8.12.8 cpio and dd Facts

This lesson covers the following topics:

- Using cpio
- Using dd

Using cpio

The **cpio** command is used to archive files or to extract files from a cpio archive. Although similar to other archive tools, **cpio** is different because it takes only the files names from standard input.

The cpio command:

- Copies files to an archive (copy-out mode).
- Extracts files from an archive (copy-in mode).
- Copies files to a different directory tree (copy-pass mode).

<table>
<tr><th>Command</th><th>Descriptions</th><th>Example</th></tr>
<tr><td>cpio</td><td>
<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>-o</td><td>Creates the archive in copy-out mode.</td></tr>
<tr><td>-v</td><td>Causes cpio to display verbose output, showing file names as they're added or removed.</td></tr>
<tr><td>-i</td><td>Extracts files by invoking copy-in mode.</td></tr>
<tr><td>-u</td><td>Overwrites existing files.</td></tr>
<tr><td>-d</td><td>Creates directory paths (if needed) during extraction.</td></tr>
<tr><td>-t</td><td>Displays archive contents without extracting files.</td></tr>
<tr><td>-p</td><td>Copies files to a new directory (copy-pass mode).</td></tr>
</table>
</td><td>ls ~/4archive | cpio -ov > filename.cpio
Creates a cpio archive from the files in the ~/4archive directory.

cpio -iv < filename.cpio
Extracts the files from the cpio archive.

ls ~/copyme | cpio -pvd ./newdirectory
Copies files from ~/copyme to ./newdirectory.</td></tr>
</table>

Using dd

The dd command stands for “data duplicator” and is used to copy and covert data. The dd command can be used for tasks such as:

- Backing up and restoring the entire hard disk or partition
- Backing up the Master Boot Record (MBR)
- To copy and convert magnetic tape format
- To convert between ASCII and EBCDIC formats
- To convert lower case to upper case

The syntax of dd is: **dd options=value**

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The syntax of dd is: dd options=value

<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>bs=BYTES</td><td>Read and write up to BYTES bytes at a time (default: 512);</td></tr>
</table>
</td><td>dd if=/dev/sda of=/dev/sdb
Will clone one hard disk to another hard disk.

dd if=hdadisk.img of=/dev/sdb3
Will restor the above image to an other machine.

dd if=/dev/hda1 of=~/partition.img
Will backup a partion to an image name partition.img</td></tr>
</table>

	overrides ibs and obs
cbs=BYTES	Convert BYTES bytes at a time
conv=CONVS	Convert the file as per the comma separated symbol list
count=N	Copy only N input blocks
ibs=BYTES	Read up to BYTES bytes at a time (default: 512)
if=FILE	Read from FILE instead of stdin
iflag=FLAGS	Fead as per the comma separated symbol list
obs=BYTES	Write BYTES bytes at a time (default: 512)
of=FILE	Write to FILE instead of stdout
oflag=FLAGS	Write as per the comma separated symbol list
seek=N	Skip N obs-sized blocks at start of output
skip=N	Skip N ibs-sized blocks at start of input
status=LEVEL	The LEVEL of information to print to stderr; 'none' suppresses everything but error messages, 'noxfer' suppresses the final transfer statistics, 'progress' shows periodic transfer statistics