DS-5 Debugger commands listed in groups

Type *help* followed by a command name for more information on a specific command.

Breakpoints and watchpoints

Command	Description
break	Sets a software breakpoint.
hbreak	Sets a hardware breakpoint.
tbreak	Sets a temporary software breakpoint that is deleted when it is hit.
thbreak	Sets a temporary hardware breakpoint that is deleted when it is hit.
awatch	Sets a read/write watchpoint for a global/static data symbol.
rwatch	Sets a read watchpoint for a global/static data symbol.
watch	Sets a write watchpoint for a global/static data symbol.
condition	Sets a break condition for a specific breakpoint or watchpoint.
ignore	Sets the ignore counter for a breakpoint or watchpoint condition.
break-script	Assigns a script file to a specific breakpoint for execution when the breakpoint is triggered.
break-stop-on-threads, break-stop-on-cores	Applies an existing breakpoint to one or more threads or processors.
break-stop-on-vmid	Applies an existing hardware breakpoint to a virtual machine.
enable breakpoints	Enables one or more breakpoints or watchpoints by number.
disable breakpoints	Disables one or more breakpoints or watchpoints by number.
delete breakpoints	Deletes one or more breakpoints or watchpoints by number.
resolve	Resolves one or more breakpoints or watchpoints.
clear	Deletes a breakpoint at a specific location.
clearwatch	Deletes a watchpoint at a specific location.
info breakpoints, info watchpoints	Displays information about the status of all breakpoints and watchpoints.
set breakpoint	Controls the automatic behavior of breakpoints and watchpoints.
silence	Disables the printing of stop messages for a specific breakpoint.
unsilence	Enables the printing of stop messages for a specific breakpoint.

Operating System (OS)

Command	Description
sharedlibrary	Loads shared library symbols.
nosharedlibrary	Discards all loaded shared library symbols except for the symbols that are loaded explicitly using the sharedlibrary command.
info sharedlibrary	Displays the names of the loaded shared libraries.
set os	Controls the OS settings in the debugger.
show os	Displays the current OS settings in the debugger.
set sysroot, set solib-absolute-prefix	Specifies the system root for prefixing shared library paths.
show sysroot, show solib-absolute-prefix	Displays the system root directory in use by the debugger when searching for shared library symbols.
set auto-solib-add	Controls the automatic loading of shared library symbols.
show auto-solib-add	Displays the current automatic setting for use when loading shared library symbols.
set solib-search-path	Specifies additional directories to search for shared library symbols.
show solib-search-path	Displays the current search paths in use by the debugger when searching for shared libraries.
set stop-on-solib-events	Specifies whether the debugger stops execution when it is notified of an event by the dynamic linker.
show stop-on-solib-events	Displays the current debugger setting that controls whether execution stops when shared library events occur.
thread, core	Sets the current thread and displays thread state and stack frame.
thread apply, core apply	Temporarily switches control to a thread or processor to execute a DS-5 Debugger command and then switches back to the original state.
info threads	Displays a list of threads showing ID, current state and related stack frame information.
info processes	Displays a list of processes showing ID, current state and related stack frame information.
info os-log	Displays the contents of the Operating System (OS) log buffer for connections that supports this feature.
info os-modules	Displays a list of the Operating System (OS) modules for connections that supports this feature.
info os-version	Displays the version of the Operating System (OS) for connections that supports this feature.

Execution control

Command	Description
start	Sets a temporary breakpoint and starts running the image until it hits the breakpoint. When the debugger stops, the breakpoint is deleted. By default, the breakpoint is set at the address of the global function main().
set blocking-run-control	Controls whether run control operations such as stepping and running are blocked until the target stops or released immediately.
show blocking-run-control	Displays the current setting for blocking run control operations.
set debug-from	Specifies the address of the temporary breakpoint for subsequent use by the start command.
show debug-from	Displays the current setting for the expression that is used by the start command to set a temporary breakpoint.
run	Starts running the target.
continue	Continues running the target.
advance	Sets a temporary breakpoint and continues running the image until it hits the breakpoint. When the debugger stops, the breakpoint is deleted.
finish	Continues running the device to the next instruction after the selected stack frame finishes.
interrupt, stop	Interrupts the target and stops the current application if it is running.
wait	Instructs the debugger to wait until either the application completes or a breakpoint is hit.
reset	Performs a reset on the target.
step	Source level stepping including stepping into all function calls where there is debug information.
stepi	Instruction level stepping including stepping into all function calls.
steps	Source level stepping through statements including stepping into all function calls where there is debug information.
next	Source level stepping over all function calls.
nexti	Instruction level stepping over all function calls.
nexts	Source level stepping through statements but stepping over all function calls.
thread, core	Displays information about the current thread or processor.
thread apply, core apply	Temporarily switches control to a thread or processor to execute a DS-5 Debugger command and then switches back to the original state.
set step-mode	Specifies whether to step into or step over a function with no debug information.
show step-mode	Displays the current step setting for functions without debug information.
handle	Controls the handler settings for one or more signals or exceptions.
info signals, info handle	Displays information about the handling of signals.

Call stack

Command	Description
up	Controls and displays the current position in the call stack.
up-silently	Controls the current position in the call stack.
down	Controls and displays the current position in the call stack.
down-silently	Controls the current position in the call stack.
frame	Displays stack frame information at the selected position.
select-frame	Controls the current position in the call stack.
info frame	Displays stack frame information at the selected position.
info stack, backtrace, where	Displays information about the call stack.
set backtrace	Controls the default behavior when using the info stack command.
show backtrace	Displays current behavior settings for use with the info stack command.

Memory

Command	Description
memory	Specifies the attributes and size for a memory region.
memory auto	Resets the memory regions to the default target settings.
memory debug-cache	Controls the caching by the debugger for all memory regions.
enable memory	Enables one or more user-defined memory regions.
disable memory	Disables one or more user-defined memory regions.
delete memory	Deletes one or more user-defined memory regions.
info memory	Displays the attributes for all memory regions.
memory flash	Defines a region of flash memory.
memory set	Writes to memory.
memory set_typed	Writes a list of values to memory.
dump	Reads data from memory or an expression and writes to a file.
append	Reads data from memory or an expression and appends to an existing file.
restore	Reads data from a file and writes it to memory.
x	Displays the content of memory at a specific address.
disassemble	Displays disassembly for a specific section of memory.
set flash-buffer	Defines a memory region for use as a flash buffer.
show flash-buffer	Displays the area of memory in use as a buffer for flash programming operations.

Files

Command	Description
load	Loads an image on to the target and records the entry point address for future use by the run and start commands.
loadfile	Loads debug information into the debugger, an image on to the target and records the entry point address for future use by the run and start commands.
file, symbol-file	Loads debug information from an image into the debugger.
reload-symbol-file	Reloads debug information from an already loaded image into the debugger using the same settings as the original load operation.
add-symbol-file	Loads additional debug information into the debugger.
discard-symbol-file	Discards debug information relating to a specific file.
dump	Reads data from memory or an expression and writes to a file.
append	Reads data from memory or an expression and appends to an existing file.
restore	Reads data from a file and writes it to memory.
info files, info target	Displays information about the loaded image and symbols.
info sources	Displays the names of the source files.
cd	Sets the working directory.
pwd	Displays the working directory.
directory	Defines additional directories to search for source files.
show directories	Displays the list of directories to search for source files.
set substitute-path	Modifies the search paths used when displaying source code.
show substitute-path	Displays the current search path substitution rules in use by the debugger when searching for source files.

Registers

Command	Description
info registers	Displays the name and content of registers for the current stack frame.
info all-registers	Displays the name and content of grouped registers for the current stack frame.

Data

Command	Description
list	Displays lines of source code.
set listsize	Modifies the default number of source lines that the list command displays.
show listsize	Displays the number of source lines that the list command displays.
set variable	Specifies an expression and assigns the result to a variable.
whatis	Displays the data type of an expression.
x	Displays the content of memory at a specific address.
disassemble	Displays disassembly for a specific section of memory.
info address	Displays the location of a symbol.
info symbol	Displays the symbol name at a specific address.
info locals	Displays all local variables.
info functions	Displays the name and data types for all functions.
info variables	Displays the name and data types of global and static variables.
info classes	Displays C++ class names.
info members	Displays the name and data types for all class member variables that are accessible in the function corresponding to the selected stack frame.

Information

Command	Description
info address	Displays the location of a symbol.
info all-registers	Displays the name and content of all registers.
info breakpoints, info watchpoints	Displays information about the status of all breakpoints and watchpoints.
info capabilities	Displays a list of capabilities for the target device that is currently connected to the debugger.
info classes	Displays C++ class names.
info cores	Displays information about the running processors.
info files, info target	Displays information about the loaded image and symbols.
info frame	Displays stack frame information at the selected position.
info functions	Displays the name and data types for all functions.
info inst-sets	Displays the available instruction sets.
info locals	Displays all local variables for the current stack frame.
info members	Displays the name and data types for class member variables.
info memory	Displays the attributes for all memory regions.
info os-log	Displays the contents of the Operating System (OS) log buffer for connections that support this feature.
info os-modules	Displays a list of loadable kernel modules for connections that support this feature.
info os-version	Displays the version of the Operating System (OS) for connections that support this feature.
info processes	Displays information about the user space processes.
info registers	Displays the name and content of all application level registers.
info semihosting	Displays semihosting information for the server, client, or all.
info sharedlibrary	Displays the names of the loaded shared libraries.
info signals, info handle	Displays information about the handling of signals or exceptions.
info sources	Displays the names of the source files.
info stack, backtrace, where	Displays information about the call stack.
info symbol	Displays the symbol name at a specific address.
info threads	Displays information about the available threads.
info variables	Displays the name and data types for all global and static variables.

Log commands

Command	Description
log config	Specifies the type of logging configuration to output runtime messages from the debugger.
log file	Specifies an output file to receive runtime messages from the debugger.

Set commands

Command	Description
set	set is an alias for set variable.
set arm	Controls the behavior of the debugger when selecting the instruction set for disassembly and setting breakpoints.
set auto-solib-add	Controls the automatic loading of shared library symbols.
set backtrace	Controls the default behavior when using the info stack command.
set breakpoint	Controls the automatic behavior of breakpoints and watchpoints.
set blocking-run-control	Controls whether run control operations such as stepping and running are blocked until the target stops or released immediately.
set debug-from	Specifies the address of the temporary breakpoint for subsequent use by the start command.
set endian	Specifies the byte order for use by the debugger.
set escapes-in-filenames	Controls the use of special characters in paths.
set flash-buffer	Defines a memory region for use as a flash buffer.
set listsize	Modifies the default number of source lines that the list command displays.
set os	Controls the Operating System (OS) settings in the debugger.
set print	Controls the current debugger print settings.
set semihosting	Controls the semihosting operations in the debugger.
set solib-search-path	Specifies additional directories to search for shared library symbols.
set step-mode	Specifies whether to step into or step over a function with no debug information.
set stop-on-solib-events	Specifies whether the debugger stops execution when it is notified of an event by the dynamic linker.
set substitute-path	Modifies the search paths used when displaying source code.
set sysroot, set solib-absolute-prefix	Specifies the system root for prefixing shared library paths.
set variable	Specifies an expression and assigns the result to a variable.
set wildcard-style	Specifies the wildcard style to use for pattern matching in strings.

Show commands

Command	Description
show	Displays the current debugger settings.
show architecture	Displays the current target architecture.
show arm	Displays the current instruction set settings in use by the debugger for disassembly and setting breakpoints.
show auto-solib-add	Displays the current automatic setting for use when loading shared library symbols.
show backtrace	Displays the current behavior settings for use with the info stack command.
show blocking-run-control	Displays the current setting for blocking run control operations.
show breakpoint	Displays the current breakpoint and watchpoint behavior settings.
show debug-from	Displays the current setting for the address of the temporary breakpoint used by the start command.
show directories	Displays the list of search directories.
show endian	Displays the current byte order setting.
show escapes-in-filenames	Displays the current setting for controlling the use of special characters in paths.
show flash-buffer	Displays the area of memory in use as a buffer for flash programming operations.
show listsize	Displays the listing size for the list command.
show os	Displays the current Operating System (OS) settings in the debugger.
show print	Displays the current debugger print settings.
show semihosting	Displays the current setting for semihosting operations.
show solib-search-path	Displays the current search path for shared libraries.
show step-mode	Displays the current step setting for functions without debug information.
show stop-on-solib-events	Displays the current debugger setting that controls whether execution stops when shared library events occur.
show substitute-path	Displays all the substitution rules.
show sysroot, show solib-absolute-prefix	Displays the system root prefix for shared library paths.
show version	Displays the current version number of the debugger.
show wildcard-style	Displays the current wildcard style in use for pattern matching.

Display

Command	Description
echo	Displays only textual strings.
output	Displays only the output of an expression.
print, inspect	Displays the output of an expression and records the result in a debugger variable.
set print	Controls the current debugger print settings.
show print	Displays the current debugger print settings.

Scripts

Command	Description
if	Enables you to write scripts that conditionally execute debugger commands.
while	Enables you to write looping scripts that conditionally execute debugger commands.
end	Enables you to terminate conditional scripts.
source	Loads and runs a script file containing debugger commands to control and debug your target.

Supporting commands

Command	Description
define	Enables you to derive new user-defined commands from existing commands.
help	Displays help information for a specific command or a group of commands listed according to specific debugging tasks.
pause	Pauses the execution of a script for a specified period of time.
shell	Runs a shell command within the current debug session.
quit, exit	Quits the debugger session.
show version	Displays the current version number of the debugger.
show architecture	Displays the architecture of the current target.
set arm	Controls the behavior of the debugger when selecting the instruction set for disassembly and setting breakpoints.
show arm	Displays the current instruction set settings in use by the debugger for disassembly and setting breakpoints.
info inst-sets	Displays the available instruction sets.
set endian	Specifies the byte order for use by the debugger.
show endian	Displays the current byte order setting in use by the debugger.
info capabilities	Displays a list of capabilities for the target device that is currently connected to the debugger.
set semihosting	Controls the semihosting options in the debugger.
show semihosting	Displays the current semihosting settings.
stdin	Specifies semihosting input requested by application code. For use only in a command-line console with interactive mode.
unset	Modifies the current debugger settings.

Flash commands

Command	Description
flash list	Displays all the registered flash algorithms.
flash register	Registers flash algorithms from a directory.
flash unregister	Unregisters a flash algorithm.
memory flash	Defines a region of flash memory.
set flash-buffer	Defines a memory region for use as a flash buffer.
show flash-buffer	Displays the area of memory in use as a buffer for flash programming operations.