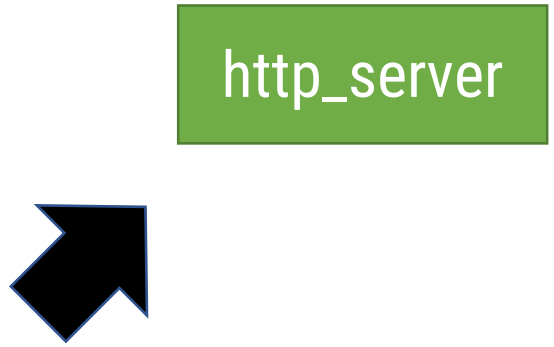
Network Programming PJ3

NP TA 子頤



A HTTP server is waiting for a connection…

Client

Waiting for a connection

http_server

Connect to http_server

Waiting for a connection

Client

http_server

Connect to http_server

Accept, create socket

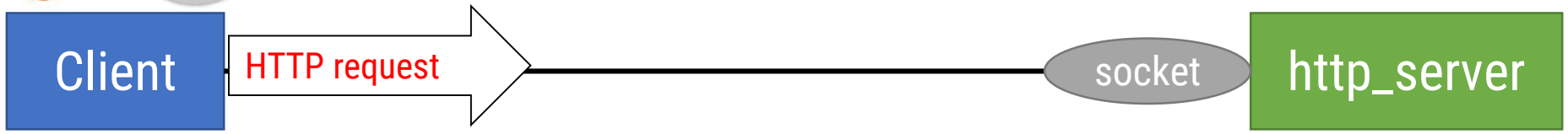
Client

socket

http_server

Sending content

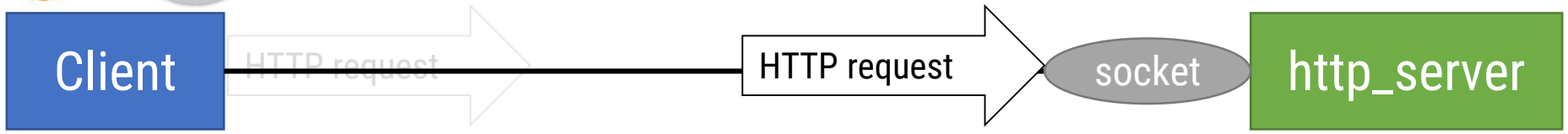
Accept, create socket



E.g., URI =
http://nplinux1.cs.nctu.edu.tw/~tzuyee/panel.cgi

Sending content

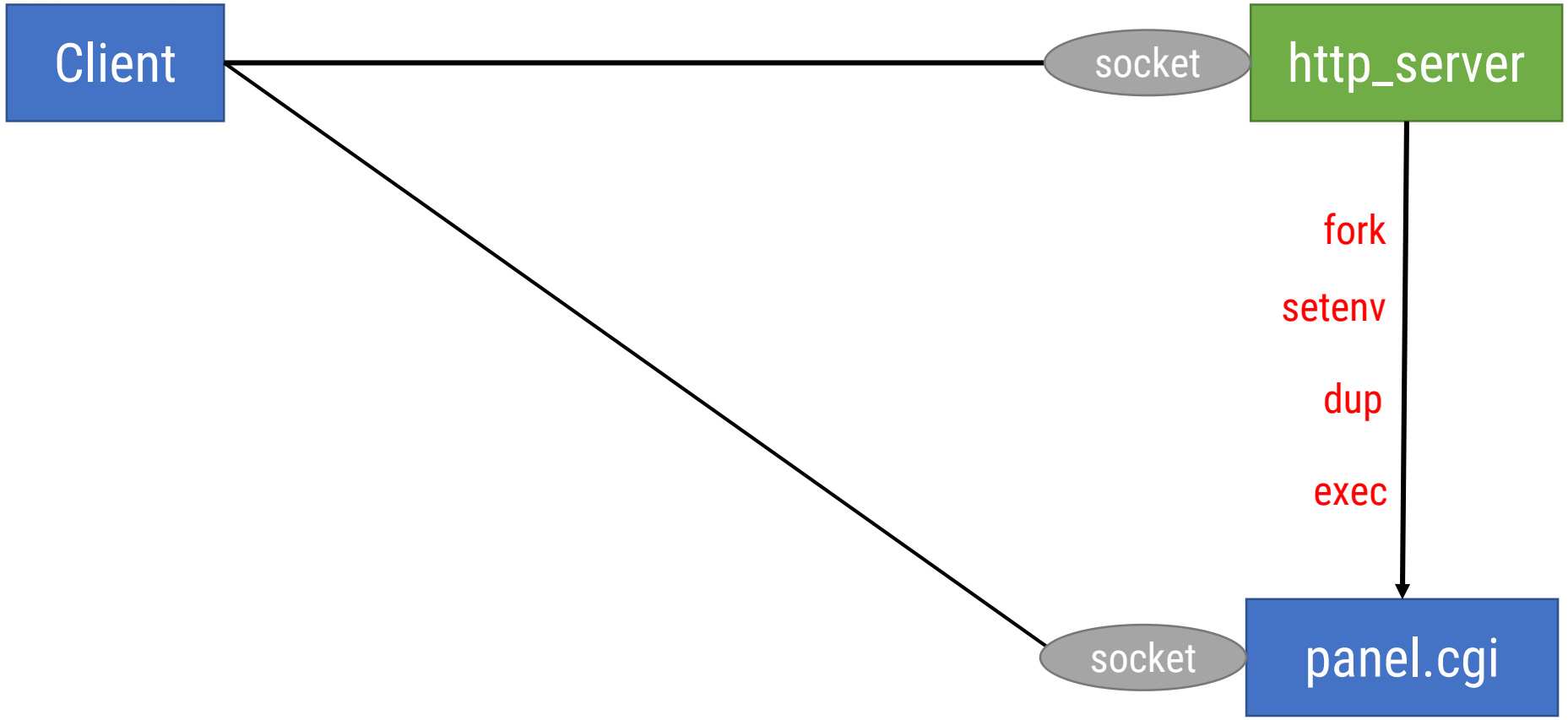
Receive and parse the request

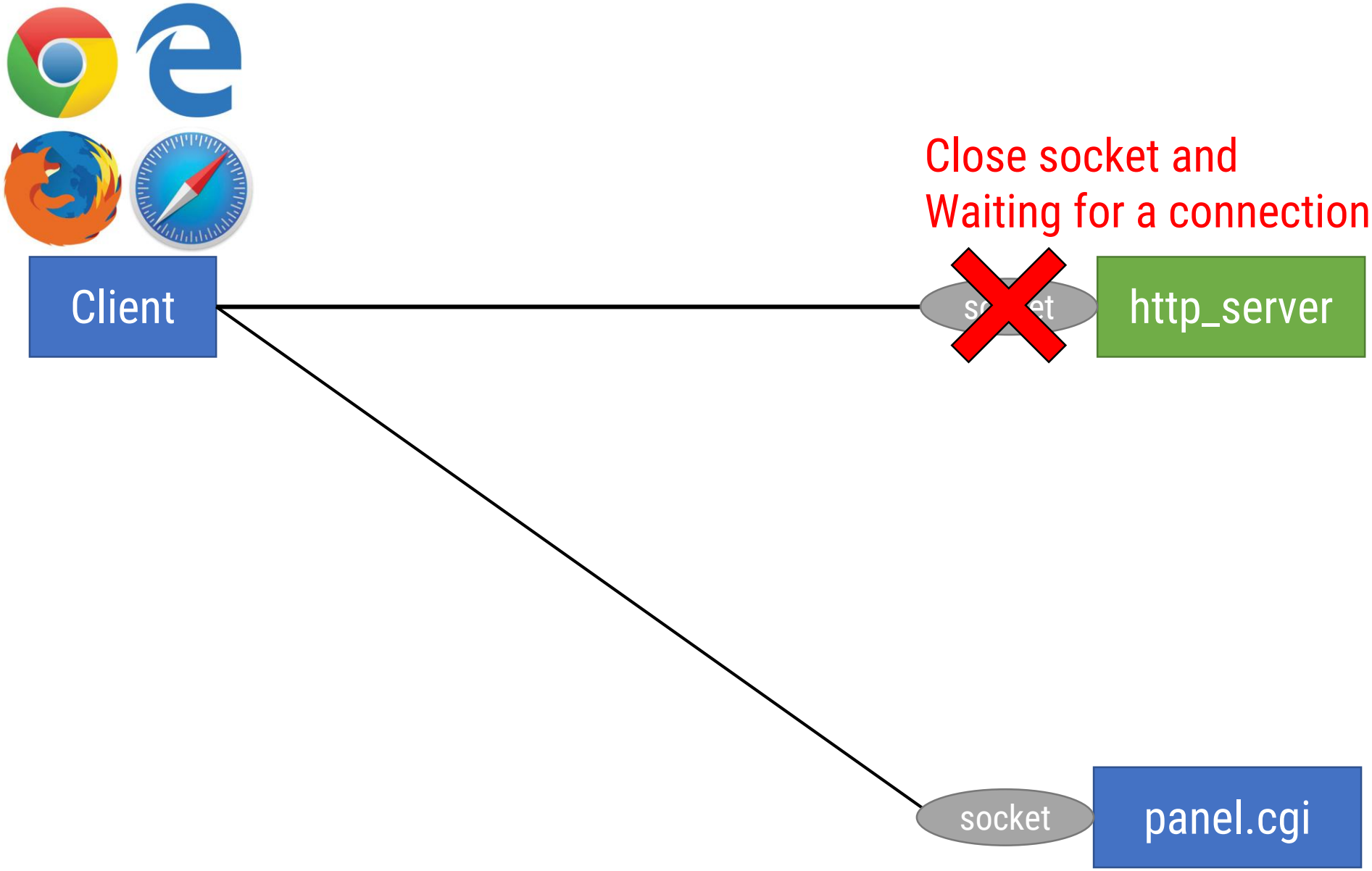


E.g., URI =
http://nplinux1.cs.nctu.edu.tw/~tzuyee/panel.cgi

URI = http://nplinux1.cs.nctu.edu.tw/~tzuyee/panel.cgi

Do CGI procedure




Close socket and
Waiting for a connection
Client
socket
http_server
socket
panel.cgi

Waiting for a connection

Client

http_server

HTTP RESPONSE

Panel cgi's stdout

socket

panel.cgi

Client

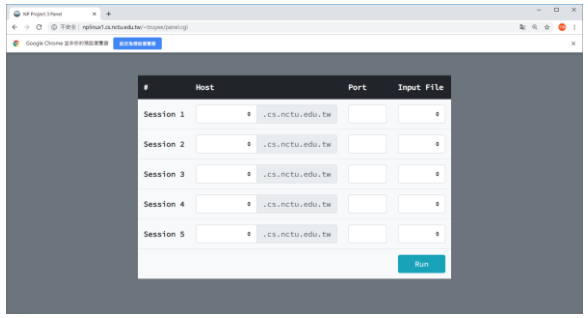
Waiting for a connection

http_server

Child exit!

socket

panel.cgi



Client

Waiting for a connection

http_server

Connect to http_server

Waiting for a connection

Client

http_server

Connect to http_server

Accept, create socket

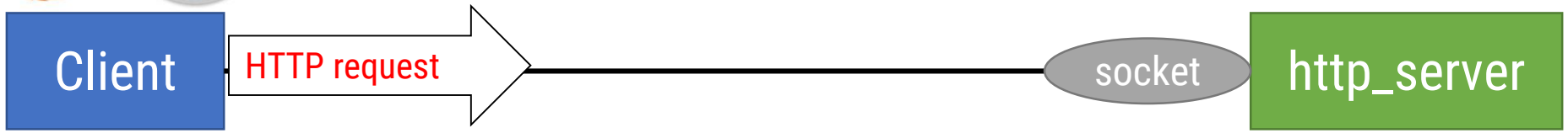
Client

socket

http_server

Sending content

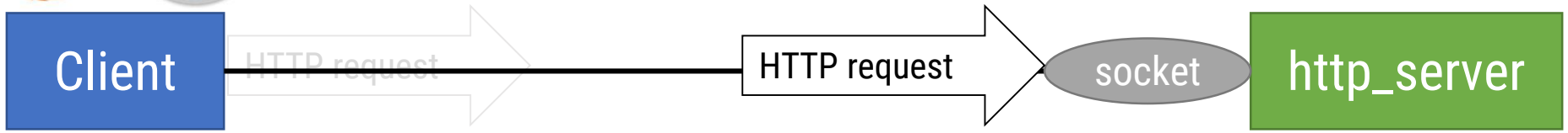
Accept, create socket



E.g., URI =
http://nplinux1.cs.nctu.edu.tw/~tzuyee/console.cgi?h0=...

Sending content

Receive and parse the request



E.g., URI =
http://nplinux1.cs.nctu.edu.tw/~tzuyee/console.cgi?h0=...

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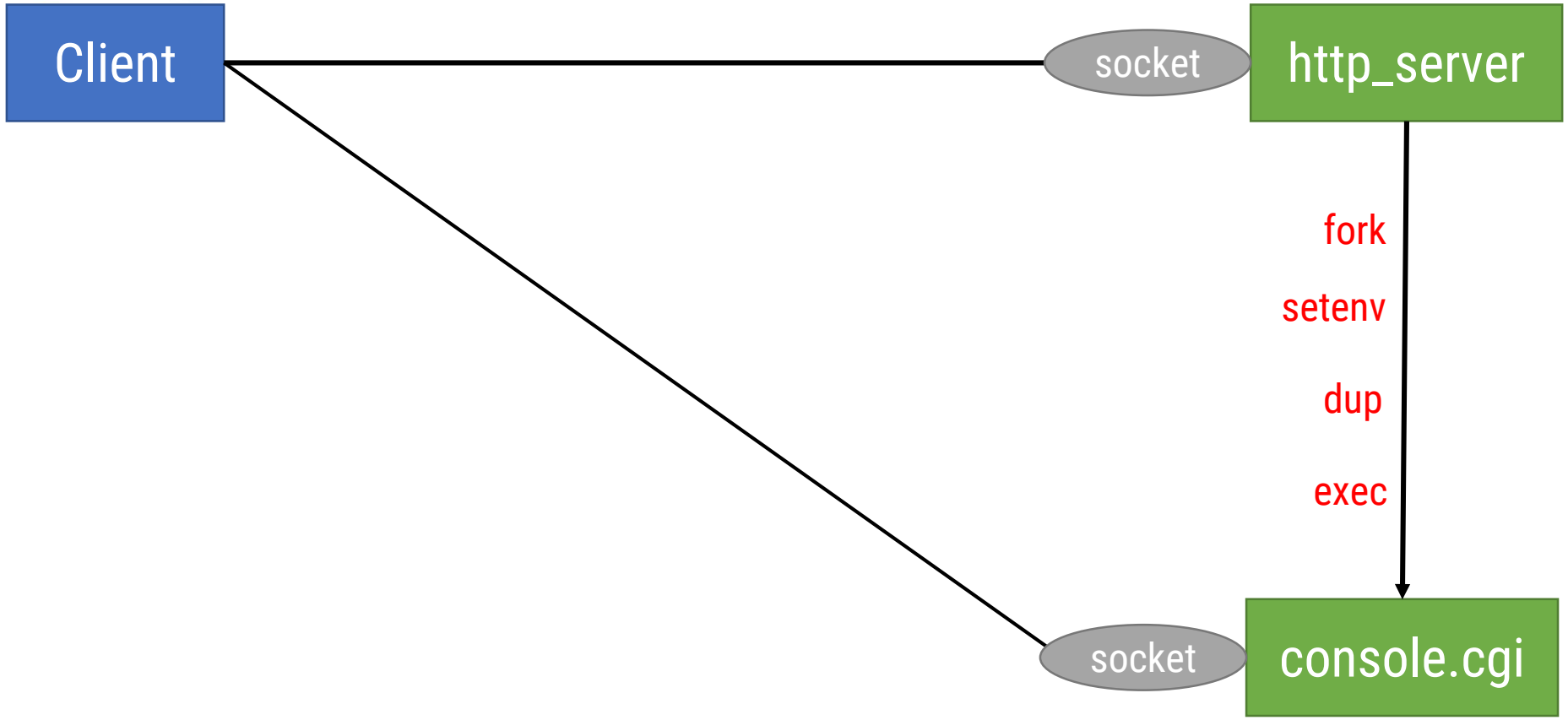
Do CGI procedure



QUERY_STRING=
h0=nplinux1&p0=1234...

Client

Close socket and
Waiting for a connection

socket

http_server

socket

console.cgi

QUERY_STRING=
h0=nplinux1&p0=1234…

Client

Waiting for a connection

http_server

socket

console.cgi

QUERY_STRING=
h0=nplinux1&p0=1234…

Client

Waiting for a connection

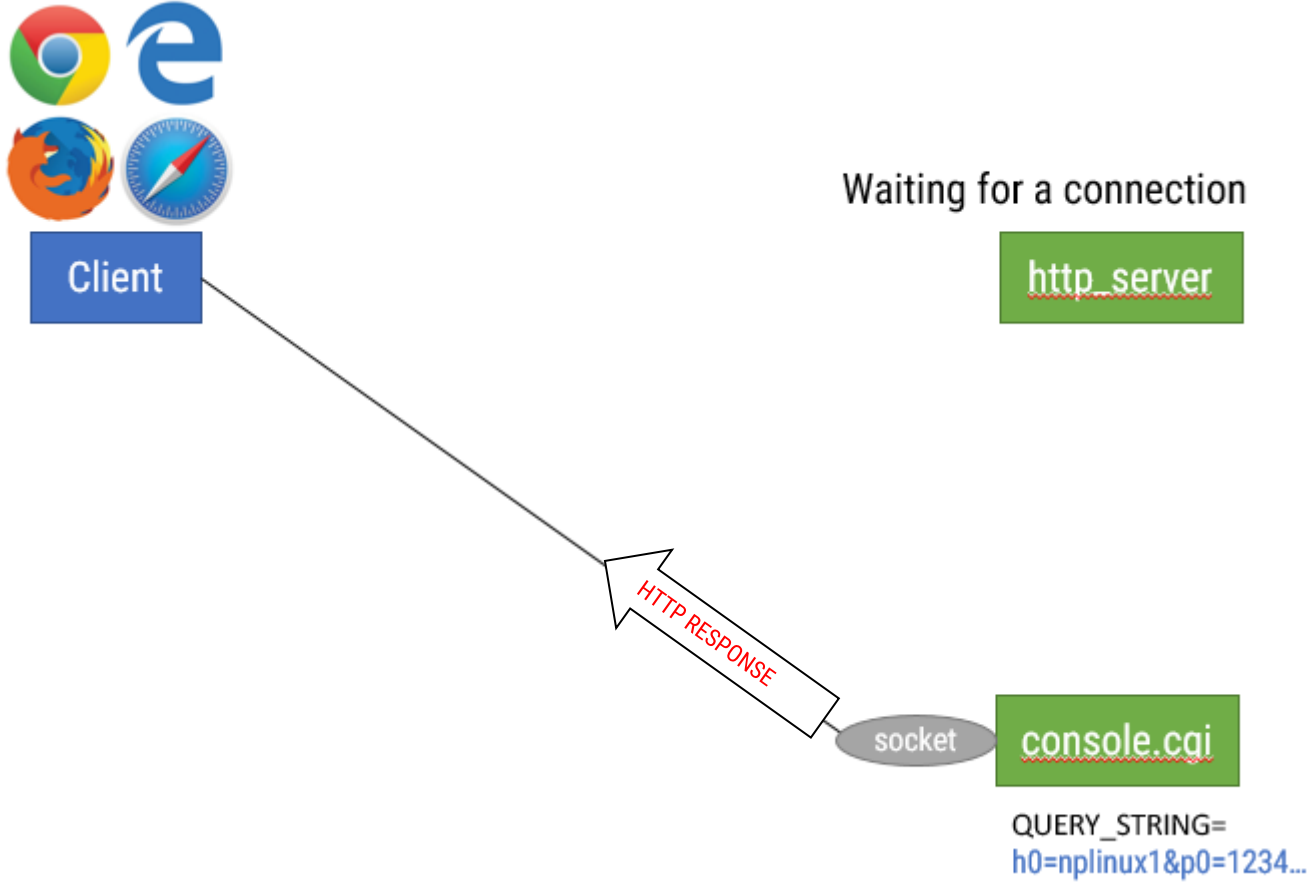
http_server

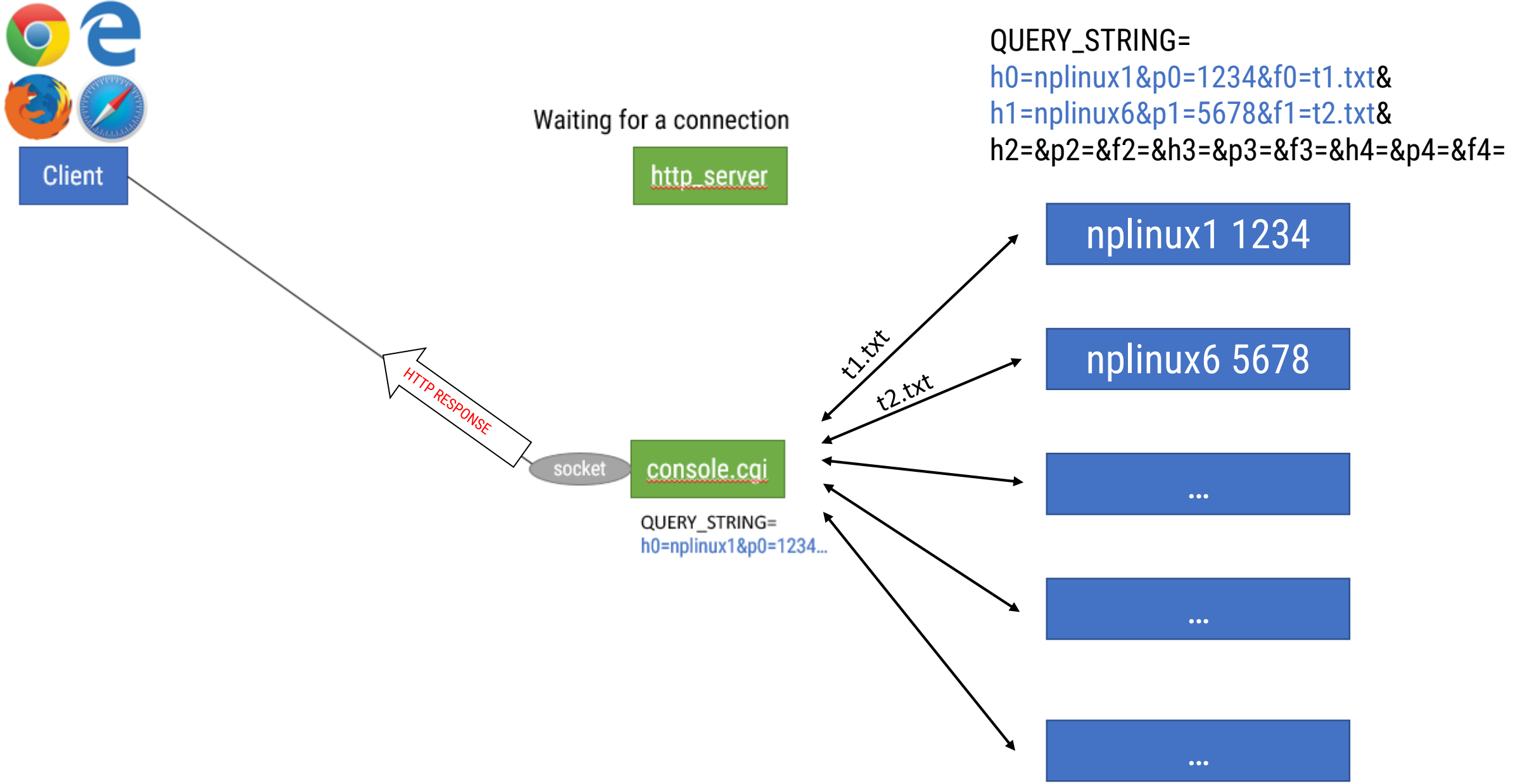
HTTP RESPONSE

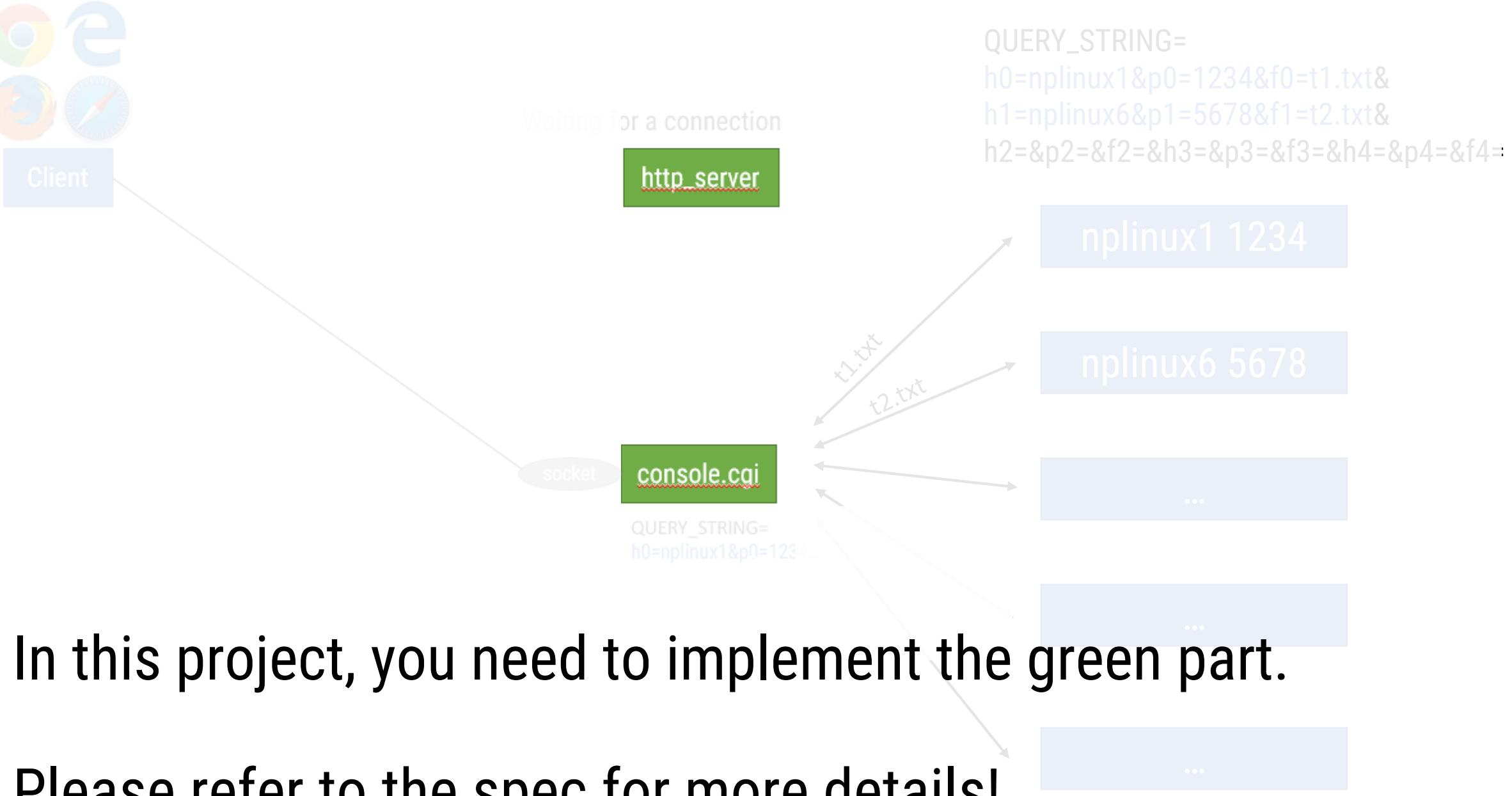
socket

console.cgi

QUERY_STRING=
h0=nplinux1&p0=1234…


Waiting for a connection
Client
http_server
HTTP RESPONSE
socket
console.cgi
QUERY_STRING=
h0=nplinux1&p0=1234...


Client
Waiting for a connection
http_server
QUERY_STRING=
h0=nplinux1&p0=1234&f0=t1.txt&
h1=nplinux6&p1=5678&f1=t2.txt&
h2=&p2=&f2=&h3=&p3=&f3=&h4=&p4=&f4=
nplinux1 1234
nplinux6 5678
...
...
...
t1.txt
t2.txt
HTTP RESPONSE
socket
console.cgi
QUERY_STRING=
h0=nplinux1&p0=1234...



In this project, you need to implement the green part.

Please refer to the spec for more details!