

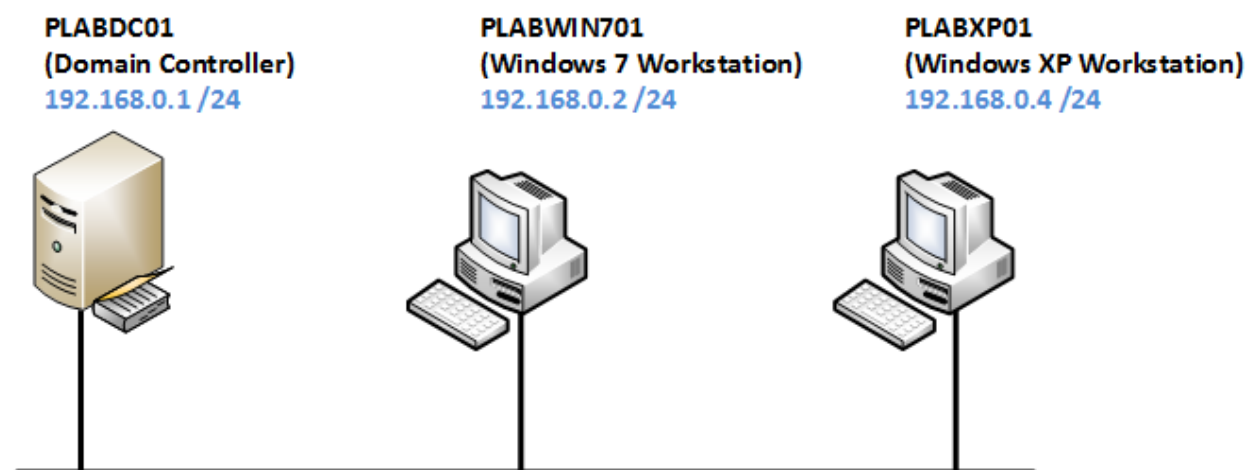
Introduction

The **Command Line Utilities** module provides you with the instruction and Server hardware to develop your hands on skills in the defined topics. This module includes the following exercises:

- 1) Windows Command Line Utilities
- 2) General Options for Command Line Tools

Lab Diagram

During your session you will have access to the following lab configuration.



Connecting to your lab

In this module you will be working on the following equipment to carry out the steps defined in each exercise.

- PLABWIN701 (Windows 7 Workstation)

Each exercise will detail which console you are required to work on to carry out the steps.

To start simply click on the named Server from the device list (located on the left hand side of the screen) and click the **Power on** from the in tools bar. In some cases the devices may power on automatically.

During the boot up process an activity indicator will be displayed in the name tab:

- Black - Powered Off
- Orange - Working on your request

- Green - Ready to access

If the remote console is not displayed automatically in the main window (or popup) click the **Connect** icon located in the tools bar to start your session.

If the remote console does not appear please try the following option:

- Switch between the HTML 5 and Java client versions in the tools bar.

In the event this does not resolve your connectivity problems please visit our Help / Support pages for additional resolution options.

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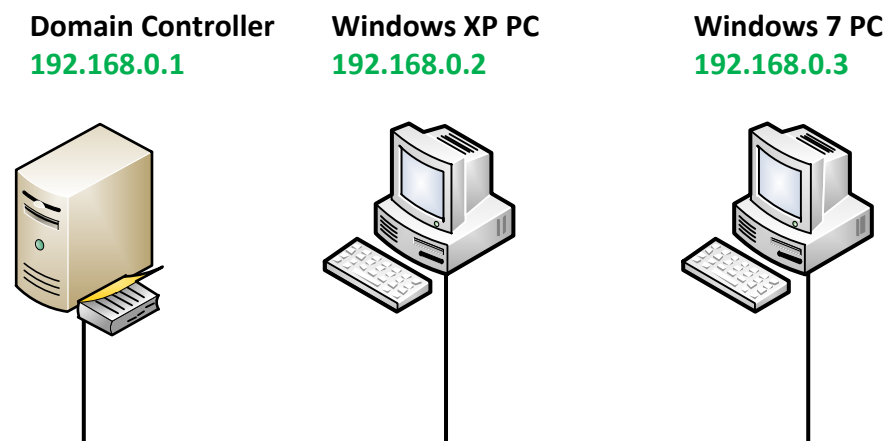
Exercise 1 - Windows Command Line Utilities

In this exercise, you learn about many of the command line tools available to you on a Windows platform. Most of these tools are fundamental to all Windows operating systems so it's important to understand that they exist and how to use them to their full potential.

Please refer to your course material to gain understanding of these command-line tools or alternatively you can use the Microsoft TechNet website on <http://bit.ly/KVs29M> [Windows 7: Troubleshooting and Support] to research these topics.

Lab Diagram

The following lab diagram applies to the exercises in this module.



DIR

The **dir** command allows you to see the available files and directory structure within a directory.

It is useful for finding files and folders on your computer using the command line instead of using Windows Explorer.

The syntax for DIR:

```
DIR [drive:][path][filename] [/P] [/W] [/A[:attributes]] [/O[:sort order]] [/S] [/B] [/L] [/V]
```

Where:

/P

This displays results information page by page (press space to page through them).

/W

This displays information in wide list format.

/A

Displays information with various attributes:

D Directories

R Read-only files

H Hidden files

A Files ready for archiving

S System files

- Prefix meaning not

/O

Displays files in sorted order, with the sort order as:

N By name (alphabetic)

S By size (smallest first)

E By extension (alphabetic)

D By date & time (earliest first)

G Group directories first

- Prefix to reverse order

A By Last Access Date

/S

Displays files in the specified directory and in all its subdirectories.

/L

Uses lowercase.

/V

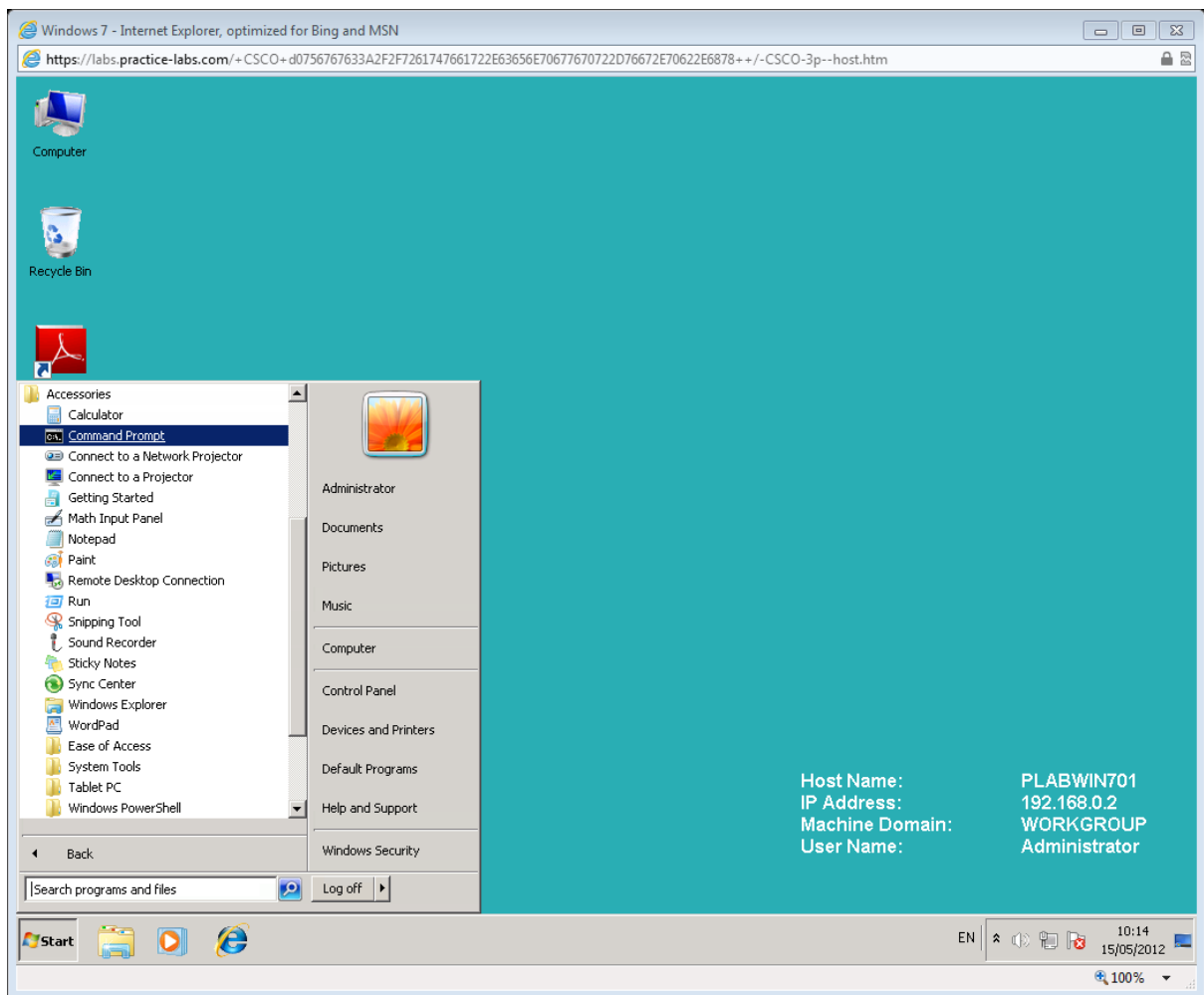
This makes the command to work in verbose mode.

Step 1

Turn on the **Windows 7** device in the Practice Labs console.

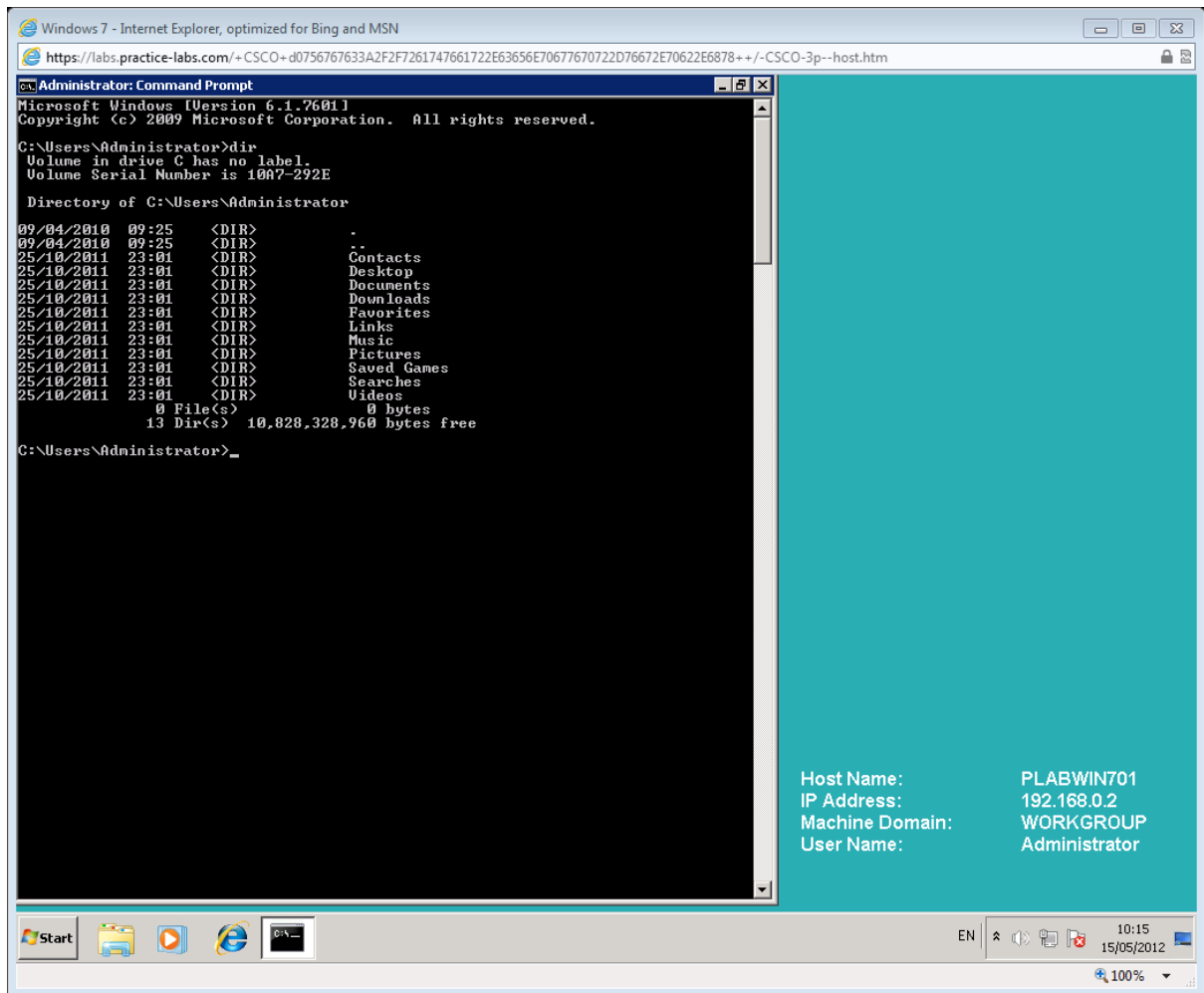
Once the **Windows 7** device is fully started, click **Connect** to log on.

Open the Command Prompt.



To view the list of files and directories in the current path, type the following command in the command prompt and press Enter;

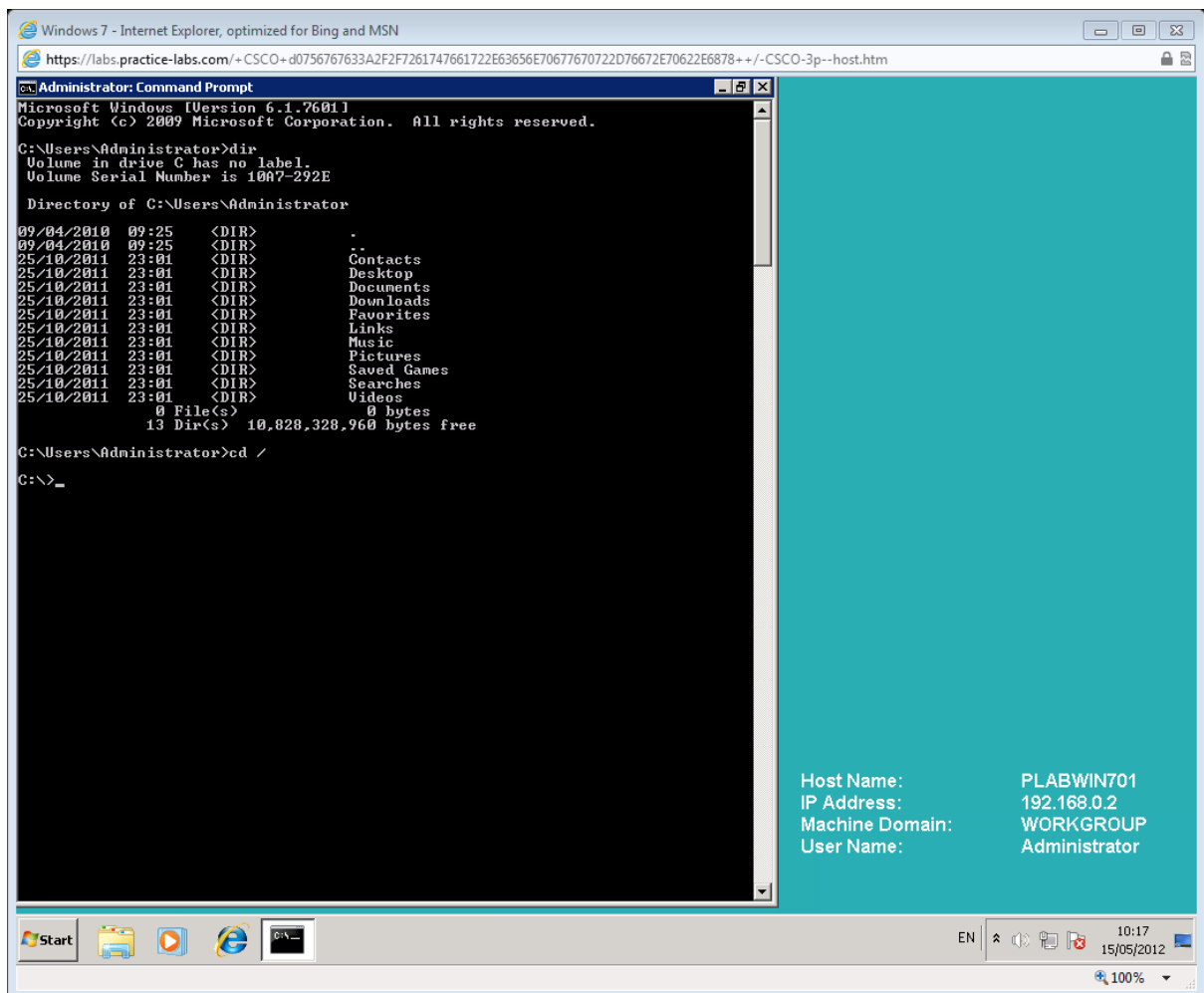
dir



Note that there are only directories and no files listed.

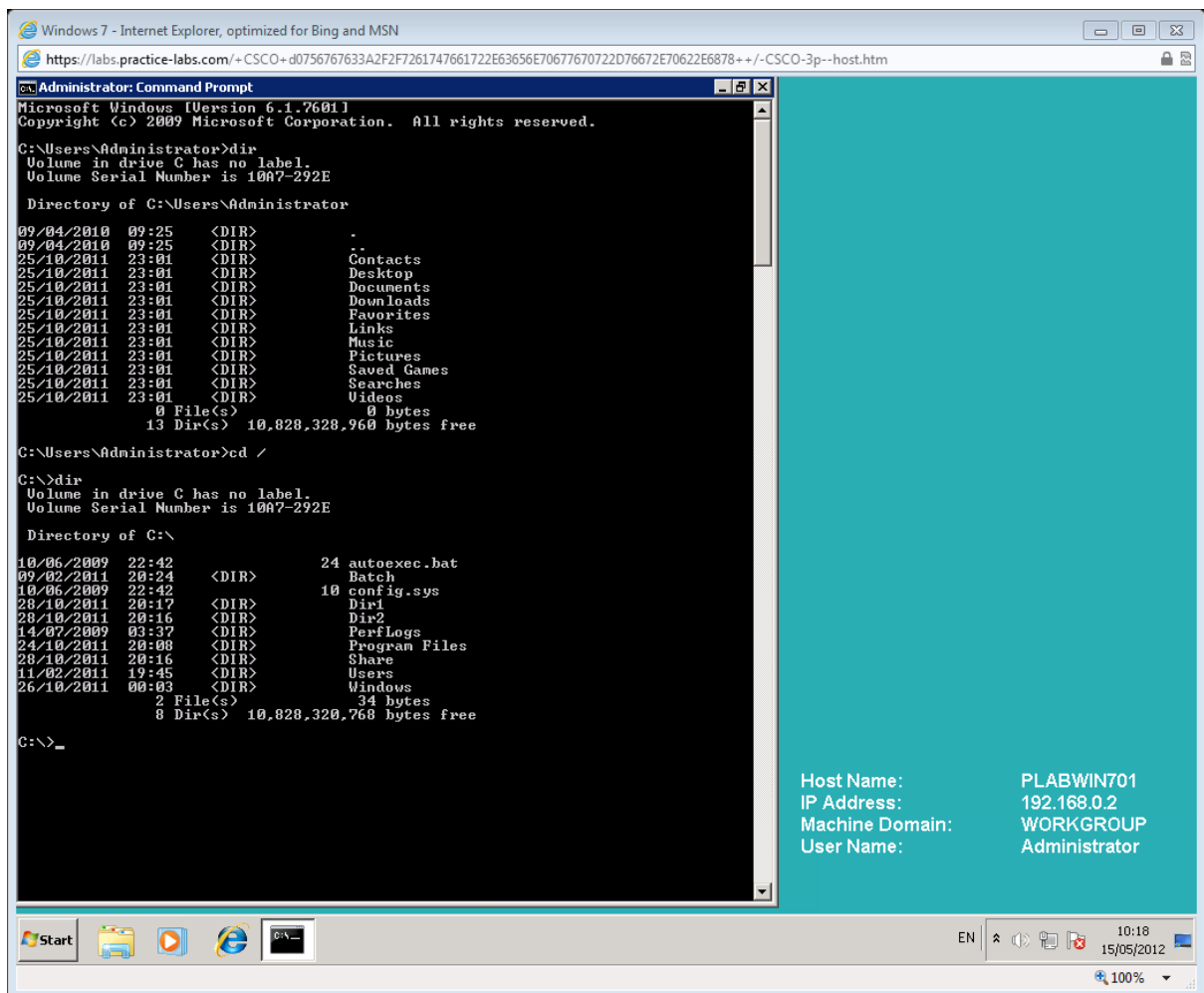
To change the path to the root of the drive, type the following command in the command prompt and press Enter;

cd /



To view the list of files and directories in the root of the C: drive, type the following command in the command prompt and press Enter;

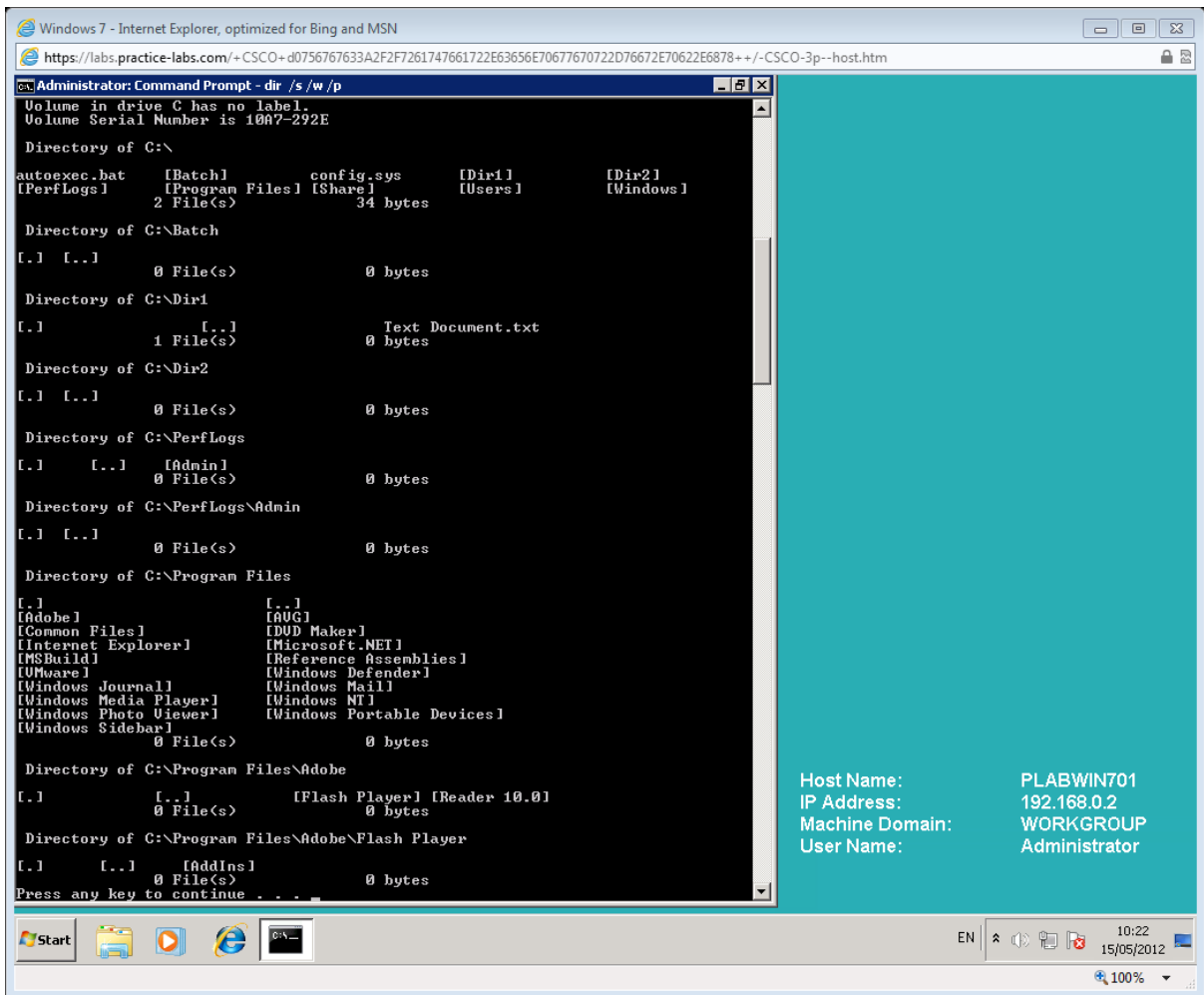
dir



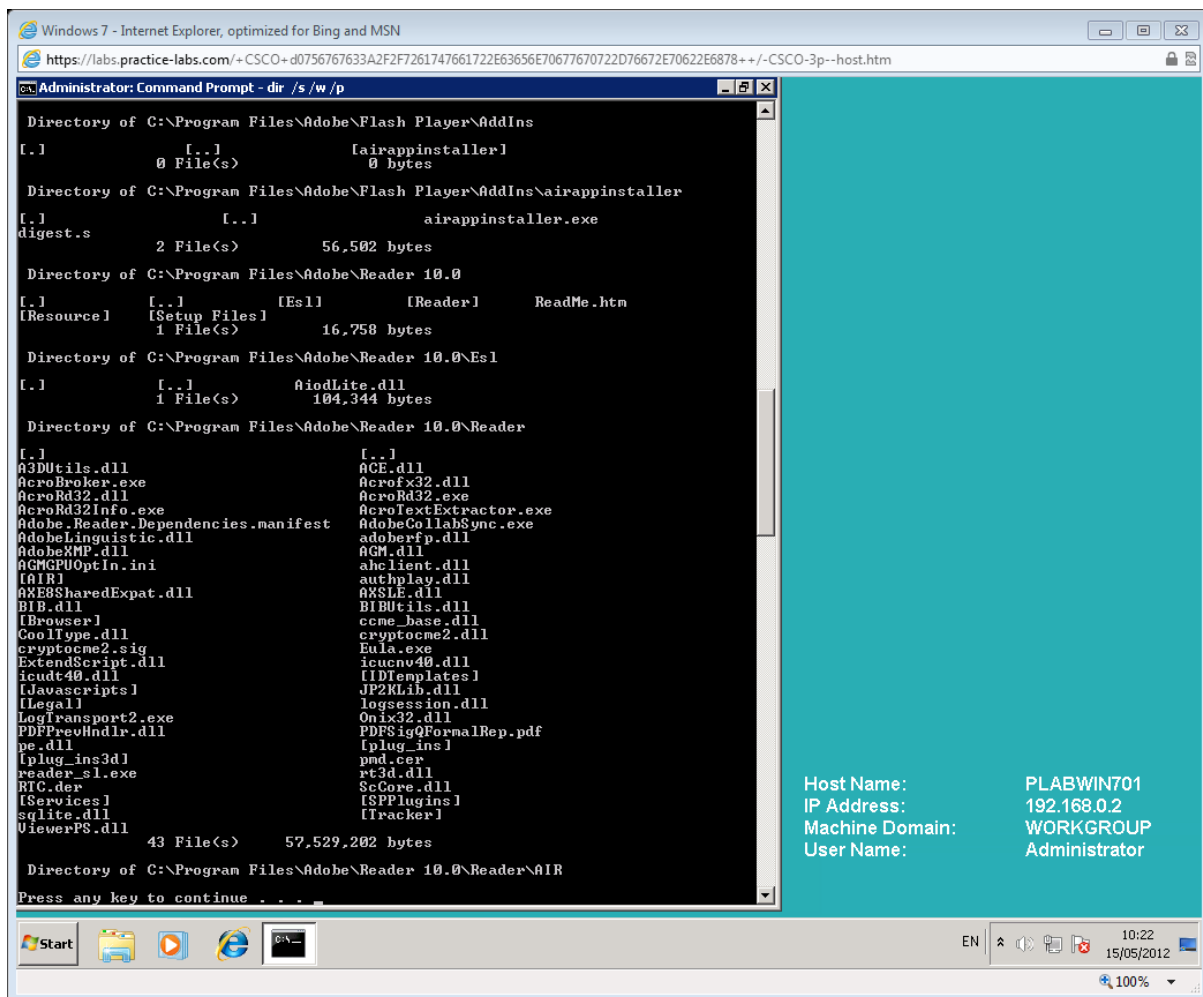
Note that you can now see two files listed. These are the entries that have a specified size and which do not contain <DIR> in the listing.

To list all the files and directories in the current directory, and then list the subdirectories in wide format, one page at a time, type the following command in the command prompt and press Enter;

```
C:\> dir /s /w /p
```

Press the **spacebar** to advance to the next screen.

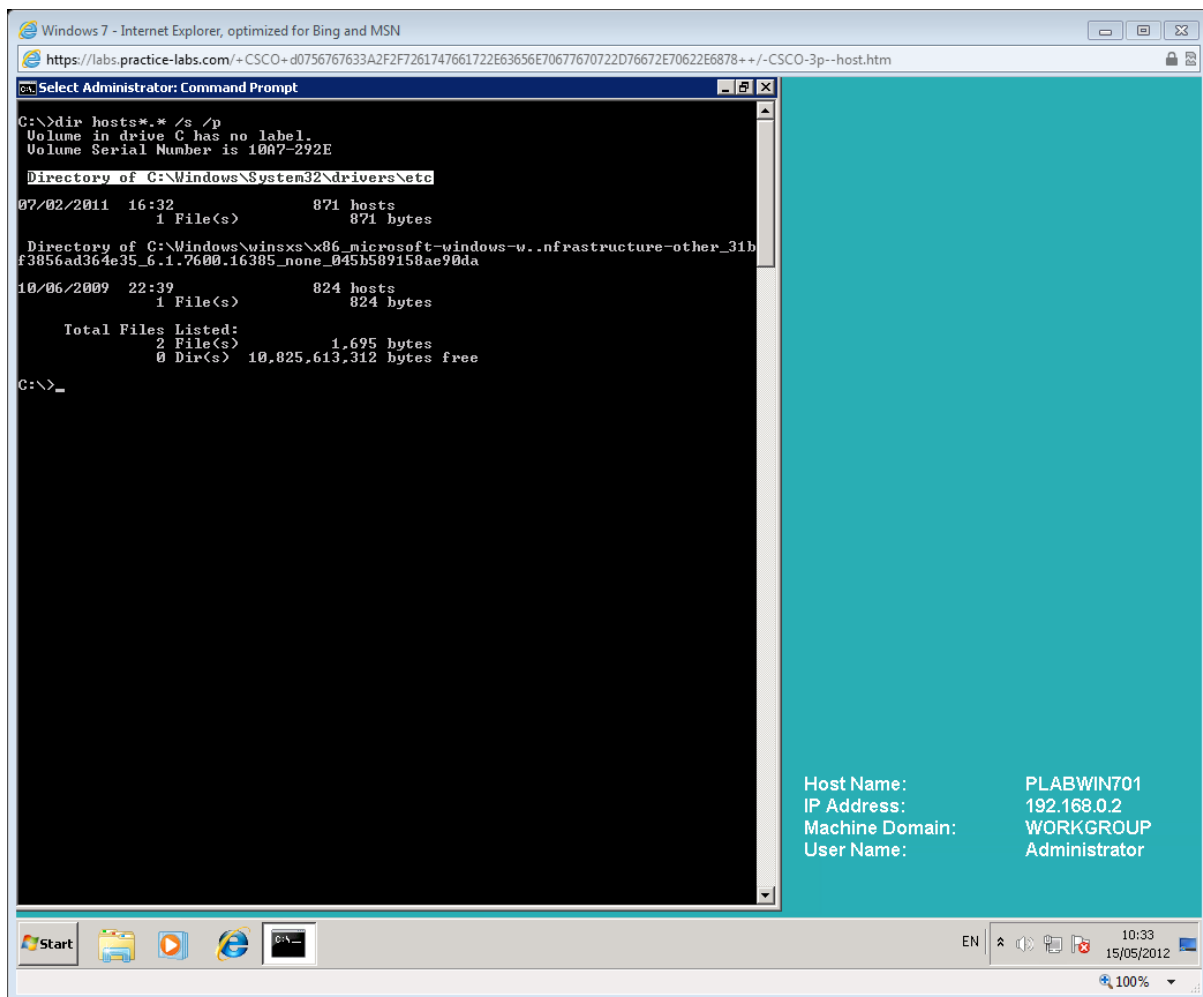


You can press the **CTRL+C** key combinations to cancel the command.

Step 2

To find the **hosts** file, type the following command in the command prompt and press Enter;

```
dir hosts*.* /s /p
```



Leave the command prompt open for the next task.

Note that the hosts file was found in two locations, one within the C:\Windows\System32\drivers\etc path and the other in a hidden system folder that stores backups of protected operating system files.

Also note that the hosts file has no file extension, but using the asterisk character allows a wildcard search that would locate any files starting with the characters “hosts” throughout any directory path lower than the current path.

MD (Make Directory), CD (Change Directory) and RD (Remove Directory)

The **MD** command creates a new directory either in the current directory or in a particular directory that you specify when executing the command.

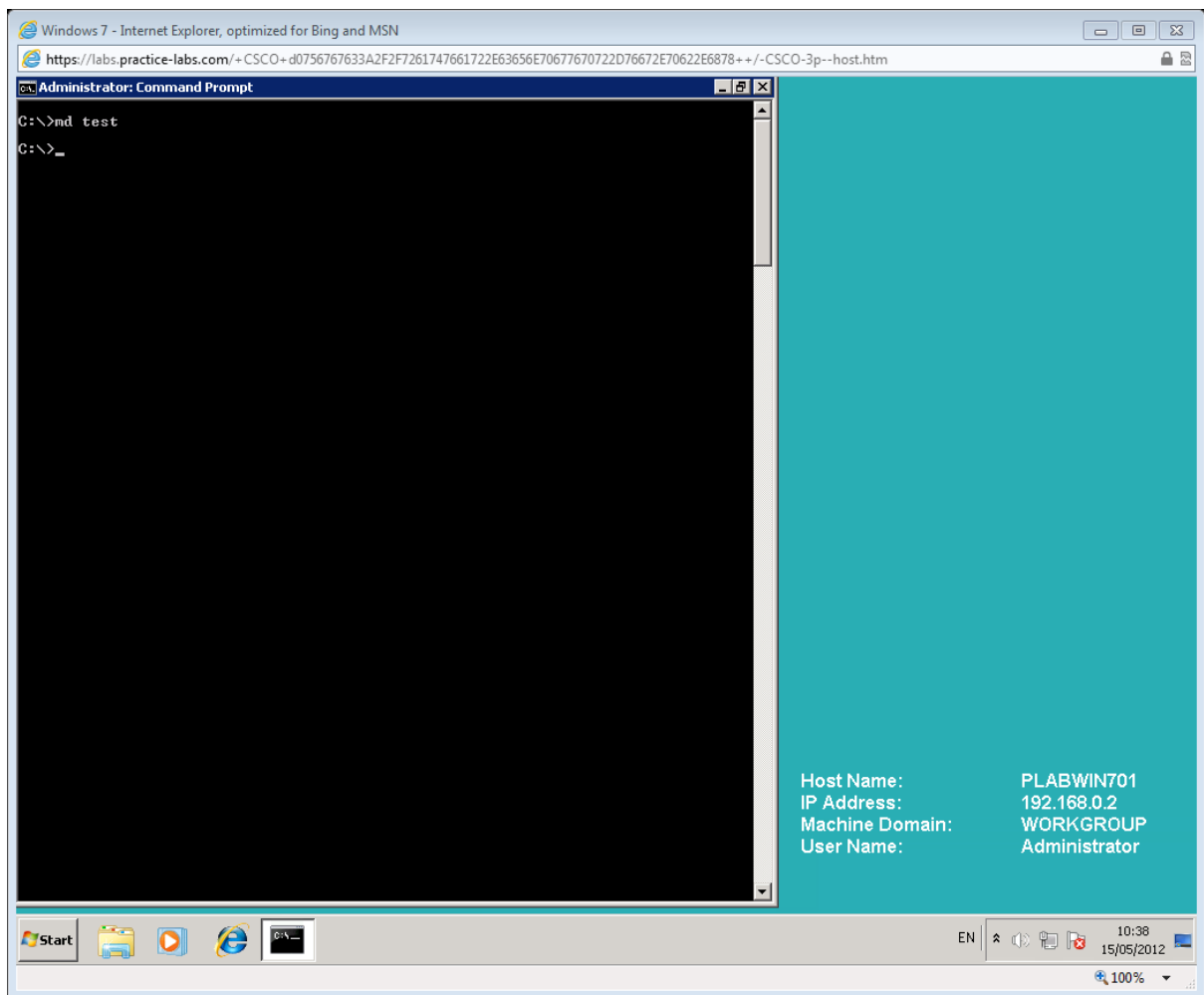
The **CD** command changes your current directory to the directory mentioned in the command.

The **RD** command is used to remove the directories from your system, the opposite of the MD command.

Step 1

To create a new directory, type the following command in the command prompt and press Enter;

md test

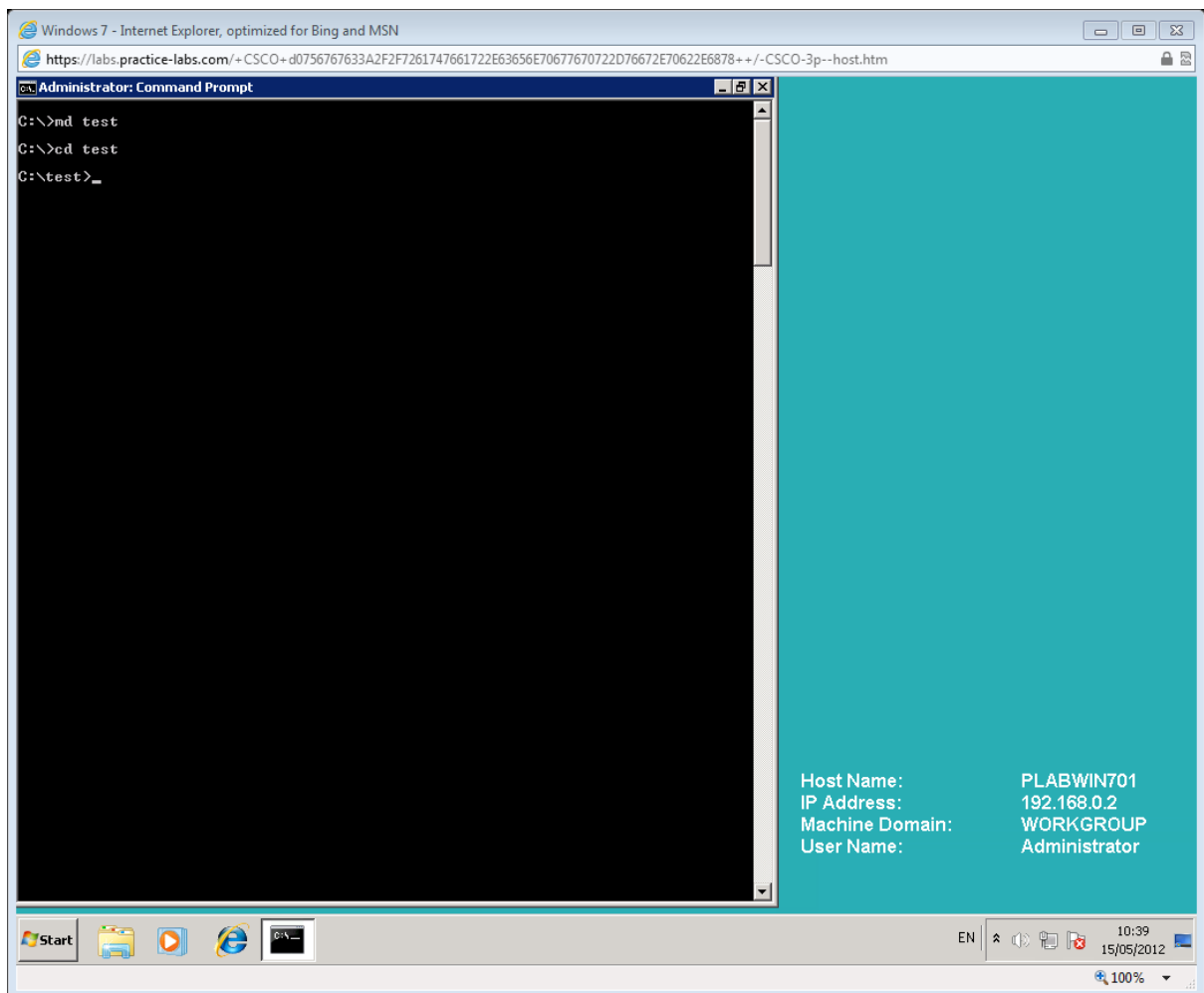


Note that the lack of an error message indicates success.

Step 2

To browse to the new sub-directory, type the following command in the command prompt and press Enter;

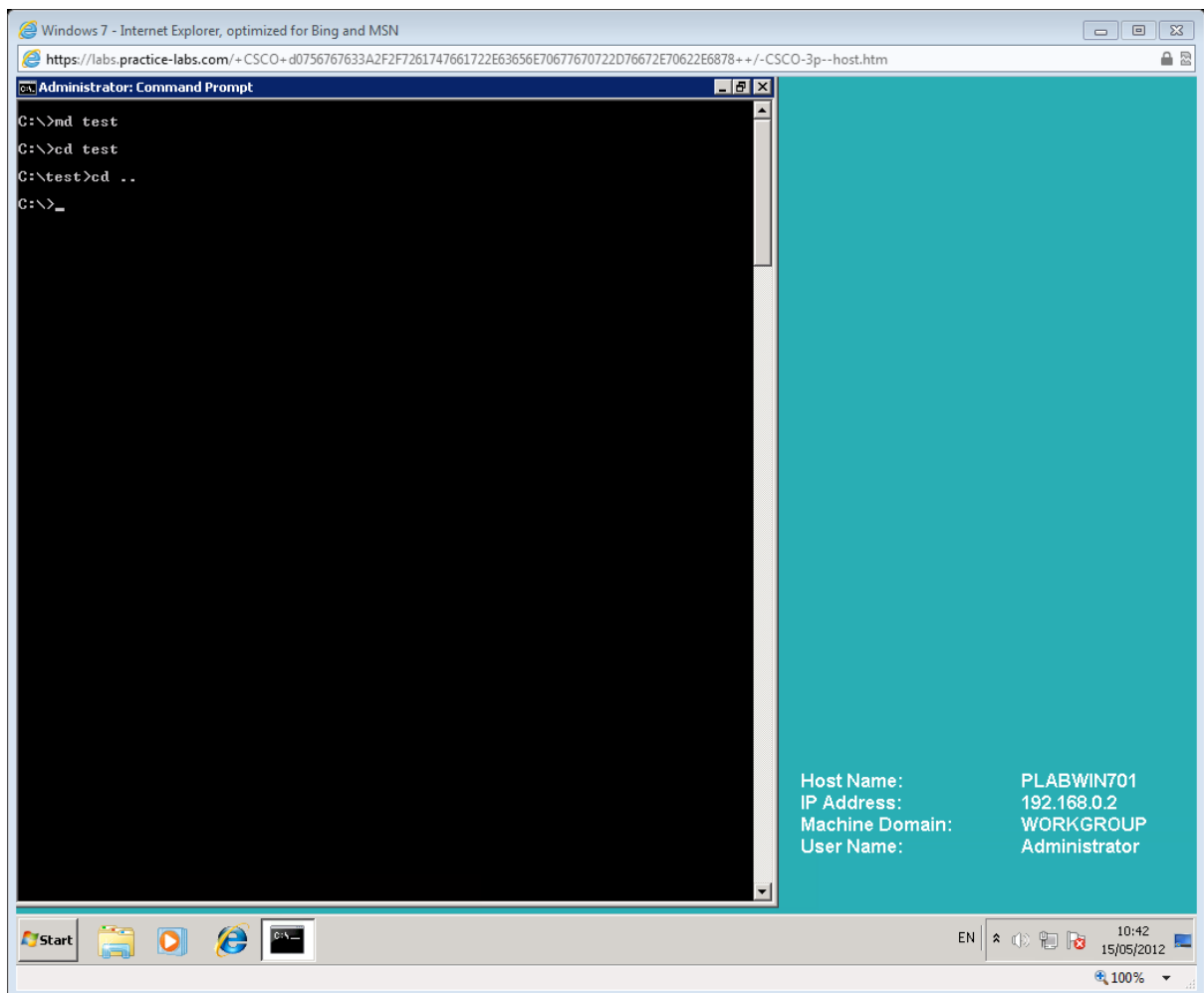
cd test



Step 3

To navigate to the parent directory, type the following command in the command prompt and press Enter;

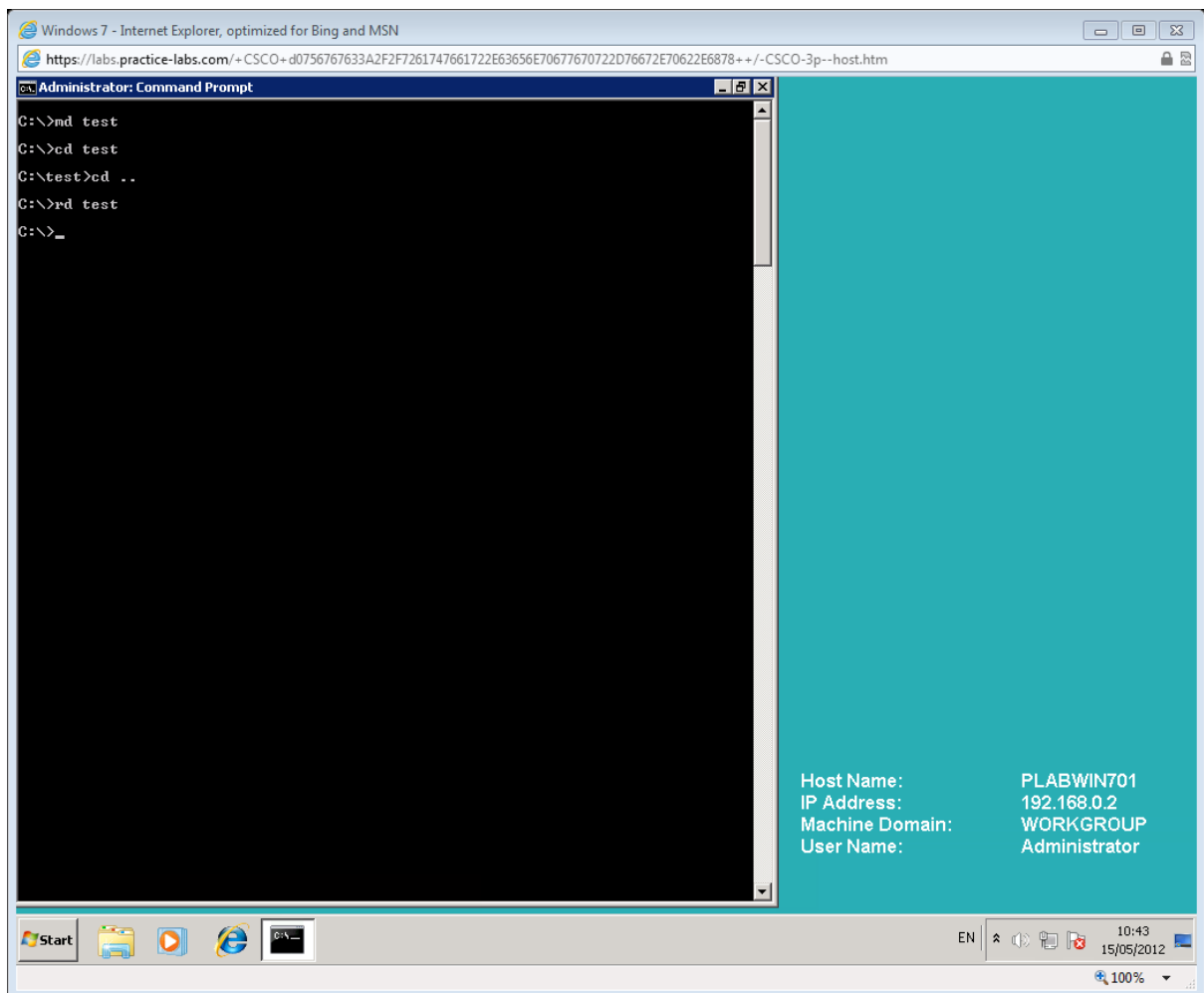
cd ..



Step 4

To remove to the new sub-directory, type the following command in the command prompt and press Enter;

rd test



Note that the lack of an error message indicates success.

Leave the command prompt open for the next task.

EDIT

This command starts MS-DOS Editor, which creates and changes ASCII text files. The GUI equivalent is something like **notepad.exe**, however edit is sometimes still useful when editing small files (like the hosts file) on your computer.

Syntax

```
edit [/b] [/h] [/r] [/s] [/<NNN>][[<Drive>:][<Path>]<FileName> [<FileName2> [...]]
```

Where:

/b

This forces monochrome mode, so that MS-DOS Editor displays in black and white.

/h

This displays the maximum number of lines possible for the current monitor.

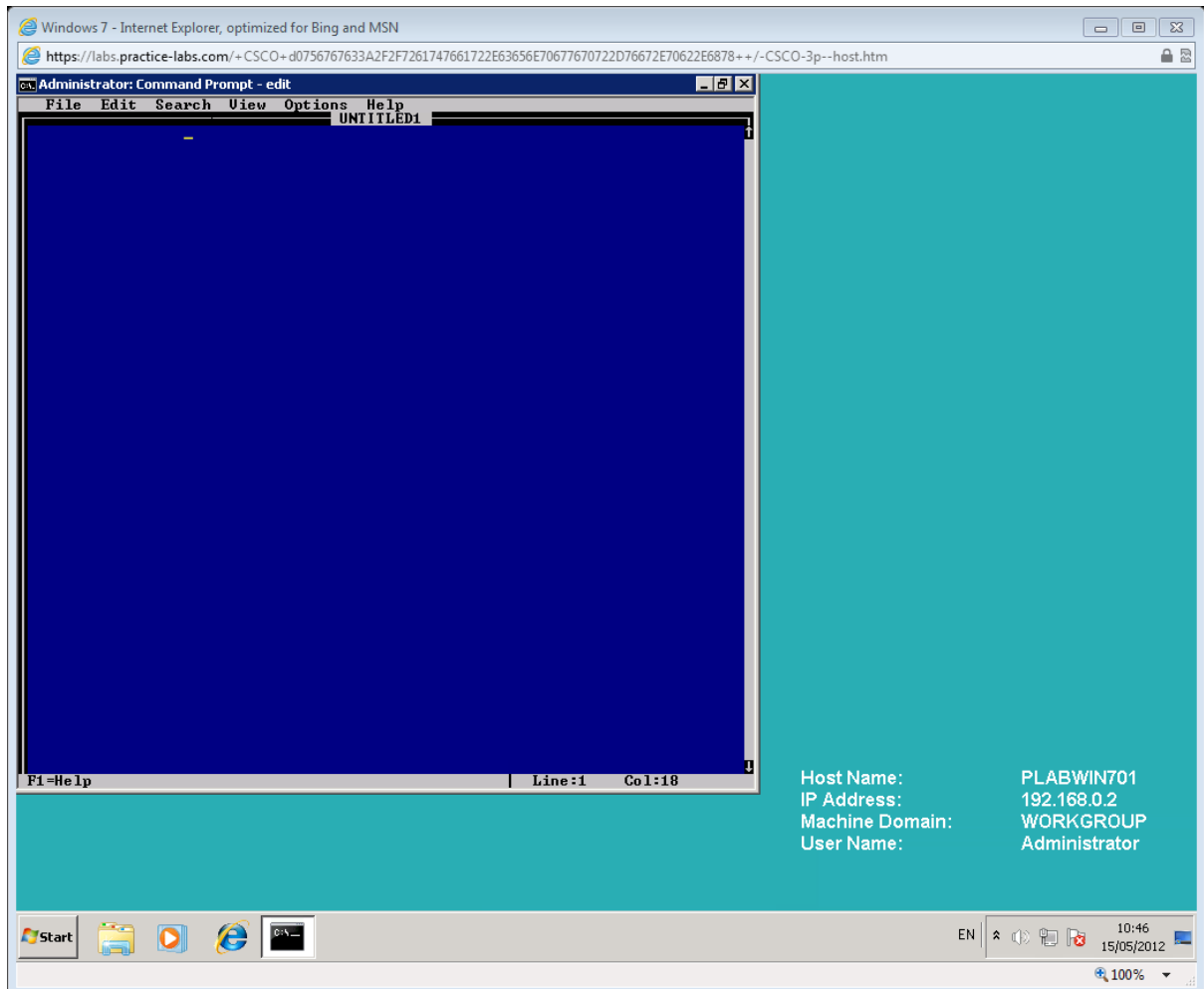
/r

Loads file(s) in read-only mode.

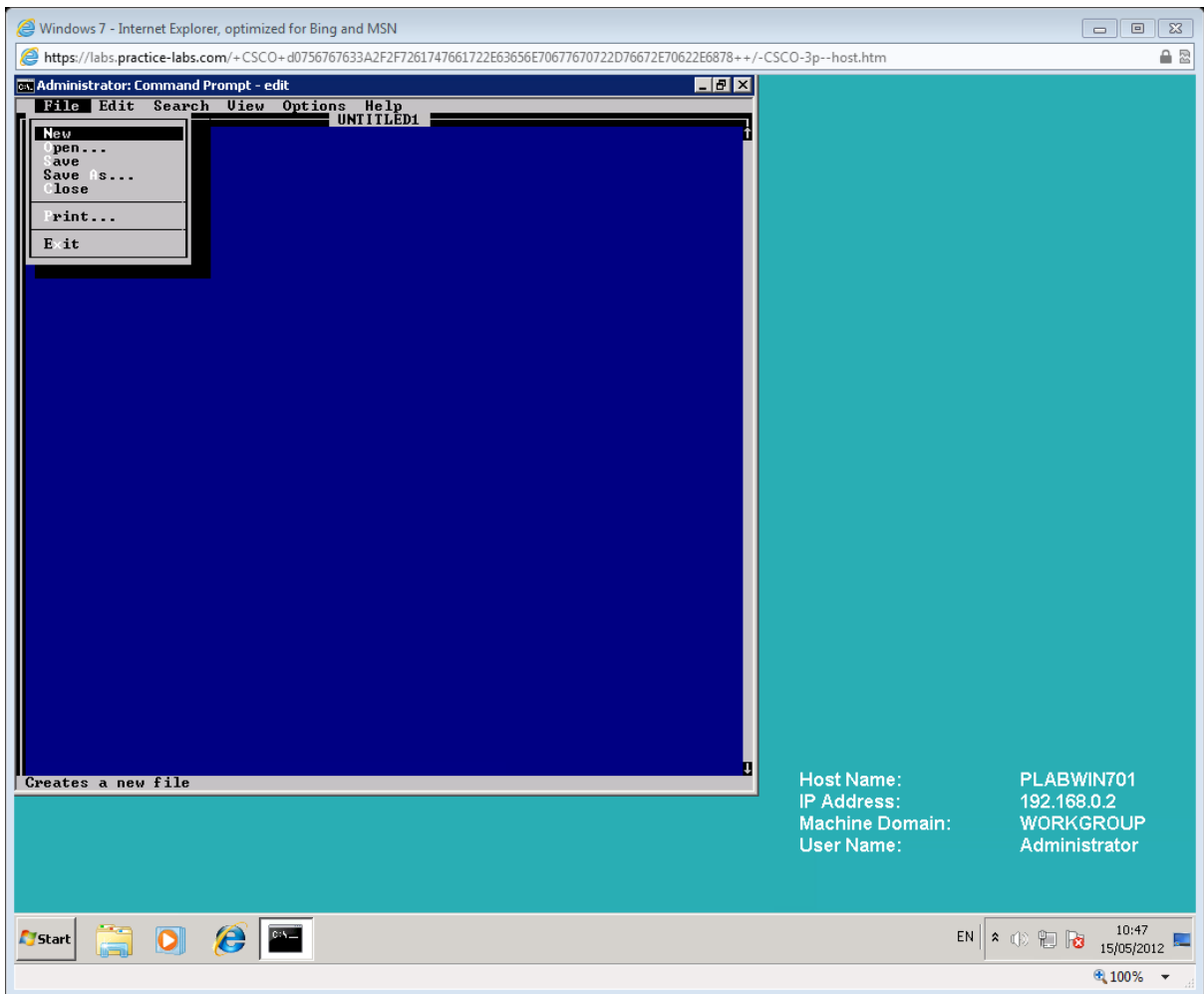
Step 1

To open **EDIT**, type the following command in the command prompt and press Enter;

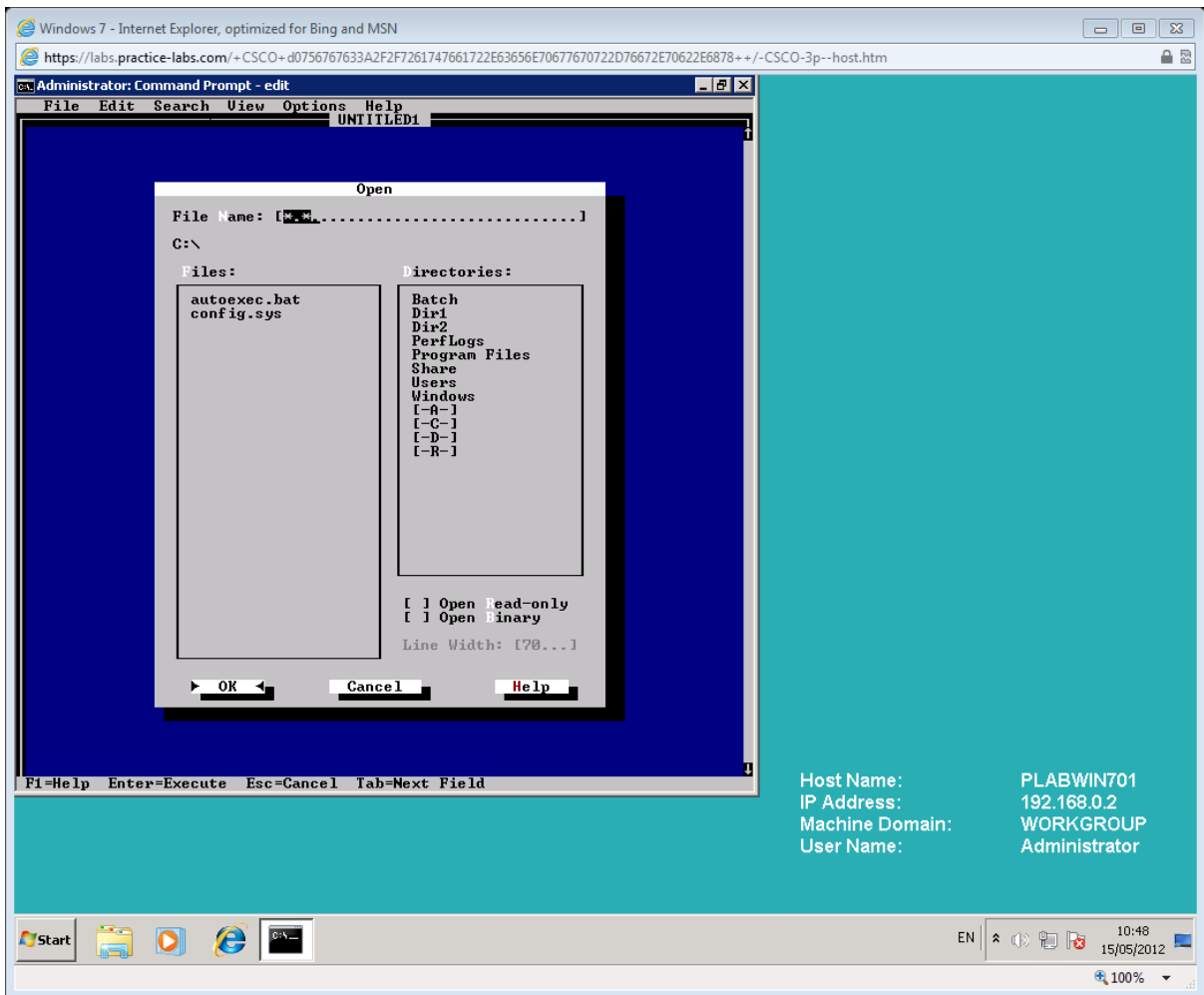
edit



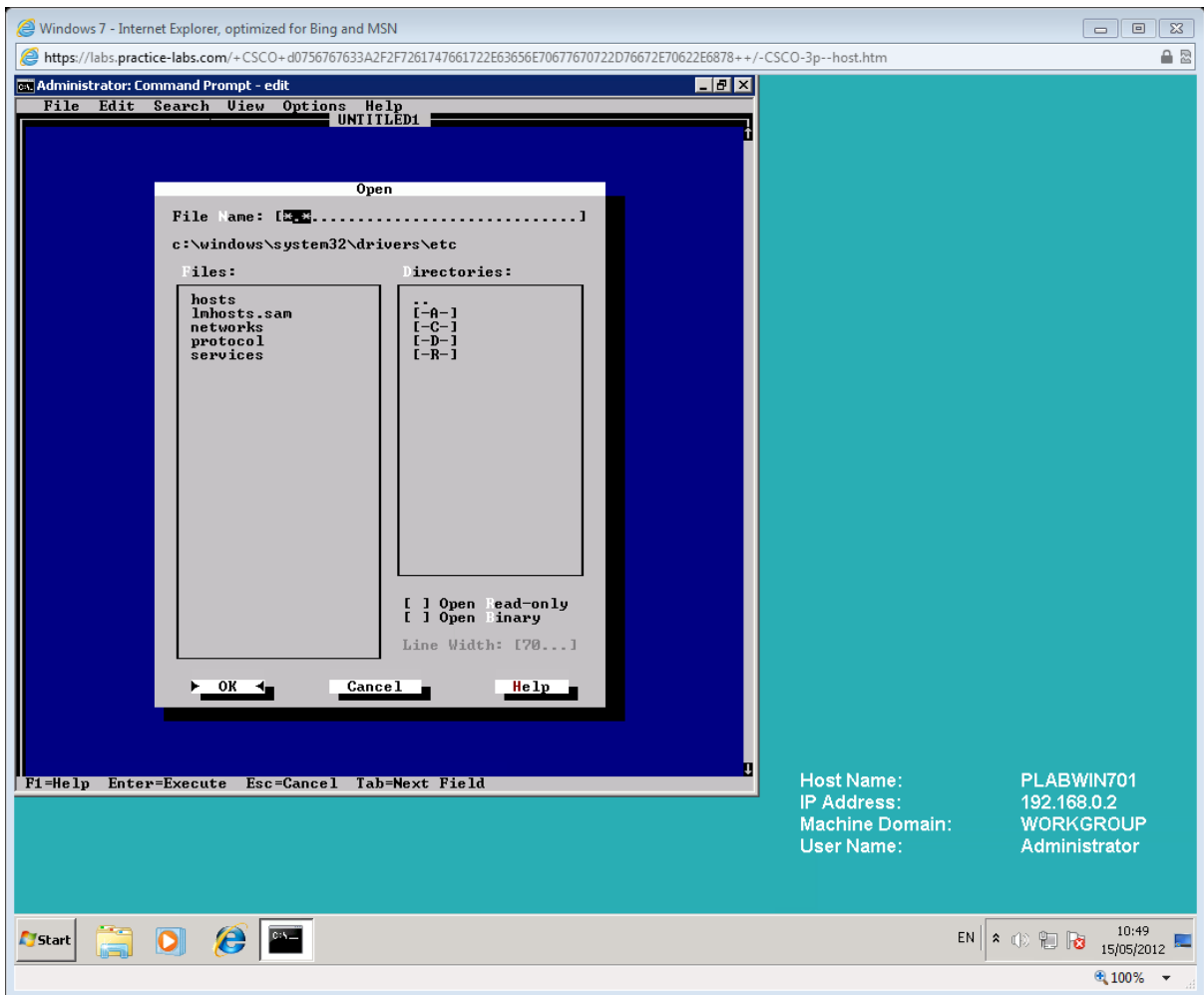
Click on **File**



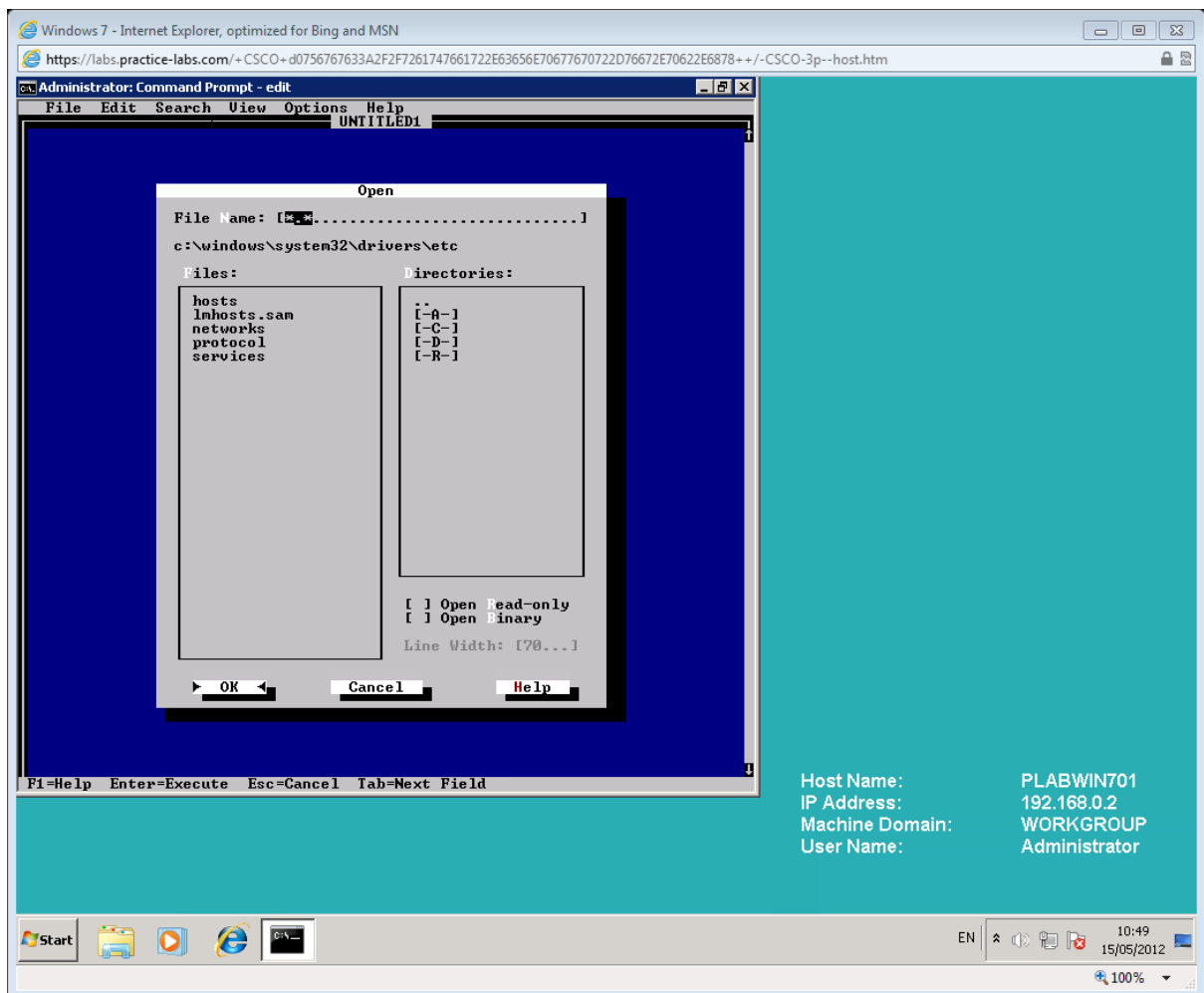
Select **Open**.



Navigate to **C:\Windows\System32\Drivers\Etc.**



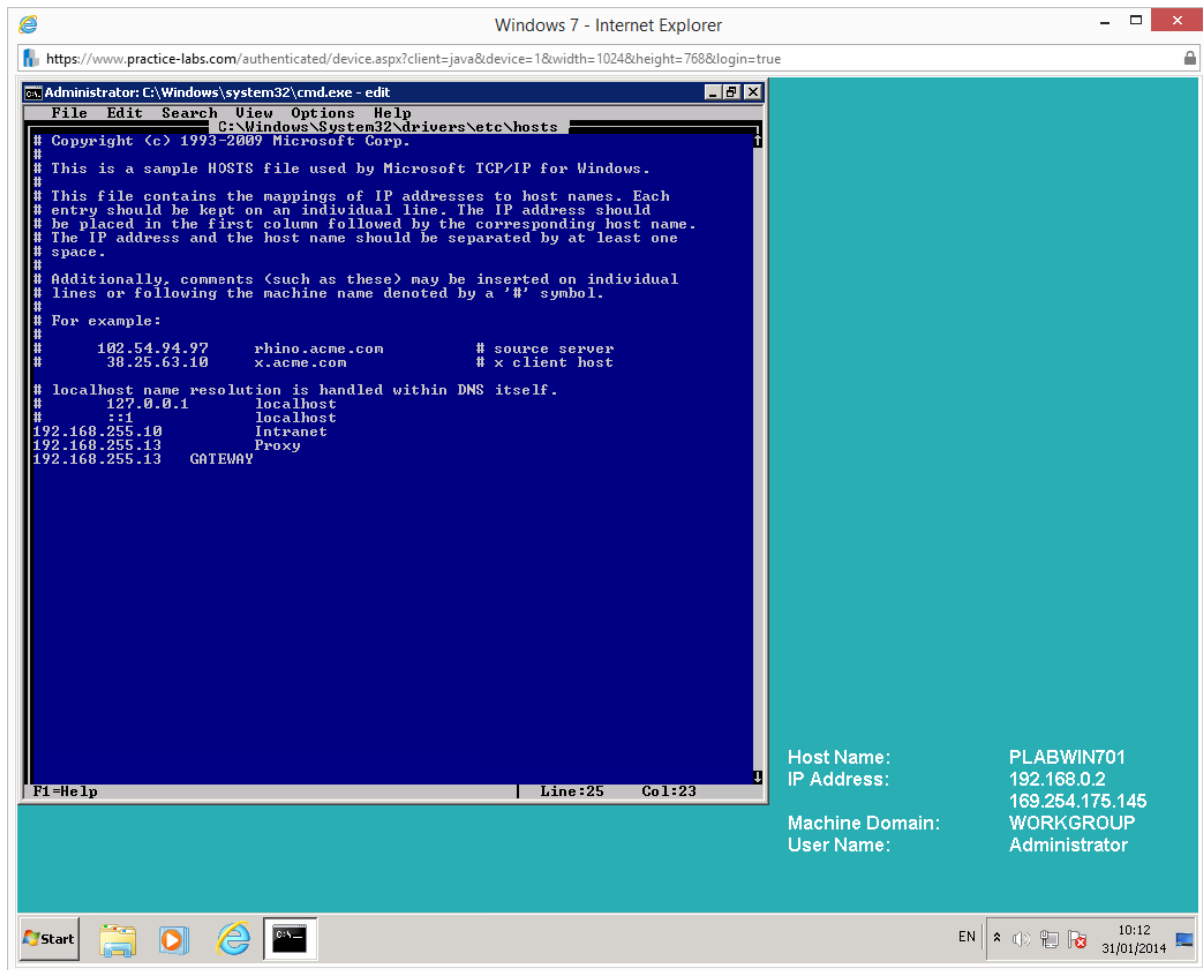
Double click **hosts**.



Step 2

To add a new entry to the hosts file, type the following line of text in the EDIT window and press Enter;

192.168.255.13 GATEWAY



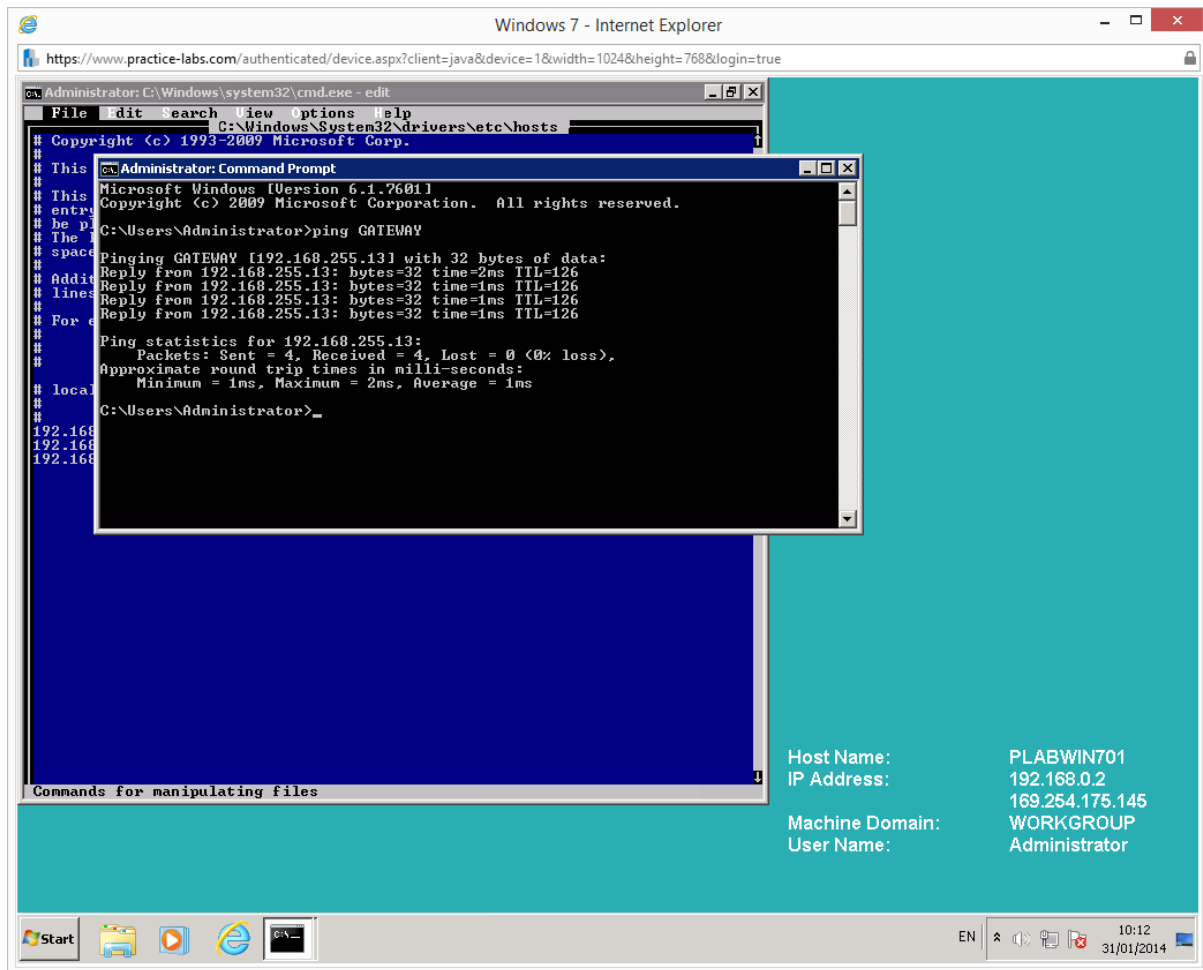
Click on **File**, and select **Save**.

Step 3

Open another instance of the **Command Prompt**.

To test the new entry to the hosts file, type the following line of text in the command prompt and press Enter;

ping GATEWAY

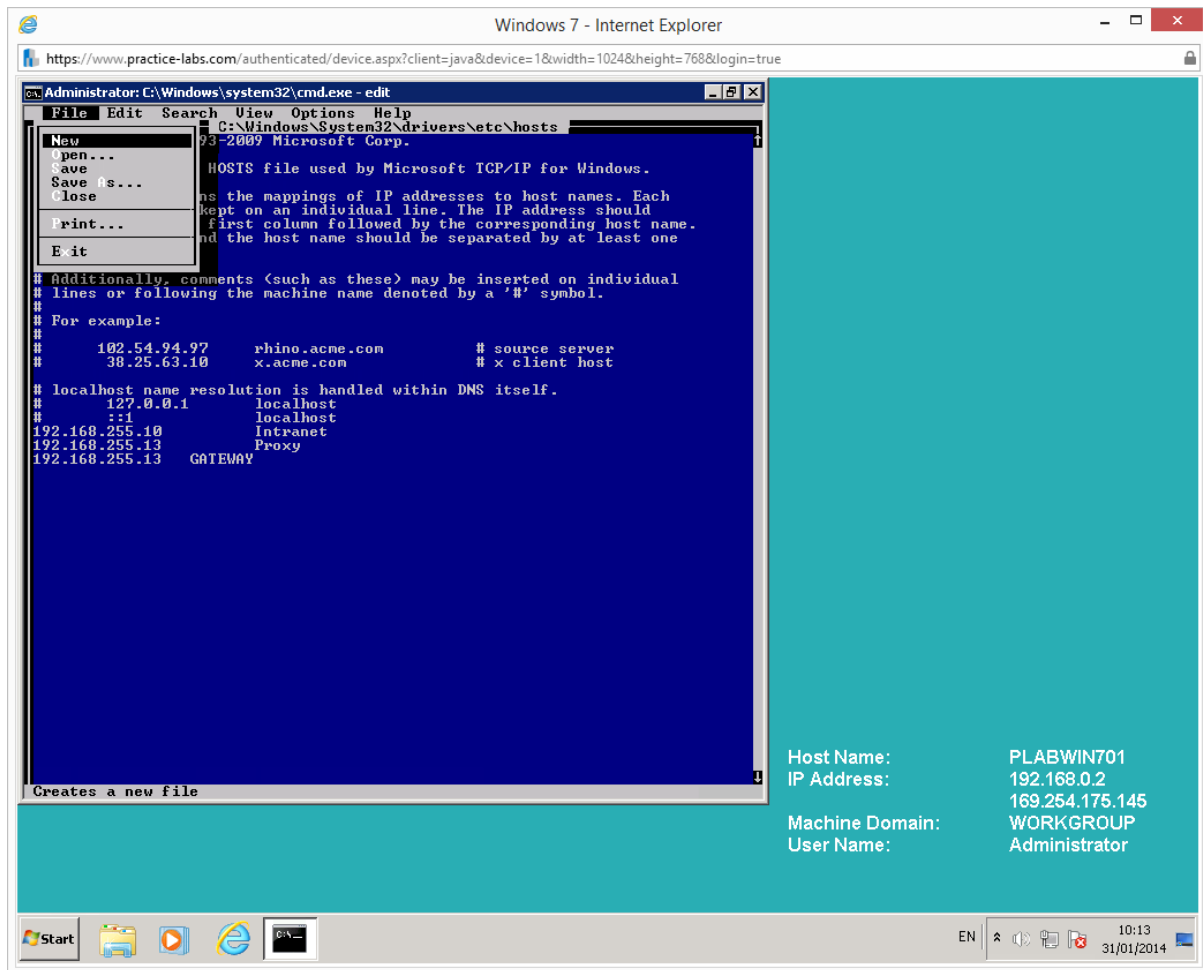


Note from the first line of PING output that the name resolution from GATEWAY to 192.168.255.13 was successful.

Close the command prompt window that was used for PING.

Switch back to **EDIT**.

Click **File** and **Exit**.



Leave the command prompt open for the next task.

COPY and XCOPY

This command copies one or more files from one location to another.

Syntax

COPY [/a] [/v] [/y] [+<Source> [/a | /b] [+ ...]] [<Destination> [/a | /b]]

Where:

/a

This indicates an ASCII text file.

/v

This verifies that new files are written correctly.

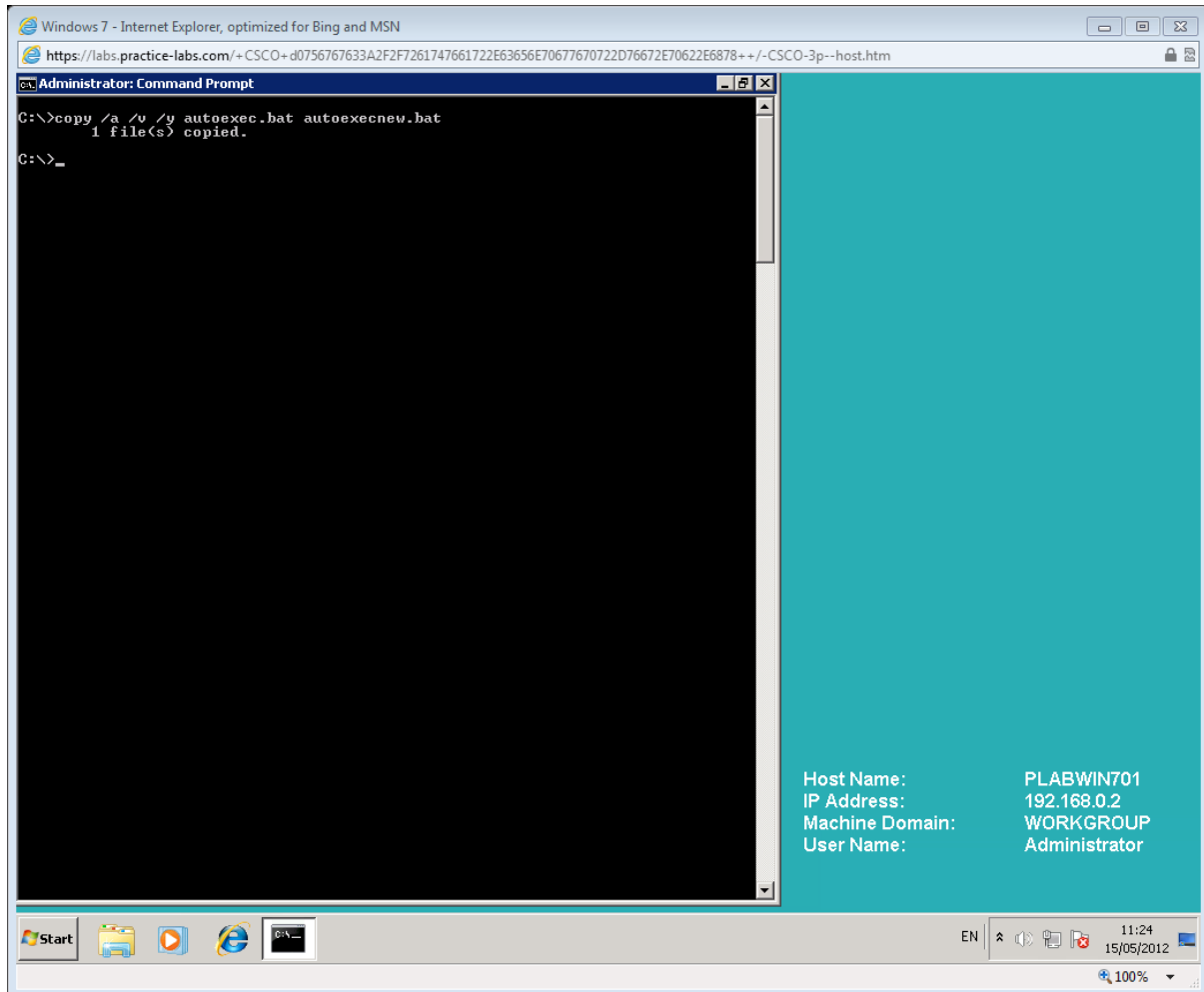
/y

This suppresses prompting to confirm that you want to overwrite an existing destination file.

Step 1

To make a copy of the **autoexec.bat** file (located in the root of the C drive) called **autoexecnew.bat**, type the following line of text in the command prompt and press Enter;

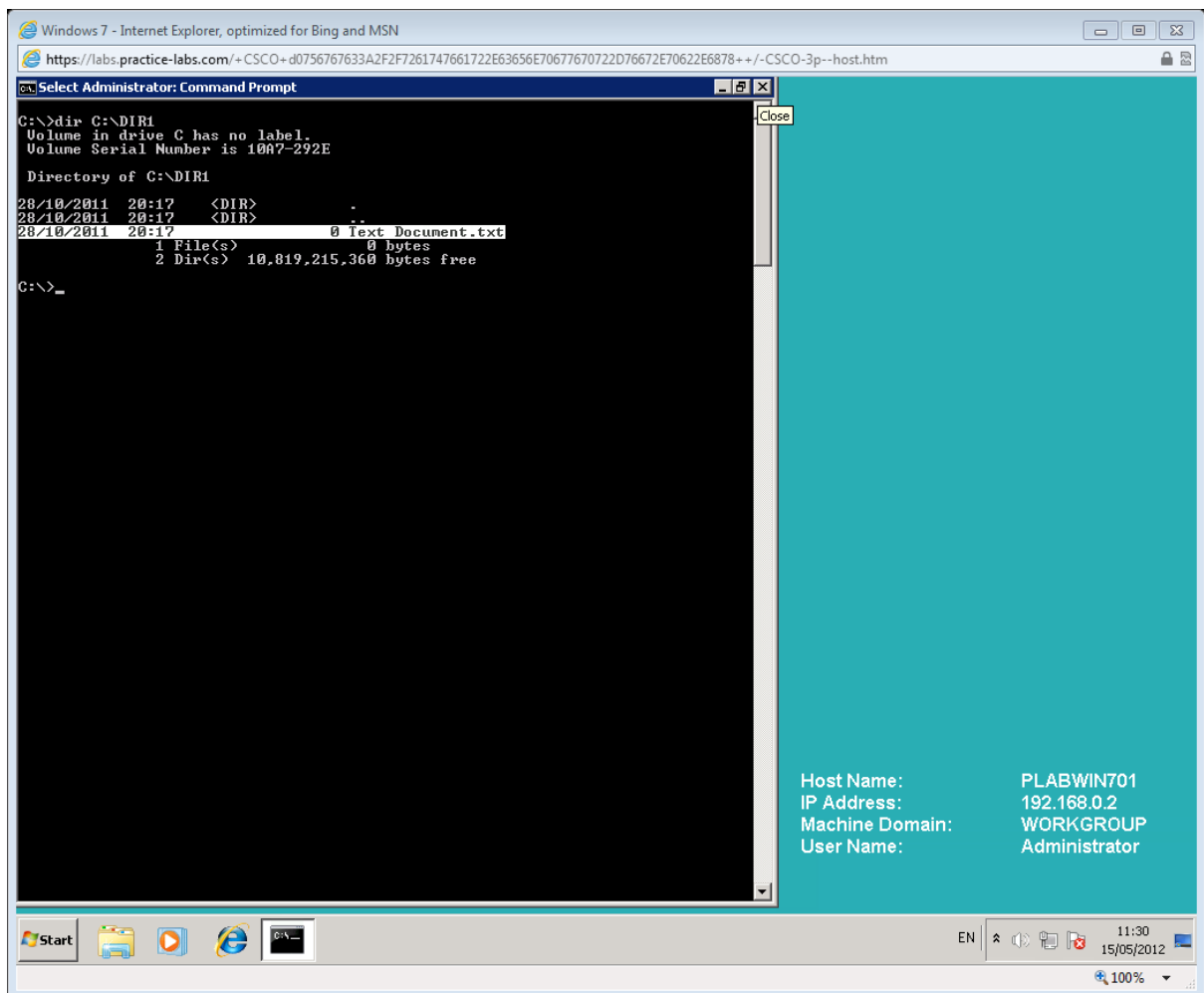
```
copy /a /v /y autoexec.bat autoexecnew.bat
```



Step 2

To view the contents of the **DIR1** directory, type the following line of text in the command prompt and press Enter;

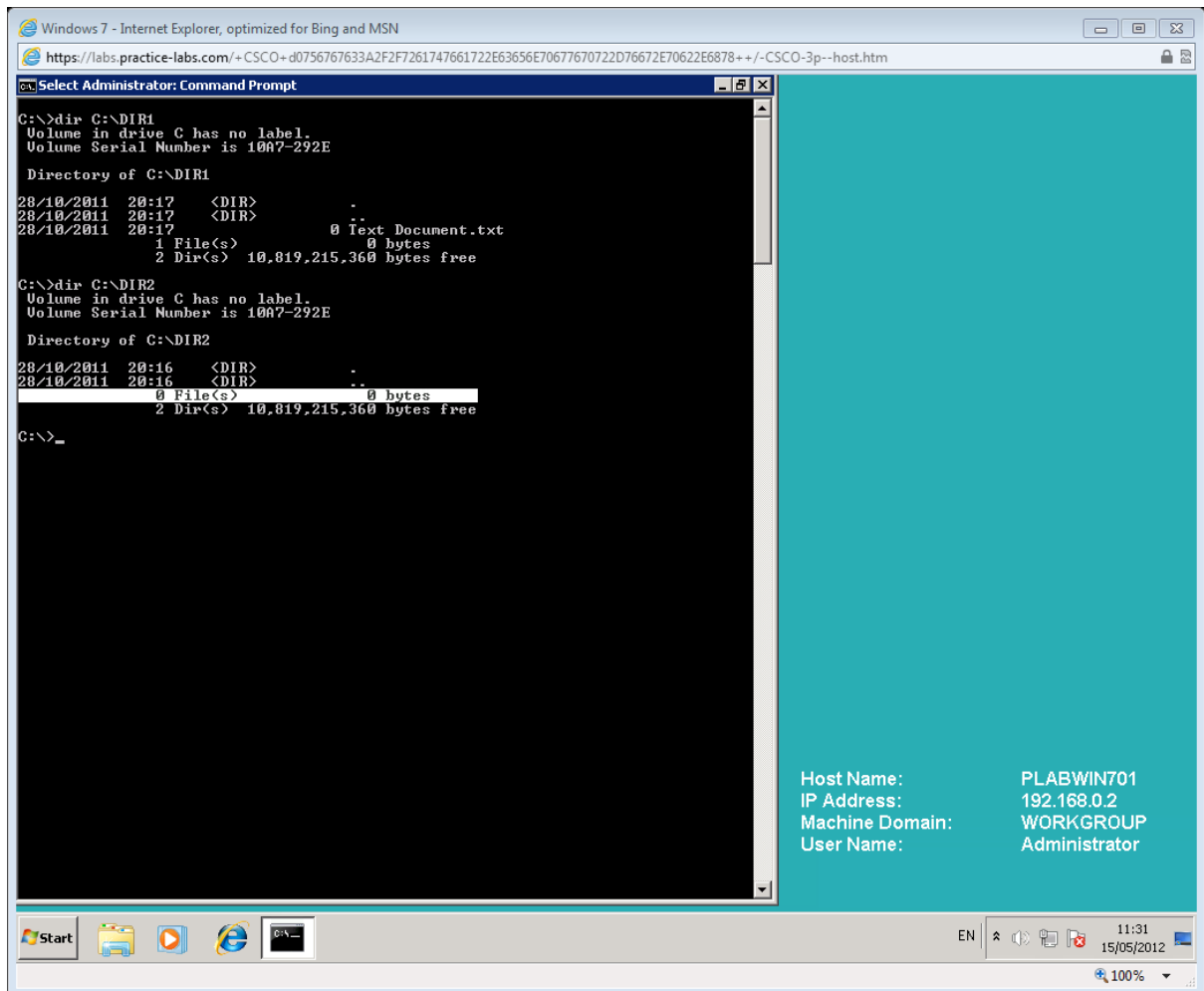
```
dir C:\DIR1
```

Note that **DIR1** contains a file called **Text Document.txt**

To view the content of the **DIR2** directory, type the following line of text in the command prompt and press Enter;

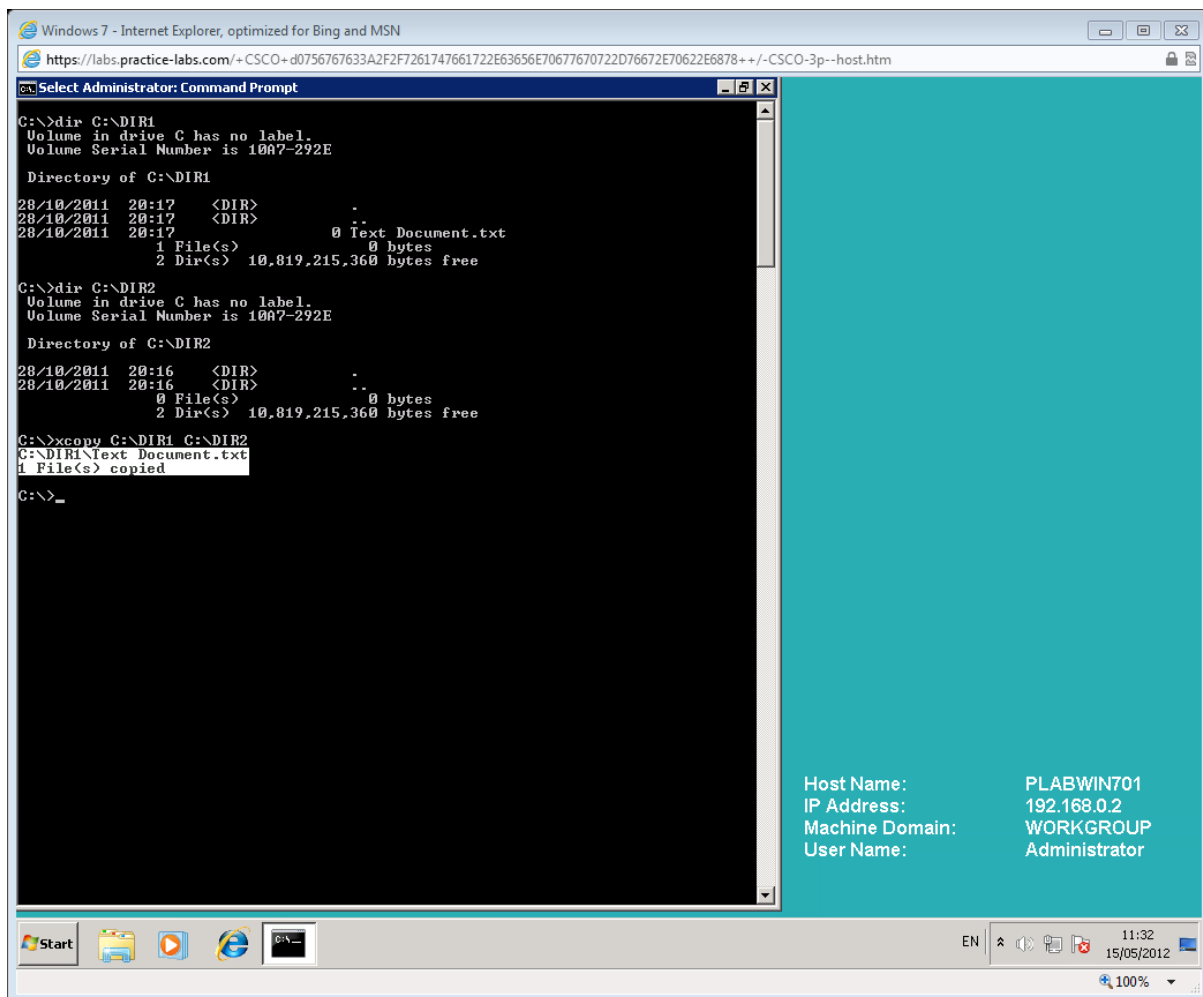
dir C:\DIR2



Note that DIR2 is empty.

To copy the content of the DIR1 directory to the DIR2 directory, type the following line of text in the command prompt and press Enter;

```
xcopy C:\DIR1 C:\DIR2
```



Note that the contents of DIR1 were copied to DIR2

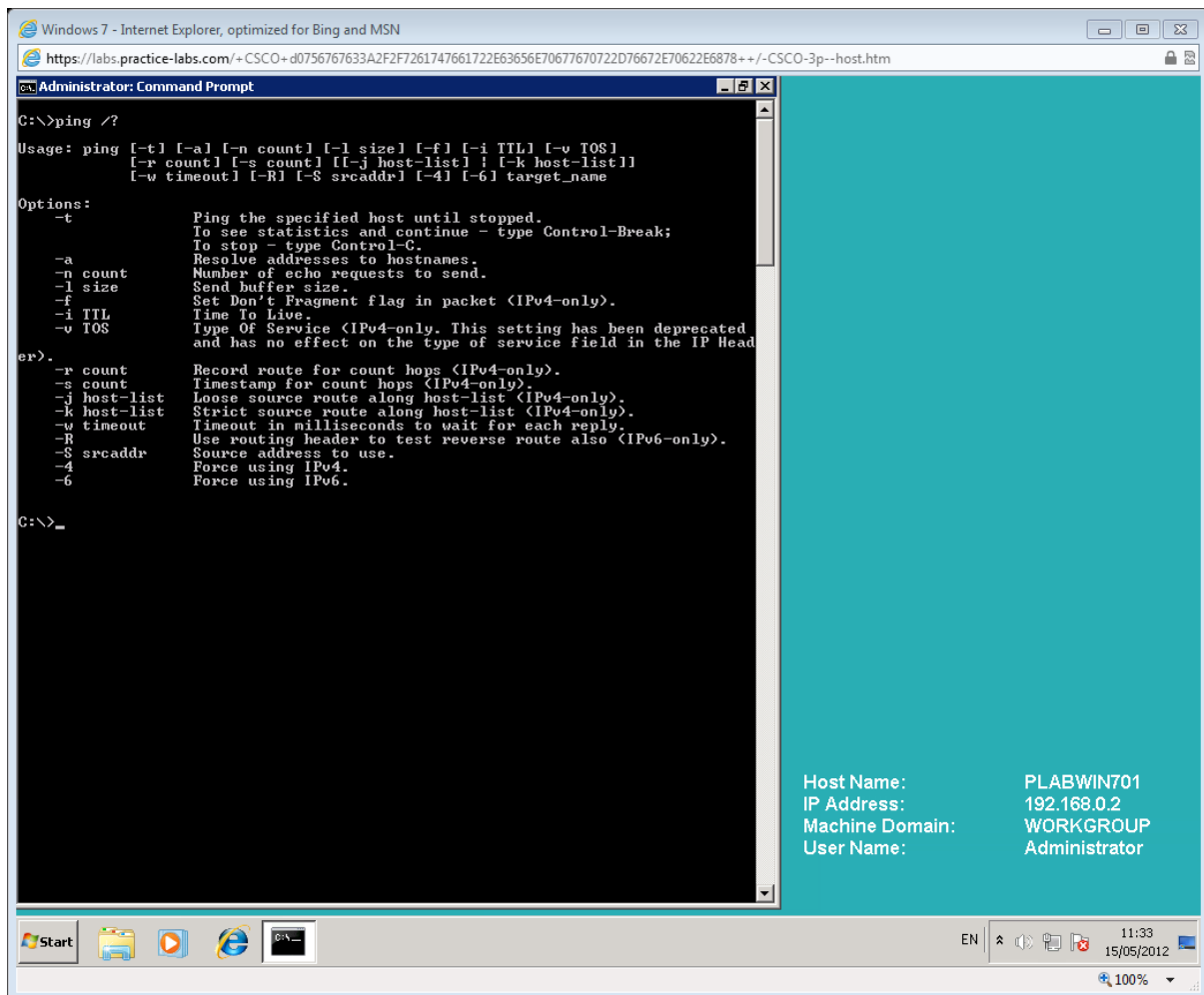
Leave the command prompt open for the next task.

Exercise 2 - General Options for Command Line Tools

Whichever command line utility you are using, in general you can use the `/?` parameter to display the help for the respective command.

To view the usage and optional parameters available for the PING command, type the following line of text in the command prompt and press Enter;

```
ping /?
```



```
Windows 7 - Internet Explorer, optimized for Bing and MSN
https://labs.practice-labs.com/+CSCO+d0756767633A2F2F7261747661722E63656E70677670722D76672E70622E6878++/-CSCO-3p--host.htm
Administrator: Command Prompt
C:\>ping /?
Usage: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS]
           [-r count] [-s count] [[-j host-list] | [-k host-list]]
           [-w timeout] [-R] [-S srcaddr] [-4] [-6] target_name

Options:
-t          Ping the specified host until stopped.
            To see statistics and continue - type Control-Break;
            To stop - type Control-C.
-a          Resolve addresses to hostnames.
-n count   Number of echo requests to send.
-l size    Send buffer size.
-f         Set Don't Fragment flag in packet (IPv4-only).
-i TTL     Time To Live.
-v TOS     Type Of Service (IPv4-only. This setting has been deprecated
            and has no effect on the type of service field in the IP Head
er).
-r count   Record route for count hops (IPv4-only).
-s count   Timestamp for count hops (IPv4-only).
-j host-list Loose source route along host-list (IPv4-only).
-k host-list Strict source route along host-list (IPv4-only).
-w timeout Timeout in milliseconds to wait for each reply.
-R         Use routing header to test reverse route also (IPv6-only).
-S srcaddr Source address to use.
-4        Force using IPv4.
-6        Force using IPv6.

C:\>_

Host Name:          PLABWIN01
IP Address:         192.168.0.2
Machine Domain:    WORKGROUP
User Name:         Administrator

11:33
15/05/2012
100%
```

Close the command prompt.

Summary

- In this exercise you learned about various Windows command-line utilities and their associated parameters that can be used to modify the output of the commands.

Also Try

Using your lab infrastructure you can attempt the following topics at your own pace.

- Run the Netstat command and observe the output.