12.5.4 Name Resolution Facts

Name resolution services resolve easy to remember host and domain names into IP addresses.

This lesson covers the topic of configuring name resolution settings.

Name Resolution Settings Configuration

The following table lists the files that administrators use to configure name resolution settings on Linux:

Command	Function	Examples
/etc/hosts	Maps host names to their associated IP addresses. Each record in this file line contains an IP address along with the hostname that should be resolved to that IP address. It may optionally contain an alias that also maps to that same IP address. When a host needs to resolve a hostname into an IP address, this file is read first by default. If a mapping for the hostname is found, it is used, and the name resolution process ends. If a mapping is not found in this file, then the name resolution request is sent to a DNS server.	**10.0.0.136 fs5.corpnet.com fs5** specifies that the IP address **10.0.0.136** is mapped to **fs5.corpnet.com** and that the alias **fs5** also maps to that same IP address.
/etc/resolv.conf	Provides the system with the address of a DNS server that can be used for name resolution. Up to three servers can be listed, and the servers are accessed in the order specified. The file can also specify a fully qualified domain name that will be appended to hostnames that are missing a domain name.	**nameserver 8.8.8.8** specifies 8.8.8.8 as the IP address of the DNS server. **search corpnet.com** appends the domain name to hostnames that do not have a domain name. For example, **linux1** becomes **linux1.corpnet.com**.
/etc/nsswitch.conf	Specifies whether the computer's hosts file or the DNS server takes precedence.	**hosts: files dns** specifies that the hosts file takes precedence before the DNS server.
/etc/hostname	Defines the host and domain names.	**fs5.corpnet.com** identifies the system's hostname as fs5.
host	Finds the IP address for a domain name.	**host fs5.corpnet.com** displays the IP address for

		fs5.corpnet.com.
hostname	Displays or sets the name of the local host for the current session.	**hostname ls4** sets the hostname for the current session to ls4.
dig	Domain Information Groper (dig) is a command-line tool that lets you query Domain Name System (DNS) name servers and displays the answers that are returned from the name server(s) that are queried. Dig is useful for verifying and troubleshooting DNS problems and can also be used to perform DNS lookups and displays the answers that are returned from the name server that were queried.	**dig testout.com** displays the DNS information for the TestOut site. This includes all of the IP addresses mapped to this site.
nslookup	A program to query internet domain name servers. The nslookup command has two modes: interactive and non-interactive. Interactive mode allows the user to query name servers for information about various hosts and domains or to print a list of hosts in a domain. Non-interactive mode is used to print just the name and requested information for a host or domain. Non-interactive mode is used when the name or Internet address of the host to be looked up is given as the first argument. To use **nslookup**: 1. Enter nslookup at the shell prompt. 2. Enter the hostname or IP address, such as 192.168.1.1. 3. The DNS server should respond with the requested mapping. 4. Type **exit** when finished.	**nslookup google.com** returns the IP address for google.com.