

WinDbg / SOS Cheat Sheet

Environment

Attach to process	F6
Detach from a process	.detach
Break debuggee execution	Ctrl-Break
Continue debuggee execution	g
Exit WinDbg	q
Clear the screen	.cls

Getting Help

Debuggee commands	?
Debugger commands	.help
Online help file	.hh command
Help on extension on top of chain	!help
Help on specific extension command	!help command

Issuing Commands

Scroll through command history	[up], [down], [enter]
Paste into command window	[right-click]

Examining the Unmanaged Environment

List loaded modules with full path	!mf
List loaded modules with last modified timestamp	!mt
List unmanaged threads	~
Select active thread	~thread_id s
View call stack	k
View thread CPU consumption	!runaway
Set a breakpoint	bp
Dump small memory image	.dump path
Dump large memory image	.dump /ma path

Loading SOS

Load SOS for .NET 1.x	.load clr10\sos
Load SOS for .NET 2.0	.loadby sos mscorwks

Examining the Managed Environment

Dump runtime type information	!dumpruntimetypes
View managed threads	!threads
View managed call stack	!clrstack
View combined managed / unmanaged callstack	!dumpstack
View function call arguments	!clrstack -p
View local variables	!clrstack -l
View object dump	!do address
View array dump	!da address
View object size (including children)	!objsize address
View heap usage by type	!dumpheap -stat
View heap usage filtered by type	!dumpheap -type type
View GC roots of object instance	!gcroot address
View managed sync blocks	!syncblk
View managed thinlocks (CLR 2.0)	!dumpheap -thinlock
View information on most recent exception	!printexception
Set a breakpoint	!bpm module method