The KAlarm Handbook

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Contents

Abstract

KAlarm is a personal alarm message, command and email scheduler by KDE.

Chapter 1

Introduction

KAlarm lets you schedule the display of personal alarm messages, the playing of sound files, the execution of commands and the sending of emails.

KAlarm displays the list of pending alarms, showing their times and details. You can create new alarms, or you can select existing alarms for modification or deletion. You can also optionally view expired alarms.

When configuring an alarm, you can choose whether it should repeat, and whether the alarm should be canceled if it cannot be triggered at its scheduled time. For display alarms, you can type in a message text, specify a text or image file to display, or specify a command whose output should be displayed. You can also choose the color of the alarm message, and whether to play a sound or speak the message.

Alarms may also be scheduled from the command line, or via D-Bus calls from programs.

When an alarm message is due, it is displayed on each desktop to ensure that you don't miss it. The message window shows the time for which the alarm was scheduled. It usually has a defer option to ask for the alarm to be displayed again later. An example of an alarm message:
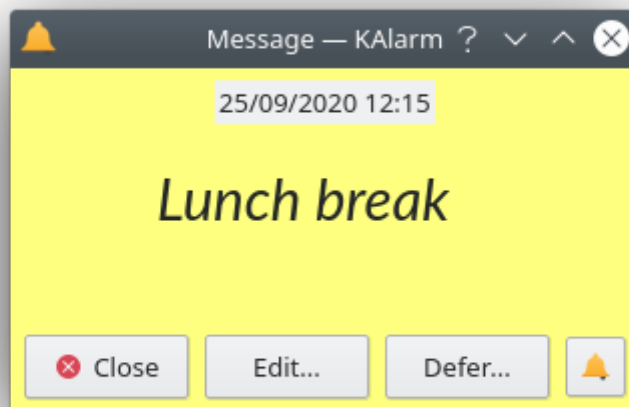
Optionally, an alarm message may be displayed as a notification instead of in a window.

When the alarm specifies a command to execute or an email to send, KAlarm displays nothing. KAlarm usually shows an icon in the system tray, although this can be hidden if desired.

Chapter 2

Using KAlarm

When it is run with no command line parameters, KAlarm starts in graphical mode, and displays the current list of outstanding alarms.

> TIP
> All spin boxes in KAlarm have an acceleration facility. To make the value change by larger steps, hold down the **Shift** key while you click on the spin arrow buttons.
>
> <div align="center">1 ◇</div>
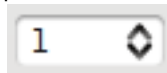
2.1 Alarm Types

The basic functions available from the different alarm types which KAlarm provides are:

- Display alarms display either a text message which you type in, or the contents of a text or image file, or the textual output from a command which is run when the alarm triggers. In addition to displaying one of these items, they can also play audio files, have their text spoken, or emit a simple beep. You can also specify commands to be executed before and after the alarm message is displayed.

- Command alarms execute either a command or a shell script which you can type in. Nothing is displayed unless an error occurs.

- Email alarms send a email. Nothing is displayed unless an error occurs.

- Audio alarms play an audio file. Nothing is displayed unless an error occurs.

2.1.1 Error Handling

If an error occurs when an alarm triggers, an error message will be displayed (unless you have previously specified not to show that type of message again).

If an execution error occurred the last time a command alarm triggered, a white on red exclamation mark is shown in the message color column. Details of the error are displayed in a tooltip if you position the cursor over that line in the alarm list. The same error indications are shown for display alarms if an execution error occurred for a pre- or post-alarm command specified in the Special Actions dialog, except that the color column is not changed to a red background.

2.2 Alarm List

The main KAlarm window displays the current list of pending alarms, showing their times, repetition intervals, colors, names, and message texts, names of files to play or display, commands to execute or email subjects. (For a recurring alarm, the time shown is its next scheduled trigger time. For an alarm with a reminder, the time shown is the time of the alarm proper, not the reminder time.) An icon at the left of each alarm text/file/command/email subject indicates the type of alarm.

Note that the **Name** column only exists if the use of alarm names is enabled in the General tab of the Configuration dialog.
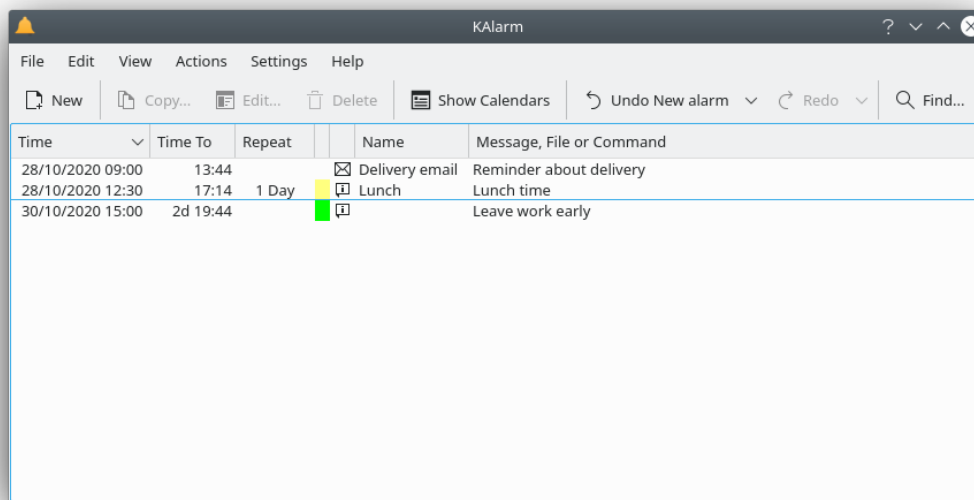
For a repeated alarm, the list shows its next scheduled trigger time and its basic repetition interval (e.g. '1 Day' for a daily recurrence, '3 Weeks' for a recurrence which triggers on Monday and Wednesday every third week, 'Login' for a repeat-at-login alarm).

If an execution error occurred the last time a command alarm triggered, or the last time a display alarm's pre- or post-alarm command was executed, an error indication is shown in the color column, as described in Error Handling above.

2.2.1 Changing the Alarm List Appearance

The alarms may be ordered by date/time, repeat interval, color, type, name or text by clicking on the titlebar for the appropriate column. To reverse the sort order, click the column titlebar again.

You can optionally show the remaining time until each alarm is due, together with, or instead of, the alarm's scheduled time.

You can select which columns to display or hide by Right clicking on the column headings and using the context menu to set the columns to show. But note that at least one of the **Name** or **Message, File or Command** columns, and at least one of the **Time** or **Time To** columns, are always shown.

If you use multiple alarm calendars, you can color code alarms according to which calendar they belong to, by selecting a different background color for each calendar (see Using Calendars).

2.2.2 Archived Alarms

By default, KAlarm archives alarms for a limited period once they have expired or been deleted. (But note that alarms which you delete are stored only if they have already triggered at least once.) You can control whether KAlarm archives expired alarms, and for how long, in the Configuration dialog.

Archived alarms may be shown in the alarm list by selecting **View** → **Show Archived Alarms**. To hide them again, deselect **View** → **Show Archived Alarms**.

2.2.3 Filtering the Alarm List by Date

You can restrict the alarm list to show only alarms which are scheduled to occur on a selected date. This is achieved by means of the alarm date selector, which can be displayed or hidden by **View** → **Show Date Selector**. Select a date by clicking on it in the date selector, or deselect it by clicking on it again. The date selector displays a single month. To display a different month, use the arrow controls in the date selector.

2.2.4 Searching the Alarm List

You can search through the alarm list to find alarms containing a search text. To invoke this, select **Edit** → **Find...**. In the search dialog, select the alarm types which you wish to search. To continue searching for more alarms which match, use **Edit** → **Find Next** or **Edit** → **Find Previous**.

Searching is performed as follows:

- Text message alarms: the message text is searched.

- File display alarms: the file path/URL is searched.

- Command alarms: the command line or command script is searched.

- Email alarms: in addition to the subject and body of the email, the recipients and the URLs of attachments are searched.

- Audio alarms: the file path/URL is searched.

> NOTE
> Only alarms currently shown in the alarm list can be selected for searching. So if you want to search archived alarms, you must first display them as described in the section above.

2.3 Creating and Manipulating Alarms

2.3.1 Creating a New Alarm

To create a new alarm, do one of the following, and then select the type of alarm from the list which appears. This displays the Alarm Edit dialog through which you configure the alarm.

- Select **File** → **New**.

- Right click on the system tray icon and choose **New Alarm** from the context menu.

- Right click in the alarm list and choose **New** from the context menu.

Alternatively, you can create new alarms preconfigured from various sources:

- To preset the alarm's date in the Alarm Edit dialog, right click on the desired date in the alarm date selector (see Filtering the Alarm List by Date) and select the appropriate alarm type from the context menu.

- To base your new alarm on an alarm template, follow the instructions in the Alarm Templates section.

- To base your new alarm on an existing one, highlight the existing alarm in the list and select **File → Copy**. This opens the Alarm Edit dialog already filled in with a copy of the selected alarm's details.

- To create a new alarm which displays an existing email message, drag the email from KMail onto KAlarm's main window. Then select the **Display Alarm** option. This opens the Alarm Edit dialog with the entire email message (including sender, recipient, etc.) as the alarm text.

- To create a new email alarm to send a copy of an existing email message, drag the email from KMail onto KAlarm's main window. Then select the **Email Alarm** option. The Alarm Edit dialog is preset with the entire email message except sender.

- To create a new alarm which displays a summary of an existing to-do, drag the to-do from KOrganizer or other application onto KAlarm's main window. This opens the Alarm Edit dialog with the to-do contents as the alarm text.

- To create a new command alarm, drag the text of a script starting with '#!' onto KAlarm's main window. Then select the **Command Alarm** option. This opens the Alarm Edit dialog preset with the script text.

- To create a file display alarm, drag a text or image file URL onto KAlarm's main window. This opens the Alarm Edit dialog and sets the file name.

- To create an audio alarm, drag an audio file URL onto KAlarm's main window. This opens the Alarm Edit dialog and sets the file name.

- To create a text message alarm, drag any piece of text onto KAlarm's main window. If prompted, select the **Display Alarm** option. This opens the Alarm Edit dialog preset with the alarm text.

- You can automatically create birthday alarms for people in KAddressBook as described in Importing Birthdays from KAddressBook.

2.3.2 Modifying an Existing Alarm

To modify an existing pending alarm (expired alarms cannot be amended), do one of the following:

- Double click on its entry in the alarm list.

- Select it by clicking on its entry in the alarm list. Then choose **Edit → Edit**.

- Right click on its entry in the alarm list and choose **Edit** from the context menu.

This displays the Alarm Edit dialog.

2.3.3 Deleting/Reactivating an Alarm

To delete existing alarms, select one or more by clicking on their entries in the alarm list. Then do one of the following:

- Choose **Edit** → **Delete**.

- Right click on the selected entries and choose **Delete** from the context menu.

- To delete them without a confirmation prompt, type **Shift-Delete**.

When you delete an active alarm, it is archived, provided that it has triggered at least once before being deleted, and provided that expired alarms are archived at all. (Use the Configuration dialog to control whether and for how long archived alarms are stored.) When you delete an archived alarm, or an active alarm which has not yet triggered, it is removed permanently.

You can reactivate a deleted alarm from the archived alarms list, provided that it has not yet expired. To do this, first display archived alarms, as described in Archived Alarms. Then:

- Select one or more appropriate archived alarms by clicking on their entries in the alarm list. Then choose **Actions** → **Reactivate**.

- Right click on the desired entries in the archived alarm list and choose **Reactivate** from the context menu.

2.3.4 Enabling/Disabling an Alarm

See Enabling and Disabling Alarms for how to enable and disable alarms, either individually or as a whole.

2.3.5 Setting an Alarm to Wake from Suspend

See Wake From Suspend for how to configure an alarm to wake up your system from suspension or hibernation.

2.3.6 Acknowledging an Alarm

See Alarm Message Display for how to acknowledge alarms.

2.3.7 Alarm Templates

If you frequently want to set up similar alarms, you can create an alarm template to avoid having to enter all the details from scratch each time. A template can contain all the details which an alarm can contain, apart from the start date.

As an example, you may regularly want to set an alarm to remind you about a television program whose time varies from week to week. The template would contain all the alarm details (message text, whether to play a sound, etc.) except for the time and date. Now, to create the alarm, all you need to do is open the Alarm Edit dialog with that template and then enter the time and date.

To create an alarm based on a template, open the Alarm Edit dialog preset with the template details:

- Select the **File** → **New** → **New Alarm From Template** menu item, and then select the desired template.

- Right click on the system tray icon and choose **New Alarm** → **New Alarm From Template** from the context menu. Then select the desired template.

- Open the Alarm Edit dialog in the usual way, and click the **Load Template...** button to select a template to preset the dialog with.

2.3.7.1 Configuring Templates

You can create, modify or delete templates using the Alarm Templates dialog, or you can create a new alarm template based on an existing alarm.

To create a new alarm template, do one of the following:

- Display the Alarm Templates dialog by selecting the **File** → **Templates...** menu item, clicking **New**, and choosing the alarm type from the list which appears. This displays a blank Template Edit dialog.

- Display the Alarm Templates dialog by selecting the **File** → **Templates...** menu item, select an existing template from the list and click **Copy**. This opens the Template Edit dialog already filled in with a copy of the existing template's details.

- Highlight an alarm in the alarm list and select **File** → **Create Template....** This opens the Template Edit dialog already filled in with a copy of the selected alarm's details.

To modify an existing template, display the Alarm Templates dialog by selecting the **File** → **Templates...** menu item and click **Edit**. This displays the Template Edit dialog which is described below.

To delete existing templates, display the Alarm Templates dialog by selecting the **File** → **Templates...** menu item, select one or more templates and click **Delete**. A confirmation prompt is issued to prevent accidental deletions.

2.3.7.2 Template Edit Dialog

The Template Edit dialog is similar to the Alarm Edit dialog. The following controls are different:

- Enter the template's name in **Template name**. It is the template's name which is displayed in template selection lists, so it is best to choose a name which will remind you of its function. Each template's name must be unique.

- In the **Time** group box, select one of:

  - **Default time** if you do not wish to specify any trigger time. Alarms based on this template will initially use the normal default trigger time for new alarms.

  - Check **Time** to enter a time when the alarm is to be triggered.

  - Check **Date only** to specify that the alarm should only have a date, not a time.

  - Check **Time from now** to enter how long (in hours and minutes) after the alarm is created, that it should be triggered.

- In the **Recurrence Rule** group box in the **Recurrence** tab, no day or month need be selected for weekly or yearly recurrences, respectively.

2.3.8 Alarm Calendars

If you only use one computer and work independently, it may not matter to you where KAlarm stores its alarms. But if you need to access alarms on more than one computer, or in more than one location on your local computer, you can define 'alarm calendars' to tell KAlarm to use other alarm calendars additional to, or in place of, its default ones.

You can view and manipulate calendars via the calendar list, which can be displayed alongside the alarm list in KAlarm's main window. Alarms from all alarm calendars are shown merged together in the alarm list. When you save a new alarm, you can set a configuration option to determine whether it is automatically saved into the default calendar, or whether you will be prompted to choose a calendar. When you edit an existing alarm, it is automatically saved back into its original alarm calendar.
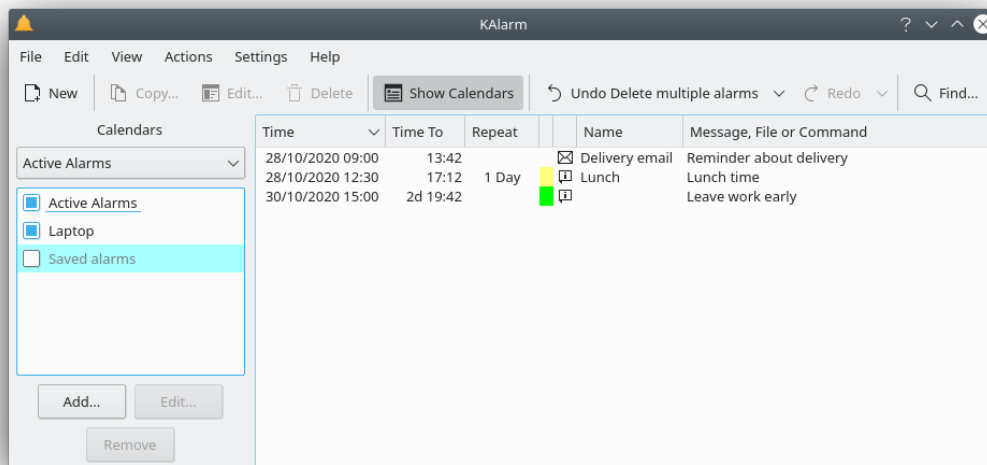
2.3.8.1 Calendar Types and Options

Alarm calendars are categorized by alarm type and storage type. They can be disabled, set read-only, or made the default calendar for their alarm type.

Alarm type

The three alarm entity types – active alarms, archived alarms and alarm templates – are stored in separate alarm calendars. KAlarm therefore has three standard default calendars, one for each type (see Questions and Answers for details), which you can change if you wish.

Storage type

KAlarm handles two alarm calendar storage types:

- Local file: Alarms are stored in a single local file in iCalendar format. KAlarm uses local file calendars by default (see Questions and Answers for details). 'Local files', in addition to files on the local computer, can include alarm calendars on the local network as long as their location can be represented by a path name starting with / .

- Local directory: Alarms are stored in a local folder, each alarm being stored in a separate iCalendar file within the folder. This storage method has the advantage that in the event of file corruption, you should lose only one alarm, not the entire calendar.

Enabled/disabled status

Disabling a calendar has the same effect as removing it, except that it still appears in the calendar list for easy re-enabling. When disabled, its alarms are ignored and do not appear in the alarm list or list of templates. When it is re-enabled, its alarms are once again shown and, if it is an active alarm calendar, made active.

Read-only status

A read-only calendar's alarms cannot be changed or added to. So you cannot edit its alarms, or save new alarms to it. Also, it is not possible to defer its alarms, since to do so would need the deferral time to be saved into the alarm. After its alarms trigger, they are not removed from the calendar and archived until you or another user accesses the calendar in read-write mode.

You can set the read-only status of a calendar in the calendar configuration dialog. However, some calendars cannot be made writeable, for various reasons:

- If a calendar was created by another application, it would be unsafe to allow KAlarm to update it, since differences in data format might make it unusable by the creating application.

- If the calendar was created by a later version of KAlarm, data might be lost if your version of KAlarm updated it.

- If the calendar was created by a previous version of KAlarm, data could be lost or it could be made unusable for the previous KAlarm version if your version of KAlarm updated it. You will be prompted whether to convert its format so as to make it writeable, bearing in mind the potential compatibility problems if the previous KAlarm version needs to access it again.

- If you do not have permission to write to the calendar file or folder.

If you need write access to alarms in a calendar which cannot be made writeable, you can copy its alarms by importing them into a writeable calendar using the latter calendar's **Import...** context menu option (see Importing Alarms from External Calendars).

Default calendar status

One calendar of each alarm type can optionally be made the default calendar for that alarm type. New alarms are automatically saved to the default calendar for the appropriate alarm type, unless you have selected the prompt option for new alarms and templates in the Configuration dialog.

2.3.8.2   Using Calendars

You can view and manipulate calendars via the calendar list, which can be displayed or hidden by **View → Show Calendars**. When using the calendar list, first select the alarm type using the combo box above the list. Then either click on one of the buttons below the list, or Right click on the appropriate calendar in the list and choose an item from the context menu. The actions available are:

Add...

Add a calendar of the selected type to the list. You are asked to choose a storage type, following which the calendar configuration dialog is displayed, where you can enter the location of the calendar and its characteristics. If there is no existing alarm calendar in the specified location, a new one will be created.

Remove

Remove the selected calendar from the list. The calendar itself is left intact; it is simply removed from the list, and may subsequently be reinstated in the list if desired.

Edit...

Edit the selected calendar. This displays the configuration dialog for the selected calendar.

Reload

    Reload the selected calendar. The calendar is re-read from its storage location, ensuring that there is no discrepancy between what KAlarm displays and the current state of the calendar. If the calendar is shared with other users, any changes which they have made will now be seen by KAlarm.

> **WARNING**
> If you reload a remote calendar, any changes to alarms which you have made since the calendar was last saved will be lost. Also, any alarms which have expired since the last save may be retriggered.

Import...

    Import alarms from external calendar files into the selected calendar. This is described in Importing Alarms from External Calendars. This option is not available for disabled or read-only calendars.

Export...

    Export all the alarms in the selected calendar to an external calendar file. This is described in Exporting Alarms to External Calendars. This option is not available for disabled calendars.

Show Details

    Display details about the selected calendar. This shows the calendar's location, storage type and status information.

Use as Default

    Make the selected calendar the default calendar for the selected calendar type. This option is not available for disabled or read-only calendars.

Set Color...

    Select a background color for highlighting this calendar's alarms in the alarm list. This enables you to see at a glance which alarms belong to a particular calendar.

Clear Color

    Clear color highlighting for this calendar's alarms in the alarm list. The option only appears after **Set Color** has been used on this calendar.

2.3.9   Importing Alarms from External Calendars

You can import alarms from other calendar files into KAlarm. The import function scans the selected calendar files for events containing alarms, and copies them (with new unique IDs) into KAlarm's calendar. Events without alarms, and calendar entries other than events, are ignored. There are two ways to import alarms:

- Use **File** → **Import Alarms...** to import alarms of all types (active alarms, archived alarms and alarm templates) from the calendar files.

  If you have configured alarm calendars, alarms of each type will be added to the appropriate default calendar, or if you have selected the prompt option for new alarms and templates in the Configuration dialog, you will be prompted for the calendar to use.

- Right click on a calendar in the calendar list, and choose **Import...** from the context menu. This imports alarms of the currently selected type into that calendar. For example, if the selected calendar type is alarm templates, alarm templates (and not active alarms or archived alarms) will be imported.

> **WARNING**
> If you import alarms from calendar files which were created by applications other than KAlarm, the alarms may be changed by the import process – even alarm times may change. This depends on the data storage conventions used by the other application, and is unavoidable if those conventions differ from what KAlarm expects. Always check imported alarms for unexpected changes, and adjust them as necessary.

2.3.10 Exporting Alarms to External Calendars

You can export alarms from KAlarm to other calendar files, either the alarms currently selected in the alarm list, or all the alarms from an alarm calendar. The methods to do this are given below. Whichever method is used, you can either create a new calendar file or append the exported alarms to an existing calendar file. To append the alarms, check **Append to existing file** in the file selection dialog; otherwise, any existing file is overwritten.

- To export the alarms currently selected in the alarm list, Right click on the selection and choose **Export...** from the context menu, or use **File** → **Export Selected Alarms...** in the main menu.

- To export all the alarms from a calendar, Right click on a calendar in the calendar list, and choose **Export...** from the context menu.

2.3.11 Importing Birthdays from KAddressBook

> **NOTE**
> This function is only available if KAlarm's Akonadi plugin is installed and enabled.

You can set up display alarms for birthdays stored in KAddressBook, by **File** → **Import Birthdays...**. This displays a dialog which allows you to select which birthdays to create alarms for.

- In the **Alarm Text** group box, you can set up the text to be displayed in the birthday alarm messages. The message text is created by combining the **Prefix** text followed by the person's name followed by the **Suffix** text. No spaces are added, so remember to include any necessary trailing space in **Prefix** and leading space in **Suffix**.

> **NOTE**
> If you change the alarm text, the birthday selection list will be re-evaluated.

- In the **Select Birthdays** list, select the birthdays which you want to create alarms for. Note that the list shows only those entries in KAddressBook which contain a birthday and which do not already have a birthday alarm in the format currently defined in the **Alarm Text** group box.

- The remaining controls are the same as for **Text** alarms in the Alarm Edit dialog.

If you have configured alarm calendars, the alarms will be added to the default active alarm calendar, or if you have selected the prompt option for new alarms and templates in the Configuration dialog, you will be prompted for the calendar to use.

2.3.12 Undo / Redo

You can undo and redo the most recent changes which you have made during the current session of KAlarm. Most actions can be undone, including creation, edit and deletion of alarms and alarm templates, and reactivation of alarms. To prevent excessive resources being used by the undo history, the number of changes stored is limited to the last 12.

To undo the last change, select **Edit** → **Undo**. To redo the last change which was undone, select **Edit** → **Redo**.

To undo a change other than the last one, click on the **Undo** button in the toolbar and hold the mouse button down. A list of actions will be displayed from which you can choose the one to undo. If you don't see the action which you are looking for, remember that you may need to undo more recent changes first, which the desired change depends on. For example, if you edited an alarm and then deleted it, you cannot undo the edit until you have first undone the deletion.

Redoing a change other than the last one can be done in a similar manner, using the **Redo** toolbar button.

2.4 The Alarm Edit Dialog

The Alarm Edit dialog enables you to view and edit an alarm. When you first use KAlarm, a simplified form of the dialog is displayed, with only a small number of options visible. To see all options, click the **More Options** button; to revert to the simplified dialog, click the **Less Options** button. KAlarm always remembers your last display choice whenever the Alarm Edit dialog is redisplayed.

You can configure the default values of many of the settings in the Alarm Edit dialog using the Configuration dialog's Edit tab.
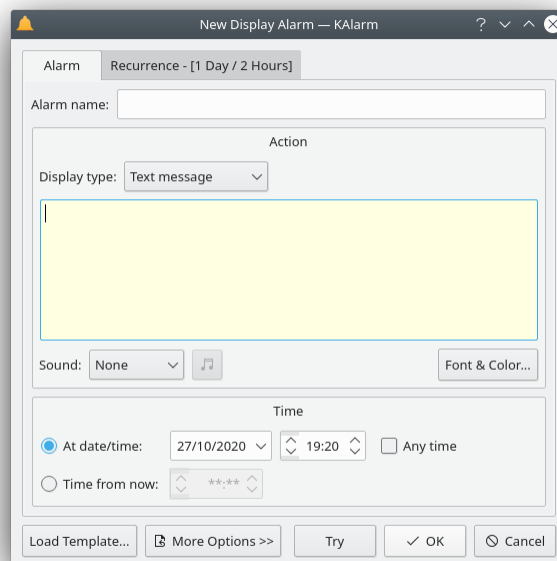
Simplified Alarm Edit dialog for a display alarm

19
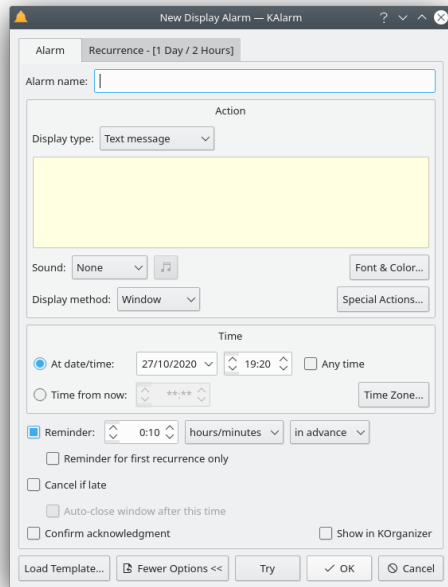
Alarm Edit dialog for a display alarm, showing all options

2.4.1 Alarm Name

You can give a name to the alarm in the **Alarm name** field. This is a convenience to help you identify the alarm more easily. You do not have to enter a name, and it need not be unique.

Note that this field is only displayed if the use of alarm names is enabled in the General tab of the Configuration dialog.

2.4.2 Alarm Action

The controls in the **Action** group box vary depending on the type of alarm being edited.

2.4.2.1 Display Alarms

Display alarms display a window when the alarm triggers. Select the method used to generate the alarm window contents, using the combo box at the top:

- **Text message** in order to enter an alarm message text (which may include newlines) in the edit box.

- **File contents** to enter the path or URL of a text or image file whose contents are to be displayed in the alarm message. Use the button beside the edit box to display a file selection dialog. The **Speak** option is not available for this type of alarm.

- **Command output** to specify that the alarm message text will be generated by a command which is executed when the alarm triggers. See Command Alarms below for details of how to enter the command or command script to execute.

The controls available for display alarms are:

- The **Sound** option allows you to select whether an audible alarm should sound when the alarm message is displayed. Choose:

  - **None** to display the alarm silently.
  - **Beep** to sound a beep.
  - **Speak** to have the alarm message spoken as well as being displayed. This option is only available if KAlarm was built with speech enabled and you have the Qt™ Speech module installed and working.
  - **Sound file** to play an audio file. Use the button on the right to display the Sound File dialog which lets you select a file to play and set volume and repetition options. If you hover the mouse over the selector, a tooltip will display the audio file currently selected.

    In the Sound File dialog:

    * Enter the sound file path, or use the button beside the edit box to display a file selection dialog. You can listen to the selected file by clicking the play button to the left of the edit field. That button then changes function to allow you to stop playing when you have heard enough.
    * Check **Repeat** to continually repeat the audio file for as long as the alarm is displayed. (The alarm message window contains a button to stop playing the sound should you need silence but still want to display the alarm.)
    * Check **Volume** and adjust the slider control if you want to adjust the volume at which the audio file is played.
    * If the Phonon audio backend currently in use supports it, you can fade the volume. Fading means to start playing the audio file at one volume and gradually change to the final volume, over a specified time interval. The final volume is that entered in **Volume** above. To enable fade, check **Fade**, and then enter the fade period in seconds in the **Fade time** field, and adjust the **Initial volume** slider.

    > TIP
    > You can use the **Try** button to test out the selected sound levels.

- Use the **Font & Color...** button to select a font, and foreground and background colors, for the alarm message. In the **Choose Alarm Font & Color** dialog, check **Use default font** to display the message in whatever font is configured as the default at the time the message is displayed. To choose a specific font for the message, uncheck **Use default font**. (The default font and colors can be set in the Configuration dialog.)

  The selected colors are shown in the alarm message text entry field.

- The **Display method** option lets you select how to display the alarm. Choose:

  - **Window** to display the alarm in a window. This option allows the full range of options to be used when configuring the alarm.
  - **Notification** to use the standard notification system to display the alarm message. Due to the limitations of the notification system, the following alarm configuration options cannot be used with notifications: setting font and color; setting an audio file to play when the alarm is displayed; confirmation of alarm acknowledgement; automatic closing of the display on expiry of the late-cancellation time.

  See the Alarm Message Display section for further details about how alarm messages are displayed.

- Use the **Special Actions...** button to specify shell commands to execute before or after displaying the alarm. In the **Special Alarm Actions** dialog:

  - In the **Pre-alarm action** field, enter a shell command to execute before the alarm is displayed. Note that KAlarm will wait for the command to complete before displaying the alarm.

    A pre-alarm action is only executed once when the alarm message is initially displayed, including when a reminder message is replaced by the actual alarm message. It is *not* executed in any of the following circumstances:

* When a reminder message is displayed.
* When the message is redisplayed after deferring the alarm, unless **Execute for deferred alarms** is checked.
* When the message was displaying at the time you logged off and is then restored when you log back in.
* When a recurring alarm triggers but the alarm message (or a deferred alarm message) from a previous occurrence of the alarm is still visible; in other words, when the previous occurrence of the alarm has not yet been acknowledged.

The pre-alarm action can be used to control whether to display the alarm message:

* Check **Cancel alarm on error** to cancel the alarm if the pre-alarm command returns an error status. This will prevent the alarm message from being displayed, and any post-alarm action from being executed.
* Normally, if the pre-alarm command returns an error, an error message is displayed and an error indication is shown in the alarm list. These error notifications can be prevented by checking **Do not notify errors**.

– In the **Post-alarm action** field, enter a shell command to execute when the alarm is acknowledged (whether by clicking **Close** or by using the close button in the window's titlebar). It is *not* executed in any of the following circumstances:

* When a reminder message is closed.
* When you defer the alarm, except when the deferred alarm is finally acknowledged.
* When the alarm message is closed due to logging out.

See Command Alarms below for details of how shell commands are executed.

2.4.2.2 Command Alarms

Command alarms execute a command without displaying any alarm message.

NOTE
This alarm type is not available if KDE is running in kiosk mode.

When the command is executed, the environment variable KALARM_UID contains the event UID for the alarm. Note that when the command is executed from the Alarm Edit dialog's **Try** button, KALARM_UID will be blank if it is a new alarm, or if the alarm has been modified in the dialog, because the alarm only acquires a UID when it is saved in the alarm calendar.

The controls available for command alarms are:

* The **Enter a script** check box lets you choose whether to enter a shell command line or a script.

  If this option is unchecked, you can enter a shell command line to execute. The command is passed straight to the default shell (defined by the SHELL environment variable), and may include whatever options, parameters, piped commands, etc. are permitted by the shell in a single line command.

  If this option is checked, you can enter the text of a script to execute. Remember to include a first line such as #!/bin/bash to ensure that the correct command interpreter is invoked.

* If the command returns an error, an error message is normally displayed, and an error indication is shown in the alarm list. The error notification message can be prevented by checking **Do not notify errors**.

* Use the **Command Output** group box to specify what you want to be done with any terminal output which the command produces when it executes.

  – Check **Execute in terminal window** to cause the command to be executed in a terminal window. You can choose which type of terminal window should be used in the Configuration dialog.

 – Check **Log to file** to save the command's output in a file. The output, prefixed by a heading showing the time at which the command was scheduled to run, will be appended to any existing contents of the file. Enter the file name in the edit box, or use the button beside the edit box to display a file selection dialog.

 – Check **Discard** to throw away the command's output.

2.4.2.3 Email Alarms

Email alarms send an email without displaying any alarm message.

Fill in the recipients' addresses, the email subject line and the message body in the three edit fields. Use the button beside the addressee edit box to display your KDE address book from which you can select email recipients. (Note that the button is only shown if KAlarm's Akonadi plugin is installed and enabled.) Attachments may be added using the **Add...** button. Note that attached files must still exist when the alarm is triggered; no copy is stored at the time the alarm is configured. To remove an attachment, highlight it in the drop-down list and click the **Remove** button.

Set the following options:

• The **From** combo box allows you to select which KMail identity to use as your email address for sending the email. This option only appears if your **From** email address in the Configuration dialog is set to **Use KMail identities**. Otherwise your email address is preset in the Configuration dialog, rendering this option inapplicable.

• Check **Copy email to self** to send a blind copy of the email to yourself when the alarm is triggered. The email address to which the copy will be sent may be set in the Configuration dialog, the default being your email address set in KMail.

2.4.2.4 Audio Alarms

Audio alarms play an audio file without displaying any alarm message.

Set the following options:

• Enter the sound file path, or use the button beside the edit box to display a file selection dialog.

• Check **Repeat** to continually repeat the audio file until the **Stop Play** option is selected. To stop playing the file, select the **Actions** → **Stop Play** menu option, or Right click on the system tray icon and choose **Stop Play** from the context menu. If you wish, you can set up a global shortcut key for this action.

• Check **Volume** and adjust the slider control if you want to adjust the volume at which the audio file is played.

• If the Phonon audio backend currently in use supports it, you can fade the volume. Fading means to start playing the audio file at one volume and gradually change to the final volume, over a specified time interval. The final volume is that entered in **Volume** above. To enable fade, check **Fade**, and then enter the fade period in seconds in the **Fade time** field, and adjust the **Initial volume** slider.

2.4.3 Deferral

If the alarm is a recurring alarm and it was deferred after it was last displayed, the **Deferred Alarm** group box shows the time the alarm was deferred to. **Change...** displays a dialog which allows you to change the deferred time or to cancel the deferral.

2.4.4 Time

In the **Time** group box, select either

- **At date/time** to enter the date and time when the alarm is to be triggered. Check **Any time** if you want to specify only a date for the alarm: in this case the alarm will be displayed at the first opportunity on or after the configured start-of-day time, on the specified date. (Configuring KAlarm describes how to set the start-of-day time.)

    For a non-recurring alarm, the date/time which you enter must be in the future, or if you enter only a date it must be today or later. For a recurring alarm, there are no such restrictions since the start date/time will be automatically adjusted to the first recurrence due after the current time.

- **Time from now** to enter how long after now (in hours and minutes) the alarm should be triggered.

If desired, choose a time zone to apply to the alarm. This time zone is used for all dates and times relating to this alarm, including recurrence and exception dates and times. Normally, you should leave the time zone controls unchanged unless you have a good reason to change them.

The time zone controls are displayed only when the selected time zone is different from the default time zone set in the Configuration dialog, or if you click the **Time Zone...** button.

- In the combo box, choose the time zone which this alarm is to use. When creating a new alarm, this is initially set to the time zone selected in the Configuration dialog, which will be your computer's time zone unless you have changed it.

- Select **System time zone** if you want to use the local computer time zone (on whichever computer KAlarm happens to be running on at the time).

2.4.5 Reminder

For a display alarm, check **Reminder** if you want to display a reminder either before or after the main alarm and each of its recurrences (if any). Enter how long in advance or afterwards, using the edit controls beside the check box. Note that if the alarm recurs, the reminder period is normally limited to being less than the recurrence or sub-repetition interval.

NOTE

Reminders are not displayed for sub-repetitions within a recurrence. Reminders are only shown for each main recurrence of the alarm.

If the alarm recurs, check **Reminder for first recurrence only** if you only want a reminder for the alarm's first recurrence. If this is checked, and it is an advance reminder, the reminder period is not subject to the normal limit of being less than the recurrence or sub-repetition interval.

2.4.6 Cancelation

The late-cancelation options determine how an alarm is treated after its scheduled time:

- The **Cancel if late** check box determines what happens if the alarm cannot be triggered at its scheduled time.
    Check this box to cancel the alarm if it cannot be triggered within a specified time period after the right time. The time period is selected using controls which appear when you check the box. For example, if you enter a time period of 1 hour, the alarm will be triggered at the first opportunity up to an hour after it is due, but if it cannot be triggered within an hour its activation will be canceled.

> **NOTE**
> The lateness of date-only alarms, i.e. ones for which the **Any time** option is selected, is calculated from the start-of-day time on the alarm's scheduled date.

Leave the box unchecked to trigger the alarm at the first opportunity starting at the scheduled time, regardless of how late it is.

> **NOTE**
> An alarm can only be triggered while you are logged in, and while both X and KAlarm are running.

- Check **Auto-close window after this time** if you want the alarm window to be automatically closed if it is still showing at the expiry of the late-cancelation time.

2.4.7 Recurrence

Specify whether or how the alarm should be repeated using the **Recurrence** tab.

> **NOTE**
> The alarm's basic repetition characteristics are displayed for convenience in the title of the **Recurrence** tab. The recurrence interval is shown first, followed by any sub-repetition interval set up using the **Sub-Repetition** button.

In the **Recurrence Rule** group box, set the recurrence type or time period as follows:

- To trigger the alarm once only, select **No recurrence**.

- Select **At login** to trigger the alarm whenever you log in, until its scheduled end time. Then, at its scheduled end time it will finally be triggered one last time. (Note that an alarm repeated at login will also be triggered any time you restart KAlarm.)

- To make the alarm recur at regular intervals, select one of the time period types and then enter in the **Recur every** box how many time periods should elapse between recurrences. For example, to repeat every fortnight, you could select **Daily** and enter a value of 14, or select **Weekly** and enter a value of 2. Depending on the time period type selected, you may have further options:

  - For a weekly recurrence, check each day in the week on which you wish to trigger the alarm.
  - For a monthly recurrence, you may select either a fixed date, or a position (e.g. the second Tuesday).
  - For a yearly recurrence, you may select either a fixed day in the month, or a position in a month (e.g. the last Saturday in May). Check each month of the year in which you wish to trigger the alarm.

    If you set up a yearly recurrence for February 29th, you can specify how it is to be handled in non-leap years by selecting the appropriate **February 29th alarm in non-leap years** option:

    * **None**: the alarm will occur on February 29th in leap years, but will be suppressed in non-leap years.
    * **28 Feb**: the alarm will occur on February 29th in leap years, and on February 28th in non-leap years.
    * **1 Mar**: the alarm will occur on February 29th in leap years, and on March 1st in non-leap years.

> TIP
> To set a daily alarm to occur only on weekdays, use a weekly recurrence and check each weekday.

In the **Recurrence End** group box, set the overall recurrence time span as follows:

- Select **No end** to continue the repetitions indefinitely.

- Select **End after** to specify the total number of occurrences of the alarm.

- Select **End by** to specify the date/time until which the alarm will be repeated. Note that this uses the same time zone as the alarm's start time.

> NOTE
> The end date/time determines when the last main recurrence will be, but does not limit sub-repetitions. If sub-repetitions are configured, they will trigger as normal after the last main recurrence, regardless of the end date/time.

The **Exceptions** group box allows you to exclude certain date/times from the recurrence which you have set up. Note that these controls are not shown in the simplified form of the Alarm Edit dialog: to see them, click **More Options**.

- The list of exceptions (i.e. excluded date/times) is shown on the left. To add a new exception, enter a date on the right and press **Add**. To change an exception, highlight it in the list, enter the new date on the right and press **Change**. To delete an exception, highlight it in the list and press **Delete**.

- You can restrict an alarm not to occur on holidays by checking **Exclude holidays**. This does not change the way the alarm is scheduled; it simply suppresses the alarm whenever it happens to trigger on a holiday. You can select your holiday country or region in the Configuration dialog.

- You can restrict an alarm to occur only during working time by checking **Only during working hours**. This does not change the way the alarm is scheduled; it simply suppresses the alarm whenever it happens to trigger outside working hours. Work days and working hours are set in the Configuration dialog.

2.4.7.1   Sub-Repetition

You can use the **Sub-Repetition** button to set up a repetition within a repetition. In this case, each time the alarm is due as specified in the main recurrence, instead of being triggered just once it is triggered repeatedly in accordance with your sub-repetition specification. For example, to set up an alarm which repeats every hour from noon to 6 pm each Thursday, you would set up a weekly recurrence on Thursday at 12:00, and use the Sub-Repetition dialog to specify an interval of 1 hour and either a count of 6 or a duration of 6 hours.

In the Sub-Repetition dialog which is displayed when you click the **Sub-Repetition** button, check **Repeat every** to set up a repetition, or uncheck it to remove the repetition. If **Repeat every** is checked, set up the repetition as follows:

- Enter the time interval between repetitions in the controls beside **Repeat every**. Select the desired time units (e.g. **days**) and then enter the number of units.

- Specify either the repetition count or its duration:

  - Select **Number of times** to enter how many times the alarm should be triggered after the main recurrence. So, for example, to make the alarm occur 4 times at each main recurrence, i.e. 3 additional times, you should enter 3 here.

– Select **Duration** to enter the total time period during which the alarm should be repeated. This need not be an exact multiple of the repetition interval; it will automatically be rounded down when you click **OK**.

NOTE

To prevent overlapping sub-repetitions for the same alarm, a sub-repetition's duration is restricted to be less than the longest interval between main recurrences. Each time the alarm recurs as specified in the main recurrence, any still active sub-repetition which started at the previous recurrence is automatically cancelled.

2.4.8 Other Controls

For display alarms, the **Confirm acknowledgment** check box lets you specify whether you will be prompted for confirmation when you close the alarm message window. This may be used as a safeguard against accidental acknowledgment of alarms.

Select **Show in KOrganizer** to add the alarm to KOrganizer's active calendar, where it will appear as an event without an alarm. This option allows you to track alarms in KOrganizer while still making use of KAlarm's functions.

NOTE

If you later modify or delete the alarm in KAlarm, the KOrganizer event will be modified or deleted correspondingly. But if you change the event in KOrganizer, the alarm in KAlarm will not be affected.

Press the **Load Template** button to select a template to preset the dialog with, as described in Creating and Manipulating Alarms.

Press the **Try** button to test the alarm and check whether it works correctly. The alarm is executed just as if it had been scheduled in the normal way. In the case of an audio alarm, press the **Try** button a second time to stop playing the sound file.

Press the **OK** button when all details are correct, to add the alarm to the scheduled list. Note that when editing an existing alarm, the **OK** button is disabled while no changes have been made.

2.5 Alarm Message Display

Alarm messages may be displayed in windows or as notifications, depending on the option chosen in the Alarm Edit dialog. These two display options are described below.

If you inhibit notifications for the desktop, the execution of display alarms will be suspended until notifications are re-enabled. Note that this applies to all display alarms, regardless of whether they are displayed in windows or as notifications.

2.5.1 Alarm Message Window

Alarm messages which are displayed in windows provide the fullest functionality.

When an alarm message is due, it is displayed on each desktop and cannot be covered by ordinary windows, to ensure that you see it. The message window shows the time for which the alarm was scheduled, so that you can see when it popped up if you were away from the computer at the time. If the alarm's scheduled time is in a different time zone from your local computer's setting, its time zone will also be displayed. (For reminder messages, the date/time shown is

that for the main alarm or its recurrence, not the reminder message time, and the window title is 'Reminder'.)

Alarm message windows remain visible until you acknowledge them, unless **Auto-close window after late-cancelation time** was checked in the Alarm Edit dialog. In the case of a recurring alarm, if an unacknowledged message window remains from a previous occurrence of the alarm, the existing window is simply popped up when the alarm recurs. This avoids having to acknowledge multiple copies of the same message should you not wish, or be unable, to acknowledge a message at the time it appears.

The alarm message window provides whichever of the following options are applicable to the displayed alarm:

- Acknowledge the alarm by clicking the **Close** button. This closes the window (after a prompt for confirmation, if you selected **Confirm acknowledgment**).

- Edit the alarm by clicking the **Edit...** button. This displays the Alarm Edit dialog.

- Display options to defer the alarm until later by clicking the **Defer...** button. Then select **Defer to date/time** to enter the date and time when the message is to be redisplayed, or select **Defer for time interval** to enter how long after now (in hours and minutes) the message should be redisplayed. Then click **OK** to defer the alarm message and close its window.

> NOTE
> The time the alarm is deferred to must be earlier than its next scheduled occurrence or next advance reminder. For this reason, the **Defer...** button in the alarm message window and the **OK** button in the Deferral dialog are disabled one minute before the next occurrence or advance reminder.
> Note that if a reminder is configured *after* the alarm, you *can* defer the alarm past its reminder time. In this case, the reminder will be suppressed.

> NOTE
> The **Defer...** button is not available for alarms which are displayed at login due to the **Repeat at login** option having been selected.

- Stop playing the alarm's sound file by clicking the button showing the 'stop playing' symbol.

- If the alarm message was created by dragging an email from KMail, you can directly access the email in KMail by clicking the button showing the KMail icon. This will display the email and select the folder containing the email in KMail's folder list.

> WARNING
> If KMail's indexes are regenerated, the link to the email in KMail will be lost.

- The button showing the **KAlarm** icon provides a convenient way to activate KAlarm's main window, with that alarm highlighted.

You can choose in the Configuration dialog which of two different modes should be used to display alarm message windows:

- As a normal window. In this mode, the keyboard focus is taken by the alarm message window when it appears, so if you are typing at the time your keystrokes will be diverted to it rather than your original application.

- As a non-modal window. In this mode, the keyboard focus is unaffected when the alarm message window appears, so it will not interfere with your typing. However in this mode the window has no titlebar or frame, so you cannot move it or resize it.

NOTE
When an alarm is displayed on top of a full screen application, it is shown as a non-modal window regardless of this configuration setting. This is due to a limitation of the window system.

2.5.1.1 Positioning of Message Windows

You can choose in the Configuration dialog which of two schemes should be used to position alarm message windows:

- The windows are displayed as far away from the current mouse cursor as possible. This minimizes disruption to your work flow and minimizes the possibility of accidentally acknowledging the alarm.

- The windows are displayed in the center of the screen. To reduce the chance of accidentally acknowledging the alarm, the buttons on the window are initially disabled, becoming active only after a configurable delay.

If you have several alarm message windows, or error messages, displayed, you can spread the windows out across the screen to make them all visible, or group them all together again in the top left corner of the screen, by means of the **View** → **Spread Windows** menu option. If you wish, you can set up a global shortcut key for this action.

2.5.2 Alarm Message Notifications

Alarm messages which are displayed as notifications provide less functionality than those displayed in windows.

When an alarm message is due, it is displayed as a notification. The notification shows the time for which the alarm was scheduled. If the alarm's scheduled time is in a different time zone from your local computer's setting, its time zone will also be displayed. (For reminder messages, the date/time shown is that for the main alarm or its recurrence, not the reminder message time, and a "Reminder" heading is shown.)

The notification automatically closes after a short time-out. (Note that the time-out is common to all applications; it can be changed in System Settings.) After a notification times out, it can still be seen in the notification history until you remove it or until you log out. Because applications have no way to access the notification history, KAlarm cannot remove or replace notifications in the history as it would for alarm windows. So the history may contain multiple notifications for the same alarm, including reminders and recurrences.

The alarm message notification provides the following options. Note that selecting any option will immediately close the notification, and prevent it being shown in the notification history. Note also that these options are only available while the notification is active, before it times out. If you subsequently access the notification in the notification history, then due to the limitations of the notification system, the only interaction available is to remove it from the history.

- Acknowledge the alarm by clicking the **Close** button. This closes the notification.

- Edit the alarm by clicking the **Edit** button. This displays the Alarm Edit dialog.

- Display options to defer the alarm until later by clicking the **Defer** button. This button is only shown if it is possible to defer the alarm. See the description of the defer option in the Alarm Message Window section for details.

- Clicking the notification anywhere other than a button will activate KAlarm's main window, with that alarm highlighted.

2.6 System Tray Operation

KAlarm by default displays an icon in the system tray. The icon provides both control and an alarm monitoring status indication. A normal KAlarm icon indicates that all alarms are being monitored, while two different modified icons indicate either that some alarms, or that all alarms, are not being monitored. The icon modifications depend on the icon theme being used.

KAlarm's system tray icon is by default automatically hidden whenever there are no alarms due in the next 24 hours. You can change the auto-hide time limit, or always show the system tray icon, using the Configuration dialog. To show the icon when it has been automatically hidden, click the arrow in the system tray to reveal hidden icons.

If you hover the mouse cursor over the system tray icon, a summary of the first few message alarms due in the next 24 hours are displayed as a tooltip. You can switch this feature off, or configure the number of alarms to display and their format, in the Configuration dialog.

Left click on the system tray icon to toggle between displaying and hiding the KAlarm main window.

Right click on the system tray icon to display its context menu:

Enable Alarms

Enables or disables monitoring of alarms.

See Enabling and Disabling Alarms for details.

New Alarm

After you select the alarm type from the list which appears, opens the Alarm Edit dialog to create a new alarm.

Stop Play

Halts playback of the audio file currently playing.

Spread Windows

Spreads alarm and error message windows across the screen, or groups them together again.

Configure KAlarm...

Displays the KAlarm Configuration dialog.

The Configuration dialog is described in Configuring KAlarm. It includes options relating to the KAlarm system tray icon.

Restore / Minimize

Restores or minimizes the main KAlarm window.

Quit

Closes the KAlarm system tray icon and main windows.

Quits KAlarm if no alarm message windows are displayed.

2.6.1 Displaying KAlarm in the System Tray

You must be running the Plasma desktop or another suitable window manager in order to display KAlarm in the system tray.

Select **View → Show in System Tray** to display KAlarm in the system tray according to the preferences set in the View tab of the Configuration dialog.

To remove KAlarm from the system tray, deselect **View → Show in System Tray**.

To choose whether or not KAlarm will be shown at startup in the system tray, use the View tab of the Configuration dialog.

2.7 Refreshing Alarms

If in the unlikely event that any alarm was not triggered when it should have been, you can refresh the alarm list and trigger any missed alarms by selecting **Actions** → **Refresh Alarms**. This causes KAlarm to reload all alarm calendars.

You can reload an individual calendar and refresh its alarms in the alarm list by Right clicking the calendar in the calendars list and selecting the **Reload** menu option. See Alarm Calendars for details.

2.8 Enabling and Disabling Alarms

Alarms may be enabled and disabled either as a whole or individually:

- 'Alarm monitoring' applies to alarms as a whole. While alarm monitoring is disabled, no alarms are triggered at all. While alarm monitoring is enabled (the normal situation), all alarms which are not individually disabled will trigger at the appropriate times.

  When alarm monitoring is re-enabled, alarms which would have triggered while it was disabled are now triggered (unless any late-cancel option prevents this). In other words, disabling alarm monitoring has the same effect as stopping KAlarm – alarms are postponed until it is re-enabled.

- Alarms may be individually enabled and disabled, independently of the alarm monitoring status. So the enabled/disabled status of individual alarms will be unchanged by disabling and then re-enabling alarm monitoring. Unlike alarm monitoring which could potentially be disabled due to KAlarm not running, individual alarms can only be disabled if you use menu commands to do so.

  When an alarm is individually re-enabled, it is not now triggered if it became due while disabled. In other words, disabling an individual alarm cancels all its occurrences until it is re-enabled.

  An alarm's individual enabled/disabled status is indicated by its color in the alarm list (the color being configurable in the View tab of the Configuration dialog).

For an alarm to trigger, it must be individually enabled as well as alarm monitoring being enabled.

2.8.1 Enabling Alarm Monitoring

For alarm monitoring to occur, KAlarm must be running. Once you run KAlarm, it will from then on start automatically whenever you log in unless you later disable it in the General tab of the Configuration dialog.

If alarm monitoring is currently disabled, do one of the following to enable alarms:

- Select **Actions** → **Enable Alarms**.
- Right click on the system tray icon and choose **Enable Alarms** from the context menu.

2.8.2 Disabling Alarm Monitoring

You can temporarily disable alarm monitoring, which prevents KAlarm from checking any alarms either until you re-enable alarms, or – assuming that KAlarm is configured to start at login – until the next time you log in.

- Unselect **Actions** → **Enable Alarms**.

- Right click on the system tray icon and uncheck **Enable Alarms** from the context menu.

- Run KAlarm with the command line option `--disable-all`.

- Stop KAlarm as described in Quitting KAlarm.

Alarms may be permanently disabled by preventing KAlarm from being started at login using the General tab of the Configuration dialog.

2.8.3 Enabling and Disabling Individual Alarms

To enable individual alarms which are currently disabled, do one of the following:

- Select one or more alarms by clicking on their entries in the alarm list. Then choose **Actions** → **Enable**.

- Right click on the desired entries in the alarm list and choose **Enable** from the context menu.

To disable individual alarms which are currently enabled, do one of the following:

- Select one or more alarms by clicking on their entries in the alarm list. Then choose **Actions** → **Disable**.

- Right click on the desired entries in the alarm list and choose **Disable** from the context menu.

2.9 Wake From Suspend

It is possible to configure a selected alarm to wake your computer from hibernation or suspension when the alarm triggers, so that the alarm action can occur even when the system was shut down. This function is controlled by a dialog which is accessed by selecting **Actions** → **Wake From Suspend**. The dialog allows the Wake From Suspend alarm to be set, cancelled or displayed.

Use of the Wake From Suspend function requires administrative privileges. You will be prompted for the root password when you set or cancel a Wake From Suspend alarm.

NOTE
Wake From Suspend is not supported on some computers, especially older ones, and some computers only support setting a wakeup time up to 24 hours ahead. There may also be restrictions on which suspend mode the function will wake from. You should consider setting up test alarms to check your system's capability before relying on this feature.

WARNING
Your computer can only schedule a single Wake From Suspend at a time. If you use this function with KAlarm, you must ensure that this does not conflict with any other application which also uses Wake From Suspend. Whenever an application schedules or clears Wake From Suspend, this cancels any previously set Wake From Suspend, no matter whether set by KAlarm or any other application.

The Wake From Suspend dialog is used in conjunction with the alarm list in KAlarm's main window.

- **Use highlighted alarm**: this sets the alarm currently highlighted in the alarm list as the Wake From Suspend alarm. Any existing scheduled Wake From Suspend is cancelled, as explained above. The button is enabled only if exactly one alarm is highlighted.

- **Cancel wake from suspend**: this cancels any existing Wake From Suspend (whether set by KAlarm or any other application - see above). Note that this only cancels the wakeup function associated with the alarm; the alarm itself is not deleted and will continue to operate as normal.

- **Show current alarm**: this highlights the current Wake From Suspend alarm in the alarm list, so that it can be identified. The button is disabled if no Wake From Suspend is currently configured.

- The **Number of minutes before alarm to wake from suspend** control allows you, if you wish, to ensure that the system has time to fully restore itself before the alarm triggers, so that the alarm can trigger at the correct time.

2.10 Quitting KAlarm

Quit KAlarm by selecting **File** → **Quit**, or **Quit** in the system tray icon context menu. Alternatively, if the system tray icon is not visible, close all KAlarm's windows.

Chapter 3

Configuring KAlarm

To configure KAlarm's operation to suit your system and your personal preferences, select **Settings** → **Configure KAlarm...**. This displays the Configuration dialog.

3.1 General

The **General** section lets you control KAlarm's overall behavior:

- **Start at login**: KAlarm will be started automatically at session login, ensuring that KAlarm runs at all times unless you manually quit.

  > WARNING
  > This option should always be checked unless you intend to discontinue use of KAlarm.

  > NOTE
  > This option is automatically reselected whenever KAlarm is run. So if you have unchecked this option and want to continue to prevent KAlarm from running at login, you need to uncheck this option again each time you run KAlarm.

- **Warn before quitting**: When alarms are disabled while KAlarm is not running, selecting this option prompts you for confirmation if you attempt to terminate KAlarm using the system tray icon's **Quit** option. This prevents accidental disabling of alarms. For safety, this option is automatically re-enabled by default whenever you change run mode.

- **Enable alarm names**: Specify whether each alarm can be given a name to help you to identify it. This determines whether the **Name** column will be shown in the alarm list, and whether the **Alarm name** field will appear in the Alarm Edit dialog.

- **Confirm alarm deletions**: Specify whether you should be prompted for confirmation each time you delete an alarm.

- **Default defer time interval**: Enter the default time interval, in hours and minutes, to show initially when the Defer Alarm dialog is displayed. Note that if an alarm has been deferred previously, the interval shown initially in the Defer Alarm dialog will be equal to the deferral interval used the last time that alarm was deferred.

- **Terminal for Command Alarms**: Here, you can select which type of terminal window should be used for command alarms which are executed in a terminal window. Some of the most common terminal window applications are preconfigured, e.g. xterm, Konsole, although only those which are installed on your system will be shown here. You can view the actual command options used for each application by displaying the context help for its radio button.

  If you want to use another application, or want to use one of those listed but with different command options, select **Other** and enter the command to invoke the terminal window. By default, the alarm's command string will be appended to what you specify. Alternatively, you may specify where the alarm's command string should be inserted, by use of the following codes:

  %c
  :   The alarm's command string will be substituted.

  %w
  :   The alarm's command string will be substituted, with a `sleep` appended.

  %C
  :   A temporary command file containing the alarm's command string will be created, and the command to execute the file will be substituted.

  %W
  :   A temporary command file containing the alarm's command string will be created with a `sleep` appended, and the command to execute the file will be substituted.

  %t
  :   KAlarm's name in the current language will be substituted.

  When the command alarm is triggered, its command string will be quoted before being inserted into the terminal window command.

- **Enable Akonadi**: Choose whether to use Akonadi to provide features which depend on it. See Akonadi plugin for details. Note that this option is only shown if the Akonadi plugin is installed.

3.2   Time & Date

The **Time & Date** section lets you set options relating to time and date:

- **Time zone**: Select your time zone. KAlarm uses this time zone throughout, except when you override it for individual alarms.

- **Holiday region**: Select which country's or region's holidays to use. This affects recurring alarms for which the option to exclude holidays is selected.

- **Start of day for date-only alarms**: Set the start-of-day time for the purposes of triggering date-only alarms, i.e. ones for which the **Any time** option was selected. On the date when they are due, such alarms will be output at the earliest opportunity during the 24 hours starting from the start-of-day time.

- **Working Hours** group box: These options let you define your working hours, needed when the **Only during working hours** option is selected for a recurrence in the Alarm Edit dialog.

  - Check each day which is a working day.
  - **Daily start time**: enter the time at which you start work each day.
  - **Daily end time**: enter the time at which you finish work each day.

- **KOrganizer event duration**: Enter the event duration to set in KOrganizer for alarms which are copied to KOrganizer. The default duration is zero.

3.3 Storage

The **Storage** section lets you choose options for saving and archiving alarms:

- **New Alarms & Templates**: Specify which calendar to store new alarms and alarm templates in when using multiple alarm calendars:

  - **Store in default calendar**: New alarms and alarm templates are automatically added to the default alarm calendar without prompting for confirmation.
  - **Prompt for which calendar to store in**: When you create a new alarm or alarm template and there is more than one writeable alarm calendar, you will be prompted to choose which calendar to save it in. Note that when alarms are saved on expiry, they are always stored in the default archived alarm calendar without prompting.

- **Archived Alarms** group box: These options control the storage of archived alarms in the default archived alarm calendar.

  - **Keep alarms after expiry**: Select this option to archive expired and deleted alarms. Deselect it to keep no record of alarms once they cease to be active. Note that deleted alarms are only archived if they have previously been triggered. If you delete an alarm before it ever triggers, it is discarded.
  - **Discard archived alarms after**: Set the number of days to store expired and deleted alarms in the archive, after which they are permanently deleted.
  - **Clear archived alarms**: This button discards all currently archived alarms from the default archived alarm calendar. (Other archived alarm calendars are left unchanged in case they are shared with other people.) This has no effect on alarms which subsequently expire or are deleted; they will continue to be archived according to the selected options.

3.4 Email

The **Email** section lets you choose options for sending and addressing email alarms:

> NOTE
> Options dependent on KMail are only available if KAlarm's Akonadi plugin is installed and enabled.

- **Email client**: Specify the email client to be used to send email alarms:

  - **KMail**: When an email alarm is triggered, the email is sent automatically using KMail.
  - **Sendmail**: When an email alarm is triggered, the email is sent automatically using sendmail®. This option will only work if your system is configured to use sendmail®, or a sendmail® compatible mail transport agent such as postfix or qmail.

- **Copy sent emails into KMail's "sent-mail" folder**: Select this option if, every time an email alarm is triggered, you want a copy of the transmitted email to be stored in KMail's `sent-mail` folder.

> NOTE
> This option is not available when KMail is selected as the email client, since KMail automatically does this.

- **Notify when remote emails are queued**: Select this option to display a notification whenever an email alarm queues an email for sending to a remote system. This may be useful if, for example, you have a dial-up connection, or email is queued in KMail's `outbox` folder, so that you can ensure that you do whatever is needed to actually transmit the email.

- Select your email address to be used as the sender's address in email alarms:

  – Select **From** to enter an email address.
  – Select **Use default KMail identity** to use your default email address which is configured in KMail.
  – Select **Use KMail identities** to be able to choose at the time you configure an email alarm which of KMail's email identities to use. KMail's default identity will be used for alarms which were already configured before you selected this option.

- Select your email address to be used for sending blind copies of email alarms to yourself when the **Copy email to self** option is selected:

  – Select **Bcc** to enter an email address. If blind copies are to be sent to your account on the computer which KAlarm runs on, you could simply enter your user login name here.

  – Select **Use default KMail identity** to use your default email address which is configured in KMail.

3.5 View

The **View** section lets you control some aspects of KAlarm's appearance. In the **General** tab:

- **Show in system tray** group box: When selected, the system tray icon is displayed while KAlarm is running, subject to the selected option:

  – **Always show**: The system tray icon is always displayed.
  – **Automatically hide if no active alarms**: The system tray icon is hidden if there are no active alarms.
  – **Automatically hide if no alarm due within time period**: The system tray icon is hidden if no alarm is due within the entered time period, starting from now.

  When the system tray icon is automatically hidden, you can make it visible by means of the system tray option to show hidden icons.

  When **Show in system tray** is selected, closing the system tray icon closes all KAlarm main windows, and if no message windows are visible, quits the application.

- **System Tray Tooltip** group box: These options control what information is shown in the tooltip which appears when the mouse cursor hovers over KAlarm's system tray icon.

  – **Show next 24 hours' alarms**: When selected, a summary of the first few alarms due in the next 24 hours is displayed.
  – **Maximum number of alarms to show**: Deselect this option to display all of the next 24 hours' alarms. Select it to set the maximum number of alarms which will be displayed.
  – **Show alarm time**: Select this option to show the time at which each alarm is scheduled.
  – **Show time until alarm**: Select this option to show the length of time remaining before each alarm's next scheduled occurrence. The length of time is shown in hours and minutes.
    * **Prefix**: Specify a symbol or text to show in front of the length of time until the alarm, to distinguish it from the time at which the alarm is scheduled.

- The **Alarm List** group box allows the selection of the colors used in the alarm list in KAlarm's main window, to show disabled and archived alarms.

The **Alarm Windows** tab contains options to control the appearance of alarm message windows.

- **Position windows far from mouse cursor**: Select this option to display alarm message windows as far away from the current mouse cursor position as possible. This minimizes the chance of accidentally acknowledging an alarm by unintentionally clicking on a button just as the message window appears.

- **Center windows, delay activating window buttons**: Select this option to display alarm message windows in the center of the screen. To reduce the chance of accidentally acknowledging the alarm, the window's buttons are initially disabled. The delay in seconds before they become active is set in **Button activation delay (seconds)**.

- **Message windows have a titlebar and take keyboard focus**: This option controls whether alarm message windows are modal or not, i.e. whether they grab the keyboard focus when they appear. See the Alarm Message Display section for details.

3.6 Edit

The **Edit** section lets you choose default values for the options in the Alarm Edit dialog:

- The **General** tab contains options which apply to all alarm types.

  - Set the default method for displaying alarm messages.
  - Set the default states for the **Show in KOrganizer** and **Cancel if late** check boxes.
  - Set the default recurrence type.
  - Select the default handling in non-leap years of yearly recurrences scheduled for February 29th.

- The **Alarm Types** tab contains options which apply to specific types of alarm.

  - For display alarms:
    * Set the default states for the **Auto-close window after this time** and **Confirm acknowledgment** check boxes.
    * Set the default reminder period units.
    * Set the default special display alarm actions.
    * Set the default sound options. Note that a default sound file may be specified even if the sound type is not set to **Sound file**.
  - For command alarms:
    * Set the default states for the **Enter a script** and **Execute in terminal window** check boxes.
  - For email alarms:
    * Set the default state for the **Copy email to self** check box.

- The **Font & Color** tab lets you set the default appearance of alarm messages. Select their default font, and foreground and background colors.

Chapter 4

Command Line Operation

When command line parameters are supplied, KAlarm does not display the list of scheduled alarms as described in Using KAlarm above. Command line options specific to KAlarm may be used to perform the following operations:

- schedule a new alarm

- control KAlarm's display mode

- obtain help

Additional command line options are provided primarily to enable other programs to interface to KAlarm. They are described in the chapter Developer's Guide to KAlarm.

The command line must only contain options applicable to one KAlarm operation. If you want to perform multiple operations, you must invoke KAlarm multiple times with a single set of options each time.

4.1   Schedule a New Alarm

The following options are used to schedule a new alarm:

Option	Description
`-a, --ack-confirm`	Prompt for confirmation when the alarm message is acknowledged.
`-A, --attach URL`	Specify the path or URL of a file which is to be attached to the email. This option may be repeated as necessary. `--mail` must be specified with this option.
`--auto-close`	Automatically close the alarm window after the expiry of the `--late-cancel` period. `--late-cancel` must be specified with this option.
`-b, --beep`	Make an audible beep when the message is displayed. `--speak`, `--play` and `--play-repeat` cannot be specified with this option.
`--bcc`	Blind copy the email to yourself. `--mail` must be specified with this option.

`-c,--color,--colour color`	Set the message background color to the specified Qt™ color name or hex code 0xRRGGBB.
`-C,--colorfg,--colourfg color`	Set the message foreground color to the specified Qt™ color name or hex code 0xRRGGBB.
`-d,--disable`	Disable the alarm. It will not trigger until it has been manually enabled.
`--disable-all`	Disable alarm monitoring. This prevents any alarms from being triggered until you re-enable alarms or restart KAlarm, e.g. at next login. `--triggerEvent` cannot be specified with this option.
`-e,--exec commandline`	Specify a shell command to execute. If specified, this option must be the last KAlarm option in KAlarm's command line. All subsequent command parameters and options are interpreted as forming the command line to execute. `--file` and `--exec-display` and `--mail` cannot be specified with this option. `--ack-confirm`, `--beep`, `--color` and `--colorfg` are ignored with this option.
`-E,--exec-display commandline`	Specify a shell command to execute to generate the alarm message text. If specified, this option must be the last KAlarm option in KAlarm's command line. All subsequent command parameters and options are interpreted as forming the command line to execute. `--exec`, `--file` and `--mail` cannot be specified with this option.
`-f,--file URL`	Specify the path or URL of a text or image file whose contents are to form the alarm message. `--exec`, `--exec-display` and `--mail` cannot be specified, and *message* must not be present with this option.
`-F,--from-id ID`	Use the specified KMail identity as the sender of the email. `--mail` must be specified with this option.
`-i,--interval period`	Set the interval between repetitions of the alarm. Hours/minutes are specified in the format *nHnM*, where *n* is a number, e.g. 3H30M. Other time periods are specified in the format *nX*, where *n* is a number and *X* is one of the following letters: Y (years), M (months), W (weeks), D (days). If `--recurrence` is also specified, Y (years) and M (months) are not allowed. Mandatory if `--repeat` or `--until` is specified.
`-k,--korganizer`	Show the alarm as an event in KOrganizer's active calendar.

`-l,--late-cancel period`	Cancel the alarm if it cannot be triggered within the specified `period` after the correct time. Hours/minutes are specified in the format `nHnM`, where `n` is a number, e.g. 3H30M. Other time periods are specified in the format `nX`, where `n` is a number and `X` is one of the following letters: W (weeks), D (days). The default value of `period` is 1 minute.
`-L,--login`	Trigger the alarm every time you log in. `--interval`, `--repeat` and `--until` cannot be specified with this option.
`-m,--mail address`	Send an email to the specified address. This option may be repeated as necessary. `--exec`, `--exec-display` and `--file` cannot be specified with this option. `--ack-confirm`, `--beep`, `--color` and `--colorfg` are ignored with this option.
`-n,--name`	Specify a name to help you to identify the alarm.
`-N,--notify`	Display the alarm as a notification, not in a window. `--color`, `--colorfg`, `--play`, `--ack-confirm` and `--auto-close` cannot be specified with this option.
`-p,--play URL`	Specify the path or URL of an audio file to be played once, either as an audio alarm or when the alarm message is displayed. `--play-repeat`, `--beep` and `--speak` cannot be specified with this option.
`-P,--play-repeat URL`	Specify the path or URL of an audio file to be played repeatedly, either until **Stop Play** is used, or for as long as the alarm message is displayed. `--play`, `--beep` and `--speak` cannot be specified with this option.
`--recurrence spec`	Set the alarm to recur. Specify the recurrence using iCalendar syntax (defined in RFC2445), e.g.'FREQ=MONTHLY;COUNT=4;INTERVAL=3;BYDAY=-1MO'. `--until` cannot be specified with this option.
`-r,--repeat count`	Set the number of times the alarm should be triggered, or if a recurrence is specified with `--recurrence`, the number of times the alarm should be triggered each time `--recurrence` activates it (i.e. a repetition within a recurrence). If `--recurrence` is not present, specify -1 to repeat the alarm indefinitely. `--interval` must be, and `--until` cannot be, specified with this option.

`-R, --reminder period`	Output a reminder alarm the specified length of time before or after the main alarm and each of its recurrences (if any). The `period` is specified in the same format as described for `--late-cancel`. By default, the reminder will occur before the alarm. To specify a reminder after the alarm, prefix `period` with `+`, e.g. +3D. This option cannot be specified with `--exec`, `--mail` or `--reminder-once`.
`--reminder-once period`	Output a reminder alarm once, the specified length of time before or after the first recurrence of the alarm. No reminder will be displayed before or after subsequent recurrences (if any). The `period` is specified in the same format as described for `--reminder`. This option cannot be specified with `--exec`, `--mail` or `--reminder`.
`-s, --speak`	Speak the message when it is displayed. This option requires KAlarm to have been built with speech enabled and the Qt™ Speech module to be installed and working. `--beep`, `--play` and `--play-repeat` cannot be specified with this option.
`-S, --subject subject`	The subject line of the email. `--mail` must be specified with this option.
`-t, --time date/time`	Trigger alarm on the date or at the date/time specified. Specify a date without a time in the format `yyyy-mm-dd[ TZ]`; specify a date and time by `[[[yyyy-]mm-]dd-]hh:mm[ TZ]` (where omitted, date fields default to the values for today). If no time zone is specified, the local system time zone is assumed. If a time zone specifier `TZ` is present, it may be the name of a system time zone (e.g.**Europe/London**), or **UTC** representing the UTC time zone.
`-v, --volume percentage`	Set the audio volume for playing the audio file. This option can only be used when `--play` or `--play-repeat` is specified.
`-u, --until date/time`	Repeat the alarm until the date or date/time specified. Specify the date or date/time using the same syntax as for `--time`. Note that if `--time` is specified, the time zone will be taken from its value and no time zone may be included in the `--until` value. `--interval` must be, and `--repeat` and `--recurrence` cannot be, specified with this option.
`message`	Message text to display or, if `--mail` is specified, the body of the email message.

Either a message text, `--file`, `--exec`, `--exec-display`, `--play` or `--play-repeat` must be specified; except as noted above, all the options are optional.

Two alternative examples which display a multi-line message with a red background at 10 p.m. on the 27th of this month are:

```
% kalarm -c red -t 27-22:00 "Remember to\nSTOP"
% kalarm -c 0xFF0000 -t 27-22:00 "Remember to\nSTOP"
```

4.2 Other Options

The following options are used to perform various functions, including displaying the Alarm Edit dialog.

Option	Description
`--edit eventID`	Display the Alarm Edit dialog to edit the alarm with the specified event ID. The event ID is the unique ID of the event, optionally prefixed by the configuration name or numeric ID of the resource containing the event, in the format `[resourceID:]eventUID`.
`--edit-new-audio`	Display the Alarm Edit dialog, in order to edit a new audio alarm.
`--edit-new-command`	Display the Alarm Edit dialog, in order to edit a new command alarm.
`--edit-new-display`	Display the Alarm Edit dialog, in order to edit a new display alarm.
`--edit-new-email`	Display the Alarm Edit dialog, in order to edit a new email alarm.
`--edit-new-preset templateName`	Display the Alarm Edit dialog, preset with the alarm template of the specified name, in order to edit a new alarm.
`--list`	Output a list of scheduled alarms to `stdout`. The list shows brief details of each pending alarm: its resource identifier, UID, next scheduled time and message text or file.
`--tray`	Display KAlarm as an icon in the system tray.
`--disable-all`	Disable monitoring of all alarms.

See also:

kf5options(7)
qt5options(7)

Chapter 5

Developer's Guide to KAlarm

KAlarm provides an interface to allow other applications to request the following functions:

- schedule a new alarm
- cancel an already scheduled alarm
- trigger an already scheduled alarm
- display the Alarm Edit dialog
- list scheduled alarms

Each of the above functions is implemented both by a D-Bus call and by the command line. D-Bus calls should be used in preference if KAlarm is already running.

5.1 D-Bus Interface

The D-Bus calls described in this document are all implemented in KAlarm's `/kalarm` D-Bus object path. The interface is defined in the files `org.kde.kalarm.kalarm.xml` and `kalarmiface.h`.

5.1.1 cancelEvent

Name

cancelEvent – cancel an already scheduled alarm.

Synopsis

```
void cancelEvent(const QString& eventID)
```

Parameters

eventID

Specifies the unique ID of the event to be canceled, optionally prefixed by the configuration name or numeric ID of the resource containing the event, in the format `[resourceID:]eventUID`.

Description

`cancelEvent()` is a D-Bus call to cancel the specified alarm. KAlarm deletes the alarm from the calendar without displaying or executing it.

5.1.2   triggerEvent

Name

triggerEvent – trigger an already scheduled alarm.

Synopsis

```
void triggerEvent(const QString& eventID)
```

Parameters

eventID

Specifies the unique ID of the event to be triggered, optionally prefixed by the configuration name or numeric ID of the resource containing the event, in the format *[resourceID:]eventUID*.

Description

`triggerEvent()` is a D-Bus call to trigger the immediate display or execution of the specified alarm (regardless of what time it is scheduled for). KAlarm retrieves the alarm from the calendar and then displays or executes it.

If the alarm is already due, KAlarm then deletes all scheduled occurrences of the alarm up to the current time, and if no repetitions of the alarm still remain, the alarm is deleted from the calendar. If the alarm is not due yet, its scheduled occurrences are left unchanged.

5.1.3   scheduleMessage

Name

scheduleMessage – schedule a new alarm message.

Synopsis

```
bool scheduleMessage(const QString& name, const QString& message, const QString&
startDateTime, int lateCancel, unsigned flags, const QString& bgColor, const
QString& fgColor, const QString& font, const QString& audioURL, int reminderMins,
const QString& recurrence, int subRepeatInterval, int subRepeatCount)
```

```
bool scheduleMessage(const QString& name, const QString& message, const QString&
startDateTime, int lateCancel, unsigned flags, const QString& bgColor, const
QString& fgColor, const QString& font, const QString& audioURL, int reminderMins,
int recurType, int recurInterval, int recurCount)
```

```
bool scheduleMessage(const QString& name, const QString& message, const QString&
startDateTime, int lateCancel, unsigned flags, const QString& bgColor, const
QString& fgColor, const QString& font, const QString& audioURL, int reminderMins,
int recurType, int recurInterval, const QString& endDateTime)
```

Parameters

name

> Specifies an optional name for the alarm.

message

> Specifies the text of the message to be scheduled, or if *flags* has the **DISPLAY_COMMAND**
> bit set, specifies the command line to execute to generate the message text.

startDateTime

> Specifies the scheduled date, or date and time, at which the message should be displayed.
> For a date-only alarm, the string should be in the format *YYYY–MM–DD[TZ]* (as returned
> by QDate::toString(Qt::ISODate)). For an alarm with a date and time, the string should
> be in the format *YYYY–MM–DDTHH:MM[:SS][TZ]* (as returned by QDateTime::toString(Qt
> ::ISODate)) or *HH:MM[:SS]* (as returned by QTime::toString(Qt::ISODate)). If no date is
> specified, today's date is used. Note that any seconds value is ignored.
>
> If no time zone is specified, the local system time zone is assumed. If a time zone specifier
> *TZ* is present, it may be the name of a system time zone (e.g. **Europe/London**), or **UTC**
> representing the UTC time zone.

lateCancel

> Causes the alarm to be canceled if it cannot be triggered within the specified number of
> minutes after the alarm's scheduled time. If the value is 0, the alarm will not be canceled
> no matter how late it is triggered.

flags

> Specifies the logical OR of the desired alarm flags. The flag bits are those defined in class
> KAlarmIface in kalarmiface.h. Note that not all flag bits are applicable to message alarms.

bgColor

> Specifies the background color for displaying the message. The string may be in the format
> '#RRGGBB' (as returned by QColor::name()) where RR, GG and BB are two-digit hexadec-
> imal values for red, green and blue. Alternatively the string may be in any of the other
> formats accepted by QColor::setNamedColor(), such as a name from the X color database
> (e.g. 'red' or 'steelblue'). Set the string to null to specify the current default background
> color.

fgColor

> Specifies the foreground color for displaying the message. The format of the string is the
> same as for *bgColor*, or alternatively set the string to null to specify the current default
> foreground color.

font

> Specifies the font for displaying the message. The format of the string is that output by QF
> ont::toString(). Set the string to null to use the default message font current at the time
> the message is displayed.

audioURL

> Specifies the audio file which is to be played when the message is displayed. Set the value
> to null if no audio file is to be played.

reminderMins

> Specifies the number of minutes in advance of the main alarm and of each of its recurrences
> (if any) at which a reminder alarm should be displayed. Specify a negative value for a
> reminder to be displayed after the main alarm. Specify 0 if no reminder is required.

recurrence

> Specifies a regular recurrence for the alarm, using iCalendar syntax as defined in RFC2445.
> For example, 'FREQ=MONTHLY;COUNT=4;INTERVAL=3;BYDAY=-1MO' would specify
> 4 repetitions at 3-monthly intervals on the last Monday of the month. For a non-recurring
> alarm, specify an empty string.

recurType

> Specifies the recurrence type for the alarm. The permissible values are MINUTELY, DAILY, WEEKLY, MONTHLY, YEARLY. These are defined in class `KAlarmIface` in `kalarmiface.h`. Monthly recurrences are of the day of the month type, and yearly recurrences are of the date in the year type, with the date in both cases taken from the `startDateTime` parameter.

recurInterval

> Specifies the number of periods (minutes/days/weeks/months/years as specified by `recurType`) between recurrences of the alarm.

recurCount

> Specifies the number of times that the alarm should be repeated. Specify -1 to repeat the alarm indefinitely.

endDateTime

> Specifies the end date, or date and time, for recurrences of the alarm. If `startDateTime` includes a time, this parameter must also include a time; if `startDateTime` contains only a date, this parameter must also contain only a date. It must not contain a time zone specifier; the same time zone as for `startDateTime` is used to interpret this parameter's value.

subRepeatInterval

> Specifies the number of minutes between sub-repetitions of the alarm. Specify 0 for no sub-repetition. Ignored if no recurrence is specified.

subRepeatCount

> Specifies the number of sub-repetitions of the alarm, including the initial occurrence.

Description

`scheduleMessage()` is a D-Bus call to schedule the specified alarm message for display at the specified date and time. It has three forms. The most general form allows an arbitrary recurrence to be specified – use this also for non-repeating alarms. The other forms provide convenient access to a restricted set of alarm recurrence types, one specifying a repetition count and the other an end time.

If the scheduled time (including any repetitions) has already passed, KAlarm immediately displays the message (unless the `lateCancel` value indicates that it is now too late to display the alarm, in which case KAlarm ignores the request). If the scheduled time (or a repetition) is in the future, KAlarm adds the alarm message to the default active alarm calendar for later display.

5.1.4   scheduleFile

Name

scheduleFile – schedule a new alarm which displays the contents of a text or image file.

Synopsis

```
 bool scheduleFile(const QString& name, const QString& URL, const QString& startD
ateTime, int lateCancel, unsigned flags, const QString& bgColor, const QString&
audioURL, int reminderMins, const QString& recurrence, int subRepeatInterval,
int subRepeatCount)

 bool scheduleFile(const QString& name, const QString& URL, const QString& startD
ateTime, int lateCancel, unsigned flags, const QString& bgColor, const QString&
audioURL, int reminderMins, int recurType, int recurInterval, int recurCount)

 bool scheduleFile(const QString& name, const QString& URL, const QString& startD
ateTime, int lateCancel, unsigned flags, const QString& bgColor, const QString&
audioURL, int reminderMins, int recurType, int recurInterval, const QString&
endDateTime)
```

Parameters

name

Specifies an optional name for the alarm.

URL

Specifies the text or image file whose contents are to be displayed in the message to be scheduled.

startDateTime

Specifies the scheduled date, or date and time, at which the message should be displayed. For a date-only alarm, the string should be in the format *YYYY-MM-DD[TZ]* (as returned by `QDate::toString(Qt::ISODate)`). For an alarm with a date and time, the string should be in the format *YYYY-MM-DDTHH:MM[:SS][TZ]* (as returned by `QDateTime::toString(Qt::ISODate)`) or *HH:MM[:SS]* (as returned by `QTime::toString(Qt::ISODate)`). If no date is specified, today's date is used. Note that any seconds value is ignored.

If no time zone is specified, the local system time zone is assumed. If a time zone specifier *TZ* is present, it may be the name of a system time zone (e.g. **Europe/London**), or **UTC** representing the UTC time zone.

lateCancel

Causes the alarm to be canceled if it cannot be triggered within the specified number of minutes after the alarm's scheduled time. If the value is 0, the alarm will not be canceled no matter how late it is triggered.

flags

Specifies the logical OR of the desired alarm flags. The flag bits are those defined in class `KAlarmIface` in `kalarmiface.h`. Note that not all flag bits are applicable to file alarms.

bgColor

Specifies the background color for displaying the file. The string may be in the format '#RRGGBB' (as returned by `QColor::name()`) where RR, GG and BB are two-digit hexadecimal values for red, green and blue. Alternatively the string may be in any of the other formats accepted by `QColor::setNamedColor()`, such as a name from the X color database (e.g. 'red' or 'steelblue'). Set the string to null to specify the current default background color.

audioURL

Specifies the audio file which is to be played when the message is displayed. Set the value to null if no audio file is to be played.

reminderMins

Specifies the number of minutes in advance of the main alarm and of each of its recurrences (if any) at which a reminder alarm should be displayed. Specify a negative value for a reminder to be displayed after the main alarm. Specify 0 if no reminder is required.

recurrence

Specifies a regular recurrence for the alarm, using iCalendar syntax as defined in RFC2445. For example, 'FREQ=MONTHLY;COUNT=4;INTERVAL=3;BYDAY=-1MO' would specify 4 repetitions at 3-monthly intervals on the last Monday of the month. For a non-recurring alarm, specify an empty string.

recurType

Specifies the recurrence type for the alarm. The permissible values are MINUTELY, DAILY, WEEKLY, MONTHLY, YEARLY. These are defined in class `KAlarmIface` in `kalarmiface.h`. Monthly recurrences are of the day of the month type, and yearly recurrences are of the date in the year type, with the date in both cases taken from the *startDateTime* parameter.

recurInterval

Specifies the number of periods (minutes/days/weeks/months/years as specified by *recurType*) between recurrences of the alarm.

recurCount

> Specifies the number of times that the alarm should be repeated. Specify -1 to repeat the alarm indefinitely.

endDateTime

> Specifies the end date, or date and time, for recurrences of the alarm. If *startDateTime* includes a time, this parameter must also include a time; if *startDateTime* contains only a date, this parameter must also contain only a date. It must not contain a time zone specifier; the same time zone as for *startDateTime* is used to interpret this parameter's value.

subRepeatInterval

> Specifies the number of minutes between sub-repetitions of the alarm. Specify 0 for no sub-repetition. Ignored if no recurrence is specified.

subRepeatCount

> Specifies the number of sub-repetitions of the alarm, including the initial occurrence.

Description

`scheduleFile()` is a D-Bus call to schedule the specified text or image file for display at the specified date and time. Apart from specifying a file path or URL and omitting the foreground color and font, its usage is identical to `scheduleMessage` - see the description of that function for further details.

5.1.5 scheduleCommand

Name

scheduleCommand – schedule a new alarm which executes a shell command.

Synopsis

```
 bool scheduleCommand(const QString& name, const QString& commandLine, const
QString& startDateTime, int lateCancel, unsigned flags, const QString& recurre
nce, int subRepeatInterval, int subRepeatCount)
```

```
 bool scheduleCommand(const QString& name, const QString& commandLine, const
QString& startDateTime, int lateCancel, unsigned flags, int recurType, int re
curInterval, int recurCount)
```

```
 bool scheduleCommand(const QString& name, const QString& commandLine, const
QString& startDateTime, int lateCancel, unsigned flags, int recurType, int re
curInterval, const QString& endDateTime)
```

Parameters

name

> Specifies an optional name for the alarm.

commandLine

> Specifies the command whose execution is to be scheduled. The *flags* parameter indicates whether this parameter contains a shell command line or a command script.

startDateTime

Specifies the scheduled date, or date and time, at which the message should be displayed. For a date-only alarm, the string should be in the format *YYYY-MM-DD[TZ]* (as returned by QDate::toString(Qt::ISODate)). For an alarm with a date and time, the string should be in the format *YYYY-MM-DDTHH:MM[:SS][TZ]* (as returned by QDateTime::toString(Qt::ISODate)) or *HH:MM[:SS]* (as returned by QTime::toString(Qt::ISODate)). If no date is specified, today's date is used. Note that any seconds value is ignored.

If no time zone is specified, the local system time zone is assumed. If a time zone specifier *TZ* is present, it may be the name of a system time zone (e.g. **Europe/London**), or **UTC** representing the UTC time zone.

lateCancel

Causes the alarm to be canceled if it cannot be triggered within the specified number of minutes after the alarm's scheduled time. If the value is 0, the alarm will not be canceled no matter how late it is triggered.

flags

Specifies the logical OR of the desired alarm flags. The flag bits are those defined in class KAlarmIface in kalarmiface.h. Note that not all flag bits are applicable to command alarms.

recurrence

Specifies a regular recurrence for the alarm, using iCalendar syntax as defined in RFC2445. For example, 'FREQ=MONTHLY;COUNT=4;INTERVAL=3;BYDAY=-1MO' would specify 4 repetitions at 3-monthly intervals on the last Monday of the month. For a non-recurring alarm, specify an empty string.

recurType

Specifies the recurrence type for the alarm. The permissible values are MINUTELY, DAILY, WEEKLY, MONTHLY, YEARLY. These are defined in class KAlarmIface in kalarmiface.h. Monthly recurrences are of the day of the month type, and yearly recurrences are of the date in the year type, with the date in both cases taken from the *startDateTime* parameter.

recurInterval

Specifies the number of periods (minutes/days/weeks/months/years as specified by *recurType*) between recurrences of the alarm.

recurCount

Specifies the number of times that the alarm should be repeated. Specify -1 to repeat the alarm indefinitely.

endDateTime

Specifies the end date, or date and time, for recurrences of the alarm. If *startDateTime* includes a time, this parameter must also include a time; if *startDateTime* contains only a date, this parameter must also contain only a date. It must not contain a time zone specifier; the same time zone as for *startDateTime* is used to interpret this parameter's value.

subRepeatInterval

Specifies the number of minutes between sub-repetitions of the alarm. Specify 0 for no sub-repetition. Ignored if no recurrence is specified.

subRepeatCount

Specifies the number of sub-repetitions of the alarm, including the initial occurrence.

Description

scheduleCommand() is a D-Bus call to schedule the specified shell command line, or command script, for execution at the specified date and time. Apart from specifying a command and omitting the message color, font and audio file parameters, its usage is identical to scheduleMessage - see the description of that function for further details.

5.1.6   scheduleEmail

Name

scheduleEmail – schedule a new alarm which sends an email.

Synopsis

```
 bool scheduleEmail(const QString& name, const QString& fromID, const QString&
addresses, const QString& subject, const QString& message, const QString& att
achments, const QString& startDateTime, int lateCancel, unsigned flags, const
QString& recurrence, int subRepeatInterval, int subRepeatCount)
```

```
 bool scheduleEmail(const QString& name, const QString& fromID, const QString& add
resses, const QString& subject, const QString& message, const QString& attachmen
ts, const QString& startDateTime, int lateCancel, unsigned flags, int recurType,
int recurInterval, int recurCount)
```

```
 bool scheduleEmail(const QString& name, const QString& fromID, const QString& add
resses, const QString& subject, const QString& message, const QString& attachmen
ts, const QString& startDateTime, int lateCancel, unsigned flags, int recurType,
int recurInterval, const QString& endTime)
```

Parameters

name
>   Specifies an optional name for the alarm.

fromID
>   The KMail identity to use as the sender of the email. If empty, the sender's email address will be that configured in KAlarm's Email preferences.

addresses
>   A comma separated list of recipients' email addresses.

subject
>   Specifies the subject line of the email.

message
>   Specifies the email message body.

attachments
>   A comma-separated list of paths or URLs of files to send as email attachments.

startDateTime
>   Specifies the scheduled date, or date and time, at which the message should be displayed. For a date-only alarm, the string should be in the format *YYYY-MM-DD[TZ]* (as returned by QDate::toString(Qt::ISODate)). For an alarm with a date and time, the string should be in the format *YYYY-MM-DDTHH:MM[:SS][TZ]* (as returned by QDateTime::toString(Qt ::ISODate)) or *HH:MM[:SS]* (as returned by QTime::toString(Qt::ISODate)). If no date is specified, today's date is used. Note that any seconds value is ignored.
>
>   If no time zone is specified, the local system time zone is assumed. If a time zone specifier *TZ* is present, it may be the name of a system time zone (e.g. **Europe/London**), or **UTC** representing the UTC time zone.

lateCancel
>   Causes the alarm to be canceled if it cannot be triggered within the specified number of minutes after the alarm's scheduled time. If the value is 0, the alarm will not be canceled no matter how late it is triggered.

flags

> Specifies the logical OR of the desired alarm flags. The flag bits are those defined in class `KAlarmIface` in `kalarmiface.h`. Note that not all flag bits are applicable to email alarms.

recurrence

> Specifies a regular recurrence for the alarm, using iCalendar syntax as defined in RFC2445. For example, 'FREQ=MONTHLY;COUNT=4;INTERVAL=3;BYDAY=-1MO' would specify 4 repetitions at 3-monthly intervals on the last Monday of the month. For a non-recurring alarm, specify an empty string.

recurType

> Specifies the recurrence type for the alarm. The permissible values are MINUTELY, DAILY, WEEKLY, MONTHLY, YEARLY. These are defined in class `KAlarmIface` in `kalarmiface.h`. Monthly recurrences are of the day of the month type, and yearly recurrences are of the date in the year type, with the date in both cases taken from the *startDateTime* parameter.

recurInterval

> Specifies the number of periods (minutes/days/weeks/months/years as specified by *recurType*) between recurrences of the alarm.

recurCount

> Specifies the number of times that the alarm should be repeated. Specify -1 to repeat the alarm indefinitely.

endDateTime

> Specifies the end date, or date and time, for recurrences of the alarm. If *startDateTime* includes a time, this parameter must also include a time; if *startDateTime* contains only a date, this parameter must also contain only a date. It must not contain a time zone specifier; the same time zone as for *startDateTime* is used to interpret this parameter's value.

subRepeatInterval

> Specifies the number of minutes between sub-repetitions of the alarm. Specify 0 for no sub-repetition. Ignored if no recurrence is specified.

subRepeatCount

> Specifies the number of sub-repetitions of the alarm, including the initial occurrence.

Description

`scheduleEmail()` is a D-Bus call to schedule the specified email for sending at the specified date and time. Apart from specifying the email header and contents and omitting the message color, font and audio file parameters, its usage is identical to `scheduleMessage` - see the description of that function for further details.

5.1.7   scheduleAudio

Name

scheduleAudio – schedule a new alarm which executes a shell command.

Synopsis

```
 bool scheduleAudio(const QString& name, const QString& audioURL, int volumePerce
nt, const QString& startDateTime, int lateCancel, unsigned flags, const QString&
recurrence, int subRepeatInterval, int subRepeatCount)
```

```
 bool scheduleAudio(const QString& name, const QString& audioURL, int volumePerce
nt, const QString& startDateTime, int lateCancel, unsigned flags, int recurType,
int recurInterval, int recurCount)
```

```
 bool scheduleAudio(const QString& name, const QString& audioURL, int volumePerce
nt, const QString& startDateTime, int lateCancel, unsigned flags, int recurType,
int recurInterval, const QString& endDateTime)
```

Parameters

name

> Specifies an optional name for the alarm.

audioURL

> Specifies the audio file which is to be played.

volumePercent

> Specifies the volume level to use, as a percentage of full volume. Specify -1 to use the default volume.

startDateTime

> Specifies the scheduled date, or date and time, at which the message should be displayed. For a date-only alarm, the string should be in the format *YYYY-MM-DD[TZ]* (as returned by QDate::toString(Qt::ISODate)). For an alarm with a date and time, the string should be in the format *YYYY-MM-DDTHH:MM[:SS][TZ]* (as returned by QDateTime::toString(Qt ::ISODate)) or *HH:MM[:SS]* (as returned by QTime::toString(Qt::ISODate)). If no date is specified, today's date is used. Note that any seconds value is ignored.

> If no time zone is specified, the local system time zone is assumed. If a time zone specifier *TZ* is present, it may be the name of a system time zone (e.g. **Europe/London**), or **UTC** representing the UTC time zone.

lateCancel

> Causes the alarm to be canceled if it cannot be triggered within the specified number of minutes after the alarm's scheduled time. If the value is 0, the alarm will not be canceled no matter how late it is triggered.

flags

> Specifies the logical OR of the desired alarm flags. The flag bits are those defined in class KA larmIface in kalarmiface.h. Note that not all flag bits are applicable to command alarms.

recurrence

> Specifies a regular recurrence for the alarm, using iCalendar syntax as defined in RFC2445. For example, 'FREQ=MONTHLY;COUNT=4;INTERVAL=3;BYDAY=-1MO' would specify 4 repetitions at 3-monthly intervals on the last Monday of the month. For a non-recurring alarm, specify an empty string.

recurType

> Specifies the recurrence type for the alarm. The permissible values are MINUTELY, DAILY, WEEKLY, MONTHLY, YEARLY. These are defined in class KAlarmIface in kalarmiface.h. Monthly recurrences are of the day of the month type, and yearly recurrences are of the date in the year type, with the date in both cases taken from the *startDateTime* parameter.

recurInterval

> Specifies the number of periods (minutes/days/weeks/months/years as specified by *rec urType*) between recurrences of the alarm.

recurCount

    Specifies the number of times that the alarm should be repeated. Specify -1 to repeat the alarm indefinitely.

endDateTime

    Specifies the end date, or date and time, for recurrences of the alarm. If *startDateTime* includes a time, this parameter must also include a time; if *startDateTime* contains only a date, this parameter must also contain only a date. It must not contain a time zone specifier; the same time zone as for *startDateTime* is used to interpret this parameter's value.

subRepeatInterval

    Specifies the number of minutes between sub-repetitions of the alarm. Specify 0 for no sub-repetition. Ignored if no recurrence is specified.

subRepeatCount

    Specifies the number of sub-repetitions of the alarm, including the initial occurrence.

Description

`scheduleAudio()` is a D-Bus call to schedule the specified audio file to be played at the specified date and time. Apart from specifying a volume and omitting the message color and font parameters, its usage is identical to `scheduleMessage` - see the description of that function for further details.

5.1.8 edit

Name

edit – Display the Alarm Edit dialog to edit an alarm.

Synopsis

```
bool edit(const QString& eventID)
```

Parameters

eventID

    Specifies the unique ID of the event to be edited, optionally prefixed by the configuration name or numeric ID of the resource containing the event, in the format *[resourceID:]eventUID*.

Return value

false if the specified alarm could not be found or is read-only, true otherwise.

Description

`edit()` is a D-Bus call to display the Alarm Edit dialog to edit the specified alarm.

5.1.9 editNew

Name

editNew – Display the Alarm Edit dialog to edit a new alarm.

Synopsis

```
bool editNew(int type)
bool editNew(const QString& templateName)
```

Parameters

type

Specifies the alarm type. The permissible values are DISPLAY, COMMAND, EMAIL, AU-DIO. These are defined in class `KAlarmIface` in `kalarmiface.h`.

templateName

Specifies the name of an alarm template to base the new alarm on.

Return value

false if *type* has an invalid value, or if no template with the name *templateName* can be found; true otherwise.

Description

`editNew()` is a D-Bus call to display the Alarm Edit dialog to edit a new alarm. If an alarm type is specified as a parameter, a blank dialog is displayed. Alternatively, if an alarm template name is specified as a parameter, the dialog is preset with details from the template.

5.1.10 list

Name

list – Return a list of scheduled alarms.

Synopsis

```
QString list()
```

Return value

List of alarms, separated by newlines, each in the format *resource_id:UID time text*

Description

`list()` is a D-Bus call to return a string containing a summary of scheduled alarms. The list shows brief details of each pending alarm: its resource identifier, UID, next scheduled time and message text or file.

5.2   Command Line Interface

Command line options are provided to enable other programs to start up KAlarm if it is not already running, in order to trigger or cancel scheduled alarms, or schedule new alarms. The reason for using command line options for this purpose is that if KAlarm were started without any command line parameters and then sent D-Bus requests, it would start in its default graphical mode, which is clearly undesirable for an inter-program request.

> NOTE
> Programs should first check whether KAlarm is already running; if it is, they should instead use D-Bus calls to request these operations.

The command line options for scheduling a new alarm are as described in the chapter Command Line Operation. The options for triggering and canceling scheduled alarms are as follows:

> NOTE
> Normal users may also if they wish use these command line options (assuming that they can supply the necessary parameter information).

Option	Description
`--cancelEvent eventID`	Cancel the alarm with the specified event ID. The event ID is the unique ID of the event, optionally prefixed by the ID of the resource containing the event, in the format *[resourceID:]eventUID*. The action taken is the same as for the cancelEvent()D-Bus call. `--triggerEvent` cannot be specified with this option.
`--triggerEvent eventID`	Trigger the alarm with the specified event ID. The event ID is the unique ID of the event, optionally prefixed by the ID of the resource containing the event, in the format *[resourceID:]eventUID*. The action taken is the same as for the triggerEvent()D-Bus call. `--cancelEvent` cannot be specified with this option.

Examples are:

```
% kalarm --triggerEvent KAlarm-387486299.702
% kalarm --cancelEvent KAlarm-388886299.793
```

Chapter 6

Questions and Answers

1. *What configuration files does KAlarm use?*

   KAlarm's configuration is held in the following files in the folder **qtpaths --paths Generic-ConfigLocation** :

   - `kalarmrc` holds your KAlarm preferences.
   - `kalarmresources` holds the list of alarm calendars currently used by KAlarm.

2. *Where does KAlarm store its alarms?*

   When KAlarm is run the first time, it creates the following alarm calendars in the folder **qtpaths --paths GenericDataLocation** :

   - `kalarm/calendar.ics`, which holds active alarms.
   - `kalarm/expired.ics`, which holds archived alarms.
   - `kalarm/template.ics`, which holds alarm templates.
   - `kalarm/displaying.ics`, which is a special calendar file to hold details of alarms currently being displayed, which allows KAlarm, when it is restarted, to redisplay alarms which were being displayed when it last stopped.

   You can subsequently replace these calendars, except `displaying.ics`, or create additional alarm calendars in any location which you choose. You can find out which calendar files are currently in use by viewing each calendar's details in the alarm calendars list.

3. *What format are alarms stored in?*

   The calendar files in which KAlarm stores its alarms are text files whose format is defined by the document RFC2445 - Internet Calendaring and Scheduling Core Object Specification (iCalendar). This is the standard format used by all kdepim applications. KAlarm uses certain non-standard properties, in conformance with RFC2445. These are documented in the `DESIGN-kalarmcalendar.html` file which is distributed with KAlarm.

4. *What is the function of KAlarm's Akonadi plugin?*

   KAlarm uses its Akonadi plugin to provide all features which depend on Akonadi (the KDE PIM cross-desktop storage service). If this plugin is not installed and enabled, KAlarm will lack the following features:

   - Sending emails via KMail, leaving sendmail® as the only option to send emails (see Email preferences).
   - Drag and drop of emails.
   - Selection of email addresses from KAddressBook.
   - Import of birthdays from KAddressBook.

- Migration of Akonadi alarm calendar resources on the first run of a new version of KAlarm.

If the plugin is installed, it can be enabled or disabled in the General tab of the Configuration dialog.

5. *What is the program kalarmautostart?*

kalarmautostart is a little helper program whose function is to autostart KAlarm at login.

KAlarm is usually restored by the session manager at login (to redisplay its windows in the same state as they were when you logged off). But if it was not running when you logged off, it would not be started by the session manager and therefore needs to be autostarted. The problem is that when an application is both session managed and autostarted, there is no guarantee as to which will occur first. If autostart gets in first, it will prevent the session manager from restoring the application's state.

To avoid this problem, kalarmautostart is autostarted at login instead of KAlarm. All it does is wait for a short time (to ensure that the session manager has time to do its job) before starting KAlarm, at which point it terminates.

6. *How can I use KAlarm on a non-Plasma desktop?*

To run KAlarm on a non-Plasma desktop, the main requirement is to ensure that KAlarm is run automatically whenever you log in. More detailed instructions are contained in the `INSTALL` file which is distributed with KAlarm.

Chapter 7

Credits and License

KAlarm

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