Practical 10

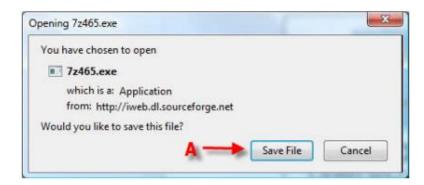
1. Installing utility software 7Zip on Windows

Go to the 7zip home page and select the version of 7 Zip that you would like to download.

	Welcome to the 7-Zip Home! 7-Zip is a file archiver with a high compression ratio. Download 7-Zip 4.65 (2009-02-03) for Windows:				2-210 4.11 heta Dominad hom for Association of Point of	um.	
z Format	Link	Type	Windows	Size		LZHA SOK 9.11 beta	
ZMA SDK ownload	Download	-	10.01	1948	A	P2Ped assessed	
AQ	Download	.msi	169	1 MB			
upport inks	Download 7	-Zip 9.11	beta (2010-	03-15) for Windows:			
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ource forge	Download	-	- 32-bit	1 MB	2		
onum	Domiland	.mai	1054	1 MB			
ngilish Agatan tarese Singi,	The download links above redirect you to download pages on SourcePorge.net						
eoch	License						
Ituguese Braze	2-Zip is open source software. Nost of the source code is under the GNU LGPL license. The unRek code is under a mixed license. CNU LGPL + unRek restrictions. Check license information here: <u></u>						
	You can use 7-2ip on any computer, including a computer in a commercial organization. You don't need to register or pay for 7-2ip.						
nainian	The main features of 7-Zip						
	 High compression ratio in new <u>7x formal</u> with LZMA compression Supported formatic Packing / unpacking: 7z, ZIP, GZIP, IIZIP3 and TAR Unpacking only: ARI, CAI, CHA, CHA, CHO, DEB, CMG, HES, ISO, LZHA, LZMA, KSI, KISS, RAR, RAW, USF, WMA, XAR and Z. For ZIP and GZIP formats, <u>7-ZIP</u> provides a compression ratio that is <u>7-10</u> % better than the ratio provided by PLZD; Strong AES-256 encryption in 7z and ZIP formats Eiffrage Structure (Complete Structure) 						

In our case the following version options applied:

- A Download 7zip 4.65 for Windows
- B Download 7zip 9.11 Beta for Windows



A – Click "Save File"

If the Z-Zip install file doesn't automatically run then manually open the executable file for 7zip.

A new window will then appear asking you in what directory do you want to install the 7Zip program. Select the preferred folder that you want to save the 7Zip program. Click "Install" after you have selected the directory.

Choose Install Location	(m)
Choose the folder in which to install 7-Zip 4.65.	G
Setup will install 7-Zip 4.65 in the following folder. To install it and select another folder. Click Install to start the installation	
A	
Destination Folder	
Et Program Piles (2-20	Browse
Space required: 2.9MB	
Space available: 19.7GB	
ww.7-zip.org	

- A Select the folder where you would like to Save the 7-zip program
- B Click "Install" after you choose an install directory.



A – After 7zip finishes installing, click "finish"

2. Installing utility software 7Zip on RedHat

7zip is an open-source archive program originally developed for Windows, which can pack or unpack a variety of archive formats including its native format 7z as well as XZ, GZIP, TAR, ZIP and BZIP2. 7zip is also popularly used to extract RAR, DEB, RPM and ISO files.

The first command that I used to install this package was :

\$ sudo apt-get install p7zip
[sudo] password for himanshu:
Reading package lists Done
Building dependency tree
Reading state information Done
p7zip is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 50 not upgraded.

The output pointed that p7zip is already installed.

7z archiver as a command line utility, I need to install the **p7zip-full** package. So we tried to install this package:

\$ sudo apt-get install p7zip-full Reading package lists... Done Building dependency tree Reading state information... Done Suggested packages: p7zip-rar The following NEW packages will be installed: p7zip-full 0 upgraded, 1 newly installed, 0 to remove and 50 not upgraded. Need to get 1,419kB of archives. After this operation, 3,662kB of additional disk space will be used. WARNING: The following packages cannot be authenticated! p7zip-full Authentication warning overridden. Get:1 http://archive.ubuntu.com/ubuntu/ lucid/universe p7zip-full 9.04~dfsg.1-1 [1,419kB] Fetched 1,419kB in 29s (48.0kB/s) Selecting previously deselected package p7zip-full. (Reading database ... 133376 files and directories currently installed.) Unpacking p7zip-full (from .../p7zip-full 9.04~dfsg.1-1 amd64.deb) ... Processing triggers for man-db ... Setting up p7zip-full (9.04~dfsg.1-1) ...

After both p7zip and p7zip-full are installed, you will see the following three command line utilities installed in your Linux box :

- 7z
- 7za
- 7zr

The package includes three binaries, /usr/bin/7z, /usr/bin/7za, and /usr/bin/7zr. Their manpages explain the differences:

- **7z** uses plugins to handle archives.
- **7za** is a stand-alone executable. 7za handles fewer archive formats than 7z, but does not need any others.
- **7zr** is a stand-alone executable. 7zr handles fewer archive formats than 7z, but does not need any others. 7zr is a "light-version" of 7za that only handles 7z archives.

Now all the three utilities were present and this can be confirmed by the 'whereis' command.

\$ whereis 7z
7z: /usr/bin/7z /usr/share/man/man1/7z.1.gz
\$ whereis 7za
7za: /usr/bin/7za /usr/share/man/man1/7za.1.gz
\$ whereis 7zr
7zr: /usr/bin/7zr /usr/share/man/man1/7zr.1.gz

Create an archive

This can be done by using the function letter 'a'. Here is a small example:

\$ 7z a basic.7z basic 7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30 p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs) Scanning Creating archive basic.7z Compressing basic/helloworld.c Compressing basic/helloworld.o Compressing basic/helloworld.i Compressing basic/helloworld.s Compressing basic/helloworld.s Compressing basic/helloworld Everything is Ok \$ Is abc.txt basic basic.7z bufferoverflow.c

Extract an archive

This can be done using the function letter 'e'.

Lets extract the archive created in the previous example:

\$ <mark>7z e basic.7z</mark>
7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30
p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs)
Processing archive: basic.7z
Extracting basic/helloworld.c
Extracting basic/helloworld.o
Extracting basic/helloworld.i
Extracting basic/helloworld.s
Extracting basic/helloworld
Extracting basic
Everything is Ok
Folders: 1
Files: 5
Size: 27541
Compressed: 5805
\$ <mark>Is</mark>
abc.txt basic basic.7z bufferoverflow.c helloworld helloworld.c helloworld.i helloworld.o
helloworld.s

So we see that basic.7z was extracted and all the files were extracted into the same folder. The files extracted are shown in bold in the output above.

List archive details

This can be done by using the function letter 'l'. Here is an example:

\$ 7z l basic.7z

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7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30 p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs)

Listing archive: basic.7z

----Path = basic.7z Type = 7z

Method = LZMA BCJ Solid = + Blocks = 2 Physical Size = 5805 Headers Size = 232			
Date Time Attr Si	ze Compi	essed Name	
2012-09-09 16:47:17A	192	3600 basic/helloworld.c	
2012-09-09 16:47:17A	1568	basic/helloworld.o	
2012-09-09 16:47:17A	16700	basic/helloworld.i	
2012-09-09 16:47:17A	577	basic/helloworld.s	
2012-09-09 16:47:17A	8504	1973 basic/helloworld	
2012-09-09 16:47:17 D	0	0 basic	
27541	5573 5	files, 1 folders	

So we see that the details of the archive basic.7z were listed in the output.

Test integrity of the archive

This can be done using the function letter 't'. Here is an example:

\$ 7z t basic.7z basic
7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30
p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs)
Processing archive: basic.7z
Testing basic/helloworld.c
Testing basic/helloworld.o
Testing basic/helloworld.i
Testing basic/helloworld.s
Testing basic/helloworld
Testing basic
Everything is Ok
Folders: 1
Files: 5
Size: 27541
Compressed: 17566

Delete a file from the archive

This can be done using the function letter 'd' along with the switch -r. This switch tells the 7zip utility to traverse the subdirectories.

Here is an example:

\$ 7z basic.7z				
7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30				
p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs)				
Listing archive: basic.7z				
Path = basic.7z				
Type = 7z				
Method = LZMA BCJ				
Solid = +				
Blocks = 3				
Physical Size = 6154 Headers Size = 269				
Headers Size = 209				
Date Time Attr Size Compressed Name				
2012-09-09 16:47:17A 192 3600 basic/helloworld.c				
2012-09-09 16:47:17A 1568 basic/helloworld.o				
2012-09-09 16:47:17A 16700 basic/helloworld.i				
2012-09-09 16:47:17A 577 basic/helloworld.s				
2012-09-09 17:33:51A 634 312 basic/bufferoverflow.c				
2012-09-09 16:47:17A 8504 1973 basic/helloworld				
2012-09-09 17:33:34 D 0 0 basic				
28175 5885 6 files, 1 folders				
\$ 7z d basic.7z helloworld -r				
7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30				
p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs)				
Updating archive basic.7z				
Everything is Ok				

\$ 7z l basic.7z

7-Zip 9.04 beta Copyright (c) 1999-2009 Igor Pavlov 2009-05-30 p7zip Version 9.04 (locale=en_IN,Utf16=on,HugeFiles=on,2 CPUs) Listing archive: basic.7z

Path = basic.7z Type = 7z Method = LZMA Solid = + Blocks = 2 Physical Size = 4165 Headers Size = 253 Date Time Attr Si	ze Comp	ressed Name	
2012-09-09 16:47:17A	192	3600 basic/helloworld.c	
2012-09-09 16:47:17A	1568	basic/helloworld.o	
2012-09-09 16:47:17A	16700	basic/helloworld.i	
2012-09-09 16:47:17A	577	basic/helloworld.s	
2012-09-09 17:33:51A	634	312 basic/bufferoverflow.c	
2012-09-09 17:33:34 D	0	0 basic	
19671 \$	3912 5	files, 1 folders	

First we checked the files in the archive, next we tried to delete the 'helloworld' executable. Again when the entries in the archive were listed, no trace of 'helloworld' was found. So we can say that this file was successfully deleted from the archive.