BusyBox – The Swiss Army Knife of Embedded Linux

INFORMATION ABOUT BUSYBOX

https://busybox.net/downloads/BusyBox.html

SYNTAX

[crayon-6a9d6067aa70c527885731/]

DESCRIPTION

BusyBox combines tiny versions of many common UNIX utilities into a single small executable. It provides minimalist replacements for most of the utilities you usually find in GNU coreutils, util-linux, etc. The utilities in BusyBox generally have fewer options than their full-featured GNU cousins; however, the options that are included provide the expected functionality and behave very much like their GNU counterparts.

BusyBox has been written with size-optimization and limited resources in mind. It is also extremely modular so you can easily include or exclude commands (or features) at compile time. This makes it easy to customize your embedded systems. To create a working system, just add /dev, /etc, and a Linux kernel. BusyBox provides a fairly complete POSIX environment for any small or embedded system.

BusyBox is extremely configurable. This allows you to include only the components you need, thereby reducing binary size. Run ‘make config’ or ‘make menuconfig’ to select the functionality that you wish to enable. Then run ‘make’ to compile BusyBox using your configuration.

After the compile has finished, you should use ‘make install’ to install BusyBox. This will install the ‘bin/busybox’ binary, in the target directory specified by CONFIG_PREFIX. CONFIG_PREFIX can be set when configuring BusyBox, or you can specify an alternative location at install time (i.e., with a command line like ‘make CONFIG_PREFIX=/tmp/foo install’). If you enabled any applet installation scheme (either as symlinks or hardlinks), these will also be installed in the location pointed to by CONFIG_PREFIX.

USAGE

BusyBox is a multi-call binary. A multi-call binary is an executable program that performs the same job as more than one utility program. That means there is just a single BusyBox binary, but that single binary acts like a large number of utilities. This allows BusyBox to be smaller since all the built-in utility programs (we call them applets) can share code for many common operations.

You can also invoke BusyBox by issuing a command as an argument on the command line. For example, entering
[crayon-6a9d6067aa712811842636/]
will also cause BusyBox to behave as ‘ls’.

Of course, adding ‘/bin/busybox’ into every command would be painful. So most people will invoke BusyBox using links to the BusyBox binary.

For example, entering
[crayon-6a9d6067aa714185085968/]
will cause BusyBox to behave as ‘ls’ (if the ‘ls’ command has been compiled into BusyBox). Generally speaking, you should never need to make all these links yourself, as the BusyBox build system will do this for you when you run the ‘make install’ command.

If you invoke BusyBox with no arguments, it will provide you with a list of the applets that have been compiled into your BusyBox binary.

COMMON OPTIONS

Most BusyBox applets support the **–help** argument to provide a terse runtime description of their behavior. If the CONFIG_FEATURE_VERBOSE_USAGE option has been enabled, more detailed usage information will also be available.

COMMANDS

Currently available applets include:
[crayon-6a9d6067aa716032348699/]