Our Favorite XSS Filters and how to Attack them

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So well, Black Hat 2009 and DEFCON 17 are over now, and on Black Hat I presented twice, so I want to do a quick recap.

If you asisted to them, I would appreciate any feedback, since the blackhat's feedback system about the passport stuff is like.. not-public, so its completely useless for me.

So, if anyone want's to give feedback, you can use the comments or send me an email at sird@rckc.at

David Lindsay also made a nice write up about the presentation in here: http://p42.us/?p=42

You can get our slides from here: http://p42.us/favxss/

I don't know if the CNN and Java.net bugs have been fixed, but they did worked at the stage (we made a live-demo on how to bypass the IE8 xss filter), and well there's an errata on the NoScript section.

There was a fix I didnt tested regarding the same origin exception, so now instead of using:

```
http://www.google.com/imgres?imgurl=http://tinyurl.com/ZWZ8Z4&imgrefurl=http://tinyurl.com/ZWZ8Z4
```

Use:

```
http://www.google.com/imgres?imgurl=http://pwn&imgrefurl=/search?q=ZWZ8Z4%26btnI=I%23asciifullNameRowId
```

Since we dont really need TinyURL, it was just an extra, but well, it makes sense for it to get fixed.

And also, the DoS & pwn for NoScript well, apparently because of something related to ABE, now noscript will absolutely kill your browser. Upgrade to latest NoScript to be protected against the PoC

of the presentation.

So, in the talk, david presented about the not-so-filtered html/js tricks we use, the unicode part was a quick (very quick) recap since Chris Weber was going to have a cool presentation about Unicode the next day (and it was awesome!!!) but anyway, regarding the unicode section, I made a quick demo on a vuln on PHP's 4, 5 and 6 utf8_decode function that allows an attacker to do cool filter bypasses.

The PHP-IDS section, I'm not sure if Mario has fixed it, but my bypass was fixed.

Besides that, if you are going to use PHP-IDS, you can be sure that thornmaker and all the slackers crew is gonna be there to break it and report it waay before a real-life attacker can bypass it, just remember to keep it updated.

So, the talk was cool, I actually thought I wasn't going to finish on time so I was talking very fast, and in a matter of fact I actually talked so fast that I actually finished 10 minutes before time.

So well, after that, I spoke with a couple of people about the presentation, and I got quite a lot of biz cards (I didn't realized untill I got to the hotel and emptied my pockets.. I actually can't rememer to who all those cards belong to), so if I told you I was going to get back to you later, you should probably send me an email (sird@rckc.at) since I probably wont recognize your name in your card (my memory sucks!).

So well, the second day I had another talk, that was a solution Im working on, that sort of competes with Mozilla CSP (could help as a transition to CSP) called ACS - Active Content Signatures, that will implement security measures for protecting against XSS on the client-side without the need of an addon on your browser.

I plan to implement some of NoScript features, as well as IE8 XSS Filter, and CSP, so I'll try just to get the best of the best stuff in there. Inlcuding a JS sandbox that is being made by Gareth Hayes and that sort of combines the best of Google Caja and Facebook JS sandbox but all in the client side, so you dont need to do ANYTHING at all in the server :).

The second talk was an epic fail, I lost my document (it was on the Downloads folder, duh!) so there was like a 5 to 10 minutes gap of me setting up my computer and not-finding the doc..

Thankfully it was a breakout session so it wasn't taped haha, anyway, my audience was small but very speciallized, the Mozilla security squid and Mozilla securinator were there, as well as david ross, the author of the super-IE8 XSS filter, a couple of friends and some other people.. The q&a at the end was very cool :).

I haven't published the details of the .doc of ACS since well, it is still in an early stage but if you are interested I will send you a draft. I am planing to present it during this month, and I will let you all guys know in this blog, together with a nice demo.

The HTML Parser of ACS together with the JavaScript sandbox (JSReg) of Gareth can be tried at: http://eaea.sirdarckcat.net/testhtml.html

If you can hack it, please do it (and let me now =D). There's a sla.ckers.org thread about it here: http://sla.ckers.org/forum/read.php?2,29259

Also, I want to state that I want to do:

```
./pressure.pl -h tra.ckers.org -p /rsnake -p /id
```

So well, blackhat was a lot of fun, and actually I wasn't planning to stay for defcon, but with a fast flight change and a lot of luck, I was able to stay more time, and go to defcon.

I want to say that DEFCON is waaaaaaaaaaay too fun, I didn't know it was so cool! BlackHat is like for CSOs, CTOs, etc.. so vendors were like giving away gifts to everyone so they will buy their stuff, and well, the talks were more interesting, but anyway, defcon rocks.

The 2wire talk that my friend hakim gave was very cool, we went to war driving in a limousine the night before, that was fun as hell haha.

It was nice to meet all those slackers in blackhat/defcon, I'm sorry for all those casinos in the strip that got their wifi-paying system completely bypassed by a very skilled slacker (whose identity prefers to be kept private), but the hotels include bellagio, mirage, paris, caesars palace, circus circus, riviera and well probably every hotel in the world that uses COX for providing the service (maybe also Lodgenet).

Ah btw, regarding the last post of Google Analytics, I want to show something I think is very cool. To make impossible to a user to logout and/or login to any google service (gmail/google reader/google analytics/ adsense/adwords/etc..).

http://google.sirdarckcat.net/?v=https://www.google.com/accounts

If you readed all this post and you are not following me on twitter, then well, there it is!

When your victim gets a "bad request" that means, "you win". Google knows about this since like 4 or 5 months ago.. and it's still unfixed. If one day you can't access your google account, or can't logout, try deleting all your cookies.. And either use noscript and mark googleanalitycs.com as untrusted, or point in your hosts fike googleanalitycs.com to 0.0.0.0 (and if you are a system admin that is not using google analytics you should probably also do the same, since all websites in the world that use google analytics are vulnerable to this attack, and you are protecting your user's security AND privacy by doing so..).

Greetz!!

PS. I made this post on notepad so its probably weird on blogspot.