

investigation tool, since it can produce almost any kind of connection its user could need and has a number of built-in capabilities.

It is able to perform [port scanning](#), [file transferring](#) and port listening.

The original netcat's features include:^[2]

- Outbound or inbound connections, TCP or UDP, to or from any ports
- Full [DNS forward/reverse checking](#), with appropriate warnings
- Ability to use any local source port
- Ability to use any locally configured network source address
- Built-in port-scanning capabilities, with randomization
- Built-in loose source-routing capability
- Can read command line arguments from standard input
- Slow-send mode, one line every N seconds
- [Hex dump](#) of transmitted and received data
- Optional ability to let another program service establish connections
- Optional [telnet](#)-options responder

Rewrites like GNU's and OpenBSD's support additional features. For example, OpenBSD's nc supports [TLS](#), and GNU netcat natively supports a [tunneling](#) mode supporting UDP and TCP (optionally allowing one to be tunneled over the other) in a single command,^[3] where other versions may require piping data from one netcat instance to another.

Ports and reimplementations

[\[edit\]](#)

The original version of netcat was a [Unix](#) program. The last version (1.10) was released in March 1996.^[4]

There are several implementations on [POSIX](#) systems, including rewrites from scratch like [GNU](#) netcat^[5] or [OpenBSD](#) netcat,^[6] the latter of which supports IPv6 and [TLS](#). The OpenBSD version has been ported to the [FreeBSD](#) base,^[7] Windows/Cygwin,^[8] and Linux.^[9] [Mac OS X](#) comes with netcat installed as of OSX 10.13 or users can use [MacPorts](#) to install a variant.^[10]

A [DOS](#) version of *netcat* called *NTOOL* is included in the [FreeDOS](#) Package group *Networking*.^[11] It is based on the WatTCP stack and licensed under the [European Union Public Licence](#) Version 1.1.^[12]

Known ports for embedded systems includes versions for [Windows CE](#) (named "Netcat 4 wince"^[13]) or for the [iPhone](#).^[14]

[BusyBox](#) includes by default a lightweight version of netcat named mini-netcat.^[15] Another version with more features, named bloaty nc, is also available.^[16]

[Solaris](#) 11 includes netcat implementation based on OpenBSD netcat.^[17]

Socat^[18] is a more complex variant of *netcat*. It is larger and more flexible and has more options that must be configured for a given task. On February 1, 2016, [Santiago Zanella-Beguelin](#) and [Microsoft Vulnerability Research](#) issued a security advisory regarding a [composite Diffie-Hellman](#) parameter which had been [hard-coded](#) into the [OpenSSL](#) implementation of *socat*.^[19] The implausibility that a composite might have been unintentionally introduced where a [prime number](#) is required has led to the suspicion of [sabotage](#) to introduce a [backdoor software vulnerability](#).^[20] This *socat* bug affected version 1.7.3.0 and 2.0.0-b8 it was corrected in following releases from 1.7.3.1 and 2.0.0-b9.^[19]

Cryptcat^[21] is a version of *netcat* with integrated transport encryption capabilities.

In the middle of 2005, [Nmap](#) announced another *netcat* incarnation called *Ncat*.^[22] It features new possibilities such as "Connection Brokering", TCP/UDP Redirection, SOCKS4 client and server support, ability to "Chain" *Ncat* processes, HTTP CONNECT proxying (and proxy chaining), SSL connect/listen support and IP address/connection filtering. Like [Nmap](#), *Ncat* is [cross-platform](#).

On some systems, modified versions or similar *netcat* utilities go by the command name(s) `nc` , `ncat` , `pnetcat` , `socat` , `sock` , `socket` , `sbd` .

Ncat is a similar tool to *netcat* provided by [Nmap](#) suite.^[22] *"While Ncat isn't built on any code from the "traditional" Netcat (or any other implementation), Ncat is most definitely based on Netcat in spirit and functionality."*^[23]

Ncat features includes: ability to chain *Ncats* together, redirect both TCP and UDP ports to other sites, SSL support, and proxy connections via [SOCKS4](#) or HTTP (CONNECT method) proxies (with optional proxy authentication as well).^[24]

- [List of Unix commands](#)
- [cat \(Unix\)](#) – Shell command for writing an input file or stream to standard output
- [Nmap](#)
- [OpenSSL](#)
- [Telnet](#)
- [Plink](#)
- [Packet Sender](#)
- [Banner grabbing](#)

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- [Official website](#)
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Source: <https://en.wikipedia.org/wiki/Netcat>