



Tramp - Emacs Remote File Editing

Operation	Keystroke	Function	Note
Tramp <ul style="list-style-type: none">• Using Tramp• Tramp @ wikiEmacs• tramp-mode @ Emacs Wiki• Tramp FAQ <div>Last updated on: 2025-03-12</div>	Emacs can open file located on a remote computer. Use a command to visit (open) a file and provide a file name that uses the Tramp-specific format (explained below) to identify the network protocol, user name, hostname and the file name of the remote computer. <div> Tramp relies on a ssh connection and attempts to locate the end of the shell prompt of the remote shell. See ↗ Grep for searching in remote system with Tramp.</div>		
Troubleshooting Tramp <div>See also:</div> <ul style="list-style-type: none">• Remote shell setup hints	<ul style="list-style-type: none">• #1: establish a normal ssh connection to the remote host using the ssh command. Make sure it connects fine.<ul style="list-style-type: none">• There are cases where Tramp fails on a host because your local ssh has never seen that remote host.• #2: make sure that the remote host has a simple shell startup when \$TERM is set "dumb".<ul style="list-style-type: none">• If the shell prompt of the remote host shell is complex, Tramp might not be able to connect and will timeout.<ul style="list-style-type: none">• There are 2 potential solutions to this problem:<ul style="list-style-type: none">• Update the regular expression specified by the tramp-shell-prompt-pattern user-option.• Configure the shell to use a simple prompt that has no escape sequence. The simpler the better.<ul style="list-style-type: none">• Tramp set the TERM environment variable to "dumb", therefore you can modify your shell configuration code (in ~/.bashrc, ~/.zshrc or whatever your shell uses) to select a simple prompt when TERM is dumb as in the following (written in POSIX compliant):<pre>if ["\$TERM" = "dumb"]; then PS1='# ' else # your normal prompt setting logic goes here fi</pre><div>On zshrc you may want to use the following line at the top of your script instead:<pre>[["\$TERM" == "dumb"]] && unsetopt zle && PS1='\$ ' && return</pre></div>		
<ul style="list-style-type: none">• Activate Tramp Trace buffer	<ul style="list-style-type: none">• #3: check the Tramp logs: If the above fails, you will need to debug Tramp and look into the Tramp tracing:<ul style="list-style-type: none">• Set tramp-verbose user option to 10 to activate the tramp debug buffer.<ul style="list-style-type: none">• See ELisp evaluation in xpl - Emacs Lisp for various ways of setting Emacs Lisp variables.• Look at the Tramp debug trace to identify the problem.<ul style="list-style-type: none">• Locate the ssh command issued by Tramp and try it manually to see what it does.• If that fails, try the above with. a clean Emacs started with emacs -Q		
<ul style="list-style-type: none">• To remote log as root	<ul style="list-style-type: none">• #4: If you want to be able to edit remote host files as root, you will want to remote log as root (which might be considered a security risk).<ul style="list-style-type: none">• For that, the remote host must be set to allow it.<ul style="list-style-type: none">• To activate this, edit the /etc/ssh/sshd_config file and ensure you have the following line: PermitRootLogin yes		
<ul style="list-style-type: none">• Remote File format<ul style="list-style-type: none">• Quoted file names <div> The PEL commands pel-open-at-point and pel-set-open-at-point-dir support this tramp file name syntax. With those, you can open remote file via their full or partial file name at point!</div>	<code>/method:host:filename</code> <code>/method:user@host:filename</code> <code>/method:user@host#port:filename</code>	method is: ftp, scp, ssh or - . If it is -, the tramp selects the method as follows: <ul style="list-style-type: none">• If the host name starts with 'ftp.' (with dot), Emacs uses FTP.• If the user name is 'ftp' or 'anonymous', Emacs uses FTP.• If the variable tramp-default-method is set to 'ftp', Emacs uses FTP.• If ssh-agent is running, Emacs uses scp.• Otherwise, Emacs uses ssh. If you want to access a <i>local</i> file that has the syntax corresponding to the remote file name syntax, then you need to <u>quote the file name</u> by adding /: at the beginning of the file name.	
Open local files/dir as sudo or su	Tramp provides a syntax to open local files or directories as sudo or su		
<ul style="list-style-type: none">• Open local file as sudo or su (see ↗ File-mngt)	<ul style="list-style-type: none">• To open local file as sudo: C-x C-f /sudo::/path/to/file• To open local file as su: C-x C-f /su::/path/to/file		
<ul style="list-style-type: none">• Open local directory as sudo or su (see ↗ Dired)	<ul style="list-style-type: none">• To open local directory as sudo: C-x d /sudo::/path/to/directory• To open local directory as su: C-x d /su::/path/to/directory		
Open remote files/dir as sudo or su			
<ul style="list-style-type: none">• Open remote file as sudo or su (see ↗ File-mngt)	<ul style="list-style-type: none">• To open local file as sudo: C-x C-f /ssh:you@remotehost sudo:remotehost:/path/to/file• To open local file as su: C-x C-f /ssh:you@remotehost su:remotehost:/path/to/file <div>With Emacs >= 27.1:</div> <ul style="list-style-type: none">• To open local file as sudo: C-x C-f /ssh:you@remotehost sudo::/path/to/file• To open local file as su: C-x C-f /ssh:you@remotehost su::/path/to/file		
<ul style="list-style-type: none">• Open remote directory as sudo or su (see ↗ Dired)	<ul style="list-style-type: none">• To open local directory as sudo: C-x d /ssh:you@remotehost sudo:remotehost:/path/to/directory• To open local directory as su: C-x d /ssh:you@remotehost su:remotehost:/path/to/file <div>With Emacs >= 27.1:</div> <ul style="list-style-type: none">• To open local directory as sudo: C-x d /ssh:you@remotehost sudo::/path/to/directory• To open local directoryas su: C-x d /ssh:you@remotehost su::/path/to/directory		
Multi-hop open	For more information on multi-hop with. Tramp: C-h i g (tramp)Ad-hoc multi-tops		
Open a file via multi-hops	<ul style="list-style-type: none">• C-x C-f /ssh:hop1user@hop1host ssh:you@remotehost:/path/to/file		
Open this PDF file. See also: ↗ Help/Info	<f11> p tramp	(pel-help-pdf-select &optional OPEN-GITHUB-PAGE-P)	Open the ↗ Tramp local PDF. If the prefix argument (like C-u or M--) is used, then open remote GitHub hosted raw PDF instead. If pel-flip-help-pdf-arg user-option is set it's the other way around.
↗ Customize Tramp	<f11> <f2> g	(customize-group &optional GROUP OTHER-WINDOW)	Open the tramp customization group.
Open a file on remote computer See: ↗ File-mngt	<ul style="list-style-type: none">• <f11> f f• M-<f11> M-f• M-f• C-x C-f	(find-file FILENAME &optional WILDCARDS) (ido-find-file)	Prompt for the file name. <ul style="list-style-type: none">• Enter a file name that corresponds to the remote file name syntax, as described above. Completion is available, as usual.<ul style="list-style-type: none">• Type / first and then the <i>method</i> followed by :

Tramp — References

Topic & Link	Notes
Tramp Quick Start Guide	Short Introduction how to use TRAMP from the Emacs User Manual
Tramp User Manual	Tramp User Manual.
Tramp Mode @ Emacs Wiki	
Tramp @ Stack Overflow	There's several Q&A about tramp.
Tramp @ Emacs StackExchange	And on Emacs Stack Exchange too.
Reddit Emacs has some discussion on Tramp	<ul style="list-style-type: none"> Has TRAMP ever work for you flawlessly? Tramp another "waiting for prompts from remote shell...failed"
Related other info	<ul style="list-style-type: none"> About ssh ControlMaster option: used when remote host does not support key-based authentication.