

host command in Linux with examples

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host command in Linux system is used for DNS (Domain Name System) lookup operations. In simple words, this command is used to find the IP address of a particular domain name or if you want to find out the domain name of a particular IP address the host command becomes handy. You can also find more specific details of a domain by specifying the corresponding option along with the domain name.

Syntax:

```
host [-aCdIriTWV] [-c class] [-N ndots] [-t type] [-W time]
    [-R number] [-m flag] hostname [server]
```

host command without any option: It will print the general syntax of the command along with the various options that can be used with the host command as well as gives a brief description about each option.

Example:

```
anshul@anshul-VirtualBox:~$ host
Usage: host [-aCdIriTWV] [-c class] [-N ndots] [-t type] [-W time]
        [-R number] [-m flag] hostname [server]
-a is equivalent to -v -t ANY
-c specifies query class for non-IN data
-C compares SOA records on authoritative nameservers
-d is equivalent to -v
-i IP6.INT reverse lookups
-l lists all hosts in a domain, using AXFR
-m set memory debugging flag (trace|record|usage)
-N changes the number of dots allowed before root lookup is done
-r disables recursive processing
-R specifies number of retries for UDP packets
-s a SERVFAIL response should stop query
-t specifies the query type
-T enables TCP/IP mode
-v enables verbose output
```

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Different options with the host command:

- **host domain_name:** This will print the IP address details of the specified domain.

Example:

```
host geeksforgeeks.org
```

```
anshul@anshul-VirtualBox:~$ host geeksforgeeks.org
geeksforgeeks.org has address 52.25.109.230
geeksforgeeks.org mail is handled by 1 aspmx.l.google.com.
geeksforgeeks.org mail is handled by 10 alt3.aspmx.l.google.com.
geeksforgeeks.org mail is handled by 10 alt4.aspmx.l.google.com.
geeksforgeeks.org mail is handled by 5 alt1.aspmx.l.google.com.
geeksforgeeks.org mail is handled by 5 alt2.aspmx.l.google.com.
anshul@anshul-VirtualBox:~$
```

- **host IP_Address:** This will display the domain details of the specified IP Address.

Example:

```
host 52.25.109.230
```

```
anshul@anshul-VirtualBox:~$ host 52.25.109.230
230.109.25.52.in-addr.arpa domain name pointer ec2-52-25-109-230.us-west-2.compute.amazonaws.com.
anshul@anshul-VirtualBox:~$
```

- **-a or -v:** It used to specify the query type or enables the verbose output.

Example:

```
host -a geeksforgeeks.org
```

```
anshul@anshul-VirtualBox:~$ host -v geeksforgeeks.org
Trying "geeksforgeeks.org"
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 14557
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;geeksforgeeks.org.          IN      A

;; ANSWER SECTION:
geeksforgeeks.org.         8      IN      A      52.25.109.230

Received 51 bytes from 127.0.0.53#53 in 1 ms
Trying "geeksforgeeks.org"
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 11597
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;geeksforgeeks.org.          IN      AAAA

Received 35 bytes from 127.0.0.53#53 in 583 ms
Trying "geeksforgeeks.org"
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 43282
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;geeksforgeeks.org.          IN      MX

;; ANSWER SECTION:
geeksforgeeks.org.         278     IN      MX      5 alt2.aspmx.l.google.com.
geeksforgeeks.org.         278     IN      MX      5 alt1.aspmx.l.google.com.
geeksforgeeks.org.         278     IN      MX      10 alt4.aspmx.l.google.com.
geeksforgeeks.org.         278     IN      MX      10 alt3.aspmx.l.google.com.
```

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```
host -t ns geeksforgeeks.org
```

```
anshul@anshul-VirtualBox:~$ host -t ns geeksforgeeks.org
geeksforgeeks.org name server ns-869.awsdns-44.net.
geeksforgeeks.org name server ns-245.awsdns-30.com.
geeksforgeeks.org name server ns-1569.awsdns-04.co.uk.
geeksforgeeks.org name server ns-1520.awsdns-62.org.
anshul@anshul-VirtualBox:~$
```

Example 2: To print SOA record

```
host -t SOA geeksforgeeks.org
```

```
anshul@anshul-VirtualBox:~$ host -t SOA geeksforgeeks.org
geeksforgeeks.org has SOA record ns-869.awsdns-44.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
anshul@anshul-VirtualBox:~$
```

Example 3: To print *txt* record

```
host -t txt geeksforgeeks.org
```

```
anshul@anshul-VirtualBox:~$ host -t txt geeksforgeeks.org
geeksforgeeks.org descriptive text "v=spf1 include:amazonses.com include:_spf.google.com -all"
anshul@anshul-VirtualBox:~$
```

- **-C** : In order to compare the SOA records on authoritative nameservers.

Example:

```
host -C geeksforgeeks.org
```

```
anshul@anshul-VirtualBox:~$ host -C geeksforgeeks.org
Nameserver 205.251.198.33:
  geeksforgeeks.org has SOA record ns-869.awsdns-44.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
Nameserver 205.251.197.240:
  geeksforgeeks.org has SOA record ns-869.awsdns-44.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
Nameserver 205.251.192.245:
  geeksforgeeks.org has SOA record ns-869.awsdns-44.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
Nameserver 205.251.195.101:
  geeksforgeeks.org has SOA record ns-869.awsdns-44.net. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
anshul@anshul-VirtualBox:~$
```

- **-R** : In order to specify the number of retries you can do in case one try fails. If anyone try succeeds then the command stops.

Example:

```
host -R 3 geeksforgeeks.org
```

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```
anshul@anshul-VirtualBox:~$ host -R 3 geeksforgeeks.org
geeksforgeeks.org has address 52.25.109.230
geeksforgeeks.org mail is handled by 10 alt4.aspmx.l.google.com.
geeksforgeeks.org mail is handled by 5 alt1.aspmx.l.google.com.
geeksforgeeks.org mail is handled by 5 alt2.aspmx.l.google.com.
geeksforgeeks.org mail is handled by 1 aspmx.l.google.com.
geeksforgeeks.org mail is handled by 10 alt3.aspmx.l.google.com.
anshul@anshul-VirtualBox:~$
```

- **-l**: In order to list all hosts in a domain. For this command to work you need to be either an admin or a node server.


Example:

```
host -l geeksforgeeks.org
```

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