

Linux Memory Protection Mechanism

Linux distribution (exec-shield kernel)	ASLR			Non-execution (DEP)			Glibc / GCC patch					
	Stack	Heap	Library	Stack	Heap	Library	ASCII Armour	-fomit-frame-pointer	main() canary	modify dtors	SSP	-pie
Red Hat Linux 9.0 / RHEL 3	O	X	X	X	X	X	X	X	X	X	X	X
Fedora Core 3 / RHEL 4	O	O	X	O	O	X	O	X	X	X	X	O
Fedora Core 4	O	O	O	O	O	X	O	libc	X	X	X	O
Fedora Core 5 ~ 6 / RHEL 5	O	O	O	O	O	X	O	libc/bin	O	X	X	O
Fedora 7 / RHEL 5.x	O	O	O	O	O	X	O	libc/bin	O	O	X	O
Fedora 8 ~ 10	O	O	X	O	O	X	O	libc/bin	O	O	X	O
Fedora 11	O	O	X	O	O	O	O	libc/bin	X	O	X	O
Fedora 12	O	O	O	O	O	O	O	libc/bin	X	O	X	O
Cent OS 4.4	O	O	X	O	O	X	O	libc	X	X	X	O
Cent OS 4.5 ~ 4.8	O	O	O	O	O	X	O	libc	X	X	X	O
Cent OS 5.0 ~ 5.4	O	O	O	O	O	X	O	libc/bin	O	O	X	O
Ubuntu 6.06.2	O	X	O	X	X	X	X	libc/bin	X	X	X	O
Ubuntu 6.10 ~ 8.04.1	O	X	O	X	X	X	X	libc/bin	O	X	O	O
Ubuntu 8.10 ~ 9.0.4	O	O	O	X	X	X	X	libc/bin	O	O	O	O
Ubuntu 9.10	O	O	O	O	O	X	O	libc/bin	X	O	O	O
openSUSE 11.2	O	X	O	X	X	X	X	libc/bin	X	O	X	O
Gentoo 2006.0 (1.6.14)	O	X	O	X	X	X	X	libc/bin	X	X	X	O
Gentoo 2007.0 (1.12.9)	O	X	O	X	X	X	X	libc/bin	O	X	X	O