers more than Brokers would weight the Customer Scoring Table higher than the Broker Scoring Table.
7. Click **SAVE**.

Manage a Submission Score

Managers and Admins are able to update and delete a Submission Score rule.

To update a Submission Score:

1. Click the ⋮ icon on the email template you want to update and select **Update Rule**.
2. Update **Rule Name**, **Active upon Update**, **Line of Business**, **Scoring Table Inputs** and **weightage**, similar to steps 2-6 in Create a Submission Score.
3. Click **SAVE**.

To delete a Submission Score rule:

1. Click the ⋮ icon on the Submission Score rule you want to delete and select **Delete Rule**. A confirmation screen will show as this action will be permanent.
2. Click **DELETE**.

Configuring Alerts

Introduction

Alerts are generated after particular actions are taken on a submission. These alerts provide business users with brief overviews of important information that may have been missing or added to a submission. While Connected Underwriting ships with some pre-built alert configurations, you may want to add other types of alert conditions for your underwriting submissions process.

This page explains how to add a new alert configuration to your solution's infrastructure currently in place in the application and customize the solution to meet your needs.

> The modifications and extensions listed here are non-exhaustive, and more complex changes can be made to these features if desired.

Adding a new alert configuration

The alert configuration logic controls how Connected Underwriting generates alerts and allows you to configure alerts to extend the solution to meet your specific business requirements.

To add a new alert configuration:

1. Add a row to `ISU_R_ALERT_CONFIG` with the proper message and name to be displayed.
2. Add child rows for the newly inserted Alert Config into `ISU_R_ALERT_SET` with the proper AND or OR operators specified.
3. Add child rows for the newly inserted Alert Sets into `ISU_R_ALERT_CONDITION`, with a valid value for the operator parameter of the Condition JSON dictionary and a valid value for the field code.
   - If the operator in the JSON dictionary is brand new, then add a corresponding constant with the naming convention `ISU_ENUM_OPERATOR_<OPERATOR_NAME>` and a value corresponding to the text value of the new operator.
     - Then, add this new constant to `ISU_CONF_operatorReference`. You may need to create a new updateConditionRule for the operator as well.
       - While this family of rules is currently only relevant to Priority Scoring and does not pertain to Alerts, future extensibility of the solution and extensibility of Alert Configuration to be front-end-controlled may use this family of rules to define how user inputs can be saved into the CONDITION_JSON field when building an alert.
   - If the field code is brand new, then create a new constant with the naming convention `ISU_ENUM_ALERT_FIELD_CODE_<RECORD>_<FIELD>` that holds the text value of the field code inserted into the Alert Condition table.
     - If the field is contained in a Submission-related record that is not contained in the Change Log structure, ensure that the corresponding record type is added to and accounted for in the rules `ISU_getValuesForChangeLog`, `ISU_createChangeLogOldValues`, and `ISU_updateChangeLogNewValues`.
     - Then, create a new rule with the naming convention `ISU_evaluateAlertField<RecordField>` that will host the logic for evaluating that particular field. Follow examples in other rules that begin with `ISU_evaluateAlertField`.

- **NOTE**: Ensure that all possible operators that this particular field can have are accounted for appropriately in this rule.
  - Then, add the newly created constant, newly created rule, and corresponding bundle key to `ISU_CONF_alertFieldReference`.

Configuring Scoring Fields

Introduction

Users with business administrator access can create scoring sets and configure them to create a new priority scoring rule, which dictates the overall priority score for a submission. Connected Underwriting ships with a variety of scoring set fields. However, additional business needs may require you to extend the Connected Underwriting solution by configuring priority scoring by adding new scoring set fields not included in the application.

This page explains how to add a new scoring set field to the current Connected Underwriting infrastructure and customize the solution to meet your needs.

> The modifications and extensions listed here are non-exhaustive, and more complex changes can be made to these features if desired.

Adding a New Scoring Set Field

These scoring sets are based on a single field on a submission or related record.

To add a new scoring set field:

1. Add a constant for the name of the code for the new Scoring Set Field. Using the naming convention `ISU_ENUM_SCORING_FIELD_CODE_<NAME_OF_FIELD>`. This should hold the text value of the Scoring Set Field code to be stored in the database for Scoring Sets that use this field.
2. Create a bundle key and corresponding text value for the front-end display of the Scoring Set Field.
3. Create a new interface expression to host the grid, which front-end users can use to add individual Scoring Set Conditions for Scoring Sets that use the new Field. Use the naming convention `ISU_editScoringValueDynamicInterface<NameOfField>`.
   - Add the following rule inputs to this interface:
     - **scoringSet** (type: ISU_Record_R_Scoring_Set)
     - **i18nData** (type: Any Type)
     - **scoringConditions** (type: list of ISU_Record_R_Scoring_Condition)
     - **fieldLabel** (type: Text)
   - This interface should ultimately contain an a!gridLayout() component that contains columns for:
     - **Value for the Field**: a column to hold an a!dropdownField(), a!textField(), or another user-input component that allows users to select a potential value for the new Field. Within the saveInto of this component, the condition field of the Scoring Condition should be updated by using the updateConditionRule rule accessed by calling the rule `ISU_returnOperatorReferenceByCode`.
     - **Score**: a column to hold an a!integerField() that saves into the Score for the corresponding row???s Scoring Condition.
     - **Delete**: a column to hold an a!richTextIcon() that allows for deletion of a corresponding row.
   - The grid should create rows for each rule-inputted Scoring Condition and a row for setting the default score for the Scoring Set by using the sub-component `ISU_scoringSetDefaultValueGridRow`.
   - The grid should also include an addRowLink that adds an additional Scoring Condition to the list of rule-inputted Scoring Conditions.

- Use the existing interface rules `ISU_editScoringValueDynamicInterfaceBrokerAddressState` or `ISU_editScoringValueDynamicInterfaceConstructionYear` as guides for creating this rule.
4. Create a new expression rule to evaluate which Scoring Conditions apply to the new Field. This rule should return an `ISU_Record_R_Scoring_Set` record with the Scoring Condition relationship updated to contain the Scoring Condition which applies for the Submission. Use the naming convention `ISU_evaluateScoringField<NameOfField>`.
   - Add the following as rule inputs to this expression:
     - **submission** (type: ISU_Record_Submission)
     - **scoringSet** (type: ISU_Record_R_Scoring_Set)
     - **scoringConditions** (type: list of ISU_Record_R_Scoring_Condition)
     - **submissionLob** (type: ISU_Record_Submission_Lob)
   - This rule should use the filter() function to filter the list of rule inputted Scoring Conditions for the correct match based on the value for the new Field on the Submission. This can be done by calling `ISU_filterScoringConditionWithOperatorEquals` or `ISU_filterScoringConditionWithOperatorBetween` and passing in the value on the Submission for the new Field as the runtimeValue parameter.
5. Lastly, add a new map to the list of maps in `ISU_CONF_scoringFieldReference` for the newly created Field. Set in the map the following key-value pairs:
   - **label**: the bundle key of the new Field
   - **code**: the constant created containing the code for the new Field
   - **editScoringValueInterface**: the reference to the interface created containing the grid for editing the Scoring Set
   - **evaluateScoringSetRule**: the reference to the expression rule used to evaluate which Scoring Condition is applicable for a Submission.

Configuring Users and Groups

Introduction

Managing staffing changes can be a major pain point for many organizations. New team members, or team members with new responsibilities, need access to the tools needed to do their jobs. To ensure security, departing team members need to have their access revoked in a timely manner.

The Connected Underwriting Settings site allows business users with the appropriate access to quickly make the changes needed to keep business running securely.

If you need to add new role or assignment groups, or modify group membership using Appian Designer, see the Modifying Groups page.

Role groups and assignment groups

Within Connected Underwriting Settings, business users are able to add users to role groups, and create assignment groups and add users to them. So what are role groups and assignment groups?

Role groups

Role Groups are based on the user's role within their company and represent the different ways they will interact with the solution. This allows you to put certain teams into security groups to allow access to specific parts of the solution. To create or delete a role group, please contact your system administrator.
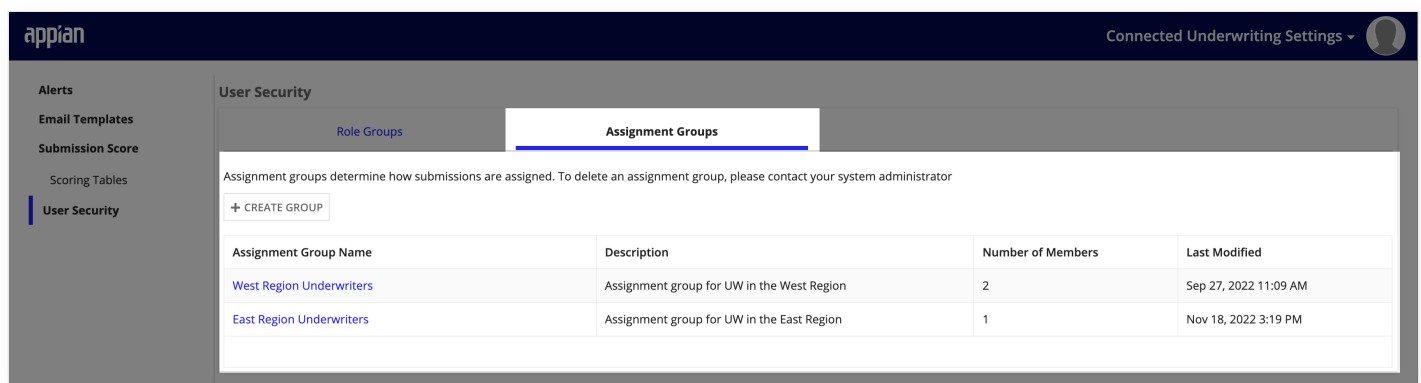
For example,

- Team members who are involved in ensuring data completeness of a Submission will be in the Underwriter Assistant role group.
- Managers who need to make changes to available email templates will be in the Managers role group.

Assignment groups

Assignment groups determine which users can be assigned Submissions. For example, an organization can have an assignment group focused on the West region and another focused on the East. If a Submission is assigned to the West Group, then users in that group are notified to work on that submission.
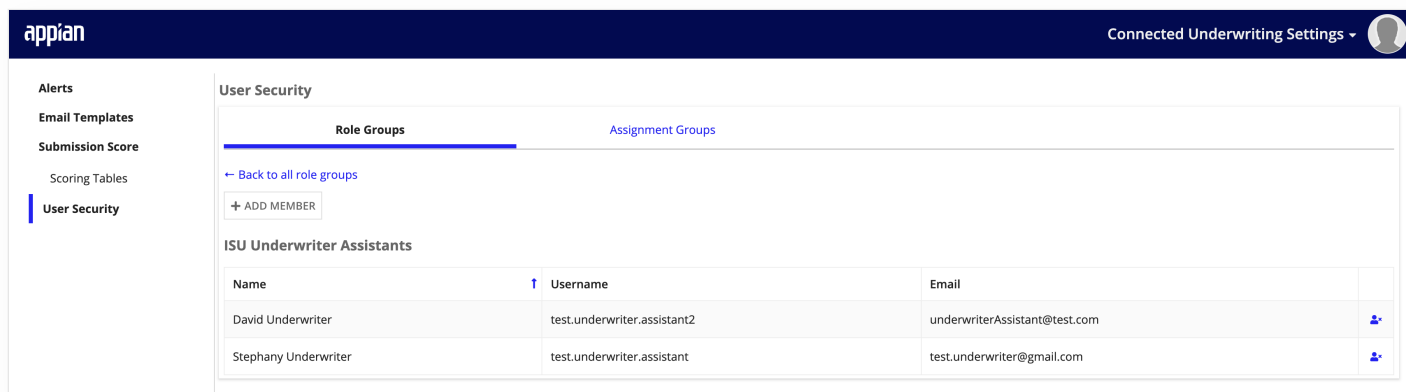
See Groups Reference Page for more information on what groups provide what access in the solution.

View groups and group members

Business users with the appropriate group membership can easily view all groups and members in any group in your organization.

To view current groups:

1. On the **Connected Underwriting Settings** site, click the **User Security** tab from the menu.
2. There are Groups to view: 1) **Role Groups** and 2) **Assignment Groups**.
3. Select and click the **Role Group Name** or **Assignment Group Name** you want to view the members of.

Manage group membership

Managing group membership is easy. You can add existing users to a group, and remove members that no longer have access to a particular group.

To add an existing user to a group:

1. On either the **Role Groups** or **Assignment Groups** page, select the group that you would like to update.
2. Click **ADD MEMBERS**.
3. In the **Search** field, start entering the username you want to add and the system will auto-suggest a list of users that you can select to add to the group.
4. Click **ADD**.

To remove a member from a group:

1. On either the **Role Groups** or **Assignment Groups** page, select the group that you would like to update
2. From the Member list, select the **Remove Member** icon next to the name of the user you would like to remove from the group.
3. On the confirmation screen, click **REMOVE**.

Add an Assignment Group

Assignment groups determine which users can be assigned submissions. Once created, assignment groups can be selected when reassigning submissions. The solution ships with an ISU Default Assignment Group.

To add an Assignment Group:

1. Navigate to the **Assignment Groups** page
2. Select **CREATE GROUP**.

3. Add **Group Name**, a **Description** for the group, and **Group Members**.
4. Click **SAVE**.

Modifying Groups

Introduction

When adding users to Appian Connected Underwriting, they initially won't have access to see or do much in the solution. In order to give them access to the information and actions they need to perform their jobs, you must add them to the appropriate groups.

Connected Underwriting comes with default groups that make it easy to grant the appropriate access to users. The solution uses business groups that represent the different business roles that will interact with the solution. For example, **Underwriting Manager** and **Underwriting Assistant**. These business groups are members of security and wrapper groups, which grant access to different parts of the solution, such as starting a new underwriting Submission or viewing account information.

By placing users into business groups, the solution automatically assigns them the appropriate access for their business role. To understand what groups to put users in depending on the actions that they need to perform, see the Groups Reference Page.

When you are setting up the solution, you will need to understand what business roles are required for your organization and modify the groups to fit your organization. You will also need to add users to the appropriate groups. This page outlines how to do both.

Modifying group membership

To give users appropriate access to Connected Underwriting, you must first add them to the necessary business groups. Access in Connected Underwriting is driven by membership of business groups, and there are minimal restrictions on additional access to specific pieces of functionality in the main Connected Underwriting site.

One specific distinction in user access lay in the Connected Underwriting Settings site, an administrative page that allows users to modify underwriting submissions processes. This site is only accessible to the ISU Administrators and ISU Managers groups.

You can manage group membership either manually or automatically.

Manually modifying membership

Modifying group membership can be done from two places in Connected Underwriting:

Connected Underwriting Settings

Business users can use the Connected Underwriting Settings site to modify users in business groups. See [Managing Group Membership](#) for instructions on how to do this.

Appian Designer

Administrators can also use Appian Designer to manage group membership. See [Group Management](#) for more information on this.

> Appian highly recommends that you use the Connected Underwriting Settings site to manage all group memberships. Using Appian Designer to update group membership may cause unwanted visibility changes or security vulnerabilities.

Automatically syncing group membership

You can also configure an Appian process model to run periodically, typically nightly, which can automatically add users to different groups. This is typically hooked into an LDAP integration to ensure the LDAP system is what actually controls user access to groups. See the [LDAP Synchronization](#) Playbook article for more information about setting this up.

Syncing with LDAP would likely overwrite group memberships that were set using the Connected IS Settings site.

If you implement automatic syncing, you have two options:

- You can leave the Groups & Users section of Connected Underwriting Settings visible to end users so that they can use it to grant access right away, without waiting for the sync. If you choose this option, make sure that end users know that they need to make changes in the LDAP system as well as Connected Underwriting and that their changes in Connected Underwriting will be overwritten by the changes to the LDAP system.
- You can hide the Groups & Users section of Connected Underwriting Settings by adding a visibility check in the backend to this portion of the site.

Adding new business groups

If your organization has different business roles that the default business groups don't cover, you can create additional groups using Appian Designer.

To add a new business group:

1. [Create a business group](#) for the new business role.
   - Set the **Visibility** to **Public (everyone)**. This will allow users to select the group in pickers in the application.
   - Set the appropriate **Parent Group**. Reference an existing business group to see how this is configured.
2. [Add users](#) to the group.

Groups Reference Page

Introduction

Connected Underwriting comes with a number of groups provided by default. By adding users to these groups, you can grant access to separate parts of the solution.

There are two categories that the default groups belong to:

Role Groups

- These groups represent the different business roles that will interact with the solution and grant access to select solution functionality.
- Examples include **Underwriter???s Assistant** and **Manager**.

Assignment Groups

- These groups are how submission assignment is delineated.

Default groups

This page lists the default groups provided with Connected Underwriting, and what actions members of the security groups can perform.

To update group membership from the Connected Underwriting Settings site, see Setting Up Users and Groups. To modify groups and add users from Appian Designer, see the [Group Management](#) page.

User actions

This table lists all of the actions that are available in Connected Underwriting and the groups that control access to those actions.

All application users

- Create a new Submission.
- Update Submission information and upload documents.
- Complete Message, Classification, and Reconciliation Exceptions.
- Reply to Submission Thread.
- Create and Edit a Customer, Broker, or Broker Office.

ISU Administrators

- Manage Appian design objects.

ISU Administrators and Managers

- View the Connected Underwriting Settings site and configure alerts, priority scoring rules, email templates and user security.

Submission Assignee

- Accept or Decline a Submission.

Task Assignee

- Resolve a Task.

User Flow

Introduction

The Overall Submission Flow Diagram depicts a high-level view of the life cycle of a Submission record within the solution. The diagram shows how a Submission can be created, the processing and IDP extraction of associated documents, key data writes associated with the Submission, points of user interaction, and the moving of the Submission to a reviewed state.

Overall Submission Flow Diagram

Note: Because this diagram is meant to show the overall process, nuances and more complicated logic are omitted; not all possible Submission flows are represented.
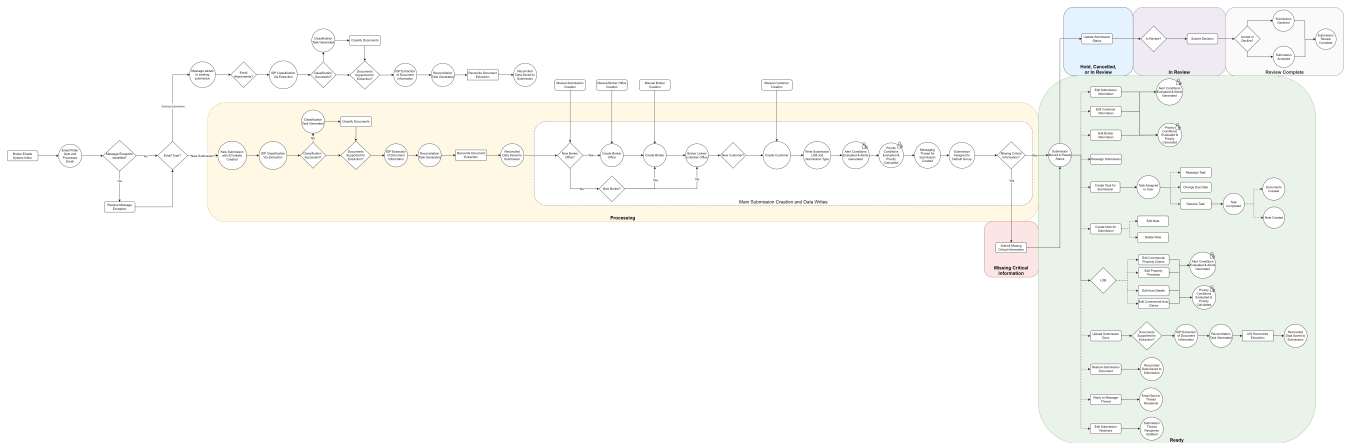
Using This Diagram

In the diagram, different kinds of shapes represent different kinds of activities in the overall flow:

1. Circles represent automated activities performed by the system. Automated activities which may be affected by settings in the Connected Underwriting Settings site are represented with a user icon in the top right corner of the node.
2. Rectangles represent manual interactions by users.
3. Diamonds represent decision points at which the flow may change depending on a certain set of logic.
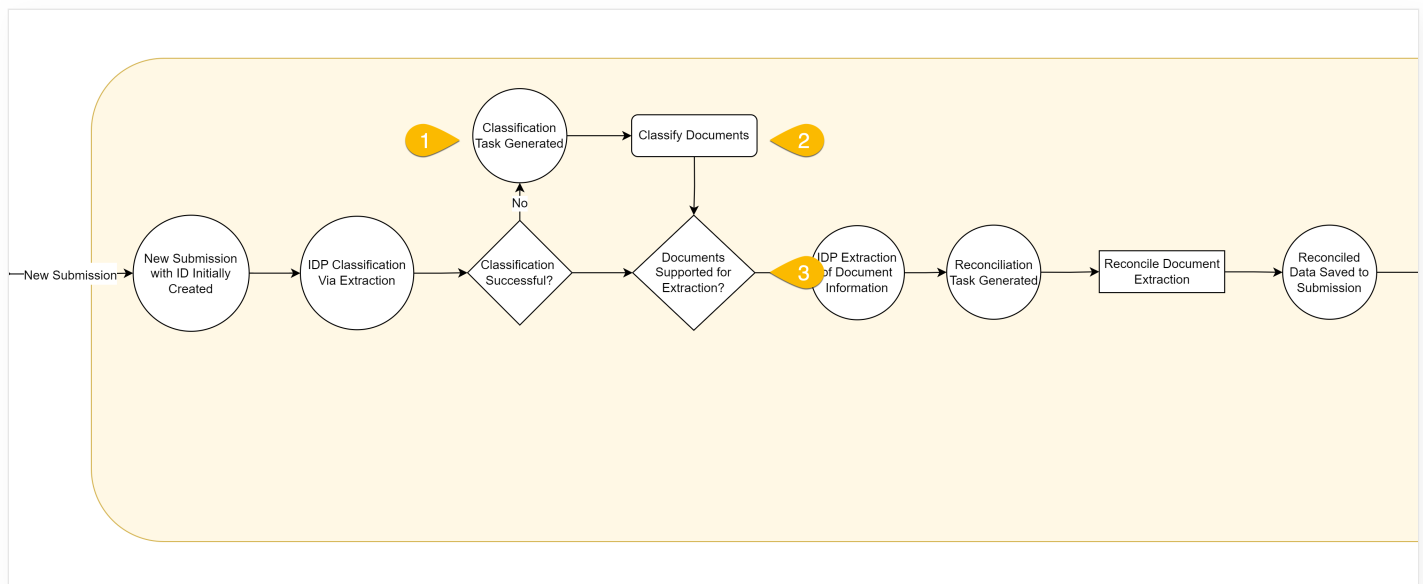
The lines between nodes in the diagram also have different meanings:

- Solid lines represent definite flows; one activity will always take place after the other.

- Dotted lines represent possible or optional flows; one activity may take place after another depending on a decision by a user.

The larger colored containers represent groupings of events based on the status of the Submission. The submission statuses and their corresponding colors are:

COLOR	STATUS
Yellow	Processing
Red	Missing Critical Information
Green	Ready
Blue	Hold/Canceled/In Review
Purple	In Review
Gray	Review Complete

Synopsis of diagram

Submissions can be created in two ways:

1. Manually created directly in the Connected Underwriting site.
2. Via emails that are polled from a specific inbox set up for the environment.

Emails sent to the specified inbox are analyzed to determine whether a Message Exception should be created for the Submission. All Message Exceptions must be resolved by a front-end user for the flow to continue. Once a Message Exception for an email has been resolved, the corresponding email sent determines whether the Submission corresponds to an existing record or is new.

In the case that a Submission is new, the Submission is created initially and set to a status of **Processing**. From here, any PDF document attachments from the email are attempted to be classified through IDP extraction. If automated classification is not successful, a Classification Exception is created for a user to manually classify a document.

Once a document is classified, the system checks whether the document type is supported for additional IDP extraction. If this is the case, the system uses IDP to extract information from the corresponding form and automatically creates an Extraction Reconciliation Exception for a front-end user to confirm and correct any of the extracted information. Once the extracted information is reconciled, additional key data writes for the Submission occur, including linking the Submission to a Broker and Customer and generating Alerts and a Priority Score for the Submission.

After key data writes have taken place, the Submission is assigned to the Default Assignment Pool and is checked for missing Critical Information. A Submission must be moved out of the **Missing Critical Information** status through user action before it is sent to a **Ready** status.

Once a Submission is in a **Ready** status, a variety of actions can be taken by front-end users to change or add key pieces of information for the Submission. Certain actions are dependent on the listed Line of Business for the Submission. Many of these actions are optional for users and are not necessarily required to be taken in order for the Submission to move forward in its life cycle.

A Submission in a **Ready** status can be moved into either a **Canceled**, **Hold**, or **In Review** status via user interaction in the Update Status related action. In the case that the user moves the Submission to an **In Review** status, users are then able to Submit a Decision for the Submission and either Accept or Decline it. In either of these cases, the Submission is moved to its final Review Complete status.