

Bash Loadable Builtin Builtins

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What Are They?

Bash Loadable Builtins are shared libraries from which Bash can load new builtin commands. Most libraries contain only a single command and have the same name as that command (i.e. no **.so** extension).

Why Use Them?

- Faster to run than external commands of the same name (applies to builtin commands in general)
- Has all of the new builtins in ksh93 that bash didn't already have, plus the ksh **print** builtin
- Some cool new commands
 - 1) **csv**: Process a line of csv data and store it in an indexed array.
 - 2) **dsv**: **csv** on steroids – any delimiter, comma is RFC 4180 compliant, option to skip consecutive delimiters and so on
 - 3) **fltexpr**: Like **let** but floating-point (new in bash 5.3)

Where Can I Get A List Of Available Loadable Builtins?

- First of all, make sure they actually are available on your system. They will be in `/usr/lib/bash/` if present (`lib64` on some distributions). By distribution:
 - Slackware – always present
 - Ubuntu & Debian – Optional **bash-builtins** package
 - Fedora – Not provided. Need to build from source
- The filenames are the commands.

How Do I Use Them

- To load a loadable builtin, use the **enable** bash command.
- Original format:
 - enable -f filename name ...
 - enable -f /usr/lib64/bash/finfo
- Additional format available since bash 5.2:
 - enable name ...
 - enable finfo cut
 - Bash looks along **BASH_LOADABLES_PATH** for each *name*.
 - If a shared object supplies multiple commands, still must do
 - enable -f cut lcut
- **cut** and **truefalse** are the only objects to supply multiple commands. **true** and **false** are builtin already.

How Do I Write My Own Builtin Command?

- Must write a function **xxx_builtin()** to implement command `xxx`.
- Get the bash source:
 - `git clone https://git.savannah.gnu.org/git/bash.git`
- Follow the instructions in *examples/loadables/README*.