The \texttt{l3sys-shell} package

System shell functions

The \LaTeX\ Project\textsuperscript{*}

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This module provides platform-neutral interfaces to system shell commands. These functions can only access the shell if a document is proceeded using \texttt{-shell-escape}, which allows \textit{unrestricted} access to command line functions.

In general, arbitrary documents should \textit{not} be processed in this way, as shell escape could either accidentally or deliberately lead to unexpected side-effects. In that sense, they should be treated like any other arbitrary script: with caution. No attempt is made by the functions here to avoid injection of additional commands into the arguments.

With the above security caveats in mind, these functions are provided for authors where a workflow scripting \textit{within} a \LaTeX\ document is preferable to using an external script. The latter would of course also have the ability to run arbitrary code.

\begin{itemize}
  \item \texttt{\textbackslash sys\_shell\_cp:nn \{\langle source\rangle\} \{\langle dest\rangle\}}
    \begin{itemize}
      \item Copies the files specified in the \texttt{\langle source\rangle} (which may include wildcards) to the \texttt{\langle dest\rangle}.
      \item The file paths specified using / as a path separator. Copying \textit{not} recursive: only files at the path level given are copied. If unrestricted shell escape is not enabled, no action is attempted.
    \end{itemize}
  \item \texttt{\textbackslash sys\_shell\_mkdir:n \{\langle directory\rangle\}}
    \begin{itemize}
      \item Creates the \texttt{\langle directory\rangle}, which should be specified using / as a path separator. If unrestricted shell escape is not enabled, no action is attempted.
    \end{itemize}
  \item \texttt{\textbackslash sys\_shell\_mv:nn \{\langle old\rangle\} \{\langle new\rangle\}}
    \begin{itemize}
      \item Moves the \texttt{\langle old\rangle} to \texttt{\langle new\rangle} names/locations: the \texttt{\langle old\rangle} names may include wildcards. In both arguments, / should be used as the path separator. If unrestricted shell escape is not enabled, no action is attempted.
    \end{itemize}
  \item \texttt{\textbackslash sys\_shell\_rm:n \{\langle files\rangle\}}
    \begin{itemize}
      \item Removes the \texttt{\langle files\rangle} (which may include wildcards). The file path specified using / as a path separator. If unrestricted shell escape is not enabled, no action is attempted.
    \end{itemize}
  \item \texttt{\textbackslash sys\_shell\_rmdir:n \{\langle directory\rangle\}}
    \begin{itemize}
      \item Removes the \texttt{\langle directory\rangle}, which should be specified using / as a path separator. If unrestricted shell escape is not enabled, no action is attempted.
    \end{itemize}
\end{itemize}

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\texttt{\sys_get_shell_pwd:N} \hspace{1cm} \texttt{\sys_get_shell_pwd:N \langle str var \rangle}

Sets the \texttt{\langle str var \rangle} to the present working directory (the output of \texttt{pwd} on Unix or \texttt{cd} on Windows). Note that on Windows this will contain string backslash chars (\texttt{\}). If unrestricted shell escape is not enabled, no action is taken.

\texttt{\sys_shell_split_ls:nN} \hspace{1cm} \texttt{\sys_shell_split_ls:N \{(glob)\} \langle seq \rangle}

Sets the \texttt{\langle seq var \rangle} to contain one entry per directory listing (equivalent to \texttt{ls -1} or \texttt{dir /b}) as specified by the \texttt{\langle glob \rangle}: the entries are strings. If unrestricted shell is not enabled, no action is taken.

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