Operational Enhancement Solutions

jhaEnterprise Workflow™ Release 2021.0

jhaEnterprise Workflow User Guide

04/18/2022

jack henry Banking®
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Documentation Updates

The following information describes the updates made to this document as they occur throughout the release year.

> **CAUTION**
> These changes reflect updates to documentation only.

Date	Change Summary
6/7/21	Original R2021.0 publication.
4/18/22	The caution notes in the *Manual Activity Timer - Send an Email* and *Send Email Activity* topics clarify that an email group must be created through an email provider.

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*jha*Enterprise Workflow

*jha*Enterprise Workflow is a workflow and business process management product that helps define and electronically manage your business processes. The solution allows automation and user interaction to provide the best process for your organization to increase:

- Efficiency
- Accuracy
- Timeliness

*jha*Enterprise Workflow uses a large variety of integration methods to allow multiple products to participate in the business process through one product.

*jha*Enterprise Workflow also allows your institution to:

- Facilitate manual processes by guiding users through steps that take place outside of the system and track the completion of each manual activity within the workflow.
- Execute enterprise-wide workflows by automatically routing work to decision makers and key personnel within and among functional departments.
- Streamline and standardize business processes and procedures.
- Improve operating efficiency while reducing operating costs.
- Enhance customer response and service.
- Support dynamic operational environments, business goals, and the regulatory requirements governing sensitive documents such as loan origination/servicing documents, account opening/closing documents, credit card applications, and trust administration documents.

*jha*Enterprise Workflow is only available in the Xperience Framework.

Landing Zones

If only one institution is associated with the Xperience instance, the normal *jha*Enterprise Workflow functions appear. *jha*Enterprise Workflow is divided into the following landing zones/ functions:

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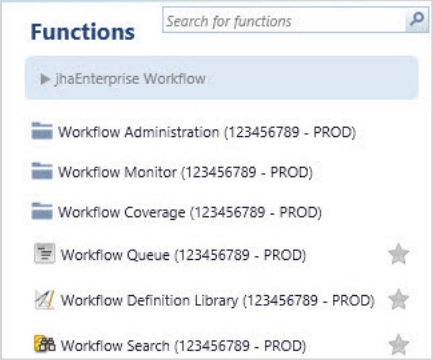

> **NOTE**
> Depending upon your user access, you may or may not be able to view or use these functions.

- *Workflow Administration* contains all the options administrators use to manage groups, queues, categories, permission sets, business calendar settings, email templates, and work listing settings. *Workflow Administration* is where administrators do the necessary behind-the-scenes work so workflows can be built and users can access their queues.
- *Workflow Monitor* contains options that allow authorized users to view running workflow instances, terminate workflow instances, retry faulted workflow instances, change the priority of a workflow instance, and release holds.
- *Workflow Coverage* contains options that help authorized users manage queues and the availability of users.
- *Workflow Queue* contains options that allow users to work activities and tasks. Authorized users can also start a workflow, change the priority of a workflow, and manage availability status.
- *Workflow Definition Library* contains options that allow authorized users to create, manage, import, export, publish, unpublish, and manage versions of workflow definitions.
- *Workflow Search* contains options that allow authorized users to search for workflow instances and view, print, and export the results to an Excel® file. There is also an option that allows authorized users to view the history of the workflow instance.

Zoom Functionality

*jha*Enterprise Workflow uses Xperience's zoom functionality on all screens, except for *Workflow Designer*. *Workflow Designer* has its own zoom functionality separate from Xperience.

The default zoom value is *100%*. Zoom values persist for each tab opened after the zoom value is changed (even after Xperience is closed and reopened).

For instance, *Workflow Administration* is opened at *100%* magnification. *Workflow Search* is then opened, and the magnification is changed to *200%*. The *Workflow Administration* screen

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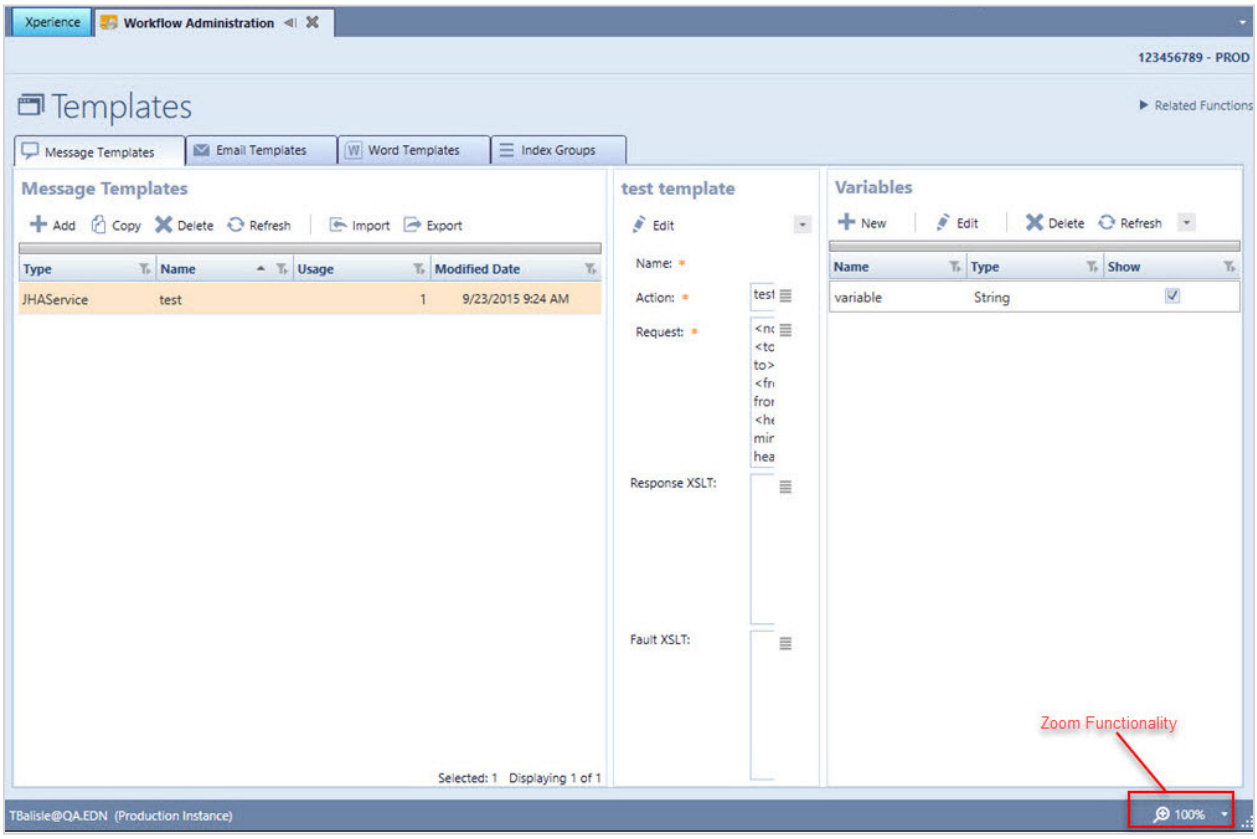
remains at *100%*. *Workflow Search* is opened and its screen is at *200%* magnification. *Workflow Search* magnification retains the last entered value of *200%*.



Zoom menu options:

- **Zoom In** - increases magnification in 25% increments.
- **Zoom Out** - decreases magnification in 25% increments.
- Predefined screen magnifications:
  - **400%**
  - **200%**
  - **150%**
  - **125%**
  - **100%** (default value)
  - **75%**
  - **50%**
  - **25%**
- **Custom** - allows for irregular numbers (e.g., *213%*). Range is *10%–1,000%*.

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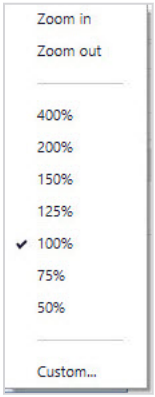

Logging On

Depending on your configuration scenario, use these options to connect and log on to Xperience and *jha*Enterprise Workflow.

Connect to Institution

If more than one institution is associated with the Xperience instance, the **Connect to Institution** option appears.

Selecting **Connect to Institution** allows you to choose an institution or switch to a different institution.

Connect to Workflow System

When the Workflow Key is not found in Persistent Storage during discovery, a **Connect to Workflow System** option is available.

Selecting **Connect to Workflow System** opens the *Workflow System* tab, where you can enter a valid host name in a regular expression. The *jha*Enterprise Workflow client verifies the host and adds the routing UI and host name to Persistent Storage. It adds the Xperience instance to the institution's *Workflow Client* tab in the jXchange Management Console and begins the discovery process automatically.

Using Help in jhaEnterprise Workflow

You can access **Help** the following ways:

- From the *Xperience* tab, click **Help**, and enter *jhaEnterprise Workflow* in the search box.
- From any screen in *jha*Enterprise Workflow, type keywords into the *Search help* box, located in the top right corner of your screen.

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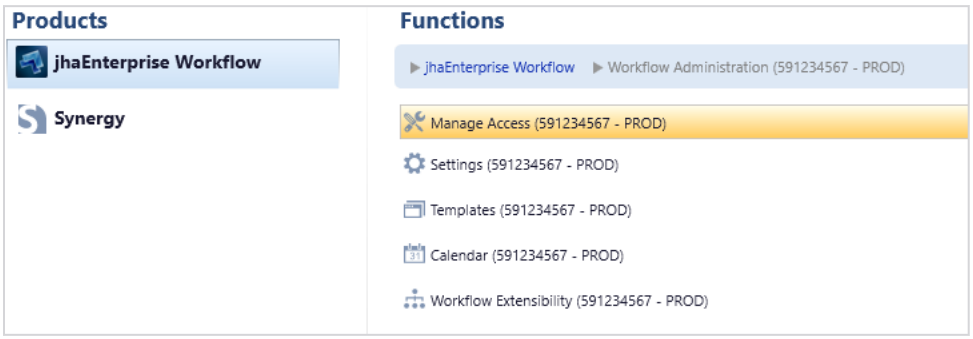
Workflow Administration

The *Workflow Administration* landing zone is used by administrators to establish and manage the behind-the-scenes settings that are critical to operating in *jha*Enterprise Workflow.

Administrators must start here to enable users to build workflows and have access to work in their queues. Changes made on the *Workflow Administration* screens are recorded to Enterprise Audit.

> **NOTE**
> Depending upon your user access, you may or may not be able to view or use these functions.

The *Workflow Administration* landing zone contains options that, when selected, take you to screens that allow you to perform various administrative functions.



Manage Access

Use **Manage Access** to manage **Groups**, **Queues**, **Categories**, and **Permission Sets**.

Settings

Use the **Settings** function to manage settings for **Queue Settings**, **Enterprise Events**, **Workflow Scheduler**, **Optional Features**, and **Diagnostics**.

Templates

Use the **Templates** function to manage **Message Templates**, **Email Templates**, **Word Templates**, and **Index Groups**.

Calendar

Use the **Calendar** function to **Manage Calendars**, **Configure Calendars**, and work with **Holiday Sets**.

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Extensibility

Use the **Extensibility** function to import a package containing a workflow definition and its dependencies.

Manage Access

The **Manage Access** function allows administrators to manage **Groups**, **Queues**, **Categories**, **Permission Sets**, **Approvers**, and **Approver Groups**.

Groups

This option allows you to tell the system which users are meant to make up groups based on the IMS Claims of user, role, or department. You can also add, edit, and delete groups here.

A group is a specified membership of users. A group's membership is defined by a set of rules defining the IMS Claims required to be a member. Membership can also be explicitly given to one or more people by IMS subject.

*jha*Enterprise Workflow comes standard with two groups: **Everyone** and **Super Users**. You can edit the **Everyone** group's membership. By default, the **Super Users** group has permissions for everything.

> **NOTE**
> The **Workflow Admin** group exists for each institution and cannot be deleted.

Fields and Functions: Manage Groups

The following fields and functions are located on the *Manage Groups* screen.

Groups Panel

Add

Add an item.

Copy

Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Groups Detail

When a group is selected from the list in the *Groups* panel, the information about that group appears in the panel on the right-hand side of the screen.

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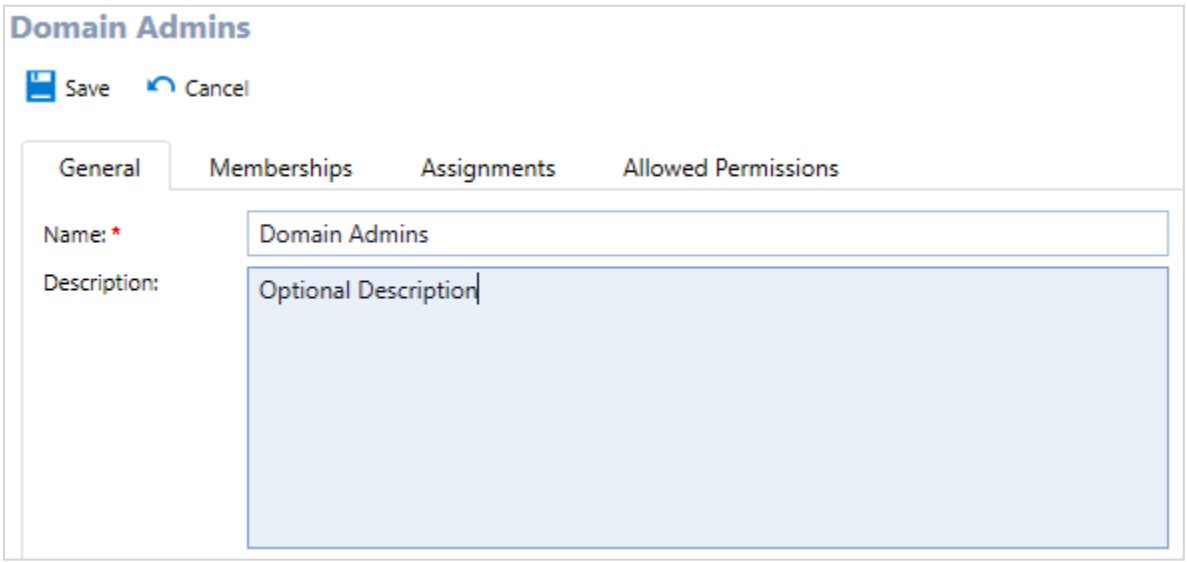
General Tab

The *General* tab contains the name and description of the group that is selected on the *Groups* panel.



Name

This field is required and must be unique for the institution.

Description

This field is optional.

Memberships Tab

The *Memberships* tab contains the membership settings for the selected group.

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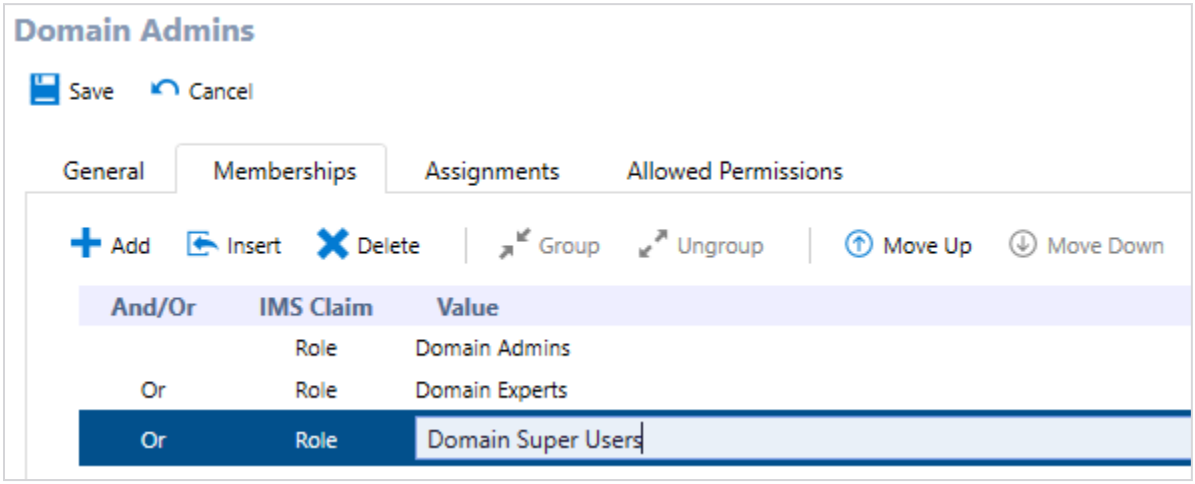

Add

Add a membership row.

Insert

Select **Insert** to add a new row.

Delete

Select **Delete** to permanently remove the selected row.

Assignments Tab

The *Assignments* tab contains the assigned **Resources** and their associated **Permission Sets**.

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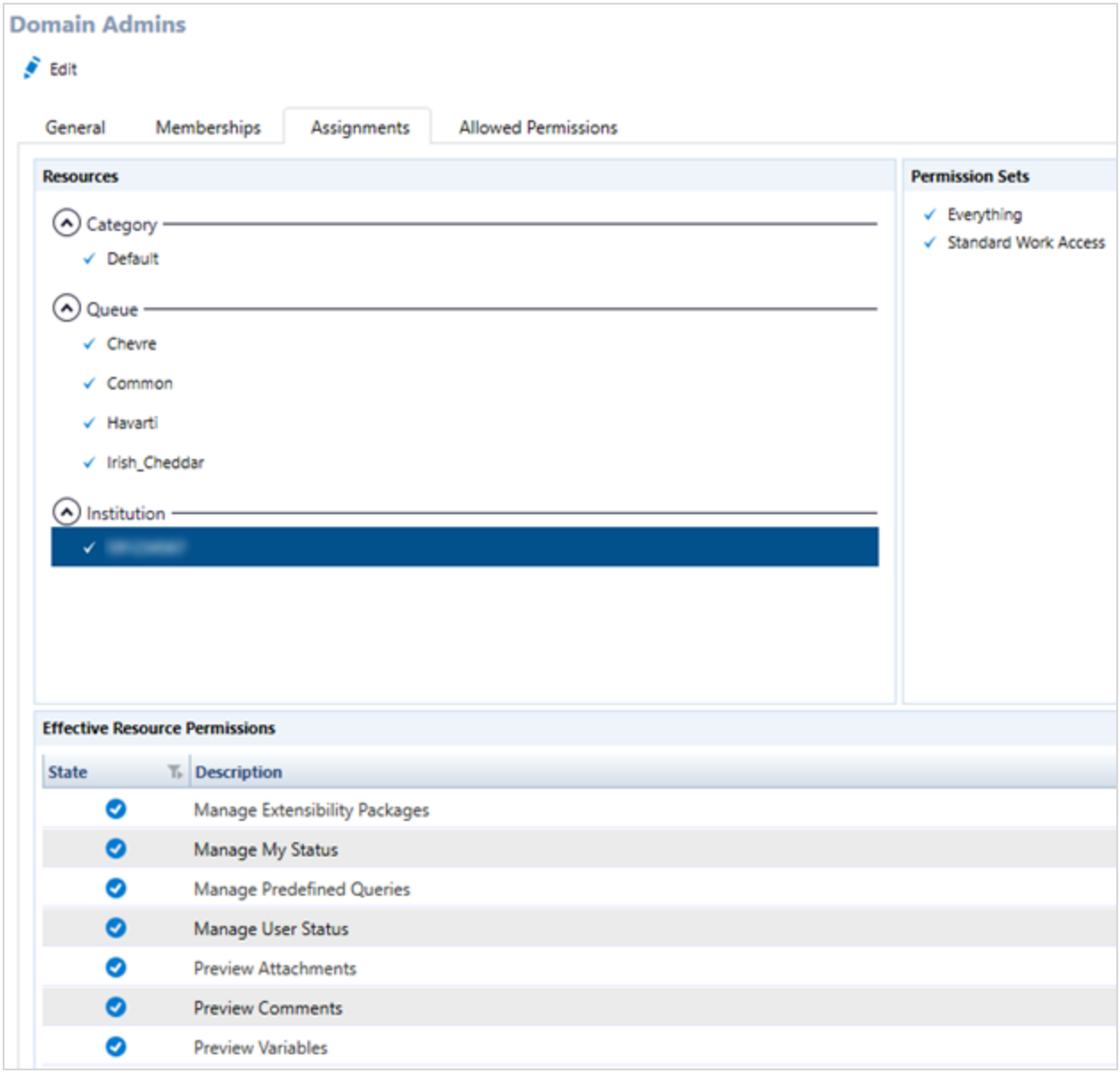

Resources

The *Resources* panel lists **Resources** by **Type**:

- **Category**
- **Queue**
- **Institution**

Resources are built in the other **Manage Access** tabs:

- *Queues*

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- *Categories*

Permission Sets

This panel contains a list of available **Permission Sets**.

Permission Sets are built in the similarly named *Manage Access* tabs.

Effective Group Permissions

This panel is collapsed by default. Expand the *Effective Group Permissions* panel to view all effective permissions that are assigned to the selected **Resource** for this group. The **State** and **Description** for each permission is listed in this panel.

State

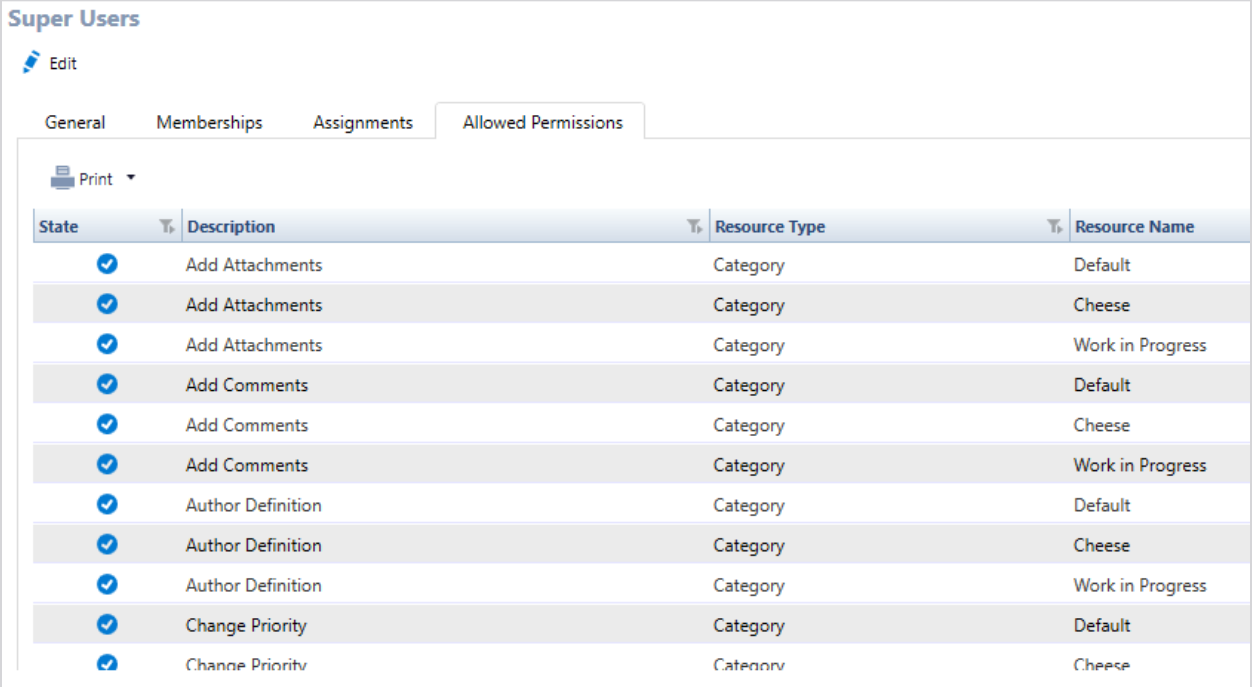
This column reflects whether the effective permission is **Allowed** or **Denied**.

Description

This field contains a description of the permission.

Allowed Permissions Tab

The *Allowed Permissions* tab contains a table with all allowed permission for the group, including the **Resource Type** and **Name**.



State	Description	Resource Type	Resource Name
✓	Add Attachments	Category	Default
✓	Add Attachments	Category	Cheese
✓	Add Attachments	Category	Work in Progress
✓	Add Comments	Category	Default
✓	Add Comments	Category	Cheese
✓	Add Comments	Category	Work in Progress
✓	Author Definition	Category	Default
✓	Author Definition	Category	Cheese
✓	Author Definition	Category	Work in Progress
✓	Change Priority	Category	Default
✓	Change Priority	Category	Cheese

Print

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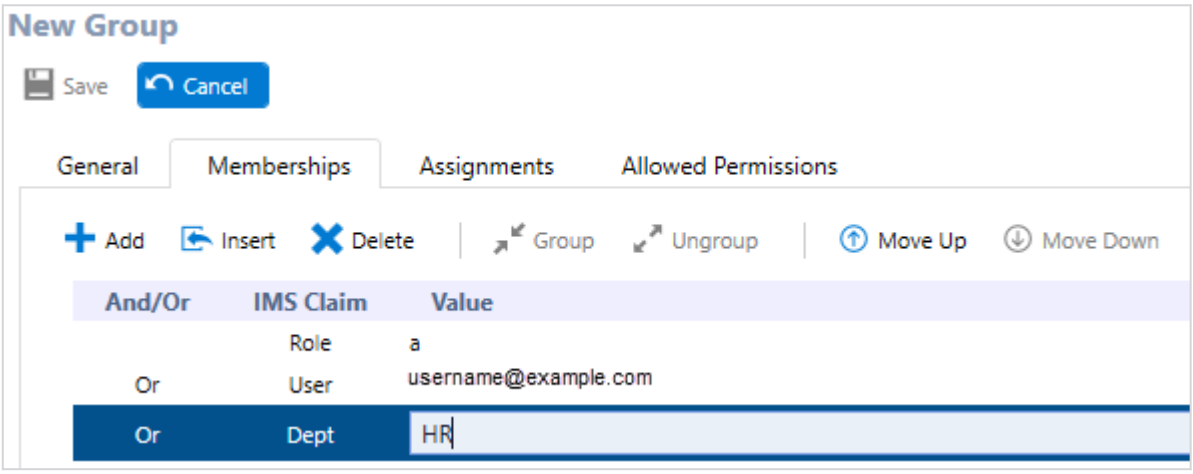
Use the **Print** button to print table content. The **Print** drop-down menu also has options to **Print Preview**, **Open with Excel**, or **Save as Excel**.

Adding a Group

1. From the *Groups* panel, select **Add**.
2. In the *General* tab, enter a name and description for the new group.
3. In the *Memberships* tab, enter the appropriate information for the group members.



4. From the **IMS Claim** drop-down list, select *Role*, *User*, or *Dept*.
5. Complete the **Value** field.
6. Select **Insert** to add a second row and complete steps 4–5, if necessary.
7. Use the **Group** and **Ungroup** options to group/ungroup selected memberships, if necessary.
8. In the **Assignments** tab, assign **Resources** and **Permission Sets**.

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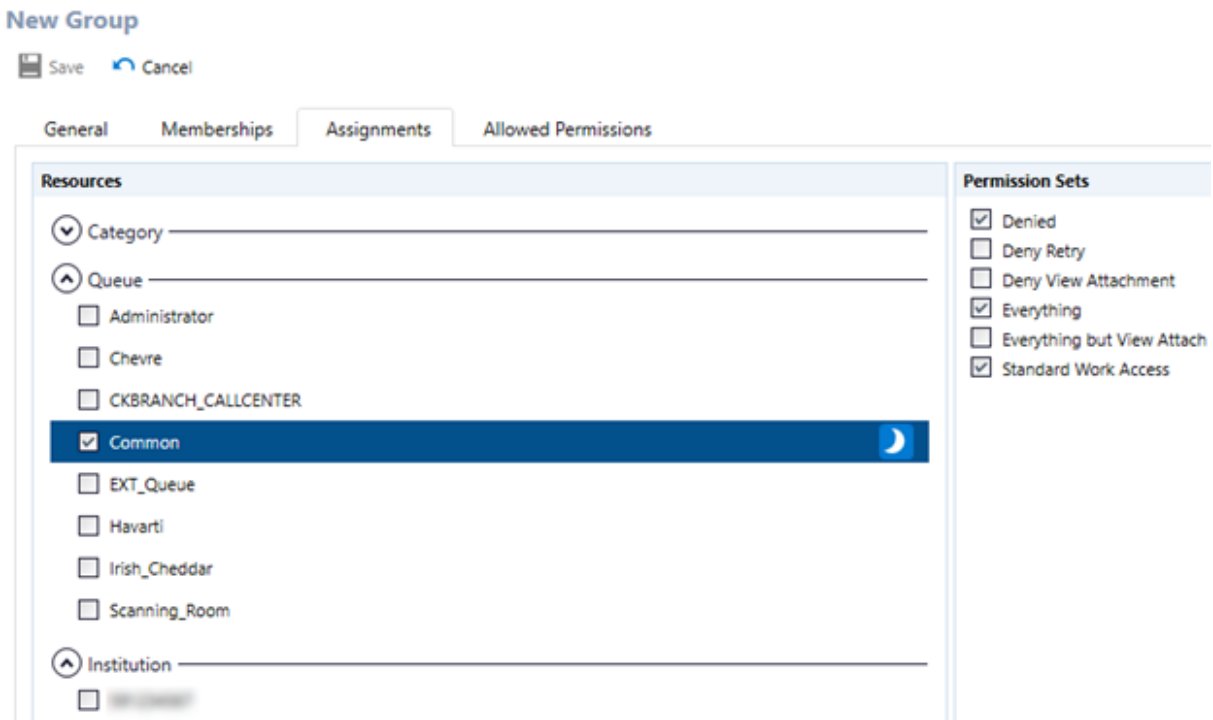

9. Select a **Resource** (**Category**, **Queue**, or **Institution**) by selecting its check box.

   When a **Resource** is selected, you can assign **Permission Sets** to it with the respective check boxes in that panel.

   > **NOTE**
   > A **Group** can have more than one **Resource** assigned. A **Resource** may have more than one **Permission Set** assigned to it.

10. Use the moon icon under **Resources** > **Queue** to indicate if the **Queue** is in standby mode.

    Standby mode helps to ensure that work is completed by designating a backup for the normal group. The standby workers do not normally work in this queue, but work can be assigned to them if the normal queue has no available workers.

    > **NOTE**
    > Standby mode references the combination of this **Group** and this **Queue**. Standby mode does not represent any time this **Group** is tied to any **Queue**.

11. When all necessary information is entered, click **Save**.

Editing a Group

1. From the *Manage Groups* screen, select the group you want to edit from the *Groups* panel.
2. Click **Edit**.
3. Edit the **General**, **Memberships**, and **Assignments** screens as necessary.

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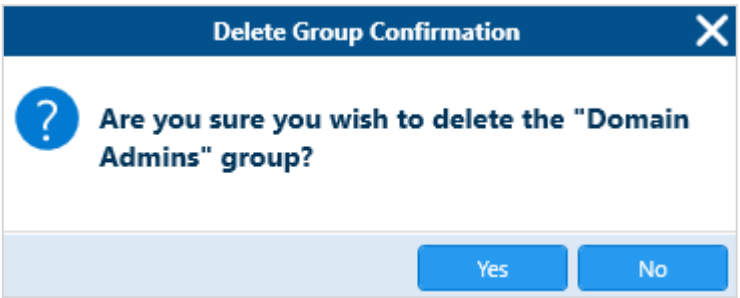
4. Click **Save**.
   The changes to the group are saved.

Deleting a Group

> **NOTE**
> The **Everyone** group cannot be deleted.

1. On the *Manage Groups* screen, select a group.
2. Select **Delete**.
   The *Delete Group Confirmation* dialog box appears.



3. Select **Yes**.
   The item is deleted from the *Groups* list.

Manage Queues

This option allows you to work with queues.

A **Queue** is the person or group that is assigned a manual activity. Some typical names of queues are: Customer Service, Accounts Payable, Accounts Receivable, Recruiting, and Benefits.

You can add, edit, and delete queues you create. However, you cannot delete or edit the **Common** queue, which is the default queue, and comes standard with *jha*Enterprise Workflow.

> **CAUTION**
> You cannot delete any item (such as a category, queue, or email template) if the item has been referenced in any published definition.

To grant users access to a queue, the administrator must choose or create a workflow group and connect it to one or more permission sets.

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Fields and Functions: Manage Queues

The following fields and functions are on the *Manage Queues* screen.

Queues Panel

When you select a queue from the list in the *Queues* panel, the information about that queue appears in the panel on the right.

Add

Add an item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

New Queue Panel

When you select **Add**, the *New Queue* panel appears.

Name

Enter the name of your new queue.

> **TIP**
> The queue name cannot include special characters.

Description

The description of the *Queue*. This field is optional and has a 255-character limit.

Related Group Permissions

The *Related Group Permissions* panel contains a grid with all allowed permissions for the queue.

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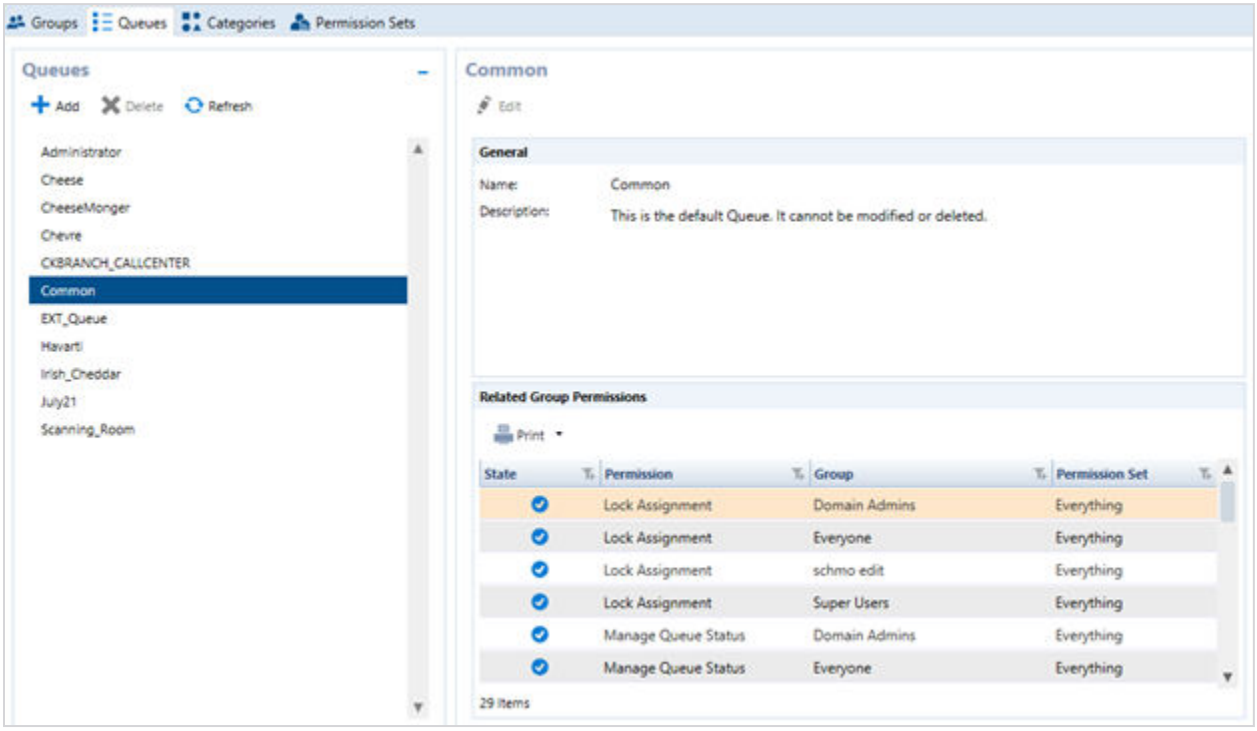

Print

Use the **Print** button to print grid content. The **Print** drop-down menu also has options to **Print Preview**, **Open with Excel**, or **Save as Excel**.

Adding a Queue

1. From the *Manage Queues* screen, click **Add** from the *Queues* panel.
   The *New Queue* panel appears.
2. Enter a name and description for the queue.

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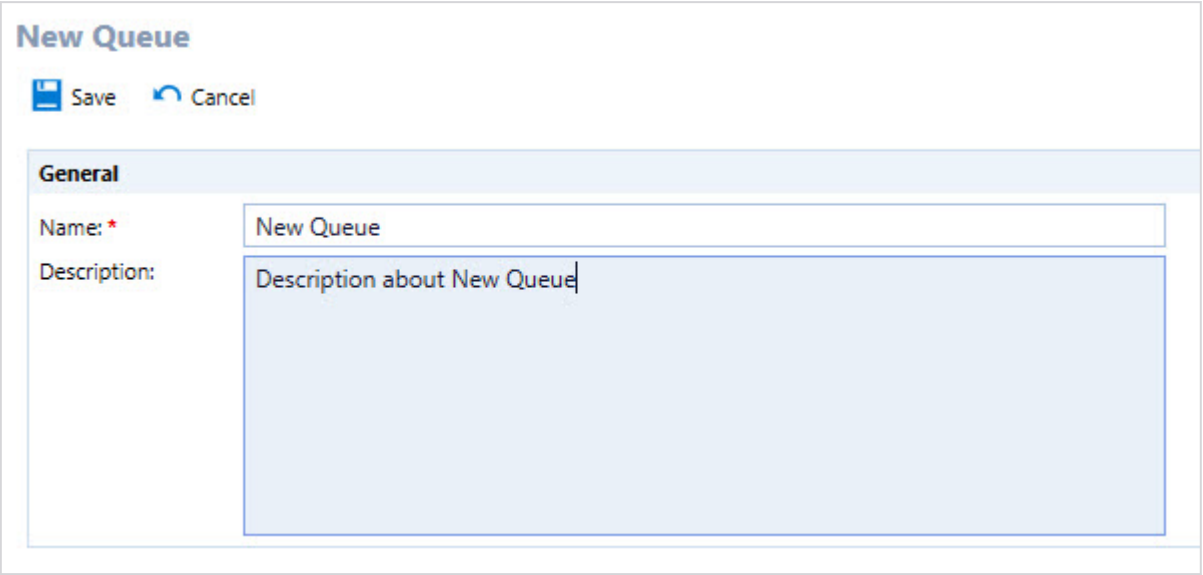

The **Name** field is required, and you can only enter letters and numbers in this field, no spaces.

3. Click **Save**.
   The new queue is saved and appears in the *Queues* panel.

Editing a Queue

1. From the *Manage Queues* screen, select the queue you want to edit from the *Queues* panel, and click **Edit**.
2. Edit the name and description for the queue, as necessary.

> **NOTE**
> The queue **Name** cannot be edited if the queue is in use, but the **Description** can be modified.

3. Click **Save**.
   The changes to the queue are saved.

Deleting a Queue

> **CAUTION**
> You cannot delete any item (such as a category, queue, or email template) if the item has been referenced in any published definition.

1. From the **Manage** > **Queues** screen, select the queue you want to delete from the *Queues* panel.
2. Select **Delete**.
   A confirmation dialog box appears:

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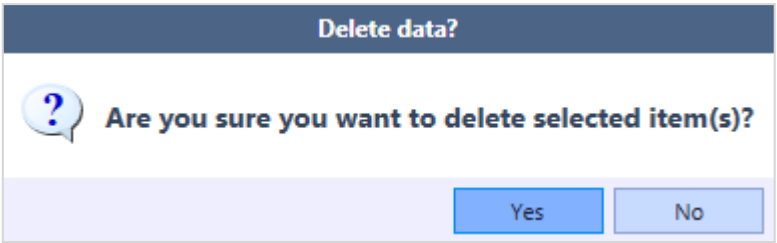

3. Select **Yes**.
   The item is deleted from the list of *Queues*.

Manage Categories

This option allows you to work with categories.

You can add, edit, and delete categories you create. However, you cannot delete or edit the *Default* category that is standard for *jha*Enterprise Workflow.

Categories govern everything about the workflow instance. A *Category* is generally equivalent to a business line. For example, a *Category* may be defined as **Accounting**, while a *Queue* may be **Accts Rec** or **Accts Payable**, but an **Invoice Processing** workflow would be in the **Accounting** category.

To grant access to a category for users, an administrator chooses or creates a workflow group and connects it to one or more permission sets.

Each workflow group may be associated with one or more permission sets. A workflow category may have one or more workflow groups associated with it.

> **CAUTION**
> You cannot delete any item (such as a category, queue, or email template) if the item has been referenced in any published definition.

Fields and Functions: Manage Categories

The following fields and functions are on the *Manage Categories* screen.

Categories Panel

Categories allow you to separate workflows and secure them by audience. Categories should contain a name and a description.

Add

Add an item.

Delete

Select **Delete** to remove the selected item.

Refresh

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Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

New Category Panel

When you click **Add**, the *New Category* panel appears.

Name

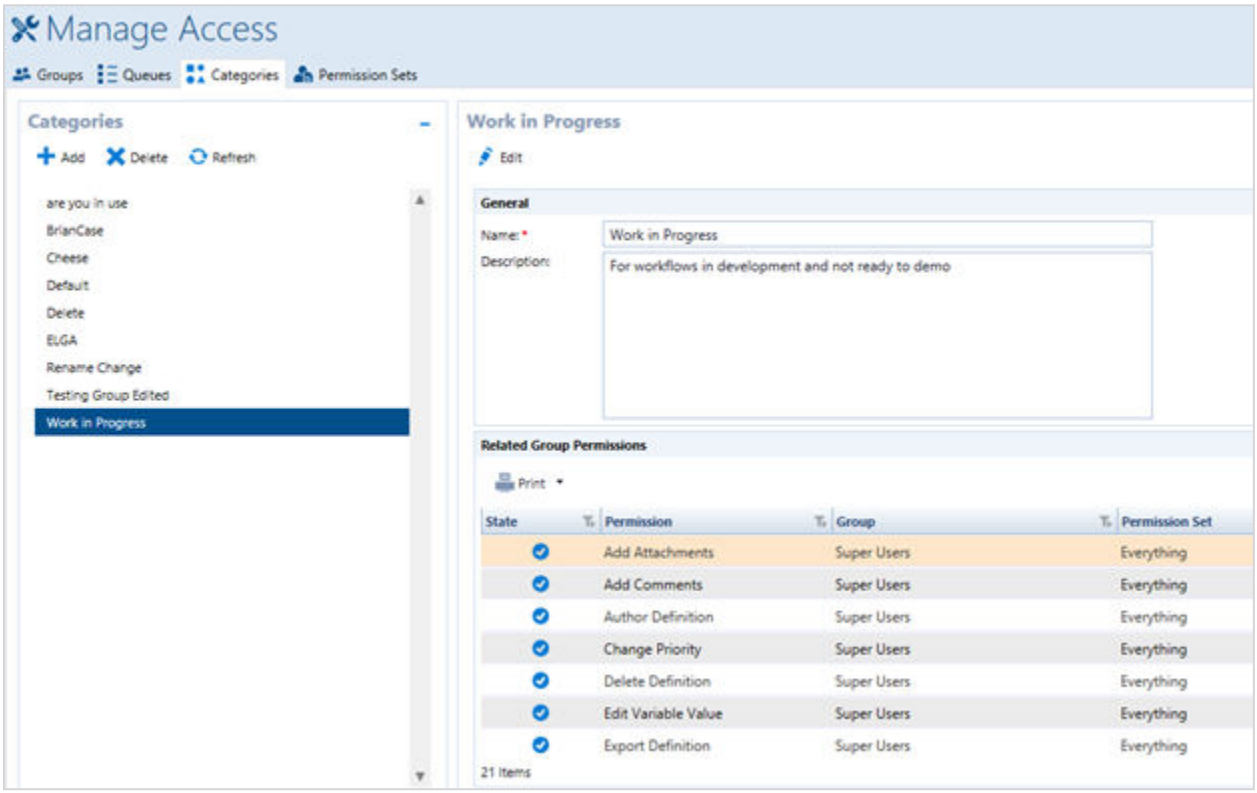
Enter a name. This name appears to users in the **Workflow Queue** and **Workflow Monitor** landing zones.

Description

The description of the *Category*. This field is optional and has a 255-character limit.

Related Group Permissions

The *Related Group Permissions* panel contains a grid with all allowed permissions for the category.



Print

Use the **Print** button to print grid content. The **Print** drop-down menu also has options to **Print Preview**, **Open with Excel**, or **Save as Excel**.

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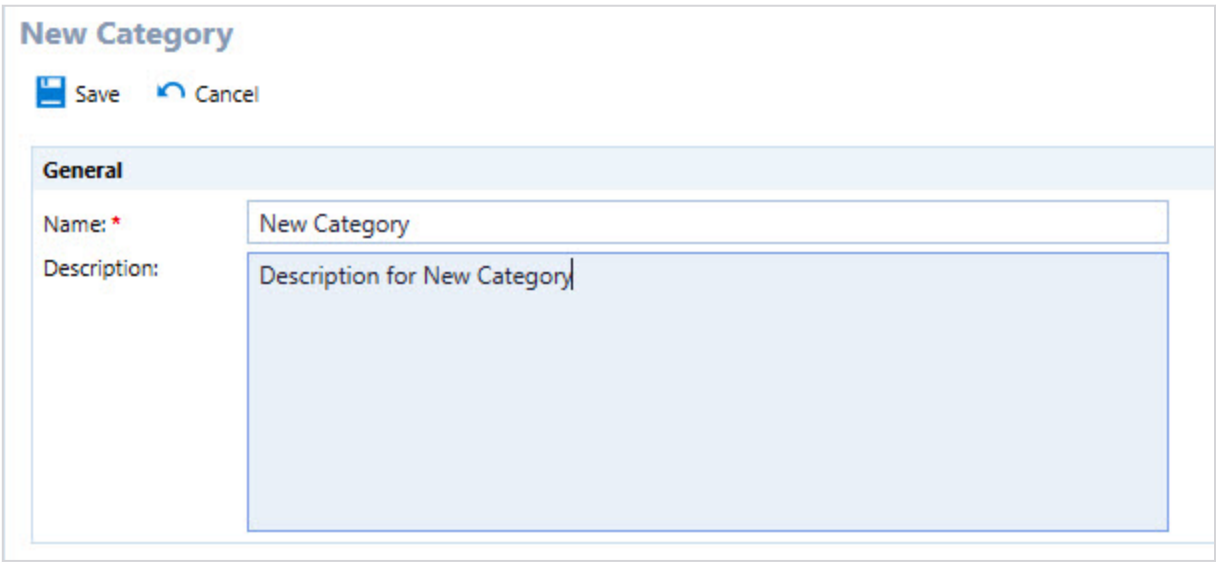
Adding a Category

1. From the *Manage Categories* screen, click **Add** from the *Categories* panel.
   The *New Category* panel appears.
2. Enter a name and description for the category.



   The **Name** field is required.
3. Click **Save**.
   The new category is saved and appears in the *Categories* panel.

Editing a Category

1. From the *Manage Categories* screen, select the category you want to edit from the *Categories* panel, and click **Edit**.
2. Edit the name and description for the category, as necessary.

> **NOTE**
> The category **Name** cannot be edited if the category is in use, but the **Description** can be modified.

3. Click **Save**.
   The changes to the category are saved.

Deleting a Category

> **CAUTION**
> You cannot delete any item (such as a category, queue, or email template) if the item has been referenced in any published definition.

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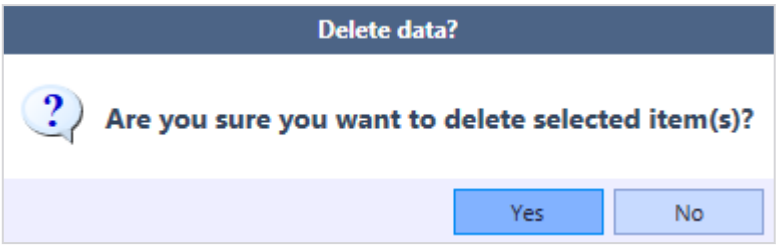
1. From the **Manage** > **Categories** screen, select the category you want to delete from the *Categories* panel.
2. Select **Delete**.
   A confirmation dialog box appears:



3. Select **Yes**.
   The item is deleted from the list of *Categories*.

Manage Permission Sets

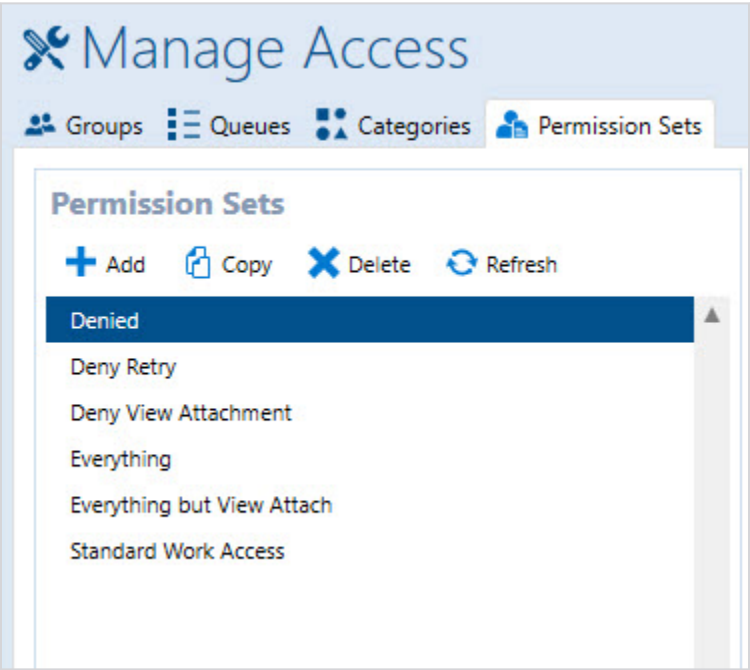
This option allows you to tell the system what specific actions can be performed.

The **Manage Permission Sets** screen allows you to add, edit, and/or delete permission sets.

Fields and Functions: Manage Permission Sets

The following fields and functions are on the *Manage Permission Sets* screen.

Permission Sets



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Add

Add an item.

Copy

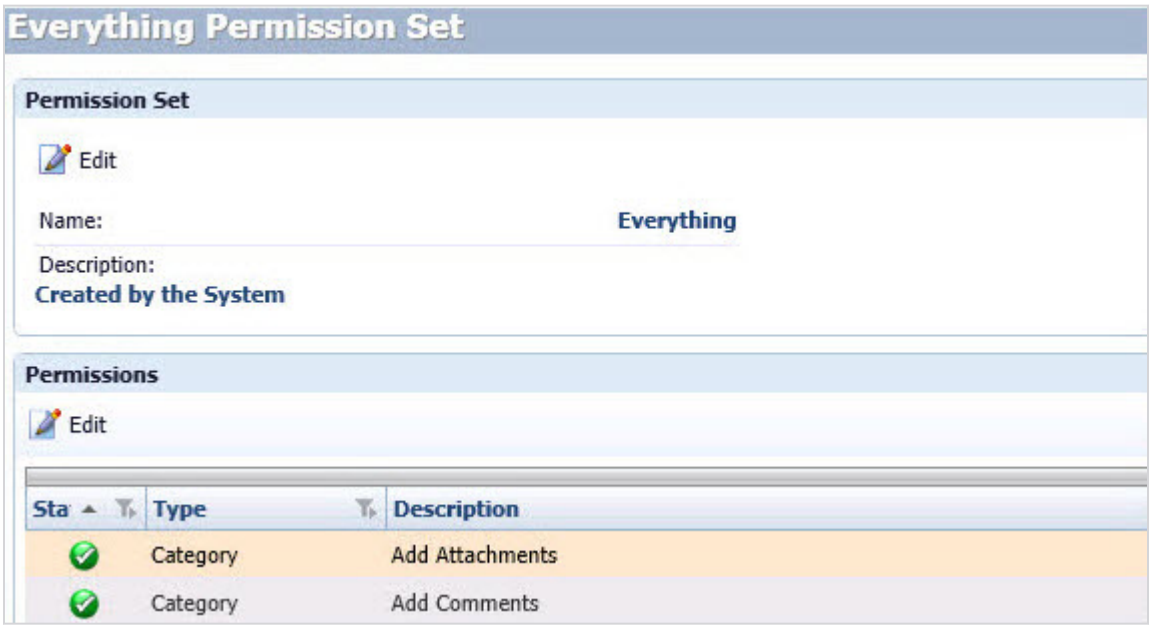
Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.



Edit

Select **Edit** to modify an existing item.

Name

Enter a unique permission set name.

Description

The description of the *Permission Set*. This field is optional and has a 255-character limit.

State

This column allows you to select the permission from the grid and assign it **Allow**, **Deny**, or **Unassign** permission.

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Type

This column tells you the type of permission it is: **Category**, **Institution**, or **Queue**.

Description

This column provides brief information about what action the user is allowed to do.

Allow

If a permission is in an **Allow** state, the users associated with the selected permission set have access to perform this action.

Deny

If a permission is in a **Deny** state, the users associated with the selected permission set are denied access to perform this action.

Unassign

If a permission is in an **Unassigned** state, the users associated with the selected permission set do not have access to perform this action.

Permissions

There are three types of permissions:

- **Category Permissions** - These permissions govern the actions users can take on an entire workflow definition or a running workflow instance. Examples of actions taken for an entire workflow are author, export, or publish. Examples of actions taken for a running workflow instance are change priority, add a comment, or terminate.
- **Queue Permissions** - These permissions govern the actions users can take on a manual activity, such as reassign, lock, take, and receive.
- **Institution Permissions** - These permissions govern the actions users can take regardless of category or queue.

Description	Type	Additional Information
Add Attachments	Category	This permission allows the user to attach a document from Synergy to an existing workflow. If this permission is allowed, the user is allowed to attach a document to an existing workflow, even if the **View Attachment** and/or **Preview Attachment** permissions are not granted.
Add Comments	Category	This permission allows the user to add comments to a workflow in the *Comments* pane of the *Details* panel. **NOTE**

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Description	Type	Additional Information
		The **Preview Comments** or **View Comments** permissions are required to access the *Comments* pane of the *Details* panel.
Author Definition	Category	This permission allows the user to create, copy, and import workflow definitions.
Change Priority	Category	This permission allows the user to change the priority (**High**, **Normal**, **Low**) of a workflow.
Delete Definition	Category	Allows the user to delete a workflow definition.
Edit Variable Value	Category	Allows the user to edit a variable value in the *Variables* pane of the *Details* panel. **NOTE** The **Preview Variables** or **View Variables** permissions are required to access the *Variables* pane in the *Details* panel.
Export Definition	Category	This permission allows the user to export a workflow definition.
Faulted Workflow Notification	Category	This permission allows the user to receive an email notification if a workflow faults.
Lock Assignment	Queue	This permission allows the user to lock the assignment of a **Manual Activity** per queue for the remainder of the workflow.
Manage Extensibility Packages	Institution	This permission allows the user to access **Workflow Extensibility**.
Manage My Status	Institution	This permission allows the user to change their status (*Available* or *Unavailable*) for *Just-in-Time* work assignments.
Manage Predefined Queries	Institution	This permission allows the user to work with *Saved Searches*.
Manage Queue Status	Queue	This permission allows the user to activate and deactivate the *Stand By* status for the queue.

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Description	Type	Additional Information
Manage User Status	Institution	This permission allows the user to change the status of another user (*Available* or *Unavailable*) for *Just-in-Time* work assignments.
Monitor Workflows	Category	This permission allows the user to access *Monitor Workflows*.
Preview Attachments	Institution	This permission allows the user to view the *Attachments* pane in the *Details* panel on the *Workflow Queue* and *Workflow Monitor* landing pages.
Preview Comments	Institution	This permission allows the user to view the *Comments* pane in the *Details* panel from the *Workflow Queue* and *Workflow Monitor* landing pages.
Preview Variables	Institution	This permission allows the user to view the *Variables* pane in the *Details* panel from the *Workflow Queue* and *Workflow Monitor* landing pages.
Publish Definition	Category	This permission allows the user to publish a workflow definition, which makes the workflow definition available to start.
Queue Manager Notification	Queue	This permission allows the user to receive an email notification if a timer action is set for *Send an Email* on a **Manual Activity** and has a **To** value of *Queue Manager Notification*.
Reassign Work	Queue	This permission allows the user to assign a **Manual Activity** to another queue and/or user.
Receive Work	Queue	This permission allows the user to receive a Manual Activity when the Manual Activity is set to the **Just-in-Time** delivery method. Users with the **Receive Work** permission in a *Queue* but without the **Take Work** permission only see **Manual Activities** assigned to them in that *Queue*. Without the **Take Work** permission, those users do not see **Manual Activities** that are unassigned or assigned to others in that *Queue*.
Release Held Activities	Category	This permission allows the user to view and open the **Held Activities** function on the *Workflow Monitor* menu.

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Description	Type	Additional Information
		This permission also allows the user to release a hold on a workflow item.
Remove Attachments	Category	This permission allows the user to remove an attachment from a workflow. > **NOTE** > The user also needs the **Preview Attachments** permission and/or the **View Attachments** permission to access the *Attachments* pane on the *Details* panel.
Retry Faulted Workflows	Category	This permission allows the user to view and open the **Faulted Workflows** function on the *Workflow Monitor* menu. This permission also allows the user to attempt to restart a workflow item from the point that it was stopped due to a fault.
Search Workflows	Category	This permission allows the user to search for workflows.
Start a Workflow	Category	This permission allows a user to start a workflow. > **NOTE** > If the **Add Attachment** permission is allowed but the **Start Workflow** permission is not granted, the user is not allowed to start a workflow with an attachment from Synergy.
Take Work	Queue	This permission allows the user to view and take a **Manual Activity** in the *Workflow Queue*.
Terminate Workflow	Category	This permission allows a user to end a workflow.
Unpublish Definition	Category	This permission allows the user to take a published workflow definition out of publication (i.e., makes a workflow definition unavailable for users to start).
View Attachments	Category	This permission allows the user to view the *Attachments* pane in the *Details* panel from the **Manual Activity**.

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Description	Type	Additional Information
View Comments	Category	This permission allows the user to view the *Comments* pane in the *Details* panel of the **Manual Activity**.
View Variables	Category	This permission allows the user to view the *Variables* pane in the *Details* panel in a **Manual Activity**.
Workflow History	Category	This permission allows the user to view the history for the selected workflow.

Adding a Permission Set

Each permission set requires a unique name and at least one **Effective Permission** in an **Allowed** or **Unassigned** state.

1. From the *Permissions* panel, select **Add**.
   The *New Permission Set* panel appears.
2. Enter a name and description for the permission set.
   The description you enter should distinguish the permission set from the others.
3. Click **OK**.
4. From the *Permission* panel, click **Edit** to add permissions to your permission set.
5. Select each permission you want to allow for this permission set, and then click **Allow**.
6. Select each permission you want to deny for this permission set, and then click **Deny**.
   Each permission is set to **Unassign** by default.
7. Click **OK**.
   The new permission set is added to the list in the *Permission Sets* panel.

Editing a Permission Set

1. From the *Permissions* panel, select the permission set you want to change, and click **Edit**.
   The settings for that permission set appear in the panel to the right.
2. In the *Permission Set* panel, make any necessary changes to the fields.
3. Click **OK**.
   Your changes are saved.

Permission Timing Behaviors

When a user's permissions are changed while they are in *jha*Enterprise Workflow, these changes fall into one of the following three behavior categories that define how these changes take effect in the system: Category 1, Category 2, and Category 1 ½.

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Category 1

This category contains permissions that are checked in semi-real time. This means a cache of permission is kept and provided by the service, and every minute that cache is refreshed. Below are all permissions that fall in Category 1:

- Publish Definition
- Unpublishing Definition
- Author Definition
- Delete Definition
- Export Definition
- Change Priority in Queue
- Change Priority in Manual Activity

Category 2

This category contains permissions that are not checked on the server side. This means when users log in to *jha*Enterprise Workflow, they can continue to perform the activity until they leave the product. Below are all permissions that fall in Category 2:

- Terminate Workflow
- Release Held Activities
- Add Comments
- Viewing Comments
- Add Attachments
- View Attachments
- Remove Attachments
- Edit Variable Value
- View Variables
- Monitor Workflows
- Search Active Workflows
- Retry Faulted Workflows
- Preview Comments
- Preview Attachments
- Preview Variables
- Manage My Status
- Manage User Status
- Queue Manager Notifications
- Lock Assignment
- Take Work
- Receive Work

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- Reassign Work
- Manage Queue Status

Category 1 ½

This category includes workflow permissions that cover more than one authorized event within the product. At least one of the events is a Category 1, and at least one of the events is a Category 2. Below is a permission that falls in this category:

- Starting a Workflow - There are two events in this scenario. The first always considers the permission set upon sign in. This shows and allows the worker to select the **Start a Workflow** option. The second event makes a server side call, considers the cached permissions, and displays the workflow definition grid to the worker so they can start a workflow.

Refreshing the Workflow Product

Some of the current behaviors require the user to exit and re-enter the product to refresh permission changes. If this is the case, the user may still have access to the particular function they do not have permission to use. However, they cannot inquire on records or actually do anything once they are in the function.

If the user refreshes *jha*Enterprise Workflow after exiting the product, they would not have access to the function. This is because a refresh reloads the product options and sub-options in Xperience, taking into account the product permissions.

Manage Approvers

This option allows administrators to work with **Approvers**. **Approvers** are added to an **Approver Group** and used in the **Remote Approval Activity** in a workflow definition.

Fields and Functions: Approvers

These fields and functions are located on the *Manage Approvers* screen.

Approvers Panel

When an approver is selected from the list in the *Approvers* panel, the information about that approver (other than PIN) appears in the panel on the right-hand side of the screen.

Add

Add an item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

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New Approver Panel

When you select **Add**, the *New Approver* panel appears.

Name

Enter the name of the new approver. This name appears in *Monitor* and *History*.

Email Address

Enter the email address of the approver. The email address must be unique (two approvers cannot use the same email address).

> **NOTE**
> *jha*Enterprise Workflow checks the formatting of the entered email address for validity, but does not test the actual email address. A test email is not sent to the entered email address.

PIN

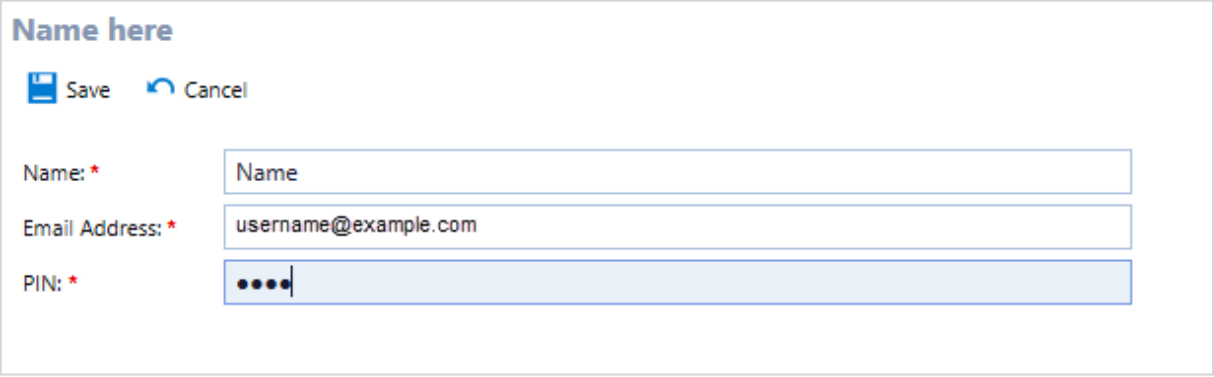
Enter a 4-digit PIN that the approver uses to access the remote approval site.

Adding an Approver

Follow these steps to add an approver to remote approval site.

> **NOTE**
> *jha*Enterprise Workflow does not send an email to the approver with their PIN information. The workflow administrator must notify the approver of their PIN information.

1. On the *Manage Approvers* screen, click **Add** on the *Approvers* panel.
   The *New Approver* panel appears.



2. Enter a **Name**.
   Name is required.
3. Enter an **Email Address**.
   The email address is required and must be unique (two approvers cannot use the same email address).

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4. Enter a four-digit PIN for the approver.

   PIN is required.

   > **NOTE**
   > *jha*Enterprise Workflow does not send an email to the approver with their PIN information. The workflow administrator must notify the approver of their PIN information.

5. Click **Save**.

The new approver is saved and appears in the *Approvers* panel.

Editing an Approver

Follow these steps to edit the **Name** and/or **Email Address** of the approver.

> **NOTE**
> The approver's **PIN** cannot be changed via the **Edit** process.

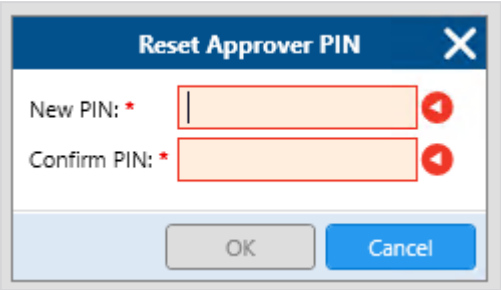
1. On the *Manage Approvers* screen, select an approver to edit from the *Approvers* panel, and then click **Edit**.
2. Edit the approver's **Name** and/or **Email Address** as necessary.
3. Click **Save**.

The changes to the approver are saved.

Resetting an Approver's PIN

*jha*Enterprise Workflow does not send an email to the approver with their PIN information. The workflow administrator must notify the approver of their PIN information.

1. On the *Manage Approvers* screen, select the approver from the *Approvers* panel, and then click **Reset PIN**.
   The *Reset Approver PIN* dialog box appears.



2. Enter a **New PIN**.
3. Enter the same PIN in the **Confirm PIN** field.
4. Click **OK**.

> **NOTE**
> The **OK** button is not available until both fields are completed and the PIN values match.

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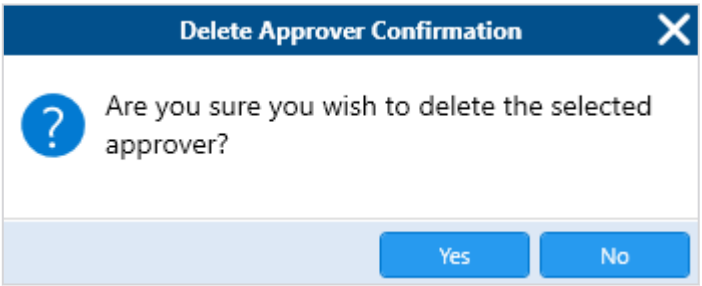
The changes to the approver PIN are saved.

Deleting an Approver

Follow these steps to delete a remote workflow approver.

1. On the *Manage Approvers* screen, select the approver you want to delete from the *Approvers* panel.
2. Select **Delete**.
   The *Delete Approver Confirmation* dialog box appears.



3. Select **Yes**.
   The approver is deleted from the *Approvers* list and is removed from any **Approver Group** membership, as well.

Manage Approver Groups

This option allows administrators to work with approver groups. Approver groups are used in the **Remote Approval Activity** in a workflow definition.

Fields and Functions: Approver Groups

When an approver group is selected from the list in the *Approver Groups* panel, the information about that approver group appears in the panel on the right-hand side of the screen.

Add

Add an item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

New Approver Group Panel

When **Add** is selected, the *New Approver Group* panel appears.

Name

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Enter the name of the new approver group. The **Approver Group Name** must be unique. This name appears in the **Remote Approval Activity**.

Description

Enter a **Description** of the approver group. This field is optional and has a 255-character limit.

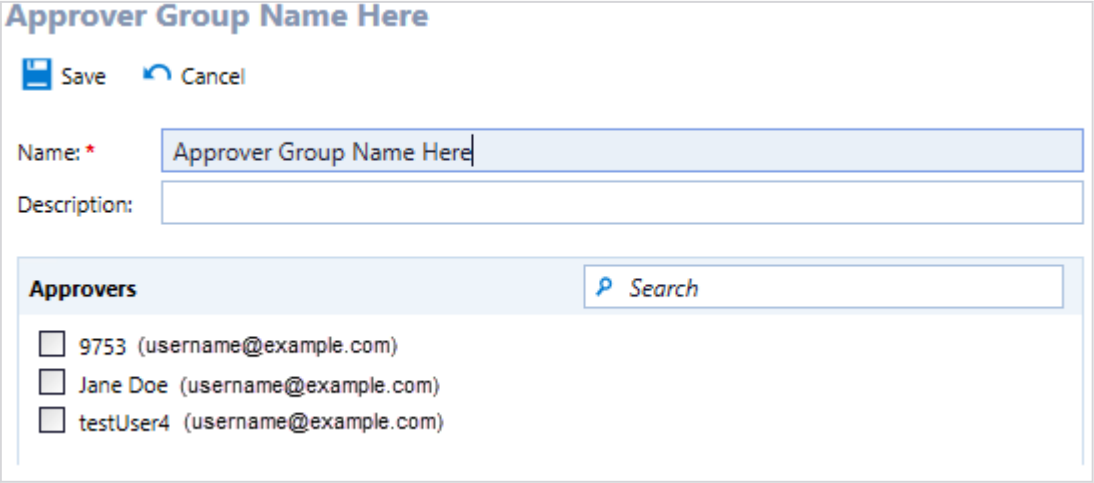
Approvers

In the *Approvers* list, select the check box to the left of an approver name to add them to the approver group. Approvers appear in alphabetical order by **Name**.

Adding an Approver Group

Follow these steps to create an approver group.

1. On the *Manage Approver Groups* screen, click **Add** in the *Approver Groups* panel. The *New Approver Group* panel appears.



2. Enter a **Name** for the approver group.

   Name is required and must be unique.
3. Enter a **Description** for the approver group.

   Description is optional.
4. Select **Approvers** for the approver group.

   Approvers appear beneath the input fields. Select the checkbox next to an approver name to add that profile to the approver group.
5. Click **Save**.

The new approver group is saved and now appears in the *Approver Groups* panel.

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Editing an Approver Group

Follow these steps to edit an approver group.

1. On the *Manage Approver Groups* screen, select an approver group to edit in the *Approver Groups* panel.
2. Click **Edit**, and then edit these fields as necessary:
   - **Name**
   - **Description**
   - **Approvers**

   > **NOTE**
   > The approver group **Name** cannot be edited if the approver group is in use. However, the **Description** and **Approvers** can be modified.
3. Click **Save**.

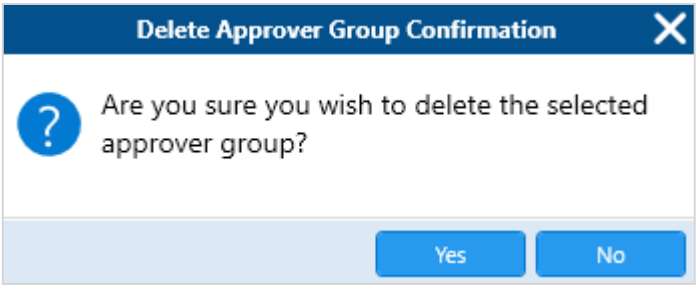
The changes to the approver group are saved.

Deleting an Approver Group

Follow these steps to delete an approver group.

> **CAUTION**
> An approver group cannot be deleted if it has been referenced in any workflow definition.

1. On the *Manage Approver Groups* screen, select an approver group to delete from the *Approver Groups* panel.
2. Select **Delete**.
   The *Delete Approver Group Confirmation* dialog box appears.



3. Select **Yes**.

The approver group is deleted.

Settings

This option allows you to customize various aspects of *jha*Enterprise Workflow and adjust your institution settings.

There are five tabs on the *Settings* screen:

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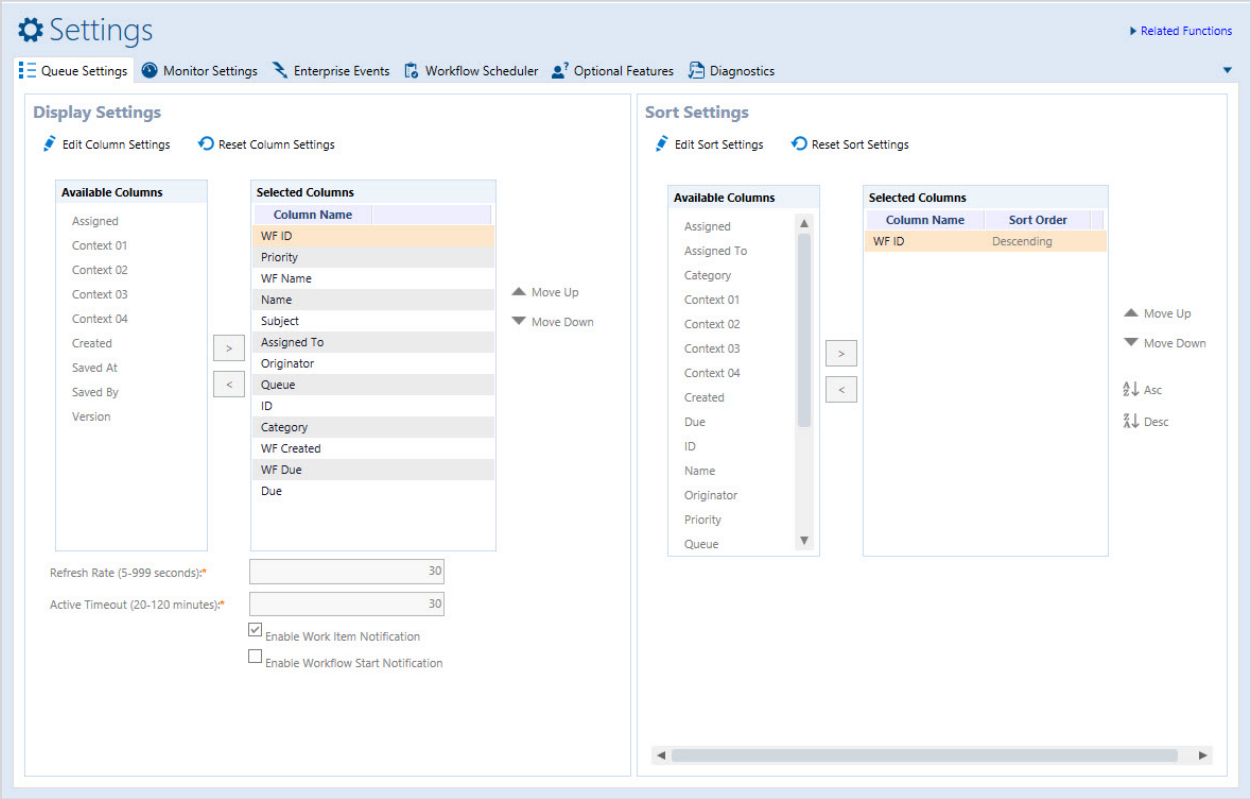
- *Queue Settings*
- *Enterprise Events*
- *Workflow Scheduler*
- *Optional Features*
- *Diagnostics*

Queue Settings

This option allows you to customize various aspects of the Queue behavior.

You can change the look of the work-listing grid in the queue, the columns, the column order, the column width, and the default sort. You can also change the default refresh rate and enable system tray notifications to alert users when new work lands in their queue.



Display Settings Panel

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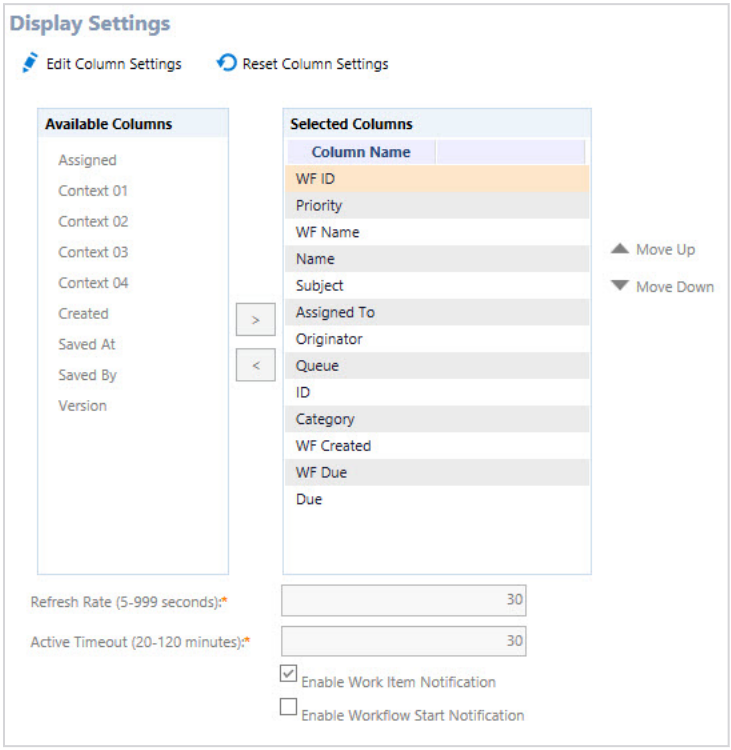

Edit Column Settings

Select **Edit Column Settings** to manage the **Selected Columns** that appear for the user. With this function, you can customize the user's work listing view. You can add columns to the display, rearrange the column order, adjust the refresh rate, and set the **Active Timeout** option.

Reset Column Settings

Select **Reset Column Settings** to revert your display settings and sort order setting back to default settings. All changes made are erased when this function is selected.

Available Columns

This field contains the columns you can allow users to view in their queue. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

Selected Columns

This field contains the columns that appear in the user's queue. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

Move Up/Move Down

Use these arrows to arrange the columns in the **Selected Columns** field, as necessary.

Refresh Rate

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Enter the time, in seconds, you want the system to **Auto Refresh** and update the items in the work listing of the Workflow Queue.

> **CAUTION**
> Lowering the **Refresh Rate** for the Workflow Queue can impact the overall performance of *jha*Enterprise Workflow. If you experience this issue, increase the **Refresh Rate** in 5-second increments to find an acceptable value. The recommended and default value is 30 seconds.

Active Timeout (minutes)

Enter the time frame in which you want the system to change a user's status to **Inactive** so work does not go to them when they are not online or are no longer available. If **Inactive**, **Auto Refresh** suspends until the user becomes **Active** in the *Queue* again.

Enable Work Item Notifications

Select this check box to view notifications in the system tray and Xperience **Notifications** when work items are updated in the *Workflow Queue*.

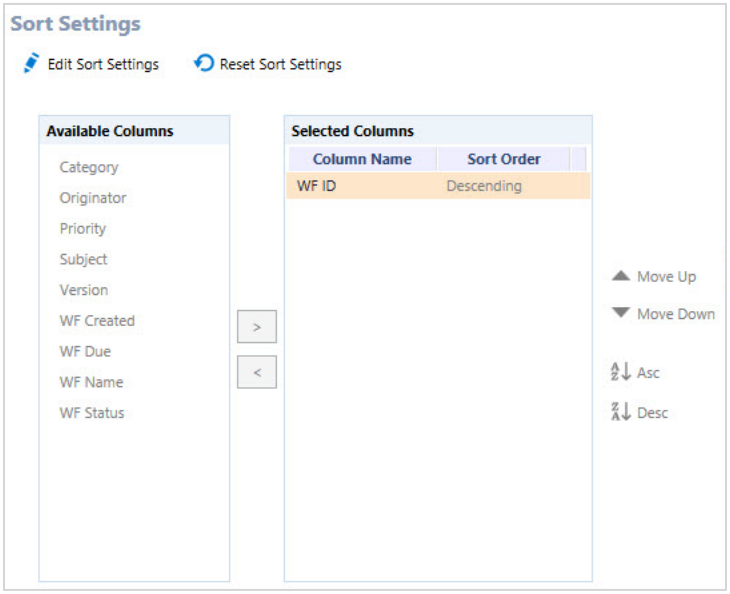
> **NOTE**
> These are the system notifications, not email notifications.

Enable Workflow Start Notifications

Select this check box to view notifications in the system tray and Xperience **Notifications** when a user manually starts a new workflow.

> **NOTE**
> These are system notifications, not email notifications.

Sort Settings Panel



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Edit Sort Settings

Select **Edit Sort Settings** in the *Sort Settings* panel to change how columns are sorted and presented to users. The selected *Sort Settings* values are also used to load *Workflow Queue* content.

Reset Sort Settings

Select **Reset Sort Settings** to revert your display settings and sort order setting back to default settings. All changes made are erased when this function is selected.

Available Columns

This field contains the columns you can allow users to view in their queue. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

Selected Columns

This field contains the columns that appear in the user's queue. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

> **NOTE**
> If no explicit **Sort Settings** are set (i.e., **Selected Columns** is empty), then the system sorts by hard-coded priority (high, medium, low) and **WF ID** is sorted in ascending order.

Move Up/Move Down

Use these arrows to arrange the columns in the **Selected Columns** field, as necessary.

Asc/Desc

Select Asc **Asc** or Desc **Desc** to change column's direction in the user's work listing view.

Monitor Settings

This option allows you to customize various aspects of the *Monitor Workflows* page.

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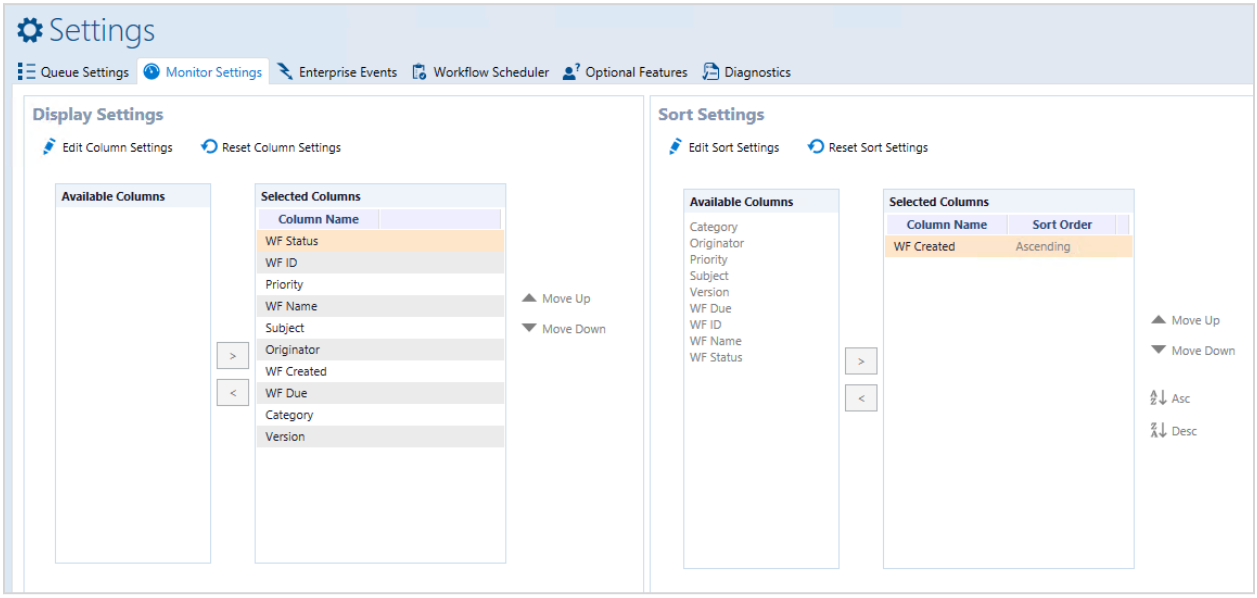
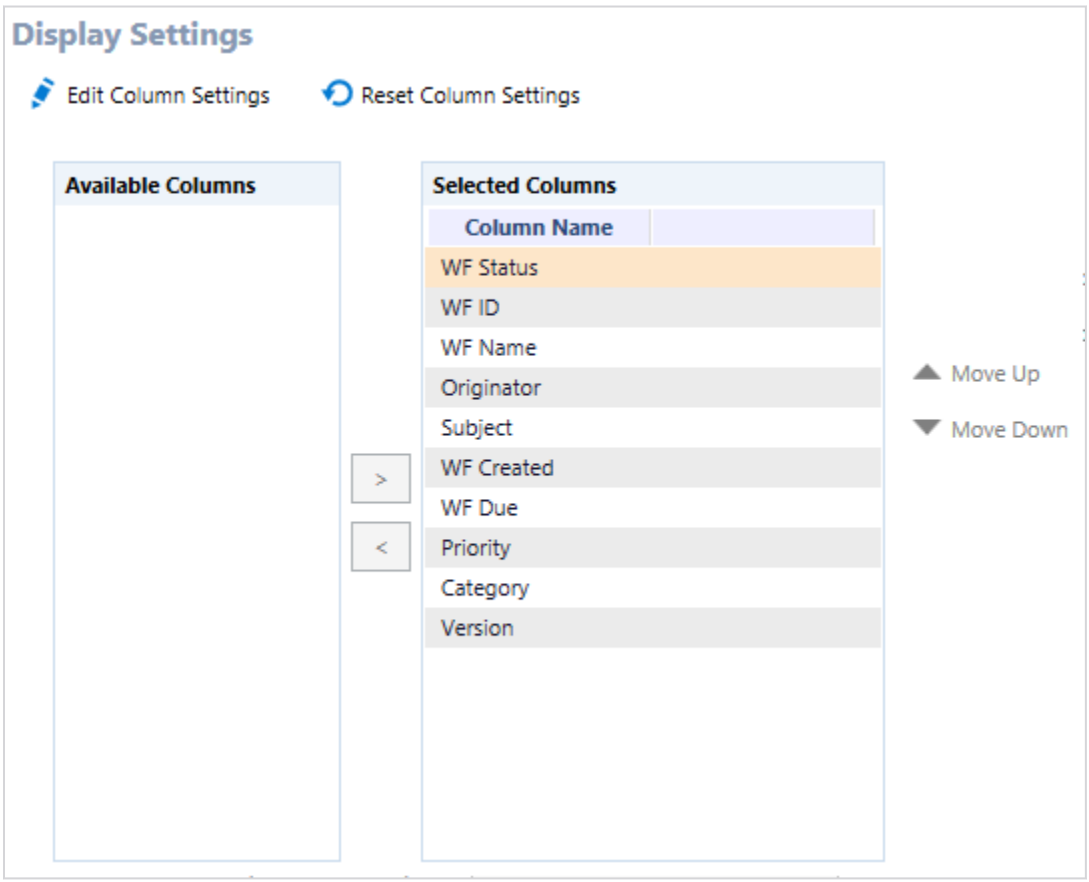


Display Settings Panel



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Edit Column Settings

Select **Edit Column Settings** to manage the **Selected Columns** that appear for the user. With this function, you can customize the user's work listing view. You can add columns to the display and rearrange the column order.

Reset Column Settings

Select **Reset Column Settings** to revert your display settings and sort order setting back to default settings. All changes made are erased when this function is selected.

Available Columns

This field contains the columns that users can view in *Monitor Workflows*. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

Selected Columns

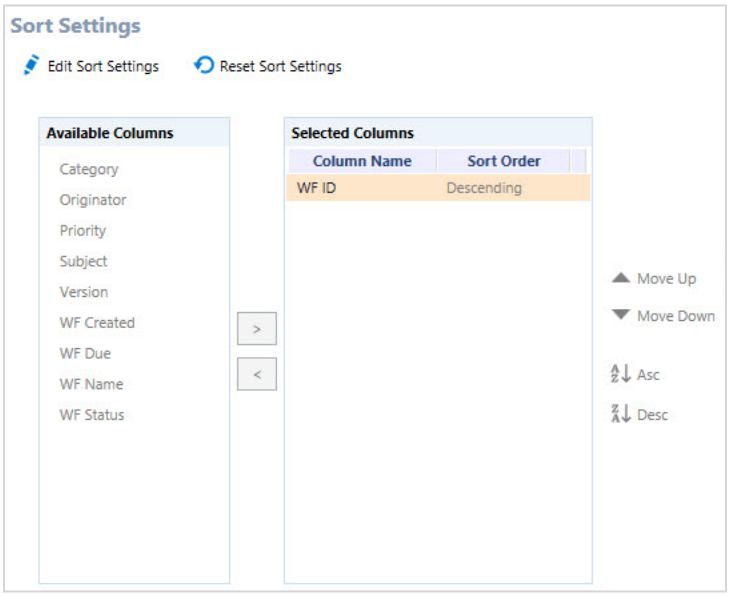
This field contains the columns that appear in *Monitor Workflows*. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

> **NOTE**
> If no explicit *Sort Settings* are set (i.e., **Selected Columns** is empty), then the system sorts by hard-coded priority (high, medium, low) and **WF ID** is sorted in ascending order.

Move Up/Move Down

Use these arrows to arrange the columns in the **Selected Columns** field, as necessary.

Sort Settings Panel



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Edit Sort Settings

Select **Edit Sort Settings** in the *Sort Settings* panel to change how columns are sorted and presented to users. The selected *Sort Settings* values are also used to load *Workflow Queue* content. The selected *Sort Settings* values are also used to load *Monitor Workflows* content.

Reset Sort Settings

Select **Reset Sort Settings** to revert your display settings and sort order setting back to default settings. All changes made are erased when this function is selected.

Available Columns

This field contains the columns that users can view in *Monitor Workflows*. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

Selected Columns

This field contains the columns that appear in *Monitor Workflows*. Use the arrow buttons between the **Available Columns** field and the **Selected Columns** field to move the columns back and forth, as necessary.

> **NOTE**
> If no explicit *Sort Settings* are set (i.e., **Selected Columns** is empty), then the system sorts by hard-coded priority (high, medium, low) and **WF ID** is sorted in ascending order.

Move Up/Move Down

Use these arrows to arrange the columns in the **Selected Columns** field, as necessary.

Asc/Desc

Select Asc **Asc** or Desc **Desc** to change column's direction in the user's work listing view.

Enterprise Events

An event is a type of message that can be used to start a workflow. The event message can also contain data that can be transferred to workflow variables.

> **NOTE**
> Enterprise Events is required and *jha*Enterprise Workflow must be configured in order to subscribe to an event.

The *Enterprise Events* screen has three functions:

- Event Numbers identify specific event messages. Adding an event number to this screen causes *jha*Enterprise Workflow to listen for that event.
- Event Numbers can be mapped to workflows. When *jha*Enterprise Workflow receives an Event Number with matching codes, it starts the selected workflow.

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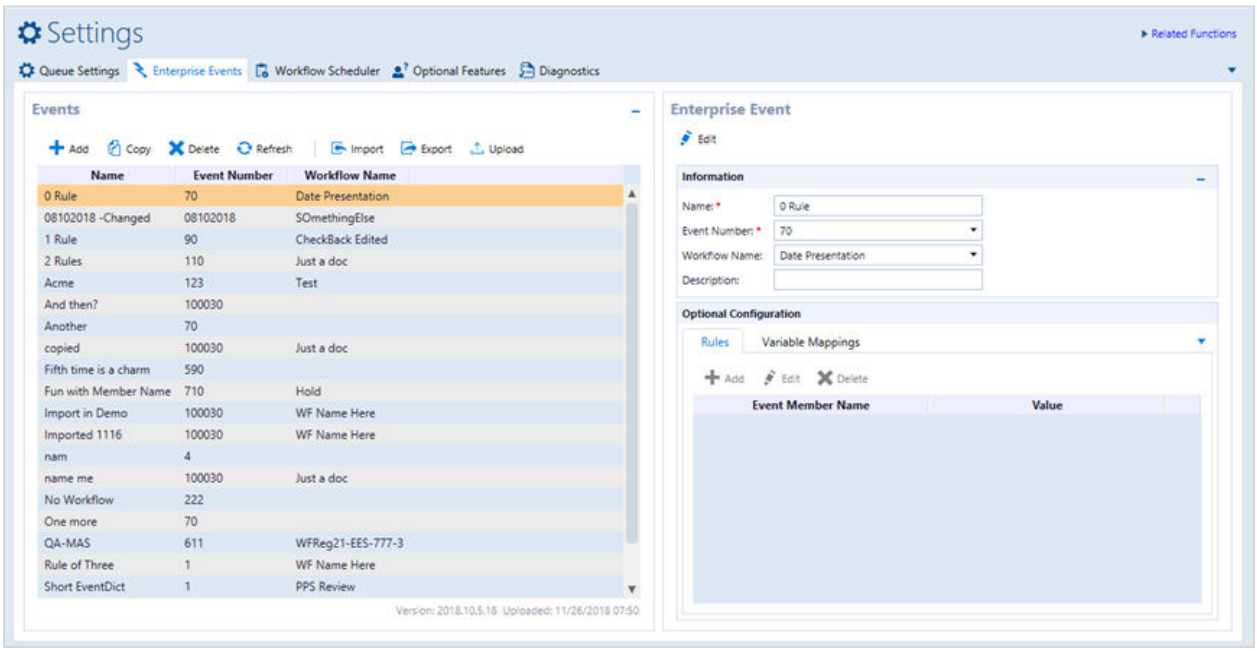
- An event message may contain data which is paired within the message to Event Variables. The message's Event Variables can be mapped to the workflow's variables. When the workflow starts, the data from the event message can be applied to the running workflow.

Fields and Functions: Enterprise Events

The following fields and functions are on the *Enterprise Events* screen.

Events Panel



Add

Add an item.

Copy

Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Import

Select **Import** to import an event and its values from another location. When an event is imported, all of its associated values are also imported (i.e., **Name**, **Event Number**,

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Workflow Name, **Description**, **Rules**, and **Variable Mappings**). Import searches for .eec file types.

Export

Select **Export** to export an Enterprise Event to a different location. The **Export** function dumps .eec file types.

Upload

Select **Upload** to upload an event dictionary XML file. Information in the event dictionary is used to populate drop-down menus for **Event Number** and **Event Member Name**.

Enterprise Event Editing Panel

Information

Edit

Select **Edit** to modify an existing item.

Name

Enter a **Name** that is unique.

Event Number

Enter or select the number associated with the event. The **Event Number** is required and can contain only letters and numbers. The number cannot contain spaces and has a 25-character limit.

> **CAUTION**
> Only the formatting is checked when an **Event Number** is submitted. The system does not verify if the **Event Number** actually exists.

Workflow Name

Enter or select the published workflow definition name to start an instance for the **Event Number**. Formatting is the same as the workflow name in Workflow Designer.

> **CAUTION**
> The system does not verify if the workflow name exists.

Description

Enter a description of the workflow, if desired. This field is optional and has a 255-character limit.

Optional Configuration

Rules

Use **Rules** to create additional conditions for starting a workflow. Any information entered in **Rules** is treated as an = operator. If more than one **Rule** is entered, then the conditions must all be true.

Event Variable Mappings

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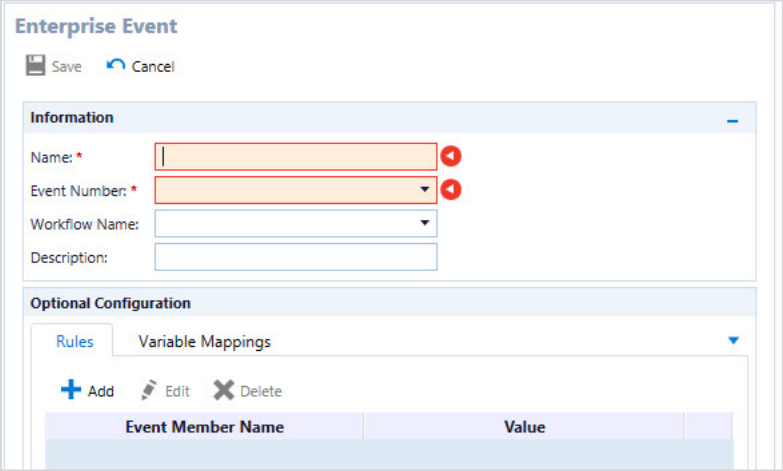
This section optionally allows the user to map event (message) variables to workflow variables. All mappings must contain both an *Event Variables* and *Workflow Variable*. The variable formatting rules follow the rules found in *Workflow Designer*.

Adding a New Event

New events are added on the *Events* pane of the *Enterprise Events* tab.

1. In the *Events* pane, select the **Add** button.
   The *Enterprise Event Information* pane appears in editing mode with all fields blank. The *Rules* and *Event Variable Mappings* tabs are inactive and all fields are blank.



2. Fill in the fields with the appropriate information.
   Name and **Event Number** are required fields.

> **TIP**
> If you are not done building your event and have to complete it at a later time, do not assign a valid event number. Saving a valid event number puts the event into an active state.

3. Add any desired **Rules** and/or **Variable Mappings**.
4. Select **Save**.
   The new event now appears in the *Events* pane.

Copying An Event

Events can be copied in the *Events* pane.

1. Click the event you wish to copy.
2. Select **Copy**.
   All information (other than **Name**) is copied from the original workflow.
3. Enter a unique **Name**.
4. Make any other desired changes to the *Enterprise Event Information*, and then click **Save**.

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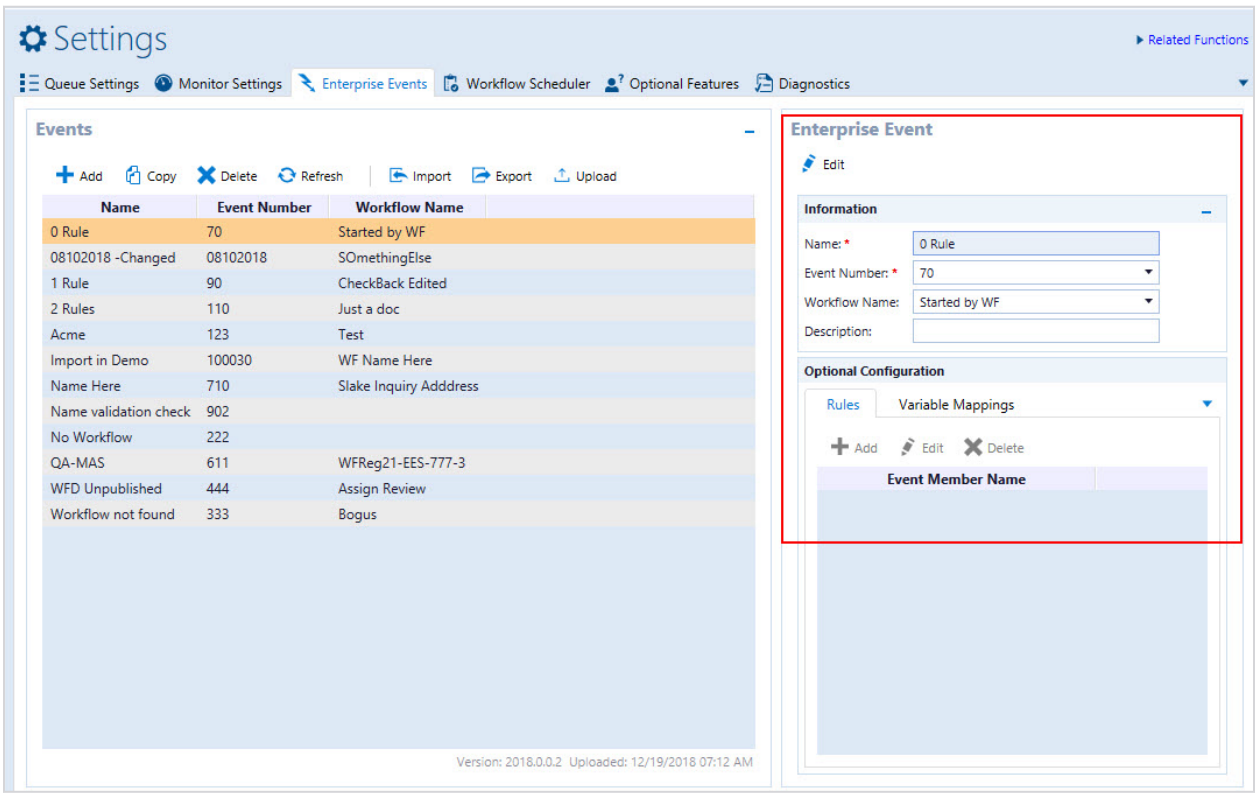
Deleting an Event

An event can be deleted from the *Events* pane.

1. Click the event you wish to delete.
2. Select **Delete**.
3. Select **Yes** when prompted.

Enterprise Event Editing

The *Enterprise Event Editing* pane allows you to manage event information, rules, and mappings.



Enterprise Event Information

Select an event from the *Events* pane on the left-hand side of the screen to work with that event's *Information* and *Optional Configuration*.

The *Information* pane defaults to display mode, which does not allow for editing. The **Edit** function is only available when an event is selected. The pane can be collapsed by using the minimize button on the right-hand side of the screen. When an event is selected and **Edit** mode is initiated, **Save** and **Cancel** become selectable options, and you can enter a **Name**, enter or

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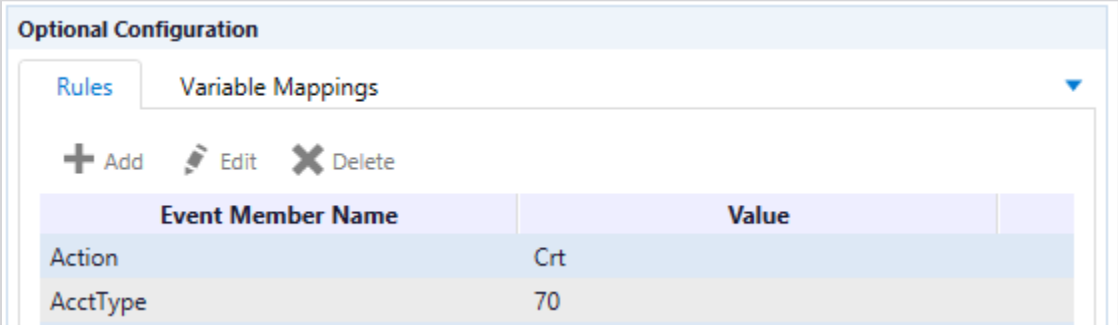
select an **Event Number**, enter or select a **Workflow Name**, and enter a **Description**. Improper formatting produces an error message.

The *Event* pane selection determines the information that appears in the pane.

Optional Configuration

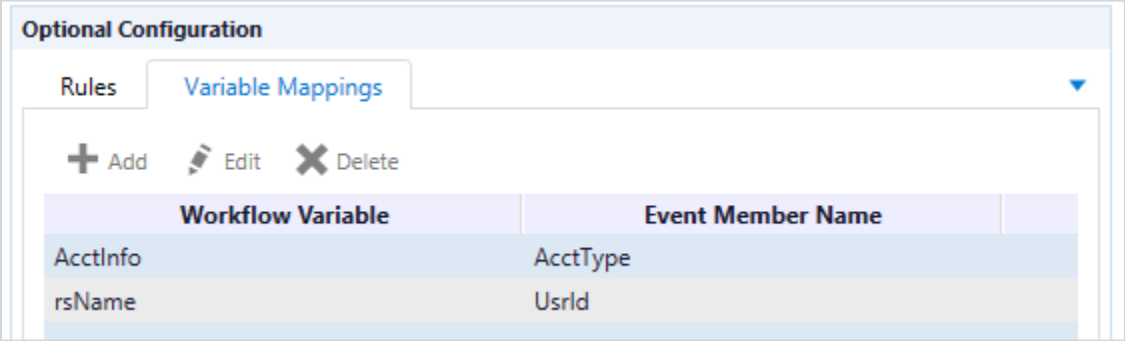
The *Optional Configuration* pane allows users to set *Rules* and *Variable Mappings* for their events.

Use *Rules* to put additional conditions on a starting a workflow.



Any information entered in *Rules* is treated as an = operator. If more than one rule is entered, then all conditions must be true.

Variable Mappings allow users to map event (message) variables to workflow variables.



All mappings must contain both a *Workflow Variable* and an *Event Member Name*. Variable formatting rules follow the rules found in *Workflow Designer*.

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Workflow Scheduler

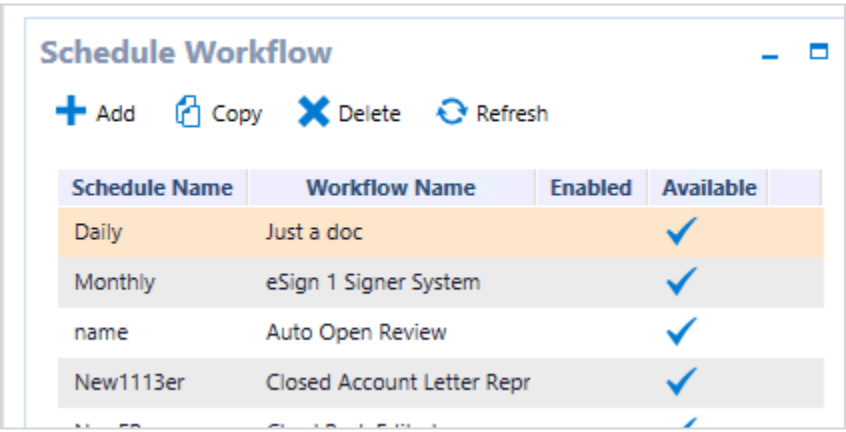
The *Workflow Scheduler* tab allows you to set a date and time for a workflow to begin.

> **NOTE**
> *Workflow Scheduler* does not adhere to **Business Hours** as defined in **Workflow Administration** > **Calendars**.

Workflows can be scheduled to occur:

- Once
  - Select **None** for a one-time occurrence
- **Daily**
- **Weekly**
- **Monthly**
- **Yearly**

Schedule Workflow Pane



The *Schedule Workflow* pane contains the following fields and functions:

Add

Places the *Details* pane in edit mode with all fields set to default values.

Copy

Places the *Details* pane in edit mode. All fields (including *Recurrence Pattern* fields) have the same value as the copied schedule, except for the **Schedule Name** and **Description** fields, which remain blank.

Delete

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Deletes the selected schedule if the schedule is available (i.e., has a green check mark in the *Available* column). An error message appears when you try to delete an unavailable schedule.

Refresh

Refreshes the status of the schedules.

Schedule Name

The value entered in the *Detail* pane that denotes the schedule name.

Workflow Name

The published workflow that the schedule starts.

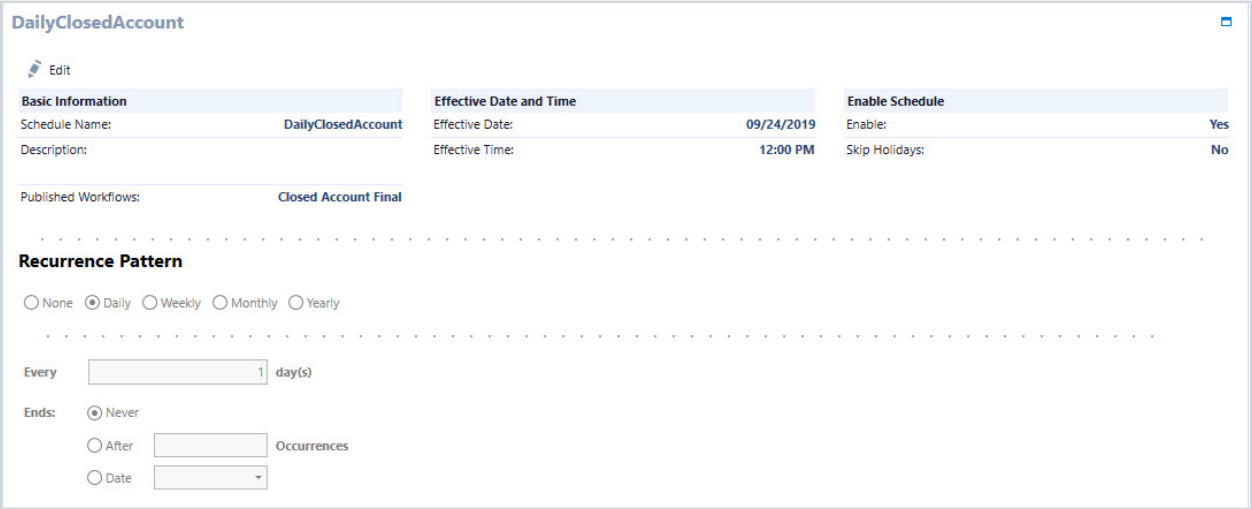
Enabled

A green check mark indicates that the workflow is scheduled to run. No check mark indicates that the workflow is not scheduled to run. Schedules can be enabled or disabled in the *Details* pane.

Available

The schedule is available only when the scheduler service registers it. Availability may take several minutes after the schedule has been created or edited. A schedule can only be deleted or edited when it is available. Since the screen does not automatically update, the user must select **Refresh** to view the status. A green check mark indicates that the schedule is available. An hourglass indicates that the schedule is not yet available.

Details Pane



The *Details* pane allows the user to set a schedule name, workflow association, start date and time, enables status, and recurrence pattern. Select **Edit** to work with a scheduled workflow.

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Schedule Name

This field is required. Enter a unique name consisting of letter and numbers only (no spaces or special characters). The field is blank by default.

Description

Optional. Blank by default.

Published Workflows

This field is required. Only currently published workflows appear in the **Published Workflows** drop-down menu. This field is blank by default.

Effective Date

This field is required. The current day is the default setting. The **Effective Date** can be manually entered or selected from a drop-down calendar. The date cannot be in the past and must follow the *[mm/dd/yyyy]* format.

Effective Time

This field is required. The field must follow the [hh:mm AM/PM] format. The time entered cannot be in the past. This field is blank by default. *Workflow Scheduler* does not adhere to business hours as defined in **Workflow Administration** > **Calendars**.

> **CAUTION**
> Avoid scheduling an **Effective Time** near the transition hours of Daylight Saving Time (DST).

The workflow does not start when scheduled between 2:00 and 2:59 a.m. after DST starts. Because the scheduled time does not occur when the clock jumps forward, the workflow never executes.

The workflow starts twice when scheduled between 1:00 and 1:59 a.m. when DST ends. The clock is moved back, causing the workflow to start again.

Enable

Set to *No* by default. The schedule runs only when this field is set to *Yes*.

Skip Holidays

This field is set to *No* by default. When **Skip Holidays** is set to *No*, the scheduler starts workflow instances even if their occurrence falls on a holiday.

If set to *Yes*, the scheduler does not start workflow instances if their occurrence falls on a holiday. That occurrence is skipped.

Holidays are determined by institution's default calendar. Holidays are treated as all-day events, regardless of the holiday definition. For example, if January 15th is defined as a holiday from 8:00 a.m. to 12:00 p.m., scheduler recognizes January 15th as a holiday and does not start the workflow instance.

Recurrence Pattern

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Set to *None* by default. See the *Recurrence Pattern Options* section for more details.

Recurrence Pattern Options

The *Recurrence Pattern* pane allows you to customize when a schedule workflow recurs, if at all.

Recurrence Pattern: None

When the recurrence pattern is set to *None*, the scheduled workflow runs once on the **Effective Date** and **Effective Time** entered. **None** is the default setting when a scheduled workflow is first created.

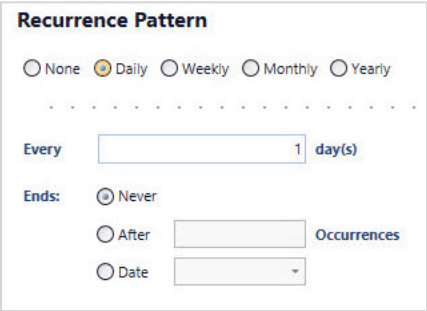
Recurrence Pattern: Daily

When the recurrence pattern is set to *Daily*, the scheduled workflow runs daily (including weekends). The recurrence begins on the **Effective Date**.

The recurrence is set to run every day by default. The user can enter another value in the **Every [X] Days** field if the workflow is to run every second day, third day, etc.

The user has three options for ending the recurrence:

- *Never* (default) - The workflow runs every day until stopped manually.
- *After [X] Occurrences* - The workflow runs until it completes user-defined number of occurrences. The default number of occurrences is *10*.
- *Date* - The workflow ends on a user-selected date. The date is selected from a calendar drop-down box.



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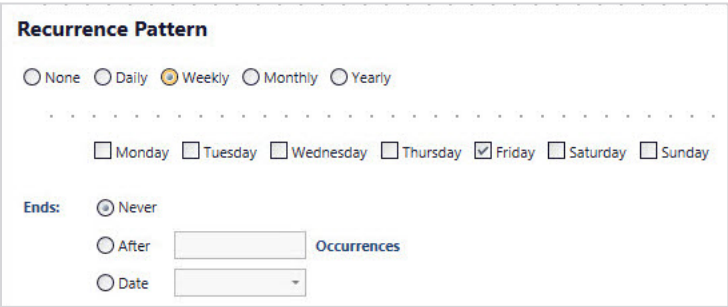
Recurrence Pattern: Weekly

When the recurrence pattern is set to *Weekly*, the scheduled workflow runs weekly (including weekends). The recurrence begins on the **Effective Date**.

The user has three options for ending the recurrence:

- *Never* (default)- The workflow runs on the selected days until stopped manually.
- *After [X] Occurrences* - The workflow runs until it completes the user-defined number of occurrences. The default number of occurrences is *10*.
- *Date* - The workflow ends on a user-defined date. The date is selected from a calendar drop-down box.



Recurrence Pattern: Monthly

When the recurrence pattern is set to *Monthly*, the scheduled workflow runs on the same day of the month (including weekends). The recurrence begins on the **Effective Date**. The **Effective Date** is also used to determine the day of the month for the recurrence.

The user has three options for ending the recurrence:

- *Never* (default) - The workflow runs until stopped manually.
- *After [X] Occurrences* - The workflow runs until it completes a user-defined number of occurrences. The default number of occurrences is *10*.
- *Date* - The workflow ends on a user-defined date. The date is selected from a calendar drop-down box.

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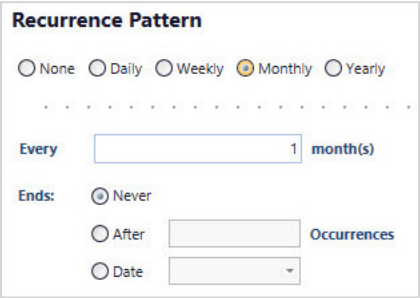


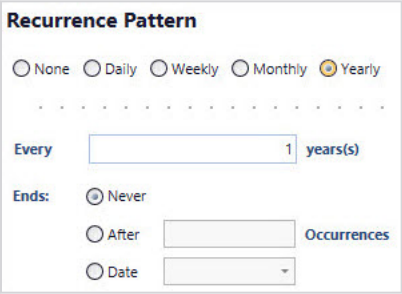
Recurrence Pattern: Yearly

When the recurrence pattern is set to *Yearly*, the scheduled workflow runs on the same day every year (including weekends). The recurrence begins on the **Effective Date**. The **Effective Date** is also used to determine the month and day of the month for the recurrence.

The recurrence is set to run every year by default. The user can enter another value in the **Every [X] Year(s)** field if they want the workflow to run every second year, third year, etc.

The user has three options for ending the recurrence:

- *Never* (default) - The workflow runs until stopped manually.
- *After [X] Occurrences* - The workflow runs until it completes a user-defined number of occurrences. The default number of occurrences is *10*.
- *Date* - The workflow ends on a user-defined date. The date is selected from a calendar drop-down box.



Optional Features

The *Optional Features* view allows you to customize institution email settings and time zones.

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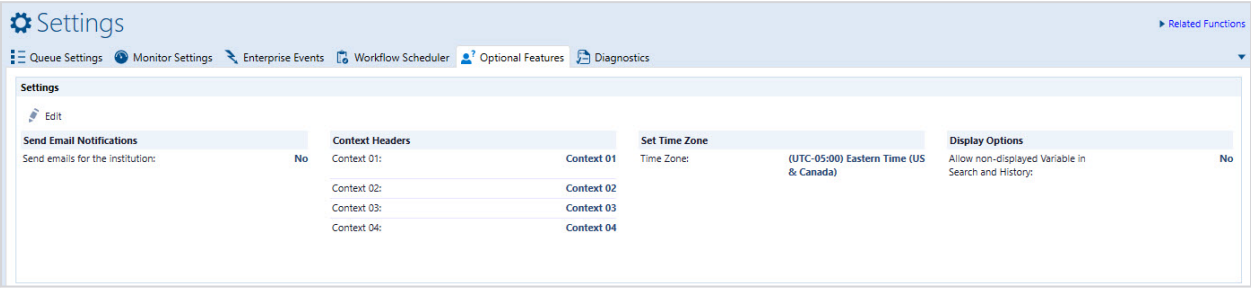

Edit

Select **Edit** to modify an existing item.

Send emails for the institution

Select this option to turn on/off all email notifications for the entire institution. These are the types of emails that this option affects:

- Email timer action from the Initialize Activity
- Email timer action from the Manual Activity
- Send Email activity
- Faulted Workflow email notifications
- Work is Waiting notifications

> **NOTE**
> This option does not retain missed email opportunities or send them out once email is re-enabled.

Context Headers

There are four context header fields that you add and customize. These fields appear in the *Optional Features* tab.

> **NOTE**
> The *Context* tab in the Initialize Activity is associated with these context fields, allowing you to link a variable with a context. When you do so, the variable's value appears in the *Context* column in the *Workflow Queue* at run time.

Set Time Zone

Select this option to configure your institution's time zone. The default format is UTC, but the date/time can be changed to the format that makes the most sense to your institution's users.

The **Set Time Zone** setting applies to the date/time System Tags located in the *Subject* or *Body* sections of all emails.

System Tags:

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- WorkflowDefinitionCreateDate
- WorkflowDue
- ActivityCreated
- ActivityDue
- ActivityAssigned

System-generated emails impacted:

- *Work is Waiting* notification
- *Faulted Workflow* notification

Display Options

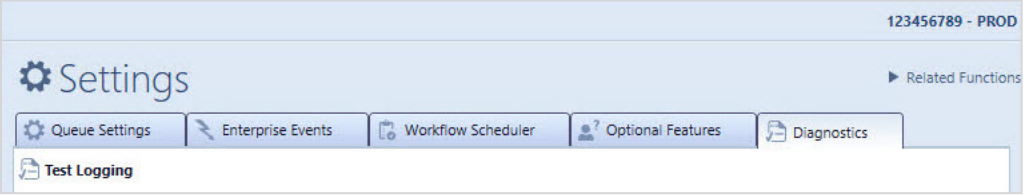
Allow non-displayed Variable in Search and History defaults to *No*.

When set to *No*, variables that are not set to display are not available for **Search** and do not appear in *Workflow History* if set by an **Assign Activity**.

When set to *Yes*, variables that are not set to display can be used for **Search** and appear in *Workflow History* if set by an **Assign Activity**.

Diagnostics

The *Diagnostics* view allows you to perform client **Test Logging**.



Test Logging

Click **Test Logging** to test whether the *jha*Enterprise Workflow client can successfully communicate with Enterprise Logging. Enterprise Logging is a product available in the jXchange Management Console.

Templates

This section describes how to create and work with templates in *jha*Enterprise Workflow.

Manage Message Templates

This option allows you to create and save message templates so users can easily select a template in the Workflow definition.

Having message templates saves time and prevents users from rebuilding the subject and body of a message.

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> **CAUTION**
> To automatically generate message templates from an XSD, you should contact the web service provider (*jha*Enterprise Workflow Support for Service Gateway supported services and MessageBus calls). The XSD files for the messages you want to import should be placed in the `JHA\Xperience\Instance\Working\Framework` path. Selecting **Generate** provides additional functionality to import and browse the XSD.

Users may create the following types of templates:

- *Message Bus* - compatible with *Manual Activities* with a **Task Type** of *JHA Application Action* and an **Action Type** of *Override*.
- *JHA Service* - compatible with *JHA SOAP Service Activity* .
- *External* - compatible with *External SOAP Services*.

Fields and Functions: Manage Message Templates
The following fields and functions are on the *Manage Message Templates* screen.

Message Templates Panel

Add

Add an item.

Copy

Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Import

Choose a file to import.

Export

Select **Export** to choose a location for one or more files to be exported.

Message Panel

Message Template Type

Select either *Message Bus*, *JHA Service*, or *External*. *Message Bus* templates are compatible with Manual Activities with a **Task Type** of *JHA Application Action* and an **Action Type** of *Override*. *JHA Service* templates are compatible with JHA SOAP Service Activity. *External* templates are compatible with External SOAP Services.

Generate

Selecting **Generate** brings up the *Generate Message* section.

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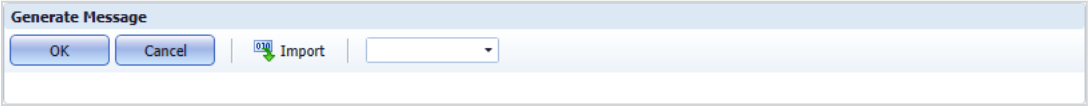

Selecting **Import** navigates to the folder where your Xperience Framework is located. To generate messages, contact Workflow Support and have the necessary .xsd files added to a Contracts folder.

Name

Enter a name for the template in this text box. The name must be unique within the institution.

Action

The **Action** value is typically *<serviceContractNamespace>* + *<serviceContractName>* + *<operationName>* This may differ per contract. JHA Application **Action** values are *<http://jackhenry.com/ws/>* + *<OperationName>* (i.e., http://jackhenry.com/ws/WorkflowInstcStart). This field is required.

Request

The **Request** is the body of the request message. If you use the **Generate** option, a syntactically valid example is automatically added. This field is required and must be well-formed XML. The XML is validated, but it is not validated against the contract. For example, a request of <bogus>This is bogus </bogus> will meet XML validation and save, but it will most likely fault at run time. You may use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in the message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*.

Response XSLT

This is the response message that allows you to map a response to a variable and use the result in the workflow. The **Response XSLT** field allows an XSLT to be applied to the response that is returned from the service call. Information from the call is saved to variables. Use well-formed XML. You can use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in the message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*. The XSLT must produce output that matches a specific expectation.

Fault XSLT

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The fault mapping allows you to quickly view and fix the errors if the workflow faults. The **Fault XSLT** field accepts a valid XSLT document that is applied to a fault response returned from the service call. You can specify if a service fault should fault the Workflow. Use well-formed XML. You can use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in a message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*. The XSLT must produce output that matches a specific expectation.

Edit

Select **Edit** to make changes to the selected template. The **Edit** option appears after at least one email template has been created.

Variables Panel

The variables panel is used for validation of templates that use variables or workflow tags. Enter any variables in the *Variables* panel that you intend to use in a template.

New

Select **New** to create a new item.

Edit

Select **Edit** to modify an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Clear

Selecting **Clear** removes all variables from the pane.

Name

Provide a name that clearly indicates the business process. This name appears to users in the **Workflow Queue**.

Type

Select *String*, *Boolean*, *DateTime*, *Decimal*, or *Integer*.

Show

Selecting **Show** makes the variable visible.

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Generating XSD Contracts

Before you can auto-generate a template, you must import contracts. For Jack Henry products, contact *jha*Enterprise Workflow Support for more information. For other services, add a Contracts folder. This folder should be added where the Xperience Framework is located.

1. Navigate to **Workflow Administration** > **Manage Message Templates**.
2. On the *Message Templates* panel, select **Add**.
3. Select *Message Bus*, *JHA Service*, or *External* from the **Message Template Type** drop-down menu.
   - *Message Bus* works with *Manual Activities* with a **Task Type** of *JHA Application Action* and an **Action Type** of *Override*.
   - *JHA Service* works with *JHA SOAP Service Activity* .
   - *External* works with *External SOAP Services*.
4. Select **Generate**.
5. Select **Import**.
   The *Import Message XML* window appears. The folder where your Xperience Framework is located is the default location.
6. Navigate to the Contracts folder, select the .xsd file you want to import, and then select **OK**.

Creating a Message Template

1. From the *Message Templates* panel, select **Add**.
   A new message template appears in the panel on the right.
2. Select either *JHA Service*, *Message Bus*, or *External* from the **Message Template Type** drop-down menu.

   The Message Bus template type has only two fields: **Name** and **Request**.
3. Enter a **Name**.
4. Enter an **Action** and a **Request**.

   > **TIP**
   > The **Action** and **Request** fields can have tags. Tags are placeholders in the template that populate with information about the activity or workflow at run time.

   The **Name**, **Action**, and **Request** fields are required. The **Response XSLT** and **Fault XSLT** fields are optional.
5. Select **OK**.
   The template is saved and appears in the *Message Templates* panel.

Editing a Message Template

1. On the *Manage Message Templates* screen, select the message template you want to edit from the *Message Templates* panel, and then click **Edit**.
2. Edit the **Name**, **Action**, **Request**, **Response XSLT**, and **Fault XSLT** fields, as necessary.

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3. Select **OK**.

Importing a Message Template

1. Select **Import**.
   The *Import Template (*jat)* window appears.
2. Navigate to the template file and select **Import**.

   The *Manage Message Template* screen displays in edit mode.

   The imported template displays in the **Details** section of the *Manage Message Templates* screen.
3. In the *Details* panel, select **OK**.

   Until you select **OK**, the imported template is not saved and does not appear in the Master Panel.

> **NOTE**
> *Variables* are automatically added when a message template is imported.

Exporting a Message Template

1. Select **Export**.
   The *Select a Folder* window appears.
2. Navigate to the template and select **Export**.
   The *Export Message Templates* window appears.
3. Navigate to the location where you want the files to be exported, and then select **Export**.

Adding a Variable

Use variables to help validate mistakes in templates. Once a template using variables is saved, the variables may be imported into a work-flow definition.

1. In the *Variables* panel, select **New**.
2. In the **Name** field, enter the variable name.
3. In the **Type** field, select *String*, *Boolean*, *DateTime*, *Decimal*, or *Integer* from the drop-down menu.
4. Select or clear the **Show** check box to change the visibility of the variable.
5. Select **OK**.

Editing a Variable

1. Select a variable in the *Variables* panel.
2. Select **Edit**.
3. In the **Name**, **Type**, and **Show** fields, make the necessary changes to the variable.
4. Select **OK**.

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Advanced Message Templates

This topic provides XSLT requirements and message template response and fault schema for the *Manage Message Templates* screen.

This image shows message template XSLT requirements:

```
<?xml version='1.0'?>
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:p1="http://jackhenry.com/jxchange/TPG/2008"
xmlns:s="http://www.w3.org/2003/05/soap-envelope">
<xsl:template match="/">
<WorkflowTranslatedResponse>
    <VariableMap>
        <ActivityMapVariable>
            <VariableName >Response</VariableName >
            <Value><xsl:value-of
            select="s:Envelope/s:Body/p1:WorkflowInstcModResponse/p1:RsStat"/>
            </Value>
        </ActivityMapVariable>
    </VariableMap>
</WorkflowTranslatedResponse>
</xsl:template>
</xsl:stylesheet>
```

This image shows the message template response and fault schema:

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```xml
<?xml version="1.0" encoding="utf-8"?>
<xs:schema elementFormDefault="qualified" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="ActivityClientFault" nillable="true" type="ActivityClientFault" />
  <xs:complexType name="ActivityClientFault">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="FaultWorkflow" type="xs:boolean" />
      <xs:element minOccurs="0" maxOccurs="1" name="Code" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="SubCode" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="Reason" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="Details" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="AdditionalMappings" type="ArrayOfVariableValuePair" />
      <xs:element minOccurs="0" maxOccurs="1" name="CodeVariable" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="SubCodeVariable" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="ReasonVariable" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="DetailsVariable" type="xs:string" />
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfVariableValuePair">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="VariableValuePair" nillable="true" type=
      "VariableValuePair" />
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="VariableValuePair">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="VariableName" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="Value" type="xs:string" />
    </xs:sequence>
  </xs:complexType>
  <xs:element name="VariableValuePair" nillable="true" type="VariableValuePair" />
  <xs:element name="WorkflowTranslatedResponse" nillable="true" type="WorkflowTranslatedResponse" />
  <xs:complexType name="WorkflowTranslatedResponse">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="VariableMap" type="ArrayOfActivityMapVariable" />
      <xs:element minOccurs="0" maxOccurs="1" name="FaultMap" type="ActivityClientFault" />
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfActivityMapVariable">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="ActivityMapVariable" nillable="true" type=
      "ActivityMapVariable" />
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ActivityMapVariable">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="VariableName" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="Value" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultValue" type="xs:string" />
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ActivityMapVariable" nillable="true" type="ActivityMapVariable" />
</xs:schema>
```

Manage Email Templates

This option allows you to create and save email templates so users can easily select a template in the workflow definition, as needed.

Having email templates saves time and prevents users from rebuilding the subject and body of a message every time an email needs to be sent. Emails are sent using the **Send Email Activity**, or they can be used as a workflow (**Initialize Activity** > **Timers** tab) or a Manual Activity (**Timers** tab).

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You can add tags to an email template to further customize the message. The tag appears generic in the template, but at run time, it populates based on the information it receives from the running workflow instance. See the *Appendix* for more information about workflow tags.

*jha*Enterprise Workflow does not come with any built-in email templates.

> **CAUTION**
> You cannot delete any item (such as a category, queue, or email template) if the item has been referenced in any published definition.

Fields and Functions: Manage Email Templates
The following fields and functions are located on the *Manage Email Templates* screen.

Email Templates Panel

New

Select **New** to create a new item.

Copy

Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Email Panel

Name

Provide a name that clearly indicates the business process. This name appears to users in the **Workflow Queue**.

Subject

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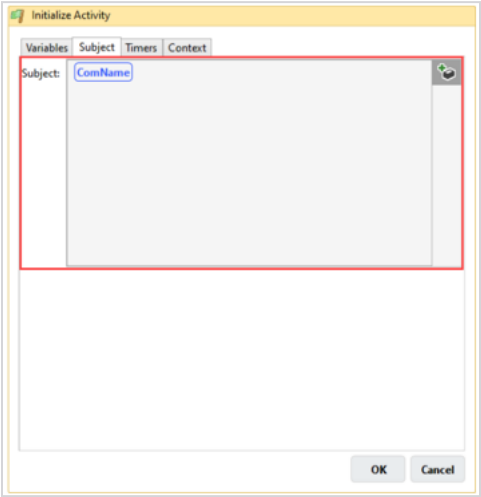

Subject is optional.

Subject supports both entered text and variables. Use IntelliSense to create a **Subject** that contains variables. Subjects with variables can be useful in providing identifying information to users working the *Queue*.

For example, if the **Workflow Name** is *Account Change*, then the **Subject** can contain *Account Number*. This information enables a *Queue* user to distinguish among *Account Change* activities that appear in the work list grid.

Body

Enter the text for the body.

RemoteApprovalSiteURL

Use the **RemoteApprovalSiteURL** tag in the **Body** of a template that is used in the **Remote Approval** activity.

Format this tag as a link (i.e., *<a href="<%RemoteApprovalSiteURL%>">Pending Approval</a>*.

ActivityDirectLink

Use the **activitydirectlink** tag in the **Body** of a *Work is Waiting* notification in a *Manual Activity*.

A user that receives the email can click the link to access the primary Xperience instance, and then open the *Manual Activity* in *jha*Enterprise Workflow.

If there is more than one Xperience instance and none are indicated as **Primary**, then clicking the link results in an error. See the *Working with an Institution* section of the *jhaEnterprise Workflow Configuration Guide* for more information.

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> **NOTE**
> The **activitydirectlink** feature does not support web-based email.

Edit

Select **Edit** to make changes to the selected template. The **Edit** option appears after at least one email template has been created.

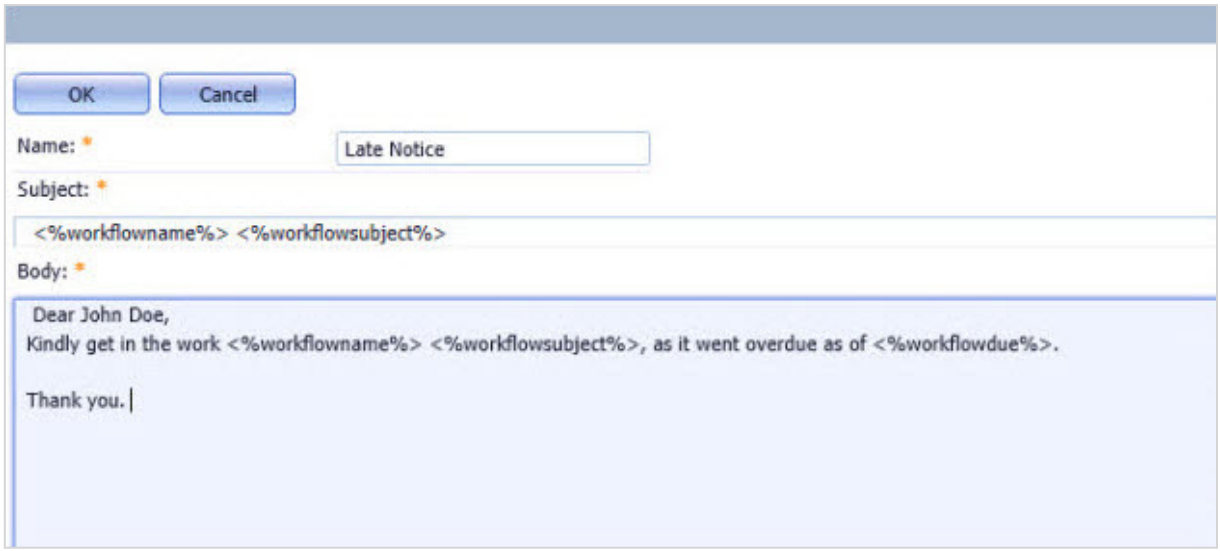
Creating a New Email Template

1. From the *Email Templates* panel, select **Add**.
   A new email template appears in the panel on the right.
2. Enter a name, and press **Tab**.
3. Enter a subject and a body, and press **Tab**.

> **TIP**
> The **Subject** and **Body** fields can leverage tags. Tags are placeholders in the template like Activity, Name, or Workflow Name that, at run time, populate with information about the activity or workflow, making the email far more useful.

For example, if you have an email template called Late Notice, you could populate the fields as follows:

- **Subject** - *<%workflowname%> <%workflowsubject%>*
- **Body** - *Dear John Doe, Kindly get in the work <%workflowname%> <%workflowsubject%> as it went overdue as of <%workflowdue%>. Thank you.*



This allows you to use this same generic template across many workflow definitions. At run time, the applicable information is automatically populated.

4. Click **OK**.

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The template is saved and appears in the *Email Templates* panel.

Editing an Email Template

1. From the *Manage Email Templates* screen, select the email template you want to edit from the *Email Templates* panel, and click **Edit**.
2. Edit the **Name**, **Subject**, and **Body** fields, as necessary.
3. Click **OK**.
   The changes to the template are saved.

Manage Word Templates

This option allows you to import and delete Microsoft® Word® template files that can be used within workflows. These templates are used with the **Word Merge** activity in the designer.

For additional information on creating Microsoft® Word® templates that can be used with Synergy eSign, see the *Adding eSignature Fields to a Microsoft Word Template* topic.

Fields and Functions: Manage Word Templates

The following fields and functions are on the *Manage Word Templates* screen.

Import

Choose a file to import.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Inserting Merge Fields in Microsoft Word®

1. Open your document in Microsoft Word®.
2. Click where you want to insert a merge field.
3. Select **Insert**, and then select **Field...**
   The **Field** dialog box opens.
4. In the **Field Names** list, select *MergeField*.
5. In the **Field Name** field, enter a name and select **OK**.

   Press **Alt+F9** to switch between displaying field codes and results in your Microsoft Word® document. Field codes appear between curly braces.

Importing a Word Template

1. From the *Word Templates* panel, select **Import**.
   The *Import Template* window displays.
2. Navigate to the file location and select **Import**.

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The file name cannot be:

- More than 100 characters
- The same as a previously imported template

The Word template's name and the date and time it was imported appear in the **Word Templates** section.

Manage Index Groups

Use this option to package indexes into groups. You can add, edit, copy, delete, refresh, import, and export index groups. These groups are used with the **Document Add** activity in the designer.

Manage Index Groups allows you to change an index value if you have a created template. The changed index value is applied in all applicable locations, rather than having to open every **Document Add** activity in every workflow definition that contains the index value.

Fields and Functions: Manage Index Groups

The following fields and functions are located on the *Manage Index Groups* screen.

Index Groups

Add

Add an item.

Copy

Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Import

Choose a file to import.

Export

Select **Export** to choose a location for one or more files to be exported.

Index Group Editing Pane

Name

Provide a name that clearly indicates the business process. This name appears to users in the **Workflow Queue**.

Description

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Enter a description of the workflow, if desired. This field is optional and has a 255-character limit.

Index Values

Add

Select **Add** to add an index name, index type, and index value.

Edit

Select **Edit** to edit existing values.

Delete

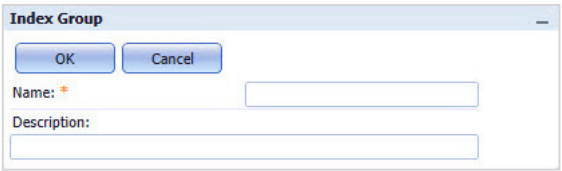
Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Adding an Index Group

1. From the *Manage Index Groups* window, select **Add**.
   The *Index Group* section appears in edit mode.



2. Enter a **Name** and **Description** for the index group.
   Only the **Name** field is required.
3. Select **OK**.
   The new index group appears in the **Index Groups** section.

Editing an Index Group

1. In the *Index Groups* panel, select the index group you want to edit.
2. In the *Index Group* panel, select **Edit**.
3. Edit the necessary fields, and then select **OK**.

Importing an Index Group

1. Select **Import**.
   The *Import Index Groups (*.idxg)* window appears.
2. Navigate to the index group you want to import and select **Import**.
   The imported index group appears in the *Index Group* editing panel.
3. Edit the name and description of the index group if necessary and select **OK**.

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The index group appears in the *Index Groups* panel.

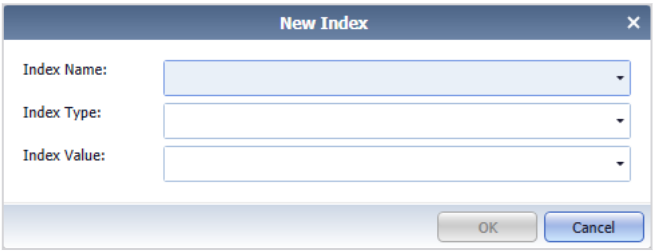
Exporting an Index Group

1. In the *Index Groups* panel, select the index group you want to export.

   You can export multiple index groups by pressing **Ctrl** and selecting each index group to export.
2. Select **Export**.
   The *Export Index Group(s)* window appears.
3. Navigate to the location where you want to export the index group and select **Export**.

Adding Index Values

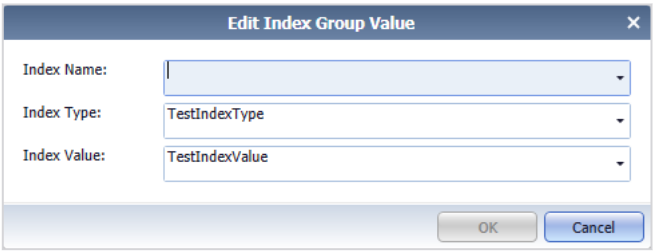
1. In the *Index Groups* panel, select the index group you want to add values to.
2. In the *Index Values* pane, select **Add**.
   The *New Index* window appears.



3. Enter the necessary values for **Index Name**, **Index Type**, and **Index Value**.

Editing Index Values

1. In the *Index Groups* panel, select the index group with values you want to edit.
2. In the *Index Values* pane, select the set of index values you want to edit, and then select **Edit**.
   The *Edit Index Group Value* window appears.



3. Edit the values, and then select **OK**.

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Calendar

This section describes how to manage and configure calendars and holiday sets in *jha*Enterprise Workflow.

Manage Calendars

This screen contains options that allow you to configure business hours in *jha*Enterprise Workflow to match your institution's business hours.

> **CAUTION**
> Timers use the business hours set in *Manage Calendars*.

> **CAUTION**
> The **Hold** activity does not use **Manage Calendars**. It uses actual time.

You can create more than one business calendar, including holidays, per institution, to accommodate different time zones, shifts, etc.

> **CAUTION**
> If your institution plans to use timers, it is highly recommended that you set the hours in the *Business Hours* panel to match your institution's hours. It is also recommended that you enter your institution's holidays in the *Manage Holiday Sets* panel.

Calendar Defaults

The system has a default calendar called **System Calendar**. This calendar cannot be modified or deleted by users. The **System Calendar** has the same time zone of the system-generated calendar of the database server.

> **NOTE**
> When an upgrade occurs, the calendar created in the original Business Calendar (meaning the version that only allowed the creation of one Business Calendar) becomes the default calendar upon upgrading to the new version of *jha*Enterprise Workflow.

Fields and Functions: Manage Calendars

The following fields and functions are located on the *Manage Calendars* screen.

Calendars Panel

The *Calendars* panel allows you to create new calendars in the *jha*Enterprise Workflow system to match your institution's varied business hours. For example, you may have a calendar for each time zone.

Add

Add an item.

Delete

Select **Delete** to remove the selected item.

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Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

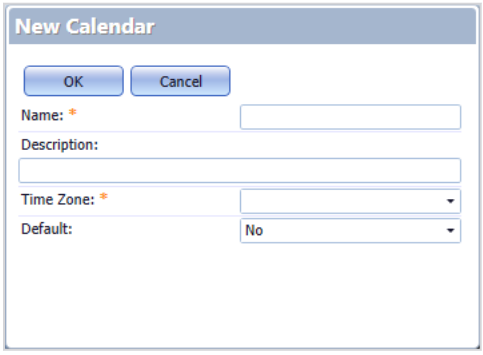
System Calendar

Select the **System Calendar** to view the calendar's properties in the *System Calendar* panel.

> **NOTE**
> The **System Calendar** cannot be modified or deleted.

Add/Edit Calendar Panel

The panel on the right side of the screen displays the information associated with the calendar selected in the *Calendars* panel. The name of the calendar selected becomes the title of the panel. The definitions below refer to the fields and functions contained within this panel.



Edit

Select **Edit** to change an existing calendar. You cannot make changes to the calendar until you select this option.

> **NOTE**
> You cannot modify the System Calendar.

Name

Provide a name that clearly indicates the business process. This name appears to users in the **Workflow Queue**.

Description

Enter a description of the workflow, if desired. This field is optional and has a 255-character limit.

Time Zone

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Select a time zone from the drop-down menu.

Default

Select **Yes** from the drop-down menu to set the calendar as the default.

> **NOTE**
> The **Skip Holidays** setting in *Workflow Scheduler* uses holidays as defined in the default **Calendar**.

Configure Calendars

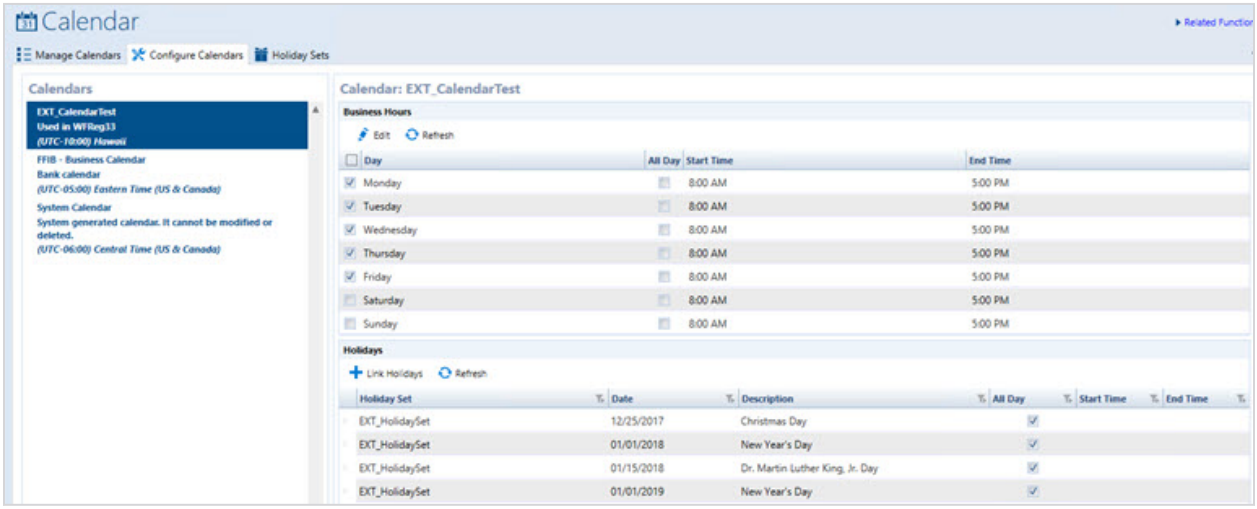
This option allows you to configure calendars.

Fields and Functions: Configure Calendars

The following fields and functions are located on the *Configure Calendars* screen.

Calendars

When you select a calendar from the list in the *Calendars* panel, the *Business Hours* and *Holidays* sections appear inside the right panel.



Business Hours

The *Business Hours* section allows you to set the business hours for each day of the week, including Saturday and Sunday.

Edit

Select **Edit** to edit the selected field.

Refresh

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Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Day

Select the check box for the day of the week, if necessary.

All Day

Select this check box to include all hours of operation for that business day.

Start Time

Enter the time the business day begins for your institution.

> **NOTE**
> If your hours are 8:00 a.m. to 2:00 p.m. on a business day, you would enter *8:00 a.m.* in the **Start Time** field and *2:00 p.m.* in the **End Time** field. This will keep timers from counting the hours from 2:00 p.m. to 5:00 p.m.

End Time

Enter the time the business day ends for your institution.

> **NOTE**
> If your hours are 8:00 a.m. to 2:00 p.m. on a business day, you would enter *8:00 a.m.* in the **Start Time** field and *2:00 p.m.* in the **End Time** field. This will keep timers from counting the hours from 2:00 p.m. to 5:00 p.m.

Holidays

The *Holiday* section allows you to link holidays. It also contains the date, description, beginning, and ending time for each holiday in the system.

Link Holidays

Select **Link Holidays** to create holiday sets. When you select **Link Holidays**, the *Link Holiday Set* window appears. Use the **Add** and **Remove** buttons to move the holidays to/from the *Available Holiday Sets* section to/from the *Assigned Holiday Sets* section, as necessary.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Holiday Set

The name of the Holiday Set.

Date

Select the date.

Description

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Enter a description of the workflow, if desired. This field is optional and has a 255-character limit.

All Day

Select this check box if the holiday hours are all day for this holiday.

Start Time

Enter the time the holiday begins for your institution.

> **NOTE**
> If your hours are 8:00 a.m. to 2:00 p.m. on a holiday, you would enter *8:00 a.m.* in the **Start Time** field and *2:00 p.m.* in the **End Time** field. This will keep timers from counting the hours from 2:00 p.m. to 5:00 p.m.

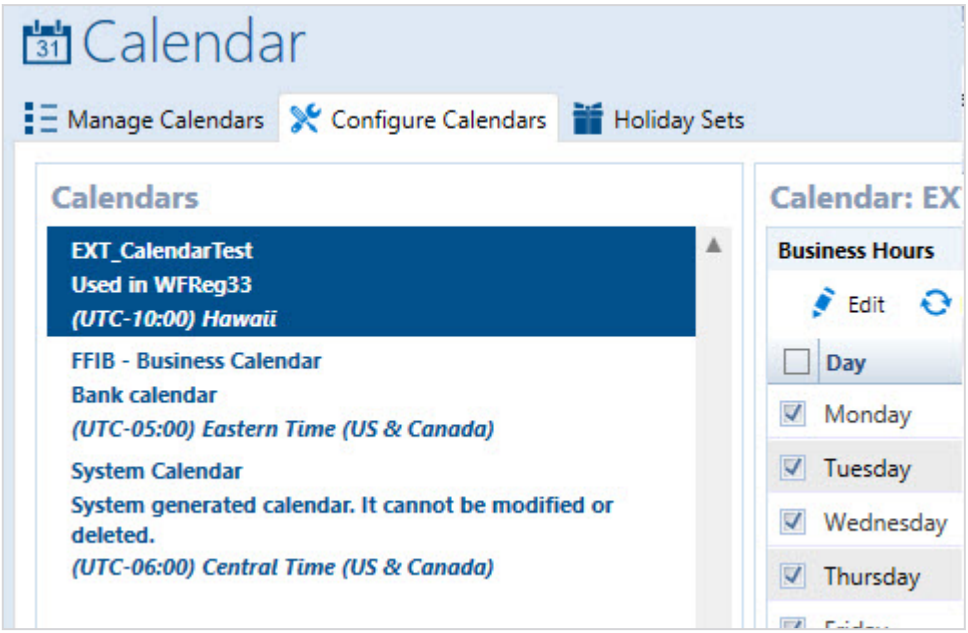
End Time

Enter the time the holiday ends for your institution.

> **NOTE**
> If your hours are 8:00 a.m. to 2:00 p.m. on a holiday, you would enter *8:00 a.m.* in the **Start Time** field and *2:00 p.m.* in the **End Time** field. This will keep timers from counting the hours from 2:00 p.m. to 5:00 p.m.

Linking Holidays

1. Navigate to the *Configure Calendars* screen.
2. Select the calendar you want to link from the *Calendars* panel.



3. From the *Holidays* section on the right panel, select **Link Holidays**.

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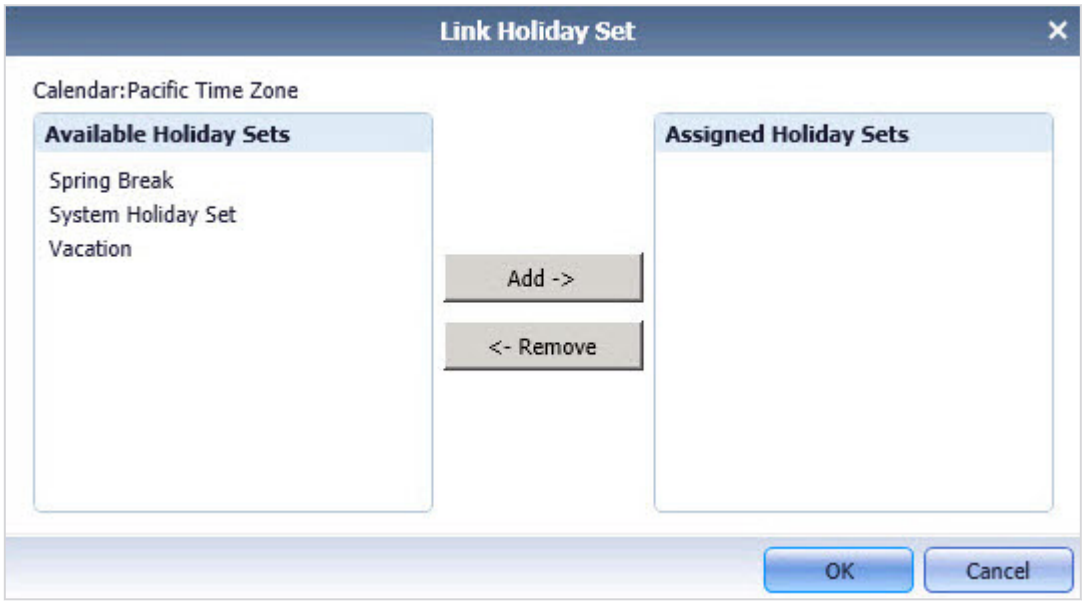
The *Link Holiday Set* window appears.



4. Use **Add** or **Remove** to move the holidays you want to belong to the holiday set from the *Available Holiday Sets* section to the *Assigned Holiday Sets* section.
5. Click **OK**.
   The Holiday Set is created and appears in the *Holidays* panel on the *Configure Calendars* screen.

Holiday Sets

This screen contains options that allow you to view, add, edit, copy, and delete holiday definitions.

The *Holiday Sets* screen contains three sections:

- *Holiday Sets* - Displays the available holiday definitions, along with buttons that allow the user to add, delete, and copy definitions.
- *Basic Information* - Allows you to enter the holiday's name and description.
- *Definitions* - Lists the holiday information, including the date, description, and beginning and end time.

Fields and Functions: Holiday Sets

The following fields and functions are located on the *Holiday Sets* screen.

Holiday Sets

The *Holiday Sets* panel contains the available holiday sets, along with functions that allow you to add, delete, or copy holiday sets.

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Add

Add an item.

Copy

Select **Copy** to create an item from the content of an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Basic Information

The panel on the right side of the screen displays the information associated with the calendar selected in the *Calendars* panel. The name of the calendar selected becomes the title of the panel.

Edit

Select **Edit** to modify an existing item.

Name

Provide a name that clearly indicates the business process. This name appears to users in the **Workflow Queue**.

Description

Enter a description of the workflow, if desired. This field is optional and has a 255-character limit.

Holiday Definitions

The *Holiday Definitions* panel contains the holiday's date, description, start, and end time.

Add

Add an item.

Edit

Select **Edit** to modify an existing item.

Delete

Select **Delete** to remove the selected item.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Date

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Select the date.

Description

Enter a description of the workflow, if desired. This field is optional and has a 255-character limit.

All Day

Select this check box if the holiday hours are all day for this holiday.

Start Time

Enter the time the business day begins for your institution.

> **NOTE**
> If your hours are 8:00 a.m. to 2:00 p.m. on a business day, you would enter *8:00 a.m.* in the **Start Time** field and *2:00 p.m.* in the **End Time** field. This will keep timers from counting the hours from 2:00 p.m. to 5:00 p.m.

End Time

Enter the time the business day ends for your institution.

> **NOTE**
> If your hours are 8:00 a.m. to 2:00 p.m. on a business day, you would enter *8:00 a.m.* in the **Start Time** field and *2:00 p.m.* in the **End Time** field. This will keep timers from counting the hours from 2:00 p.m. to 5:00 p.m.

Extensibility

Extensibility provides a more complete export and import process for Workflow Definitions. With Extensibility, Workflow Administrators can import a workflow definition with its dependencies, which minimizes the manual effort required to make a workflow operational. These imported workflow definition packages can be applied with a single click.

Workflow definition packages may include:

- Queues
- Categories
- Message Templates (Message Bus, JHA Service, External)
- Email Templates
- Word Templates
- Index Groups
- Calendars

When an extensibility package is applied, only a configured calendar is created (i.e., calendar and holiday set). If a configured calendar already exists, the extensibility package does not create new holiday sets.

Message or email templates are not packaged if they are overridden in all activities.

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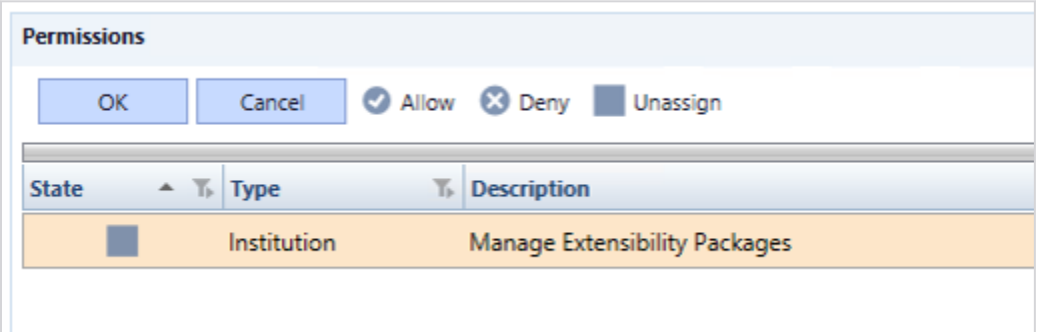
> **NOTE**
> If the template is not overridden in at least one activity, it is packaged and displayed in the manifest.

Manage Extensibility Packages is available as an institution permission.



When an extensibility package is applied, the workflow definition draft that appears in the Workflow Definition Library uses the release version in which the extensibility package was created. Any subsequent edits to that workflow definition change its version to the current release.

Creating a Package

1. Select a Workflow Definition from the *Available Definitions* panel.
   Available Definitions includes both draft and published Workflow Definitions.
2. Select **Create Package**, and then provide a unique **Name**.

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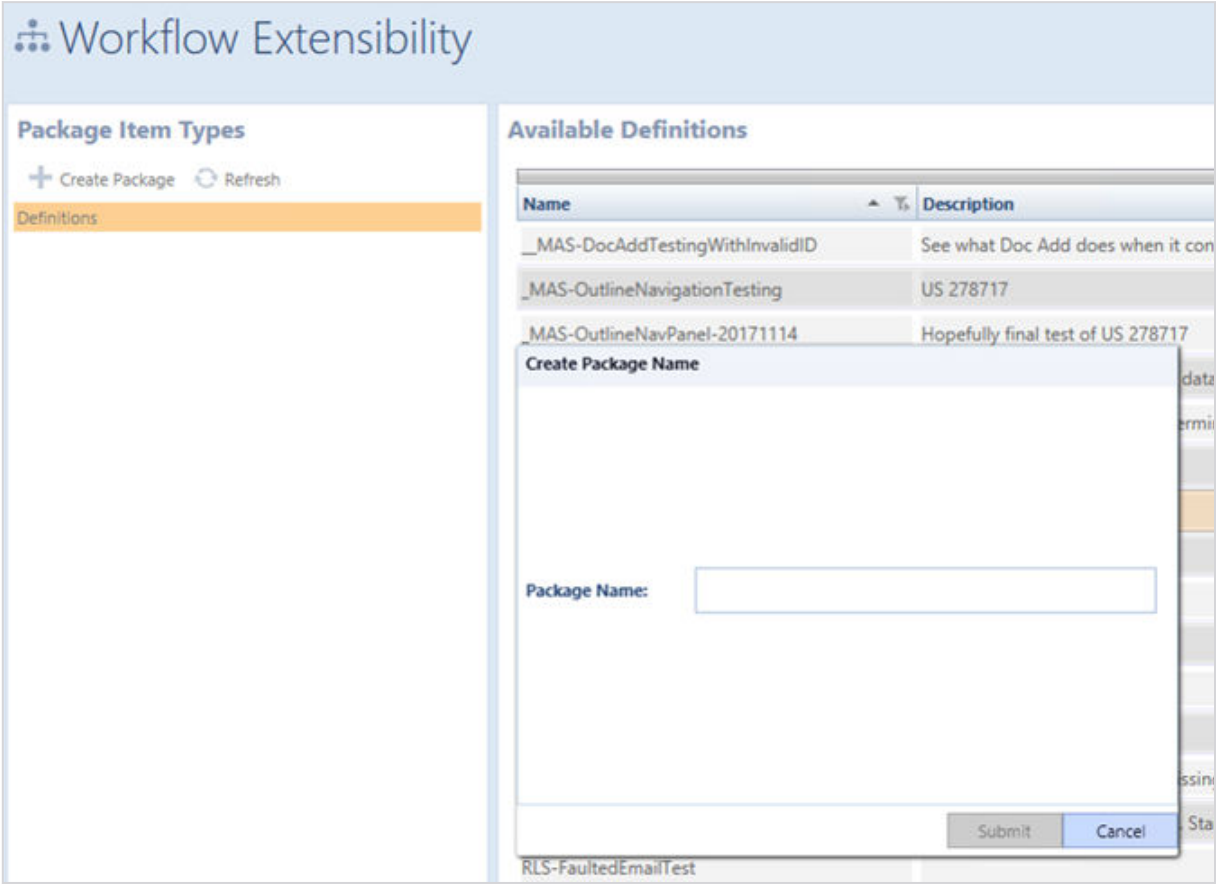

Package names can be letters and numbers, but spaces are not allowed.

3. Select **Submit**.
   The **Package Status** switches to *Creating* in the *Available Packages* view. When complete, the **Package Status** changes to *Available*.

Exporting a Package

1. Select a package from the **Available Packages** list for export.
2. Select the **Export** button.
3. Select the path where you want the export to be located.
4. Select **OK**.

> **NOTE**
> If a package of the same name already exists in the selected directory, a failure message appears.

Importing a Package

1. Select the **Import** button in the toolbar.

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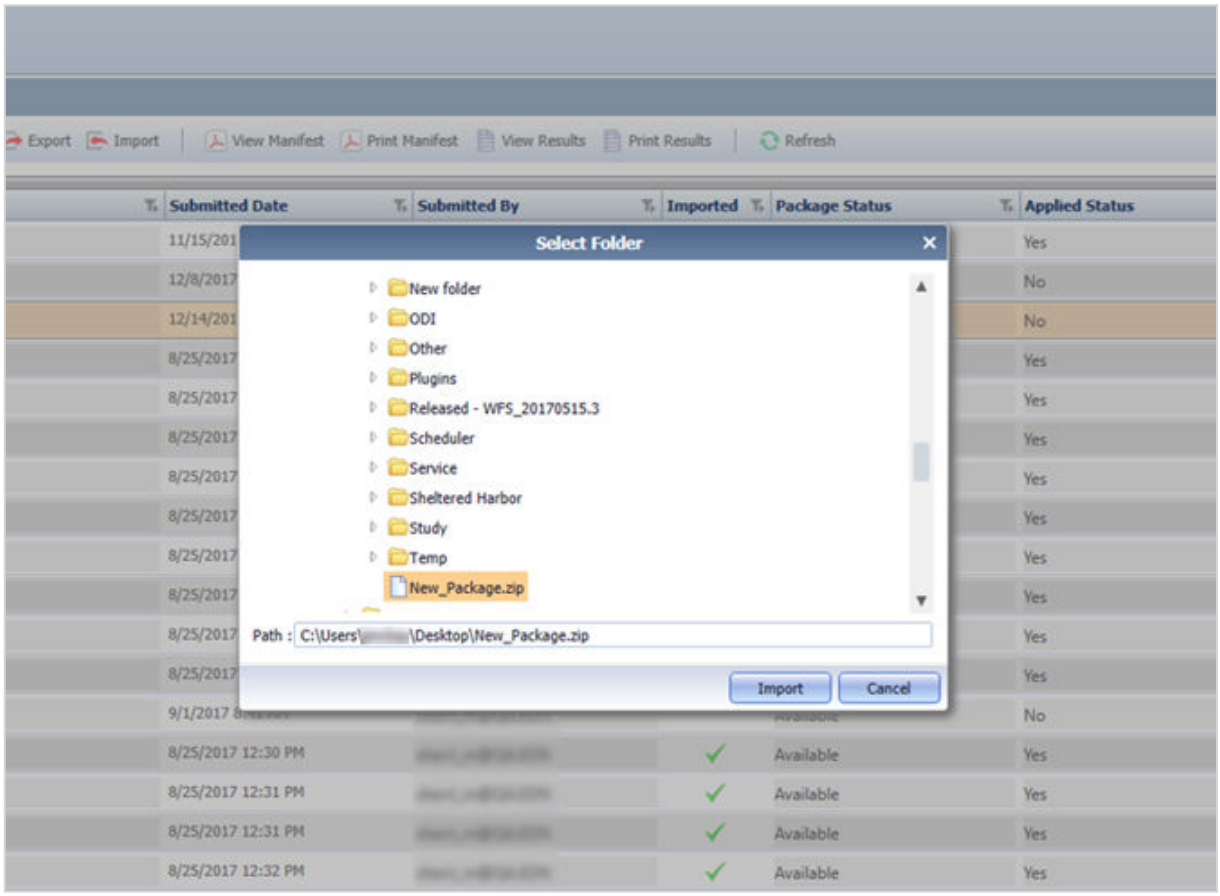
2. Browse to the package zip file location.



3. Select **Import**.
   The import process occurs.

> **NOTE**
> The screen is not available until the import is complete. Importing takes less than 10 seconds.

> **NOTE**
> If a package of the same name already exists, an error is produced. If the import is successful, a confirmation message appears and a green checkmark is added to the *Imported* column.

Applying a Package

1. Open **Workflow Extensibility**.
2. Navigate to the package you wish to apply.
3. Select **Apply** from the toolbar.

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The *Package Status* changes to *Applying*. *Applied Status* remains *No* until the process is complete. When successfully completed, the definition and other package components are added. The *Package Status* changes to *Available* and the *Applied Status* is *Yes*.

> **TIP**
> Results of a completed **Apply** process can be viewed or printed. Select **View Results** to display a PDF file in a separate Xperience tab.

Workflow Monitor

The *Workflow Monitor* landing zone allows authorized users to view and/or take actions on a running workflow instance.

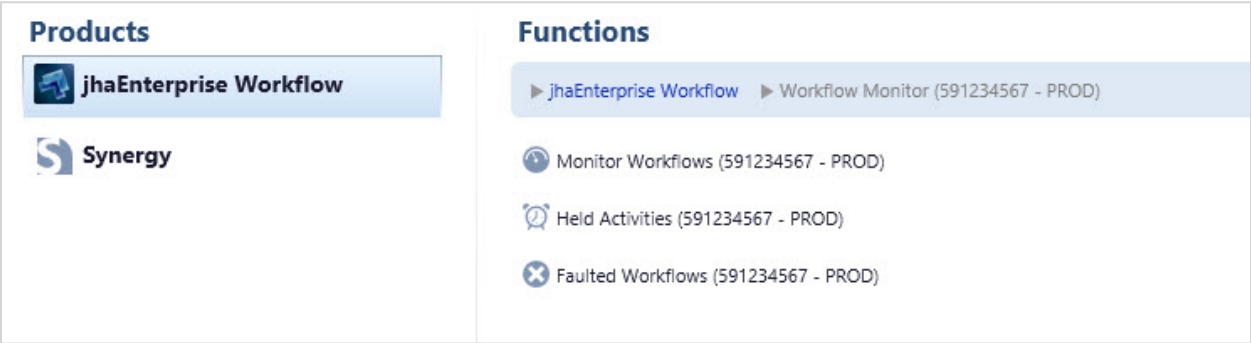
From the *Workflow Monitor*, you can monitor workflow instances and take any necessary action including terminating a workflow, releasing a hold from a workflow, or retrying a faulted workflow. The *Workflow Monitor* contains information about manual activities and hold activities.

> **NOTE**
> Depending upon your user access, you may or may not be able to view or use all these functions.

Workflow Monitor Access

You will only see the *Workflow Monitor* if you have **Allowed** status for at least one of the following options:

- **Monitor Workflows**
- **Release Held Activities**
- **Retry Faulted Workflows**



Information populated in the *Workflow Monitor* is based on the categories for which you have monitor capabilities. You must have at least one of the following Institution Preview permissions in an **Allowed** state to view the **Details** option within the *Workflow Monitor*:

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- Preview Attachments
- Preview Comments
- Preview Variables

Grid Population

*jha*Enterprise Workflow populates the work listing grid in batches to avoid timeouts while you work. You may begin working on the items that have loaded while the remaining items continue to load. The status of the grid population process is noted in the bottom corner of the screen.

Monitor Workflows

Monitor Workflows displays a list of current workflows in any state: **Active**, **Hold**, or **Faulted**. The **Monitor Workflows** option provides a high-level view of what is actively running in the system at the current time.

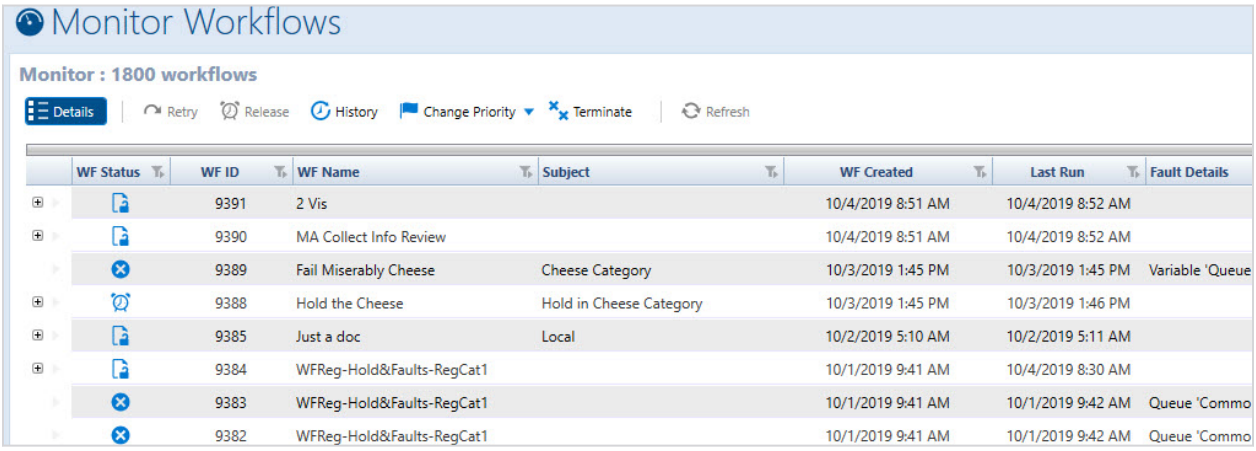
If you have the necessary access, you can add comments, view variables, terminate workflows, etc.

Examples: Business Cases for Monitor Workflow

- You need to unpublish a workflow definition, but first you want to see how many instances are currently active. Select **Monitor Workflow** to view all the currently active instances.
- You need to know the status of a specific customer loan but cannot see the status because it is not in your queue. Select *Monitor Workflows*, and filter down to the customer's loan to check the status.

Fields and Functions: Monitor Workflows

The following fields and functions are located on the *Monitor Workflows* screen. This screen allows you to view all active workflows, regardless of their status.



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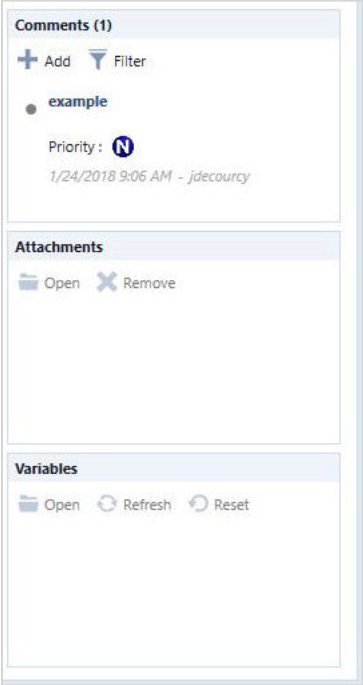
Select the ⊞ expand button next to a listed workflow to view additional details.

Details

Select **Details** to view and/or edit the information in the *Comments*, *Attachments*, and *Variables* panels. You must have the required permissions to access the **Details** option.



Comments

This panel contains any helpful comments about the workflow, the date the comment was made, and the user who left the comment. Comments belong to the entire running workflow, not just a single manual activity.

Attachments

This panel displays any attachments for the selected workflow. You can select **Open** to view the attachment. Attachments belong to the entire running workflow, not just a single manual activity. Depending on the institution setup, opening an attachment opens either:

- A new Synergy viewer tab in Xperience, if **Synergy** is available and configured. Each attachment appears as a sub-tab on the *Synergy Viewer* tab. Available options when viewing the item depend on your Synergy permissions, as you have left *jha*Enterprise Workflow and are in Synergy at this point.
- A new Xperience tab appears if **Iris** is configured for the institution. The Xperience tab displays attachments as PDF files. Each attachment opens in a new Xperience tab and tab names are the same as the document name that appears in the *Attachments* panel.

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The *Iris* tab contains a grid with information about each opened attachment. You can print from the *Iris* tab.

> **NOTE**
> Only Synergy or Iris can be configured to use **Attachments**, not both. Synergy and Iris are mutually exclusive.

Variables

This panel contains a list of variables used in the selected workflow. If you have the necessary permissions, you may be able to view and/or modify the variable values by selecting **Open**. Select **Reset** to uninitialize, or clear, selected variables. Variables belong to the entire running workflow, not just a single manual activity. Variables appearing here are only those configured to be visible in the workflow definition. There may be some you want to use in the workflow definition for evaluation/routing that you do not necessarily want seen or exposed to users at run time. Not all users see the *Variables* panel.

Retry

Select **Retry** to attempt to resubmit a faulted workflow.

Release

Select **Release** to release a hold on a held workflow.

History

Select **History** to view the history of the selected workflow.

Change Priority

This field allows you to select and change the level of priority for the selected workflow instance. The menu options are *High*, *Normal*, and *Low*.

Terminate

Select **Terminate** to remove a workflow. This will remove only the selected instance of the workflow.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Held Activities

The *Held Activities* screen contains a list of all workflows that are currently on hold.

Three hold types appear in *Held Activities*:

- The workflow is in a **Held Activity**.
- The workflow is in a **Start a Workflow Activity** and is waiting for the started workflow to complete.
- The workflow is in a **Remote Approval Activity** awaiting replies and/or expiration.

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Workflows automatically release from a hold when their configuration duration time ends. However, it may be necessary to manually release a hold activity on the *Held Activities* screen so the workflow can proceed to the next activity.

Example: Business Case for Held Activities

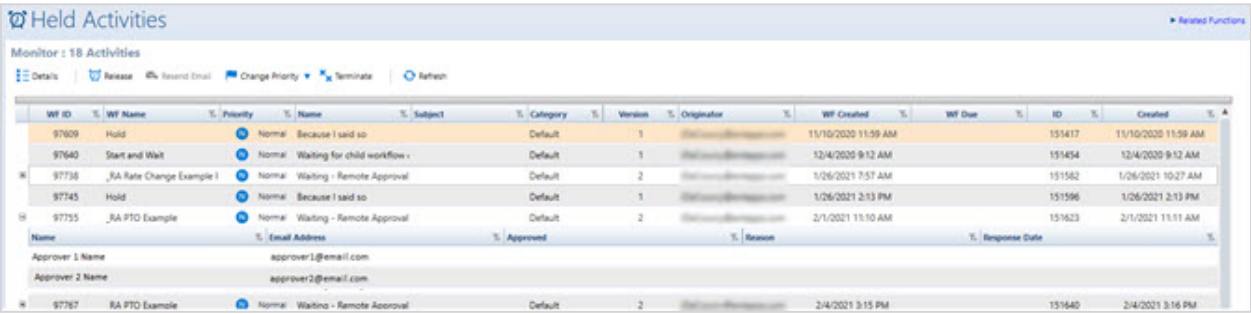
> A customer is upset, and they do not want to wait any longer for funding. Add a comment indicating a rush is needed, change priority to *High*, and release the hold to enable the workflow to continue before its configured hold duration is met.

Fields and Functions: Held Activities

The following fields and functions are on the *Held Activities* screen. This screen allows you to view all the activities in the system that are currently in a hold. A value of *9/9/9999* in **Expires** indicates an indefinite hold.

From the *Held Activities* screen, you can release a hold, resend a remote approval email, change workflow priority, and terminate a workflow. If you have the necessary permissions, you may also be able to change priority, terminate a workflow instance, and work in the *Details* panel.

> **NOTE**
> **Held Activities** do not use **Business Calendar Settings**. They use actual time.



Details

Select **Details** to view and/or edit the information in the *Comments*, *Attachments*, and *Variables* panels. You must have the required permissions to access the **Details** option.

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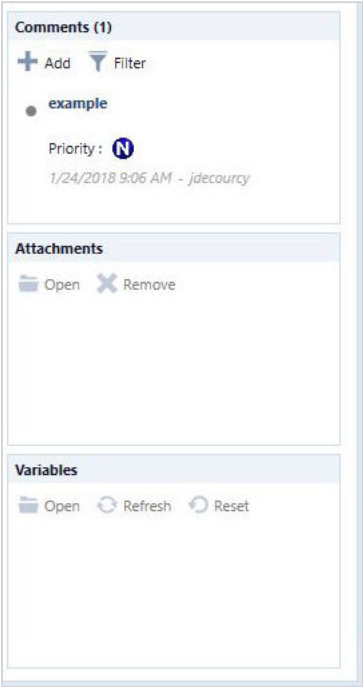

Comments

This panel contains any helpful comments about the workflow, the date the comment was made, and the user who left the comment. Comments belong to the entire running workflow, not just a single manual activity.

Attachments

This panel displays any attachments for the selected workflow. You can select **Open** to view the attachment. Attachments belong to the entire running workflow, not just a single manual activity. Depending on the institution setup, opening an attachment opens either:

- A new Synergy viewer tab in Xperience, if **Synergy** is available and configured. Each attachment appears as a sub-tab on the *Synergy Viewer* tab. Available options when viewing the item depend on your Synergy permissions, as you have left *jha*Enterprise Workflow and are in Synergy at this point.
- A new Xperience tab appears if **Iris** is configured for the institution. The Xperience tab displays attachments as PDF files. Each attachment opens in a new Xperience tab and tab names are the same as the document name that appears in the *Attachments* panel. The *Iris* tab contains a grid with information about each opened attachment. You can print from the *Iris* tab.

> **NOTE**
> Only Synergy or Iris can be configured to use **Attachments**, not both. Synergy and Iris are mutually exclusive.

Variables

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This panel contains a list of variables used in the selected workflow. If you have the necessary permissions, you may be able to view and/or modify the variable values by selecting **Open**. Select **Reset** to uninitialize, or clear, selected variables. Variables belong to the entire running workflow, not just a single manual activity. Variables appearing here are only those configured to be visible in the workflow definition. There may be some you want to use in the workflow definition for evaluation/routing that you do not necessarily want seen or exposed to users at run time. Not all users see the *Variables* panel.

Release

Select **Release** on a hold activity to remove the set hold and allow the workflow to continue. Select **Release** on a **Remote Approval** activity to set its **Response Variable** to *False* and exit the activity.

Resend Email

Select **Resend Email** to send the remote approval email to an approver again. To send the email to selected approvers, click the **+** plus sign to expand the parent **Remote Approval** record, select the desired approvers, and then click **Resend**.

To resend the email to all approvers, select the parent record and click **Resend**.

> **NOTE**
> This feature uses the email address of the approver as it existed at the time that the **Remote Approval** activity was created.

Change Priority

This field allows you to select and change the level of priority for the selected workflow instance. The menu options are *High*, *Normal*, and *Low*.

Terminate

Select **Terminate** to remove a workflow. This will remove only the selected instance of the workflow.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Faulted Workflows

Select **Faulted Workflows** to view a list of workflows in a **Faulted** state and the reason for the failure. Once you believe the problem is fixed, you can retry the faulted workflow.

> **NOTE**
> The fix may be something done outside of *jha*Enterprise Workflow entirely.

If a workflow is listed on the *Faulted Workflows* screen, some kind of exception has occurred preventing the workflow from successfully completing an activity. From the *Faulted Workflow*

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screen, you may choose to fix the exception and select **Retry** to allow the workflow to continue from the point of failure.

Retry Faulted Workflows

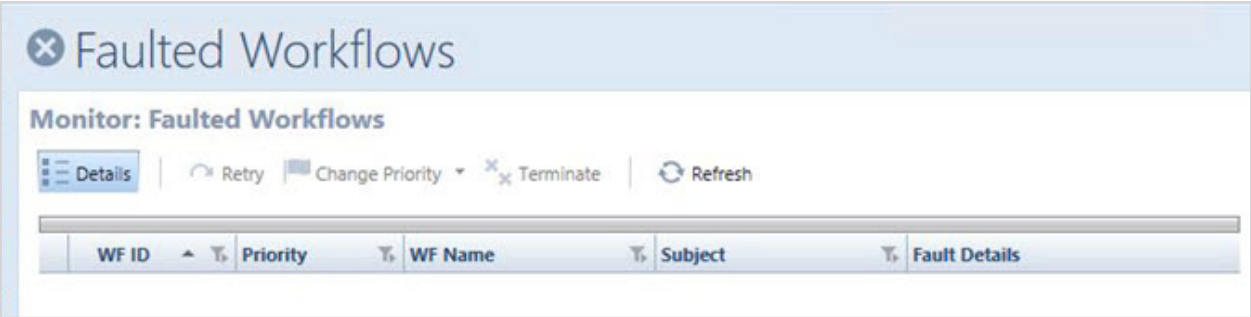
The **Details** option provides additional information on the problem. If possible, fix the problem, and select **Retry** to see if the workflow can now complete the activity and move on.

> **TIP**
> After you retry, you must select **Refresh** to see if the fault was fixed.

If you cannot fix the problem, you could, assuming you have permissions, add a comment indicating why it cannot be fixed and then terminate the workflow.

Fields and Functions: Faulted Workflows

The following fields and functions are located on the *Faulted Workflows* screen. This screen allows you to view all workflows that are in a **Faulted** status.



Details

Select **Details** to view and/or edit the information in the *Comments*, *Attachments*, and *Variables* panels. You must have the required permissions to access the **Details** option.

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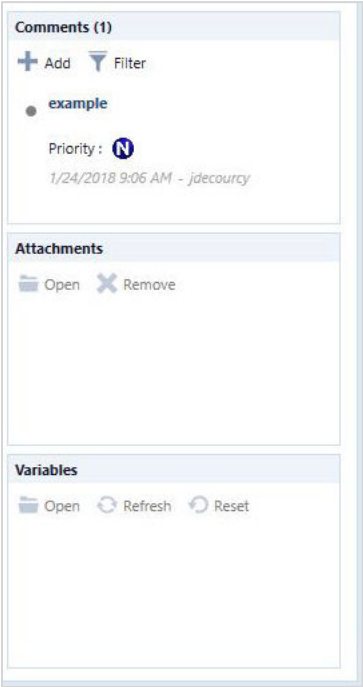

Comments

This panel contains any helpful comments about the workflow, the date the comment was made, and the user who left the comment. Comments belong to the entire running workflow, not just a single manual activity.

Attachments

This panel displays any attachments for the selected workflow. You can select **Open** to view the attachment. Attachments belong to the entire running workflow, not just a single manual activity. Depending on the institution setup, opening an attachment opens either:

- A new Synergy viewer tab in Xperience, if **Synergy** is available and configured. Each attachment appears as a sub-tab on the *Synergy Viewer* tab. Available options when viewing the item depend on your Synergy permissions, as you have left *jha*Enterprise Workflow and are in Synergy at this point.
- A new Xperience tab appears if **Iris** is configured for the institution. The Xperience tab displays attachments as PDF files. Each attachment opens in a new Xperience tab and tab names are the same as the document name that appears in the *Attachments* panel. The *Iris* tab contains a grid with information about each opened attachment. You can print from the *Iris* tab.

> **NOTE**
> Only Synergy or Iris can be configured to use **Attachments**, not both. Synergy and Iris are mutually exclusive.

Variables

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This panel contains a list of variables used in the selected workflow. If you have the necessary permissions, you may be able to view and/or modify the variable values by selecting **Open**. Select **Reset** to uninitialize, or clear, selected variables. Variables belong to the entire running workflow, not just a single manual activity. Variables appearing here are only those configured to be visible in the workflow definition. There may be some you want to use in the workflow definition for evaluation/routing that you do not necessarily want seen or exposed to users at run time. Not all users see the *Variables* panel.

Retry

Select **Retry** to attempt to resume the selected workflow from the point of failure.

Change Priority

This field allows you to select and change the level of priority for the selected workflow instance. The menu options are *High*, *Normal*, and *Low*.

Terminate

Select **Terminate** to remove a workflow. This will remove only the selected instance of the workflow.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Workflow Coverage

The *Workflow Coverage* is the landing zone that allows you to manage the availability of users by manipulating queue status and/or user status.

There are two options in *Workflow Coverage*: **Manage Queue Status** and **Manage Users**.

> **NOTE**
> Depending upon your user access, you may or may not be able to view or use all of these functions.

Manage Queue Status

Manage Queue Status allows you to change the availability of a queue.

This option is used to ensure coverage if the volume of incoming work suddenly increases. If a queue is configured with **Stand By** groups, then putting the queue in **Stand By** mode, increases the number of users working in the queue. The **Manage Queue Status** option is also helpful when planning employee vacations or employee absences.

Fields and Functions: Manage Queue Status

The following fields and functions are located on the *Manage Queue Status* screen.

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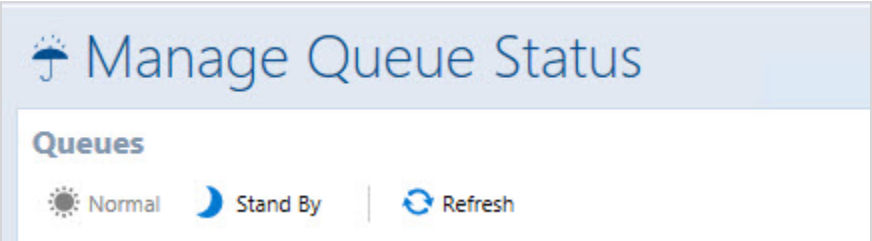

Normal

A **Normal** status is used for regular, everyday workers in the queue.

Stand By

Stand By mode helps ensure that work gets done by designating a group as a backup for the normal group. The stand-by workers do not normally work in this queue but work is assigned to them when the normal queue has no available workers. You can set a group to **Stand By** mode from the *Configure Queues* screen.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Name

This field displays the name.

Status

This field displays the queue status: **Normal** or **Stand By**.

 # Workers

This field displays a distinct count of the effectively available workers with take and/or receive work permission for that queue.

Modified Date

This field displays the date on which the queue status was most recently modified.

Modified By

This field displays the name of the user who most recently modified the queue status.

Manage Users

Manage Users allows you to change the availability status of users in the *Workflow Queue*.

> **NOTE**
> If a user is not in the queue, they show as *Unavailable*, even if they are logged on to *jha*Enterprise Workflow and working elsewhere (e.g., Design Surface). Users that are *Unavailable* cannot be forced into an *Available* status if they have gone inactive in the *Queue*.

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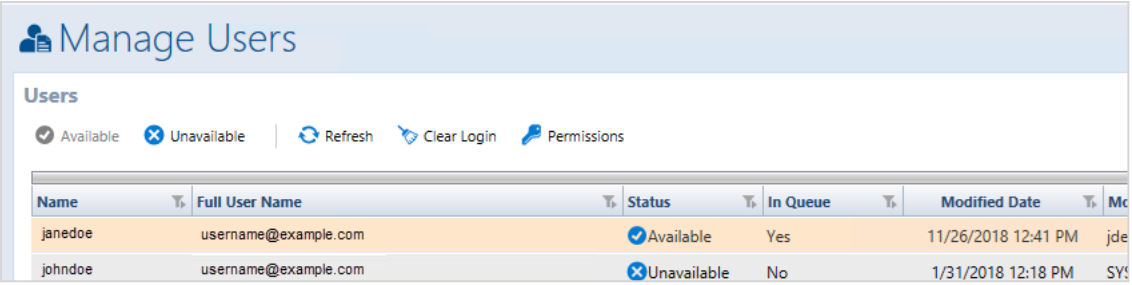
This option is helpful if manual activities are assigned by a push delivery method, such as **Just-in-Time**. Marking a user's status **Available** is one of the factors used to determine if a manual activity should land in the queue work listing with an **Assigned To** value.

Functions: Manage Users

The following functions are located on the *Manage Users* screen.



Available

Select **Available** to indicate that the selected user is available to receive work. When a user logs out and logs back in to the system, the user is not automatically assigned an **Available** status The user is assigned the status they had at the time they last logged out. This prevents users without permission from controlling their status by logging out/in.

Unavailable

Select **Unavailable** to indicate that the selected user is unavailable to receive work. When a user logs out and logs back in to the system, the user is not automatically assigned an **Available** status. The user is assigned the status they had at the time they last logged out. This prevents unpermissioned users from controlling their status by logging out/in.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Clear Login

Select **Clear Login** to remove a name from the user list.

Permissions

Select **Permissions** to open the **User Permissions** modal.

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Workflow Queue

The *Workflow Queue* landing zone is where you view and interact with manual activities that run in workflow instances (that are accessible to you).

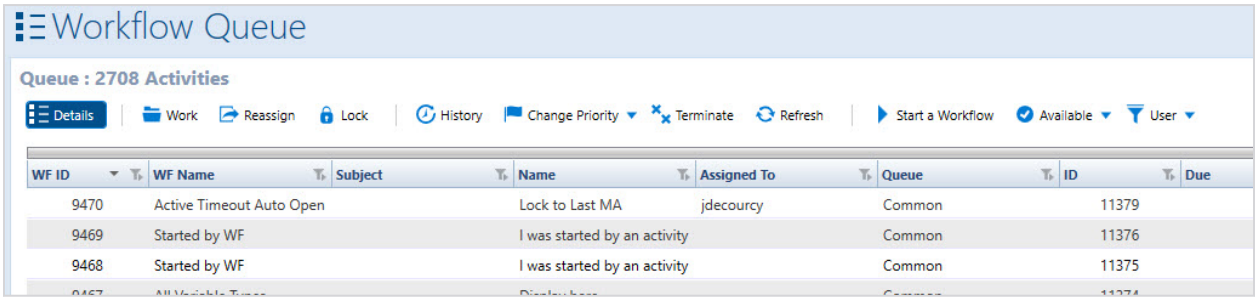
The *Workflow Queue* allows you to view and work on manual activities from within a work listing. Each user has a queue that contains a list of manual activity work items assigned to them or their queues. A queue is associated with memberships and their permission sets. Queue settings are managed by your administrator.

The *Workflow Queue* also allows you to take action on a manual activity (i.e., **Work**, **Reassign**, **Lock**). You can also take action on a running workflow as a whole (i.e., **Change Priority**, **Terminate**) with the **Details** function. See *Fields and Functions: Workflow Queue* for more information.

The *Workflow Queue* contains two parts: the Toolbar and the Work Listing Grid.

- Toolbar - Your access to options on the toolbar depends on your permissions.
- Work Listing Grid - Manual activities appearing in the table are activities you have either **Take** and/or **Receive** permissions for in the specified queue.

Users with the **Receive Work** permission in a *Queue* but without the **Take Work** permission only see **Manual Activities** assigned to them in that *Queue*. Without the **Take Work** permission, those users do not see **Manual Activities** that are unassigned or assigned to others in that *Queue*.



Auto Refresh functionality displays the most current and up-to-date manual activities in the work listing grid. Changes made in other areas of *jha*Enterprise Workflow appear soon after they are made so you can view activities in their current state. **Auto Refresh** runs as long as the user is actively working the *Queue*. If the user leaves the *Queue* open but does nothing (e.g., no clicks, no working items) for longer than the configured **Active Timeout** value (**Workflow Administration** > **Settings** > **Queue Settings** > **Active Timeout**), then **Auto Refresh** suspends.

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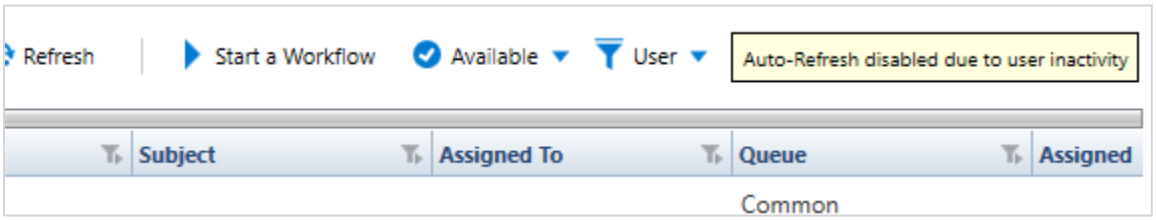
A disclaimer appears in the work listing toolbar if **Auto Refresh** is not running. As soon as the user takes any action/clicks in the *Queue*, then **Auto Refresh** resumes.

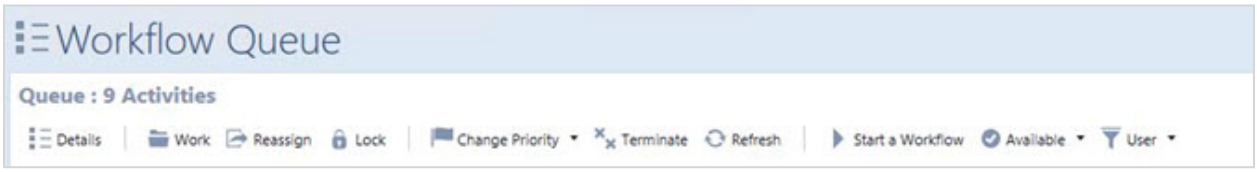


Grid Population

*jha*Enterprise Workflow populates the work listing grid in batches to avoid timeouts while you work. You may begin working on the items that have loaded while the remaining items continue to load. The status of the grid population process is noted in the bottom corner of the screen.

Fields and Functions: Workflow Queue

The **Workflow Queue** allows you to view and interact with the manual activities in running workflow instances that are accessible to you. The following fields and functions are located on the *Workflow Queue* screen.



Details

Select **Details** to view and/or edit the information in the *Comments*, *Attachments*, and *Variables* panels. You must have the required permissions to access the **Details** option.

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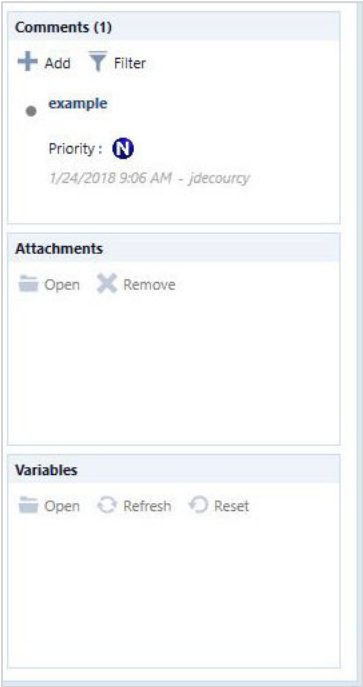

Comments

This panel contains any helpful comments about the workflow, the date the comment was made, and the user who left the comment. Comments belong to the entire running workflow, not just a single manual activity.

Attachments

This panel displays any attachments for the selected workflow. You can select **Open** to view the attachment. Attachments belong to the entire running workflow, not just a single manual activity. Depending on the institution setup, opening an attachment opens either:

- A new Synergy viewer tab in Xperience, if **Synergy** is available and configured. Each attachment appears as a sub-tab on the *Synergy Viewer* tab. Available options when viewing the item depend on your Synergy permissions, as you have left *jha*Enterprise Workflow and are in Synergy at this point.
- A new Xperience tab appears if **Iris** is configured for the institution. The Xperience tab displays attachments as PDF files. Each attachment opens in a new Xperience tab and tab names are the same as the document name that appears in the *Attachments* panel. The *Iris* tab contains a grid with information about each opened attachment. You can print from the *Iris* tab.

> **NOTE**
> Only Synergy or Iris can be configured to use **Attachments**, not both. Synergy and Iris are mutually exclusive.

Variables

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This panel contains a list of variables used in the selected workflow. If you have the necessary permissions, you may be able to view and/or modify the variable values by selecting **Open**. Select **Reset** to uninitialize, or clear, selected variables. Variables belong to the entire running workflow, not just a single manual activity. Variables appearing here are only those configured to be visible in the workflow definition. There may be some you want to use in the workflow definition for evaluation/routing that you do not necessarily want seen or exposed to users at run time. Not all users see the *Variables* panel.

Work

Select **Work** to view and complete a manual activity within the currently selected workflow instance. You can only complete one activity at a time.

Reassign

Select **Reassign** to immediately assign a manual activity to another user/queue. **Reassign** can override a queue assignment as well as an **Assigned To** value.

Lock

Select **Lock** to open the *Lock Assignment* dialog box. The *Lock Assignment* dialog box allows you to select a user from the **Assigned To** drop-down menu. Assigning a user via *Lock Assignment* ensures that the designated user is **Assigned To** every time a Manual Activity reaches a *Queue* going forward. *Lock Assignment* does not affect the *Assigned To* value of the current Manual Activity.

Lock Assignment is constrained by the *Queues* defined in the *Workflow Definition*. *Lock Assignment* cannot be used for a *Queue* that is not included in the *Workflow Definition*.

History

Select **History** to view the history of the selected workflow.

Change Priority

This field allows you to select and change the level of priority for the selected workflow instance. The menu options are *High*, *Normal*, and *Low*.

Terminate

Select **Terminate** to terminate a workflow instance and remove it from your queue.

> **CAUTION**
> If you terminate a workflow instance, it is completely removed for all users.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Start a Workflow

Select **Start a Workflow** to begin a running workflow of the selected workflow definition.

Start New Instance

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If there is a published version of the **WF Name**, then this function starts a new instance when selected. The **Category** permission for **Start a Workflow** governs this function.

> **NOTE**
> The new instance does not carry over any **Attachments**, **Comments**, or **Variable** values.

Available/ Unavailable

Select *Available* or *Unavailable* from the drop-down list to change your availability status. Your availability status appears to other users in the system. An **Available** status means that you are available to accept new work, and an **Unavailable** status lets other users know that you are not able to accept any new work at this time.

Mine/Workable/Overdue/All/User

- Select *Mine* to view all manual activities assigned to you.
- Select *Workable* to view all manual activities that are either assigned to you or unassigned and in a queue where you have **Take** permissions. *Workable* is the default setting.
- Select *Overdue* to view manual activities that are assigned to you, past due, and/or are in a queue where you have **Take** permissions, and either the **Workflow Due** or **Due** timers have past.
- Select *All* to view anything and everything for which you have **Take** and/or **Receive** permission.
- The **User** value appears when the user either sorts, filters, or changes the column order of the grid.

> **NOTE**
> If you only have **Receive** permission, the content displayed is the same as in the workable filter. If you have **Take** permission, this filter displays everything from the queue: **Mine**, **Unassigned**, and **Unavailable**. The **Unavailable** setting indicates that the item is assigned to another user.

Work Listing Grid

The *Work Listing Grid* contains a list of the manual activities in running workflow instances that are available to you. The *Work Listing Grid* also provides a breakdown of workflow information.

> **NOTE**
> Fields in the *Work Listing Grid* that begin with *WF* refer to a workflow instance. Fields without *WF* refer to that manual activity.

Filters

You can filter and sort these fields by selecting the **Text Filter** icon located to the right of the field name. You change the order of the fields in the grid by selecting the field name and dragging and dropping it to a new location.

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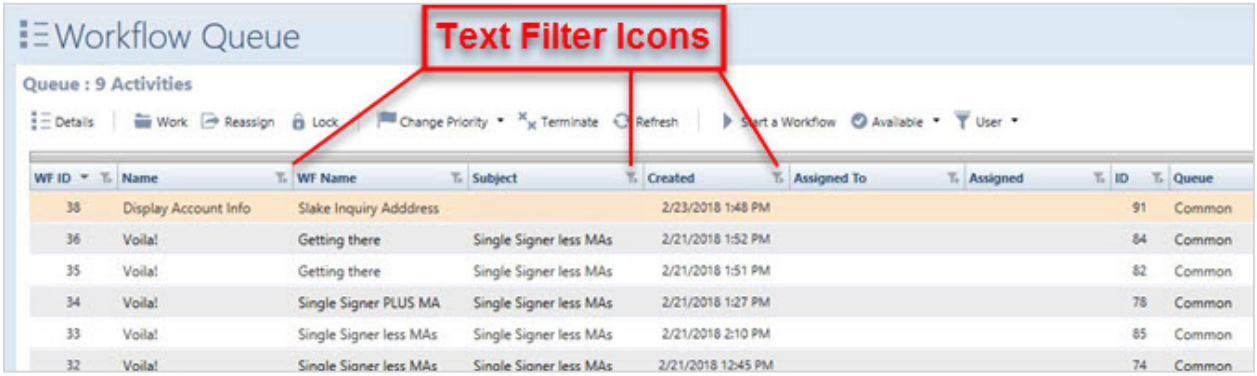

Starting a Workflow

1. From the *Workflow Queue* screen, select **Start a Workflow**.
   The *Start a Workflow* window appears.
2. Select the workflow you want to start from the list, and click **OK**.
3. Click **Refresh**.
   If the workflow has a manual activity, the new instance of the workflow appears in the queues for those individuals who have the necessary activities assigned to them.

> **NOTE**
> Even if the activity is assigned to you, it may not be the first one in your queue. You may be required to complete another activity first.

4. Choose from one of these options:
   - To work on the activities pending in the selected workflow, select **Work** from the *Workflow Queue* toolbar.
   - To start a new instance, right-click the workflow from which you want to start an instance, and then select **Start new instance**.

> **NOTE**
> The new instance does not carry over any **Attachments**, **Comments**, or **Variable** values from the original workflow.

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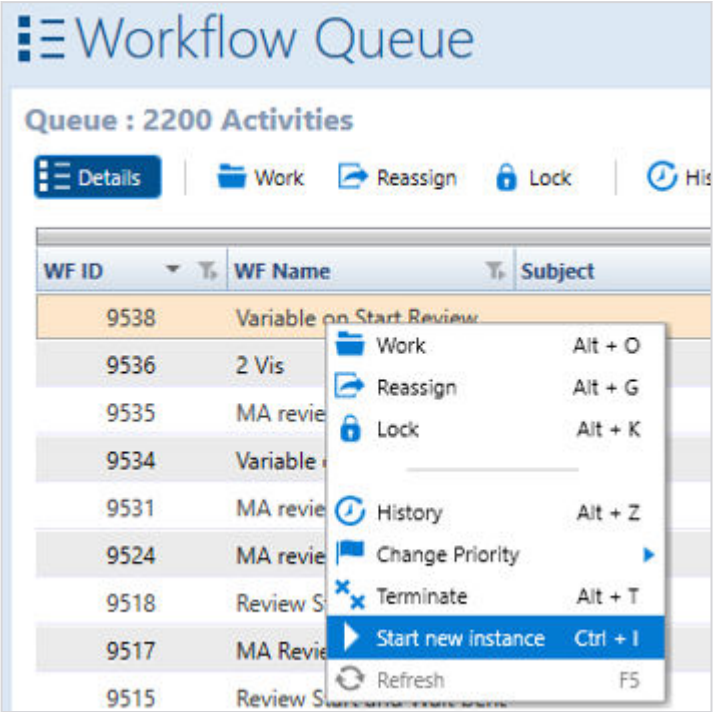
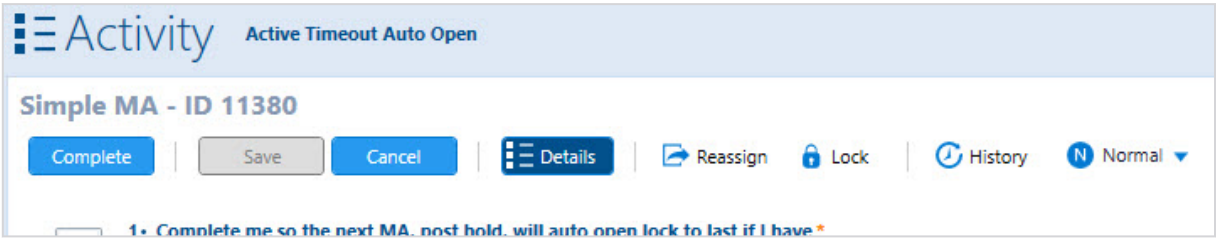


Working a Manual Activity

1. From the *Workflow Queue* screen, select the appropriate **Manual Activity** from the work listing.
2. Select **Work**.
   The *Activity* screen appears, listing in order, any necessary actions you must complete.
3. Complete the tasks in the order listed.

   Depending on the type of task, you may need to select the empty box to acknowledge you have completed the task.



> **NOTE**
> When you acknowledge the task, a green check mark appears in the box to indicate that the task is complete.

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Select or hover over the light bulb for a hint or a reminder regarding the task, if necessary.

Select **Save** if you need to save your progress in this **Manual Activity**. This allows you to save your progress and return to this **Manual Activity** at a later time.

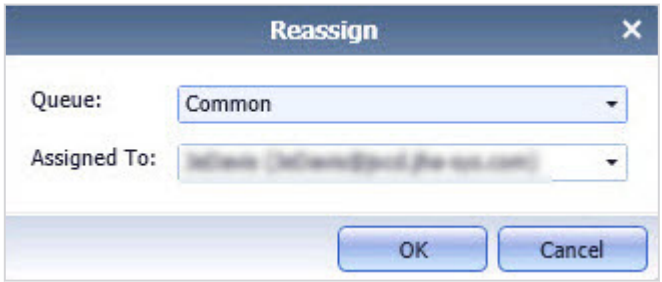
4. When the tasks are complete, click **Complete**.
   You are returned to the *Workflow Queue* screen.

> **NOTE**
> A **Manual Activity** is not complete until all the required tasks are complete.

Reassigning a Manual Activity

Use **Reassign** to immediately assign a manual activity to another user/queue. Reassign can override a queue assignment, as well as an **Assigned To** value.

1. From the *Workflow Queue* screen, select **Reassign**.



   The *Reassign* window appears.
2. In the **Queue** field, select or input the queue you wish to reassign the manual activity.
3. In the **Assigned To** field, select or input the user to reassign the manual activity.
4. Click **OK**.
   The manual activity is reassigned to the selected queue/user.

Locking Assignment on a Manual Activity

Assigning a user via *Lock Assignment* ensures that the designated user is **Assigned To** every time a Manual Activity reaches a *Queue* going forward. *Lock Assignment* does not affect the *Assigned To* value of the current Manual Activity.

1. From the *Workflow Queue* screen, select **Lock**.

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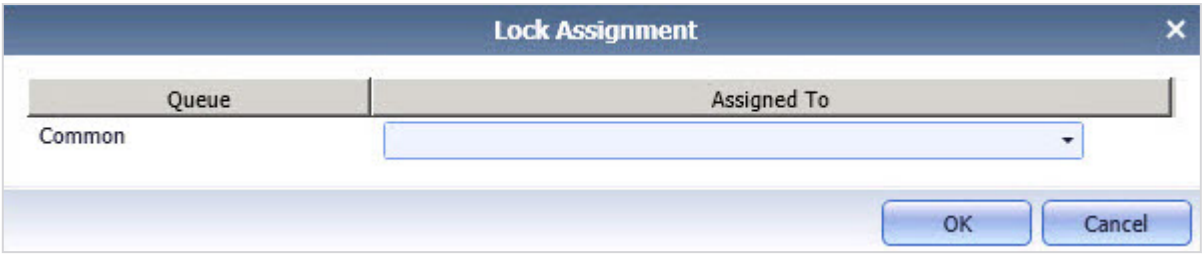

The *Lock Assignment* window appears.

2. In the **Assigned To** field, select or enter the user you wish to lock to the manual activity.

   The **Queue** field cannot be changed.

3. Click **OK**.

   The manual activity is locked to the selected user.

Workflow Definition Library

The *Workflow Definition Library* landing zone stores all workflow definitions for an institution.

The *Workflow Definition Library* is the gateway to the *Workflow Designer*, where workflow definitions are built.

> **NOTE**
> Depending upon your user access, you may or may not be able to view or use all these functions.

You must have at least one of these permissions to view the *Workflow Definition Library*:

- Author Definition
- Delete Definition
- Export Definition
- Publish Definition
- Unpublish Definition

The *Workflow Definition Library* allows you to:

- Create workflow definitions
- Edit existing workflow definitions
- Copy workflow definitions
- Publish and unpublish a workflow definition
- Complete the Unpublish-Terminate-Restart process
- Import and/or export a workflow definition

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Grid Population

*jha*Enterprise Workflow populates the workflow definition grid in batches to avoid timeouts. You may begin working on the items that have loaded while the remaining items continue to load. Load is determined by the sort that is applied to the workflow definition grid. For example, a sort based on **Modified Date** in descending order loads the most recently modified workflow definitions in its first batch.

The status of the grid population process is noted in the bottom corner of the screen.

About Workflow Definitions

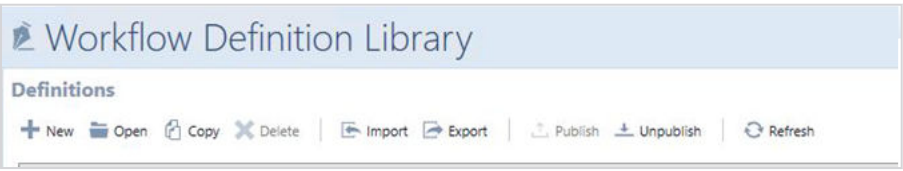
A workflow definition is a series of connected activities that take place within an organization to complete a desired business function. Workflow definitions help monitor and coordinate these activities.

The user must have author permissions in an effective allowed state in at least one category for the **New**, **Open**, **Copy**, and **Import** options to appear.

A workflow definition can, and often does, require communication between several departments and associates. Managers monitor running instances via **Monitor Workflows** or by checking the manual activity in the **Queue**.

Functions: Workflow Definition Library

The following fields and functions are located in the *Workflow Definition Library*.



New

Select **New** to begin designing a workflow. Clicking **New** opens the *New Workflow Definition* screen, which is where you design workflows.

Open

Select **Open** to open an existing workflow.

> **NOTE**
> Once you open a published workflow, any changes you make must be saved as a new draft.

Copy

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Select **Copy** to create a copy of an existing workflow definition. You can copy one workflow definition at a time.

Copying a workflow definition in a *Published* or *Unpublished* state will create a *Draft* state version of the workflow definition in the library.

Copying a workflow definition in a *Draft* state creates a *Draft* version with *_Copy* appended to its name in the library.

Delete

Select **Delete** to delete a workflow definition. When a workflow definition state is published, it cannot be deleted.

Import

Select **Import** to upload an external workflow into the *jha*Enterprise Workflow system. You can only import one item at a time. **Import** does not save the workflow definition. It opens the workflow definition on the design surface, and you need to save it from the *Workflow Definition* tab.

Export

Select **Export** to choose a location for one or more files to be exported.

Publish

Select **Publish** to make a workflow definition available for users to work from their queue.

Unpublish

Select **Unpublish** to unpublish a workflow definition. If there are any active running workflow instances, the *Unpublish Workflow* dialog appears to ask if you want to allow the current versions to run or if you want to terminate them.

Refresh

Select **Refresh** to update the screen and display any new information or changes that have been made since you first entered the screen.

Lock Publish

The **Lock Publish** icon appears next to a workflow instance to prevent authors from publishing or unpublishing a workflow definition when it is already in the middle of the Unpublish-Terminate-Restart process. This function keeps the publish operation from destabilizing the *jha*Enterprise Workflow system.

Publish a Workflow

Publishing a workflow definition makes it available in the system to start running instances. When a workflow definition is in **Draft** mode, no one can see it in the queue, and it cannot be worked. It must first be published.

A user must have **Publish Definition** permission in an effective allowed state in at least one category for the **Publish** option to appear.

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The following rules apply to the *Workflow Definition Library*:

- You can only publish from the *Workflow Definition Library*.
- You can only publish a draft that does not have validation errors.
- You can only publish one workflow definition at a time.

Click **Publish** to publish a valid workflow definition.

Unpublishing a Workflow Definition

Unpublishing a workflow definition makes it unavailable in the system to start running instances.

A user must have **Unpublish Definition** permission in an effective allowed state in at least one category for the **Unpublish** option to appear.

These rules apply to the *Workflow Definition Library*:

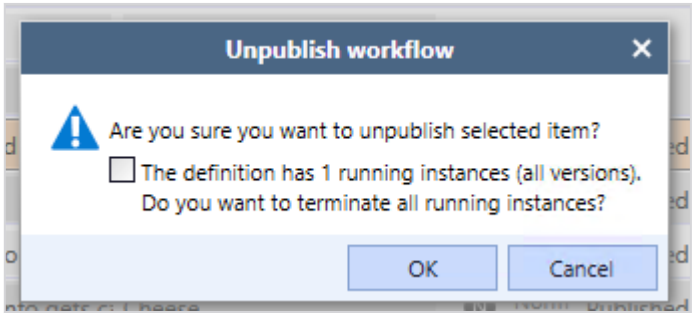
- You can only unpublish from the *Workflow Definition Library*.
- You can only unpublish a workflow definition in a *Published* state.
- You can only publish one workflow definition at a time.

1. Navigate to the *Workflow Definition Library*.
2. Select a published definition.
3. Click **Unpublish** to unpublish a valid workflow definition.

   If there are no running instances of the workflow, then a prompt appears to confirm that you want to unpublish:

   - Select **Yes** to change the workflow definition state from *Published* to *Unpublished*.
   - Select **No** to leave the workflow definition in a *Published* state.

   If there are running instances of the workflow definition, a prompt appears:



   To allow the running workflow instances to complete, leave the checkbox unselected and click **OK**.

   To terminate all running instances, click the checkbox and then click **OK**.

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Publishing a New Version

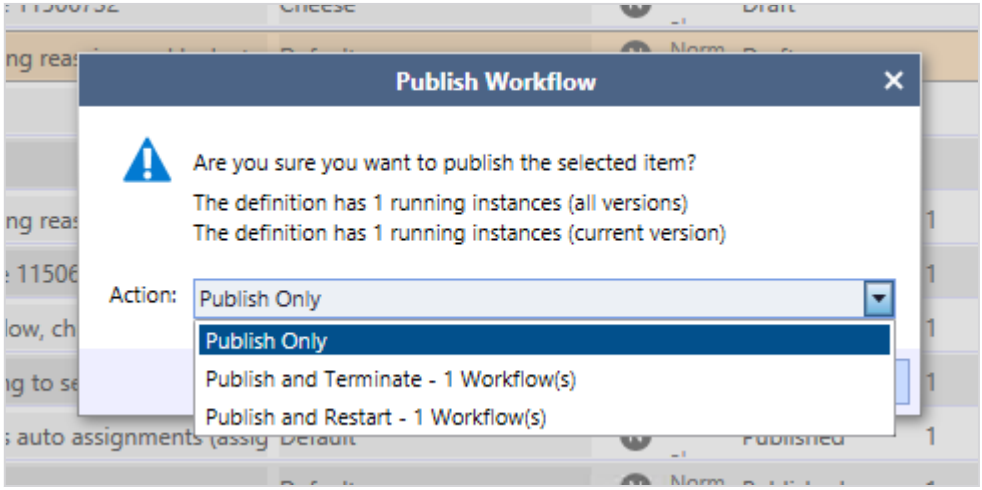
1. Navigate to the *Workflow Definition Library*.
2. Select a published definition, and then select **Copy**.
   This action creates a copy of the definition in a *Draft* state.

   > **NOTE**
   > The *Draft* version and the published version have the same name.

3. In the *Workflow Definition Library*, select the *Draft* version and then select **Publish**.

   If there are no running instances of a prior version, the definition is unpublished and the *Draft* assumes a *Published* state with an incremented version.

   If there are running instances of a prior version, you are presented with publication options (proceed to the next step).



4. Select one of these options:

Option	Result
Publish Only	Select this to unpublish the prior version, publish the *Draft* and increment its version, and allow any running instances from prior versions to continue.
Publish and Terminate	Select this to unpublish the prior version, publish the *Draft* and increment its version, and terminate all running instances from prior versions.

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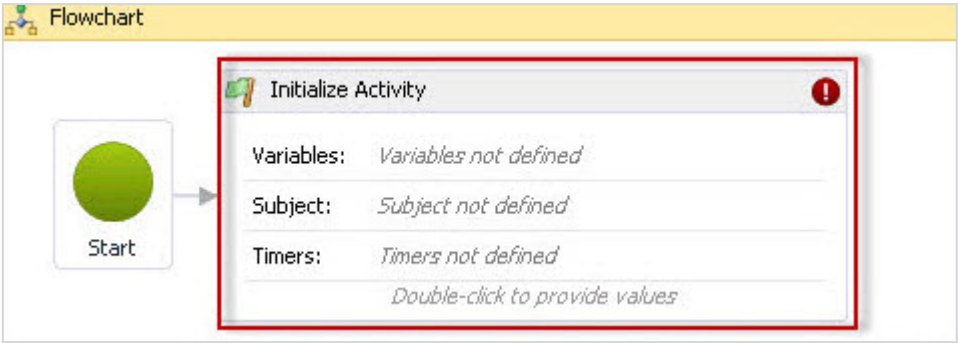
Option	Result
Publish and Restart	Select this to unpublish the prior version, publish the *Draft* and increment its version, and restart the running instances from the prior version. Restarting terminates the running instances from the prior version and restarts them with the newest version. Restarting carries over comments, attachments, and variable values from the terminated workflows.

Creating a Workflow Definition

1. From the *Workflow Definition Library*, select **Add**.
   The *New Workflow Definition* screen appears. Two activities exist in the design surface to get you started: *Start* and *Initialize*.
2. In the *Properties* panel, complete the **Name**, **Description**, **Category**, **Calendar**, and **Priority** fields.

   The *Properties* panel is on the right side of the screen.
3. Double-click **Initialize Activity**.



   The **Initialize Activity** is the starting point of your workflow definition. You cannot delete or remove the **Initialize Activity**.
4. Complete the *Subject*, *Variables*, *Timers*, and *Context* tabs as needed.
5. Click **OK**.
6. Drag and drop activities from the *Toolbox* panel, as needed.

   For information about the purpose of each task, see the *Interact Activities*, *Flow Activities*, *Action Activities*, and eSignature Activity topics.

   For information on how to add activities to a workflow definition, see the *Adding an Activity to a Workflow* and/or *Adding a Manual Activity to a Workflow* topics.

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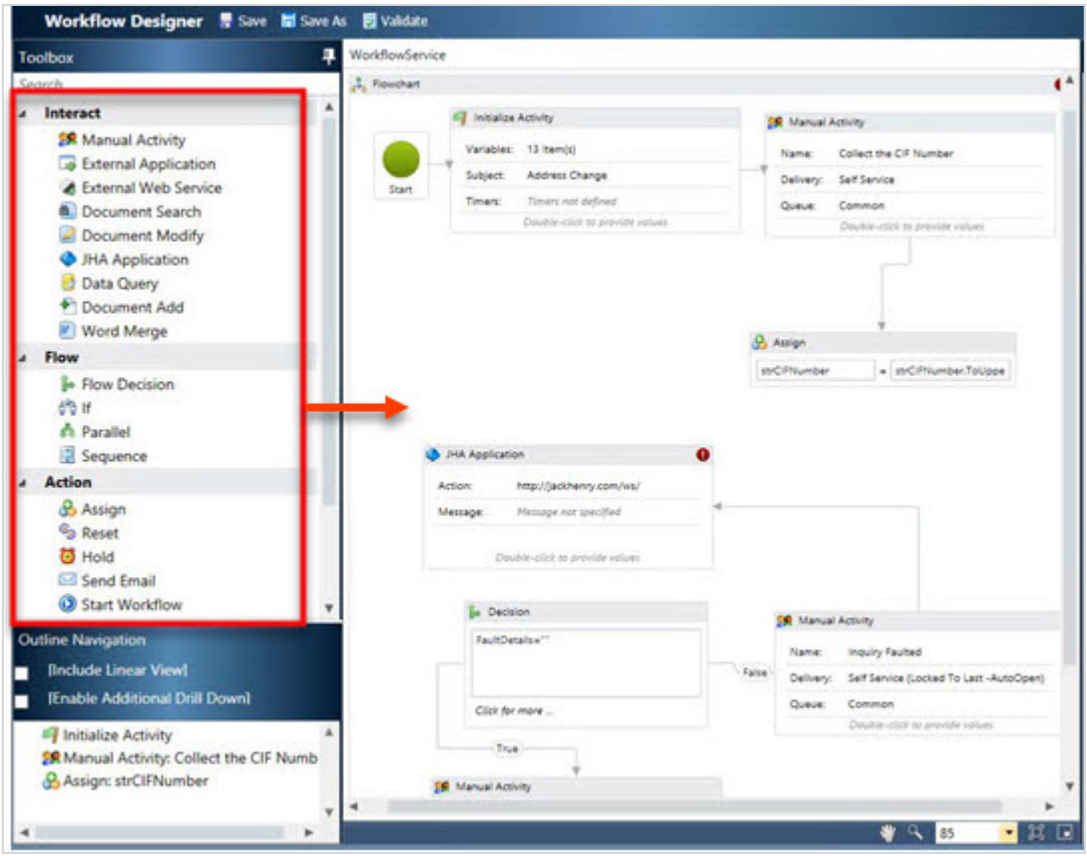
7. When your workflow definition is complete, click **Save**.
8. Click **Validate** to make sure that all activities in your workflow definition are complete and valid.
9. Return to the *Workflow Definition Library*.
10. Click **Refresh** if your new workflow definition is not listed.
11. Select your new workflow definition, and click **Publish**.

    Clicking **Publish** is the final step in creating a workflow definition, and it enables the users in the selected queue to view and/or start work instances.

Adding an Activity to a Workflow Definition

1. From the *Workflow Designer*, select the activity you want to add from the *Toolbox* panel and drag and drop onto the *Flowchart*.



2. Double-click the activity to open it, and enter any required values.
3. Click **OK**, as necessary.
4. Attach the activity to another activity by completing the following substeps:

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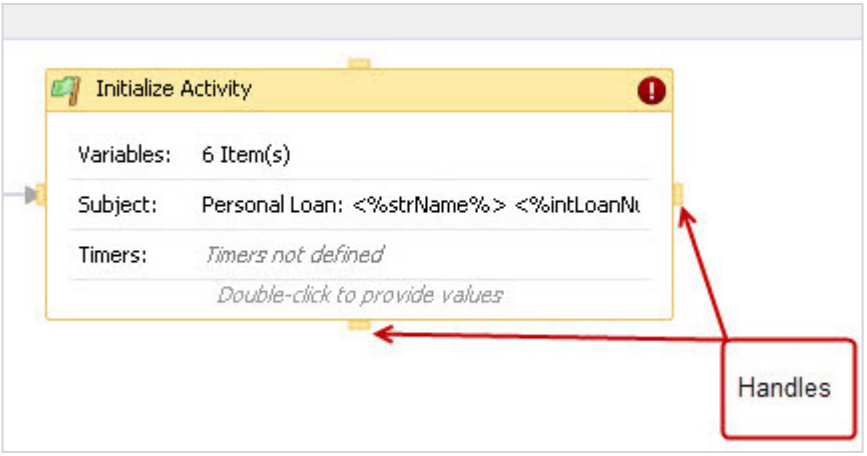
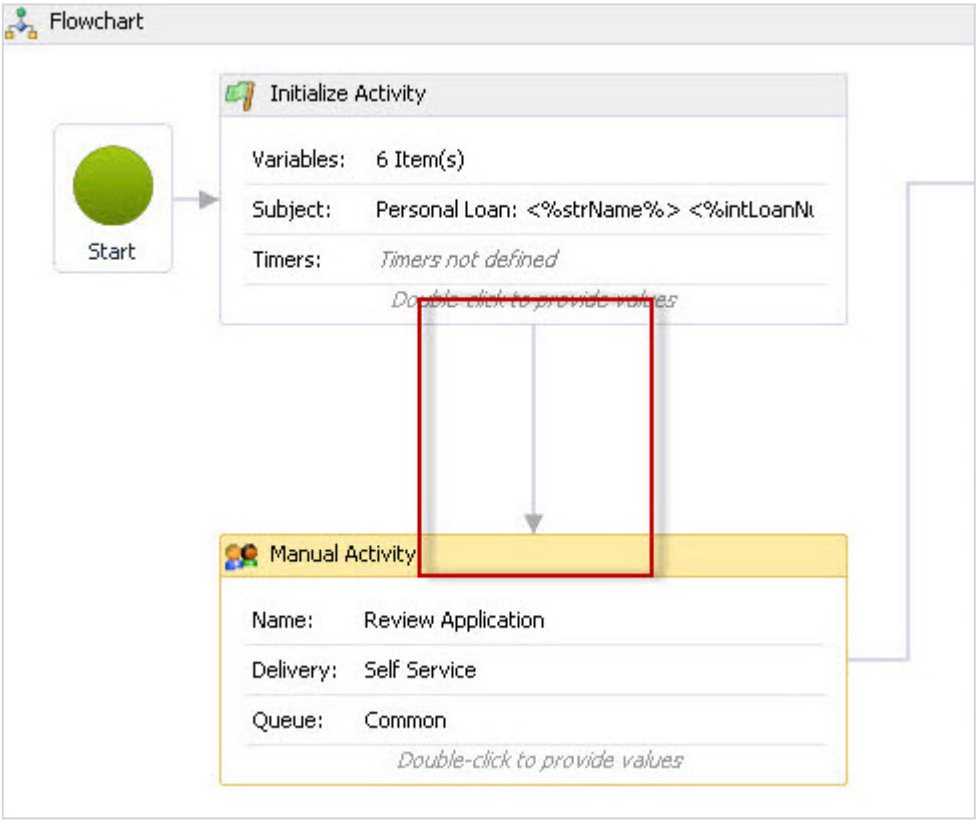
a) Select the activity you want to come before the new activity in the workflow to make the handles appear.



b) Click one of the four handles on the window you want to attach the new activity to, and draw a line with the mouse to attach them.

c) Draw a line to connect it to the next activity in the workflow definition.



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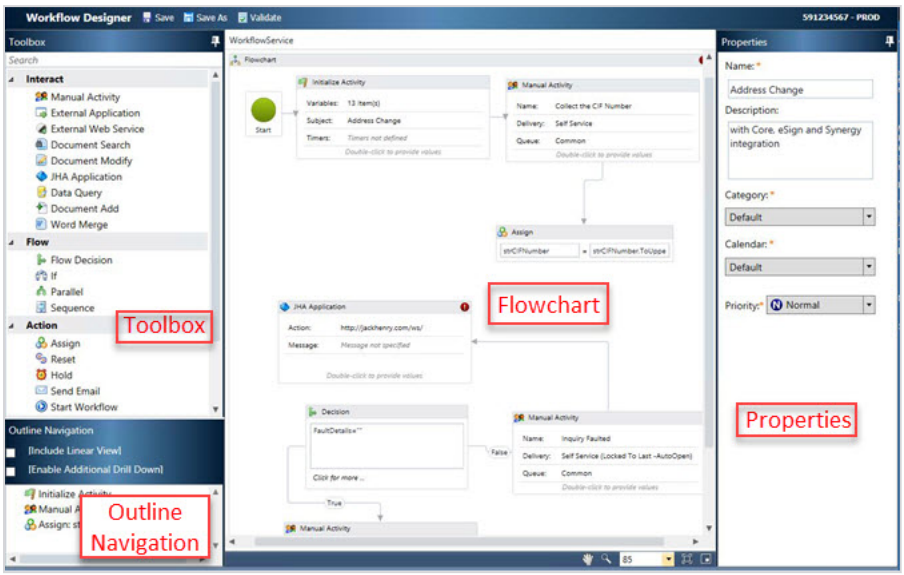
> **CAUTION**
> The direction of the line determines the order of the activity in the workflow. Make sure that you draw your arrow accordingly.

The activity is added to the workflow definition.

5. Click **Save**.

Workflow Designer

The *Workflow Designer* screen is the central location for workflow definition creation. There are four primary sections in the *Workflow Designer*: the *Toolbox*, *Outline Navigation*, *Flowchart*, and *Properties*.



Use the activities in the *Toolbox* to build a workflow definition on the *Flowchart*. Drag and drop the activities from the *Toolbox* to the *Flowchart* to add them to a workflow definition.

To connect activities, hover over the activity to view the handles. Drag from the handle on the source of the activity to the destination activity. To break a connection, select the connector line on the design surface and press **Delete**.

While working in the design surface, you may copy activities to create a duplicate of an activity within a workflow definition. All options specified for that activity will be included in the copy. From within the *Flowchart*, right-click the desired activity and select *Copy*.

You can also delete activities from a workflow definition by right-clicking the activity and selecting *Delete* or by selecting the activity and pressing **Delete**.

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Functions: Workflow Designer

The following functions are located in the *Workflow Designer*.

Save

Select **Save** to save changes to a workflow definition.

Save As

Select **Save As** to save an existing workflow definition to a different and unique name. Use **Save As** to provide a unique, new name to create a new version of the workflow definition.

> **NOTE**
> Changing the **Name** in *Properties* and clicking **Save** does not create a new workflow definition. That action only renames the workflow definition.

Validate

Select **Validate** as you design your workflow definition to ensure that there are no broken elements in the workflow definition. Validation is automatically triggered when you save a workflow definition to a new name.

Refresh

Select **Refresh** to update any dependent items used in the workflow definition, such as:

- Queues
- Email Templates
- Message Templates
- Data Sources
- External SOAP Service Providers
- External REST Providers
- Categories
- Calendars
- Index Groups
- External Applications
- Word Templates

> **NOTE**
> Dependent items are items that were built elsewhere (e.g., WF Admin, jXchange Management Console) but are used in the workflow definition.

> **TIP**
> It is a best practice recommendation to use **Refresh** in the *Flowchart* view and not when working in the details of an **Activity**.

Toolbox

Interact

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The *Interact* list contains activities that allow you to interact with people or applications. This list contains the following:

- **Manual Activity**
- **External Application**
- **External SOAP Service**
- **Document Index Search**
- **Document Index Modify**
- **JHA SOAP Service**
- **Data Query**
- **Word Merge**
- **Document Add**

Flow

The *Flow* list contains activities that control the flow on the design surface. This list contains **Flow Decision**, **If**, **Parallel**, and **Sequence**.

Action

The *Action* list contains activities that allow you to perform an action when you get to this step. This list contains **Assign**, **Reset**, **Hold**, **Send Email**, and **Start Workflow**.

eSignature

The *eSignature* list contains activities that allow you to obtain a digital signature. This list contains **Request eSignature**, **Check eSignature Status**, **Get eSignature Document**, and **Get eSignature Audit**.

Outline Navigation

Outline Navigation provides the user with a view of the workflow activities.

> **CAUTION**
> You must scroll through the entire design surface before selecting an **Outline Navigation** check box.

Include Linear View

When **Include Linear View** is selected, all activities that appear on the *Flowchart* level (top-level activities) also appear in the *Outline Navigation* section.

When an activity is selected on the design surface, it is also highlighted in *Outline Navigation*. An activity can be selected in the *Outline Navigation* to shift focus to that activity on the design surface. Focus can only be set to an activity in the flowchart or top level of the workflow.

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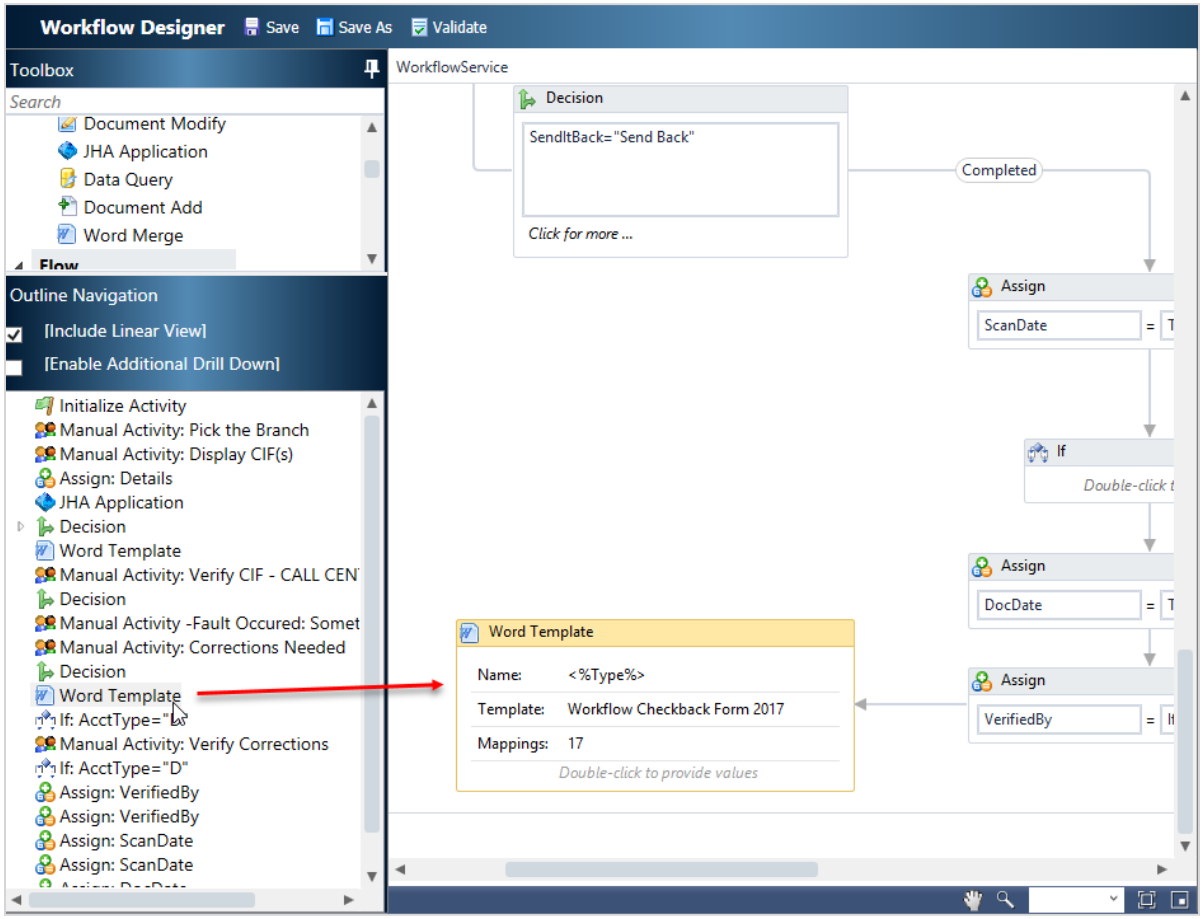

> **NOTE**
> You cannot navigate to a **Flow Decision**. Click one of the activities in a **Flow Decision True/False** branch to set focus close to the **Flow Decision**.

Enable Additional Drill Down

When **Enable Additional Drill Down** is selected, content within container activities appears (e.g., **If**, **Parallel**, and **Sequence**). Click the arrow to the left of the activity in the *Outline Navigation* to expand and see the activity's contents. You cannot navigate directly to an activity inside the container activity.

> **NOTE**
> Only the activity or activities in the *Try* section of a **TryCatch** activity appear when **Enable Additional Drill Down** is selected.

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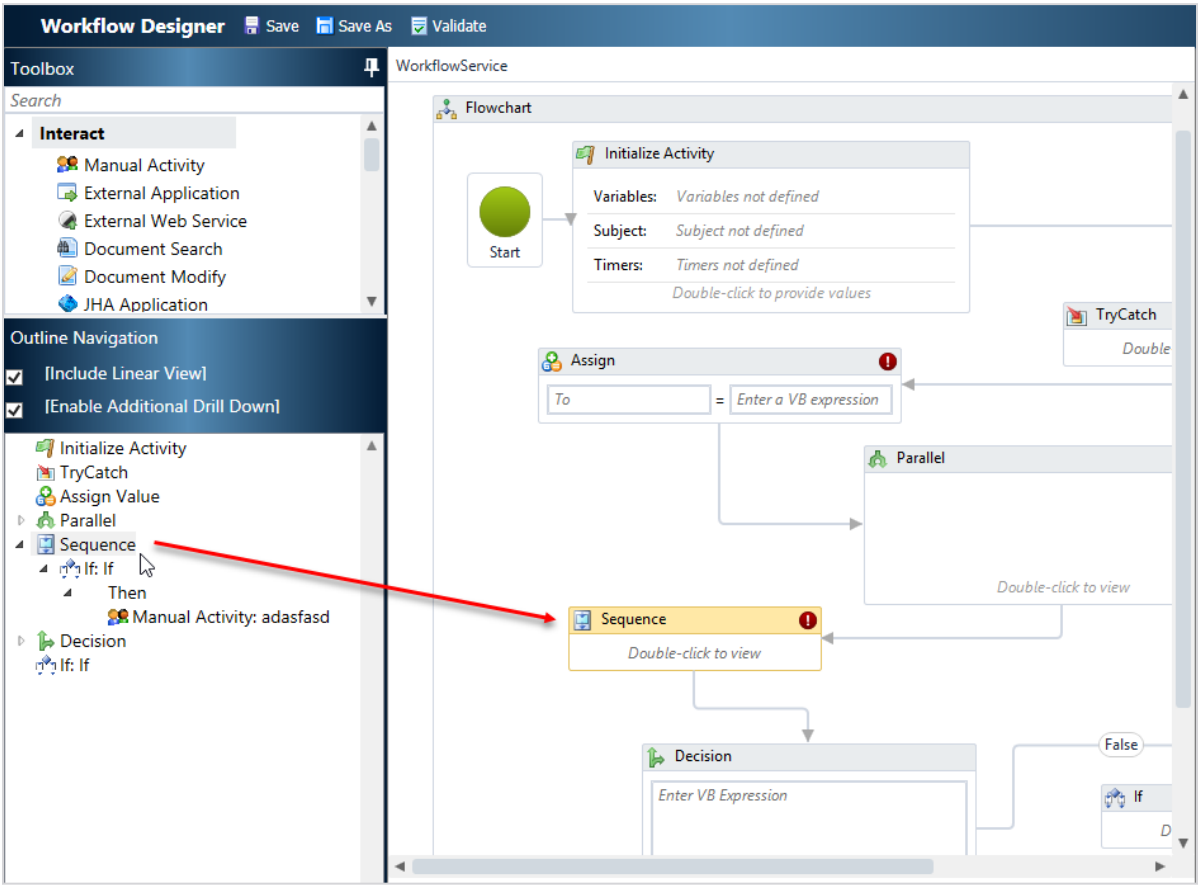

Flowchart

The *Flowchart* is the blank slate that you use to build your workflow definition. Drag and drop activities from the *Toolbox* onto the *Flowchart* to build a workflow definition.

When working in activity details or within nested activities, breadcrumb links appear at the top of the *Flowchart*. Not all activities have an **OK** button that returns the user to the *Flowchart* level. In those activities, use the breadcrumb links to return to the **Flowchart**.

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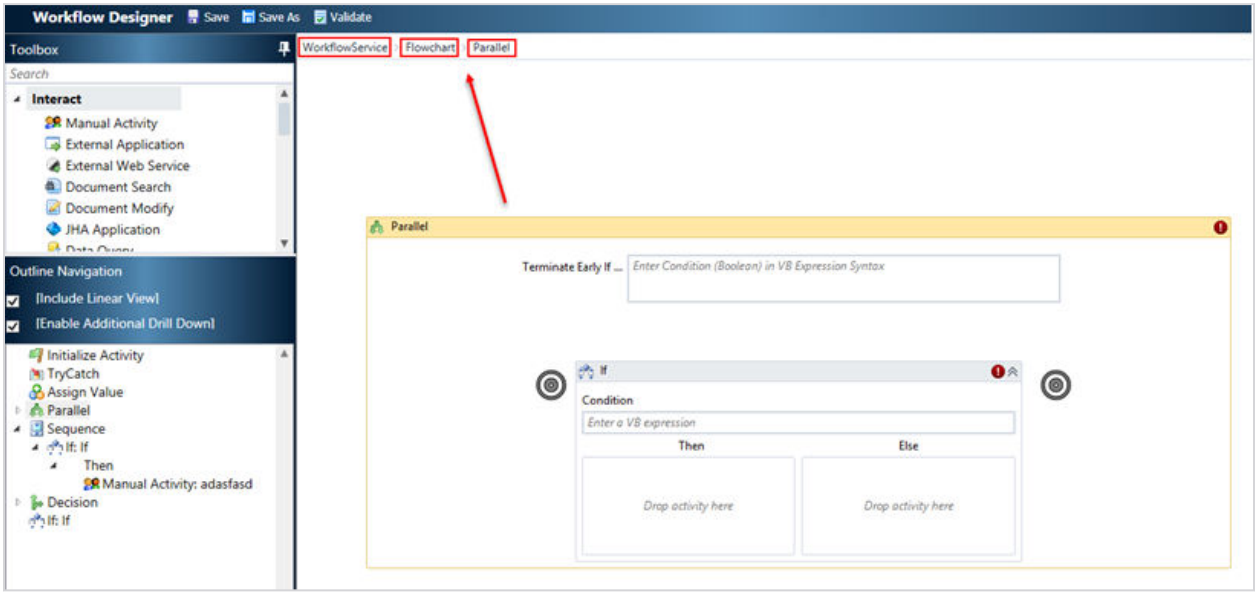

Properties

The *Properties* panel includes the **Name**, **Description**, **Category**, **Calendar**, and **Priority** fields.

Name

Provide a name that clearly indicates the business process. This name appears to users in the **Workflow Queue**.

Description

The description only appears to workflow authors in the *Workflow Definition Library*. This field might be used to describe the purpose of the workflow or to note changes between workflow versions.

Category

Select the appropriate category. Categories have groups and permission sets associated with them, so make sure that you select the category your users are in.

Calendar

Select the calendar from the drop-down list. This list contains all the calendars created within *jha*Enterprise Workflow. You can use the calendar to control which time zone should be considered when the definition is in run time.

Priority

Select one of the following: *High*, *Normal*, or *Low*. The **Priority** field informs users of the importance of the workflow so they can manage their queue accordingly.

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View Menu Bar

Pan

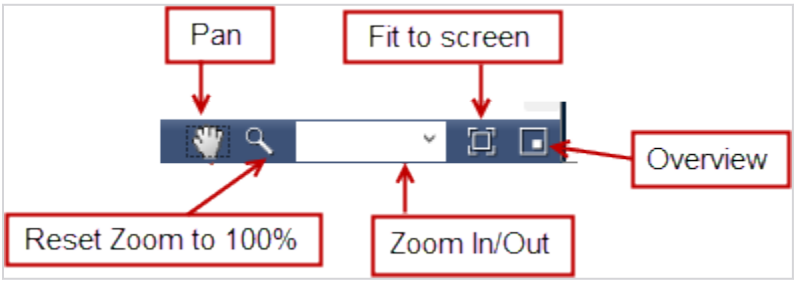
Use the **Pan** option to grab the screen and scroll through the surface by using the mouse.

Zoom

Zoom is helpful when you are working on a large workflow in the design view. Zooming out allows you to see more of the flowchart.

Overview

Overview is helpful when you have a large workflow in the flowchart. The **Overview** option allows you to see more of the design view.



Activities

Activities are the building blocks of a workflow definition. You can choose from several types of activities, all of which appear in the *Toolbox* panel within the *Design Surface*. You can drag and drop these activities onto the *Flowchart* as you create/edit a workflow definition.

The manual activity is used to define procedures that rely on human intervention for their execution. Each manual activity must contain at least one task, but may contain more. The **Manual Activity** contains actions taken by a workflow user.

Initialize Activity

The *Initialize Activity* only runs one time regardless of how many times it can be rerouted in a workflow. After the first time this activity runs, any subsequent use causes the execution to stop, and no changes will occur. The Initialize Activity completes the following actions:

- Creates variables.
- Defines the subject.
- Creates timers.

The *Initialize Activity* appears in the *Workflow Designer* by default. It contains four tabs: *Variables*, *Subject*, *Timers*, and *Context*.

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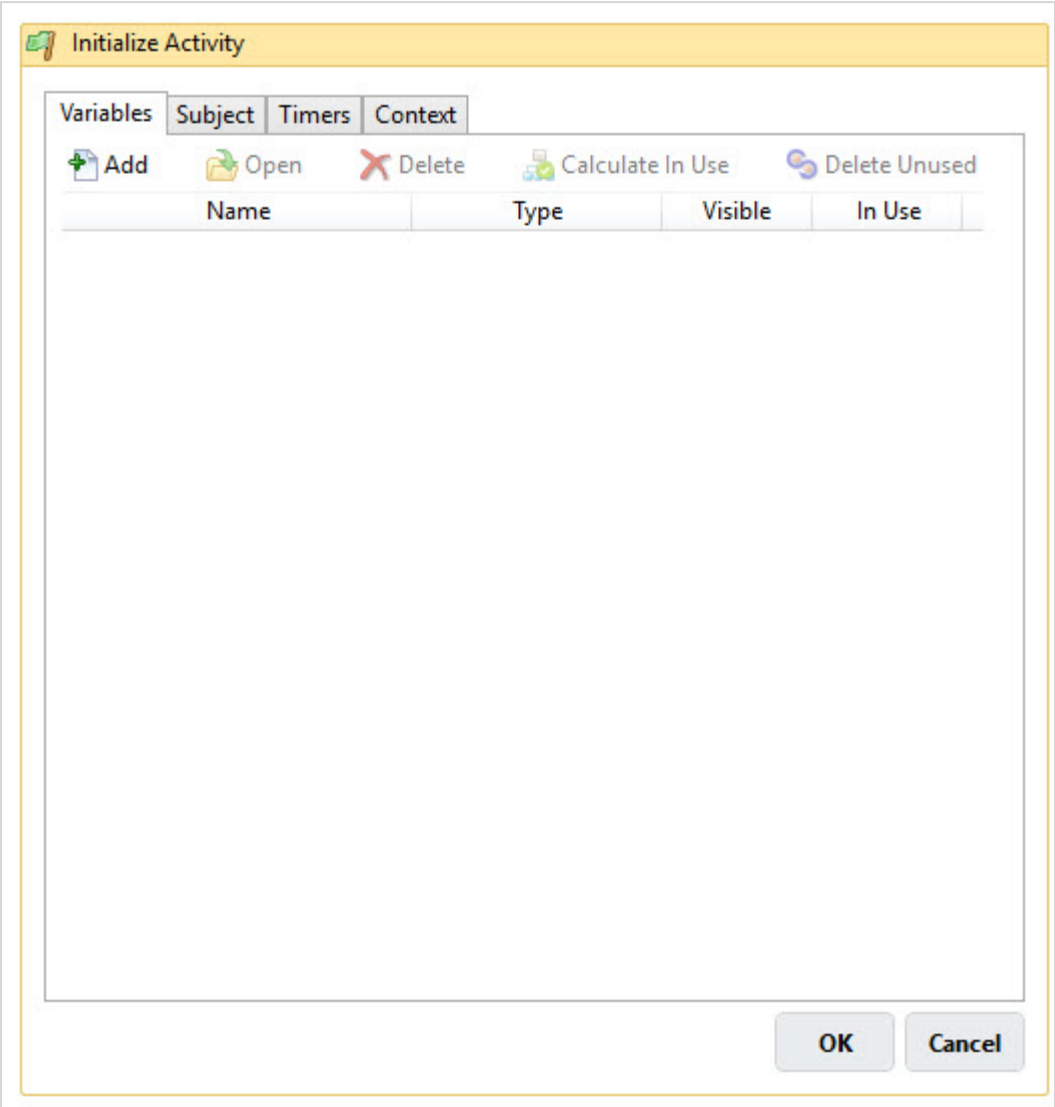

Fields and Functions: Initialize Activity

Variables

You can create variables in the *Initialize Activity*. There are five types of variables you can add:

- String - Character value
- Boolean - Yes/no
- DateTime - Date/time
- Decimal - Numeric value
- Integer - Numeric value, whole numbers

Add

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Add an item.

Name

Enter a name for the variable. **Name** is required.

Type

Select *String*, *Boolean*, *DateTime*, *Decimal*, or *Integer*.

Display in the Variables Panel

Select this check box if you want this variable to appear in the *Variables* panel at run time. Clear this check box to hide this variable from the *Variables* panel at run time.

Open

Select this option to view/edit the details of the variable.

Delete

Select **Delete** to remove the selected item.

Calculate In Use

Select this option to perform an ad hoc search and populate or update the **In Use** column values. Searching for variables in use is always on demand. Updated values in the **In Use** column are not saved upon closing and reopening the activity.

To improve search performance, it is a best practice recommendation to name variables distinctly. Using similar variable names increases the time required for a search to complete.

Delete Unused

Select this option to delete any variables that are detected as not in use. This button is only enabled after running a **Calculate In Use** search.

Subject

Subject

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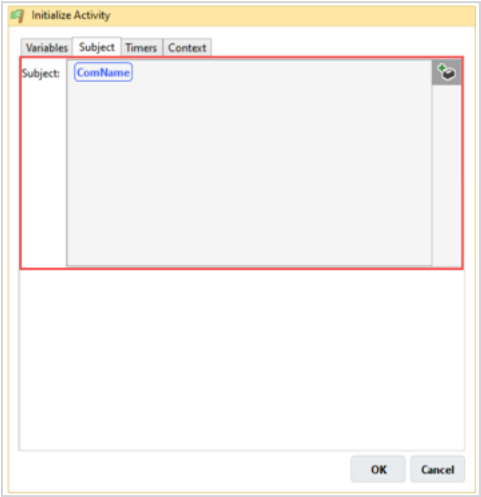
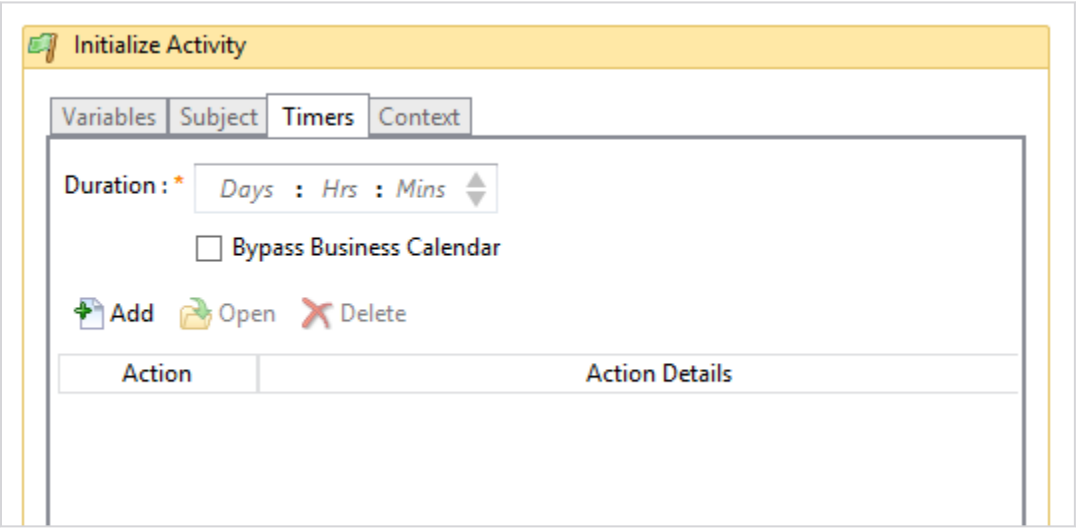


Subject is optional.

Subject supports both entered text and variables. Use IntelliSense to create a **Subject** that contains variables. Subjects with variables can be useful in providing identifying information to users working the *Queue*.

For example, if the **Workflow Name** is *Account Change*, then the **Subject** can contain *Account Number*. This information enables a *Queue* user to distinguish among *Account Change* activities that appear in the work list grid.

Timers



Timers are optional.

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By default, timers adhere to the business hours defined in the **Calendar** selected in *Properties*.

Set a timer if you want an action to take effect in a designated time period after a workflow instance starts.

Add

Add an item.

Action

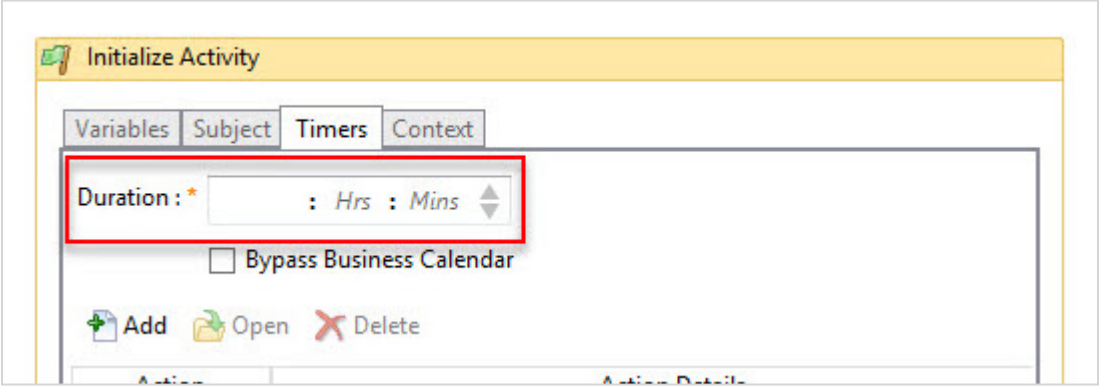
Select the necessary item from the drop-down list. You can select one of the following:

- *Send an Email*
- *Start a Workflow*

Duration

The **Duration** can be entered as either a variable or the actual duration of time. The default mode is the actual duration. In this mode, enter the duration of the timer. Time must be entered in days:hours:minutes format: *00:00:00*.

> **NOTE**
> If **DAYS** is used, it counts the current day as day one. Even if there is only one minute left in the business day, the current day is day one.



Bypass Business Calendar

Select this check box to determine if the countdown uses the business calendar or actual time (i.e., a 24-hour day).

Open

Select this option to open/edit the selected item.

Delete

Select **Delete** to remove the selected item.

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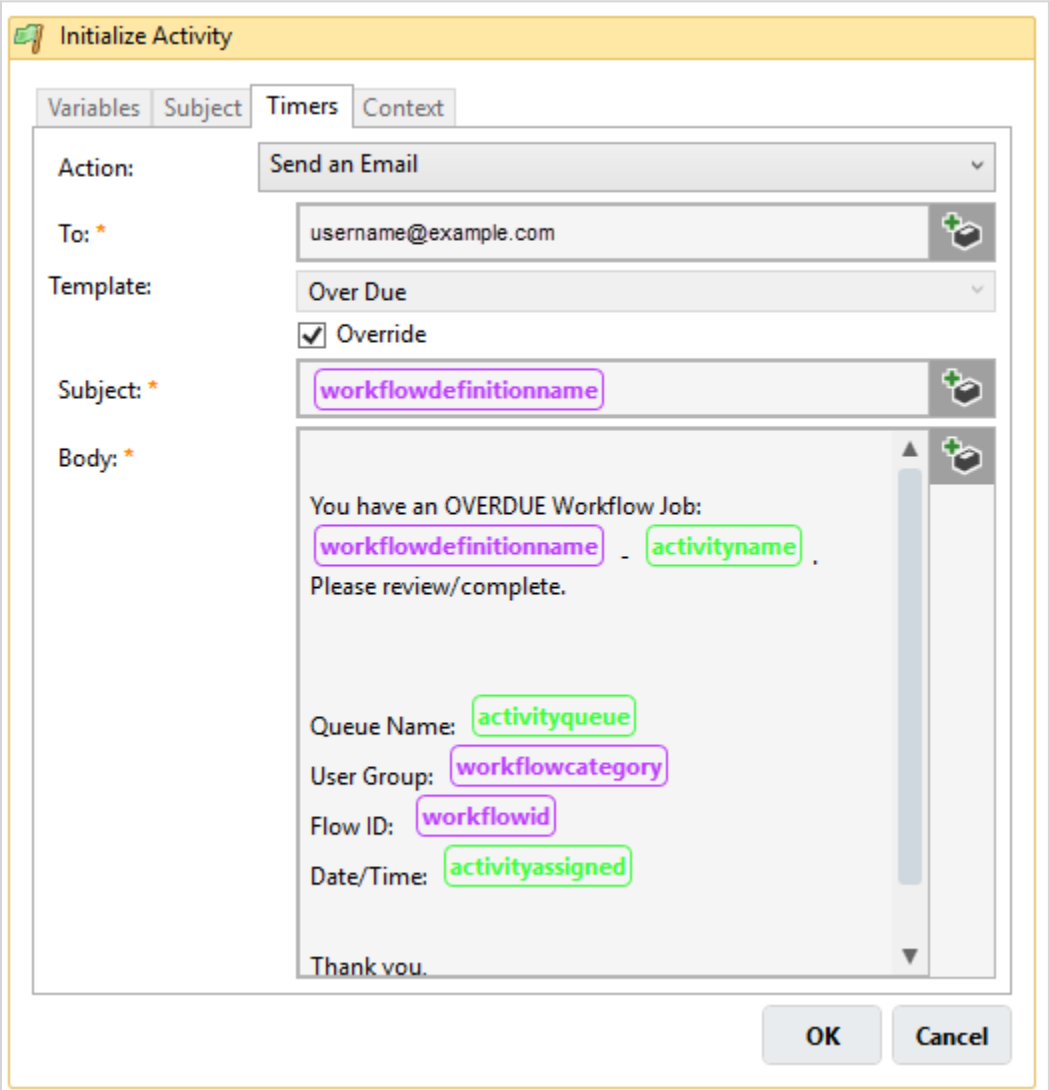
Initialize Timer: Send an Email



The **Send an Email** timer action sends an email to an assigned recipient.

You can set the **To** value to a string variable. **To** can also be set to the **Originator** system variable.

> **NOTE**
> Setting **To** to the **Originator** variable assumes that the user name is an email address. If the user names are not email addresses, then using **Originator** does not deliver an email.

> **CAUTION**

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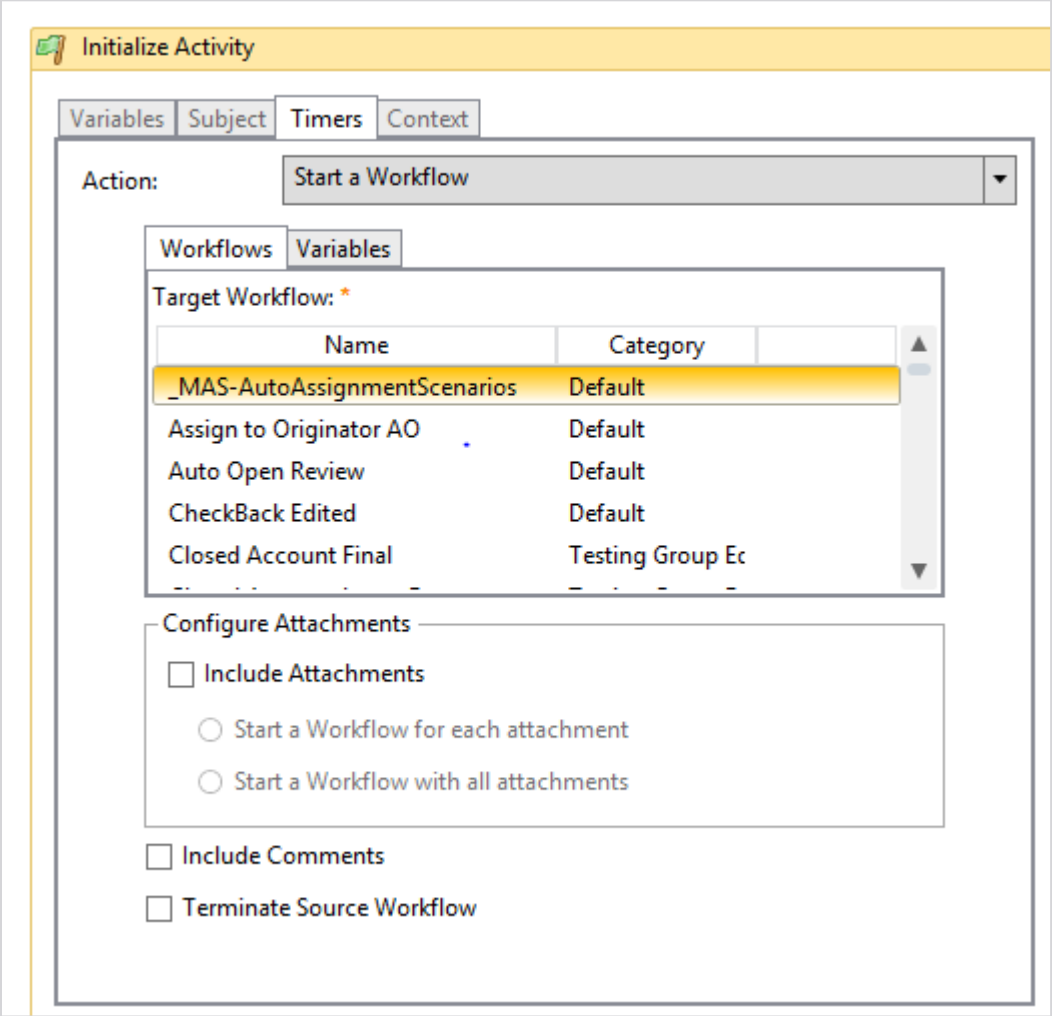
> This activity does not parse multiple email addresses out of a single variable. To use a variable to send emails to multiple email addresses, create a group for that purpose or use multiple variable values separated by a semi-colon (;).

You can customize the subject and body of the email or use an email template. You can choose from an existing email template (created by administrators), or you can select **Override** to compose a custom email.

When the **Override** check box is selected, the **Template** drop-down menu is unavailable. To change the **Template**, clear the **Override** check box.

Initialize Timer: Start a Workflow



The **Start a Workflow** timer action allows you to start a workflow automatically.

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Start a Workflow can be set to pass along its variables, comments, and attachments from the source workflow to the destination workflow.

Configure Attachments

Select one of the following, as necessary:

- *Start a Workflow For Each Attachment*
- *Start a Workflow For All Attachments*

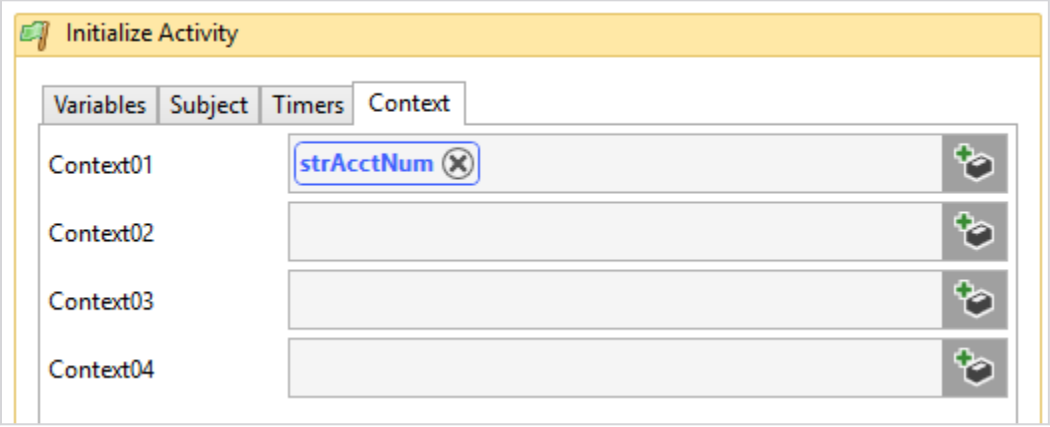
Include Comments

Include comments from the workflow.

Terminate Source Workflow

This option terminates the current workflow instance at the start of the new workflow instance.

Context



The fields in the *Context* tab allow you to associate a variable with a context. When you do so, the variable's value appears in the *Context* column in the *Workflow Queue* at run time.

Variables can be set in lieu of or in addition to the **Subject**. The benefit of using *Context* variables is that they can be sorted independently, whereas the **Subject** is an appended value.

Interact Activities

The *Interact* list contains activities that allow you to interact with people or applications.

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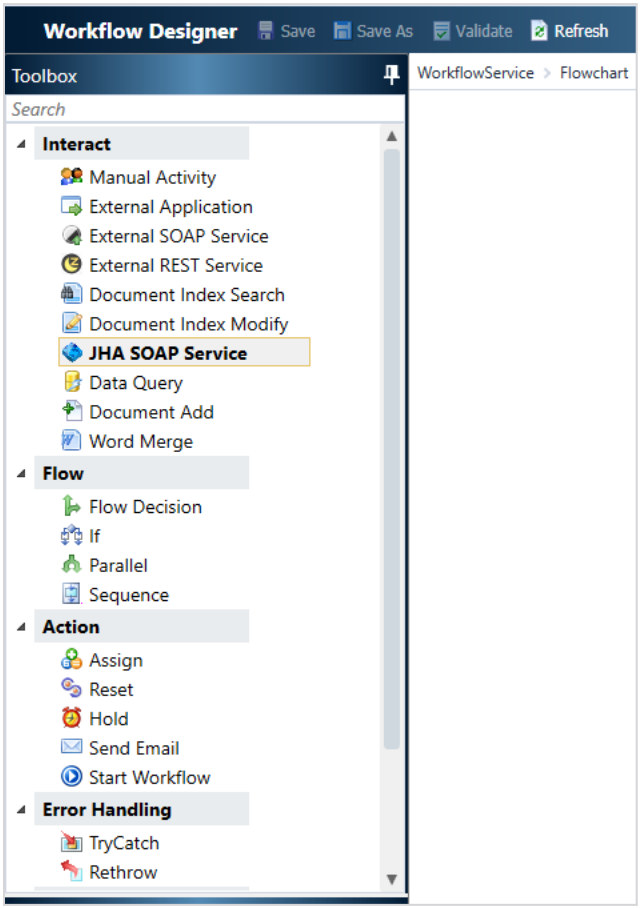

Manual Activity

Use this activity to create tasks and present questions to users that facilitate the completion of activities outside of *jha*Enterprise Workflow.

External Application

Use this activity to launch an external application during workflow execution.

External SOAP Service

Use this activity to call an external SOAP service during workflow execution.

Document Index Search

Use this activity to retrieve Synergy values from the currently attached Synergy document and assign them to workflow variables. If there are multiple Synergy documents attached to the workflow instance, **Document Index Search** retrieves indexes from the first attached document.

> **NOTE**
> This is a Synergy-specific activity.

Document Index Modify

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Use this activity to modify the indexes on the currently attached Synergy document. If there are multiple documents attached to the workflow instance, **Document Index Modify** only updates the indexes on the first attached Synergy document unless the **Modify All Attachments** check box is selected.

> **NOTE**
> This is a Synergy-specific activity.

JHA SOAP Service

Use this activity to request and receive information from across the Service Gateway and assign the acquired values to variables. For example, use **JHA SOAP Service** to look up a customer by **Account Number** and pull in supporting information, such as **Name** or **Account Type**.

Data Query

Use this activity to select from a list of data sources that are for the institution by a system administrator in jXchange Management Console (JMC).

Word Merge

Use this activity to map workflow variables to Microsoft® Word template fields, which creates a merged document at run time.

Document Add

Use this activity to set parameters for sending a document and its mapping indices to a content management system (CMS), such as Synergy.

If your institution uses Synergy, use the **Document Add** activity to send output of the **Word Merge** or **eSignature** activities to the archive. You can also optionally attach the output to a running workflow instance.

If your institution uses Iris, use the **Document Add** activity to attach output of the **Word Merge** activity to a running workflow instance.

> **TIP**
> All activities can be added to a workflow definition by dragging and dropping them onto the *Flowchart*.

Manual Activity

The **Manual** activity allows you to create tasks and present questions to users that facilitate the completion of activities outside of *jha*Enterprise Workflow. A **Manual** activity is completed and controlled by the actions of individuals, as opposed to computers.

Drag and drop the **Manual** activity option from the *Toolbox* panel onto the *Flowchart* to add it your workflow.

There are five tabs in the **Manual** activity: *Tasks*, *Delivery*, *Timers*, *Notify*, and *Tracking*.

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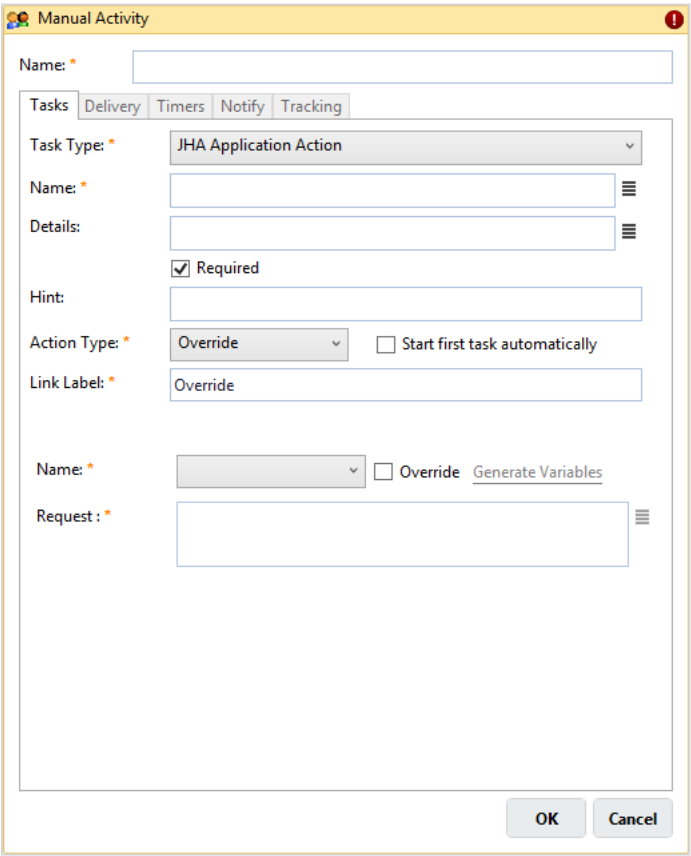
> **CAUTION**
> When a **Manual Activity** resides in another activity (such as **If**, **Parallel**, **Sequence**, or **TryCatch**), click **OK** at every level that you are working to ensure that your changes are not lost. Press **OK** to commit changes, and then navigate to another *Flowchart* level with the breadcrumb links.

Field Definitions: Tasks Tab

The following fields are located in the *Tasks* tab.

Tasks may be placed in the order they are to be completed, marked as optional, or grouped together. Tasks are associated with manual activities. The manual activity is the only activity with tasks.



All task types have these fields in common: **Type**, **Name**, **Details**, **Required**, and **Hint**.

You are required to mark each task **Complete** when/where appropriate to complete the associated manual activity.

Task Types

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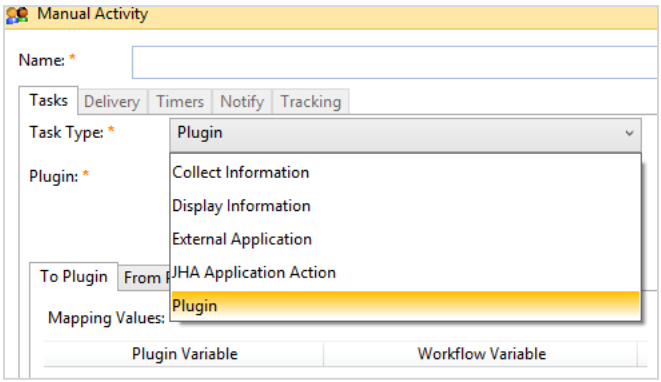

Collect Information

Use this task type when the activity involves collecting information from the user and expects a response. You can collect responses by creating a drop-down list, or you can allow a free-form response. The **Collect Information** task prompts the user to answer a question. The response is stored in the selected **Response Variable**. Subsequent activities within the workflow will utilize this response.

Display Information

Use this task type when the activity involves displaying information to the user and does not require a response. The **Display Information** task type has no specific functionality associated with it. **Display Information** displays an instruction or command. For example, *Verify interest rate* or *Contact the customer*. This is the default task in a new manual activity.

You must complete the **Name** field and indicate if the task requires completion by selecting the **Required** check box. The **Details** field is not required. You may also choose to enter a hint, which can be helpful to the user as they complete the task.

External Application Task

Use this task type to launch an external application such as Microsoft® Office from within a workflow definition.

> **NOTE**
> An external software program and data file may also be launched from an **External Application** activity. This is done by selecting the **External Application** activity from the *Toolbox* in the *Workflow Designer*.

> **CAUTION**
> It is very important to understand the difference between the External Application in the task, which is what is being addressed here, and the External Application as an activity. The task application references the application path on the local client, while the activity application references the application path on the server. An end user working a manual activity will never see an **External Application Activity**, only an **External Application Task**.

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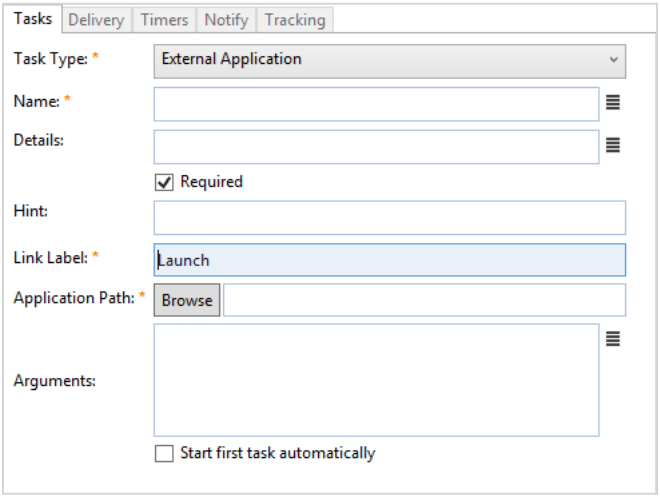

When you select *External Application*, the *External Application Options* section expands, allowing you the option to auto-launch the first external application task in the workflow.

Notice that the **Link Label** field is pre-filled with *Launch*. Enter the application path in the provided field, enter any necessary arguments, and then select the *Start first task automatically* check box. When the user clicks to begin this task in the *Workflow Queue*, the task will auto-launch the external application.

> **NOTE**
> You can use double quotation marks in your argument.

JHA Application

Use this task type to make a request to another JHA application running in Xperience.

> **NOTE**
> A Synergy function such as **Refile** or **Reindex** can be defined with this task type.

Plugin

Use this task type to host a plug-in in a Manual Activity.

> **NOTE**
> Before adding a plug-in to a Manual Activity, the plug-in must be registered by a system administrator in the jXchange Management Console (JMC) and uploaded to Xperience.

1. In the Workflow Designer, drag the Manual Activity onto the workflow surface.
2. Double-click the Manual Activity to edit.
3. Enter the Manual Activity name in the **Name** field.
4. On the *Tasks* tab, choose *Plugin* from the **Tasks Type** drop-down menu.
5. Choose a plug-in from the **Plugin** drop-down menu.

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6. On the *To Plugin* and *From Plugin* tabs, enter the variables in the **Workflow Variables** field, and then select **OK**.

Common Values

Name

Enter a name that describes the task. You can enter both text and variables in this field so you can present the user working the task with as much meaningful information as possible.

Details

Enter any details to help explain the task to the user. You can enter both text and variables in this field so you can present the user working the task with as much meaningful information as possible.

Required

Select this check box to make this task required.

Hint

Enter any additional details to help the user complete the task.

Response

Response Set

Enter the response set data.

Allow Free Form

Select this check box to allow the user to type an answer.

Response Variable

Select the response variable data.

Field Definitions: Delivery Tab

The following fields are located in the *Delivery* tab.

A delivery method determines the specific means in which manual activities are routed to a queue. Only one delivery method can be assigned to every manual activity within the task type. Delivery methods must be assigned to every manual activity within a workflow definition. There are four delivery methods: **Self Service**, **Assign to Originator**, **Just-in-Time**, and **Specific Person**.

Delivery is only configured on the manual activity. A queue is a repository for work. Users can access work from the work listing within the workflow queue. Work that appears in the work listing depends on the assigned queue.

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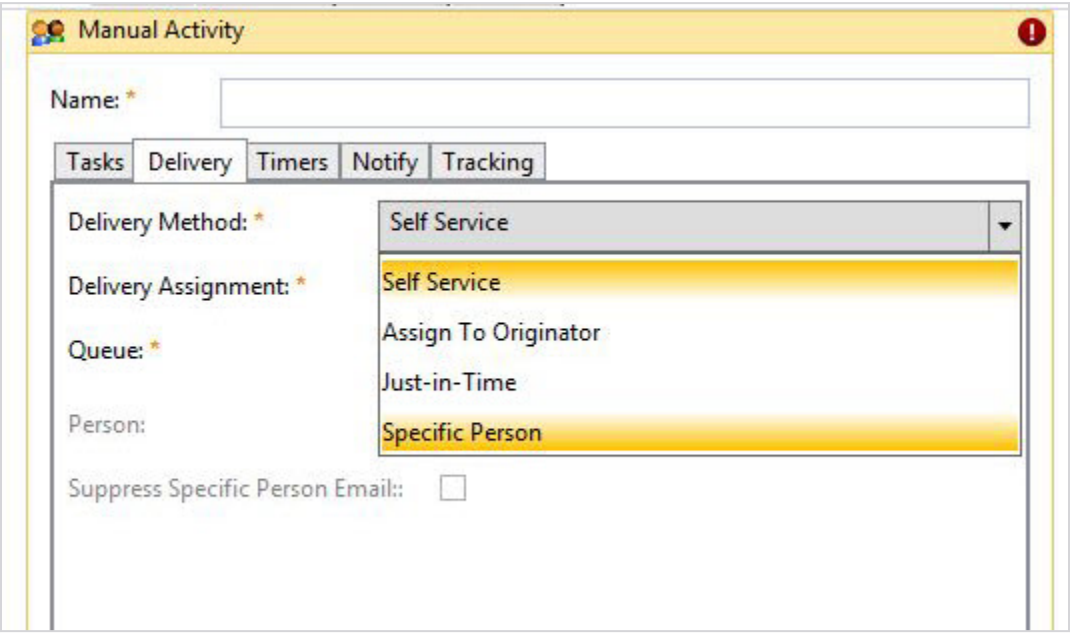
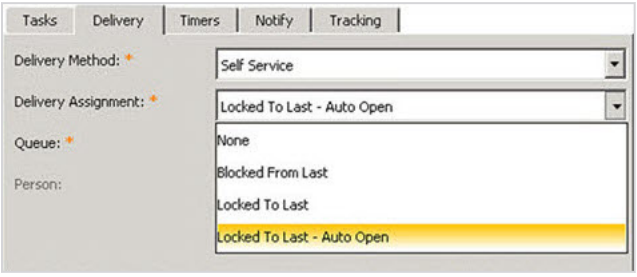


Self Service

The **Self Service** delivery method makes the manual activity available to anyone with **Take** permission in the selected queue. The manual activity lands in the work listing without an **Assigned To** value. Anyone can complete the manual activity, and once a user completes the manual activity, the workflow continues to the next defined activity.



The **Deliver Assignment** options for **Self Service** are:

- **None** - No method.
- **Blocked From Last** - This allows authors to specify that a manual activity cannot be worked by the same person that worked the preceding manual activity. This allows another worker to supply an approval or review of an item, if necessary.
- **Locked To Last** - This allows you to specify a manual activity must be assigned to the same worker in a queue who worked the most recently completed manual activity. This allows the flow of work to continue to the same user within the queue.

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- **Locked To Last - Auto Open** - This assignment option works the same as **Locked To Last**, except that the manual activity automatically opens when the workflow reaches that Manual Activity.

> **CAUTION**
> The manual activity does not open automatically if it is reassigned to another user.

> **CAUTION**
> When the manual activity is closed but not completed, the manual activity does not automatically open again in the same session.

Assign to Originator

The **Assign to Originator** delivery method assigns the manual activity to the individual who started the workflow.

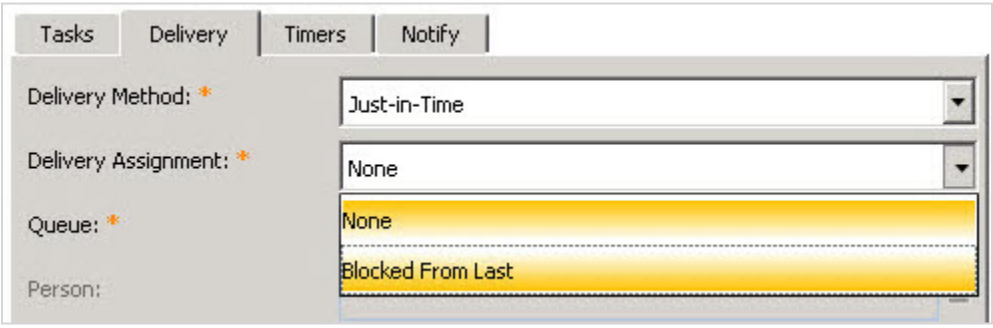
If the workflow is not started by a user in the *Workflow Queue*, then the manual activity will have a queue, but no **Assigned To** value is set when the workflow reaches that manual activity.

Assign to Originator supports **Auto Open** as a delivery assignment. If the user that starts the workflow is in the *Workflow Queue* when the manual activity is reached, the activity automatically opens. If the user is not in the queue, then the manual activity opens the next time they open the queue.

Just-in-Time

The **Just-in-Time** delivery method ensures that the manual activity is assigned to an available member of the queue. For example, when someone in the queue becomes available to work the next manual activity, it is assigned to them in a just-in-time fashion.

> **NOTE**
> Workers can only have one Just-in-Time activity assigned to them at a time.



The **Delivery Assignment** options for **Just-in-Time** are:

- **None** - No method.

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- **Blocked From Last** - This allows authors to specify that a manual activity cannot be worked by the same person that worked the preceding manual activity. This allows another worker to supply an approval or review of an item, if necessary.

Specific Person

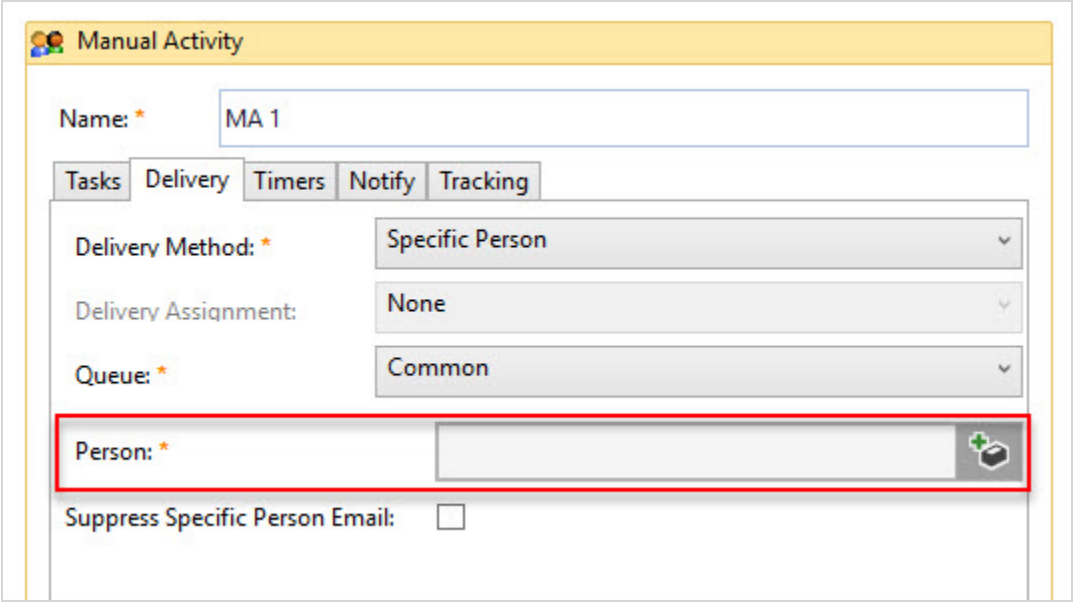
The **Specific Person** option allows the task to be delivered directly to an individual in the queue.

Queue

Select the queue where the manual activity is sent. The default is **Common Queue**.

Person

The **Person** field becomes active when *Specific Person* is selected for the **Delivery Method**. This field allows you to assign the activity to a specific person.



Suppress Specific Person Email

This option allows the author to disable the default email sent to the user for the **Specific Person** delivery method. Check the box to enable this option.

Manual Activity Timers

Timers are optional.

By default, timers adhere to the business hours defined in the **Calendar** selected in *Properties*.

Field Definitions: Timers Tab

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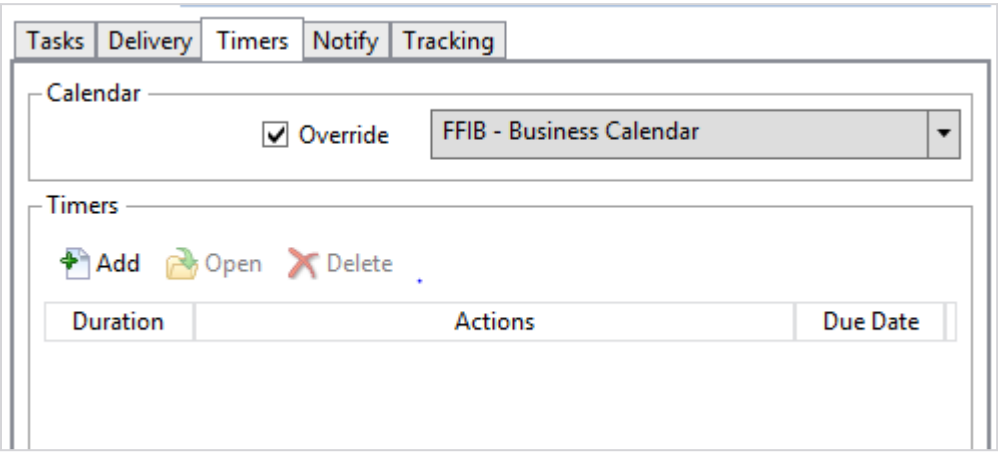


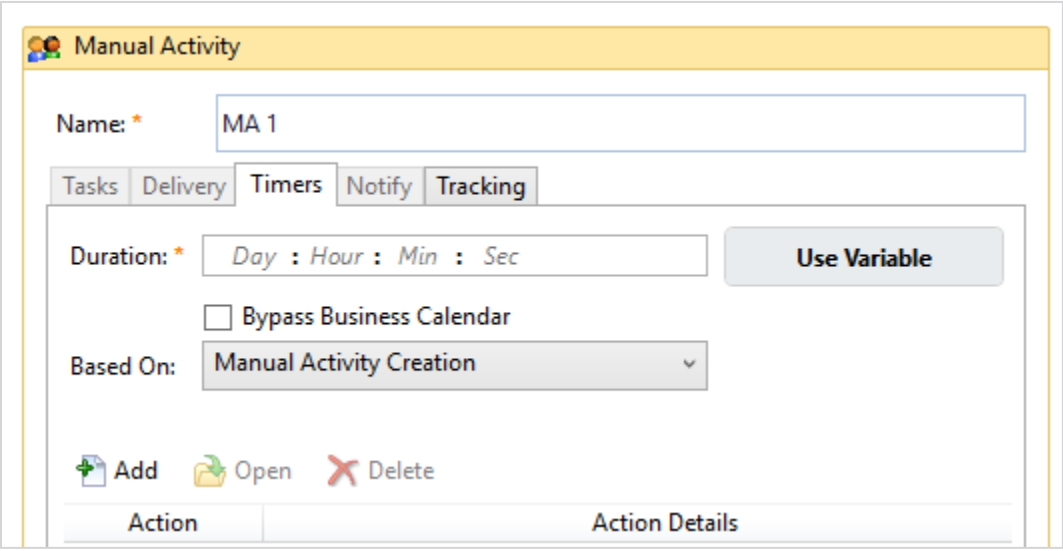
Override

When the *Override* check box is selected, a drop-down list becomes available, allowing you to select from all calendars defined for the institution. By selecting *Override* and choosing a calendar, the selected calendar overrides the definition-level calendar and will be used for every timer created for the manual activity. The *Override* check box is selected by default.

Add

Add an item.

Field Definitions: Add a Timer



Duration

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The **Duration** can be entered as either a variable or the actual duration of time. The default mode is the actual duration. In this mode, enter the duration of the timer. Time must be entered in days:hours:minutes:seconds format: *00:00:00:00*.

> **NOTE**
> If **DAYS** is used, it counts the current day as day one. Even if there is only one minute left in the business day, the current day is day one.

To enter a variable, click the **Use Variable** button to switch to variable mode.

> **NOTE**
> When using a variable to set the **Timer Duration**, the system expects a string variable with a value in the days:hours:minutes:seconds format. For example, enter a 15-minute duration as *00:00:15:00*.

Bypass Business Calendar

Select this check box to determine if the countdown uses the business calendar or actual time (i.e., a 24-hour day).

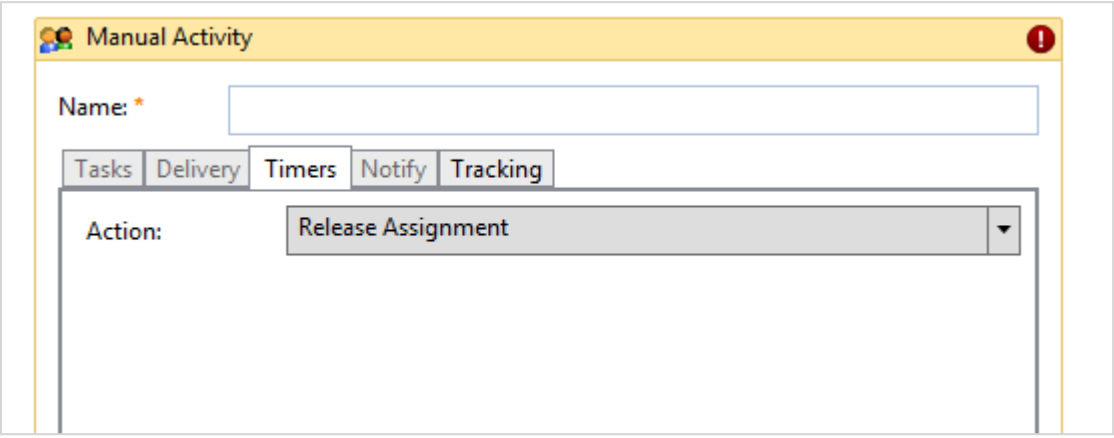
Based On

- *Manual Activity Creation* - Starts timer based on when the manual activity is created.
- *Manual Activity Assignment* - Starts timer based on when the manual activity is assigned.

> **CAUTION**
> Timers are not reoccurring. If you create a timer based on a manual activity assignment, it will launch based on the original assignment. It is not impacted by subsequent reassignment/assignment release.

Manual Activity Timer - Release Assignment

When a **Release Assignment** timer expires, the **Assigned To** value of the *Manual Activity* is cleared. The **Assigned To** value remains in the applicable queue.



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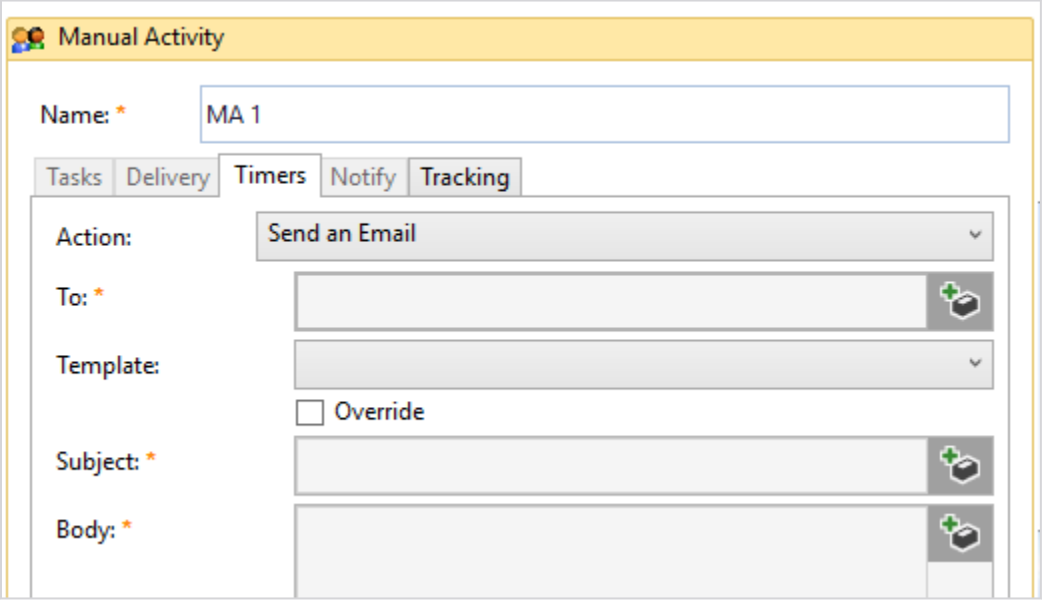
Manual Activity Timer - Send an Email

The **Send an Email** timer action sends an email to an assigned recipient.



You can set the **To** value to a string variable. The string variable must contain either a single email address or the name of an email group. **To** can also be set to the **Originator** system variable.

> **NOTE**
> Setting **To** to the **Originator** variable assumes that the user name is an email address. If the user names are not email addresses, then using **Originator** does not deliver an email.

> **CAUTION**
> This activity does not parse multiple email addresses out of a single variable. To use a variable to send emails to multiple email addresses, create an email group through your email provider or use multiple variable values separated by a semi-colon (*;*).

The **Send an Email** timer action for manual activities includes system variables for the following:

- **Assigned To** - this value sends an email to the person who the **Manual Activity** is assigned to in the *Workflow Queue*.
- **Queue Manager Notification** - this value sends an email to any user with the **Queue Manager Notification** permission in an effective allowed state for the applicable *Queue*. **Queue Manager Notification** is an escalation path available through a *Manual Activity* timer.

You can customize the subject and body of the email or use an email template.

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You can choose from an existing email template (created by administrators), or you can select **Override** to compose a custom email.

The **activitydirectlink** scoped tag can be used in the **Body** of a *Send an Email* timer action in a **Manual Activity**.

A user that who receives the email can click the link to access the primary Xperience instance and then open the **Manual Activity** in *jha*Enterprise Workflow.

If there is more than one Xperience instance and none are indicated as **Primary**, then clicking the link results in an error. See the *Working with an Institution* section of the *jhaEnterprise Workflow Configuration Guide* for more information.

> **NOTE**
> The **activitydirectlink** feature does not support web-based email.

Manual Activity Timer - Start a Workflow
The **Start Workflow** timer action allows you to start a workflow automatically.

Start Workflow can be set to pass along its variables, comments, and attachments from the source workflow to the destination workflow.

Configure Attachments

Select one of the following, as necessary.

- *Start a Workflow for each attachment*.
- *Start a Workflow for all attachments*.

Include Comments

Include comments from the parent workflow.

Terminate Source Workflow

This option terminates the current workflow instance upon the start of the *newworkflow* instance.

Field Definitions: Notify Tab
The following fields are located in the *Notify* tab.

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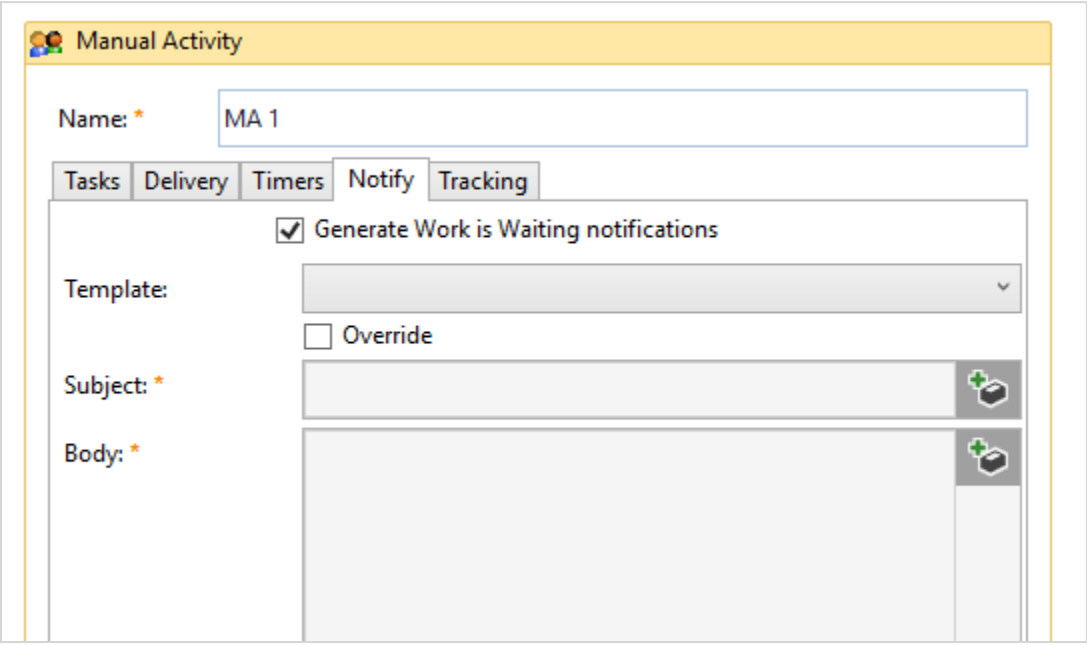

Generate Work is Waiting notifications

Select **Generate Work is Waiting notifications** to create notification emails to anyone that is capable of working the activity. The *Work is Waiting* notification is only sent if the *Manual Activity* reaches the *Queue* and no one is available to work the activity. The *Work is Waiting* email is sent to all members of the *Queue* that:

- Have logged in to *jha*Enterprise Workflow at least once for the institution
- Can work the *Manual Activity* (i.e., have the **Take Work** and/or **Receive Work** permission for that *Queue*)

For example, if a queue only has a small number of users that log on infrequently to work manual activities, it may be advisable to set up a *Work is Waiting* notification. If the queue in question is not frequently used, its users may need a prompt to know that there is a manual activity that requires attention.

Template

Select **Email Template** (as created in **Workflow Administration** > **Email Templates**) from this drop-down list.

Override

Select this check box to override the use of a template and create a new, unique notification.

Subject

The **Subject** is the same as the email that timer sends.

Body

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Enter the text for the body.

RemoteApprovalSiteURL

Use the **RemoteApprovalSiteURL** tag in the **Body** of a template that is used in the **Remote Approval** activity.

Format this tag as a link (i.e., *<a href="<%RemoteApprovalSiteURL%>">Pending Approval</a>*.

ActivityDirectLink

Use the **activitydirectlink** tag in the **Body** of a *Work is Waiting* notification in a *Manual Activity*.

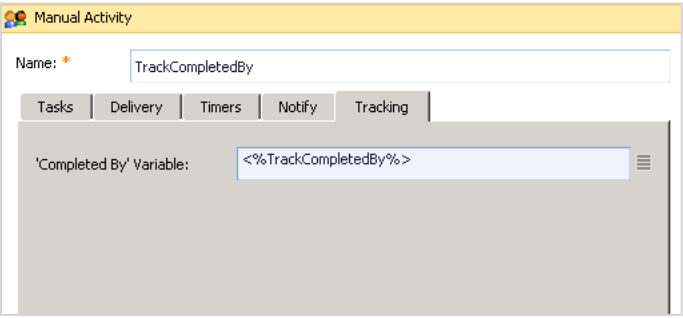
A user that receives the email can click the link to access the primary Xperience instance, and then open the *Manual Activity* in *jha*Enterprise Workflow.

If there is more than one Xperience instance and none are indicated as **Primary**, then clicking the link results in an error. See the *Working with an Institution* section of the *jhaEnterprise Workflow Configuration Guide* for more information.

> **NOTE**
> The **activitydirectlink** feature does not support web-based email.

Field Definitions: Tracking Tab

The following fields are located in the **Tracking** tab.



'Completed By' Variable

Select the custom string variable associated with the user or queue worker who completed the manual activity.

Adding a Manual Activity to a Workflow Definition

1. Select **Manual Activity** from the *Toolbox* panel and drag and drop it onto the *Flowchart*.

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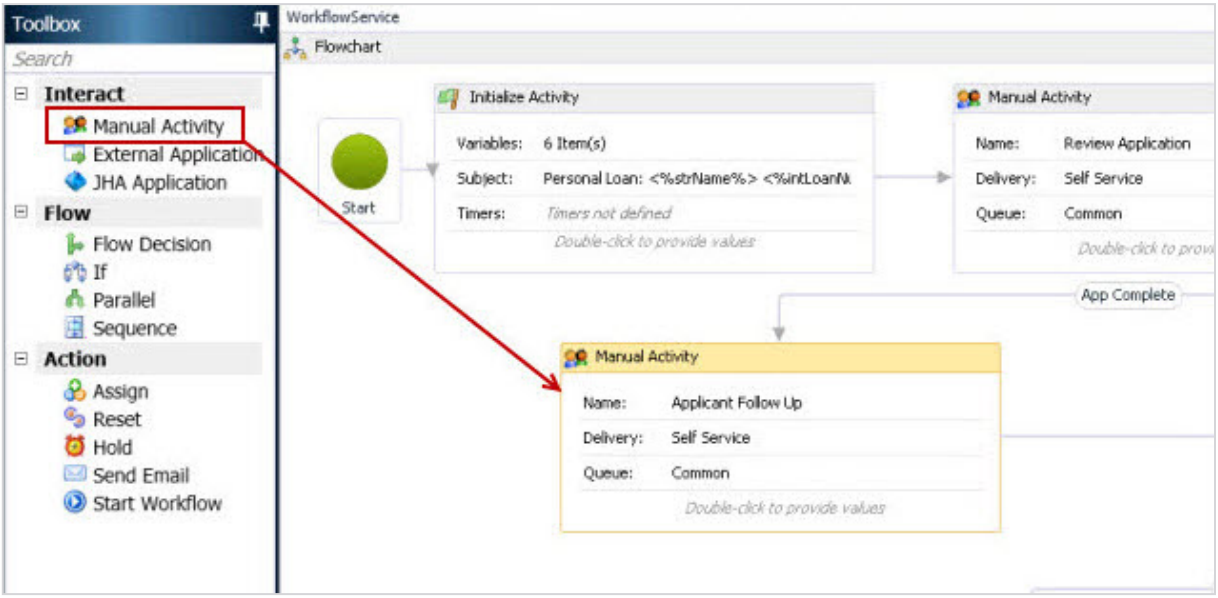

2. Double-click **Manual Activity** to enter values.
   The *Manual Activity* window opens.
3. Name the Manual Activity.
4. Complete all the necessary fields in the *Task* tab, and click **OK**.
5. Select the **Delivery** tab, and select the **Delivery Method** and **Queue**.
6. Complete the fields in the *Timer* tab if a timer is necessary.
7. Complete the fields in the *Notify* tab if a notification message is necessary.
8. Complete the fields in the *Tracking* tab if tracking is necessary.
9. After ensuring the *Task*, *Delivery*, *Timer*, *Notify*, and *Tracking* tabs are complete, click **OK**.
   The *Manual Activity* closes, and you are returned to the workflow definition.
10. Attach the new *Manual Activity* to the **Initialized Activity** or to another activity by completing the following sub-steps:
    a) Select the activity you want to come before the new activity in the workflow to make the handles appear.

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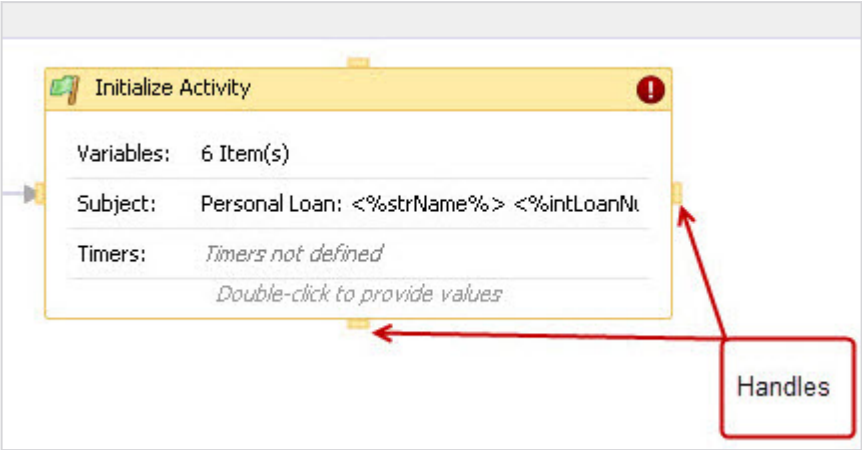
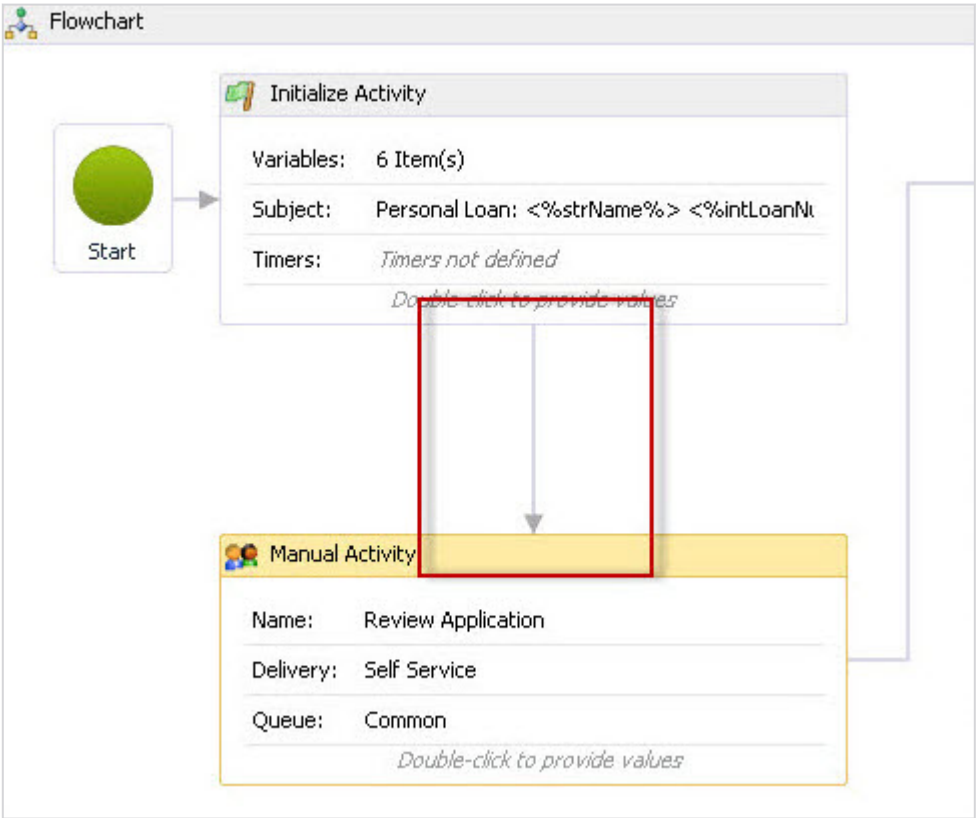


b) Click one of the four handles on the window you want to attach the *Manual Activity* to, and draw a line to attach them.

c) Draw a line to connect it to the next activity in the workflow definition.



CAUTION

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> The direction of the line determines the order of the activity in the workflow. Make sure that you draw your arrow accordingly.

The *Manual Activity* is added to the workflow definition.

11. Click **Save**.

External Application Activity

An **External Application** activity allows you to launch an external program from a running workflow instance. Third-party applications such as Notepad or Microsoft Office® can be started with an **External Application** activity. An external software program data file may also be launched from an **External Application** activity.

Creating the list of registered applications, or executable files, for an institution must happen prior to implementing this activity. A system administrator sets up the registered application in the jXchange Management Console (JMC).

> **NOTE**
> External applications on the server side are fire and forget unless you select the **Wait for Exit** check box when creating the activity in the workflow.

Changes to Registered Applications in the JMC

When you set up an **External Application** activity in a workflow definition, the system pulls only the information that currently exists in the JMC for the selected registered application at that point in time. Any subsequent changes made to the **External Application** are not automatically made to the activity.

For example, if you set up an **External Application** activity on the design surface, and then someone goes into JMC and modifies the registered application entry, you must go back and delete the activity referencing the original entry and re-add the activity and reselect the registered application so the new changes are brought in.

Field Definitions: External Application
These fields are located in the **External Application** activity.

> **NOTE**
> An administrator must register an external application before it is available for use.

External applications are fire and forget, by default. If you want the activity to wait until the external application is complete before moving on to the next activity, select the *Wait for Exit* check box, and complete the required **Response Variable** and **Max Wait Time** fields.

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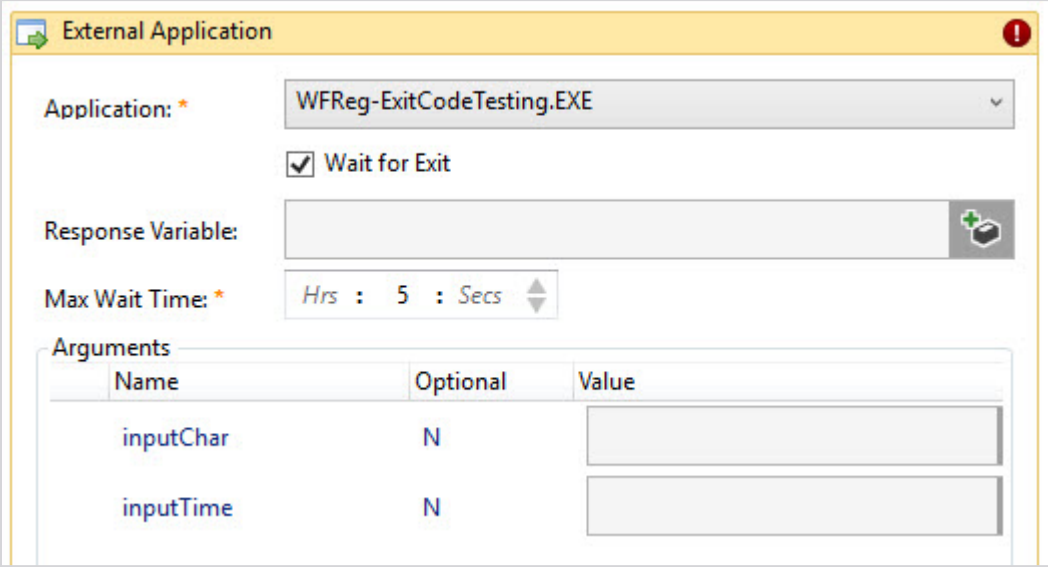

Application

Select the necessary external application from the drop-down list.

Wait for Exit

Select this check box to send a notification that the external application activity is complete before moving on to the next activity in the workflow. This option also allows the value returned by the external application activity to be used in later activities in the workflow. For example, a home loan value gathered through a manual activity could be sent to a loan evaluation **External Application** that returns an approval or rejection response that can then be ran through a **Flow** or an **If** activity that guides future steps in the workflow instance. When you select this check box, the **Response Variable** and the **Max Wait Time** fields become active.

Response Variable

Enter the response variable. This variable must be an integer.

Max Wait Time

Enter the maximum wait time in hours, minutes, and seconds.

Field Definitions: Registered Applications

When you select **Add** in the *Application Arguments* panel, the following fields appear, allowing you to add a new registered application.

Name

This field displays the name.

Flag

This text will be placed on the command line before the argument.

Quotes

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Select this check box to place quotes around the argument.

Optional

Select this check box to indicate when the argument must be specified by the calling workflow.

Description

The description only appears to workflow authors in the *Workflow Definition Library*. This field might be used to describe the purpose of the workflow or to note changes between workflow versions.

External SOAP Service Activity

The **External SOAP Service** activity enables calls to external services via SOAP messages.

Providers must be defined for an institution in the jXchange Management Console (JMC) by a system administrator. At least one **Provider** must exist to implement this activity.

Fields and Functions: External SOAP Service

The following fields and functions are on the *External SOAP Service* screen.

Provider

The **Provider** drop-down menu contains external SOAP services for the institution as defined by a system administrator in the jXchange Management Console (JMC).

Name

The **Name** drop-down menu contains only external templates defined in *Manage Message Templates*.

Override

The **Override** check box allows you to toggle between making the activity fields editable. When the check box is selected, the **Action**, **Request**, **Response XSLT**, and **Fault XSLT** fields are editable. When the check box is cleared, those fields are not editable.

Action

The **Action** value comes from the section of the contract from which the outgoing XML is requesting values. String values are allowed if they were added to an Initialize Activity or created through the IntelliSense control.

Request

The **Request** field accepts XML to request string values. String values are allowed if they are added to an **Initialize Activity** or created through an IntelliSense control.

Response XSLT

This is the response message that allows you to map a response to a variable and use the result in the workflow. The **Response XSLT** field allows an XSLT to be applied to the response that is returned from the service call. Information from the call is saved

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to variables. Use well-formed XML. You can use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in the message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*. The XSLT must produce output that matches a specific expectation.

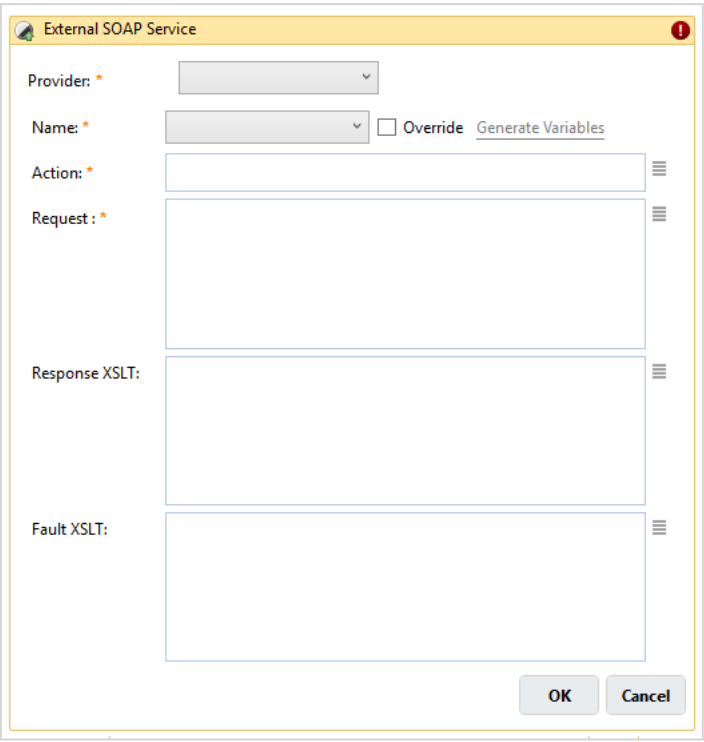
Fault XSLT

The fault mapping allows you to quickly view and fix the errors if the workflow faults. The **Fault XSLT** field accepts a valid XSLT document that is applied to a fault response returned from the service call. You can specify if a service fault should fault the Workflow. Use well-formed XML. You can use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in a message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*. The XSLT must produce output that matches a specific expectation.

Adding an External SOAP Activity

1. In the *Interact* section of *Workflow Designer*, drag the **External SOAP Service** onto the flowchart.
2. Double-click the **External SOAP Service** to open it in edit mode.



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3. In the **Provider** drop-down menu, select a provider that was defined in jXchange Management Console.
4. In the **Name** drop-down menu, select an external message template defined in *Manage Message Templates*.
5. Enter the necessary values for **Action** and **Request**.
6. Select **OK**.

External REST Activity

The **External REST Service** activity enables calls to external web services via REST messages. Providers must be defined for an institution in the jXchange Management Console (JMC) by a system administrator. At least one **Provider** must exist to implement this activity.

Fields and Functions: External REST Service

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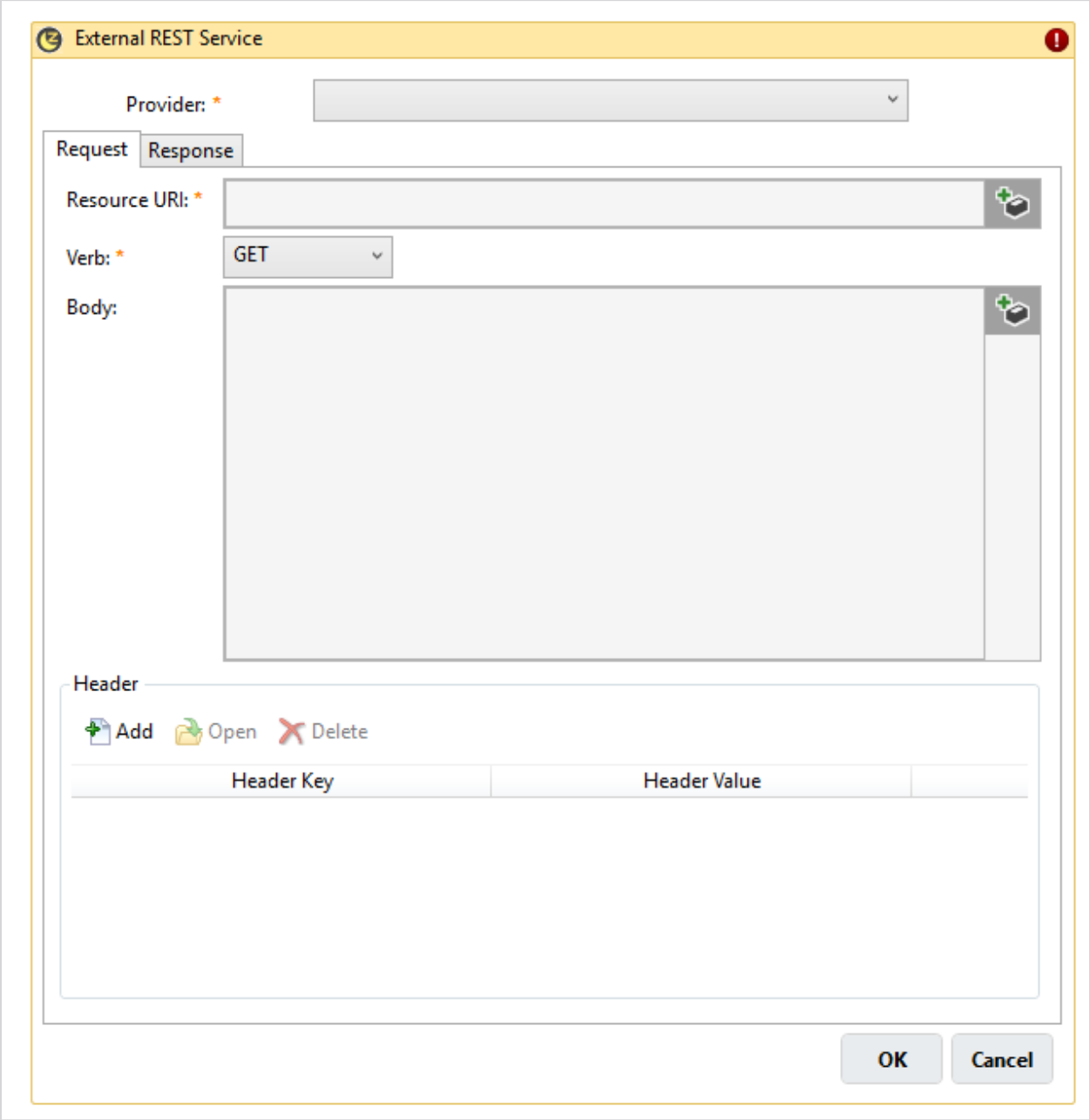

Provider

The **Provider** drop-down menu contains external REST services for the institution as defined by a system administrator in the jXchange Management Console (JMC).

Request Tab

Resource URI

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This value is required. **Resource URI** supports data entry and/or variables.

Resource URI is used in conjunction with the **Endpoint Address** setup for the **Provider** in the JMC. The contents of the **Resource URI** are determined by **Provider** expectations.

Use these references for assistance with URL encoding:

- *https://www.w3schools.com/tags/ref_urlencode.ASP*
- *https://meyerweb.com/eric/tools/dencoder/*

Verb

Select a **Verb**. *GET* is the default value. Other supported values include *PUT*, *DELETE*, and *POST*.

Body

Body may not be required for all verbs. For example, *GET* or *DELETE* may send information in the **Resource URI** and not need **Body**.

Body supports text and/or variables. **Body** may be in JSON, XML, or application/x-www-url-formencoded format.

For information about working with JSON, see *https://json.org/example.html*.

For infrmation about working with application/x-www-url-formencoded, see *https://www.urlencoder.org/*.

For information about handling special characters when working with www-url-formencoded, see *https://en.wikipedia.org/wiki/Percent-encoding*.

> **NOTE**
> Body requirements depend on **Provider** expectations.

Header

Header Key and **Header Value** pairs are optional. Requirements depend on **Provider** expectations.

The **Key** value must be unique. Both **Request Header Key** and **Request Header Value** support text and/or variables.

> **NOTE**
> If the same **Header Key** is configured in both the JMC for the **Provider** and in the **REST Activity**, then the **REST Activity** takes precedence at run time (overrides the JMC **Header Key**).

Response Tab

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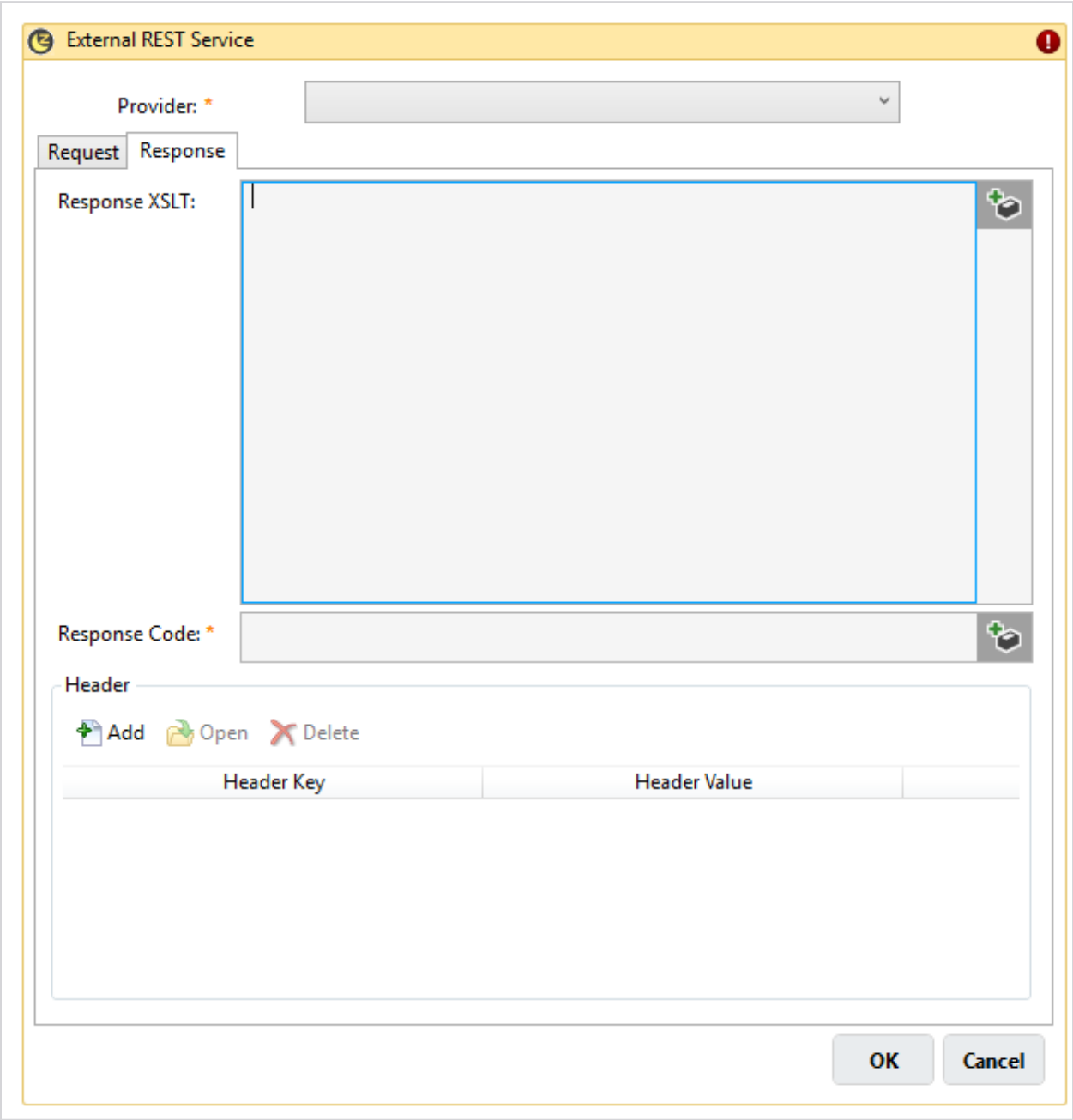

Response XSLT

The response message that allows you to map a response to a variable and use the result in the workflow. The **Response XSLT** field lets the user apply an XSLT to the response that is returned from the service call. Information from the call is saved to variables. Use well-formed XML. You can use tags to denote variables, which are replaced at run time.

> **NOTE**

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> If you use variables in the message, they must be added to the **Variables** to be validated.

The XSLT must produce output that matches a specific expectation.

Response Code

The **Response Code** is required and must be mapped to an integer value.

For more information about **Response Code** standards, see *https://developer.mozilla.org/en-US/docs/Web/HTTP/Status*.

Header

The **Header Key** and **Header Value** pairs are optional. Requirements depend on **Provider** expectations.

The **Key** value must be unique. The **Response Header Key** supports text and/or variables. The **Response Header Value** only supports a variable.

Adding an External REST Service Activity

1. Drag the **External REST Service** from the **Interact** menu to the *Flowchart*.
2. Double-click the **External REST Service** to open it in editing mode.
3. In the **Provider** drop-down menu, select a provider that is defined in the jXchange Management Console.
4. Provide the **Resource URI** on the *Request* tab.
5. Select a **Verb**.
   a) If applicable, select the required **Body** value.
   b) If applicable, select the required **Header** values.
6. If applicable, enter the **Response XSLT** on the *Response* tab.
7. Assign an integer variable to the **Response Code**.

   If applicable, enter the required **Header** values.
8. Select **OK**.

External REST Activity and SharePoint Integration - Tips and Tricks

*jha*Enterprise Workflow offers two ways to integrate with SharePoint® via REST.

- SharePoint® On Premises uses Integrated Security
- SharePoint® Online uses OAuth Security

Sending an Update Request

The SharePoint® REST API supports update requests that use a **post** verb with specific information required in the *Request Header*.

The first header **Key** is *If-Match*. If there is no concern that another user has modified the row since the workflow last accessed it, use a value containing an asterisk (*) to modify the latest version.

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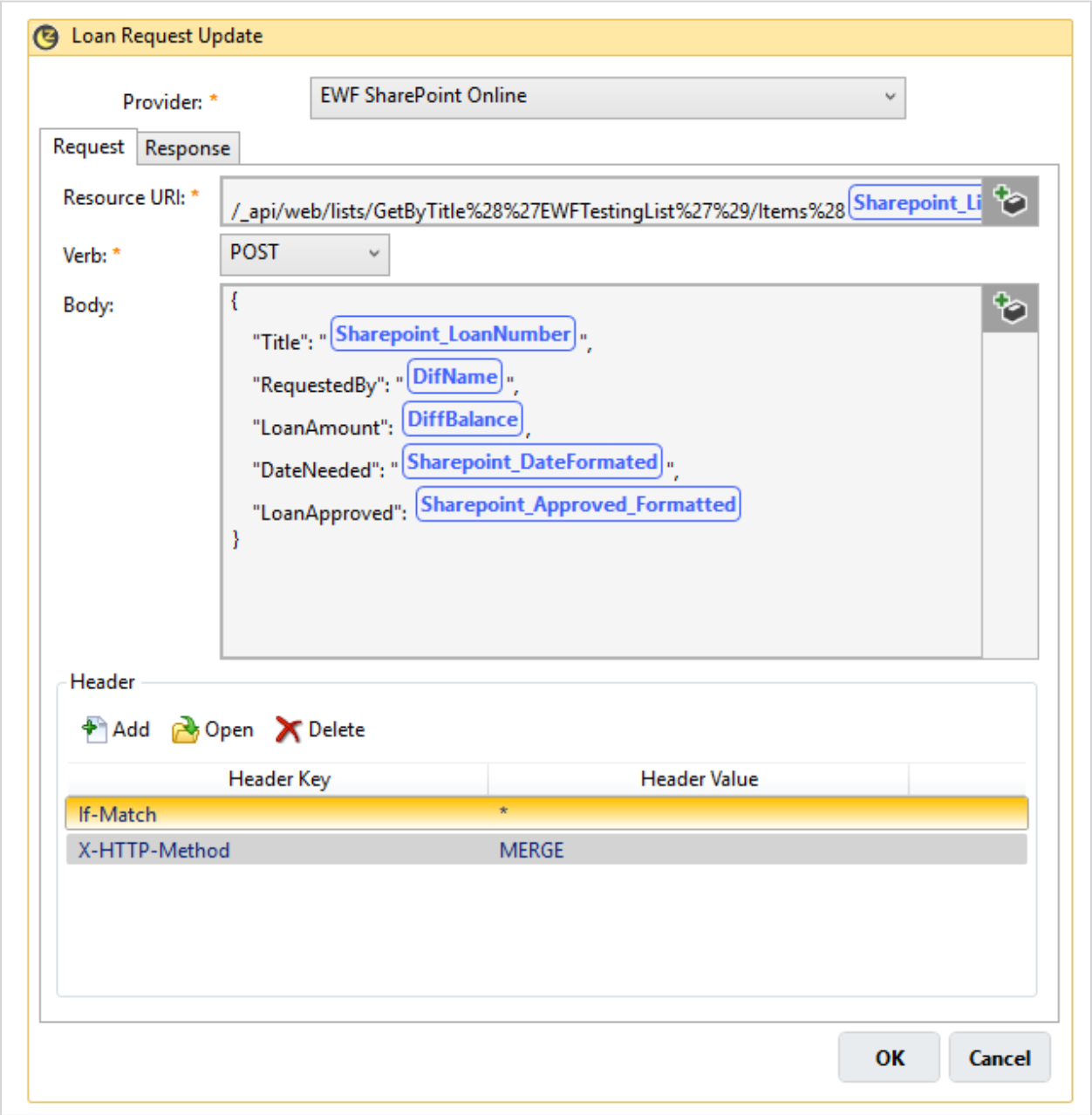
The second header **Key** is *X-HTTP-Method*. A value of *DELETE* indicates that the request is to modify an item.



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Sending a Delete Request

The SharePoint® REST API supports delete requests that use a **post** verb with specific information required in the *Request Header*.

The first header **Key** is *If-Match*. If there is no concern that another user has modified the row since the workflow last accessed it, use a value containing an asterisk (*) to remove the latest version.

The second header **Key** is *X-HTTP-Method*. A value of *DELETE* indicates that the request is to remove an item.

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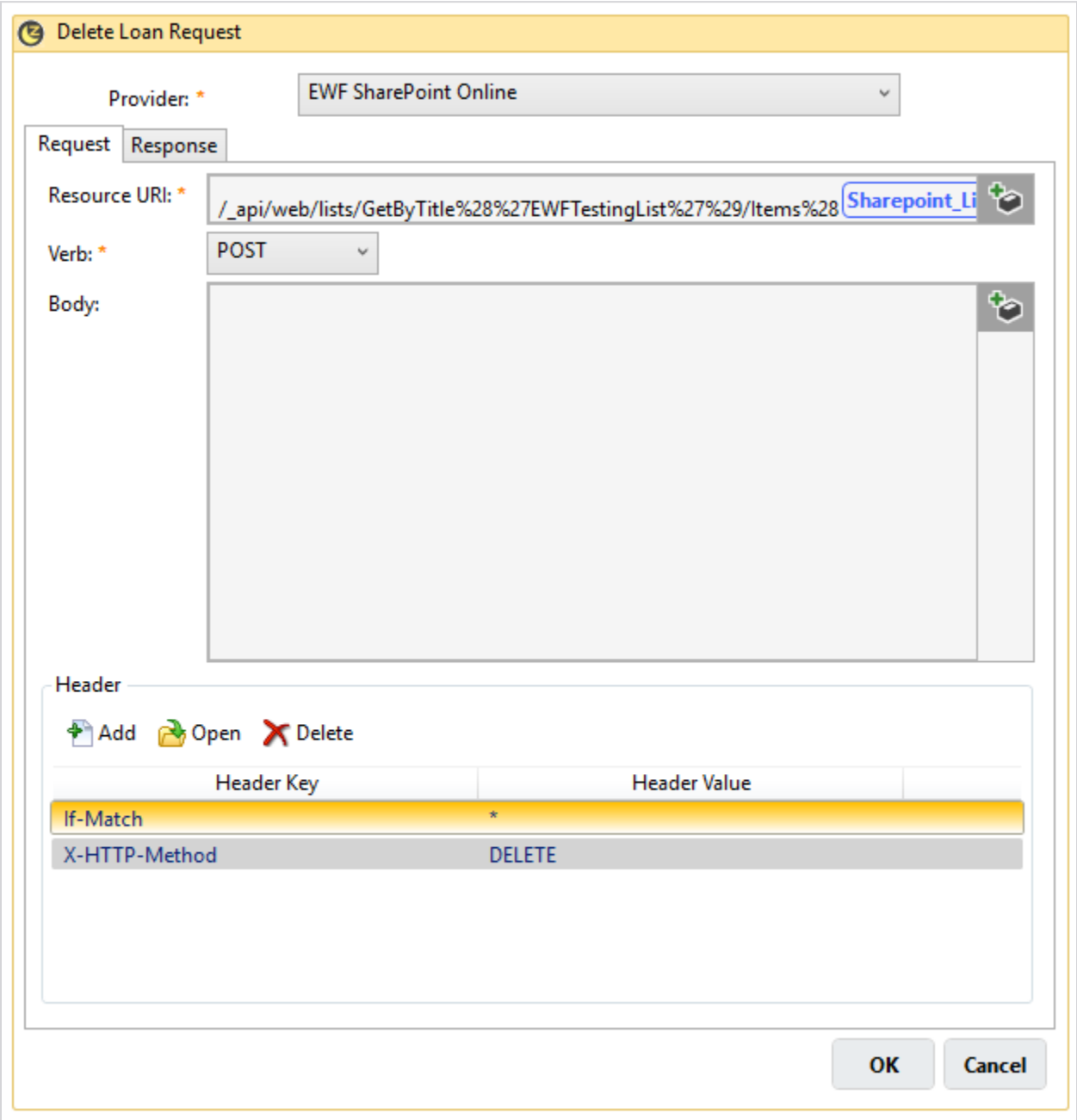

Using ETags in REST Activities

Use ETags in **External REST Activities** to target a particular version if versioning is used in SharePoint®.

On an insert request, capture the returned **ETag** value in a variable from the *Response Header*.

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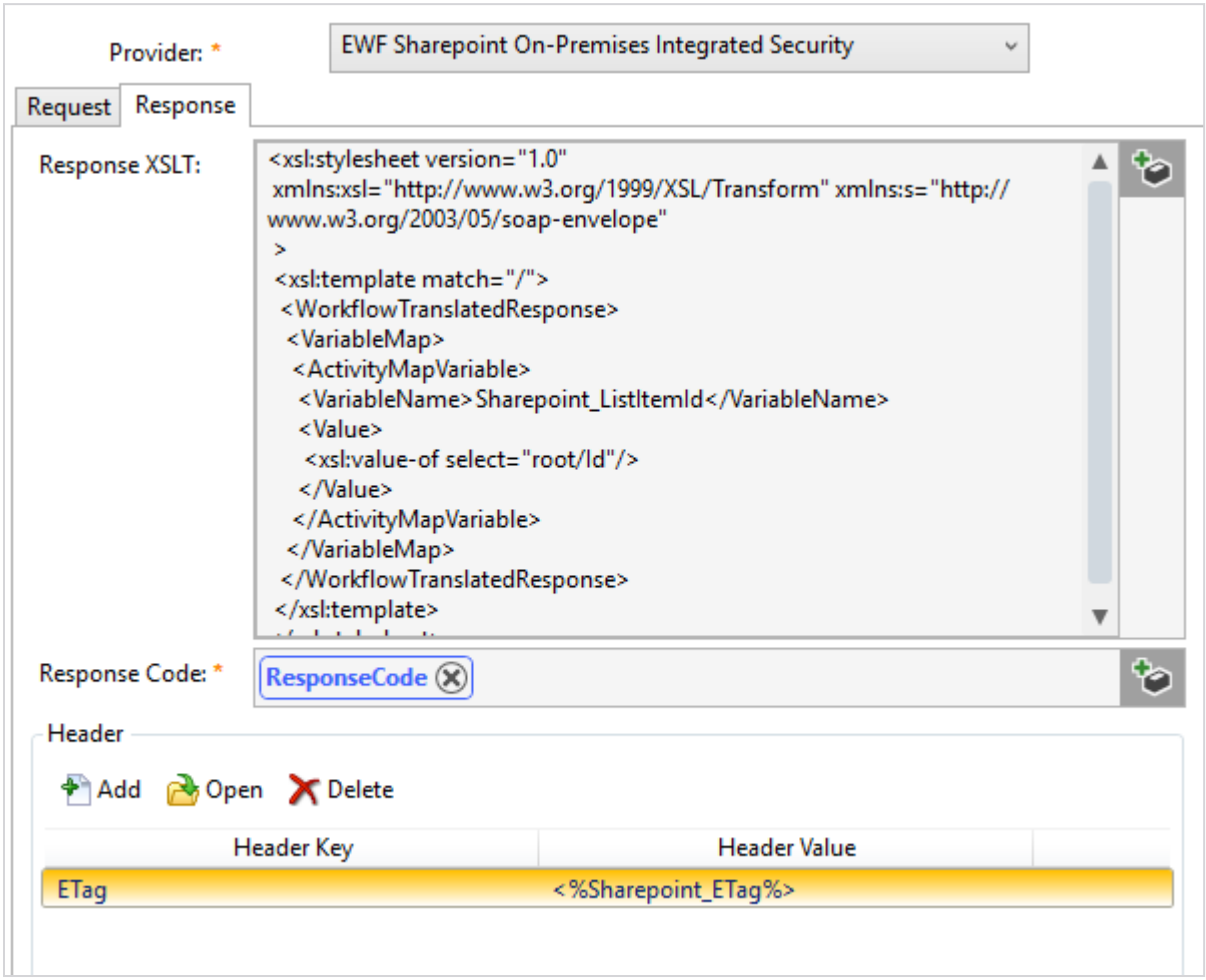

Use this **ETag** in the *Request Header* on subsequent update or delete requests to ensure that only the desired version of the item is changed.

SharePoint On Premises and Request Digest

A **Request Digest** is required when using REST integration with SharePoint® On Premises.

The **Request Digest** is a time-limited security token that validates an API request.

Obtain a **Request Digest** value before making a request to insert, update, or delete in SharePoint® On Premises. Reading values from SharePoint® (*GET*) does not require a **Request Digest**.

Create an **External REST Activity** for **Request Digest** before each **External REST Activity** request to insert, update, or delete. In the **External REST Activity**, map the returned value to a variable (such as `SharePoint_X_RequestDigest`).

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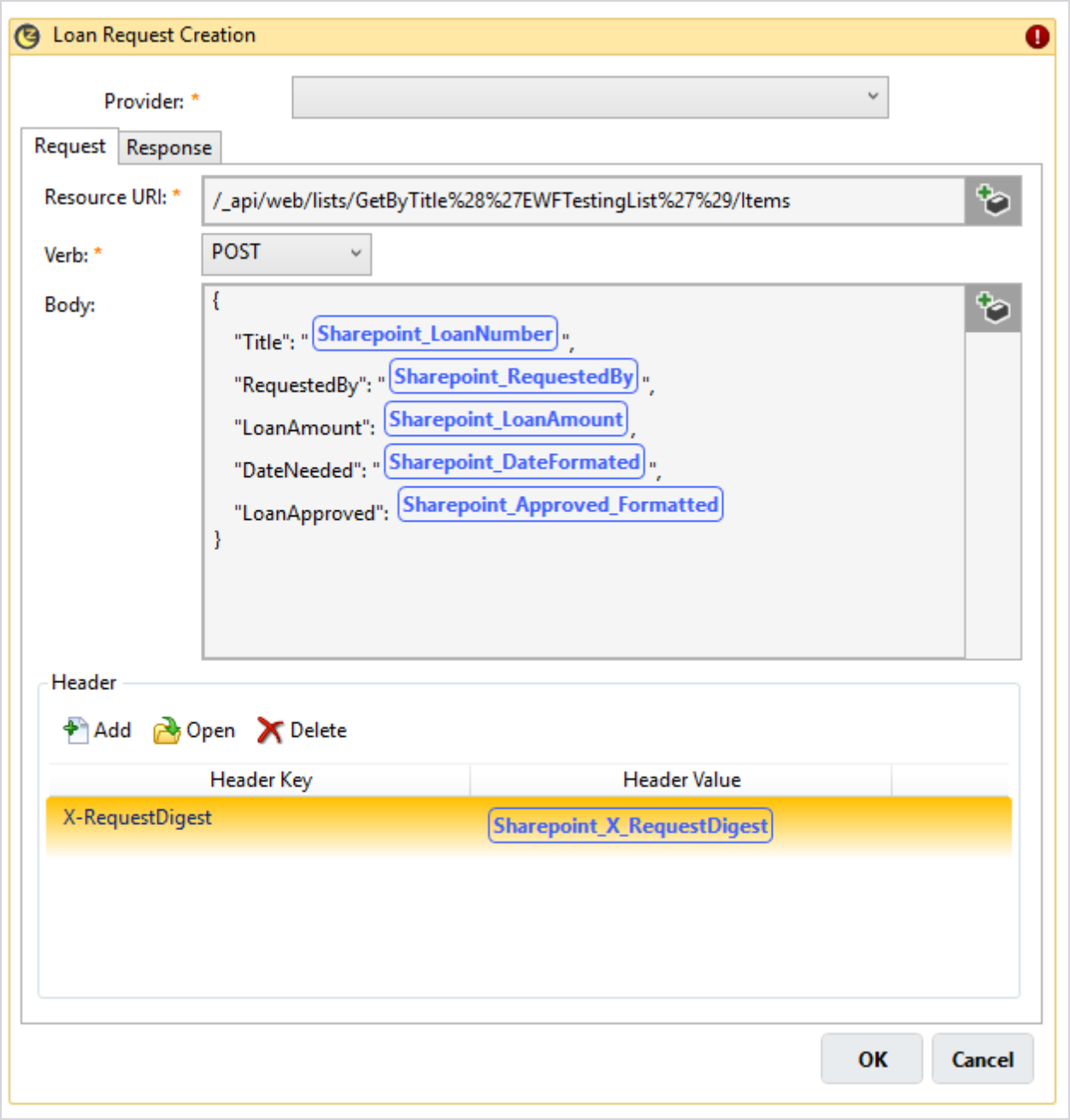
In subsequent **External REST Activities** used to insert, update, or delete, send the **Request Digest** in the *Request Header*. The **Header Key** is *X-RequestDigest*. The **Header Value** is the variable to which the value is mapped (e.g, `SharePoint_X_RequestDigest`).

The following screenshot is an example of an insert request with only one value in the *Request Header*. In an **External REST Activity** for an update or delete request, the *X-RequestDigest* value would be the third required **Header Key**.



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Best Practice Recommendation

Long periods of time can exist between SharePoint® REST API requests in a workflow instance. Obtain a new **Request Digest** value before each insert, update, or delete request to reduce the likelihood of failure due to an expired **Request Digest**.

Document Index Search Activity

The **Document Index Search** activity is Synergy specific.

> **NOTE**
> This activity is not available if your institution uses Iris for attachments.

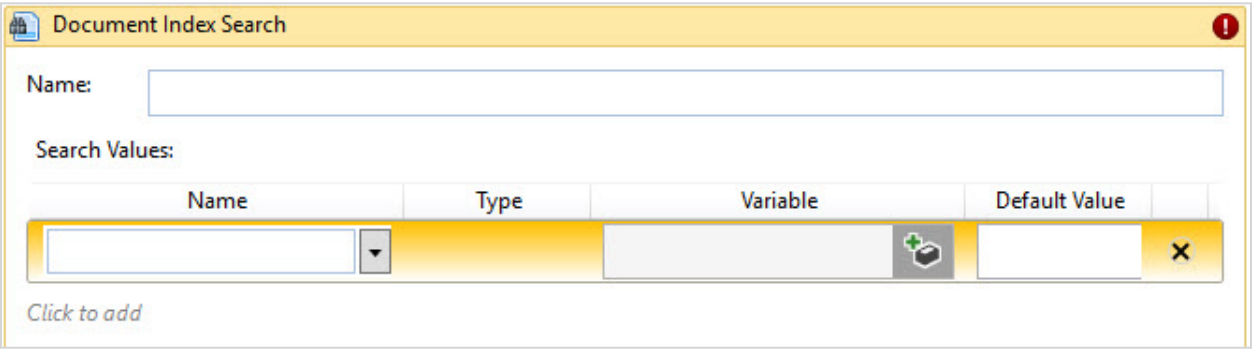
The **Document Index Search** activity allows you to extract index information from an attached Synergy item. Extracted information can be assigned to a variable for use in the running workflow.

For example, you could extract a piece of meaningful information like an account number to use in the **Subject** to allow you to tell workflows apart: *Personal Loan 12345* vs. *Personal Loan 67890*. Otherwise, all your Personal Loans look the same, making it hard to quickly tell them apart in the grid.

A **Document Index Search** activity faults if:

- Synergy is down.
- Synergy returns an error.
- There is no attachment in *jha*Enterprise Workflow.

Optionally, the **Document Index Search** activity can be set to fault if Synergy does not find the matching document when a search is performed. To force a fault in this scenario, select the **Send to Faulted Activities if 0 Match at Run Time** check box.



Search Values

Name

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Select the appropriate name from the drop-down list.

Type

This field is auto-populated depending upon what you select in the **Name** field.

Variable

Select the appropriate variable from the drop-down list. The value returned from Synergy for the **Name** is used to set the **Variable** value in *jha*Enterprise Workflow.

If there is a data conflict with the value returned from Synergy, the **Variable** is not set. For example, if the **Variable** in *jha*Enterprise Workflow is set to *integer*, a response of *ACME* from Synergy does not set the **Variable** value.

Default Value

This value is sent to Synergy if nothing is present.

If you are providing a default value in a **Document Index Search** activity, a **Document Index Modify** activity, or a **Reindex** task JHA Application, the system does not compare/validate what you enter in the **Default Value** field to the variable type that is pulled in to the **Value** field. The default value is passed into the variable if nothing is returned from the Synergy inquiry. If the default value is *%empty%*, it means that the variable's existing value needs to be cleared if nothing is returned by Synergy. If the default value does not have anything in it and nothing is returned from Synergy, then the existing variable value should be untouched.

Send to Faulted Workflows if 0 Match at Run Time

Select this check box to force a fault if the **Document Index Search** activity does not find the attached document in Synergy. This scenario can occur if the document is purged by Synergy retention prior to the workflow hitting the **Document Index Search** activity. If the author expects there to be an attachment to extract information from at this point in the workflow, they may want to force a failure.

If this check box is not selected, the workflow carries on to the next activity without faulting.

> **NOTE**
> This option only forces a failure if Synergy does not find the document. It is possible to have a response returned without any matching, mapped **Search Values** without causing a fault.

Document Index Modify Activity

The **Document Index Modify** activity is Synergy specific.

> **NOTE**
> This activity is not available if your institution uses Iris for attachments.

The **Document Index Modify** activity allows you to update index information on an attached Synergy items. Indicate the variable to be used and the corresponding Synergy property to be updated.

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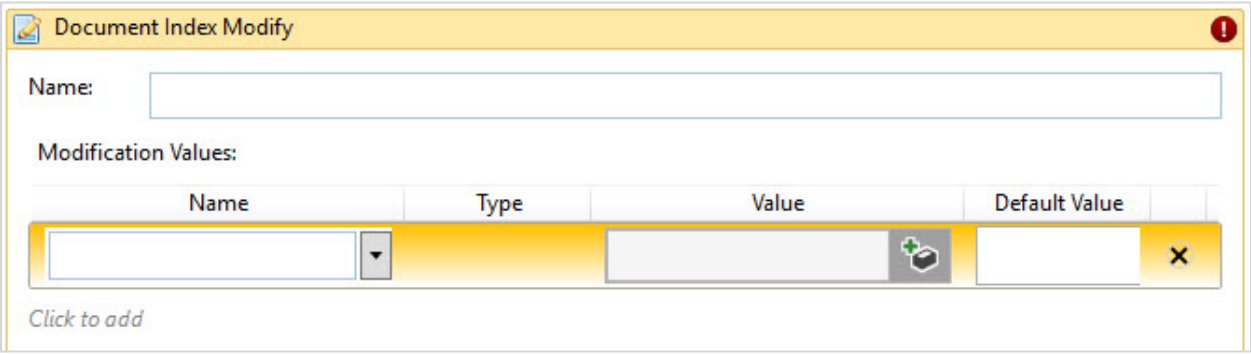
> **CAUTION**
> Only Synergy Checks and Synergy Documents can be modified. Synergy Reports cannot be modified.

For example, you could refile an item in Synergy, moving it from one cabinet location to another. After a QC review, it moves from the protected cabinet, where it is being checked, to its actual cabinet, making it available as a search result in a Core inquiry.



Modification Values

Name

Select the appropriate name from the drop-down list.

Type

This field is auto-populated depending upon what you select in the **Name** field.

Value

There are three options available for **Value**:

- Select a variable
- Enter a literal value wrapped in single quotation marks (i.e., *'this'*)
- Enter *%null%* to remove a value

Default Value

This value is sent to Synergy if nothing is present.

If you are providing a default value in a **Document Index Search** activity, a **Document Index Modify** activity, or a **Reindex** task JHA Application, the system does not compare/validate what you enter in the **Default Value** field to the variable type that is pulled in to the **Value** field. The default value is passed into the variable if nothing is returned from the Synergy inquiry. If the default value is *%empty%*, it means that the variable's existing value needs to be cleared if nothing is returned by Synergy. If the default value does not have

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anything in it and nothing is returned from Synergy, then the existing variable value should be untouched.

Modify All Attachments

Select this check box to modify all the attachments associated with the workflow instance. Otherwise, only the first and primary attachment will be modified.

JHA SOAP Service Activity

The **JHA SOAP Service** activity allows the workflow instance to request and receive information from across the Service Gateway from any supported JHA application. The activity assigns the acquired values to variables. Those variables can be used in subsequent activities in the workflow. The activity supports tags.

When you enter XML messages into the **JHA SOAP Service** activity, the system sends an information request across the Service Gateway.

An editing tool (such as SOAP UI) is required to create the messages you enter in the **JHA SOAP Service** activity.

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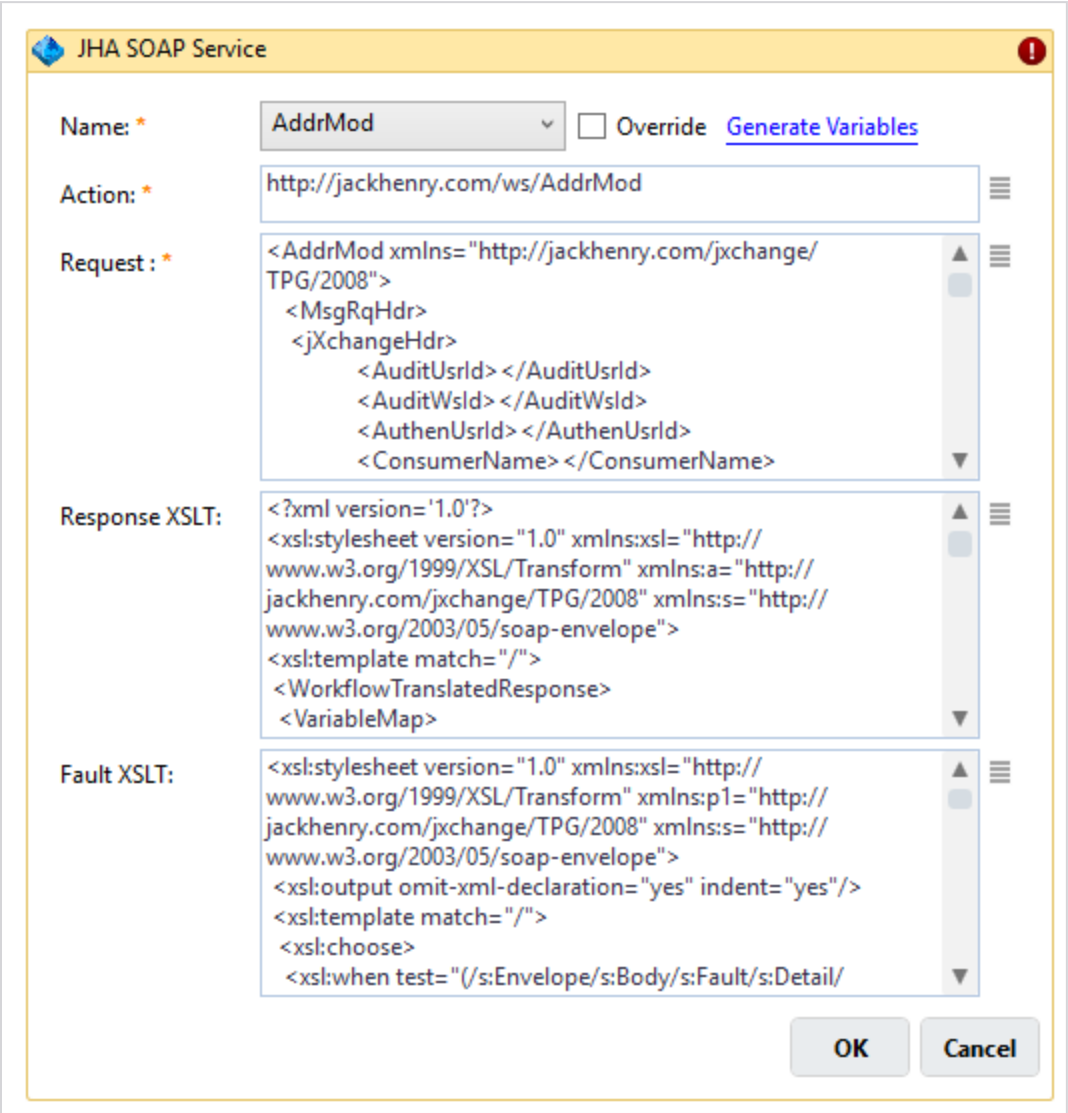

Name

The **Name** drop-down menu includes JHA SOAP Service templates as built in *Workflow Administration Templates* with a **Type=JHAService**. Selecting a template transfers the values from each of the template's fields to its corresponding field in the JHA SOAP Service activity.

Action

This is the action that is being taken within the workflow.

Override

The **Override** check box allows you to toggle between making the activity fields editable. When the check box is selected, the **Action**, **Request**, **Response XSLT**, and **Fault XSLT** fields are editable. When the check box is cleared, those fields are not editable.

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Generate Variables

Variables in a selected template that do not have the same name as a variable already listed in the Initialize Activity **Variables** tab will be added to the **Variables** tab.

Request

The **Request** field accepts XML used to request values from a Service Gateway contract. String values are allowed if they were added to an Initialize Activity or created through the IntelliSense control.

Response XSLT

This is the response message that allows you to map a response to a variable and use the result in the workflow. The **Response XSLT** field allows an XSLT to be applied to the response that is returned from the service call. Information from the call is saved to variables. Use well-formed XML. You can use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in the message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*. The XSLT must produce output that matches a specific expectation.

Fault XSLT

The fault mapping allows you to quickly view and fix the errors if the workflow faults. The **Fault XSLT** field accepts a valid XSLT document that is applied to a fault response returned from the service call. You can specify if a service fault should fault the Workflow. Use well-formed XML. You can use tags to denote variables, which will be replaced at run time.

> **NOTE**
> If you use variables in a message, they must be added to the *Variables* to be validated. These variables may be imported in the *Workflow Definition*. The XSLT must produce output that matches a specific expectation.

XSLT and Tags

The **JHA SOAP Service** activity contains four text boxes: **Action**, **Request Message**, **Response XSLT**, and **Fault XSLT.** The **JHA SOAP Service** activity uses XSLT (Extensible Style sheet Language Transformations). XSLT allows the author to transform one XML document into other XML documents. By using the **JHA SOAP Service** activity, you are transforming a response XML document into an XML document that can be de-serialized into a `WorkflowTranslatedResponse` object.

Tags can be used in all text boxes within the **JHA SOAP Service** activity. A tag is a variable or workflow property referenced by the use of open (`'<%'`) and closed (`'%>'`) tag delimiters. Tags are replaced by the actual value at run time.

> **NOTE**

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> Tags may be used for elements. When you use tags, they must be used as both the start and end tag.

Action

The **Action** text box defaults to http://jackhenry.com/ws/ because this location is the base action for all jXchange messages. The user may complete the **Action** text box by adding the name of the action from the jXchange message contract. If the **Action** text box is set to an empty string, it resets to the default.

No additional validation is required or performed, as this enables any action type to be used in the future.

Request Message

The request message should be the body of the message. This is the outgoing request message that is sent to the configured Service Gateway end point. The request message will be placed in a soap envelope, `Soap12WSAddressing10`, before it is sent. The message should begin with the following format:

```
<p1:DocImgMod xmlns:p2="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext 1.0.xsd"
xmlns:p1="http://jackhenry.com/jxchange/TPG/2008">
```

The `jXchangeHdr` is required. If it is omitted, the Service Gateway call fails due to authorization errors.

```
<jXchangeHdr>
  <AuditUsrId></AuditUsrId>
  <AuditWsId></AuditWsId>
  <AuthenUsrId></AuthenUsrId>
  <ConsumerName></ConsumerName>
  <ConsumerProd></ConsumerProd>
  <Ver_1/>
  <jXLogTrackingId><%jxLogTrackingId%></jXLogTrackingId>
  <Ver_2/>
  <InstRtId></InstRtId>
  <InstEnv></InstEnv>
  <Ver_3/>
  <BusCorrelId><%workflowbusinesscorrelationid%></BusCorrelId>
  <Ver_4/>
  <WorkflowCorrelId><%workflowcorrelationid%></WorkflowCorrelId>
  <Ver_5/>
  <ValidConsmName></ValidConsmName>
  <ValidConsmProd></ValidConsmProd>
```


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```
  <Ver_6/>
</jXchangeHdr>
```

*jha*Enterprise Workflow populates most elements of the `jXchangeHdr` at the time of implementation. Neither the *JHA Service Type* template nor the **JHA SOAP Service** prevent variables for those elements, but if a variable is configured, it is ignored. Those elements are:

- `<AuditUsrId></AuditUsrId>`
- `<AuditWsId></AuditWsId>`
- `<AuthenUsrId></AuthenUsrId>`
- `<ConsumerName></ConsumerName>`
- `<ConsumerProd></ConsumerProd>`
- `<ValidConsmName></ValidConsmName>`
- `<ValidConsmProd></ValidConsmProd>`

These elements can be optionally set to a variable name:

- `<jXLogTrackingId><%jxLogTrackingId%></jXLogTrackingId>`
- `<BusCorrelId><%workflowbusinesscorrelationid%></BusCorrelId>`
- `<WorkflowCorrelId><%workflowcorrelationid%></WorkflowCorrelId>`

Response XSLT

Design the **Response XSLT** text box to map any items from the response into a `WorkflowTranslatedResponse` object. The `WorkflowTranslatedResponse` is represented in XML serialized form, as shown below.

```
<WorkflowTranslatedResponse
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
            <VariableMap>
            <ActivityMapVariable>
            < VariableName >VariableName</ VariableName >
            <Value>Assignment Value</Value>
            <DefaultValue>Optional </DefaultValue>
            </ActivityMapVariable>
            </VariableMap>

</WorkflowTranslatedResponse>
```

Without the XML, the response is transformed into an object. To map a value in the response back to a variable in the workflow, use an XSL value, as shown below.

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```
<xsl:value-of
select="s:Envelope/s:Body/p1:DocImgSrchResponse/p1:Doc
ImgSrchArray/p1:DocImgSrchInfo/p1:DocName"/>
```

> **NOTE**
> When mapping to a variable, use the literal value of the variable name not a tag (`<%tag%>`) value unless you want the value to be dynamic. When dynamic, it is replaced by the value of a variable.

Fault XSLT

The **Fault XSLT** text box should be designed to map any items to an `ActivityClientFault`. When mapped in the response, it is specified as a `FaultMap`. When mapped in the **Fault XSLT** text box, it will be an `ActivityClientFault`. While it can be mapped in the **Response XSLT**, know that **Fault XSLT** text box mapping will always override any mapping in the **Response XSLT** text box with regard to fault information.

The following is a literal mapping value. No transform based on incoming information is applied. The author-supplied values are highlighted in green.

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```
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:p1="http://jackhenry.com/jxchange/TPG/2008"
xmlns:s="http://www.w3.org/2003/05/soap-envelope">

<xsl:output omit-xml-declaration="yes" indent="yes"/>
<xsl:template match="/">
 <ActivityClientFault>
<!—when true workflow will fault -->
  <FaultWorkflow>true</FaultWorkflow>
<-- Value of the incoming Fault Code -->
  <Code>Code</Code>
<-- Value of the incoming Fault Sub Code -->
  <SubCode>SubCode</SubCode>
<-- Value of the incoming Fault Reason -->
  <Reason>Reason</Reason>
<-- Value of the incoming Fault Code Details -->
  <Details>Details</Details>
<-- Allows any other value to variable mapping that is desired. -->
  <AdditionalMappings>
   <VariableValuePair>
    <VariableName>VariableName</VariableName>
    <Value>Value</Value>
   </VariableValuePair>
  </AdditionalMappings>
<-- Variable to set with the value of  Code -->
  <CodeVariable>Code</CodeVariable>
<-- Variable to set with the value of  SubCode -->
  <SubCodeVariable>SubCode</SubCodeVariable>
<-- Variable to set with the value of  Reason -->
  <ReasonVariable>Reason</ReasonVariable>
<-- Variable to set with the value of  Details -->
  <DetailsVariable>Details</DetailsVariable>
 </ActivityClientFault>
</xsl:template>
</xsl:stylesheet>
```

Fault XSLT Default Behavior

Custom mapping of fault to variables is optional.

The default XSLT is to map:

- Code as `<xsl:value-of select="s:Envelope/s:Body/s:Fault/s:Code/s:Value"/>`.
- SubCode as `<xsl:value-of select="s:Envelope/s:Body/s:Fault/s:Code/s:Subcode/s:Value"/>` .

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- Reason as `<xsl:value-of select="s:Envelope/s:Body/s:Fault/s:Reason/s:Text"/>`.

The Code, SubCode, and Reason appear in the error description on the *Faulted Workflows* view.

The layout of the fault is a bit different because a fault is well known. Therefore, a Code, SubCode, and Reason do not have to be mapped to a variable. Authors should do so only if they wish to evaluate them.

There is also an array of variable values that the author may use to map any number of values from the fault back to the workflow.

Validation

The **Request Message**, **Response XSLT**, and **Fault XSLT** use the same validation routine. The text is validated to ensure that it is proper XML. Tags are validated to ensure that the variable exists.

The use of any string value that matches the value of `<VariableName>value</VariableName>` will be validated as if value is a variable name.

If `<VariableName>value</VariableName>` is needed for a literal or in an outgoing message, a tag may be used to avoid any validation. For example, create a string variable named *myName*, assign the value *VariableName*, and use *<<%myName>>value</<%myName%>>*.

Creating a JHA SOAP Service Activity

Follow these steps to create a **JHA SOAP Service** activity within a workflow definition.

1. Navigate to the *Workflow Designer*.
2. Drag and drop the **JHA SOAP Service** activity from the *Toolbox* onto the *Flowchart*.
3. Double-click the **JHA SOAP Service** to provide the values.
4. Enter the action in the **Action** text box.

   The **Action** text box defaults to http://jackhenry.com/ws/ because this location is the base action for all jXchange messages. The user may complete the **Action** text box by adding the name of the action from the jXchange message contract. If the **Action** text box is set to an empty string, it resets to the default.
5. Select a *JHA SOAP Service* template from the **Template** drop-down menu if necessary.

   The **Template** field is optional.
6. Select the **Override** check box, if necessary.
7. Enter the XML code into the **Request Message** text box.

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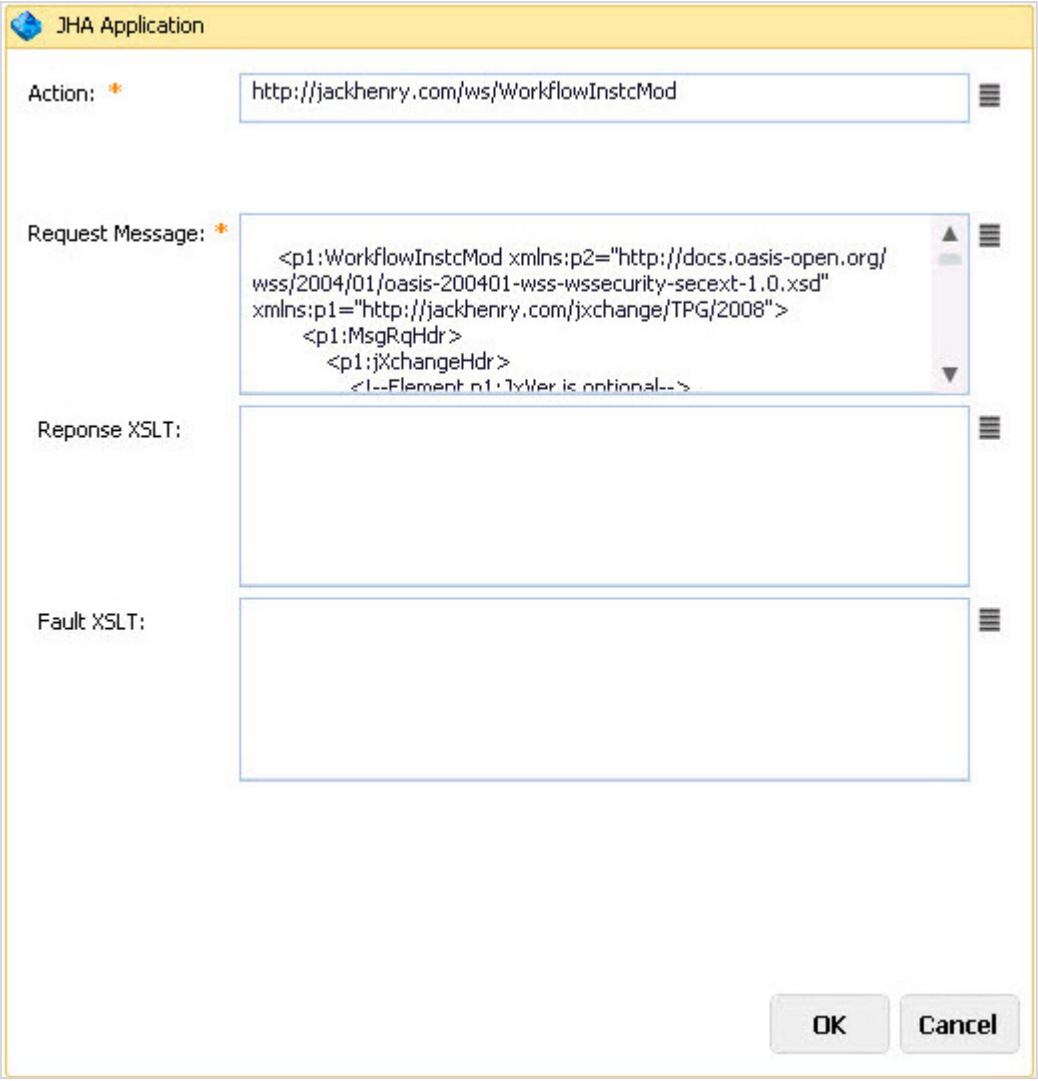

8. Enter the response message in the **Response XSLT** text box.

   The response message allows you to map a response to a variable and use the result.

9. Enter the fault mapping message in the **Fault XSLT** text box.

   The fault mapping allows you to quickly view and fix the errors when/if the workflow faults.

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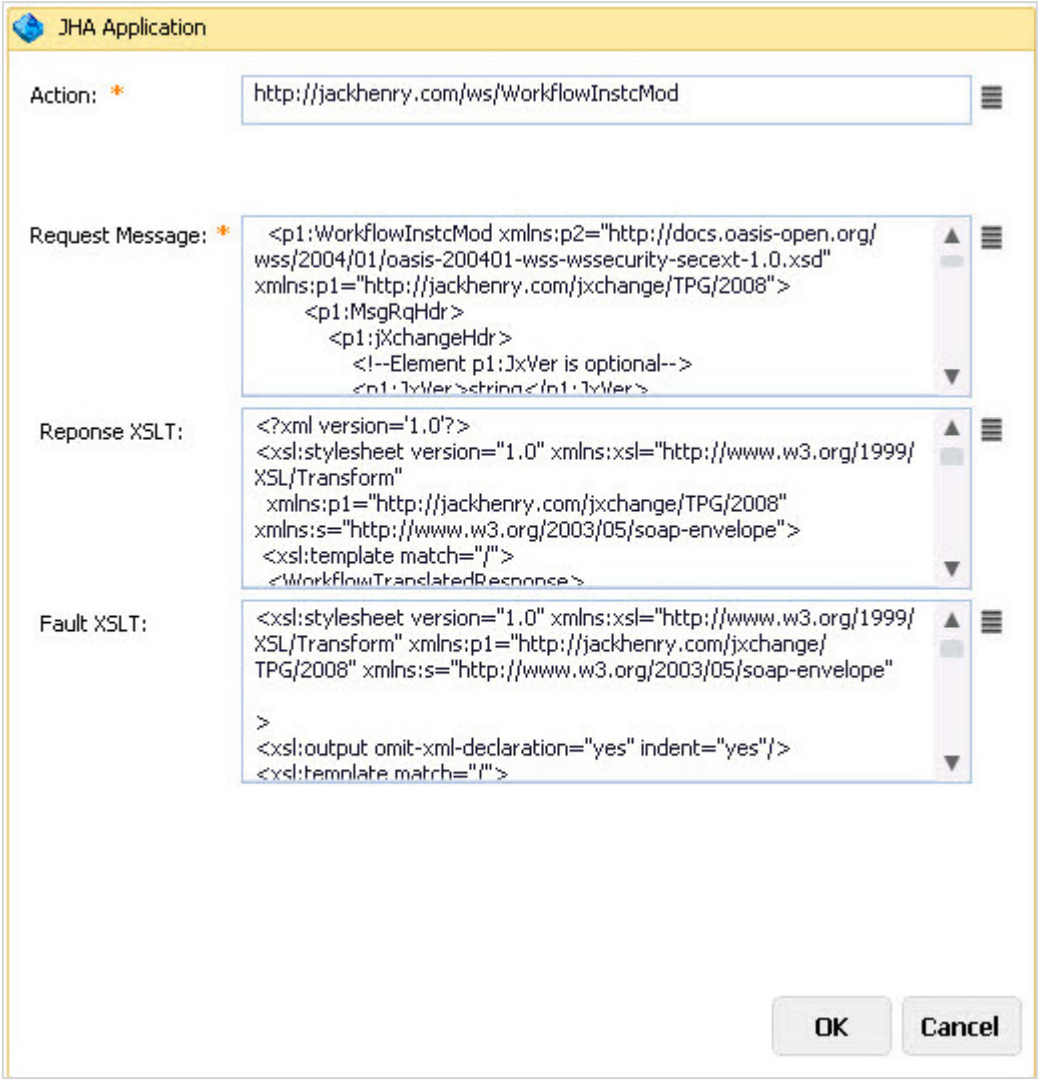

10. Click **OK**.

Data Query Activity

The **Data Query** activity enables access to a database.

Data Sources must be defined for an institution in the jXchange Management Console (JMC) by a system administrator. At least one **Data Source** must exist to implement this activity.

Fields and Functions: Data Query

The **Data Query** activity allows you to set up data queries within *jha*Enterprise Workflow. The following fields and functions are located in the *Data Query* activity.

Query Tab

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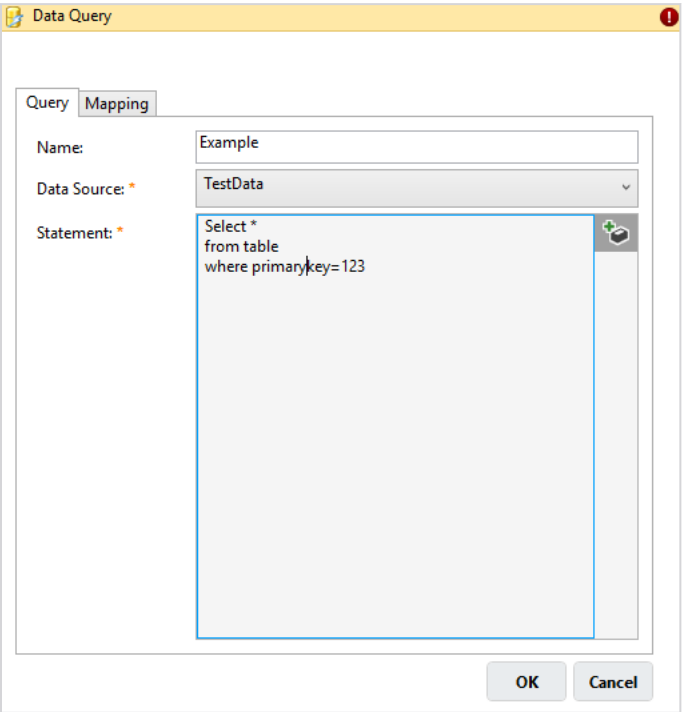


The *Query* tab allows the author to include variables as query criteria in the **SQL Data Query** activity in order to pass workflow information into that data source as a filter criteria for the results.

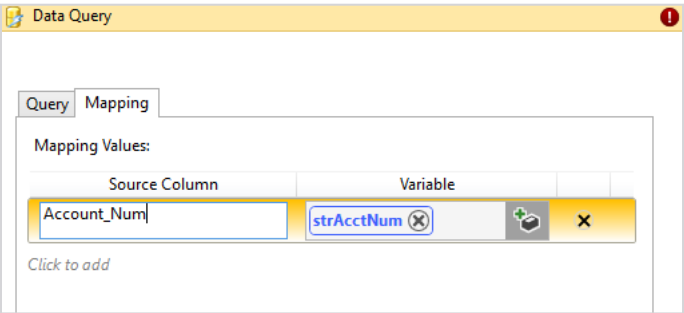
Data Source

Select from the list of the available Registered Data Source connections.

Statement

The statement must include at least one variable. Enter the statement's opening bracket/percent sign combination (i.e., <%). A drop-down list displays all available variables and tags.

Mapping Tab



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The *Mapping* tab allows the author to associate workflow variables with data elements within the query statement.

Source Column

When entering values into the **Source** column, the data element must match the data type of the variable. If not, the **Data Query** activity will fault.

Variable

Select the control's icon or enter the left variable tag (i.e., <%) to produce the field's menu. All variables defined in **Initialize** activity are available.

Adding a Data Query

1. From the **Functions** menu, select **Workflow Definition Library**.
2. Drag and drop the **Data Query** activity from the *Toolbox* onto the *Flowchart*.
3. Double-click the **Data Query** activity to provide the values.
4. Enter the necessary values in the **Name**, **Data Source**, and **Statement** fields.
5. Select the **Mapping** tab and enter the necessary information in the **Source Column** and **Variable** fields.
6. Select **OK**.

Word Merge Activity

Use the **Word Merge** activity to map workflow variables to Microsoft® Word® template fields.

Using the **Word Merge** activity creates a merged document at runtime.

Fields and Functions: Word Merge

The following fields and functions are located in the **Word Merge** activity.

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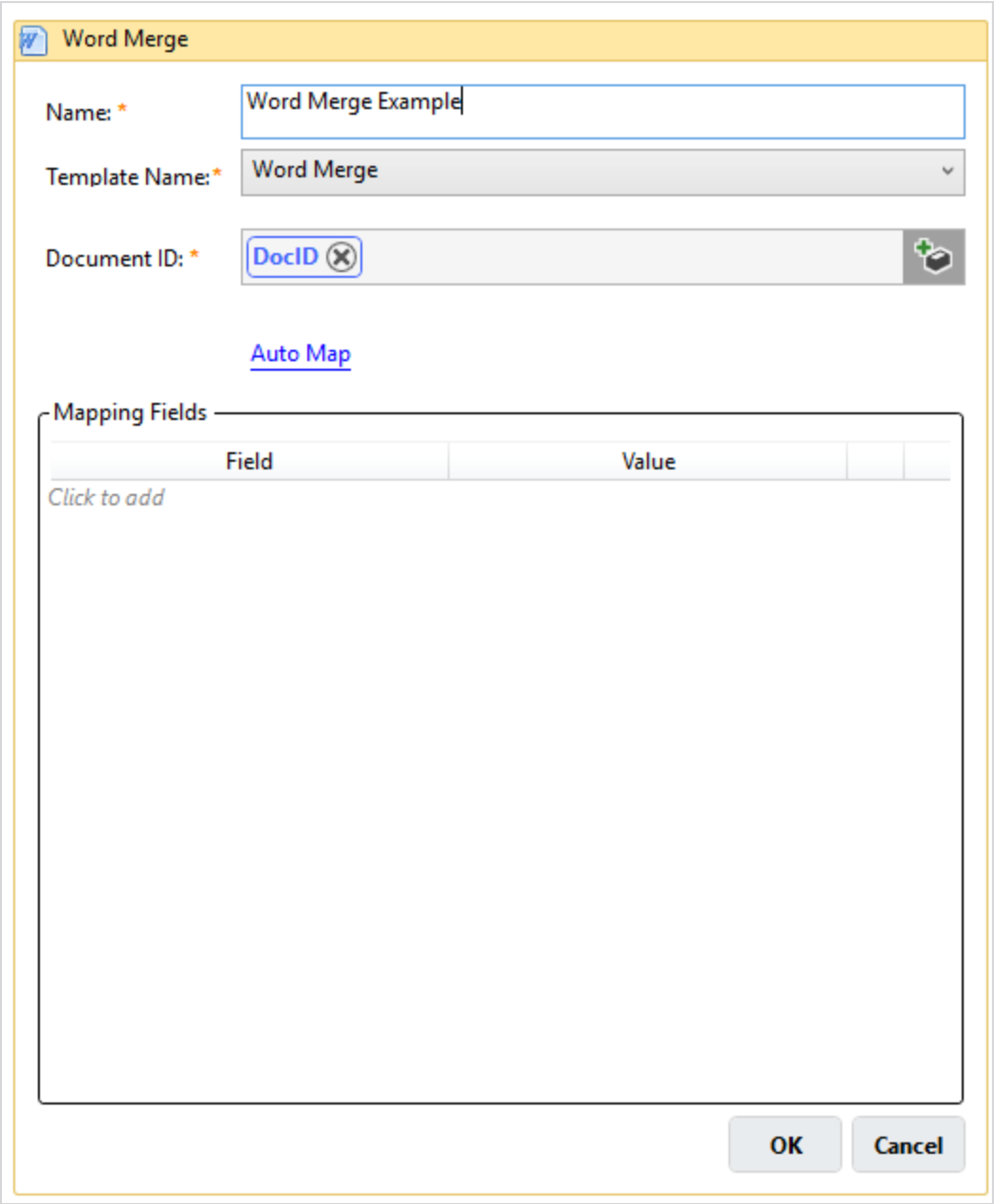

Name

Enter a unique name for the activity. This field is required.

Template Name

The **Template Name** drop-down list includes templates currently stored in *Manage Word Templates*.

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For additional information on creating Microsoft® Word templates that can be used with Synergy eSign, see the *Adding eSignature Fields to a Microsoft Word Template* topic.

Document ID

Map the **Document ID** to a string variable. Only string variables are allowed.

The **Document ID** holds the Word Merge output at run time to enable use in other activities, such as **Request eSignature** and **Document Add**.

Auto Map

The **Auto Map** link appears if there are no **Mapping Fields** yet or there are **Mapping Fields** changes.

If the **Word Merge Field Name** is the same as the **Variable Name**, then **Auto Map** creates the **Mapping Fields** entry.

If the variable name does not exist, then **Auto Map** creates both the variable (as a string that appears in the *Variables* panel) and a **Mapping Fields** entry.

> **NOTE**
> **Auto Map** does not create variables or **Mapping Fields** for protected words, such as *String*, *Now*, etc.

Mapping Fields

Field

The user can select a target field from the Word template. The system automatically generates a list of the fields defined in the Word template. The names of these fields are listed in the combo box menu.

Value

Manually enter a variable name already created in **Initialize Activity** or use the IntelliSense control to select a variable or create a new variable.

Value outputs as a string in the Microsoft® Word document, regardless of the variable type in **Mapping Fields**.

> **NOTE**
> If the converted output of the non-string value is not desired, use an **Assign Activity** to modify it. In an **Assign Activity** preceding the **Word Merge Activity**, specify the output format with **ToString**. In the **Word Merge Mapping Fields**, use this formatted string variable in place of the non-string variable.

Creating a Word Merge Activity

1. From the **Interact** section of the *Workflow Designer*, drag and drop the **Word Merge** activity onto the *Flowchart*.

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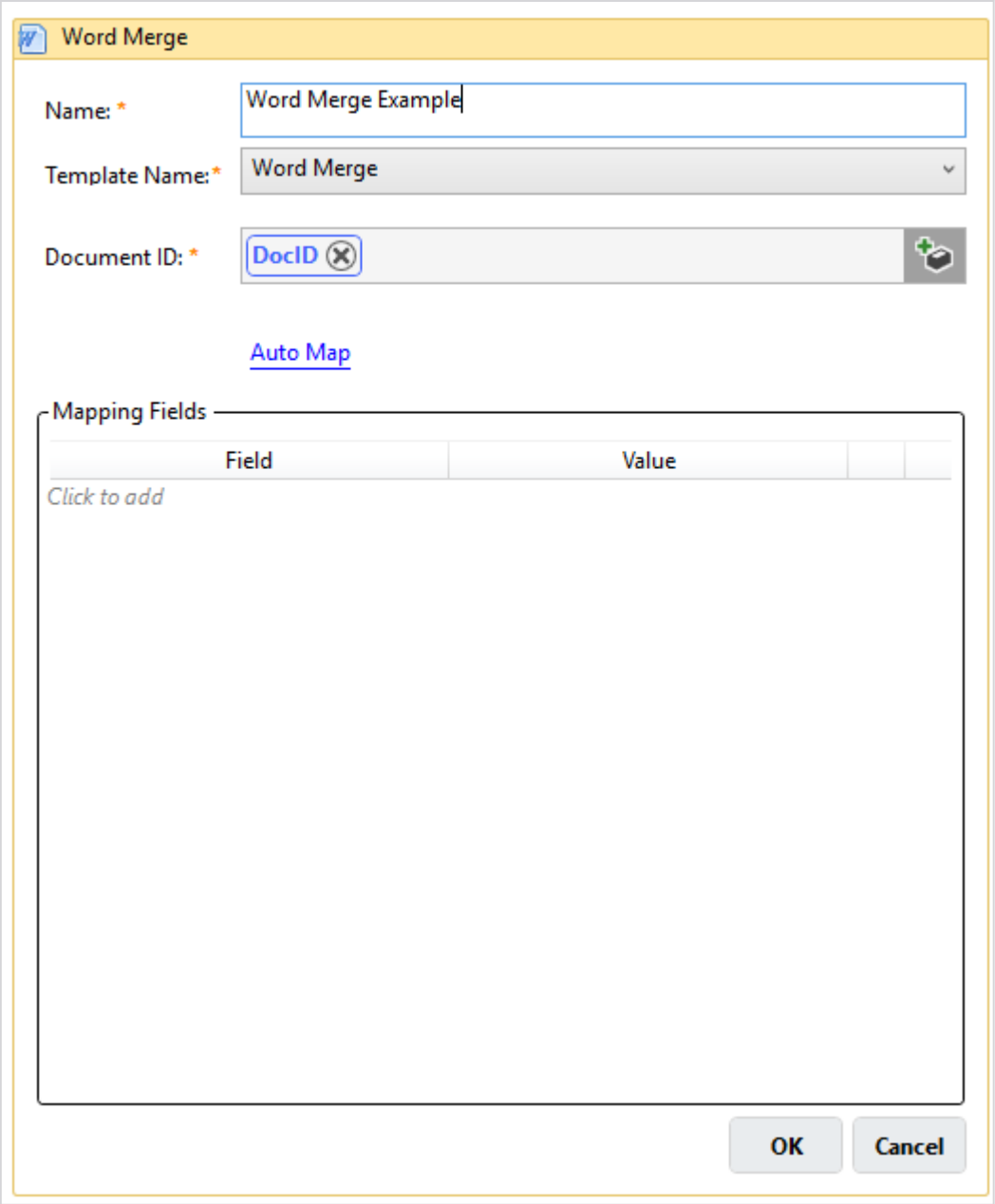
2. Double-click the *Word Merge* activity to open it in edit mode.
   The *Word Merge* editing window appears.



3. Enter the **Name**.
4. In the **Template Name** drop-down menu, select a template currently stored in *Manage Word Templates*, and then select **OK**.
5. Map a string variable in the **Document ID** field.
6. Select a string value from the **Field** drop-down menu.

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7. Set a variable **Value** for each **Field**.

Document Add Activity

Use the **Document Add** activity to set parameters for sending a document and mapping its indices to a content management system, such as Synergy.

If your institution uses Synergy, use the **Document Add** activity to send output of the **Word Merge** or **eSignature** activities to the archive. You can also optionally attach the output to a running workflow instance.

If your institution uses Iris, use the **Document Add** activity to attach output of the **Word Merge** activity to a running workflow instance.

> **NOTE**
> Only Synergy or Iris can be configured to use **Attachments**, not both. Synergy and Iris are mutually exclusive.

Creating a Document Add Activity

1. Select the **Document Add** activity on the **Toolbox**.

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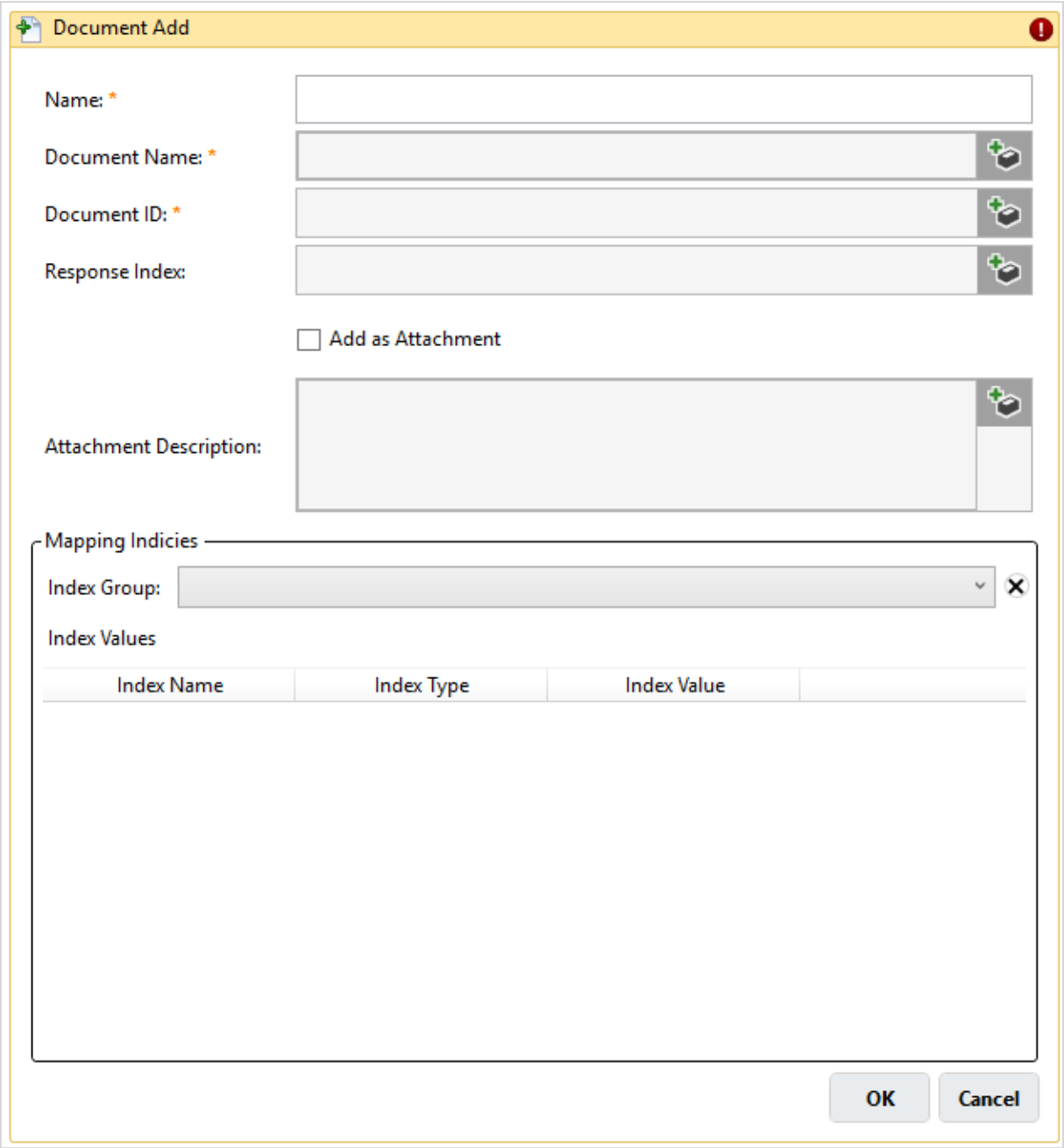

2. Enter the **Name** of the activity.
3. Enter the **Document Name**.

   Enter text that uniquely identifies the document. Variables can be used in the name. This field is required.
4. Map to a string variable in the **Document ID** field.

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The **Document ID** variable should be the same variable used in the preceding Word Merge Activity.

5. Enter the **Response Index**.

   Only string variables are allowed in this field.

   > **NOTE**
   > The author can map the index value for the stored document (returned by the content management system) to an author-created string variable. The author can manually enter the variable or select a string variable from the **IntelliSense** control. The author can also use the **IntelliSense** control to create a variable.

6. Select **Add as Attachment**, if desired.

   In the **Attachment Description** field, enter information that describes the attachment (this field is optional).

   Selecting this check box creates a link to the stored document in the *Attachment* pane at run time. Information entered in the **Attachment Description** field appears in the **Details** > **Attachments** panel.

7. Select an index group from the **Index Group** drop-down menu.

   You can select index groups that are currently stored in *Manage Index Groups*. If the selected index group has values, they appear in the *Index Values* table.

   Index Group is required if your institution uses Synergy for attachments. **Index Group** is optional if your institution uses Iris for attachments.

   Information used in an **Index Group** does not appear in the *jha*Enterprise Workflow user interface for Iris attachments. It is only stored in the database.

8. Select **OK**.

Flow Activities

The *Flow* list contains activities that control the flow on the design surface.

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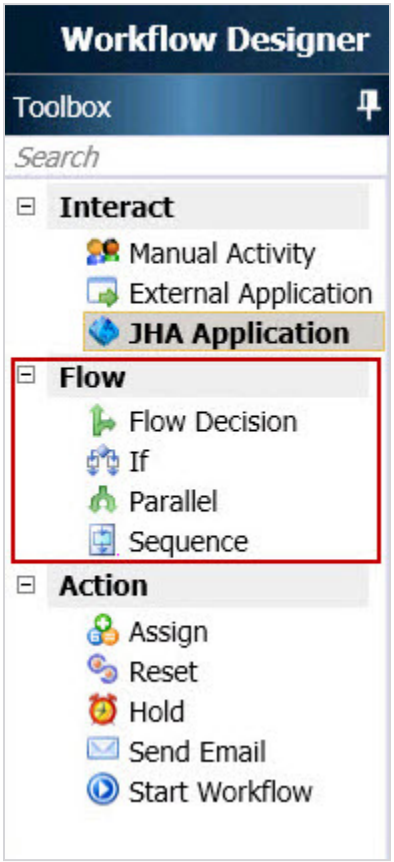

- **Flow Decision** - Use this activity in a workflow definition if you need conditional processing.
- **If** - Use this activity in a workflow definition when you only need one activity if **True**.
- **Parallel** - Use this activity in a workflow definition to allow multiple branches to occur concurrently.
- **Sequence** - Use this activity in a workflow definition if you need more than one activity to occur in the branch.

> **TIP**
> The **Flow Decision** allows you to branch off the workflow. In contrast, the **If** activity does not. **If** allows you to do everything that is within the directional context of the **If** activity and then proceed on to the single branch that immediately follows the **If** activity.

All activities can be added to a workflow definition by dragging and dropping them onto the *Flowchart*.

Flow Decision Activity

The **Flow Decision** activity allows conditional processing in a workflow definition. Use a **Flow Decision** in a workflow when the next activity in the flow is dependent upon conditional

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circumstances. One connected branch executes if the logical condition evaluates to **True** and the other branch executes if the logical condition evaluates to **False**.

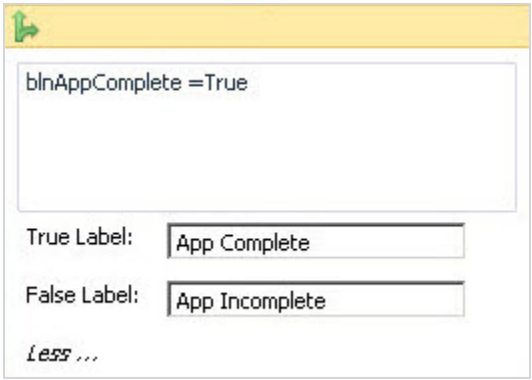
These are examples of the logical operators *And* and *Or*:

- *T and T=T*, *T or T=T*
- *T and F= F*, *T or F=T*
- *F and T=F*, *F or T=T*
- *F and F=F*, *F or F=F*

Decisions are made based on variables. These are the valid operators:

- = (equal to)
- < > (not equal to)
- < (less than)
- < = (less than or equal to)
- > (greater than)
- > = (greater than or equal to)

> **NOTE**
> *jha*Enterprise Workflow supports more operations than what is in this list.



Use parenthesis to build complex statements. For example, *((Variable 1 = 1) OR (Variable 1 = 2)) AND (Variable 2 = YES)*

VB Expressions

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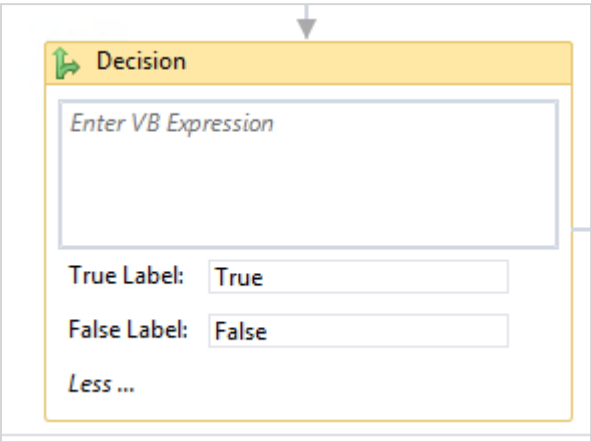
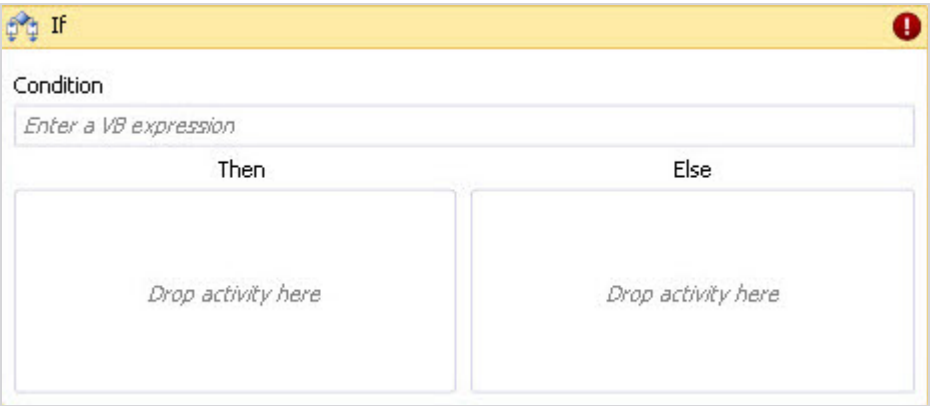


The *Flow Decision* activity supports the use of VB expressions. A VB expression can be a collection of two or more terms that perform a mathematical or logical operation. The terms are usually variables combined with an operation to determine results.

Additional information about VB expressions with strings can be found at: *https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/functions/string-functions*

If Activity

The **If** activity is helpful when you only need one activity if **True**.



If allows you to do everything that is within the directional context of the **If** activity and then proceed on to the single branch that immediately follows the **If** activity.

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VB Expressions

The **If** activity supports the use of VB expressions. A VB expression can be a collection of two or more terms that perform a mathematical or logical operation. The terms are usually variables combined with an operation to determine results.

Additional information about VB expressions with strings can be found at: *https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/functions/string-functions*

Parallel Activity

The **Parallel** activity allows you to break a flow into several branches. Each branch executes independently and simultaneously.

Use the **Terminate Early If** option to complete the parallel activity and end any executing branches if its conditions are met. However, if the conditions are not met, then all branches must execute for the parallel activity to complete.

> **NOTE**
> You can add a maximum of 30 activities inside a parallel activity.

This image shows two activities inside a parallel activity.

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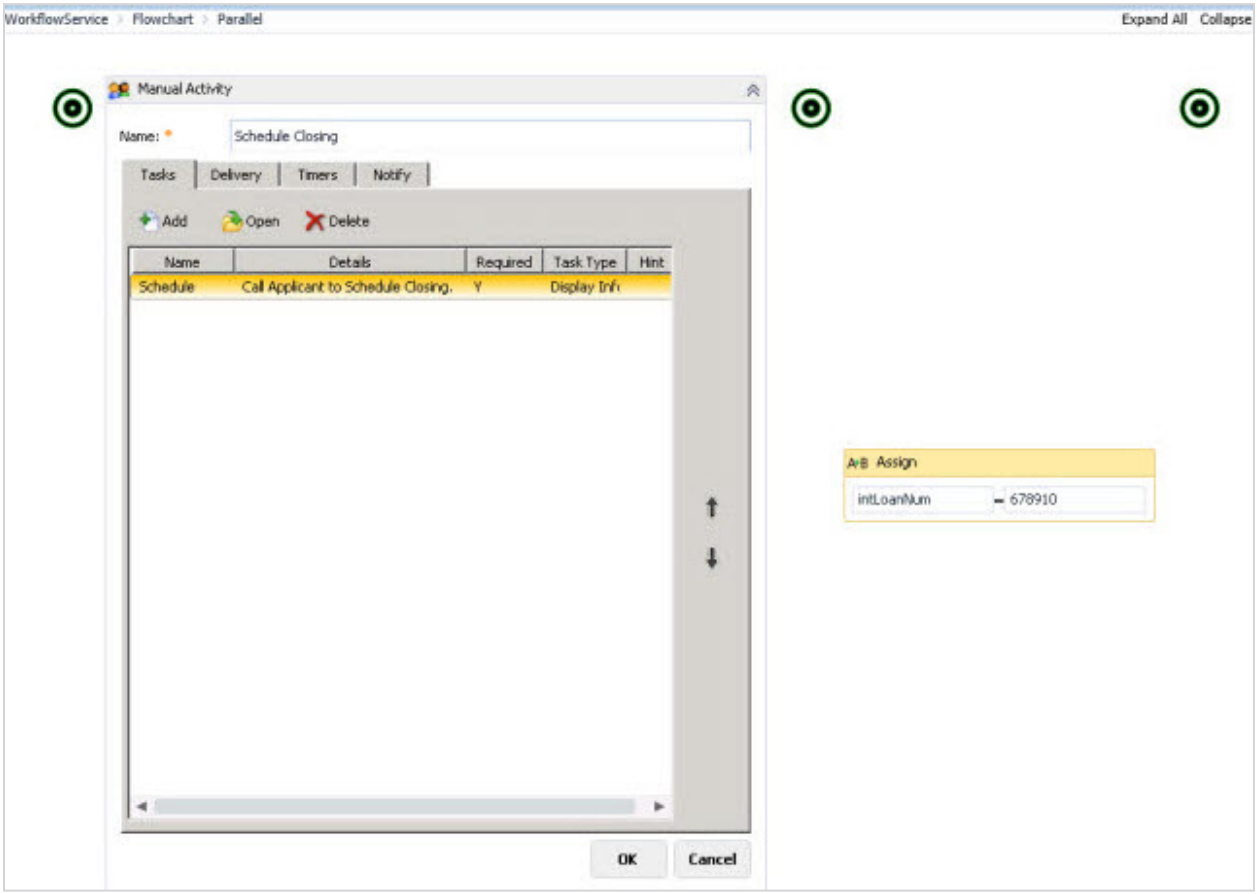

To add activities, drag and drop it directly onto the middle of the green bull's-eye.

> **CAUTION**
> You cannot add a **Flow Decision** to a **Parallel** activity.

VB Expressions

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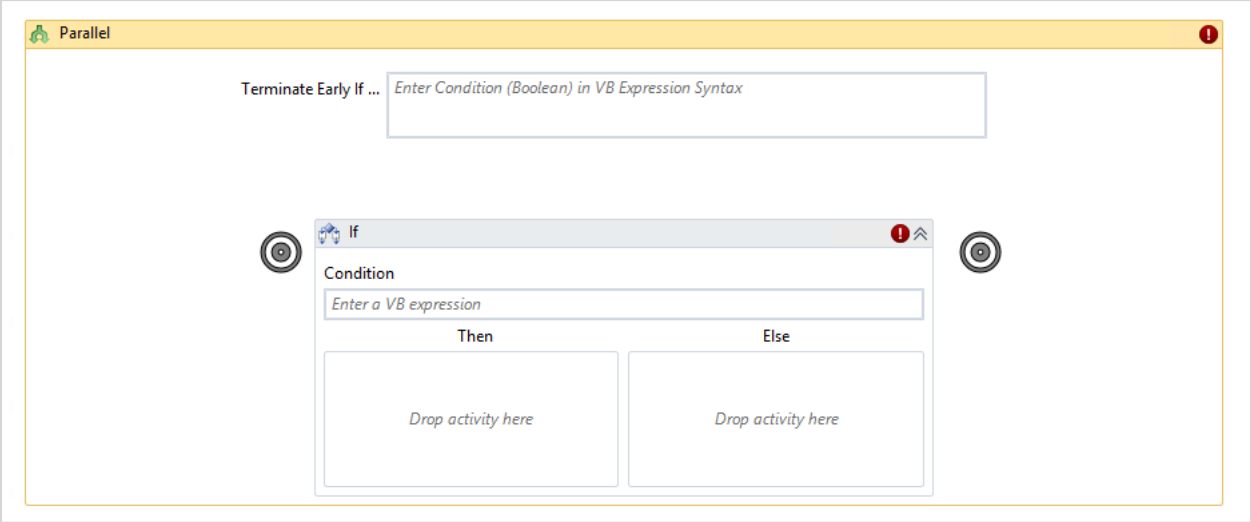

The **Terminate Early If** option in a **Parallel** activity supports the use of VB expressions. A VB expression can be a collection of two or more terms that perform a mathematical or logical operation. The terms are usually variables combined with an operation to determine results.

Additional information about VB expressions with strings can be found at: *https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/functions/string-functions*

Sequence Activity

The **Sequence** activity is a container for when you need to do more than one activity in a branch.

Action Activities

The *Action* list contains activities that allow you to perform an action when you get to this step.

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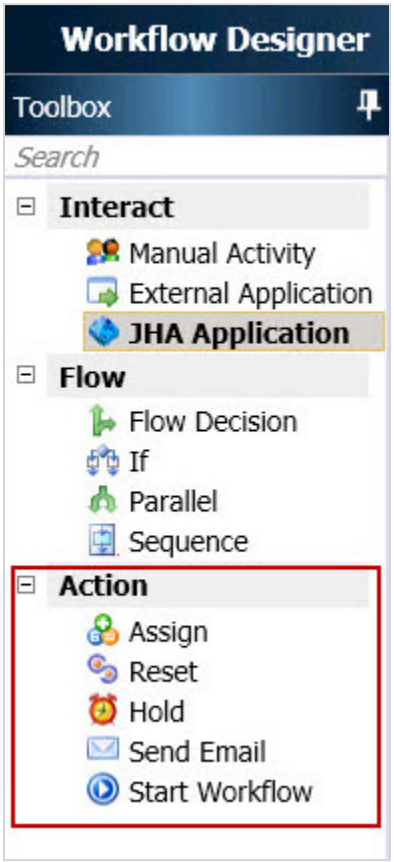
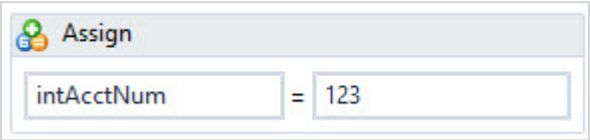


- **Assign** - Use this activity in a workflow definition to set a variable value.
- **Reset** - Use this activity in a workflow definition to assign a variable a null value at a predefined step within the workflow.
- **Hold** - Use this activity in a workflow definition to place a hold on an activity for a configured duration.
- **Send Email** - Use this activity in a workflow definition to send an email.
- **Start Workflow** - Use this activity in a workflow definition to start a workflow.

All activities can be added to a workflow definition by dragging and dropping them onto the *Flowchart*.

Assign Activity

The **Assign** activity sets a value to a specified variable.



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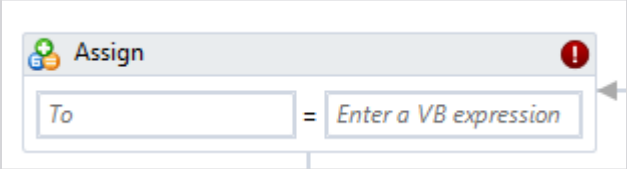
> **TIP**
> When entering a decimal value, you must enter a *D* after the value.

VB Expressions



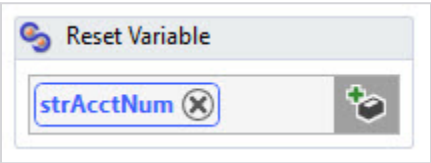
The **Assign** activity supports the use of VB expressions. A VB expression can be a collection of two or more terms that perform a mathematical or logical operation. The terms are usually variables combined with an operation to determine results.

Additional information about VB expressions with strings can be found at: *https://docs.microsoft.com/en-us/dotnet/visual-basic/language-reference/functions/string-functions*

Reset

The **Reset** activity allows you to set a variable back to its default value at a predefined step within the workflow.

Use **Reset** to assign any variable type back to its default value, even if it was assigned previously in the workflow instance.



Fields and Functions: Hold Activity

The **Hold** activity stops the workflow from moving on to the next defined activity for either a specified amount of time or until the hold is manually released.

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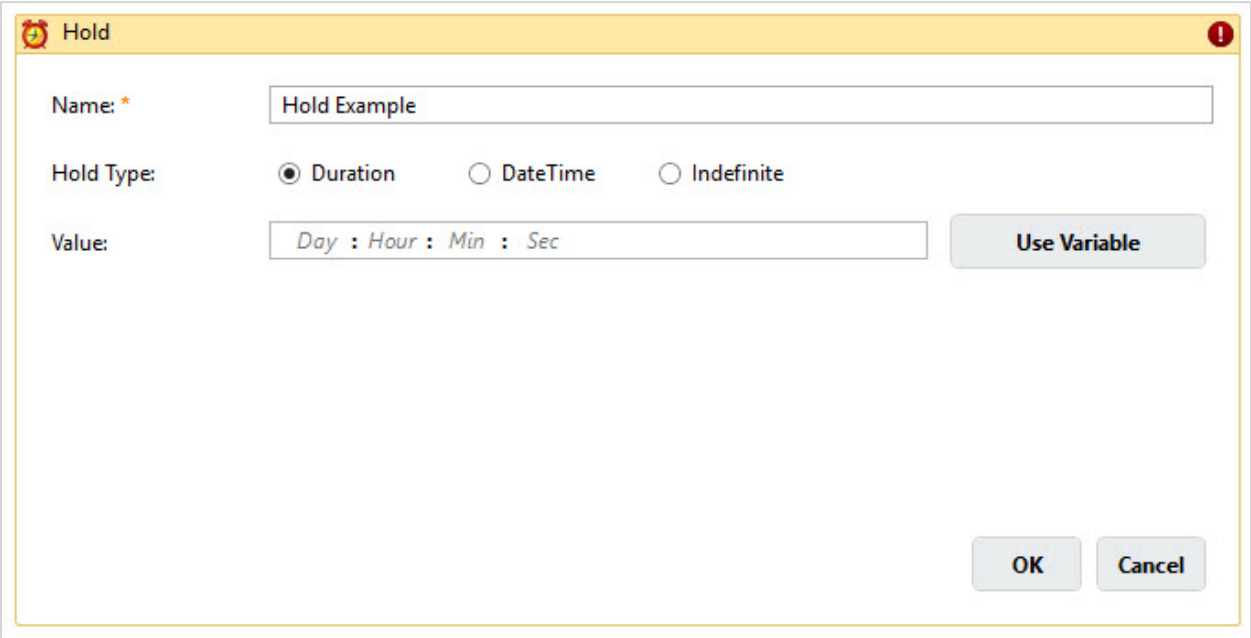

Name

Enter the name of the activity.

Hold Type

Hold Type has options for:

- **Duration** - allows for a specified value or selection of a variable. **Duration** is the default value for **Hold Type**.
- **DateTime** - allows for the selection of a value using a date/time field or selection of a variable.
- **Indefinite** - requires a manual release by an authorized user in *Workflow Monitor*.

> **NOTE**
> When using a variable to set the **Hold Duration**, the system expects a string variable with value in the *days:hours:minutes:seconds* format. For example, enter a 15-minute duration as *00:00:15:00*.

Value

When using a variable to set the **Value**, be sure the variable is in the proper format. The system expects a string variable with value in the *days:hours:minutes:seconds* format. For example, a 15-minute duration is represented as *00:00:15:00*.

Send Email Activity

A **Send Email** activity sends an email in a workflow to an assigned recipient.

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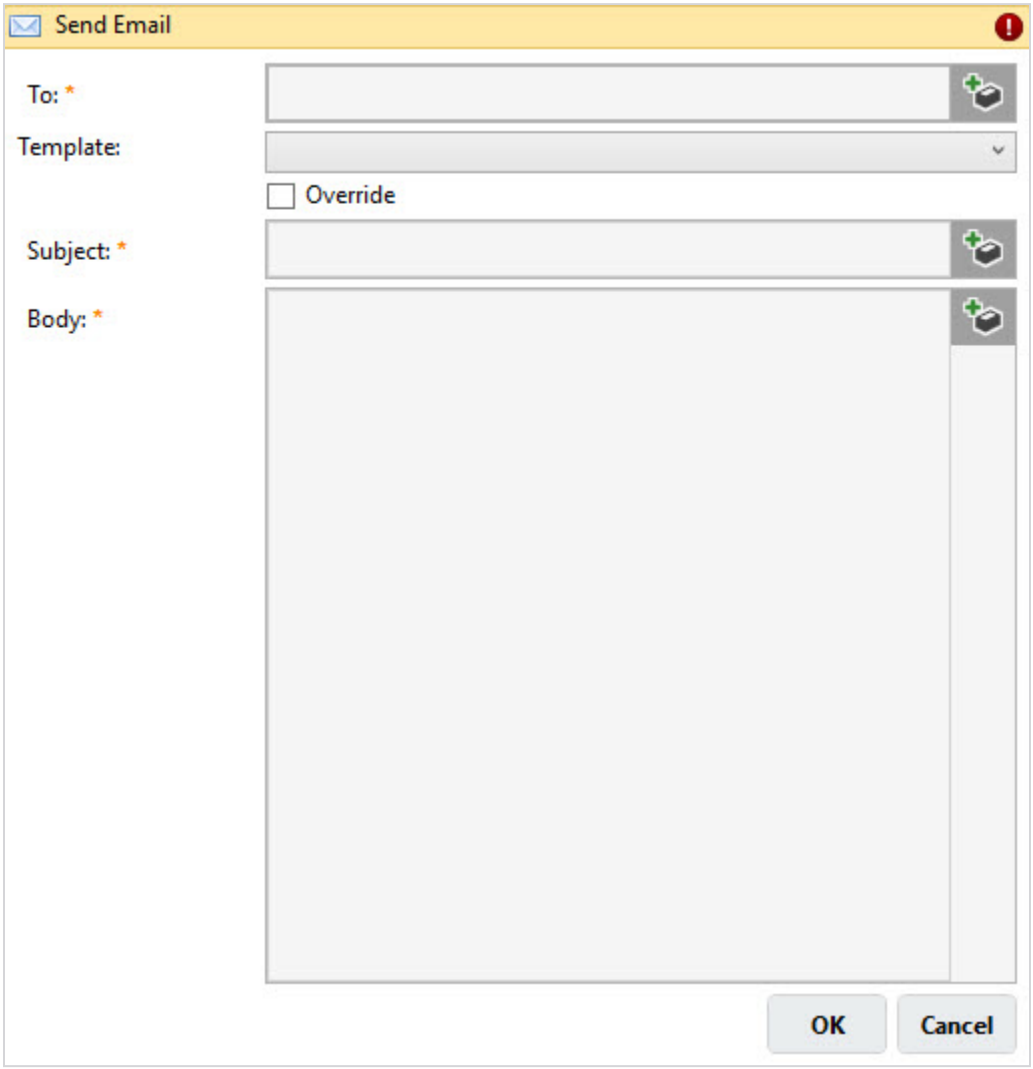

You can set the **To** value to a string variable. The string variable must contain either a single email address or the name of an email group. **To** can also be set to the **Originator** system variable.

> **NOTE**
> Setting **To** to the **Originator** variable assumes that the user name is an email address. If the user names are not email addresses, then using **Originator** does not deliver an email.

> **CAUTION**
> This activity does not parse multiple email addresses out of a single variable. To use a variable to send emails to multiple email addresses, create an email group through your email provider or use multiple variable values separated by a semi-colon (;).

You can customize the subject and body of the email or use an email template.

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You can choose from an existing email template (created by administrators) or you can select **Override** to compose a custom email. This activity is typically used to allow a workflow to email information about a process.

When the **Override** check box is selected, the **Template** drop-down menu is unavailable. To change the **Template**, clear the **Override** check box.

Start a Workflow

The **Start Workflow** activity allows you to start a workflow automatically when the workflow instance reaches this activity. **Start Workflow** can be set to pass along its variables, comments, and attachments from the source workflow to the destination workflow.

Configure Attachments

Select one of the following, as necessary.

- *Start a Workflow for each attachment*.
- *Start a Workflow for all attachments*.

Include Comments

Include comments from the parent workflow.

Terminate Source Workflow

This terminates the parent workflow instance upon the start of the child workflow instance.

Hold Until Complete

This creates a hold for the parent workflow instance until the completion of the child workflow instance.

> **NOTE**
> If multiple workflows are started, as with **Start a Workflow** for each attachment, then the first child workflow that completes releases the hold on the parent workflow. **Hold Until Complete** does not require all child workflows to complete to release the hold on the parent workflow.

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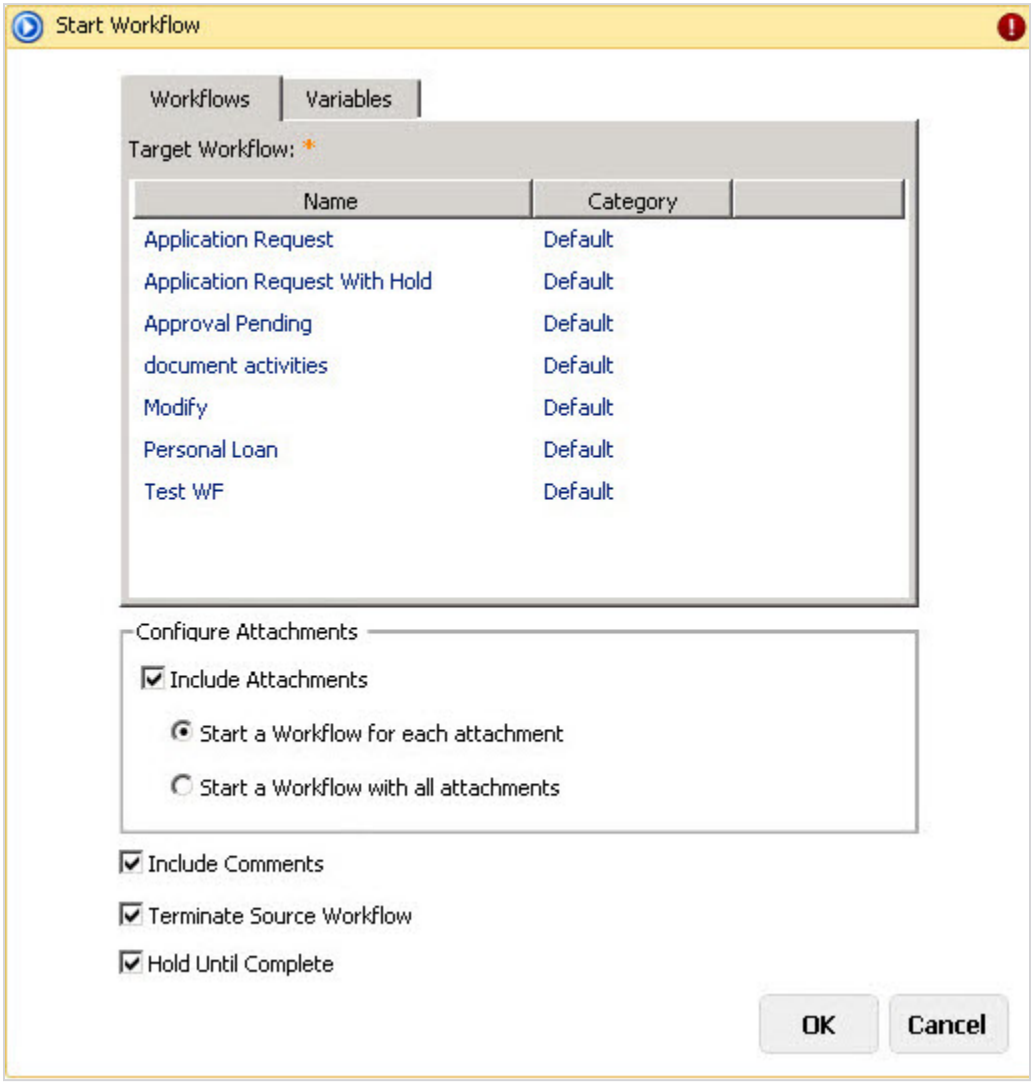

Approvals Activity

A system administrator must configure **Remote Approval** in the jXchange Management Console for the **Remote Approval** activity to appear in the *Toolbox*. If an institution does not want to use **Remote Approval**, *jha*Enterprise Workflow can still be used.

The **Remote Approval** activity is used to present information to approvers on the remote approval site. Individuals that are crucial to business processes can use the remote approval site to review and provide feedback on workflow items without logging on to Xperience to access the *Workflow Queue*.

Remote Approval activities can only be viewed and interacted with on the remote approval site. These activities do not appear in the *Workflow Queue* like a **Manual Activity**.

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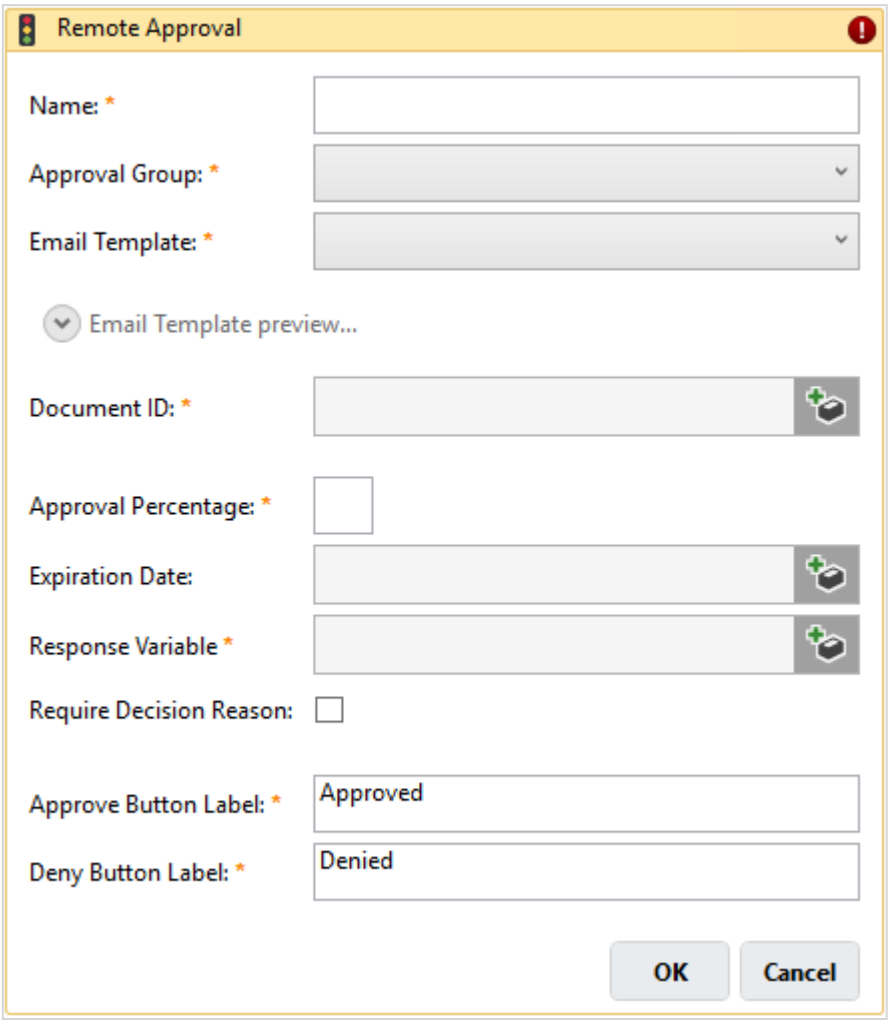
Creating a Remote Approval Activity

1. Select the **Remote Approval** activity on the *Toolbox*, and then drag it onto the *Flowchart* design surface.

> **NOTE**
> The **Remote Approval** activity cannot be used in a **Parallel** activity.



2. Enter the **Name** of the activity.
   This name appears on the remote approval site.
3. Select an **Approver Group**.
   The **Approver Group** dictates who can approve or deny the request.
4. Select an **Email Template**.

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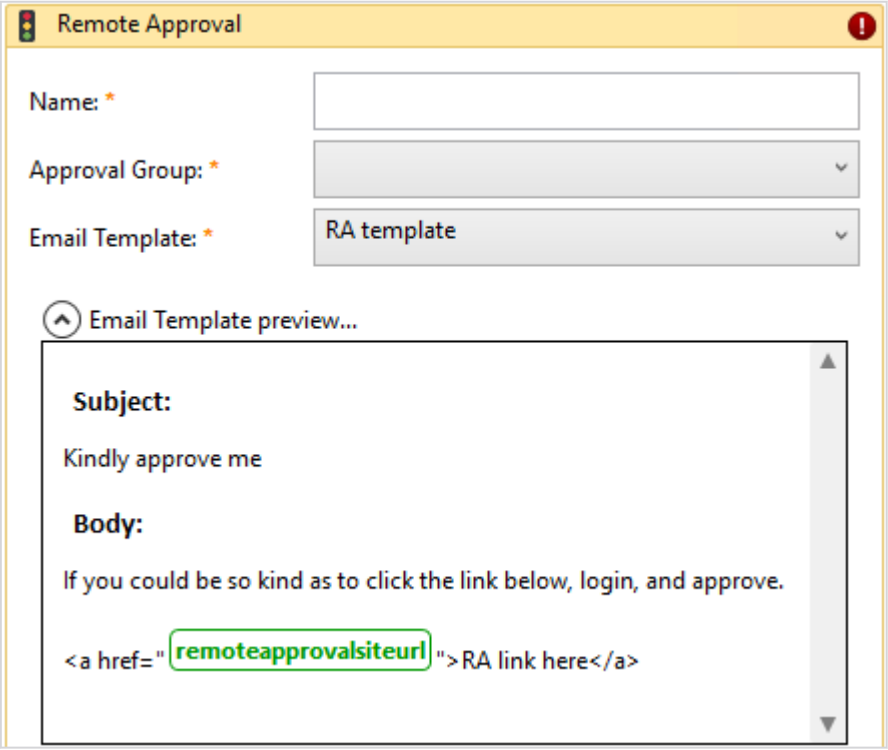
The email template is used when delivering the **Remote Approval** link to approver group members.

> **NOTE**
> The email template must contain a <%RemoteApprovalSiteURL%> system variable that is formatted to appear as a link.

Use the **Email Template Preview** arrow to expand and collapse a read-only view of the selected email template.



5. Map to a string variable in the **Document ID** field.

   The **Document ID** variable should be the same variable used in the preceding **Word Merge** activity. The **Word Merge** content contains the information that the approver is asked to either **Approve** or **Deny**.

6. Enter an **Approval Percentage**.

   The value entered must be between 1–100. This value is the minimum percentage of approvals required to exit the activity. Examples:

   - If **Approval Percentage** = 1, any approver who confirms the approval request sets the **Response Variable** to **True**, and the activity is exited.

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- If **Approval Percentage** = 100, approval is required from all members of the approver group. When 100% approval is reached, the **Response Variable** is set to **True**, and the activity is exited.
- If **Approval Percentage** = 100, any approver who denies the approval request sets the **Response Variable** to **False**, and the activity is exited.

7. Map a date/time variable in the **Expiration Date** field.

   This field is optional. If the **Expiration Date** is met but the **Approval Percentage** is not met, the **Response Variable** is set to **False**.

   > **NOTE**
   > **Expiration Date** does not use business calendars.

8. Map a boolean variable in the **Response Variable** field.

   The **Response Variable** is set to either *True* or *False*, based on the **Approval Percentage**.

9. Select the **Require Decision Reason** check box to require the approver to provide a reason for their response (whether they approve or deny the request on the remote approval site).
10. Use the **Approve Button Label** field to provide a custom button label for the **Approve** option on the remote approval site.

    Approved is the default value. This field is optional.

11. Use the **Deny Button Label** field to provide a custom button label for the **Deny** option on the remote approval site.

    Denied is the default value. This field is optional.

12. Select **OK**.

Error Handling Activities

Use **TryCatch** to capture and retry to prevent a workflow instance from falling into *Faulted Workflows*, which requires a manual **Retry**.

A workflow definition that typically works may occasionally fall into *Faulted Workflows*, due to extenuating circumstances (e.g., system load/stress/timing) when the workflow definition reaches the **Data Query** activity. A user can then go to *Faulted Workflows* and click **Retry** to send the workflow definition back through its process. The **TryCatch** activity allows users to place the **Data Query** into a system-generated retry to eliminate the step of having to manually **Retry** a workflow.

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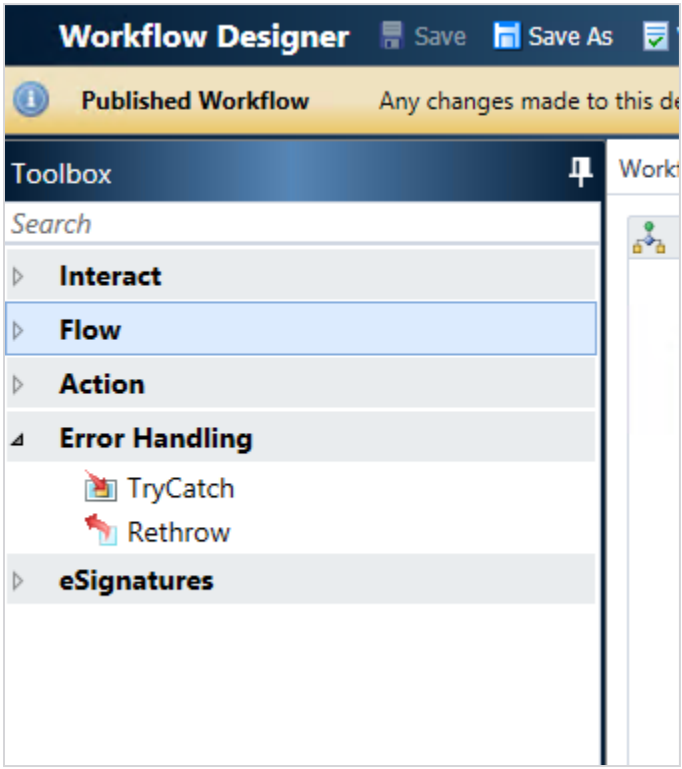

TryCatch

> **NOTE**
> A **Flow Decision** activity cannot be used within a **TryCatch** activity.

> **NOTE**
> A common name can be given to the **TryCatch** activity in the *Designer Flowchart*, but that name does not carry over into reporting.

The **TryCatch** activity contains three sections:

Try

If an activity or sequence has a chance of throwing an error (such as **Data Query**), drop the activity or sequence into the *Try* field. *Try* requires at least one *Catches* or *Finally* item.

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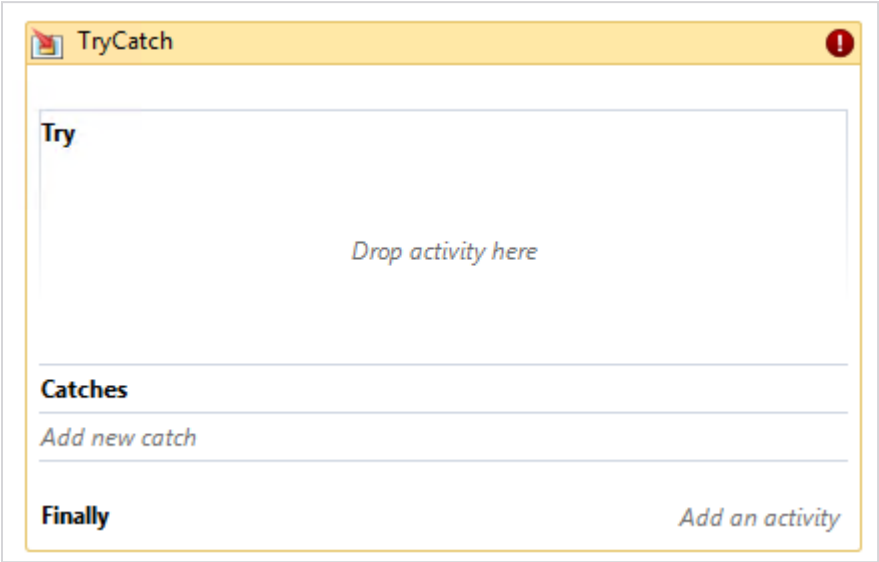
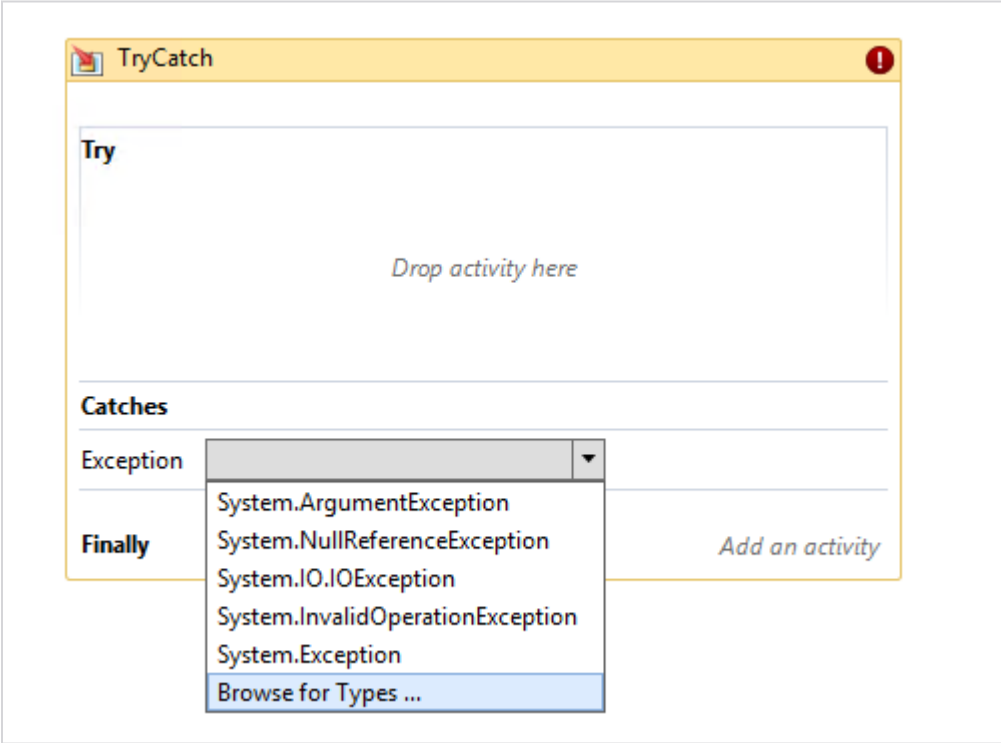


Catches

In the *Catches* section, configure the **Exception** that you wish to catch. More than one **Exception** can be set, but an **Exception** cannot be edited once it is set. To delete an **Exception**, right-click and then select **Delete** from the context menu.



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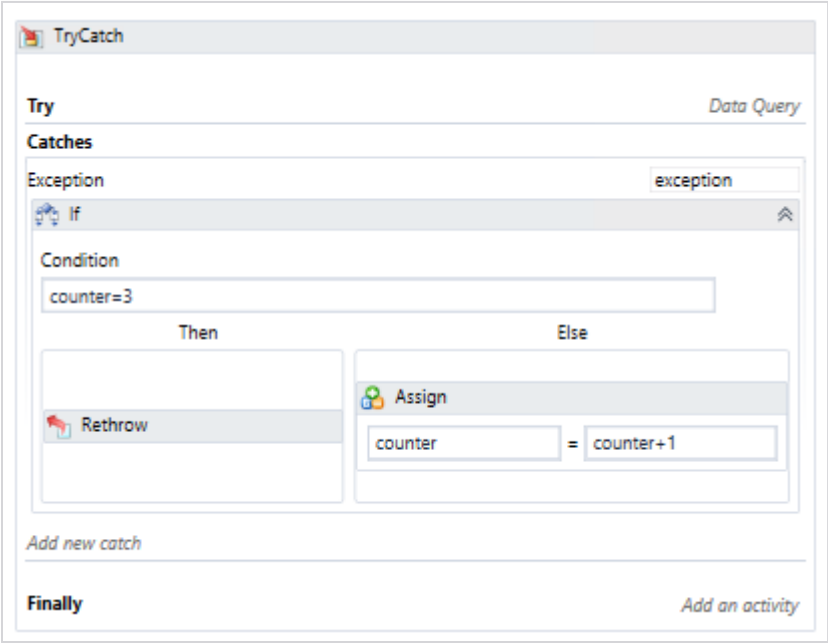
Drop the activity or sequence into *Catches* when an error occurs.



Finally

Whether an error occurs or not, add the activity or sequence to be performed after the **TryCatch** block to the *Finally* section.

Rethrow

Use the **Rethrow** activity to allow the workflow to fault and appear in *Faulted Workflows*. This activity can be useful for troubleshooting if an error persists after the configured number of retries.

The **Rethrow** activity is optional. The **Rethrow** activity can only be used within a **TryCatch** activity.

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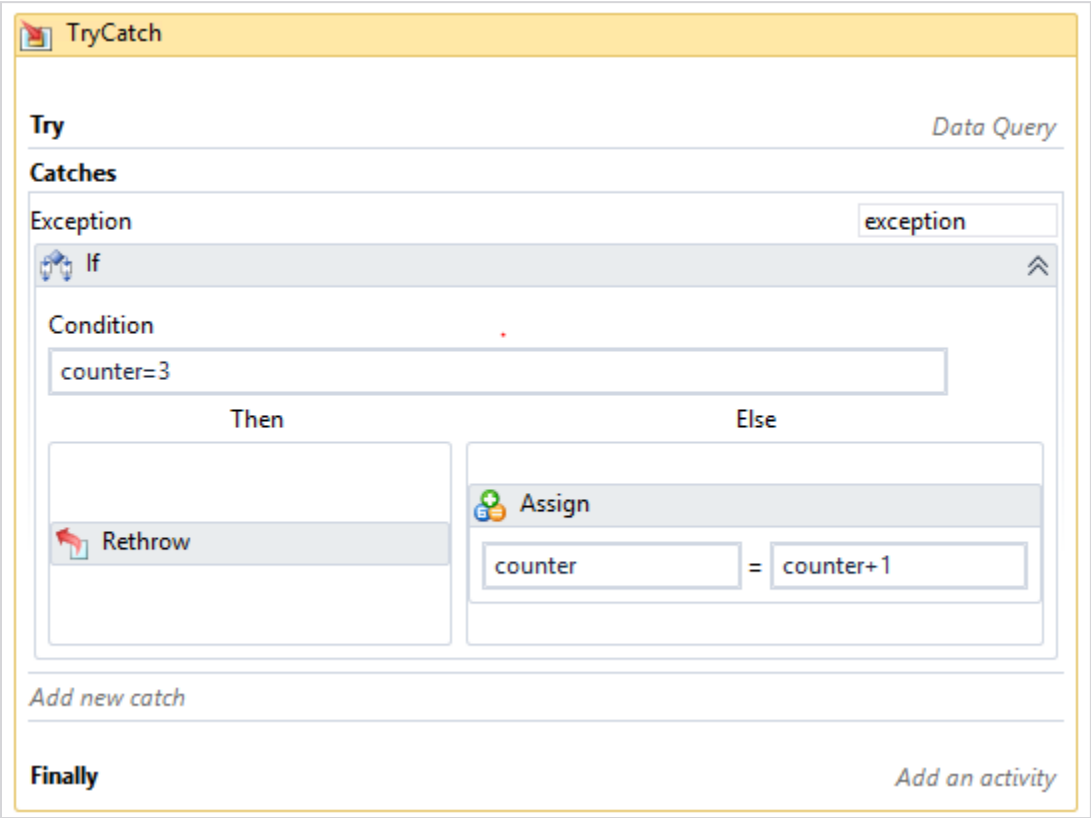
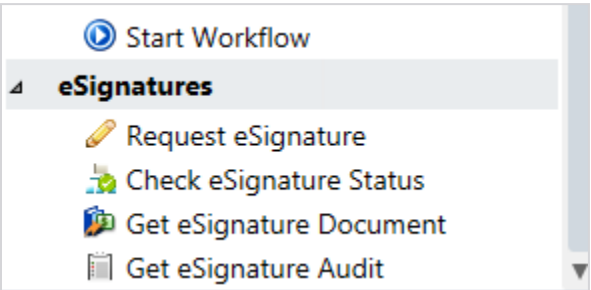


eSignature Activities

The **eSignatures** list contains activities that allow you to utilize Synergy eSign functionality.



- **Request eSignature** - Use this activity to submit a Word Merge document (created in a previous activity) for electronic signature.
- **Check eSignature Status** - Use this activity to check if the Synergy eSign session is complete.

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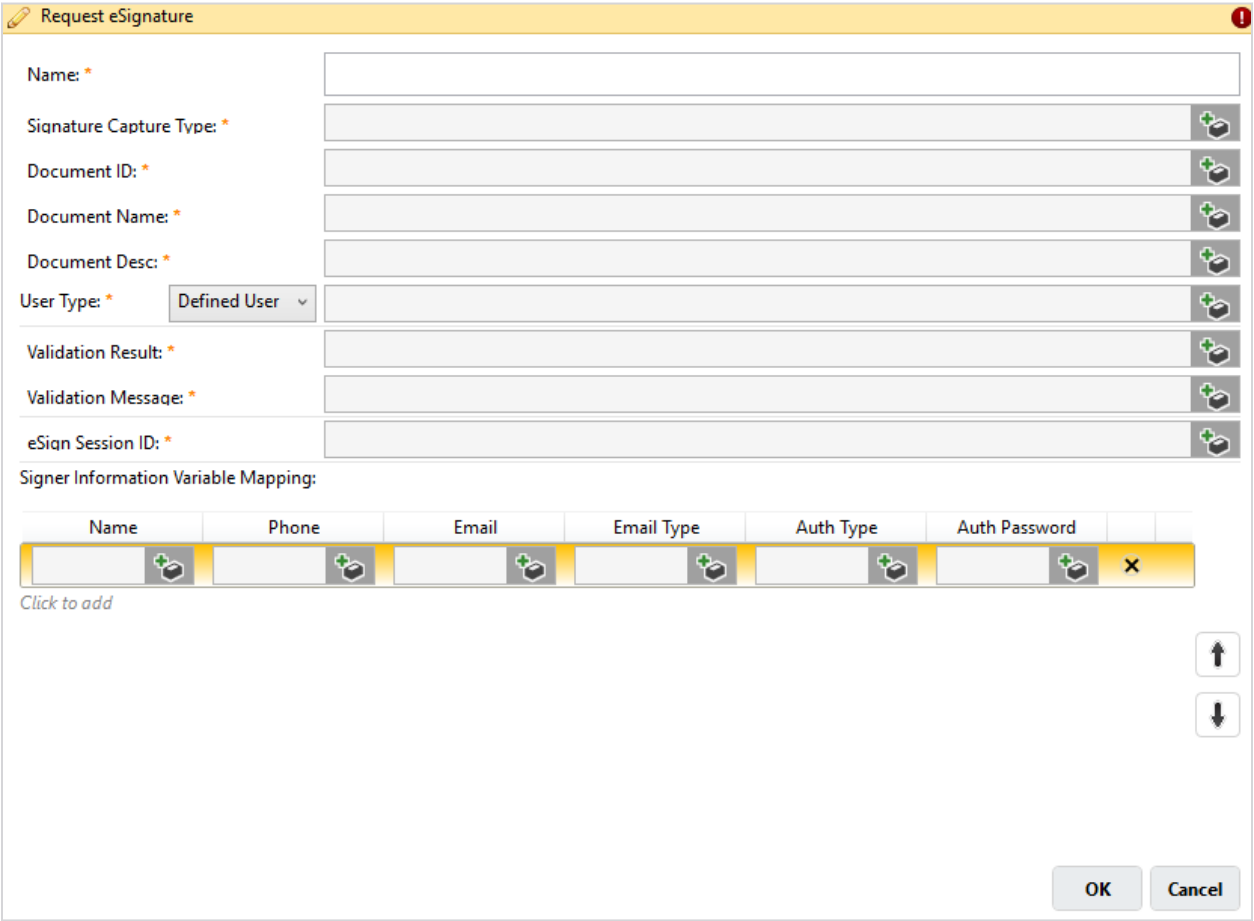
- **Get eSignature Document** - Use this activity to retrieve the *Signed Document*, which enables archival in Iris or Synergy Enterprise Content Management when using a **Document Add** activity.
- **Get eSignature Audit** - Use this activity to retrieve the *Audit Report* for the signing process from Synergy eSign, which enables archival in Iris or Synergy Enterprise Content Management when using a **Document Add** activity.

Request eSignature Activity



The *Request eSignature* activity allows you to submit a Word Merge document (created in a previous activity) for electronic signature.

Field Definitions

Name

Enter the name of the activity.

Signature Capture Type

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Synergy eSign supports two types of signing or **Signature Capture Type**: *Local* (in-house) or *Remote*. If the signer is physically present, use *Local*. If the signer plans to sign digitally, use *Remote* (also known as *eSign Web*).

Document ID

This value is the *Document ID* from the Word Merge activity. Use either *AuditReport1* or *AuditReport2*.

Document Name

Provide the name of the document. Synergy eSign does accept spaces in this field.

Document Desc

Enter a short description of the document.

User Type

The **User Type** field indicates the user that creates the Synergy eSign session. If the person working the job has to log on to Synergy eSign to find the session, use the **Defined User** type.

> **TIP**
> Set the **Defined User** variable in a preceding activity.

Use the **System User** type if the person working the job does not need to log on to Synergy eSign to find the session (e.g., Remote Signature Capture Type).

Validation Result/Message

Before *jha*Enterprise Workflow generates the *Request eSignature* message to Synergy eSign, it validates that the required mapped variables have values. If any required value is missing, it is caught as a *Result=Fail* in the **Validation Message** field.

eSign Session ID

Successful responses include an **eSign Session ID**, which confirms that Synergy eSign accepted the request and started a session. This value is mapped to a variable used in subsequent eSignature activities:

- **Check eSignature Status**
- **Get eSignature Document**
- **Get eSignature Audit**

Signer Information Variable Mapping

For a signature block to appear when a document is sent to Synergy eSign, it is required to set up at least one signer in the *Request eSignature* activity.

> **NOTE**
> All signer fields in the *Request eSignature* activity require variable mapping.

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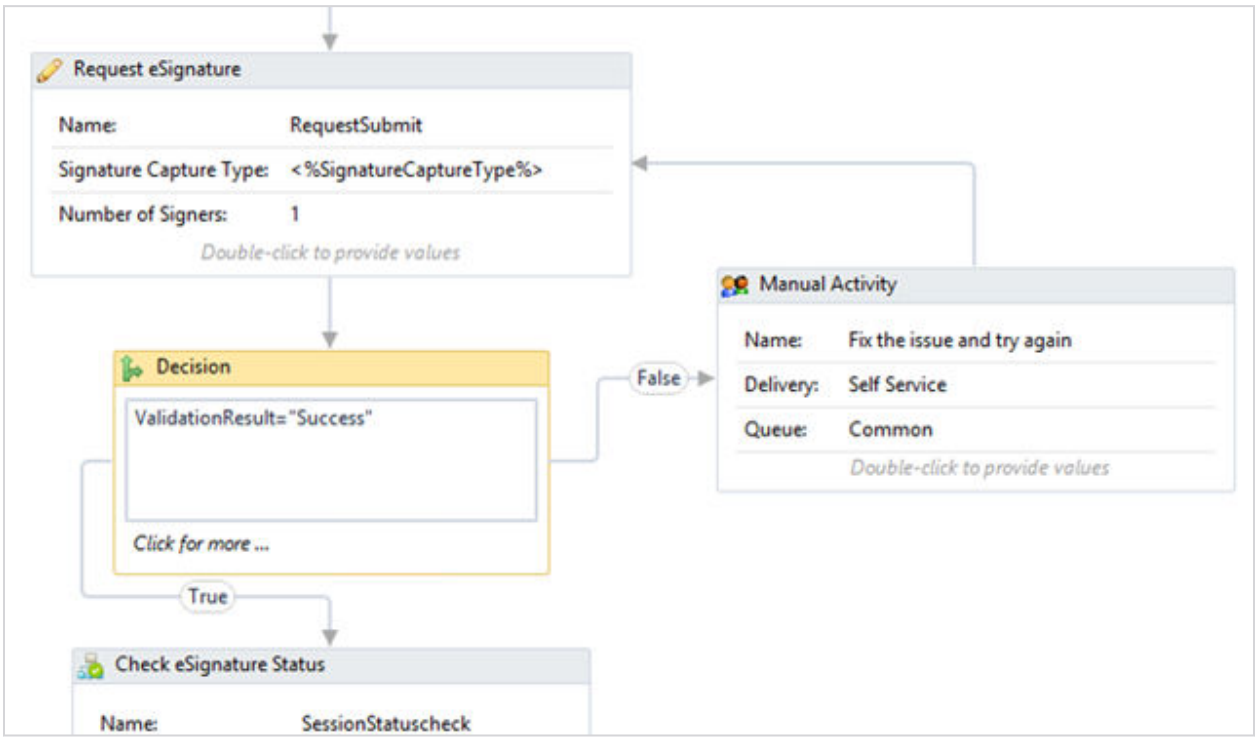
The number of signature fields in the Word® template and the number of signers in the *Request eSignature* activity must match, as all signature lines sent to Synergy eSign are required.

Best Practice



Place a **Decision** after the *Request eSignature* to check the **Validation Result**.

Only move on to the next activity when you receive a *Success* message. If you do not receive a *Success* message, then view the *Validation Message* in a Manual Activity so that the appropriate variable value can be set or changed.

Check eSignature Status Activity

Use this activity to see if the Synergy eSign session is complete.

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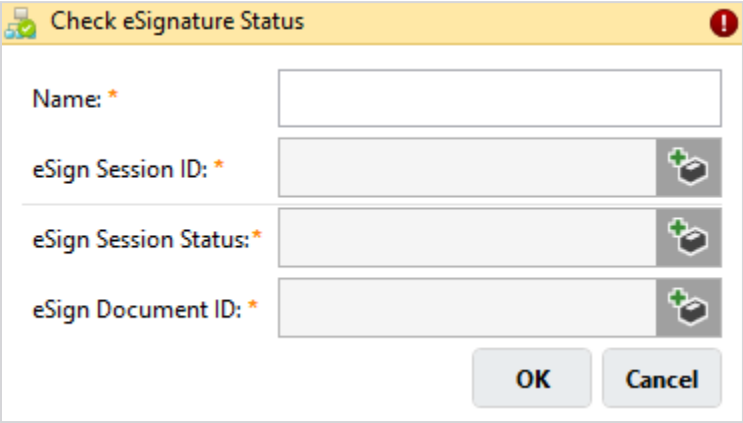


Set the **eSign Session ID** to use the variable from the **Request eSignature** activity.

> **CAUTION**
> If there is no **eSign Session ID** value or it is invalid at runtime, then a *Fault* occurs via Workflow Monitor.

If the session is *Complete*, then an **eSign Document ID** is assigned to the mapped variable. The mapped variable is used in the **Get eSignature Document** activity.

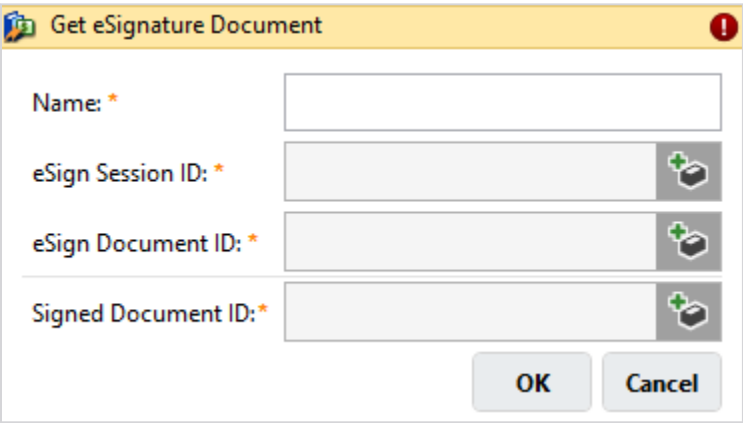
Best Practice

Put a *Decision* after the **Check eSignature Status**.

Only move on to the next eSignature activity, **Get eSignature Document**, when you receive a *Comp* status.

Get eSignature Document Activity

Use this activity to retrieve the *Signed Document*, which enables a **Document Add** activity to attach the signed document.



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Set the **eSign Session ID** to use the variable from a preceding activity.

Set the **eSign Document ID** to use the variable from a preceding activity. Use the **Signed Document ID** from the **Get eSignature Document** activity.

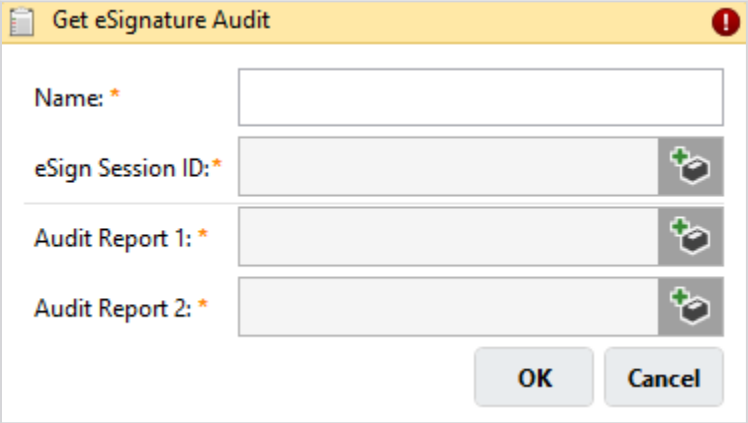
> **CAUTION**
> If the variable values are missing or invalid at runtime, then a *Fault* occurs via Workflow Monitor.

The signed document is returned and associated to the variable that is mapped to **Signed Document ID**.

> **NOTE**
> You cannot view or attach this signed document without completing a **Document Add**.

Get eSignature Audit Activity

Use this activity to retrieve the Audit Report from Synergy eSign.



Set the **eSign Session ID** to use the variable from a preceding activity.

> **CAUTION**
> If the variable value is missing or invalid at runtime, then a *Fault* occurs via Workflow Monitor.

Set up a variable for both the **Audit Report 1** and **Audit Report 2**. Synergy eSign can return more than one Audit Report, depending on how the signatures are completed.

> **NOTE**
> You cannot view or attach Audit Reports without completing a **Document Add**. Each Audit Report requires its own **Document Add** activity.

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Validation

When you create a workflow definition, click **Validate** to ensure that all activities are complete and connected in the workflow definition. You can validate your workflow definition prior to saving and publishing from the *Design Surface* screen. Validation runs automatically when you attempt to save or publish a workflow definition.

The following are examples of missing data that cause a validation error to occur:

- Lack of task
- Lack of delivery method
- Lack of connection to/from activity
- Lack of queue

Workflow Search

Workflow Search allows you to search for one or more workflow instances from the Workflow Reporting database for audit reporting purposes.

The search function uses a restrictive *AND* operator, not an inclusive *OR* operator. Using more criteria as search terms means that more has to be true to generate a result.

For example, if you search for *WF Status = Active* and *WF Ended = Jan 1 2019-Jan 31, 2019*, you will receive no results since active workflows do not have end dates.

> **NOTE**
> Depending upon your user access, you may or may not be able to view or use all of these functions.

Fields and Functions: Workflow Search

The *Workflow Search* screen allows you to search for and view details of workflow instances. The following fields and functions are on the *Workflow Search* screen.

*jha*Enterprise Workflow automatically provides one set of search criteria, *WF Status*. The values associated with this criterion's **Data Type** are *Active*, *Faulted*, *Held*, *Terminated*, and *Completed*, all of which are selected by default. You can clear these check boxes, as needed, to customize your search.

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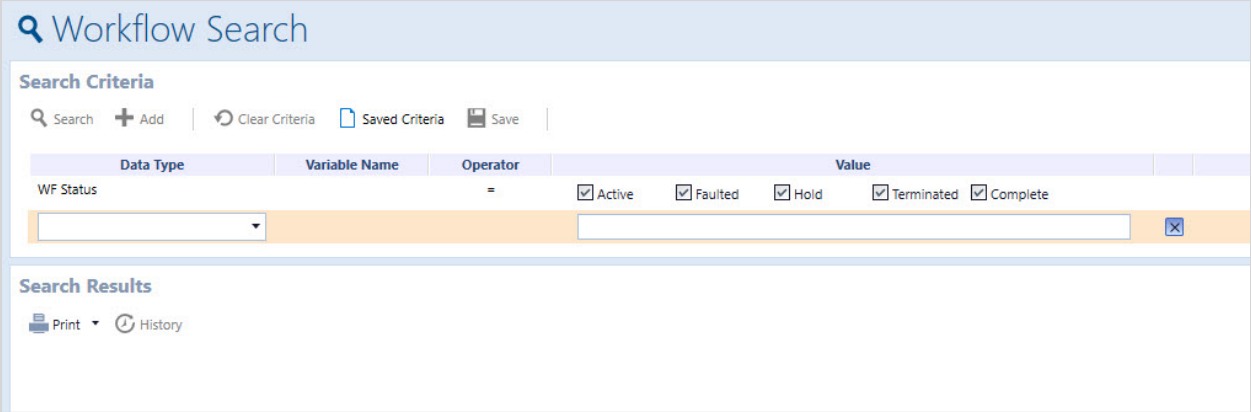

Search Criteria

Search

Select this to perform the search based on the criteria you have entered/selected.

Add

Allows you to add a new set of search criteria.

Clear Criteria

Select **Clear Criteria** to clear all *Search Results* and reset the *Search Criteria* to all statuses and awaiting additional criteria input.

> **TIP**
> When *Search Results* start loading, the *Cancel Search* dialog box disappears. However, it is possible to use **Clear Criteria** to stop the results from loading. For example, if a search yields 15,000 results and is more than expected, it is not necessary to wait for all the results to load in order to refine the search criteria and try again. Click **Clear Criteria** to clear the *Search Results* section.

Saved Criteria

Select **Saved Criteria** to open a list of saved search options.

Save

Select **Save** to save new search criteria. This option is only available to authorized users.

WF Status: Values

The **WF Status** search criteria appears in the *Search Criteria* panel, by default. Select or clear the check boxes in the *Value* column to customize the results that appear in the *Search Results* panel. These check boxes include: *Active*, *Faulted*, *Held*, *Terminated*, and *Completed* and are selected by default.

Data Type

Select the necessary option from the drop-down list. Options include:

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- **Assigned To** - the user currently assigned to the Manual Activity in the Queue. This value appears as *username@domain.example* (where the username is used and the fully qualified domain name is in place of *domain.example*).
- **Attachment ID** - a unique identifier of an attachment associated to a workflow. This value does not appear anywhere in the *jha*Enterprise Workflow user interface.
- **Attachment Type** - a type of attachment associated to a workflow. This value does not appear anywhere in the *jha*Enterprise Workflow user interface.
- **Business Correlation ID** - the business correlation ID that is associated to a workflow. This value only appears in *Workflow History*.
- **Category** - the *Category* of a workflow.
- **Exclude Unassigned** - if selected, *Results* will only include workflows currently in a Manual Activity with an **Assigned To** value.
- **Queue** - the current *Queue* of the Manual Activity.
- **Variable** - any variable value that has ever existed on a workflow. This is the only search criteria that searches historical values. All other search criteria searches for current values only. If the same variable name is set up multiple times in the search criteria, it is treated as an *Or* operator. See the *Variables - Additional Information* topic for an example.
- **WF Created** - the start date of a workflow.
- **WF Ended** - the date the workflow ended (whether it was *Completed* or *Terminated*). Only workflows with a *Completed* or *Terminated* **WF Status** have a **WF Ended** value.
- **WF ID** - the workflow ID of a workflow. This value may not be unique. The **WF ID** can appear on multiple workflows if there was a database restore or if the **WF ID** was reset.
- **WF Name** - the workflow name.
- **WF Status** - the state of the workflow.
- **Workflow Correlation ID** - The **Workflow Correlation ID** of a workflow. This value only appears in *Workflow History*.
- **Workflow Instance ID** - the unique **Workflow Instance ID** of a workflow. This value only appears in *Workflow History*.

> **NOTE**
> Only workflows with a *Completed* or *Terminated* **WF Status** have a **WF Ended** value.

> **CAUTION**
> The same **WF ID** value can appear on multiple workflows if there was a database restore or if the **WF ID** was reset. The **WF ID** might not be unique.

Variable Name

If *Variable* is selected for the **Data Type**, you must enter the name of the variable you want to search for here.

Operator

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The available **Operator** depends on the selected search argument. **WF Name** and **Variable** support *Contains*, *Begins With*, or *Ends With*. **WF Created** and **WF Ended** support <=, >= , and *Range* (**From** - **To**). All others support = (equals) only.

Value

Enter a value in the text box, or select the appropriate option from the drop-down list.

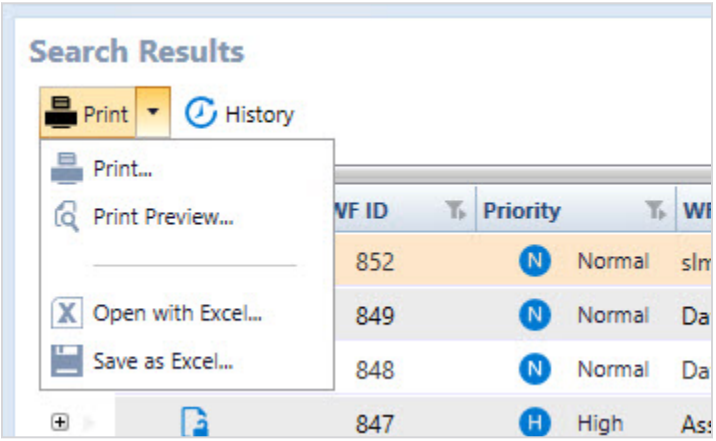
> **NOTE**
> **Exclude Unassigned** is the only data type with a drop-down box.

Search Results

The *Search Results* panel of the *Workflow Search* screen populates the search results based on the criteria entered in the *Search Criteria* panel.

Print

Allows you to print the list of results, or select the drop-down arrow to view additional options.



- **Print Preview** - Displays a *Print Preview* dialog box.
- **Open with Excel** - Opens the list in an Excel® spreadsheet.
- **Save as Excel** - Allows you to save the list as an Excel® file.

History

Select this option to view the *Workflow History* screen. See the *Workflow History* topic for more information.

Terminate

Terminate is governed by the **Category** permission for **Terminate Workflow**. When terminated, workflows do not appear in the *Search Result*. There is no refresh in *Workflow Search*. **Search** again to see the **WF Status** and **WF Ended** set by **Terminate**.

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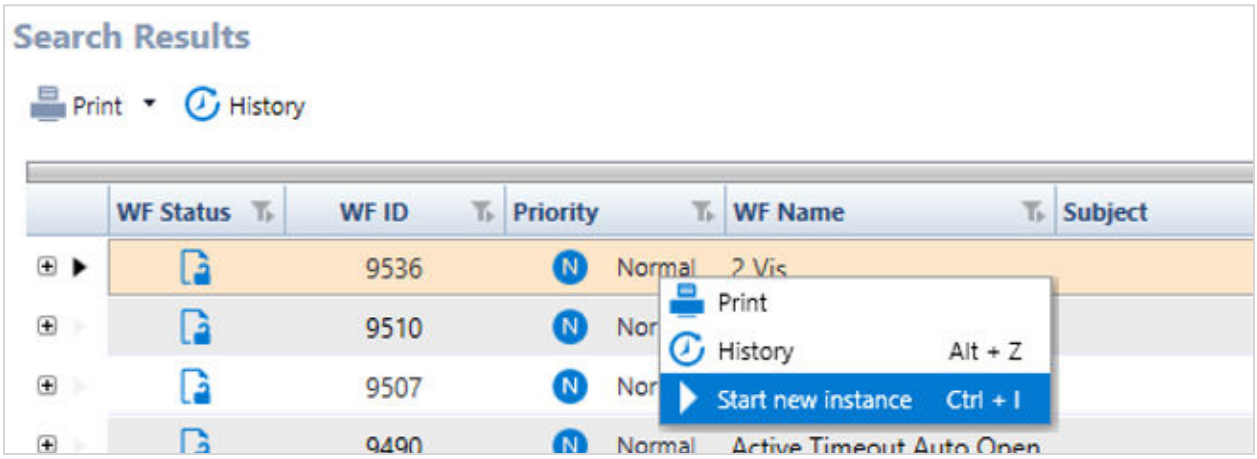
> **NOTE**
> A workflow cannot be terminated from *Search Results* if its **WF Status** is *Completed* or *Terminated*.

Start New Instance

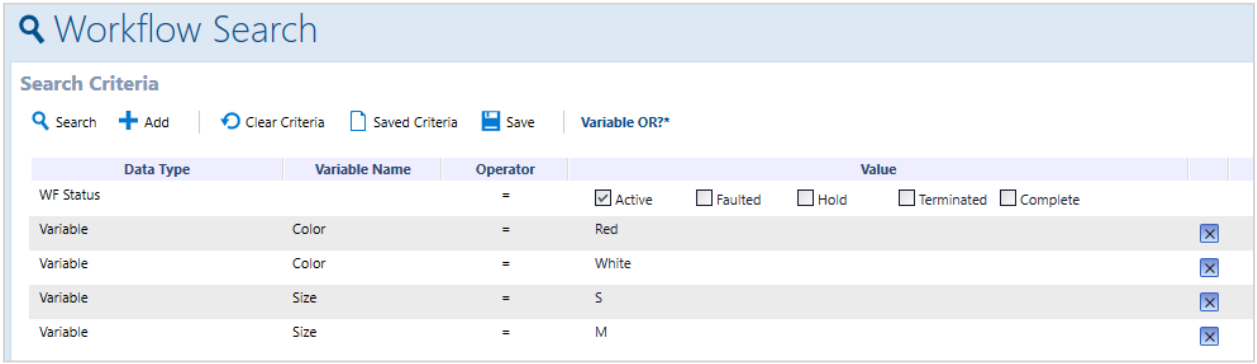
If there is a published version of the **WF Name**, then this function starts a new instance when selected. The **Category** permission for **Start a Workflow** governs this function.

> **NOTE**
> The new instance does not carry over any **Attachments**, **Comments**, or **Variable** values.



Variables - Additional Information

Workflow Search Example



If you have the same variable name entered multiple times in the search criteria, *Workflow Search* treats the variable as an *Or* operator. In the *Workflow Search Example*, an executed search looks for:

- Active workflows
- *Color* variable with *Red* or *White* value

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- *Size* variable with *S* or *M* value

The search results would include all workflows that meet the criteria below:

- Active, Red, S
- Active, Red, M
- Active, White, S
- Active, White, M

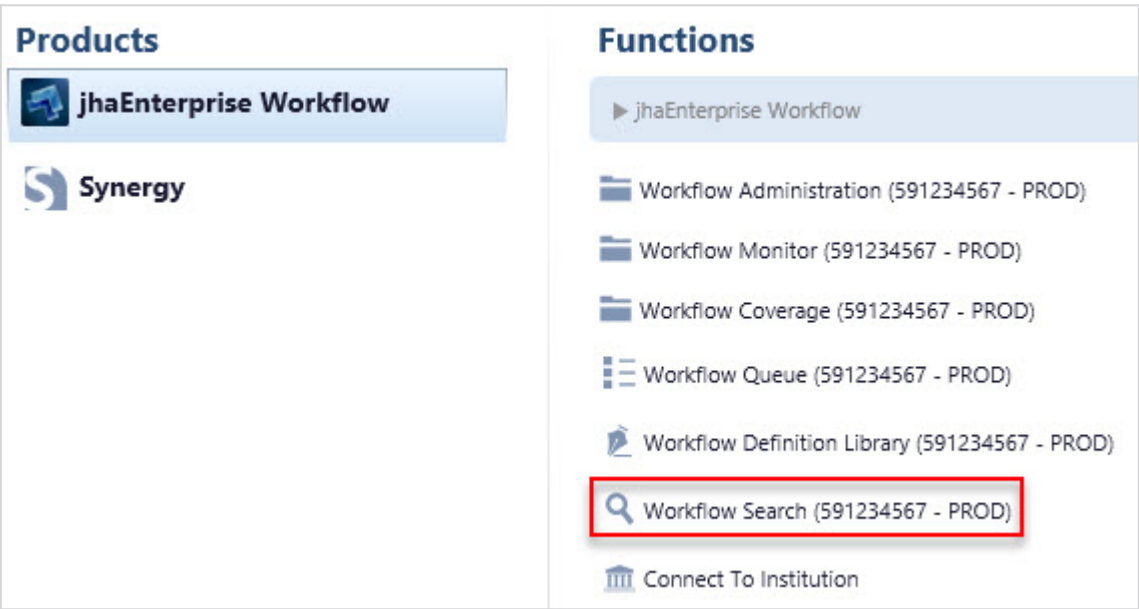
Almost all search criteria entered here is treated like an *And* operator, with two exceptions:

- **WF Status** - allows a multi-select and acts as an *Or* operator
- **Variable** where **Variable Name** is the same

Searching for a Workflow Instance

Follow these steps to search for a workflow instance.

1. From the **Functions** menu, select **Workflow Search**.



   The *Workflow Search* screen appears.

2. In the *Search Criteria* panel, review the **WF Status** criteria, and clear any of the check boxes in the *Value* column, if necessary.

   These values are:

   - Active
   - Faulted
   - Held

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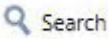
- Terminated
- Completed

3. Select to add a new row of search criteria.
   A new row appears.
4. Select the appropriate option from the **Data Type** drop-down list.
5. Enter the **Variable Name**, if necessary.

> **TIP**
> This only applies if you selected *Variable* for the **Data Type**.

6. Select the *Operator* value, if necessary.
7. Enter or select the **Value**.
8. Select  .
   The results appear in the *Search Results* panel.

You can edit the search criteria by selecting any row, which automatically makes the row editable. You can add a row by selecting **Add**. You can also remove an entire row of search criteria by selecting ☒ **Delete** on any criteria row except the Workflow Status row (first row).

Saving a New Search

Authorized users can save a set of search criteria.

Authorized users must have the Manage Predefined Queries permission to save searches.

> **NOTE**
> Users with the Manage Predefined Queries permission are able to view and start saved searches, even if they do not have category permissions for that saved search. However, the user is not able to view the results produced by the saved search.

1. On the *Workflow Search* screen, enter the necessary information in the **Data Type**, **Variable Name**, **Operator**, and **Value** fields.
2. Select **Save**.
   The *Save Search Criteria* dialog box appears.

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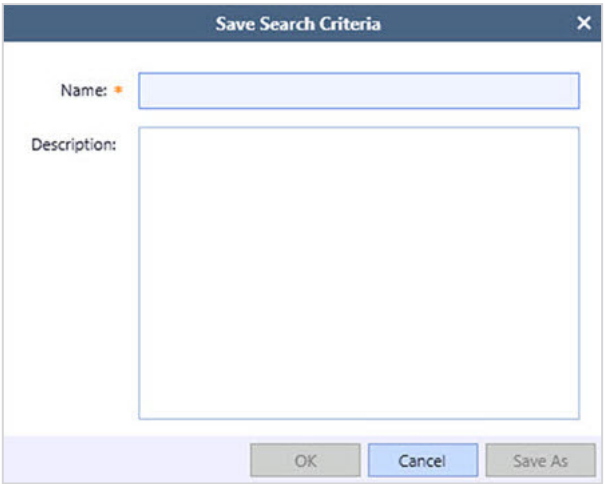
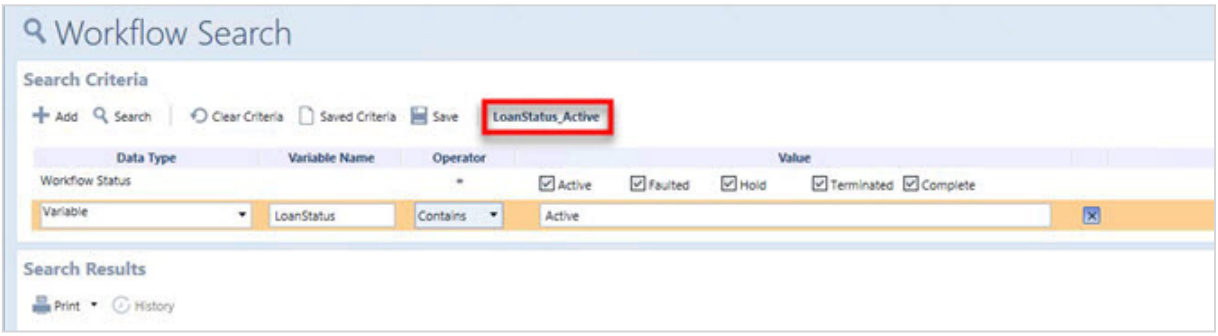
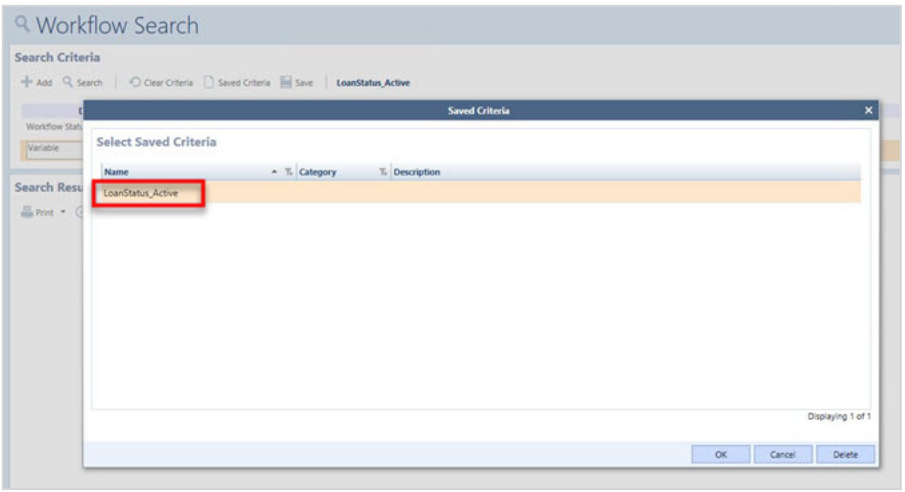


3. Enter a **Name** and **Description**, and then select **OK**.
   The newly created saved search appears on the *Search Criteria* toolbar.



The new saved search also now appears in the *Saved Criteria* dialog box.



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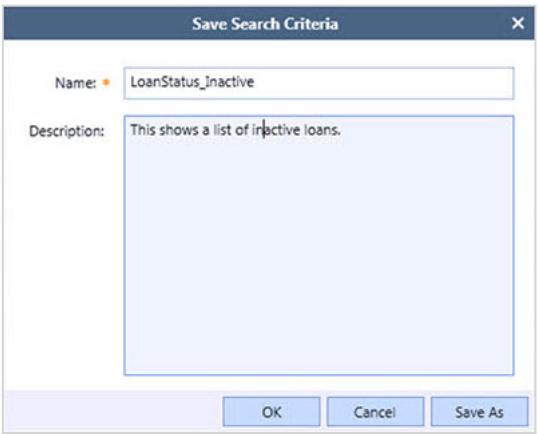
Modifying a Saved Search

Authorized users can edit a set of search criteria.

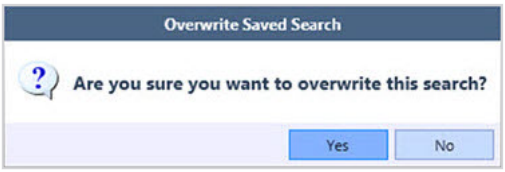
1. Create a saved search or select one from the **Saved Criteria** list.

> **NOTE**
> If a change is made to the search criteria, an asterisk appears next to the **Saved Search** name on the toolbar.

2. Select **Save**.
   The *Save Search Criteria* dialog box appears. Changes can be made to the *Name* and/or *Description* fields, but are not required.



3. Select **OK**.
   A change confirmation dialog box appears.



4. Select **Yes** to confirm the change.
   If the name is changed, the updated name appears on the toolbar and in the **Saved Criteria** list.

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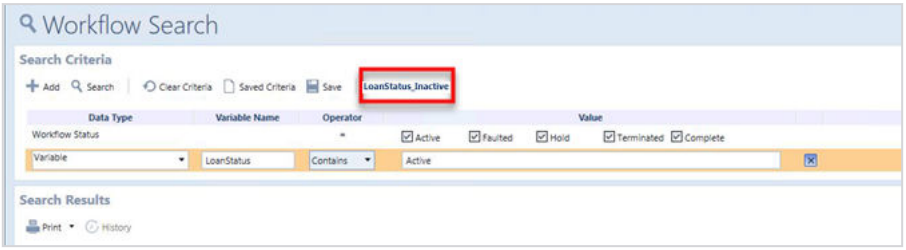
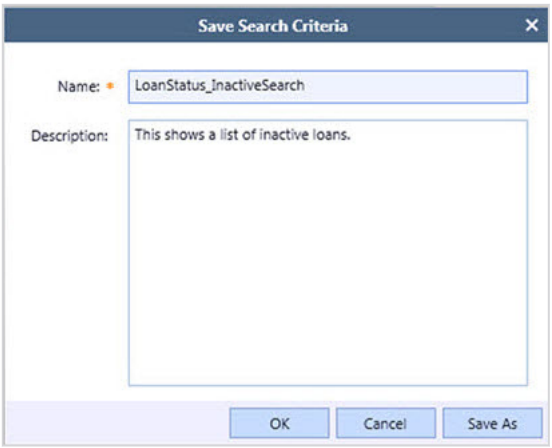


Creating a Copy of a Saved Search

1. Create a saved search or select one from the **Search Criteria** list.

   > **NOTE**
   > Change the search criteria, if desired.

2. Select **Save**.
   The *Save Search Criteria* dialog box appears.
3. Change the **Name**.
   The **Save As** button is now enabled.



4. Select **Save As**.
   The saved search's name changes on the *Search Criteria* toolbar. The copied saved search appears in the **Saved Criteria** list, along with the original saved search.

Selecting a Saved Criteria

1. Navigate to the *Search Criteria* pane, and then select **Saved Criteria**.
   The *Saved Criteria* dialog box appears.

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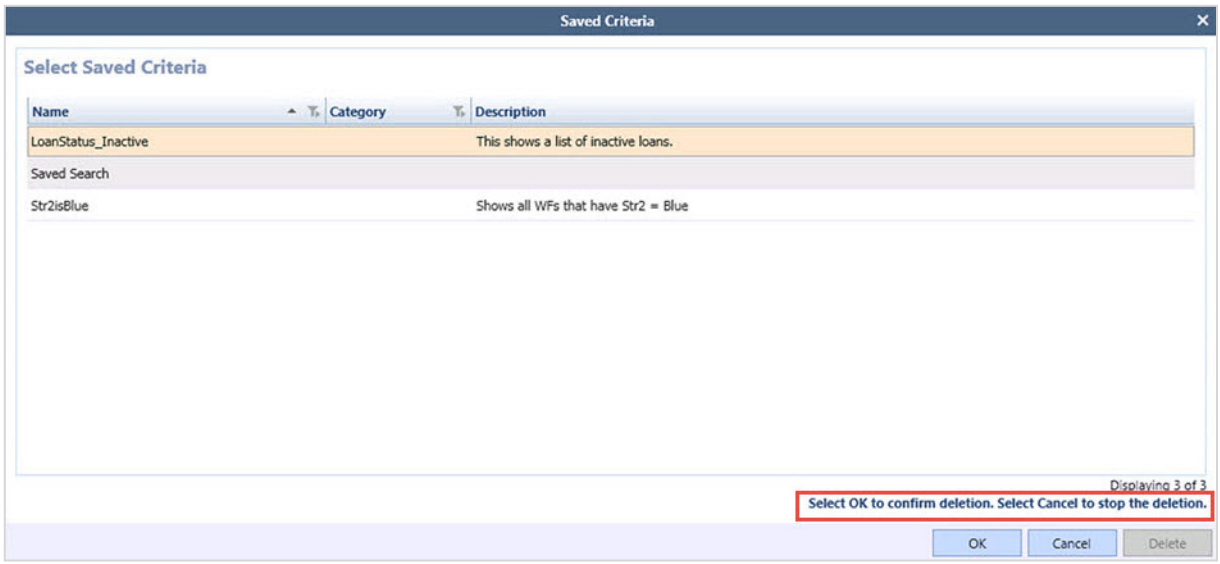
2. Select one of the saved searches from the list.
3. Select **OK**.
   The dialog box closes. The saved search's name appears on the toolbar with its criteria.

Deleting a Saved Search

1. Navigate to the *Search Criteria* pane, and then select **Saved Criteria**.
   The *Saved Criteria* dialog box appears.
2. Select a saved criteria from the list.
3. Select **Delete**.
   Text confirming the delete request appears above the **Delete** button.



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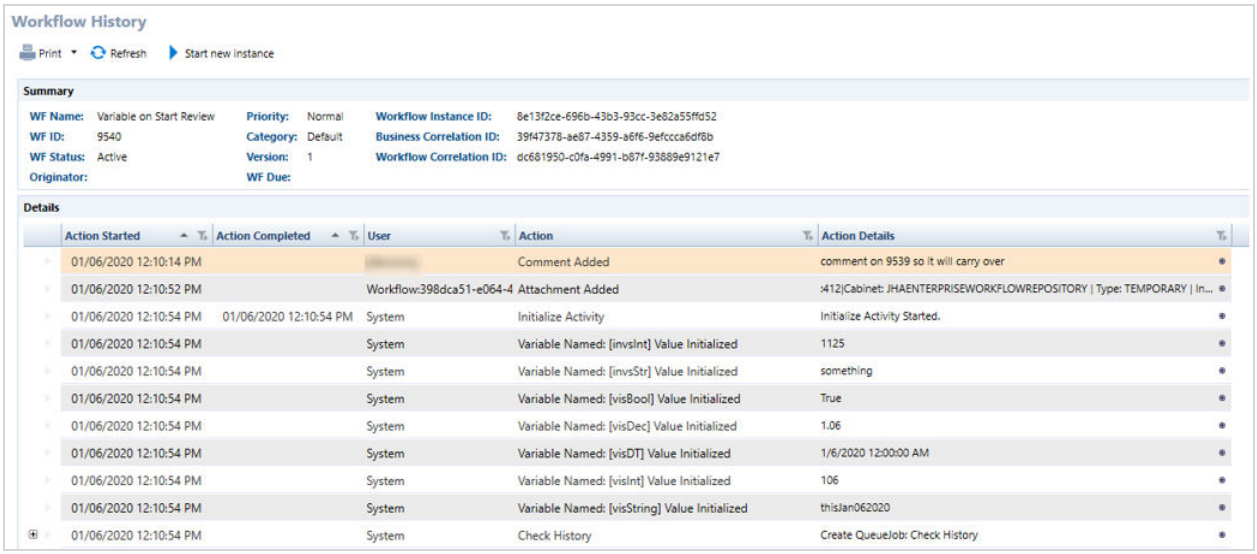
4. Select **OK**.
   The selected saved search is removed from the list. The dialog box remains open until you select **Cancel** or ✕.

Workflow History



The *Workflow History* screen contains a *Summary* panel that includes the following information about the selected workflow instance:

- WF Name
- WF ID - this value may reflect *0* if the workflow was created in a release version equal or previous to 2019.0. WF ID availability in search and history only exists from release 2019.1 and higher.
- WF Status
- Originator
- Priority
- Category
- Version
- WF Due
- Workflow Instance ID
- Business Correlation ID
- Workflow Correlation ID

> **NOTE**

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> This information can be copied to the clipboard via right-click per data element. For example, if **WF Name** is right-clicked, only the name is copied.

The *Workflow History* screen also contains a *Details* panel that includes the following information about the selected workflow instance:

- Action Started - date and time
- Action Completed - date and time
- User
- Action
- Action Details
- Task Type
- Task Name
- Task Details
- Response
- Task Completed

Functions: Workflow History

The following functions are found on the *Workflow History* screen.

Print

Select **Print** to print the screen, or select the drop-down arrow to view the following options:

- **Print Preview** - Displays a *Print Preview* dialog box.
- **Open with Excel** - Opens the list in an Excel® spreadsheet.
- **Save as Excel** - Allows you to save the list as an Excel® file.

Refresh

Select **Refresh** to update the screen.

Start New Instance

If there is a published version of the **WF Name**, then this function starts a new instance when selected. The **Category** permission for **Start a Workflow** governs this function.

> **NOTE**
> The new instance does not carry over any **Attachments**, **Comments**, or **Variable** values.

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Appendix

This appendix provides information about product integrations with *jha*Enterprise Workflow, working with variables, and commonly used terms in *jha*Enterprise Workflow.

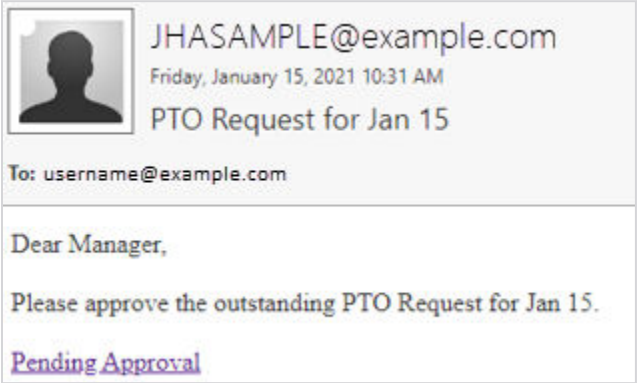
Remote Approval Site

The remote approval site is used by persons that are critical to business processes.

The remote approval site can be accessed from a workstation or via a mobile device, such as a phone or tablet.

Remote Approval Email Notification

When a workflow author creates a **Remote Approval** activity, the designated remote approvers are notified via email that an approval request is pending.



The workflow author determines the content of the email when setting up the **Remote Approval** activity. This email is delivered to everybody included in the **Approver Group** that the workflow author selects in the **Remote Approval** activity.

There is a link in the body of the email that directs the recipient to the remote approval site. Click the link to open the *Remote Approval Login* page.

> **NOTE**
> JHA only supports Google Chrome™ or Microsoft Edge™ browsers.

Remote Approval Login

The *Remote Approval Login* page pulls the approver's email address from the link in the email. The remote approver only has to enter their **PIN**.

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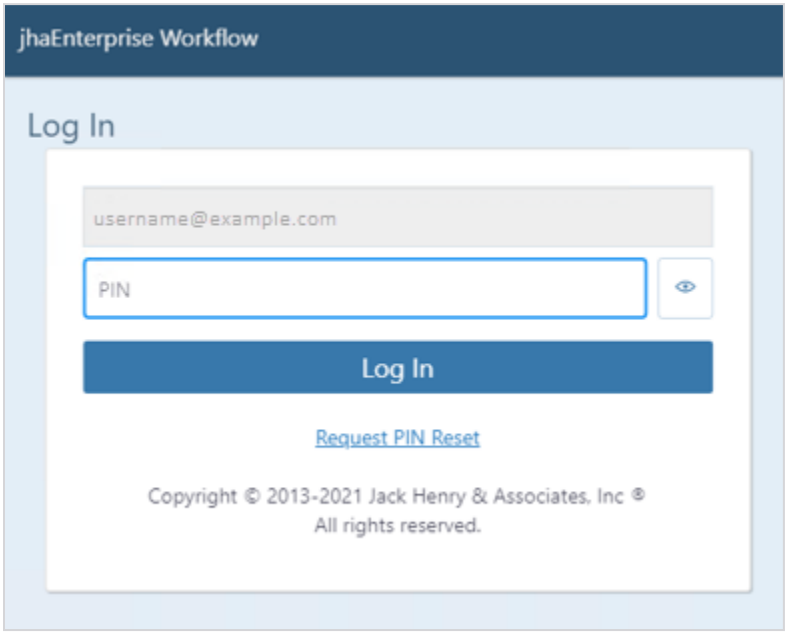
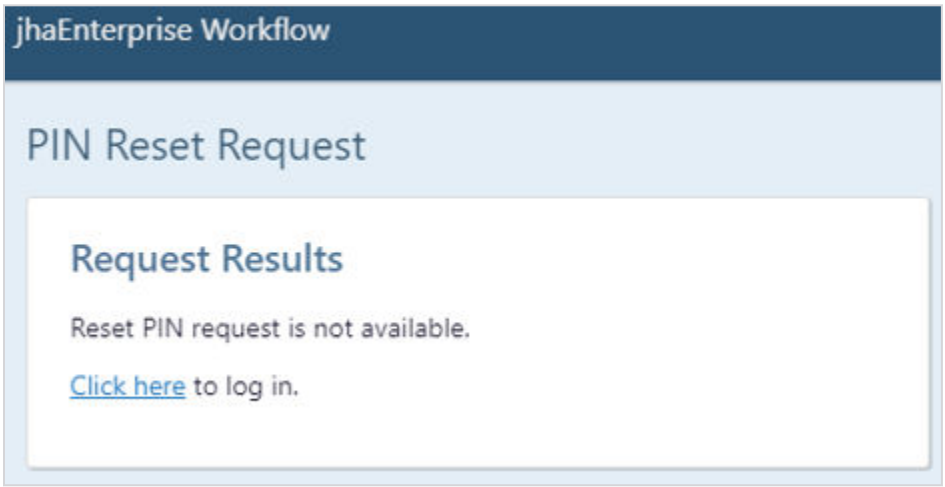


If the approver has forgotten their PIN, they can use the **Request PIN Reset** button to request assistance from the WF Admin. Resetting a PIN is a manual process for the WF Admin. If **PIN Reset** is not configured with an email address for the institution, a message indicating that **Request PIN Reset** is unavailable appears:



Approval Requests and Responses

After the remote approver successfully logs in, they see the remote approval request.

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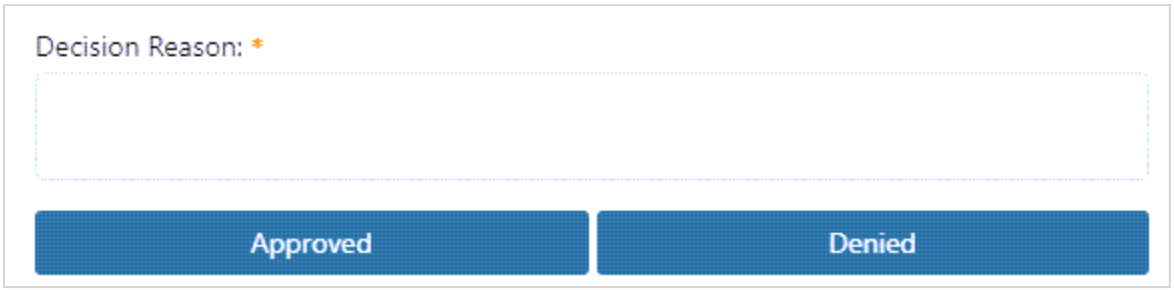
The remote approval contains the workflow name, the activity name, and the details of the request.

At the bottom of the page, the remote approver can provide a reason for their decision and either approve or deny the request. The workflow author determines the terminology of the approve/deny buttons when they create the **Remote Approval** activity, so the button labels may vary (e.g., Approved/Denied, Yes/No, Confirm/Deny, etc.).



When a selection is made, a confirmation message appears:

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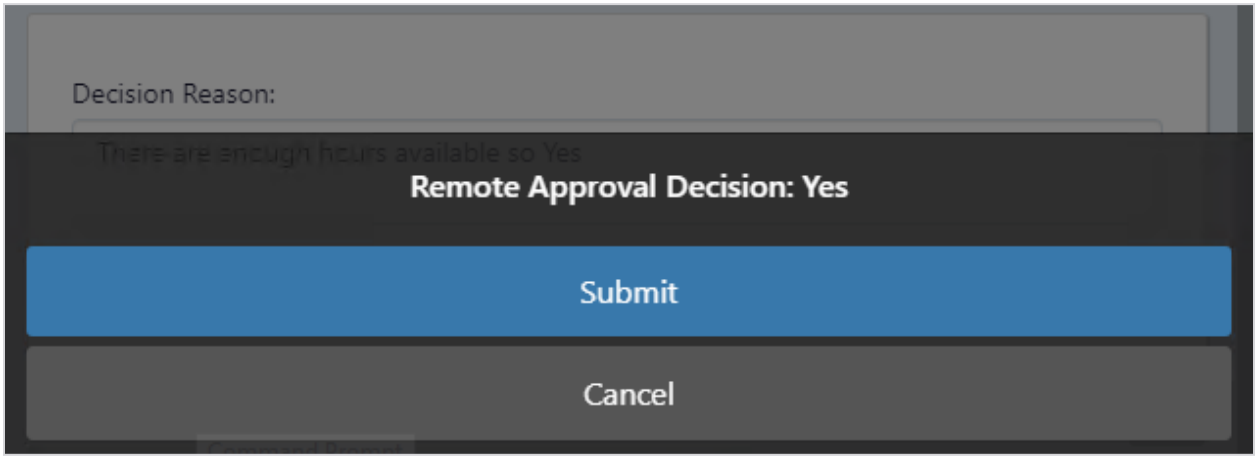
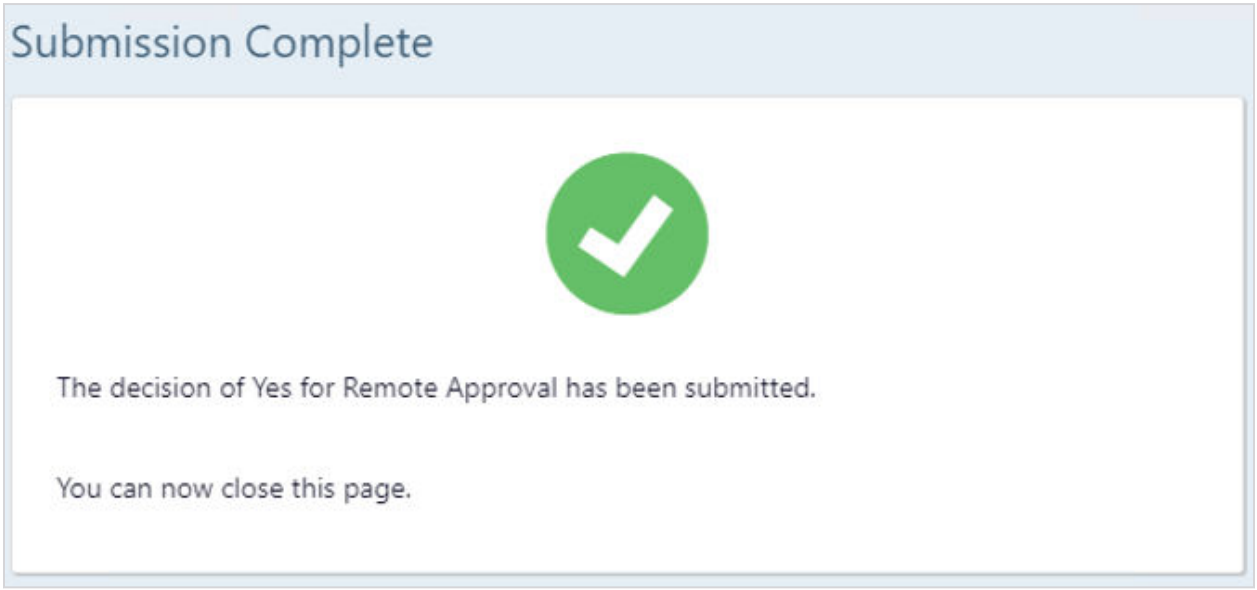


Select **Submit** to confirm the decision. Select **Cancel** to go back and change the decision or details.

When **Submit** is selected, the screen shows that the submission is complete:



Session Timeouts

If a remote approver logs in to the remote approval site but takes no action for 25 minutes, a session timeout warning appears:

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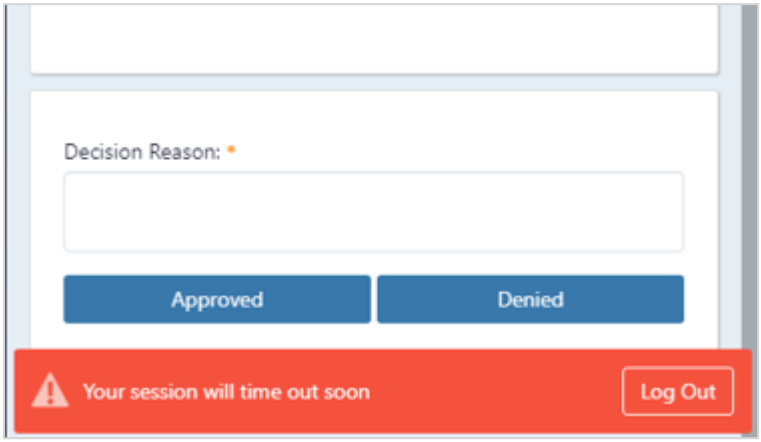
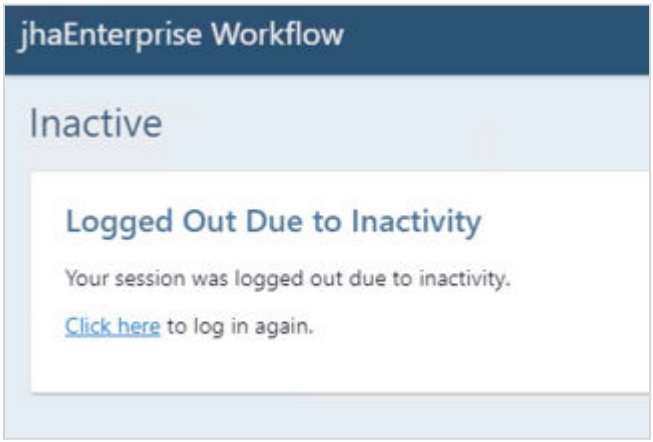


If another 5 minutes without activity lapses, the remote approval session ends:



Synergy-Specific Functionality

Some functionality in *jha*Enterprise Workflow is specific to Synergy Enterprise Content Management. This functionality is automatically hidden from view for users who are non-Synergy users.

If you are a Synergy customer, the Synergy Enterprise Content Management functionality must be activated upon installation so it appears in your institution's *jha*Enterprise Workflow environment.

The functionality that is specific to Synergy is listed in the following table. Within this document, Synergy-specific functionality is noted.

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Synergy-Specific Functionality

Area Affected	Functionality
Workflow Designer	**Document Index Search**
Workflow Designer	**Document Index Modify**
Manual Activity > **Task Type**	**JHA Application**
Attachments panel	**Open**

Synergy eSign Functionality

*jha*Enterprise Workflow is integrated with Synergy eSign via jXchange Service Gateway.

The Synergy eSign functionality enables *jha*Enterprise Workflow to create and submit a document for eSignature. When signed, the document can be retrieved from Synergy eSignature and archived into a content management system (CMS), such as Synergy Enterprise Content Management.

Each document submitted for eSignature has its own set of activities. Each document needs:

- Word Merge
- Request eSignature
- Check eSignature Status
- Get eSignature Document
- Document Add
- Get eSignature Audit with Document Add

Creating Word Templates For Use With Synergy eSign

This section includes information about creating Word Templates for use with Synergy eSign. Word documents created with a template can be submitted to Synergy eSign for electronic signature (i.e., eSignature) via the **Request eSignature** activity.

Customizing the Toolbar in Microsoft® Word

1. Open Microsoft® Word.
2. Navigate to **File** > **Options**.
   The *Word Options* dialog box appears.

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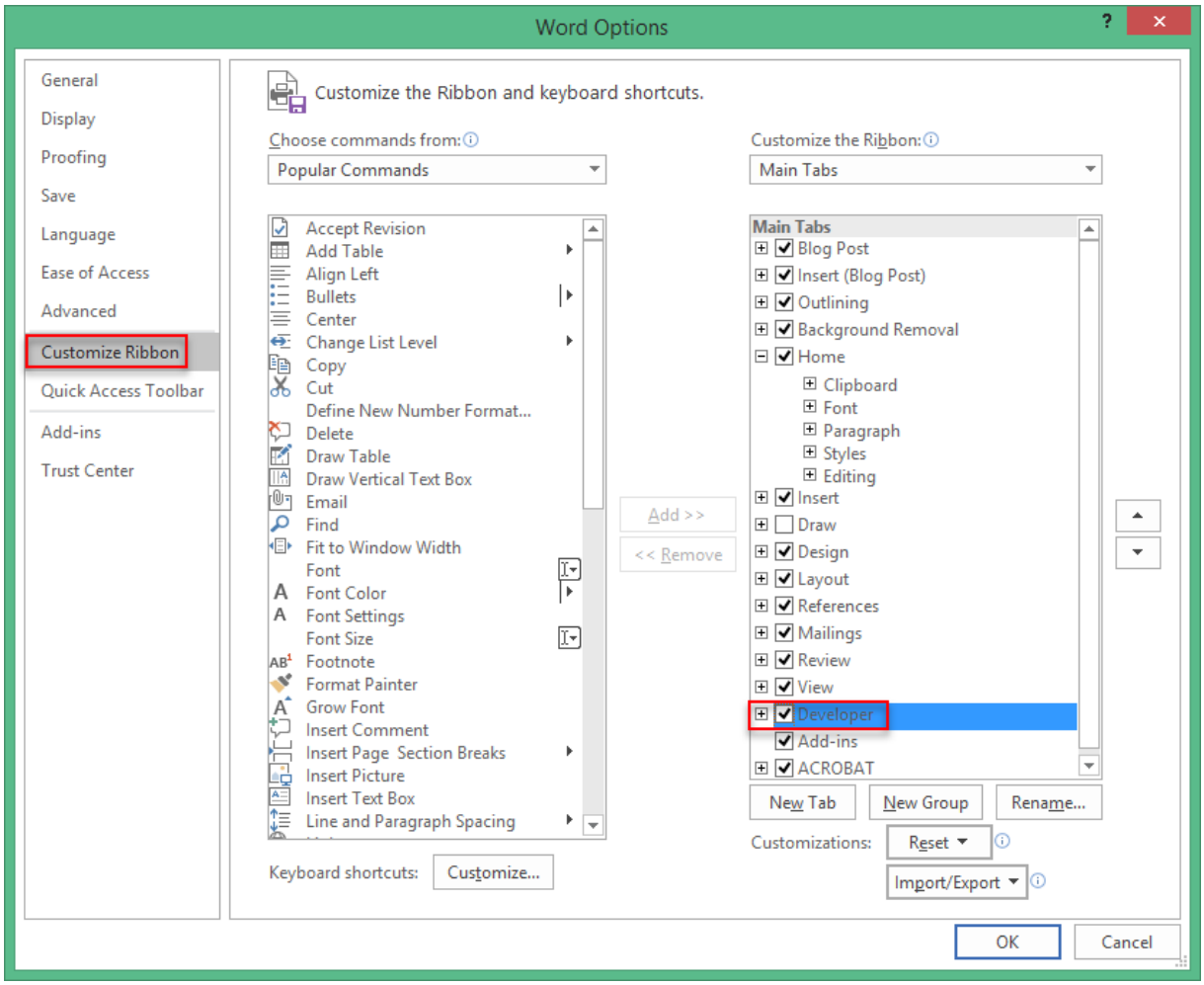
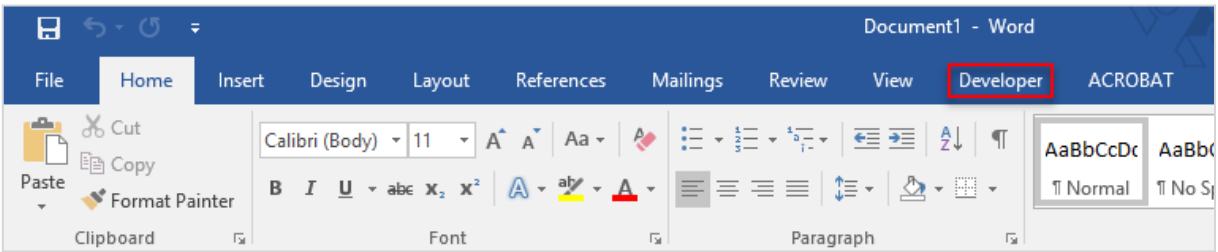


3. Select **Customize Ribbon**, and then select the **Developer** check box.
4. Select **OK**.
   The *Developer* tab appears on the toolbar menu.



5. Return to **File** > **Options** > **Customize Ribbon**.
6. Expand the **Developer** menu.
7. Select **New Group**.

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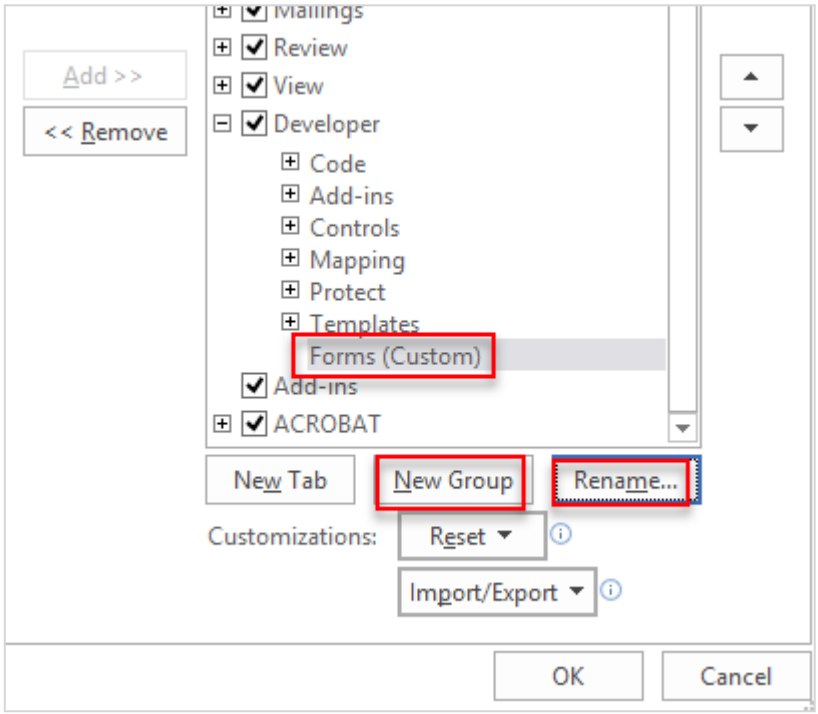
A group is added to the bottom of the **Developer** options.



8. Click **Rename**, and then give the group a name that you can remember (e.g., *Forms*).

> **CAUTION**
> Do not close the dialog box.

9. Click the **Choose commands from** drop-down menu, and then select **All Commands**.

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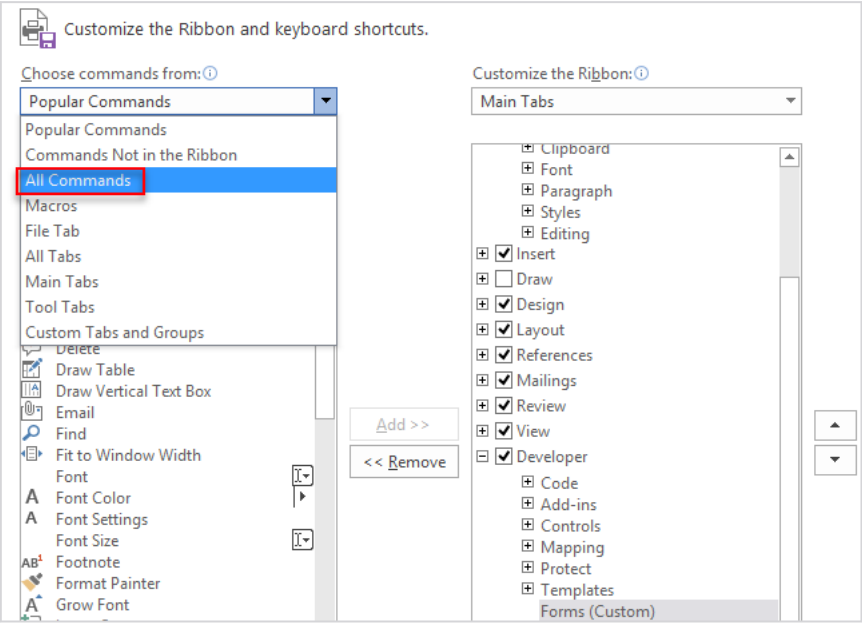
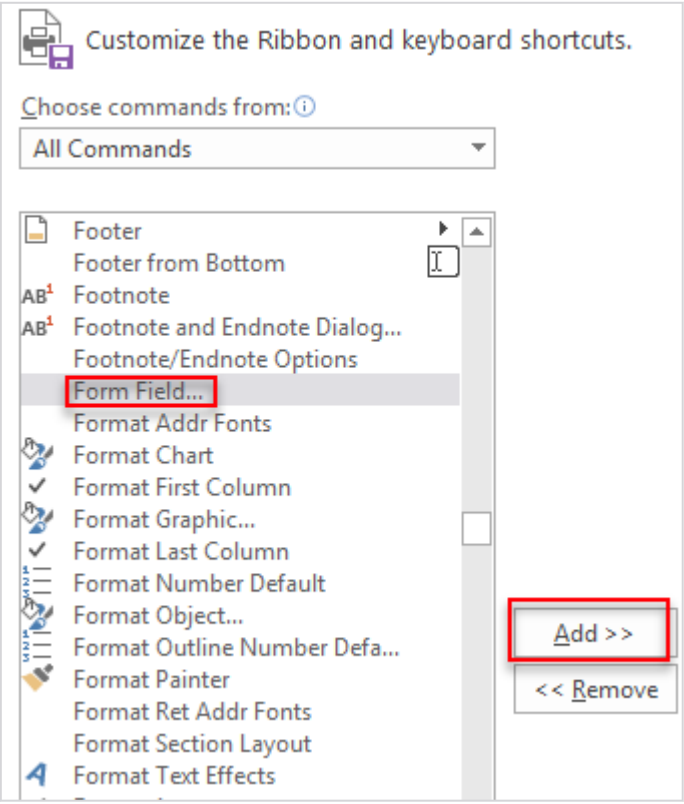


10. Select **Form Field** from the **All Commands** options, and then click **Add**.



TIP

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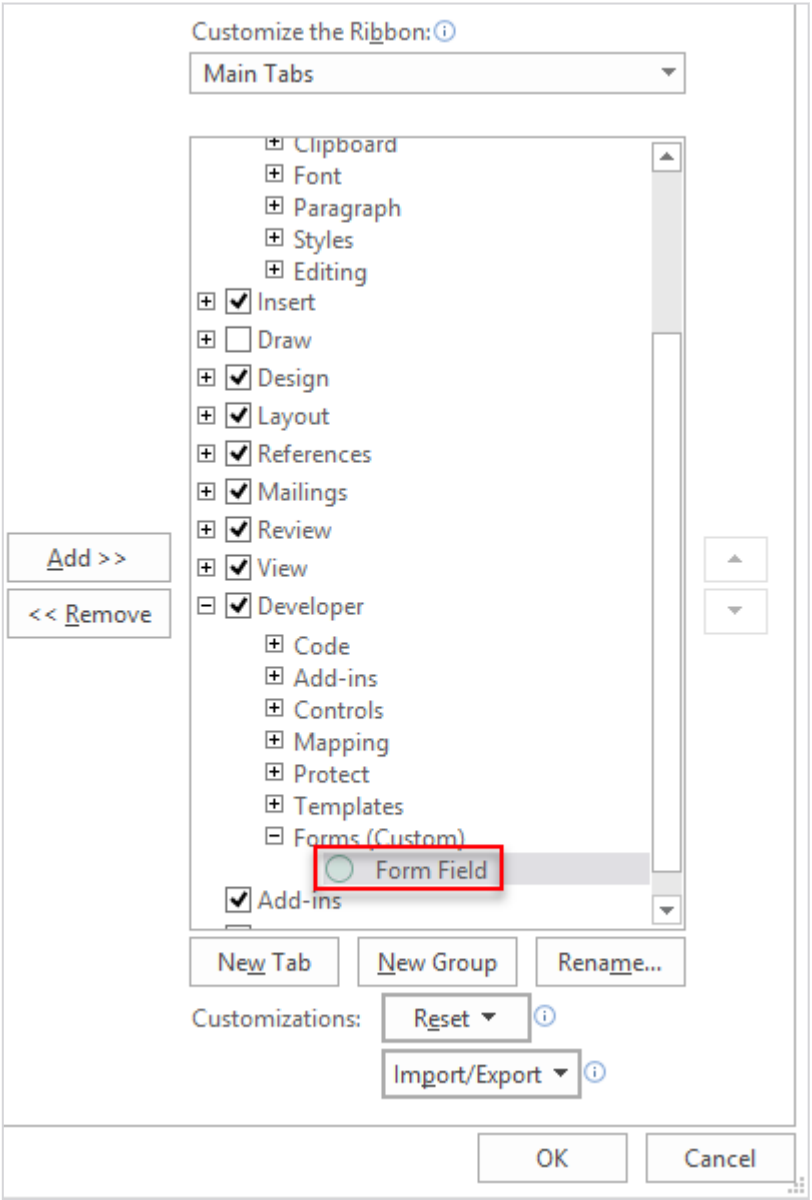
> Make sure that the new group you added in the right-hand column is still highlighted.

The **Form Field** menu item appears under the group you added in the right-hand column.



11. Click **OK** to close the dialog box.

    Microsoft® Word saves these settings and applies them each subsequent time the application is opened on this computer.

Perform these steps on each individual computer that is used to create Synergy eSign templates.

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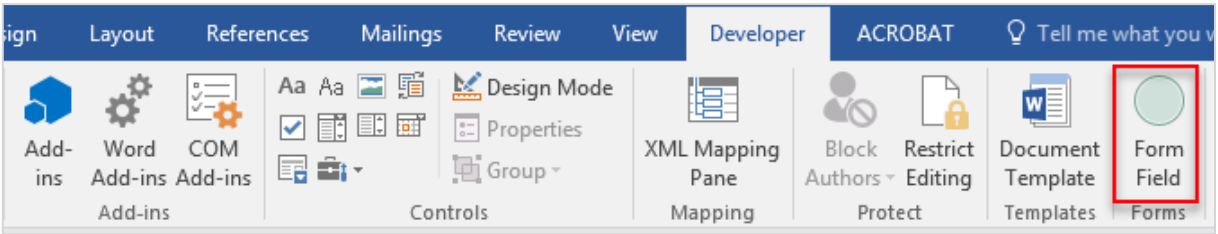
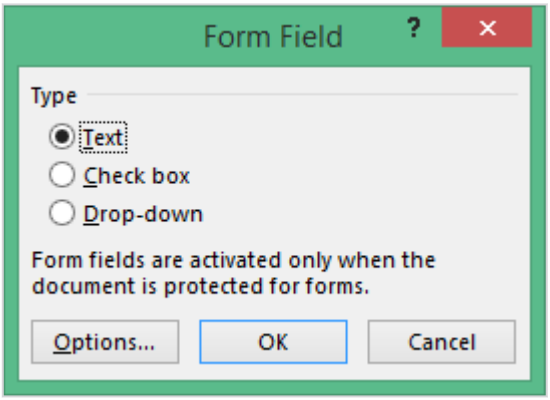
Adding eSignature Fields to a Microsoft® Word Template

1. Open a Microsoft® Word document, and then select **Developer** on the toolbar.
2. Select **Form Field**.



The *Form Field* dialog box appears.



3. Select **Text**.
4. Click the **Options...** button.
   The *Text Form Field Options* dialog box appears.

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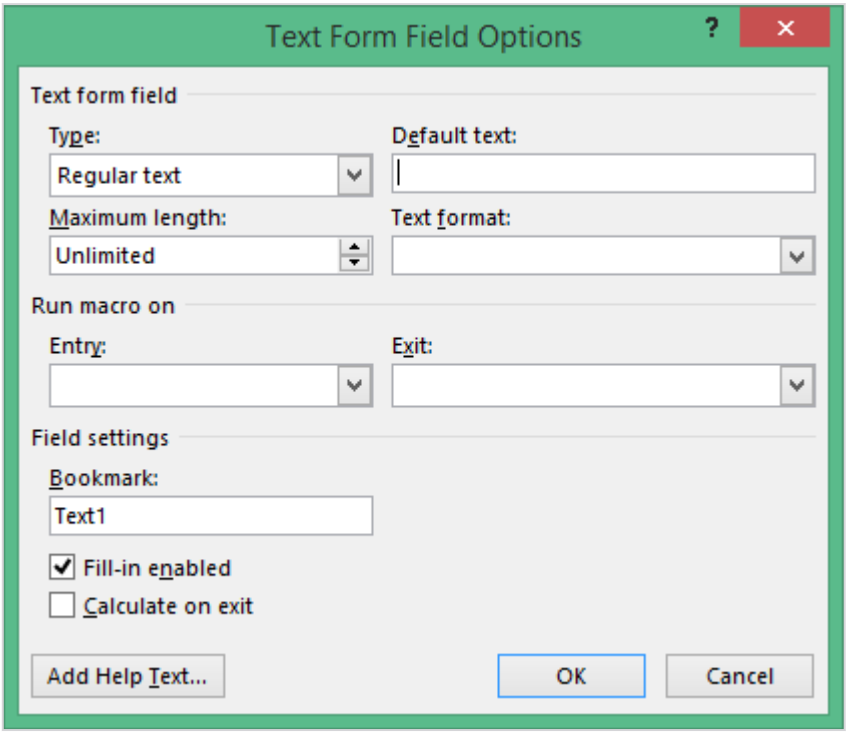

> **NOTE**
> The values configured in the *Text Form Field Options* dialog box are critical for the field to be recognized correctly and processed as an eSignature field.

5. Set **Type** to *Regular text*.
6. Enter underscores in the **Default text** field.

   This field defines the width of the signature field in the final document. For example, entering 25 underscores in this field creates a signature field in the final PDF document that is 25 characters wide.

> **TIP**
> Either underscores or spaces can be used in this field, but underscores are recommended because they are a visual indicator the information is required in the final document.

7. Accept the default setting (**Unlimited**) in the **Maximum length** field.
8. Accept the default blank setting in the **Text format** field.
9. Leave the **Run macro on** fields blank.

> **CAUTION**
> Do not set macros in the **Entry** and **Exit** fields for documents used in eSignature scenarios.

10. Set **Bookmark** to the name of the field.

> **NOTE**

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> Make sure that the **Bookmark** follows the naming guidelines as defined in *Bookmark Naming Conventions for eSignature Fields*.

11. Select the **Fill-in enabled** check box.

    Do not select the **Calculate on exit** check box and do not **Add Help Text**. Help text is not used when the document is converted to PDF.

Bookmark Naming Convention for eSignature Fields

When naming signature fields, use the naming convention TEAWEB_SIG_P[*x*]_[*y*], where *x* identifies which party the signature represents and *y* is an index when there are multiple signatures for the same party.

Use TEAWEB_INI_P[*x*]_[*y*] for initial fields.

When a date field is associated with any signature field, make sure that its name matches the associated signature field name with ***_[DATE]*** appended. For example, a data field associated with signature field TEAWEB_SIG_P1_1 would be named TEAWEB_SIG_P1_1_DATE.

> - TEAWEB_SIG_P1_1 for first signer and first signature location
> - TEAWEB_SIG_P1_2 for first signer and second signature location
> - TEAWEB_INI_P1_1 for first signer and first initial location
>
> - TEAWEB_SIG_P2_1 for second signer and first location
> - TEAWEB_SIG_P2_2 for second signer and second signature location
> - TEAWEB_SIG_P2_2_DATE for second signer and the date associated with second signature location

Additional Requirements for eSignature Document Templates

- Do not enable any Microsoft® Office security features that restrict editing or user rights to a document.
- Do not encrypt or digitally sign the document.
- Do not include any Microsoft® Office eSignature fields or functionality.
- Do not include any Microsoft® Office add-ins or COM add-ins in the document.
- Turn off **Track Changes** before using the document in production.
- Do not include large images or high-resolution images. Documents submitted for eSignature cannot exceed 2.5 MB. High resolution or large images quickly cause a document to exceed the size restriction.
- Do not include any form elements that appear in the *Controls* section of the *Developer* tab. Using these controls can cause the document to be rejected when submitted for eSignatures.

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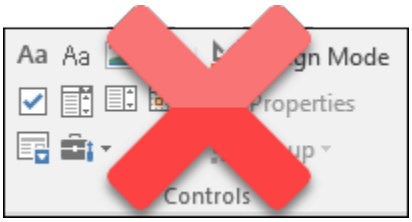

IntelliSense Control

The IntelliSense control allows you to insert system-created and user-created variables into associated fields.

The *Default* tab lists the system-created and user-created variables that are already available for use. The *New Variable* tab allows you to create a variable.

IntelliSense controls are available on the following screens:

- *Workflow Administration*
  - *Manage Message Templates*
- *Workflow Designer*
  - *External SOAP Service*
  - *JHA SOAP Service*

Workflow Tags

Workflow tags are system-generated variables that can be assigned system-generated values. You cannot assign values directly to a workflow tag.

There are two types of workflow tags:

- Workflow-scoped tags, which can be assigned values related to a workflow as a whole
- **Manual Activity**-scoped tags, which can be assigned values relating to a single **Manual Activity**

Workflow-Scoped Tags

- *workflowdefinitionname*
- *workflowdefinitionversion*
- *workflowdefinitionpriority*
- *workflowdefinitioncreatedate*
- *workflowcategory*
- *workflowsubject*
- *workflowdue*
- *workflowid*

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- *workflowguid*
- *workflowbusinesscorrelationid*
- *workflowcorrelationid*
- *environmentid*
- *routingid*

Manual Activity-Scoped Tags

- *originator*
- *activityname*
- *activitycreated*
- *activityassigned*
- *activitydirectlink*
- *activitydue*
- *activityqueue*
- *activityid*
- *activityguid*

The **activitydirectlink** scoped tag can only be used in a **Manual Activity**. The tag can be used in the **Body** of a *Send an Email Timer* **Action** as well as in the **Body** of a **Notify** email.

A user who receives the email can click the link to access the primary Xperience instance and then open the *Manual Activity* in *jha*Enterprise Workflow.

If there is more than one Xperience instance and none are indicated as **Primary**, then clicking the link results in an error. See the *Working with an Institution* section of the *jhaEnterprise Workflow Configuration Guide* for more information.

> **NOTE**
> The **activitydirectlink** feature does not support web-based email.

Workflow tags can be used on the following screens.

Workflow Administration

Workflow-scoped tags are available for use when working with:

- *Manage Message Templates*
- *Manage Index Groups*
- *Manage Email Templates*

Workflow Designer

- *Initialize Activity*
- *Manual Activity*

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- *External SOAP Service* - workflow-scoped tags only
- *JHA SOAP Service* - workflow-scoped tags only
- *Data Query*
- *Send Email*
- **Document Add**
- **External Application**

Glossary of Terms

A

Activity

Component of a Workflow Definition. A description of work that forms a logical step within a process. An activity is either manual or automated.

- **Manual Activity** - Requires human intervention. A manual activity is a set of tasks that a group or individual performs. A manual activity requires human resources to support process implementation. Manual activities are allocated to a workflow queue.
- **Automated Activity** - Does not require human intervention. Automated activities use a workflow management system to manage an activity during business process implementation.

activitydirectlink

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If there is more than one Xperience instance and none are indicated as **Primary**, then clicking the link results in an error. See the *Working with an Institution* section of the *jhaEnterprise Workflow Configuration Guide* for more information.

> **NOTE**
> The **activitydirectlink** feature does not support web-based email.

Attachment

An item attached to the workflow, such as a document, report, check, etc.

Authority

Particular permissions grant individuals and groups the authority to perform a corresponding action, such as **Start a Workflow Instance**.

Availability

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Availability is a mechanism that indicates if a user is available to work in queues in which they are participants. Availability is a global status, so changing its state impacts all queues in which the user is a participant.

B

Block From Last

Block From Last is a **Delivery Assignment** option available with the **Self Service** and **Just-In-Time** delivery methods for a manual activity.

Block From Last allows authors to specify that the same person who worked the previous manual activity cannot work the next manual activity. This process allows another worker to supply an approval or review of an item, if necessary.

Business Process

A set of one or more linked procedures or activities that collectively realize a business objective or policy goal. Business processes typically operate within the context of an organizational structure that defines functional roles and relationships.

C

Category

A collection of Workflow Definitions associated to the same label. Categories are used for classification and security.

Collect Information Task

A type of task that prompts a user for input. These tasks can collect simple data type values and store the answers in the workflow bag (or EBO, if instructed).

Comment

A note or notes traveling with a Workflow Definition instance. Authorized users can view or manipulate **Comments** from the *Enterprise Workflow Queue* and/or **Manual Activity**.

D

Display Information Task

A type of task that only exists within the **Manual Activity**. A completed instruction does not result in data capture from the end user. This task is typically a text statement that instructs the user to complete an action (i.e., *Review attached document*).

I

Identity Management System (IMS)

Jack Henry & Associates' Identity Management System is the authentication source for the Enterprise Workflow solution.

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Installation

A physical installation of an Enterprise Workflow System that may contain one or more Workflow Server instances.

Institution

A complete business entity. Users may be authorized to access underlying data for one or more institutions.

Iris

Iris is an optional component that is available to customers who wish to use attachments but do not have Synergy Enterprise Content Management. Iris documents are only accessible via the *Attachments* panel of an active/running workflow. Iris is not a separately sold product. Iris is only useful with *jha*Enterprise Workflow.

L

Lock Assignment

Lock Assignment ensures that the same user receives the work every time a **Manual Activity** reaches the next queue. **Lock Assignment** does not impact the current **Assigned To** value of the *Manual Activity*.

Locked to Last

Locked to Last is a **Delivery Assignment** option available with the **Self Service** delivery method for a manual activity. **Locked to Last** allows you to specify that a manual activity must be assigned to the same worker in a queue who worked the most recently competed manual activity. This process allows the flow of work to continue to the same user within the queue.

P

Priority

Set the priority on a workflow instance to indicate a level of importance or urgency. A workflow's priority value persists on the instance.

Property

A descriptive element of an Activity or Workflow Definition, such as **Name**.

Publish

Publish a Workflow Definition to make it available to start in an instance.

Q

Queue

A queue is used in with **Manual Activity** assignments in a Workflow Definition. A queue contains memberships that define the approved users and their permissions.

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Queue Manager Notification

The **Queue Manager Notification** allows a user to receive an email notification if the **Send an Email** timer action is set on a *Manual Activity* and the **To** value is set to *Queue Manager Notification*.

This permission allows a targeted email to be sent to users who are specified as **Queue Managers** for escalation purposes. The notification is sent if a **Manual Activity** timer expires.

R

Reassign

Select **Reassign** to assign a manual activity to another user or queue. **Reassign** can override a queue assignment as well as an **Assigned To** value.

Remote Approval

The **Remote Approval** feature allows individuals who are crucial to a business process to approve or deny requests made in that process. These critical persons can provide a decision and feedback on requests on a remote approval site without logging in to Xperience and *jha*Enterprise Workflow. Remote approval decisions can be made via a mobile device, such as a phone or tablet.

A system administrator must configure **Remote Approval** in the jXchange Management Console for the **Remote Approval** activity to appear in the *Toolbox*. Configuration is performed on **jXchange Management Console** > **Enterprise Workflow** > **Server Instances**.

A workflow administrator must build email templates that contain a formatted <%RemoteApprovalSiteURL%> system variable, **Word Templates**, **Approvers**, and **Approver Groups**.

When the system administrator and workflow administrator tasks are complete, a workflow author can set up a **Remote Approval** activity in a workflow definition. A remote approver can then access the remote approval site to approve or deny the requests that the workflow author built.

T

Take

A queue participant can take (assign to themselves and begin working) any available activity in the queue's *Activity List*. Taking an available activity assigns it by default and opens the *Activity Dialog*, which puts the activity *in use*.

Task

A component of the **Manual Activity**, such as Display Information, Collect Information, etc.

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U

Unpublish

Use **Unpublish** to prevent new Workflow Definition instances from being created.

W

Workflow Definition

A **Business Process** definition created in the Workflow Designer. The Workflow Definition consists of:

- A network of activities and their relationships.
- Criteria indicating the start and termination of the process.
- Information about individual activities (i.e., queues, data, etc.).

Workflow Designer

The landing area used to create and publish Workflow Definitions.

Workflow Queue

The Workflow Queue lists active workflows that allow for selection and completion of manual activities.

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