

HP Service Manager

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For the supported Windows® and UNIX® operating systems

Time Period Management help topics for printing

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Time Period Management

You can use Time Period Management to manage time period definitions for your organization so that end users can see how their activities will be affected during different time periods. A time period definition is a set of settings that defines a type of time windows based on a set of recurrence rules, including its category, current phase (based on a pre-configured workflow), approval status, scope, assignment group, owner, affected services, affected departments, and affected locations. You can define Local, Regional, or Global time periods that apply to a specific set of or all locations (countries or regions) in your organization; you can further define which departments, business services, environment type (for example, production or test) the time periods apply to. In addition, you can define the scope of each time period to indicate whether it will cause performance degradation or service outage to end users or it will have no impact on end user's activities.

If integrated with another module in HP Service Manager, Time Period Management will enable you to directly view time periods from that module. For example, if integrated with Change Management, time period definitions will enable users to view time periods and changes in a Calendar widget and view time periods and changes in the context of a selected change. This is helpful for change planning.

Note: If you disable the Service Manager Calendar, Time Period Management is disabled simultaneously.

Time Period Management concepts

The following table lists the concepts used in Time Period Management.

Concept	Description
Time Period Definition	A set of settings that defines a type of time period, including its category, current phase (based on a pre-configured workflow), approval status, scope, owning group, owner, affected services, affected departments and locations, and so on.
Time Period Category	Time period categories are templates for creating different kinds of time period definitions. Each time period category is associated with a workflow that defines a life cycle for time periods. When creating a new time period, users are prompted to select a category from a list. The list of categories are grouped by type so that users can easily find the one they want. Category grouping is defined in Time Period Settings.
Time Period Rule	A rule is the central element in a time period to create time period occurrences. It reflects the recurrence of future start and end times of time period occurrences, and stores all the recurrence patterns.
Time Period Occurrence	An occurrence is the real time (start and end) when a time period window happens. Each occurrence contains a start and end date/time. A time period definition can have many occurrences.
Time Period Workflow	A time period workflow defines a life cycle for time periods. Each workflow is associated with a time period category. Out-of-the-box, the Timeperiod workflow includes four phases: Planning, Approval, Published, and Retired.
Time Period Approval	Administrators define approvals required for time periods using the Approval Definition utility. When the time period creator submits it for approval, the time period enters the Approval phase and goes through the pre-configured approvals. The Time Period Management module uses assignment groups and operators as approvers.
Time Period Notification	For time period approvals, standard approval notifications are defined in the timeperiodDefinition object record (Tailoring > Document Engine > Objects). Notifications can be automatically triggered and sent to relevant approvers or owners based on configured conditions.
Time Period Security Area and Role	The Time Period Management module uses security areas and roles to control user access to the module. By default, there are two areas (Timeperiod and Timeperiod Configuration), and four roles (Timeperiod Administrator, Timeperiod Analyst, Timeperiod Approver, and Timeperiod Manager).

Time Period Management process

The following is an sample process for Time Period Management:

1. A System Administrator configures time period global settings.
2. A Time Period Administrator configures time period categories, workflows, and approvals.
3. A Time Period Analyst creates the following time period definitions:
 - a. Creates the rules.
 - b. Sets the ownership.
 - c. Sets the affected services, locations, and departments.
 - d. Checks the time windows.
 - e. Submits the time periods for approval.
4. An approver (or an approval delegate) approves the time period definitions. Once approved, the time periods are automatically published.
5. A Time Period Administrator/Manager updates time period categories and types.
6. An owner updates, maintains, or retire the time period definitions assigned to the owner.
7. A Time Period Administrator/Manager unretires time period definitions if needed.

Time period workflow

Each time period has a workflow, which is defined in the time period category. Out-of-the-box, a workflow (named **Timeperiod**) is available, which includes four phases. This workflow drives the creation, approval, publication, and retirement of time period definitions including their occurrences.

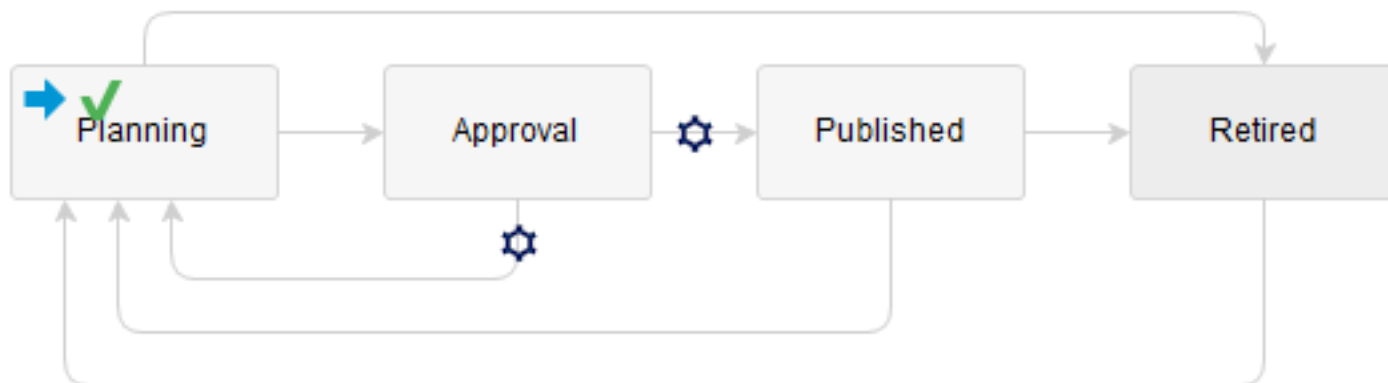
Note: You can create your own workflows if needed.

To view the name of a time period's workflow, open the time period's category record (**Time Period Management > Configuration > Time Period Categories**), and then locate the Workflow field.

To access a time period workflow, navigate to **Time Period Management > Configuration > Workflows**.

Phases

The following table describes each phase in the **Timeperiod** workflow.



Phase	Description	Notes
Planning	<div>Planning a time period</div> <ul style="list-style-type: none">• Create the rule• Specify the ownership• Specify the impacted services, locations, or departments• Check the time windows	

Phase	Description	Notes
Approval	Approve the time period based on the configured approval rules.	<p>An automatic transition is configured from the Approval phase to each of these phases: Planning, and Published.</p> <p>The transition triggers are as follows:</p> <ul style="list-style-type: none">• From Approval to Planning: (Expression: approval.status in \$L.file="denied")• From Approval to Published: (Expression: approval.status in \$L.file="approved")
Published	The time period, the rules and occurrences are displayed in read-only. Some occurrences can be manually canceled. In this phase the time period is approved and officially published.	
Retired	The time period is retired and the record is inactive (closed).	

Actions and activities in each phase

The following table summarizes the actions and activities available or allowed in each phase of the workflow: Planning (P1), Approval (P2), Published (P3), and Retired (P4). A cross mark indicates the item is available or allowed.

Type	Item	Description	P1	P2	P3	P4
Button	OK	Saves the record and exits.	x	x	x	x
	Cancel	Exits the record without saving.	x	x	x	x
	Save	Saves the record.	x	x	x	
	Submit for Approval	Moves the record to the Approval phase.	x			
	Retire	Moves the record to the Retired phase and deletes all occurrences.	x		x	
	Change Time Zone	Changes the time zone to display date/time values from the user's time zone to a different one.	x	x	x	x
	Apply Template	Applies a time period template.	x			
	Submit for Re-planning	Moves the record back to the Planning phase.			x	
Menu Option (More >)	Set Reminder	Calls the out-of-the-box reminder feature.	x	x	x	
	Copy	Copies the record.	x	x	x	x
	Change Type / Category	Changes the category and type of the current record. Works only in the first phase.	x			
	Create Template from Record	Creates a new time period template from the record.	x	x	x	
	Notify	Sends a notification.	x	x	x	
	Approval > Approve/Deny/Retract	Approve: Approves the record. Once approved, the record's approval status changes to approved, and the record automatically moves to the Published phase. Deny: Denies the record. Once denied, the record's approval status changes to denied, and the record automatically returns to the Planning phase. Retract: Retracts a denial of the record. Once retracted, the record moves back to pending approval status.		x		
	Unretire	Moves the record to the first phase and activates it again.				x
User Action	View rules	Allows users to view the existing rule(s) of		x	x	

Type	Item	Description	P1	P2	P3	P4
		the record.				
	Create / Modify rules	Allows users to create new rules and modify the existing rule(s).	x			
	Filter activities	Allows users to filter the activities of the record.	x	x	x	
	Filter occurrences	Allows users to filter the occurrences of the record.	x	x	x	
	Deactivate a single occurrence	Allows users to deactivate one single occurrence, when the date is no longer required.			x	
System Background Activity	Write activities	As soon as activities are created.	x	x	x	x
	Update occurrences	Updates occurrences according to the defined rules.	x		x	x
	Set create / update fields	Set the created by / updated by and related time stamps. These values are saved in the Rules. The form is fully editable.	x			
	Set update fields	Sets the updated by and related time stamps.		x	x	
	Move to previous / next phase	If the record is denied, the system automatically moves the record back to the Planning phase. If the record is approved, the system automatically moves the record to the next phase.		x		

Time period recurrence rules

A time period rule reflects the recurrence of future start and end times of the time period occurrences. The time period rule stores all the recurrence patterns. The occurrences are created based on the rule.

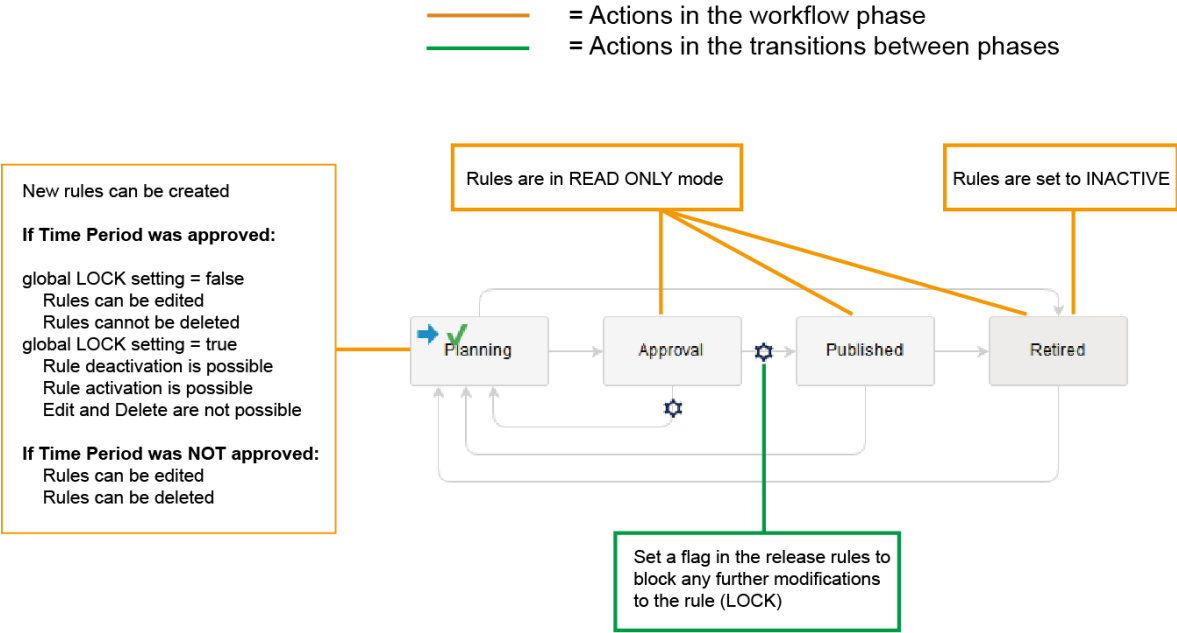
There are five rule types available: Arbitrary, Daily, Weekly, Monthly, and Yearly. All types, except for Arbitrary, can be configured with several recurrence rules. Arbitrary allows the configuration of specific start and end times, in case some occurrences do not follow a specific rule.

Principles of Rules

The following principles apply to time period rules.

Time Period Phase	Principles
Planning	<p>You can create, change, or remove a rule when the time period was never approved before, and the following happens:</p> <ul style="list-style-type: none">• As soon as you create a rule, the occurrences are created in Inactive state.• As soon as you change a rule, the occurrences are deleted and new ones recreated in Inactive state.• As soon as you remove a rule, the occurrences are removed. <p>Once the time period was approved, its rules are <i>locked</i> and cannot be changed anymore if it is not in the first phase.</p> <ul style="list-style-type: none">• When the global LOCK setting is set to true, a locked rule allows only activation/deactivation in the Planning phase, and all its future occurrences are deleted.• When the global LOCK setting is set to false, a locked rule allows deletion / modification of the rule only in the Planning phase.
Approval	Rules are displayed in read-only.
Published	Rules are displayed in read-only.
Retired	<p>When a Time Period is retired, the associated rules are set to Inactive.</p> <p>In case a Time Period is unretired, the associated rules remain Inactive and need to be reactivated manually if the rules are still valid.</p>

Once a rule is configured, various actions are started to prevent users from unauthorized editing, as shown in the following figure.



Global lock setting

The time period global settings contains this option: **Lock Rules once approved**. This global lock setting allows administrators to decide whether or not users can edit, delete, activate, or deactivate rules after approval. By default, this global lock is not enabled.

The following table describes the behaviors when this option is enabled (set to true) and disabled (set to false).

Global Lock Setting	Behavior
false	<p>Update Rules</p> <p>Updating rules is only possible in the first phase of the workflow. To update a rule, access an existing time period in the “planning” phase, click the Rule Id in the Rules section, and then update the rule. When your edits are complete, click Save.</p> <p>The following functionality is implemented in case a rule was changed:</p> <ul style="list-style-type: none">• If the time period was NOT approved before, all occurrences are recalculated.• If the time period was approved before, all future occurrences are recalculated.

Global Lock Setting	Behavior
	<p>Delete Rules</p> <p>Deleting rules is only possible in the first phase of the workflow. Delete is only possible when the time period was not approved before. To delete a rule, access an existing time period in the “planning” phase, click the Rule Id in the Rules section, and then click Delete.</p> <p>When a rule is deleted, all occurrences for this rule are deleted.</p> <p>Add Rules</p> <p>Adding rules is only possible in the first phase of the workflow. To add a rule, open a time period and click New in the Rules section.</p>
true	<p>Update Rules</p> <p>Updating rules is only possible in the first phase of the workflow if the time period was NOT approved. To update a rule, follow the steps described above.</p> <p>Once the time period was approved and the time period is again in the first phase, the rules are displayed in read-only, but a Deactivate Rule or Activate Rule button is available on the top of the screen to allow you to deactivate or activate the rule.</p> <p>Delete Rules</p> <p>Deleting rules is only possible in the first phase of the workflow if the time period was NOT approved. Once the time period was approved and the time period is again in the first phase, you cannot delete its rules anymore. To delete a rule, access an existing time period in the “planning” phase, click the Rule Id in the Rules section, and then click Delete.</p> <p>When a rule is deleted, all occurrences for this rule are deleted.</p> <p>Add Rules</p> <p>Adding rules is possible only in the first phase of the workflow. To add a rule, open a time period and click New in the Rules section.</p>

Rule security

Rules are not secured by a separate area or role, and therefore the security of a rule is closely tied to the security of its time period definition. Basically, if you can update a time period, you can also update its rules.

Note: The security of the rules is implemented in function `getEditRights(record)` in the `timeperiodRule ScriptLibrary` record.

Time period occurrences

An occurrence is the real time when a time period window happens. Each occurrence contains a start and end time. When you add an active rule to a time period, occurrences are automatically created based on the rule.

Occurrence details

In the Occurrences section of a time period, you can view the details of each occurrence as described in the following table.

Label	Description
Rule Id	The ID of the rule associated with the occurrence.
Start Date	The start time of the occurrence.
End Date	The end time of the occurrence
Time Zone	The time zone of the occurrence Start Date and End Date. See "Change the time zone of a time period" on page 35 for more information.
Status	The status of the occurrence: Active , or Inactive . You can change the status only when the time period is in the Published phase.
Activate after approval	Indicates whether or not the occurrence will be activated after approval: Yes , or No . In the first phase or in case the time period is pending approval, an occurrence can be marked to stay inactive after approval. This allows users or approvers to disable specific occurrences and approve the rest of the occurrences for a time period.

Number of occurrences for initial display

The global setting **Number of occurrences for initial display** defines the maximum number of occurrences that can be displayed in the Occurrences section. When the number of occurrences exceeds this limit, the following note displays at the top of the Occurrences section:

Not all occurrences are displayed. You can use the filter functions to locate specific occurrences.

When this happens, you can use the following fields to filter occurrences: Rule Id, Start Date, End Date, Status, and Activate. Use the little magnifying glass to search for records, and use the little button with a red cross to clear the filter.

Note: The actual number of occurrences that are displayed is also limited by another global setting: **Maximum number of months for calculation of future occurrences**. The recommended value is 12 (months).

For information about these two settings, see ["Configure time period global settings" on page 39](#).

Occurrence state

Time period occurrences store the calculated start and end times of time period definitions based on their configured rules. Occurrences are accessible as long as the time period definitions are active.

Each occurrence record contains a check box to indicate whether it is active or inactive, as described in the following table.

Condition	Occurrence State
When an occurrence is created	A new occurrence is created as inactive (false).
When a time period is created (in the planning phase)	Occurrences are inactive .
When a time period definition moves to the published phase	All future occurrences are set to active , while occurrences in the past remain inactive .
When a time period definition moves back to the planning phase	Future occurrences become inactive , while occurrences in the past remain active .
When a time period definition moves to the retired phase	Past occurrences remain active , while future occurrences are removed.
When a time period definition is directly retired (was never approved)	All occurrences are removed.

Occurrence security

The following security rules apply to time period occurrences:

Time Period Phase	Security Rule
Planning	Users cannot activate or deactivate an occurrence, but can check whether or not an occurrence should be kept active after approval.
Published	All users with update rights to the time period can deactivate occurrences, but cannot reactivate them. Only users with Approval and Expert rights to the time period can reactivate occurrences.

Occurrence persistence

To ensure that customers can easily link changes and time periods together, the time stamps on a time period are made persistent. This allows the implementation of validations and additional reporting to ensure changes are linked with the right time period.

Time period security areas and roles

The following security areas and roles are used to ensure proper security in the Time Period Management module.

Security areas

Out-of-the-box, the Time Period Management module has the following security areas. To view their default rights and default settings, navigate to **System Administration > Security > Areas**, and open these records through a search.

Area	Description
Timeperiod	For security related actions in time period definitions, rules and occurrences.
Timeperiod Configuration	For security related actions in time period categories, approvals and workflows.

Note: For the Timeperiod Configuration security area, do not select **When assigned** or **When assigned to workgroup** from the **Update** or **Delete/Close** drop-down list since the objects related to this security area have no assignee or assignment group fields.

Security rights and settings

The following table describes the security rights and settings used in the Time Period Management module.

Setting / Right	Description
View	Can view time period records
New	Can create new time period records
Update	Can update time period records
Delete / Close	Can retire new time period records
Expert	Can activate/deactivate occurrences

Setting / Right	Description
Admin	Is admin
Modify Template	Can create templates
Can apply template	Can apply templates
Can approve	Can approve time period records
Can delegate approvals	Can delegate approvals for time period records
Can override approvals	Can override approvals
Can copy record	Can copy time period records
Can send notifications	Can send notifications from time period records
Can set reminder	Can set a reminder for time period records
Can change category / type	Can change the category/type of a time period record
Can create global inbox	Can create global time period inboxes
Initial Inbox	Initial inbox for the time period module
Manage format	Sc manage format
Can create personal Inbox	Can create personal inboxes for time period records
Lock on Display	When displaying a record the user, HP Service Manager locks the record regardless of whether the user is modifying the record or not
New thread List -> Edit	When the user accesses a record from a record list, Service Manager keeps the record list open and displays the record in a new tab window
New thread Search -> List	When the user searches in the Time Period area, Service Manager keeps the search form open and displays the search results in a new tab window
New thread View -> Edit	When the user accesses a record from a Time Period view, Service Manager keeps

Setting / Right	Description
	the view form open and displays the record in a new tab window
New thread View -> Search	When the user runs a search from a Time Period view, Service Manager keeps the view form open and displays the search form in a new tab window
Un-retire	Can unretire (reopen) time period records

Security roles

Out-of-the-box, the following security roles are available for the Time Period Management module.

To access these rules, click **System Administration > Security > Roles**, and then open the roles through a search.

Role	Description	Default Rights/Setting in the Timeperiod Area	Default Rights/Setting in the Timeperiod Configuration Area
Timeperiod Administrator	Full rights.	<ul style="list-style-type: none"> • View • New • Update (Always) • Delete/Close (Always) • Expert • Admin • Can apply Template • Can approve • Can delegate approvals • Can override approvals • Can copy record 	<ul style="list-style-type: none"> • View • New • Update (Always) • Delete/Close (Always) • Expert • Admin

Role	Description	Default Rights/Setting in the Timeperiod Area	Default Rights/Setting in the Timeperiod Configuration Area
		<ul style="list-style-type: none"> • Can send Notifications • Can set reminder • Can change category / type • Can create global Inbox • Can create personal Inbox • Unretire • Allowed Categories: all categories 	
Timeperiod Analyst	Partial rights; can update only when assigned.	<ul style="list-style-type: none"> • View • New • Update (When assigned to workgroup) • Update (When assigned to workgroup) • Can apply Template • Can copy record • Can send Notifications • Can set reminder • Can create global Inbox • Can create personal Inbox • Allowed Categories: 	No rights

Role	Description	Default Rights/Setting in the Timeperiod Area	Default Rights/Setting in the Timeperiod Configuration Area
		all categories	
Timeperiod Approver	Partial rights; can approve and delegate approvals.	<ul style="list-style-type: none"> • View • Update (Never) • Delete/Close (Never) • Can approve • Can delegate approvals • Can send Notifications • Can set reminder • Allowed Categories: all categories 	No rights
Timeperiod Manager	Expert rights; can always update.	<ul style="list-style-type: none"> • View • New • Update (Always) • Delete/Close (Always) • Expert • Can apply Template • Can approve • Can delegate approvals • Can copy record • Can send Notifications • Can set reminder 	<ul style="list-style-type: none"> • View • New • Update (Always) • Delete/Close (Always) • Expert

Role	Description	Default Rights/Setting in the Timeperiod Area	Default Rights/Setting in the Timeperiod Configuration Area
		<ul style="list-style-type: none">• Can change category / type• Unretire• Allowed Categories: all categories	

User roles

Out-of-the-box, four users (operators) were created for testing purposes based on the security roles described above.

Operator	Description
Timeperiod.Admin	Can perform all Time Period Management tasks.
Timeperiod.Analyst	Partial rights; can perform Time Period Analysis tasks.
Timeperiod.Approver	Partial rights; can approve time periods.
Timeperiod.Manager	Expert rights; can perform all Time Period Management tasks except for certain administration tasks.

Working with time periods

Users perform the following tasks when working with time periods that are in different phases.

- ["Create a time period" below](#)
- ["Update a time period" on page 30](#)
- ["Submit a time period for approval" on page 31](#)
- ["Deactivate or activate a time period occurrence" on page 31](#)
- ["Deactivate a time period rule" on page 32](#)
- ["Delegate a time period approval" on page 33](#)
- ["Approve a time period" on page 34](#)
- ["Change the time zone of a time period" on page 35](#)
- ["Retire a time period" on page 35](#)
- ["Submit a time period for replanning" on page 36](#)

Create a time period

A time period must contain one or more rules in order to create occurrences. A time period rule stores all the recurrence patterns, and reflects the recurrence of the future start and end times of the time period occurrences. Rules are the central element in the Time Period module to create time period occurrences.

Tip: You can create a time period from scratch or copy from an existing one.

To create a time period from scratch, follow these steps:

1. Click **Time Period Management > Create New Time Period**.

A list of time period categories is displayed. The categories are grouped by Type.

Time period type	Description
Availability Hours	A period of time in which a service should be available.
Maintenance Window	A period of time in which Change requests may be implemented.
Neutral	A period of time indicating an external event, such as a holiday, which has no direct bearing on request implementation.
Freeze Period	A period of time in which Change requests may not be implemented.

2. Select a category.

The **New Time Period** form opens, with certain field values automatically populated.

3. Complete the fields in the **Details** and **Applies to** sections as necessary. The following tables describe the two sections, and the Activities section.

Details

Attribute	Description	Notes
Id	A system-generated unique ID for the time period definition.	The ID is generated based on the number file.
Current Phase	The phase that the time period definition is currently in, depending on the pre-configured workflow.	The workflow is defined in the time period category.
Approval Status	The approval status of the time period definition.	Same approval states as in Change Management.
Type	The type of the selected category.	Read-only
Category	The selected category.	Read-only
Next Review Date	Enter the next review date of this time period definition.	Must be a future date.
Scope	The acceptable scope of the time period. <div> Note: This field is available only for a time period of the Maintenance Window type. </div>	A Global List with three values: <ul style="list-style-type: none"> ◦ No Impact ◦ Degradation

Details, continued

Attribute	Description	Notes
		<ul style="list-style-type: none"> Outage
Owning Group	The assignment group that owns this time period.	Linked to the assignment table. Values must be a valid assignment group.
Owner	The owner (person) of this time period.	Must be a member of the assignment group (Owning Group).
Name	A display name of the time period definition.	Any name is acceptable.
Description	A description of the time period definition.	Any textual description.

Activities

Attribute	Description
New Update Type	<p>The type of the new update. There are three OOB types:</p> <ul style="list-style-type: none"> Update Communication with Stakeholders Communication with Service Owners
New Update	The description of the new update for the activity log.
Activity List	Lists all activities performed on the record.
Activity Type Filter	Allows a filtered view of the activity list per Activity Type.

Applies to

Attribute	Description	Notes
Environments	An attribute to classify the time period definition even further.	
Services	Services for which this time period definition is created.	Must be a Business Service configuration item from the device file.
Locations	The locations this time period applies to.	Must be a valid record from the location file.
Departments	The departments this time period applies to.	Must be a valid record from the department file.

Note: By default, the time period is valid for all Locations, Departments, Services, and Locations (these fields have a default value of <All>). When you specify a specific item, the <All> value is cleared and replaced with your specified value.

4. Click **Save**.

Note: Before you can add a rule, you need to save the time period.

The time period is added.

5. In the **Rules** section, continue to add rules to the time period.
 - a. Click **New**. The **New Time Period** form opens.
 - b. In the **Rule Name** field, type a descriptive name. For example, **My Rule 1**.

Note: The rule is Active by default. If you want to add an inactive rule, deselect the **Active** option. Inactive rules will not create occurrences for the time period.

- c. In the **Time period** field, select a time zone. By default, the time zone defined in your operator record or the system time zone defined in the System Information Record is selected. If you are creating a time period definition for users located in another time zone, you may want to select their time zone. Occurrences will be generated based on the specified time zone.
 - d. Select a Recurrence Type. For example, **Monthly**.
 - e. Specify when the rule will start to take effect and when it will expire. For example, you can specify February 1, 2013 as the effective date, and the rule will expire after 10 occurrences.

Note: The maximum allowed value in the **Expires after** field is defined in the Time Period Settings. See "[Configure time period global settings](#)" on page 39. If you specify a value greater than the maximum, an error occurs.

- f. Select a recurrence pattern. For example, you can specify the rule recurs every 1 month, on every fourth of the month or on every first Monday of the month.

Note: The value of the recurrence pattern has the following limitations:

- Daily: 1 to 1000
- Weekly: 1 to 100
- Monthly: 1 to 25
- Yearly: 1 to 3

- g. Specify the start and end times of the rule. For example, you can specify the rule starts at 00:00 (hh:mm) and ends on the same day at 08:00 (hh:mm).
- h. If you want to set an arbitrary schedule for the rule, select the **On an arbitrary schedule** check box, and then specify the start day and end date for each individual occurrence.
- i. Click **Save**.

The rule is added.

- j. Click **Save & Exit**.

You are returned to the time period record. The new rule now displays in the **Rules** section, and its occurrences during the specified effective period are listed in the **Occurrences** section. When there are a large number of occurrences, you can use the filters (Rule ID, Start Time, End Time, Status, and Activate) at the top of this section to view specific rules.

The maximum allowed value in the **Expire after** field and the number of months to calculate future occurrences are defined in the time period global settings. See ["Configure time period global settings" on page 39](#).

Note: The occurrences are displayed in your time zone or the system time zone if yours is not available, instead of the time zone specified in the rule. You can change the occurrence display time zone only for this session by clicking the **Change Time Zone** button (if you log off and then log back in, the time zone change no longer takes effect). For details, see ["Change the time zone of a time period" on page 35](#).

6. If needed, continue to add more rules as described above.
7. Click **Save**.

The time period is created.

The **Workflow** section shows the workflow linked with the time period category you selected previously, and the current phase of the time period is Planning.

The **Approvals** section is now empty. Next, you can further update the time period or submit it for approval.

To create a time period from an existing one, follow these steps:

1. Click **Time Period Management > Search Time Periods**.
2. Open the existing time period through a search.
3. Click **More** or the **More Actions** menu, and select **Copy**.

The new time period is created, populated with data from the original time period, except for the **Impact and Current Phase** field values. The new record always has an empty Scope and a Current Phase of **planning**.

4. Click **Save**.

Note: The **Copy options for Rules and Occurrences** setting specified in the Time Period Settings determines whether or not and how rules and occurrences are copied. When you click **Save**, rules and occurrences are copied regardless of their state (active or inactive).

5. Update the time period as needed, and click **Save**.

Update a time period

You cannot update an existing time period unless it is in the Planning phase.

To update a time period, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**.
2. Click **Search**, or enter several fields on the search form and then click **Search**.

Note: An entry in the ID field must include the prefix TP. For example, TP000003.

3. Locate the time period record you want to update, and update it as needed.
4. Save the record.

Submit a time period for approval

Once you have finalized a time period definition, you can submit it for approval. By default each time period will go through the time period approvals defined in the Timeperiod approval definition, which is a global definition that takes effect on all time periods. Your administrator can create their own approval definitions and associate them to different time period categories.

To submit a time period for approval, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**, and open the time period through a search.
2. Click **Submit for Approval**.

The time period moves to the **approval** phase, and its Approval Status changes to **pending**.

The **Approvals** section now lists all currently required approvals. Once an approval is completed, the approval activity will be displayed in the Approval Log.

Deactivate or activate a time period occurrence

Once you have added rules to a time period, the occurrences are automatically calculated and displayed in the record. By default, all occurrences are automatically activated after the time period is approved; however you can manually deactivate an individual occurrence and activate it later if needed.

To cancel an occurrence in a time period, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**, to open the time period record.
2. In the **Occurrences** section, locate an occurrence and do the following according to the current phase of the time period:

Phase	
Planning or	In the Activate after approval column, click Yes or No to change to the opposite value.

Phase	
Approval	Yes means the occurrence is activated after approval while No means the occurrence stays inactive after approval.
Published	<p>In the Status column, click Active to deactivate or click Inactive to activate, and then enter an explanation about the status change if required. The value now changes from Active to Inactive or from Inactive to Active.</p> <div data-bbox="431 546 1370 921"> <p>Note:</p> <ul style="list-style-type: none"> After approval the Activate after approval column is no longer displayed. Instead the Status column is displayed as a link. Clicking the Active or Inactive link deactivates or activates the occurrence. As a normal user (with only update rights), you can always deactivate occurrences, but you cannot reactivate occurrences once the record is published; to reactivate an occurrence after the approval phase, you must have Expert or Approval rights to a time period record. Normal users are disallowed to play with the status of the occurrences. </div>

Deactivate a time period rule

By default, time period rules are active when created. If a time period rule no longer works for you, you can permanently remove it from the time period, or you can temporarily deactivate it. You can do so only when the time period is in the first phase of the workflow.

To deactivate a time period rule, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**, and then open the time period record that contains the rule.
2. In the **Rules** section, click the rule and then deselect the **Active** option.

Note: : If the time period was approved and back to the first phase, the existing rules are read-only, and you should click the **Deactivate Rule** button instead.

3. Click **Save** to save the rule, and then click **Save & Exit**.

In the **Occurrences** section of the time period, all future occurrences based on this inactive rule are now removed.

Delegate a time period approval

Approval Delegation is possible for time periods in the same way as for other modules in HP Service Manager. Before you can delegate your approvals to other users, your system administrator should have given you the rights to delegate approvals. For information about how to grant approval delegation rights, see ["Time period security areas and roles" on page 19](#).

To delegate approvals, follow these steps:

1. Navigate to **Miscellaneous > Approval Delegation**.

The **List Delegates** wizard opens.
2. Click **Add New Delegation**.

The **Delegate Selected Approvals** option is selected by default.
3. Click **Next**.
4. Select the **Timeperiod** module, and click **Next**.
5. Select your group (for example, **Service Manager**) or operator (for example, **Timeperiod.Approver**), move it into the right pane, and then click **Next**.
6. Complete the following fields, and click **Next**.

Field	Description
Delegate to	The user to whom the approvals will be delegated. Click Fill to select a user from the list. Note: If a desired user is not in the list, the user does not have the rights to access or approve time periods. Contact your system administrator for assistance. If your Service Manager system has a Process Designer Content Pack applied, the desired user must be a member of the ChM Membership group.
Valid From	The delegation start time.
Valid To	The delegation end time.

7. Click **Finish**.

Approve a time period

If you are the approver or a member of the approval group, or a delegate of a time period approval, you receive a notification when a time period is pending your approval. You can then complete your approval. Once all approvals of the time period are complete, the time period automatically advances to the published phase, and the approval status changes from pending to approved. If a time period is denied during an approval, it needs to be resubmitted for approval.

Note: You can Deny a pending approval or Retract a completed approval.

If you are the approver or a member of the approval group, follow these steps to approve or reject a time period:

1. Navigate to **Time Period Management > Search Time Periods**, to open the time period record.
2. In the **Approvals** section, click the **Timeperiod** approval in the **Currently Approvals** subsection.
3. Put the cursor in your approval, click **More > Approval > Approve/Deny** to approve or reject the record.

Note: If you are not the approver, but have approval override rights, you can also approve by clicking **More > Override > Approve Current**.

- To approve, click **Approve**.

Note: If you want to redo your approval, click **Retract**.

- To reject, click **Deny**.
4. Enter your approval comments, and click **OK**.

If denied, the time period then returns to the planning phase, and its approval status becomes denied.

If there are still pending approvals, the time period remains in the approval phase with an approval status of pending; otherwise, it advances to the published phase with an approval status of approved.

If you are a delegate, follow these steps to approve or reject a time period:

1. In the To Do Queue, select **Approval Delegation** from the **Queue** list, and **Active approval delegations assigned to me** from the **View** list.
2. Click the approval for the time period.
3. Click **Approve** or **Deny**.

Change the time zone of a time period

When you are viewing or updating a time period definition, its occurrences are displayed in your time zone or the system time zone if yours is not defined. In some cases, for example, if a time period is created for users in another time zone, you may want to change the current display time zone to that one.

Note: The time zone change takes effect only for your current session (it will no longer take effect if you log off and then log back in).

To change the time zone of a time period, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**, and then open the time period record you want to update.
2. Click **Change Time Zone**.
3. In the **New session's Time Zone** field, select another time zone.
4. Click **Finish**.

The occurrences are now displayed in the new time zone.

Retire a time period

Once a time period is no longer needed, you can retire it. When retired, the time period record is inactive and closed.

Note: You can retire a time period only when it is in the planning or published phase.

To retire a time period, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**, and then open the time period record you want to retire.
2. Make sure the record is in the planning or published phase.
3. Click **Retire**.

The time period advances to the retired phase, and becomes read-only. All occurrences in the Occurrences section have been removed.

To unretire a time period, follow these steps:

Note: To unretire a retired time period, you need one of the following security roles: system administrator, Timeperiod Administrator, or Timeperiod Manager. These roles have the rights to unretire time periods.

1. Open the time period.
2. Click **More** or the **More Actions** menu, and then select **Unretire**.

The time period returns to the planning phase.

Note: Although the rules are active at this time, the occurrences are not automatically added back. You need to manually save the rules to get them back.

3. In the **Rules** section, open each rule, and click **Save** and then **Save & Exit**.

The occurrences now display in the **Occurrences** section.

Submit a time period for replanning

Once a time period is published, its rules and occurrences become read-only. You can only manually cancel an individual rule. If you need to update the rules or occurrences, you can submit it for replanning. Doing so returns the time period back to the planning phase.

To submit a time period for re-planning, follow these steps:

1. Navigate to **Time Period Management > Search Time Periods**, to open the time period record.
2. Click **Submit for Replanning**.

Note:

- Existing rules are read-only if the **Lock Rules once approved** global setting is enabled, and therefore you can no longer update them, but you can still deactivate/activate them using the **Deactivate Rule** or **Activate Rule** button that appears on the top of the rule detail form; if **Lock Rules once approved** is disabled (set to false), you can still update existing rules.
- Deactivating a rule will trigger the deletion of all future occurrences based on the rule; activating a rule triggers the creation of the occurrences as of today.
- The system will display a warning message if any existing changes conflict with the submitted time period.

Time period configuration tasks

Administrators can perform the following configuration tasks for the Time Period module.

- ["Configure time period global settings" on the next page](#)

Configure some global settings for the Time Period Management module. This configuration includes updating or deleting existing settings and adding new settings.

- ["Configure a time period workflow" on page 42](#)

Define the workflow in the time period category.

- ["Configure time period categories" on page 43](#)

Create new time period categories, and update or remove existing ones to manage the data structures of different kinds of time period definitions.

- ["Configure time period approvals" on page 46](#)

Define approvals for the Time Period module using approval definitions. The Timeperiod approval definition is linked to the Approval phase.

- ["Configure time period approval notifications" on page 47](#)

Define and trigger the time period approval notifications. When a time period is added or updated, notifications are generated.

- ["Calculate time period conflicts" on page 49](#)

Calculate time period conflicts between the current changes record or change task record and the existing time period.

- ["Trigger an approval for time period conflicts" on page 51](#)

Define an additional approval for a module and then associate the approval definition to the corresponding phase of a record.

- ["Configure time period conflict notifications for Change Management" on page 53](#)

Configure time period conflict notifications for Change Management. When a change with the Conflict with Freeze Window conflict type is approved, a notification is sent to the owner of the conflicted time period.

Configure time period global settings

Administrators can configure some global settings for the Time Period Management module. This configuration includes updating or deleting existing settings and adding new settings.

To configure time period settings, follow these steps:

1. Click **Time Period Management > Administration > Settings**.

The Time Period Settings form opens, in which the Module and Area fields are auto-populated with these values: **Timeperiod**, and **Timeperiod Configuration**.

2. Specify the settings on the form, as described in the following table.

Attribute	Description	Validation
Time period category group-by fields (comma separated)	The fields by which the time period categories are grouped when users creates a new time period definition.	Maximum: 4 fields
Time period category sort-by fields (comma separated)	The fields by which the time period categories are sorted when users creates a new time period definition.	Maximum: 4 fields
Link for copy	The link record used to copy the fields from the current record to the target. The default link is timeperiodDefinition.copy.	None
Copy options for Rules and Occurrences	These are the options when users copy time period definitions: <ul style="list-style-type: none">◦ Do not copy Rules/Occurrences◦ Copy Rules only◦ Copy Rules/Occurrences	None
Lock Rules once approved	If this option is set to true, users cannot edit or delete their rules anymore when time periods are approved and then return to the first phase of the	None

Attribute	Description	Validation
	<p>workflow. Users can only deactivate or activate the rules.</p> <p>If this option is set to false, users can always edit or delete their rules as long as time periods are in the first phase.</p> <p>Note: A time period rule reflects the recurrence of future start and end times of the time period occurrences. A time period rule stores all the recurrence patterns.</p> <p>For more information, see "Time period recurrence rules" on page 13.</p>	
Maximum number of occurrences before a rule expires	<p>The maximum allowed value for the Expires after field in which the user enters the number of recurrences within a time period rule.</p> <p>For more information, see "Create a time period" on page 25.</p>	No greater than 100
Maximum number of months for calculating future occurrences	The number of months to calculate future occurrences.	<p>Maximum: 12 months</p> <p>The default value (12) is recommended for best performance.</p>
Number of occurrences for initial display	The maximum number of occurrences that are displayed when users view a time period definition.	Maximum: 100
Force activity entry for occurrence status changes	If this option is selected, users are required to give an explanation when changing the status of an occurrence. The explanation is logged in the activity log.	None
Disable the Pop-up Window to warn time period conflicts	<p>If this option is set to true, the time period conflicts warning is displayed in system message.</p> <p>If this option is set to false, a window is opened to warn time period conflicts.</p>	None

Attribute	Description	Validation
Send an email notification to the time period owner when the conflicting change is approved	If this option is selected, an email will be sent to the time period owner of a freeze window when the conflicting change is approved.	None

3. Click **Save**.

To add a new time period setting, follow these steps:

1. Click **Time Period Management > Administration > Settings**.

The Time Period Settings form opens.

2. Click **More** or the More Actions menu, and select **Add New Setting**.

The New Setting Information wizard opens.

3. Complete the following fields, and click **Next**.

Field Name	Description	Example Value
Setting Id	Specify an ID for the setting. Note: Once saved, the setting ID becomes non-editable.	categoryGroupBy
Display Label	Enter a display name of the setting.	Time period category sort-by fields
Description	Enter a description of the setting.	
Setting Type	Select a type from the list: <ul style="list-style-type: none"> ○ Number: a numeric field. ○ String: a String field. ○ Date/Time: a Date/Time field. ○ Boolean: a Boolean field. A 	String

Field Name	Description	Example Value
	<p>check box will appear before the display label.</p> <ul style="list-style-type: none">Manual List: a list of options.Global List: a global list.RecordCondition	
Mandatory	Indicates if this setting is mandatory.	Not selected

4. If the setting requires validation, enter a validation script; otherwise leave it empty.
5. Click **Finish**.
6. Open **Time Period Settings** from the navigator. The new setting now appears on the form.

To edit or remove an existing time period setting, follow these steps:

1. Click **Time Period Management > Administration > Settings**.
2. Click **More** or the More Actions menu, and select **Edit Settings**.

A wizard opens.

3. Click the **Setting Id** of the setting you want to edit or remove.
4. Update the field values as needed, and click **Finish**.
5. If you want to remove the setting, click **Remove This Setting**.

Configure a time period workflow

Each time period has a workflow, which is defined in the time period category.

You can find one OOB workflow (named **Timeperiod**) from **Time Period Management > Configuration > Workflows**.

Note: The workflow phases contain special rule sets to ensure that occurrences and rules are managed correctly.

To configure your own time period workflow, follow these steps:

1. Navigate to **Tailoring > Process Designer > Workflows**.
2. Click **New**.
3. Type a name and description for the workflow, and in the **Table name** field select **timeperiodDefinition**.
4. Click **OK**.
5. Define the phases and transitions for the workflow.
6. Save the workflow.

Configure time period categories

You use time period categories to manage the data structures of different kinds of time period definitions. You can create new categories, and update or remove existing ones.

Category types

All categories fall into a set of types defined in globallist `timeperiodCategoryTypes` based on the `codes` table. The out-of-the-box types are described in the following table. You can configure the types to suit your needs.

Type	Description
Maintenance Window	Maintenance period.
Neutral	Information period.
Freeze Period	Blackout period.

Category workflows

Each category has an associated workflow, which is created for the `timeperiodDefinition` table. Before creating a time period, make sure you have already created a workflow for it. For details, see

["Configure a time period workflow" on page 42.](#)

Category configuration

To create a new time period category, follow these steps:

1. Click **Time Period Management > Configuration > Time Period Categories**.

The Time Period Categories search form opens.

2. Click **New**.

An ID is automatically assigned to the new category.

3. Complete the following fields.

Attribute	Description	Notes
Id	An automatically generated unique ID.	
Type	Select one from the pre-defined types. For example: <ul style="list-style-type: none">○ Maintenance Window○ Neutral○ Freeze Period	<ul style="list-style-type: none">○ This is a mandatory field.○ Cannot be changed as long as there are active time periods related to the category.
Name	A display name for the time period category.	<ul style="list-style-type: none">○ This is a mandatory field.○ Cannot be changed as long as there are active time periods related to the category.
Workflow	The workflow that is associated with this category. Time periods of this category will use this workflow.	<ul style="list-style-type: none">○ A workflow created for the timeperiodDefinition table.
Active	Active flag. If the flag is set to false, the category will not be selectable when users create a new time period.	
Color	The color in which this time period	<ul style="list-style-type: none">○ Global List with predefined values as

Attribute	Description	Notes
	category is displayed in the calendar.	HTML color code
Usage Condition	<p>A condition that allows the user an additional filtering on the categories. When a time period is created and this condition evaluates to false, the category is not selectable.</p> <p>To add a usage condition, Click Edit and then add a RAD expression in the Condition Editor.</p>	<ul style="list-style-type: none"> Any RAD condition is acceptable. Whether a user can use a category or not is also dependent on the Allowed Categories setting in the user's Security Role. For more information, see "Time period security areas and roles" on page 19.
Description	A description of the category.	

- Click **Save**.

The new category is created.

To update an existing category, follow these steps:

Note: You cannot rename a category if there are active time period definitions linked with it.

- Navigate to **Time Period Management > Configuration > Time Period Categories**.

The Time Period Categories search form opens.

- Complete some fields to narrow down your search results or leave the fields empty, and then click **Search**.
- Select the category, and update its field values.
- Click **Save**.

To delete an existing category, follow these steps:

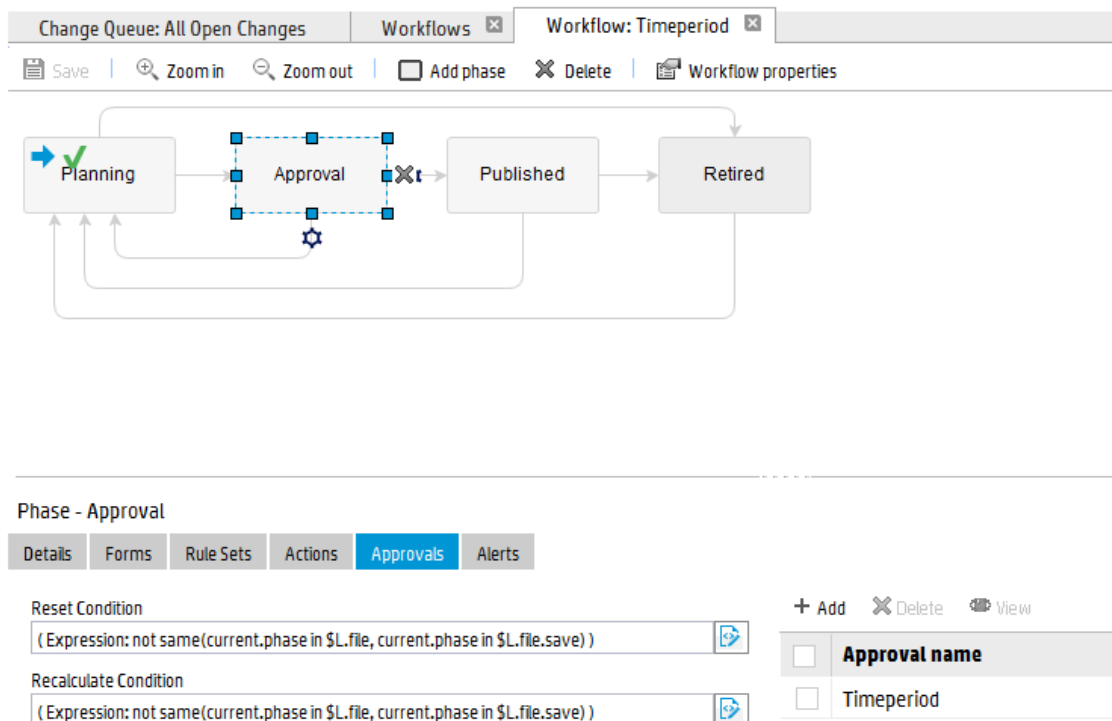
Note: You can delete a category only when there are no active time period definitions linked with it.

- Navigate to **Time Period Management > Configuration > Time Period Categories**, and open the category.
- Click **Delete**.

Configure time period approvals

You define approvals for the Time Period module using approval definitions. The out-of-box approval definition is **Timeperiod**, which contains sample configurations only for testing purposes. The Timeperiod approval definition is linked to the Approval phase.

You can update the Timeperiod approval definition according to your needs; you can also create your own approval definitions and link them with their corresponding phase in the workflow.



To configure time period approvals, follow these steps:

1. Navigate to **Time Period Management > Configuration > Approval Definitions**.

The timeperiod **Approval Definition** form is displayed. You can update this definition according to your needs. The following example shows how you create a new approval definition and link it to the Approval phase in the workflow.

2. Change the name of the Timeperiod definition, for example, change it to `Timeperiod1`.
3. Click **Add**.

4. In the **Approval Condition** field, enter a condition expression. For example, a `true` condition means the approval definition takes effect on all time periods.
5. In the **Approval Type** field, select an approval type. Refer to the following table for all approval types and the descriptions.

Type	Description
All must approve	All members of the group must approve the request.
One must approve	Only one member must approve the request.
Quorum	A majority of the approval group must approve the request.
All must approve - immediate denial	All approvers must approve the record. The first denial causes the status to change to Deny. Other approvers do not need to take any action.

6. In the **Approval Description** field, enter a description of the approval definition.
7. Enter one or more approval groups/operators, as well as their sequence and condition.

Column	Description	Example
Group/Oper	Enter the name of an assignment group or operator. Note: A member of the assignment group will be able to perform the approval. Change Approval and Request Approval groups cannot perform time period approvals.	Service Manager or Change.Coordinator
Sequence	The sequence of the approval.	1
Condition	The condition for the approval.	true

8. Save the approval definition.
9. Navigate to **Tailoring > Process Designer**, and associate the approval definition to the Approval phase of a time period workflow. For example, associate it to the out-of-box Timeperiod workflow.

Configure time period approval notifications

Notifications are generated when a Time Period is added or updated. The time period approval notifications are defined in the `timeperiodDefinition` Object record, and are triggered through the standard approval workflow in HP Service Manager. You can customize the notifications as needed.

To configure time period approval notifications, follow these steps:

1. Navigate to **Tailoring > Document Engine > Objects**.
2. In the File name field, type `timeperiodDefinition`.
3. Click **Search**.

The object record opens.

4. Click the **Approvals** tab. Refer to the following table for the default notifications configuration.

Notification Name	Notification Record	Description
Approval notification	Timeperiod Approval	Executed when a time period approval happened. <ul style="list-style-type: none"> ◦ An approval message is displayed in the client. ◦ Emails are sent to the owner, owning group, delegates and next pending approval group.
Denial notification	Timeperiod Denial	Executed when a time period denial happened. <ul style="list-style-type: none"> ◦ An approval message is displayed in the client. ◦ Emails are sent to the owner, and owning group.
Retraction notification	Timeperiod Retract	Executed when a time period approval / denial was retracted <ul style="list-style-type: none"> ◦ An approval message is displayed in the client. ◦ Emails are sent to the owner, and owning group.
Final approval notification	Timeperiod Final Approval	Executed when a time period was fully approved. <ul style="list-style-type: none"> ◦ An approval message is displayed in the client. ◦ Emails are sent to the owner, and owning group.
Final denial notification	Timeperiod Final Denial	Executed when a time period was fully denied. <ul style="list-style-type: none"> ◦ An approval message is displayed in the client. ◦ Emails are sent to the owner, and owning group.

5. Navigate to **Tailoring > Notifications > Notifications**, and click **Search**.
6. Update the notifications listed above as necessary.

Calculate time period conflicts

Out-of-the-box, HP Service Manager only calculates time period conflicts for changes or change tasks of certain categories, including Hardware, Maintenance, Network, Release Management, and Software. If the start date and the end date are specified or updated without null, the system will calculate the conflicts between the current record and existing time periods when you trigger the save operation. Time period conflict calculation has the following five results available.

- 0: The time period conflict calculation is completed without conflicts.
- 1: The current record conflicts with a Freeze window.
- 2: The current record misses a Maintenance window.
- 3: The current record exceeds a Maintenance window.
- null: The time period conflict calculation is not performed.

You can type `d tpconflict in $file` in the RAD Debugger and then press **Enter** to view the time period conflict result on a change form or a change task form.

Calculate time period conflicts automatically

The Change Management module is used as an example in the sample task. To calculate the conflicts between a change and a time period, follow these steps:

1. Refer to [Enable the calendar](#) to enable the calendar.
2. Refer to [Display records from an application module in the calendar](#) to configure the calendar mapping for a change.
3. Refer to ["Create a time period" on page 25](#) to create a new time period, and then refer to ["Approve a time period" on page 34](#) to approve the newly created time period.
4. Create a change with a category that can be used for time period conflict calculation. Fill in the Planned Start date and Planned End date if the two fields are null. The two date fields are configured in calendar mappings.
5. Fill in all mandatory fields, and then click **Save**. If the change conflicts with an existing time period,

the system automatically selects the **Time Period Conflict** check box in the change record and displays the following warning message.

The Change you scheduled conflicts with the existing freeze period or maintenance period.

Note: If you do not select the **Disable the Pop-up Window to warn time period conflicts**, the time period conflict warning message is displayed in a pop-up window. See ["Configure time period global settings" on page 39](#) for more information.

6. Locate and click the calendar to locate the change record, which is displayed with a red or yellow conflict icon. Hover your mouse over the conflict icon of the change record to view the detailed time conflict information.

Note: You can also perform the sample task above if you are working with HP Service Manager Process Designer (PD) Content Pack 9.30.3. In PD environment, the system calculates time period conflicts for changes or change tasks of certain categories, including Emergency, Normal and Standard.

Calculate time period conflicts manually

Sometimes when you are adding, retiring or updating time periods, or invoking other process, the time period conflicts may be out of synchronization because these updates do not trigger the save operation of a change.

To get the latest conflict status on a change form, click **More** or the **More Actions** icon and then select **Calculate Time Period Conflicts**. After the manual recalculation, the tpconflict flag in \$file in the RAD Debugger is updated accordingly.

Note: The **Calculate Time Period Conflicts** option is available only when all the following requirements are met:

- The Service Manager Calendar is enabled.
- The current change is configured for time period conflict calculation. Refer to [Display records from an application module in the calendar](#) for more information.
- The current change is in not closed.

Note: Manual time period conflict calculation is not applicable to Problem Management, Incident Management and Interaction.

Trigger an approval for time period conflicts

You can define an additional approval for a module which has time period conflicts and also has the approval functionality. The default approval definition is Approval Depending on Timeperiod Conflict, which is linked to the Approval phase. You can either update the approval definition as necessary or create your own approval definitions and link them to their corresponding phases.

The Change Management module is used as an example in the sample task. Follow these steps to trigger an additional approval for a change record.

1. Click **Change Management > Maintenance > Approvals**.

The **Approval Definition** form opens.

2. Type `Approval Depending on Timeperiod Conflict` in the **Name** field and then click **Search**. You can update this approval definition as necessary. The following steps show how you create a new approval definition and link it to the Change Approval phase.
3. Rename the Approval Depending on Timeperiod Conflict definition. For example, rename it to `Approval Depending on Timeperiod Conflict1`.
4. Click **Add**.
5. Type a condition expression in the **Approval Condition** field. For example, `true` means the approval definition takes effect on all time periods.
6. Select an approval type in the **Approval Type** field. Refer to the following table for all approval types and the descriptions.

Type	Description
All must approve	All members of the group must approve the request.
One must approve	Only one member must approve the request.
Quorum	A majority of the approval group must approve the request.

Type	Description
All must approve - immediate denial	All approvers must approve the record. The first denial causes the status to change to Deny, whereas the other approvers do not need to take any action.

7. Type a description of the approval definition in the **Approval Description** field.
8. Enter one or more approval groups or operators as well as their sequence and condition.

Column	Description	Example
Group/Oper	Enter the name of an assignment group or operator. Note: A member of the assignment group will be able to perform the approval.	Change.Manager
Sequence	The sequence of the approval.	1
Condition	The condition for the approval.	tpconflict in \$L.file>0 Note: <ul style="list-style-type: none"> ◦ tpconflict in \$L.file=1 means the record conflicts with the Freeze window ◦ tpconflict in \$L.file=2 means the record conflicts with the Miss Maintenance window ◦ tpconflict in \$L.file=3 means the record conflicts with the Exceeded Maintenance window

9. Save the approval definition.
10. Click **Save**.
11. follow these steps to associate the approval definition to the Change Approval phase.

- a. Click **Change Management > Changes > Change Phases**.
 - b. Click **Search**. A list of change phases is displayed.
 - c. Select the **Change Approval** phase.
 - d. Click the **Approval/Review** tab, add **Approval Depending on Timeperiod Conflict1** to the **Approval Requirement** section.
 - e. Click **Save**.
12. Create a change record which conflicts with an existing time period, and then move the change phase to Change Approval.
 13. The approval status of the change record is Pending and **Approval Depending on Timeperiod Conflict1** is displayed on the **Approvals > Current Approvals** section.
 14. Select the approval, and then select to approve or reject the change record.

Configure time period conflict notifications for Change Management

When a change with the Conflict with Freeze Window conflict type is approved, a notification is sent to the owner of the conflicted time period (type="Freeze Period") to inform him or her that there is a change scheduled in the freeze period.

Follow these steps to configure time period conflict notifications for Change Management:

1. Type `db` in the Service Manager command line, and then press **Enter**.
2. Type `Object`, and then press **Enter** to open the Search Object Records form.
3. Type `cm3r` in the **File name** field, and then click **Search** to open the object record.
4. On the **Approvals** tab, click **Find Related Information** in the **Approval process** field to open the `cm.update.save` Process Definition form.
5. On the **Final Javascript** tab, find the JS function that is called by Final Javascript.
6. Update this JS function.
7. Click **Save**.

Note: Alternatively, you can directly update

`lib.timeperiodConflict.processTpConflictNotification` to configure time period conflict notifications.

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