Dynamics GP Workflow

Workflow Overview

Setup Checklist:

To set up the Workflow system, you'll need to complete several tasks. The following items lists the tasks you'll need to complete and the order in which you should complete them.

1. Be sure that the SQL Server Agent service is set up to start automatically with the operating system.

    If the SQL Server Agent service isn't set up to start automatically, the escalation action you selected for your workflows will not be performed.

    When an approver fails to act on a task by the task's due date, the task is considered overdue, or escalated. You can select the action to be taken when a task in the workflow overdue in the Workflow Maintenance window.

2. Install Web Services for Microsoft Dynamics GP:

    This component is required if you want to perform actions directly from the e-mail message, such as an approving a document.

    Note: When you install Web Services, be sure that the application user account is a domain account that has privileges to access Active Directory.

3. Map GP user to Active Directory user:

    Workflow requires GP Users to be mapped to Active Directory users to manage the approval cycle according to the levels setup up with workflow.

4. Set up e-mail options for workflow:

    Set up e-mail options for Workflow so you can send e-mail messages and perform actions in e-mail messages such as such as approving or rejecting a document.

5. Set up e-mail messages for workflow notifications:

    Create messages that you can send to originators and approvers when workflow tasks are assigned to them or when documents they've submitted have completed the workflow approval process.

6. **Configure the Workflow calendar:**

   Configure the Workflow calendar to show which days are work days and which days are non-work days for each of your companies. The Workflow system will count only the work days when calculating a step's deadline.

7. **Create workflow:**

   Create and configure workflow, such as a purchase order workflow or a requisition workflow.

8. **Delegate Workflow tasks:**

   Specify how to delegate tasks.

   Approvers can delegate, or reassign, their tasks to other approvers. For example, if Frank will be out of the office for a period of time, he can delegate his tasks to another approver in the workflow, such as Sue or Ann.
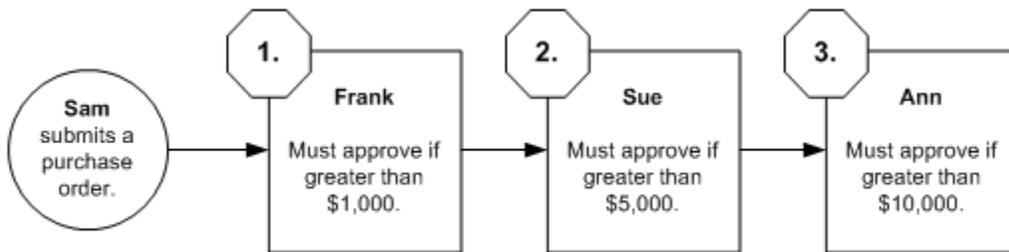
   If users will be out of the office for a period of time, or will be unavailable to respond to tasks, have them delegate their tasks.

Prepare for workflow setup

Now that you understand the setup steps required to implement workflow, let's discuss how to begin. The best way to prepare for setting up a Workflow system is to create diagrams illustrating the workflow you want to create. It's recommend you draw each workflow using a software program such as Microsoft Office Visio, or by simply using pen and paper.

Your diagrams should indicate:

* The order in which the workflow steps occur
* Who the approvers are at each step, and the conditions under which their approval is required

For example, your diagram may look similar to the following workflow diagram
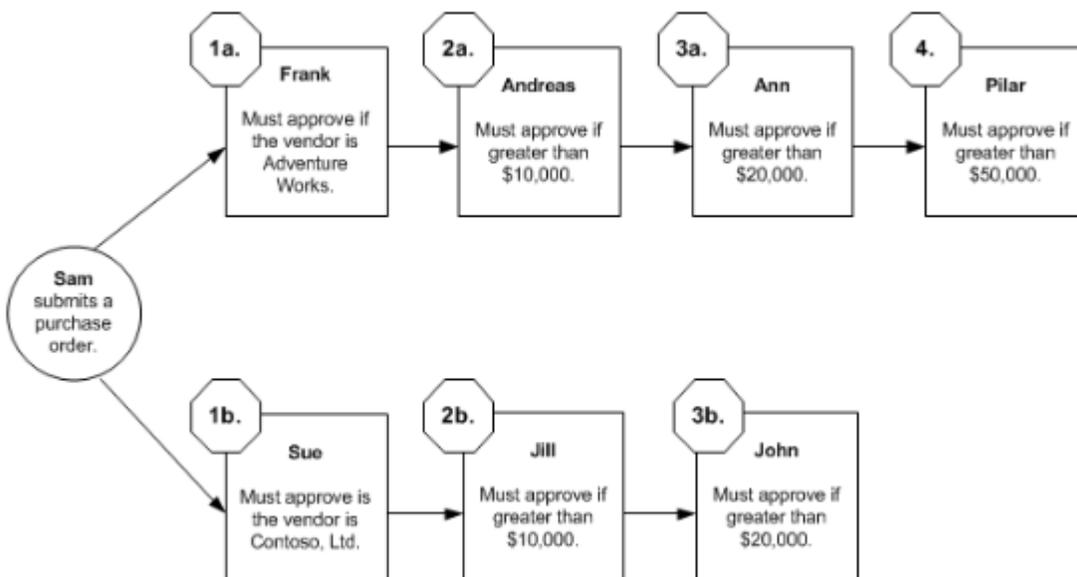
Assign GP Users to Active Directory accounts

Administration >> Setup >> System >> Users

Map GP user to active directory user account (Windows Account). This relationship is required to manage the approval cycle within workflow setup.

Workflow Email Setup

Administration >> Setup >> System >> Workflow Setup

The Workflow Setup window to set up e-mail options for Workflow. After marking the Enable E-Mail for Workflow option, you must enter the e-mail address, Simple Mail Transfer Protocol (STMP) server, and authentication information for an e-mail account so you can send e-mail notifications.

If you enable e-mail actions, you can perform actions directly from the e-mail message, such as approving a document. To perform actions from the e-mail message, verify the following components.

- Be sure that you have installed Microsoft Dynamics GP Web Services and that the application user account set up in Microsoft Dynamics GP Web Services is a domain account that has privileges to access Active Directory.
- Be sure that you are using Internet Explorer 9.0 or later.

To set up e-mail options for Workflow:

1. Open the Workflow Setup window.
    (Administration >> Setup >> System >> Workflow Setup)

2. Mark the Enable E-Mail for Workflow option to send e-mail notifications.

3. Enter the name of the e-mail address for the account. This is the e-mail address that e-mail is sent from.

4. Enter the name to show on e-mail messages sent from this account. The display name is optional.

5. Enter the name of the SMTP server the account uses to send e-mail. Typically this is in a format similar to smtp.<your_company>.com.

6. Enter the port number of the SMTP server for this account. The default port is 25.

7. Mark the "This server requires a secure connection (SSL) option if required".

8. Select which credentials to use when sending e-mail. You can use the credentials of the SQL Server Database Engine, other credentials that you supply, or anonymously.

9. Choose Test E-mail button to open the Test Workflow E-Mail window. You can use this window to send an e-mail message to verify that you can send a message using the current settings.

10. Mark the Enable E-Mail Action option to take actions in e-mail notifications such as such as approving or rejecting a document.

11. Enter the name of the Web Services server.

12. Enter the port number of the Web Services server. The default port is 48620

13. Mark the "This server requires a secure connection (SSL) option if required".

14. Choose Test E-mail Action button to verify your server information for Microsoft Dynamics GP Web Services and the connectivity to the server.

Workflow Message Setup

Tools > Setup > Company > Workflow > E-mail Message Setup

This window is used to create messages that you can send to notify a user when a workflow step is assigned or an originator when a workflow action is completed.

You can also use and customize default messages that are already available by adding fields that are associated with a document type or workflow. For example, you could add the action deadline or comments from the originator of a purchase order approval.

To Setup Email Messages

1. Open the Message Setup window.
    (Administration >> Setup >> Company >> Workflow >> E-mail Message Setup)

2. Enter an ID to identify the message.

3. Enter a description of the message ID.

4. Select Workflow Assignment or Workflow Action Completed as the message type.

5. Select the series in which you want this message to appear. Messages assigned to All can be used with all series that have workflow types.

6. Select a document type from the series you selected. This field isn't available if you selected All as the series.

7. Enter a subject line for the message. You also can customize the subject line by adding a field or fields associated with a document or workflow.

8. Enter the message that will appear in the e-mail when sending notifications. You also can customize the message by adding a field or fields associated with a document or workflow.

9. Choose Document Lines to add document line item information in a message body. Document line items can be used to make decisions on whether to approve or reject the document in workflow. This tab is not available if you selected All as the series.

10. Enter or select an address that the originator or approver can use to send a reply to a specific e–mail address. For example, assume that you have entered purchasing@fabrikam.com as the reply to address. If you send a document in e-mail to an approver, the approver receives e-mail from username@domainname.com. When the vendor replies to the e-mail, purchasing@fabrikam.com is used in the To field.

11. Choose Validate to verify the field or fields you added to the message body or subject line match the document type assigned to the message.

12. Choose Save to save the message ID.

Workflow Calendar Overview

The Workflow calendar shows which days are work days and which are non-work days. The Workflow system will count only the work days when calculating a step's due date. The Workflow calendar uses the date and time values from server that has Microsoft Dynamics GP installed. Work days are typical work days and times for the company. A task's due date is calculated using the time limit specified for workflow steps and the work days and times entered in the Workflow Calendar window. The Workflow calendar uses the date and time values from server that has Microsoft Dynamics GP installed.

For example, assume that you have set up a calendar to have Monday through Friday as the work days and 8 A.M. to 5 P.M. as hours worked for each day. The workflow step assigned to Amy, the purchasing manager, gives Amy a four–hour time limit to act on her workflow task. Using the Workflow calendar, if Amy is assigned a purchase order at 3 P.M. on Monday, she'll have until 10 A.M. on Tuesday to approve or reject the purchase order.

As another example, assume that the workflow step assigned to Amy gives her a three days to act on her workflow tasks. Using the Workflow calendar, if Amy is assigned a purchase order at 2 P.M. on Thursday, she'll have until 2 P.M. of Tuesday to approve or reject the purchase order. This is because Saturday and Sunday are not counted toward the task's due date.

Non-work days are not counted against the time limit set for activity assignments for workflow steps. For example, assume that you have set up a calendar to have Monday through Friday as the work days and 8 A.M. to 5 P.M. as hours worked for each day. Plus, you added Monday, July 22 to the calendar as a non-working day. The workflow step assigned to Amy gives her two days to act on her workflow tasks. Using the Workflow calendar, if Amy is assigned a purchase order at 3 PM on Thursday, July 18, she'll have until 3 P.M. of Tuesday, July 23 to approve or reject the purchase order.

Configuring Workflow Calendar
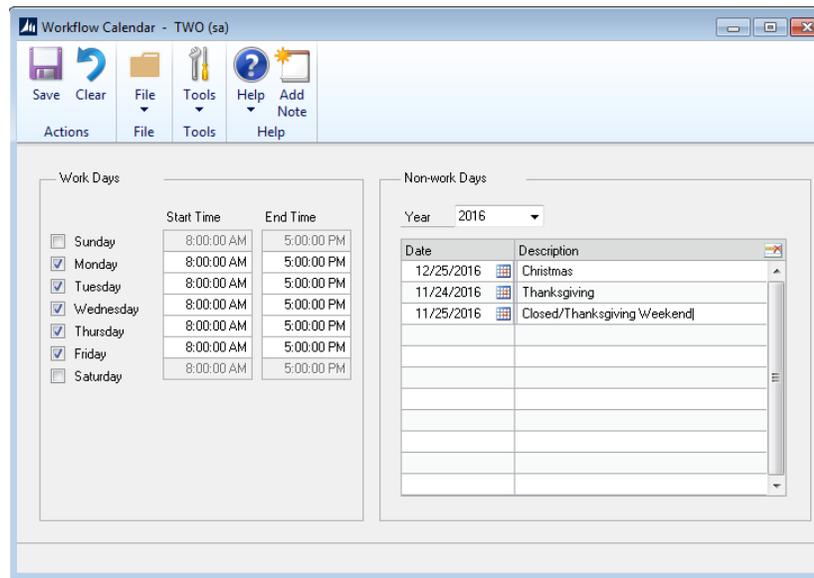
1. Open the Workflow Calendar window.
   (Administration >> Setup >> Company >> Workflow >>Workflow Calendar)

2. Select the option for each day that is typically a work day in your company and enter the start and end time of the day.

3. To define non-work days, select the year that you want to define non-work days for.

4. Enter the date and description of the non-work day.

5. Choose Save.

Workflow Maintenance (Configuring and Creating a Workflow)

A workflow is the approval process for a document. A workflow defines how a document "flows" through the system by showing who must approve it, and the conditions under which they must approve it.
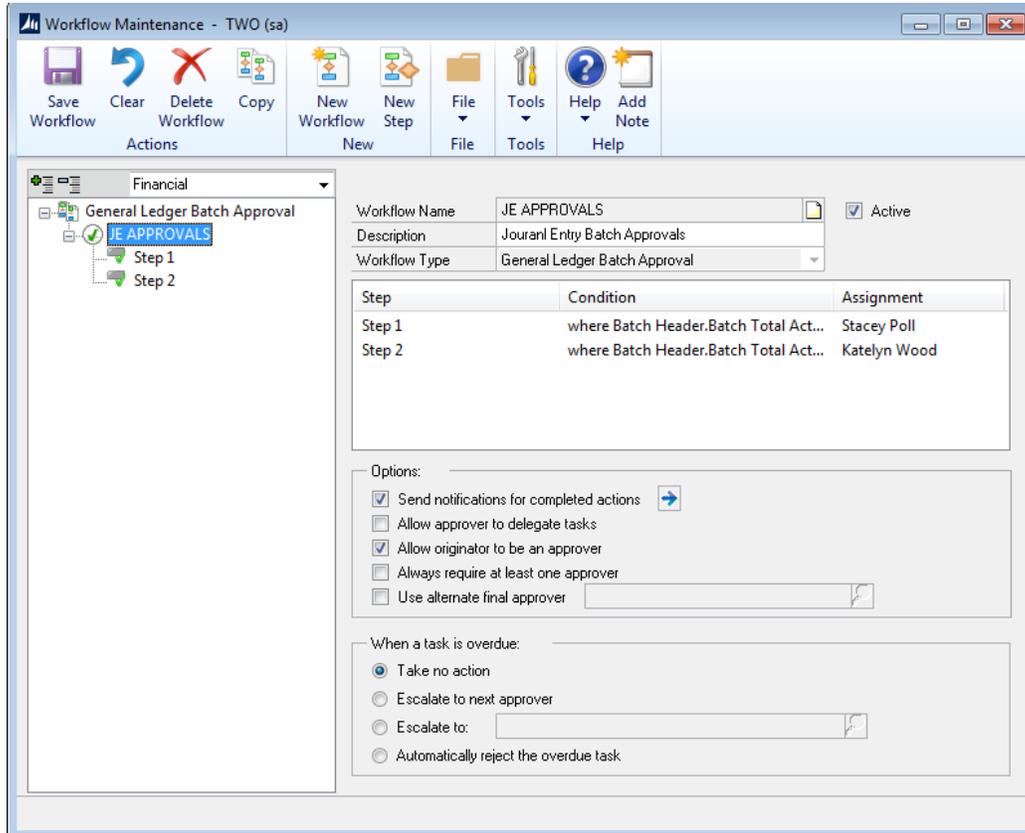
To Create and Configure a workflow:

1. Open the Workflow Maintenance window.
   (Administration >> Setup >> Company >> Workflow >>Workflow Maintenance)

2. Select the type of workflow to create.

   Select the series and then the workflow type in the tree view. Each workflow you create will be based on a type. The type indicates the purpose of the workflow. After you select the type of workflow you want to create, you can define the properties of the workflow.

   At least one manager must be selected before you can activate a workflow for the type. Choose the Manager lookup button to open the Workflow User Selection window to add managers to the workflow type.

3. Choose New Workflow.

4. Name the workflow.

   Enter a unique name for the workflow. We recommend that the name include your company name and the type of document the workflow is for. For example, if you're configuring a workflow for purchase orders created in the Fabrikam sample company, you may want to name the workflow "Fabrikam Purchase Orders."

   You also can enter a description of the workflow, such "Multiple approval steps for purchase orders."

   You can choose the Copy button to copy an existing workflow from one company to another company.

5. Indicate whether notifications should be sent for completed actions.

   You can send notifications messages to users when the documents they've submitted have completed actions in the workflow approval process.

   Mark the Send notifications for completed actions option in the Workflow Maintenance window and choose the expansion button to open Workflow Email Notification Maintenance window. You can use this window to select which completed action that the originator should be notified about, the message to send for the notification of the action, and the carbon-copy (cc) recipients of the notification.

6. Indicate whether approvers can delegate tasks.

   To allow an approver to delegate a task to another approver in the workflow, mark the Allow approver to manually delegate tasks option.

   For example, assume that Frank is reviewing a purchase order. If the Allow approver to delegate tasks option has been selected, Frank will be able to delegate the purchase order to another approver in the workflow.

7. Indicate whether an originator should be an approver.

   Any user who creates a document such as a purchase order can submit it for approval. You can specify that the originator for the workflow can be an approver.

   For example, assume that Sue submits a purchase order for Northwind Traders totalling $25,000.
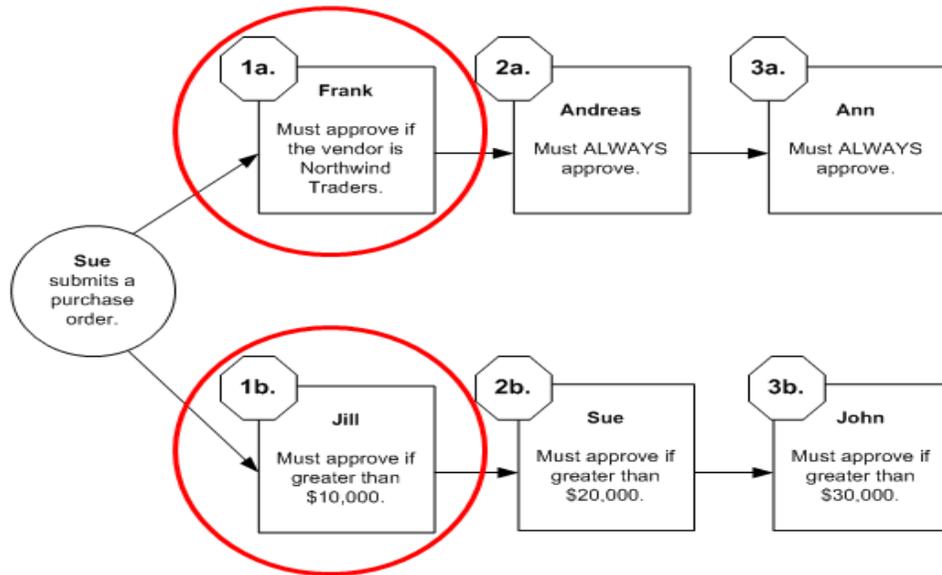
The system starts by evaluating the first steps to determine if approval is required there. Since the purchase order meets the conditions specified in both first steps, it is sent to Frank and Jill for approval.

When Frank and Jill approve the purchase order, it is assigned to Andreas and Sue. Note that Sue will have to approve her own purchase order. After Andreas approves the purchase order, Ann must approve it.

Suppose the Allow originator to be an approver option is not selected. This means that when Sue submits a document for approval, she is removed from the list of approvers for the step, and replaced by the alternate final approver, or manager if there is no alternate final approver.
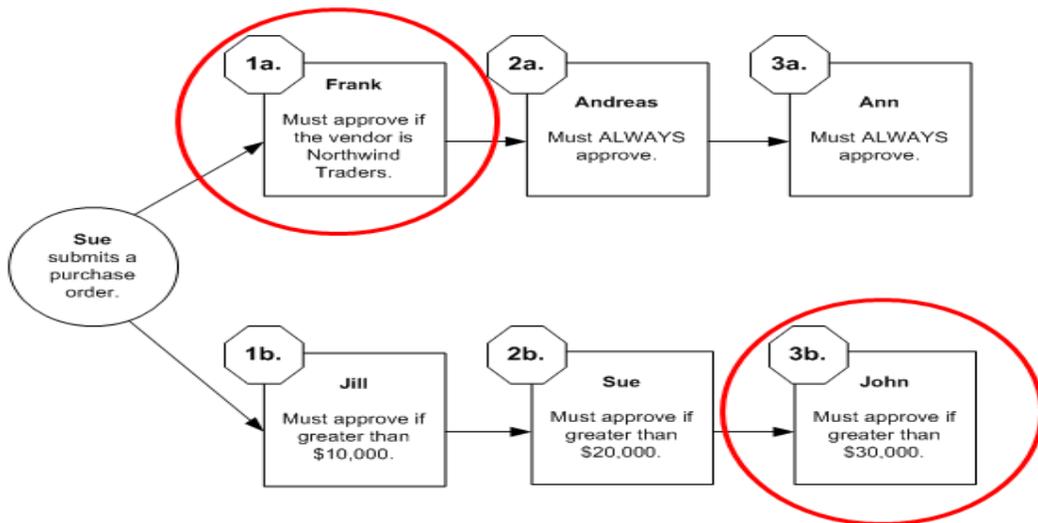
8. Indicate if documents should be approved by at least one person.

There may be cases when a document does not require approval. For example, consider the following workflow. If Sam submits a purchase order for $100, no approval is needed because the purchase order does not meet any of the conditions specified in the workflow steps. In this scenario, the purchase order will be saved automatically with a status of No Action Needed.
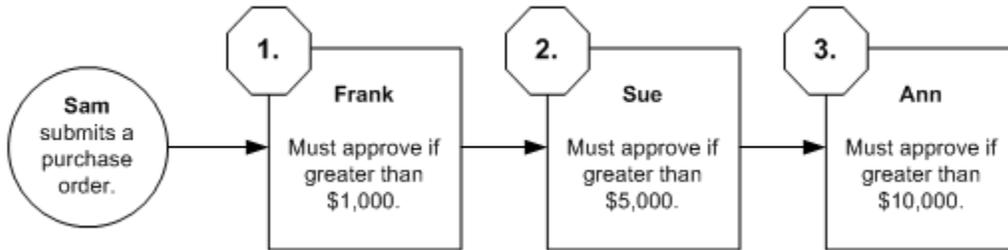
9. Specify an alternate final approver.

The *final approver* is the last person in the approval path who is required to approve a document. For example, assume that Sam submits a purchase order for Northwind Traders totalling $7,000. This purchase order must be approved by Frank and Sue. Because the purchase order is not greater than $10,000, Ann's approval is not required. In this scenario, Sue is the final approver.
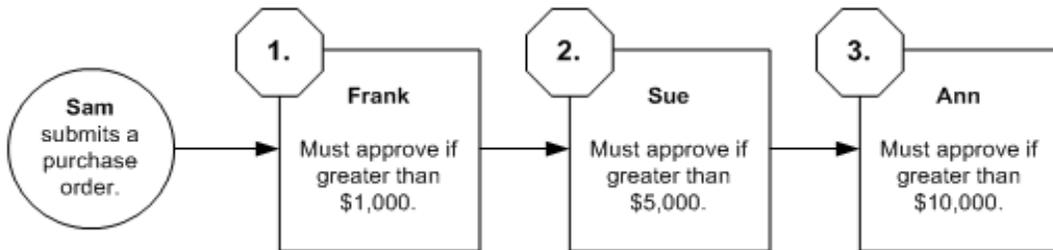
Mark the Use alternate final approver option and enter the name of an alternate final approver if you want a different escalation approver. The alternate final approver is assigned to the approval action under the following conditions.

- The Always Require at Least One Approver option is marked and there are no approval steps whose conditions are met.
- The Always Require at Least One Approver option is marked and the approver edits the document and there are no following approval steps.
- There are no approval steps following an overdue step, depending on your escalation settings.

To better understand when the alternate final approver is used, assume that Ann edits the $11,000 purchase order that Sam submitted. Ann increases the quantity of items requested so that the purchase order now totals $12,000. She then approves the document. Ann typically would be the final approver (because the document is more than $10,000). However, because Ann edited the document, she can't final approve it. The document will be sent to the alternate final approver for approval.

10. What should happen when a task is overdue.

When an approver fails to act on a task by the task's due date, the task is considered overdue, or escalated. Indicate what should happen to overdue tasks by selecting one of the following options.

Take no action   Select this option if you want the task to remain assigned to the current approver.

Escalate to next approver   Select this option if you want the system to automatically assign the task to the next approver in the workflow.

Escalate to   Select this option if you want the system to automatically assign the task to a specific user. You must enter the name of the user you want the task assigned to.

Automatically reject the overdue   Select this option if you want the system to automatically reject the task.

11. Choose Save Workflow.

Configuring a Workflow Step

A workflow step allows you to define the order of how items flow through the workflow, conditions for running the step, and properties associated with assigning the activity to users.

To configure a workflow step:

1. From the Workflow Maintenance window, select the workflow for which you want to a create a step and click the New Step button.

2. Name the step.

   Enter a unique name for the step. We recommend that you keep the step names simple, such as *Step 1* and *Step 2*, or *Purchasing Manager Approval* and *CEO Approval*. Keeping the step names simple will help you manage the order in which they occur.

   You also can enter a description of the workflow step, such Approval for purchase orders over $5000 or Perform credit check.

3. Specify a step type.

   Approval   If this step requires that a user must give approval as part of the workflow process, select Approval.

   Task   If this step requires that a user must complete a procedure as part of the workflow process, select Task.

4. Specify where this step should occur.

   You must specify where this step should occur in the workflow.

   First step in the workflow   If this step is the first step in the workflow, select This step is a first step.

   Keep in mind, you can have multiple first steps. For example, review the following workflow illustration. Notice that steps 1a, 1b, and 1c are all first steps.

1a.
Frank

Must approve if the vendor is Adventure Works.

1b.
Andreas

Must approve if the vendor is Contoso, Ltd.

1c.
Ed

Must approve if the vendor is Northwind Traders.

Sam submits a purchase order.

2.
Sue

Must approve if greater than $5,000.

3.
Ann

Must approve if greater than $20,000.

4.
Maria

Must approve if greater than $50,000.
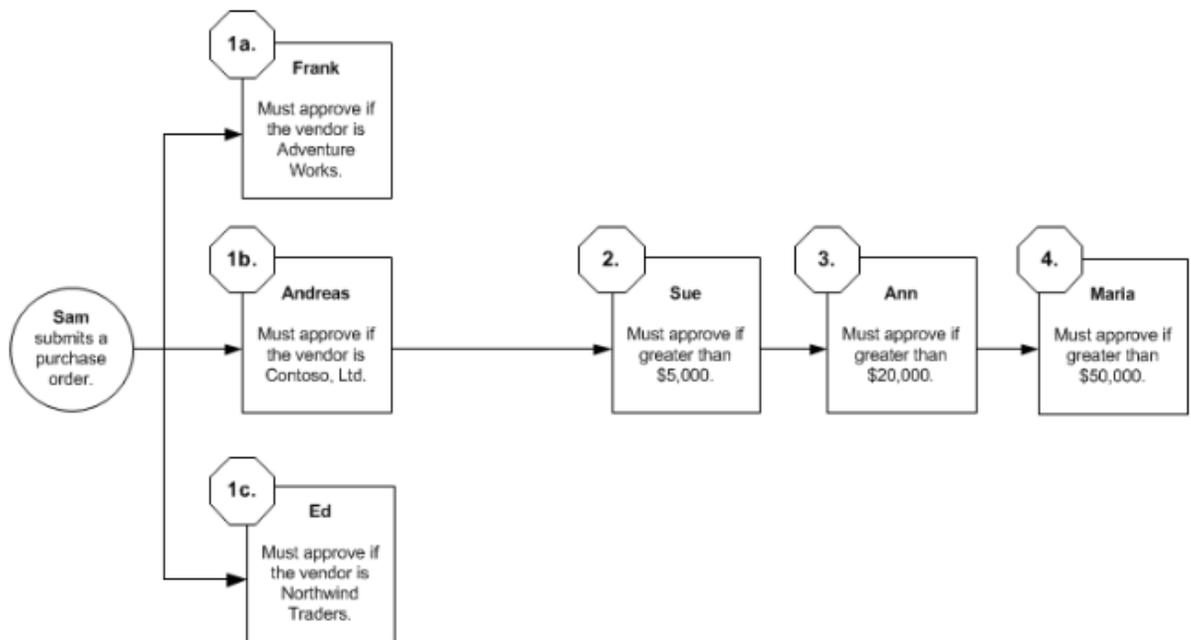
**Subsequent step in the workflow**   If this step is *not* a first step, select This step follows the selected step. Then select the workflow step that this step should follow. For example, consider the following workflow illustration. Notice that step 4 follows step 3a.

1a.
Frank

Must approve if the vendor is Adventure Works.

2a.
Andreas

Must approve if greater than $10,000.

3a.
Ann

Must approve if greater than $20,000.

4.
Pilar

Must approve if greater than $50,000.

Sam submits a purchase order.

1b.
Sue

Must approve is the vendor is Contoso, Ltd.

2b.
Jill

Must approve if greater than $10,000.

3b.
John

Must approve if greater than $20,000.
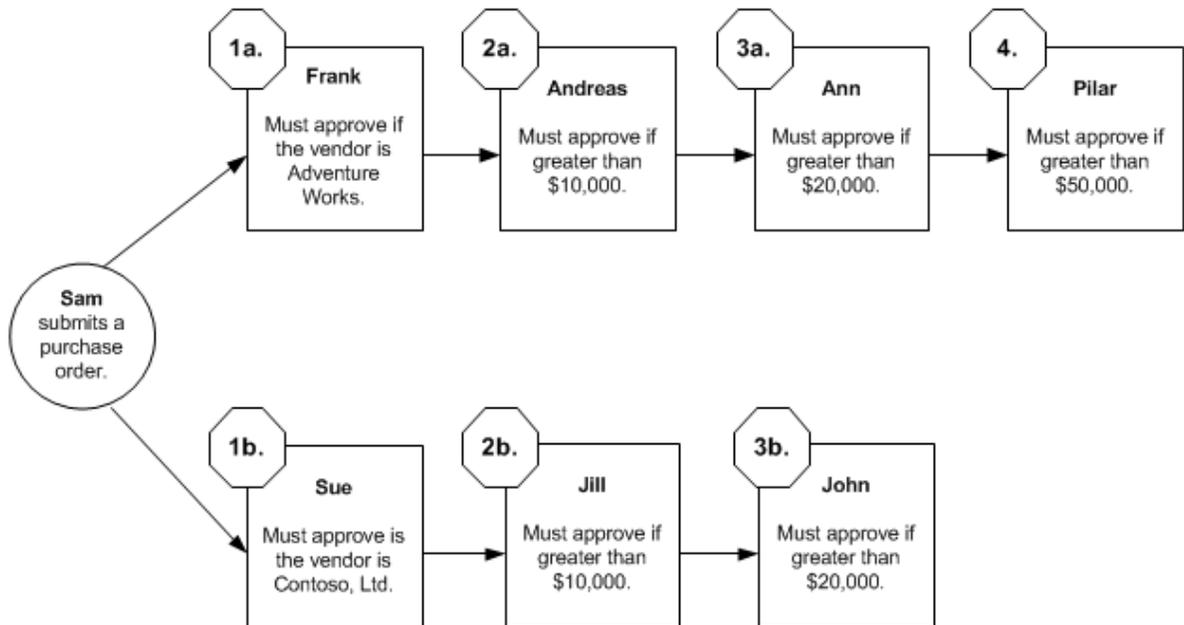
For example, assume that your company requires verification of the unit cost of each item on a purchase order before the purchase order can be approved. Sam has submitted a purchase order for $5,000. Frank must perform an action step of verifying the unit costs of the items on the purchase order before Sue can start the approval process.
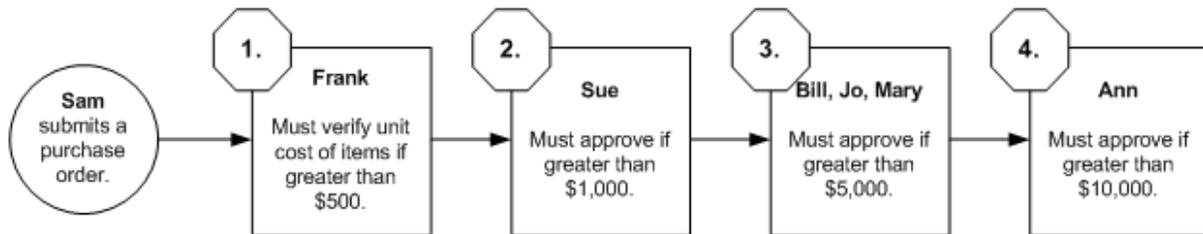

5. Specify when approval or task is required at this step.

    You must specify when approval or a task is required at this step. Approval or a task may be required always, or only under specific conditions.

    Action is always required   If approval or task is always required at this step, select the Action is always required for this step option.

    Keep in mind, if you select this option, it doesn't mean that this step will *always* occur in the workflow; rather, it means that any document *that reaches this step* must always be approved or the task be completed.

    To understand this better, consider the following workflow illustration. There are two approval paths for purchase orders: one for purchase orders for Adventure Works, the other for purchase orders for Contoso, Ltd. Notice that when a purchase order for Contoso, Ltd. reaches step 2b, Jill's approval is always required. Purchase orders for Adventure Works will never reach step 2b, so Jill's approval is not required in those situations.
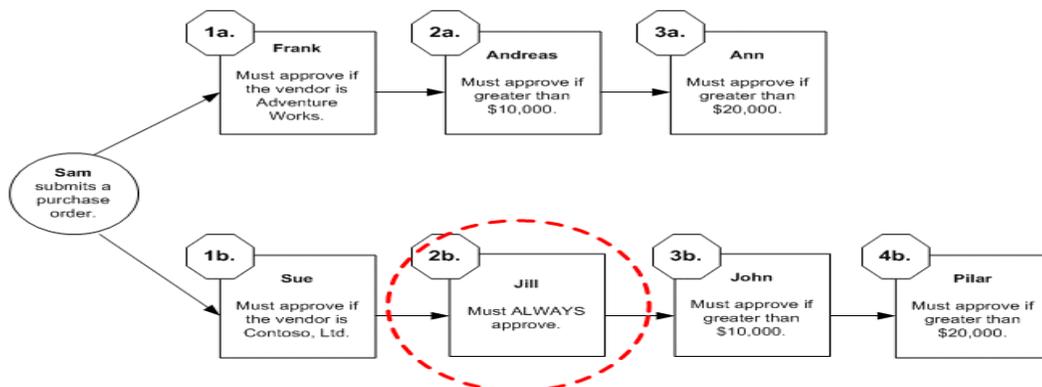
Action is required under specific conditions   If approval or a task at this step is required only under specific conditions, select the Action is required only when the following conditions is met option. Then specify the conditions under which approval or the action is required. Choose the expansion button to open the Workflow Condition Editor window.

For an example of adding a specific condition, consider the previous workflow diagram. Notice that Frank's approval is required only when the vendor on the purchase order is Adventure Works. You would use the following steps to add Frank's approval requirement as a condition.

1.	Open the Workflow Condition Editor.
2.	Since this is the first condition created for the workflow step, the first part of the condition is Where.
3.	The second part of the condition is to select the field that you want to use in the condition. Since Frank's approval is needed for a specific vendor ID, you would select Purchase Order Work Vendor ID.
4.	Next, select a restriction to apply to the field you selected. The restrictions available depend on the type of field you selected. In this case, you would select "is" as your restriction.
5.	After selecting the restriction, determine the comparison. Since Frank's approval is needed for a specific vendor ID, you would select Constant to use a value instead of a field on the same document.
6.	Then, enter a specific value to use in the condition. For this condition, it would be ADVENWORK001.
7.	The last step is to choose Add to add the condition to the Conditions list. The condition should look like the following. where Purchase Order Work.VendorID is 'ADVENWORK001' After adding this condition in the Conditions list, the "and" and "or" options are available for the next condition for the workflow step, if applicable.

6. Assign approvers.

   Specify who must approve the documents that reach this step in the workflow. You can have one approver or multiple approvers. Enter the names of the approvers in the Assign To field.

   If you have one approver, that person will be responsible for approving all documents that reach this step in the workflow.

7. Set a time limit.

Specify how many hours, days, or weeks the approver has to respond to the task—that is, approve or reject it. The number of hours, days, or weeks you enter will be used to calculate the task's due date.

Mark the Apply Workflow Calendar option to include the Workflow calendar in the due date calculations for the step. For example, assume that you have set up work days in the Workflow calendar as being from Monday to Friday, 8:00 A.M. to 5:00 P.M., and entered four hours as the time limit for a step. If the step is starts at 3:00 P.M. on Wednesday, and the option is marked, then the due date for the task will be set to 10:00 A.M. Thursday morning. If the option is not marked, the due date for the task is set to 7:00 P.M. Wednesday evening.

 For detailed information about how a task's due date is calculated, see Overview
 of the Workflow calendar.

If an approver fails to respond by the due date, the task is considered overdue, or escalated. The task will then be handled according to the option you selected in the When a task is overdue area for the workflow. For more information, see Indicate what should happen when a task is overdue..

8. Send a notification message.

Mark to send e-mail messages to users when workflow tasks are assigned to them. Then, enter or select the message ID for the notification for when the step is run.

You can click the Send Message link to open the Message Setup window, where you can view or edit the message.

9. Specify the completion policy of a step.

If you have multiple approvers, you must specify how many of the approvers must approve the documents that reach this step. Select one of the following options.

Only one response needed   If you select this option, the action applied to the document is determined by the first person who responds.

For example, assume Sam has submitted a purchase order for $50,000, and it is currently at step 3 in the workflow. If Mary is the first person to respond to the document, the action she takes is applied to the document. For example, if she approves it, the document is sent to Ann for approval. If Mary rejects the document, it is given the status of Rejected and the workflow process is complete.
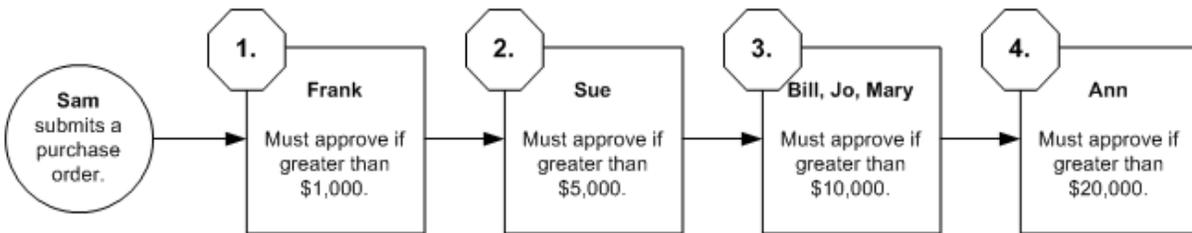
Majority must approve or take action   If you select this option, a majority of the approvers must approve the document for it to continue down the workflow approval path.

For example, consider the workflow previously illustrated. Assume that Sam has submitted a purchase order for $50,000 and it is currently at step 3 in the workflow.

- If Bill and Jo are the first two approvers to respond—and they both approve the document— the document is sent to Ann for approval. Because a majority is reached, the system does not wait for Mary to respond.
- If Bill and Jo are the first two approvers to respond—and one of the approvers reject the document—the document is given the status of Rejected and the workflow process is complete. Because a majority is reached, the system does not wait for Mary to respond.
- If Bill approves the document and then Jo requests a change, the document is given the status of Pending User Action. Because a change is requested, the document is immediately sent back to the originator. The system does not wait for Mary to respond.

Keep in mind, if a workflow step has an even number of approvers, a majority must still document in order for it to continue down the workflow approval path. For example, suppose step 3 has four approvers (Bill, Jo, Mary, and Chris). Three approvers must approve the document in order for it to continue down the approval path. If two approvers approve the document, and two reject it, the document is given the Rejected status because a majority was not reached.

All must approve or take action   If you select this option, all of the approvers must approve the document in order for it to continue down the workflow approval path.

For example, consider the workflow previously illustrated. Assume that Sam has submitted a document for $50,000 and it is currently at step 3 in the workflow. If all of the approvers (Bill, Jo, and Mary) approve the document, it is sent to Ann for approval. If one person rejects the document, it is given the status of Rejected and the workflow process is complete. If one person requests a change to the document, it is sent to Sam with a status of Pending User Action.

10. Choose Save Step

11. Repeat to setup all remaining steps

Activate Workflow

Administration > Setup > Company > Workflow Maintenance

You can create multiple workflows of a specific workflow type. For example, you can create multiple purchase order workflows. However, only one workflow of that type can be used at a time. The Active option indicates which workflow of that type will be used.

Mark the Active option to make the workflow you're configuring the active workflow. You must have at least one step created for the workflow before you can activate a workflow. If you do not want to implement this workflow in your company just yet, leave the Active option unmarked.

If there is already an active workflow of this type, you'll need to deactivate that workflow first, before activating this workflow. When you save the workflow and there is already an active workflow of this type, a message appears stating that there may be only one active workflow per workflow type. If you decide that the current workflow should be the active workflow, the Active option for the other workflow is unmarked.

***Before inactivating an existing workflow, you may want to verify that all documents submitted to the workflow have been processed.

Delegating Task

Approvers can delegate, or reassign, their tasks to other approvers. For example, if Stacey will be out of the office for a period of time, he can delegate his tasks to another approver in the workflow, such as Cheryl or Ann.
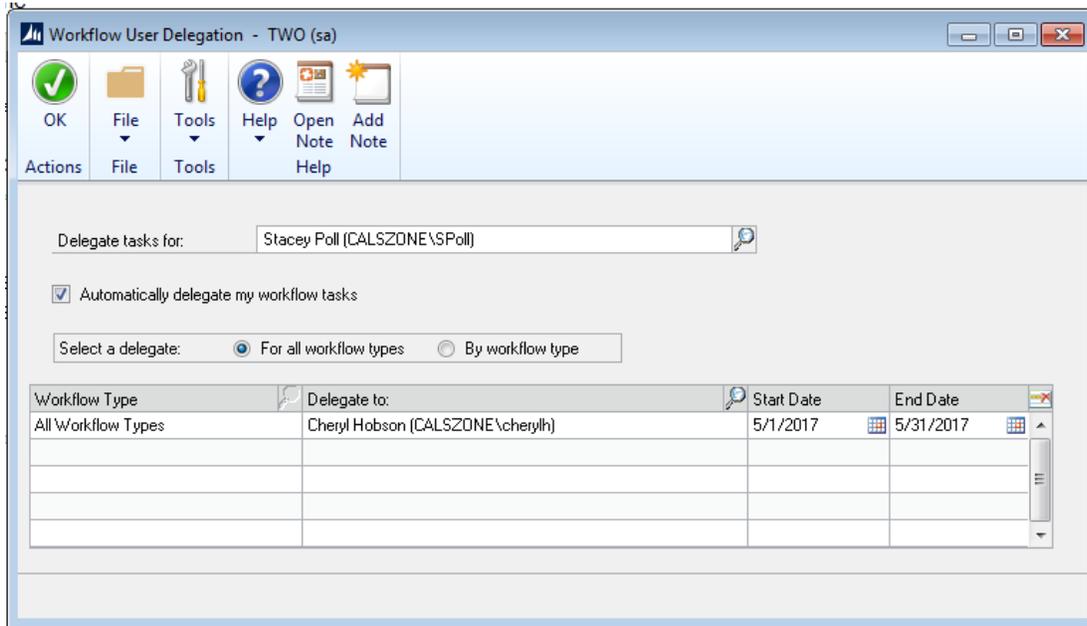
If users will be out of the office for a period of time, or will be unavailable to respond to tasks, have them delegate their tasks using the following steps.

To delegate tasks:

1. Open the Workflow User Delegation window.
   (Home >> User Preferences >> Workflow Delegation)

2. Enter or select the user to delegate tasks for.

3. Mark Automatically delegate my workflow tasks.

4. Select to delegate all of your workflow types or select to delegate by workflow type.

5. For each workflow type that you selected, specify who you want your tasks delegated to.

6. For each workflow type that you selected, specify when your tasks should be delegated by entering a starting and ending date.

7. Choose OK.

For help with this and other Microsoft Dynamics GP procedures and tips, contact:

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