Design Approach for the Firm Management Enhancement

Project Overview

With this enhancement, a user will be able setup firms and sub firms in order to limit which products an agent can view on the EGApp side. The firm assignment will be added to the group tab of the Admin tool. The firm drop-down will pre-fill with the firms added in the firm management tab and will allow the Admin user to assign a firm identifier to individual groups. This project will also allow finer refinement of state product availability with the addition of the product filtering by group for each individual product.

Features/Requirements

- The user will be able to limit products for a specific firm.
    - The user will be able to enter in firms and associated firms into the Firm Management utility.
        - This utility will allow users to add, update and remove firms.
        - All inputted fields are unique and there can be no duplicates.
        - This utility uses react table v6.
- A firm drop-down will display for each group under the group name in the Admin groups tab. It will contain the firm name for all firms set-up in the Firm Management tab and will be sorted alphanumerically.
- Each group can be associated with a firm by selecting the firm in the firm drop-down and saving the group.
- The firm org drop-down will default to blank if it has not been set for the group.
- When a user without a firm identifier, such as Pershing, enters the group tab of the Admin tool, all groups associated with their organization will be displayed.
- When a user with a firm identifier set for their group access enters the group tab of the Admin tool, only the groups with the same firm identifier will be displayed in the group view.
- A new column for firm id will be displayed in the group view, allowing the user to see the firm identifier without having to select each group.
- The firm org drop-down is visible for all organizations, but it is an optional group setting.
- The user will be able to add the option to use group product jurisdiction refinement by checking the box for state refinement in the group tab of the Admin tool. The location of the option is on the product tab for each group. The option will default to off.
- The option to use the state refinement will be saved for the group.
- The product hyperlink will not display if the state refinement option is turned off and if the product has not been enabled for the group.
- Clicking on the product hyperlink opens a dialog to display the list of states allowed per the sales agreement for the product.

- The firm user can remove a state from the group's product availability by unchecking the box. The state can be added back by checking the box.
- When the product hyperlink is clicked, the latest sales agreement product availability is displayed. If a state has been added or removed from the sales agreement jurisdiction access, it is reflected in the group product jurisdiction list.
- The product jurisdiction is not saved until the save button is clicked. The user may make multiple changes to product jurisdiction for groups and organizations and save with one click of the save button. The user is not required to save after each change.
- An audit will be recorded when the user selects/deselects the option to use group product state refinement and will display in the group history tab. The audit will contain the group name, the old and new value for the state refinement option, the action date, and the login that performed the action.
- An audit will be recorded for each update to the group product jurisdiction access. The audit will contain the group name, the list of states added or removed from access, the action date, and the login that performed the action.

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Use Cases / Workflow Changes

The user will be able to set up groups with firm organization associations. The firm associations will restrict what the user will be able to view when entering the groups tab of the Admin tool. If the group for the user logging has an associated firm identifier, only the groups with the same firm identifier will be visible in the group tab.

When the state refinement checkbox in the product tab of each group is checked, the product names will display as hyperlinks. When the user clicks on the product hyperlink, a dialog displays with the list of available jurisdictions. The user can then select which states the group will have product availability in the App Portal. Only the states approved for the product's sales agreement will be displayed in the jurisdiction list. The selected/deselected states are not saved until the save button is clicked. The user may select the jurisdictions for multiple groups and organizations before clicking save. An audit is created when the group has toggled the state refinement option, as well as an audit for each addition and removal of jurisdictions. **Note: if the sales agreement's state approvals for a product have changed, the group product jurisdictions must be updated also. Each group with relevant product jurisdiction approvals must be resaved after a change to the sales agreement state approvals.**

Admin Changes

Firm Management Tool -

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Deployment Profile Changes

- A new Firm Org Configuration Scope will be available for IT (vendor) user only, for deploying firm information to the higher environments.

Group Tab Changes

- SessionState for the Admin tool was extended to include the firm ID for the logged in user.
- Entering the groups tab, if the user has an associated firm ID for their user group, the user groups that do not have the same corresponding firm identifier are filtered from the view.
- If the user entering the Admin groups does not have a firm associated with the role, all groups are shown as before in the groups details.
- Users with an associated firm ID will show an additional firm ID column in the group's detail. This allows easy identification of the firm ID without clicking on each group.
- The master config database is queried for the firm data that is stored in the Firm table. This list is sorted alphanumerically by firm name and displayed in the firm drop-down located under each group name.
- The default value for the firm ID drop-down is a blank value.
- If the logged in user has an associated firm, only the session firm ID is displayed in the firm org drop-down. The user will not be able to change the firm ID association.
- If the logged in user does not have an associated firm identifier, the firm association can be changed for each group.
- When a firm ID is added for a group, an audit is recorded with the Group name, the previous firm ID, the updated Firm ID, the date of action, and the logged in user.
- The product jurisdiction option is turned off by default. To add the ability to refine the user group's product access by state, the checkbox in the product tab must be checked.
- The enable state refinement option is saved in the user group flags column of the Group table. This is then added to the group access model as it is displayed in the group access view and not in the group details view like other user group columns.
- If the enable state option is not checked, the product jurisdiction models are not loaded and the products display as plain text.
- When the option is checked, the jurisdiction approval model is loaded for each product and the product names display as hyperlinks.
- The product jurisdiction approvals are queried from the product access table and if there are values present for the selected user group, these are set as selected in the jurisdiction approval model. If no values are present, the jurisdiction values from the sales agreement are defaulted to selected in the jurisdiction dialog.
- If there are states that have been removed from the product's sales agreement approvals, these are removed from the group product jurisdiction approval model.
- Each product's jurisdiction approval model is assigned a nameoffset with the productid in order to identify it in the group access collection of product jurisdiction models.

- When a new product is selected for the group's access, the product's jurisdiction approval model is added to the group access collection of jurisdiction models when the dialog is closed.
- The group's jurisdiction approvals for each product are not saved when the jurisdiction dialog is closed. The jurisdictions must be maintained in the group access model until the group as a whole is saved by clicking the save button at the bottom of the view.
- When the organization drop-down selector is changed in a distributor environment in the product access tab, the jurisdiction approval model is set for each product.
- When the selected group is saved by clicking the save button, the group access property for enable state refinement for the checkbox in the product tab is used to set the user group flag for enable state refinement. This allows the toggle to be saved in the group table in the Flags column.
- If the collection of product jurisdiction models is not null for the selected products for the user group, the jurisdiction approvals and additional approvals (for non-standard states) are added to a dictionary for saving and auditing purposes for each product ID.
- An audit is created for the enable state refinement separately from the other user group flags as it exists in the product access model. The audit states the current status, previous status, session username, and date of action.
- The updated product jurisdiction dictionary is then compared to the saved jurisdictions for the selected user to determine what jurisdiction were added or removed for each product. The current sales agreement jurisdictions dictionary provides the source for the name for the jurisdictions as it contains the full list of jurisdictions.
- The product jurisdiction audit contains the session username, the selected group name, the product name, a list of states that have been added or removed using the state short name, the organization name, and the date of action.
- When the state refinement option is turned on for the first time, an audit will be created for each product enabled for state refinement as the previous values for the approvals and additional approvals will have been null in the product access table.
- When the product access is inserted into the database, the rows for the product access for the selected user group are first deleted and then reinserted using the model's group accessible product IDs.
- The jurisdiction approvals and additional approvals and then updated separately as the product jurisdictions may not be turned on. This allows the state approval columns to be cleared out and set to null if the toggle for state refinement has been turned off.
- Any changes to the product jurisdictions for the selected user group are then inserted.
- If a state has been added to a sales agreement and the Admin user wants to grant access at the group level, the selected group must be resaved in order to add the jurisdiction for the product. The group level jurisdictions are not automatically updated in the product access table when the sales agreement is changed. A new jurisdiction model based on the sales agreement is created when the Admin user enters the groups view. If a previous state refinement list exists for the selected user and product, the added jurisdiction will not be checked by default. To add the state, the user must open the associated jurisdiction list and check the box for the added state approval.
- No additional group changes are required when a state is removed from the sales agreement jurisdictions as it would already be removed from the group level access by the sales agreement restriction.

Firm Management

- This is a brand-new tool associated with this feature.
- This tool uses react-table v6. But as a benefit this table is rather simple so the usage of react table v6 is fine.
- Due to release schedule all data is being loaded and stored on the client side as one giant blob of data.
    - When we update a specific row(s) of data we only pass that changed/dirty data back and forth from the server.
    - There is no server-side paging. All paging is done client-side.
        - The initial load is one large cache of data.
    - React table v6 seems to work better with one giant blob of data rather than server-side paging. We can implement server-side paging, but we need to be a lot more careful with when/how we re-render and how often we call back to the server.
    - Given the small size of this data (max 1k rows with 3 - 10 columns)
        - I don't believe server-side paging makes sense right now.
- Only IT/Vender users can edit/add/delete fields on this tool.
    - Delete does not actually delete the row but rather moves it to the deleted tab. The system tracks this via the isDeleted flag.
    - The purge process permanently deletes a row.
    - Firm ID values are not editable.
        - These values are not editable as we use the firm id as our primary key.
            - This "primary key" is in the DB and the key the react logic uses to determine which row is which.
            - This approach to simplify and clarify the usage of firm id system wide. It's clearer to associate the firm id (because that's what it is) rather than have both a firm id and a firm guid.
- All other users an only view the page. But only if the "Enable Firm Management" Admin Group option is enabled.
- The system supports a Save All button.
    - This button saves all rows through the whole firm management system.
        - Even rows that are not displayed to the user at this time.
        - We could upgrade the logic to just save the displayed data, but we may enhance the system in the next release.
- The system supports a Discard All button.
    - This button discards all rows through the whole firm management system.
        - We could upgrade the logic to just discard the displayed data, but we may enhance the system in the next release.
        - We could also upgrade the system to include a discard row button, but it will need to be in the next release.
    - We display an error if the user has uncommitted changes, and they switch between tabs (active/deleted).
- We display an error if the user has rows with duplicate data in any other row.
    - No cell can have duplicate data found in that column.

- Given the timeline for this release and the fact only IT users will use this tool. It's mostly just supposed to be functional rather than "as user friendly as possible."
- The event handling of the Firm Management tool is handled mostly in the componentDidUpdate method.
    - Consolidated the logic here to make it more readable.
    - By passing flags back and forth through the redux/state. We can more clearly see what's the server is passing back and what it's not.
        - Moved to this method to limit the amount of data we pass back and forth from the client to the server.

App Changes

Firm ID / Case Access identifier

The "new" Firm will be a different identifier than the "old" hierarchical Firm / Case Access / Office identifier (firm information from FireLight Access will also be tied to the "old" firm / case access identifier).

For backwards compatibility, if the group does **not** have a Firm associated with it, the following fields and data items will be populated with the "old" Case Access firm identifier and name (what is passed in the FirmRegistrationNum / FirmName for the associated agent party in the 1228):

- FLI_FIRM_ID data item
- FLI_CASE_ACCESS data item
- FLI_FIRM_NAME data item
- User FirmID property
- User CaseAccess properties
- Activity FirmID property
- Activity CaseAccess property

Going forward, CaseAccess / FLI_CASE_ACCESS should be used instead of FirmID / FLI_FIRM_ID for hierarchical firm related logic, and all base logic related to Case Access by Firm ID will use CaseAccess / FLI_CASE_ACCESS.

The following identifiers will continue to be used for the "old" Firm Case Access logic:

- FLI_CURRENT_FIRM_ID
- FLI_CURRENT_FIRM_NAME
- FLI_ORIG_FIRM_ID

If a group **does** have a Firm associated with it in Groups profile, the following fields and data items will be populated with the "new" firm information configured in Firm Management profile in Admin:

- FLI_FIRM_ID data item (Firm ID)
- FLI_FIRM_NAME data item (Firm Name)
- FLI_DTCC_ASC_FIRM_ID data item (Associated Firm ID)
- FLI_DTCC_ASC_FIRM_NAME data item (Firm Name)
- User FirmID

- Activity Firm ID

Product Access

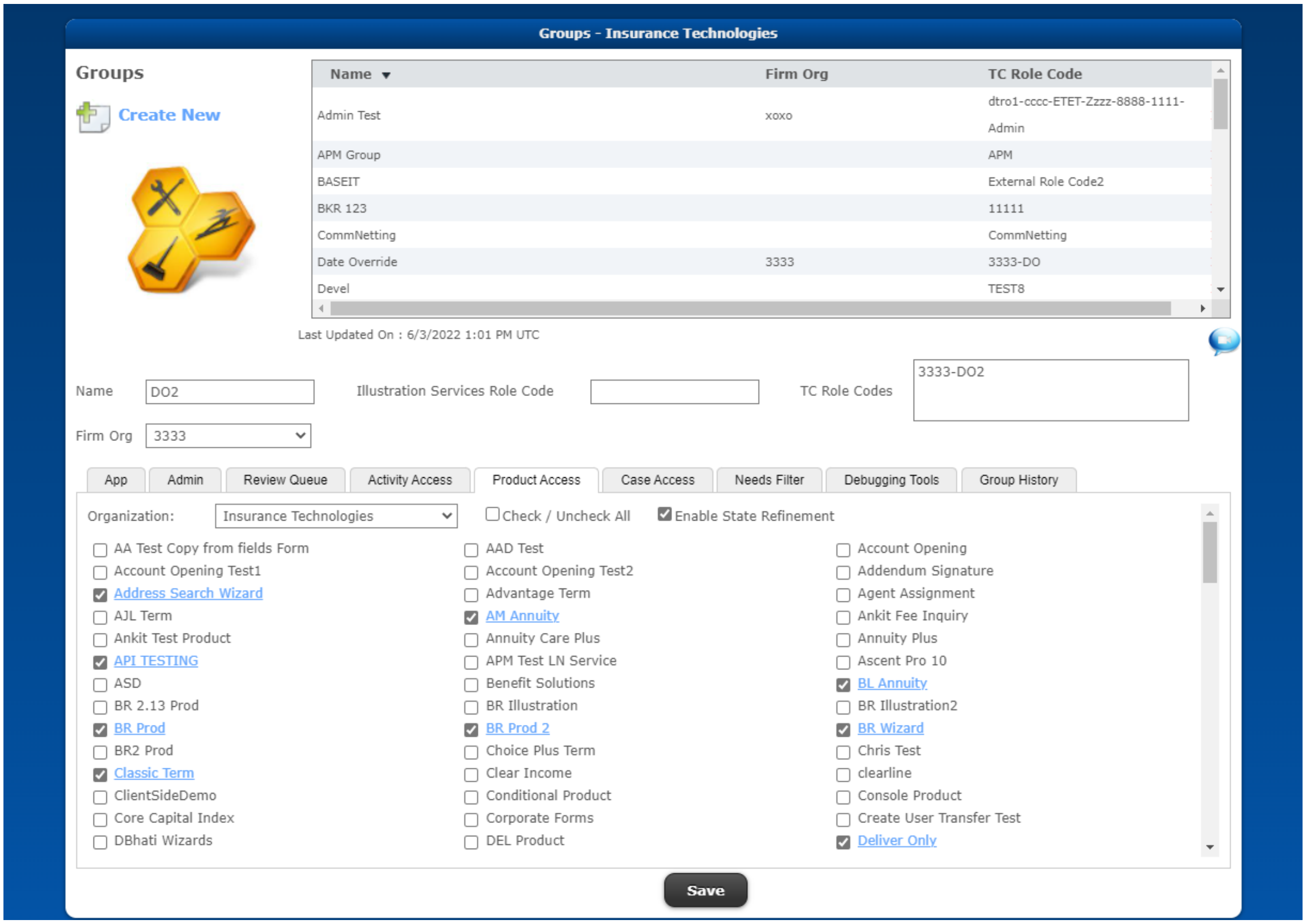
Regarding creating new activities/products, the system will now limit the products list by Jurisdiction and Jurisdiction defined in the new hyper link in the product access tab. The system does not use the firm id specifically on the EGApp side. The system only uses the group access product id.

- For this new logic, we modified the `FillUserGroup` method to include two new parameters. These two new parameters are related to the new `JurisdictionApproval` and `AdditionalJurisdictionApproval` columns added to the GroupProductAvailability.
- This new limitation is populated in the `AccessibleProductInfoCollection.` This new collection contains the jurisdictions for every individual product.
- Now we need to either call the UserGroup from everywhere we need to restrict products by jurisdiction or pass in the UserGroup object.

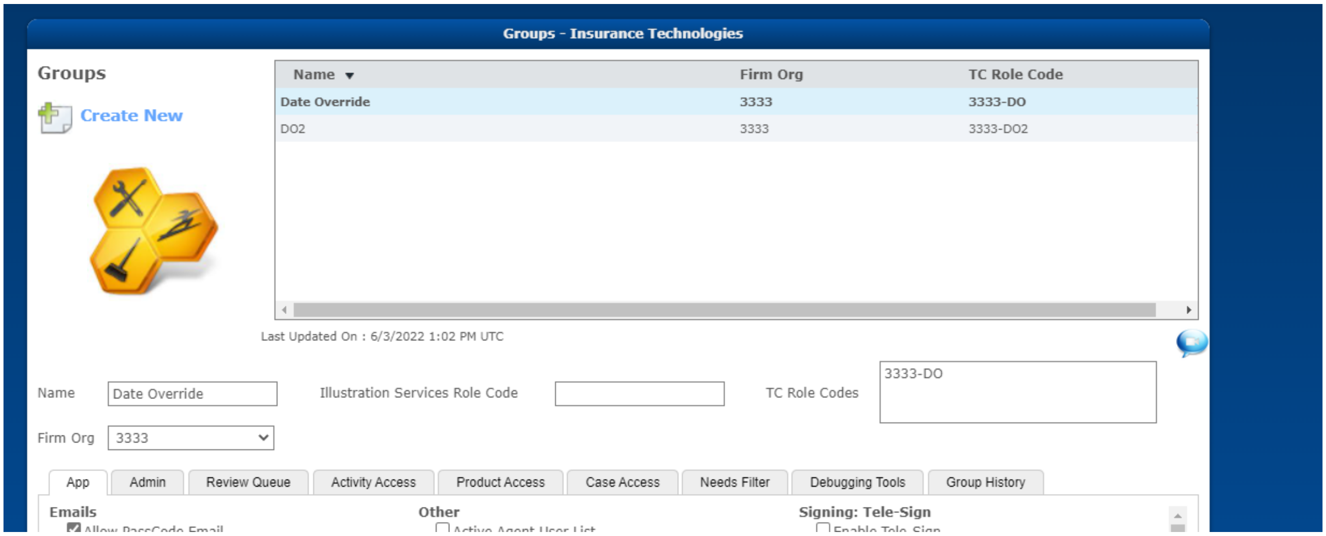
Integration Changes

N/A

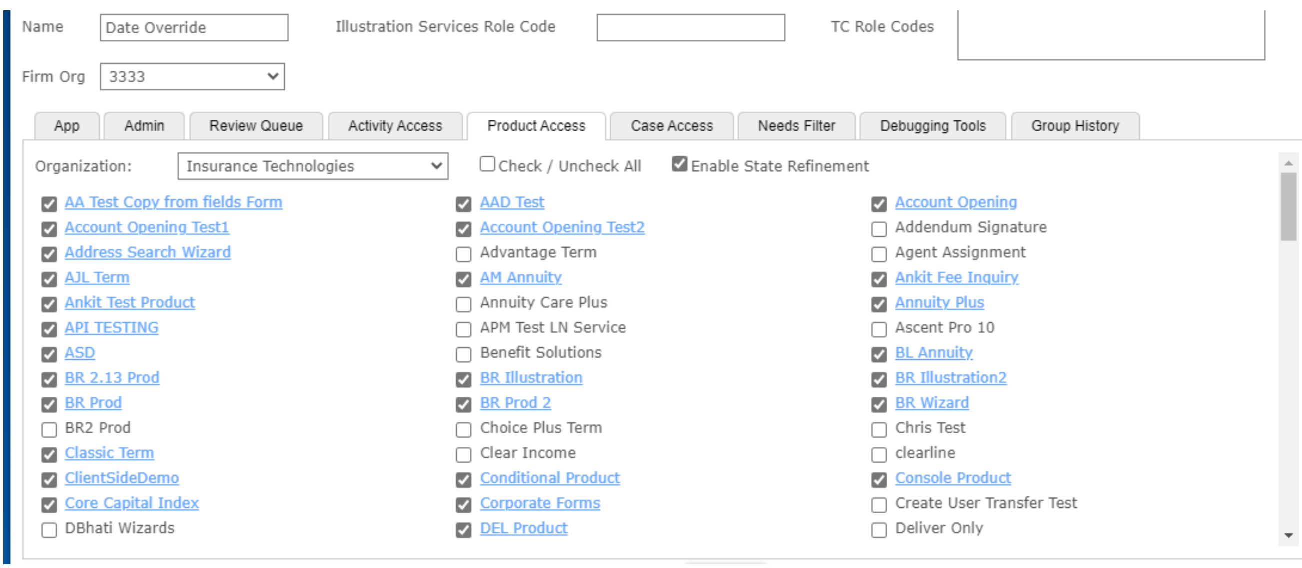
UI Mock Ups



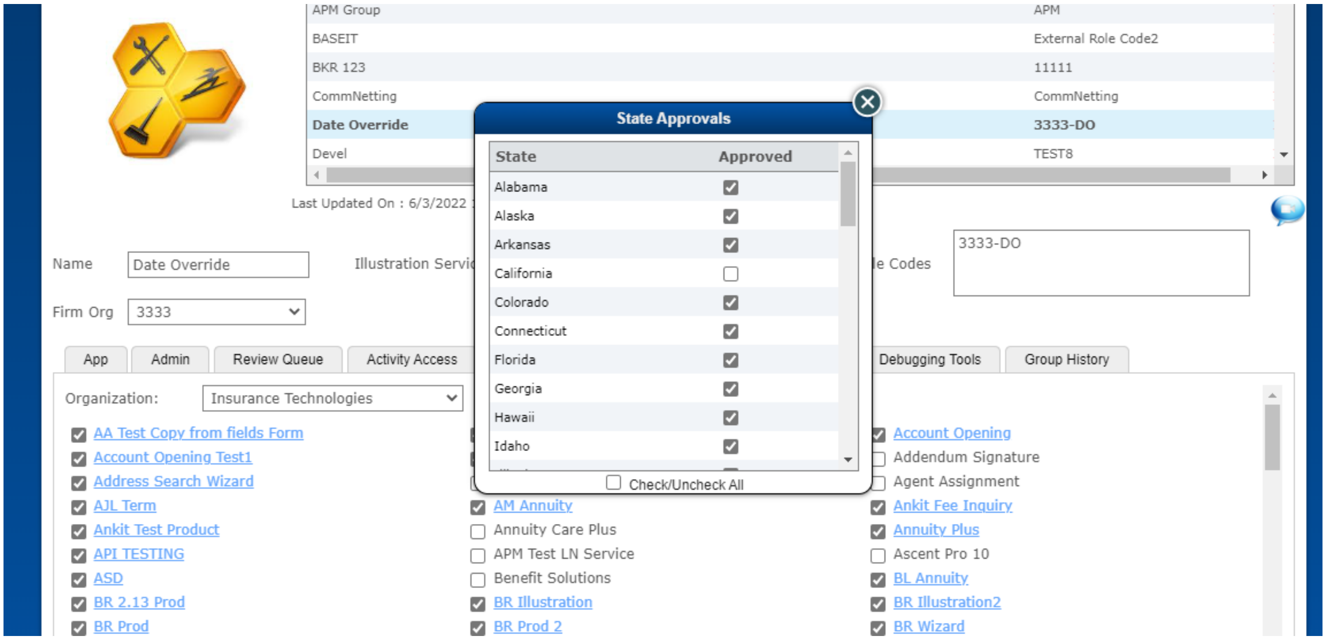
Admin Tool- Group Tab with Firm Org drop-down and product jurisdiction for selected products when enable state refinement is enabled.



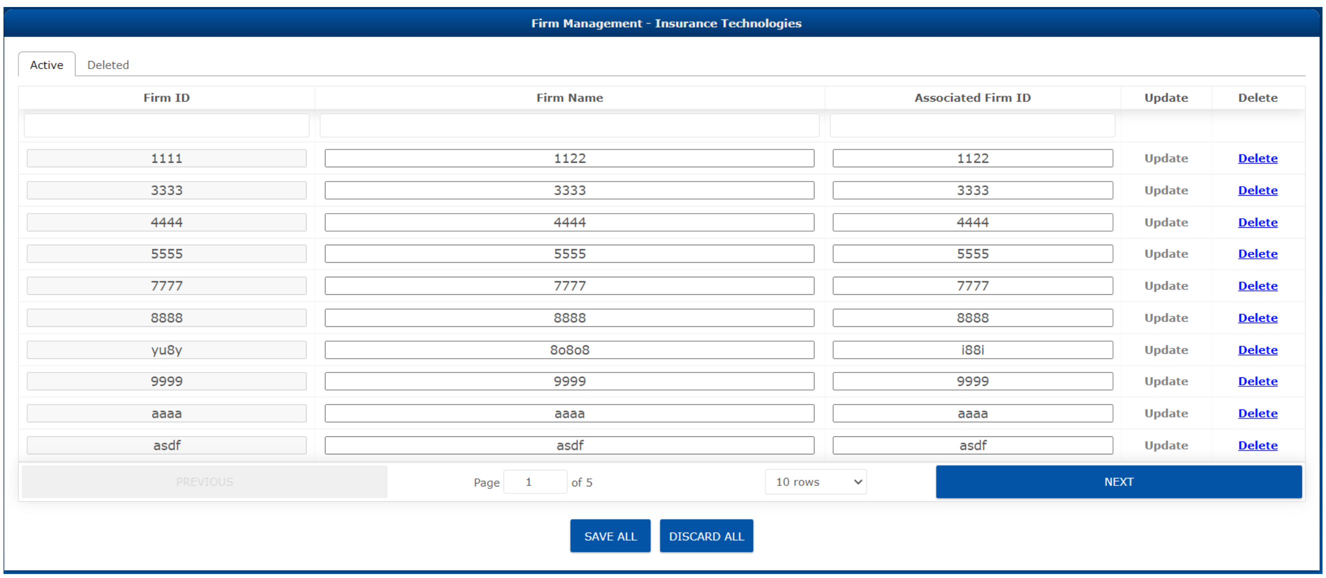
If logged in as user with firm org, only groups with the same firm ID are visible.



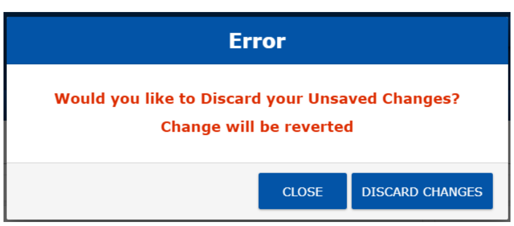
When Enable State Refinement is checked and the product is enabled, the product is displayed as a hyperlink.



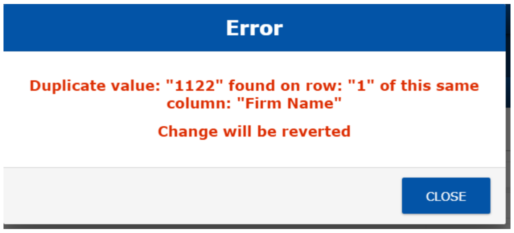
Clicking the hyperlink opens a state approval dialog with Sales agreement jurisdictions checked by default.



Above is the Firm Management tool. IT users will use this tool in order to add firms.



Discard Error Dialog.



Duplicate Value Error Dialog.

How to Enable and Use This Feature

Areas Impacted

System Area	Yes	Comment
Admin Tool		
- **Form Library**		
- **Design Forms**		
- **Profile Administration**	X	Groups- added state refinement, product jurisdictions, firm id drop-down and detail column
- **Reports**	X	Admin reports-
- **Deployment**	X	
- **Design Wizard**		
FireLight App		
- **New Application**	X	
- **Edit Application**		
- **Inbound Integration**		
- **Outbound Integration**		
- **PDF Generation**		
- **Email System**		
FireLight Console		
- **Windows**		
- **iOS**		
Other Systems		
- **DTCC Integration**		
- **Commission Netting**		
- **Activity Reporting**	X	