Name Service Switch

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The **Name Service Switch** (**NSS**) is a facility in Unix-like operating systems that provides a variety of sources for common configuration databases and name resolution mechanisms. These sources include local operating system files (such as /etc/passwd, /etc/group, and /etc/hosts), the Domain Name System (DNS), the Network Information Service (NIS), and LDAP.

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nsswitch.conf

A system administrator usually configures the operating system's name services using the file /etc/nsswitch.conf. This lists databases (such as passwd, shadow and group) and one or more sources for obtaining that information. Examples for sources are *files* for local files, *ldap* for the Lightweight Directory Access Protocol, *nis* for the Network Information Service, *nisplus* for NIS+, and *wins* for Windows Internet Name Service.

The nsswitch.conf file has line entries for each service consisting of a database name in the first field, terminated by a colon, and a list of possible source databases mechanisms in the second field. A typical file might look like:

```
passwd:     files ldap
shadow:     files
group:      files ldap

hosts:      dns nis files

ethers:     files nis
netmasks:   files nis
networks:   files nis
protocols:  files nis
rpc:        files nis
services:   files nis

automount:  files
aliases:    files
```

The order of the services listed determines in which order NSS will attempt to use those services to resolve queries on the specified database.

History

Earlier Unix-like systems, with the notable exception of Ultrix, either accessed only the configuration files or had hard-coded rules for files or databases to access; Ultrix offered nearly identical functionality to the Name Service Switch, using the configuration file `/etc/svc.conf`.

Sun Microsystems first developed NSS for their Solaris operating system, but subsequently programmers ported it to many other operating systems including FreeBSD, NetBSD, GNU/Linux, HP-UX, IRIX and AIX.

See also

- Passwd (database)
- Shadow (database)
- Group (database)
- Pluggable Authentication Modules
- BSD Authentication
- Name server
- System Security Services Daemon

External links

- `nsswitch.conf(5) (http://netbsd.gw.com/cgi-bin/man-cgi?nsswitch.conf+5+NetBSD-current)` : name-service switch configuration file – NetBSD File Formats Manual
- Name Service Switch implementation in the GNU C Library (http://www.gnu.org/software/libc/manual/html_node/Name-Service-Switch.html)
- NSS module supporting LDAP (http://www.padl.com/OSS/nss_ldap.html) : nss_ldap
- Another NSS module supporting LDAP (http://arthurdejong.org/nss-ldapd/) : nss-ldapd
- NSS module supporting AFS (http://megacz.com/software/libnss-afs.html) : nss_afs

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