

openwrt luci web解析

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阅读数: 2434

路由器: newifi mini

硬件信息: mt7620a +mt7612e+128M DDR+16M flash

固件: Pandorabox

luci theme: lafite

主界面:

 这里写图片描述

winSCP登录

securieCRT 串口登录

/www/index.html:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD
3 <html xmlns="http://www.w3.org/1999/xhtml">
4 <head>
5 <meta http-equiv="Cache-Control" content="no-cache" />
6 <meta http-equiv="refresh" content="0; URL=/cgi-bin/luci" />
7 </head>
8 <body style="background-color: white">
9 <a style="color: black; font-family: arial, helvetica, sans-serif;" href="/cgi-bin
10 </body>
11 </html>
```

在 uhttpd web server 中的 cgi-bin 目录下, 运行 luci 文件 (权限一般是 755) , luci 的代码如下:

```
1 #!/usr/bin/lua          #lua脚本, lua执行命令的路径
2 require "luci.cacheloader"  #导入 cacheloader 包
3 require "luci.sgi.cgi"     # 导入 sgi.cgi 包
4 luci.dispatcher.indexcache = "/tmp/luci-indexcache"    #cache 缓存路径地址
5 luci.sgi.cgi.run()        #执行run方法, 此方法位于 /usr/lib/lua/luci/sgi/cgi.lua中
```

找到luci.lua运行文件, /usr/lib/lua/luci/sgi/cgi.lua :

```
1 exectime=os.clock()
2 module("luci.sgi.cgi",package.seeall)
3 local a=require("luci.ltn12")
```

```

4 require("nixio.util")
5 require("luci.http")
6 require("luci.sys")
7 require("luci.dispatcher")
8 local function o(t,e)
9 e=e or 0
10 local a=a.BLOCKSIZE
11 return function()
12 if e<1 then
13 t:close()
14 return nil
15 else
16 local a=(e>a)and a or e
17 e=e-a
18 local e=t:read(a)
19 if not e then t:close()end
20 return e
21 end
22 end
23 end
24 function run()
25 local t=luci.http.Request(
26 luci.sys.getenv(),
27 o(io.stdin,tonumber(luci.sys.getenv("CONTENT_LENGTH"))),
28 a.sink.file(io.stderr)
29 )
30 local e=coroutine.create(luci.dispatcher.httpdispatch) //开启协助线程---->调用/u:
31 local o=""
32 local i=true
33 while coroutine.status(e)~="dead"do
34 local n,e,t,a=coroutine.resume(e,t)
35 if not n then
36 print("Status: 500 Internal Server Error")
37 print("Content-Type: text/plain\n")
38 print(e)
39 break;
40 end
41 if i then
42 if e==1 then
43 io.write("Status: "..tostring(t).. " ..a.."\r\n")
44 elseif e==2 then
45 o=o..t..": "..a.."\r\n"
46 elseif e==3 then
47 io.write(o)
48 io.write("\r\n")
49 elseif e==4 then
50 io.write(tostring(t or ""))

```

```

51 elseif e==5 then
52 io.flush()
53 io.close()
54 i=false
55 elseif e==6 then
56 t:copyz(nixio.stdout,a)
57 t:close()
58 end
59 end
60 end
61 end
62

```

连接路由器，浏览器下输入192.168.1.1，转入192.168.1.1/cgi-bin/luci，转入登录页面，调用了/usr/ua/luci/controller/admin/index.html文件：

```

1 module("luci.controller.admin.index", package.seeall)
2
3 function index ()
4     local root = node()
5     if not root.target then
6         root.target = alias("admin")
7         root.index = true
8     end
9
10    local page                = node("admin")
11    page.target                = firstchild()           //从dispatcher.lua调firstchi
12    page.title                 = _("Administration")
13    page.order                 = 10
14    page.sysauth               = "root"
15    page.sysauth_authenticator = "htmlauth"           //从dispatcher.lua调htmlauth()
16    page.ucidata               = true
17    page.index                 = true
18
19    -- Empty services menu to be populated by addons
20    entry({"admin", "services"}, firstchild(), _("Services"), 40).index = true
21
22    entry({"admin", "logout"}, call("action_logout"), _("Logout"), 90)
23 end
24
25 function action_logout ()
26     local dsp = require "luci.dispatcher"
27     local utl = require "luci.util"
28     local sid = dsp.context.authsession
29
30     if sid then
31         utl.ubus("session", "destroy", { ubus_rpc_session = sid })

```

```

32
33     luci.http.header("Set-Cookie", "sysauth=%s; expires=%s; path=%s/" %{
34         sid, 'Thu, 01 Jan 1970 01:00:00 GMT', dsp.build_url()
35     })
36 end
37
38     luci.http.redirect(dsp.build_url())
39 end
40

```

查看htmlauth()函数:

```

1 function authenticator.htmlauth(a,t,o)
2 local t=e.formvalue("luci_username")
3 local i=e.formvalue("luci_password")
4 if t and a(t,i)then
5 return t
6 end
7 require("luci.i18n")
8 require("luci.template")
9 context.path={}
10 e.status(403,"Forbidden")
11 luci.template.render("sysauth",{duser=o,fuser=t})
12 return false
13 end

```

在dispatcher.lua读取并解析了/etc/config下的luci配置，可以看到读取了theme:

```

1 if(t and t.index)or not i.notemplate then
2 local s=require("luci.template")
3 local t=i.mediaurlbase or luci.config.main.mediaurlbase
4 if not pcall(s.Template,"themes/%s/header"%n.basename(t))then
5 t=nil
6 for a,e in pairs(luci.config.themes)do
7 if a:sub(1,1)~="."and pcall(s.Template,
8 "themes/%s/header"%n.basename(e))then
9 t=e
10 end

```

使用了/usr/lib/lua/luci/viem/theme/lafite

查看/usr/lib/lua/luci/controller/admin/lafite.lua :

```

1 module("luci.controller.admin.lafite", package.seeall)
2
3 function index()

```

```

4     local root = node()
5     if not root.target then
6         root.target = alias("lafite")
7         root.index = true
8     end
9
10    function jump ()
11        local uci = require("luci.model.uci").cursor()
12
13        local themename = uci:get('luci', 'main', 'mediaurlbase') or nil
14
15        if not themename then
16            return template("jump")
17        end
18
19        themename = themename:match('[%da-zA-Z]*$')
20        if themename == 'lafite' then
21            return template("jump")
22        else
23            local list = {}
24            for _, v in ipairs(require('luci.fs').dir('/www/luci-static')) do
25                if v ~= '.' and v ~= '..' then
26                    list[#list+1] = v
27                end
28            end
29            if #list > 2 then
30                return alias("admin")
31            end
32        end
33        return template("jump")
34    end
35
36    local page = entry({"lafite"}, jump(), nil, 0)
37    page.sysauth = false
38    page.ucidata = true
39    page.index = true
40
41    entry({"lafite", "change"}, call("action_change"), _("index"), 0)
42 end
43
44 function action_change()
45     local sauth = require "luci.controller.api.user"
46     local PBUtil = require "luci.pb.PBUtil"
47     local code = PBUtil.message()
48
49     local _apiAuth = sauth.checkApiAuth()
50     if _apiAuth then return _apiAuth end

```

```

51     local V = PUtil.getFormValue({ 'change' })
52
53     if not V.change then
54         return code.miss('Change+')
55     end
56     if V.change ~= '0' and V.change ~= '1' then
57         return code.error('Change+')
58     end
59
60     local themename = 'lafite'
61     if V.change == '1' then
62         local list = {}
63         for _, v in ipairs(require('luci.fs').dir('/www/luci-static')) do
64             if v ~= '.' and v ~= '..' then
65                 list[#list+1] = v
66             end
67         end
68         if #list > 2 then
69             for _, v in ipairs(list) do
70                 if v ~= 'lafite' and v ~= 'resources' then
71                     themename = v
72                 end
73             end
74         end
75     end
76 end
77
78 PUtil.setUCISection('luci', 'main', {
79     mediaurlbase = '/luci-static/' .. themename
80 })
81
82 uci:commit('luci')
83
84 return code.ok()
85 end

```

Luci则会calling /luci/admin/目录下的lafite.lua脚本。

模块入口文件lafite.lu中index()函数中，使用entry函数来完成每个模块函数的注册：

```
1 local page = entry({"lafite"}, jump(), nil, 0)
```

转入/www/web/

```
1 entry({"lafite", "change"}, call("action_change"), _("index"), 0)
```

change函数中加入了/usr/lib/lua/luci/pb/目录下文件

