The Konsole Handbook

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Contents

Abstract

This document is the user handbook for the Konsole application.
Konsole is an X terminal emulator for KDE.

Chapter 1

Introduction to Konsole

1.1 What is a terminal?

UNIX® operating systems were originally designed as text-only systems, controlled by keyboard commands -- what is known as a command-line interface (CLI). The X Window System® and KDE and other projects have since added the graphical interface you are now using. However, the underlying CLI system is still there, and is frequently the easiest, fastest and most powerful way to perform many tasks.

Konsole is what is known as an X terminal emulator, often referred to as a terminal or a shell. It gives you the equivalent of an old-fashioned text screen on your desktop, but one which can easily share the screen with your graphical applications. Windows® users may be familiar with the MS-DOS Prompt utility, which has the analogous function of offering a DOS™ command-line under Windows®. (Although the UNIX® CLIs offer far more power and ease of use than does DOS!)

Explaining the use of the UNIX® CLI is beyond the scope of this document, as it would require a lengthy book. Fortunately, many such books are available in every language in any good bookstore or library. There are also tutorials available on the Internet. Enjoy KDE, but don't be shy about learning to use the command-line! You will find that even learning just the basics will make your computer use much more efficient and enjoyable.

1.2 What makes Konsole special?

Konsole's advanced features include simple configuration and the ability to use multiple terminal shells in a single window, making for a less cluttered desktop.

Using Konsole, a user can open:

- Linux® console sessions
- Shell sessions
- Screen sessions
- Midnight Commander file manager sessions
- `Root` console sessions
- `Root` Midnight Commander sessions
- User created sessions

These sessions can be renamed to help you keep track of all your shells, or signaled (STOP, CONT, HUP, INT, TERM, KILL).

For more control over Konsole, a user can:

- hide/show the menubar and/or frame
- select the size of a Konsole window, fonts, color schemes, and key mapping
- change location of the scrollbar or hide the scrollbar
- change location of the tabbar or hide the tabbar

All chosen settings can be made the default for forthcoming sessions by saving them.

For those with a deep interest in the taxonomy of free X terminals, there are two others of this kind: xterm, the original, written even before X itself (a month or two), and xvt, a lightweight xterm clone, on which most other currently available derivatives (notably eterm) are based.

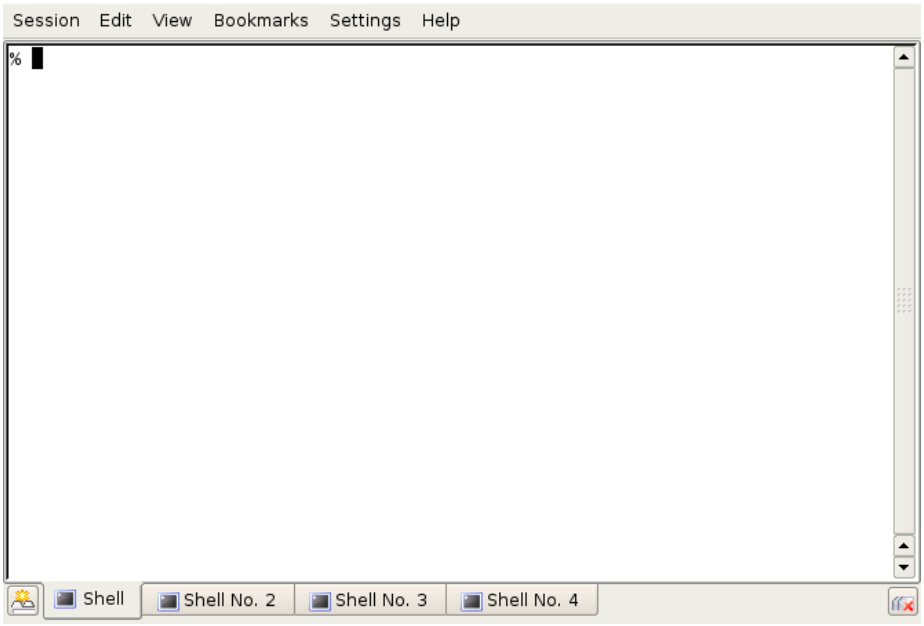
After a decade, Konsole is the first rewrite from the ground up. While xterm has definitely been hacked to death (its `README` begins with the words 'Abandon All Hope, Ye Who Enter Here'), Konsole offers a fresh start using contemporary technologies and understanding of X.

Chapter 2

Use of Konsole

2.1 Startup

When Konsole is started, an application (typically a UNIX® shell) runs in the window. Simply type at the prompt.



Konsole with 4 terminal sessions open.

A 'Tip of the Day' window may also appear on startup, offering hints on the use of Konsole. If you do not wish to receive tips, uncheck the Show tips on startup box.

2.2 History

As lines scroll off the top of the screen, they can be reviewed by moving the scroll bar upwards, scrolling with a mouse wheel or through the use of the Shift+Page Up (to move back a page), Shift+Page Down (to move forward a page), Shift+Up Arrow (to move up a line) and Shift+Down Arrow (to move down a line) keys (provided the History option is on).

In addition, Konsole mimics the FreeBSD console when **scroll lock** is pressed. When scroll lock is on, ordinary in- and output from the shell is suspended, and you can scroll through the history with **Page Up**, **Page Down**, and **Up Arrow** and **Down Arrow**.

Konsole's history can be configured via Settings → History...

Konsole provides a number of history related actions located in the Edit menu.

- Find in History...
- Find Next
- Find Previous
- Save History As...
- Clear History
- Clear All Histories

> NOTE
> In Konsole, references to history are to the text that is displayed in Konsole's window. The shell that is running in Konsole (e.g. bash) also has a 'history' which is unrelated to Konsole's history.

2.3 Sessions

If you often have to log into remote machines, or always run a similar set of terminal applications, you can use Konsole's 'Session' feature along with KDE's session management to automate a lot of this for you. Let's take the following example: You often have open an ssh session to the machine `administration` ready for generic administration tasks. You may have noticed the New Session button on Konsole's tab bar contains a menu if you click and hold on it, and you can choose new session types here. We are going to add new entries to this menu.

1. Click on the menu entry Settings → Configure Konsole...
2. Choose the Session tab.

3. Fill in the first entry with a name. This is the name that will show in the menu, and will be the default label instead of Shell when you start a session of this type.
4. Enter a command just as you normally would if you opened a new shell and were going to issue that command. For our first example above, you might type **ssh** *administration*.
5. On the lower part of the panel, configure this session's appearance. You can have a different font, colour scheme, and $TERM type for each session.
6. Press the Save Session... button. A dialog will ask you to confirm the filename.
7. Press OK.

You should now be able to press and hold the New Session button on the tab bar, and select your new session type from the list. A new shell session will open within the Konsole window, with the result of your executed command. In our example, you will be at an ssh passphrase prompt, and when you provide your passphrase, you will be logged into the remote machine. [1] Perhaps you want to remotely tail your http error logs on a webserver, you could use a commandline something like **ssh** -f *webserver* **tail** -f */var/log/httpd-error.log*.

You can use this to execute local commands as well. Try creating a session where the command is **tail** -f */var/log/messages*. In this case, exiting the running application will close the shell session as well.

One really nice use of this feature is if you find you always have the same set of open sessions, KDE can open them all for you automatically when you start a new KDE session. Simply have them open as you like when you exit KDE, and they will be saved with your KDE session, and restored just like any other application when you restart KDE.

> NOTE
> You can assign shortcuts to any session.

2.4 Mouse Buttons

This section details the use of the mouse buttons for the common right handed mouse button order. For the left handed mouse button order, swap left and right in the text below.

Left All left mouse button clicks will be sent to a mouse-aware application running in Konsole. If an application will react on mouse clicks, Konsole

[1] You can avoid this step also, by using ssh-agent, but that is a topic for another goodie.

indicates this by showing an arrow cursor. If not, an I-beam (bar) cursor is shown.

Holding the left mouse button down and dragging the mouse over the screen with a mouse-unaware application running will mark a region of the text. While dragging, the marked text is displayed reversed for visual feedback. Select Copy from the Edit menu to copy the marked text to the clipboard for further use within Konsole or another application. The selected text can also be dragged and dropped into compatible applications. Click on the selected text and drag it to the desired location. Depending on your KDE settings, you may need to hold the **Ctrl** key while dragging.

Normally, new-line characters are inserted at the end of each line selected. This is best for cut and paste of source code, or the output of a particular command. For ordinary text, the line breaks are often not important. One might prefer, however, for the text to be a stream of characters that will be automatically re-formatted when pasted into another application. To select in text-stream mode, hold down the **Ctrl** key while selecting normally.

Pressing the **Ctrl** and **Alt** keys along with the left mouse button will select a column of text.

Double-click with the left mouse button to select a word; triple-click to select an entire line.

If the upper or lower edge of the text area is touched while marking, Konsole scrolls up or down, eventually exposing text within the history buffer. The scrolling stops when the mouse stops moving.

After the mouse is released, Konsole attempts to keep the text in the clipboard visible by holding the marked area reversed. The marked area reverts back to normal as soon as the contents of the clipboard change, the text within the marked area is altered or the left mouse button is clicked.

To mark text on a mouse-aware application (Midnight Commander, for example) the **Shift** key has to be pressed when clicking.

Middle Pressing the middle mouse button pastes text currently in the clipboard. Holding down the **Ctrl** key as you press the middle mouse button pastes the text and sends it to Konsole.

> NOTE
> If you have a mouse with only two buttons, pressing both the left mouse button and right mouse button together emulates the middle mouse button of a three button mouse.

If you have a wheel as the middle button, rolling it in a mouse-unaware program will move Konsole's scrollbar.

Right The items that appear in the menu when the right mouse button is pressed depend on whether the menubar is visible.

Menubar is visible: Set Selection End, Copy, Paste, Send Signal, Detach Session, Rename Session..., Bookmarks and Close Session menu items.

Menubar is hidden: Show Menubar, Set Selection End, Copy, Paste, Send Signal, New Session, Detach Session, Rename Session..., Bookmarks, Settings and Close Session menu items.

In a mouse-aware application, press the **Shift** key along with the right mouse button to get the pop-up menu.

Pressing the **Ctrl** key and right mouse button brings up the Session menu.

2.5 Menu Bar

The menubar is at the top of the Konsole window. The menubar can be activated and deactivated by the Alt key.

Settings → Hide Menubar allows the menubar to be hidden. When the menubar is hidden, Show Menubar can be reached by right clicking in the window or by Alt+Ctrl+M, which is the default shortcut for activating the menubar. The menubar can also be toggled by assigning it a shortcut.

2.5.1 Session Menu

Session → New Shell Open a new session with a terminal shell. Alt+Ctrl+N can also be used, as described in more detail below.

Session → New Window Open a new Konsole window.

Session → New Linux Console Open a new session emulating a text-only Linux® system.

> NOTE
> See the file `README.linux.console` in the Konsole source package for detailed information on how the Linux® console differs from a typical UNIX® console. If this doesn't mean anything to you, you almost certainly don't need to worry about it.

Session → New Midnight Commander Open a new session with the Midnight Commander file browser.

> NOTE
> This menu entry will only be visible if Midnight Commander (**mc**) is installed on your system.

Session → New Root Midnight Commander Open a new session with the Midnight Commander file browser, as the `root` user.

After being prompted for the `root` password, the `#` prompt appears under the browser window, indicating that the user is working with `root` privileges. Again, working as `root` is frequently necessary but care should be taken to avoid accidental damage.

> NOTE
> This menu entry will only be visible if Midnight Commander (**mc**) is installed on your system.

Session → **New Root Shell** Open a new session with a terminal shell, as the `root` user.
After being prompted for the `root` password, the `#` prompt appears, indicating that the user is working with `root` privileges. This is frequently necessary for installing new software and other system maintenance, but care should be taken to avoid accidental damage.

Session → **New Screen Session** Open a new session with the Screen virtual terminal manager. See **`man`** `screen` for more information.

> NOTE
> This menu entry will only be visible if Screen (**screen**) is installed on your system.

Session → **New Shell at Bookmark** Start a new terminal shell, in a folder chosen from the bookmark list.

Session → **Print Screen...** Print the current screen.

Session → **Close Session** Close the current session.

Session → **Quit** Quit Konsole, closing all sessions and any applications launched from them.

You can also open a new session with a key shortcut. By default, Alt+Ctrl+N is used. You can also define your own key shortcuts through the Settings → Configure Shortcuts... menu command.

The list of available sessions will reflect what programs are installed along with any user defined sessions. The session list will be alphabetized for quick viewing.

Finally, note that the session types can be modified, and new types created, by using the configuration dialog, reached from the Settings → Configure Konsole... menu entry.

2.5.2 Edit Menu

Edit → **Copy** Copy the selected text to the clipboard.

Edit → **Paste (Shift+Insert)** Paste text from the clipboard at the cursor location.

Edit → **Send Signal** Send Signal - Send the specified signal to the shell process, or other process, that was launched when the new session was started.
Currently available signals are:

STOP	to stop process
CONT	continue if stopped
HUP	hangup detected on controlling terminal, or death of controlling process
INT	interrupt from keyboard
TERM	termination signal
KILL	kill signal
USR1	user signal 1
USR2	user signal 2

Refer to your system manual pages for further details by giving the command **man** `7 signal`.

Edit → **ZModem Upload... (Alt+Ctrl+U)** Send a file via ZModem.

Edit → **Clear Terminal** Clear all text from the session window.

Edit → **Reset & Clear Terminal** Reset and clear the session window.

Edit → **Find in History...** Find a word or string of text in the current history. Options allow case sensitive or backwards searches, and the use of regular expressions in searches. Press the Edit button to use the KDE graphical editor to create a regular expression.

Edit → **Find Next** Move to the next instance of the text for which you are searching.

Edit → **Find Previous** Move to the previous instance of the text for which you are searching.

Edit → **Save History As...** Save the current history as a text file.

Edit → **Clear History** Clear the history for the current session.

Edit → **Clear All Histories** Clear the history for all sessions.

2.5.3 View Menu

View → **Detach Session** Open the current session in a separate window. The name of the session is displayed on the titlebar of the new window.

View → **Rename Session... (Alt+Ctrl+S)** Open a dialog box allowing you to change the name of the current session. The name is displayed on the session tab. Alt+Ctrl+S can also be used.

View → Monitor for Activity Flag the current session so it will show an alert if activity occurs. An icon of a lit light bulb will appear in the session's tab. Use this to alert you if something happens while you are working in another session. The time before an alert can be modified in the Konsole preferences.

View → Monitor for Silence Flag the current session so it will show an alert if no activity occurs for 10 seconds. An icon of a dark light bulb will appear in the session's tab. Use this to alert you if a task stops while you are working in another session. The time before an alert can be modified in the Konsole preferences.

View → Send Input to All Sessions Flag the current session so any commands entered into it will be sent to all sessions. The session will have a small icon in its tab to remind you to be careful of what you enter! `rm -rf *`, for instance, is probably not a good idea.

View → Move Session Left (Ctrl+Shift+Left) Move the tab of the current session one tab to the left.

View → Move Session Right (Ctrl+Shift+Right) Move the tab of the current session one tab to the right.

Shift+Left and Shift+Right can be also be used to move between sessions.

View → Session icons... At the bottom of the menu is a list of the available sessions. Selecting one makes that session active.

You can also use the Shift+Left/Shift+Right keys to cycle through the available sessions.

2.5.4 Bookmarks Menu

Bookmarks → Add Bookmark Add the current location to the bookmark list.

Bookmarks → Edit Bookmarks Edit the bookmark list.

Bookmarks → New Bookmark Folder... Add a new folder to the bookmark list.

The bookmark list is displayed at the bottom of the menu. Select a bookmark to change to that location.

> NOTE
> You can use the bookmark editor to manually add URLs like ssh://user@host or telnet://host to open remote connections.

2.5.5 Settings Menu

Settings → **Hide Menubar** Hide the menubar.

Settings → **Tab Bar** Control visibility/location of tabbar: Hide, Top, or Bottom.

Settings → **Scrollbar** Control visibility/location of scrollbar: Hide, Left, or Right.

Settings → **Full Screen Mode (Ctrl+Shift+F)** Toggle window between full-screen and normal size.

Settings → **Bell** Set the bell: System Bell, System Notification, Visible Bell, or None.

Settings → **Font** Set font size: Enlarge Font or Shrink Font.

Use the Select... option to pick any combination of font, size and style.

Settings → **Encoding** Select character encoding.

Settings → **Keyboard** Choose desired keymapping.

The list of these keymappings is taken from `$KDEDIR/share/apps/konsole/*.keytab`. The file `$KDEDIR/share/apps/konsole/README.KeyTab` describes the `*.keytab` format in more detail. Add to or modify these files to match your needs. The default keytab is taken from `$KDEDIR/share/apps/konsole/README.default.Keytab`.

Settings → **Schema** Set colors of text and background.

The list is taken from `$KDEDIR/share/apps/konsole/*.schema`. The file `$KDEDIR/share/apps/konsole/README.Schema` describes the `*.schema` format in more detail. Add to or modify these files to match your needs. You can also create custom schemas through the preferences dialog at Settings → Configure Konsole....

Settings → **Size** Set size of text area (given in columns x rows).

Settings → **History...** Open a dialog where you can configure the history. The Enable check box toggles saving of lines that have scrolled off the top of the window. You can enter the Number of lines to remember in the text field, or use the spinner buttons to increase or decrease the number in steps of 100 lines. The Defaults button will reset the history to 1000 lines. Selecting Set Unlimited will cause all history to be saved. Press OK to save your changes, or Cancel to close the dialog without saving your settings.

Settings → **Save as Default** Save the current settings as the new default.

Settings → **Save Sessions Profile...** Save the current set of sessions under a name you choose. The profile can then be used by starting Konsole from the command-line with the *`--profile`* and the name of the profile.

Settings → **Configure Notifications...** Customize notifications for Konsole.

Settings → **Configure Shortcuts...** Customize keyboard shortcuts for Konsole commands.

Settings → **Configure Konsole...** Open the KDE Control Center module, allowing many additional changes to Konsole's interface and behavior, including the creation of custom schemas and modification of the available sessions.

2.5.6 Help Menu

Help → **Konsole Handbook** Open the table of contents of this document.

Help → **Tip of the Day** Display a helpful tip about the use of Konsole. Check the Show on start box to display a tip each time Konsole is started.

Help → **Report Bug...** Submit a bug report or a feature request for Konsole.

Help → **About Konsole** Information about Konsole's author

Help → **About KDE** Information about the KDE project

2.6 Tab Bar

The tabbar allows multiple terminal sessions to be attached to a single Konsole window.

Konsole with 4 terminal sessions open with the tabbar on the bottom.

The Settings → Tab Bar menu item allows the tabbar to be moved to the Top or Bottom. The tabbar can also be hidden by selecting Hide.

On the left side of the tabbar is a button which allows for a multitude of actions.

- Click on the button to start a new standard session.
- Clicking and holding on the button will popup a list of sessions to select.
- Right-clicking on the button (or any empty space on the tabbar) will popup up a menu to set certain options:
  - Tab Bar: Hide, Top, Bottom.
  - Tab Options: Text & Icons, Text Only, Icons Only.
  - Dynamic Hide will hide the tabbar when there is only one session opened.
  - Auto Resize Tabs will automatically resize the tabs to the width of the tabbar.

On the right side of the tabbar is a button that closes the current session. This button will be disabled when there is only one session running.

Right-clicking on any tab will popup another menu:

- Detach Session
- Rename Session...
- Monitor for Activity
- Monitor for Silence
- Send Input to All Sessions
- Select Tab Color...
- Switch to Tab...
- Close Session

2.7 Command-line Options

When Konsole is started from the command-line, various options can be specified to modify its behavior.

--help List the various options.

-e *command* Execute *command* instead of the normal shell.

> NOTE
> Any arguments after *command* will be passed to *command*, not Konsole.

--keytab *file* Start Konsole using a specified .keytab file to customize key bindings.

--keytabs List all of the available keytabs.

--ls Start with a login shell environment. What that does varies depending on your system, but generally it means that files such as `/.profile` or `/.bash_profile` will be read. (If that doesn't mean anything to you, don't worry about it, but keep in the back of your mind for when you realize you need it.)

--name *name* Set the name that appears in the titlebar.

--noclose Prevent Konsole from closing when an **exit** command is issued in the only session window.

--noframe Start Konsole without a frame.

--nohist Disable the saving of lines that scroll off the top of the window.

--nomenubar Start Konsole with the menubar hidden.

--noresize Disable the resizing of the terminal window.

--noscrollbar Start Konsole with the scrollbar hidden.

--notabbar Start Konsole with the tabbar hidden.

--noxft Start Konsole without Xft antialiasing. Antialiasing of a small font may be difficult to read.

--profile ***file*** Start Konsole using a saved set of sessions.

--profiles List all of the available profiles.

--schema ***name*** | ***file*** Start Konsole using schema 'name' or specified in 'file' to customize appearance.

--schemata List all of the available schemata.

--script Enable extended DCOP Qt™ functions.

-T ***title*** Set the window title.

--tn ***terminal*** Sets the environment variable TERM to the specified value. Read **man** `xterm` for more information on TERM.

--type ***type*** Start a session of the given type rather than the default.

--types List all of the available session types.

--vt_sz ***CCxLL*** Start a terminal window of CC Columns and LL lines.

--workdir ***dir*** Open with *dir* as the working folder.

Examples:

```
% konsole --vt_sz 90x25 --nohist
```

Starts a Konsole window with 90 columns and 25 rows, with no history

```
% konsole --noclose -e echo_args Hello, thanks for using ↩
    Konsole!
```

Starts a Konsole window with the text printed 'Hello, thanks for using Konsole!'

The *echo_args* is a simple Bash script:

```
#!/bin/bash
echo $*
```

Konsole also accepts generic Qt™ and KDE options:

--help-qt List Qt™-specific options

CAUTION
The following Qt™ options have no effect on Konsole:

--fn, --font ***fontname*** Defines the application font

--bg, --background ***color*** Sets the default background color

--fg, --foreground ***color*** Sets the default foreground color

--btn, --button ***color*** Sets the default button color

--help-kde List KDE-specific options

--help-all List all options

--author Show the authors' names

-v, --version Show the version number

--license Show license information

2.8 DCOP

For an introduction to DCOP and using **dcop** please look at the User Guide entry on DCOP.

Chapter 3

Credits and Copyright

As of KDE 3.4, Konsole is maintained by Kurt Hindenburg kurt.hindenburg@kdemail.org

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Appendix A

Konsole on non-Linux platforms

Information on building Konsole on platforms other than Linux® is available in the `README.ports` file in the Konsole source package. It provides a list of experts for certain platforms (Tru64, Solaris™, OpenBSD) and requests volunteers from other UNIX® platforms.

For more infomation please visit these websites:

- KDE on FreeBSD
- KDE on Solaris