

scp Command

**scp** (Secure Copy) is a command-line tool that is used to transfer files and directories across the systems securely over the network. When we use **scp** command to copy files and directories from our local system to a remote system then in the backend it makes **ssh connection** to a remote system.

Syntax:

```
scp <options> <files_or_directories> user@target_host:</folder>
scp <options> user@target_host:/files <folder_local_system>
```

Some of the most widely used options in **scp** command are listed below:

| command | Explanation  |
|---------|--|
| -C      | Enable Compression   |
| -i      | identity File or private key   |
| -l      | limit the bandwidth while copying  |
| -P      | ssh port number of the target host   |
| -r      | Copy files and directories recursively                                       |
| -p      | Preserves modification times, access times, and modes from the original file |
| -q      | Disables the progress meter  |

curl Command

**curl** is a command-line tool to transfer data to or from a server, using any of the supported protocols.

Syntax:

```
curl [options] [URL...]
user@clarusway:~$ curl https://www.clarusway.com
```

- o**: Saves the downloaded file on the local machine with the name provided in the parameters.

```
curl -o [file_name] [URL...]
```

Example:

```
user@clarusway:~$ curl -o hello.zip ftp://speedtest.tele2.net/1MB.zip
```

Network Configuration Files

The graphical help tools use a few basic commands to edit a specific set of network configuration files. The exact names and location of the configuration files in the file system depend largely on your distribution and version of Linux.

| File   | Description  |
|--|--|
| /etc/resolv.conf   | List DNS servers for internet domain name resolution. Manual page for: /etc/resolv.conf  |
| /etc/hosts   | Lists hosts to be resolved locally (not by DNS). Manual page for: /etc/hosts   |
| /etc/nsswitch.conf   | List order of host name search. Typically look at local files, then NIS server, then DNS server. Manual page for: /etc/nsswitch.conf |
| Red Hat/Fedora/CentOS: /etc/sysconfig/network                      | Specify network configuration. eg. Static IP, DHCP, NIS, etc.  |
| Red Hat/Fedora/CentOS: /etc/sysconfig/network-scripts/ifcfg-device | Specify TCP network information.   |
| Ubuntu/Debian: /etc/network/interfaces                             | Specify network configuration and devices. eg. Static IP and info, DHCP, etc.  |

The **/etc/sysconfig/network** file

- The **/etc/sysconfig/network** file is a global (across all network cards) configuration file. It allows us to define whether we want networking (**NETWORKING=yes|no**), what the hostname should be (**HOSTNAME=**) and which gateway to use (**GATEWAY=**).
- Note that this file contains no settings at all in a default RHEL7 install (with networking enabled).

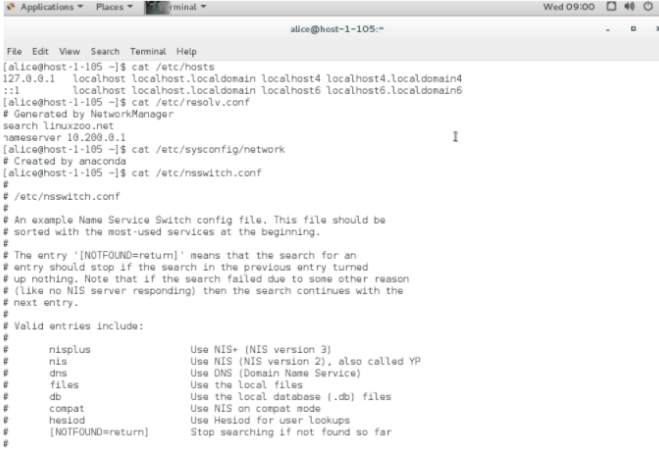
The **/etc/hosts** file

The main purpose of **/etc/hosts** configuration file is to resolve hostnames that cannot be resolved any other way. It can also be used to resolve hostnames on small networks with no DNS server.


The **/etc/resolv.conf** file

This file is used for configuring the DNS (Domain Name System) resolver library. The **resolv.conf** configuration file contains information parameters used by the DNS resolver. The DNS resolver allows for the operating system to translate domain names into IP addresses.

Example:



| Directive  | Description   |
|------------|---|
| auto       | Indicates the device should be setup at boot time         |
| lo         | Loopback interface  |
| iface      | Interface   |
| eth0       | Ethernet device 0, typically the primary network adaptor  |
| inet       | Indicates network adaptor has an IPv4 address space       |
| dhcp       | Network adaptor gets its configuration from a DHCP server |
| static     | Indicates the adaptor uses fixed IP configuration         |
| address    | The IP address of the host                                |
| netmask    | Network subnet mask                                       |
| gateway    | Gateway Address   |
| network    | The network portion of the IP address                     |
| nameserver | The IP of a DNS   |

 **Tips:**

- The loopback (lo) interface will have an IP address of 127.0.0.1, which represents the host itself. Suppose you want to open a web page running on the same Linux server you are on. You could open `http://127.0.0.1` in your web browser. That IP address won't be accessible over the network.
- The ethernet 0 (eth0) interface is typically the connection to the local network. Even if you are running Linux in a virtual machine (VM), you'll still have an eth0 interface that connects to the physical network interface of the host. Most commonly, you should ensure that eth0 is in an IP state and has an IP address so that you can communicate with the local network and likely over the Internet.