# Palette Controls for Flows

Live Forms' flow palette contains all of the forms you have already created in the Forms tab of the application you are currently editing. These forms are available for you to add as steps of the flow. The palette also contains a new form which lets you create a new form step directly within the flow designer. Additional step types for flow steps are Summary, http and Anonymous Task. The purpose of each is described below.

```
                    PALETTE
   +  New Form           =  Summary
   @  HTTP               ✉  Anonymous Task
   ▤  Client             ▤  Services
   ▤  PO
```
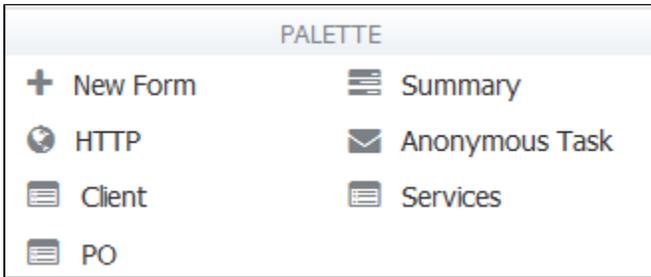
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Keeping your Forms and Flows in Sync

Forms that are used as steps in a workflow can be created in the Form or Flow designers. There are two approaches a designer can choose from when creating a flow:

1. Create forms in the Forms designer and then drag the form(s) into the flow as the steps (Existing Forms).
2. Create the flow by dragging a New Form from the palette and drop it onto the flow canvas. Then click the

   🖉

   edit icon and create the form in the forms designer that opens up in the flow designer.

There are pros and cons to each approach when you need to make small updates to one of the steps of your flow:.

- The designer can go back and edit the forms in the forms designer then drag the updated forms into the flow. If you choose to do this, then you have to redo any properties for that step. (assign users/roles, task information, Pending messages, customized Save and Continue buttons etc).
- Or you can update the form directly in the flow by clicking the

  🖉

  edit icon. This approach is quicker but the changes that you make to the form from within the flow designer **DO NOT** update the form in the Forms designer.

Let's say you create the perfect form step in a workflow and now you want to use it in another flow. How do you extract the form step from the flow so that it is available in the Forms designer?

 If you click on a form step in a workflow, you can download that step from the flow as a standalone form and upload it into the Forms designer. Simply click on the step in the flow then click the

⬇

form icon. If you have designed your workflow using Linked Steps in a Flow the icon to download the form step will only appear on the parent step.
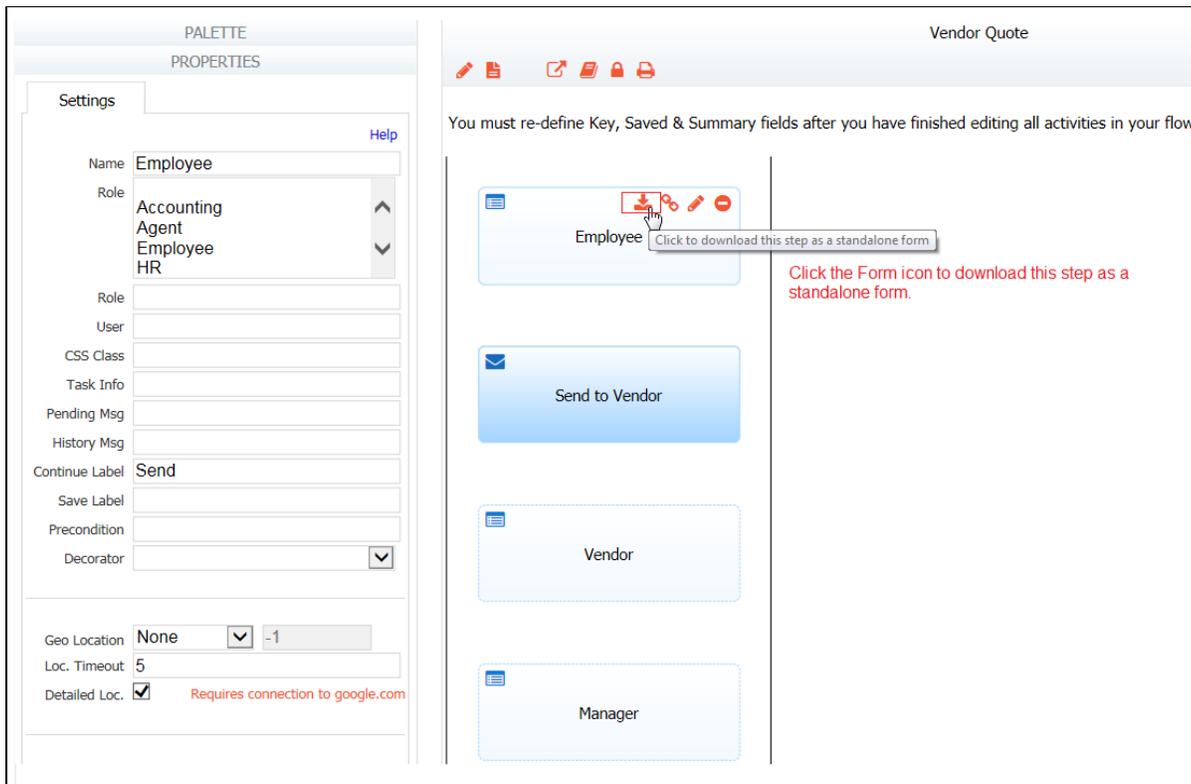
The downloaded file is a _form.zip file and is named according to the convention shown below:

- the flow name
- the version number of the form step plus 1
- _flow step name
- _form.zip

Here is an example of the downloaded file for step 1 named Employee in a workflow named Vendor Quote.
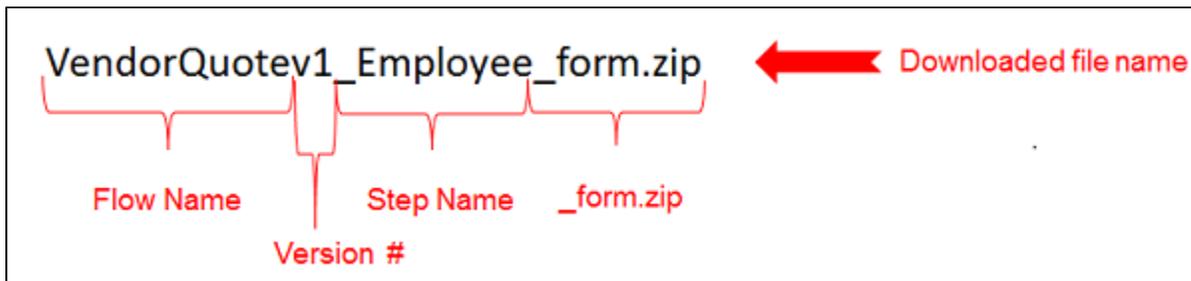
This is an easy way to keep your forms and flows in sync and reuse forms created/updated in the flow designer in other workflows or as standalone forms.

Form actions and Doc actions, excluding Doc URIs, are copied to the extracted form if that step in the flow was an existing form that was dragged into the flow and that form had configured actions.

Activity doc actions are retained. Email Activity doc actions are copied to the Additional Email tab in the extracted form.

Doc Uris are cleared when applied to a form that is created in the forms designer then dragged into the flow designer as a step. Designers will have to manually add them to the extracted form.

Limitations:

- PDF mappings from the flow will NOT be included in the download of the extracted step.

New Form

The New Form palette control allows you to create a new form step in your workflow directly inside the flow designer. If you do not have an existing form for the step you require, drag & drop the New Form into your flow and create the step in place. This will launch the Live Forms form designer where you can add controls to the form just as you would if you designed the form from the Forms Home page.

Drop the New Form from the palette into the flow. Click to select it. Then click the

edit icon to launch the form designer. A unique and arbitrary name will be generated automatically for the step--Step 29 for example. You'll change this name inside the form designer.
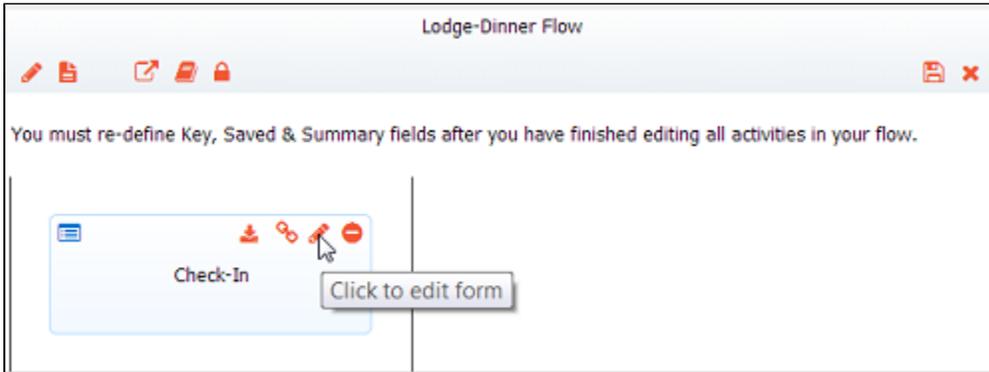
Existing Forms

The palette contains all of the forms that you have already created and which are listed in your current application's forms home page. You can use any form as a step in the flow. Adding an existing form to the flow creates a copy of that form. If you later edit the form from the forms home page, those changes will not affect the step in the flow. It remains as it was at the time you copied it into the flow. If you want to update the flow to have a new copy of the form, delete the form from the flow and drag it in again. You can also edit the form directly in the flow. Conversely these changes to the form inside the flow do not affect the original form in the form home page.
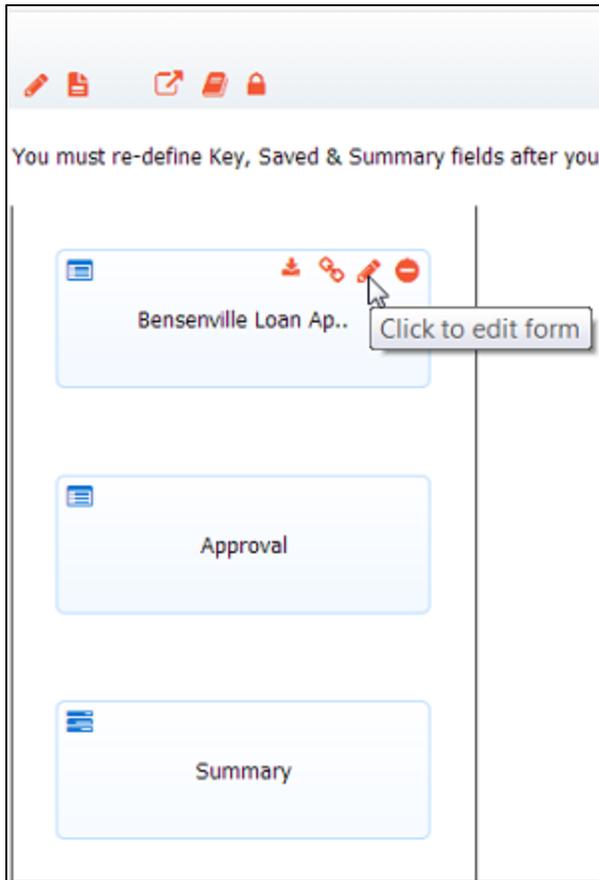
When you add an existing form as a step in your flow:

- PDF mappings associated with the form will be copied to the flow
- If the form has a configured Email data to a specified location doc action it will be copied to the Activity Document Action for that step.
- If the Email data to a specified address wizard is empty but an Additional Email doc action is configured, it will be copied to the Activity Document Action for that step.
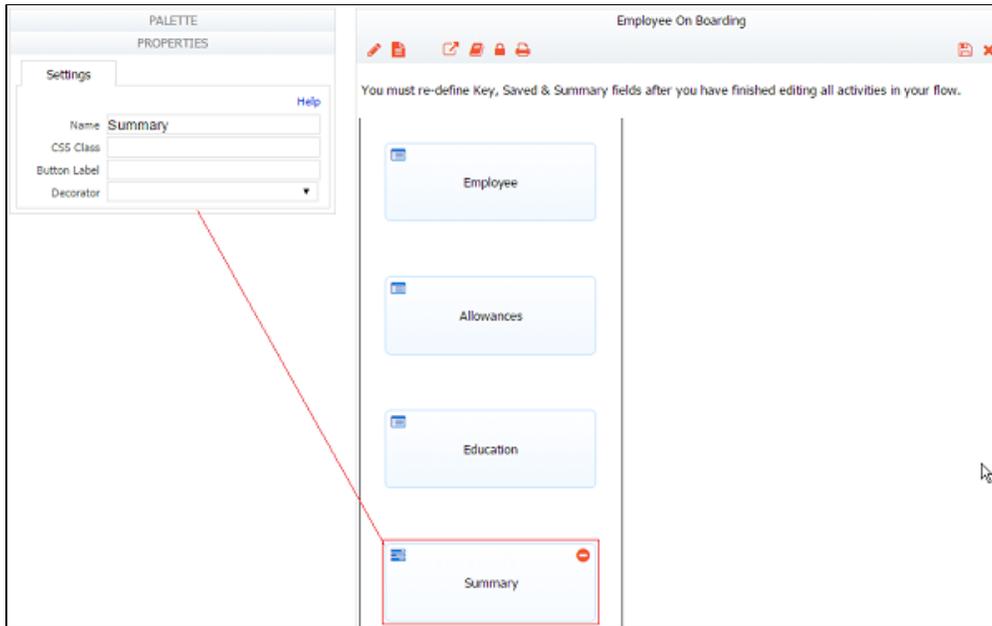
Summary

Drag a Summary step anywhere in your flow. This will simply display a Summary view of all the data that has been entered into the various steps of the flow prior to the Summary step. Clicking on the Details button navigates to the selected step for viewing/editing.

Previously completed steps in a workflow can be viewed by all users but editing data is only allowed for the user that initiated the flow. For example, if the Summary step is part of a screenflow performed by the same user, editing is allowed when this user clicks on the Details button. Once the flow navigates to a different user, previous steps are rendered read-only and cannot be edited. Refer to Flow Processing Modes for more information.

The Print button is available on Summary steps by default. Refer to Printing Flows for the details.

The designer can specify a CSS class, a Button label and a Decorator for the Summary step on the Settings property tab.

The fields that display on the Summary Step are selected by the designer in the Summary wizard.

HTTP Wait - Notify

HTTP Wait-Notify is a step, configured with a post url, that can be added to a flow. The flow data is posted to this url when the task is executed. A call back url is included in the post. The flow and task are suspended until the receiver posts back.

The timezone must be added programmatically by the service you are using. http steps can be performed by an anonymous user.

Let's consider this scenario. Your company has a purchase process workflow. One of the steps in the workflow requires approval from several other approvers before the flow can continue to the next step. These approvals should happen in parallel and not one after the other. A web component that would manage those approvals is in place. An http Wait-Notify can be added to the Live forms flow with a URL to the web component to collect the signatures. The callback URL will be included in that post. The flow will be suspended until all the signatures are collected. The remote web component will notify the Live Form flow using the callback URL when the signature task is completed. If the http step in the flow has doc actions configured, they will be performed and the flow will proceed to the next step.

Now let's take a look at a simple flow that will accomplish the scenario described above. This flow contains the Purchase Request form submitted by the company purchasing manager as the first step, followed by an http step which provides the url to the web component that handles collecting the signatures from all the required approvers, followed by a Summary step. Remember the flow will be suspended until all the approval signatures have been collected by the web component. The web program will then use the callback url to proceed to the Summary step of the flow.
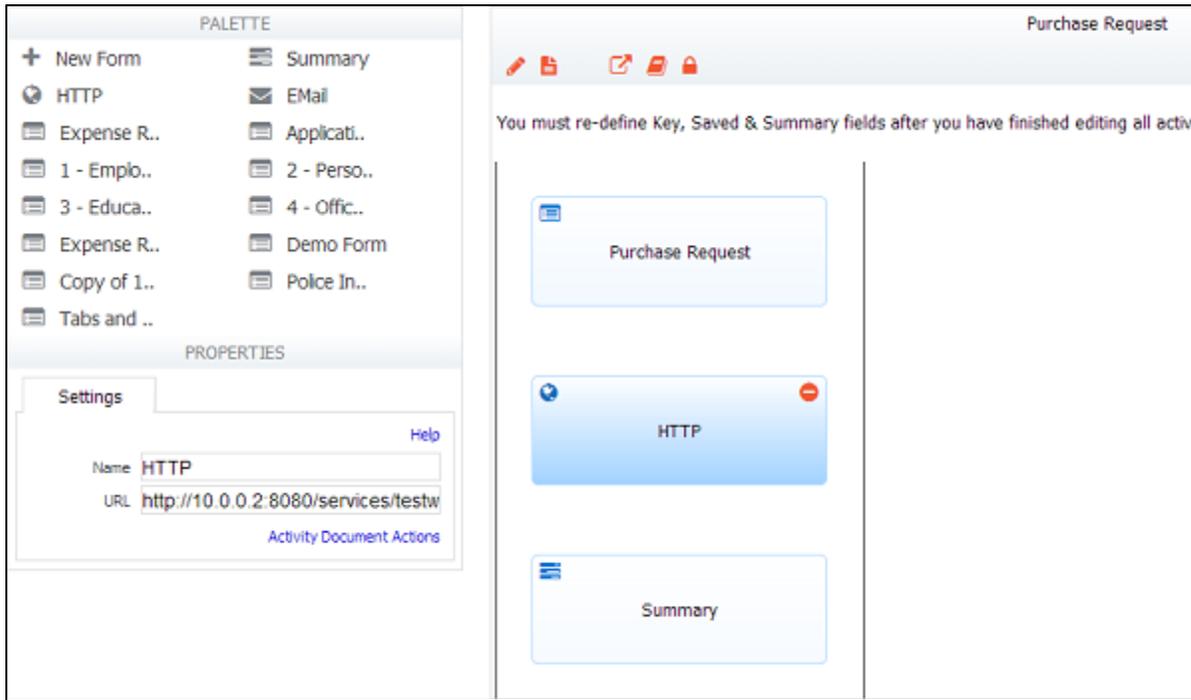
To set up the http URL, click on the http step and enter the URL for your post. In the image below, we are entering the URL to a remote test server running a service that can be used to test this feature: http://localhost:8082/services/testwaitnotify

```
10:14:13.071 |-INFO
[http-nio-8080-exec-2] [
c.f.f.s.FlowService] - httpWaitNotify: POSTing to
http://localhost:8080/services/testwaitnotify Jun 21, 2013 10:14:13 AM
org.apache.catalina.core.StandardWrapperValve invoke
INFO: TesthttpWaitNotifyServlet: notify URL is:
http://localhost:8080/frevvo/web/tn/willstenant/user/designer/app/_fZMUEK5
vEeKl1rJ0IEAosw/flowtype/_pJUvcMFJEeKKR-e9RKn4zg/notify?embed=true&_method
=POST&nextstepTypeId=next&locale=eng&_method=post&embed=true&_submission=4
a3850a2-4c62-4a1b-b2e1-f50bba6547c8
```

When the first step in the flow is submitted, you will see an outbound message in the frevvo log similar to the one shown below:

Notice the latter portion of the entry contains the call back URL

This URL is generated by the frevvo server and will point to whatever host/port the frevvo server is accessed on. If the frevvo.forms.server.external.url parameter in config.properties or web.xml is set, it will always use the value of that property.

This URL is used by the remote service to "wake" up the Live Forms flow. Any document actions configured will be performed and the Live Forms flow will resume. Flow visibility must be set to public.

You cannot reset a flow to an http step. There is a new flow status, WAITING, that you can use to find steps in a flow that is in a suspended state.

If navigation is used to go to previous step, the http step will be skipped. In this case if a user who has navigated back, makes some changes in a form and proceeds forward through the flow, the backend system will not have updated data. If you use the http step, it is important to realize that it will not get called again if the user navigates around. The designer may not want to have the navigation bar visible or prior steps' data should be read-only. The http step will get recalled if you reset to a prior step and the flow continues through it's normal steps.

Configure a History Message on the step before the http step if you want to see relevant information in the audit trail.

Anonymous Task

Important Design Fact
Use of the Anonymous Task step requires that the ACL for "who can use the flow" is set to **Pubic**.This is because your flow now contains a step that is performed by a person who is not an authenticated user - someone who is not logged into Live Forms

Note: If you want to control who can use the flow, then set a role(s) on the first step of your workflow.

Live Forms offers the flow designer many ways to send emails from workflows. You can:

- Configure Task Notification emails - users receive an email informing them that there is a task on their Task List that requires their attention.
- Send an email when a flow is completed. This email is configured through the Doc Action wizard and can be customized.
- Send an email when one of the steps in the middle of the flow is executed. This email is configured through the Activity Doc action wizard and can be customized.
- An email is sent to a user when a task is rejected. This is an automatic function of the rejection feature and the email cannot be customized at this time.
- Escalation emails - tasks must be completed before a deadline. Designers configure the users that receive reminder emails and an email that is sent when the deadline expires.
- Route a workflow to someone who does not have a Live Forms login (anonymous user) - discussed below:

The Anonymous Task in the flow designer palette is **ONLY** used to route a workflow to someone who does not have a Live Forms login (anoymous user). It does send an email to the anonymous user that contains a link to the step in the flow that the anonymous user performs. The anonymous user completes the step and then the workflow is routed back to a user who must login for the workflow to continue. Examples of workflows that would have an anonymous email step would be a request to an outside vendor for a quote, or a Purchase Order that is sent to the customer for approval. Refer to the Flow Tutorial for step by step instructions to implement this feature for a Purchase Order workflow.

Many business scenarios require a step in the workflow to be performed by a person who is not an authenticated user - someone who is not logged into Live Forms.

The Anonymous Task step allows the design of a flow where some steps are performed by authenticated users/roles and other steps are performed by an anonymous user. The anonymous user receives an email, clicks on a link in the email and accesses the task **without being authenticated**, performs the anonymous step, clicks continue, and the flow is routed back to an internal, authenticated user. The flow is suspended (saves the flow to the database), sends an email to the specified email address with a back link. The anonymous user clicks the link email and the flow renders even though he/she is not logged in.

A typical situation is an employee who submits a request to an outside vendor for a quote, which then needs to be approved by the employee's manager. The Anonymous Task step of the flow sends an email to the vendor, the flow is suspended until the vendor submits his quote, then the flow continues for the manager's approval. The Vendor Quote Workflow Tutorial consists of step by step instructions to completely build/test a workflow that uses the Anonymous task step.

The Vendor Quote workflow, shown in the image, has 4 steps:

- Step 1 is the Vendor Quote request filled in by someone in the company with the employee role. The Employee role was selected from the role list for this step.
- Step 2 of the flow sends an email to the vendor. The Anonymous Task step was dragged from the palette and dropped into the flow. This step must have an email address. It can be filled in by the user or populated via a business rule. In this case, the value of the control named VendorEmail will be used to determine the email address to send to. VendorEmail is an example of a template. An email is sent to the email address in the VendorEmail control with the link back to the flow.
- Step 3 is what the vendor sees when the link inside the email is clicked. The step that goes to the anonymous user **cannot have a role, dynamic role or user assigned to it.** This step is really a section in the main form that is shown only when step 3 is being performed. The Vendor and Manager sections are shown/hidden using a business rule. The flow is suspended until the vendor completes his section. In a future version of Live Forms, the amount of time the flow remains suspended can be configured.
- Step 4 is the Manager Approval step. After the vendor submits the quote information, the flow proceeds to the manager step and puts the Vendor Quote Task on the Task List of the employee's manager . The manager can approve/reject the quote. If approved, the flow is completed.

Step 1 is assigned the Employee role from the role dropdown.
Step 2 uses a template - {VendorEmail} - to determine the email address for the vendor.
Step 3 cannot have roles or users assigned to it. This is the step that the vendor executes. The vendor is an anonymous user - does not need to be logged into Live Forms to perform this step.
Step 4 uses the EmployeeManagerId control value to determine the manager to send the flow to for completion.

Here is what it looks like when the flow is performed:

When the Vendor clicks on the link, the relevant parts of the flow are shown. The notify URL automatically adds the timezone from the browser.

The vendor fills in the quote and signs the form. The workflow is suspended until the vendor clicks on the Quote button.

1 Employee ✉ Send to Vendor ③ Vendor 4 Manager

First Name
☑ Tom

Last Name
☑ Cat

Email
✉ tom@mycompany.com

▾ Job Request

Design Job
▤ Business Card

Estimated # of hours
▭ 2

Vendor Name
☑ William Castle Business Cards

Vendor Email
✉ castlewiliam2@gmail.com

▾ Vendor Quote

Additional Comments
Thank You for your business.

Quote Amount (USD)
▭ 50.00

Vendor Signature
✎ W. Castle

→ Quote   Save 🖺

The vendor sees this pending message and the workflow proceeds to the Manager Approval step.

Quote from William Castle Business Cards has been successfully submitted for approval.

The manager approve/rejects the flow from his Task List. Any configured Form/Doc actions , such as a display message, will execute. If the manager approves the task, the workflow is complete. Note the Vendor Quote step in the flow is greyed out.

My Tasks

Vendor Quote Workflow
Tom Cat   Apr 25, 2014

1 Employee   Send to Vendor   3 Vendor   4 Manager

First Name
Tom

Last Name
Cat

Email
tom@mycompany.com

▾ Job Request

Design Job
Business Card

Estimated # of hours
2

Vendor Name
William Castle Business Cards

Vendor Email
castlewilliam2@gmail.com

▾ Vendor Quote

Additional Comments
Thank You for your business.

Quote Amount (USD)
50.00

Vendor Signature

▾ Manager

I approve this quote
● Yes
○ No

Comment
Approved for $50.00.

Apr 25 2014   Edit this section

Finish   Save

Form Action Display Message

Quote from William Castle Business Cards has been completed.

Some Tips about Anonymous Task steps

- Anonymous Task steps are performed by an anonymous user - the user is not required to sign into Live Forms.
- The behavior of workflows consisting of multiple consecutive anonymous steps has changed. Refer to this Multiple clicks on an Anonymous Email link for the details.
- The Anonymous Task step will show up in the navigation bar for other users as usual; you can assign it a decorator but you cannot click on it.
- The task will show up in the Audit Trail in the Waiting state when it is waiting for an anonymous recipient. You can search for it, do all the usual things.
- Users can reject Anonymous Task steps in a flow by clicking the Reject button but a subsequent user cannot reset a flow back to these steps. See the topic below for more information.
- If the Navigation Toolbar is used to go to previous step, the Anonymous Task step will be skipped. It would get recalled if you reset to a prior step and the flow continues through it's normal flow.

- The Navigation Toolbar can be used to navigate to a previous step in a screenflow performed by anonymous users. See Anonymous Screenflows
- Configure a History Message on the step before the Anonymous Task step if you want to see relevant information in the audit trail. The History Message can be templatized so you can see the email address of the recipient.
- If you are setting up Escalations on an Anonymous Email step and you choose to send emails to your users to let them know that the deadline for the task is approaching, change the default template {task.perform.url} to the {task.notify.url} template in the body of the Reminder message on the Live Forms escalation screen. See the Reminder Message Template for Anonymous Task step for the details.
- Confluence users must set the flow to public and allow anonymous access to your Confluence page. The only way for anonymous users to access the flow task from is to use the built-in {task.notify.url} function.

Anonymous Screenflows

⌄ Click here to for the details...

Let's consider a Job Application workflow with the following requirements:
- The workflow is going to be performed by anonymous users. Anonymous users do not sign in to Live Forms.
- The anonymous user receives an email that includes a link to the workflow.
- The workflow must collect a lot of information from the applicant: Contact Information, Education and Employment history, References and more. You can create one long form or design a screenflow with an Anonymous Task step and subsequent steps as separate screens to collect the information.
- The user must have the option to compete the screenflow in multiple sessions. Clicking on the email link takes the user back to the last step in the screenflow where the **Continue** button was clicked.
- The user must be able to navigate back to previous steps to review or update information that was previously entered.

Flow Designer

- The Save on Navigate checkbox is checked and the Navigation Toolbar is configured on the Flow Property Panel
- Step 1 of the screenflow has a field named EmailAddress that collects the applicant's email address.
- Step 2 is an Anonymous Task step.
- All remaining steps in the screenflow are designed to collect the applicant's information: Contact Info, Education and Employment history, references etc. Remember, these steps cannot have a role, dynamic role or user property assigned to them.

The image shows an example of a possible screenflow design:

Anonymous Users can return to a previous step by clicking on the Navigation Toolbar.

Anonymous Task Properties

When you drag/drop an Anonymous Task step into your flow and click on it, a Properties panel displays. The Name, Pending Message, Precondition and Decorator properties work exactly like they do on other types of steps. Task Info doed not apply to an Anonymous Task. If you want to set up a History Message you must do so on the step in your flow that the anonymous user is going to see. Note the envelope decorator to identify the Anonymous Task step in the flow.

Step Doc Actions work exactly like they do on other types of steps.
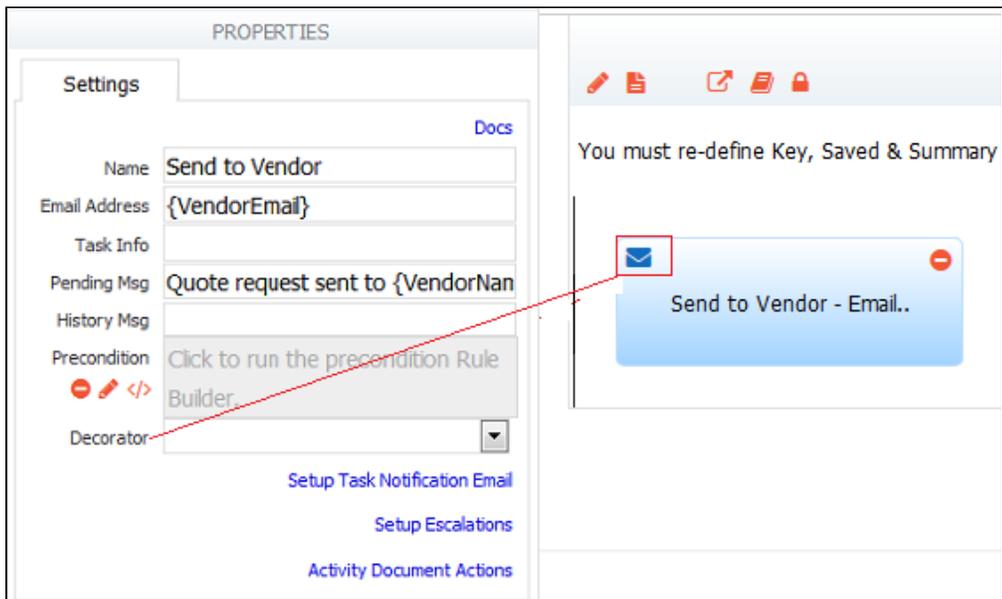
When you click on the step in your flow that is seen by the anonymous user, a Properties pane displays. Several of these properties, do not apply to a task performed by a non-authenticated person and will have no effect. These properties are: Role List, Role, User, Task Info, CSS class, Preconditon, Save Load, Save to Role, and Save to User and . You can customize the button label, history message and select a decorator for

this task that will display on the Navigation toolbar.

The Task Notification Email wizard also works exactly like it does on other types of steps except that the default message content is slightly different. It references {task.notify.url} which is the back link URL that the non-authenticated person clicks in the email to perform their step in the workflow. The designer can customize this message however, if you don't include the {task.notify.url} in your email content, the email recipient will never be able to access the task.

Resetting a Flow with an Anonymous Task step

Consider a flow with the following navigation: Step 1 is performed by an Employee > Step 2 is an Anonymous Task step > Step 3 is performed by an Anonymous user > Step 4 is performed by a manager.

- Employee starts flow, email gets sent, the anonymous step is performed and a task is generated for manager. If the manager is also a flow admin, they can reset the flow to a previous step
- A flow cannot be reset to the Anonymous Task step. In this example, only a reset to the employee step is allowed.
- The task is returned to the Employee Task List. When the employee performs the step again and clicks Continue. The Anonymous Task step is performed again and another email will go to the anonymous user.
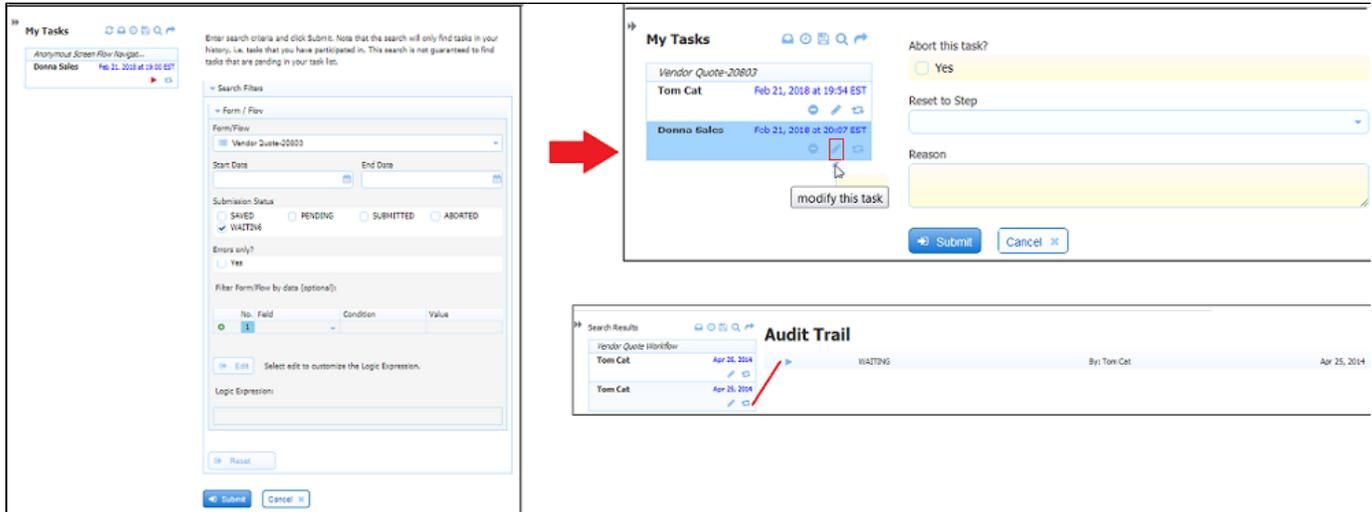

The same behavior applies to a flow with an http step.

## Searching Tasks with an Anonymous Task step

Consider a flow with the following navigation: Step 1 is performed by an Employee > Step 2 is an Anonymous Task step > Step 3 is performed by an Anonymous user > Step 4 is performed by a manager.

- The flow has been started and the notification email has been sent.
- The flow is now in the WAITING state.
- The Employee can search for a status of WAITING and view the audit trail. If the employee is also a flow admin, they can reset the flow

to a previous step

- The tenant admin can search for a status of WAITING, reset the flow to a previous step, abort it or view the Audit trail.
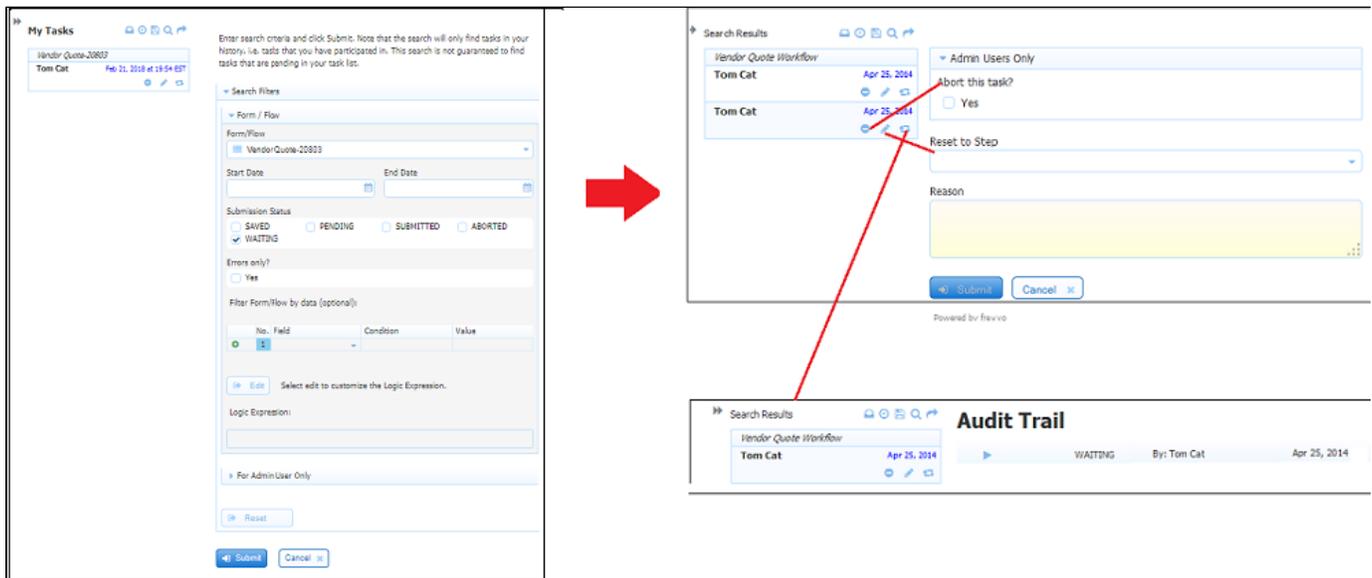
The same behavior applies to a flow with an http step.

Anonymous Task Steps and the Reject Feature

If a Reject feature is configured for a workflow, non-admin users can send the workflow back to a previous step. For example, a Manager can send the workflow back to an Employee for corrections. If the workflow contains an Anonymous Task step, the anonymous user can reject the task but it is not possible to reject back to the Anonymous Task step from subsequent steps in the workflow.

Form Viewer Control

The Form Viewer control is used to allow a generated PDF to be viewed as part of a form step in a flow. This control only appears on the Forms palette in the flow designer when you click the

icon to edit an step in a flow.