

# Connectical LaTeX document class

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## Abstract

This is a document class for LaTeX specially developed for documentation produced at Connectical. It is mainly based upon the `scrartcl` document class included in the [KOMA-Script](#) package.

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## 1 Changes over the KOMA-Script article class

- The first page includes a black band with the inverse Connectical logo over it, right aligned.
- Different title layout for the `\maketitle` command.
- The table of contents is designed to be output just after the title of the document, and it will **always** force a new page after it. Also, when the first page has table of contents it won't have page numbering either.

## 2 Implementation

### 2.1 Version

Define our own version number and date of last-modification for this release.

```
\newcommand{\connecticalversion}{A0A3}  
\newcommand{\connecticalupdated}{2006/05/12}
```

### 2.2 Preliminary declarations

We must be sure that the user is running LaTeX 2e or better. Nearly everybody does, but checking for it does not harm.

```
\NeedsTeXFormat{LaTeX2e}
```

Declare which document class do we provide in this .cls file.

```
\ProvidesClass{connectical}%  
  [\connecticalupdated\space\connecticalversion\space La-  
TeX2e document class]
```

Load the class this one is based upon (`scrartcl`, from [KOMA-Script](#)). Also, pass options to it:

- `a4paper` - Here in Europe we use the DIN A4 paper size. If this needs to be changed someday, we'll have to move this parameter to the class itself, instead of hardcoding it here.
- `11pt` and `DIVcalc` - Select *standard* font size (11pt is enough for most cases: 10pt would be small for some stuff and 12pt is way too big) and declare whether we want text width and height being calculated depending on paper size and font size.
- `oneside` - Allows for printing either on one-sided media and two-sided media, without having a bad look when document is printed one-side.

```
\LoadClass[a4paper,11pt,DIVcalc,oneside]{scrartcl}
```

### 2.3 Document preamble

#### 2.3.1 Packages

We do load the `ae` package, which provides nice PostScript fonts when generating PDF output without the big mess of configuring TeX to produce good

output when using the T1 encoding. This way we can keep using the OT1 encoding, which is more compatible among different TeX/LaTeX distributions, without losing usage of extended character maps (ISO Latin, Unicode...)

The `aeguill` package provides french guillemets («like the ones enclosing this text») when using the `ae` package, which does not install a character map for them.

The two AMS packages (`amsmath` and `amssymb`) provide enhanced support for typesetting in math mode, as well as extra symbols used by the LaTeX generator included with [Docutils](#).

Finally, the `cmtt` package overrides the default Computer Modern monospaced font with a virtual version of it which provides extended character maps and more variations over the standard monospaced font (italic, bold, small caps...).

```
\usepackage{ae}
\usepackage{aeguill}
\usepackage{amsmath}
\usepackage{amssymb}
\usepackage[override]{cmtt}
```

We often use graphics and colored output in documents, so we provide the `color` and `graphicx` packages when loading our document class. In order to provide better output for graphics we check for pdfTeX being run and supply the appropriate option to the `graphicx` package in this case.

```
\usepackage[dvipsnames,usenames]{color}

\ifx\pdftexversion\undefined
  \usepackage{graphicx}
\else
  \usepackage[pdftex]{graphicx}
\fi
```

Last, but not least, do hyperlinks between sections of the document using the `hyperref` package. Blue is a nice colour for hyperlinks. Also, set the view to «fit width» when loading the PDF in a viewer (most viewers, including popular ones like Evince, Acrobat and Kpdf support this).

```
\usepackage[colorlinks=true,
  linkcolor=blue, urlcolor=blue,
  pdfstartview=FitH]{hyperref}
```

### 2.3.2 Command definitions

The `\email` command is used to insert an e-mail address. The address is converted into a clickable hyperlink. Similarly, the `\amail` command creates an hyperlinked e-mail address, but inserted between angles.

```
\newcommand{\email}[1]%
  {\href{mailto:#1}{#1}}

\newcommand{\amail}[1]%
  {\ensuremath\langle\email{#1}\ensuremath\rangle}
```

The `\cyear` command defines the year which the copyright notice of the document applies to. By default takes the current year as value, if not used in the document preamble.

```
\newcommand{\cyear}[1]%
  {\ifx\empty#1\empty\else\gdef\@cyear{#1}\fi}
```

Redefine the `\label` command so it creates targets which can get hyperlinked by using the `hyperref` package imported earlier in the document preamble.

```
\let\tmp@label=\label
\renewcommand{\label}[1]%
  {\hypertarget{#1}{\tmp@label{#1}}}
```

We also redefine the `\tableofcontents` command to style it. When using the table of contents in the document, the first page is set not to have page numbering, and text starts in the next page, after the table of contents. Note that we must reset the `page` counter to make LaTeX start numbering pages with the right number after the table of contents is put in the output!

```
\let\tmp@toc=\tableofcontents
\renewcommand{\tableofcontents}[0]{%
  \thispagestyle{empty}%
  \tmp@toc\newpage%
  \setcounter{page}{1}%
}%
```

This is the most elaborate redefinition: `\maketitle`. The title is set up so:

1. It has a black box over it, with a white Connectical logo aligned at the right into the box.

2. A separation of 5em follows.
3. The title is printed out, left aligned, in bold sans-serif face, with huge size.
4. A small space (1.5em) follows.
5. The author field is printed out, in normal-sized sans-serif face.
6. A space of 4em remains before the rest of the content.

### Warning

The logo is an external PDF/EPS file which gets included by using `\includegraphics`. We should consider using PStricks to render it ([InkScape](#) exports to PStricks format, I believe).

Note that we take care of properly setting the title of the generated PDF documents by invoking `\hypersetup` here.

```
\renewcommand{\maketitle}{%
  \noindent\colorbox{black}{\parbox{\textwidth}{%
    \hfill\includegraphics[width=4cm]{connectical-
i}%
  }}%
  \vspace{5em}%
  \noindent\parbox{\textwidth}{%
    \huge\sffamily\bfseries\@title%
  }%
  \vspace{1.5em}\
  {\sffamily\@author}%
  \vspace{4em}%
  \hypersetup{pdftitle={\@title}}%
}%
```

### 2.3.3 Default values for required fields

```
\cyear{\number\year}
\parskip = 0.65em
\parindent = 0in
```