

CGI and cs.rpi.edu

How to create and run CGI programs using the CS web server.

Netprog: cgi.cs.rpi.edu

1

Web Servers & CGI

- Most web server are capable of running CGI programs.
- The server must be able to determine whether a URI refers to:
 - document - just send it back
 - CGI program - run it and send back the result.

Netprog: cgi.cs.rpi.edu

2

CGI recognition

- Some servers insist that CGI programs be in a special place
 - typically the URL path is one of:
`/CGI-BIN /cgi-bin /CGI /cgibin`
- Some servers look at the filename:
 - filename ends with `.cgi`
- Some servers are given a list of URLs that are CGIs

Netprog: cgi.cs.rpi.edu

3

User files and Web Servers

On Unix based web servers, the URL
`/~username`
is typically *mapped* to the directory
`~username/public.html`
-or-
`~username/public_html`

Netprog: cgi.cs.rpi.edu

4

`www.cs.rpi.edu`

- On the CS web server you should put your files in `~/public.html`

The URI

`http://www.cs.rpi.edu/~you`
is your home page.

you is your CS username.

Netprog: cgi.cs.rpi.edu

5

Directories

- Most web servers do the following when a URL maps to a directory:
 - if there is a file named `index.html` in the directory - it is sent back.
 - if there is no `index.html`, an HTML formatted directory listing is sent back.

Netprog: cgi.cs.rpi.edu

6

Create a Home Page

```
cat > ~public.html/index.html
<H1>Master Network Programmer for
  Hire</H1>
^D
> chmod go+r ~public.html/index.html
```

The file must be readable by anyone!
(the web server runs as nobody)

Netprog: cgi.cs.rpi.edu

7

CGI & cs.rpi.edu

The web server `www.rpi.edu` will not run user CGI programs.

Neither will `www.cs.rpi.edu`

`cgi.cs.rpi.edu` will!

Netprog: cgi.cs.rpi.edu

8

cgi.cs.rpi.edu

- Your executable file's name should end with `.cgi`
- Your executable will be run as you (with your userid permissions).
- Make sure the file/directory are not world or group writeable!

Netprog: cgi.cs.rpi.edu

9

IMPORTANT

- `cgi.cs.rpi.edu` is a BSD computer!
- You need to build your CGI on a BSD machine!
- You should use:
`freebsd.remote.cs.rpi.edu`

Netprog: cgi.cs.rpi.edu

10

Getting Started

- Copy one of the examples and get it running:

```
> cd ~/public.html
> cp -r
  ~hollingd/public.html/netprog
  /code/CGI/pizza .
> chmod -R go-w pizza
```

Netprog: cgi.cs.rpi.edu

11

Debugging

- It's hard to debug a CGI program!
- Debugging print statements should generate HTML.
- You can run the program from the Unix command line - you just need to set the environment variables right (use GET for this).

Netprog: cgi.cs.rpi.edu

12

Log Files

- `cgi.cs.rpi.edu` has a log file that can be helpful when your program won't run:

```
/servers/cgi2/logs/error_log
```

The command "`tail -f`" may come in useful...

Netprog: cgi.cs.rpi.edu

13

More Help

- Look at "Guide to CGI programming on `cgi.cs.rpi.edu`".
- Lots of links to CGI resources.

Netprog: cgi.cs.rpi.edu

14
