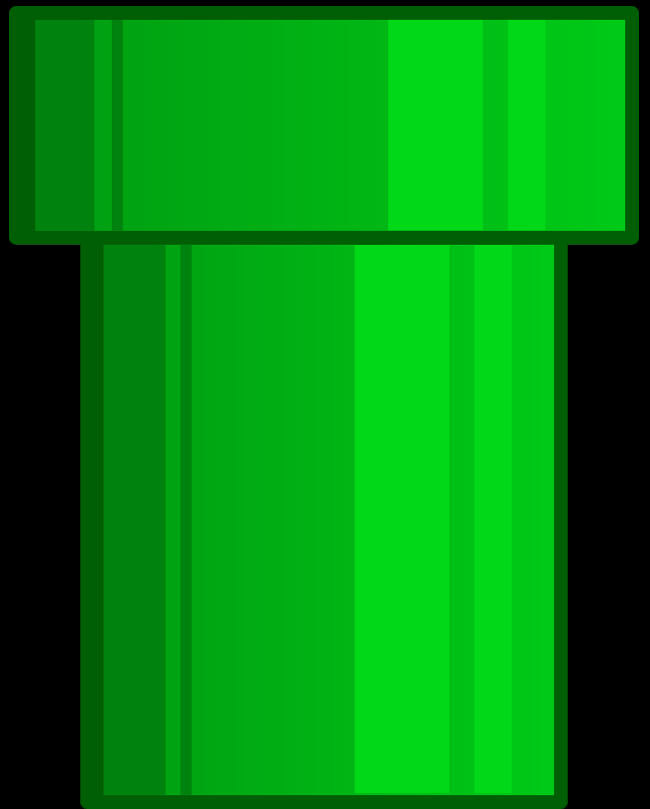
Finding Files
and
Other Linux Mysteries

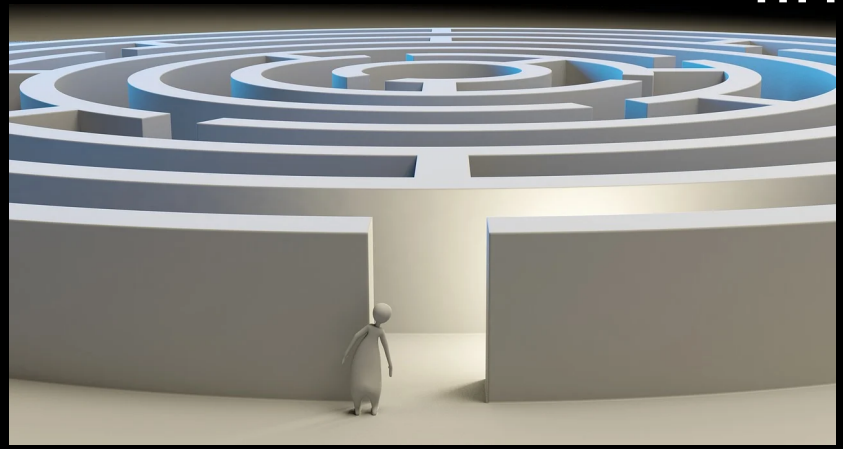
Agenda

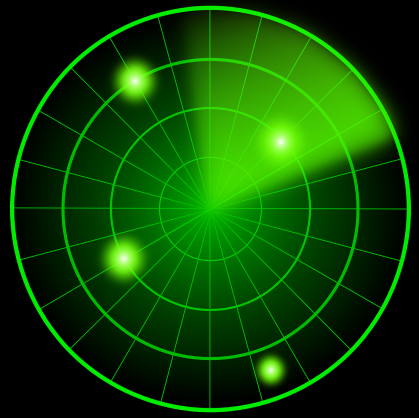
- Searching Methods
- Wildcards
- Searching Inside Files
- STDIN, STDOUT, and | (pipes)
- Commands



Where the heck are my files?!?!

Two major programs used for finding flies:
find and locate





Find… Well okay, that makes sense

Find searches the file structure for a pattern matching your input.

Yes, it goes through each and every file and directory until it finds or doesn’t find what you are looking for.

Find works, but it’s so slooowww

In step locate! This program searches through a database for pattern a matching the pattern you gave it.

The problem with searching a database is you have to rely on that database being up to date!

What was that file called…?

What if we want to find all of the files with bear in their name?
Wildcards are used to specify generalities.
* = the Kleene Star can be anything (even nothing)
? = this must exist but this one character can be anything.
[] = this character I am specifying must be in the following range
ex. [a-z][0-9]

Searching inside files

Find and Locate are great for getting to the files you need, but what if you want to check a file for content?

Well, to do that you mention to your friend, Ken Thompson, that you want to search through The Federalist Papers and give him a SINGLE NIGHT to create GREP, Global Regular Expression Print.

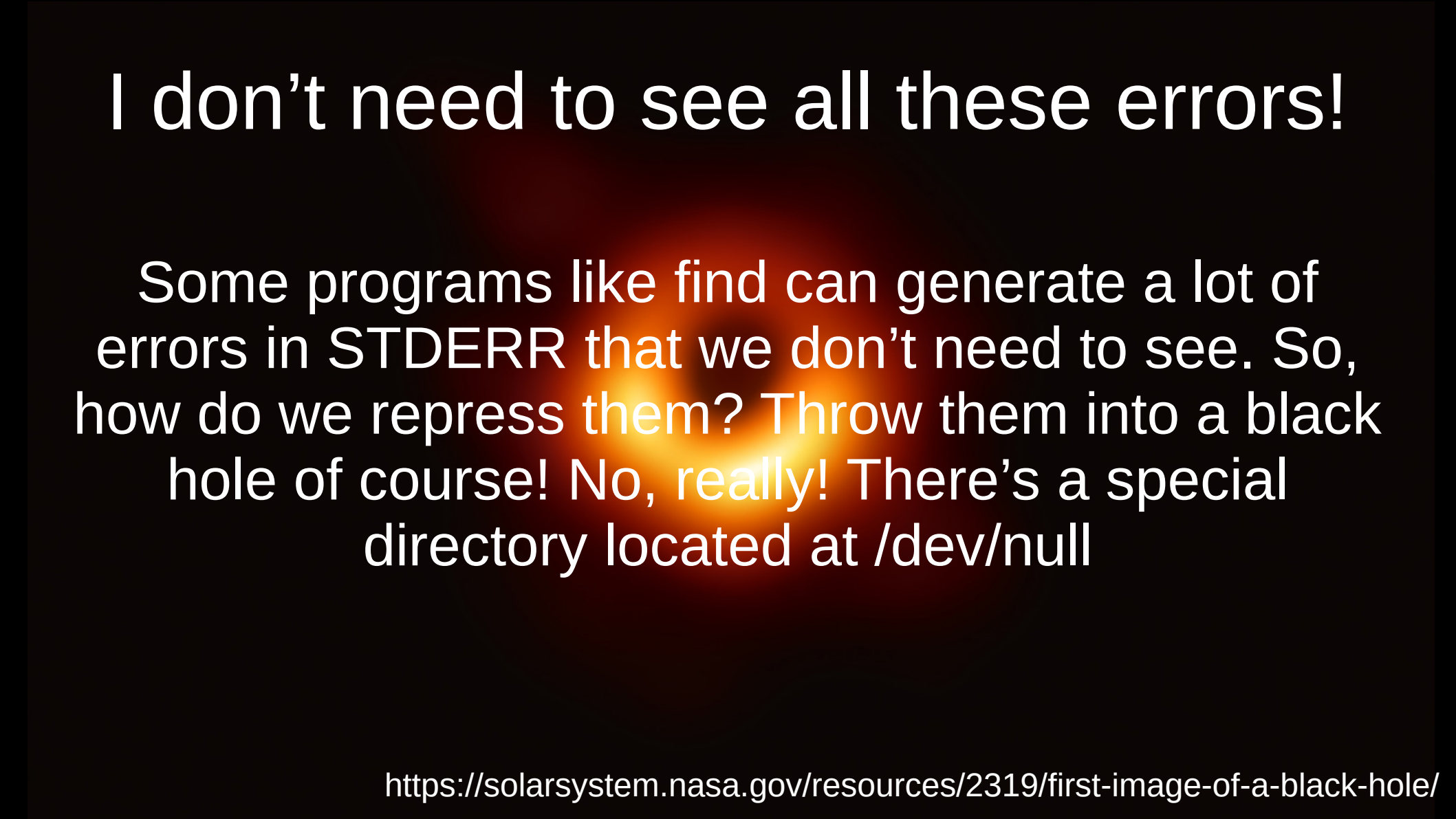
He’s From NOLA… Not that I’m biased

STDIN, STDOUT, and | (pipes)

- STDIN – Standard Input. This is the main buffer programs look for input
- STDOUT – Standard Output. This is the main buffer programs write out data
- STDERR – This is the standard buffer for errors
- | (pipes) – They work just like they do in Mario. By that I mean the redirect the STDOUT of one program into the STDIN of the next

I don’t need to see all these errors!

Some programs like find can generate a lot of errors in STDERR that we don’t need to see. So, how do we repress them? Throw them into a black hole of course! No, really! There’s a special directory located at /dev/null



https://solarsystem.nasa.gov/resources/2319/first-image-of-a-black-hole/

Commands

- tree
- locate
- updatedb
- find
- > and >>
- echo
- grep
- awk
- sort
- | (pipe)
- uniq