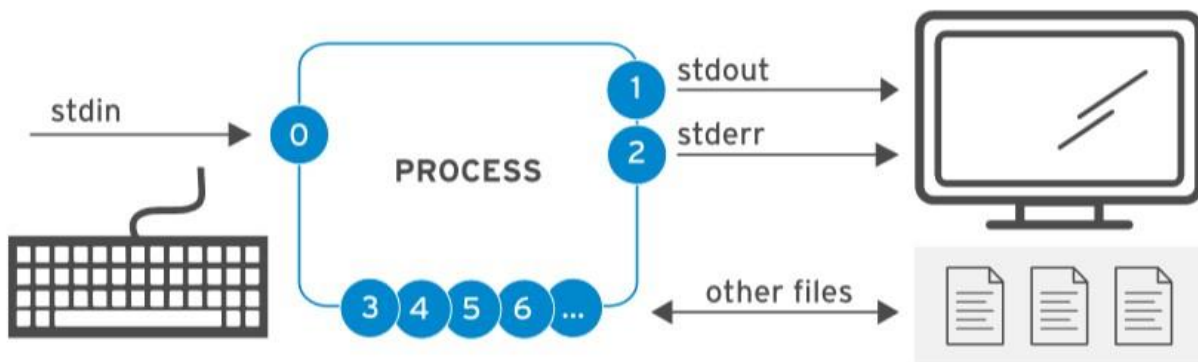


Chapter: 3 Creating, Viewing, and Editing text Files

OBJECTIVES

- Save command output or errors to a file with shell redirection, and process command output through multiple command-line programs with pipes.
- Create and edit text files using the vim editor.

REDIRECTING OUTPUT TO A FILE OR PROGRAM



Command Redirection-Symbol (with file name)

Channels (File Descriptors)

NUMBER	CHANNEL NAME	DESCRIPTION	DEFAULT CONNECTION	USAGE
0	stdin	Standard input	Keyboard	read only
1	stdout	Standard output	Terminal	write only
2	stderr	Standard error	Terminal	write only
3+	<i>filename</i>	Other files	none	read and/or write

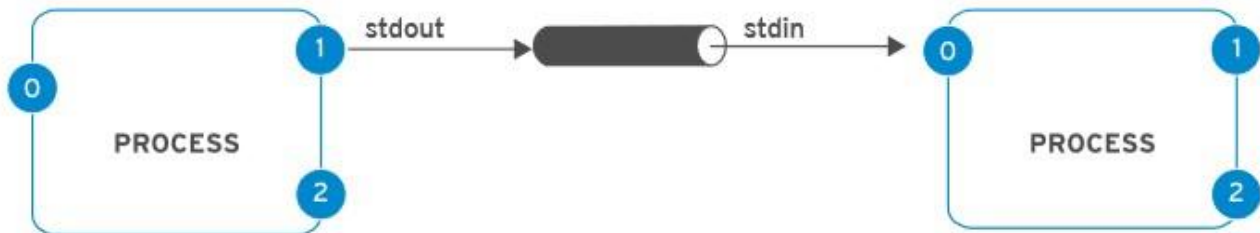
Output Redirection Operators

USAGE	EXPLANATION	VISUAL AID
<code>> file</code>	redirect stdout to overwrite a file	
<code>>> file</code>	redirect stdout to append to a file	
<code>2> file</code>	redirect stderr to overwrite a file	
<code>2> /dev/null</code>	discard stderr error messages by redirecting to /dev/null	
<code>> file 2>&1</code>	redirect stdout and stderr to overwrite the same file	
<code>&> file</code>		
<code>>> file 2>&1</code>	redirect stdout and stderr to append to the same file	
<code>&>> file</code>		

CONSTRUCTING PIPELINES

A pipeline is a sequence of one or more commands separated by the pipe character (`|`). A pipe connects the standard output of the first command to the standard input of the next command.

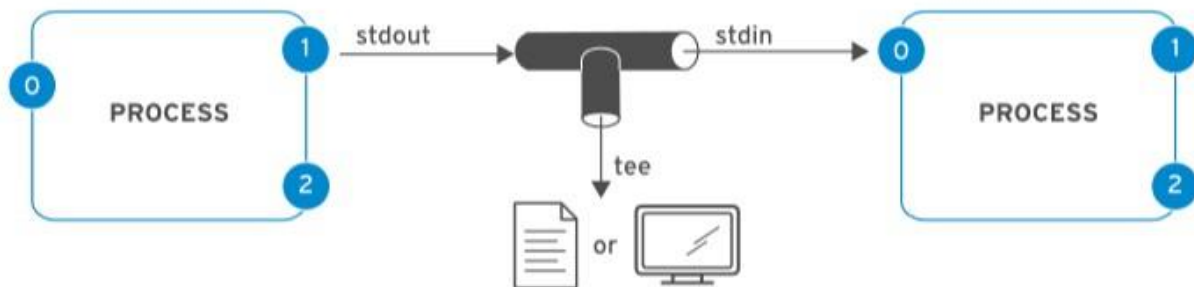
command - 1 | command - 2



Pipelines, Redirection, and the tee Command

When redirection is combined with a pipeline, the shell sets up the entire pipeline first, then it redirects input/output. If output redirection is used in the middle of a pipeline, the output will go to the file and not to the next command in the pipeline.

command - 1 | tee command - 2 | command - 3



EDITING FILES WITH VIM or VI

vi filename or vim filename

Visual Mode in Vim Visual mode is a great way to highlight and manipulate text. There are three keystrokes:

Character mode: `v`

Line mode: `Shift+V`

Block mode: `Ctrl+V`

The Minimum, Basic Vim Workflow

i - key is used to access insert mode

Esc – key is used to exit from and mode

x - key is used to delete content from file

:w - command writes (saves) the file and remains in command mode for more editing

:wq - command writes (saves) the file and quits Vim

:q! - command quits Vim, discarding all file changes since the last write