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**At the command prompt type nslookup weber.edu and press ENTER. Copy the results and paste them in the space below. Repeat the step using the dig (dig weber.edu) and host (host weber.edu) commands.**

**nslookup**

te86504@icarus:~$ nslookup weber.edu

Server: 137.190.19.17

Address: 137.190.19.17#53

Non-authoritative answer:

Name: weber.edu

Address: 137.190.8.10

Name: weber.edu

Address: 205.120.163.214

**dig**

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> weber.edu

;; global options: +cmd

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 14508

;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 4000

;; QUESTION SECTION:

;weber.edu. IN A

;; ANSWER SECTION:

weber.edu. 146 IN A 205.120.163.214

weber.edu. 146 IN A 137.190.8.10

;; Query time: 0 msec

;; SERVER: 137.190.19.17#53(137.190.19.17)

;; WHEN: Mon Nov 30 00:26:32 UTC 2015

;; MSG SIZE rcvd: 70

**host**

te86504@icarus:~$ host weber.edu

weber.edu has address 137.190.8.10

weber.edu has address 205.120.163.214

weber.edu has IPv6 address 2001:1948:210:8::10

weber.edu mail is handled by 40 aspmx2.googlemail.com.

weber.edu mail is handled by 30 alt2.aspmx.l.google.com.

weber.edu mail is handled by 20 alt1.aspmx.l.google.com.

weber.edu mail is handled by 10 aspmx.l.google.com.

weber.edu mail is handled by 50 aspmx3.googlemail.com.

**Use the three commands to find out what is the Deseret News’ (**[**www.deseretnews.com**](http://www.deseretnews.com/)**) IP address?**

**nslookup**

te86504@icarus:~$ nslookup www.deseretnews.com

Server: 137.190.19.17

Address: 137.190.19.17#53

Non-authoritative answer:

Name: www.deseretnews.com

Address: 199.104.95.15

**dig**

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> www.deseretnews.com

;; global options: +cmd

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 32707

;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 4000

;; QUESTION SECTION:

;www.deseretnews.com. IN A

;; ANSWER SECTION:

www.deseretnews.com. 77100 IN A 199.104.95.15

;; Query time: 0 msec

;; SERVER: 137.190.19.17#53(137.190.19.17)

;; WHEN: Mon Nov 30 00:30:34 UTC 2015

;; MSG SIZE rcvd: 64

**host**

te86504@icarus:~$ host www.deseretnews.com

www.deseretnews.com has address 199.104.95.15

**Change types of server lookups. Look up the Mail Exchange (MX) records for weber.edu and gmail.com using the three utilities. Copy and paste results below.**

**nslookup**

te86504@icarus:~$ nslookup -query=mx weber.edu

Server: 137.190.19.17

Address: 137.190.19.17#53

Non-authoritative answer:

weber.edu mail exchanger = 50 aspmx3.googlemail.com.

weber.edu mail exchanger = 40 aspmx2.googlemail.com.

weber.edu mail exchanger = 30 alt2.aspmx.l.google.com.

weber.edu mail exchanger = 20 alt1.aspmx.l.google.com.

weber.edu mail exchanger = 10 aspmx.l.google.com.

Authoritative answers can be found from:

aspmx3.googlemail.com internet address = 173.194.219.26

aspmx3.googlemail.com has AAAA address 2607:f8b0:4002:c03::1b

aspmx2.googlemail.com internet address = 74.125.135.26

aspmx2.googlemail.com has AAAA address 2607:f8b0:4001:c12::1b

alt2.aspmx.l.google.com internet address = 173.194.219.27

alt2.aspmx.l.google.com has AAAA address 2607:f8b0:4002:c03::1b

alt1.aspmx.l.google.com internet address = 74.125.135.27

alt1.aspmx.l.google.com has AAAA address 2607:f8b0:4001:c12::1b

aspmx.l.google.com internet address = 173.194.203.27

aspmx.l.google.com has AAAA address 2607:f8b0:400e:c04::1b

**dig**

te86504@icarus:~$ dig weber.edu NS +noall +answer

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> weber.edu NS +noall +answer

;; global options: +cmd

weber.edu. 86068 IN NS dns1.weber.edu.

weber.edu. 86068 IN NS dns6.weber.edu.

weber.edu. 86068 IN NS dns4.weber.edu.

te86504@icarus:~$ ^C

te86504@icarus:~$ dig weber.edu MX +noall +answer

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> weber.edu MX +noall +answer

;; global options: +cmd

weber.edu. 60 IN MX 30 alt2.aspmx.l.google.com.

weber.edu. 60 IN MX 20 alt1.aspmx.l.google.com.

weber.edu. 60 IN MX 10 aspmx.l.google.com.

weber.edu. 60 IN MX 50 aspmx3.googlemail.com.

weber.edu. 60 IN MX 40 aspmx2.googlemail.com.

**host**

te86504@icarus:~$ host -t mx weber.edu

weber.edu mail is handled by 20 alt1.aspmx.l.google.com.

weber.edu mail is handled by 10 aspmx.l.google.com.

weber.edu mail is handled by 50 aspmx3.googlemail.com.

weber.edu mail is handled by 40 aspmx2.googlemail.com.

weber.edu mail is handled by 30 alt2.aspmx.l.google.com.

**nslookup**

te86504@icarus:~$ nslookup -query=mx gmail.com

Server: 137.190.19.17

Address: 137.190.19.17#53

Non-authoritative answer:

gmail.com mail exchanger = 5 gmail-smtp-in.l.google.com.

gmail.com mail exchanger = 20 alt2.gmail-smtp-in.l.google.com.

gmail.com mail exchanger = 10 alt1.gmail-smtp-in.l.google.com.

gmail.com mail exchanger = 40 alt4.gmail-smtp-in.l.google.com.

gmail.com mail exchanger = 30 alt3.gmail-smtp-in.l.google.com.

Authoritative answers can be found from:

gmail-smtp-in.l.google.com internet address = 74.125.20.26

**dig**

te86504@icarus:~$ dig gmail.com MX +noall +answer

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> gmail.com MX +noall +answer

;; global options: +cmd

gmail.com. 3310 IN MX 20 alt2.gmail-smtp-in.l.google.com.

gmail.com. 3310 IN MX 10 alt1.gmail-smtp-in.l.google.com.

gmail.com. 3310 IN MX 40 alt4.gmail-smtp-in.l.google.com.

gmail.com. 3310 IN MX 30 alt3.gmail-smtp-in.l.google.com.

gmail.com. 3310 IN MX 5 gmail-smtp-in.l.google.com.

**host**

te86504@icarus:~$ host -t mx gmail.com

gmail.com mail is handled by 10 alt1.gmail-smtp-in.l.google.com.

gmail.com mail is handled by 40 alt4.gmail-smtp-in.l.google.com.

gmail.com mail is handled by 30 alt3.gmail-smtp-in.l.google.com.

gmail.com mail is handled by 5 gmail-smtp-in.l.google.com.

gmail.com mail is handled by 20 alt2.gmail-smtp-in.l.google.com.

**Look up the Name Server (NS) types for weber.edu and microsoft.com using the three utilities. Paste results below.**

**nslookup**

te86504@icarus:~$ nslookup -type=ns weber.edu

Server: 137.190.19.17

Address: 137.190.19.17#53

Non-authoritative answer:

weber.edu nameserver = dns4.weber.edu.

weber.edu nameserver = dns1.weber.edu.

weber.edu nameserver = dns6.weber.edu.

Authoritative answers can be found from:

dns4.weber.edu internet address = 137.190.234.2

dns4.weber.edu has AAAA address 2001:1948:214::2

dns1.weber.edu internet address = 137.190.1.2

dns1.weber.edu has AAAA address 2001:1948:210::2

dns6.weber.edu internet address = 205.120.163.5

**dig**

te86504@icarus:~$ dig weber.edu NS +noall +answer

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> weber.edu NS +noall +answer

;; global options: +cmd

weber.edu. 86068 IN NS dns1.weber.edu.

weber.edu. 86068 IN NS dns6.weber.edu.

weber.edu. 86068 IN NS dns4.weber.edu.

**host**

te86504@icarus:~$ host -t ns weber.edcu

Host weber.edcu not found: 3(NXDOMAIN)

te86504@icarus:~$ host -t ns weber.edu

weber.edu name server dns6.weber.edu.

weber.edu name server dns4.weber.edu.

weber.edu name server dns1.weber.edu.

**nslookup**

te86504@icarus:~$ nslookup -type=ns microsoft.com

Server: 137.190.19.17

Address: 137.190.19.17#53

Non-authoritative answer:

microsoft.com nameserver = ns2.msft.net.

microsoft.com nameserver = ns4.msft.net.

microsoft.com nameserver = ns3.msft.net.

microsoft.com nameserver = ns1.msft.net.

Authoritative answers can be found from:

ns2.msft.net internet address = 208.84.2.53

ns2.msft.net has AAAA address 2620:0:32::53

ns4.msft.net internet address = 208.76.45.53

ns4.msft.net has AAAA address 2620:0:37::53

**dig**

te86504@icarus:~$ dig microsoft.com NS +noall +answer

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> microsoft.com NS +noall +answer

;; global options: +cmd

microsoft.com. 63478 IN NS ns1.msft.net.

microsoft.com. 63478 IN NS ns2.msft.net.

microsoft.com. 63478 IN NS ns4.msft.net.

microsoft.com. 63478 IN NS ns3.msft.net.

**host**

te86504@icarus:~$ host -t ns microsoft.com

microsoft.com name server ns3.msft.net.

microsoft.com name server ns1.msft.net.

microsoft.com name server ns2.msft.net.

microsoft.com name server ns4.msft.net.

**Use an alternate nameserver. i.e. Use Google’s name server (address of server is 8.8.8.8). Use the three tools to look up addresses for weber.edu and** [**www.hp.com**](http://www.hp.com/)**. Paste results below.**

**nslookup**

te86504@icarus:~$ nslookup weber.edu 8.8.8.8

Server: 8.8.8.8

Address: 8.8.8.8#53

Non-authoritative answer:

Name: weber.edu

Address: 205.120.163.214

Name: weber.edu

Address: 137.190.8.10

**dig**

te86504@icarus:~$ dig 8.8.8.8 weber.edu

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> 8.8.8.8 weber.edu

;; global options: +cmd

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NXDOMAIN, id: 51612

;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 4000

;; QUESTION SECTION:

;8.8.8.8. IN A

;; AUTHORITY SECTION:

. 900 IN SOA a.root-servers.net. nstld.verisign-grs.com. 2015112901 1800 900 604800 86400

;; Query time: 20 msec

;; SERVER: 137.190.19.17#53(137.190.19.17)

;; WHEN: Mon Nov 30 00:53:12 UTC 2015

;; MSG SIZE rcvd: 111

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 62122

;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 4000

;; QUESTION SECTION:

;weber.edu. IN A

;; ANSWER SECTION:

weber.edu. 300 IN A 205.120.163.214

weber.edu. 300 IN A 137.190.8.10

;; Query time: 1 msec

;; SERVER: 137.190.19.17#53(137.190.19.17)

;; WHEN: Mon Nov 30 00:53:12 UTC 2015

;; MSG SIZE rcvd: 70

**host**

te86504@icarus:~$ host weber.edu 8.8.8.8

Using domain server:

Name: 8.8.8.8

Address: 8.8.8.8#53

Aliases:

weber.edu has address 205.120.163.214

weber.edu has address 137.190.8.10

weber.edu has IPv6 address 2001:1948:210:8::10

weber.edu mail is handled by 20 alt1.aspmx.l.google.com.

weber.edu mail is handled by 10 aspmx.l.google.com.

weber.edu mail is handled by 50 aspmx3.googlemail.com.

weber.edu mail is handled by 40 aspmx2.googlemail.com.

weber.edu mail is handled by 30 alt2.aspmx.l.google.com.

**nslookup**

te86504@icarus:~$ nslookup hp.com 8.8.8.8

Server: 8.8.8.8

Address: 8.8.8.8#53

Non-authoritative answer:

Name: hp.com

Address: 15.216.241.18

Name: hp.com

Address: 15.201.225.10

Name: hp.com

Address: 15.240.60.238

Name: hp.com

Address: 15.217.232.245

**dig**

te86504@icarus:~$ dig 8.8.8.8 hp.com

; <<>> DiG 9.9.5-3ubuntu0.5-Ubuntu <<>> 8.8.8.8 hp.com

;; global options: +cmd

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NXDOMAIN, id: 65471

;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 4000

;; QUESTION SECTION:

;8.8.8.8. IN A

;; AUTHORITY SECTION:

. 868 IN SOA a.root-servers.net. nstld.verisign-grs.com. 2015112901 1800 900 604800 86400

;; Query time: 0 msec

;; SERVER: 137.190.19.17#53(137.190.19.17)

;; WHEN: Mon Nov 30 00:53:45 UTC 2015

;; MSG SIZE rcvd: 111

;; Got answer:

;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 45889

;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:

; EDNS: version: 0, flags:; udp: 4000

;; QUESTION SECTION:

;hp.com. IN A

;; ANSWER SECTION:

hp.com. 600 IN A 15.216.241.18

hp.com. 600 IN A 15.217.232.245

hp.com. 600 IN A 15.240.60.238

hp.com. 600 IN A 15.201.225.10

;; Query time: 55 msec

;; SERVER: 137.190.19.17#53(137.190.19.17)

;; WHEN: Mon Nov 30 00:53:45 UTC 2015

;; MSG SIZE rcvd: 99

**host**

te86504@icarus:~$ host hp.com 8.8.8.8

Using domain server:

Name: 8.8.8.8

Address: 8.8.8.8#53

Aliases:

hp.com has address 15.201.225.10

hp.com has address 15.216.241.18

hp.com has address 15.217.232.245

hp.com has address 15.240.60.238

hp.com mail is handled by 10 smtp.hp.com.