

The Z Shell

Z shell @ Wikipedia
Zsh home page

The Z Shell (zsh) is a POSIX compliant shell that is now the default shell of macOS and Kali Linux.

- This page is a quick reference to various topics related to the Z Shell.
- See PEL specific information here: [ZiL - UNIX Shell](#)

Zsh Configuration

File	Users	Configuration file sourced order (See note 2)					Sourced for zsh -f	Similar to	Notes
		New Terminal session: Interactive Login	Sub-shell: Interactive non-login (includes Emacs shells)	Scripts : non-interactive, non-login	Scripts with special flag or piping output into SSH connection: Non-interactive login	Logout			Read section STARTUP/SHUTDOWN Files in the zsh(1) man page for information on configuration files. Use Emacs to display your local zsh man pages. See Z Help/Info .
/etc/zshenv	All	1	1	1	1	Not sourced	Yes		
\$ZDOTDIR/.zshenv	Current	2	2	2	2	Not sourced	No		<ul style="list-style-type: none"> If ZDOTDIR undef, uses \$HOME Do NOT prepend/append to PATH here (sub-shells and scripts will have duplicate entries!)
/etc/zprofile	All	3	Not sourced	Not sourced	3	Not sourced	No	~/.profile of: <ul style="list-style-type: none"> bash sh 	⚠ On macOS, /etc/zprofile does an eval of /usr/libexec/path_helper to set PATH.
\$ZDOTDIR/.zprofile	Current	4	Not sourced	Not sourced	4	Not sourced	No		<ul style="list-style-type: none"> If ZDOTDIR undef, uses \$HOME Define EDITOR, prepend/append user PATH here! The logic will not be applied twice.
/etc/zshrc	All	5	3	Not sourced	Not sourced	Not sourced	No		
\$ZDOTDIR/.zshrc	Current	6	4	Not sourced	Not sourced	Not sourced	No		<ul style="list-style-type: none"> If ZDOTDIR undef, uses \$HOME Define functions, aliases, prompt here! The logic is sourced at login and when a sub-shell is created: the logic cannot preped/append to envvar but can select values based on values of envvar set in sub-shells. Do NOT prepend/append to PATH here (sub-shells will have duplicate entries!)
/etc/zlogin	All	7	Not sourced	Not sourced	5	Not sourced	No	~/.login of: <ul style="list-style-type: none"> ksh 	
\$ZDOTDIR/.zlogin	Current	8	Not sourced	Not sourced	6	Not sourced	No		<ul style="list-style-type: none"> If ZDOTDIR undef, uses \$HOME
/etc/zlogout	All	Not sourced	Not sourced	Not sourced	Not sourced	1	No		
\$ZDOTDIR/.zlogout	Current	Not sourced	Not sourced	Not sourced	Not sourced	2	No		<ul style="list-style-type: none"> If ZDOTDIR undef, uses \$HOME

Zsh - Notes

#	Topic	Note
1	ZDOTDIR	The location of the user specific configuration files can be modified by ZDOTDIR environment variable. <ul style="list-style-type: none"> 👉 Instead of using ZDOTDIR envvar you can also place symlinks to the real location of the files.
2	Configuration Files	
	Login	When opening a new terminal window.
	Interactive shell	When executing zsh explicitly (or implicitly inside an editor like Emacs).
	Script	When executing a script that has a #!/bin/zsh shebang.
	Logout	Used as cleanup of login shell, executed before terminating the process of a login shell. If the shell is terminated by an external process these files might not run.
3	Envvar	Environment variables built-in shells that are quite useful.
	\$	Print the current process ID with: echo "\$\$" . The process ID of the shell parent process is \$PPID
	0	Name of the shell (really the name of the program that launched the shell). Print it with: echo "\$0"
	?	Exit code value of the last executed command. Print it with: echo "\$?" .
	SHLVL	An environment variable that represents the depth of a stack of shells executing each other. Supported by zsh, but also bash, ksh

Zsh - References

Topic	Reference
About Zsh	<ul style="list-style-type: none"> Z shell @ Wikipedia
Zsh Home	<ul style="list-style-type: none"> Zsh home page : with links to the following: <ul style="list-style-type: none"> Z shell page. : with links to information, documentation, support and source code pages.
Zsh intro, manual & tips	<ul style="list-style-type: none"> The zsh Manual: <ul style="list-style-type: none"> Zsh Manual (the manual in several formats) : the official zsh manual — current version. Introduction to Zsh (a November 30, 1995 document; gives an overview of Zsh early on). A User's Guide to the Z-Shell. by Peter Stephenson March 23, 2003. <ul style="list-style-type: none"> This also is a predecessor to the book From Bash to Z Shell published by APress in 2005 Moving to Zsh. from Armin Briegel, provides a good introduction to macOS users. Awesome-zsh lists several things zsh can do in an easy-to-read list format.
Zsh configuration info	<ul style="list-style-type: none"> How do Zsh Configuration Files Work? By Daniel Kehoe @ freeCodeCamp . Good into but 100% correct as it misses identifying some files. Zsh prompt expansion which lists the codes used to customize zsh prompt. Customizing the zsh Prompt , from Armin Briegel
Zsh configuration frameworks	<ul style="list-style-type: none"> Oh My Zsh - An open-source, community-driven framework for managing Zsh configuration. Pretzo Zimfw Zsh-snap
Other Zsh resources	<ul style="list-style-type: none"> Z-Shell.dev, a wiki-based collection of tools for zsh. Documentation is very scarce and would benefit from a overview description of the site's purpose. It seems to be devoted to Zi, but the purpose of Zi is not clear either. Their code is not well documented, an unfortunate trend in software these days. However some potentially useful pages might be useful: <ul style="list-style-type: none"> Zsh Plugin Standard — seems to list a set of conventions - at this point I'm not sure if these are followed globally or it's just for Zi. Zsh Native Scripting Handbook — a list of Zsh script snippets.
Zsh man pages	👉 Use Emacs to display zsh man pages! Viewing man pages with Emacs gives you great navigation and control. <ul style="list-style-type: none"> See Z Help/Info toward end of page 5 for the commands to open a man page. Use M-<F8> with PEL.

Topic	Reference
Zsh Linters	High-quality linter for Zsh do not seem to exist. Shellcheck mostly supports bash and sh, not zsh specifics. The other two Zsh linters I found seem to be in early or abandoned state: zlint and zsh-lint .
Other Topics	<ul style="list-style-type: none">• Reload Zsh configuration - Bozhidar Batsov article