CGI Advantage® 4

Workflow and Collaboration Administration Guide

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Workflow Overview

Workflow is transaction approval processing whereby transactions are optionally routed through CGI Advantage to users or groups of users for review/approval prior to finalizing the transaction. Workflow provides the technical means of electronically routing transaction data to the next approval level. While it is not necessary to require approvals for transactions, approval processing provides a powerful, automated means of human authorization of data prior to finalization. In this respect, approval processing is typically implemented for critical, or highly visible, transactions.

Note: Approval processing is only a subset of transaction processing and can be turned off in favor of using a different workflow product's rules processing and routing capabilities. The approval processing in CGI Advantage provides simple workflow functionality. The open architecture of CGI Advantage allows an external workflow engine to be integrated by implementing the adapters as needed by the workflow engine.

A transaction may require up to 15 levels of approval. For each approval level, you can define rules for requiring that approval level, establish a routing destination and a routing sequence, and indicate whether an automatic e-mail notification should be sent to the user or group where the work unit is being routed.

Refer to the following topics for additional information:

- Workflow Common Terminology
- Workflow Processing Summary

Workflow Common Terminology

Some of the common terms of CGI Advantage Workflow that are used throughout this guide are explained below:

- **Work Unit** – Indicates the item for which the workflow is being performed. In the case of CGI Advantage, the work unit is a transaction. Work Unit may also be called a Work Item.
- **Approval Rule** – Determines which, if any, approval levels are required for a work unit, and if so, defines the approval routing properties (for example, the assignee, the routing sequence, and so forth).
- **Approval Role** – A defined group of users sent transactions for review.
- **Approval Condition** – Used to construct approval rules. Each condition evaluates up to five approval fields and values to construct a condition for requiring approvals.
- **Approval Fields** – Individual value containers used to construct approval conditions. Approval fields can be defined for transaction headers and line fields.
- **Approval Comments** – Descriptions that can be attached to approval routings to inform the recipient of the work item of the purpose of the routing. For example, the comment may be "Please verify the vendor."
- **Approval Hierarchy** – Used to define the hierarchy in which the transaction approvals are performed.

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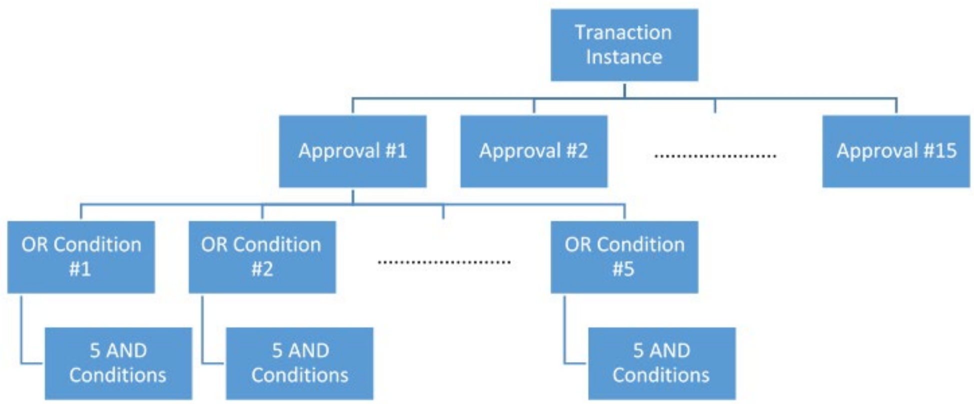
- **Workflow Emails** - Each approval level assignment includes the option of sending an email message to the assignee, whether the assignee is a user or a role. The email message is sent to an email address for the single user assignee or for each email address for the members of an approval role. In addition to automatic notifications, ad-hoc emails can also be sent.

Workflow Processing Summary

This section provides a few more technical details about workflow.

- In CGI Advantage, approval assignments can be routed to an approval role or directly to a user. Each approval level can be assigned to only one role user or one user. Each approval level can have a maximum of five OR conditions, and each OR condition can have a maximum of five AND conditions.



- Condition ordering is important. After an AND condition evaluates as false, no more AND conditions are checked because the whole sequence will evaluate as false. Likewise, after an OR condition evaluates as true, no more OR conditions are checked because the whole sequence will evaluate as true.

- AND conditions may not contain fields from more than one component unless one of the component types is the transaction Header. For example, F1 is a field on a transaction Header. F2, F3, and F4 are fields on the Vendor tab, and F5 and F6 are fields on the Commodity tab. “F1 is ‘xx’ AND F2 is less than 100” represents a valid AND condition. “F2 is less than 100 AND F6 is not ‘yy’” does not represent a valid condition since F2 and F6 belong to different components and neither of the two tabs is the transaction Header.

- Each approval level is assigned an ordinal number that specifies when the approval level assignment should be displayed in the assignee’s worklist. Approval levels with a lower ordinal number will be assigned earlier than levels with higher ordinal numbers. Approval levels with the same ordinal number will appear in the assignee's worklist at the same time.

- Each approval level assignment must include a comment. This comment describes the purpose for this approval level and appears on the worklist entry for the approval assignment.

- Each approval level assignment can also include the option of sending an e-mail message to the assignee, whether the assignee is a user or role. The e-mail message is sent to the e-mail address for the single user assignee or to all members belonging to the assigned approval role.

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- Users are assigned approval level authorities based on the Access Control settings for their security roles and the resource group of the transaction instance being approved. Assignees must have the appropriate approval level authority or the approval assignment should not be made. For further information on Access Control, please refer to the "Access Control" topic in the *CGI Advantage Security Administration User Guide*.
- Same-transaction tab fields in AND conditions are evaluated together. For example, a transaction with a Commodity tab can have multiple lines. The component contains two fields of interest -- Commodity Code and Unit Cost. A condition of Commodity Code equals PC AND Unit Cost is greater than 10,000.00 can be designed. Because these two fields are contained on the same tab and in an AND condition, processing looks for the first commodity line that meets this AND condition. Even if the next line does not satisfy the condition, the rule will evaluate to true. Though approval conditions may be satisfied at the line level, they are required at the transaction level.

Collaboration Overview

Collaboration is the optional routing of transactions in *Draft* phase to various users for editing or verifying the transactions before submitting them to *Pending* or *Final* phase. Unlike workflow that is automatic in being invoked and in routing, collaboration is only triggered by a user that selects the Collaboration action from the transaction-level menu and then chooses from one or more collaborators or collaborator groups. Refer to the "Collaborating Draft Transactions" topic in the *CGI Advantage Transactions User Guide* for more information.

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Configuration

This section covers all of the reference pages involved in workflow configuration:

- Configure Approvers
- Configure Workflow and Collaboration

Configure Approvers

The following pages include setup for configuring approvers in CGI Advantage, refer to the associated topic for more information:

- Email Setup
- Manage Approval Roles
- Add Approvers to a Role
- Copy Workflow Roles
- Approval Role Display Order
- Alternate Approval Assignments
- Manage Approvers
- Assign Roles to Approver
- Approval Hierarchy
- Access Control

Email Setup

This configuration allows sites to choose between Port based Email Server (IWF00) and Web API based Email Server. These configuration properties exist in the CSF.properties file.

› Properties Information

Property	Description
ADVEMAILCHANNEL.API.ENABLE	By default, this property will be turned off (*false*). In this state, the Advantage application has to use Port based Email Server (IWF00). This should be set to *true* when the Advantage application needs to use Web API based Email Server. Additionally, sites must configure the following properties for 'Web API based Email Server' connection details:

Property	Description
	• ADVEMAILCHANNEL.API.URL = https://api.sendgrid.com/v3/mail/send • ADVEMAILCHANNEL.API.KEY = SENDGRID_KEY • ADVEMAILCHANNEL.API.CLASS = com.amsinc.gems.adv.common.AdvSendGrid **Note:** Currently, Advantage is developed to support SendGrid's Web API based Email Server only. Key ('SENDGRID_KEY') must be updated with the appropriate token by each site. As part of enabling SendGrid's Web API based Email Server, SendGrid certificate has to be added to the Advantage application's keystore, in order to enable the secure handshake. Please follow these steps: a. Go to "product/RTFiles" deployment folder. b. Take a backup of existing ADV3.Keystore. c. Export SendGrid certificate from sample.keystore. d. Once export is complete, import that certificate into original ADV3.Keystore and bounce the application. e. Copy this ADV3.Keystore to other products that are on the same cluster and at the same build level.

Email Server

The Email Server (IWF00) page defines the email servers used by workflow. In order to send emails during approval processing and for ad-hoc emails to be available to all users, it is necessary to set up and maintain the list of email servers for the system. The system allows email servers to be set up for individual departments and/or centrally. The email server for each user is defined based on their home department code. If no email server is found for that department, then the central email server, if any, is used.

› Field Information

Field	Description
Department	A required piece of a server definition that identifies a single department that uses the server or the wildcard value of (????) and is used to represent all departments not uniquely defined. The department connected to this field is the Home Department of the User ID as defined on the User Information page.
Server Name	The fully qualified email message store server name.
SMTP Server Name	The fully qualified Simple Mail Transfer Protocol (SMTP) server name. This server is used to send all emails.
Message Folder	The name of the folder in which e-mail messages are stored.
Automatic Sender ID	The system User ID from which all approval-generated emails are sent.
Protocol	The message store email protocol. The protocols of *imap* and *pop3* are supported.
Enable TLS	This check box enables the Transport Layer Security (TLS) feature for emails. When selected, the following properties on CSF.properties must be defined. • ADVEMAILCHANNEL.PORT = 587 • ADVEMAILCHANNEL.USERNAME = < User Name of Email server> • ADVEMAILCHANNEL.PASSWORD = <Password of the user account on Email server> On the Email Server, Port 587 should be available for the user and the StartTLS property should be configured as required. • ADVEMAILCHANNEL.ENABLE_TLS = TRUE

Testing Email Functionality

The CGI Advantage application allows you to test email functionality without actually sending emails to recipients in a production or non-production environment. This feature allows you to test functionality as designed without the need to disable POP servers or scrub (replace email addresses with a dummy email address) email addresses from non-production or production environments. To enable the “dummy email”

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functionality for a specific CGI Advantage application, two parameters must be defined on the application's Application Parameters (APPCTRL) page.

- **SEND_DUMMY_EMAIL** (Send Dummy Email) - If set to *true*, the CGI Advantage application sends all system-generated emails to the dummy email address defined in the SEND_DUMMY_EMAIL_ID parameter instead of the recipient email address. If set to *false*, the emails are sent to the recipient email address.
- **SEND_DUMMY_EMAIL_ID** (Dummy Email Address) - This parameter defines the Site Administrator's email address for sending dummy email notifications.
- **ENABLE_REJECT_COMMENTS_ON_EMAIL** (Enable rejection comments on the Email notification) - If the Parameter Value field is set to *Y* (true) then the system allows the rejection comments provided by a supervisor to be relayed in the email triggered to the creator of the transaction upon rejection of any transaction. If set to *N* (false) then the comments will only be visible once the creator logs in and checks the transaction and will not be relayed on the email triggered.

Manage Approval Roles

The Manage Approval Roles (IWF01) page is used to define and maintain approval roles. Approval roles are groups of users that can be used as destinations for approval routings. Optionally, organization values can be associated with an approval role to allow for decentralized administration and security of the approval roles.

› Field Information

Field	**Description**
Role ID	A unique identifier of an approval role for system processing purposes.
Name	The name of the approval role as it will appear in worklists.
Organizational COA (9)	Organizational values that enable decentralized workflow administration and security. Please see the "Advanced Setup" topic for more information on this topic.
Description	A long description of an approval role for reporting purposes.

› Related Pages

- **Approval Users** - A transition to the Add Approvers To A Role page and is filtered based on the selected approval role to add one or more users to that role.
- **Alternate Approval Assignments** - A transition to the Alternate Approval Assignments page to temporarily assign a different approval level to a user or approval role.

Add Approvers to a Role

This page allows you to add approvers to a role or remove approvers from a role. This page includes the following tabs:

- Current Approvers

  This tab lists all approvers that are currently assigned to the selected Role ID. This tab includes the following row-level actions:

  - **Manager** - Select this action to change the value in the **Manager** column. If the current value of the Manager column is *No* and then this action is selected, then the value of the Manager column is changed to *Yes*. If the current value of the Manager column is *Yes* and then this action is selected, then the value of the Manager column is changed to *No*.

  - **Remove Selected Current Approver** - Select this action to remove this user for the selected Role ID.

- Available Approvers

  The Available Approvers tab allows you to add a user as an approver for the selected Role ID by selecting the **Add Selected Available Approver** action for the user in the grid.

Copy Workflow Roles

The Copy Workflow Roles (CPYWRL) is a specialized page that allows you to select a User ID and copy one or more workflow (approval) roles from that user to another.

To copy one or more workflow roles from one user to another, complete the following steps:

- Step 1: Search for and select a User to copy from

  Click the **Show Available Rows** button and the workflow roles assigned to the user will appear in the 2nd table. You can select all roles by selecting the check box in the table header or you can individually select the check box for each role you want to copy. Once you have made your selections click the **Continue** button to transition to Step 2.

- Step 2: Search for and select a User to copy to

  Once the 2nd user is selected, the **Show Current Roles** button is optional to display roles currently assigned to the user. If you need to change any of your role selections from step 1 then click the **Previous** button. If you are satisfied with your selections then click the **Continue** button to transition to Step 3.

- Step 3: Copy roles

  This displays both users with a choice of appending (**Append to Existing Roles** button) or deleting the current roles and replacing them (**Replace Existing Roles** button). When done click the **Finish** button to complete the copy.

Approval Role Display Order

The Approval Role Display Order (ROLEDISP) page is used to define the order in which approval roles will be displayed in the Worklist field that appears on each worklist page.

› Field Information

Field	Description
Role ID Role Name	Values previously defined on the Manage Approval Roles page or with the Copy Approval Roles page
Display Sequence Number	A number that represents the order in which the approval role should be displayed in the worklist listing. If left to the default of *1* then roles will be displayed in the order added.

› Related Actions

- **Move to Top**, **Move Up**, **Move Down**, **Move to Bottom** – Related actions for selected rows so that the application adjusts the display order automatically.
- **Reset All** – Returns all records to a set value of 99.

Alternate Approval Assignments

The Alternate Approval Assignments (IWF02) page is used to assign work units to another user or approval role now or in the future to another user or approval role. This assignment may be for a specified date range. It can also optionally be for a different approval level. For example, while a user is on vacation all of the user's assignments, by approval level, can be automatically assigned to another user or role.

› Field Information

Field	Description
Approval Level	The approval level for which the alternate assignment is to be made. If the alternate assignment is to be made for all approval levels for the original assignee, then set this value to 0.
From Date	The date on which the Alternate Approval Assignment becomes active.
To Date	The last date on which the Alternate Approval Assignment is active.

Field	Description
Assignee Is a Role? Assignee ID	If the Assignee Is a Role is *true*, then an approval role has to be selected or entered in the Assignee ID field. If *false*, then a User ID has to be selected or entered.
Alternate Assignee Is a Role? Alternate Assignee ID	If the Alternate Assignee Is a Role is true, then an approval role has to be selected or entered in the Alternate Assignee ID field. If false, then a User ID has to be selected or entered.

› Related Pages

- **Approval Users** - A transition to the Manage Approvers page to make updates there or transition to other approval setup pages.
- **Approval Roles** - A transition to the Manage Approval Roles page to research, adjust settings for existing roles or add new ones.

Manage Approvers

The Manage Approvers (IWF11) page is a specialized page that allows for many approval assignment tasks starting with the location of a user. All users of the system are by default Approval Users. However, only those users assigned to Approval Roles or to which approvals are routed directly to can approve a transaction.

› Field Information

No field information is given as all fields are defined in the *CGI Advantage Security Administration User Guide* in the "User Information" topic listed in the Configuration section, as well as within this guide for the following: Manage Approval Roles, Alternate Approval Assignments, and Copy Workflow Roles.

› Related Pages

- **Assign Roles** - A transition to the Assign Roles to Approver page with the selected user to locate one or more approval roles to assign to that user.
- **Alternate Approval Assignments** - A transition to the Alternate Approval Assignments page to temporarily assign a different approval level to the selected user.
- **Copy Workflow Roles** - A transition to the Copy Workflow Roles page to copy one or more approval roles from the selected user to another.

Assign Roles to Approver

The Assign Roles to Approver page allows you to add approval roles to a user or remove approval roles from a user. This page includes the following tabs:

- Current Roles

  This tab lists all approval roles that are currently assigned to the selected User ID. This tab includes the following row-level actions:

  - **Manager** - Select this action to change the value in the **Manager** column. If the current value of the Manager column is *No* and then this action is selected, then the value of the Manager column is changed to *Yes*. If the current value of the Manager column is *Yes* and then this action is selected, then the value of the Manager column is changed to *No*.

  - **Remove Selected Current Role** - Select this action to remove this approval role for the selected User ID.

- Available Roles

  The Available Roles tab allows you to assign an approval role to the selected User ID by selecting the **Add Selected Available Role** action for the role in the grid.

Approval Hierarchy

The Approval Hierarchy (APRVHIER) page is a specialized page that records the desired hierarchical precedence of organization codes that the approval engine uses in between the first lookup with all the supplied organization codes to the last lookup of all wildcard values. While there can be as few or as many levels as necessary, it is possible that performance can degrade if many lookups are required. The hierarchical precedence is not specific to any particular Transaction Code. The default, delivered hierarchical precedence will be the following:

1. Government Branch, Cabinet, Department, Division, Group, Section, District, and Bureau
2. Government Branch, Cabinet, Department, Division, Group, Section, and District
3. Government Branch, Cabinet, Department, Division, Group, and Section
4. Government Branch, Cabinet, Department, Division, and Group
5. Government Branch, Cabinet, Department, and Division
6. Government Branch, Cabinet, and Department
7. Government Branch And Cabinet
8. Government Branch

- Field Information

Field	Description
Sequence	A required sequence number for each combination of organizational COA in approval hierarchy rules.

Field	Description
Organizational COA Check Boxes (9)	Each organizational COA is represented by a checkbox that indicates whether or not the COA is used in the hierarchy.

Two scenarios are necessary to explain this reference page. The first is without using the page. The second is using the delivered data.

- Scenario 1 – Transaction Created With Only Department

Field	Value
Transaction Code	PO
Transaction Department	010
Transaction Unit	(blank)
Approval Rules	Two entries for Purchase Order: • Organization Codes: Department *010* and Unit *001* with all other fields the wildcard of *????* for a simple condition that routes all purchase orders with those COA in the Transaction ID to an Approval Role of *010_001*. • Organization Codes: All wildcards equal to *????* with a condition that routes all purchase orders to an approval role of *Central Purchasing*.

When the transaction is successfully submitted out of draft, the approval engine will perform a lookup to the Approval Rules using the Transaction Code and Transaction Department. Since there is no Transaction Unit entered, a look up will not be performed with the unit and all of the organization codes except department will be wildcards. If there had been a Transaction Unit, then a lookup to the Unit reference page would have been done to retrieve all organizational rollups for possible use in evaluating workflow rules.

As a result, only Approval Rule #2 will be read and the Purchase Order will go to the Central Purchasing approval role. (Note, if rule #1 should have been read, then the requirement for a Transaction Unit should be set on the Transaction Control page.

› Scenario 2 – Transaction Created With Department and Unit

Field	**Value**
Transaction Code	PO
Transaction Department	010
Transaction Unit	001
Unit	Current Fiscal Year, Department 010; Unit 001 Org Codes: • Government Branch = 010 • Cabinet = 010
Approval Rules	One entry for Purchase Order: • Organization Codes: Cabinet *010* and all other COA fields equal to the *????* wildcard for a simple condition that routes all purchase orders with that COA to an Approval Role of *CAB010*.

When the transaction is successfully submitted out of draft, the approval engine will perform a lookup to Unit to determine the organization codes for the department and unit. Then the department and unit combination is used to retrieve the government branch and cabinet.

The approval engine will next perform a lookup to Approval Rules with those four organization codes. Unable to find an entry on Approval Rules, the approval engine will perform a lookup to Approval Hierarchy, which will provide the hierarchy to be used to perform the subsequent lookups to Approval Rules. Using the lowest sequence from Approval Hierarchy, a lookup will be performed to the Approval Rules (IWF08) table, which will also not find an entry on IWF08.

The approval engine will then continue using the next sequence(s) from the Approval Hierarchy (Government Branch, Cabinet, Department, Division, Group, Section, District, and Bureau); no Approval Rule is found so the next sequence is used and so forth. Finally, upon reading sequence #6 (Government Branch, Cabinet and Department), a match is found. Keep in mind that reading the Approval Hierarchy only has to match the non-blank COA retrieved from the Unit record. The single approval rule will be found and the transaction will go to pending.

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Access Control – Approval Levels

The Access Control (SCRACS) page, although not considered a workflow setup page, is where the given approval level for an approver is determined by the combination of security role and resource group to which the transaction in workflow belongs. That is determined by the series of Approval Level 1 to 15 check boxes. Also controlled at that combination are all the ‘approval actions’ found on the various worklist pages that approvers can choose from such as Approve, Reject, Bypass Approvals, and so forth.

Please consult the "Access Control" topic in the *CGI Advantage Security Administration User Guide*, for more information on these security settings.

Configure Workflow and Collaboration

The following pages include setup for configuring workflow and collaboration in CGI Advantage, refer to the associated topic for more information:

- Transaction Codes
- Transaction Control
- Approval Meta Data
- Manage Approval Comments
- Manage Approval Fields
- Manage Approval Conditions
- Approval Rules
- Notifications
- Notification Variables
- Configure Worklist Details
- Access Control
- Transaction Collaboration Template

Transaction Codes

The Transaction Codes (DOCCD) page is one primarily updated by the Populate Transaction Codes batch process to facilitate workflow approval by bringing together all of the transaction codes of CGI Advantage into one repository.

Transaction Control

The Transaction Control (DCTRL) page contains a few fields that impact approval workflow for an individual Transaction Code.

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› Field Information

Field	**Description**
Submit Phase	A setting of *Pending* means there will be the evaluation of workflow rules with the submit action. A setting of *Final* means workflow rules will not be evaluated.
Workflow Process	A choice of four values control what type of workflow evaluation will be done: • *None* - No workflow evaluation even if the Submit Phase is *Pending*. • *Internal* – Advantage workflow will be evaluated if the Submit Phase is *Pending*. • *External* - 3rd party workflow application integrated into CGI Advantage Financial will be evaluated if the Submit Phase is *Pending*. • *Both Internal and External* – Both Advantage and 3rd party workflow will be evaluated if the Submit Phase is *Pending*.
Workflow Asynchronous Processing	When *unchecked*, after the final approval is applied and there are no new errors, then the transaction will go to *Final*. When *checked*, after the final approval is applied and there are no new errors, the transaction does not go directly to *Final* but stays in *Pending*. It will take another Submit action for the transaction to leave *Pending* and go to *Final*. Typically, that second submit is done by the System Maintenance Utility. Note: Regardless of the Workflow Asynchronous Processing setting, if the transaction rejects during final workflow approval submission, the transaction will revert to *Draft* phase and will need to be corrected and resubmitted to *Pending* phase, and then go through workflow again. The purpose of the Workflow Asynchronous Processing is to delay the submission of the transaction into *Final* phase. Rejected transactions will always need to be corrected, resubmitted and sent back through workflow.
Single Approvals Enforced	When *checked*, a user is allowed to apply only one approval to a transaction and the Single Approvals Enforced indication on the Approval Rules (IWF08) page is not referenced. When *unchecked*, a user can apply multiple approvals unless the Single Approvals Enforced indication on the Approval Rules (IWF08) page is checked.

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Field	Description
Approval Bypass	When *checked*, if the transaction has a Submit Phase of *Pending* on DCTRL, a user with sufficient security settings can choose to bypass all approvals and submit the transaction in *Draft* or *Pending*.
Override Pending Phase	When there are override errors with a transaction code with workflow setup, there are three values that control the override and the approval: • *Allowed only after reaching* - Overrides to be applied in Pending and not Draft. • *Required before reaching* – Overrides have to be applied in Draft. • *Allowed before or after reaching* – Overrides can be applied to either Pending or Draft
Collaboration	When *checked*, the **Collaborate** action in the transaction-level menu will open the Transaction Collaboration Path page for the user to view or take action. The latter only being available when the transaction's Phase is *Draft*.

Approval Meta Data

The Approval Meta Data (WFMDATA) page in the Advantage Administration application provides the user with a table used to define drop down fields that are necessary for setting up Approval Fields. The Approval Fields are used in the setup of the Conditions used for defining new Approval Rules. The values in the WFMDATA fields are later referenced during run-time when Approval Rules are being evaluated.

Manage Approval Comments

The Manage Approval Comments (IWF05) page defines the accompanying text that appears with a transaction at a given workflow instance. The intention of the text is to give the reason why the transaction is at the approval instance. Adequate text will allow a user to quickly scan an approval role or their own worklist to determine summary information about transactions in order to act on the most urgent first.

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› Field Information

Field	Description
Comment ID	A unique number assigned by the system for identification purposes. Numbering is controlled by the R_WF_CMNT listing on the Unique Numbers page.
Comment	Descriptive text that can be associated with one or more approval rules.

Manage Approval Fields

The Manage Approval Fields (IWF06) page the set of transaction fields for each Transaction Code that can be used to defined a workflow condition that can be used to define a workflow rule.

› Field Information

Field	Description
Transaction Code	Each Transaction Code defined on the Transaction Control reference page is available for defining an approval field. When a record has been added to that reference page, the Populate Transaction Codes batch process has to be run to update the system for that transaction code, components available, and fields on those components.
Component	Each tab visible on a transaction is a 'component' of the transaction type. This identification is the database table name for the component. That convention is (Transaction Type) + DOC + (component) such as JV_DOC_ACTG for the Accounting component of the Journal Voucher transaction type.
Field	The field is identified by the database attribute, so use of the pick is encouraged to identify the field properly. The Populate Workflow Metadata job creates the data found in this field. Note: The Component field must be completed before using the drop-down listing for Field.

› Related Pages

- **Approval Conditions** - A transition to the Manage Approval Conditions page to view any conditions defined already for the approval field or create a condition.

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Manage Approval Conditions

The Manage Approval Conditions (IWF07) page includes a set of transaction fields with conditions for evaluation that can be used to define a workflow rule. Each approval condition consists of a maximum of five sub-conditions. During approval processing, these five sub-conditions are logically linked together with AND statements to the single approval condition. Approval conditions cannot contain fields from more than one transaction component unless one of the components is the Header.

› Field Information

Field	Description
Condition ID	A unique identifier entered to identity the condition.
Transaction Code	A required Transaction Code that instructs the system what to allow in the Left and Right Hand Side fields as defined on the Manage Approval Fields page.
Type	The type of comparison determines how the Left and Right Hand Sides are compared and if the comparison is to use the prior transaction version. • *Actual Value* – Will compare the Left Hand Side and Right Hand Side Field or Value with the same transaction version. • *Delta Change* – Will compare the Left Hand Side field in the current and prior transaction version and the delta difference (if any) is compared against the Right Hand Side Value. • *Percent Change* – Will compare the Left Hand Side field in the current and prior transaction version and the percent difference (if any) is compared against the Right Hand Side Value. • *Absolute Delta Change* – Will compare the Left Hand Side field in the current and prior transaction version and the absolute value of the delta difference (if any) is compared against the Right Hand Side Value. • *Absolute Percentage Change* - Will compare the Left Hand Side field in the current and prior transaction version and the absolute value of the percent difference (if any) is compared against the Right Hand Side Value. Types other than *Actual Value* are intended to be used for Amount and Quantity type of fields.
Left Hand Side	The field selected for comparison as previously defined on the Manage Approval Fields page.

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Field	Description
Operand	A comparison requires an operand in order to compare the Left Hand Side field against the Right Hand Side Field or Value. Valid values include (<, >, =, <>, <=, >=, *In List*, and *Not In List*). If the Operator selected is either *In List* or *Not in List*, multiple values can be entered in the Right Hand Side field. If the Operator is *In List*, multiple values will be evaluated in an OR statement. If the Operator is *Not In List*, multiple values will be evaluated in an AND statement.
Right Hand Side Value	Enter the evaluation value for the Left Hand Side. For text values, be sure to enclose the value in quotation marks (for example, “Test Value”), and for Yes/No values, specify the value as “true” or “false”. If the Operand selected is *In List* or *Not In List*, then commas must separate multiple values.
Right Hand Side Field	This field can be populated only if no value is provided in the Right Hand Side Value field to compare the Left and Right Hand Side fields as *Actual Value*. The Right Hand Side values are filtered to display only those fields within the same component (or the transaction header) as that selected in the Left Hand Side.

› Related Pages

- **Approval Fields** - A transition to the Manage Approval Fields page to view any fields already defined or add a new field.

Approval Rules

The Approval Rules (IWF08) page is where the workflow rules are defined for transaction processing. Rules are selected based on the Transaction Code and the organizational values (see examples in the "Approval Hierarchy" topic). The applicable rule is the one that most specifically matches the organizational values. Once a rule has been found, it is evaluated to determine if approvals are required. If no applicable rule is found, then the transaction does not require approvals and it is marked as having completed the approvals phase of Workflow. The transaction is then either processed to *Final* or remains as *Pending* for submission by the System Maintenance Utility, based on the Workflow Asynchronous Process setting on the Transaction Control page.

Note: Regardless of the Workflow Asynchronous Processing setting, if the transaction rejects during final workflow approval submission, the transaction will revert to *Draft* Phase and will need to be corrected and resubmitted to *Pending*, and go through workflow again.

Each Approval Rule can require up to 15 levels of approval, and each level consists of up to five approval conditions joined with logical OR connections. If any of the approval level’s conditions evaluates to *true*, then that approval level is required. If any approval level is required, then the transaction requires approval(s) and enters approval processing for all required approval levels.

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› Field Information

Field	Description
Transaction Code	A required Transaction Code that instructs the system what conditions can be selected.
Organizational COA (9)	The organizational values for the approval rule. The default value, ????, is a wild card and matches any value. Two examples are given to demonstrate the use of these fields: • Department is entered as *010* and Approval Level 1 is completed with Routing Sequence, Assignee ID, and Worklist Comment (at a minimum); this will result in all instances of the Transaction Code where the Transaction Department is *010* will go to the Assignee ID. There are no conditions in this example to show how the Organizational COA can be used as approval fields. • Two rules exist where the transaction amount is found to be greater than $1000.00 where one rule is to Department *010* and the other is to Department *020*. In this situation, any instance of the transaction over that amount will go to different approval roles or approval users based on the Transaction Department. This reduces approval setup by not needing two different conditions where the amount is the same in each but the Transaction Department is different. Two records are required each way, but just a preference of setup.
Self-Approval Restriction	The restriction associated with approving a transaction that a user has created and/or submitted. The restrictions can be one of the following: • No Restriction • Creator Restricted • Submitter Restricted • Creator / Submitter Restricted The default value is defined by the SELF-APPROVAL_DEFAULT_VALUE record on Application Parameters.
Enforce Single Approval	If this check box is not selected, then a single user is allowed to apply multiple approvals to the same transaction. This indication is only read if the Single Approvals Enforced check box on the Transaction Control page is *unchecked*. If the check box on Transaction Control is *checked* an informational message is issued

Field	Description
	during an update action on the Approval Rules if Enforce Single Approval is *unchecked*.
Notify Batch Submitter	Select this check box if you want the submitter of transactions submitted by batch jobs to be sent an email notification as soon as an approval level assignment occurs (provided Additional Notification on Approval Level is setup to send emails to Submitter).
Notify Creator	Select this check box if you want the creator of transactions to be sent an email-notification as soon as the transaction goes to *Pending*. This notification can be particularly useful in scenarios where creator and submitter are different.
Send Resubmit Notification	Select this check box if you want to send a notification to the original submitter and the previous downstream approvers of a transaction when any transaction is resubmitted having previously been rejected back to *Draft*. This action also updates the approval sheet to include the new notifications.
Recall Maximum Routing Sequence	The system allows the submitter to recall the transaction from *Pending* to *Draft* from any specified routing sequence, if the Recall Maximum Routing Sequence field value is equal to or less than the current routing sequence of the transaction that is waiting for approval.
Rejection Comment Required	If *checked* and a user selects either the Reject or Reject All actions, then the system will require that user to populate the Subject and Comment fields before the transaction is successfully rejected. This setting bypasses the setting of the WF_BYPASS_COMMENTS_PG_ON_REJECT parameter on the Application Parameters page. Therefore, even if WF_BYPASS_COMMENTS_PG_ON_REJECT is set to *N*, if Rejection Comment Required is *checked* on the Approval Rules, then a Subject and Comment must be entered to reject.
Effective From / To	Optional dates to control when an approval rule begins or ends.
Notify Submitter	If *checked*, a transaction rejection notification email will be sent to the submitter when the submitted transaction has been rejected back to the *Draft* phase.

› Field Information for Approval Levels 1 to 15

Field	Description
Routing Sequence	Defines the sequence in which the approval routings occur. Approval levels need not be ordered sequentially (for example, level 1, then level 2, then level 3, and so on). Approval routings can occur in any order and may be done in parallel (for example, level 2, then level 1 and 3, then level 15, then level 5, and so on). Set the Routing Sequence to *0* if the approval level is not required (in this case no routing to the Approval Level takes place and all field values setup on the Approval Level are ignored).
Priority	Priority value assigned to a workflow rule that is intended to provide information to approvers looking to take transactions from a worklist.
Email Assignee / Role	When *checked*, an email will be sent to a user (if the assignee is a User ID) or all members of the Approval Role (if the assignee is an Approval Role) at a given approval level. It can be used to notify the Assignee that the transaction is routed to the given Approval Level (it can occur with Approve, Reject, Unapprove actions, and so forth.).
Condition 1 to 5	Determines which conditions are evaluated for the approval level. If any of these conditions evaluate to true and the Routing Sequence is not *0*, then this approval level is required.
Approval Rule	The logical rule associated with the workflow approval conditions that must be met for the indicated Transaction Code to be submitted for the selected approval level. The value is a concatenation inferred from the Approval Rule record.
Assignee ID	The User ID for individual approval or the Approval Role ID has the Assignee Is a Role flag *checked*. If the Assignee ID is populated, the Assignee Field must be blank.
Assignee Is a Role?	An indication that among driving edits, determines if the Assignee ID field is to capture a User ID (*unchecked*) or an Approval Role ID (*checked*).
Assignee Field	Allows the selection of transaction Header fields where User IDs are recorded to be used for workflow instead of the Assignee ID for each approval level. To facilitate the routing of HRM transactions by Supervisor ID, when the selection of routing by Assignee Field is made on Approval Rules, the WF SUPR INFER TYPE SPAR entry is used to determine

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Field	Description
	which User ID should be used for workflow routing; the Supervisor User ID established on Department Specific Data (DEPTD) (Text Value = *D*), or the incumbent's User ID of the Reporting To Position on Position Maintenance (PSMT) (Text Value = *P*). The system first attempts to infer the Supervisor User ID. However, if a Supervisor ID is not found on Department Specific Data, then the system infers the incumbent's User ID of the Reporting To Position on Position Maintenance.
Worklist Comment ID Worklist Comment	A required field to put a comment into the workflow inquiry pages for the approval level. The comment text is inferred from the Manage Approval Comment reference page for informational purposes.
Additional Notification	An indication to send a notification to the creator and/or submitter of a transaction if the transaction is assigned for an approval at the selected level (it can occur with Approve, Reject, Unapprove actions, and so forth). Valid values for this field are: • None • Submitter • Creator • Both The Additional Notification must be set to None, if the selected level does not require approvals (that is, Assignee ID). For transactions submitted with batch processes, notification emails to Submitter is only sent when Notify Batch Submitter is selected.
Non-Approval Notification	An indication that a notification email should be sent to a User, Role or Variable, as defined in the Non-Approval ID field when the transaction reaches the selected Approval Level (it can occur with Approve, Reject, Unapprove actions, and so forth). The feature can be used to send an email to any person(s) notifying about the transaction reaching the selected Approval Level. The notification is sent when a level is evaluated as *true* (Conditions are satisfied), regardless of whether the transaction is also being routed for Approval at the selected level. If *checked*, the Routing Sequence must be populated with a value between 1 and 15 and the Non-Approval ID, Non-Approval ID Type, and Non-Approval Comment ID must be populated. It is possible to setup an Approval Level only for notification (to send email to other person indicated by Non-Approval ID) and not for routing by setting up Routing Sequence, Condition (if any) and Non-Approval Notification fields and leaving Assignee ID blank. In this

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Field	Description
	situation, when a transaction reaches the Approval Level it will send a notification email and then route to the Approval Level at next Routing Sequence.
Non-Approval ID Type Non-Approval ID	The ID of the User, Role, or Variable that will receive a non-approval notification. The following rules apply: • If the Non-Approval ID Type is *User ID*, then the Non-Approval ID must be a valid user on the User Information page. • If the Non-Approval ID Type is *Role ID*, then the Non-Approval ID must be valid role on the Approval Role page. • If the Non-Approval ID Type is *Variable*, then the Non-Approval ID must be valid on the Notification Variables page.
Non-Approval Comment ID Non-Approval Comment	A required field when the Non-Approval Notification is *checked* to put a comment into the notification to the Non-Approval ID for the approval level. The comment text is inferred from the Manage Approval Comment reference page for informational purposes.
Automatic Escalation	This field indicates after how many days from the day of assignment of the worklist item, the assignee should be sent a warning email notification if no action has been taken. If assignee is an approval role, an email is sent to all of the members of the role. If assignee is a User OR if role and a member of the role has performed a Take Task on the Worklist Item, an email is sent to the particular user. Refer to the Automated Workflow Escalations run sheet in the *CGI Advantage Administration Utilities Run Sheets* guide to understand the functionality of the following fields related to warning notification and escalation. To summarize, these fields drive when the batch process should send a warning email notification to an assignee when the worklist item ages beyond the Warning Threshold Age and when it should escalate the item to Escalate Assignee(s) when it ages beyond Escalate Threshold Age 1 and 2. Warning and escalation ensures that the worklist item is worked on by the specified time period by sending email reminders to an assignee and escalating the item to more assignee(s) by creating additional routings to them so that they can work on them.
Warning Threshold Age	Age of the worklist item at Approval Level after which it becomes eligible for Warning Email notifications. Only values greater than zero can be specified. Note: The following condition has to be satisfied that drives the sequence of events on aging: Warning Threshold Age < Escalate

Field	Description
	Threshold Age 1 < Escalate Threshold Age 2. This means when a worklist item ages beyond Warning Threshold Age, then the first warning email is sent out every time the job is run. If Assignee does not take action on the worklist item and the item ages beyond Escalate Threshold Age 1, then the Automated Workflow Escalations batch job does escalation at level 1. If still no action is taken on the worklist item and the item ages beyond Escalate Threshold Age 2, then the Automated Workflow Escalations batch job does escalation at level 2.
Warning / Escalate Template ID	Template ID to be used for sending the Warning/Escalation e-mail at approval level. The content of the template forms the body of the e-mail notifications to be sent to the users.
Escalate Threshold Age 1 Escalate Assignee ID 1 Escalate 1 Assignee Is a Role	• Age of the worklist item at approval level after which it becomes eligible for escalation at Escalation Level 1. Only values greater than zero can be specified. • Automated Workflow Escalations batch job calculates the age of a worklist item as the number of days between the Assigned Date of the worklist item and the Application System Date on Application Parameters. If the age of the worklist item equals or exceeds the Escalate Threshold Age 1 but is less than the Escalate Threshold Age 2 (which means the item is not yet escalated at Level 2), then the batch job routes the worklist item to Escalate Assignee 1 asking to take action on the pending Workflow item. After the escalation, both Escalate Assignee and Original Assignee will be able to work on the worklist item through their worklist. When any one of them approves the item, it moves ahead in the Workflow chain. • Both Original Assignee as well as Escalate Assignee 1 are notified through e-mail of the escalation action. If Original Assignee is a User then the e-mail notification is sent to the particular User. If Original Assignee is an Approval Role and none of the Role's Approvers has performed 'Take Task' on it then an e-mail notification is sent to all Approvers belonging to that Role. If the task has been taken by an Approver with that Role, then the e-mail notification is sent to the particular Approver only. The Escalate Assignee ID 1 and Escalate 1 Assignee Is a Role fields are used to determine if escalated to a user or an approval role.

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Field	Description
Escalate Threshold Age 1 Escalate Assignee ID 1 Escalate 1 Assignee Is a Role	• Age of the worklist item at approval level after which it becomes eligible for escalation at Escalation Level 2. Only values greater than zero can be specified. • The Escalate Assignee ID 2 and Escalate 2 Assignee Is a Role fields are used to determine if escalated to a user or an approval role.

› Related Pages

- **Levels 11 - 15** - A transition to an additional Approval Roles page that lists rules 11 to 15.
- **Approval Conditions** - A transition to the Manage Approval Conditions page to view any conditions defined already for a transaction code or define a new one.
- **Approval Fields** - A transition to the Manage Approval Fields page to view any fields already defined for a transaction code or add a new field.

Notifications

The Notifications (NOTIF) page is where the text of various workflow notifications, security, and collaboration emails are defined.

› Field Information

Field	Description
ID	A unique identification of a notification template to the system. There are several pre-defined values that are discussed later.
Notification ID	A unique identification/code for the notification.
Notification Subject	The text that will be placed in the Subject line of the notification email.
Notification Text	The text that will be placed in the Body of the notification email along with any other details generated by the application.

The following are delivered notifications with specific uses. While the Notification Subject and Notification Message can be adjusted, the ID and Notification ID cannot be changed.

- Transaction Entering Workflow

  If Notify Creator is *checked* for an approval rule, this entry is used when the transaction enters a Transaction Phase of *Pending*.

  - ID: 0
  - Notification ID: DOCUMENT
  - Notification Subject: %docid% has entered the Pending phase.
  - Notification Message: Your transaction has entered the Pending phase. Depending on the approval conditions, it will require zero, one, or more approvals before it can be completely processed. No action is required on your part.

- Additional Notification for Transaction Entering Workflow

  If Additional Notification is populated for an approval rule, this entry is used when the transaction enters a Transaction Phase of *Pending*. Note: Submitters of batch jobs are only notified if Notify Batch Submitter is also *checked*. If the Submitter and Creator are the same, then only one email is generated.

  - ID: 1
  - Notification ID: APRLVL
  - Notification Subject: %docid% has reached approval level %lvl%."
  - Notification Message: Your transaction has reached this approval level due to the successful evaluation of the corresponding approval condition. Depending on the approval rule, zero, one, or more users have been assigned to approve your transaction for this approval level. No action is required on your part.

- Transaction Resubmitted Into Workflow

  If Send Resubmit Notification is *checked* for an approval rule, this entry is used for the email notification as soon as the transaction is resubmitted.

  - ID: 5
  - Notification ID: RESUBT
  - Notification Subject: Transaction Resubmitted: % doc id %
  - Notification Message: A transaction you previously submitted or approved has been resubmitted and may have been modified. You may review the transaction using the following link %DOC ID% < DOC ID Link>

- Transaction Routed To an Individual for Collaboration

  - ID: 6
  - Notification ID: DOCCOLU
  - Notification Subject: Transaction Collaboration: % doc id %

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- Notification Message: A transaction has been routed to you for collaboration. You may review the transaction using the following link %DOC ID% < DOC ID Link>

› Transaction Routed To a Group for Collaboration

- ID: 7
- Notification ID: DOCCOLR
- Notification Subject: Transaction Collaboration: % doc id %
- Notification Message: As a member of group %Role ID% you have been assigned to Collaboration for the following: %DOC ID Link%%DOC ID% < DOC ID Link>

› Transaction Routed for Collaboration Message To Creator

- ID: 8
- Notification ID: DOCCOLC
- Notification Subject: Transaction Collaboration: %DOC ID% has reached %ASSIGNEE%
- Notification Message: Your transaction has reached this collaboration user/role based on the successful route. Depending on the collaboration rule, zero, one, or more users have been assigned to collaborate your transaction. No action is required on your part.

Notification Variables

The Notification Variables (IWFNVAR) page is where variables are established for sending e-mail notifications to users that are not defined as Advantage Users or Roles. The variables defined are evaluated by transactions to return an email address. These have to be added as a customization to return an email address for a variable (refer to the AMSDocHeader.evalWfAprvNotifWoVar method for more details).

› Field Information

Field	Description
Transaction Code	A required identification of which transaction code the inference rule exists.
Notification E-Mail Variable	The required identification of the field that contains the email address for notification.
Description	Optional information text to explain why the variable exists and the reason.

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Configure Worklist Details

The Configure Worklist Details (CNFGWDET) page is used to decide the fields from the selected transaction code that should be displayed on the Worklist Details (WRKLSTDL) page against each workflow item. The number of fields configured for a transaction code cannot exceed five. The Worklist Details Synchronization batch job has to be run in order for the configuration changes to take effect and reset the configuration records (meanings configurations changes were applied). Synchronization includes inserting/updating/deleting Worklist Details record data to be in synch with the configuration setup on this page.

This configuration page includes two tabs.

- Transaction Code

  This tab displays the Transaction Code selected from the initial search page for which the record-action of View or Edit was taken. Records are added to the page via the Populate Transaction Codes batch job. Do not try to add records manually.

Field	Description
Transaction Code	A required identification of a Transaction Code, as defined on Transaction Control, for which a worklist detail will be defined.
Transaction Name	The name of the Transaction Code as defined on the Transaction Control entry.
Description	Optional information text to explain why the variable exists and the reason.

- Worklist Details Configuration

  This tab displays the one to five fields that are available for the Transaction Code on the Worklist Details inquiry page. Records are added to the page via the Populate Workflow Metadata batch job. Do not try to add records manually.

Field	Description
Component	Each tab visible on a transaction is a ‘component’ of the Transaction Type. This identification is the database table name for the component. That convention is (Transaction Type) + DOC + (component) such as JV_DOC_ACTG for the Accounting component of the Journal Voucher Transaction Type.
Field	The field is identified by the database attribute, so use of the pick is encouraged to identify the field properly. Note the Component must be completed before using the drop down listing for Field.

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Field	Description
Field Name	The displayed name of the field as defined in Advantage Metadata.
Data Type	The data type of the field as defined in Advantage Metadata.

Access Control - Collaborate

The Access Control (SCRACS) page, although not considered a collaboration setup page, is where the action to invoke collaboration is given for a user as determined by the combination of security role and resource group to which the transaction belongs. The check box is labeled Collaborate just as the control found on the Transaction Control page that enables the collaboration feature for a given transaction code.

Please consult the "Access Control" topic in the *CGI Advantage Security Administration User Guide*, for more information on these security settings.

Transaction Collaboration Template

The Transaction Collaboration Template (DCOT) page is where collaboration paths are defined for those transaction codes enabled for collaboration on the Transaction Control page. Templates can be defined globally, where all of the organizational COA fields are set to the *????* wildcard, or a template can be defined to a subset of organizational entities. The page is read in the same manner as discussed for approval roles when it comes to gathering rollups from any Unit associated with the template and reading the Approval Hierarchy page.

› Field Information

Many fields are not listed below as they are defined in the same manner as on the Approval Rules page.

Field	Description
Notify Creator	Select this check box if you want the creator of transactions to be sent an email notification as soon as the transaction progresses through the collaboration path.
Email	When *checked*, the application will send an email to the approver role or user when they are next in the collaboration path of a transaction.

Transactions

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Some amount of workflow administration can be done with the User Maintenance (UDOC) transaction. Refer to the "User Maintenance Layout" topic in the *CGI Advantage Security Administration User Guide* for detailed information about this transaction.

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Inquiries

The following table lists the inquiries for workflow and collaboration in CGI Advantage, refer to the associated topic for additional information.

Name	Page Code	Description
Worklist Landing	WRKLST	This landing page provides a carousel that lists all of the worklist and collaboration pages available for the logged in user.
Worklist	WRKLSTC	Each Advantage application (Admin, Financial, Human Resource Management, and Performance Budgeting) has a Worklist page, which can be accessed via the carousel on the Worklist Landing page. The Worklist pages are the interaction point between approvers and worklist items.
Collaboration	COLWKLST	A special inquiry page that lists the Draft transactions waiting for collaboration.
Worklist Details	WRKLSTDL	A special workflow inquiry page that has up to five fields specific to a transaction code for inquiry. This will allow an approver to sort on those fields in order to prioritize work on pending transactions.
Worklist Pipeline	WRKPIP	A special workflow inquiry page that displays the transactions associated with a current approver or approval role worklist, giving the approver with sufficient approval authority the ability to bypass approvals on lower approval routings for a work item.
Manager Worklist	IWF12	The manager worklist is available to a user who is defined as being a manager of a workflow role.
Worklist Administration	WLADMN	A specialized inquiry that allows a workflow administrator of all approval roles to monitor and control transactions currently in workflow.
Approval Recall	APRVRCL	This inquiry lists transactions that are still in workflow and allows you to recall the highest approval applied.
Approval Log	IWF09	An inquiry into all logged actions of approvers.
Approval Processing Log	IWF10	An inquiry into all approval processing events that have occurred for a transaction by Event Type.

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Name	Page Code	Description
Reassign/Manually Route Approver (User Information)	APRVRS	Some worklist pages include a **Reassign** action and/or a **Manually Route** action. Both of these actions transition you to a User Information page that lists users to whom the selected Worklist item can be reassigned/manually routed.
Change Priority	CHGPRTY	This page allows you to change the Priority of a worklist item and it allows you to specify a Priority Reason.
Transaction Override Log	DOCLOG	This page allows you to view all errors that were overridden by users during transaction processing. Logging is done when a transaction is submitted successfully to the *Final* Phase. For each error that is overridden, a separate record is created in the log.
Transaction Collaboration Path	DCOP	A specialized inquiry page that displays predefined collaboration rules and allows the addition of new rules. This page can only be accessed via links within a transaction.

Worklist Landing

The Worklist Landing (WRKLST) page provides a carousel that lists all of the worklist and collaboration pages available for the logged in user.

The following pages share the same layout and options of the basic Worklist inquiry:

- Administration Worklist
- Financial Worklist
- Human Resource Management Worklist
- Performance Budgeting Worklist

The following pages share the same layout and options as the basic Collaboration inquiry:

- Administration Collaboration
- Financial Collaboration
- Human Resource Management Collaboration

The following pages have specialized filter sections and return only certain Transaction Types.

- Human Resource Employee Worklist
- Human Resource Position Worklist
- Human Resource Recruitment Worklist

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- Human Resource Time Worklist
- Human Resource Supervisor Worklist

Worklist

Each Advantage application (Admin, Financial, Human Resource Management, and Performance Budgeting) has a Worklist page, which can be accessed via the carousel on the Worklist Landing page. The Worklist pages are the interaction point between approvers and worklist items. The Worklist field is the primary filter with choices in the listing of a user's personal worklist, each approval group to which the approver belongs, and a choice to show all worklists, called *ALL*, is available on many worklist pages. The enabled property for the defaultToUserWorklist parameter in the worklist.conf file determines whether the Worklist defaults to the user's worklist or to *ALL*. If enabled=false, then the Worklist defaults to *ALL*. If enabled=true, then the Worklist defaults to the user's worklist. Note: This setting is applicable to all Worklist widgets and Worklist pages.

The SHOW_REJECT_TRANS_IN_WRKLST_WID parameter on the Application Parameter (APPCTRL) page indicates if the rejected transactions need to be displayed in the Worklist widget. When set to *Y*, rejected transactions are included in the Worklist widget. The default value is *N*, which excludes rejected transactions from the Worklist widget.

If the ENABLE_WORKLIST_VIEW_ALL flag on the ERP Application Parameters (ERPCTRL) page is set to *true*, then the Worklist widget contains a **View All** button (in the top right) that takes the user to the respective worklist page (Admin, Financial, Human Resource Management, and Performance Budgeting).

On the Worklist pages, a related page link exists to transition to the Worklist Details inquiry page for more information for a transaction. Note this page is blank if there are no fields defined on the Configure Worklist Details page.

› Page-Level Actions

- **Change Role Order**: A transition to the Approval Role Display Order page where the display order of all approval roles can be defined or changed.
- **Recall**: A transition to the Approval Recall page to review those transactions approved by an approver that are still in workflow, and that approval applied is the highest one that has been applied to the transaction thus far. From this page an approval can be recalled (see that action below).
- **Worklist Details**: A transition to the Worklist Details page, to view any additional details defined for a transaction code. Before using this transition, it is necessary to narrow down a Worklist listing to one transaction code.
- **Worklist Pipeline**: A transition found on many worklist pages that takes the worklist results to the Worklist Pipeline page to impact other approval levels.
- **Manager Worklist**: A transition to the Manager Worklist for those approvers that are defined as the manager for the approval role to perform all tasks available from the regular worklist but also a few management functions.

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› Grid-Level and Row-Level Actions

There are many actions available from the grid menu and row menu. Those actions that can only apply to a single transaction are only listed in the row menu. The Worklist widget for Performance Budgeting includes many actions (such as, Approve, Reject All, Take Task, Return Task, and so forth) that allow you to perform the selected action on all records that are selected (that is, the selection check box is selected) in the grid. The Worklist widget for Performance Budgeting also includes a **Refresh** action, which refreshes the list of transactions on the Worklist widget.

To perform actions such as Approve, Reject, Reject All, and Unapprove, the user must take the workflow item from the approval role worklist to his/her personal worklist using the Take Task action. The Take Task action can be avoided by setting the transactionWorkflowActions feature flag to *true*, which makes the Take Task action optional for users that belong to the workflow role.

- **Approve:** This action applies a user's approval level to the selected transaction(s). The approval is applied to the currently assigned approval level. After the approval action has been applied successfully, the transaction(s) will be removed from your worklist, and routed to the next approver or approval role, if required.
- **Unapprove**: This action will remove a previously applied approval from the selected transaction(s). It allows you to "take back" your applied approvals. This action is applied to the currently assigned approval level. You may apply an Unapprove action only on a transaction on which a Reject action has occurred, as opposed to Reject, which can be applied on a transaction at any approval level. Furthermore, Unapprove can only be applied on a transaction when the routing Reason is to "Confirm or remove approval'.
- **Reject**: This action is used to indicate a wish to not approve the currently assigned approval level on the selected transaction(s). The transaction will then be routed back to the approver that previously approved the transaction. The transaction would be routed back to the Draft phase if this is the first approval routing. A Reject action can be applied at any approval level and by any approver, as opposed to Unapprove, which can only be applied on a transaction on which a Reject action has been applied. The Rejection Comment Required indication on the approval rule defines whether a comment is required. The Rejection Comment Required field once set to *Yes* from the approval rule can also be sent to the recipient through email by giving a value of *Y* on the ENABLE_REJECT_COMMENTS_ON_EMAIL parameter on the Application Parameter (APPCTRL) page.
- **Reject All**: This action is used to indicate that you want to remove the transaction(s) from approval processing. This action may be applicable when, for example, the submitter is trying to purchase more items then allowed. Applying this action will reject your and all other approval levels and will route the transaction back to the submitter for corrections. The Rejection Comment Required indication on the approval rule defines whether a comment is required. The Rejection Comment Required field once set to *Yes* from the approval rule can also be sent to the recipient through email by giving a value of *Y* on

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the ENABLE_REJECT_COMMENTS_ON_EMAIL parameter on the Application Parameter (APPCTRL) page.

- **Reassign**: This action allows you to assign the transaction to another approver. This will remove the transaction from your worklist and add it to the selected user's worklist. This is different than the Manual Route action, which will keep the transaction in your worklist while also adding it to the selected user's worklist.
- **Take Task**: This action moves a transaction or transactions from an approval role to the personal worklist of an approver.
- **Return Task**: This action returns a transaction or transactions from the personal worklist of an approver to the approval role worklist from where it may be taken by another user. The Return Task is not possible if the current task is in the user's worklist as a result of any of the following actions: Reassign, Manual Route, Reject, Unapprove, or Recall.
- **Manual Route**: This action routes the transaction to the personal worklist of another approver. The routed transaction will continue to exist in the original worklist also, as opposed to the Reassign action.
- **Bypass Approval**: This action allows the transaction(s) to be processed to Final without needing to go through the approval process. The Bypass Approvals action can be applied from inside the transaction or from the worklist. In addition to security that allows the action, bypassing of approvals has to be allowed for a given transaction code on the Transaction Control reference page.
- **Track Work In Progress**: This action opens a view of the past and future workflow activity of a transaction. The view may be accessed from within the transaction or from a worklist.
- **Change Priority**: Select this action to change the Priority of a selected transaction or transactions.
- **Posting Line Inquiry**: This action, which is only available for Financial transactions, transitions to Posting Line Inquiry (PLINQ), filtering records for the selected transaction. The action gives approvers a full view of all posting lines within a transaction version.

Collaboration

Advantage Administration, Advantage Financial, and Advantage Human Resource Management applications have a Collaboration page, which can be accessed via the carousel on the Worklist Landing page. The Collaboration pages are used to verify the *Draft* transactions waiting for collaboration. Each Collaboration page provides a list of collaboration transactions assigned to the user/role. When collaboration takes place for a particular transaction, the collaborated transaction is displayed on the Collaboration page for the associated application. The Collaboration page contains certain filtering criteria to limit the records on the page and the grid displays the records based on the selected criteria. Clicking the Transaction ID link opens the transaction.

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› Page-Level Actions

- **Change Role Order**: A transition to the Approval Role Display Order page where the display order of all approval roles can be defined or changed.

Worklist Details

The Worklist Details (WRKLSTDL) page displays additional fields from transactions against each Worklist entry. This allows users to sort on those fields so that the user can prioritize Worklist items. For each Transaction Code, the additional fields that should be displayed on this page is configured on the Configure Worklist Details page.

For example: The Accounts Payable manager should be able to sort Invoice transactions as per their Scheduled Payment Date so that he/she may be able to prioritize approval of Invoice transactions with an earlier Scheduled Payment Date. Thus, the Scheduled Payment Date field can be displayed on the Worklist Details page for Worklist items of Invoice transactions with the appropriate setup on the Configure Worklist Details page. The manager can then sort on the Scheduled Payment Date field on this page.

The Transaction Code field value is mandatory for browsing the records because Custom fields are defined based on the Transaction Code on the Configure Worklist Details page. Use the Selection check box to select one or multiple worklist items to be reassigned, returned, reprioritized, or viewed. To select or deselect all the items on the page, check the Selection check box in the grid header section. All actions available on the Worklist page are available on this page. Refer to the "Worklist" topic for more information.

Worklist Pipeline

The Worklist Pipeline is a special workflow inquiry page that displays the transactions associated with a current approver or approval role worklist, giving the approver with sufficient approval authority the ability to bypass approvals on lower approval routings for a work item. Access to the page is not direct but from other workflow pages.

The page displays all work items that include the worklist as a future step in the approval process, excluding the current and parallel approval work items since they are part of the worklist page.

› Grid-Level and Row-Level Actions

There are a number of actions available from the grid menu and row menu. Those actions that can only apply to a single transaction are only listed in the row menu.

- **Bypass All Approvals**: This action allows the transaction(s) to be processed to final without needing to go through the approval process. Note: This action is disabled if you navigate to this page after selecting an approval role.

- **Bypass Prior Approvals**: This action will apply a bypass to each lower level approval, moving the task to the approval level of the approver. This action does not bypass parallel approvals or higher level approvals. Note: This link is disabled when you navigate to this page after selecting an approval role.

- **Bypass Prior Approvals and Take**: This action will apply a bypass to the prior approvals and remove the work item from approval role worklist and move it to the approver's worklist. Note: This link is disabled when you navigate to this page after selecting the User Worklist.
- **Track Work in Progress**: A transition to the Track Work in Progress page to view past, present, and future workflow activity. Refer to the "Track Work in Progress" topic in the *Transactions User Guide* for more information.

Manager Worklist

The Manager Worklist page is similar in nature to the regular worklist pages as all actions and transitions on the regular pages are available via the Manager Worklist. Refer to the "Worklist" topic for information on the actions and transitions available via this page. Additional filter fields are available and all transactions assigned to the worklists of individual approvers in the approval role can be queried. Also, with all actions, the manager is not limited to just transactions in the worklist of the manager but to all approvers in the approval role.

Worklist Administration

A specialized inquiry that allows a workflow administrator of all approval roles to monitor and control transactions currently in workflow.

› Grid-Level Actions

The following grid-level actions exist that are also available via the Worklist page:

- **Return Task**: Puts the transaction back into the approval role from which a user took the task or returns it to the original approval user.
- **Reassign**: Puts the transaction into the personal worklist of an approval user.
- **Change Priority**: Adjusts the priority up or down, which will require a reason for the change to be specified.

› Page-Level Links

The following related page link is available, which is defined in the "Worklist" topic:

- Worklist Details

Approval Recall

The Approval Recall page lists the transactions approved by an approver that are still in workflow. Only the highest approval level applied so far is displayed. This page allows you to recall the previous approval by selecting Recall from the row-level menu for the transaction. Access to the page is not direct but from other workflow pages, for example, via the **Recall** link on the page-level menu of the Worklist pages.

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Approval Log

The Approval Log inquiry allows you to view a log of approval actions applied to transactions. For each approval action applied to a transaction, the status before and after the action is logged, along with the user who applied the action, Approval Rule ID, date/time and Approval Level.

Approval Processing Log

The Approval Processing Log inquiry allows you to view a log of approval processing events that occurred for a transaction by Event Type. The date of the approval processing event along with a description of the event is also provided.

Reassign/Manually Route Approver

Some worklist pages include a **Reassign** action and/or a **Manually Route** action. Both of these actions transition you to a User Information page that lists users to whom the selected Worklist item can be reassigned/manually routed. Only users that belong to roles that have the authority (Access Control) to apply the given Approval Level on the given Resource are displayed on this page. Select the **Reassign** action on the row for the desired user and the transaction is reassigned to that user for approval.

Change Priority

By default, the Priority value of a Worklist item is inferred from the Approval Rules page (IWF08). Approvers can sort on the **Priority** field on the Worklist page(s) where it is displayed in order to look at higher priority items and work on them. Authorized users can change the Priority of a worklist item by selecting the **Change Priority** action from worklist pages that include this action. This action transitions you to the Change Worklist Priority page, which allows you to change the Priority and specify a Priority Reason. The Priority Reason can be used for tracking the reason for assigning the particular Priority value (deviating from the defaulted values). Note: Priority change is also logged as a Transaction Comment on the transaction.

Transaction Override Log

The Transaction Override Log page allows you to view all errors that were overridden by users during transaction processing. Logging is done when a transaction is submitted successfully to the *Final* Phase. For each error that is overridden, a separate record is created in the log.

Transaction Collaboration Path

A specialized inquiry page that only opens from within a transaction via the Collaboration action or through the Collaboration icon in the Smart Menu in the center top of the page. The page displays the predefined collaboration rules and allows the addition of rules. However, pre-defined rules cannot be deleted. Refer to the "Collaborating Draft Transactions" topic in the *Transactions User Guide* for more information about this page.

The following related actions exist that can only be taken when a transaction is in the Draft phase:

- **Add -** (represented by the + icon) This action inserts a manual line into the collaboration routing path to an approval role or user along with a comment, intended for instructions.

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- **Route** - This action starts the collaboration process, moves collaboration to the next level, or finishes the collaboration. Which happens depends on where in the transaction is in the collaboration process.
- **Skip -** This action moves the transaction onto the next open collaboration step or ends collaboration. Which happens depends on where in the transaction is in the collaboration process.
- **Top, Up, Down, Bottom** - These actions appear to allow a user to re-arrange the collaboration path where the step has not completed or skipped. Where the item is in the path determines what actions are scene.

Of special note is the field for Collaboration Status, which has the following values:

- **In-Process** – This status is displayed when Transaction Collaboration is currently assigned to a level.
- **Done** – This status is displayed when a user finishes the Transaction Collaboration on a routing level. This status is displayed after a user selects the Route link. The system changes the status from In – Process to Done.
- **Hold** – This status is displayed when a user holds the transaction for processing on the routing level. This status is displayed when the Held action is selected on the transaction.
- **Submit** - This status is displayed when the transaction is submitted. When a transaction is submitted, no transaction collaboration can occur for the routing level.
- **Skipped** - This status is displayed when the collaboration level was skipped.

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Advanced Setup

This section provides setup information on workflow decentralization:

- Decentralized Workflow Administration
- Enhanced Supervisor Enabled Workflow
- Worklist Configuration
- Application Parameter
- Business Role Type Conditions

Decentralized Workflow Administration

Workflow Administration in CGI Advantage can be set up to run in a decentralized manner by activating the row filtering function for the Manage Approval Roles (page IWF01 or table R_WF_ROLE) page. Activating row filtering allows decentralized workflow administrators, who can resolve workflow issues in a quick and efficient manner. As a decentralized workflow administrator, you can:

- Define and assign roles only for the authorized organizations of a user (row filtering ensures this behavior).
- Define different Approval Roles for different organizational codes.
- Control workflow role assignments by organizational codes.
- Designate one or more members of a role as role managers to further facilitate workflow administration.

For more information on activating row filtering, please refer to the "Application Resources" topic in the *CGI Advantage Security Administration User Guide*.

Enhanced Supervisor Enabled Workflow

Transactions in HRM, except Group Timesheet (TIMEG), can be routed to an employee's supervisor for whom the transaction is submitted for or the submitter's supervisor depending upon site setup when the transactions are initially routed to a workflow role via Manage Approval Rules (IWF08).

This functionality can be enabled using the WF_HRM_CUST_APPRV_ROUTER parameter on the Application Parameter (APPCTRL) page. Once enhanced workflow is enabled, a user must enter a workflow role for the WF_DRECT_TO_SUPR parameter on the Application Parameter page that is valid on Manage Workflow Roles (IWF01). Supervisor information is initially retrieved using the submitter's details unless overridden using the WF_DIRECT_TO_EMPL_SUPR_EVEN_IF_NOT_SUBM parameter on the Application Parameter page.

Workflow will perform a look up if an override supervisor is included on a Department Specific Data (DEPTD) transaction to retrieve supervisor information, if no override is mentioned then the system will perform a look up to retrieve supervisor information from Position. If no supervisor information is retrieved for both employee or the submitter, then the transaction will be placed in the workflow role's queue to facilitate designated users to perform workflow actions.

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Worklist Configuration

The Worklist Configuration (worklist.conf) file includes site-wide parameters and properties for worklist pages/widgets as indicated below.

Parameter	Default Value	Parameter Description
defaultToUserWorklist enabled	enabled=false	The enabled property for the defaultToUserWorklist parameter determines whether the Worklist defaults to the user's worklist or to *ALL*. • If enabled=*false*, then the Worklist defaults to *ALL*. • If enabled=*true*, then the Worklist defaults to the user's worklist. Note: This setting is applicable to all Worklist widgets and Worklist pages.
totalGridRowsToFetch totalGridRowsCount	totalGridRowsCount=20	The totalGridRowsCount property for the totalGridRowsToFetch parameter determines how many rows of Worklist items are displayed on the Worklist widgets. The user must navigate to the Worklist page to see the full set of Worklist items. Note: This setting allows sites to reduce the load time of Home Pages that include a Worklist widget. It is recommended to keep the count to less than 50 to avoid potential performance impacts.

Application Parameter

Application Parameter (APPCTRL) is one that is part of general system configuration. Options on this table are set once and do not vary by year, department, transaction, or other factors. The table is very generic in its design so that it can host many different types of options with the Parameter Name and Parameter Value fields.

Note: Any changes to records on this table should be followed by a restart of all servers used for CGI Advantage applications.

The Parameter Short Description is listed first followed by the Parameter Name in parentheses.

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Parameter	Parameter Description
Show rejected transactions on the Worklist widget (SHOW_REJECT_TRANS_IN_WRKLST_WID)	This parameter indicates if the rejected transactions need to be displayed in the Worklist widget. When set to *Y*, rejected transactions are included in the Worklist widget. The default value is *N*, which excludes rejected transactions from the Worklist widget.

Business Role Type Conditions

Workflow conditions can be setup for the following transactions based on the business role type a user is utilizing to submit the transaction. Each of the transactions contains a Role Type (ROLE_TYPE) column where the valid options are *E* (employee), *M* (manager), and *blank* (all other business role types). In order to use this functionality, IWF06, IWF07, and IWF08 should be updated accordingly. For IWF06, an entry is needed, per transaction, with the Component as the DOC_HDR table name and the Field as ROLE_TYPE. For IWF07, an entry is needed for specific conditions as desired. For example, if an Employee Business Role is required for workflow but other roles are not, the Operator field needs to be set to =. This makes it so that only Employee Business Roles are required to go through workflow for the defined transaction. For IWF08, set the condition(s) as setup on IWF07.

- Beneficiary Designation (BDES)
- Donated Leave Transaction (DL)
- Employee Address (ADDR)
- Employee Attributes (ATTR)
- Employee Competency (ECMP)
- Employee Education History (EEDH)
- Employee Emergency Contact (EMER)
- Employee Identification Change Form (EICF)
- Employee Leave Request (LREQ)
- Employee Performance Evaluation (EPEV)
- Employee Performance Expectation (EPEX)
- Employee Tax Withholding Certificate (MYW4C)
- Employee Work History (EWRK)
- Leave Bank Enroll Transaction (LBNRL)
- Licenses and Certifications (LCNS)
- Overtime Request (OREQ)

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- Self Performance Evaluation (SPEV)
- Timesheet (TIMEI)
- Work Schedule Change Request (WREQ)

Advanced Batch Processing

Workflow and Collaboration areas have a few system processes. Please refer to the appropriate topic below for a list of all jobs. For detailed information on the jobs (such as when to run, input, output, and process parameters) refer to the associated run sheet in the *CGI Advantage - Administration Utilities Run Sheets* guide.

- Batch Jobs

Batch Jobs

The batch jobs are listed alphabetically in the below table. For detailed information on the jobs (such as when to run, input, output, and process parameters) refer to the associated run sheet in the *CGI Advantage - Administration Utilities Run Sheets* guide.

Job Name	**Description**
Populate Transaction Codes	A required batch process to build the list of transaction codes available for workflow and collaboration definition.
Populate Workflow Metadata	A required batch process to build out the transaction components (seen as tabs online) and fields on those components, which available for workflow and collaboration definition.
Automated Workflow Escalation	This process performs the warning notifications and escalations of worklist items that are pending in an individual approver's worklist for more than a specific period of time. This helps to ensure that the items are worked on within the specified time period by sending email reminders to the Assignee and escalating the item to more Assignee(s) by creating additional routings so that they can work on the item.
Workflow Delegate to Alternate Approver	This process job is used to route transactions that are submitted into a manager's queue during the time the Out of Office is effective into the alternate approver's queue.
Worklist Details Synchronization	This is a required process after setting up or adjusting records on the Configure Worklist Details page to synchronize the data on Worklist Details page.

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