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BMC FootPrints Service Core

Change Manager Guide

Version 11.5

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Introduction

Change Manager Overview

Solving business problems often results in procedural changes. However, changes just as often occur when companies proactively seek business benefits by reducing costs and/or improving services. The goal of the change management process is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes, thus minimizing the impact of change-related incidents upon service quality, and consequently improving the day-to-day operations of the organization. Changes range from small solutions, i.e., upgrading memory or software on a single machine, to large projects, such as an organization–wide system upgrade.
The ITIL (Information Technology Infrastructure Library) standard for service and support defines change management as a process that ensures that standardized methods and procedures are used for efficient and prompt handling of all changes to minimize the impact of change-related incidents on service quality. Consequently, change management aims to improve the day-to-day operation of the organization.

The BMC FootPrints Service Core Change Manager add-on module enables organizations to develop their own approval process for Issues with no programming. In BMC FootPrints Service Core Change Manager, approvers are designated for specific workspaces. When an Issue meets approval criteria, the approvers are notified that an Issue awaits approval. The approvers then give or withhold approval. When an Issue meets approval criteria, it is moved to another stage in the process. Note that meeting "approval criteria" may mean that the Issue is rejected rather than approved.

Workspace administrators can designate different approvers for different stages in the approval process. For example, a proposal for a software change may require an approval in principle for the change from product management, an approval for the design from the development organization, an approval for the actual software build from software development, then a testing approval from quality assurance, and so on. The BMC FootPrints Service Core Change Manager feature allows the workspace administrator to create an orderly and efficient method for getting those approvals and ensuring that nothing falls through the cracks or waits too long for review.

NOTES

BMC FootPrints Service Core Change Manager is an add-on module that incurs an additional cost. Approvers must have a BMC FootPrints Service Core Agent license (fixed or concurrent). The BMC FootPrints Service Core Change Manager feature is related to but not to be confused with Change Manager as defined by the IT Infrastructure Library. The BMC FootPrints Service Core Change Manager feature provides the ability to manage changes via a voting/approval process.

BMC FootPrints Service Core Change Manager is implemented with customized statuses, fields, teams, roles, and escalation rules. The fields and statuses are built into the Change Manager template, a feature of the Workspace wizard for building Change Manager workspaces. The included Change Manager template is a workflow recommendation from BMC, and can be customized as easily as any BMC FootPrints Service Core Workspace to reflect the specific needs of the organization.

BMC FootPrints Service Core Change Manager provides features that include the following:

- Customizable criteria for automatically setting off an approval process (including all built-in and custom fields)
- Customizable rules for meeting an approval (i.e. requiring one, a majority, or all to approve)
- Customizable actions upon approval or disapproval, including the start of another approval phase, change of status, re-assignment, etc.
- Customizable email notifications for various stages of approval

- BMC FootPrints Service Core Change Manager Audit Trail
- Customizable Permissions for access to approval information
- Built-in homepage listing “My Approvals”
- Built-in BMC FootPrints Service Core Change Manager reports
- Approval via email
- Optional anonymous approvals

For details on configuring BMC FootPrints Service Core Change Manager, refer to Configuring BMC FootPrints Service Core Change Manager.

For details on using BMC FootPrints Service Core Change Manager, refer to Using BMC FootPrints Service Core Change Manager.

Basic Workflow

The BMC FootPrints Service Core Change Manager template provides a basic workflow for handling a Request For Change (RFC). The RFC may originate from an Incident or Problem reported to the helpdesk. Examples of the types of Issues that could be RFCs include end-user dissatisfaction with their current system; company–wide change or single–system changes. Changes in how or where the company handles business changes may result in an RFC.

The following is a suggested workflow:

- The RFC is submitted into a Pending queue, where it will be reviewed by a manager who will either Reject or Accept the RFC.
- If the RFC is Rejected, it can be modified by the submitter and re–submitted to the Pending queue, or Closed, so that no further action can be taken on this RFC.
- If the RFC is Accepted, it is placed in a queue for review by a Change Advisory Board (CAB). The CAB is responsible for authorizing what should be done, when exactly it should be done, and assigning the work.

NOTE

The CAB should be made up of a variety of technical and business staff, and should include the Change Manager(s).

- After the CAB Authorizes the change, it is assigned out to one or more builders who will be responsible for implementing the change.
- After the change is implemented, a Quality Assurance team then tests it.
- If the change has been implemented successfully, it can be built for distribution.
- If the change has failed testing, it may return to the builder(s) to implement the change again, or sent back to the CAB to be reevaluated.
- Once the change is built, the change is scheduled for implementation.
- After implementation, it may become obvious that the change is not working as planned, and a Back-Out plan must be implemented. Otherwise, the change enters a review period.

- If after the review period, the change is deemed unsuccessful, a backout–out plan is implemented, or the change can be sent back to the CAB.
- If the change has passed all the stages successfully, the RFC can be Closed.

This is a comprehensive guideline for a Change Manager workflow. You may not need all these stages or all of these teams of people. Feel free to streamline the process to meet your organization's needs.

Change Manager Template

Status Values

The following values are included with the template to support the workflow:

- Pending
- Accepted
- Rejected
- CAB Review
- Authorized
- Assigned Out
- Testing
- Failed
- Built
- Implemented
- Back-Out
- Under Review
- Unsuccessful
- Closed

Change Manager Workspace Fields

Template Fields

The Change Manager template comes with the following fields to support the basic workflow. These fields and their values may be modified to suit the specific business needs of your organization.

- **Reason for Change**—A drop–down choice field defining why the change was requested. Values include:
  - Incident/Problem Resolution
  - User/Customer Dissatisfaction
  - Proposed Introduction/Removal of New CI

  - Proposed Upgrade to Infrastructure
  - Changed Business Requirements
  - New or Changed Legislation
  - Location Change
  - Product or Service Change from Vendors
- **Category**—A drop–down choice field that further defines the type of infrastructure, service, or activity that requires change. You may find it convenient to create this field as a part of dependency group based on “Reason for Change”. Categories include:
  - Server Maintenance
  - Hardware
  - Software
  - Documentation
  - Telecommunications Facilities
  - Engineering Cover
  - Training Courses
  - IT Infrastructure Management Procedures
  - Tactical Plans
  - Environmental Infrastructure
- **Impact**—A choice field defining what impact the change will have on the organization. Values include:
  - Minor
  - Significant
  - Major
- **Effect**—A text field allowing anyone involved with the RFC to describe what the effect of implementing (or not implementing) might be.
- **Authorized By**—A choice list with the names of users who can authorize the change. The template contains “User1”, “User2”, etc. These values should be replaced with the names of your authorizing users.
- **Authorization Date**—A date/time field that should be entered when the “Authorized By” field is filled in.
- **Build Date**—A date/time field for entering the projected date when the build will be done.
- **Testing Date**—A date/time field for entering the projected date when testing will be done.
- **Implementation Date**—A date/time field for entering the projected date when the implementation will be done.
- **Back-Out Plan** – A text field for describing the Back–Out plan, describing the baseline system before changes were made.
- **Review Date** – A date field for entering the date for reviewing the change to determine its success.

Suggested Additional Fields

The following fields are not currently included in the BMC FootPrints Service Core Change Manager Template, but can be created by the Workspace Administrator to support the Change Manager workflow:

- **Configuration Item**—A multi–line text field for recording information pertinent to the RFC that is retrieved from a configuration or asset management database.
- **Scope**—A drop–down choice field showing how many touch points the change will affect. Suggested choices could include:
  - 1
  - 2-99
  - 100-999
  - 1000+
- **Risk**—A drop–down choice field defining assumed risk of the change, with choices:
  - High
  - Medium
  - Low
- **Root Cause**—A drop–down choice field defining why the change needs to take place, with choices:
  - Human Error
  - Bug in Application
  - Procedural Failure
  - Hardware Failure
  - Network Failure
  - Server Down
  - Other
- **Other**—A single line text field to be filled out if "Other" is chosen as a value for Root Cause. This field could be a pop–up dependency if the value "Other" is chosen for Root Cause.

Other BMC FootPrints Service Core Features

The following additional features can be used in the change management process:

- **Customer Self-service**—The customer portal can be used to allow users throughout the organization to request and see the status of their changes.
- **Email**—Good communication is essential to the change management process, so email notification should be used at each stage to email assignees and other affected parties on the change process.
- **Calendar**—When changes are scheduled, they can be linked to the workspace calendar, providing additional visibility of changes to members of the organization.

- **Reporting**—The extensive reporting features of BMC FootPrints Service Core can be used to track scheduled changes for the next week, month, etc., and to measure the efficacy of past changes.
- **Service Level Management**—If changes are affected by service level agreements, the SLM feature can be used to manage the due dates for changes.

Additional Workspace Administration Tasks for Change Manager

In addition to the built-in BMC FootPrints Service Core and custom Workspace fields, additional administrative tasks are necessary to support the change management workflow. This includes creating Teams and Roles for everyone involved in the Change Management process, and Escalations to automate the workflow and ensure that criteria are being met for the process.

Teams and Roles

The following teams and roles should be created by the Workspace Administrator to support the workflow:

- **Builders**—Builders should be limited to only editing their own assignments, and should not be able to change assignment. They should be limited to only changing the RFC status to “Testing” when the RFC is in the status of “Assigned Out” or “Failed”.
- **Testers**—Testers should be limited to only editing their own assignments, and should not be able to change assignment. They can change RFCs from “Testing” to “Failed” or “Built” only.
- **CAB**—CAB members may have various roles. If they are only CAB members, you can create a role for them that is also limited to only their own assignments, without any re-assignment capabilities. They should be limited to changing status to “Rejected” or “Authorized” when the current status is “CAB Review”. Once “Authorized” they should then be able to change to “Assigned Out” once a decision is made who should implement the change.
- **Managers**—The managers should have complete access to the system and may be on the CAB team. There should be no restrictions on what statuses they can change to and what assignments they can make.

Escalation Rules

The escalation rules will automate the workflow process, ensuring compliance with the system through the various stages of the RFC life–cycle. These rules should all be based on status, and should automatically assign the next team as appropriate to the status of the RFC.

NOTE

The escalations must be created in the order presented so they will run in the correct order.

1. First create an escalation called “Pending”. This will be an instant escalation upon creation or edit. All RFCs that are requests or in Pending will automatically set to Pending and be assigned to the Manager or Managers Team if there are more than one.
2. Create an escalation called “CAB”. This will be an instant escalation upon creation or edit. Once an RFC is in the status of “Accepted”, this escalation rule will change the status to “CAB Review” and assign the CAB team.
3. Create an escalation called “Builder”. This will be an instant escalation upon creation or edit. Once the CAB puts an RFC into the “Assigned Out” status, this rule will assign the RFC to the Builders team.

4. Create an escalation called “Tester”. This will be an instant escalation upon creation or edit. Once the Builder puts the RFC into the status of “Testing”, this rule will reassign the RFC to the Testers team.
5. Create an escalation called “Failed”. This will be an instant escalation upon creation or edit. If the Tester puts an RFC into the status of “Failed”, this rule will reassign the RFC to the Builders team.
6. Create an escalation called “Built”. This will be an instant escalation upon creation or edit. Once a Tester puts an RFC into the status “Built”, this rule will reassign the RFC back to the Change Manager(s).
7. Finally, create an escalation called “Review Period”. This will be a time-based escalation that will be set for RFCs that have not been edited for some time period. It would be best to choose your minimum review time period. It will check all RFCs in the status “Implemented” and if their Review Date is the current date, send out email notifications to the managers that the review period is over.

This combination of escalation rules guarantees that no agents can circumvent any step of the change management process through the following restrictions:

- The specific agents role configuration will not allow them to reassign the RFC, so they may only choose the next logical status(es) in the change process.
- Since the reassignment rules are all based on teams, auto–assignment can be set up to use round–robin assignment or to leave the entire team assigned if a round robin method is not desired.
- Change Managers can be involved in any part of the process since they have access to all statuses and reassignment at all times.

The size of your organization and the level of commitment you want to make to the change management process may result in less configuration and fewer restrictions in the BMC FootPrints Service Core Workspace.

Configuring BMC Change Manager

Configuring Change Manager

Configuring change management involves the following steps (for an explanation of change management is, see BMC FootPrints Service Core Change Manager Overview.

- **Planning**
  - Determine your change management approval process
    - **Decide the type of Issue(s) that requires an approval process**—Decide what requires approval. Then decide which fields in an Issue should trigger placing an Issue into the approval process. For example, you might have a process for approving expenditures. You could have a drop-down field that contains different ranges for the cost of an expenditure, such as "1-500", "501-1000", "1000-5000", "5000-10000", and "10000+". The values could be used to determine which process gets that Issue. To use a different example, for a software change request you might use a drop-down field that contains values for the degree of difficulty of the change, such as "Minor", "Moderate", and "Significant". Each value in the drop-down field could serve as a criterion to trigger placing the Issue into a different process.
    - **Decide what happens to an Issue in a process**—Once an Issue meets the criteria and is submitted to the approval process, it must pass through one or more "phases". In a phase, specified "approvers" vote on whether an Issue is approved or rejected. Action is then taken upon the Issue based on the results of the vote. There may be several levels of approval within a process, each level translating into a different phase. Using the expenditure example from above, an expenditure of $10,000 or more might require approval from a manager in one phase and from an upper level manager in the next phase. A third phase might be built for a large expenditure for CFO approval. Different sets of approvers can be specified for each phase.
- **Determine who your approvers are for each phase in the process**—These may be the same approvers for every phase, different approvers, or a combination of the same and different approvers.
- **Decide what constitutes approval or rejection of a change request**—Once you decide who has to approve the Issue, you have to decide what constitutes approval and rejection. You can require unanimous approval or rejection or you can require some percentage of the voters approve or reject the Issue (e.g., 51% approve or 50% disapprove, which would mean a majority must approve the Issue but half or fewer of the approvers could reject the Issue).
- **Decide how you want to handle email notification**—You can have emails sent when a phase begins, as a recurring reminder during the phase, or when a phase ends (i.e., voting has concluded in the phase), or any combination of these. In addition, you can include a ballot in the email so that approvers can vote by replying to the email. If you want to send recurring reminders, you must decide how frequently a reminder is sent to someone who has not voted.
- **Decide what you want to happen with an Issue at the end of each phase in the approval process**—Determine what happens to an Issue if it is approved or if it is disapproved. There are two separate sections for specifying what to do to the Issue at the end of the phase, depending on whether it is approved or rejected. Fields within the Issue can be changed, an external program can be run, assignments can be changed, the Issue can be moved into another approval process and phase, etc. There are a variety of options for determining what to do with the Issue once voting in a phase has concluded.

  A good way to understand the approval process in BMC FootPrints Service Core Change Manager is to read the Create Approval Processes and Create Phases sections of this document to get a feel for how an Issue is moved through BMC FootPrints Service Core Change Manager.

- **Configure the approval process**—Once you have done your planning, the next step is to configure an actual process, including its phases.
  - Create the process
  - Create the phases of the process
  - Order Change Manager Processes and View/Print Summaries

Create Approval Processes

To create an approval process:

1. Select Administration | Workspace, then select Change Manager from the Automated Workflow section of the main frame. The BMC FootPrints Service Core Change Manager page is displayed.
2. Click **Add Approval Process**. The Configure Approval Process page is displayed.
3. In The Issue Criteria tab, enter the criteria for initiating the approval process. When an Issue is created, the data in the Issue is compared to the criteria specified here and on other tabs. If the criteria match the data in the Issue, the Issue is put into the approval process.
   - **Title**—Enter a word or phrase for which to search.
   - **Description**—If a word or phrase is entered (or multiple words using Boolean Operators), only Issues containing that word/phrase in the Description are returned.
   - **Keyword**—If a word or phrase is entered, any Issues containing that word/phrase in any field are returned, including Title, Description, Workspace fields, and Address Book fields, as long as the full text search conforms to full text keyword search behavior.
   - **Assigned to**—Highlight one or more users to returns Issues assigned to the user(s) selected, holding down the CTRL key to select multiple users. If you do not want to limit the search to any particular assignees, do not highlight any users. Advanced Controls are also available for this field.

NOTE ON PERMISSIONS

Access to Issues is based on a user's **Role**[1]. Assignment options may be restricted based on your role. Please consult your BMC FootPrints Service Core administrator for more information.

   - **Submitted by**—If a user is selected, the search returns only Issues created by that user.
   - **Priority**—Returns only Issues of the specified priority or priorities. Highlight the priorities to be included; hold down the CTRL key to highlight multiple priorities. To return all priorities, no priorities need to be selected (this has the same result as selecting all priorities).
   - **Status**—Returns only Issues of the specified status(es). By default, Open and any custom statuses are highlighted in the status dialog. To select multiple statuses, hold down the CTRL key.
   - **Other Issue Information**—The fields in this tab differ depending on the fields in the current Workspace. Search on as many fields as desired. Search methods vary with the field data types:

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[1] A user type assigned to one or more users to define permissions. Both built-in roles and custom roles can be assigned to users. Examples of built-in roles include Agent, Customer Read/Submit, and Workspace Administrator.

- **Character field**—Displays a text box. Enter the word or phrase to search on (or multiple words using Boolean Operators).
- **Number field**—Displays a text box. Enter the number or part of a number for which to search.
- **Drop-down and Multi-select field**—Displays a multi-select dialog box. Highlight one or more values to search on. To search for Issues that contain no data for the field, select No data. If you do not want to restrict the search based on choices in a field, do not highlight any values.
- **Date fields**—Search on a date or date range. Date Field Search Options

4. In The Contact Criteria tab, enter contact criteria to be matched against data in the Issue. The fields in this tab differ depending on the fields in current Address Book. Search methods are the same as those for Issue Information fields (see above).
5. In the Advanced Criteria tab, enter other criteria. These criteria are not matched to data in fields, but instead provide a filter for the Issues that are returned.
   - **Issue Types to Include**—Specify whether Advanced Issue types, including Subtasks and Global Issues, are returned. Options include:
     - **All Issue Types**—All Issue types are returned.
     - **Regular Issues**—Regular (non-Global or Master/Subtask) Issues are returned.
     - **Include Master Issues**—**Master Issues**[1] that contain subtasks are returned.
     - **Include Subtasks**—Subtasks of Master Issues are returned.
     - **Include Global Issues**—**Global Issues**[2] are returned.
     - **Include GlobalLinks**—All users' Issues linked to a Global Issue are returned.
     - **Group Master Issues with Subtasks/Global Issues with GlobalLinks**—Available for Reports only. These options override the sort order selected in the report.
   - **Date**—If dates are specified, the search returns only Issues from the time period specified. Date Field Search Options
   - **Age**—Returns Issues created in the time specified. Number of days and hours can be specified. Modifiers are also provided, including “Greater Than”, “Less Than”, “Equal to”, “Greater than or Equal to”, “Less than or Equal to”, and “Not Equal to”. As an example, to return Issues greater than 1 day old, choose “Greater than” and fill in “1” for “Days”.

NOTE
Age is always 24/7 and does not use the Workspace Work Schedule.

NOTE
Date/time fields can only be searched by date, not time.

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[1] A type of FootPrints Issue that contain Subtasks, each with a different task that must be completed before the Master Issue is Closed. The Master issue is the "parent" in a parent/child relationship between the Master Issue and its Subtasks.
[2] A special FootPrints Issue type used to designate important or frequently reported Issues that will affect many users. Global Issues can be broadcast to all Agents, are displayed on the Agent Home page, and can optionally be displayed for Customers to subscribe to. Whenever a new Issue is reported with the same problem, the Agent (and optionally the Customer) can link the Issue to the known Global Issue (called GlobalLinks). Global Issues can be closed with the GlobalLinks together at one time.

- **Advanced Action Criteria**—Click the checkbox to indicate that the issue has an associated Advanced Action that requires workflow (i.e., an approval via BMC FootPrints Service Core Change Manager or some other factor) before execution on the asset. This checkbox only applies if you have BMC FootPrints Asset Core.
- **Multiple Criteria**
  - **And/Or**—Select whether the criteria you entered are all required to be fulfilled before triggering the change management approval process (And) or only one of them must be fulfilled before triggering the approval process (Or).

6. In the Name/Save tab, enter a name for the process (e.g., Capital Expenditure) and any comments or description you want to include for the process. Enter your password and click the **SAVE** button to save this process.

The next section of this document describes how you create the individual phases in the process you created.

Create Phases

To create a phase:

1. Select Administration | Workspace, then select Change Manager from the Automated Workflow section of the main frame.
2. Click **Add Phase**. The Configure Approval Phase page is displayed.
3. **Complete Step 1**
   - **Name** field-The Name field is limited to 254 characters.
   - **Description** field-The Description field is unlimited.
   - **Copy From Another Phase** field-The **Copy From Another Phase** field allows you to copy all of the Phase values of an existing Phase into this Phase. To copy Phase data, select the existing Phase from the Copy From Another Phase drop-down field and save the page (scroll to the bottom of the page, enter your password, and click the SAVE button). Once you've created a Phase by copying it, you can come back and edit the values of the new Phase.
4. **Complete Step 2-**Set the requirements for Requests for Change (RFCs). Requirements include the Voters who will determine whether the RFC is approved or denied. There are several options for selecting approvers and you can select any combination of these options.
   - **Agents/Contacts Tab**—Highlight an individual user or users in the User List on the left and then use the arrow button to move them to the Eligible Voters list on the right (or highlight Eligible Voters and use the arrow button to remove them from the list).
     - **Filters (User Name, Display)**—The User Name and Display fields allow you to filter the names that are listed in the Eligible Voters list. Enter a string in the User Name field and click the Load button to repopulate the list with all names containing that string. Select from the Display drop-down to repopulate the list with all the names that meet the drop-down's criteria (for example, all Workspace Administrators users). The two fields, User Name and Display, can be used together to filter the names further. For example, if you enter the letter "b" in the User Name field and then select Concurrent Agents from the Display drop-down, the list displays all agents with the letter "b" in their user name that use a concurrent license.

  - **User ID**—Add a user to the Selected Users (eligible voters) list directly by entering a user ID in the User ID field and then clicking the Add button.
  - **Phase approval** when **All eligible voters approve. Phase Disapproval** when **One eligible voter disapproves**—All voters must unanimously approve the Issue in order for the Issue to be considered approved. This means that if there is just one vote against approval, the Issue is rejected. It also means that as soon as one disapproval is submitted, voting is closed regardless of whether all approvers have voted.
  - **Phase approval** when **At least *X*% of eligible voters approve. Phase Disapproval** when **More than *X*% of eligible voters disapprove**—Approval is given when X% voters approve. For example, if this is set to 33% and there are nine eligible approvers, when three of them approve then the Issue is approved. When the approval percentage is selected, the disapproval percentage is calculated for you automatically. Approval or disapproval do not always wait for all of the votes to be submitted; as soon as the approval or disapproval threshold is reached, the voting is closed.
  - **Phase approval** when **More than *X*% of eligible voters approve. Phase Disapproval** when **At least *X*% of eligible voters disapprove**— Approval is given when more than *X*% voters approve. For example, if this is set to 33% and there are nine eligible approvers, when four of them approve then the Issue is approved. When the approval percentage is selected, the disapproval percentage is calculated for you automatically. Approval or disapproval do not always wait for all of the votes to be submitted; as soon as the approval or disapproval threshold is reached, the voting is closed.
  - **Phase approval** when **One eligible voter approves. Phase Disapproval** when **All eligible voters disapprove**—The Issue is approved when one of the eligible voters approves. The Issue is only disapproved if disapproval is unanimous. Voting closes as soon as one of these states is reached.
  - **First tally to reach *X*% of eligible voters**—The Issue is approved or disapproved based on which set of voters achieves the specified percentage of voters first. For example, if 33% is specified and there are nine approvers, then the first vote count to reach three votes first decides the Issue.
  - **Deadline for approval/disapproval checkbox**—Check the box and enter the amount of time to set a deadline to approve/disapprove. If a clear approval or disapproval vote is not reached when the timer runs out, the decision is made according to what is specified in the drop-down field. The number of days refers to real days, not Workspace Schedule days. Drop-down options are: **Approved** (the Issue is approved when the timer runs out); **Disapproved** (the Issue is rejected when the timer runs out); Determined by Highest Tally-Tie: **Approved** (whichever set of votes is higher wins, but in the case of a tie the Issue is approved when the timer runs out); Determined By Highest Tally-Tie: **Disapproved** (whichever set of votes is higher wins, but in the case of a tie the Issue is disapproved when the timer runs out); **Expired** (the Issue is no longer active).
- **Teams Tab**—Highlight a team or teams in the Team List on the left and then use the arrow button to move them to the Eligible Voters list on the right (or highlight Eligible Voters and use the arrow button to remove the team from the list). The phase approval parameters that appear on this tab are described immediately above.
- **Issue Characteristics**—Select the eligible voters based on the issue characteristics. For example, if you want the person who submitted the Issue to be an eligible voter, click the Submitter checkbox. The phase approval parameters that appear on this tab are described above. Options are:
  - **Individual Assignees**—Designates the Issue assignees as approvers for this Issue and phase only.
  - **Assignees' Supervisor—**Designates the Issue assignee's supervisor as an assigned approver for this Issue and phase only.

- **Team Members of Assigned Team** (if Team assigned)—Designates the members of an assigned Team as approvers for this Issue and phase only.
- **Team Leader (if Team assigned)—Designates the Team Leader of an assigned as an approver for this Issue and phase only.Assignee's Supervisor**—Designates the Issue's Assignee(s) supervisor as an assigned approver for this Issue and phase only.
- **Submitter**—Designates the Issue Submitter as an assigned approver for this Issue and phase only.
- **Submitter's Supervisor** —Designates the Issue submitter's supervisor as an assigned approver for this Issue and phase only.
- **Submitter's Supervisor's Supervisor**—Designates the Issue submitter's supervisor's supervisor as an assigned approver for this Issue and phase only.
- **Contact**—Designates the Issue Contact as an assigned approver for this Issue and phase only.
- **Contact's Supervisor** —Designates the Issue Contact's supervisor as an assigned approver for this Issue and phase only.
- **Contact's Supervisor's Supervisor**—Designates the Issue Contact's supervisor's supervisor as an assigned approver for this Issue and phase only.

- **Issue Fields**—BMC FootPrints Service Core Change Manager retrieves the voter from the value in a workspace field. The value must be a user ID or address book ID (in the case of customers). One use for selecting voters this way is that it allows an escalation retrieve the voter based on issue characteristics. The phase approval parameters that appear on this tab are described above.
- **Select an approver who will only vote if...**—Select a fallback voter in case none of the selected eligible voters (e.g., Assignees' Supervisor) can vote on the Issue. A selection is only required when nobody is set to be an eligible voter and one of the selection boxes is selected in the 'Select Eligible Voters from User List'.

5. **Step 3: General Options** deals mainly with email notifications for approvers, but provides some other options as well.
   - **Mandatory Comments For Voting**—When a vote is submitted, the voter can be forced to enter a comment by selecting a checkbox for that type of vote. You can select any combination of checkboxes or leave all of them blank.
   - **Phase Start Email Notification**—Notify approvers that a phase requiring their approval has begun.
     - **Email Title**—Enter the title you want to include at the top of each email notification. With respect to %%Variable%% expressions, some field data from the Issue can also be used in the field headers, as follows:
       - **Issue Number**—%%MRID%%
       - **Title**—%%TITLE%%
       - **Priority**—%%PRIORITY%%
       - **Status**—%%STATUS%%
       - **Submitter**—%%SUBMITTER%%
       - **Workspace ID**—%%PROJID%%
       - **Workspace and Address Book fields**—%%FIELD NAME%% where "FIELD NAME" is the name of the field in upper case.

- **Voting by email**—Include the %%BALLOT%% variable to include a ballot with the notification. It is a better idea, however, to include the ballot in the body of the email than in the header. The ballot can be completed and returned by the approver to cast the vote. Note that the HTML generated by some programs, such as MS Word, is not always 100% compatible with all email clients. If you experience formatting or display problems, try using a simpler basic HTML editor.

  Click the [Insert Variable] link to display a list of valid variables. Double-click a variable or click it once and then click the Insert button to append the variable to the title. Click the [Preview] link to view a preview of the email you have built.

- **Email Body**— Check the box for Text or HTML to determine the format to be used for outgoing BMC FootPrints Service Core Change Manager email. If you select HTML, you can use standard HTML tags to format the email, but the variables remain the same as always. Once you select the type of email body to use, click on either [Email Body: Text] or [Email Body: HTML] to access the message body and edit it. Enter the content you want included in the body of the email. With respect to %%Variable%% expressions, field data from the Issue can also be used in the email body, as follows:
  - **Issue Number**—%%MRID%%
  - **Title**—%%TITLE%%
  - **Priority**—%%PRIORITY%%
  - **Status**—%%STATUS%%
  - **Submitter**—%%SUBMITTER%%
  - **Workspace ID**—%%PROJID%%
  - **Workspace and Address Book fields**—%%FIELD NAME%% where "FIELD NAME" is the name of the field in upper case.
  - **Description**—Include all description data from the Description field by using the %%DESCRIPTION%% variable. Include only the first description entered by using the %%DESCRIPTIONFIRST%% variable. Include only the most recent description by using the %%DESCRIPTIONLAST%% variable.
  - **Voting by email**—Include the %%BALLOT%% variable to include a ballot with the notification. It is a better idea, however, to include the ballot in the body of the email than in the header. The ballot can be completed and returned by the approver to cast the vote. Click the [Insert Variable] link to display a list of valid variables. Double-click a variable or click it once and then click the Insert button to append the variable to the title. Note that the HTML generated by some programs, such as MS Word, is not always 100% compatible with all email clients. If you experience formatting or display problems, try using a simpler basic HTML editor.
- **Include attachments for this issue**—Click the checkbox to include any attachments to the Issue with the email.

- **Vote Notification**—You can optionally notify all eligible voters when another voter records a vote on the Issue. Use the checkbox to determine whether to notify voters of approval, disapproval, and/or deferred votes, as well as whether or not to send a notification to the vote submitter. The vote submitter will not receive a notification if none of the other checkboxes in this section are selected. Email Title, Email Body, and Attachment options are the same as above under Phase Start Email Notification.
- **Recurring Email Reminder**—Enable email reminders, select the frequency with which email reminders are sent to approvers to remind them to vote on an Issue, and specify the content of the email. The emails are sent until the approver's vote has been recorded or the Issue has been approved or rejected. Email Title, Email Body, and Attachment options are the same as above under Phase Start Email Notification.

- **Minutes/Hours/Days/Weeks**—Select the frequency with which email reminders are sent to approvers who have not yet voted. Selections are exclusive, meaning that you can only pick the frequency from one of the time periods. If you select a frequency from a different time period, the previous time period is zeroed out. In other words, if you picked "15 minutes" and then picked "3 hours", the minutes selection returns to 0.

- **Anonymous Voting**—By default, details of the voting results can be displayed, including who voted and how they voted. Check this box to hide eligible voters and current vote lists from the extended voting details page. Votes are not completely anonymous to everyone because anyone with the role to run change management reports or view change management history can still view votes in those places.
- **Phase Status Workspace Field**—The Workspace Status Field option is used to set up a field specifically to track the approval status of an issue. Click the checkbox to enable this function.
  - **Use Existing Field or Create New Field**—Check a radio button to specify whether an existing drop-down field will be used to track the status or a new drop-down will be created. Regardless of which radio button is selected, the following values are added automatically to the field:
    - Processing
    - Approved
    - Disapproved
    - Expired

    These statuses cannot be removed from the field once they have been added. Other changes to the field, such as adding statuses or moving the field on the page, can be made on the Form Designer page. To delete a field that has been enabled for tracking approval status, you must first disable the Phase Status Workspace Field by removing the check from the checkbox on this page.

6. **Step 4: Actions on Phase Approval** determines what is done with an Issue once an approval has been obtained.
   - **Status**-Click the checkbox and then select a status from the drop-down list if you want the status to change once this phase of voting has concluded.
   - **Priority**—Click the checkbox and then decide how you want the priority changed when phase approval is obtained as follows:
     - **Move the Priority *X* step(s) toward 10**—Provides a relative number for raising the priority number.
     - **Move the Priority *X* step(s) toward 1**—Provides a relative number for lowering the priority number.
     - **Change the priority to *X***—Specify a priority number to which the priority is changed when phase approval is obtained.
   - **Workspace/Address Book Fields**—By enabling this function, you can edit any combination of workspace and address book fields when the issue is approved. To do so, check the checkbox, then click the Configure Field Edits button. The issue page fields are displayed. Enter the values you want to be displayed in each field upon approval of the issue.
   - **Assignment**
     - **Change assignment of Issue**—Assign the Issue to another agent or agents when the approval is finalized.
       - **Add selected users as Assignees if they are not already assigned**—Does not change the current assignees, but allows you to add additional assignees. Use the assignee box to select the new assignees.

  - **Re-assign to selected users after unassigning all existing users**—Unassigns all current assignees. You then have to assign a new set of assignees. Use the assignee box to select the new assignees.
  - **Flat and Group By Team**—Selecting Flat displays an expanded list, showing the individual team members. Selecting Group collapses the list and assignments are then made on a group and not an individual basis.
- **Advanced Action**—Execute the pending Advanced Action for the asset associated with the issue. This only applies if you have the BMC FootPrints Asset Core.
- **CI Links**—These actions apply to CIs linked to the issue. This is only available if you have the BMC FootPrints Service Core Configuration Manager module. Either or both of the CI Links options can be selected.
  - **Approve Proposed CIs**—Approve proposed new CIs when the issue is approved
  - **Approve Proposed Changes to Existing CIs**—Approve proposed changes to existing CIs when the issue is approved.
- **External Action**—Click the checkbox to enable this function, which allows you to execute an external program when approval is obtained for this phase. This feature is especially useful for running scripts. The external program must be one that can run and stop on its own without any user intervention. In addition, if the program involves running a graphical user interface (GUI), it may not be able to display the interface to a screen, which could cause the program to hang and fail. Therefore, the program should also be one that can run from a command line rather than a GUI. Enter the path to the program in the Execute external program field. In addition, you can pass field data to the external program by using the %%Variable%% functions. Click the [Insert Variable] link to display a list of valid variables. Double-click a variable or click it once and then click the Insert button to append the variable to the field.
- **Run instant edit-based escalation**—If you check the box, if the end of a phase triggers an edit to an Issue, the Issue is checked against escalation criteria and, if it matches escalation criteria, the Issue is escalated accordingly. If the box is not checked, which is the default, then a BMC FootPrints Service Core Change Manager approval or disapproval does not trigger an escalation.
- **Transfer to Phase**—By default, an approval moves an Issue into the next defined phase and a disapproval ends the process. However, an action can be defined to start any selected phase on approval or disapproval. Note that a transfer into a phase which has already finished in the past clears the old votes from it and restarts the voting. Click the checkbox and then select a phase from the drop-down to transfer the phase upon a phase approval.
- **Approval Notification Email**
  - **Email eligible voters/submitter/assignees/supervisors of assignees/team leaders of each team/contact(s)/last agent to edit the Issue a notification of phase verdict**—Check the box(es) to have an email notification sent to the specified parties.
  - **Send single-Issue notification mail to the following space-separated email addresses**—Enter email addresses for additional individuals to be notified. You can use the select the **Insert Variables** button to insert a variable that represents a field that contains an email address. If you select a field that does not contain an email address, the email is sent to that address but will bounce.
- **Email Title**—Click the [Insert Variable] link to display a list of valid variables. Double-click a variable or click it once and then click the Insert button to append the variable to the title. Click the [Preview] link to view a preview of the email you have built.
  - **Email Body**— Check the box for Text or HTML to determine the format to be used for outgoing BMC FootPrints Service Core Change Manager email. If you select HTML, you can use standard HTML tags to format

the email, but the variables remain the same as always. Once you select the type of email body to use, click on either [Email Body: Text] or [Email Body: HTML] to access the message body and edit it. Enter the content you want included in the body of the email.   With respect to %%Variable%% expressions, field data from the Issue can also be used in the email body, as follows:

- **Issue Number**—%%MRID%%
- **Title**—%%TITLE%%
- **Priority**—%%PRIORITY%%
- **Status**—%%STATUS%%
- **Submitter**—%%SUBMITTER%%
- **Workspace ID**—%%PROJID%%
- **Workspace and Address Book fields**—%%FIELD NAME%% where "FIELD NAME" is the name of the field in upper case.

  Click the [Insert Variable] link to display a list of valid variables. Double-click a variable or click it once and then click the Insert button to append the variable to the title.

- **Include attachments for this issue**—Click the checkbox to include any attachments to the Issue with the email.

7. **Step 5: Actions on Final Disapproval** determines what is done with an Issue once a disapproval has been obtained. The options are the same as in the preceding step of this procedure.
8. Type in your password and then click the **Save** button to save this phase.

NOTE

If the final phase in a process does not specify at least one action to be taken upon final approval and the Issue is approved, the Issue will be re-submitted to the same Change Manager process. Likewise, if the final phase in a process does not specify at least one action to be taken upon final disapproval and the Issue is disapproved, the Issue will be re-submitted to the same Change Manager process. In other words, the Issue will loop back into the process in those instances. To ensure that this does not happen, the final phase in a process should specify some action to be taken upon final approval and upon final disapproval.

VBS Scripts

The VBS scripts interpreter (wscript.exe or cscript.exe) requires the presence of certain registry entries for IUSR_Machine user. Since an `HKEY_CURRENT_USER` hive is not available for the IUSR_Machine, IIS loads the `HKEY_USERS\.DEFAULT` hive in its place. However, the `HKEY_USERS\.DEFAULT` hive does not contain the necessary keys and entries for the scripting engine, and read access for `IUSR_Machine` user is not granted to the `HKEY_USERS\.DEFAULT` hive. Therefore, in order to run VBS scripts as an external action from an escalation, the registry must be changed as follows:

1. Using the Registry Editor, create the following Keys and Entries:
   ```
   HKEY_USERS\.DEFAULT\Software\Microsoft\Windows Scripting Host
   HKEY_USERS\.DEFAULT\Software\Microsoft\Windows Scripting Host\Settings
   ```
2. Verify that the user IUSR_Machine has Read access to these keys(using regedt32).
3. Create the following entries under `HKEY_USERS\.DEFAULT\Software\Microsoft\Windows Scripting Host\Settings`:
   ```
   DisplayLogo: REG_DWORD: 0
   Timeout: REG_DWORD: b4
   BatchMode: REG_DWORD: 0
   ```

Order Change Manager Processes and View/Print Summaries

To change the order of the approval processes and view/print approval summaries, select Administration | Workspace | Change Manager.

Change Order of Processes

To change the order of the processes, select the Move up arrow or Move down arrow beside the process name to move that process up or down in the list.

View/Print Process Summaries

Across the top of the main frame, below the title of the page, you'll see links labeled "Configuration / Issue Approval States". The page you are on initially is the Configuration page. The linked pages are:

- **Configuration**—Displays the list of Change Manager processes with the buttons for editing, deleting, or move the process up or down, and adding new processes and phases.
  - **Open All Processes/Close All Processes**—Open All Processes opens all of the processes on the page to display all of the phases in those processes. Close All Processes closes all of the processes on the page so that the phases associated with the processes are not displayed.
  - **Phases**—This is the default page when the plus sign for the process is clicked. The Phases page displays all of the phases for the process along with the Edit, Delete, and Move buttons.
    - **Edit**—Click this button to edit the phase properties.
    - **Delete**—Click this button to delete the phase
    - **Move**—Select the up arrow to move the phase up in the list or the down arrow to move the phase down in the list within the process.
    - **Phase Name**—The name of the phase is a link. Clicking this link displays a summary of the process criteria.
      - **Summary**— Displays a summary of the criteria for the current process and a summary of phase properties for every phase in the current process. There is also a button at the bottom of the window for printing the page.
- **Summary**—Displays summaries of the criteria for all processes and summaries of phase properties for every phase in the processes. There is also a button at the bottom of the window for printing the page.
- **Active Approvals**—Displays a list of processes and phases, and a list of Issues associated with the phases, as well as other information regarding the Issues that are in Change Manager phases, as follows:
  - **Issue #**—The Issue number is displayed. The Issue number is also a link to the Details page of the Issue.
  - **Title**—The title of the Issue.
  - **Time In Phase**— The length of time that the Issue has been in the current phase in the process in days, hours, and minutes.
  - **Time Remaining**— The amount of time before the approval/disapproval deadline is reached in days, hours, and minutes.

- **Override**—This drop-down field allows the Workspace Administrator to approve or disapprove an Issue and is not part of the regular Change Manager voting process for approvals. The field allows the Workspace Administrator to move an Issue through a phase if, for whatever reason, the Issue has become "stuck". When a Workspace Administrator selects either Approve or Disapprove from this drop-down, the Issue is determined to have received phase approval or disapproval and follows the configured behavior for that case.

Using BMC FootPrints Change Manager

Using BMC FootPrints Change Manager

Change management is a process of acquiring approval for steps in that process. The steps in the process are defined as "phases". Designated approvers vote to approve or disapprove the Issue at each phase in the process.

An Issue that is in the Change Manager approval process looks the same as any other Issue unless the Agent has been designated as an approver for that phase of the approval process. Votes by approvers are cast either within the BMC FootPrints Service Core interface or via email.

Voting from the BMC FootPrints Service Core Interface

If the Agent has been designated as an approver, extra fields are displayed on the Details page so that the approver can cast his or her vote. Approval votes are cast on the Details page.

The fields for voting are as follows:

- **Change vote**—This box is checked by default. Check the box to leave your vote unchanged. The buttons for voting are displayed when you uncheck the box.
- **Approve/Disapprove/Defer**—Click the Approve or Disapprove button to vote to approve or disapprove the Issue. Click the Defer button to acknowledge that you have seen the "ballot" and leave a comment without affecting the final outcome of the decision. If the phase does not end before you have the chance, you can go back and change your vote to Approve or Disapprove as you see fit. If you defer, you continue receiving reminder emails.

  When approval criteria have been met, the Issue is moved into another phase of the process or the process of approvals is completed. Voters may be required to vote on only one phase or multiple phases in the process.
- **End this phase - Override all voting**—Some voters may be assigned the privilege of ending the phase entirely on the authority of their vote. This is a configurable option and is not present on all ballots.

NOTE

If you cast your vote before entering comments, the vote is recorded and the Details page changes to show the result of your vote. See below for information on how to change your vote, which allows you to add comments if you voted but did not include comments at that time.

- **Extended Voting Details**—Extended Voting Details include:
  - Issue number
  - process name
  - process description
  - phase name
  - phase description
  - approval/disapproval requirements
  - list of approvers
  - next phase in the process

  - list of approval/disapproval votes, including who voted, date of the vote, and voter comments
  - list of votes cast with voters' comments
- **Comments on Vote (optional)**—You can enter any comments you wish in this field. Some comments you might include are the rational for your vote or, for example, if you vote to disapprove, you might include what you would require to vote to approve the Issue if it came back to you again.
-

Voting by Email

If approvers receive email notification when voting begins and/or recurring email reminders that a vote is pending, approvers may, depending on how the notifications are configured, be able to cast his or her vote by replying to the notification.

If you can vote by email, the email contains a line of text similar to the following:

```
[ ]Approve          [ ]Disapprove
```

To vote by email, select Reply in your mail program, enter an X between the appropriate square brackets in the reply, then send the reply. Do not alter the security ID in any way. That data is required for a successful vote.

If the email is configured to allow it, you can also enter comments in your reply along with your vote by simply typing your comments on the line indicated.

One of a set of responses is returned to email votes for both successful and unsuccessful votes, as follows:

- For successful votes:
  - 'Your re-vote for approval for [Issue: %s, Process: %s, Phase: %s] was counted.';
  - 'Your vote for approval for [Issue: %s, Process: %s, Phase: %s] was counted.';
  - 'Your re-vote against approval for [Issue: %s, Process: %s, Phase: %s] was counted.';
  - 'Your vote against approval for [Issue: %s, Process: %s, Phase: %s] was counted.';
- For unsuccessful votes:
  - 'Your vote for [Issue: %s, Process: %s, Phase: %s] was not counted. Voting for this phase ended.';
  - 'Your vote for [Issue: %s, Process: %s, Phase: %s] was not counted. The ballot was not clear.';
  - 'Your vote for [Issue: %s, Process: %s, Phase: %s] was not counted. Reason not known.';
  - 'Your vote for [Issue: %s, Process: %s, Phase: %s] was not counted. Your email address did not match our records.';
  - 'Your vote for [Issue: %s, Process: %s, Phase: %s] was not counted. This is not the correct workspace.';
  - 'Your vote was not counted. The security ID was invalid.';
  - 'Your vote was not counted. The security ID was not found.';

Override Votes—Super-approvers

A "Super-approver" is empowered to end any phase immediately on the authority of his or her vote only. A super-approver's vote overrides all other votes in the phase.

If you are empowered with super-approver status and want to end the phase on your own authority, check the End this phase - Override all voting checkbox. A warning message is then displayed. Cast your vote to approve or disapprove and the phase is ended.

When the phase ends, it follows the normal procedure configured for approval or disapproval, depending on which way the super-approver voted.

Viewing Change Manager Issue Details

For designated Change Manager approvers only, the homepage Display drop-down list always contains a My Vote Required option. Selecting this option displays all of the active Issues that require a vote by the approver or that have been voted on by the approver. Once the Issue is closed, it is no longer displayed in this list. This provides a convenient way to view just those Issues that are active and require or have required the approver's vote.

View the Issue details for a Change Manager Issue the same way as with any other Issue. However, when you view the Issue details, not only are all of the usual fields displayed, but the Change Manager section is displayed also. Use the Change Manager section to vote on the Issue or to view the voting details. Refer to Using Change Manager for more information on casting a vote or viewing Extended Voting Details.

Viewing the Change Manager Audit Trail

If you are a member of a role with permission to view Change Manager history and run Change Manager reports, a voting history is provided in addition to the three tabs that comprise the regular Issue history (see the online help or Reference Guide PDF).

This audit trail provides a listing of all actions that were taken on a Change Manager Issue and when they were taken. Only users who have permission, based on role membership, can view all of the available history information.

The Audit Trail page cannot be edited.

To view the Change Manager audit trail:

1. Select the Details page of a Change Manager Issue.
2. Go to the History section of the page. The Audit Trail page for that Issue is displayed.

Using the Audit Trail Page

When you first open the Audit Trail page, the Issue's complete history is displayed. Use the links to view different history data, as follows:

- **Complete History**—All activity of the Issue.
- **Issue History**—Actions performed on the Issue by all users and automatically by the system.
- **Email History**—All email activity for the Issue.
- **Voting history**—A history of the individual votes cast. Voting history is not shown in any other view.

The following information is maintained for all views but the voting history:

- **Date**—The date the action was performed.
- **Time**—The time the action was performed.

- **User**—The user who performed the action. If the action was performed by the system automatically, the escalation rule is listed here.
- **Action**—The action performed on the Issue, i.e. "Changed Status", "Changed Priority", "Updated Description", etc.
- **Email type**—For email actions, the type of mail (incoming update or outgoing email notification) is displayed and the user who made the update or received the notification.

The following information is maintained for the voting history:

- **Date**—The date the vote was cast.
- **Time**—The time the vote was cast.
- **User**—The user who cast the vote.
- **Process**—The name of the process in which the vote was cast.
- **Phase**—The name of the phase in which the vote was cast.
- **Vote**—The vote that was cast (approve or disapprove).
- **Comment**—Any comments made by the voter that were a part of the vote.